CHATFIELD
arborists & consultants

Tree Protection Management Plan

Property: 10-16 Selwyn St, Elsternwick, Vic, 3185

Client: Fabcot Pty Ltd

By

Tim Chatfield of Chatfield Arborists & Consultants

(Certificate I & II in Arboriculture (Melbourne University))

(Certificate III, IV & V in Arboriculture (NMIT))

20/09/2024

Contents

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Introduction:

The Glen Eira Council has requested this TPMP as a condition forming part of the approved planning permit. This TPMP provides direction for the management/protection of particular trees to be retained surrounding the subject site during the development project. This report is for use in the application process, and project facilitation works.

A copy of the site survey and approved construction plans have been attached for reference.

This report is provided in the format according to Australian Standards AS4970:2009 *"Protection of trees on development sites"*.

Details of Tree Protection Plan

The management plan is developed in full compliance with the AS 4970:2009 (which an exert is included later in this report for reference).

Glenn Waters of Glenn Waters Arboriculture on 19/11/2020 completed the Arboricultural Assessment and Report endorsed by the planning permit. This report specifies the tree reference numbers and TPZs utilised to form this TPMP.

An update to the TPP was completed on 23/3/2023 following council feedback.

An update was completed on 5/4/2023.

A further update was completed on 20/9/2024.

Please note that since the planning permit was issued, the plans have been amended, altering the street trees requiring removal. There are still a total of 3 council trees requiring removal. However, these are no longer trees #9, #15, and #16 and are now trees #9, #22 #23 and #24, in which the removal and replacement costs will fall on the developer.

Executive Summary

22 Trees to be retained (Tree ID # s)

Trees #2, #6, #7, #8, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #26, #27 and #28.

6 Trees to be removed (Tree ID # s)

#3, #4, #5, #9, #22, #23 and #24.

The Project Arborist is required to certify three separate stages:

- Pre-Construction
- Construction
- Post Construction

Monitoring is required every two months to ensure the subject tree's ongoing health and protection throughout the project.

Arborist Attendance Required:

- TPZ Establishment Certification
- Inducting all staff into Tree Protection Procedures
- Site Demolition
    - Removal of carpark structure around trees #2, #6 and #7
    - Repositioning of TPZ fences (If Req)
    - Removal of existing crossovers within TPZs
- Excavation works
    - Excavation for basement within proximity to trees #2, #6 and #7
- Construction Works
    - Construction of the ground floor, level 1 and 2, within proximity to trees #2, #6 and #7
- Site Monitoring every two months throughout the project.
- Certification of completed construction works.
- Final certification of project.

ADVERTISED PLAN

Tree Protection Program

Site: 10-16 Selwyn Street, Elsternwick

Planning Permit Number: GE/DP-34187/2021

Author: Tim Chatfield

Report Date: 20/09/2024

This Tree Protection Program forms the schedule of the Tree Protection Management Plan (TPMP) required for this project and is to be read in conjunction with the tree data, tree location plan, and tree protection plan submitted as part of the TPMP.

The Project Arborist will notify the responsible authority of any non-compliance regarding the items in this schedule within 24 hours of their occurrence if the site managers / responsible persons refuse to take action as recommended by the project arborist.

Before any supervisory works are to occur, the project arborist must be notified by email (info@chatfieldtrees.com.au) or phone (0419 144 452) at least 5 days prior to the planned work date to ensure availability.

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
1) Pre - Construction	**1.1 Tree Pruning and Removal**	Removal of approved vegetation (within the subject Site)	Removal of trees #3, #4 and #5 within the subject site, to be completed by arborist with a minimum AQF3 qualification at the cost to the developer.	Site Manager, Project Arborist, Contractors		
		Removal of approved vegetation (council owned nature strip)	Trees #9, #22, #23 and #24 are to be removed by councils park department at cost to developer.	Site Manager, Council		
		Tree Pruning (Street Trees)	Pruning is required on multiple street trees to establish clearance from the building. (building clearance of 1m is required). This must only be comepleted by authorised GECC contarctors and must be arranged prior with the GECC Parks Department.	Site Manager, Contractor		
		Tree Pruning (Private Trees)	No pruning works are required for any private trees inlcuding tree #2 due to both its fastigiate form and no overhang into the subject site.	Site Manager		
	1.2 Tree Protection	Establish Tree protection Measures as illustrated in the 'Tree Protection Plan' (Within Subject site)	For trees #2, #6 and #7, chain link fence with weighted footings, Install supplied signage on fences which is to be visible from all angles.	Site Manager, Project arborist		

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
		Tree protection for council trees on naturstrip	Tree protection fencing is required for all street trees adjoining the site (Please ref to TPP for overview). Fencing must be installed in accordance with AS 4970-2009 utilising either chain linked fences with weighted footings or hording to a minimum height of 1.8m. All fencing must align with the back of the kerb, across the naturstrip to the edge of the proposed new crossovers and align to the footpaths edge. Each TPZ required an access point for the purpose of maintenance and ongoing inspections.			
		Pedestrian Access	The footpath adjacent to the street trees must remain open for public access throughout the development.			
		Scaffolding	If scaffolding is required to be errected within the footpath, site fencing should align to the footpaths edge, with a temporary pedestrian walkway located within the road envelope to restrict pedestrian access to the nature strip.			

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
	1.3 Certification	Check all tree protection measures are in place and all the correct trees have been removed and retained	Sign off stage on provided document	Site Manager, Project arborist		Name: Signiture:
2) Construction	**2.1 Site Induction**	All involved staff to be Inducted to Tree Protection Procedures	Introduction of TMP Schedule. Use attached register	Site Manager, Project Arborist, Contractors		
	2.2 Demolition	Site Clear	Removal of all existing infrastructure within the subject site as per the site demolition plan	Site Manager, Project Arborist, Contractors		
		Tree sensitive demolition (crossovers)	The removal of the existing crossovers within TPZs of trees #8, #17, #19 and #20, must be completed in a root sensitive manner (no soil penetration) under the direct supervision of the project arborist. These areas are to be immediately reinstated.	Site Manager, Project Arborist, Contractors		
		Tree sensitive demolition	The removal of the carpark structure around trees #2, #6 and #7 must be supervised by the project arborist to provide guidance, ensure compliance, and prune any roots if encountered.	Site Manager, Project Arborist, Contractors		

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
	2.3 Site Establishment	Earth Works - Site Cuts	Excavation works within proximity of trees #2, #6 and #7, must be supervised by the project arborist. If any roots are encountered during these works, the roots must be documented and only be pruned by the project arborist in accordance with the Australian Standard AS4373-2007	Site Manager, Project Arborist, Contractors		
	2.4 Construction	Basement level 1	Due to the proximity to tree #2, it is imperative that the TPZ fencing remain in place to act as a visual cue and provide protection for the tree. This portion of works requires supervision by the project arborist to provide guidance and ensure compliance.	Site Manager, Project Arborist, Contractors		
		Ground Floor Construction	Again, due to the proximity of works to tree #2, #6 and #7, extreem care must be taken and TPZs maintained and respected. If TPZ fencing is required to be repositioned or access into a TPZ is required, this must first be signed off by the project arborist and may require the instalation of ground protection to ensure ongoing root protection.	Site Manager, Contractors		

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
		Construction level 1+	All Tree Protection fencing must remain in position until the completion of level 2.	Site Manager		
		Excavation within TPZs	Any excavation required within a TPZ must be carried out under the direct supervision of the project arborst.	Site Manager, Project Arborist, Contractors		
		Tree Pruning (If Required)	No trees require pruning at this stage. However, if pruning is required for canopy protection or access, written approval must first be granted by the project arborist and works are to be completed and documented in full accordance with AS4373-2007 *'Pruning of Amenity Trees'*	Site Manager, Project arborist		
		Site monitoring	Monitoring by the project arborist is required every 2 months to check on trees and recommend remedial action if required (this must be documented)	Site Manager and Project Arborist		

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
		Monitoring Sign Off	To be dated and signed on each visit	Site Manager, Project Arborist		
			To be dated and signed on each visit	Site Manager, Project Arborist		
			To be dated and signed on each visit	Site Manager, Project Arborist		
			To be dated and signed on each visit	Site Manager, Project Arborist		
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			To be dated and signed on each visit	Site Manager, Project Arborist		

Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
	2.5 Landscaping	Tree #2 ground cover	The void of space around the base of this tree will require a layer of high quality mulch applied to depth of 100mm applied once a year to mitigate weed growth and mitigate any potential stress resulting from the works.			
		Boundary Fencing	If a new fence is to be constructed through the TPZs of trees #2, #6 and/or #7, the existing post holes must be utilised to ensure minimal impact to the existing root system. If new holes are required, the post holes must dug by hand tools under the project arborist supervision. If any roots >40mm are encountered, they must be retained and the post hole re-positioned. Anything smaller can be documented and cleanly pruned. There is to be a maximum 100mm of leveleing to run the plinth board between posts.	Site Manager, Project Arborist, Contractors		
	2.6 Practical Completion	All construction and landscaping works finished	Assess and document health of trees, remove of tree protection fencing	Site Manager, Project Arborist, Contractors		

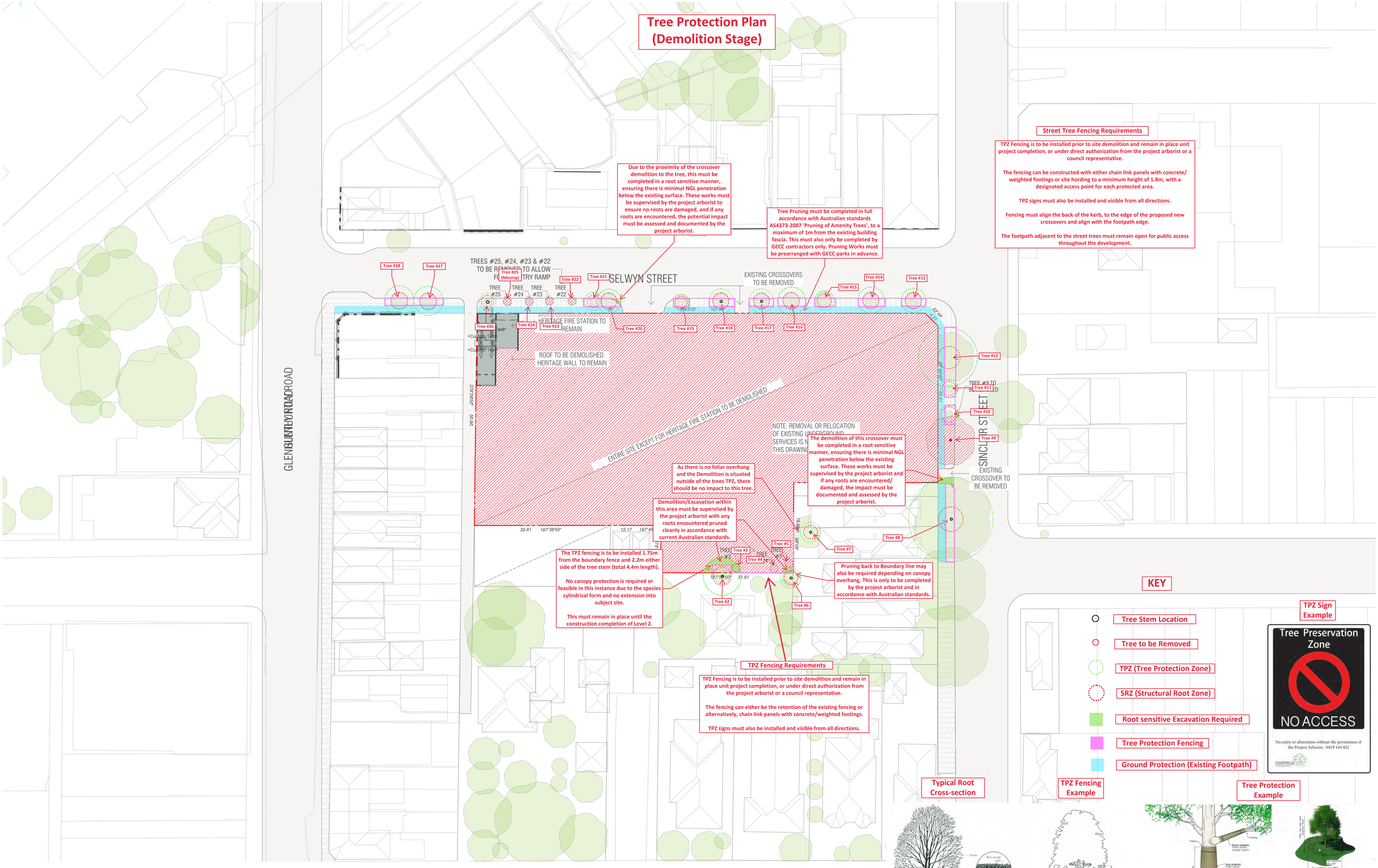
Stage	Stage Descriptor	Works Descriptor	Works Detail	Role	Date	Signed
	2.7 Certification	Project Arborist sign-off	Ensure all works were done in accordance to TMP	Site Manager, Project Arborist		Name: Signiture:
3) Post Construction	**3.1 Completion of Works**	Tree condition assessment	Short written report	Site Manager and Project Arborist		
		Remedial tree care measures	Specify any requirments for pruning and/or further action	Project Arborist		
	3.2 Certification	Arborist sign off	This is the final certification for the whole project documenting all works and tree protection measures	Site Manager, Project Arborist, Council Arborist		
		Copies of finalised and signed Tree Protection Program to be issued to Resposible Authority		Site Manager		

Final Certification

Date: _____/_____/_____
Council Arborist
Project Arborist:
Site Manager:

Tree Retention/Removal Plan
KEY
Tree to be Retained
Tree to be Removed
ADVERTISED PLAN
09 / 12 / 2022 DRAFT VCAT CONDITIONS UPDATE & AMENDMENTS FOR REVIEW
MGA94 ZONE 55
SELWYN STREET
SINCLAIR STREET
GLEN HUNTLY ROAD
MAY STREET
REGENT STREET
ST. GEORGES ROAD
LANEWAY
10-16 SELWYN STREET
EXISTING CONDITIONS PLAN
10-16 SELWYN STREET ELSTERNWICK
Hellier McFarland
Development Consultants Town Planners Land Surveyors
REF No. 10931S/1
VERSION B
DATE 29/05/2017
SHEET No. 1 of 1
SCALE 1:400
ORIGINAL SHEET SIZE A1
LENGTHS ARE IN METRES
CERTIFICATION IN RELATION TO TITLE BOUNDARIES
LEGEND
NOTATIONS
SURVEY NOTES
CONTOURS & TERRAIN MODELLING
VICMAP DATA
DIAL BEFORE YOU DIG INFORMATION
WINDOWS AND DOORS
TITLE REFERENCE & NOTES
FENDER KATSALIDIS
PROJECT
SELWYN ST DEVELOPMENT
10-16 SELWYN
ELSTERNWICK VICTORIA 3185
DRAWING TITLE
EXISTING CONDITIONS PLAN
ISSUE PURPOSE
VCAT PLANS
DRAWN SS
DATE 25.03.2022
CHECKED CB
PLOT DATE 25.03.2022
JOB NO 17103.1
SCALE 1:400@A1
TP001

Tree Protection Plan (Demolition Stage)



Street Tree Fencing Requirements

TPZ Fencing is to be installed prior to site demolition and remain in place unit project completion, or under direct authorization from the project arborist or a council representative.

The fencing can be constructed with either chain link panels with concrete/ weighted footings or site hording to a minimum height of 1.8m, with a designated access point for each protected area.

TPZ signs must also be installed and visible from all directions.

Fencing must align the back of the kerb, to the edge of the proposed new crossovers and align with the footpath edge.

The footpath adjacent to the street trees must remain open for public access throughout the development.

KEY

- Tree Stem Location
- Tree to be Removed
- TPZ (Tree Protection Zone)
- SRZ (Structural Root Zone)
- Root sensitive Excavation Required
- Tree Protection Fencing
- Ground Protection (Existing Footpath)

TPZ Sign Example

Typical Root Cross-section

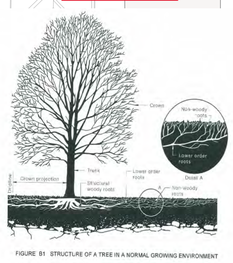
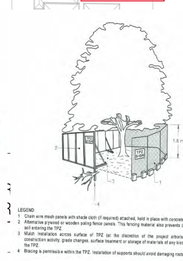
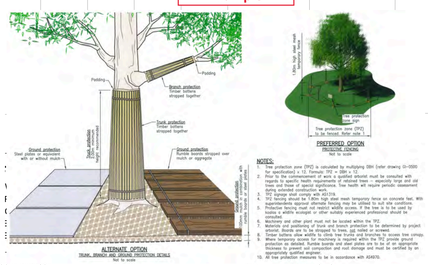


FIGURE B1 STRUCTURE OF A TREE IN A NORMAL GROWING ENVIRONMENT

TPZ Fencing Example



Tree Protection Example



BIMcloud: fkaeprdbim01 - BIMcloud/23135 Selwyn Street Elsternwick (PACE Group)/00 BIM MODELS/SD_TP-DA/CENTRAL MODELS/23135 General

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ADVERTISED PLAN

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DRAWN	DATE	CHECKED	PLOT DATE	JOB NO.
GH	03.05.2024	KT	05.08.2024	23135

SCALE 1:400@A1

DRAWING TITLE DEMOLITION PLAN

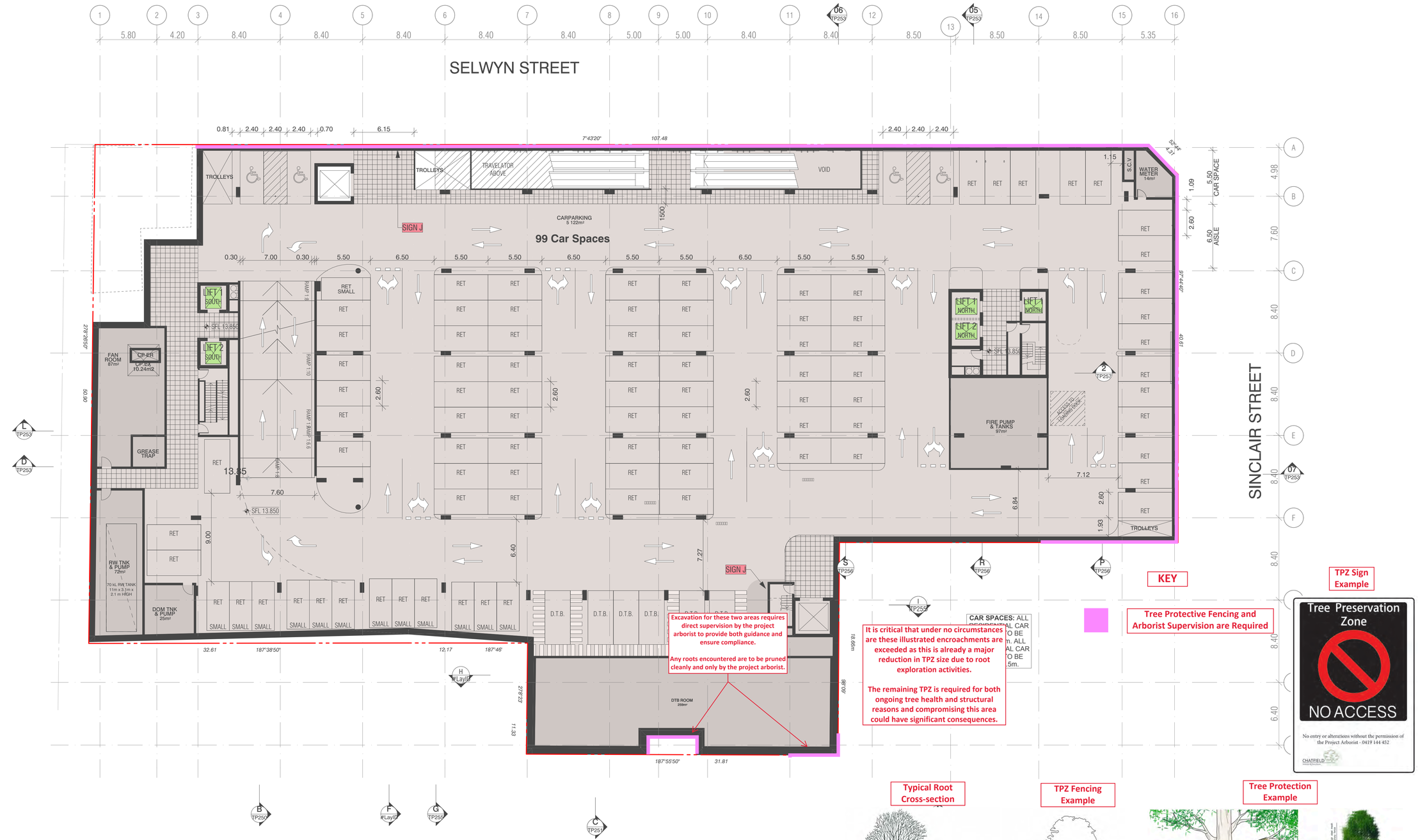
ISSUE PURPOSE TOWN PLANNING

REV. A

DRAWING NO. TP002

Tree Protection Plan (Basement Excavation)

ADVERTISED PLAN



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GH	03.05.2024	KT	05.08.2024	23135	1:200@A1	BASEMENT 1 FLOOR PLAN	TOWN PLANNING	A	TP099

Tree Protection Plan (Construction Plan)

TPZ Fencing is to be installed prior to site demolition and remain in place unit project completion, or under direct authorization from the project arborist or a council representative.

The fencing must be constructed with either chain link panels with concrete/weighted footings or site hording to a minimum height of 1.8m, with a designated access point for each protected area.

TPZ signs must also be installed and visible from all directions.

Fencing must align the back of the kerb, to the edge of the proposed new crossovers and align with the footpath edge.

The footpath adjacent to the street trees must remain open for public access throughout the development.

Footpath is to remain open throughout the development

THE PUBLIC REALM WILL BE CONSISTANT WITH THE ELSTERNWICK CULTURAL PRECINCT PLAN IN ACCORDANCE WITH THE PUBLIC REALM PLAN ENDORSED UNDER CONDITION 36. ANY INCONSISTENCIES BETWEEN THE PUBLIC REALM PLAN, AND PRECINCT PLAN WILL BE RESOLVED DURING DETAILED DESIGN

ALL RAMPS WITH 300MM W X 150MM H KERB

LANDSCAPING TO BE MAINTAINED LESS THAN 900MM H TO ENSURE TRAFFIC VIEW TRIANGLE REMAINS UNIMPEDED

WOOLWORTHS ENTRY SIGN ABOVE ENTRY. TO BE INTERNALLY ILLUMINATED

CLEAR GLAZED SHOPFRONTS NO INTERNAL FIITINGS OR OPAQUE MATERIALS

4 BIKE SPACES PROVIDED FOR PLACE OF ASSEMBLY [SUBJECT TO COUNCIL CONSENT]

CLEAR GLAZED SHOPFRONTS NO INTERNAL FITINGS OR OPAQUE MATERIALS

SELWYN STREET

SINCLAIR STREET

3 MAY STREET

1 GEORGES ST

1 MAY ST

16 SINCLAIR ST

20 SINCLAIR ST

ENTRY

AIRLOCK

TRAVELATORS FROM BASEMENT

RETAIL - SUPERMARKET 3,477m²

SHOP OR FOOD AND DRINK PREMISES 32m²

SHOP OR FOOD AND DRINK PREMISES 109m²

BOOSTER

PLACE OF ASSEMBLY 277m²

RESI LOBBY 74m²

RESI LOBBY 112m²

BWS 156m²

BWS BINS

OP.EX 10.24m2

SHARED LOADING DOCK 196m²

SUPERMARKET LOADING DOCK 371m²

SUBSTATION 16m²

GAS MTR

VISITOR BIKE PARKING 8 SPACES TO BE PROVIDED

OUTLINE OF CANOPY ABOVE

HIGH LEVEL WINDOW 1300 AFFL ABOVE F&B TENANCY EXTENT

FULL HEIGHT SOLID WALL

FLOOR TO CEILING GLAZING EXTENT

SIGN A & B

SIGN C

SIGN E

SIGN F

SIGN G

SIGN J

TREE#26 TO BE RETAINED

TREE#27 & TREE#28 TO BE RETAINED

TREE#19 TO BE RETAINED

TREE#18 TO BE RETAINED

TREE#17 TO BE RETAINED

TREE#16 TO BE RETAINED

TREE#15 TO BE RETAINED

TREE#14 TO BE RETAINED

TREE#13 TO BE RETAINED

TREE#12 TO BE RETAINED

TREE#11 & #10 TO BE RETAINED

TREE#08 TO BE RETAINED

TREE#07 & 06 TO

TREE#21 & TREE #20 TO BE RETAINED

TREE#02 TO BE RETAINED

LOADING BAY DOOR TO REMAIN CLOSED DURING LOADING ACTIVITIES

LOADING DOCK TO INCORP SOUND DAMPENING MATE ACOUSTIC ENG REQ.

Tree #28 · Tree #27 · Tree #26 · Tree #21 · Tree #20 · Tree #19 · Tree #18 · Tree #17 · Tree #16 · Tree #15 · Tree #14 · Tree #13 · Tree #12 · Tree #11 · Tree #10 · Tree #8 · Tree #7 · Tree #6 · Tree #2

BUILDING HEIGHT 2.95m

BUILDING HEIGHT 7.7m

BUILDING HEIGHT TO TERRACE 3.57m

BUILDING HEIGHT TO TERRACE 3.58m

BUILDING HEIGHT 9.6m

BUILDING HEIGHT 3.65m

ROOF ABOVE

MEZZANINE ABOVE

It is critical that the tree protection fencing must remain in place until completion of the second level. If any alteration is required, permission from both the project arborist and GECC must be obtained prior to facilitation.

TPZ FENCING TO BE INSTALLED 1.75m FROM BOUNDARY FENCE AND 2.2m EITHER SIDE OF THE TREE STEM TOTALING 4.4m. REFER TO ARBORIST REPORT FOR DETAILS.

REFER TO ARBORIST REPORT FOR FURTHER TREE MANAGEMENT INFORMATION

91.87 FENCE DEEP ROOT ZONE

KEY

- Tree Stem Location
- TPZ (Tree Protection Zone)
- SRZ (Structural Root Zone)
- Tree Protection Fencing
- Existing Ground Protection

Ground Protection (If Required)

Ground protection would consist of a base of Geo-tech fabric, covered by a layer of either mulch or crushed rock minimum of 100mm deep, and covered by a rumble boards (strips of rigid material that will disperse load and still allow for water and oxygen to penetrate the soil level below.

TPZ Sign Example

Typical Root Cross-section

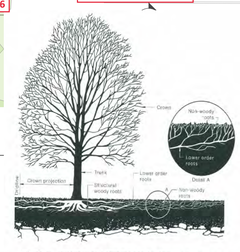
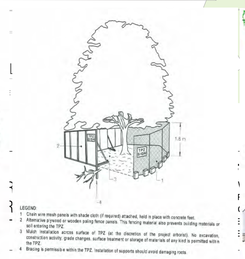


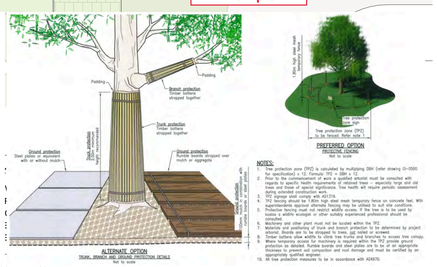
FIGURE B1 STRUCTURE OF A TREE IN A NORMAL GROWING ENVIRONMENT

TPZ Fencing Example



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. Where access 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.

Tree Protection Example



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GH	03.05.2024	KT	05.08.2024	23135	1:200@A1	GROUND FLOOR PLAN	TOWN PLANNING	A	TP100

Tree Protection Management Plan - Induction Record

Induction By :	Tim Chatfield (Project Arborist)
Planning Permit Number:	GE/DP-34187/2021
Municipality:	Glen Eira Council

Contracting Company	Work Description	Staff names	Do you understand the TMP? (Y/N)	Staff Signitures	Date of Induction

Contracting Company	Work Description	Staff names	Do you understand the TMP? (Y/N)	Staff Signitures	Date of Induction

Contracting Company	Work Description	Staff names	Do you understand the TMP? (Y/N)	Staff Signitures	Date of Induction

Site Assessment Records

Audit By	Tim Chatfield
Date	
Site	10-16 Selwyn St, Elsternwick
Objective	Montor all trees included in the Tree Protection Management Plan during development

Where all trees Assessed? (Y/N) If no why?	
Notable decline in any relevant trees?	
Tree protection measures in accordnace with TMP?	
Actionable Items?	
Additional Comments?	

Below is the exert from the relevant Australian standards (AS4970:2009) to ensure transparency and a key reference point in the facilitation process.

MONITORING AND CERTIFICATION

General

There are many stages in the development process from site acquisition to completion where the project arborist is required to monitor or certify tree protection.

Tree Protection Plan

The approved tree protection plan must be available on-site prior to the commencement of and during works. The tree protection plan will identify key stages where monitoring certification will be required.

A pre-construction meeting should be attended by the site manager, the project arborist and contractors to introduce the tree protection plan and its requirements.

Pre-Construction

Tree removal and pruning

Trees for removal or transplanting should be marked onsite as per the approved tree protection plan. Before removal, the project arborist should confirm that all marked trees correspond with those shown on the schedule or plan. Other tree work may be specified in the tree protection plan.

Tree removal should be carried out prior to the erection of protective fencing. Contractors should be instructed to avoid damage to trees within protection areas when removing or pruning trees. This may include restrictions of vehicle movements.

Any approved pruning required to allow for works should be done at this stage. AS 4373 specifies requirements for pruning.

Stumps to be removed within the TPZ must be removed in a manner that avoids damaging or disturbing roots of trees to be retained.

The project arborist should supervise tree removal, transplanting and pruning and certify works on completion.

Installing tree protection fencing and other protection measures

Fencing and other protective measures are to be installed in compliance with section 4 and as detailed in the tree protection plan.

Protection measures are to be certified by the project arborist.

Construction Stage

General

In order to ensure the protection measures are being adhered to during the pre-construction and construction stages, there should be a predetermined number of site inspections carried out by the project arborist. Matters to be monitored and reported should include tree condition, tree protection measures and impact on site works which may arise from changes to the approved plans.

Site establishment

The project arborist will monitor the impacts of demolition, bulk earth works, installation of temporary infrastructure including bunding, sediment control works and drainage works.

The construction management plan (site establishment plan) should be checked for compliance with the tree protection plan. The construction management plan normally includes location of site sheds, stockpile areas, temporary access roads and sediment control devices.

At completion of site establishment, the project arborist should certify that the tree protection measures comply with the tree protection plan.

Construction works

The project arborist will monitor the impacts of general construction works on retained trees. Monitoring should be done at regular intervals or in consultation with the site manager. Monitoring is to be recorded for inclusion in certification at practical completion.

Critical stages typically include installation of services, footings and slabs, scaffolding, works within the TPZ and at completion of building works.

Landscape works

The landscape plan should be checked for compliance with the tree protection plan. The project arborist may need to approve the staged removal or protection measures required to allow for landscaping works. The project arborist should supervise any works within TPZ's including retaining walls, irrigation and lighting installation, topdressing, planting and paving. The project arborist should specify and remedial works above and below ground. Monitoring is to be recorded for inclusion in certification at practical completion.

Practical completion

Practical completion assumes that all construction and landscaping works are finished. At practical completion all remaining tree protection measures should be removed. The project arborist should assess tree condition and provide certification of tree protection.

Post Construction

Defects liability period

Completion of outstanding building or landscaping works following the construction period must not injure trees.

Final certification

The project arborist should assess the condition of trees and their growing environment, make recommendations for any necessary remedial actions.

Following the final inspection and the completion of any remedial works, the project arborist should certify (as appropriate) that the completed works have been carried out in compliance with the approved plans and specifications for tree protection. Certification should include a statement on the condition of the retained trees, details of any deviations from the approved tree protection measures and their impacts on the trees. Copies of monitoring documentation may be required.

Notes:

- Remedial actions may include pruning in accordance with AS 4373 and/or soil remediation.
- If the project arborist has not been involved throughout the project, they should have access to inspection reports by others and should review construction drawings to determine the likely impacts on trees.

To simplify understanding of the protection requirements, see below for more information.

The following illustration shows location for roots on site and the importance of root protection on tree health.

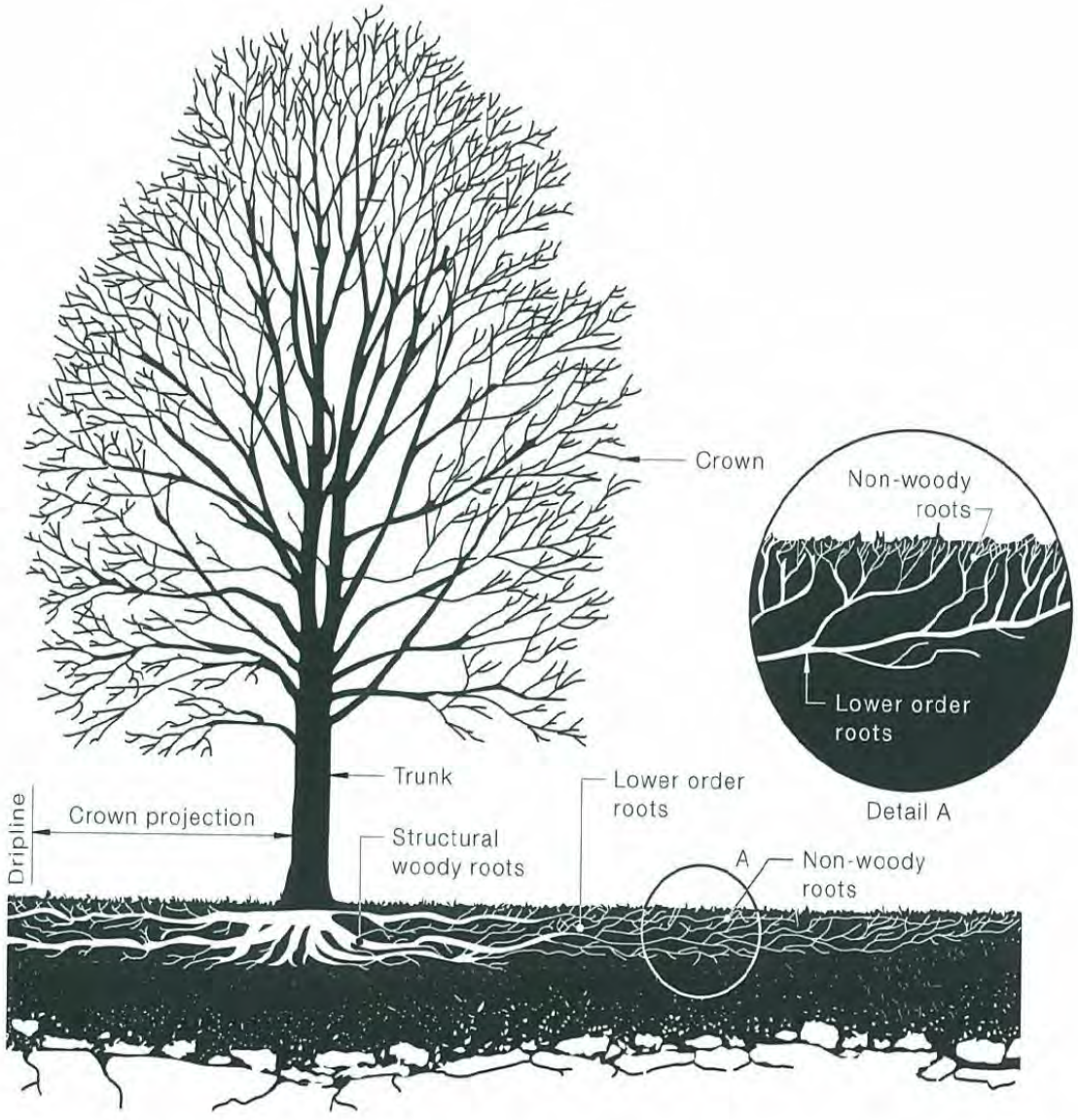
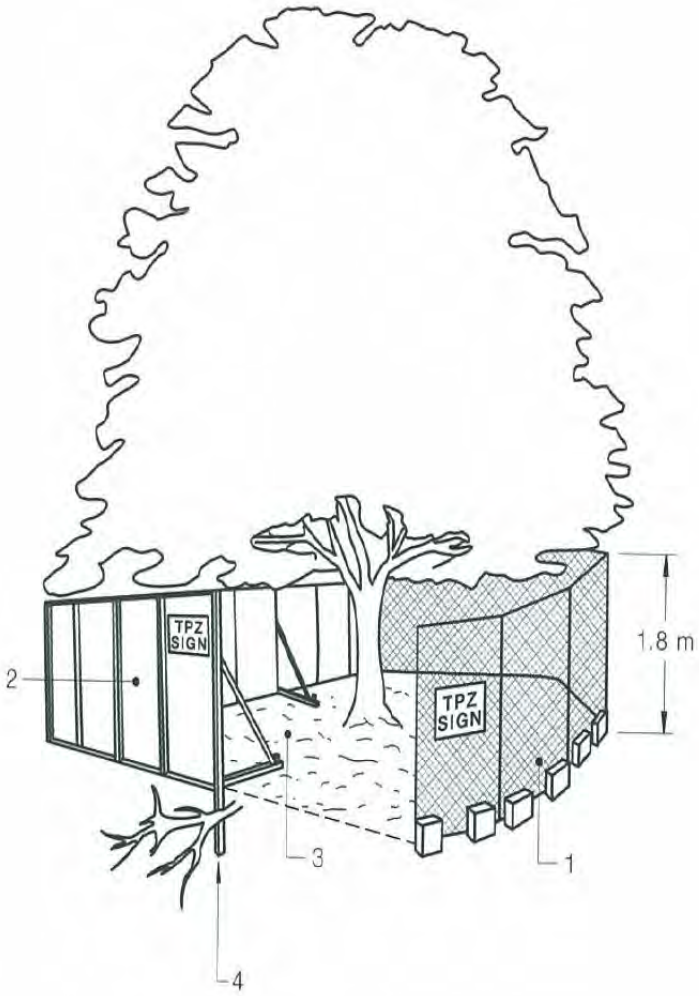


FIGURE B1 STRUCTURE OF A TREE IN A NORMAL GROWING ENVIRONMENT

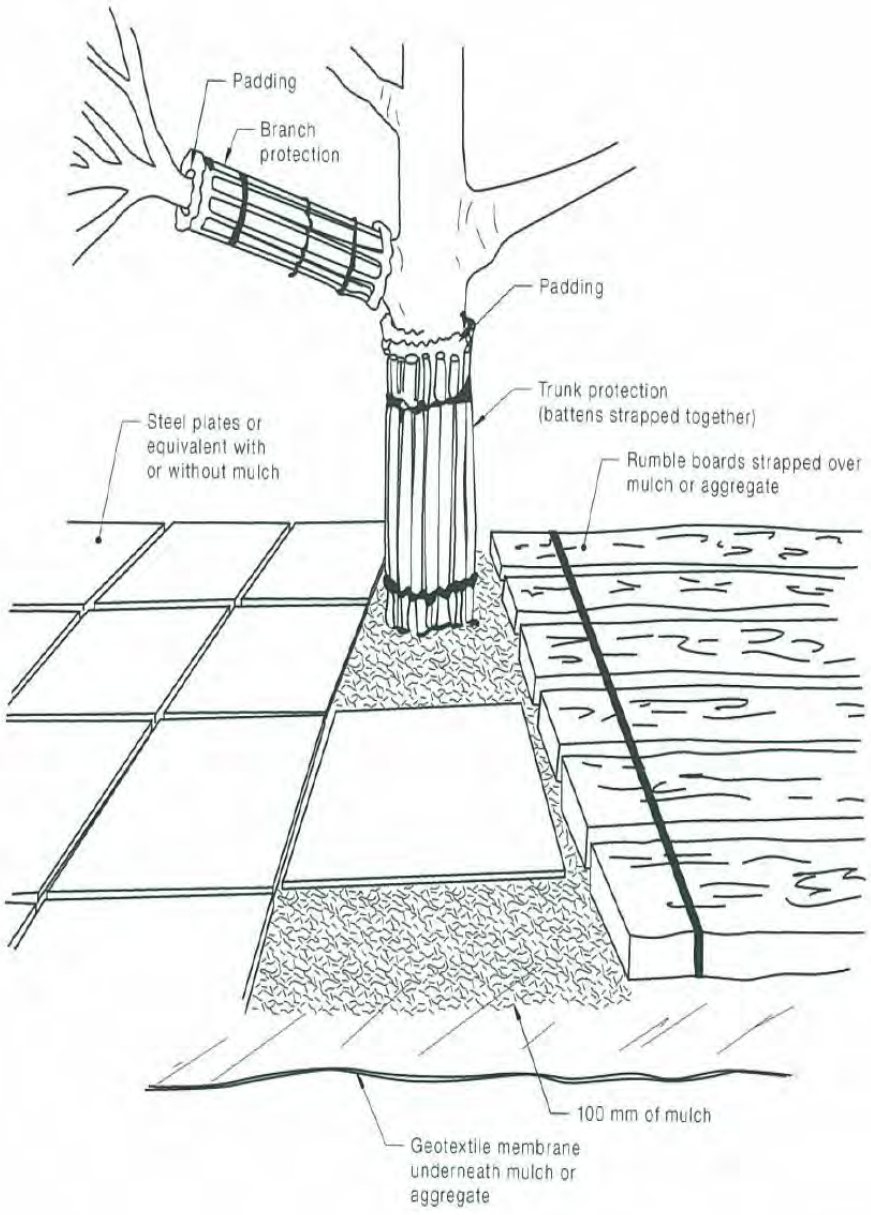
The following Illustration shows the type and location of protective fencing to be applied during construction.



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 following illustration shows the protection required when accessing a TPZ of a protected to tree. It is important to know that trees don't quickly repair and any damage caused tends to be lasting. It is proactive measures that help retain a long term specimen.



The following signage is an example of what is required to be visible at all times and located on the protective fencing surrounding the TPZ. The project arborist will have contact details listed for information relating to trees.

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Tree Preservation Zone

NO ACCESS

No entry or alterations without the permission of the Project Arborist - 0419 144 452

CHATFIELD
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Tree Assessment Explanatory Notes

Size Dimensions:

DBH (Diameter at Breast Height) is a measurement of trunk diameter taken at 1.4m above ground level.

Canopy Spread is a measurement of canopy Diameter measured from edge-to-edge of the canopy drip line.

Height is a measurement of the height of the tree by a clinometer.

Tree Protection Zone (TPZ) is estimated as 12 times the trunk DBH as per AS 4970:2009 '*Protection of Trees on Development Sites'* – it is a radius distance from the tree trunk base.

Structural Root Zone (SRZ) is estimated as per AS 4970:2009 '*Protection of Trees on Development Sites'* – It is a radius distance from the tree trunk base.

Vigour/Health:

The health condition of the tree is classified as **Very Good, Good, Fair, Poor, Moribund/Dead.**

These observations are based on factors such as physical damage, broken branches, scars, root damage, rotten cavities, visible fungal fruiting bodies, branches die back, deadwood, branch stubs, observable disease or insect damage/infestation, foliar colour and density of the canopy, growth extensions over the last year etc.

Category	Description
Very Good (5)	Outstanding specimen. Full & balanced canopy. Good shape and form. Foliage dense, entire with good colour, no pest/disease damage. No dieback or deadwood. Excellent growth indicators, eg extension growth.
Good (4)	Canopy full, may be slightly asymmetrical. Foliage dense, entire with good colour, minimal pest/disease damage. Negligible quantity of deadwood (<10%). Good growth indicators, eg extension growth.
Fair (3)	Canopy may be unbalanced. Foliage density thin, generally with good colour, some discolouration may be present. Minor pest or disease damage present. (Typical for species in location). Minor quantity of deadwood (<30%).
Poor (2)	Major quantity of deadwood and dead/broken limbs (>30%). Foliage density thin and sparse, may be severely defoliated, wilting, chlorotic or necrotic, may have excessive epicormic or basal sprout growth. Serious pest/disease damage and stress level lending to tree decline.
Dead/Moribund (1)	Tree is moribund or dead, totally defoliated or no live foliage and green bark on the tree. Bark may be peeling off trunk/branch.

Structure:

The structure of the tree is classified as **Very Good, Good, Fair, Poor, Dead.**

These observations are based on factors such as canopy balance and symmetry, straight or leaning trunk, single or multiple trunks, bifurcated co-dominants with included bark, risk of branch drop or tree collapse, presence of decay in trunk or roots, evidence of instability etc.

Category	Description
Very Good (5)	Excellent branch attachment, no structural defects. Trunk straight, sound and solid, with no exposed wounds, cavities and decay. No damage to roots and good root buttressing. Good trunk and scaffold branch taper. No branch over extension.
Good (4)	Good branch attachment with minor structural defects. Trunk straight and sound, may show minor non-hazard wounding. No damage to roots, with good buttressing.
Fair (3)	Some minor structural defects and/or damage to trunk. Regenerated crown after severe pollarding. Bark torn and missing on main trunk or branches. Cavities or decay may be present. May have minor damage to roots not threatening tree stability. May have slight leaning and slightly lopsided canopy.
Poor (2)	Major structural defects eg trunk bifurcation with included bark, cracked or split branches, pollarded canopy not regenerated, trunk/branch damage and/or missing bark, large rotten cavities, girdling or damaged roots that destabilise the tree. Root buttress not visible above ground. Serious lean, not straight growing. Canopy halved and lopsided.
Dead (1)	Dead tree poses imminent risk or high hazard risk.

Trees Age

Juvenile 0-10 years

Semi-mature 10-25 years

Mature 25 years to nominal species life expectancy

Senescent Declining vigour due to old age

Shape/Form:

The shape and form of the tree is classified as **Good, Fair, Poor.**

These observations are based on factors such as canopy shape, balance and symmetry, straight or leaning trunk, single or multiple stems.

Category	Description
Good (3)	Single upright straight tree trunk. No leaning. Well balanced, full density symmetrical canopy.
Fair (2)	Multiple trunks. Tree with minor leaning (<30 degrees off vertical). Slightly lopsided unbalanced canopy. Regenerated canopy after lopping/pollarding.
Poor (1)	Tree trunk with serious lean (>30 degrees off vertical), tree trunk with kinking, twisting, canopy lopped/pollarded. Canopy halved, badly leaning and/or lopsided. Tree top cut off for overhead power lines clearance or top dieback, or blown off in strong winds.

Significant Trees:

This rating is to be used to rate the significance of trees in the area.

Trees that are of State or National significance would normally be registered by The National Trust or Heritage Council and would be identified as such.

The local council's planning scheme may have separate listings of significant trees in the municipality.

Trees may be considered as significant if they fall into one or more of the following categories: -

- Exceptional size and/or age
- Rare or threatened/endangered species
- Unusual shape or form
- Aboriginal cultural value
- Heritage or historic value
- Exceptional example of a species
- Genetical biodiversity value
- Outstanding feature in the landscape
- Habitat value

Generally, trees are described according to their flowering and foliage amenity, greenery contribution, shade, shelter, screening, or being classified as noxious weeds or environmental weeds.

Useful Life Expectancy (ULE)

Long	Over 50 years
Medium	10-50 years
Short	Under 10 years

Retention

High	Retention recommended
Medium	Retention/Removal Optional
Low	Removal recommended
Remove	Removal a matter of necessity or urgency

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Chatfield Arborists & Consultants, Unit 6 – 2 New St, Richmond, Vic, 3121

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