TO	The City of Newcastle Council
LOCATION	11 - 17 Mosbri Crescent, The Hill 2300
SUBJECT	Compensatory planting species list
DATE	24 November 2021

1.1. Landscape architects and designers have put forward a species list of trees to be planted on the subject site as offset to those trees requiring removal.

1.2. This list has been provided to me for review, as shown below:

Angophora costata	11
Banksia integrifolia	4
Cupaniopsis anacardioides	4
Eucalyptus botryoides	6
Eucalyptus tereticornis	3
Elaeocarpus obovatus	9
Eucalyptus curtisii	3
Syzygium paniculatum	17
Tristaniopsis laurina	15
TOTAL	**72**

1.3. In the Arborist Impact Assessment, 28 April 2021, tree removal and compensatory tree plantings was discussed in detail. This report discussed on page 15: "*The matrix for determining the quantity of replacement trees follows the guideline of the UFTM Part A Private Trees, page 19, 4.3 Compensatory planting, table 4 and "In the UFTM, paragraph 1 of section 4.3 indicates that trees of moderate to significant value which cannot be retained require compensatory planting" (sic).*

1.4. The species proposed are site suitable. However, in consideration of the site's proximity to Arcadia Park, the probability of self-seeding of the nominated species in this park is high. In this regard, I would reconsider the Tuckeroo (*Cupaniopsis anacardioides)* species because of its success in displacing other more favourable local species. Any one of the other species would be suitable, alternately consider the *Angophora hispidia* - Dwarf apple gum or the *Livistona australis* – Cabbage tree palm.

1.5. I found that the majority of trees proposed would provide good canopy coverage and long-term sustainability when managed through to their semi-maturity as compensatory planting to offset tree removal.

1.6. I also found that the quantity of trees proposed is over-compensation for the quantity and quality of trees removed.

1.7. I anticipate the determining authority to concur with these conclusions.

Sincerely,

Vivianne Bleiker, Consultant Arborist, Area Tree Vet

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ATV job ref 27102021-1328

Member #3324

Vivianne Bleiker
NO-290653

TO	The City of Newcastle Council
LOCATION	13 Hillview Crescent, The Hill 2300
SUBJECT	Shoring wall affect to two trees
DATE	21 April 2022

CONTENTS

1.1. It has been requested that I review the position of a proposed shoring wall of 11-17 Mosbri Crescent, The Hill in relation to its affect to two trees in the adjoining site of 13 Hillview Crescent, The Hill. These are shown in the below photograph taken from the location of the proposed shoring wall.

1.2. These two trees are retainable and will require implementation of specific tree protection measures as discussed herein.

1.3. The following information aligns with *AS 4970-2009 Protection of Trees on Development Sites* in quantifying the situation these two trees would experience.

1.4. I have also included a table of those trees to be retained and those to be removed.

Sincerely,

Vivianne Bleiker, Consultant Arborist, Area Tree Vet

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2. AS 4970-2009 PROTECTION OF TREES ON DEVELOPMENT SITES

2.1. The Australian Standard: *AS 4970-2009 Protection of trees on development sites,* discusses the impact proposed development has on trees and trees' impacts in close proximity to built assets.

2.2. I refer you to previous arboricultural correspondence for specifics on TPZ and SRZ zones. However, in summary: **Tree protection zone (TPZ)** Considers an area around a tree to be set aside for its protection. The TPZ considers its growing environment above and below ground to determine the size of allowable encroachment prior to site works which can affect tree health and sustainability; **Structural root zone (SRZ)** The SRZ need only be calculated when major encroachment into a TPZ is proposed. The SRZ is the area around the base of the tree required for the tree's stability in the ground, it is considered critical to the tree's integrity. The woody root growth and soil cohesion in this area are necessary to hold the tree upright.

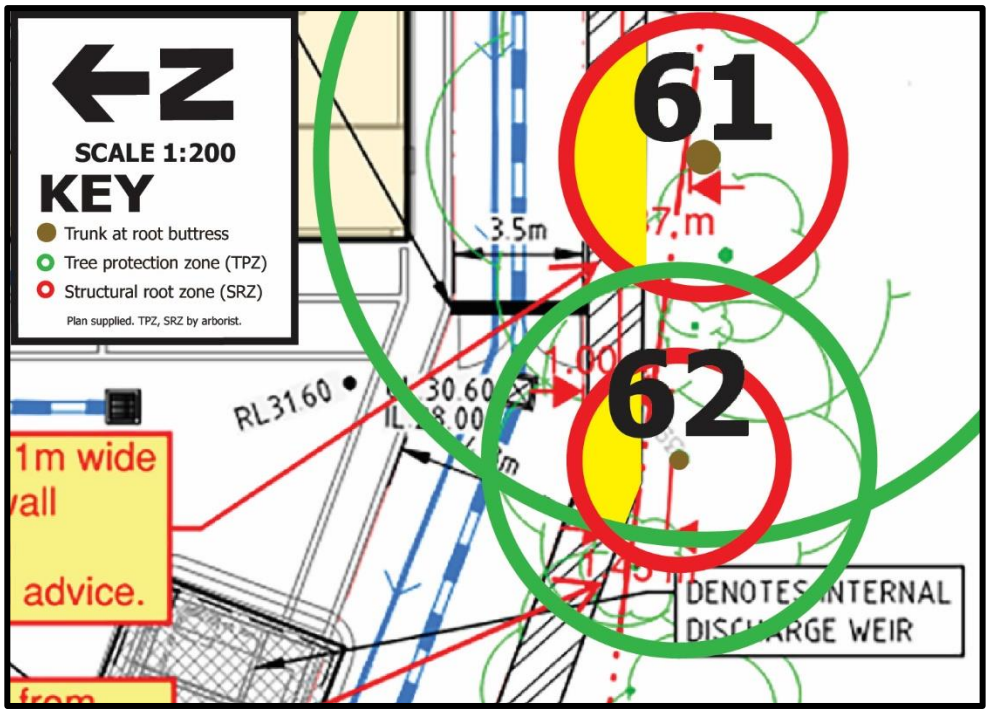
2.3. The TPZ and SRZ measurements are shown in the below table:

All measurements in metres				
Tree #	**DBH** Diametre at breast height	**TPZ** Tree protection zone as a radius	**DRB** Diametre at root buttress	**SRZ** Structural root zone as a radius
61	0.80	**9.6**	0.90	**3.2**
62	0.40	**4.8**	0.50	**2.5**

2.4. The shoring wall will be 1.87m to tree 61 and 1.45m to tree 62. This is shown on the below diagram.

2.5. This diagram shows incursion. While on plan these incursions appear significant, and more that what is typical, the trees are retainable. This is because of the position of the trees in relation to the shoring wall and that the trees are positioned at a high point to the proposed cut for the shoring wall.

2.6. Therefore, the ground level of trees 61 and 62 will be well above the cut. This indicates that there will not be loss of ground mass to cause impact to their structural integrity or sustainability.



3. TREE PROTECTION MEASURES

3.1. Basic tree protection measures are discussed in the Australian Standard being the following:

3.2. Tree Protection Measures (TPM) shall be undertaken in accordance with the requirements of AS 4970—2009 - Protection of trees on development sites, section 4, page 15. Prior to the commencement of any works, a detailed tree protection plan will be prepared in consultation with the project arborist. This plan will include the following measures:

The following activities will be restricted within the TPZ of retained trees:

a) Machine excavation including trenching
b) Excavation for site fencing
c) Cultivation
d) Storage
e) Preparation of chemicals, including preparation of cement products
f) Parking of vehicles or plant
g) Refuelling
h) Dumping of waste
i) Wash down and cleaning of equipment
j) Placement of fill
k) Lighting of fires
l) Soil level changes by mechanical excavation
m) Installation of signage
n) Physical damage to trees

3.3. These measures will apply to these two trees.

4. ADDITIONAL TREE PROTECTION MEASURES

4.1. Furthermore, there is to be no mechanical excavation to the tree SRZ. All excavation around the SRZ is to be manual. This area is to be marked out with line marking paint to facilitate the excavation and visualise the distance to those conducting the manual excavation.

4.2. In addition to these measures trees 61 and 62 are to have a mulch layer added behind the shoring wall within the site. This will offer them additional nutrients as the mulch layer decomposes, avoid drying of the soil surface and reduced undesirable weed growth.

4.3. The mulch is to be forest litter and 30cm in thickness. The mulch is not to be placed onto the trunks; a berm of 30cm is to be placed from the trunk to the closest point of the mulch around these trees.

4.4. Note that the site of trees 61 and 62 is not to be accessed by workers of 11 – 17 Mosbri Crescent, The Hill.

5. TABLE OF TREES TO BE RETAINED AND REMOVED

TREES ON SITE OF 11 – 17 MOSBRI CRESCENT			
Tree number	**Common / Botanical name**	**Moderate or high retention value**	**Removed?**
1	Weeping bottlebrush *Callistemon viminalis*	No	Yes
2	Queensland firewheel tree *Stenocarpus sinuatus*	No	Yes
3	Weeping bottlebrush *Callistemon viminalis*	No	Yes
4	Weeping bottlebrush *Callistemon viminalis*	No	Yes
5	Weeping bottlebrush *Callistemon viminalis*	No	Yes
6	Weeping bottlebrush *Callistemon viminalis*	No	Yes
7	Water gum *Tristaniopsis laurina*	Yes	Yes
8	Queensland umbrella tree *Schefflera actinophylla*	No	Yes
9	Broad leaved paperbark *Melaleuca quinquenervia*	Yes	Yes
10	Magenta lillypilly *Syzygium paniculatum*	No	Yes
11	Coastal She-oak *Casuarina equisetifolia*	Yes	Yes
12	Cadaghi *Corymbia torelliana*	No	Yes
12A	Coastal banksia *Banksia integrifolia*	No	Yes
13	Sweet pittosporum *Pittosporum undulatum*	No	Yes
14	Broad leaved paperbark *Melaleuca quinquenervia*	Yes	Yes
15	Broad leaved paperbark *Melaleuca quinquenervia*	No	Yes
16	Norfolk island hibiscus *Lagunaria patersonii*	No	Yes
17	Norfolk island hibiscus *Lagunaria patersonii*	No	Yes
18	Swamp She-oak *Casuarina glauca*	No	Yes
22	Swamp mahogany *Eucalyptus robusta*	Yes	Yes
23	Swamp mahogany *Eucalyptus robusta*	Yes	Yes
24	Swamp mahogany *Eucalyptus robusta*	No	Yes
25	Swamp mahogany *Eucalyptus robusta*	No	Yes
26	Broad leaved paperbark *Melaleuca quinquenervia*	Yes	Yes

27	Norfolk island hibiscus *Lagunaria patersonii*	Yes	Yes
28	Casuarina *Casuarina sp.*	No	Yes
29	Casuarina *Casuarina sp.*	No	Yes
30	Swamp She-oak *Casuarina glauca*	No	Yes
31	Small fruited fig *Ficus microcarpa var. Hillii*	Yes	Yes
32	Broad leaved paperbark *Melaleuca quinquenervia*	No	Yes
33	African Olive *Olea europaea subsp. cuspidata*	No	Yes
34	Swamp She-oak *Casuarina glauca*	Yes	Yes
35	Swamp mahogany *Eucalyptus robusta*	Yes	Yes
35A	Casuarina *Casuarina sp.*	No	Yes
36	Casuarina *Casuarina sp.*	No	Yes
37	Swamp mahogany *Eucalyptus robusta*	Yes	Yes
38	Small fruited fig *Ficus microcarpa var. Hillii*	Yes	Yes
39	Norfolk island hibiscus *Lagunaria patersonii*	No	Yes
40	Swamp mahogany *Eucalyptus robusta*	Yes	Yes
41	Small fruited fig *Ficus microcarpa var. Hillii*	Yes	Yes
42	Lillypilly *Syzygium species*	No	Yes
43	Weeping willow *Salix babylonica*	No	Yes
47	Willow / Wallangarra white gum *Eucalyptus scoparia*	Yes	Yes
		Total removed:	**43**
		Total removed with high retention value:	**16**

TREES OUTSIDE OF SITE			
Location	**Tree number**	**Common / Botanical name**	**Removed?**
Mosbri Crescent Park	**1**	Small fruited fig *Ficus microcarpa*	No
Mosbri Crescent Park	**2**	Weeping bottlebrush *Callistemon viminalis*	Yes
Mosbri Crescent Park	**3**	Weeping bottlebrush *Callistemon viminalis*	No
Mosbri Crescent Park	**4**	Small leaved lillypilly *Syzygium luehmannii*	No
Mosbri Crescent Park	**5**	Small leaved lillypilly *Syzygium luehmannii*	No
Mosbri Crescent Park	**6**	Small leaved lillypilly *Syzygium luehmannii*	No
Mosbri Crescent Park	**7**	White cedar *Melia azedarach*	No
Mosbri Crescent Park	**8**	Cook Pine *Araucaria columnaris*	No
Mosbri Crescent Park	**9**	Broad leaved paperbark *Melaleuca quinquenervia*	No
Mosbri Crescent Park	**10**	Moreton Bay fig *Ficus macrophylla*	No
17 Hillview Crescent	**44**	Canary Island Date Palm *Phoenix canariensis*	No
17 Hillview Crescent	**45**	Canary Island Date Palm *Phoenix canariensis*	No
Shared Boundary - 17 Hillview Crescent	**46**	Coral Tree *Erythrina x sykesii*	No
Arcadia Park	**47A**	Broad leaved paperbark *Melaleuca quinquenervia*	No
Shared Boundary - Arcadia Park	**48**	Canary Island Date Palm *Phoenix canariensis*	No
Arcadia Park	**49**	Swamp mahogany *Eucalyptus robusta*	No
Arcadia Park	**50**	Casuarina *Casuarina sp.*	No
Arcadia Park	**51**	Casuarina *Casuarina sp.*	No
Arcadia Park	**52**	Coast myall *Acacia binervia*	No
Arcadia Park	**53**	Swamp mahogany *Eucalyptus robusta*	No
Arcadia Park	**54**	River she-oak *Casuarina cunninghamiana*	No
Arcadia Park	**55**	River she-oak *Casuarina cunninghamiana*	No
Arcadia Park	**56**	River she-oak *Casuarina cunninghamiana*	No
Arcadia Park	**57**	Turpentine *Syncarpia glomulifera*	No
Arcadia Park	**58**	Swamp mahogany *Eucalyptus robusta*	No

Arcadia Park	**59**	Swamp mahogany *Eucalyptus robusta*	No
Arcadia Park	**60**	Brown / Plum Pine *Podocarpus elatus*	No
Arcadia Park	**61**	Canary Island Date Palm *Phoenix canariensis*	No
Arcadia Park	**62**	Silky oak *Grevillea robusta*	No
Arcadia Park	**63**	Swamp mahogany *Eucalyptus robusta*	No
Arcadia Park	**64**	Wild Olive *Olea europaea subsp. cuspidata*	No
Arcadia Park	**65**	Weeping willow *Salix babylonica*	No
Arcadia Park	**66**	Wild Olive *Olea europaea subsp. cuspidata*	No
Kitchener Parade	**19**	Mountain grey gum *Eucalyptus cypellocarpa*	Yes
Kitchener Parade	**20**	Smooth bark apple *Angophora costata*	Yes
Kitchener Parade	**21**	Camphor laurel *Cinnamomum camphora*	Yes
41 Kitchener Parade	**13A**	Radiata/Monterey pine *Pinus radiata*	No
13 Hillview Crescent	**61**	Camphor laurel *Cinnamomum camphora*	No
13 Hillview Crescent	**62**	Eucalypt *Eucalyptus sp.*	No