

# **JACKSONS NATURE WORKS**

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## **ARBORICULTURAL IMPACT ASSESSMENT REPORT**

**At**

**28 Goondari Road  
Allambie Heights**

**Prepared for**

**Synergy Construction Group**

**30<sup>th</sup> November 2021**

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Unless stated otherwise:

- Information contained in this report covers only the trees examined and reflects the health and structure of the trees at the time of inspection. The documented, observations, results, recommendations, and conclusions given may vary after the site visit due to environmental conditions.
- The inspection was limited to visual examination from the base of the subject tree without dissection, probing or coring.
- There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future; &
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Ross Jackson

Consulting Arborist

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## 1. BACKGROUND and METHODOLOGY

- 1.1 The purpose of this Tree Report is to inform and accompany the development application works at 28 Goondari Road, Allambie Heights – The Site.
- 1.2 The report was commissioned by Synergy Constructions to respond to Council's requirements to consider the development impacts on trees located on and around the Site.
- 1.3 This report outlines the health and condition of the subject trees, the remaining life expectancy of the trees, identifies any visible defects or other problems, describes which trees require pruning, removal, retention or represent a potential hazard and comments on the impact on these trees in relation to the works proposed. The report also provides recommended tree protection measures (Tree Management Plan) to ensure the long-term preservation of the trees to be retained where appropriate.
- 1.4 The Site is a residential site with gardens at Allambie Heights.
- 1.5 The trees were identified by ground level Visual Tree Assessment (VTA) <sup>1</sup> only in the data collection, taken on 5.11.2021. No aerial (climbing) was undertaken.
- 1.6 All site photographs were taken by the author at the site. All photographs were taken using a digital camera (Canon 7D) with no image enhancement either within the camera or on computer.
- 1.7 The subject trees were located on plans supplied. The trees have been plotted and can be found on Annexure B – Tree Location Plan.
- 1.8 The trees were identified and their genus species and common name used. The trees were identified by the use of data collected and compared to G Burnie, S Forrester et al (1997) **Botanica** Random House, Milsons Point, NSW, Australia.
- 1.9 DBH. The Trunk Diameter at Breast Height (1.4 metres above ground level) in centimetres was measured over bark using a metal tape which automatically converts to diameter and assumes a circular trunk cross section.
- 1.10 DRB. The trunk Diameter above Root Buttress in centimetres was measured over bark using a metal tape which automatically converts to diameter and assumes a circular trunk cross section.
- 1.11 Height. Estimated overall height in metres.
- 1.12 Spread. Measured with a metal tape measure and shown in metres.
- 1.13 Useful Life Expectancy (ULE)<sup>2</sup>.

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<sup>1</sup> Mattheck, Dr. Clause & Breloer, Helge (1994) – Sixth Edition (2001) **The Body Language of Trees – A Handbook for Failure Analysis** The Stationery Office, London, England

<sup>2</sup> Barrell, Jeremy (1996, 2001) **Pre-development Tree Assessment** Proceedings of the International Conference on Trees and Building Sites (Chicago) International Society of Arboriculture, Illinois, USA

A systematic pre-development tree assessment procedure developed by Jeremy Barrell, Hampshire, England. It gives a length of time that the Arborist feels a particular tree can be retained with an acceptable level of risk based on the information available at the time of the inspection. SULE ratings are Long (retainable for 40 years or more with an acceptable level of risk), Medium, (retainable for 16 – 39 years), Short (retainable for 5 – 15 years) and Removal (tree requiring immediate removal due to imminent hazard or absolute unsuitability).

1.14 The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) have been calculated in terms of AS 4970 – 2009 Protection of trees on development site Section 3.

1.15 To prepare this report we have reviewed the following documents:

- Plan of Levels and Detail by C & A Surveyors dated 2.8.2021.
- Architectural plans by Michael Fountain Architects Pty Ltd dated 11.11.2021, Issue E.
- Northern Beaches Council, B4.22 Preservation of Trees or Bushland Vegetation (TPO); &
- Australian Standard AS 4970 – 2009 Protection of trees on development sites.

## **2. OBSERVATIONS as seen on the days of inspection (5.11.2021)**

2.1 Our tree observations can be found in Annexure A.

## **3. DISCUSSIONS**

3.1 We have been commissioned by Synergy Constructions, to examine the health and condition of the trees on and around this development site.

It is proposed to undertake alterations and additions to existing and construct a new swimming pool on Site (development works).

3.2 We have examined the trees on site and can suggest the following considerations for the development works:

1. Tree 1 *Glochidion ferdinandi* is showing fair condition but with all of its canopy pruned away from the residence – refer plate 1.

It is proposed to construct a new access steps and stairs to the rear of the dwelling – refer Annexure C.

This tree is within these structures and will require removal. Its removal is balanced by all the remaining indigenous trees in the rear of the site.

Note this tree for removal in the Tree Management Plan (TMP).

2. Tree 2 *Fraxinus* sp. is ½ dead and has poor condition – refer plate 2.

This tree is also in the proposed renovations and will require removal, however due to its poor condition removal is recommended.

Note this tree for removal in the TMP.



Plate 1: Tree 1



Plate 2: Tree 2

3. Tree 3 *Citharexylum spinosum* is showing fair condition and is jammed in between the existing garage and the actual boundary line – refer Annexure B & plate 3.

The clients wish to extend the retaining wall to the actual boundary to provide good turning circle to exit the site forwards down a steep driveway (which is not an unreasonable proposition), this resulting in the need to remove this tree.

The Fiddlewood tree is not an indigenous tree (originates from Central America & West Indies) and is therefore considered a low retention value tree. Plus, as noted above there are many local trees being retained on site.

Note this tree for removal in the TMP.





Plate 3: Tree 3.

4. Trees 4 & 5 *Lophostemon confertus* are showing good and fair condition respectively and have an existing retaining wall (tree 4) and timber deck (tree 5) within their TPZ.

While these trees are showing fair & good condition, they should not be considered to be an impediment to the approval of this application. These trees are found from Port Stephens northwards and are not indigenous to this area, although they have adapted to the Sydney environment.

Removal is recommended to allow the development works to proceed. Note for removal in the TMP.



Plate 4: Tree 4 & 5 behind.



Plate: Tree 5 – canopy.

#### 4. RECOMMENDATIONS

The following recommendations are advised:

- a) Remove the following trees on site: Tree 1, 2, 3, 4 & 5.
- b) Tree removal work shall be carried out by an experienced tree surgeon in accordance with *Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal (2016)*.
- c) An AQF Level 5 Project Arborist shall be engaged to supervise the building works and certify compliance with all Tree Protection Measures.
- d) The tree location plan can be found on Annexure B: &
- e) The tree impact plan can be found on Annexure C.

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## Annexure A: Observations as seen on the day of inspection of trees

Tree No	Botanical Name	Age Class	Height (m)	Spread (m)	D.B.H. (cm)	D.R.B. (cm)	TPZ (radius m)	SRZ (radius m)	Condition comments as seen on site	ULE
1	<i>Glochidion ferdinandi</i>	M	8	6	40	45	4.8	2.3	F vitality. Pruned away from exist house	3
2	<i>Fraxinus sp.</i>	M	7	4	30, 15	30	4.08	2.0	P condition – ½ dead	4a
3	<i>Citharexylum spinosum</i>	M	6	6	20, 15	30	3.0	2.0	F condition. Growing beside existing carport	3
4	<i>Lophostemon confertus</i>	M	9	9	75	85	9.0	3.1	G condition with existing retaining wall	2
5	<i>Lophostemon confertus</i>	M	8	5	40	45	4.8	2.3	F condition. Deck around trunk	3

### Terms used in Tree Survey & Report:

#### Age Class

**(Y) – Young** refers to a well-established but juvenile tree. Less than 1/3 life expectancy

**(SM) – Semi-mature** refers to a tree at growth stages between immaturity and full size. A tree has reached First Adult Form i.e. displays adult characteristics. 1/3 to 2/3 life expectancy

**(M)- Mature** refers to a full size tree with some capacity for future growth. Older than 2/3 life expectancy

**(OM) – Over-mature** refers to a tree approaching decline or already declining. Older than 2/3 life expectancy and showing signs of irreversible decline.

**Health** refers to a tree's vigour, growth rate, disease and/or insects.

**Vitality** summarises observations about the health and structure of the tree on a scale of: **(G) Good, (F) Fair, (P) Poor & (D) Dead.**

**Good:** Tree is generally healthy and free from obvious signs of structural weaknesses or significant effects of pests and diseases or infection;

**Fair:** Tree is generally vigorous although has some indication of being adversely affected by the early effects of disease or infection or environmental or mechanical damage. Appropriate tree maintenance can usually improve overall health and halt decline;

**Poor:** Tree in decline and is not likely to improve with reasonable maintenance practices or has a structural fault such as bark inclusion;

**Dead:** Tree no longer capable of sustained growth.

**Deadwood (DW)** – deadwood found in canopy as a percentage.

**Over Head Power Lines (OHPL)** – upper canopy pruned to accommodate power lines at a given height.

**Height** expressed in metres refers to estimated overall height of tree.

**Next Door tree (ND)** – tree located in the neighbour's property.

**Street Tree (ST)** – tree located in Councils footpath reserve.

**Spread** expressed in metres refers to estimated spread of crown at the drip line.

**(DBH) Diameter at Breast Height** expressed in millimetres refers to the trunk diameter at 1.4 metres above ground level. Where there are multiple trunks the combined diameter has been calculated in terms of Appendix A – AS 4970 – 2009, shown in brackets.

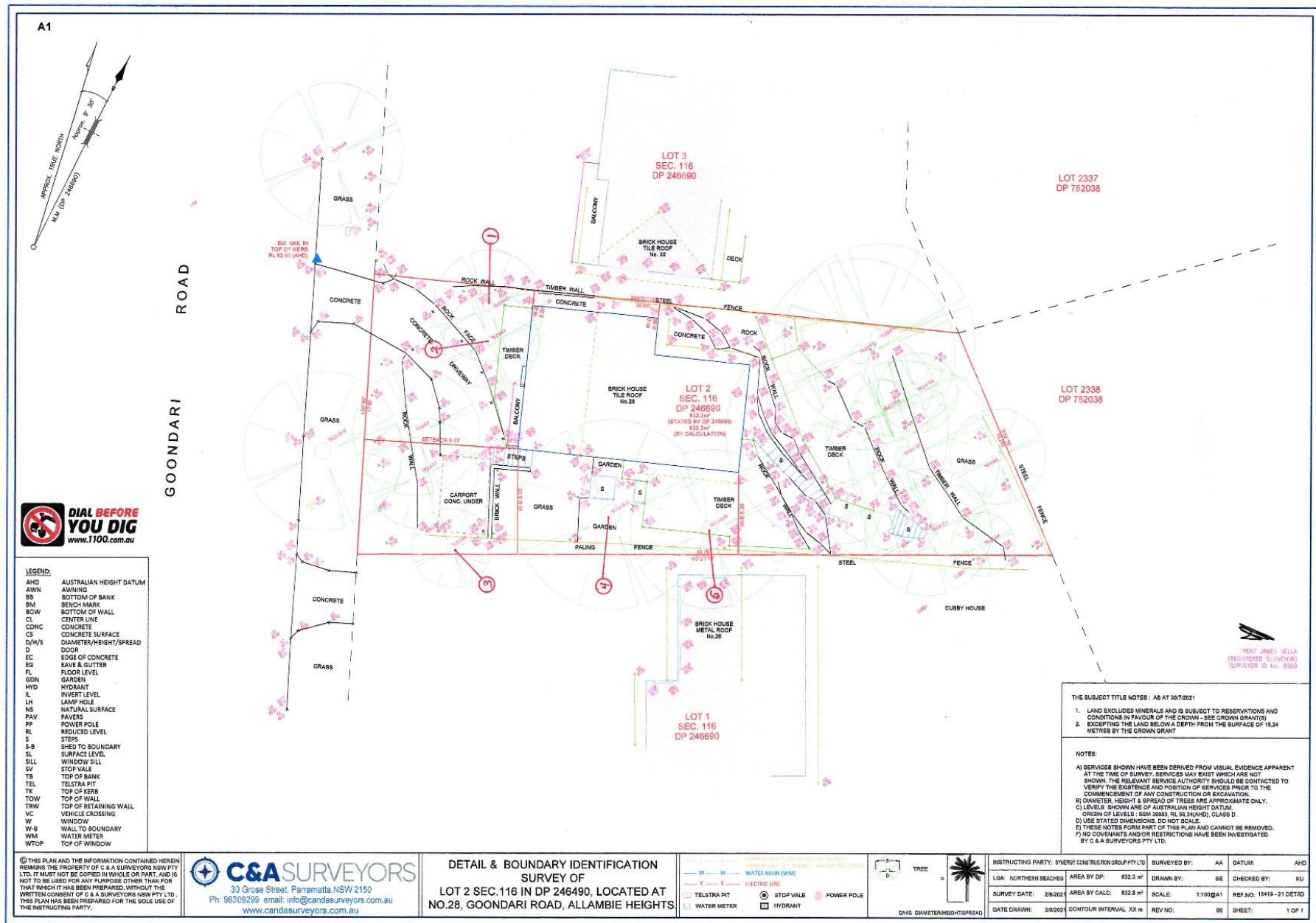
**(DRB) Diameter above Root Buttress** expressed in millimetres refers to the trunk diameter above root buttress.

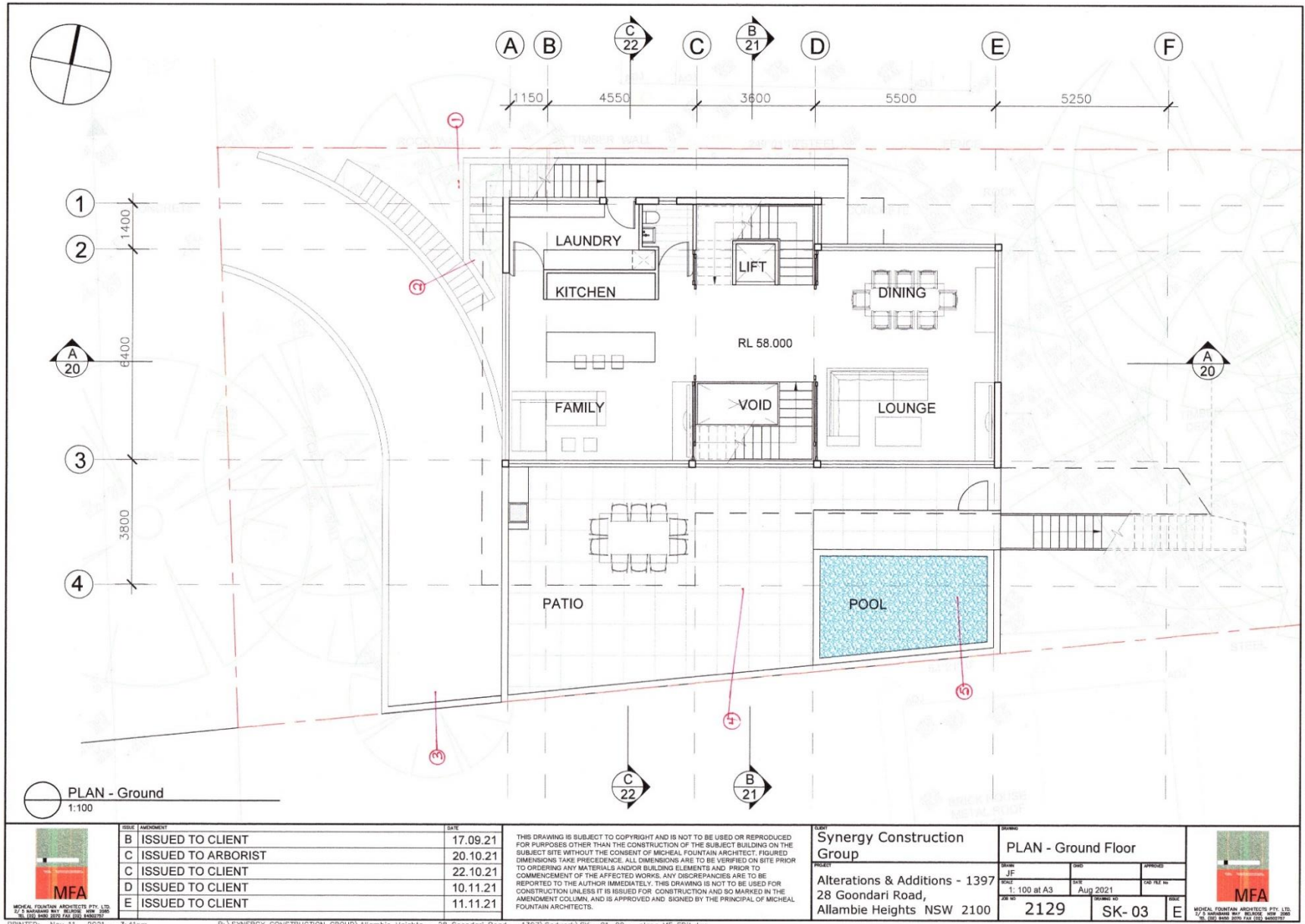
**(TPZ) Tree Protection Zone & Structural Root Zone (SRZ)** as defined by AS 4970 – 2009 Section 3



**(ULE)** The various ULE categories indicate the useful life anticipated for an individual tree or trees assessed as a group. Factors such as the location, age, condition and vitality of the tree are significant to the determination of this rating. Other influences such as the tree's effect on better specimens and the economics of managing the tree successfully in its location are also relevant to ULE (Barrell 1993, 1995, 2001).

**ULE RATING (UPDATED 1/4/01) BARRELL**

<b>1.Long ULE:</b> Trees that appear to be retainable at the time of assessment for more than 40 years with an acceptable level of risk. (A) Structurally sound trees located in positions that can accommodate future growth	<b>2.Medium ULE:</b> Trees that appear to be retainable at the time of assessment for more than 15-40 years with an acceptable level of risk. (A) Trees that may only live between 15 and 40 more years.	<b>3.Short ULE:</b> Trees that appear to be retainable at the time of assessment for more than 5-15 years with an acceptable level of risk. (A) Trees that may only live between 5 and 15 more years.	<b>4.Remove:</b> Trees that should be removed within the next 5 years. (A) Dead, dying, suppressed or declining trees because of disease or inhospitable conditions.	<b>5.Small, young or regularly pruned:</b> Trees that can be reliably moved or replaced. (A) Small trees less than 5 Metres in height.
(B) Trees that could be made suitable for retention in the long term by remedial tree care.	(B) Trees that could live for more than 40 years but may be removed for safety or nuisance reasons.	(B) Trees that could live for more than 15 years but may be removed for safety or nuisance reasons.	(B) Dangerous trees because of instability or recent loss of adjacent trees.	(B) Young trees less than 15 years old but over 5 metres in height.
(C) Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	(C) Trees that could live for more than 40 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.	(C) Trees that could live for more than 15 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.	(C) Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form.	(C) Formal hedges and trees intended for regular pruning to artificially control growth.
	(D) Trees that could be made suitable for retention in the medium term by remedial tree care.	(D) Trees that require substantial remedial tree care and are only suitable for retention in the short term.	(D) Damaged trees that are clearly not safe to retain.	
			(E) Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.	
			(F) Trees that are damaging or may cause damage to existing structures within 5 years.	
			(G) Trees that will become dangerous after removal of other trees for the reasons given in (A) to (F).	
			(H) Trees in categories (A) to (G) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review.	

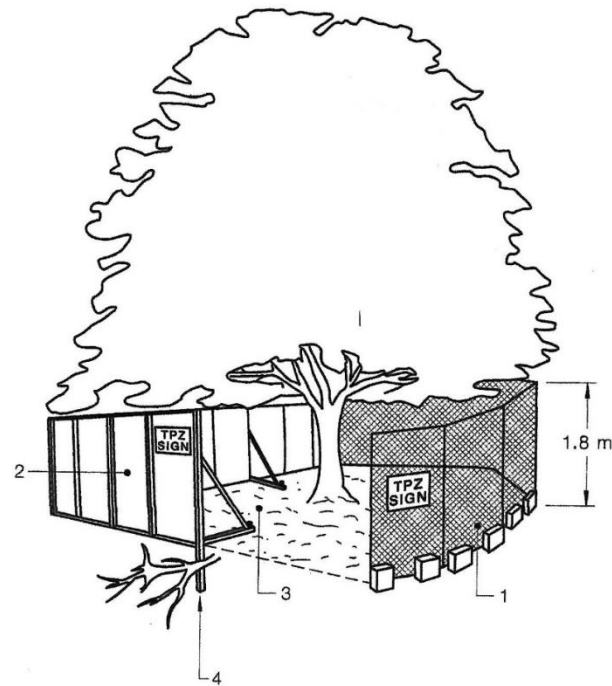




 MICHAEL FOUNTAIN ARCHITECTS PTY. LTD. 17/6 BALDWIN RD, BELMORE NSW 2193 PH: 02 9550 0075 FAX: 02 9550 0076	ISSUE	AMENDMENT	DATE	THIS DRAWING IS SUBJECT TO COPYRIGHT AND IS NOT TO BE USED OR REPRODUCED FOR PURPOSES OTHER THAN THE CONSTRUCTION OF THE SUBJECT BUILDING ON THE SUBJECT SITE WITHOUT THE CONSENT OF MICHAEL FOUNTAIN ARCHITECT. FIGURED DIMENSIONS TAKE PRECEDENCE. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE PRIOR TO ORDERING ANY MATERIALS AND/OR BUILDING ELEMENTS AND PRIOR TO COMMENCEMENT OF THE AFFECTED WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE AUTHOR IMMEDIATELY. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS ISSUED FOR CONSTRUCTION AND SO MARKED IN THE AMENDMENT COLUMN, AND IS APPROVED AND SIGNED BY THE PRINCIPAL OF MICHAEL FOUNTAIN ARCHITECTS.	<b>Synergy Construction Group</b>  Alterations & Additions - 1397 28 Goondari Road, Allambie Heights NSW 2100	PLAN - Ground Floor			 MICHAEL FOUNTAIN ARCHITECTS PTY. LTD. 17/6 BALDWIN RD, BELMORE NSW 2193 PH: 02 9550 0075 FAX: 02 9550 0076
	B	ISSUED TO CLIENT	17.09.21			DESIGN	JF	DATE	
	C	ISSUED TO ARBORIST	20.10.21			PROJECT	1:100 at A3	SITE	
	D	ISSUED TO CLIENT	22.10.21			2129	SK-03	E	
	E	ISSUED TO CLIENT	11.11.21						



## Annexure D: Tree protection details



### LEGEND:

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

FIGURE 3 PROTECTIVE FENCING