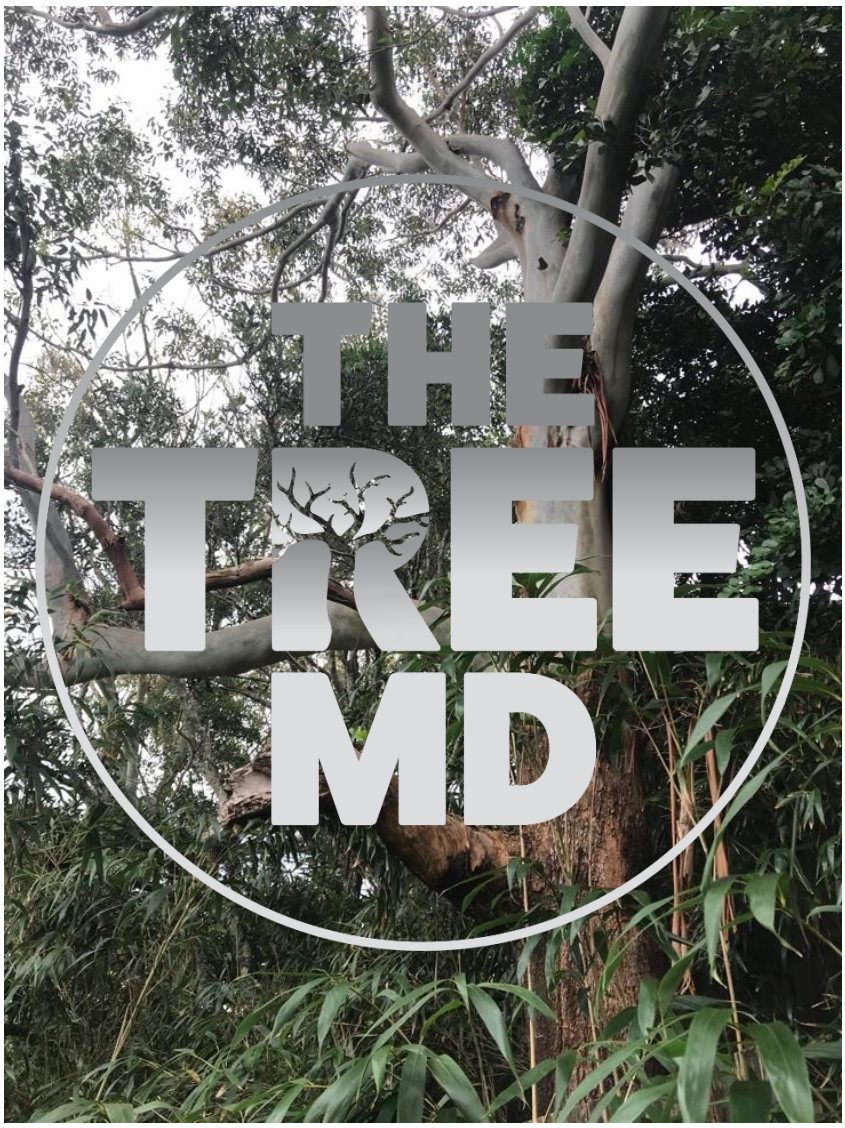
Arboriculture Addendum



10- 16 Pacific Drive Port Macquarie NSW

The Tree MD Pty Ltd
A.C.N 609 764 936
Managing Director: Geoffrey Ashton
0488 222 061
Site Assessment conducted by and
report prepared by: Geoffrey Ashton – Arboriculture AQF 5

Table of Contents

1 Summary 3
2 Disclosure Statement 3
3 Introduction 4
4 Site 4
5 Methodology 5
6 Observations 5
7 Discussion 5
8 Recommendations 6
9 Appendix A Tree Protection Plan Diagram 7
10 Appendix B Tree Profile Table 8
11 Appendix C Images 17
12 Appendix D Glossary 25
13 Appendix E –IACA Significance of a Tree Assessment (Stars) 26
14 Appendix F Tree Protection Plan 28
15 Bibliography/References 31

1 Summary

This Addendum was commissioned by Land Dynamics Australia with a request for an assessment of neighbouring trees in relation to a proposed development at 10- 16 Pacific Drive Port Macquarie NSW. The aim of this addendum is to address potential encroachments on neighbouring trees and to meet the RPS Memo request for information- Da 2021/291 dated 29th July 2021[1].

The addendum concludes that sufficient distances and protection measures are implemented within the original The Tree MD Pty Ltd report dated 25th June 2021 to not adversely impact on the neighbouring trees. Additional measurements are provided with updated plans Level 01 and 02 Plans Drawing No. A-1204 issue C dated 09.08.21 that give evidence of encroachments sustained on Trees 29 and 32 and that they are minor encroachments utilising Tree Protection Zone formations within the Australian Standard Protection of trees on development sites AS 4970 2009. [2]

Other neighbouring trees were assessed as unlikely to be affected if protection measures are implemented. The Tree MD Pty Ltd report dated 25th June 2021 and attached Tree Protection Plan provide guidance and structure to implement these protection measures throughout the development process.

2 Disclosure Statement

Trees are living organisms that provide numerous benefits to the environment; Trees within an urban environment often pose some degree of risk, this risk must be weighed up against the benefits that trees provide. Often the risks associated from trees are minimal when compared to the commonly accepted risks associated with everyday living. Some examples would be commuting in a motor car, using a stairwell or crossing a road.

There is no warranty or guarantee expressed or implied that the subject trees are defect free or do not pose any risk of harm to persons or property. Visual Tree Assessment (VTA[3]) as well as additional tree assessment techniques cannot identify or eliminate all tree defects and failure potential.

The Tree MD Pty Ltd provides professional tree management options in line with industry standards to allow customers or relative legislative bodies to make informed choices. The report findings, conclusions, specifications or recommendations are often based on information provided whether it is measurements, site plans, official reports or verbal discussions. The Tree MD Pty Ltd cannot guarantee the accuracy of this information provided although it may be taken in good will and utilised to make findings, conclusions, specifications or recommendations within this report.

Findings, conclusions, specifications and recommendations are given on the information provided or present at the time of inspection, the condition of the subject trees may change over time or in the event of adverse weather where further additional assessment is recommended. The Tree MD Pty Ltd or anyone employed or working on behalf of The Tree MD Pty Ltd is not to be held liable for any damage or loss due to decisions made or not made regarding findings, conclusions, specifications or recommendations provided in this report.

3 Introduction

This addendum was commissioned by Land Dynamics Australia who requested additional information in relation to a proposed development at 10- 16 Pacific Drive Port Macquarie NSW. The additional information is in response to a Memo RPS Memo request for information- Da 2021/291 dated 29th July 2021[1] The author of this report previously conducted a site assessment on 24th June 2021. There was ample lighting for the purpose of assessment for this report.

The proposed plan documentation utilised for the assessment of this report-

Ghazi Al Ali Architects Proposed Residential Flat Building Pacific Drive 10-16 Pacific Drive Port Macquarie last revision 12.03.21

A-00 TITLE PAGE A-10 SITE ANALYSIS A-11 SURVEY PLAN A-12 FLOOR PLANS A-13 ELEVATIONS A-14 SECTIONS A-20 STATISTICS & DIAGRAMS A-22 MATERIAL SCHEDULE A-23 3D A-0000 A-1001 A-1010 A-1050 A-1060 A-1101 A-1102 A-1201 A-1202 A-1203 A-1204 A-1205 A-1206 A-1207 A-1208 A-1209 A-1301 A-1302 A-1303 A-1304 A-1401 A-1402 A-1403 A-2001 A-2010 A-2011 A-2012 A-2020 A-2030 A-2031 A-2032 A-2035 A-2040 A-2201 A-2202 A-2203 A-2204 A-2301 A-2302 TITLE PAGE SITE ANALYSIS SITE PLAN STREETSCAPE ANALYSIS UNIT SCHEDULE SURVEY PLAN DEMOLITION PLAN LOWER GROUND GROUND FLOOR LEVEL 01 LEVEL 02 LEVEL 03 LEVEL 04 LEVEL 05 LEVEL 06 ROOF EAST ELEVATION WEST ELEVATION NORTH ELEVATION SOUTH ELEVATION SECTION AA SECTION BB RAMP SECTIONS GFA CALCULATIONS SOLAR ACCESS DIAGRAM 2D 3D SOLAR JUN 01 3D SOLAR JUN 02 CROSS-VENTILATION DIAGRAM LANDSCAPE CALCULATION SHADOW DIAGRAM S-NEIGHBOUR SOLAR ACCESS CUT AND FILL STORAGE MATERIAL SCHEDULE 01 MATERIAL SCHEDULE 02 MATERIAL SCHEDULE 03 MATERIAL SCHEDULE 04 3D 01 3D 02 [4]

Land Dynamics Australia Landscape Plan Preliminary Issue Concept Landscape Plans Drawing Title 10-16 Pacific Drive Port Macquarie Landscape Concept Plan Drawing No. 0002- 0003 revision Date 19.03.21. Land Dynamics Australia Concept Servicing Plan last Revision 26.02.21 page 0001 [5]

RPS Memo request for information- Da 2021/291 dated 29th July 2021[1]

Ghazi Al Ali Architects Project 10-16 Pacific Drive Port Macquarie Drawing No. A-0000, A-1102, A-1201, A-1203, A-1204, A-2035, A-2036 dated 09.08.21[6]

The Tree MD Pty Ltd Arboricultural Impact Assessment Report 10-16 Pacific Drive Port Macquarie NSW dated 25th June 2021[7]

The objective of this addendum is to clarify the proposed encroachments and to be submitted with additional requested information to satisfy the request for additional information.

4 Site

10- 16 Pacific Drive Port Macquarie NSW is zoned Medium Density Residential (R3)[8] and is located within the Port Macquarie Hastings Council precinct and controlled by the Port Macquarie Hasting Council's Local Environment Plan (LEP[9]) and the Port Macquarie Council's Development Control Plan (DCP)[10]. Through investigation of the online zoning and heritage maps there was no heritage item listing or heritage conservation area association for this address[11].

The site is east facing to Pacific Drive and the site slopes towards the southwest. There is a large retaining wall along the northern boundary where Trees 1- 10 are located which consists of a significant slope to the south with old wood constructed retaining walls that require remediation. The site is elevated via a retaining wall and fill to the north-western side above the neighbouring western properties.

5 Methodology

The site inspection consisted of a Visual Tree Assessment (VTA[3]). This technique assesses trees from ground level identifying features, symptoms and signs. VTA[3] is a useful tool but can be limiting as it does not inspect below ground or within the internal structure of a tree, it is also limited in the upper canopy where it may not identify concerns that may be seen from an aerial inspection.

Despite its limitations, VTA[3] is an industry recognised and accepted approach. Any further diagnostic or assessment methodology would only be incorporated where requested; further information has been obtained warranting the need for further investigation or a VTA[3] has identified the need for further investigation.

Additional methodology utilised within this report is to assess the site and implement practices that will establish a compliance with Australian Standard Protection of trees on development sites AS 4970 2009. All Trees in excess of 3m that may potentially be affected by the development were assessed for the purpose of this report.

An overlay of the trees and their numbers onto the existing plan building footprint is provided within the Tree Protection Plan Site Diagram. This plan in conjunction with the measurements supplied within the Tree Profile Table will allow for a measured analysis of the trees canopy and root systems as well as the associated impacts. Where plans are not measured, or access is not achieved an estimated distance is utilised.

6 Observations

An assessment of the proposed works within the Tree Protection Zones of Trees 29 and 32 are assessed as tolerable encroachments and are not likely to impact the subject trees if carried out in a tree sensitive manner. Also located on the fence line it is identified that sufficient clearances on the Tree Protection Zone of Tree 28, 30 and 31 have been applied to reduce the potential for associated impacts from the proposed works.

Tree 29 is situated in the neighbouring property approximately 3m below the ground level of the subject site. Due to the retaining wall between the properties and the significant amount of soil media reducing conditions for optimal root development, there is unlikely to be any root system within the development footprint as the subject tree would have optimised to the path of least resistance with root development occurring in soil that provides gaseous exchange. If the root system of Tree 29 was not asymmetric the proposed encroachment would still be outside of the formulated Structural Root Zone and still remain a minor encroachment of 9.2%, it is also well established this is a species that can tolerate substantial encroachments on its root system.

Tree 32 is assessed as a minor encroachment from the proposed plans. Updated Level 01 and 02 Plans Drawing No. A-1204 issue C plans show a reduced encroachment on the formulated Tree Protection Zone of 2.2%. This encroachment is well outside the formulated Structural Root Zone and unlikely to adversely impact the tree. Additional measures are provided within The Tree MD Pty Ltd report dated 25th June 2021 to minimise encroachments from proposed plantings within the Tree Protection Zone.

7 Discussion

Updated Level 01 and 02 Plans Drawing No. A-1204 issue C dated 09.08.21 plans have provided evidence to support the minor encroachment formulations assessed in the original The Tree MD Pty Ltd report dated 25th June 2021.

Recommendation to assess the canopy of Tree 32 were provided in The Tree MD Pty Ltd report dated 25th June 2021 to allow for the best management of the subject tree however an aerial inspection is not required to carry out the proposed works as the proposed works will have no bearing on the outcome of the aerial inspection, and the inspection will have no bearing on the proposed works. At the most extreme outcome a significant defect would be observed, and the subject tree would be removed which would reduce the requirement of tree protection in this area. The subject tree has had previous failures and with the limited assessment from over the fenceline it is identified the tree has a less desirable structural formation. There is no imminent danger evident with the limited view from ground level within 10-16 Pacific Drive Port Macquarie NSW.

8 Recommendations

Protection measures for minor encroachments outlined in The Tree MD Pty Ltd Arboriculture Impact Assessment Report 10-16 Pacific Drive Port Macquarie NSW dated 25th June 2021[7] should be implement throughout the development process to retain and protect neighbouring trees. An aerial inspection of Tree 32 is not required to allow for the proposed development to proceed however maybe carried out if the owning body wishes to assess their tree and its less desirable structural formation.

Additional information provided in Ghazi Al Ali Architects Project 10-16 Pacific Drive Port Macquarie Drawing No. A-0000, A-1102, A-1201, A-1203, A-1204, A-2035, A-2036 dated 09.08.21[6] are to be utilised as evidence to ensure the encroachments are minor encroachments utilising the Australian Standard Protection of trees on development sites AS 4970 2009[12] formulations.

9 Appendix A Tree Protection Plan Diagram

10 Appendix B Tree Profile Table

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
1	Strangler Fig *Ficus spp.*	**Medium** The tree is in fair condition with good vigour, the tree has a form typical of its species, and the tree is visual from neighboring properties although not visual prominent as it is obstructed by other vegetation.	2 Medium 15-40 years	Average	Good	M	5 to 10	5	6	4	5	36.83	2.30	4.80	0.42	0.30	0.25	0.00	0.00	Located almost a metre from fenceline, damaging retaining wall below multi-stemmed from near ground level the tree is tolerant of the rocky topography however is likely to further impact on surrounds. Believed to be self seeded and has a major encroachment from the proposed landscape.	Remove and replace
2	Kentia Palm *Howea forsteriana*	**Low** The tree is in fair condition and good vigour, The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area.	2 Medium 15-40 years	Average	Good	M	5 to 10	3	3	3	3	100	1.85	2.28	0.25	0.19	0.00	0.00	0.00	Suppressed to North leaning south, major encroachment from landscape plan	Remove and replace
3	Wattle *Acacia spp.*	**Low** The tree is in poor condition and average vigour, The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area.	3 short <1-15 Years	Poor	Average	M	10 to 15	6	6	1	5	100	2.37	4.08	0.45	0.34	0.00	0.00	0.00	Located in that garden bed possibly self-seeded. Poor specimen declining branches to south	Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
4	Black Bean *Castanospermum australe*	**Low** The tree is a young specimen and readily replaceable The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area	2 Medium 15-40 years	Good	Good	I	0 to 5	1	1	1	1	100	1.49	2.00	0.15	0.09	0.00	0.00	0.00	Slight lean to south young specimen readily replaceable	Remove and replace
5	She Oak *Casuarina spp.*	**Low** The tree is a young specimen and readily replaceable The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area	3 short <1-15 Years	Average	Good	I	5 to 10	2	2	2	2	100	2.00	2.04	0.30	0.15	0.08	0.00	0.00	Located on fenceline against retaining wall duel leader from ground level	Remove and replace
6	She Oak *Casuarina spp*	**Low** The tree is a young specimen and readily replaceable The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area	2 Medium 15-40 years	Good	Good	I	5 to 10	2	2	2	2	100	1.85	2.64	0.25	0.22	0.00	0.00	0.00	Located in centre of garden bed questionable retaining wall stability reduced life expectancy unless allowances are made. Within footprint of landscape plan	Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
7	Diamond Leaf Laurel *Auranticarpa rhombifolia*	Low The tree is in fair condition and good vigour, The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area.	2 Medium 15-40 years	Poor	Good	M	5 to 10	2	2	3	2	100	0.00	2.76	0.00	0.18	0.13	0.00	0.00	Poor root flare south and dieback branches to south	Remove and replace
8	Guioa *Guioa semiglauca*	Low The tree is in fair condition and average vigour, The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area.	3 short <1-15 Years	Average	Average	M	5 to 10	4	4	4	4	100	1.75	3.12	0.22	0.15	0.14	0.12	0.08	Limited soil media and water penetration due to concrete Result in poor vitality	Remove and replace
9	Guioa *Guioa semiglauca*	Low The tree is in fair condition and average vigour, The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area	3 short <1-15 Years	Average	Average	M	5 to 10	4	2	2	2	100	1.97	3.12	0.29	0.16	0.12	0.12	0.10	Limited soil media and water penetration due t concrete Result in poor vitality decline of branches to south. Landscape plan to remove and remediate area	Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
10	Cheese tree *Glochidion ferdinandi*	Low The tree is in poor condition and average vigour, The tree is only partly visible from surrounding properties as obstructed by other vegetation. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Average	M	0 to 5	3	4	4	1	100	1.68	2.64	0.20	0.12	0.10	0.10	0.10	Poor specimen multi stemmed from ground level	Remove and replace
11	Norfolk Island Pine *Araucaria heterophylla*	Low The tree is in poor condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Average	I	10 to 15	2	2	2	2	100	2.00	3.00	0.30	0.25	0.00	0.00	0.00	Multi stemmed from 2 m located against curve and car park	Remove and replace
12	Norfolk Island Pine *Araucaria heterophylla*	Low The tree is in poor condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Average	I	5 to 10	2	2	2	2	100	1.85	2.40	0.25	0.20	0.00	0.00	0.00	Previously main stem failure at 2m	Remove and replace
13	Norfolk Island Pine *Araucaria heterophylla*	Low The tree is in poor condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Average	Average	I	10 to 15	2	2	2	2	100	2.00	2.76	0.30	0.23	0.00	0.00	0.00	Limited room for future stem and root development	Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
14	Bottle Brush *Callistemon viminalis*	Low The tree is in poor condition and poor vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Poor	M	0 to 5	3	3	2	3	100	1.75	2.64	0.22	0.16	0.06	0.13	0.00	Rubbing branches significant decline. Crack in main stem from ground level	Remove and replace
15	Bottle Brush *Callistemon viminalis*	Low The tree is in average condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Average	Average	M	0 to 5	2	1	1	1	100	1.75	2.16	0.22	0.12	0.13	0.00	0.00	Included branch Junction Borer activity	Remove and replace
16	Bottle Brush *Callistemon viminalis*	Low The tree is in poor condition and poor vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Poor	M	0 to 5	3	1	0	1	100	1.15	1.08	0.08	0.06	0.06	0.00	0.00		Remove and replace
17	Bottle Brush *Callistemon viminalis*	Low The tree is in poor condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Average	M	0 to 5	3	2	1	2	100	1.68	1.68	0.20	0.07	0.05	0.06	0.08		Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
18	Bottle Brush *Callistemon viminalis*	Low The tree is in poor condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Average	M	0 to 5	3	2	1	3	100	2.00	2.52	0.30	0.13	0.13	0.10	0.00	Included at base	Remove and replace
19	Bottle Brush *Callistemon viminalis*	Low The tree is in fair condition and average vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Average	Average	M	0 to 5	1	2	2	2	100	1.68	2.04	0.20	0.12	0.08	0.09	0.00		Remove and replace
20	Bottle Brush *Callistemon viminalis*	Low The tree is in poor condition and poor vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Poor	M	0 to 5	2	2	2	1	100	1.57	2.04	0.17	0.11	0.12	0.00	0.00		Remove and replace
21	Coastal Banksia *Banksia integrifolia*	Low The tree is in poor condition and good vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	3 short <1-15 Years	Average	Good	M	5 to 10	1	1	1	1	100	1.68	1.56	0.20	0.10	0.07	0.00	0.00	Located 20 cm from curb young specimen Readily replaceable	Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
22	Coastal Banksia *Banksia integrifolia*	Low The tree is in poor condition and good vigour, The tree has a defect that may become structurally unsound. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Good	M	5 to 10	2	4	3	1	100	2.13	3.24	0.35	0.27	0.00	0.00	0.00	Previous stem failure at 3 m	Remove and replace
23	Guioa *Guioa semiglauca*	Low The tree has a form typical of its species,, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	2 Medium 15-40 years	Good	Good	M	0 to 5	2	2	2	2	100	1.68	1.92	0.20	0.12	0.10	0.00	0.00	Young specimen readily replacable	Remove and replace
24	Cheese tree *Glochidion ferdinandi* x4 Guioa *Guioa semiglauca* x3	Low The tree is in average condition and good vigour, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area	2 Medium 15-40 years	Average	Average	M	0 to 5	5	5	5	5	100	1.85	2.40	0.25	0.20	0.00	0.00	0.00	clump of trees multiple species stemming from one location	Remove and replace
25	Cheese tree *Glochidion ferdinandi* x2	Low The tree is in poor condition and good vigour, The tree has a defect that may become structurally unsound. The tree provides a minor contribution to the local area	3 short <1-15 Years	Poor	Poor	M	5 to 10	5	5	0	5	100	2.67	5.16	0.60	0.30	0.20	0.18	0.12	Significant decline leans to north Small tree growing near base. Previous poor pruning and restricted growth under carpark	Remove and replace

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
26	Guioa *Guioa semiglauca*	**Medium** The tree is in good condition and average vigour, the tree is locally indigenous, the trees growth is moderately restricted	2 Medium 15-40 years	Good	Average	M	5 to 10	5	0	1	3	0	2.00	2.76	0.30	0.20	0.10	0.00	0.00	Remove the vines and weeds	Retain and protect
27	Guioa *Guioa semiglauca*	**Medium** The tree is in good condition with good vigour, the trees growth is moderately restricted, and the tree provides a fair contribution to the visual character of the local area.	1 Long >40years	Good	Good	M	10 to 15	6	5	5	5	0	2.57	5.40	0.55	0.45	0.00	0.00	0.00	Approximately 6 m away from fenceline	Retain and protect
28	Lilly Pilly *Syzygium paniculatum*	**Low** The tree has a form typical of its species, The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area.	2 Medium 15-40 years	Good	Good	M	5 to 10	1	1	1	1	15	1.85	2.16	0.25	0.18	0.00	0.00	0.00	Neighbouring tree on fenceline estimated measurements	Retain and protect
29	Broad Leaved Paper Bark *Melaleuca quinquenervia*	**Medium** The tree is in good condition and good vigour, the tree is locally indigenous, the trees growth is moderately restricted	3 short <1-15 Years	Good	Good	M	5 to 10	6	3	5	6	0	2.67	6.00	0.60	0.50	0.00	0.00	0.00	Approximately 1 m from fenceline estimated measurements canopy overhangs fenceline by 2 m the fenceline so is the supporting wall drops down approximately 3 to 4 m	Retain and protect

Tree no.	Genus Species Common Name	STARS© RATING	STARS© Life Exp.	Structure	Health	Age Class	Height(M)	Canopy N	Canopy E	Canopy S	Canopy W	Est. Encr.	SRZ	TPZ	DAB (M)	DBH Stem1	DBH Stem2	DBH Stem3	DBH Stem4	Notes/Comments	Recommendations
30	Cocos palm *Syagrus romanzoffiana*	**Low** The tree is a young specimen that is easily replaceable. The tree provides a minor contribution to the local area The tree is only partly visible from surrounding properties as obstructed by other vegetation.	2 Medium 15-40 years	Good	Good	M	5 to 10	4	4	4	4	0	2.08	2.64	0.33	0.22	0.00	0.00	0.00	Approximately 1 m from fenceline, drops down possibly 2 m	Retain and protect
31	Alexandria Palm *Archontophoenix alexandrae*	**Medium** The tree is in good condition and good vigour, the tree is locally indigenous, the trees growth is moderately restricted.	2 Medium 15-40 years	Good	Good	M	10 to 15	3	3	3	3		2.25	2.40	0.40	0.20	0.00	0.00	0.00	.5 m from the fenceline in the raised garden bed care would need to be taken and I press assessment if fence was to be removed	Retain and protect
32	Blue Gum *Eucalyptus saligna*	**Medium** The tree is in average condition and good vigour, the tree is locally indigenous, the trees growth is moderately restricted.	2 Medium 15-40 years	Average	Good	M	10 to 15	8	8	8	8	10	2.85	7.20	0.70	0.60	0.00	0.00	0.00	Located against fence line previous failure at 2 m to South previous failure at 4 m to south questionable branch attachment and rubbing branch at 7 m. Retaining walls assessed as a minor encroachment, plantings will need to be flexible in their final location to avoid significant root systems	Retain and protect, contact owner to have trees assessed

Age Class	**I = Immature** **M = Mature** **O = Over mature or senescence**	**Recommendations**	**Remove**
Health	**G = Good** **A= Average** **P= Poor**		**Prune**
Structural Form	**G = Good** **A= Average** **P= Poor**		**Protect**

11 Appendix C Images

1

3

2

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29		30	
31		32	

12 Appendix D Glossary

Visual Tree Assessment (VTA)	A systematic method of tree assessment (developed by Claus Mattheck & Helge Breloer) using biological and biomechanical indicators to evaluate overall vitality and structural integrity of a tree.
AQF Level 5 Arborist	An Arborist with a AQF level 5 qualification such as a Diploma in Arboriculture [13] This with relevant experience enables the person to perform the tasks required by the standard AS 4373 2007 and legislative bodies
Arborist[14]	An Arborist with a AQF level 3 qualification [15] or above of equivalent recognised and relevant experience that enables the person to perform the tasks required by the standard AS 4373 2007 and legislative bodies
Tree	As determined by the Council Tree Preservation Order.
Tree Worker	A worker who through related training (minimum AQF level 2 in Arboriculture) or equivalent recognised and relevant on the job experience has demonstrated competence in pruning in accordance to the standard AS 4373 2007
Selective pruning	The removal of target branches
Crown thinning	The selective removal of branches that does not alter the overall size of the tree.
Dead wooding	The removal of dead branches
Non invasive excavation	Excavation that does not damage a tree
Tree Protection Zone (TPZ) Or Modified Tree Protection Zone	A specified area at a given distance from the trunk set aside for the protection of a trees root system and canopy during land development works to ensure the long term viability and stability of a tree, calculated in accordance with AS 4970:2009.
Canopy	The crown of a tree, comprising all of the foliage and branches
Pruning	The selective removal of branches, severed at the branch collar near the junction with another branch in accordance with Natural Target Pruning techniques as specified in AS4373:2007.
Structural Root Zone (SRZ)	The Structural Root Zone is located within the Tree Protection Zone; it provides the bulk of mechanical support and anchorage for the tree.

13 Appendix E –IACA Significance of a Tree Assessment (Stars)

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. An example of its use in an Arboricultural report is shown as Appendix A.

Tree Significance - Assessment Criteria

1. 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 Councils 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.

2. Medium Significance in landscape
- The tree is in fair-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.

3. Low Significance in landscape
- The tree is in fair-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.

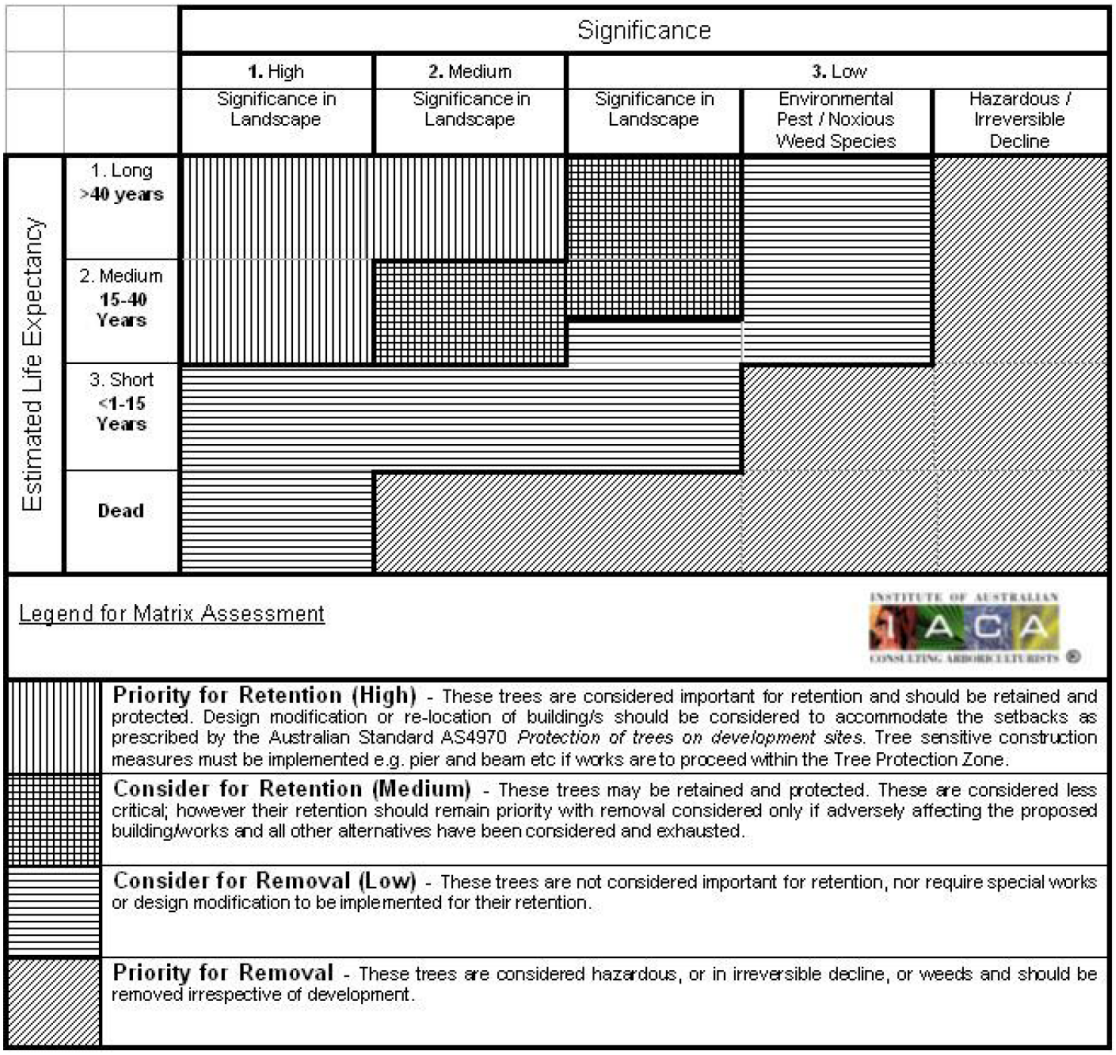
4. Hazardous/Irreversible Decline

- 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 monocultural stand in its entirety e.g.

Table 1.0 Tree Retention Value - Priority Matrix



USE OF THIS DOCUMENT AND REFERENCING

The IACA Significance of a Tree, Assessment Rating System (STARS) is free to use, but only in its entirety and must be cited as follows:

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

14 Appendix F Tree Protection Plan

The employment of a Site/Project Arborist is required to oversee tree protection measures prior to any work. The Site/Project Arborist is to perform site inspections monthly as well as site inspections at the completion of each stage of the development. These inspections are to monitor tree health, the impact on the trees and to assess the TPP is implemented, the site arborist may implement further protective measures or remove measures that are no longer required.

If any noncompliance is identified with the TPP it is to be documented by the Site/Project Arborist and will require compliance and rectification. All non-compliances are to be reported to the site supervisor, owner and certifying body.

These site visits may incorporate remedial activities such as but not limited to the rectification of noncompliance, watering, pest monitoring and pest treatment. The site arborist may be required on site to oversee additional works when working in the Tree protection Zones.

There is to be a site diary established and kept on site where all site visits are documented by the site arborist and any work within the tree protection zone recorded. A duplicated copy is to be sent to the certifier and site supervisor. Any deviation from the site plan should also be recorded.

Pre-Construction

A pre-construction meeting should be attended by the Site Manager, Site Arborist and all contractors and employees that access the site to introduce the Tree Protection Plan.

The Site/Project Arborist is to confirm the location of the trees and identify the pruning works or protection measures that council has permitted following council consent. This is as per council decision which may vary from this report. The trees will need to be removed without damage to any tree that is to be retained.

1.8m chain mesh fencing is to be installed at the formulated Tree Protection Zones or as the Site Arborist sees necessary. A modified TPZ will be required with measures undertaken at the Site Arborist discretion. These measures will be required to allow for access in a closer vicinity to the trees to be retained without causing damage to the trees. This will require maintaining the restrictions that would be implemented within the Tree Protection Zone. The modified TPZ's may incorporate the use of load sharing boards and limit machinery. This can be adjusted by the site arborist. Each activity that requires access within the Tree Protection Zone will require a Work Methodology Statement that will be subject to approval or decline by the site arborist and or governing body.

There is to be signage visible from the worksite stating -

"Caution Modified Tree Protection Zone"

The Signage should comply with Australian Standard As 1319. There is to be additional signage that has the site arborist contact details that include a contact number and specifying these prohibited activities-

- **No Machinery**
- **No storage of any kind**
- **No disposal of waste**
- **No Chemicals**
- **No excavation without Site Arborist supervision**
- **No Pruning to the tree canopy or root system without Site Arborists supervision**
- **No Site Facilities**

Site Establishment

The project site arborist is to monitor and report the impacts of temporary infrastructure. Tree health and signs and symptoms are to be recorded, with the Site Arborist to modifying any protection methods as necessary and documenting these measures within the site diary.

The placement of sand fill up to 100mm thickness throughout the Tree Protection Zone where required may be utilised prior to the laying of a geotechnical fabric and mulch layer to approximately 75mm thickness. The allocation of weight displacement boarding is to be laid throughout the Tree Protection Zone where it is not fenced off or where access is required.

The removal of the existing hard surfaces within Tree Protection Zones will require methodology and procedures statement and may utilise light machinery however this machinery is to utilise weight displacement boarding if position off the hard surface.

The Construction or Site Management Plan should be checked for compliance with the TPP, the site shed stockpiling, sediment control maybe possible concerns.

Construction Work

The project arborist is to monitor the impacts on the trees from construction; the protection measures shall remain in place with any deviation noted in the site diary. Assessment for compliance or noncompliance with the TPP is to be maintained. Tree health signs and symptoms should be recorded.

The preliminary non-invasive excavation of the retaining wall is to be over seen by the Site Arborist and is to utilise methodology and procedures that minimise the impacts on Tree 32. Any minor root pruning work is to be carried out by an arborist with a minimum level 3 in arboriculture and overseen by an AQF level 5 arborist and root pruning is to be in accordance with the Australian Standard Pruning of Amenity Trees AS 4373 2007.

Sediment control is to be implemented to reduce the potential for contamination to the lower trees within and adjacent to the site.

Landscape works

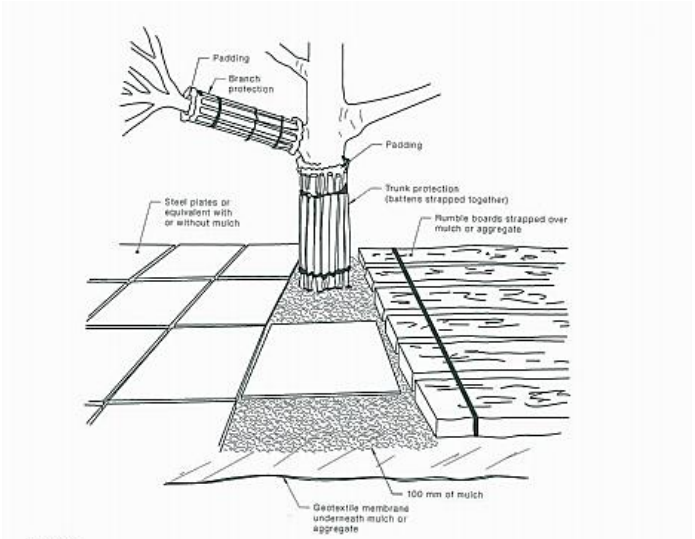
Landscape work in the Tree Protection Zones is to be assessed by the Site Arborist, any below grade excavation within Tree Protection Zones needs to be overseen by the Site Arborist. All plantings are to have flexible locations to avoid significant root systems.

Practical Completion

Upon the completion all tree protection measures are to be documented and removed. The documentation of the trees condition is to be recorded.

Final Certification

The project arborist is to assess the tree and environment with recommendations given for any remedial action. Following any remedial action an inspection is to be carried out where the project arborist is to certify the compliance with the approved TPP and tree protection measures. The certification is to state the condition of the trees as well as any deviations from the tree protection measures and their impact on the trees.

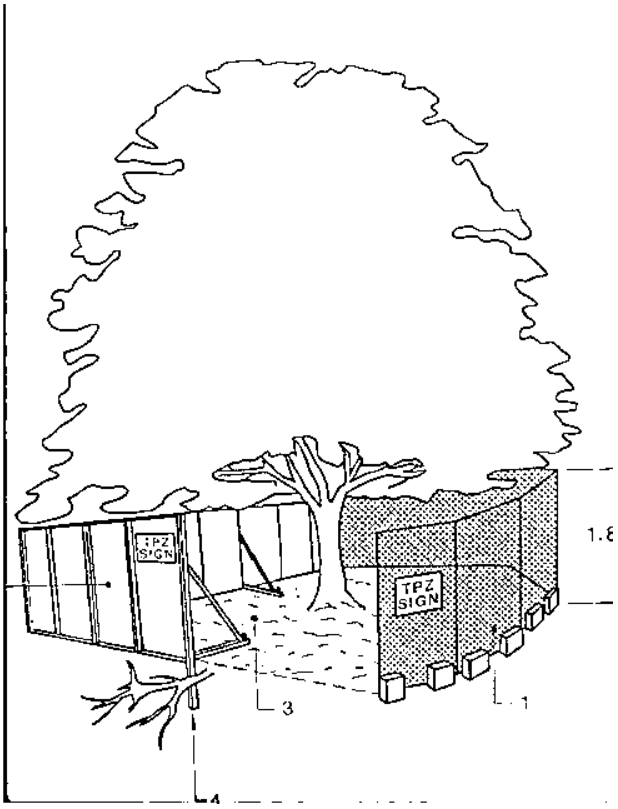


NOTES:

1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.

2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

FIGURE 4 EXAMPLES OF TRUNK, BRANCH AND GROUND PROTECTION



Australian Standard Protection of trees on development sites AS 4970 2009

15 Bibliography/References

[1] RPS Memo request for information- Da 2021/291 dated 29th July 2021

[2] Australian Standard Protection of trees on development sites As 4970 2009

[3] Matheck,C.Updated Field Guide For Visual Tree Assessment.Karlsruhe: Forschungszentrum Karlsuhe, 2007.

[4] Ghazi Al Ali Architects Proposed Residential Flat Building Pacific Drive 10-16 Pacific Drive Port Macquarie last revision 12.03.21
A-00 TITLE PAGE A-10 SITE ANALYSIS A-11 SURVEY PLAN A-12 FLOOR PLANS A-13 ELEVATIONS A-14 SECTIONS A-20 STATISTICS & DIAGRAMS A-22 MATERIAL SCHEDULE A-23 3D A-0000 A-1001 A-1010 A-1050 A-1060 A-1101 A-1102 A-1201 A-1202 A-1203 A-1204 A-1205 A-1206 A-1207 A-1208 A-1209 A-1301 A-1302 A-1303 A-1304 A-1401 A-1402 A-1403 A-2001 A-2010 A-2011 A-2012 A-2020 A-2030 A-2031 A-2032 A-2035 A-2040 A-2201 A-2202 A-2203 A-2204 A-2301 A-2302 TITLE PAGE SITE ANALYSIS SITE PLAN STREETSCAPE ANALYSIS UNIT SCHEDULE SURVEY PLAN DEMOLITION PLAN LOWER GROUND GROUND FLOOR LEVEL 01 LEVEL 02 LEVEL 03 LEVEL 04 LEVEL 05 LEVEL 06 ROOF EAST ELEVATION WEST ELEVATION NORTH ELEVATION SOUTH ELEVATION SECTION AA SECTION BB RAMP SECTIONS GFA CALCULATIONS SOLAR ACCESS DIAGRAM 2D 3D SOLAR JUN 01 3D SOLAR JUN 02 CROSS-VENTILATION DIAGRAM LANDSCAPE CALCULATION SHADOW DIAGRAM S-NEIGHBOUR SOLAR ACCESS CUT AND FILL STORAGE MATERIAL SCHEDULE 01 MATERIAL SCHEDULE 02 MATERIAL SCHEDULE 03 MATERIAL SCHEDULE 04 3D 01 3D 02

[5] Land Dynamics Australia Landscape Plan Preliminary Issue Concept Landscape Plans Drawing Title 10-16 Pacific Drive Port Macqarie Landscape Concept Plan Drawing No. 0002- 0003 revision Date 19.03.21. Land Dynamics Australia Concept Servicing Plan last Revison 26.02.21 page 0001

[6] Ghazi Al Ali Architects Project 10-16 Pacific Drive Port Macquarie Drawing No. A-0000, A-1102, A-1201, A-1203, A-1204, A-2035, A-2036 dated 09.08.21

[7] The Tree MD Pty Ltd Arboricultural Impact Assessment Report 10-16 Pacific Drive Port Macquarie NSW dated 25th June 2021

[88] NSW Legislation. 2016. *NSW Legislation*. [ONLINE] Available at: Port Macquarie-Hastings Local Environmental Plan 2011 | Planning Portal - Department of Planning and Environment (nsw.gov.au)

[9] Port Macquarie Local Environmental Plan – Port Macquarie. 2011. *Port Macquarie Local Environmental Plan – port Macquarie Shire Council*. [ONLINE] Available at http://www.legislation.nsw.gov.au/#/view/EPI/2011/84/id110 [Accessed 25th June 2021].

[10] Port Macquarie Development Control Plan – Port Macquarie Council. 2013. *Port Macquarie Development Control Plan – Port Macquarie Shire Council*. [ONLINE] Available at: http://www.pmhc.nsw.gov.au/Building-Planning/Planning-Development-Controls/Development-Control-Plans-DCPs [Accessed 27 September 2016].

[11] NSW Legislation. 2016. *NSW Legislation*. [ONLINE] Available at: 6380_COM_HER_013FA_010_20110526.pdf (windows.net) [Accessed 25th June 2021].

[12] Australian Standard Protection of trees on development sites As 4970 2009

[13] Australian Standard Pruning of Amenity Trees AS 4373 2007

[14] WorkCover. 2016. *Home - WorkCover*. [ONLINE] Available at: http://www.workcover.nsw.gov.au. [Accessed 25th June 2021].

[15] Australian Standard Pruning of Amenity Trees AS 4373 2007