

Arboricultural Impact Assessment

Project Address: 84 Gavenlock Road Mardi NSW 2259

Prepared for: Catholic Schools Broken Bay (CSBB)

Date: July 2025

Prepared by:



ABN- 34117508643

Michael. V. Marley.

Dip. Horticulture (Arboriculture)

AQF Level 5 Consultant

michaelmarley08@hotmail.com

Contact- 0405 193 400



BTC Ref: EilO'con24523

Document Details.				
Document Title	Prepared for	Project Address	Revision and Ref No	Date
Arboricultural Impact assessment	Catholic Schools Broken Bay (CSBB)	84 Gaven lock Road Tuggerah NSW 2259	Rev. B. Rev. C. Rev. D. EilO'con24523	15 March 2025. 01 April 2025. 02 July 2025.
Author- Michael Marley Bellevue Tree Consultants		Signed- 		



Eileen O'Connor
Catholic School



Planning Secretary's Environmental Assessment Requirements

Development Details

Application No: SSD-67173718
Project Name: New Eileen O'Connor Catholic School
Location: 84 Gavenlock Road, Mardi NSW 2259
Lot 9 Section 4 DP3368 within Central Coast
Applicant: Catholic Schools Broken Bay

The following documentation has been prepared to support the State Significant Development Application for the above project and in accordance with the Planning Secretary's Environmental Assessment Requirements (SEARS) dated 19th February 2024 as follows:

	Issue and Assessment Requirements	Relevant Section of this Report
7.	Trees and Landscaping: Assess the number, location, condition and significance of trees to be removed and retained and note any existing canopy coverage to be retained on-site.	Section 5 Page 4 Tables 2 & 3. Section 6 Page 5. Appendix G1 & G4.

Table of Contents

	Page
1.1. Engagement	2
1.2. Aim	2
1.3. Proposed development.....	2
1.4. Documents reviewed in the preparation of this report	2
2. Methodology.....	2
3. Site Details	3
3.2 Site description	3
Table 1. Site information.....	3
4. Subject trees	4
4.1. 103 prescribed trees.....	4
5. Impact Appraisal.....	4
5.1. The Tree Protection Zone (TPZ).....	4
Table 2. Trees proposed for removal.....	4
Table 3. Trees proposed for retention	4
6. Conclusions and Recommendations	5
6.1 Trees recommended for removal.....	5
6.2 Trees recommended for retention	6
7. Arboricultural Method Statement.....	8
8. Examples of tree protection.....	11
9. Site Photos	12
Appendix A. Tree assessment schedule	17
Appendix B. Tree Retention Matrix.....	26
Appendix C. Explanation of terms	26
Appendix D. U.L.E.....	27
Appendix E. Examples of minor encroachment into the TPZ	28
Appendix F. References.....	28
Appendix G.1. Tree Location Plan.....	30
Appendix G.2. Tree Protection Zone Plan 1.....	31
Appendix G.3. Tree Protection Zone Plan 2.....	32
Appendix G.4. Tree Protection Plan.....	33

1. Introduction

1.1. Engagement.

Bellevue Tree Consultants (BTC) was engaged by Catholic Schools Broken Bay the owners of the subject site identified as the new Eileen O'Connor School precinct, 84 Gavenlock Road Mardi, to provide an Arboricultural Impact Assessment (AIA) for a proposed development within the subject site. This AIA is to accompany a Development Application (DA) to Central Coast Council.

1.2. Aim

The aim of the report is to assess the health/vigour and structural condition of trees within the subject site, trees on neighbouring properties and street trees potentially impacted by the proposed development and make recommendations for protection, pruning, retention and/or removal.

1.3. Proposed development.

To construct a new school with associated service elements, off-road parking and recreational areas, adjacent to the St Peters College Campus.

1.4. Documents reviewed in the preparation of this report.

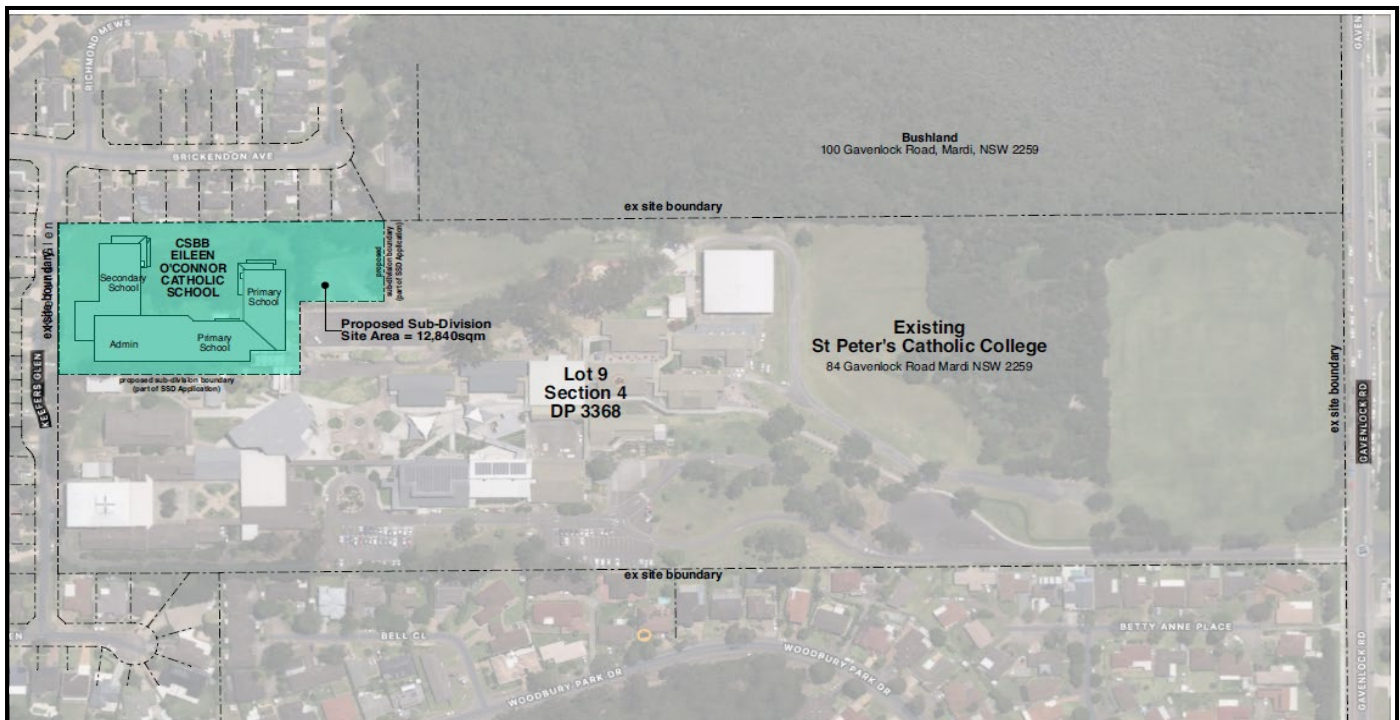
- Architectural Plan Set. Prepared by Stanton Dahl Architecture. Job No-2637.20 Rev P7 dated 10-03-25.
- Extent of Cut & Fill Plan. Prepared by Stanton Dahl Architecture. Job No-2637.20 Rev P6 dated 10-03-25.
- Tree Location Plan. Prepared by Stanton Dahl Architecture. Job No-2637.20. Rev B dated 30-06-25.
- TPZ & SRZ Plan 1&2. Prepared by Stanton Dahl Architecture. Job No-2637.20. Rev B dated 30-06-25.
- Stormwater Design. Prepared by James Taylor & Associates. Rev C dated 19-12-24
- Civil Works-Road Reserve. Prepared by James Taylor & Associates. Rev C dated 19-12-24
- Landscape Plan prepared by Inview Design Pty Ltd. Rev 09 dated 23-03-25.
- Central Coast Council- Development Control Plan (CCDCP)2022. Chapter 3.6 Tree & Vegetation Management.
- Australian Standard AS 4970-2009 'Protection of trees on Development sites'.
- Australian Standard AS 4373-2007 'Pruning of amenity trees'.

2. Methodology

- A site visit was performed on 1&3 August 2023 and 4&19 December 2024, weather was clear and dry.
- A Tree Evaluation was completed using the Visual Tree Assessment (VTA) method as described in The Body Language of Trees (Mattheck. & Breloer 1999).
- Canopy radius and tree height were estimated. Diameter at Breast Height (DBH) at 1.4m from ground level and Diameter at Base (DAB) were measured by diameter tape measure (MillionX10). DBH was rounded up in 10mm increments. Multi-trunks DBH inserted into AS4970-2009 Calculator Council Arboriculture Victoria (CAV) to determine combined measurement in millimetres.
- All trees inspected are numbered and are provided in the Tree Schedule (refer Appendix A)
- A tree retention value has been calculated using. Tree Retention Matrix Modified by Morton.A.from Couston and Howden.M (2001) Tree Retention Values Table Footprint Green Pty Ltd, Sydney Australia.(Refer Appendix B)
- The Useful Life Expectancy (U.L.E.) was estimated using U.L.E. categories and sub groups (*Pre –planning Tree surveys; Barrell.J:1993*). Explanatory notes U.L.E. categories and terminology (Refer appendix D).
- A site location map showing the position of the trees inspected with TPZ radius has been included.
- Soil Landscapes of NSW (*e-spade*) was consulted, no soil samples or Ph tests were performed.
- No sonic tomograph, resistograph, or aerial inspections were performed.

3. Site Details

3.1. Figure 1. Site Location (Source: Stanton Dahl Architecture)



3.2 Site description.

The subject site is located within North-West corner of the property identified as Lot 09/04, DP 3368, accessed by Gavenlock Road (East) and bordered by Keefers Glen (West). The subject site is an 8250m² parcel of land which is gradually sloping North-South. The subject site is vacant with a small dam, scattered trees and turf areas.

Table 1. Site information.

Local Government Area	Central Coast Council.
Relevant Planning policies	Central Coast Development Control Plan (CCDCP) 2022 Central Coast Local Environmental Plan (CCLEP) 2022 SEPP (Biodiversity & Conservation) 2021
Land zoning	R2- Low Density Residential
Soils typical of the area (Source e-spade NSW)	Coarse loamy sand. Field Ph 5.5 Acid sulphate soils -Class 4
Bush fire 10/50 search result	Property is in a designated 10/50 vegetation entitlement clearing area. Conditions apply refer 10/50 code of practice.
Threatened species/Endangered ecological community - Biodiversity Values Map and Threshold Tool	Nil result-
Heritage Item LEP 2022	Nil result-

4. Subject trees

4.1. 103 prescribed trees were assessed, the understory vegetation being ground covers, grasses and shrubs under 3 metres in height or < 75mm diameter @ 1.4m above ground level as outlined in 3.5 Tree and vegetation management Central Coast DCP 2022.

4.2. Of the 103 trees assessed 8 are street trees (Keefers Glen), 4 are located within neighbouring properties (North), the remaining trees are located within the subject site. Trees are a mixture of planted indigenous trees and exotic species. Trees 5,6,7,8 located adjacent to the Southern boundary of subject site bordering the existing St Peters Catholic College, have a planted understory of Acacia, 3-4m in height.

5. Impact Appraisal

5.1. The Tree Protection Zone (TPZ) is the area that protects the above and below ground parts of a tree. Structural Root Zone (SRZ) is the area required for tree stability. As described in the Australian Standard *Protection of trees on development sites* (AS 4970), encroachments less than 10% are considered to be minor and acceptable. No specifications are provided within the AS4970 for encroachments greater than 10% and it is the consulting arborist that must investigate if the tree will remain stable and viable. The extent of potential impacts to the trees is summarised in Tables 2 and 3 and outlined in Appendix C.

Table 2. Trees proposed for removal. Refer Appendix G.1- 4. Tree Location & TPZ Plans.

Removal Tree Numbering- Refer Appendix G.1.	Retention Value		
	Low	Mod	High
Trees wholly or partially within footprint of proposed development. (Unacceptable level of impact, major encroachment into TPZ & SRZ (>10%))	4,10,13,14,18,25,26,27,28,29, 31,32,36,37,38,39,40,41, 43,44,45,46,47,48,49,50,52,68,69,72,73,74 75,76,78,82	5,6,7,9,33,34,35 42,51,53,54,64,65,66,67 70,71,77,80,81,83,86,87	8,15,16,17,19,20 79,
3.5 CCDCP (2022) Exempt tree works. -Dead tree.	57.		

Table 3. Trees proposed for retention. Refer Appendix G.1- 4. Tree Location & TPZ Plans.

Retained Trees Tree numbering- Refer Appendix G1	Retention Value		
	Low	Mod	High
Works outside of TPZ or an acceptable level of encroachment (10-15%).	1,3,21,22,23,24,85,89,90,93,95,96,97 ,98 99,100,101,102,103.	2,11,12,56,84,91,92	55,58,59,60,61,62,63,88,94

6. Conclusions and Recommendations

6.1 Impact conclusion.

6.1.1. Under the current proposal 60 trees of low to moderate retention value and 7 high retention value trees will require removal. 26 trees of low to moderate retention value and 9 high retention value trees can be retained, no trees are suitable for transplant. All retained trees are to be protected for the duration of the development using a combination of protective fencing, trunk and ground protection (refer Appendix G4. Tree Protection Plan & Section 7.2)

6.1.2. To compensate the loss of canopy from the removal of trees replacement plantings are to be included within a detailed landscape plan (refer 6.2.8 & 6.2.9)

6.2. Trees proposed for removal

6.2.1. Trees 4,5,6,7,8,9,10,13,14 adjacent to the Southern boundary of the subject site adjacent to the existing St Peters Catholic College site will be impacted by the new internal driveway and vehicle exit. The trees are wholly (100%) or partially ($\geq 35\%$) within the development footprint representing a significant level of impact that is not tolerable for the species.

6.2.2. Trees 15,16,17,18,19,20,86,87 located adjacent to the Western boundary within the street verge of Keefers Glen (refer photos 7 & 8). Trees will be impacted by the excavations ($\geq 450\text{mm}$) for new kerb & toe and footpath with associated drainage works. Tree 20 will be further impacted by the installation of the proposed hydrant booster. The trees are wholly (100%) or partially ($\geq 35\%$) within the development footprint representing a significant level of impact that is not tolerable for the species. There are no design alterations or construction techniques that can reduce the impact. Trees are not suitable for transplant and are therefore recommended for removal.

6.2.3. Trees 25 to 54 border the existing dam that is to be filled and levelled ($\geq 500\text{mm}$) to provide space for classrooms, recreational facilities, amenities, driveway access and drainage systems. Trees are wholly (100%) within the development footprint. There are no design alterations or building techniques that can reduce the impact. Trees are not suitable for transplant and are recommended for removal.

6.2.4. Trees 64 to 79 and trees 80,81,82,83 will be impacted by the demolition of the existing netball court and the establishment of a new Eastern carpark with associated driveway access and significant earthworks works with level changes ($\geq 500\text{mm}$) for stormwater drainage. The trees are wholly (100%) or partially ($\geq 35\%$) within the development footprint representing a significant level of impact that is not tolerable for the species. There are no design alterations or building techniques that can reduce the impact. Trees are not suitable for transplant and are recommended for removal.

6.2.5. Any additional earthworks, stormwater drainage or service trenches must accommodate the TPZ's set out in Appendix A - Tree assessment schedule. All amended plans shall be reviewed, and the impact assessed by the Project Arborist.

6.2.6. Tree removal

- Tree removal shall be performed by a fully insured arborist with a minimum AQF level 3 qualification in arboriculture.
- The works must be undertaken in compliance with Safe Work Australia's – Guide to Managing Risks of Tree Trimming and Removal Work
- Stump grinding must not be performed within 3.5 metres of any retained tree.

6.2.7. The landscape plan shall accommodate suitable replacement plantings. The replacement trees shall:

- Be grown in accordance with the Australian Standard AS2303 Tree stock for landscape.
- Ensure there is adequate deep soil planting to support long term growth and development.

- Minimum container size of 45lt with minimum 3m specimen.
- All replacement trees to have to potential to grow to a height of 8m or greater.

6.2.8. Suitable replacement trees include:

- *Eucalyptus robusta* (Swamp Mahogany).
- *Syzygium luehmannii* (Riberry)
- *Waterhousea floribunda* (Weeping Lilly Pilly).
- *Elaeocarpus reticulatus* (Blueberry Ash).
- *Callicoma serratifolia* (Black Wattle)
- *Ceratopetalum apetalum* (Coachwood)
- *Banksia integrifolia* (Coastal Banksia)

6.3 Trees recommended for retention.

6.3.1. Trees 55,56,58,59,60,61,62,63 will be impacted by the construction of the new Eastern carpark to their East and the carpark access drive to their West. Trees are sufficiently setback from the proposed works with no encroachment within their TPZ or an acceptable level of encroachment (10-15%) that is acceptable for the species (refer Appendix G.2). Excavations within the TPZ are to be performed by non-destructive methods and any exposed roots cleanly cut under the supervision of the project arborist (refer Section 7.5).

6.3.2. Trees 21,22,23,24 located within neighbouring properties adjacent to the Northern boundary will be impacted by the proposed retaining wall located 2m from the boundary representing a moderate level of impact (15-20%) that is tolerable for the species. The landscaped buffer between the boundary and the proposed retaining is to maintain existing ground levels. All new plantings are to be installed in compliance with Section 7.8. Any additional works between the trees and the retaining wall is to be approved and supervised by the project arborist.

6.3.3. Trees 84,85 will be impacted the excavations (cut) for the new kerb & toe. Trees are sufficiently setback from the proposed works with no encroachment within their TPZ (refer Appendix G.2). Any additional works between the trees and the proposed edge of the cut will result in root-mass loss that may compromise tree stability and viability. All works are to be supervised by the project arborist (refer Section 7.1)

6.3.4. Trees 11,12, 88 to 103 are located within the St Peters Catholic College site; trees are sufficiently setback from the proposed works with no encroachment within their TPZ (refer Appendix G.2) and will not be impacted by the proposed development. The existing boundary fence is to act as tree protective fencing. Proposed OSD adjacent to T12 is to be located outside of the TPZ or an encroachment to represent $\leq 10\%$.

6.3.5. All retained trees will require protection prior to works commencing (refer Section 7.2), by the establishment of a No-Go zone with the installation of protective fencing, when protection fencing is deemed in-appropriate, trunk, branch & ground protection is to be installed (refer Appendix G.4) all works within the TPZ are to be performed manually (by hand) or with machinery with a long reach placed on ground protection (refer Section 7.3.3) or located outside of the TPZ.

All machinery and vehicular movements within the TPZ of any retained tree is to be placed on truck mats or similar (refer Section 7.3.3 and figure 5).

6.3.6. For activities prohibited within the TPZ of any retained tree (refer Section 7.4).

6.3.7. All tree protection measures are to be supervised and certified by the project arborist before, during and at the completion of the development (refer Section 7.9)

6.3.8. The immediate impact on the retained trees will come from the removal of existing trees, demolition of existing structures and excavation works. All care is to be taken during the demolition/excavation stage, with the use of hand tools and machinery with a long reach located outside the TPZ or supported by ground protection to prevent root damage. Impact to the canopy may arise from the operation (slewing) of cranes or similar construction machinery. Under no circumstances are trunks, branches or foliage to be damaged by machinery, where there is a conflict between tree canopy and machinery or other elements (stump removal or grinding), the project arborist shall provide advice and direction. All pruning is to be in compliance with AS-4373; Pruning of amenity trees and represent $\leq 10\%$ of total canopy removed within a 12-month period.

Regards

Michael V Marley



Principle Arborist

Bellevue Tree Consultants

Dip Hort / Dip Arb

AQF level 5 (TAFE-2006-2911234)

Accredited member- Institute of Australian Consulting Arboriculturists (ACM0692019).

International Society of Arboriculture (ISA) Professional Member (CSID-186578).

Registered Quantified Tree Risk Assessment (QTRA) and Advanced registered licensee (QTRA4431).

Copyright

Bellevue Tree Consultants 2007 ©

All Intellectual Property & Copyright Reserve

Subject to the Copyright Act 1968;

The use of any or all Sections of this report in any documentation relating to this site is permissible so long as the copyright is noted at the completion of any and all Sections.

Any other use of this report, or any part because of that for any other purpose or in the documentation for any other site is strictly prohibited. No part of this report may be reproduced, transmitted, stored in a retrieval system or updated in any form or by any means (electronic, photocopying, recording or otherwise) without written permission.

7. Arboricultural Method Statement

7.1 Prior to works commencing

7.1.1 A project arborist is to be engaged prior to any demolition or constructions works. The Project Arborist shall have a minimum AQF level 5 qualification in Arboriculture.

7.1.2 The Project Arborist, in consultation with the Project Supervisor, are to review and augment the site contractor induction to ensure all tree protection measures and all relevant guidelines within this statement are included.

7.1.3 Details of requirements relating to Project Arborists are set out in section 7.9 Key hold points.

7.1.4 Principal contractor to implement all tree protection measures in compliance with the tree protection plan and tree protection guidelines.

7.2 Tree protection guidelines

All tree protection measures must be maintained in good condition during the construction works and kept in place until the completion of works or as otherwise advised by the Project Arborist.

7.2.1 Each Tree Protection Zone shall:

- be enclosed by a 1.8m high fully supported chainmesh protective fencing.
- The fencing shall be secure and fastened to prevent movement.
- The fencing shall have a lockable opening for access.
- Roots greater than ≥ 40 mm in diameter shall not be pruned, damaged, or destroyed during the installation or maintenance of the fencing.

7.2.2 The fencing shall not:

- be moved, altered or removed without the approval of the Project Arborist;
- have a minimum of two signs that include the words "Tree Protection Zone – Keep Out". Each sign shall be a minimum size of 600mm x 500mm and state the name and contact details of the Project Arborist. Signs shall be attached facing outwards in prominent positions at 10 metre intervals or closer where the fence changes direction.
- The TPZ shall be kept free of weeds except where there is existing turf. The weeds shall be removed by hand; and unless the existing surface is turf, have mulch installed and maintained to a depth of 75mm. The mulch shall consist of mixed leaf and coarse woodchip in accordance with AS4454:2012 Composts, Soil Conditioners and Mulches.

7.3 Ground protection and trunk protection

7.3.1 Shall be installed when the Project Arborist determines protection fencing is not feasible, or the tree protection fencing is to be temporarily removed.

7.3.2 The stem and branches of retained trees shall be protected, as follows:

- install 65mm Drain coil Agg pipe around trunk at 1m intervals (refer Figure 4)
- install hardwood or treated pine timbers (100mm x 50mm) the same length as the stem or branch shall be positioned over the drain coil and next to each other around the stem or branch, secured together with galvanised wire or strapping. Boards shall not be nailed or screwed into the stem or branch.
- No part of the protection shall be secured to the tree.

7.3.3 The ground surface within the Tree Protection Zone shall be protected by placing geotextile fabric on the ground surface, covered with a layer of mulch to a depth of 75mm and then placing load bearing boarding (truck matts, steel plates or similar material) on top. The geotextile fabric and mulch shall be kept clear of tree stems by a least 50mm.

7.4 Activities prohibited within the Tree Protection Zone

- disposal of chemicals and liquids (including concrete and mortar slurry, solvents, paint, fuel or oil)
- stockpiling, storage or mixing of materials
- refuelling, parking, storing, washing and repairing tools, equipment, machinery and vehicles
- disposal of building materials and waste
- increasing or decreasing soil levels (cut and fill);
- soil cultivation, excavation or trenching;
- placing of offices or sheds;
- erection of scaffolding or hoardings; and/or
- any other act that may adversely affect the vitality or structural condition of the tree.

7.5 Excavation within the Tree Protection Zone

7.5.1 Shall be undertaken using non-destructive methods (e.g. an airspade, hydro-vac or by hand) to ensure no roots greater than $\geq 40\text{mm}$ in diameter are damaged, pruned or removed. All care shall be taken to preserve and avoid damaging roots; Where roots $< 40\text{mm}$ cannot be avoided, they are to be clean cut with sharp saw or secateurs. All exposed roots are to be covered immediately with mulch or dampened hessian or similar material.

7.5.2 Excavation shall not to occur within the Structural Root Zone

7.5.3 Any additional stormwater drainage, detention pits, rainwater tanks and/or absorption trenches must accommodate the TPZ's set out in Appendix A - Tree assessment schedule. All amended plans shall be reviewed, and the impact assessed by the Project Arborist.

7.6 Installation of underground services

7.6.1 The method for trenching within a TPZ shall either be by hand methods e.g. hand digging with a spade or trowel, hydro-vac or an air spade. Trenchless technology such as directional underground boring shall be considered where feasible.

The underground services shall be positioned below the network of protected roots without causing damage to roots $\geq 40\text{mm}$ in diameter.

7.6.2 Where feasible, all underground services shall be routed & installed beyond the identified TPZ's. Where it is impossible to divert services beyond the TPZ's, detailed plans showing the proposed routing shall be drawn in conjunction with advice from the Project Arborist.

7.6.3 Topsoil and subsoil excavated from the trench shall be deposited into separate piles and kept apart and covered until required for backfilling.

7.6.4 No roots $\geq 40\text{mm}$ in diameter are to be severed without prior agreement with the Project Arborist.

7.6.5 In cases of extreme heat or unless the trench is to be backfilled within the same day, all exposed roots $> 40\text{mm}$ in diameter shall be wrapped with damp hessian to prevent drying out.

7.6.6 Where is it necessary to sever any woody roots, they shall be clean cut with secateurs or a pruning saw.

7.7 Demolition

7.7.1 To prevent root damage all demolition works within the TPZ are to be performed with the use of hand tools and/or machinery with a long reach located outside the TPZ or supported by ground protection.

7.7.2 To ensure trees are not impacted by the movement of vehicles or machinery, a no-go zone area shall be established using protective fencing (refer A.G3 Tree Protection Plan). If protection fencing must be moved or is not practicable, then ground protection shall be installed and approved by the Project Arborist (refer section 7.3.3).

7.7.3 Impact to the canopy may arise from the operation (slewing) of cranes or similar construction machinery. Under no circumstances are branches or foliage to be damaged by construction machinery, where there is a conflict between tree canopy and construction machinery or other elements (e.g. scaffolding), the project arborist shall provide advice and direction.

7.8 Landscaping

7.8.1 Any new gardens and footpaths are to be installed on or slightly above existing levels.

7.8.2 No excavation within the TPZ or skimming within the SRZ shall occur.

7.8.3 For turfing, the existing ground levels shall be maintained within a minimum variation of depth or height of 50mm.

7.8.4 Excavation for new plant material shall be flexible in their location, if tree roots >40mm within the TPZ are encountered, the planting hole is to be moved to avoid roots.

7.8.5. Fencing posts shall be flexible in their location, if tree roots >40mm within the TPZ are encountered, the post hole is to be moved to avoid roots

7.8.6. Excavation for irrigation services (trenching) refer 7.5

7.8.7. Any additional retaining walls must accommodate the TPZ's set out in Appendix A - Tree assessment schedule. All amended plans shall be reviewed, and the impact assessed by the Project Arborist.

7.9 Key Hold Points (Table 4)

Hold point	Stage	Task	Responsibility	Certification
1	Prior to all work commencing.	Clearly mark trees approved for removal.	Principle contractor	Project arborist
2	Prior to demotion and site establishment	Implement all approved tree protection measures	Principle contractor	Project arborist
3	Construction	Supervision of excavations within the TPZ	Principle contractor	Project arborist
4	Monthly inspections or as required	Inspection of trees and tree protection and/or any works within the TPZ.	Principle contractor	Project arborist
5	Prior to issue of occupation certificate	Final inspection of trees	Principle contractor	Project arborist

8. Examples of tree protection.



Figure 3. Tree protective fencing and signage.

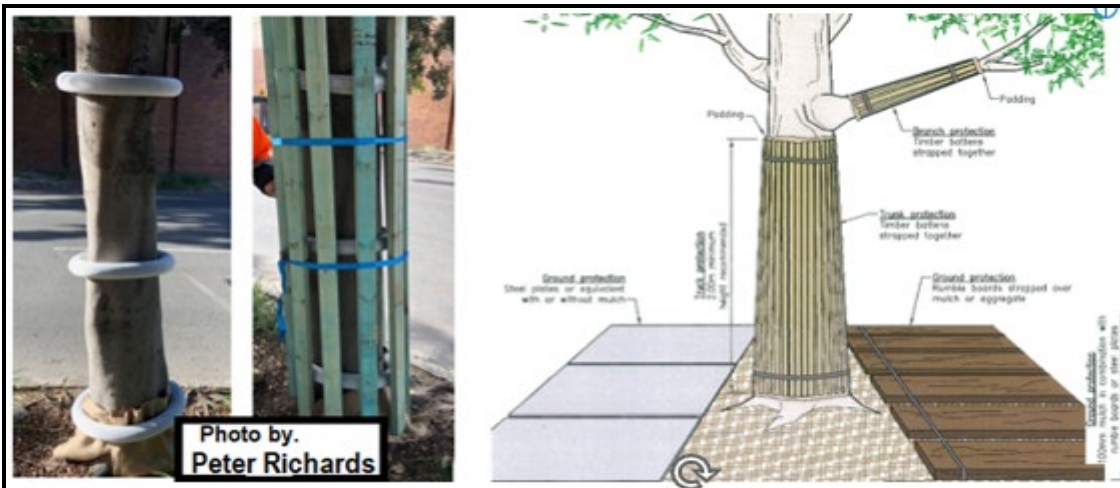


Figure 4. Trunk and branch protection.



Figure 5. Ground protection.

9. Site Photos



Photo 1. Trees 4, 5, 6, 7. Under-story Wattle to be removed.



Photo 2. Trees 9,13,14 with line of proposed driveway entry & carparking.



Photo 3. Trees 15,16,17,18,19,20 adjacent to Western boundary within street verge Keefers Glen.



Photo 4. Trees 32-54 adjacent to existing dam to be filled & levelled



Photo 5. Trees 22,23,24 within neighbouring properties Northern Boundary. Trees 55-65 adjacent to existing netball court.



Photo 6. Trees 55-83 adjacent to existing netball court.



Photo 7. Trees adjacent to Western boundary, Keefer's Glen Looking South



Photo 8. Trees adjacent to Western boundary, Keefer's Glen Looking North



Photo 9. Trees inside the Western boundary looking North.



Photo 10. Trees inside the Western boundary looking South.

Appendix A. Tree assessment schedule

Tree No	Botanical & Common Name	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
1	<i>Pyrus calleryana</i> (Ornamental Pear) Group of 3	M	6	200 250	2.4 1.8	1.5	15-40 2.d	Fair	Good	Low	Dom	90	6	Poor pruning history. Multi-trunked @ 0.5m, sound unions, low probability of failure (Slater 2016). Within subject property.
2	<i>Fraxinus oxycarpa</i> "Raywoodi" (Claret Ash)	M	10	300 400	3.6 2.1	5.0	15-40 2.d	Fair	Good	Mod	Dom	80	5	Minor deadwood 10%. Multi-trunked with sound unions, low probability of failure (Slater 2016).
3	<i>Cupaniopsis anacardioides</i> (Tuckeroo)	M	6.0	90 110	2.0 1.5	1.5	15-40 2.d	Fair	Fair	Low	Co	60	7	Minor deadwood 10%. Multi-trunked with sound unions, low probability of failure (Slater 2016).
4	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	12	300 350	3.6 2.1	4	15-40 2.d	Fair	Good	Low	Dom	50	6	Self-seeded. Multi-trunked with sound unions, low probability of failure (Slater 2016).
5	<i>Casuarina glauca</i> (Swamp She-Oak)	M	18	270 340	3.6 2.1	2	15-40 2.d	Fair	Good	Mod	Dom	70	3	Sound branching habit. No pest or disease
6	<i>Acacia spp</i> (Wattle)	M	8	250 300	3.0 2.0	5	5-10 4.e	Fair	Fair	Low	Co	70	6	Multi-trunked. Short life-span. Within understory hedge of Wattle..
7	<i>Casuarina glauca</i> (Swamp She-Oak)	M	16	350 400	4.2 2.2	3.0	40+	Good	Good	Mod	Dom	80	4	Sound branching habit. No pest or disease
8	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	18	450 500	4.8 2.3	8	15-40 2.b	Fair	Good	High	Dom	80	3	Wound with decay @2m 1 st order lateral branch. Sound unions in upper canopy

9	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	16	350 400	4.2 2.2	6.0	15- 40 2.d	Fair	Good	Mod	Co	60	5	Multi-trunked @ 3m with sound unions. Crown bias to North.
10	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	8	200 250	2.4 1.8	4.0	5-15 3.d	Poor	Fair	Low	Supp	60	6	Group of 2 trees Crown bias to North. Suppressed by neighbouring trees
11	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	9	240 290	3.0 2.0	5.0	15- 40	Poor	Fair	Low	Supp	60	6	Crown bias to North. Suppressed by neighbouring trees
12	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	500 550	6.0 2.5	5.0	15- 40 2.d	Fair	Fair	Mod	Co	60	4	Poor pruning history, Deadwood stub. Multi-trunked @ 2m with inclusions.
13	<i>Melaleuca styphelioides</i> (Prickly Paperbark)	M	4	150 200	2.0 1.6	1.5	5-15	Poor	Fair	Low	Supp	60	7	Deadwood/stubs. Poor pruning history, crown to North
14	<i>Casuarina glauca</i> (Swamp She-Oak)	M	6	200 250	2.4 1.8	3.0	5-15 3.b	Poor	Poor	Low	Dom	50	6	Rubbing against fence wound @ base. Bifurcated union @ 1.7m with inclusions. Lean to North. Street tree (Keefers Glen)
15	<i>Eucalyptus longifolia</i> (Woollybutt)	M	20	470 530	5.6 2.5	6.0	15- 40	Fair	Fair	High	Co	70	2	Fork @ 8m union appears sound. Overcrowded with neighbouring trees. Crown bias to North. Street tree (Keefers Glen). Exposed & damaged surface roots within TPZ radius.
16	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	20	520 600	6.2 2.7	6.0	15- 40	Fair	Fair	High	Co	70	2	Fork @ 9m union appears sound. Overcrowded with neighbouring trees. Crown bias to North. Street tree (Keefers Glen). Exposed & damaged surface roots within TPZ radius.
17	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	20	485 550	5.8 2.6	5.0	5-15 3.b	Poor	Fair	High	Co	60	2	Fork @ 8m union with deadwood-stub with decay. High probability of failure. Overcrowded with neighbouring trees. Crown bias to North. Street tree (Keefers Glen). Exposed & damaged surface roots within TPZ radius.
18	<i>Melaleuca styphelioides</i> (Prickly Paperbark)	M	8	380 800	4.5 3.1	3.0	5-15	Poor	Fair	Low	Co	70	6	Poor pruning history. Multi-trunked @base with sound unions. Street tree (Keefers Glen). Exposed & damaged surface roots within TPZ radius.
19	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	19	660 675	7.9 2.8	6.0	15- 40	Fair	Fair	High	Dom	60	2	Poor pruning history. Multi-trunked @base with sound unions. Street tree (Keefers Glen). Exposed & damaged surface roots within TPZ radius.
20	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	19	950 1.1	11. 3.5	6.0	15- 40	Poor	Fair	High	Dom	50	2	≥20% deadwood. 1m long wound with decay @ 7m. Poor wound-wood development. Self-correcting trunk bias to North

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
21	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	200 250	2.4 1.8	3.0	5-15	Fair	Fair	Low	Dom	75	6	Crown bias to North. Crack in trunk @ 2m. Sparse foliage.
22	<i>Casuarina glauca</i> (Swamp She-Oak)	M	18	350 400	4.2 2.2	5.0	5-15	Fair	Poor	Low	Dom	40	6	Die-back from top 20% deadwood/stubs. Crown bias to South.
23	<i>Melaleuca quinquenervia</i> (B.L. Paperbark)	M	16	400 450	4.8 2.3	5.0	15-40 2.d	Fair	Fair	Low	Co	70	5	Poor pruning history. Multi-trunked @ 2m with sound unions
24	<i>Casuarina glauca</i> (Swamp She-Oak)	M	16	400 450	4.8 2.3	4.0	15-40	Fair	Fair	Low	Co	70	5	Poor pruning history. Fork @ 1.6m union appears sound.
25-28	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	17	300 350	3.6 2.1	3.0	15-40 2.d	Fair	Fair	Low	Co	70	6	Multi-trunked with sound unions. Minor epicormic growth. <10% deadwood. Adjacent to existing dam
29	<i>Casuarina glauca</i> (Swamp She-Oak)	M	12	230 250	2.7 1.8	2.0	15-40 2.d	Poor	Fair	Low	Supp	60	7	Suppressed by neighbouring trees. Previous branch failure. Adjacent to existing dam
30	<i>Melaleuca styphelioides</i> (Prickly Paperbark)	M	6	150 200	2.0 1.6	3.0	5-15	Poor	Poor	Low	Supp	75	7	Suppressed by neighbouring trees. Previous branch failure. Adjacent to existing dam.
31-36	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	300 350	3.6 2.1	5.0	15-40 2.d	Fair	Good	Low	Co	60	6	Multi-trunked with sound unions. Minor epicormic growth. <10% deadwood. Adjacent to existing dam
37	<i>Melaleuca styphelioides</i> (Prickly Paperbark)	M	6	150 200	2.0 1.6	2.0	5-15	Poor	Fair	Low	Supp	50	7	Suppressed by neighbouring trees. Previous branch failure. Adjacent to existing dam.
38	<i>Angophora costata</i> (Smooth Barked Apple)	M	13	200 250	2.4 1.8	2.0	15-40	Fair	Fair	Low	Co	50	6	Minor epicormic growth. <10% deadwood. Adjacent to existing dam
39-43	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	16	300 350	3.6 2.1	3.0	15-40	Fair	Fair	Low	Co	70	6	Multi-forked with sound unions. Minor epicormic growth. <10% deadwood. Adjacent to existing dam

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
44	<i>Angophora costata</i> (Smooth Barked Apple)	M	15	200 250	2.4 1.8	3.0	5-15	Poor	Fair	Low	Supp	30	7	Wound in trunk @ 2m with decay. Sparse foliage. Adjacent to existing dam
45	<i>Melaleuca styphelioides</i> (Prickly Paperbark)	M	6	150 200	2.0 1.6	2.0	5-15	Poor	Poor	Low	Supp	40	7	Wounds with decay. 10% deadwood. Adjacent to existing dam
46	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	7	100 150	2.0 1.5	1.2	5-10	Poor	Fair	Low	Supp	30	7	Tall Slender narrow crown. Adjacent to existing dam
47	<i>Angophora costata</i> (Smooth Barked Apple)	M	8	300 350	3.6 2.1	1.5	5-10	Poor	Fair	Low	Supp	30	7	Large Wound @ 1.8 with decay in trunk. Poor wound-wood development. Adjacent to existing dam
48	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	7	100 150	2.0 1.5	2.0	15-40 2.d	Fair	Fair	Low	Supp	70	6	Multi-trunked with sound unions. Minor epicormic growth. <10% deadwood. Adjacent to existing dam
49-50	<i>Angophora costata</i> (Smooth Barked Apple)	M	12	300 350	3.6 2.1	3.0	15-4	Poor	Poor	Low	Co	40	7	Previous branch failure. Wounds with decay. Poor wound-wood development. Adjacent to existing dam
51	<i>Angophora costata</i> (Smooth Barked Apple)	M	14	300 350	3.6 2.1	3.0	15-40	Fair	Fair	Mod	Co	60	5	Sound branching habit. no pest. Adjacent to existing dam.
52	<i>Melaleuca styphelioides</i> (Prickly Paperbark) Group of 4	M	6	150 200	2.0 1.5	2.0	5-10	Poor	Fair	Low	Co	60	6	Multi-trunked with sound unions. Minor epicormic growth. <10% deadwood. Adjacent to existing dam
53	<i>Angophora costata</i> (Smooth Barked Apple)	M	15	300 350	3.6 2.1	4.0	15-40	Fair	Fair	Low	Co	50	7	Multi-forked with sound unions. Minor epicormic growth. <10% deadwood. Adjacent to existing dam
54	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	16	350 400	4.2 2.2	4.0	15-40	Fair	Fair	Low	Co	50	6	Minor epicormic growth. <10% deadwood. Adjacent to existing dam
55	<i>Casuarina glauca</i> (Swamp She-Oak)	M	16	420 490	5.1 2.5	4.0	15-40	Fair	Fair	Mod	Co	70	4	Sound branching habit. No pest or disease <10% deadwood. Adjacent to Northern boundary

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
56	<i>Casuarina glauca</i> (Swamp She-Oak)	M	16	450 500	5.4 2.4	5.0	15-40	Good	Good	High	Co	75	3	Sound branching habit. Crown bias to North-East
57	<i>Casuarina glauca</i> (Swamp She-Oak)	M	3	300 350	-	-	-	-	Dead	-	-	-	-	Dead -Previous crown failure- Storm damage- pruned for safety @3m from ground level. Stump remaining.
58	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	420 550	5.0 2.5	4.0	15-40	Good	Fair	High	Co	70	3	Sound branching habit. Crown bias to North-East.
59	<i>Allocasuarina torulosa</i> (Forest Oak)	M	14	340 350	4.0 2.1	3.0	15-40	Fair	Fair	Mod	Co	60	4	Poor pruning history. Multi-trunked @3m unions appear sound
60	<i>Allocasuarina torulosa</i> (Forest Oak)	M	14	410 450	4.9 2.3	4.0	15-40 2.d	Fair	Fair	Mod	Co	75	4	Sound branching habit. Crown bias to North-East.
61	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	450 550	5.4 2.5	4.5	15-40	Fair	Good	High	Co	70	3	Multi-trunked @10m unions appear sound.
62	<i>Allocasuarina torulosa</i> (Forest Oak)	M	13	250 300	3.0 2.0	2.5	5-15	Fair	Poor	Mod	Supp	60	4	Sparse foliage. Multi-trunked @3m unions appear sound
63	<i>Casuarina glauca</i> (Swamp She-Oak)	M	14	250 300	3.0 2.0	2.5	5-15	Fair	Poor	Mod	Supp	60	4	Sparse foliage. Multi-forks mid-upper canopy unions appear sound
64	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	500 600	6.0 2.6	4.5	5-15	Fair	Good	Mod	Co	60	3	Fork @ 4m with wound-wood development possible internal crack.
65	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	420 500	5.0 2.4	4.0	5-15	Fair	Good	Mod	Co	70	3	Deadwood with fungal fruiting body@3m.
66A	<i>Ficus macrocarpa</i> 'Hilli' Hills Fig	M	10	400 450	5.4 2.4	6.0	40+	Good	Good	Mod	Dom	80	4	Previously lopped @ 1.5m. Sound unions & branching habit.

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
66	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	350 400	4.2 2.2	3.0	15-40 2.d	Fair	fair	Mod	Co	60	5	Deadwood with fungal fruiting body mid canopy
67	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	450 500	5.4 2.4	3.5	15-40 2.d.	Fair	Fair	Mod	Co	70	5	Crown bias to West. Poor pruning history. Deadwood/stubs.
68	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	12	300 350	3.6 2.1	2.0	<5	Poor	Poor	Low	Supp	30	7	Sparse foliage in decline.
69	<i>Casuarina glauca</i> (Swamp She-Oak)	M	15	200 250	2.4 1.8	1.5	15-40 2.d.	Fair	Fair	Low	Supp	60	6	Sound branching habit.
70	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	300 350	3.6 2.1	4.0	15-40 2.d.	Fair	Fair	Mod	Co	70	5	Sound branching habit.
71	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	300 350	3.6 2.1	4.0	15-40 2.d.	Fair	Fair	Mod	Co	60	5	Sound branching habit- No pest or disease
72	<i>Angophora costata</i> (Smooth Barked Apple)	M	15	250 300	3.0 2.0	2.5	15-40 2.d	Poor	Fair	Low	Supp	50	6	Deadwood / Deadwood stubs. Crown bias to South.
73	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	250 300	3.0 2.0	2.0	15-40 2.d	Fair	Fair	Low	Supp	50	7	Deadwood / Deadwood stubs. Crown bias to South.
74	<i>Eucalyptus longifolia</i> (Woollybutt)	M	16	600 650	7.2 2.7	6.0	5-15 3.d	Poor	Poor	Low	Co	50	7	Previous branch failure. Deadwood/ DW stubs. Sparse foliage
75	<i>Corymbia gummifera</i> (Bloodwood)	M	15	400 450	4.8 2.3	4.5	5-15 3.d	Poor	Fair	Low	Co	50		Previous branch failure. Deadwood/ DW stubs. Sparse foliage. Crown bias to North.

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
76	<i>Angophora costata</i> (Smooth Barked Apple)	M	8	200 250	2.4 1.8	1.5	<5	Poor	Poor	Low	Co	60	7	Previous branch failure. Deadwood/ DW stubs. Sparse foliage
77	<i>Angophora costata</i> (Smooth Barked Apple)	M	15	350 400	4.2 2.2	2.5	15-40 2.d.	Fair	Fair	Mod	Co	30	7	Previous branch failure. Deadwood/ DW stubs. Sparse foliage.
78	<i>Angophora costata</i> (Smooth Barked Apple)	M	15	300 350	3.6 2.1	3.0	15-40 2.d.	Fair	Fair	Low	Co	50	6	Fork @6m union appear sound (Slater 2016).
79	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	700 800	8.4 3.0	7.5	15-40 2.d.	Fair	Fair	High	Dom	70	3	Poor pruning history. Deadwood/stubs.
80	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	300 350	3.6 2.1	2.0	15-40 2.d.	Fair	Fair	Mod	Co	50	5	Deadwood/deadwood stubs. Crown bias to North
81	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	300 350	3.6 2.1	2.5	15-40 2.d.	Fair	Fair	Mod	Co	50	5	Deadwood/deadwood stubs. Crown bias to North
82	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	10	250 300	3.0 2.0	2.5	5-15 3.d	Poor	Fair	Low	Supp	50	6	Deadwood/deadwood stubs. Crown bias to North. Low volume Epicormic shoots
83	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	16	350 400	4.2 2.2	3.0	15-40 2.d	Fair	Fair	Mod	Co	60	5	Deadwood/deadwood stubs. Crown bias to North. Low volume Epicormic shoots
84	<i>Angophora costata</i> (Smooth Barked Apple)	M	18	400 450	4.8 2.3	4.5	5-15 3.d	Poor	Fair	Mod	Co	60	5	Wound with decay @ 6m. Poor pruning history
85	<i>Melaleuca styphelioides</i> (Prickly Leaved Paperbark)	M	6	270 350	3.2 2.1	2.0	5-15 3.d	Poor	Fair	Low	Supp	60	7	Multi-trunked with inclusions. Mechanical damage wound trunk.

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
86	<i>Angophora costata</i> (Smooth Barked Apple)	M	12	250 300	3.0 2.0	2.5	15-40 2.d.	Fair	Fair	Mod	Co	70	5	Fork @ 6m union appears sound (slater2016).DW stub with decay.
87	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	500 550	6.0 2.5	5.0	15-40 2.d.	Fair	Fair	High	Co	70	3	Poor pruning history. Medium volume of epicormic shoots. Deadwood/DW stubs.
88	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	15	550 600	6.6 2.6	6.0	15-40 2.d.	Fair	Good	High	Dom	60	3	Deadwood/deadwood stubs. Crown bias to West.
89	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	6	250 300	3.0 2.5	2.5	15-40 2.d.	Fair	Fair	Low	Co	80	6	Multi-trunked, previously lopped @1.8m. Leaf miner present.
90	<i>Melaleuca styphelioides</i> (Prickly Leaved Paperbark)	M	6	150 200	2.0 1.5	1.5	5-15 3.d	Poor	Fair	Low	Supp	60	7	Poor pruning history. Crown bias to North-West.
91	<i>Angophora costata</i> (Smooth Barked Apple)	M	14	350 400	4.2 2.2	5.0	15-40 2.d.	Poor	Fair	Mod	Co	50	5	Poor pruning history. Deadwood/DW stubs with decay.
92	<i>Angophora costata</i> (Smooth Barked Apple)	M	15	400 450	4.8 2.3	3.0	5-15 3.d	Poor	Fair	Mod	Co	40	5	Poor pruning history. Deadwood/DW stubs with decay. Wounds upper canopy.
93	<i>Alphitonia excelsa</i> (Soap Tree)	M	10	300 350	3.6 2.1	3.5	<5	Poor	Poor	Low	Co	40	7	Mechanical wound @ 1.5m. Sparse foliage in decline.
94	<i>Araucaria columnaris</i> (Cook Pine)	M	15	350 400	4.2 2.2	1.5	40+	Good	Good	High	Co	90	4	Sound branching habit.
95	<i>Melaleuca styphelioides</i> (Prickly Leaved Paperbark)	M	5	200 250	2.4 1.8	1.5	5-15 3.d	Poor	Fair	Low	Supp	50	7	Suppressed growth; asymmetrical canopy

Tree No	Genus Species	Age	Height (m)	DBH & DAB (mm)	TPZ & SRZ (m)	Canopy Radius (m)	ULE	Condition	Vigour	Retention Value	Crown Class	Live crown Ratio (%)	Landscape significance	Comment
96	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	7	200 250	2.4 1.8	2.5	5-15 3.d	Fair	Poor	Low	Supp	60	7	Multi-trunked, previously lopped. Leaf miner present. Crown bias to North.
97	<i>Corymbia ficifloia</i> (Red Flowering Gum)	M	15	350 400	4.2 2.2	3.5	5-15 3.d	Poor	Fair	Low	Co	70	6	Poor pruning history. Deadwood/DW stubs with decay Lopped @2.5m.
98	<i>Angophora costata</i> (Smooth Barked Apple)	M	6	350 400	4.2 2.2	2.5	5-15 3.d	Poor	Good	Low	Co	80	7	Poor pruning history. Lopped @ base. Multi-trunked regrowth.
99	<i>Angophora costata</i> (Smooth Barked Apple)	M	6	350 400	4.2 2.2	2.5	5-15 3.d	Poor	Good	Low	Co	80	7	Poor pruning history. Lopped @ base. Multi-trunked regrowth.
100	<i>Eucalyptus robusta</i> (Swamp Mahogany)	M	7	350 400	4.2 2.2	2.5	5-15 3.d	Fair	Fair	Low	Co	70	7	Poor pruning history
101	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	7	250 275	3.0 2.0	2.0	15-40 2.d.	Fair	Fair	Low	Co	75	6	Poor pruning history
102	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	6	150 200	2.0 1.5	2.0	5-15 3.d	Fair	Fair	Low	Co	70	7	Poor pruning history. Self-seeded. Confined space.
103	<i>Glochidion ferdinandi</i> (Cheese Tree)	M	6	250 300	3.0 2.0	2.2	5-15 3.d	Fair	Fair	Low	Co	70	7	S Poor pruning history. Self-correcting trunk bias. Self-seeded. Confined space.

Appendix B. Tree Retention Matrix

	Landscape Significance Rating						
Estimated Life Expectancy	1	2	3	4	5	6	7
Long - Greater than 40 Years	High Retention Value			Moderate Retention Value			
Medium- 15 to 40 Years							
Short - 5 to 15 years				Low Ret. Value			
Transient - Less than 5 Years				Very Low Retention Value			
Dead or Potentially Hazardous							

Modified by Morton .A. from Couston,M and Howden.M (2001) Tree Retention Values Table Footprint Green Pty Ltd, Sydney Australia.

Appendix C. Explanation of terms

Height – Provided in Tree Schedule as metres

U.L.E. - Useful Life Expectancy.

D.B.H - Diameter at Breast Height (*measured at 1.4 meters from base*)

D.A.B - Diameter at base.

Age Class - **J** juvenile **SM** semi mature **M** mature **OM** over mature

Crown Class - **D** Dominant **CO** Co-dominant **I** Intermediate **S** Suppressed

Live Crown Ratio - Is the ratio of the foliage canopy to the total height of the tree.

Canopy Spread - **N** north **S** south **E** east **W** west

T.P.Z. Tree Protection Zone means an area above and below ground calculated in accordance with AS 4970-2009 Protection of trees on development sites. It is a radial distance from the stem set aside for the protection of a tree's roots and crown to provide for the viability and stability of the tree. The extent of potential impacts to the trees is summarised as:

0% of root zone impacted – no impact of significance

0 to 10% of TPZ impacted – low level of impact

10 to 15% of TPZ impacted – low to moderate level of impact

15 to 20% of TPZ impacted – moderate level of impact

20 to 25% of TPZ impacted – moderate to high level of impact

25 to 35% of TPZ impacted – high level of impact

>35% of TPZ impacted – significant level of impact (*Sourced from Guy Paroissien Landscape Matrix Pty Ltd*)

S.R.Z. Structural Root Zone is the area root zone area required to maintain a stable tree. The tree's woody roots and soil cohesion in this area are necessary to hold the tree upright. It is a radial distance from the stem calculated in accordance with AS 4970 -2009 Protection of trees on development sites. A greater area is required to maintain a trees vigour and longevity.

Vigour. The general appearance of the canopy/foliage of the tree at the time of inspection. Vigour can vary with the season and rainfall frequency. A tree can have 'Good' vigour but be hazardous due to 'Poor' condition. A tree in good vigour has the ability to sustain its life processes. Vigour is synonymous with health **G** Good **F** Fair **P** Poor

Wound wood Development - **G** Good **F** Fair **P** Poor

Structural Condition The general form and structure of the trunk/s and branching. Trunk lean, trunk/branch structural defects, canopy skewness or other hazards are considered. - **G** Good **F** Fair **P** Poor

Appendix D. U.L.E

Useful Life Expectancy (U.L.E) Categories and Subgroups (J Barrell 1996)

1. Long ULE > 40 Years

- a) Structurally sound trees located in positions that can accommodate future growth
- b) Trees which could be made suitable for long term retention by remedial care
- c) Trees of special significance which would warrant extraordinary efforts to secure their long-term retention

2. Medium ULE of 15 – 40 Years

- a) Trees which may only live from 15 to 40 years
- b) Trees which may live for more than 40 years but would be removed for safety or nuisance reasons
- c) Trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
- d) Trees which could be made suitable for retention in the medium term by remedial care

3. Short ULE of 5 – 15 Years

- a) Trees which may only live from 5 to 15 years
- b) Trees which may live for more than 15 years but would be removed for safety or nuisance reasons
- c) Trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
- d) Trees which require substantial remediation and are only suitable for retention in the short term.

4. Remove tree within 5 years.

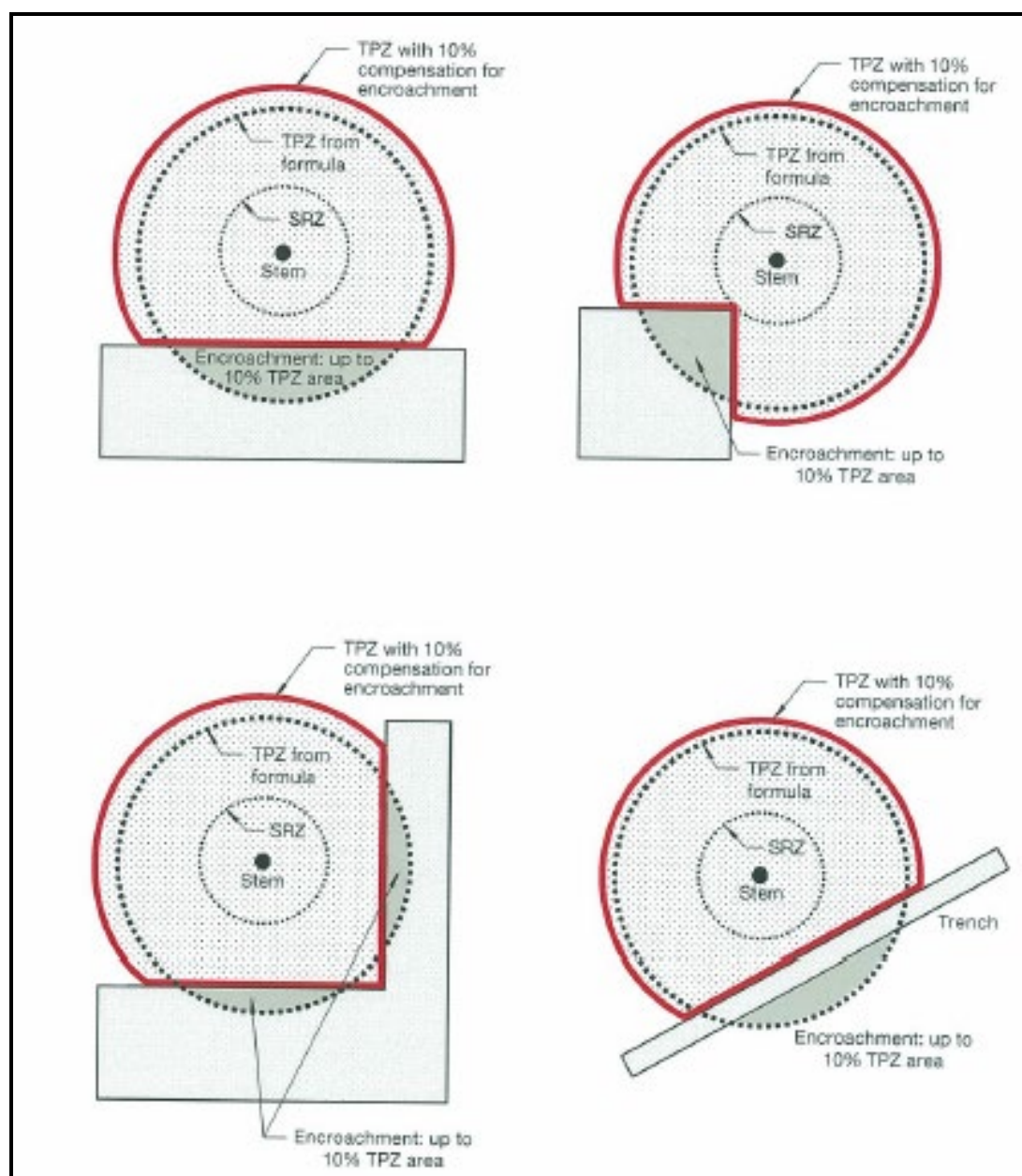
- a) Dead, dying, suppressed or declining trees because of disease or inhospitable conditions
- b) dangerous trees through instability or recent loss of adjacent trees
- c) Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form
- d) Damaged trees that are clearly not safe to retain
- e) Trees which may live for more than 5 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
- f) Trees which are damaging or may cause damage to existing structures within the next 5 years

5. Trees suitable for transplanting.

- a) small trees less than 5m in height
- b) young trees less than 15 years old but over 5m in height
- c) formal hedges and trees intended for regular pruning to control growth.
- d) palms, monocots, cycads and tree ferns.

Appendix E. Examples of minor encroachment into the TPZ

Sourced from AS4970 Protection of trees on development sites-2009.



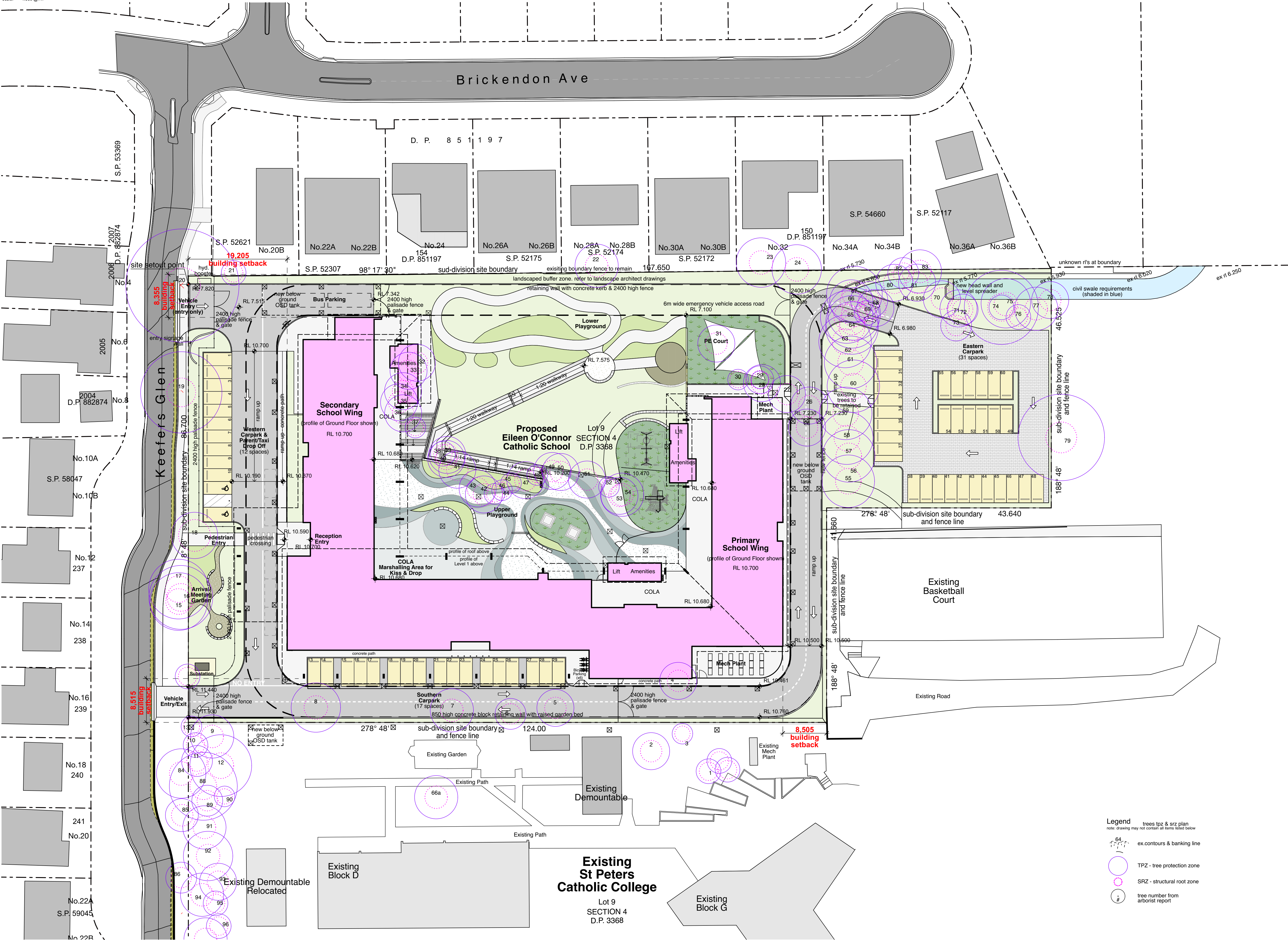
Appendix F. References

- Mattheck C & Breloer H (1999) The Body Language of Trees – A handbook for failure analysis 5th ed., London: The Stationery Office, U.K
- Slater D (2016) Assessment of Tree Forks: Junctions in Trees: Assessment of Junctions for Risk Management 2016. Romsey United Kingdom.
- Draper. D. Richards P (2009). Dictionary for managing trees in urban environments. CSIRO publishing
- Australian Standard AS 4970-2009 'Protection of trees on Development sites.
- Australian Standard AS 4373-2007 'Pruning of Amenity Trees'.
- Appendix C. TPZ potential impacts. Sourced from Guy Paroissien Landscape Matrix Pty Ltd

Amendments



0 5000 10000 20000
scale: 1:350 @ A1



Stanton Dahl & Associates Pty Limited. ABN: 32 802 261 396
Nominated Architects - SM Evans 7686 DM Bdl 11076
© Copyright 2025 Stanton Dahl

Stanton Dahl Architects
PO Box 833, Epping, NSW 1710, Australia
Tel +61 2 8876 5300
www.stantondahl.com.au

All dimensions to be verified on site and any discrepancies referred to architect for determination. figured dimensions to take precedence over scaled dimensions.

This design including its associated drawings, images, etc. is the intellectual property of stanton dahl & associates pty limited and must not be referenced copied or used without written permission of stanton dahl & associates pty limited.

Rev	Issue	Date
A	Issue for SSDA	07/04/25
B	Issue for SSDA - Revised	30/06/25

Amendments

Stanton
Dahl
Architects

Eileen O'Connor
Catholic School

CATHOLIC SCHOOLS
Broken Bay

RP INFRASTRUCTURE

Eileen O'Connor
Catholic School

Catholic Schools Broken Bay
(CSBB)
84 Gavenlock Road,
Mardi, NSW 2259

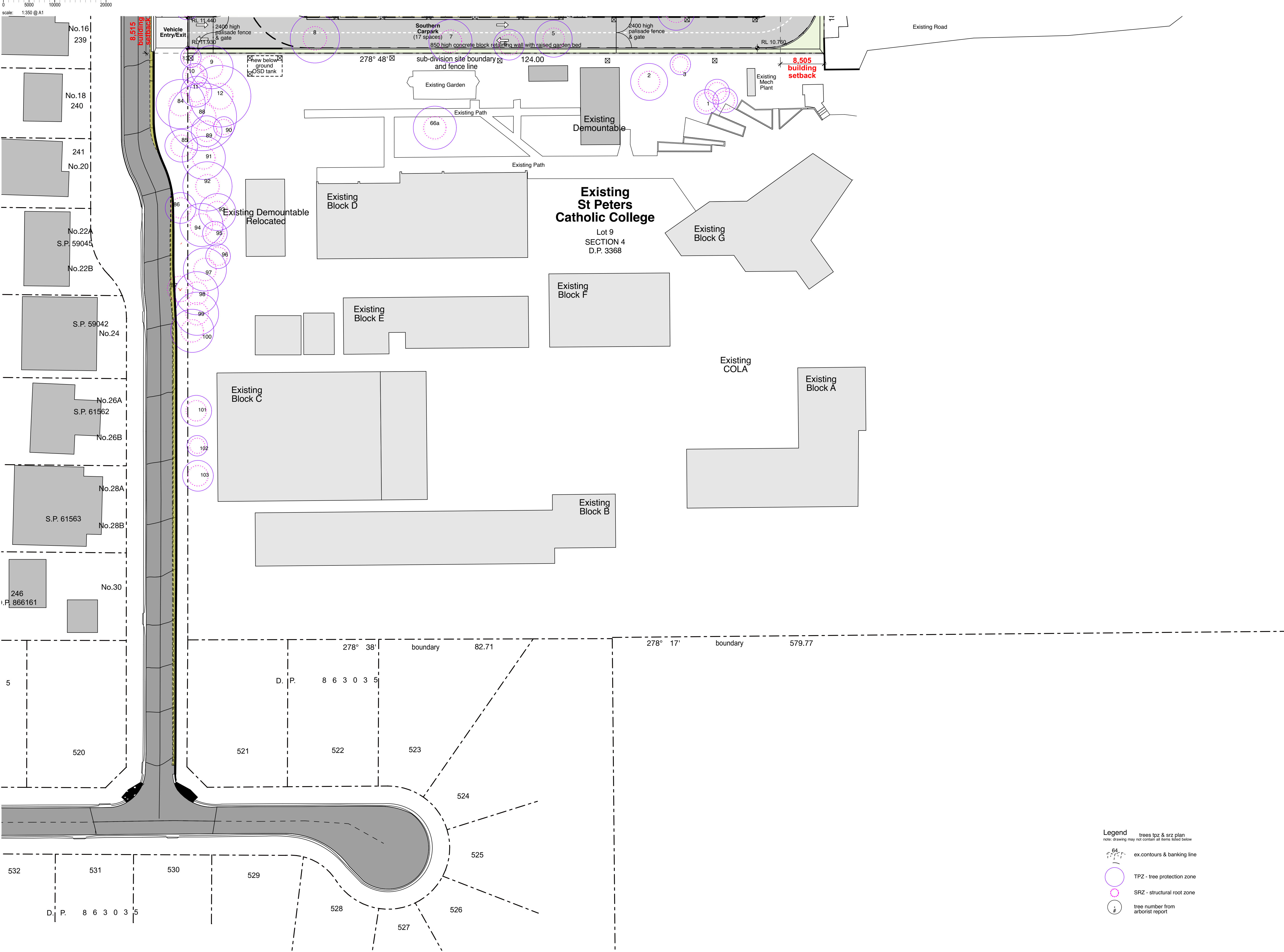
Drawn; RW
Checked; DM
Plot date; 30/6/2025

Scale; 1:350 as noted @ A1

Project No;
2637.20

Drawing No; A0117
Revision#; B

TPZ & SRZ Plan 1



Rev	Issue	Date
A	Issue for SSDA	07/04/2017
B	Issue for SSDA - Revised	30/06/2017

Amendments



Prior to works commencing.

A project arborist is to be engaged prior to any demolition or constructions works. The Project Arborist shall have a minimum AQF level 5 qualification in Arboriculture.

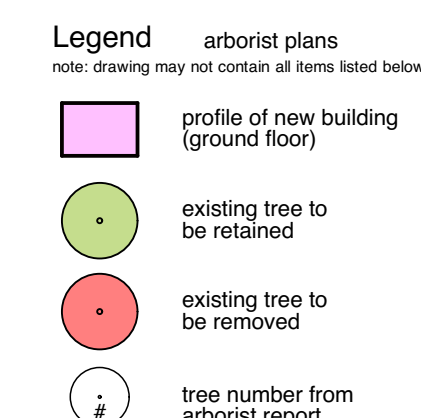
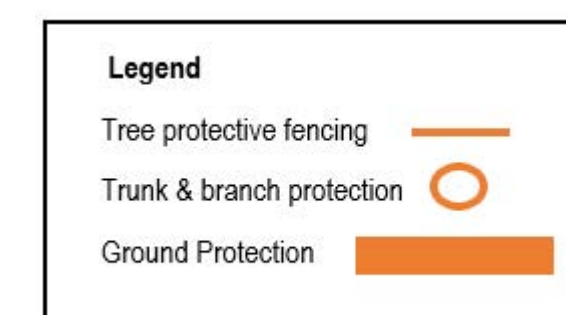
The Project Arborist, in consultation with the Project Supervisor, are to review and augment the site contractor induction to ensure all tree protection measures and all relevant guidelines within this statement are included.

Details of requirements relating to Project Arborists are set out in section 7.9 Key hold points.

Principal contractor to implement all tree protection measures in compliance with the tree protection plan and tree protection guidelines.

Refer to Section 7.1.Arboricultural Method Statement

All retained trees will require protection prior to works commencing, by the establishment of a No-Go zone with the installation of protective fencing, when protection fencing is deemed in-appropriate, trunk, branch & ground protection is to be installed (refer Section 7.2 & 7.3)



Stanton
Dahl
Architects



Eileen O'Connor
Catholic School

Catholic Schools Broken Bay
(CSBB)
84 Gavenlock Road,
Mardi, NSW 2259

Drawn; RW
Checked; DM
Plot date; 30/6/2025

Scale;1:350 as noted @ A1

Project No;
2637.20

Drawing No; Revision#;
A0116 B