

CITY OF MARIBYRNONG

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09/09/2024

URBAN PLANNING

Arboricultural Assessment & Report

54 – 62 Ashley Street West Footscray

For: Taouk Architects

Monday 9th September 2024

Arboricultural Assessment and Report 54 – 62 Ashley Street West Footscray

Report By: Graeme Lewis
Consulting Arborist
(Level 5 AQF)

Mobile: 0400 260 484

Objectives

To assess those trees located within and adjacent the subject site that may be affected by a potential development.

To identify all canopy trees within the subject site to species level and provide measured and observed tree data.

To locate the trees on the survey plan with a numerical identifier.

To provide relevant town planning information regarding tree protection.

To provide general information that will assist the design process.

Methodology

A site inspection was undertaken on Thursday 29th August 2024. The trees were inspected from ground level and observations made of the surrounding area. The subject trees were assessed for botanic name, health, structure, form, trunk and origin. Trunk diameters were measured at 1.4m from grade and at the trunk root plate interface. Canopy height and width were estimated as were neighbouring tree dimensions.

I have assessed the following Revision A, 07.06.2024, plans, by Taouk Architects.

Design Response Plan
Ground Floor Plan
First Floor Plan
Second Floor Plan
Elevations
Garden Area Plan

A copy of the *Ground Floor Plan* is provided in appendix 4 of this report. It has been marked up to show site tree numbering.

Site photographs are provided in Appendix 5.

Observations

The subject site (the site) consists of four adjoining General Residential Zone (Schedule 1) allotments located in West Footscray, a suburb within the City of Maribyrnong. The site is located on the corner of Alma Street, to the north and Ashley Street to the west.

The site trees mostly consist of insignificant plantings of fruit trees, self-sown environmental weeds and small exotics & natives that range in heights of 3 – 6m. The exception is a poorly structured 8m high *Melaleuca styphelioides* (Prickly Paperbark), which appears to have regrown from a past tree removal stump.

Several trees exist in neighbouring property 109 Alma Street which abuts the sites eastern boundary. They are a mixture NSW natives, environmental weeds, succulents and evergreen exotic conifers.

A 7m tall *Callistemon citrinus* (Scarlet Bottlebrush) is located as a street tree in the Alma Street nature strip.

It is proposed to demolish the site, including all site trees in order to construct nine townhouses. Vehicle access is provided via a new street crossover onto Alma Street.

None of the site or neighbouring trees are protected by planning scheme overlays or Local Law.

Councils Local Law 2015 Part 29 c requires an Asset Protection Permit for nature strip trees and infrastructure within a tree protection zone.

Discussion

Tree Value

Trees can make a positive contribution to the appeal of a completed development by providing a visual softening of the built form, a maturity to the landscape, a connection with the pervading landscape and neighbourhood character, they also provide scale, shade, beauty and habitat. However not all trees are suitable for retention particularly within a proposed development; particularly those exhibiting poor health, poor structure, weed status and so on.

Assigning a retention value is required under AS4970 2009 *Protection of Trees on Development Sites* and usually requires consideration of many factors such as a trees amenity value, longevity, tolerance to impact, anti-social traits, habitat, safety, planning scheme status etc. Consequently, it is a fairly subjective process, however in general the following applies:

- Trees of low retention value are unsuitable for retention,
- Trees of medium retention value can be retained if site constraints can accommodate tree retention,
- Trees of high retention value are recommended for retention and should be accommodated within the design process.

Tree Retention and Acceptable Impacts

If trees are to be successfully retained within a development site then measures must be taken to ensure adequate protection of the canopy and root mass. To this end an arborist identifies Tree Protection Zones (TPZ) so that adequate amounts of canopy and root mass are left unaffected by construction, thereby providing for a healthy, stable, long-term tree resource.

Tree Protection Zones are calculated by multiplying the trunk diameter at 1.4m from grade by twelve whilst the Structural Root Zone (SRZ) is calculated by using a diameter measurement above the root buttress. Whilst the TPZ maintains tree health, the SRZ is critical in maintaining a trees anchorage. Both the TPZ and SRZ are shown on plan as a circle, measured as a radius from trunk centre.

A TPZ is usually drawn on plan as a perfect circle, unfortunately this is not an accurate reflection of a tree's root or canopy pattern, as both of these structures will often form asymmetric shapes that are a product of their local environment. For example, canopies may be pruned back from buildings and powerlines, storm damaged or influenced by nearby trees.

Other canopy influences include available sunlight and structures whilst root growth may be influenced by adjacent built form, other tree roots, soil type, moisture gradients, leaking pipes, topography, leaning trunks etc.

AS4970 2009 determines that it may be possible to encroach or make variations to the standard TPZ. Where encroachments into a TPZ are proposed, whether minor or major, the TPZ should be compensated for elsewhere and contiguous with the TPZ.

Where minor encroachments (<10% of TPZ area) occur, variations must be made by the project arborist considering relevant factors listed in Section 3.3.4 TPZ Encroachment Considerations, these are:

- exploratory root excavation,
- potential loss of roots, number and size,
- Tree species and tolerance to root disturbance
- Age, vigour and size of the tree
- Lean and stability of the tree (and supporting roots)
- Soil characteristics and volume, topography and drainage
- The presence of existing or past structures or obstacles affecting root growth
- Design factors

Where major encroachments (>10% of TPZ area) are proposed the project arborist must demonstrate how the tree would remain viable. This may require root investigation by non-destructive methods and consideration of relevant factors listed in Section 3.3.4.

Conclusions & Recommendations

It is proposed to remove site trees 5, 6, 7, 8, 10, 14, 15, 16, 17, 18, 19 & 20, which are insignificant in terms of the amenity value they provide to the site and surrounding landscape.

According to AS4970 2009, the following Tree Protection Zone encroachments assessment applies:

- The TPZ area of trees 2, 3, 4, 9, Group 11, 21 & 22 are not encroached, therefore tree health will not be affected.
- The TPZ encroachment to street tree 1 and neighbouring trees 12 & 13 is minor.
- The TPZ of zero trees is encroached a major amount.

The encroachment to trees 12 & 13 is negligible at 1% & <1% respectively, which will not materially affect tree health.

As the Structural Root zone of street tree 1 is encroached by a proposed crossover excavation, an exploratory tree root investigation, using non destructive methods, should be used to determine how the tree may be affected.

Tree protection measures in accordance with AS4970 2009 *Protection of Trees on Development Sites* must be installed prior to the commencement of any site works.

Tree protection fencing should be placed at the extent of the TPZ for trees 1, 21 & 22 where it overlays the nature strip and is unfettered by works.

Fencing should also be erected to the extent of the TPZ for trees 2, 3, 4, 9, Group 11 & 13 where it overlays the site and is unfettered by works.

A mixture of fencing and ground protection should be used to protect the health of trees 12 and provide for adequate construction access.

Storm water drains and other underground services must be diverted around the retained trees TPZ, the only exception would be if the services are installed by underground boring, at appropriate depths, with machinery access and entry pits located outside the TPZ.

Graeme Lewis
Consulting Arborist (Level 5 AQF)

Diploma of Horticulture (Arboriculture) - (Melbourne University)
Advanced Certificate Arboriculture (VCAH Burnley)
Victorian Tree Industry Organisation - Member
Arboriculture Australia - Member

References:

ASA 4970 2009 *Protection of Trees on Development Sites* (Standards Australia)

Appendix 1 Tree Data

***DESCRIPTORS IN APPENDIX 2**

DBH = DIAMETER OF TRUNK AT 1.3M FROM GRADE. TPZ = TREE PROTECTION ZONE

SRZ= AS4970 2009 STRUCTURAL ROOT ZONE.

BOTH TPZ & SRZ DISTANCES ARE MEASURED AS A RADIUS FROM TRUNK CENTRE

*** INDICATES A TREE WITH MULTIPLE TRUNKS.**

No.	Botanical Name	Common Name	Height (m)	Width	Health	Structure	Form	Origin	DBH (cm)	TPZ (m)	SRZ (m)	Retention Value	Comments
1	<i>Callistemon citrinus</i>	Scarlet Bottlebrush	7	7	Good	Fair	Good	Planted NSW Native	39	4.7	2.5	Medium	Street tree.
2	<i>Melaleuca bracteata</i>	River Tea Tree	5	4	Fair	Fair	Fair	Planted NSW Native	15*	2	1.7	Medium	Neighbouring tree.
3	<i>Callistemon viminalis</i>	Drooping Bottlebrush	7	6	Good	Fair	Fair	Planted NSW Native	20*	2.4	1.7	Medium	Neighbouring tree.
4	<i>Syzygium paniculatum</i>	Brush Cherry	5	3	Poor	Fair	Poor	Planted NSW Native	16	2	1.8	Low	Neighbouring tree.
5	<i>Prunus cerasifera</i>	Cherry Plum	6	6	Good	Poor	Poor	Environmental Weed	25	3	2.1	Low	Lopped self sown weed tree.
6	<i>Pittosporum undulatum</i>	Sweet Pittosporum	5	6	Good	Good	Fair	Environmental Weed	10*	2	1.8	Low	Self sown weed tree
7	<i>Pittosporum undulatum</i>	Sweet Pittosporum	5	4	Good	Good	Fair	Environmental Weed	23	2.8	2.1	Low	Self sown weed tree
8	<i>Coprosma repens</i>	Taupata	4	8	Good	Poor	Fair	Environmental Weed	13*	2	2.4	Low	Thicket of self sown weeds.
9	<i>Pittosporum undulatum</i>	Sweet Pittosporum	7	9	Good	Good	Fair	Environmental Weed	24*	2.9	2.5	Low	Self sown neighbouring weed tree
10	<i>Ficus Carica</i>	Common Fig	3	3	Fair	Poor	Poor	Exotic	9	2	2.3	Low	Stump regrowth

Appendix 1 Tree Data

No.	Botanical Name	Common Name	Height (m)	Width	Health	Structure	Form	Origin	DBH (cm)	TPZ (m)	SRZ (m)	Retention Value	Comments
Group 11	<i>Yucca elephantipes</i>	Soft tipped yucca	6	3	Good	Good	Poor	Exotic	10	2	1.7	Low	Copse of neighbouring succulent plants. Reduced TPZ as per AS4970 2009.
12	<i>XCupressocyparis leylandii</i>	Leyland Cypress	9	9	Good	Fair	Poor	Exotic	35	4.2	2.4	Low	Neighbouring tree. Inappropriate species for residential sites.
13	<i>XCupressocyparis leylandii</i>	Leyland Cypress	9	9	Good	Poor	Poor	Exotic	35*	4.2	2.4	Low	Neighbouring tree. Bifurcated with included bark. Inappropriate species for residential sites.
14	<i>Citrus limon</i>	Lemon	4	4	Fair	Fair	Good	Exotic	21*	2.5	1.8	Low	Infested with wasp gall
15	<i>Camellia japonica</i>	Camellia	3	2	Poor	Good	Fair	Exotic	8*	2	1.5	Low	
16	<i>Melaleuca styphelioides</i>	Prickly-Leaved Paperbark	8	7	Good	Poor	Fair	Planted NSW Native	36*	4.4	2.7	Low	Possible stump regrowth. Multiple basal bifurcations with included bark.

Appendix 1 Tree Data

No.	Botanical Name	Common Name	Height (m)	Width	Health	Structure	Form	Origin	DBH (cm)	TPZ (m)	SRZ (m)	Retention Value	Comments
17	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	5	3	Poor	Poor	Poor	Planted NSW Native	16*	2	1.8	Low	
18	<i>Callistemon citrinus</i>	Scarlet Bottlebrush	3	4	Good	Fair	Fair	Planted NSW Native	13	2	1.8	Low	Lopped at 1.5m
19	<i>Banksia marginata</i>	Silver Banksia	6	3	Good	Good	Fair	Planted VIC Native	15	2	1.8	Medium	
20	<i>Ligustrum ovalifolium</i>	Oval leaved privet	3	3	Good	Good	Poor	Exotic	10*	2	1.9	Medium	
21	<i>Pyrus calleryana</i>	Callery Pear	4	1	Fair	Good	Good	Exotic	8	2	1.5	Medium	Street tree.
22	<i>Pyrus calleryana</i>	Callery Pear	5	4	Good	Good	Good	Exotic	11	2	1.6	Medium	Street tree.

Appendix 2

Tree Descriptors

Age

Category	Description
Young	Sapling tree and/or recently planted. As a guide a tree up to \approx 5 years of age.
Semi-mature	Tree rapidly increasing in size and yet to achieve expected size in situation.
Maturing	Specimen has reached expected size in situation, with reduced incremental growth.
Over-mature	Tree is senescent and in decline.
Dead	Tree is dead

Health:

Category	Description
Good	Good growth indicators, eg. extension growth. Crown full, with good density, foliage entire with good colour. No or minimal canopy dieback. Minimal or no pathogen damage. Good wound wood development.
Fair	Typical growth indicators, eg. extension growth, leaf size, canopy density for species in location. Tree may have <30% dead wood, or can have minor canopy dieback. Foliage generally with good colour, some discolouration may be present. Minor pathogen damage may be present.
Poor	Poor growth indicators. Tree may have >30% dead wood. Canopy dieback present. Discoloured or distorted leaves, and/or excessive epicormic growth. Pathogen is present and/or stress symptoms that could lead or are leading to decline of tree.

Structure:

Category	Description
Good	Good branch attachment and/or no or minor structural defects. Trunk and scaffold branches sound or minor damage. Good trunk and scaffold branch taper. No branch over extension. No damage to structural roots and/or good buttressing present. No obvious root pests or diseases.
Fair	Typical structure for species. Some minor structural defects and/or minor damage to trunk. Bark missing. Cavities could be present. Minimal or no damage to structural roots.
Poor	Major structural defects and/or trunk damaged and/or missing bark, large cavities, and/or girdling or damaged roots that are problematic.
Hazardous	Tree poses immediate hazard potential that should be rectified as soon as possible.

Form (General shape of the tree):

Category	Description
Good	Canopy full and symmetrical.
Fair	Minor asymmetry or suppression. Considered typical for species in situation.
Poor	Canopy suppressed, major asymmetry. Stump re-growth

Retention Value:

Category	Description
High	Tree in good condition. Is able to respond to changes in its environment. Tree may be of particular significance to site. Tree has potential to be a long-term component of the landscape if managed appropriately.
Medium	Tree in fair condition and structure. Tree may have condition or structural problems that would require treatment. Tree could sustain changes to its environment. Tree has potential to be a medium to long-term component of the landscape if managed appropriately. Tree has yet to achieve a significant landscape impact.
Low	Tree is in poor condition and/or poor structure that can not be rectified. Tree could not sustain dramatic or severe changes to its environment, or tree has detrimental effects on environment, eg. woody weed or severe anti social traits

Appendix 1

The protection and preservation of the existing trees on a development site is to be ensured by the installation of tree protection fencing set at the edge of the tree protection zones. Tree Protection fencing is to be installed prior to the commencement of any site works including demolition, excavation, delivery of materials, construction etc.

The Tree Protection Zones must be determined by the consulting arborist and conform to AS4970 2009.

The actual fence specifications should be a minimum of 1.2 - 1.5 metres of chain mesh or like fence with 1.8 meter star pickets every 3-4 metres and a top line of high visibility plastic hazard tape. This fence will deter the entry of heavy equipment and vehicles and also the entry of workers and/or the public into the Tree Protection Zone. The tree protection zone shall be clearly signed on all visible sides "Tree Protection Zone – No entry without permission from the Responsible Authority - caution fines may apply"

Table 1 Protection Fencing



LEGEND:

- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
- 2 Alternative plywood or wooden paling 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.



The fences must only be removed or shifted with the consent of the Responsible Authority.

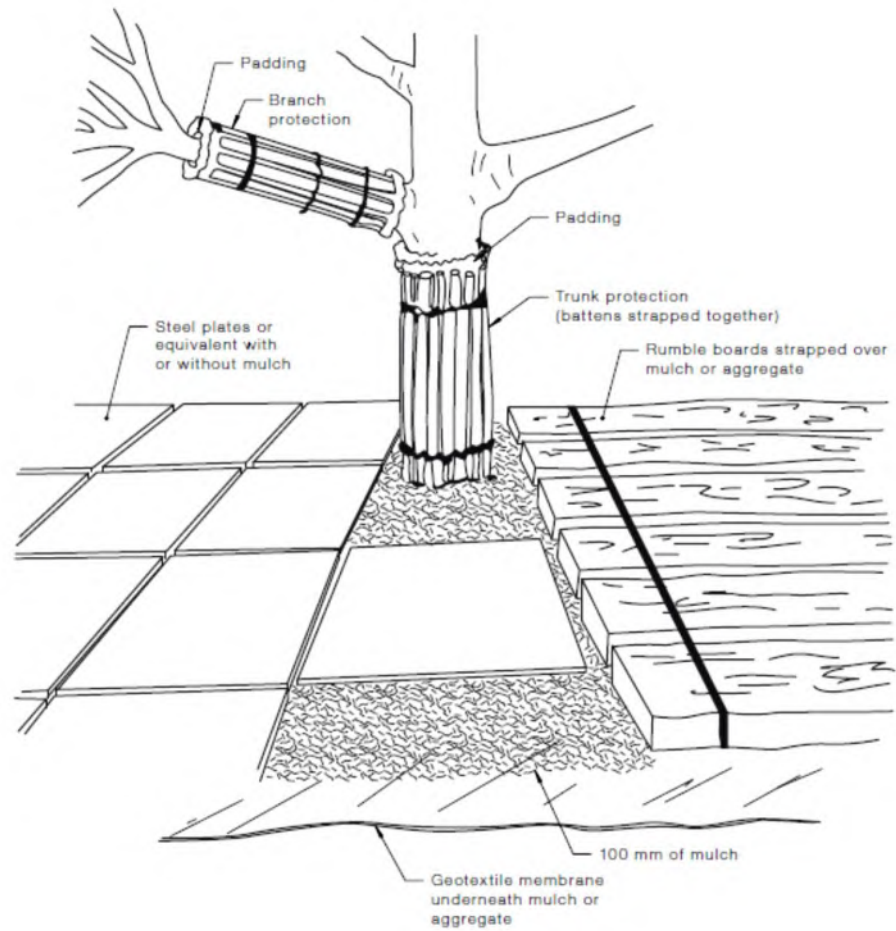
The area inside this Tree Protection Zone should be mulched with a covering of approximately 50 - 100mm deep woodchip mulch or like material.

Construction Access within the Tree protection Zone

If temporary access is required through a Tree Protection Zone this may be carried out using sheets of heavy plywood or like protection but should not be considered for long term requirements (see table 2).

Appendix 1

Table 2. Protection of trunk and ground during temporary access arrangement.



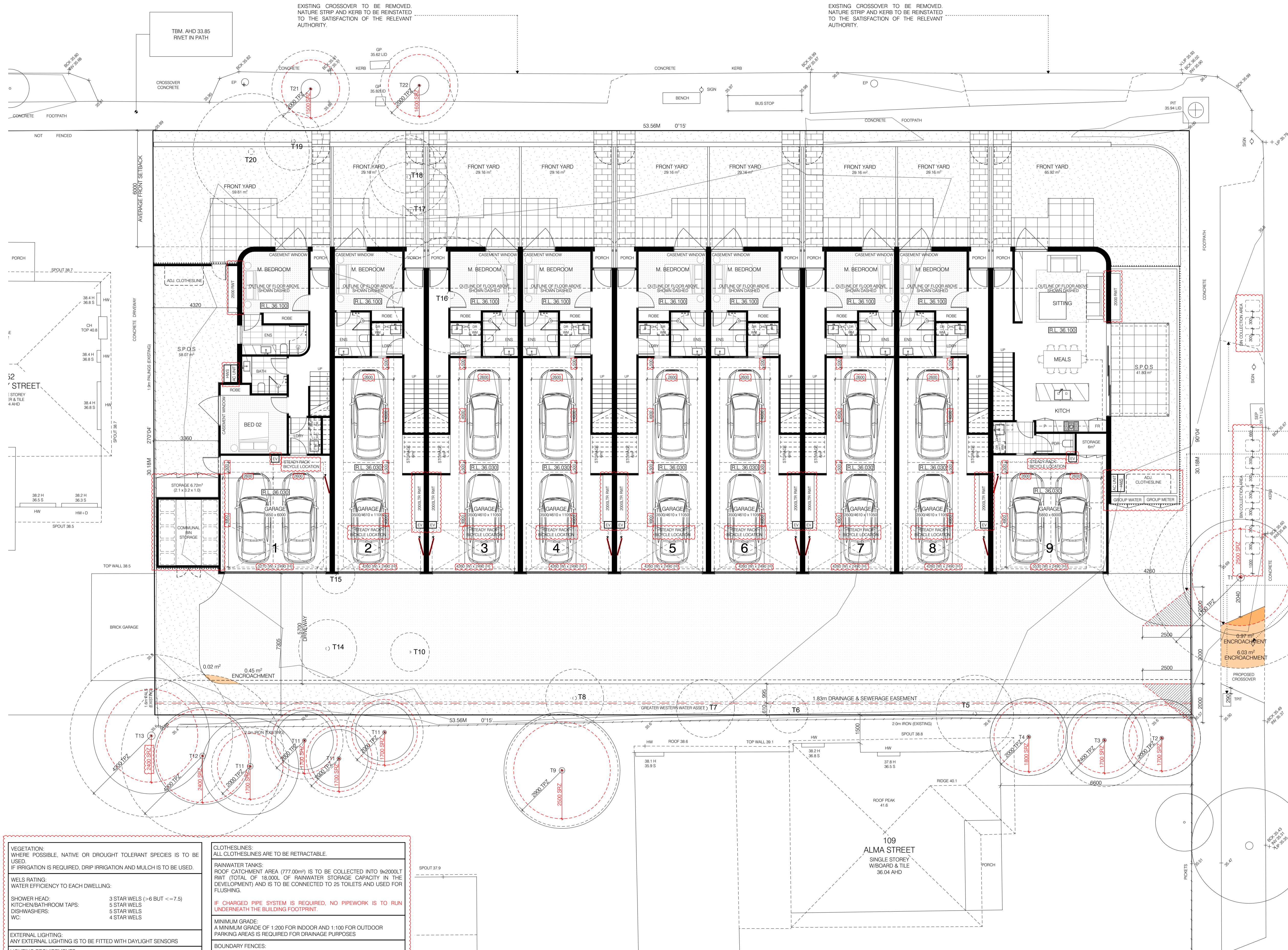
Example of rumble boards used adjacent a street tree.

Appendix 1

The following are guidelines that must be implemented to minimise the impact of the proposed construction works on the existing trees.

- The Tree Protection Zone is fenced and clearly marked at all times (according to the specification above).
- The project arborist is on-site to supervise all excavation works within the TPZ. This is more paramount if substantial roots (i.e. > 40 mm Ø) are encountered and may require pruning. Inspection will need to take place by the project arborist to ascertain impact on the trees and recommend follow up works if required.
- A layer of organic mulch (woodchips) to a depth of 50 - 100mm (no deeper) should be placed over all root systems (not just in the Tree Protection Zones) of trees which are to be retained to assist with moisture retention.
- No persons, vehicles or machinery are to enter the Tree Protection Zone without the consent of the Responsible Authority.
- Any underground service installations should be bored and utility authorities should common trench where possible.
- No fuel, oil dumps or chemicals shall be allowed in or stored on the Tree Protection Zone and the servicing and re-fuelling of equipment and vehicles should be carried out away from the root zones.
- No storage of material, equipment or temporary building shall take place over the Tree Protection Zone of any tree.
- Nothing whatsoever shall be attached to any tree including temporary services wires, nails, screws or any other fixing device.
- Supplementary watering shall be provided to all trees through any dry periods during and after the construction process.
- Any pruning that is required must be carried out by a trained and competent arborist who has a thorough knowledge of tree physiology and pruning methods. All pruning must conform to the Australian Standard – AS 4373 – 2007 Pruning of Amenity Trees. Any and all pruning must be supervised by the project arborist.
- All root excavation should be carried out by hand digging or with the use of 'Air-Excavation' techniques, and roots should be severed by saw cutting or with a sharp axe and not ripped out with a Backhoe or any machinery or blunt instrument.

ASHLEY STREET



AREA ANALYSIS

SITE AREA	1615.67 m ²
SITE COVERAGE	47.66% 770.07 m ²
PERMEABLE SURFACE	35.13% 567.73 m ²
GARDEN AREA	35.11% 567.35 m ²

DWELLING 1	
GROUND FLOOR	55.03 m ²
GARAGE	35.72 m ²
PORCH	1.27 m ²
FIRST FLOOR	79.56 m ²
BALC.	10.25 m ²
FRONT YARD	59.61 m ²
S.P.O.S	58.07 m ²
OVERALL [NOT INC. ALFRESCO]	171.58 m²

DWELLINGS 2-8	
GROUND FLOOR	31.52 m ²
GARAGE	49.20 m ²
PORCH	1.27 m ²
FIRST FLOOR	71.15 m ²
BALC.	10.06 m ²
FRONT YARD	29.16 m ²
SECOND FLOOR	72.99 m ²
OVERALL [NOT INC. ALFRESCO]	226.13 m²

DWELLING 9	
GROUND FLOOR	63.45 m ²
GARAGE	39.41 m ²
PORCH	1.27 m ²
FIRST FLOOR	77.63 m ²
BALC.	13.05 m ²
FRONT YARD	65.92 m ²
S.P.O.S	41.80 m ²
OVERALL [NOT INC. ALFRESCO]	181.76 m²

LEGEND

W	WATER METER
E	ELECTRICAL METER
AC UNIT	AIR CONDITIONING UNIT
HWS	HOT WATER SERVICE
ADU CLOTHESLINE	CLOTHESLINE
RWT	RAINWATER TANK & SIZE

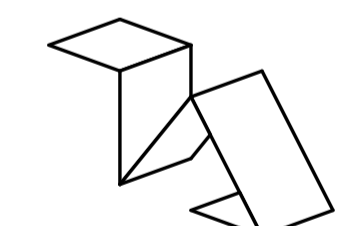
EXISTING CROSSOVER TO BE REMOVED. NATURE STRIP AND KERB TO BE REINSTITATED TO THE SATISFACTION OF THE RELEVANT AUTHORITY.

PEDESTRIAN VISIBILITY SPLAY IN ACCORDANCE WITH CLAUSE 52.06-9 (CAR PARKING) OF THE RELEVANT PLANNING SCHEME

PROPOSED CROSSOVER TO BE CONSTRUCTED TO THE SATISFACTION OF THE RELEVANT AUTHORITY.

REVISION
13.11.23 TOWN PLANNING APPLICATION
A 07.06.24 RFI

IF REQUIRED RELOCATE TELSTRA PIT TO THE SATISFACTION OF THE RELEVANT AUTHORITY.
RELOCATE STREET SIGN TO THE SATISFACTION OF THE RELEVANT AUTHORITY.



TAOUKARCHITECTS

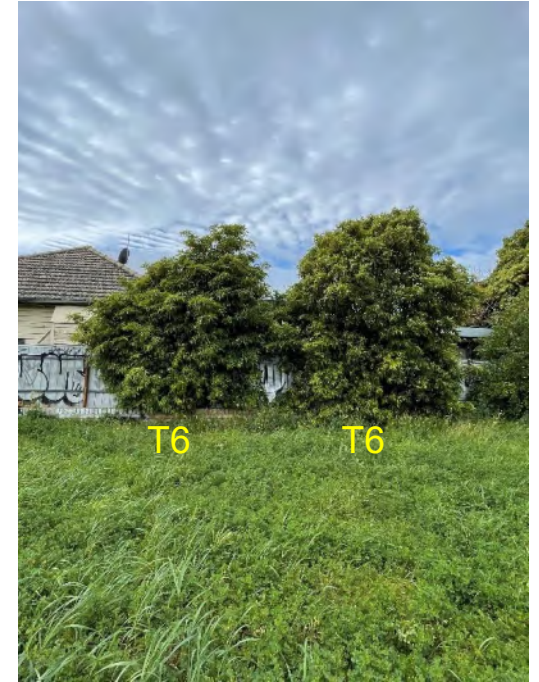
p. 9484 8080 448 HEIDELBERG ROAD FAIRFIELD VIC 3078
e. info@taoukarchitects.com.au w. taoukarchitects.com.au

RESIDENTIAL DEVELOPMENT
54-62 ASHLEY STREET
WEST FOOTSCRAY VIC 3012

CLIENT	-
DRAWING TITLE	GROUND FLOOR PLAN
SCALE	1:100 @ A1
DATE	JULY 2023
ISSUE	TOWN PLANNING APPLICATION
DRAWN	CB
DRAWING No.	TP_02
JOB No.	22-38
REVISION	-

VEGETATION: WHERE POSSIBLE, NATIVE OR DROUGHT TOLERANT SPECIES IS TO BE USED. IF IRRIGATION IS REQUIRED, DRIP IRRIGATION AND MULCH IS TO BE USED.	CLOTHESLINES: ALL CLOTHESLINES ARE TO BE RETRACTABLE.
WELS RATING: WATER EFFICIENCY TO EACH DWELLING:	RAINWATER TANKS: ROOF CATCHMENT AREA (777.00m ²) IS TO BE COLLECTED INTO 9x2000L RWT (TOTAL OF 18,000L OF RAINWATER STORAGE CAPACITY IN THE DEVELOPMENT) AND IS TO BE CONNECTED TO 25 TOILETS AND USED FOR FLUSHING.
SHOWER HEAD: 3 STAR WELS (>6 BUT <= 7.5)	IF CHARGED PIPE SYSTEM IS REQUIRED, NO PIPEWORK IS TO RUN UNDERNEATH THE BUILDING FOOTPRINT.
KITCHEN/BATHROOM TAPS: 5 STAR WELS	MINIMUM GRADE: A MINIMUM GRADE OF 1:200 FOR INDOOR AND 1:100 FOR OUTDOOR PARKING AREAS IS REQUIRED FOR DRAINAGE PURPOSES
DISHWASHERS: 4 STAR WELS	BOUNDARY FENCES: ALL SIDE BOUNDARY FENCES TO BE MINIMUM 1.80M HIGH ABOVE NGL AND TAPER DOWN 0.90M HIGH WITHIN THE FRONT SETBACK.
WC: 4 STAR WELS	AHD LEVELS: ALL LEVELS ARE SURVEYED TO AHD BY A LICENSED LAND SURVEYOR
EXTERNAL LIGHTING: ANY EXTERNAL LIGHTING IS TO BE FITTED WITH DAYLIGHT SENSORS	
LIGHTING REQUIREMENTS: ALL DWELLINGS ARE TO ACHIEVE 40lm ² LIGHTING DENSITY	
DOUBLE GLAZING: ALL HABITABLE ROOM WINDOWS ARE TO BE DOUBLE GLAZED.	

Appendix 5



Appendix 5



Stem Arboriculture Assumptions and Limiting Conditions

1. Any legal description provided to the author is assumed to be correct. Any titles and ownerships to any property are assumed to be correct. No responsibility is assumed for matters outside the consultant's control.
2. The author assumes that any property or project is not in violation of any applicable codes, ordinances, statutes or other local, state or federal government regulations.
3. The author has taken care to obtain all information from reliable sources. All data has been verified insofar as possible; however the author can neither guarantee nor be responsible for the accuracy of the information provided by others not directly under the authors control.
4. The author shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Loss of this report or alteration of any part of this report not undertaken by the author invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone but the client or their directed representatives, without the prior consent of the author.
7. This report and any values expressed herein represent the opinion of the consultant and the fee is in no way conditional upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
8. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural drawings, reports or surveys.
9. Unless expressed otherwise: 1) Information contained in this report covers only those items that were covered in the project brief or that were examined during the assessment and reflect the condition of those items at the time of inspection; and 2) The inspection is limited to visual examination of accessible components without dissection, excavation or probing unless otherwise stipulated.
10. There is no warranty or guarantee, expressed or implied by the author, that the problems or deficiencies of the plants or site in question may not arise in the future.
11. All instructions (verbal or written) that define the scope of the report have been included in the report and all documents and other materials that the consultant has been instructed to consider or to take into account in preparing this report have been included or listed within the report.
12. To the authors' knowledge all facts, matter and all assumptions upon which the report proceeds have been stated within the body of the report and all opinion contained within the report have been fully researched and referenced and any such opinion not duly researched is based upon the writers experience and observations.

Tree Protection Management Plan 54 Ashley Street West Footscray

Prepared by Graeme Lewis Level 5 AQF Arborist - November 2024

This Tree Protection Management Plan is supplied to ensure the protection and ongoing health of a retained street tree as per the City of Maribyrnong requirements.

This document must be signed and dated at the completion of each task in the column provided. This will enable the Project Arborist to complete the certification document provided in Appendix 5. If this TPMP is not satisfactorily signed off at the completion of each task, certification will not be signed off.

*Caution: failure to comply with this plan and existing permit conditions may result in Council enforcement action and stop work orders.

Works Phase	Task	Completion of Task Date & Sign-Off
<u>Pre Construction</u>	<u>Appoint a Project Arborist</u> Appoint a project arborist to action and supervise this Tree Protection Management Plan.	Site Manager Sign Off & Date
<u>Pre Construction</u>	<u>Tree Protection</u> Install tree protection fencing and ground protection in accordance with the Tree Protection Plan in Appendix 1, specifications in Appendix 2 and TPZ's in Tree Data Appendix 3. Contact the Project Arborist to arrange inspection and sign off this document.	Site Manager Sign Off & Date
<u>Pre Construction</u>	<u>Project Arborist Sign Off</u> The Project Arborist must physically inspect the fencing and ground protection to ensure it is of the standard required and in the nominated locations as per the Tree Protection Plan. Photographs of the installed fencing must be taken and kept on record.	Project Arborist Sign Off & Date
<u>Pre Construction</u>	<u>Site Induction</u> Induct all demolition / construction workers with regard to the requirements of the Tree Protection Zone. The following activities are not to occur within the Tree protection Zone: <ul style="list-style-type: none"> • Machine excavation including trenching; • Machinery / vehicle parking • Excavation for silt fencing; (continued overpage) 	Site Manager Sign Off & Date

Works Phase	Task	Completion of Task Date & Sign-Off
<u>Pre Construction</u>	<u>Site Induction continued</u> <ul style="list-style-type: none"> • Cultivation; • Storage; • Preparation of chemicals, including cement products • Parking of vehicles and plant; • Refuelling; • Dumping of waste; • Wash down and cleaning of equipment; • Placement of fill; • Lighting of fires • Soil level changes; • Temporary or permanent installation of utilities and signs, • Physical damage to the tree. • Installation of services (unless bored under arborist supervision) • Unauthorised pruning • Placement of shedding including site sheds and toilets 	Site Manager Sign Off & Date
<u>Construction</u>	<u>Commence Construction Works</u> Must only occur after tree protection measures are in place and this document is signed off by the Project Arborist.	Project Arborist Sign Off & Date
<u>Construction</u>	<u>Maintain Tree Protection</u> Maintain tree protection measures throughout the course of the demolition phase.	Site Manager Sign Off & Date
<u>Construction</u>	<u>Works within any TPZ</u> The Project Arborist must attend the site during any and all excavation works within a TPZ. Any unearthed roots >20mm diameter must be pruned by the project arborist using sterile, sharp, pruning tools and backfilled immediately or kept moist using damp hessian.	Site Manager Sign Off & Date
<u>Construction</u>	<u>Canopy Pruning – Tree 1</u> Some minor pruning is required to lift the canopy where it overhangs the Ashley Street crossover. All pruning must only be undertaken by Council arborists or Council approved contractors. Canopy pruning must occur prior to the construction of the crossover, otherwise the Project Arborist must supervise the excavation.	Site Manager Sign Off & Date
<u>Construction</u>	<u>Crossover Construction – Tree 1</u> As the exploratory excavation revealed zero roots growing into the footprint of the crossover, zero roots will require pruning, therefore the Project Arborist need not attend the excavation. To prevent machinery damage to the trunk and limbs, ensure protection fencing is maintained. See Appendix 4 for photographs of the exploratory excavation.	Site Manager Sign Off & Date

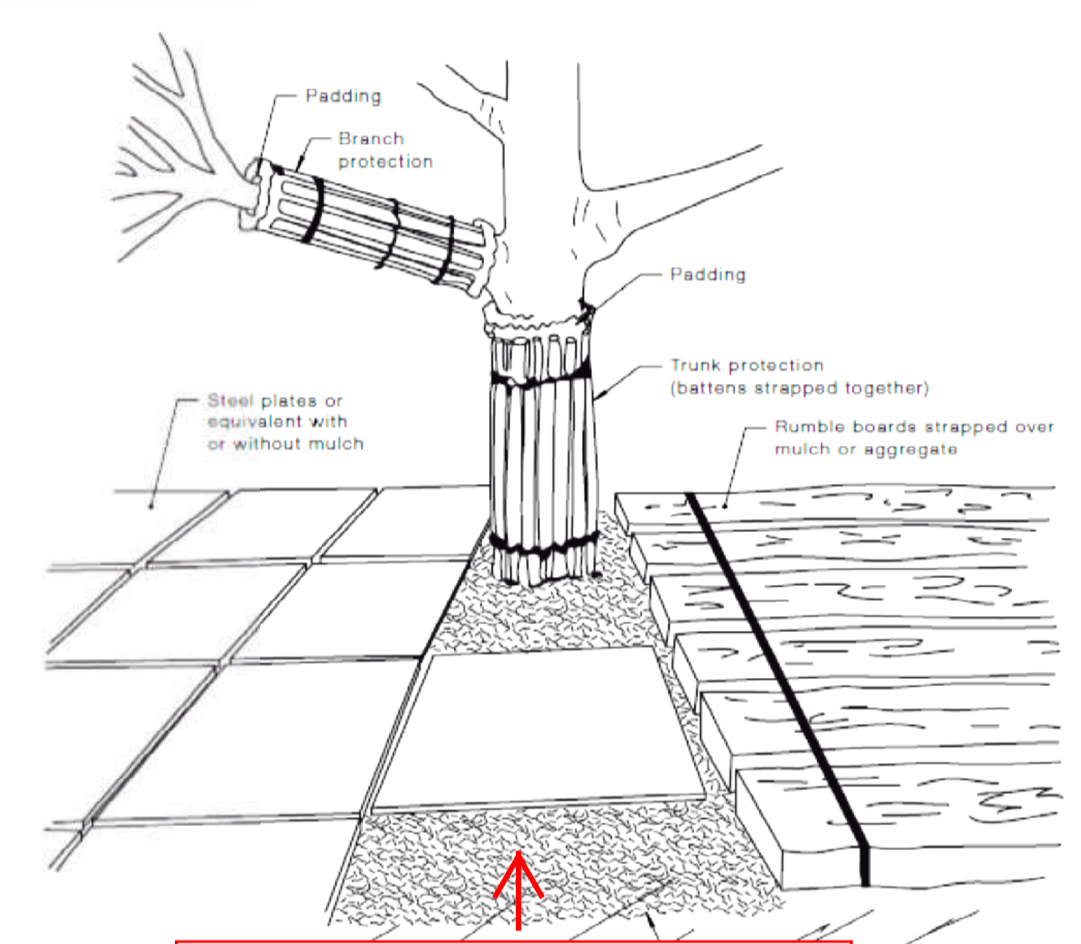
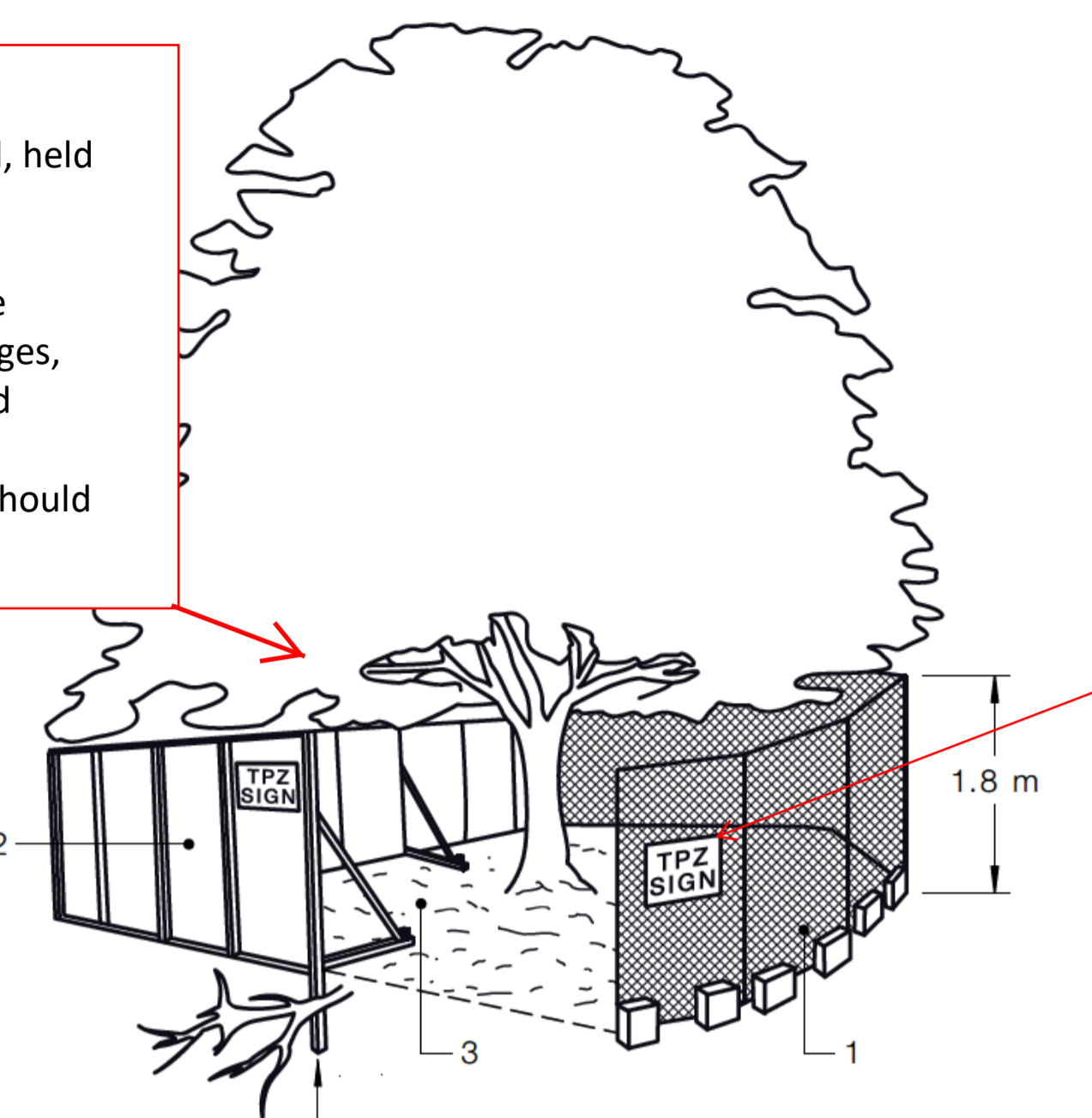
Works Phase	Task	Completion of Task Date & Sign-Off
<u>Construction</u>	<u>Installation of Services within TPZ's</u> Wherever underground services pass through the Tree Protection Zone, these must be underground bored at a minimum depth of 600mm or installed using non-destructive digging supervised by the Project Arborist.	Project Arborist Sign Off & Date
<u>Construction</u>	<u>Relocation of Protection Measures</u> Must only occur under the direct supervision of the Project Arborist. Fencing relocation may require the use of suitable ground protection (see appendix 2).	Project Arborist Sign Off & Date
<u>Construction</u>	<u>Periodic Site Visits</u> The project arborist must undertake periodic site visits generally on a fortnightly basis or as required for TPZ works supervision.	Project Arborist Sign Off & Date
<u>Construction</u>	<u>Tree Irrigation</u> In periods of dry weather, the project arborist is to monitor the watering requirements of the trees during routine fortnightly inspections. During periods of dry weather, generally between the months of December to April, for the duration of the project, apply 1 litre of clean fresh water for every centimetre of basal trunk calliper.	Project Arborist Sign Off & Date
<u>Post Construction</u>	<u>Removal of Tree Protection</u> Tree protection fencing and ground protection must only be removed after all construction works are completed and the certification section in Appendix 5 has been signed off by the project Arborist.	Project Arborist Sign Off & Date

LEGEND

- Tree Protection Zone
- Structural Root Zone
- Tree Protection Fence
- Ground Protection

Legend:

1. Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet
2. (Alternative) plywood or wooden paling fence panels.
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.



Activities generally excluded from the TPZ include but are not limited to:

- Machine excavation including trenching;
- Excavation for silt fencing;
- Cultivation;
- Storage;
- Preparation of chemicals, including preparation of cement products;
- Parking of vehicles and plant;
- Refuelling;
- Dumping of waste;
- Wash down and cleaning of equipment;
- Placement of fill;
- Lighting of fires;
- Soil level changes;
- Temporary or permanent installation of utilities and signs;
- Physical damage to the tree.

VEGETATION:
WHERE POSSIBLE, NATIVE OR DROUGHT TOLERANT SPECIES IS TO BE USED.
IF IRRIGATION IS REQUIRED, DRIP IRRIGATION AND MULCH IS TO BE USED.

WELS RATING:
WATER EFFICIENCY TO EACH DWELLING:
SHOWER HEAD: 3 STAR WELS (>6 BUT <= 7.5)
KITCHEN/BATHROOM TAPS: 5 STAR WELS
DISHWASHERS: 5 STAR WELS
WC: 4 STAR WELS

EXTERNAL LIGHTING:
ANY EXTERNAL LIGHTING IS TO BE FITTED WITH DAYLIGHT SENSORS

LIGHTING REQUIREMENTS:
ALL DWELLINGS ARE TO ACHIEVE 40lm/m² LIGHTING DENSITY

DOUBLE GLAZING:
ALL HABITABLE ROOM WINDOWS ARE TO BE DOUBLE GLAZED.

CLOTHESLINES:
ALL CLOTHESLINES ARE TO BE RETRACTABLE.

RAINWATER TANKS:
ROOF CATCHMENT AREA (777.00m²) IS TO BE COLLECTED INTO 9x2000L RWT (TOTAL OF 18,000L OF RAINWATER STORAGE CAPACITY IN THE DEVELOPMENT) AND IS TO BE CONNECTED TO 25 TOILETS AND USED FOR FLUSHING.

IF CHARGED PIPE SYSTEM IS REQUIRED, NO PIPEWORK IS TO RUN UNDERNEATH THE BUILDING FOOTPRINT.

MINIMUM GRADE:
A MINIMUM GRADE OF 1:200 FOR INDOOR AND 1:100 FOR OUTDOOR PARKING AREAS IS REQUIRED FOR DRAINAGE PURPOSES

BOUNDARY FENCES:
ALL SIDE BOUNDARY FENCES TO BE MINIMUM 1.80M HIGH ABOVE NGL AND TAPER DOWN 0.90M HIGH WITHIN THE FRONT SETBACK.

AHD LEVELS:
ALL LEVELS ARE SURVEYED TO AHD BY A LICENSED LAND SURVEYOR

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PROJECT
RESIDENTIAL DEVELOPMENT
54-62 ASHLEY STREET
WEST FOOTSCRAY VIC 3012

CLIENT
-

DRAWING TITLE
GROUND FLOOR PLAN

SCALE
1:100 @ A1

DATE
JULY 2023

ISSUE
TOWN PLANNING APPLICATION

DRAWN
CB

DRAWING No.
TP_02

JOB No.
22-38

REVISION
-

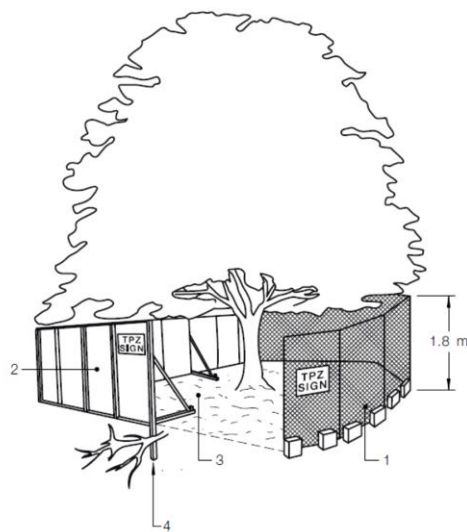
Appendix 2

The protection and preservation of the existing trees on a development site is to be ensured by the installation of tree protection fencing set at the edge of the tree protection zones. Tree Protection fencing is to be installed prior to the commencement of any site works including demolition, excavation, delivery of materials, construction etc.

The Tree Protection Zones must be determined by the consulting arborist and conform to AS4970 2009.

The actual fence specifications should be a minimum of 1.2 - 1.5 metres of chain mesh or like fence with 1.8 meter star pickets every 3-4 metres and a top line of high visibility plastic hazard tape. This fence will deter the entry of heavy equipment and vehicles and also the entry of workers and/or the public into the Tree Protection Zone. The tree protection zone shall be clearly signed on all visible sides "Tree Protection Zone – No entry without permission from the Responsible Authority - caution fines may apply"

Table 1 Protection Fencing



LEGEND:

- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
- 2 Alternative plywood or wooden paling 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.



The fences must only be removed or shifted with the consent of the Responsible Authority.

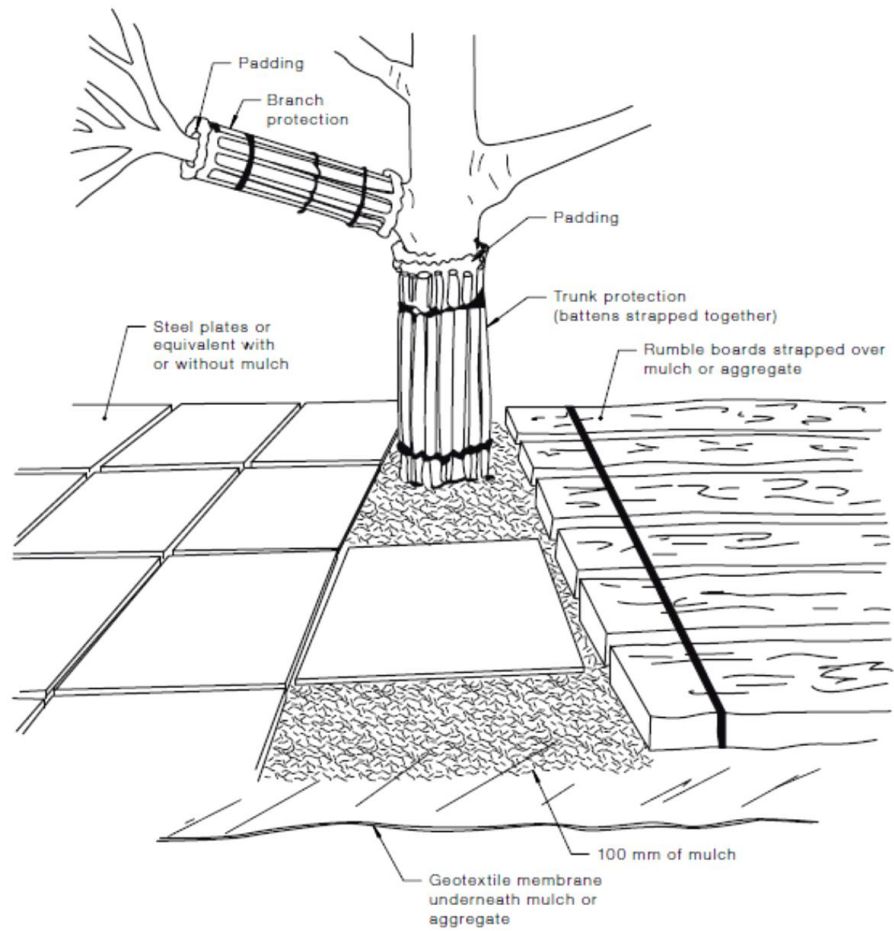
The area inside this Tree Protection Zone should be mulched with a covering of approximately 50 - 100mm deep woodchip mulch or like material.

Construction Access within the Tree protection Zone

If temporary access is required through a Tree Protection Zone this may be carried out using sheets of heavy plywood or like protection but should not be considered for long term requirements (see table 2).

Appendix 2

Table 2. Protection of trunk and ground during temporary access arrangement.



Example of rumble boards used adjacent a street tree.

Appendix 2

The following are guidelines that must be implemented to minimise the impact of the proposed construction works on the existing trees.

- The Tree Protection Zone is fenced and clearly marked at all times (according to the specification above).
- The project arborist is on-site to supervise all excavation works within the TPZ. This is more paramount if substantial roots (i.e. > 40 mm Ø) are encountered and may require pruning. Inspection will need to take place by the project arborist to ascertain impact on the trees and recommend follow up works if required.
- A layer of organic mulch (woodchips) to a depth of 50 - 100mm (no deeper) should be placed over all root systems (not just in the Tree Protection Zones) of trees which are to be retained to assist with moisture retention.
- No persons, vehicles or machinery are to enter the Tree Protection Zone without the consent of the Responsible Authority.
- Any underground service installations should be bored and utility authorities should common trench where possible.
- No fuel, oil dumps or chemicals shall be allowed in or stored on the Tree Protection Zone and the servicing and re-fuelling of equipment and vehicles should be carried out away from the root zones.
- No storage of material, equipment or temporary building shall take place over the Tree Protection Zone of any tree.
- Nothing whatsoever shall be attached to any tree including temporary services wires, nails, screws or any other fixing device.
- Supplementary watering shall be provided to all trees through any dry periods during and after the construction process.
- Any pruning that is required must be carried out by a trained and competent arborist who has a thorough knowledge of tree physiology and pruning methods. All pruning must conform to the Australian Standard – AS 4373 – 2007 Pruning of Amenity Trees. Any and all pruning must be supervised by the project arborist.
- All root excavation should be carried out by hand digging or with the use of 'Air-Excavation' techniques, and roots should be severed by saw cutting or with a sharp axe and not ripped out with a Backhoe or any machinery or blunt instrument.

Appendix 3 Tree Data

*DESCRIPTORS IN APPENDIX 2

DBH = DIAMETER OF TRUNK AT 1.3M FROM GRADE. TPZ = TREE PROTECTION ZONE

SRZ= AS4970 2009 STRUCTURAL ROOT ZONE.

BOTH TPZ & SRZ DISTANCES ARE MEASURED AS A RADIUS FROM TRUNK CENTRE

* INDICATES A TREE WITH MULTIPLE TRUNKS.

No.	Botanical Name	Common Name	Height (m)	Width	Health	Structure	Form	Origin	DBH (cm)	TPZ (m)	SRZ (m)	Retention Value	Comments
1	<i>Callistemon citrinus</i>	Scarlet Bottlebrush	7	7	Good	Fair	Good	Planted NSW Native	39	4.7	2.5	Medium	Street tree.
2	<i>Melaleuca bracteata</i>	River Tea Tree	5	4	Fair	Fair	Fair	Planted NSW Native	15*	2	1.7	Medium	Neighbouring tree.
3	<i>Callistemon viminalis</i>	Drooping Bottlebrush	7	6	Good	Fair	Fair	Planted NSW Native	20*	2.4	1.7	Medium	Neighbouring tree.
4	<i>Syzygium paniculatum</i>	Brush Cherry	5	3	Poor	Fair	Poor	Planted NSW Native	16	2	1.8	Low	Neighbouring tree.
5	<i>Prunus cerasifera</i>	Cherry Plum	6	6	Good	Poor	Poor	Environmental Weed	25	3	2.1	Low	Lopped self sown weed tree.
6	<i>Pittosporum undulatum</i>	Sweet Pittosporum	5	6	Good	Good	Fair	Environmental Weed	10*	2	1.8	Low	Self sown weed tree
7	<i>Pittosporum undulatum</i>	Sweet Pittosporum	5	4	Good	Good	Fair	Environmental Weed	23	2.8	2.1	Low	Self sown weed tree
8	<i>Coprosma repens</i>	Taupata	4	8	Good	Poor	Fair	Environmental Weed	13*	2	2.4	Low	Thicket of self sown weeds.
9	<i>Pittosporum undulatum</i>	Sweet Pittosporum	7	9	Good	Good	Fair	Environmental Weed	24*	2.9	2.5	Low	Self sown neighbouring weed tree
10	<i>Ficus Carica</i>	Common Fig	3	3	Fair	Poor	Poor	Exotic	9	2	2.3	Low	Stump regrowth

Appendix 3 Tree Data

No.	Botanical Name	Common Name	Height (m)	Width	Health	Structure	Form	Origin	DBH (cm)	TPZ (m)	SRZ (m)	Retention Value	Comments
Group 11	<i>Yucca elephantipes</i>	Soft tipped yucca	6	3	Good	Good	Poor	Exotic	10	2	1.7	Low	Copse of neighbouring succulent plants. Reduced TPZ as per AS4970 2009.
12	<i>XCupressocyparis leylandii</i>	Leyland Cypress	9	9	Good	Fair	Poor	Exotic	35	4.2	2.4	Low	Neighbouring tree. Inappropriate species for residential sites.
13	<i>XCupressocyparis leylandii</i>	Leyland Cypress	9	9	Good	Poor	Poor	Exotic	35*	4.2	2.4	Low	Neighbouring tree. Bifurcated with included bark. Inappropriate species for residential sites.
14	<i>Citrus limon</i>	Lemon	4	4	Fair	Fair	Good	Exotic	21*	2.5	1.8	Low	Infested with wasp gall
15	<i>Camellia japonica</i>	Camellia	3	2	Poor	Good	Fair	Exotic	8*	2	1.5	Low	
16	<i>Melaleuca styphelioides</i>	Prickly-Leaved Paperbark	8	7	Good	Poor	Fair	Planted NSW Native	36*	4.4	2.7	Low	Possible stump regrowth. Multiple basal bifurcations with included bark.

Appendix 3 Tree Data

No.	Botanical Name	Common Name	Height (m)	Width	Health	Structure	Form	Origin	DBH (cm)	TPZ (m)	SRZ (m)	Retention Value	Comments
17	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	5	3	Poor	Poor	Poor	Planted NSW Native	16*	2	1.8	Low	
18	<i>Callistemon citrinus</i>	Scarlet Bottlebrush	3	4	Good	Fair	Fair	Planted NSW Native	13	2	1.8	Low	Lopped at 1.5m
19	<i>Banksia marginata</i>	Silver Banksia	6	3	Good	Good	Fair	Planted VIC Native	15	2	1.8	Medium	
20	<i>Ligustrum ovalifolium</i>	Oval leaved privet	3	3	Good	Good	Poor	Exotic	10*	2	1.9	Medium	
21	<i>Pyrus calleryana</i>	Callery Pear	4	1	Fair	Good	Good	Exotic	8	2	1.5	Medium	Street tree.
22	<i>Pyrus calleryana</i>	Callery Pear	5	4	Good	Good	Good	Exotic	11	2	1.6	Medium	Street tree.

Appendix 4

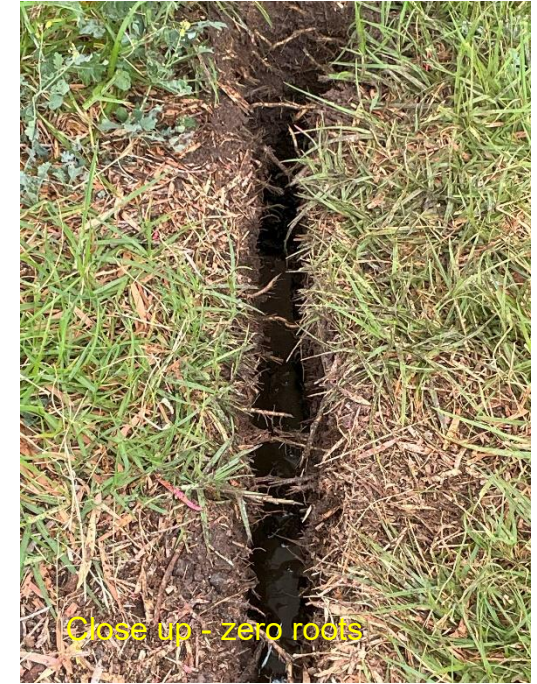
Street tree #1



Trench excavated at 2m from trunk centre to middle of splay



Opened trench. 100mm wide 270mm deep



Close up - zero roots



Close up - zero roots



Close up - zero roots



Close up - zero roots



Low limbs requiring pruning

FINAL CERTIFICATION

The Project Arborist has inspected all stages of the project as defined by this document. Any action that has not complied has been rectified and approved by the Project Arborist. All works as noted have been undertaken, approved and supervised by the Project Arborist where required.

Final Certification Approved

YES / NO

Project Arborist Name _____ Signature _____ Date _____