

Arboricultural Impact Assessment

4-12 Breese Parade, Forster DECEMBER 13, 2024

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Summary

Tree Management Strategies have been commissioned by JCP Constructions to provide an Arboricultural Impact Assessment (AIA) for one hundred and sixty-four trees located within and adjacent to 4-12 Breese Parade, Forster, refer to (Figure 1). The AIA forms part of a development application.

This report aims to:

- Assess the health and vitality of one hundred and sixty-four trees.
- Calculate the impact the proposed development will have on one hundred and sixty-four trees.
- Suggest sensitive construction or tree protection methods to retain high to medium value trees on the subject site or neighbouring site.
- Recommend the retention or removal of the subject trees.

The health, condition and retention values of one hundred and sixty-four trees are recorded in the Tree Data Schedule (Appendix 1) and shown in the Tree Impact Plan (Appendix 2).

The developmental Impacts are explored in Developmental Impact and Observations (Section 2) of this report.

The proposal requires the removal of sixty-one trees and the retention/protection of one hundred and three trees.

Conclusion

34 trees are given low retention values due to their age, health, species and position in the landscape. 34 trees have major or total incursions to their TPZ's that requires their removal as part of the proposed development.

24 trees are given medium retention values due to their age, health, species and position in the landscape. 24 trees have major or total incursions to their TPZ's that requires their removal as part of the proposed development.

3 trees are given high retention values due to their age, health, species and position in the landscape. 3 trees have major or total incursions to their TPZ's that requires their removal as part of the proposed development.

Recommendations

- Remove 61 trees. Tree removal work to be undertaken in accordance with AS
 4373 Pruning of Amenity Trees, using a qualified Arborist (minimum Australian
 Qualification Framework (AQF3) Level Arborist).
- Adhere to the Tree Management Plan (Section 3) of this report to ensure the ongoing health of trees to be retained.



1. Introduction

Tree Management Strategies have been commissioned by JCP Constructions to provide an Arboricultural Impact Assessment (AIA) for one hundred and sixty-four trees located within and adjacent to 4-12 Breese Parade, Forster, refer to (Figure 1). The AIA forms part of a development application.

MidCoast Council is the consenting authority for the development.

This report does not take into consideration the habitat value of the site but the retention value of individual trees and the associated developmental impacts.

The development consists of the demolition of the former Council Chambers and construction of a specialised retail premises development comprising four (4) units and associated works. The purpose of the subject application is to develop the site to accommodate specialised retail uses that generate employment and contribute to the economic development of Forster whilst ensuring compatibility with nearby commercial development.

This report aims to:

- Assess the health and vitality of one hundred and sixty-four trees.
- Calculate the impact the proposed development will have on one hundred and sixty-four trees.
- Suggest sensitive construction or tree protection methods to retain high to medium-value trees on the subject site or neighbouring site.
- Recommend the retention or removal of the subject tree.



Figure 1: Subject Site Highlighted in Red

2. Developmental Impacts and Observations

On 17-04-23 a site inspection was conducted. The health, condition and retention values of 164 trees are recorded in the Tree Data Schedule (Appendix 1) and shown on the Tree Impact Plan (Appendix 2).

The method for this report is outlined in (Appendix 3) Method.

All tree retention values are in accordance with IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©.

The tree impacts detailed below are based on the plans referenced in (Section 4) of this report.

The incursions to the theoretical Tree Preservation Zones (TPZ) potentially affecting trees assessed on the subject site are shown in the Tree Impact Plan (Appendix 2).

The Australian Standard 4970 Protection of Trees on Development Sites states 'If a proposed encroachment is greater than 10% of a trees TPZ or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable'. The trees nominated for retention, although varied in genus and species are considered adaptable to changes in their growing environment and have adequate area for root compensation. Due to this, an encroachment of 20% into the TPZ was allowed for, considering appropriate tree protection measures are agreed on.

As per the Tree data schedule (Appendix 1) and the Tree Impact Plan (Appendix 2), 34 trees are given low retention values as per IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©. The trees are either in poor health, young specimens or offer little amenity value. The 33 trees have major incursions to their SRZ's and TPZ's that require their removal to support the proposed subdivision.

As per the Tree data schedule (Appendix 1) and the Tree Impact Plan (Appendix 2), 24 trees are given medium retention values as per IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©. The 25 trees have major incursions to their SRZ's and TPZ's that require their removal to support the proposed subdivision.

As per the Tree data schedule (Appendix 1) and the Tree Impact Plan (Appendix 2), 3 trees are given high retention values as per IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©. The 3 trees have major incursions to their SRZ's and TPZ's that require their removal to support the proposed subdivision.

As per the Tree data schedule (Appendix 1) and the Tree Impact Plan (Appendix 2) 103 trees have acceptable minor or zero impact to their SRZ's and TPZ's. The 102 trees can be retained with project arborist supervision and Tree Protection measures allowed for, refer to the Tree Management Plan (Section 3) of this report.

3. Tree Management Plan

The Tree Management Plan is designed to offer detailed design modifications or sensitive construction methods and a step-by-step timeline for Tree Protection Measures.

Step 1: Trunk Battening

To ensure the protection of trees potentially affected by the proposed development Trunk Protection is required for all trees to be retained, as per the detail outlined in (Figure 2).

The Project Arborist must certify the protection measures are installed to the required specifications prior to commencement of construction. The trunk protection should remain in place for the duration of construction.

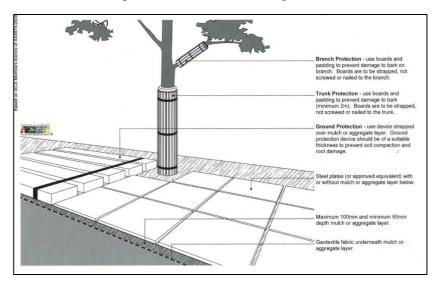


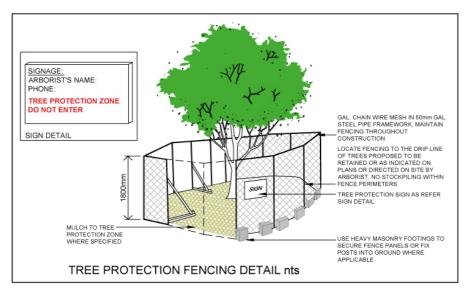
Figure 2: Trunk Battening Detail

Step 2: Erect Tree Protection Fence

To ensure the protection of trees to be retained, a tree protection fence is recommended as per the detail shown in (Figure 3).

The fence detailed in (Figure 3) needs to be erected throughout construction and may be dismantled when landscaping begins. The Project Arborist must certify the protection measures are in the correct location and to specifications prior to commencement of construction.

Figure 3: Tree Protection Fence



Step 3: Monitoring

The Project Arborist must inspect all trees to be retained on a monthly basis, unless otherwise specified by the project arborist, for the duration of the project to ensure tree protection measures are being adhered to and the health of all trees are not being adversely affected. Monitoring to cease following the final inspection and report.

Step 4: General Exclusions within the TPZ

The following activities shall be excluded within the TPZ's of trees to be retained, to (Figure 4).

Figure 4: TPZ exclusions

4.2 ACTIVITIES RESTRICTED WITHIN THE TPZ

Activities generally excluded from the TPZ include but are not limited to-

- (a) machine excavation including trenching;
- (b) excavation for silt fencing;
- (c) cultivation;
- (d) storage;
- (e) preparation of chemicals, including preparation of cement products;
- (f) parking of vehicles and plant;
- (g) refuelling;
- (h) dumping of waste;
- (i) wash down and cleaning of equipment;
- (j) placement of fill;
- (k) lighting of fires;
- (1) soil level changes;
- (m) temporary or permanent installation of utilities and signs, and
- (n) physical damage to the tree.

The Project Arborist must be notified in the event any disturbance within the TPZ of trees to be retained is required.

Step 5: Final Certification

Upon completion of construction the Project Arborist will certify that the health and condition of all trees to be retained have not been adversely affected by the development.



4. Referenced Documents

Plans that were referred to for this report include:

Plan Title	Drawing Number	Consultant	Revision
Tree Impact Plan	NBO.TIP.01.2	Tree Management Strategies	11-12-2024
Architectural Plans	Site Plan	Designs By Deane	18-11-2024
Stormwater	DA- SW100 – 601 REV 2	Jco Consultants Pty Ltd	21-06-2024



5. Conclusions & Recommendations

Conclusion

34 trees are given low retention values due to their age, health, species and position in the landscape. 34 trees have major or total incursions to their TPZ's that requires their removal as part of the proposed development.

23 trees are given medium retention values due to their age, health, species and position in the landscape. 23 trees have major or total incursions to their TPZ's that requires their removal as part of the proposed development.

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Recommendations

- Remove 61 trees. Tree removal work to be undertaken in accordance with AS
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- Adhere to the Tree Management Plan (Section 3) of this report to ensure the ongoing health of trees to be retained.



6. References

Shigo, A., 1986, A New Tree Biology and Dictionary: facts, photos, and philosophies on trees and their problems and proper care, Snohomish, WA

Council of Standards Australia (August 2009)

The Australian Standard for the Protection of Trees on Development Sites (AS 4970 – 2009).

Harris, R., Clark, J. and Matheny, N., 2003, Integrated Management of Landscape Trees, Shrubs, and Vines, fourth edition, Prentice Hall, Australia

IACA, 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

Lonsdale, D. (1999). *Principles of Tree Hazard Assessment and Management*. Forestry Commission, London.

Mattheck, C. and Breloer, H (1994) *The Body Language of Trees*. Research for Amenity Trees No.4,

The Stationery Office, London.

Disclaimer:

By the nature of their size, weight and miscellaneous structure, constant exposure to the weather and the elements, susceptibility to insects, pest and decay organisms, and trees always pose an inherent degree of hazard and risk from breakage or failure.

There is no guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future. No responsibility will be accepted for partial or full failure of any tree.

No responsibility will be accepted for any damage or injury caused by any tree or part thereof referred to in this report.

While great care is taken to accurately diagnose the condition of a tree, it is impossible to accurately determine the true structural condition of the entire tree and any diagnosis, opinions or recommendations expressed are based on several methods of determining tree health.



7. Appendices

Appendix 1: Tree Data Schedule



Tree No	Genus-species	Common Name	DAB metres (radius) Above Buttress	DBH metres (radius) Breast Ht	SRZ (radius) Metres	TPZ (radius) Metres	Height Metres	Age Young, Semi- Mature, Mature Over Mature	Canopy Spread (Metres) (radius)	TPZ incursion %	Health Good Fair Fair/Poor Poor Dead	Condition Good Fair Fair/Poor Poor Failed	Useful Life Expectancy High Medium Low	Landscape significance High Medium Low	Retention value High Medium Low	Retain/ Remove	Notes
1	Cupaniopsis anacardiodes	Tuckeroo	0.41	0.29	2.28	3.48	7.00	Semi Mature	4.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
Tree 2 and 3	Allocasuarina littoralis	Black Sheoak	0.49	0.33	2.45	3.96	9.00	Semi Mature	4.00	0	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
Tree 4 to 14	Banksia marginata	Silver Banksia	0.42	0.33	2.30	3.96	9.00	Mature	5.00	0	Poor	Fair/Poor	Medium	Low	Low	Retain	Trees located in carpark showing signs of decline in health.
15	Corymbia gummifera	Red Bloodwood	0.52	0.38	2.51	4.56	10.00	Mature	6.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
Tree 16 and 17	Banksia marginata	Silver Banksia	0.32	0.28	2.05	3.36	8.00	Semi Mature	4.00	0	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
18	Eucalyptus botriodes	Bangalay	0.68	0.52	2.81	6.24	14.00	Mature	9.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
19	Grevillea robusta	Silky Oak	0.94	0.77	3.22	9.24	15.00	Mature	8.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
20	Allocasuarina littoralis	Black Sheoak	0.82	0.59	3.04	7.08	14.00	Mature	6.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
21	Brachychiton acerifolius	Illawarra Flame Tree	0.27	0.20	1.91	2.40	7.00	Semi Mature	2.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
Tree 22 and 23	Cupaniopsis anacardiodes	Tuckeroo	0.44	0.26	2.34	3.12	6.00	Semi Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
24	Banksia marginata	Silver Banksia	0.44	0.22	2.34	2.64	8.00	Mature	2.00	0	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
25	Cupaniopsis anacardiodes	Tuckeroo	0.37	0.24	2.18	2.88	6.00	Mature	3.00	0	Fair	Fair/Poor	Medium	Medium	Medium	Retain	
Tree 26 to 31	Banksia marginata	Silver Banksia	0.49	0.26	2.45	3.12	9.20	Mature	5.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
Tree 32 to 34	Melaleuca quinquenervia	Paper Bark Tea Tree	0.66	0.50	2.78	6.00	11.00	Mature	4.00	0	Fair	Fair/Poor	Medium	Medium	Medium	Retain	
35	Banksia marginata	Silver Banksia	0.32	0.23	2.05	2.76	7.00	Mature	1.00	0	Dead	Poor	Low	Low	Low	Retain	Tree dead
36	Banksia marginata	Silver Banksia	0.39	0.34	2.23	4.08	6.00	Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
Tree 37 and 38	Allocasuarina littoralis	Black Sheoak	1.10	0.74	3.44	8.88	18.00	Mature	8.00	0	Fair	Fair	High	Medium	High	Retain	
39	Melaleuca quinquenervia	Paper Bark Tea Tree	0.64	0.44	2.74	5.28	8.20	Mature	5.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
40	Melaleuca quinquenervia	Paper Bark Tea Tree	0.59	0.38	2.65	4.56	12.00	Mature	6.00	0	Fair/Poor	Poor	Medium	Low	Low	Retain	
41	Corymbia maculata	Spotted Gum	0.40	0.28	2.25	3.36	12.00	Semi Mature	6.00	0	Poor	Fair/Poor	Medium	Low	Low	Retain	Tree in decline with deadwood, loss of canopy and decay
42	Melaleuca quinquenervia	Paper Bark Tea Tree	1.04	0.63	3.36	7.56	12.00	Mature	6.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
43	Eucalyptus botriodes	Bangalay	1.28	0.84	3.67	10.08	18.00	Mature	9.00	100	Fair	Fair/Poor	Medium	High	High	Remove	



Tree No	Genus-species	Common Name	DAB	DBH	SRZ	TPZ	Height	Age	Canopy	TPZ	Health	Condition	Useful Life	Landscape	Retention	Retain/	Notes
			metres (radius)	metres (radius)	(radius) Metres	(radius) Metres	Metres	Young, Semi-	Spread (Metres)	incursion %	Good Fair	Good Fair	Expectancy High	significance High	value High	Remove	
			Above	Breast	Metres	Wietres		Mature,	(radius)	70	Fair/Poor	Fair/Poor	Medium	Medium	Medium		
			Buttress	Ht				Mature Over			Poor Dead	Poor Failed	Low	Low	Low		
								Mature									
44	Allocasuarina littoralis	Black Sheoak	0.67	0.52	2.80	6.24	12.00	Mature	6.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
45	Allocasuarina littoralis	Black Sheoak	1.25	0.80	3.63	9.60	20.00	Mature	9.00	100	Fair	Fair	High	High	High	Remove	
46	Allocasuarina littoralis	Black Sheoak	0.67	0.46	2.80	5.52	11.00	Mature	7.00	100	Fair	Poor	Medium	Low	Low	Remove	
47	Allocasuarina littoralis	Black Sheoak	0.31	0.25	2.02	3.00	12.00	Mature	3.00	100	Poor	Poor	Low	Low	Low	Remove	Tree in decline.
48	Allocasuarina littoralis	Black Sheoak	0.86	0.70	3.11	8.40	13.00	Mature	6.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
49	Allocasuarina littoralis	Black Sheoak	0.79	53.00	3.00	636.00	12.00	Mature	5.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
50	Banksia marginata	Silver Banksia	0.46	0.35	2.39	4.20	9.00	Mature	5.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
51	Livistona australis	Cabbage-Tree Palm	0.15	0.13	1.49	1.56	5.00	Semi Mature	2.00	100	Good	Fair	Medium	Low	Low	Remove	Can be transplanted
52	Melaleuca quinquenervia	Paper Bark Tea Tree	0.82	0.68	3.04	8.16	15.00	Mature	6.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
53	Banksia marginata	Silver Banksia	0.58	0.34	2.63	4.08	8.80	Mature	5.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
54	Banksia marginata	Silver Banksia	0.67	0.55	2.80	6.60	7.00	Mature	8.00	100	Fair	Poor	Medium	Low	Low	Remove	Tree on 28 degree lean. Tree has decay and branch extension
55	Melaleuca quinquenervia	Paper Bark Tea Tree	0.85	0.71	3.09	8.52	10.00	Mature	8.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
56	Allocasuarina littoralis	Black Sheoak	0.85	0.64	3.09	7.68	12.60	Mature	6.00	100	Fair/Poor	Poor	Medium	Medium	Medium	Remove	
57	Livistona australis	Cabbage-Tree Palm	0.15	0.13	1.49	1.56	5.00	Semi Mature	2.00	100	Fair	Fair/Poor	Medium	Low	Low	Remove	Tree can be transplanted.
58	Banksia marginata	Silver Banksia	0.52	0.60	2.51	7.20	9.00	Mature	5.00	100	Fair/Poor	Poor	Medium	Low	Low	Remove	Tree has hollow, decay and poor habit.
59	Banksia marginata	Silver Banksia	0.40	0.34	2.25	4.08	8.00	Mature	4.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
60	Cupaniopsis anacardiodes	Tuckeroo	0.48	0.39	2.43	4.68	8.00	Mature	5.00	16	Fair	Fair	Medium	Medium	Medium	Retain	
61	Archontopheonix cunninghamiana	Bangalow Palm	0.15	0.13	1.49	1.56	9.00	Semi Mature	2.00	100	Fair	Fair	Medium	Low	Low	Remove	Tree may be transplanted.
62	Melaleuca quinquenervia	Paper Bark Tea Tree	0.60	0.54	2.67	6.48	9.00	Mature	5.00	23	Fair	Fair	Medium	Medium	Medium	Retain	
63	Banksia serrata	Old Man Banksia	0.64	0.57	2.74	6.84	10.00	Mature	6.00	14	Fair/Poor	Fair/Poor	Medium	Medium	Medium	Retain	
64	Melaleuca quinquenervia	Paper Bark Tea Tree	0.67	0.44	2.80	5.28	12.00	Mature	6.00	3	Fair	Fair/Poor	Medium	Medium	Medium	Retain	
65	Livistona australis	Cabbage-Tree Palm	0.15	0.13	1.49	1.56	7.00	Semi Mature	2.00	0	Fair	Fair	Medium	Low	Low	Retain	Tree can be transplanted.
66	Melaleuca quinquenervia	Paper Bark Tea Tree	0.93	0.69	3.21	8.28	18.00	Mature	6.00	30	Fair	Fair	Medium	Medium	Medium	Remove	
67	Livistona australis	Cabbage-Tree Palm	0.15	0.13	1.49	1.56	6.00	Semi Mature	2.00	0	Fair	Fair	Medium	Low	Low	Retain	Tree can be transplanted.
68	Banksia serrata	Old Man Banksia	0.41	0.26	2.28	3.12	10.00	Mature	6.00	3	Fair/Poor	Poor	Medium	Low	Low	Retain	Tree on a 20 degree lean. Growing towards road.



Tree No	Genus-species	Common Name	DAB	DBH	SRZ	TPZ	Height	Age	Canopy	TPZ	Health	Condition	Useful Life	Landscape	Retention	Retain/	Notes
Tree No	denus-species	Common Name	metres	metres	(radius)	(radius)	Metres	Young,	Spread	incursion	Good	Good	Expectancy	significance	value	Remove	Notes
			(radius) Above	(radius) Breast	Metres	Metres		Semi- Mature,	(Metres) (radius)	%	Fair Fair/Poor	Fair Fair/Poor	High Medium	High Medium	High Medium		
			Buttress	Ht				Mature,	(radius)		Poor	Poor	Low	Low	Low		
								Over			Dead	Failed					
69	Syagrus romanzoffianum	Queen Palm	0.15	0.13	1.49	1.56	11.00	Mature Mature	2.00	0	Fair	Fair	Medium	Low	Low	Retain	Exempt species
	, ,															recum	Exempt species
Tree	Livistona australis	Cabbage-Tree Palm	0.15	0.13	1.49	1.56	7.00	Semi	2.00	25, 100	Fair	Fair	Medium	Low	Low	Retain,	Tree can be transplanted if
70 And								Mature								Remove	required.
71																	
72	Banksia serrata	Old Man Banksia	0.37	0.23	2.18	2.76	7.00	Mature	4.00	0	Fair	Poor	Medium	Low	Low	Retain	
73	Banksia serrata	Old Man Banksia	0.51	0.46	2.49	5.52	11.00	Mature	6.00	7	Fair	Poor	Medium	Medium	Medium	Retain	
	Samora serraca	ora man pamora	0.01	00	2.13	0.02	11.00	aca.c	0.00						cara	Retain	
74	Banksia serrata	Old Man Banksia	0.38	0.30	2.20	3.60	9.00	Mature	4.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
75	Brachychiton acerifolius	Illawarra Flame Tree	0.37	0.26	2.18	3.12	10.00	Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
76	5 1			0.50	2.42	6.06	15.00		10.00							<u> </u>	
76	Eucalyptus pilularis	Blackbutt	0.48	0.58	2.43	6.96	16.00	Mature	10.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
77	Eucalyptus pilularis	Blackbutt	0.84	0.75	3.08	9.00	18.00	Mature	12.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
	Zasaryptas priararis	Stationate	0.0.	0.75	0.00	3.00	10.00	aca.c	22.00						cara	Retain	
Tree	Eucalyptus pilularis	Blackbutt	0.27	0.20	1.91	2.40	9.00	Semi	4.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
78 to 80								Mature									
81	Brachychiton acerifolius	Illawarra Flame Tree	0.30	0.27	2.00	3.24	8.00	Semi	2.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
								Mature			_						
82	Livistona australis	Cabbage-Tree Palm	0.15	0.13	1.49	1.56	3.00	Semi Mature	1.00	0	Poor	Fair/Poor	Medium	Low	Low	Retain	
83	Eucalyptus pilularis	Blackbutt	0.28	0.17	1.94	2.04	9.00	Semi	3.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
05	Eucurypeus pharans	Blackbatt	0.20	0.17	1.54	2.04	3.00	Mature	5.00		Tun	1411/1 001	Wicarani	LOW	LOW	Retaili	
84	Leptospermum scoparium	Tea Tree	0.33	0.24	2.08	2.88	5.00	Mature	4.00	0	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
85	Acacia sp	Wattle	0.17	0.13	1.57	1.56	6.00	Semi	4.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
								Mature		_							
Tree 86	Eucalyptus pilularis	Blackbutt	0.58	0.40	2.63	4.80	15.80	Mature	9.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
And																	
87 88	Banksia marginata	Silver Banksia	0.23	0.17	1.79	2.04	6.00	Semi	5.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
	Bulksia marginata	Silver Bariksia	0.23	0.17	1.75	2.04	0.00	Mature	5.00		Tun	1411/1 001	Wicarani	LOW	LOW	Retaili	
89	Strelitzia nicolai	Natal Wild Banana	0.15	0.13	1.49	1.56	5.00	Semi	2.00	0	Fair	Fair	Medium	Low	Low	Retain	
								Mature									
90	Banksia marginata	Silver Banksia	0.23	0.19	1.79	2.28	6.00	Semi	5.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
								Mature		_							
91	Banksia marginata	Silver Banksia	0.32	0.21	2.05	2.52	9.00	Semi Mature	4.00	0	Fair	Fair	Medium	Low	Low	Retain	
92	Eucalyptus pilularis	Blackbutt	0.50	0.38	2.47	4.56	15.00	Mature	5.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
32	prospirations	2.30Nouce	0.50	0.50	2,7/	1.50	13.00	141atare	5.00				Mediani	mediam	i i i cai ai i i	Netalli	
93	Eucalyptus pilularis	Blackbutt	0.63	0.48	2.73	5.76	16.00	Mature	6.00	0	Fair	Fair/Poor	Medium	Medium	Medium	Retain	
94	Eucalyptus pilularis	Blackbutt	0.20	0.16	1.68	1.92	8.00	Young	3.00	0	Fair/Poor	Poor	Medium	Low	Low	Retain	
							4.5										
Tree 95 to	Banksia marginata	Silver Banksia	0.33	0.25	2.08	3.00	14.00	Semi Mature	4.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
103																	
	L	1	I	·	1	1		1		1	1	1	I.	1		_ L	l .



Tree No	Genus-species	Common Name	DAB	DBH	SRZ	TPZ	Height	Age	Canopy	TPZ	Health	Condition	Useful Life	Landscape	Retention	Retain/	Notes
			metres (radius)	metres (radius)	(radius) Metres	(radius) Metres	Metres	Young, Semi-	Spread (Metres)	incursion %	Good Fair	Good Fair	Expectancy High	significance High	value High	Remove	
			Above	Breast	Wietres	Wietres		Mature,	(radius)	70	Fair/Poor	Fair/Poor	Medium	Medium	Medium		
			Buttress	Ht				Mature			Poor	Poor	Low	Low	Low		
								Over Mature			Dead	Failed					
104	Corymbia gummifera	Red Bloodwood	0.62	0.45	2.71	5.40	12.00	Mature	6.00	0	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
105	Brachychiton acerifolius	Illawarra Flame Tree	0.40	0.33	2.25	3.96	14.00	Mature	4.00	8	Fair	Fair	Medium	Medium	Medium	Retain	
106	Banksia integrifolia	Coast Banksia	0.84	0.45	3.08	5.40	13.00	Mature	5.00	24	Fair	Fair/Poor	Medium	Medium	Medium	Retain	
107	Cupaniopsis anacardiodes	Tuckeroo	0.29	0.18	1.97	2.16	10.00	Semi Mature	3.00	100	Fair	Poor	Medium	Low	Low	Remove	
108	Lophostemon confertus	Brush Box	0.33	0.25	2.08	3.00	13.00	Mature	2.00	29	Fair	Fair	Medium	Medium	Medium	Retain	
109	Cupaniopsis anacardiodes	Tuckeroo	0.25	0.17	1.85	2.04	5.00	Semi Mature	1.00	3	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
110	Harpullia sp	Tulipwood	0.33	0.26	2.08	3.12		Mature	3.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
111	Pittosporum undulatum	Sweet Pittosporum	0.34	0.20	2.10	2.40	12.00	Mature	2.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
112	Cumaniannia anggardiadas	Tuelcarae	0.24	0.16	1.02	1.02	F 00	Comi	2.00	100	Fair/Door	Foir/Door	Madium	Low	Low		
112	Cupaniopsis anacardiodes	Tuckeroo	0.24	0.16	1.82	1.92	5.00	Semi Mature	3.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
113	Lophostemon confertus	Brush Box	0.38	0.27	2.20	3.24	15.00	Semi Mature	3.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
114	Lophostemon confertus	Brush Box	0.29	0.17	1.97	2.04	12.00	Semi Mature	2.00	100	Fair	Poor	Medium	Low	Low	Remove	
115	Lophostemon confertus	Brush Box	0.44	0.31	2.34	3.72	16.00	Mature	6.00	100	Poor	Poor	Medium	Low	Low	Remove	Tree in decline.
116	Banksia marginata	Silver Banksia	0.22	0.18	1.75	2.16	5.00	Mature	4.00	100	Fair	Poor	Medium	Low	Low	Remove	
117	Syzygium paniculatum	Lilly Pilly	0.26	0.22	1.88	2.64	7.00	Semi Mature	2.00	100	Fair	Fair/Poor	Medium	Medium	Low	Remove	
118	Corymbia gummifera	Red Bloodwood	0.32	0.24	2.05	2.88	15.00	Mature	6.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
119	Eucalyptus robusta	Swamp Mahogany	0.54	0.42	2.55	5.04	16.00	Mature	8.00	100	Fair/Poor	Fair/Poor	Medium	Low	Medium	Remove	
120	Banksia marginata	Silver Banksia	0.50	0.46	2.47	5.52	10.00	Mature	3.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
121	Lophostemon confertus	Brush Box	0.36	0.26	2.15	3.12	13.00	Semi Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Remove	
122	Lophostemon confertus	Brush Box	0.25	0.19	1.85	2.28	15.00	Semi Mature	2.00	0	Fair/Poor	Poor	Medium	Low	Low	Retain	
123	Lophostemon confertus	Brush Box	0.27	0.22	1.91	2.64	16.00	Semi Mature	2.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
124	Melaleuca quinquenervia	Paper Bark Tea Tree	0.47	0.39	2.41	4.68	16.00	Mature	5.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
125	Cupaniopsis anacardiodes	Tuckeroo	0.25	0.15	1.85	1.80	10.00	Semi	3.00	100	Fair	Fair/Poor	Medium	Low	Low	Remove	
								Mature									
126	Lophostemon confertus	Brush Box	0.27	0.21	1.91	2.52	16.00	Semi Mature	2.00	16	Fair/Poor	Fair/Poor	Medium	Low	Low	Retain	
127	Alphitonia excelsa	Red Ash	0.27	0.20	1.91	2.40	16.00	Mature	2.00	39	Fair	Fair/Poor	Medium	Low	Low	Remove	
128	Melaleuca quinquenervia	Paper Bark Tea Tree	0.76	0.61	2.95	7.32	12.00	Mature	7.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	



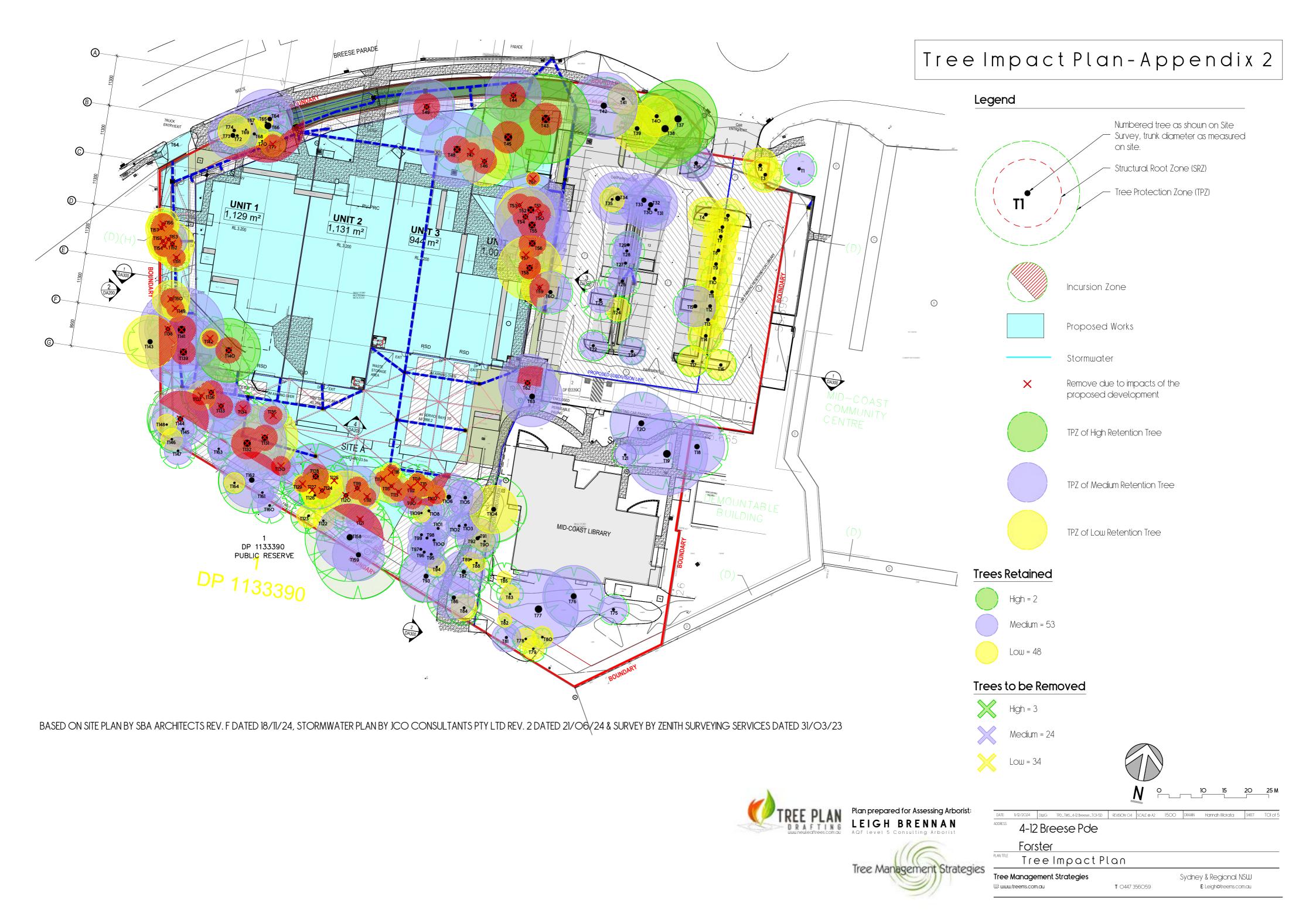
Tree No	Genus-species	Common Name	DAB	DBH	SRZ	TPZ	Height	Age	Canopy	TPZ	Health	Condition	Useful Life	Landscape	Retention	Retain/	Notes
			metres (radius)	metres (radius)	(radius) Metres	(radius) Metres	Metres	Young, Semi-	Spread (Metres)	incursion %	Good Fair	Good Fair	Expectancy High	significance High	value High	Remove	
			Above	Breast	Wettes	Wicties		Mature,	(radius)	70	Fair/Poor	Fair/Poor	Medium	Medium	Medium		
			Buttress	Ht				Mature Over			Poor Dead	Poor Failed	Low	Low	Low		
								Mature									
129	Lophostemon confertus	Brush Box	0.23	0.18	1.79	2.16	12.00	Semi Mature	2.00	100	Fair	Fair/Poor	Medium	Low	Low	Remove	
130	Alphitonia excelsa	Red Ash	0.38	0.28	2.20	3.36	16.00	Mature	5.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
	·																
131	Allocasuarina torulosa	She-Oak	0.75	0.62	2.93	7.44	15.00	Mature	5.00	100	Fair/Poor	Poor	Low	Low	Low	Remove	
132	Allocasuarina torulosa	She-Oak	1.22	0.74	3.60	8.88	17.00	Mature	7.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
133	Eucalyptus robusta	Swamp Mahogany	0.62	0.49	2.71	5.88	16.00	Mature	8.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
134	Cupaniopsis anacardiodes	Tuckeroo	0.23	0.17	1.79	2.04	8.00	Semi Mature	3.00	100	Fair	Fair	Medium	Low	Medium	Remove	
135	Eucalyptus robusta	Swamp Mahogany	0.34	0.26	2.10	3.12	15.00	Semi Mature	3.00	100	Fair	Fair	Medium	Low	Medium	Remove	
136	Eucalyptus robusta	Swamp Mahogany	0.62	0.50	2.71	6.00	17.00	Mature	6.20	100	Fair	Fair	Medium	Medium	Medium	Remove	
137	Banksia marginata	Silver Banksia	0.32	0.27	2.05	3.24	8.00	Mature	3.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
120	Adalahan animanan in	Dan an Dank Tao Tuan	0.50	0.44	2.50	F 30	10.00	Natura	F 00	100	Fair	Fair/Pass	N A a di	NA a dissas	NA a dissas		
138	Melaleuca quinquenervia	Paper Bark Tea Tree	0.56	0.44	2.59	5.28	18.00	Mature	5.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
139	Melaleuca quinquenervia	Paper Bark Tea Tree	0.66	0.71	2.78	8.52	16.00	Mature	5.00	100	Fair	Fair	Medium	Medium	Medium	Remove	
140	Eucalyptus grandis	Flooded Gum	0.76	0.60	2.95	7.20	18.00	Mature	7.00	100	Fair	Fair	High	Medium	High	Remove	
141	Melaleuca quinquenervia	Paper Bark Tea Tree	0.97	0.80	3.27	9.60	15.00	Mature	6.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	
142	Acmena sp	Lilly Pilly	0.23	0.18	1.79	2.16	10.00	Semi Mature	3.00	100	Fair	Fair	Medium	Low	Low	Remove	
143	Eucalyptus radiata	Pepermint	0.71	0.50	2.87	6.00	16.00	Mature	7.00	29	Poor	Poor	Low	Low	Low	Retain	Tree in severe decline
144	Eucalyptus pilularis	Blackbutt	0.64	0.53	2.74	6.36	15.00	Mature	8.00	43	Fair	Fair	Medium	Medium	Medium	Remove	
145	Alphitonia excelsa	Red Ash	0.29	0.21	1.97	2.52	11.00	Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
146	Alphitonia excelsa	Red Ash	0.25	0.20	1.85	2.40	10.00	Semi Mature	4.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	
147	Lophostemon confertus	Brush Box	0.34	0.26	2.10	3.12	14.00	Mature	4.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
148	Melia azederach	Chinaberry	0.24	0.19	1.82	2.28	9.00	Semi Mature	4.00	0	Poor	Poor	Medium	Low	Low	Retain	
149	Jacaranda mimosifolia	Fern Tree	0.30	0.24	2.00	2.88	6.00	Semi Mature	4.00	100	Fair/Poor	Poor	Medium	Low	Low	Remove	
150	Callistemon viminalis	Weeping Bottlebrush	0.46	0.35	2.39	4.20	6.00	Mature	2.00	100	Fair/Poor	Fair/Poor	Medium	Low	Low	Remove	
151	Glochidion ferdinandi	Cheese Tree	0.34	0.26	2.10	3.12	5.80	Semi Mature	2.50	100	Fair	Fair	Medium	Low	Low	Remove	
152	Banksia serrata	Old Man Banksia	0.38	0.41	2.20	4.92	11.00	Mature	6.00	100	Fair/Poor	Poor	Medium	Low	Low	Remove	
153	Banksia integrifolia	Coast Banksia	0.48	0.35	2.43	4.20	9.00	Mature	4.00	100	Fair	Fair/Poor	Medium	Medium	Medium	Remove	

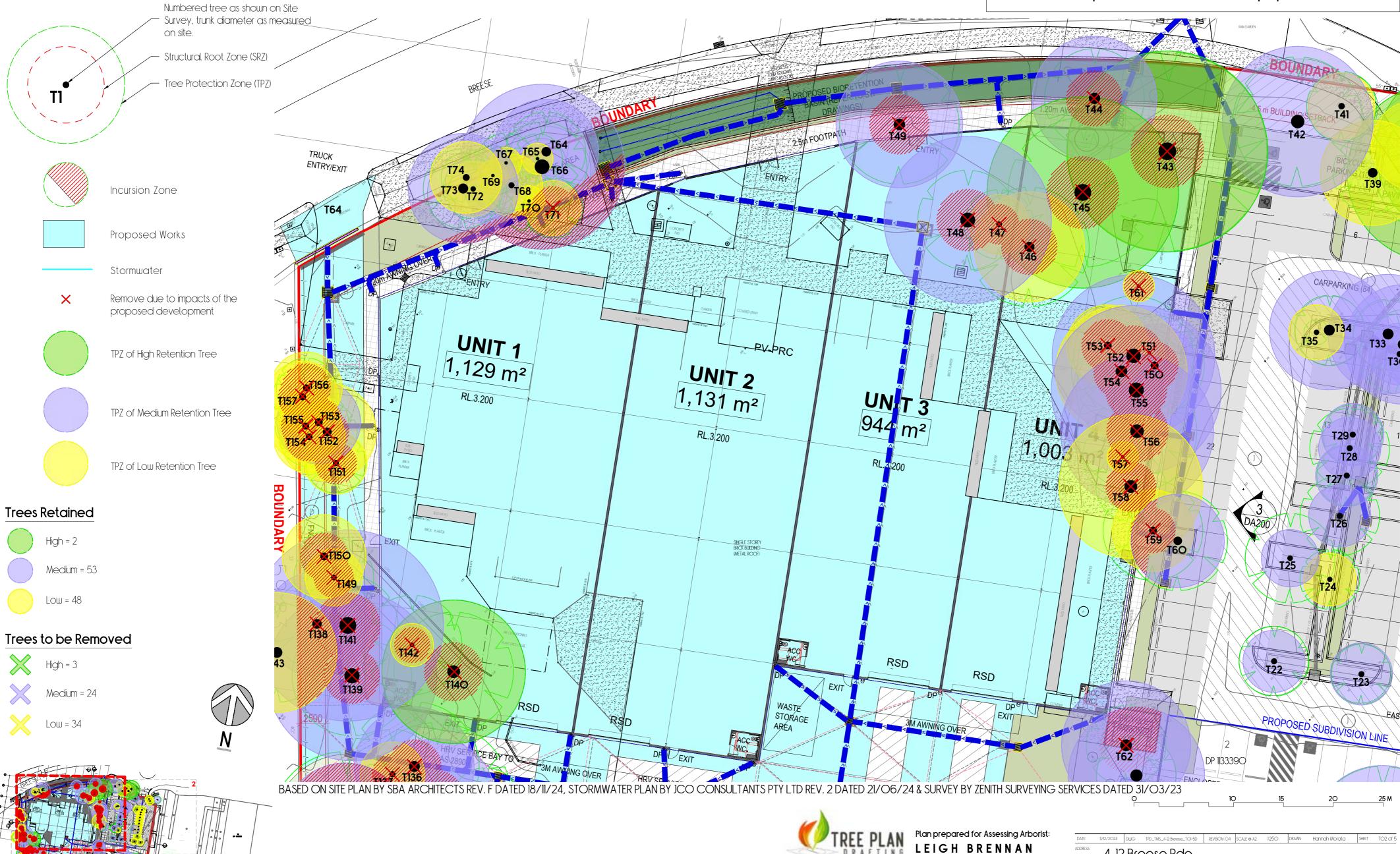


Tree No	Genus-species	Common Name	DAB metres (radius) Above Buttress	DBH metres (radius) Breast Ht	SRZ (radius) Metres	TPZ (radius) Metres	Height Metres	Age Young, Semi- Mature, Mature Over Mature	Canopy Spread (Metres) (radius)	TPZ incursion %	Health Good Fair Fair/Poor Poor Dead	Condition Good Fair Fair/Poor Poor Failed	Useful Life Expectancy High Medium Low	Landscape significance High Medium Low	Retention value High Medium Low	Retain/ Remove	Notes
Tree 154 to 157	Banksia serrata	Old Man Banksia	0.49	0.30	2.45	3.60	10.00	Mature	6.00	100	Fair/Poor	Poor	Medium	Low	Low	Remove	Group of trees in decline
158	Eucalyptus pilularis	Blackbutt	0.74	0.63	2.92	7.56	16.00	Mature	6.00	0	Fair	Fair/Poor	Medium	Medium	Medium	Retain	
159	Eucalyptus pilularis	Blackbutt	0.60	0.49	2.67	5.88	16.00	Mature	8.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
160	Lophostemon confertus	Brush Box	0.39	0.23	2.23	2.76	14.00	Semi Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
161	Alphitonia excelsa	Red Ash	0.30	0.21	2.00	2.52	15.00	Mature	3.00	0	Fair	Fair	Medium	Medium	Medium	Retain	
162	Angophora costata	Smooth Barked Apple	0.65	0.53	2.76	6.36	15.00	Mature	4.00	12	Fair	Fair/Poor	Medium	Low	Medium	Retain	
163	Lophostemon confertus	Brush Box	0.27	0.19	1.91	2.28	12.00	Semi Mature	2.00	3	Fair	Fair	Medium	Medium	Medium	Retain	
164	Alphitonia excelsa	Red Ash	0.30	0.19	2.00	2.28	12.00	Semi Mature	2.00	0	Fair	Fair/Poor	Medium	Low	Low	Retain	



Appendix 2: Tree Impact Plan







DATE: 11/12/2024 DWG: TPD_TMS_4-12 Reesse_TOLSD REVISION: 0.4 SCALE • A2 1250 DRAWN Hannah Morata SHEET TO2 of 5

ADDRESS 4-12 Breese Pde

Forster

PLAN TITLE Tree Impact Plan

Tree Management Strategies Sydney & Regional NSW

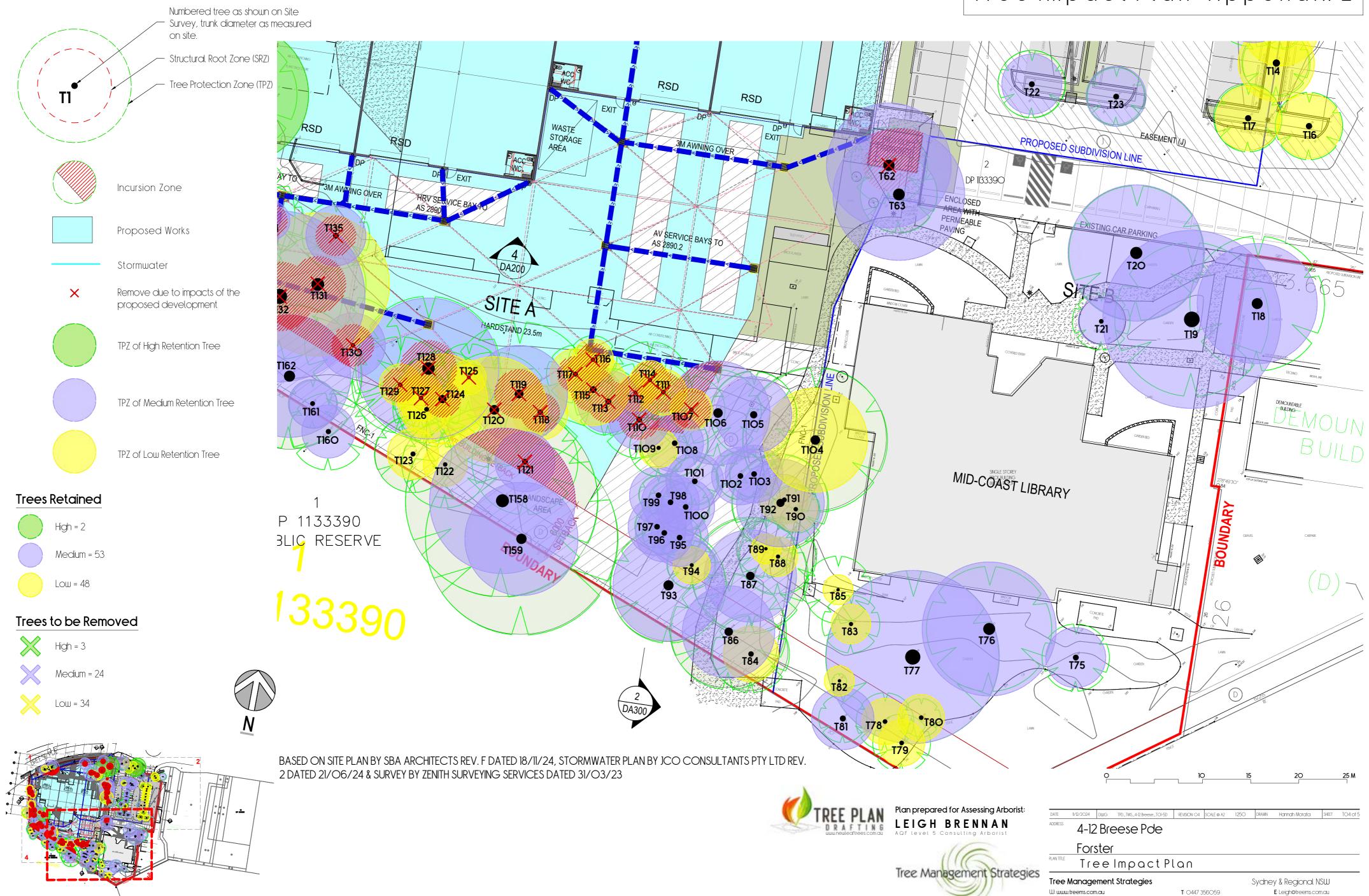
W: www.treems.com.au T: 0.447 356059 E Leigh@treems.com.au

KEY PLAN

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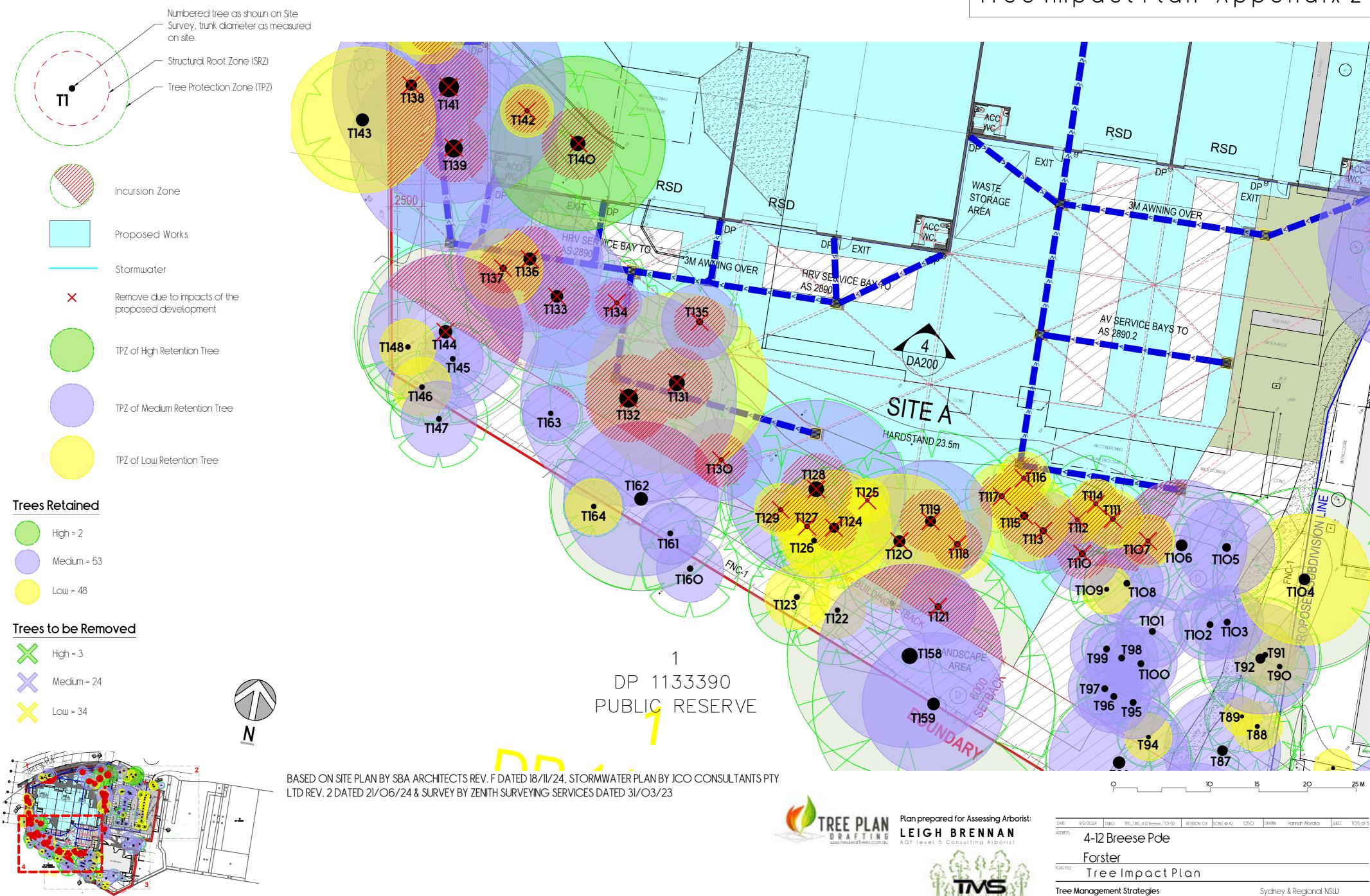


KEY PLAN

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Appendix 3: Method

Site Assessment

From the ground, the following information was recorded and displayed in the Tree Data Schedule (Appendix 1).

- Tree genus and species.
- Approximate height spread if deemed applicable.
- Trunk diameter at breast height and above the buttress.
- Age class: young, semi mature, mature, over mature.
- Health.
- Condition.

Observations were recorded and photographed.

Research

The following legislation, documents or websites were reviewed:

- The Australian Standard for the Protection of Trees on Development Sites (AS 4970 – 2009).
- MidCoast Council Development Control Plan 2014.
- MidCoast Council Environmental Plan 2014.



Tree Data Schedule Method

The health and condition of trees assessed are shown in the Tree Data Schedule (**Appendix 1**) with the methods explained below:

Tree Health

Overall Health (Vigour/Vitality)	Tree vigour is exhibited by crown density, crown cover, leaf colour, leaf size, leaf texture, presence of epicormic growth, ability to withstand predation by pest and disease, resistance and degree of dieback.
Good (Excellent)	Good tree vigour exhibited by no decline in overall health and vigour, height and shape. The specimen is observed to be of excellent condition displaying characteristics that is known for that particular species (what would be the expected condition for that particular species of that age in that location), 0% dieback, full crown density, leaf health, no pest or disease present.
Fair	Fair tree vigour exhibited by moderate decline in overall health and vigour, height and shape. The specimen is observed to be of moderate condition by not displaying characteristics adequately that is known for that particular species (what would be expected for that particular species of that age in that location), less than 10% dieback, 90% of crown foliage density, more than 90% leaf health, acceptable level of pest or disease is evident for the assessing arborist (where it is considered the tree's overall health or condition will not be affected or lead to irreversible decline from pest or disease).
Fair/Poor	Fair to poor tree vigour exhibited by considerable decline in overall health and vigour, height and shape. The specimen is observed to be of less than acceptable condition by not displaying characteristics adequately that is known for that particular species (what would be expected for that particular species of that age in that location), 10-20% dieback, considerable foliage deficiencies, 70-90% foliage density, 70-90% leaf health, pest or disease infestation at acceptable thresholds for the assessing arborist (where it is considered the tree's overall health or condition will not be affected or lead to irreversible decline from pest or disease).

Poor Poor vigour exhibited by substantial decline in overall health and vigour, height and shape. The specimen is observed to be of poor condition by not displaying characteristics adequately that is known for that particular species (what would be expected for that particular species of that age in that location), 20-30% dieback, considerable foliage deficiencies, 50-70% leaf health, pest or disease infestation at unacceptable infestation level that exceeds thresholds for the assessing arborist (where it is considered the tree's overall health or condition will be affected or lead to irreversible decline from pest or disease). **Very Poor** Very poor vigour exhibited by irreversible decline in overall health and vigour, height and shape. The specimen is observed to be of less than acceptable condition by not displaying characteristics adequately that is known for that particular species (what would be expected for that particular species of that age in that location), 15-50% dieback; severe foliage deficiencies; 30-50% density; 30-50% leaf health; pest or disease infestation at severe infestation level that exceeds thresholds for the assessing arborist (where it is considered the tree's overall health or condition will be affected or lead to irreversible decline from pest or disease). Dead Dead tree vigour exhibited by complete decline in overall health and vigour, height and shape. The specimen is observed to be dead by not displaying any characteristics adequately that is known for that particular species (what would be expected for that particular species of that age in that location), tree holds less than 15% foliage; branching is dead throughout canopy, pest or disease infestation at severe infestation level that exceeds thresholds for the assessing arborist (where it is considered the tree's overall health or condition will be affected or lead to irreversible decline from pest or

disease).



Tree Condition

Overall Condition (Structure/Stability)	The tree condition as identified by the arborist in regard to defects in structure and stability.
Good (Exceptional specimen)	No damage or decay observed to the root plate, visible basal and /or root flare, stable in ground, well tapered branches with sound open unions. All characteristics within thresholds for the assessing arborist.
Fair (Standard tree – no observable major defects to suggest that there is an increased likelihood of tree or part of tree failure)	Minor damage or decay observed to root plate, trunk or primary branches or branch unions (1st or 2nd branch order or scaffolding branch), well-formed branch unions, minor branch end weight or overextensions within thresholds for the assessing arborist.
Fair/Poor	Moderate damage or decay observed to root plate, trunk or primary branches or branch unions (1st or 2nd branch order or scaffolding branch); minimal basal/root flare; acute branch; past branch failure(s); moderate branch end-weight or over-extension approaching thresholds for the assessing arborist.
Poor	Major damage or decay observed to root plate, trunk or primary branches or branch unions (1st or 2nd branch order or scaffolding branch) no observable basal and /or root flare; acute branch unions starting to include bark; major branch end-weight or overextension at or exceeds thresholds for the assessing arborist.
Very Poor	Excessive damage or decay observed to root plate, trunk, primary branch or branch unions (1st or 2nd branch order or scaffolding branch), excessive decay or hollows compromising the structural integrity, unstable in ground, excessive branch end-weight, included-bark unions, exceeding thresholds for assessing arborist. Failure probable.
Failed	Failure of root plate or trunk or primary branch or branch unions (1st or 2nd branch order or scaffolding branch) or active split between branch unions or severe damage to primary tree structure.



Tree Retention Value Method

IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd in June 2001.

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the Tree Significance - Assessment Criteria and Tree Retention Value - Priority Matrix, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of High, Medium and Low significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined.

Tree Significance - Assessment Criteria



High Significance in landscape

- The tree is in good condition and good vigour. The tree has a form typical for the species.
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age.
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered Ecological Community or listed on a council's Significant Tree Register.
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity.
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values.
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa in situ - tree is appropriate to the site conditions.



Medium Significance in landscape

- The tree is in fair to good condition and good or low vigour.
- The tree has form typical or atypical of the species.
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area.
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street.
- The tree provides a fair contribution to the visual character and amenity of the local area.
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa in situ.

Low Significance in landscape

- The tree is in fair to poor condition and good or low vigour.
- The tree has form atypical of the species.
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings.
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area.
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen.
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa in situ - tree is inappropriate to the site conditions.
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms.
- The tree has a wound or defect that has potential to become structurally unsound.
- Environmental Pest/Noxious Weed Species.
- The tree is an Environmental Pest Species due to its invasiveness or poisonous/allergenic properties.
- The tree is a declared noxious weed by legislation.
- Hazardous and or Irreversible Decline.
- The tree is structurally unsound and/or unstable and is considered potentially dangerous.
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are for individual trees only, however, can be applied to a mono-cultural stand in entirety.

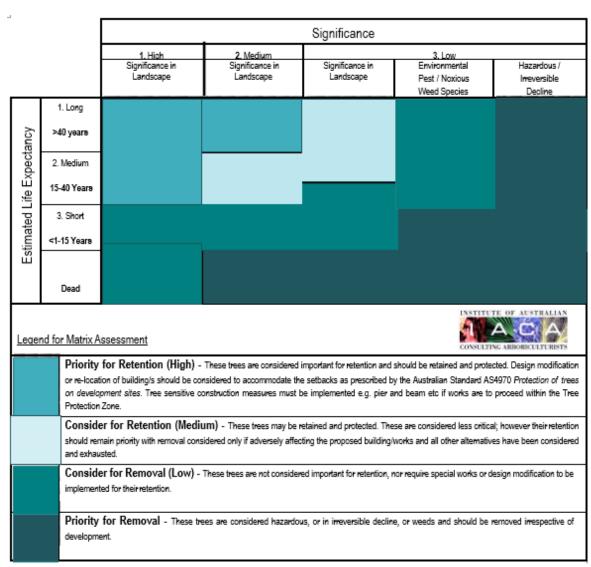


Useful Life Expectancy (ULE)

Useful life expectancy (ULE) is a measure of a trees remaining lifespan regarding its health, condition and locality ULE categories were measured as:

- a) Long (greater than 40 years)
- b) Medium (between 15 and 40 years)
- c) Short (between 1 and 15 years)
- d) Dead

Tree Retention Value - Priority Matrix



REFERENCES

Australia ICOMOS Inc. 1999, *The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance*, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturist (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, Footprint Green Tree Significance & Retention Value Matrix, Avalon, NSW Australia, www.footprintgreen.com.au



Tree Protection Zone and Structural Root Zone Method

Following the VTA, The Tree Preservation Zones and Structural Root zones were calculated and added to the Tree Data Schedule (Appendix 1) and the Tree Impact Plan (Appendix 2) with the methods explained below:

The Structural Root Zone (SRZ) is the area around the base of a tree required for its stability. The woody root growth and soil cohesion in this area are necessary to hold the tree upright; therefore, there are no variations to its size. The SRZ is normally circular with the trunk at its centre and is expressed by its radius in metres (AS - 4970). Due to the potential of causing instability of a tree, it is highly recommended that no roots within its SRZ are pruned or removed. SRZ, which is the area required for tree stability, was calculated as follows: SRZ radius = (D x 50) 0.42 x 0.64.

The Tree Protection Zone (TPZ) is the principle means of protecting trees on development sites. The TPZ is a combination of the root area and crown area that requires protection. It is an area isolated from construction disturbance, so that the tree remains viable (AS – 4970). The radius of the TPZ is calculated for each DBH 12. TPZ multiplying its Χ DBH trunk diameter measured 1.4m (DBH at above around level). The radius of the TPZ is measured from COT (Centre of the trunk).

Variations to the Tree Protection Zone (TPZ)

General

It may be possible to encroach into or make variations to the standard TPZ. Encroachment Includes excavation, compacted fill and machine trenching.

Minor encroachment

If the proposed encroachment is less than 10% of the area of the TPZ and is outside the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. Variations must be made by the project arborist considering relevant factors. (Figure 5) demonstrates some examples of possible encroachment into the TPZ up to 10% of the area.

Major encroachment

If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ the project arborist must demonstrate that the tree(s) would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods and consideration of relevant factors listed in the Clause.



Figure 5

