



Arboricultural Impact Assessment

8 Surfside Ave, Avalon Beach



Prepared by Alex Austin

For

Louise Seeto

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Alex Austin
AQF level 8 Consulting Arborist.
PO Box 84, Avalon Beach 2017
Email: arborsaw@gmail.com

1 Summary

Alex Austin, an AQF level 8 Arborist, was commissioned by Louise Seeto to complete an Arboricultural Assessment (AIA) of the trees that could be impacted by the proposed works at 8 Surfside Avenue, Avalon Beach.

The site inspection was completed on the 11th of November 2021 where 19 trees in proximity to the proposed development were inspected and are now subject to this report. This document and data has been prepared in accordance with Australian Standard 4970: 2009 *Protection of trees on development sites*. The trees have been physically tagged and have been plotted onto the site plan. The site is zoned as E4 Environmental Living under the Pittwater Local Environmental Plan 2014. The 19 trees comprise of;

- Three (3) B Retention Value Trees numbered 8, 11 & 14
- 16 C Retention Value Trees

All trees along the western boundary provide significant shading benefits to the house. The majority of the site trees have considerable screening/privacy benefits.

The proposed development works include demolition, tree removal, excavation and then construction of a new two story residence and pool. If the current proposed construction layout is to proceed, then Six (6) C Retention Value Trees numbered 4, 7, 16, 19, 20 & 21 are required for removal from the site to facilitate the project. The trees proposed for removal are small trees that all have poor structure due to previous lopping or suppression.

13 trees will be retained if the tree protection measures in the report are adhered to. Trees numbered 12, 14 & 18 have proposed works within their Tree Protection Zones (TPZ) and require sensitive excavation and construction methods. The proposed pool has been designed to minimize the impact to Trees 12, & 14. Existing retaining walls restrict root growth with TPZ and limit the extent of excavation required to accommodate the proposal with the TPZ's of Tree 12, 14 & 18. These trees are located below a 50cm high sandstone wall and also have an existing large black retaining wall within the TPZ which is restricting root growth. The minimal excavation required is considered acceptable and the works will not impact upon tree health/viability if the tree protection measures in this report are adhered to.

In order to ensure the 13 trees nominated for retention remain viable during and post construction, tree protection measures including, the engagement of a project arborist, tree protection fencing, tree protection signage, a restriction of activities within Tree Protection Zones (TPZ's), Arborist supervision of works' within the TPZ's and compliance reporting, must be incorporated into the project. A Tree Protection plan has been prepared and can be located in the Appendix.

11 new trees are to be planted onsite and are shown the Landscape Plans. The new plantings include One (1) *Banksia serrata* (Old Man Banksia) and Two (2) *Angophora costata* (Sydney Red Gum).

This document must be used in its entirety & Further questions are to be directed to:

Alex Austin



AQF Level 8 Arborist

arborsaw@gmail.com

PO Box 84 Avalon Beach, NSW, 2107

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2 Document Details

Version Number	Date	Description
001	29/4/2022	Draft Preparation
002	16/5/2202	Draft Report Release
003	06/07/2022	Proposed Plan Modification
004	28/07/2022	Landscape Plan Addition
005	19/08/2022	Final

3 Background

Alex Austin, an AQF level 8 Arborist, was commissioned by Louise Seeto to complete an Arboricultural Assessment (AIA) of the trees that could be impacted by the proposed works at 8 Surfside Avenue, Avalon Beach.

The site inspection was completed on the 11th of November 2021 where 19 trees in proximity to the proposed development were inspected and are now subject to this report. This document and data has been prepared in accordance with Australian Standard 4970: 2009 *Protection of trees on development sites*. The trees have been physically tagged and have been plotted onto the site plan.

3.1 Reviewed Documents

The following documents have been reviewed in the preparation of this fee proposal;

- Site Survey by Adam Clerke Surveyors, dated 28/09/2021
- Proposed Plans by Atelier Halefeli Architects, revision A, dated 18/08/22
- Demolition Plan by Atelier Halefeli Architects dated 1/5/22
- Preliminary Proposed Plans by Atelier Halefeli Architects, dated 30/06/22
- Landscape Plans, by Wallman Partners dated 17/08/22

4 Legislation

4.1 Zoning

The site is zoned as E4 Environmental Living under the Pittwater Local Environmental Plan 2014.

4.2 Biodiversity and Conservation SEPP

The subject trees are protected by the State Environmental Planning Policy (Biodiversity and Conservation SEPP) 2021. Trees proposed for removal or pruning, are covered by the SEPP unless they are considered an imminent danger to life and property (By a AQF Level 5 or above Arborist) and require a permit to be issued by Council.

5 Aims and Objectives

- Determine the Retention Value and required area for each tree to be protected and remain viable during and post construction.
- Identify and reduce potential conflicts between subject trees and site development by providing accurate information on the area required for tree retention and methods/techniques suitable for tree protection during construction.
- Encroachments to the TPZs are to be minimized prior to construction.

- Works within the defined Tree Protection Zone shall utilize special measures to avoid or minimize adverse impacts on trees.
- Provide information on restricted activities within the area nominated for tree protection, as well as suitable construction methods to be adopted during construction.
- The trees to be retained must be protected from all other demolition, excavation and construction activities.

6 Methodology

6.1 Tree Health and Condition

The inspection of the trees was made from the ground and involved inspection of the external features only. No invasive, diagnostic or laboratory testing was carried out.

Tree height and canopy spread were estimated and trunk diameter (DBH) and Diameter at Root Crown (DRC), have been measured with a diameter tape where applicable.

Data including species, age class, health, structure, landscape significance, defects, life expectancy were recorded. Tree species were identified using available seed and fruit during the site inspection.

All photographs were taken at the time of the site inspection by the inspecting arborist. Photographs have been altered for brightness and/or cropped only.

6.2 Tree Protection Zone and Structural Root Zone

The Tree Protection Zone method has been derived from the Australian Standard 4970–2009: *Protection of trees on development sites*.

The Tree Protection Zone (TPZ) is defined as a specified area above and below ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown. It is the area required to provide for the viability of a tree to be retained where it is potentially subject to damage by development.

The radius of the TPZ is calculated for each tree by multiplying its Diameter at Breast Height (DBH) by 12

$$TPZ\ radius = DBH \times 12$$

The trunk diameter method has been used in this report to determine the TPZ. This area provides a general guide where the roots are likely to be located.

The Structural Root Zone (SRZ) is the area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres.

$$SRZ\ radius = (Drc \times 50)^{0.42} \times 0.64$$

6.3 Root Loss

In line with section 3.3.2 of AS 4970:2009, a 10% incursion to a TPZ is considered a minor encroachment. Any more than 10% is considered a major incursion and special measures should be taken to minimise impact on the retained trees and the Arborist must demonstrate that the tree will remain viable post construction.

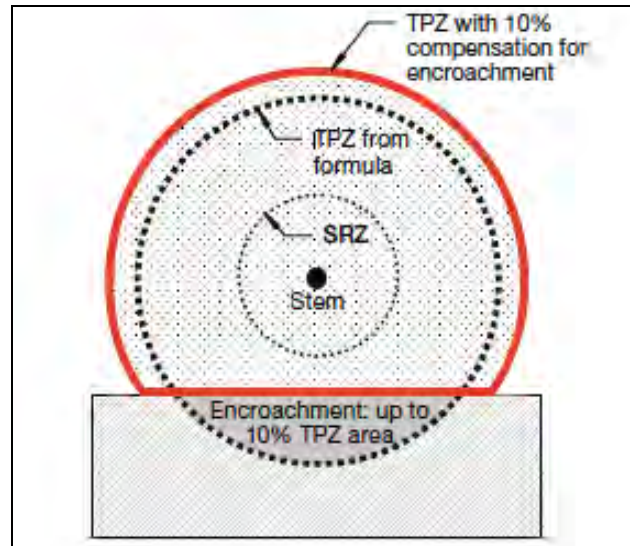


Figure 1: An example acceptable 10% minor encroachment. (Source: AS 4970:2007)

6.4 Retention Value

A simplified rating system consisting of 4 categories as a summary of the survey's cascading process. The retention value considers the trees health and structure, age class, defects, life expectancy and significance in the landscape. The retention value method has been derived from the British Standard 5837:2012.

- A – Retention Value **(Green)** Trees of high quality suggesting considerable efforts should be made to retain these trees.
- B – Retention Value **(Blue)** Trees of moderate quality suggesting reasonable efforts should be made to retain these trees.
- C – Retention Value **(Grey)** Trees of low quality and significance, These trees may be removed or retained without significant impact to the longevity of the landscape.
- R – Remove **(Red)** Trees that are not worthy of preservation and should be removed due to defects, weed species and high hazard values.

7 Findings

7.1 Suburb Map

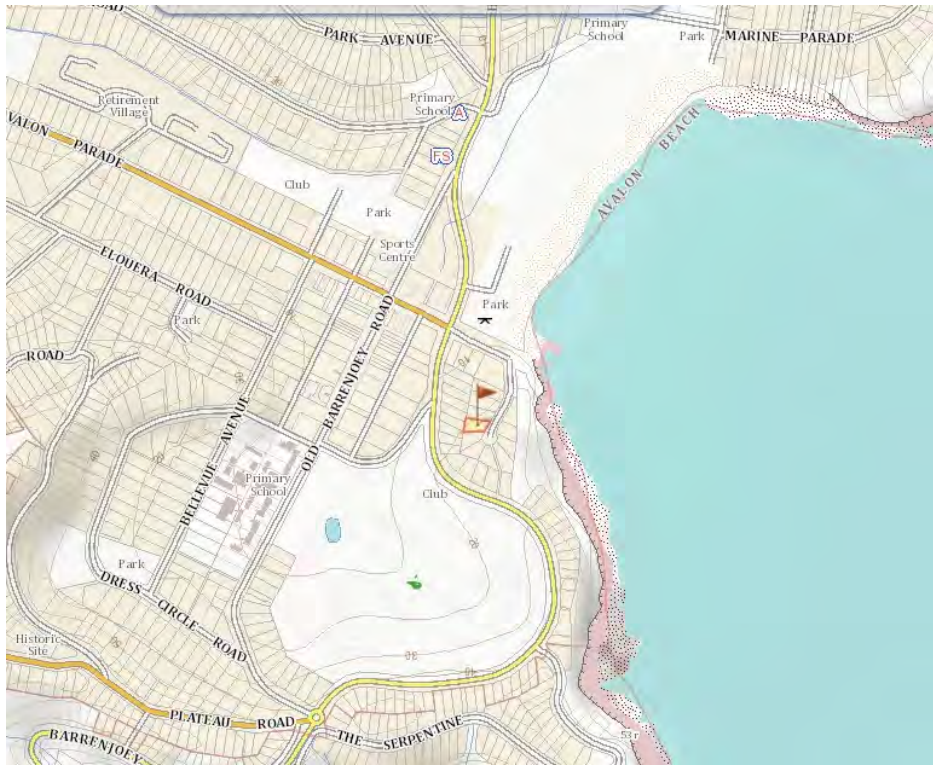


Figure 2: Map of Suburb showing site location (Source: Sixmaps 2022)

7.2 Aerial Image



Figure 3: Aerial image of site showing tree location. (Source: Sixmaps 2022)

7.3 Site conditions

The site is a half level and half west-sloping block with a two storey residence. The front yard has a concrete drive way. The back yard is bordered with trees forming a dense screen. A construction site is located in the neighbouring property to the north. A block retaining wall and separate smaller sandstone retaining wall separate the majority of the trees from the proposed works area.

All trees along the western boundary provide significant shading benefits to the house. The majority of the site trees have considerable screening/privacy benefits.



Figure 4: The front of the site can be observed. (Source: Austin 11th of November 2021)



Figure 5: The northwestern corner and existing lawn can be observed. (Source: Austin 11th of November 2021)



Figure 6: The western side of the rear garden with the retaining walls separating site trees from works. (Source: Austin 11th of November 2021)

8 Tree Survey

The site inspection was completed on the 11th of November 2021 where 19 trees in proximity to the proposed development were inspected and are now subject to this report.

The 19 trees comprise of;

- Three (3) B Retention Value Trees numbered 8, 11 & 14
- 16 C Retention Value Trees

The complete data table is located in the appendix and the trees have been mapped on the site plan.

8.1 Three (3) B Retention Value trees

Trees in this category generally possess fair or better health and structure and have life expectancies greater than 15 years. Reasonable attempts should be made to retain the trees through the project as they have the ability to be continuing components of the landscape. Examples include;

8.1.1 Tree 14 *Melaleuca quinquenervia* (Broad Leafed Paperbark)

Tree 14 *Melaleuca quinquenervia* (Broad Leafed Paperbark) that has good health and structure with a 25-50 year life expectancy and medium landscape significance. .. The tree has a 7.8m TPZ and 2.9m SRZ, Observations included located 40cm west of sandstone retaining wall. The existing block retaining wall is restricting root growth on the Southern side of the TPZ.



Figure 7: Tree 14 in the landscape showing existing retaining walls (Source: Austin 11th of November 2021)

8.1.2 Neighbours Trees 8 & 11

Tree 8 *Banksia integrifolia* (Coast Banksia) and Tree 11 *Eucalyptus robusta* (Swamp mahogany) are neighbours trees with 15 – 25 year life expectancies and medium landscape significance. Neither tree 8 or 11 is in proximity to the proposed site works and will not be impacted by the proposal. The existing site fences are adequate tree protection measures.

8.2 16 C Retention Value trees

Trees in this category should not be considered a constraint on development as they have reduced health or condition, or have short life expectancies or have low landscape significance or are easily replaceable due to their small size. Examples include;

8.2.1 Tree 7 *Angophora costata* (Sydney Red Gum)

Tree 7 *Angophora costata* (Sydney Red Gum) has good health and poor structure with a 10 -15 year life expectancy.. The tree has a 2.6m TPZ and 1.9m SRZ, Observations included; Previously lopped at 4m, poor structure from lopping points, minor rubbing branches. It appears this tree was lopped for a view prune 3 -5 years ago. This tree is considered to be easily replaceable in the short term due to its small size and should not be considered a constraint on development.



Figures 8 & 9: Tree 7 in the landscape (Left) and the poorly attached regrowth originating at the lopping points. (Right). (Source: Austin 11th of November 2021)

8.2.2 Tree 5 *Syzygium luehmannii* (Lilly Pilly) Hedgerow

Tree 5 *Syzygium luehmannii* (Lilly Pilly) is a hedgerow of 11 trees with good health and structure with a 15-25 year life expectancy. The trees provide excellent screening between the southern neighbour and the site. Observations included; Hedgerow of 11 screening neighbours. Located above existing retaining wall.

8.2.3 Tree 18 *Melaleuca quinquenervia* (Broad Leafed Paperbark)

Tree 18 *Melaleuca quinquenervia* (Broad Leafed Paperbark) that has fair health and structure with a 10 -15 year life expectancy and medium landscape significance. The tree has 8m TPZ and 2.8m SRZ, Observations included; Thinning canopy, poor pruning stubs site side and neighbours side. The existing block retaining wall is restricting root growth on the Sothern side of the TPZ.

8.2.4 Tree 19 *Melaleuca quinquenervia* (Broad Leafed Paperbark)

Tree 19 *Melaleuca quinquenervia* (Broad Leafed Paperbark) that has fair health and structure with a 5-10 year life expectancy. Observations included Previously lopped at 2m height, canopy is regrowth.



Figures 10 & 11: Tree 18 in the landscape showing existing retaining walls and a thinning canopy (Left) the small size and poor structure of 19(Right). (Source: Austin 11th of November 2021)

9 Proposed Works.

9.1 Existing layout

The exiting layout includes a two story house, driveway, retaining walls on southern and western side of site. Dense trees on southern and, western and northern boundaries of the site that provide considerable privacy. Five (5) weed/exempt trees numbered T6, 10, 22, 23 & 24 have been removed from site since the completion of the site survey.

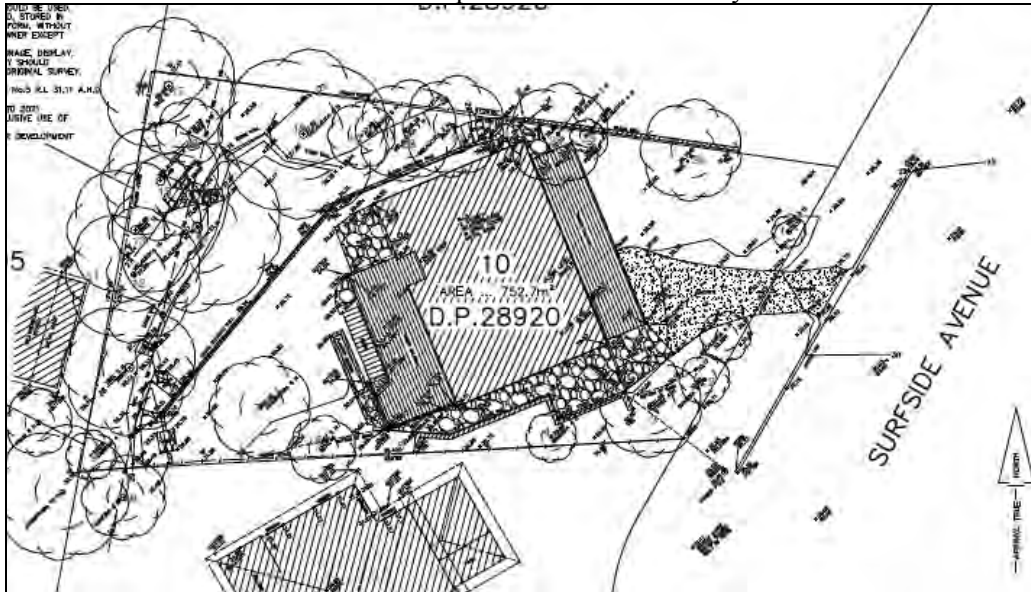


Figure 12: The existing layout. (Source: Site Survey, By Adam Clerke Surveyors, dated 28/09/2021)

9.2 Proposed Layout

The proposed development works include demolition, tree removal, excavation and then construction of a new tow story residence and pool.

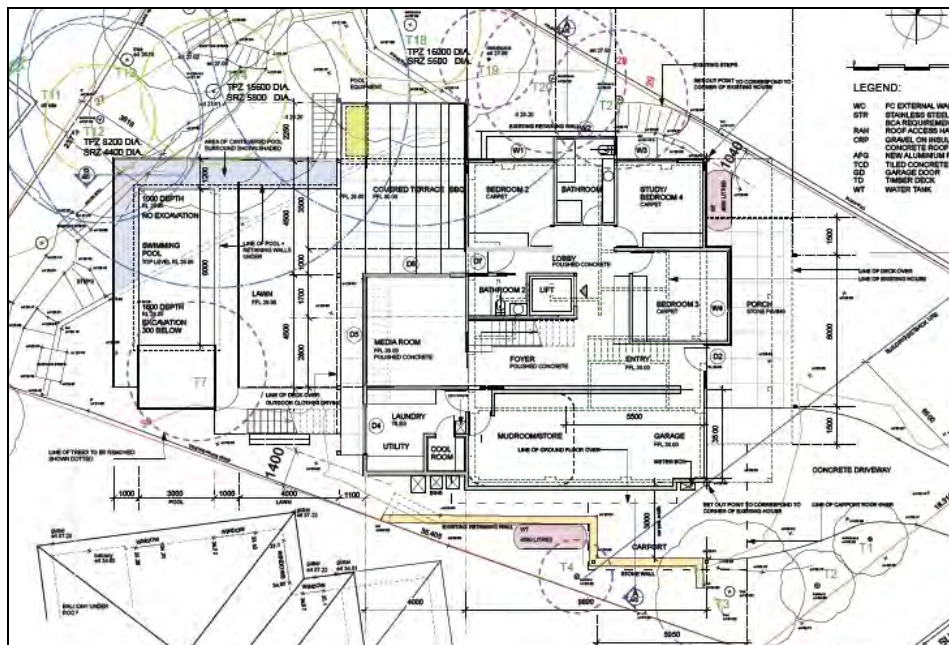


Figure 13: The proposed site plan. (Source: Proposed Plans by Atelier Halefeli Architects, revision A, dated 18/08/22)

9.3 Six (6) Tree Removals

Six (6) C Retention Value Trees numbered 4, 7, 16, 19, 20 & 21 required for removal from the site to facilitate to the project.

- Trees 4, 7, 16, 19, 20 & 21 are C Retention Value Trees that conflict with the proposed foot print.

9.4 13 Trees to be Retained

9.4.1 Neighbours Trees 8 & 11

No impact to the TPZ of neighbours Trees numbered 8 & 11 is anticipated.

9.4.2 Trees 12 & 14 *Melaleuca quinquenervia* (Broad Leafed Paperbark)- Major TPZ encroachment

A major >10% encroachment is expected with the pool expansion however, existing retaining walls restrict root growth and result in minor excavation in the TPZ. The works are outside the SRZ and at or above existing grade. The pool surround is suspended reducing the proposed foot print further. No noticeable impact to the health of Trees 12 & 14 is expected and the trees will remain viable during and post construction.

1 x 30cm mm diameter branch on Tree 14 hanging over the yard requires pruning back to the collar to achieve some pedestrian height clearance from the new levels.

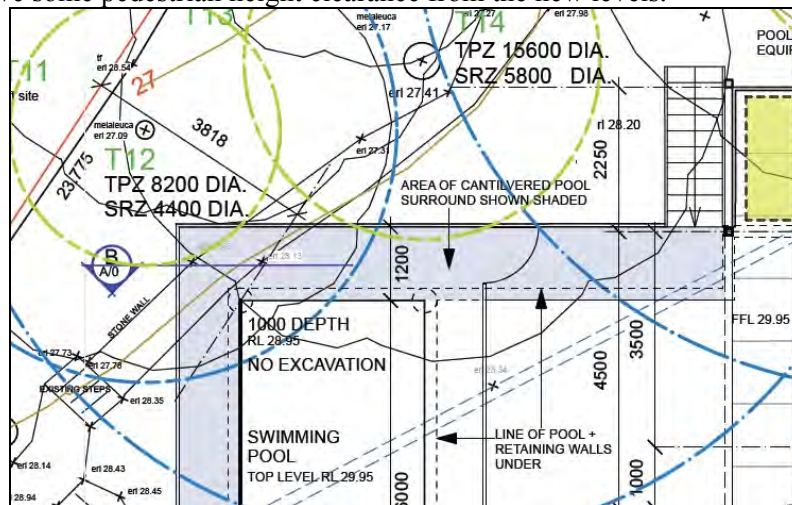


Figure 14: The proposed encroachment into the TPZ of Trees 12 & 14 by the pool with cantilevered slabs shown in grey. (Source: Proposed Plans by Atelier Halefeli Architects, dated 18/8/2022)

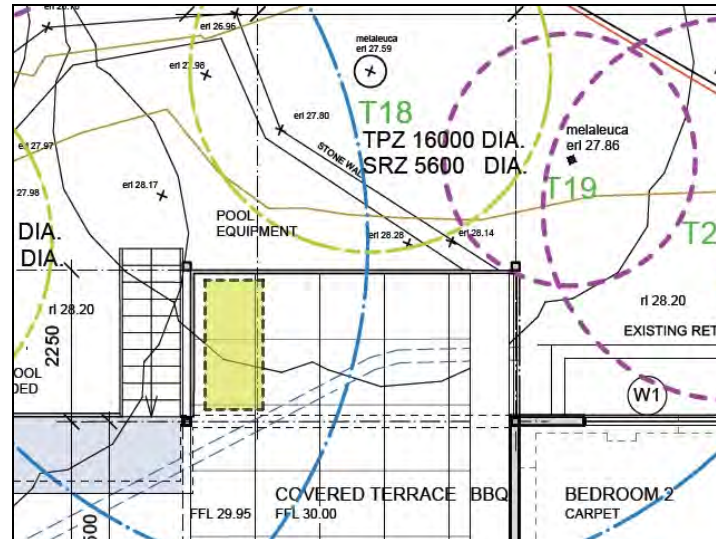


Figures 15: Tree 14 trunk is below two retaining walls observed in the image resulting in minimal excavation in the TPZ. (Source: Austin 11th of November 2021).

9.4.3 Tree 18 *Melaleuca quinquenervia* (Broad Leafed Paperbark)–Major TPZ encroachment

A major >10% encroachment is expected with the proposed covered area however, existing retaining walls restrict root growth and result in minor excavation in the TPZ. The works are outside the SRZ and above existing grade. No noticeable impact to the health of Tree 18 is expected and the trees will remain viable during and post construction.

1 x 30cm mm diameter branch over the yard requires pruning back to the collar to achieve some height clearance from the new levels.



Figures 16: The proposed covered area is within the TPZ and SRZ Tree 18. (Source: Proposed Plans by Atelier Halefeli Architects, dated 18/08/22)



Figure 17: Tree 18 in the landscape showing existing levels and branch to be pruned. (Source: Austin 11th of November 2021).

9.5 Exploratory Excavation,

If greater than 10% incursion to the TPZ is required, exploratory trenching along the proposed excavation line within the TPZ is often required in order to determine the extent of the impact to the trees..

The proposed excavation is minimized in the TPZ due to the presence of existing site retaining walls. The proposed pool design has been created to minimize excavation in the TPZ's of Trees 12 & 14 by utilizing existing ground levels. Exploratory Excavation is not deemed necessary as long as the measures to minimise impacts section of this report is adopted within the project.

10 Measures to minimise impacts to retained trees.

13 Trees numbered 1, 2, 3, 5, 8, 9, 11, 12, 13, 14, 15, 17 & 18 trees will be retained if the tree protection measures in the report are adhered to. In order to minimise the impact to the tree nominated for retention, the following measures must be incorporated into the works;

10.1 Project Arborist

An official “Project Arborist” should be commissioned to oversee the tree protection, any works within the TPZ’s and complete compliance certification. The Project Arborist should have minimum five (5) years industry experience in the field of arboriculture.

10.2 Six (6) Tree Removals

Six (6) Trees numbered 4, 7, 16, 19, 20 & 21 are proposed for removal and should be removed at the beginning of the project (STCA). The trees nominated for retention must not be damaged during the tree removal works.

10.3 Proposed Pruning

Trees 14 & 18 require pruning to accommodate the new levels.



Figures 18 & 19: The previous lopping points in Tree 19 and the poor pruning on the neighbours side of tree 21. (Source: Austin 11th of November 2021)

10.3.1 Standard of Works

To ensure a high standard of works is achieved, all proposed arboricultural works must be completed by a suitably qualified and experienced Arborist(s) of a minimum AQF Level 3 in accordance with the principles of the Australian Standard 4373-2007 *Pruning of Amenity Trees*.

10.4 Tree protection fencing

The trees nominated for retention must be fenced as per the fencing method described below.

Protective fencing is to be installed as close as practicable from the trunk to the TPZ distances listed in the Tree Data table. Existing site features such as boundary fences will influence the extent of the TPZ fencing. The project arborist is to determine the suitability and extent of the tree protection fencing to be used.

Tree protection fencing must remain intact throughout all proposed construction works and must only be dismantled after the works are complete. The temporary dismantling of tree protection fencing must only be done with the authorisation of the project arborist and/or the responsible authority.

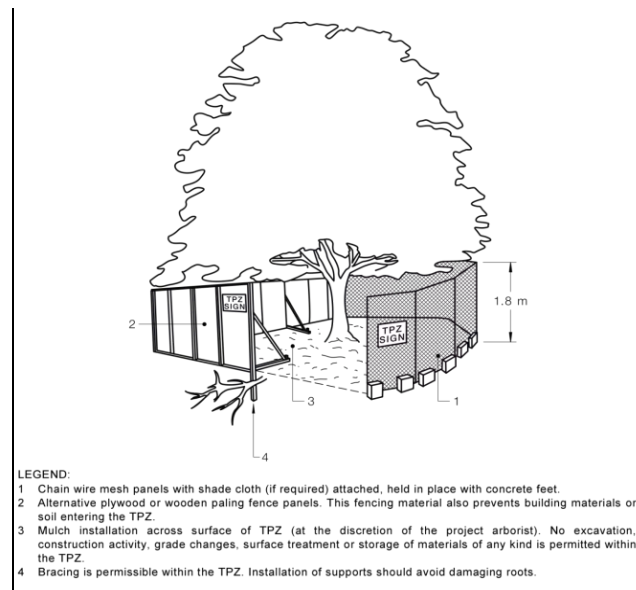


Figure 20: TPZ fencing specification. (Source: AS 4970:2007)

10.5 Tree Protection Signage

The tree protection signage below should be installed at 10m intervals along the Tree Protection Fences.



Figure 21: TPZ signage specification. (Source: Austin 2022).

10.6 Trunk wrapping

Tree 1 requires trunk wrapping to a height of 2m, in line with AS 4970:2007.

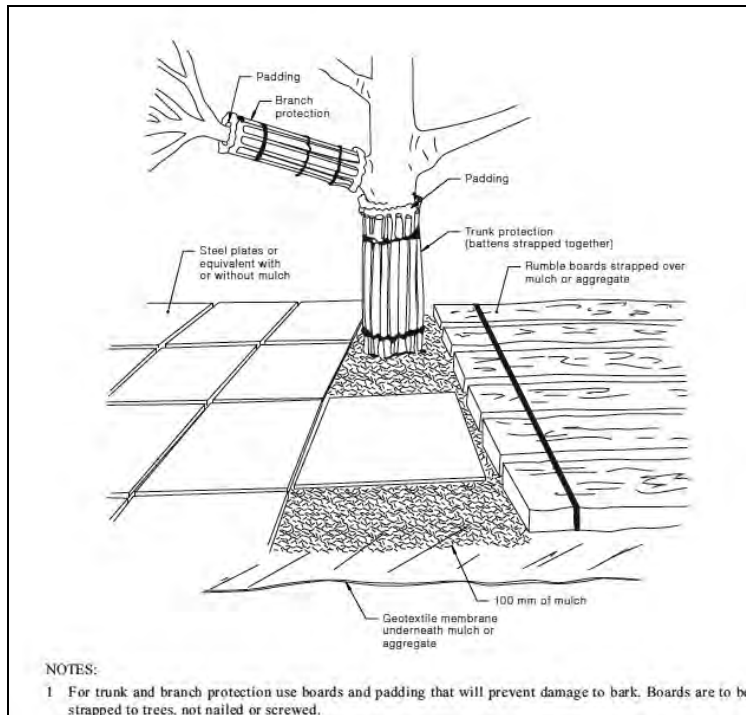


Figure 22: Trunk wrapping guidance. (Source: AS 4970:2007)

10.7 Mulching.

The TPZ for each tree should to be retained be should be mulched where it is deemed practicable. The mulch must be maintained to a depth of 50–100 mm using material that complies with AS 4454. If the existing landscape within the TPZ is to remain unaltered (e.g. turf) mulch is not required, however, it will be beneficial for tree health.

10.8 Arborist Supervision within TPZ's

The project Arborist must supervise of works within the TPZ's of Trees to be retained. Upon completion of the works within the TPZ, the project Arborist is to document whether the works have impacted the viability of the subject trees.

10.9 Works within TPZ's

All works within the TPZs must be completed by techniques that do not damage tree roots. Excavation works should be undertaken using techniques that are sensitive to tree roots to avoid unnecessary damage. Such techniques include:

- Excavation/ demolition by hand
- Excavation/ demolition by machine with Arborist supervision.
- Excavation using a high pressure water jet and vacuum truck.
- Excavation using an Air Spade with vacuum truck.

Machine excavation is prohibited within the remaining TPZ areas of retained trees unless undertaken at the direct consent from the project arborist and/or the responsible authority.

10.10 Activities Restricted within the TPZ

- Machine excavation without Arborist supervision
- Demolition by machine without Arborist supervision
- Excavation for silt fencing

- Storage
- Preparation of chemicals, including preparation of cement products
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Soil level changes
- Temporary or permanent installation of services, utilities or signs
- Physical damage to the tree
- Parking or driving of vehicles/machinery.

10.11 Compliance Inspections & Reports

Inspections should be conducted by the Project Arborist at key points during the construction in order to ensure that protection measures are being adhered to during construction stages and decline in tree health or additional remediation measures can be identified.

Tree inspections and compliance reporting by the project arborist is required:

1. Following the tree removal works and the installation of the tree protection fencing
2. During the excavation works within the TPZ's of Trees 12, 14 & 18.
3. During any works within TPZ's of trees to be retained unless specific methodologies are developed and approved by the project arborist.
4. Every 2 months during the works to ensure compliance.
5. At the practical completion of the project.

Following each inspection, the project arborist shall prepare a brief Compliance report detailing the condition of the trees. These reports should contain photographic evidence where required to demonstrate that the protection measures are in place as specified.

Any Non-Compliance Statements shall be submitted to the Project Manager (as well as the clients' nominated representative) if tree protection conditions have been breached. Reports should contain clear remedial action specifications to minimise any adverse impact on any subject tree.

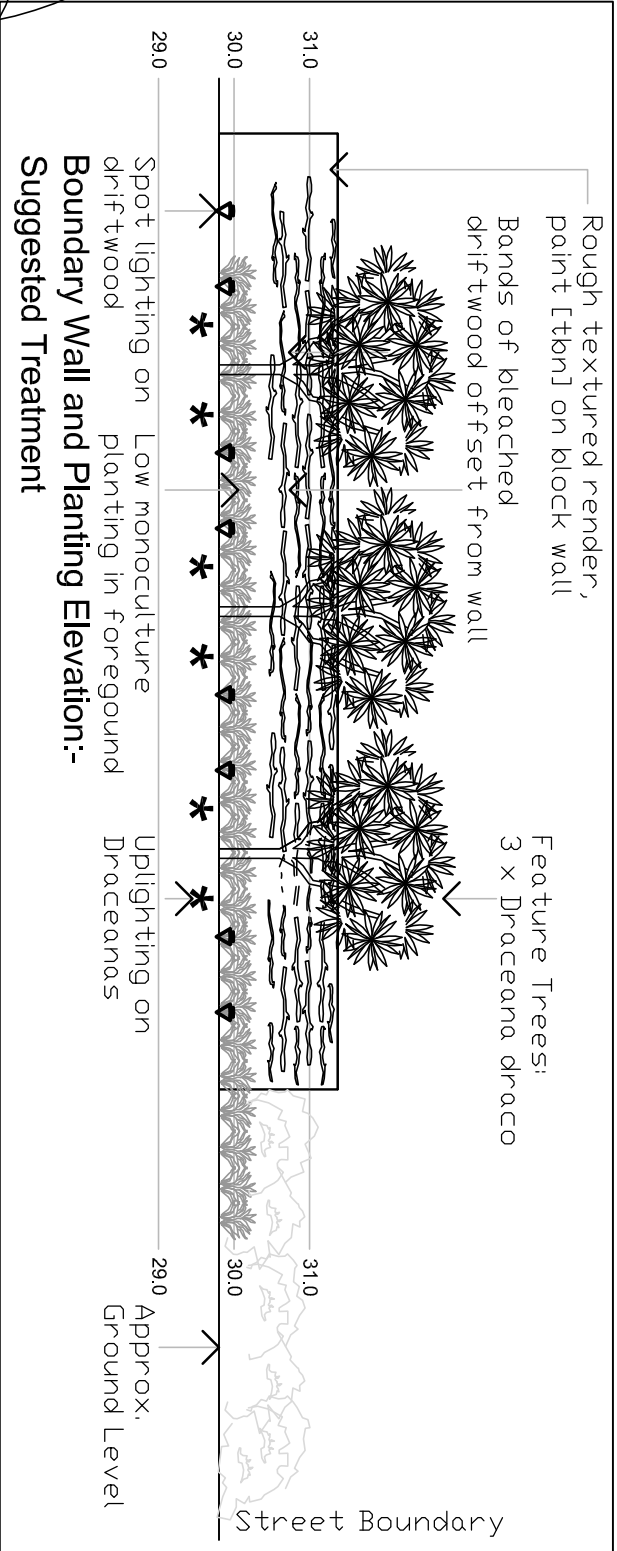
15 Appendices

15.1 Tree Data

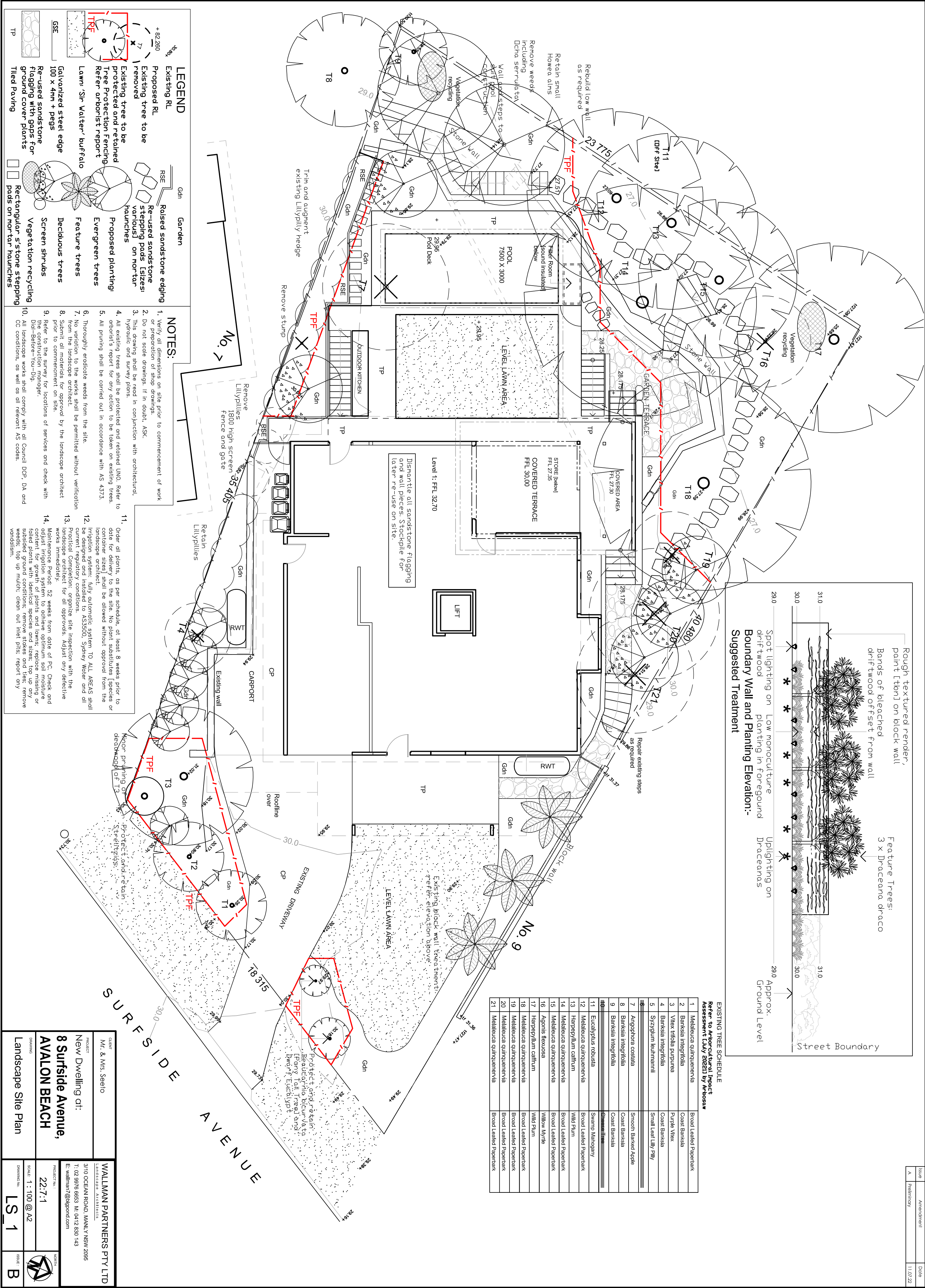
15.2 Tree Protection Plan

Tree no.	Botanical Name	OwnerShip	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Observations	Landscape Significance	Retention Value	Impact	Proposed Action
1	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	22	26	2.6	21.90	1.9	3	3	Good	Poor	Semi-mature	10-15	Previously lopped, wind swept form, screening benefit	Low	C	No Impact	Retain and Protect
2	<i>Banksia integrifolia</i> (Coast Banksia)	Site	1	27	28	3.2	32.57	1.9	4	4	Good	Poor	Semi-mature	10-15	Previously lopped, wind swept form, screening benefit	Low	C	No Impact	Retain and Protect
3	<i>Vitex trifolia purpurea</i> (Purple Vitex)	Site	1	46	50	5.5	96.13	2.5	4	10	Good	Poor	Senescent	5-10	Basal union has failed, resting on lower stems, curious growth	Medium	C	No Impact	Retain and Protect
4	<i>Banksia integrifolia</i> (Coast Banksia)	Site	1	26	28	3.1	30.58	1.9	4	2	Good	Poor	Semi-mature	10-15	Previously lopped, re growth at 3m, screening benefit. Located above existing retaining wall.	Low	C	No Impact	Remove
5	<i>Syzygium luehmannii</i> (Lilly Pilly)	Site	1	10	10	2.0	12.57	1.5	4	15	Good	Good	Semi-mature	15-25	Hedgerow of 11 screening neighbours. Located above existing retaining wall.	Medium	C	No Impact	Retain and Protect
7	<i>Angophora costata</i> (Sydney Red Gum)	Site	1	22	27	2.6	21.90	1.9	6	4	Good	Poor	Semi-mature	10-15	Previously lopped at 4m, poor structure from lopping points, minor rubbing branches	Low	C	Within Pool Footprint	Remove
8	<i>Banksia integrifolia</i> (Coast Banksia)	Neighbours	1	35	40	4.2	55.42	2.3	9	3	Good	Good	Semi-mature	15-25		Medium	B	No Impact	Retain and Protect
9	<i>Banksia integrifolia</i> (Coast Banksia)	Site	1	10	12	2	12.566	1.5	3	2	Good	Good	Semi-mature	15-25		Low	C	No Impact	Retain and Protect
11	<i>Eucalyptus robusta</i> (Swamp mahogany)	Neighbours	1	45	50	5.4	91.61	2.5	10-15	5-10	Good	Fair	Semi-mature	15-25	Wind swept form, epicormic growth, approx 1m from fence, not on plan	Medium	B	No Impact	Retain and Protect
12	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	34	39	4.1	52.30	2.2	10	3	Fair	Fair	Semi-mature	10-15	Deadwood, stunted leaves, co dominant	Low	C	Major Encroachment	Retain and Protect
13	<i>Harpephyllum caffrum</i> (Kaffir Plum)	Site	1	65	76	7.8	191.13	2.9	10-15	5-10	Good	Fair	Mature	15-25	Exempt species, overhangs neighbours, Multistem from 1.5 height, large buttresses. Poor pruning wounds neighbours side	Medium	C	No Impact	Retain and Protect
14	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	65	72	7.8	191.13	2.9	10-15	10-15	Good	Good	Mature	15-25	Located 40cm west of sandstone retaining wall. Pruning of 30cm low branch over lawn.	Medium	B	Major Encroachment	Retain and Protect
15	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	46	51	5.5	95.73	2.5	10	10	Good	Fair	Semi-mature	15-25	Wind swept suppressed form,	Low	C	No Impact	Retain and Protect
16	<i>Agonis flexuosa</i> (Willow Myrtle)	Site	1	28	30	3.4	35.47	2.0	<5	<5	Fair	Poor	Semi-mature	<5	Suppressed, poor form	Low	C	No Impact	Remove
17	<i>Harpephyllum caffrum</i> (Kaffir Plum)	Site	1	62	68	7.4	173.90	2.8	5-10	10-15	Good	Fair	Mature	10-15	Exempt species, Wind swept suppressed form, Multi stem from 1m, poor pruning neighbours side. Majority of canopy overhangs neighbours.	Medium	C	No Impact	Retain and Protect
18	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	67	67	8.0	203.08	2.8	5-10	10-15	Fair	Fair	Mature	10-15	Thinning canopy, poor pruning stubs site side and neighbours side. Removal of 2 lowest branches site side.	Medium	C	Major Encroachment	Retain and Protect
19	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	19	22	2.3	16.33	1.8	6	1	Fair	Poor	Semi-mature	5-10	Previously lopped at 2m height, canopy is regrowth	Low	C	Major Encroachment	Remove

20	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	35	35	4.2	55.42	2.1	6	3	Good	Fair	Semi-mature	15-25	Previously lopped, at 5m, poor pruning north side, stubs, co dominant stems. Screening benefit	Low	C	Major Encroachment	Remove
21	<i>Melaleuca quinquenervia</i> (Broad Leafed Paperbark)	Site	1	48	48	5.8	104.23	2.4	6	3	Good	Fair	Semi-mature	15-25	Previously lopped, at 5m, poor pruning north side, stubs, co dominant stems. Screening benefit	Low	C	Major Encroachment	Remove



EXISTING TREE SCHEDULE		
Refer to Arborescultural Impact Assessment (July 2022) by Arbosav		
1	Melaleuca quinquenervia	Broad Leaved Paperbark
2	Banksia integrifolia	Coast Banksia
3	Vibex trifolia purpurea	Purple Vibex
4	Banksia integrifolia	Coast Banksia
5	Syzygium leichmannii	Small Leaf Lilly Pilly
6	Angophora costata	Smooth Barked Apple
7	Banksia integrifolia	Coast Banksia
8	Banksia integrifolia	Coast Banksia
9	Banksia integrifolia	Coast Banksia
10	Chorizanthe	Chorizanthe
11	Eucalyptus robusta	Swamp Mahogany
12	Melaleuca quinquenervia	Broad Leaved Paperbark
13	Harpephyllum caffrum	Wild Plum
14	Melaleuca quinquenervia	Broad Leaved Paperbark
15	Melaleuca quinquenervia	Broad Leaved Paperbark
16	Agonis flexuosa	Willow Myrtle
17	Harpephyllum caffrum	Wild Plum
18	Melaleuca quinquenervia	Broad Leaved Paperbark
19	Melaleuca quinquenervia	Broad Leaved Paperbark
20	Melaleuca quinquenervia	Broad Leaved Paperbark
21	Melaleuca quinquenervia	Broad Leaved Paperbark



CLIENT Mr. & Mrs. Seeio	PROJECT New Dwelling of: 8 Surfside Avenue, AVALON BEACH	WALLMAN PARTNERS PTY LTD 3/10 OCEAN ROAD, MANLY NSW 2095 T: 02 9976 6653 M: 0412 890 143 E: wallman7@bigpond.com
DRAWING Landscape Site Plan	PROJECT NO. 22-7-1 SCALE: 1 : 100 @ A2 DRAWING NO. LS_1	NOTES WALLMAN PARTNERS PTY LTD