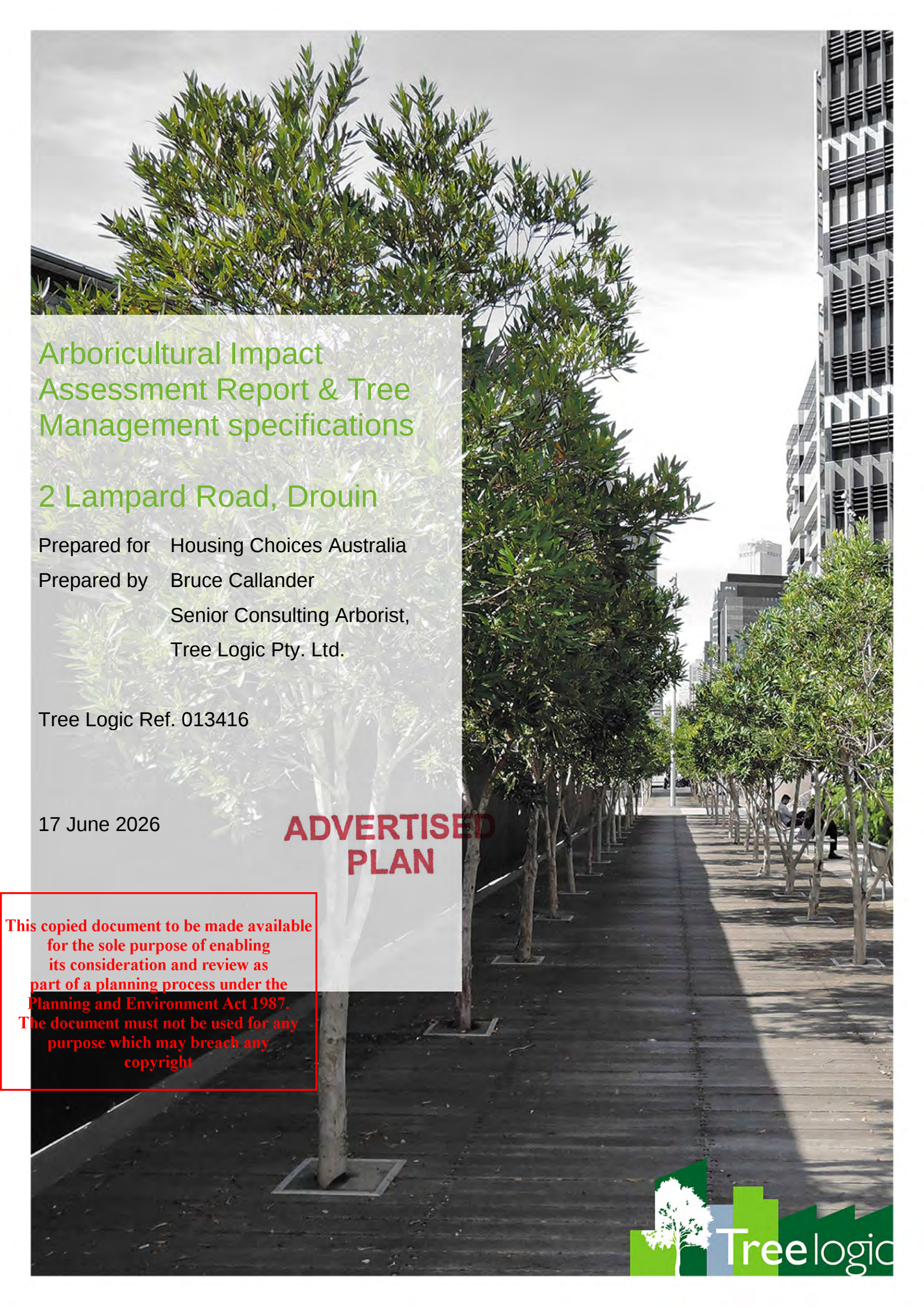




Arboricultural Impact Assessment Report & Tree Management specifications

2 Lampard Road, Drouin

Prepared for Housing Choices Australia

Prepared by Bruce Callander

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Tree Logic Pty. Ltd.

Tree Logic Ref. 013416

17 June 2026

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File No.	Version	Author	Issue date	Edits	Issued by.
13416	Preliminary report	Bruce Callander	1/3/2024	Preliminary Arboricultural Report (PAR)	BC
13416	Arboricultural Impact assessment V1	Bruce Callander	8/3/2024	Tree Impact Report_ - 2 Lampard Road, Drouin	BC
13416	Pruning -letter of opinion	Bruce Callander	6/6/2024	Description of pruning of western canopy of Heritage Elm trees	BC
13416	Tree report_4-6 Lampard Rd, Drouin		6/8/2024	Preliminary Arboricultural Report (PAR)	BC
13416	Arboricultural impact assessment V2	Bruce Callander	15/10/2025	Arboricultural Impact Assessment & Tree Management Report (AIA & TMR)	BC
13416	Arboricultural impact assessment V3	Bruce Callander	17/4/2026	Arboricultural Impact Assessment & Tree Protection Specifications (AIA & TPS)	BC
13416	Arboricultural impact assessment V4	Bruce Callander	17/06/2026	Updates to AIA, TPS, & TPP based on review of design dated 25/05/2026	BC
13416	Arboricultural impact assessment V5	Bruce Callander	17/06/2026	Updates to AIA, TPS, & TPP - Review of updated Civil & Landscape plans	BC
13416	Arboricultural impact assessment V6	Bruce Callander	17/06/2026	Updates to Landscape plans (Rev: G)	BC

1 Introduction

Tree Logic has prepared a preliminary tree assessment report in relation to the site to inform the design of the development proposal and has also completed a previous tree impact assessment report for the final design. (Refer to *Preliminary Tree Report_13416 - 2 Lampard Road, Drouin – 1/3/2024*, *Tree Impact Report_13416 - 2 Lampard Road, Drouin – 8/3/2024*) and *Tree Logic Letter of Opinion (Date: 06 June 2024)* regarding pruning of western canopy 'specifically as to whether the proposed building will interfere with the tree canopy and require pruning or lopping to accommodate the proposal'.

Since that time further, the properties at 4 and 6 Lampard Road have been acquired and an assessment of trees within and adjacent to these properties has been undertaken and reported on. (Refer to *TL_13416_Tree report_4-6 Lampard Rd, Drouin_2025_Addendum – 6/8/25*).

In total fifty two (52) trees and two (2) groups of trees have been reported on associated with the subject sites, 2, 4, and 6 Lampard Road including street trees adjacent to the site in South Main Road and Lampard Road, as well as neighbour's trees in 5 South Main Road and 8 Lampard Rd.

Please refer to preliminary *Preliminary Tree Report_13416 - 2 Lampard Road, Drouin – 1/3/2024* and *Tree report_4-6 Lampard Rd, Drouin_2025_Addendum – 6/8/25* for method, observations, TPZ establishment guidelines, tree data tables and all tree and tree protection zone mapping.

Further advice has also been provided in relation to the Access Ramp extending east from the town houses between Trees 4 and 5. (Please refer to *TL_Letter_251204_Access ramp impacts_Trees 4-5* dated 4/12/2025).

This report is an update to the last design review, arboricultural impact assessment, tree protection specification and tree protection plan prepared in April 2026. (Refer to *TL_Tree Management Report_V4_13416 - 2 Lampard Road, Drouin – 2/6/26*)

This Arboricultural Impact Report relates to all 52 trees and 2 groups associated with the subject sites as a whole and provides appropriate Tree Management Specifications.

2 Reason for Assessment

Treelogic has been engaged by Housing Choices Australia to review the design proposal for affordable housing units across 2, 4 and 6 Lampard Road.

The requirements of the Arboricultural Impact Assessment (AIA) report include:

- Review the proposed design in relation to the tree assessment data collected in 2024 and 2025.

- Identify any encroachments into the Notional Root Zones (NRZ) and Structural Root Zones (SRZ) for trees compliant with AS4970-2025 'Protection of Trees on Development Sites'.

- Identify approved building design, construction zones, site access, machinery, equipment, and temporary structures required to enable demolition, excavation, and construction.

- Prepare an arboricultural impact assessment (AIA) detailing the potential construction impacts the proposal will have on retained trees.

To offer tree management specifications required to avoid or minimise perceived impacts to ensure trees are retained successfully, including design or construction considerations and tree protection measures required to maintain the ongoing viability of the assessed trees. These include details of temporary tree protection fencing or hoarding to be used to isolate public trees from impacts associated with demolition, excavation & bulk earthworks and construction activities including landscaping.

Documents viewed:

Town Planning Architectural Drawing Set - 2-6 Lampard Road Drouin Vic 3818

Prepared by LIAN Architects Pty. Ltd. Project Number: HC02 – TP001. Rev P. 25/5/2026

Drawing Number	Drawing Name
TP004	SURVEY PLAN
TP005	SITE PLAN
TP010	DEMOLITION PLAN
TP100	GROUND FLOOR GA PLAN
TP101	FIRST FLOOR GA PLAN
TP102	SECOND FLOOR GA PLAN
TP103	ROOF PLAN

GF_Drainage plan. Prepared by EDGE Consulting Engineers. Proj No: **AU250718**. Dwg: C300-C302
Rev P08. Date: 21/5/2026

Landscape Site Plan. Prepared by Emergent Studios. Proj No: 25009. Dwg: SK100 Rev: G. 15/6/26

3 Tree Protection Zones

- 3.1 The most important consideration for the successful retention of trees is to allow appropriate above and below ground space for the trees to continue to grow. This requires the allocation of tree protection zones for retained trees.
- 3.2 The Australian Standard (AS 4970-2025) 'Protection of Trees on Development Sites' has been used as a guide in the allocation of Notional Root Zones (NRZ) for the assessed trees. The NRZ for individual trees is calculated based on trunk diameter at standard height (DSH) measured in centimetres at 1.4 metres up from ground level. The radius of the NRZ is calculated by multiplying the trees DSH by 12.
- 3.3 This method provides a NRZ that addresses both the stability and growing requirements of a tree. NRZ distances are measured as a radius from the centre of the trunk at (or near) ground level. The maximum NRZ should be no more than 15 m radius and the minimum NRZ should be no less than 2 m radius.
- 3.4 The Structural Root Zone (SRZ) is the area in which the larger woody roots required for tree stability are found close to the trunk and which then generally taper rapidly. This is the minimum area recommended to maintain tree stability but does not reflect the area required to sustain tree health. No works are permitted within the SRZ radius as tree stability maybe compromised. All SRZ distances can be seen in Appendix 1.
- 3.5 Encroachment into the NRZ is permissible under certain circumstances though this is dependent on both site conditions and tree characteristics (See Figure 9 for examples of encroachment). Minor encroachment, up to 10% of the NRZ, is generally permissible provided encroachment is compensated for by recruitment of an equal area contiguous with the NRZ. Encroachment must also consider the crown of the tree and ensure that excessive pruning is not required that would cause the tree to become unbalanced or disfigured.
- 3.6 The 10% encroachment on one side equates to approximately a $\frac{1}{3}$ reduction of the radial distance. Refer to Figure 1 for examples of acceptable NRZ encroachment.

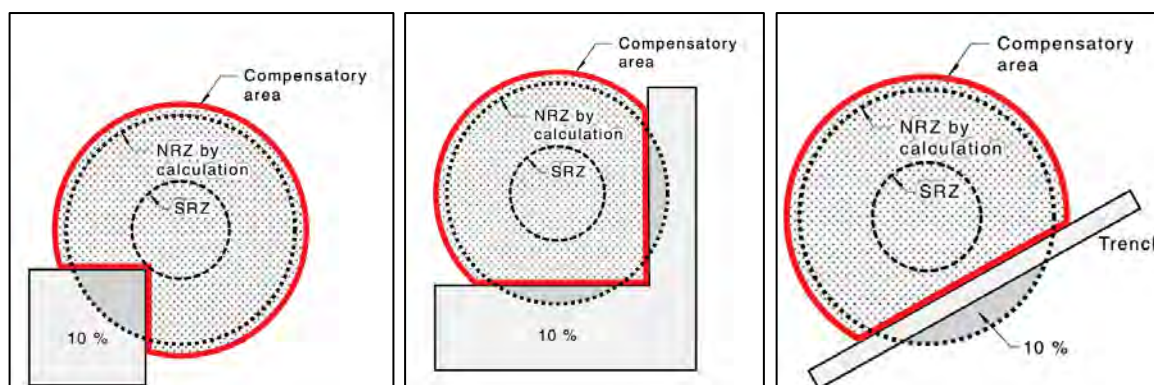


Figure 1: Examples of minor encroachment into the NRZ

- 3.7 Encroachment greater than 10%, less than 20% and outside of the SRZ is considered Moderate encroachment under AS4970-2025 and is only permissible if it can be demonstrated that after such encroachment the tree would remain viable.
- A non-destructive root investigation (NDRI) may be required to investigate and identify the location of roots within the proposed area of encroachment and root sensitive construction methods may need to be utilized.
- 3.8 Encroachment greater than 20% or extending into the SRZ is considered to be major and has the potential to cause unsustainable damage to the ongoing viability of the affected trees.
- It is unlikely to be supported by the arborist and the relevant authority unless specific tree sensitive design & construction methods are developed based of the results of non-destructive root investigation.
- 3.9 Tree root growth is opportunistic and occurs where the essentials to life (primarily air and water) are present. Heterogeneous soil conditions, existing barriers, hard surfaces, and buildings may have inhibited the development of a symmetrically radiating root system. Existing infrastructure around some trees may be within the TPZ or root plate radius. Where this has occurred, the roots of some trees may have grown in response to the site conditions and if existing hard surfaces and building alignments are utilised in new designs then impacts on the trees should be minimal.
- 3.10 All NRZ measurements are provided in the tree assessment data in Appendix 1.
- 3.11 Tree Protection Zones (TPZs) must be established around the NRZ of each retained tree that comprises tree protection fencing (TPF), ground buffering or other methods specified by the arborist to ensure trees are appropriate protected through the construction process.
- 3.12 Root sensitive construction methods may need to be adopted within the TPZ that are based on results of non-destructive root investigation (NDRI) in consultation with the consulting arborist or Responsible Authority.
- 3.13 All street trees are under the management of the Baw Baw Shire Council and will require permission for any works to occur within their TPZs and for any canopy pruning works.
- 3.14 The maturing English Elm trees 2 to 7 have additional tree controls applicable under Schedule 246 of the Heritage Overlay (HO246).

4 Arboricultural Impact Assessment (AIA)

- 4.1 The subject study area comprises three adjacent allotments on the south side of Lampard Road with Lot 2 facing South Main Road. The sites have a slight fall towards the west. Trees 1 to 11 are council managed street trees growing in the adjacent road reserves. Trees 12 to 36, 41 to 44 and 50 are small trees / shrubs within 4 t to 6 Lampard Road. Trees 38 to 40 are growing within 8 Lampard Road as neighbour's trees as are Trees 45 to 49 and 52, growing within the rear setback of 5 South Main Road. Refer to Figure 1.



Figure 1: Aerial view of the subject sites, 2, 4 & 6 Lampard Road, Drouin, shown with red outline. The green shaded area is Heritage Overlay 246 comprising 6 heritage listed English Elm trees. Refer to Appendix 2 for legend for tree points & TPZs.

Refer to Appendix 1 for all tree assessment data and NRZ measurements.

- 4.2 At the time of preparing the Arboricultural Impact Assessment (AIA) plans for a community housing project were provided for review. (*Ground Floor GA Plan. Prepared by Lian Architects. Proj: HC02. Dwg: TP-100 Rev P. Date: 25/5/2026*).

- 4.2.1 Landscape Site Plan (Emergent Studios) and Drainage Plan (Edge) were also reviewed.

Impacts identified under the current design include;

- 4.3 Each of the heritage listed Elm trees will have minor TPZ encroachment of less than 5%, primarily associated with the balconies and private open space areas at ground level as well as permeable paving entry path between Trees 4 and 5.

- 4.4 The average depth of grade change varies at each balcony but ranges from approximately 250mm to 450mm. The depth of footings for the block wall will be approximately 500-600mm.
- Arborist supervision will be required during the initial excavation for the footings of each of the balcony walls to ensure the heritage Elm trees are protected and any roots are appropriately pruned by the project arborist.
 - Initial excavation to 500mm depth will be done with non-destructive digging to allow the arborist to identify and record any significant roots (roots >60mm diameter (Ø) and to prune them cleanly approximately 150mm back from the face of the required footings.
 - TPZ exclusion fencing must be established between the edge of works and the back of the pedestrian footpath on South Main Road.
 - No access to the fenced TPZ is permitted for any reason or by any contractors unless authorised by the project arborist.
- 4.5 The Access Ramp that is indicated inside the property within the NRZ of Tree 4 and Tree 5 must be constructed with permeable pavement treatment set at or above existing grade. Refer to *TL_Letter_251204_Access ramp impacts_Trees 4-5* dated 4/12/2025 for more detailed impact assessment and management requirements.
- Arborist supervision is required during the initial excavation of the top 100mm of topsoil for the permeable access ramp.
 - The arborist will approve and supervise the relocation of the TPZ exclusion fencing at the time of forming the path.
- 4.6 The canopy of Heritage Elm trees 2, 3, 5 and 6 may require minor reduction pruning of some over-extended branches to provide reasonable clearance to the upper level balconies on the eastern face of the of the eastern building during and post construction. Refer to previously supplied *Treelogic_Letter of Opinion_2 Lampard Rd, Drouin* (6/6/24) for full details and specifications of acceptable pruning requirements.
- The project arborist must specify the extent of acceptable pruning in consultation with the project / site manager, pruning contractor and the relevant authority.
 - All pruning must be completed by suitably qualified (minimum AQF Cert 3- Arboriculture) and experience arborist complying with Australian Standard - Pruning of Amenity trees (AS4373-2007).
 - The final location of appropriate target pruning will be best determined by the pruning arborist based on their best judgement of branching and weight distribution once they have accessed the tree for pruning purposes.
 - Pruning must be completed in a controlled manner to avoid damaging any trees that are required to be retained as well as property (fences) or impeding the movement of traffic on Main South Road or Lampard Road.
 - Climbing spikes must not be used to climb a tree for pruning purposes only.
- 4.7 Landscaping plans indicate that natural lawn (L01) will be retained within the front setback facing Main South Road between the balconies and pedestrian path.

- The arborist must confirm that existing grass remains and that no stripping or instant turf is to be used. Top-dressing and re-seeding may occur providing topsoil does not exceed 20mm depth.
 - Small garden beds (GB01) are proposed to be set between the ground floor balconies, comprised of 'Mix B' (*Lomandra confertifolia* ssp. *rubiginosa* 'Misty Green', *Pelargonium australe*, *Poa labillardieri* 'Eskdale') with additional *Baurea*, *Correa lawrenciana*, *Correa reflexa*, *Goodenia* shrubs all in 140mm Ø pots. (Refer to Plant Schedule-SK720_Rev: G).
 - All garden beds to main south road frontage are to be hand dug by hand and must avoid severing any tree roots greater than 30mm diameter.
 - All planting holes and weeding must be completed by hand.
 - Pot sizes larger than 140mm Ø must not be introduced into the NRZ of any retained street trees.
- 4.8 Three (3) street trees in Lampard Road will have TPZ encroachment of either Minor (<10%) to Moderate (10-20%) primarily associated with enlargement of the existing crossover between Trees 8 and 9 as well as some landscape treatments within the subject site.
- 4.8.1 Tree 8, Red-flowering Gum, is shown to have grade changes associated with new driveway crossover (approximately 8%), adjusted pedestrian path ramping (approximately 5%) and associated batter within the nature strip (approximately 4%) feathering back to natural grade.
- 4.8.2 Tree 9, Photinia sp, is also shown to have grade changes associated with new driveway crossover and adjusted pedestrian path ramping (approximately 7%), and associated batter within the nature strip (approximately 5.2%) feathering back to natural grade.
- 4.8.3 Initial demolition of the existing crossover and path and excavation works for the new crossover alignment must be completed under arborist supervision to ensure the driveway is constructed without unduly damaging Trees 8 and 9.
- 4.8.4 While the levels of the pedestrian path are set, some flexibility in the shaping and battering of the soil levels within the nature strip to the west of Tree 8 and the east of Tree 9 must be permitted. The arborist will determine how much scraping and shaping is permitted based on identification of significant tree roots by the arborist during non destructive digging.

Refer to Plate 1 for 3D impression of the new lowered driveway crossover.



Plate 1 - 3D impression of the new lowered driveway crossover.

4.8.5 It is noted that Tree 8 already appears to have had previous root disturbance to the west base that has led to the advancing trunk decay.

On this basis, there may be few if any viable roots from Tree 8 within the proposed crossover battering zone.

4.8.6 A very small section of the SRZ of Tree 9 is impacted where the pedestrian path begins to ramp down to the lowered crossover. However, being on the lower side of the driveway the finished level change within the SRZ will be negligible and basically feathering back to existing levels.

Refer to Plate 2 for existing conditions between Trees 8 and 9



Plate 2 - Existing conditions between Trees 8 and 9

4.8.7 It may be possible to avoid impacting the SRZ by the path returning to existing grade 80cm sooner than shown next to Tree 9 or using a shallow profile, reinforced concrete path at that interface.

- It should be noted that tree 9 is a Photinia species that is commonly hedged and is tolerant of heavy pruning of canopy and roots.
- 4.8.8 Pavement treatments that are indicated inside the property and within the NRZ of Tree 8 must be constructed with permeable pavement treatment set at or above existing grade following a light scrape of top 100mm of topsoil under Arborist supervision at the same time as battering for the new driveway crossover.
- 4.9 The drainage plan indicates that all stormwater pipes, pits and retention tanks are located outside of the NRZ of the retained street trees.
- 4.9.1 The LPD has been located between Trees 9 and 10 where the existing concrete crossover will be demolished and returned to grassed naturestrip.
- 4.10 Tree 10, Magenta Cherry, will have minor encroachment of approximately 10% by the communal garden which will mostly comprise porous paths and above grade garden beds.
- 4.11 The Water Metres and Storm Water discharge are indicated to be located between the TPZs of Tree 9 and 10 to avoid impacting these trees.
- 4.11.1 All connecting water mains must be either directed away from the TPZs of these trees or must be bored to the location of the metres at a depth of more than 650mm to the top of the bore head.
- TPZ exclusion fencing must be established between the edge of works and the back of the pedestrian footpath on Lampard Road.
- 4.12 Under the current design all other trees within 4-6 Lampard Road (Trees 12-35, 41-44, 50, 51 and Groups 1 and 2) are indicated to be removed and new trees introduced in the new landscape upon completion of the building works.
- 4.13 Neighbour's trees 36 and 39 will have isolated fence posts installed within the NRZ which must be dug by hand to 500mm depth and moved accordingly if roots <50mm diameter are exposed.
- 4.13.1 Rain water tanks and filters will be installed within the out edge of the TPZs of trees 36 to 38 at existing grade.

4.14 Tree numbers sorted by impacts is summarised below in Table 4.

Table 4- Trees numbers sorted by construction impacts.

Impact	Impact name	% TPZ_enc	Count	tree_nos
None	NA	0	2	1, 11
	Neighbour's tree	0	7	40, 45, 46, 47, 48, 49, 52
NRZ Minor (<10%)	Balcony - 1.06%, Balcony - 2.22%, building1 - 0.76%	4	1	2
	Balcony - 1.0%, Balcony - 1.84%	3	1	3
	Balcony - 0.2%, Balcony - 1.7%, Paving_middle - 3.16%	5	1	4
	Balcony - 1.14%, Balcony - 0.01%, Paving_middle - 2.39%	4	1	5
	Balcony - 0.33%, Balcony - 1.3%	2	1	6
	Balcony - 0.23%	1	1	7
	Communal garden - 9.82%, Water metres - 0.04%	10	1	10
	Communal garden - 0.11%	1	1	11
	Fence - 0.68%, Rain tank - 3.48%	4	1	36
	Fence - 0.47%, Rain tank - 1.71%	2	1	37
	Fence - 0.01%, Rain tank - 4.47%	5	1	38
	Fence - 1.25%	1	1	39
NRZ Moderate (10-20%)	Battered D'way - 3.63%, Letterboxes - 0.84%, driveway_crossover - 8.23%, paving_north - 4.73%	17	1	8
	Battered D'way - 5.45%, driveway_crossover - 7.57%	12	1	9
X	To be removed	100	32	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 41, 42, 43, 44, 50, 51, G1, G2
Grand Total			54	

5 Tree management specifications

- 5.1 Any trees that are to be retained in the vicinity of any proposed works will require Tree Protection Zones to be established prior to commencing any works onsite including demolition, bulk earthworks, civil works, trenching, construction, landscaping activity, delivery and storage of materials or placement of site sheds.
- 5.2 Tree protection must be incorporated into the design and appropriate construction controls, fencing and management practices must be implemented prior to commencing any construction related activity, including demolition, bulk earthworks construction of gantries, etc.
- 5.3 The tree protection zones for all trees to be retained must be clearly shown on all design drawings and plans with appropriate notations so that all staff and contractors are aware of the responsibility to protect trees throughout the design, development and delivery of the project.
- 5.4 The TPZ fencing must be in the form of temporary fencing panels with concrete block feet and locked together. TPZ fencing must be sufficiently robust to withstand knocks and bumps from plant and machinery, delivery vehicles and effectively exclude or prevent any storage of materials dumping of spoil or waste products being disposed of in the Tree Protection Zone.
- 5.5 Tree Protection Fences (TPF) for council street trees must be fenced to the back of kerb, edge of the adjacent footpath and the radial distance of the TPZ within the nature strip to prevent storage of materials or spoil or vehicular access damaging the trees or compacting soil within the TPZ.

- The TPF must not hinder pedestrian access unless an alternative arrangement has been approved by the relevant authorities.
- 5.6 Where existing footings for buildings or asphalt or concrete pavement exists within the TPZ of a tree this may represent a precedence for development. This would need to be confirmed by the project arborist and may need to be verified with non-destructive root investigation.
- 5.7 Changes to the existing soil grade through lowering or increasing the soil level can potentially impact upon tree condition. Lowering the soil can result in root loss which may cause tree dieback / decline. Increasing the soil levels greater than 200mm depth can prevent gaseous exchange and water infiltration within the root zone that may reduce tree vigour over time.
- Therefore, the existing soil grade within the TPZ of retained trees must be maintained as much as possible. Any changes to the soil grade within the final design plans should be assessed by an arborist to determine any impact.
- 5.8 Appropriate signage stating 'Tree Protection Zone- No access' is to be fixed to the fencing to alert people as to importance of the tree protection zone. Refer to Figure 3 for fencing example.

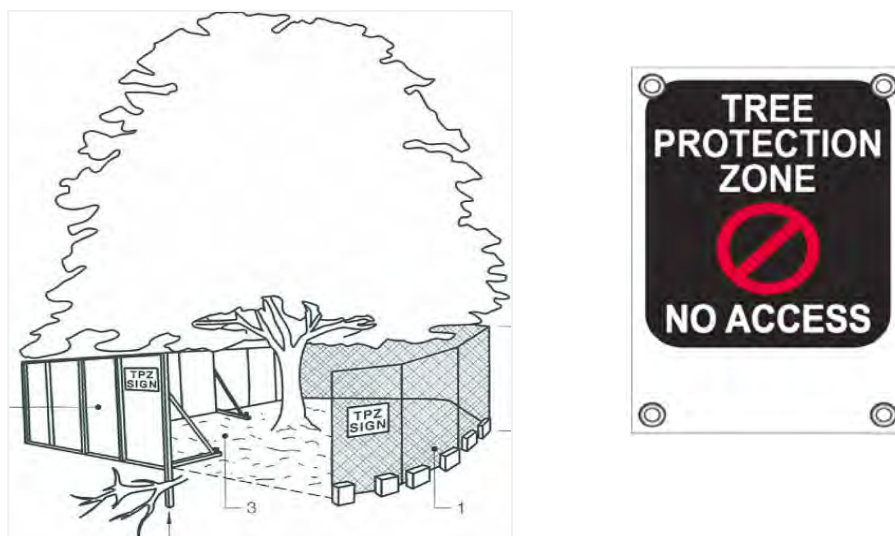


Figure 3. Above left - Example of TPZ fencing. Above right -Example of TPZ signage.

- 5.9 The following activities must be excluded from or controlled within the Notional Root Zone (NRZ) unless otherwise approved by the relevant authority or the Project Arborist.
- Machine excavation (including trenching) for continuous strip footings or installation of underground services or road base.
 - Alteration of soil levels including placement of fill.
 - Storage of wastes or materials (including fuels, oils or chemicals).
 - Preparation of or cleaning of any cement products.
 - Storage and or parking of vehicles or any plant/machinery within NRZ.

- Washing down of equipment.
- Installation of utilities.
- Physical damage of any kind to the tree (including direct attachment of anything into the tree).
- Soil cultivation.

5.10 If protection fencing is unsuitable during construction, a ground protection system in accordance with Section 4.5.3 (Ground protection) of the Australian Standard (AS4970-2025) must be installed.

- Ground protection is required where the NRZ of adjacent neighbour's trees extends into the subject site and must ensure the existing soil levels are preserved unchanged. Buffering must comprise a layer of Geo-textile laid over the native ground and covered with 75 to 100mm of matured wood chip or aggregate with an average particle size of 20-30mm.
- If necessary, a cellular confinement system, must be used to stabilise the buffering fill and allow some construction activities to be completed within the TPZ such as setting up piling rig or lifting in materials and wall panels.
- The extents of Ground Buffering and Tree Protection Fencing must be identified in consultation with design & engineering team and shown on the Tree Protection Plan (TPP).

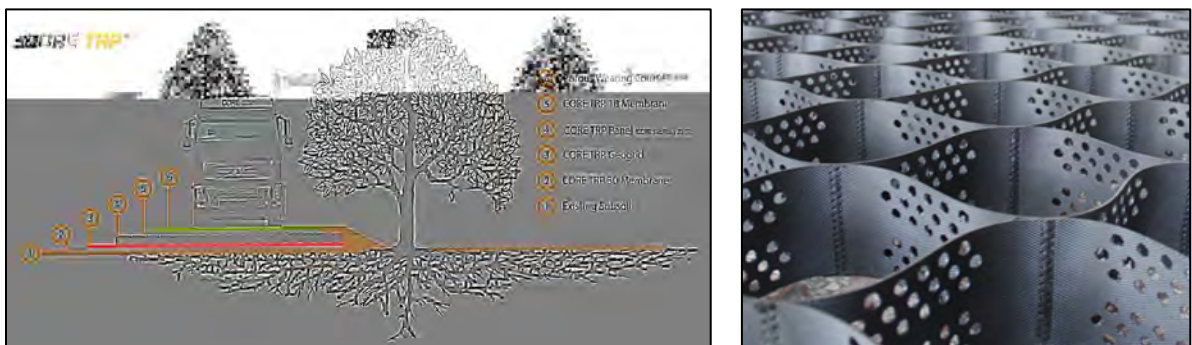


Figure 3: Example of cellular confinement system suitable for temporary ground buffering of TPZs where required

- o Ground protection is required for Trees 2, 3, 4, 5, 6, 7, 8, 9, 10.

5.11 No form of excavation for trenching for installation of underground services is permitted within the nominated NRZ areas for any retained trees without prior consultation with the council and / or site arborist, to avoid severing roots that could be vital to the stability and continued sustainability of the retained trees.

- Trenching for the installation of all underground services must be designed to avoid encroaching the NRZ of retained trees.
- If it is unavoidable that an underground service must pass through a defined NRZ, the service must be installed via directional boring at a minimum depth of 750mm to the top of the bore head.
All entry and exit points for the boring must be located beyond the NRZ radius.
- Lubricants or wastewater from the boring process must not be permitted to enter or contaminate the soils within the NRZ.

- When connecting to or demolishing existing services that are located within the TPZ of a retained tree, root sympathetic excavation methods, such as hand-digging or hydro or pneumatic excavation are to be utilised to minimise root loss and disturbance.
- 5.12 Design should ensure appropriate growing space is allocated for all trees that are to be retained. If infrastructure is constructed too close to any of the retained trees, there is potential for damage to occur resulting from incremental root growth.
Damage to paving from root activity is most likely to occur within 2 m of the trunk base of a tree where the large woody structural root zone may contribute to upheaval. It is recommended that a minimum 2 metre clearance is provided from any tree to any hard paved surface.
- 5.13 Temporary facilities and site sheds may be established on existing hard stand if already present within a TPZ providing there is no physical impacts to the trees and no requirement to penetrate the surface within the TPZ for installation of footings or underground services.
Access / egress to these facilities must not encroach or compact the native soil within the TPZ.
- 5.14 Refer to Appendix 1 for all tree data and NRZ dimensions, Appendix 2 for tree location and NRZ maps,
Appendix 3 for Tree Descriptors and Appendix 4 for TPZ establishment and Maintenance guidelines.

6 Arborist supervision schedule:

- 6.1 A Project Arborist (PA) must be appointed to supervise and guide the following key stages of construction to manage and control construction activities in the vicinity of trees to ensure they remain viable post-construction. The PA must be qualified with minimum AQF level 5 – Arboriculture or equivalent. Council must be notified of the appointed arborist and their qualifications.
- 6.2 The arborist must attend site at time of occupation to be inducted as the project arborist and meet with site managers and supervisors to convey the importance of tree preservation to all relevant parties involved with the site works.
 - Site managers must then ensure all contractors and site workers receive written and verbal instruction about the importance of tree protection within the site.
- 6.3 The project arborist must review any changes to the current design plans such as re-alignment of the buildings, footings, level changes, bore entry / exit pits or underground services pits, to approve or make appropriate recommendations that will avoid or minimise any perceived tree impacts.
- 6.4 The project arborist must attend site once the TPZ fencing is established around retained trees to inspect and sign-off on the compliance of the tree protection as specified.
- 6.5 The project arborist must be present to adjust the TPZ fencing and supervise initial excavation works where they extend into the NRZ of any trees to be retained, including neighbour's and street trees.
- 6.6 The project arborist must attend periodically at 6-8 week intervals, to inspect TPZ fencing and / or ground buffering are being maintained as required.
- 6.7 The project arborist must be contacted if any incident happens that wounds or damages a tree or may have impacted tree condition.
- 6.8 The project arborist must complete a final inspection at completion of works and removal of TPZ fencing to assess whether trees have been successfully retained, that they remain viable and to evaluate trees for any ongoing monitoring purposes.
- 6.9 The project arborist must supervise and guide the following key stages of construction.

Project Arborist Inspection Schedule		
Task	Timing	Liaison
Review any changes to the current design plans, such as re-alignment of the stormwater outlet, to approve or make appropriate recommendations	Design finalisation	Designers / Project Arborist
Review civil drawings to confirm that all underground services and drainage connections avoid the need for any excavation within the NRZ of all retained trees	Design finalisation	Designers / Project Arborist

Project Arborist Inspection Schedule		
Task	Timing	Liaison
Site induction meeting to discuss TMP & implementation.	At site occupation	Site Manager / Project Arborist
Inspect and sign off on installation of TPZ fencing and ground buffering for retained trees or recommend changes as required.	Site Occupation / Pre demolition	Site Manager / Project Arborist
Meet with site manager and pruning contractor to determine extents of canopy pruning required for clearance to building during construction and thereafter.	Prior to commencing construction	Site Manager / Project Arborist / Tree contractor
Adjust TPZ fencing and supervise initial excavation works where they extend into the NRZ of any trees to be retained, including neighbour's and street trees. i.e. - Initial excavation for footings of balcony walls within the NRZs of Trees 2 to 7, - Lowering of path and driveway crossover between Trees 8 and 9. - Initial scrape for porous pavement entrance path between Trees 4 and 5 - Initial scrape for porous pavement treatments in NRZ of Trees 8 and 9 and communal garden in NRZ of Tree 10. - Excavation of fence post holes in SRZ of Trees 36 & 39 - Initial hand weeding / planting of garden beds in NRZs of Tree 2 to 7, between & in front of balconies facing Main South Road	Commencement of / during construction	Site Manager / Project Arborist / Contractors
Meet with landscape crew to specify the small pot size and hand-digging / weeding within the garden beds between balconies facing Main South Road. Supervise initial hand-digging of garden beds (GB01)	Landscaping stage	Site Manager / Project Arborist / Contractors
Periodic inspections at 6 -8 week intervals to evaluate TPZ compliance, maintenance and tree condition	During Construction	Site Manager / Project arborist
At completion of works and during decommissioning of works compounds to ensure trees are not damaged during bump-out.	At completion of works	Site Manager / Project Arborist / Contractor
Final sign off	Post construction	Site Manager / Project arborist

6.10 The Project Arborist must maintain written and photographic records of site inspections based on the Supervision Timetable and make note of any variations or non-compliances that could detrimentally impact on the healthy retention of protected trees.

- An example of a Project Arborist Certification Checklist is provided below.

PROJECT ARBORIST - CERTIFICATION CHECKLIST		
Project Permit No. & Address:		
Commencement Date:		
Project Arborist / Company Name / Qualification:		
Certification Item	Date / Signed	Comments
Review any changes to the current design plans, such as re-alignment of balconies, access paths, underground services, water metre, electrical kiosk, drainage, construction requirements.		
Initial Site meeting to discuss TMP.		
Inspection of installation of TPZ fencing or ground buffering of trees for retained trees prior to tree demolition.		
Meet with site manager and pruning contractor to determine extents of canopy pruning required for clearance to building during construction and thereafter.		
Adjust TPZ fencing and supervision of initial excavation works where they extend into the NRZ of any trees to be retained, including neighbour's and street trees. i.e. - Initial excavation for footings of balconies within the NRZs of Trees 2 to 7, - Lowering of path and driveway crossover between Trees 8 and 9. - Initial scrape for porous pavement entrance path between Trees 4 and 5 Initial scrape for porous pavement treatments in NRZ of Trees 8 and 9 and communal garden in NRZ of Tree 10. - Excavation of fence post holes in SRZ of Trees 36 & 39 - Initial hand weeding / planting of garden beds in TPZs of Tree 2 to 7, between balconies facing Main South Road		
Irrigation of TPZs during summer months		
6-8 week interval site inspection to monitor tree health & compliance & maintenance of tree protection zone fencing.		
Final inspection at completion of landscaping works		
Completion Date		

- 6.11 The project arborist must attend site at completion of works and removal of TPZ fencing to inspect and sign off that the retained trees have not been impacted during the construction process and remain viable.
- 6.12 Any damage to any tree required to be retained must be reported immediately to the project arborist and the relevant authority for assessment and appropriate actions.
- 6.13 Supplementary irrigation may need to be applied during the hotter and drier months of Summer and Autumn as per guidelines provided at Appendix 3.
- 6.14 Trees under third party ownership such as street trees must be duly protected unless the council, tree owner or manager of the tree authorises works to occur to the tree or within the TPZ.

6.15 To summarise, it is a requirement to retain and manage the council street trees and neighbours trees in conjunction with any site redevelopment.
When preparing any design proposal, the following objectives should be considered and incorporated into the design.

- Minimise works that encroach into the recommended TPZ of any tree and avoid encroaching any TPZ by more than 10%.
- Where the NRZ of any neighbouring tree extends into the subject site, appropriate TPF and / or ground buffering must be installed to prevent any excavation, compaction or contamination of the root zones of neighbour's trees.
- Ensure all private open space that extends into the TPZ maintains existing soil levels and allows similar levels of porosity for air and water to permeate into the tree root zone as currently available to the trees.
- Ensure any built form and roof line is able to passively shed the accumulated leaf-drop and debris that will fall from the surrounding Elm trees, especially during Autumn each year.
- Avoid locating or directing any underground services within or through the TPZ of any retained trees.

7 Conclusion

- 7.1 Tree Logic was engaged by Housing Choices Australia, to undertake an arboricultural impact assessment of trees associated with proposed redevelopment works at 2 to 6 Lampard Road, Drouin including adjacent council street and neighbour's trees.
- 7.2 The trees were assessed in full detail and assigned an Arboricultural rating that summarizes the landscape and retention value of the assessed trees. Refer to Preliminary Arboricultural Reports for 2 Lampard Road and 4 to 6 Lampard Road, Drouin. (For full details of tree attributes and arboricultural ratings refer to *TL_Report_13416 - 2 Lampard Road, Drouin - 1/3/24* and *TL_13416_Tree report_4-6 Lampard Rd, Drouin_2025_Addendum - 6/8/25*).
- 7.3 All street trees are under the management of the Baw Baw Shire Council and will require permission for any works to occur within their TPZs and for any canopy pruning works. The maturing English Elm trees 2 to 7 have additional tree controls applicable under Schedule 246 of the Heritage Overlay (HO246).
- 7.4 Tree Protection Zone measures must be implemented prior to commencing any works onsite, including demolition, bulk earthworks, construction, landscaping activity, delivery and storage of materials or placement of site sheds.
Recommendations and guidelines on TPZ establishment and management are provided in Sections 3 and 4 of this management report and Appendix 4
- 7.5 Minor canopy reduction pruning of over-extended branches on the heritage Elm trees may be required to provide reasonable clearance to the upper level balconies of the eastern building during construction and thereafter.
Refer to *Treelogic_Letter of Opinion_2 Lampard Rd, Drouin (6/6/24)* for full details and specifications of acceptable pruning requirements.
- 7.6 The tree protection zones for all trees to be retained within the site must be clearly shown on all design drawings and plans with appropriate notations so that all staff and contractors are aware of the responsibility to protect trees throughout the design, development and delivery of the project.
- 7.7 The tree assessment data is attached in Appendix 1 in tabular form.
The tree location and numbering plans are attached as Appendix 2 with separate colours sorted by Arboricultural rating.
- 7.8 Tree condition can change rapidly because of environmental and other influences. It is recommended that regular inspections are undertaken to identify changes to tree condition on a 3-to-5-year cycle or following local severe or damaging weather events.
- 7.9 No part of this report is to be reproduced unless in full.

I am available to answer any questions arising from this report.

No part of this report is to be reproduced unless in full.

Signed



Bruce Callander Senior Consultant Arborist

Treeologic P/L

T: 03 9870 7700

References and bibliography:

Australian Standard (4970-2009) Protection of Trees on development sites. Standards Australia, Sydney NSW Australia

Clark, J.R. & Matheny, N.P (1998), Trees and Development: A technical guide to preservation of trees during land development. ISA, Champaign, Illinois.

Standards Australia (2007), Australian Standard (4373-2007) - Pruning of Amenity trees, Standards Australia, Homebush, NSW

Dunstan, JA. (2017) International Society of Arboriculture– Tree Risk Assessment Manual (2nd edition). ISA, Champaign, Illinois.

Appendix 1: Tree Assessment Table: 2 LAMPARD ROAD, DROUIN

See following 3 pages.

Key:

DBH = Diameter at breast height, 1.4m up trunk, unless otherwise indicated.

Arb rating = arboricultural rating.

NRZ = Notional Root Zone in radial metres.

SRZ = Structural root zone in radial metres.

ULE = Useful Life Expectancy measured in years.

Definition of the descriptor categories used in the assessment can be seen Appendix 3.

treeid	species	comm_name	age_class	origin_typ	dbh_cm	Height x width	health	structure	arb rating	ule_yrs	comments	overlays	NRZ_rad_m	srz_rad_m	rec_works	Impact	Impact name	% TPZ_enc	Action	Location
1	<i>Eucalyptus leucoxylon</i>	Yellow Gum	Early-mature	Victorian native	52	13 x 14	Fair to Poor	Fair to Poor	Mod.B	11 to 20	Deadwood >50mm, main leader dead, minor dieback.	DCPO1, 52.37	6.2	2.6	Deadwood >50mm	None	Street tree	0	None required	South Main Rd
2	<i>Ulmus procera</i>	English Elm	Maturing	Exotic deciduous	122	25 x 25	Good	Fair	High	21 to 40	Acute forks, over-extended limbs - developing. East, over service wires & west ~7m over subject site, down to 1.5m. K&C 9.3m E, path 2.7m w.	HO246, DCPO1, 52.37	14.6	3.9	Weight reduction, Reduce over-extended branch	NRZ Minor (<10%)	Balcony - 1.06%, Balcony - 2.22%, building1 - 0.76%	4.04	TPF / Ground buffering / Arborist supervision	South Main Rd
3	<i>Ulmus procera</i>	English Elm	Maturing	Exotic deciduous	90	22 x 22	Good	Fair	High	21 to 40	Over-extended limbs - developing. West ~6.5m over subject site, down to 1.0m. K&C 10m E, path 2.5m w.	HO246, DCPO1, 52.38	10.8	3.5	Weight reduction, Reduce over-extended branch	NRZ Minor (<10%)	Balcony - 1.0%, Balcony - 1.84%	2.84	TPF / Ground buffering / Arborist supervision	South Main Rd
4	<i>Ulmus procera</i>	English Elm	Maturing	Exotic deciduous	88	21 x 19	Fair	Fair	Mod.A	21 to 40	Over-extended limbs - developing. West ~4m over subject site, down to 2m. K&C 11.5m E, path 2.5m w.	HO246, DCPO1, 52.39	10.6	3.4	Reduce over-extended branch	NRZ Minor (<10%)	Balcony - 0.2%, Balcony - 1.7%, Paving_middle - 3.16%	5.07	TPF / Ground buffering / Arborist supervision	South Main Rd
5	<i>Ulmus procera</i>	English Elm	Maturing	Exotic deciduous	84	23 x 19	Fair	Fair	Mod.A	21 to 40	Over-extended limbs - developing. East & west ~5m over subject site, down to 3m. K&C 10.4m E, path 2.7m N & w. double telstra pits <1m west - roots cracking.	HO246, DCPO1, 52.40	10.1	3.4	Clearance pruning building(s)	NRZ Minor (<10%)	Balcony - 1.14%, Balcony - 0.01%, Paving_middle - 2.39%	3.54	TPF / Ground buffering / Arborist supervision	South Main Rd
6	<i>Ulmus procera</i>	English Elm	Maturing	Exotic deciduous	85	20 x 21	Fair	Fair	Mod.A	21 to 40	Over-extended limbs - developing. & west ~3.5m over subject site, down to 1.2m. K&C 8m E, path 1m Sth & 3.2m w.	HO246, DCPO1, 52.41	10.2	3.4	Reduce over-extended branch	NRZ Minor (<10%)	Balcony - 0.33%, Balcony - 1.3%	1.63	TPF / Ground buffering / Arborist supervision	South Main Rd
7	<i>Ulmus procera</i>	English Elm	Maturing	Exotic deciduous	76	21 x 21	Fair	Fair	Mod.A	21 to 40	Over-extended limbs - developing. Nth & west ~4m over subject site, down to 3m. K&C 3.2m E, path 4m w. Confined growing area to Nth	HO246, DCPO1, 52.42	9.1	3.2		NRZ Minor (<10%)	Balcony - 0.23%	0.23	TPF / Ground buffering / Arborist supervision	South Main Rd
8	<i>Corymbia ficifolia</i>	Red-flowering Gum	Maturing	Australian native	71	9 x 10	Fair	Fair to Poor	Mod.B	11 to 20	Incipient decay, root damage, trunk wounds. 35x200 trunk wound on west extends to main fork from dead/damaged root. ~1m over subject site, down to 2.5m. K&C 1.3m Nth, path 1.5m Sth.	DCPO1, 52.37	8.5	3.1	Monitor trunk decay	NRZ Moderate (10-20%)	Battered D'way - 3.63%, Letterboxes - 0.84%, driveway_crossover - 8.23%, paving_north - 4.73%	17.34	TPF / Ground buffering / Arborist supervision	Lampard Rd
9	<i>Photinia serratifolia</i>	Chinese Hawthorn	Maturing	Exotic evergreen	45 @0.8m	6 x 9	Fair	Fair to Poor	Mod.B	11 to 20	Multi-stemmed. ~1m over subject site, down to 2.5m. K&C 1.3m Nth, path 1.5m Sth.	DCPO1, 52.37	5.4	2.5		SRZ	Battered D'way - 5.17%, MSB-SCF - 0.13%, driveway_crossover - 6.5%	11.77	TPF / Ground buffering / Arborist supervision	Lampard Rd
10	<i>Syzygium paniculatum</i>	Magenta Cherry	Maturing	Australian native	65 @0.8m	10 x 9	Fair	Fair to Poor	Mod.B	11 to 20	Co-dominant stems w included bark. ~1m over subject site, down to 2.5m. K&C 1.3m Nth, path 1.5m Sth.	DCPO1, 52.37	7.8	2.8		NRZ Minor (<10%)	Communal garden - 9.82%, Water metres - 0.04%	9.86	TPF / Ground buffering / Arborist supervision	Lampard Rd
11	<i>Corymbia ficifolia</i>	Red-flowering Gum	Maturing	Australian native	91	11 x 14	Good	Fair	Mod.A	11 to 20	Root damage. ~1.5m over PP down to 3.5m. K&C 1.0m Nth - lifting, path 1.0m Sth repaired.	DCPO1, 52.37	10.9	3.5		NRZ Minor (<10%)	Communal garden - 0.11%	0.11	TPF / Ground buffering / Arborist supervision	Lampard Rd
12	<i>Rosa sp.</i>	Rose	Early-mature	Exotic deciduous	1,1,1	3 x 2	Fair	Fair to Poor	Low	6 to 10	Multi-stemmed. Rose bush	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
13	<i>Prunus cerasifera</i>	Cherry-plum	Early-mature	Exotic deciduous	4,3,2,2,2	4 x 2	Fair	Poor	Low	6 to 10	Epicormic crown, lopped, multi-stemmed.	DCPO1	2	1.7		X	To be removed	NA	To be removed	6 Lampard
14	<i>Prunus cerasifera</i>	Cherry-plum	Early-mature	Exotic deciduous	4,3,2,2,2	3 x 1	Fair	Fair to Poor	Low	6 to 10	Epicormic crown, lopped, multi-stemmed.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
15	<i>Platanus orientalis</i>	Oriental Plane	Young	Exotic deciduous	8	4 x 2	Fair	Fair to Poor	Low	11 to 20	Weed infested. Cotoneaster & Pittosporum growing at base. Wrong trees in wrong location. 6006.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
16	<i>Platycladus orientalis</i>	Bookleaf Cypress	Early-mature	Exotic conifer	2,1,1,1,1	2 x 1	Fair	Fair	Mod.C	11 to 20	Shrub.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
17	<i>Ficus microcarpa var. hillii</i>	Hill's Weeping Fig	Early-mature	Exotic evergreen	13	3 x 3	Good	Fair	Mod.C	11 to 20	Wrong tree-wrong location.	DCPO1	2	1.6		X	To be removed	NA	To be removed	6 Lampard
18	<i>Ficus microcarpa var. hillii</i>	Hill's Weeping Fig	Early-mature	Exotic evergreen	13	3 x 2	Good	Fair	Mod.C	11 to 20	Wrong tree-wrong location.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
19	<i>Platycladus orientalis</i>	Bookleaf Cypress	Early-mature	Exotic conifer	2,1,1,1,1	3 x 1	Fair	Fair	Mod.C	11 to 20	Shrub.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard

treeid	species	comm_name	age_class	origin_typ	dbh_cm	Height x width	health	structure	arb rating	ule_yrs	comments	overlays	NRZ_rad_m	srz_rad_m	rec_works	Impact	Impact name	% TPZ_enc	Action	Location
20	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Early-mature	Victorian native	12	4 x 4	Fair	Fair to Poor	Low	1 to 5	Woody weed sp Wrong tree-wrong location.	DCPO1	2	1.6		X	To be removed	NA	To be removed	6 Lampard
21	<i>Omalanthus nutans</i>	Bleeding Heart	Early-mature	Australian native	7	3 x 1	Fair	Fair to Poor	Low	1 to 5	Self-sown ephemeral small tree / wrong tree-wrong location.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
22	<i>Syzygium australe</i>	Scrub Cherry	Early-mature	Australian native	7,7,5	3 x 3	Fair	Fair to Poor	Mod.C	11 to 20	Weed infested. Hedged, Cotoneaster out-competing to east.	DCPO1	2	1.6		X	To be removed	NA	To be removed	6 Lampard
23	<i>Syzygium australe</i>	Scrub Cherry	Early-mature	Australian native	7,6	3 x 3	Fair	Fair to Poor	Mod.C	11 to 20	Hedged shrub.	DCPO1	2	1.6		X	To be removed	NA	To be removed	6 Lampard
24	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Semi-mature	Victorian native	4,3,3,2	3 x 3	Fair	Fair to Poor	Low	1 to 5	Woody weed sp 6cm Native Bleeding Heart growing from base-short ULE, Solanum mauritanum.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
25	<i>Persea americana</i>	Avocado	Semi-mature	Exotic evergreen	3,2	3 x 2	Fair	Poor	Low	1 to 5	Lopped. At 30cm.	DCPO1	2	1.5		X	To be removed	NA	To be removed	4 Lampard
26	<i>Citrus Xlimon</i>	Lemon	Maturing	Exotic evergreen	17,14,9	4 x 5	Fair to Poor	Fair to Poor	Low	6 to 10	Canker/galls, incipient decay, wounds.	DCPO1	2.6	2.1		X	To be removed	NA	To be removed	6 Lampard
27	<i>Eucalyptus botryoides</i>	Southern Mahogany	Early-mature	Victorian native	23,20,10	11 x 7	Fair	Fair to Poor	Mod.C	6 to 10	Multi-stemmed, stump re-sprout. Decaying stump at base.	DCPO1, 52.37	3.8	2.3		X	To be removed	NA	To be removed	6 Lampard
28	<i>Eucalyptus botryoides</i>	Southern Mahogany	Early-mature	Victorian native	30	8 x 6	Fair	Fair to Poor	Mod.C	6 to 10	Lopped, past limb failure. Wrong tree-wrong location.	DCPO1, 52.37	3.6	2		X	To be removed	NA	To be removed	6 Lampard
29	<i>Grevillea robusta</i>	Silky Oak	Early-mature	Australian native	13	4 x 4	Fair	Fair	Mod.C	11 to 20	Trunk wounds. With lots of exudate. 1m from boundary retaining wall, now-wrong tree-wrong location	DCPO1	2	1.6		X	To be removed	NA	To be removed	6 Lampard
30	<i>Ficus carica</i>	Common Fig	Over-mature	Exotic deciduous	40,40	4 x 6	Fair	Poor	Low	1 to 5	Epicormic shoots, lopped, trunk decay, weed infested. Blackberry, Solanum mauritanum.	DCPO1	6.8	2.9		X	To be removed	NA	To be removed	6 Lampard
31	<i>Omalanthus nutans</i>	Bleeding Heart	Maturing	Australian native	14	3 x 3	Fair	Fair to Poor	Low	1 to 5	Self-sown-short ULE.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
32	<i>Prunus cerasifera</i>	Cherry-plum	Early-mature	Exotic deciduous	5,4,3,3,2	5 x 3	Fair	Fair to Poor	Low	1 to 5	Multi-stemmed, woody weed sp	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
33	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Early-mature	Victorian native	23	5 x 4	Fair	Poor	Low	1 to 5	Multi-stemmed, woody weed sp Lopped at 1m, <0.5m from retaining wall.	DCPO1	2.8	1.8		X	To be removed	NA	To be removed	6 Lampard
34	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Early-mature	Victorian native	15,11	5 x 4	Fair	Poor	Low	1 to 5	Multi-stemmed, woody weed sp., partly suppressed - crown bias nth. Lopped at 1m, <0.5m from retaining wall.	DCPO1	2.2	1.8		X	To be removed	NA	To be removed	6 Lampard
35	<i>Prunus cerasifera</i>	Cherry-plum	Early-mature	Exotic deciduous	12,7,5	5 x 5	Fair	Fair to Poor	Low	1 to 5	Multi-stemmed, woody weed sp., partly suppressed - crown bias se. Lopped at 1.6m.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard
36	<i>Leptospermum sp.</i>	Tea-tree	Early-mature	Australian native	14,11,11	5 x 3	Poor	Poor	Low	<1	In irreversible decline, multi-stemmed, neighbour's tree. Partly lopped at 1.8m.	DCPO1	2.5	1.7		NRZ Minor (<10%)	Fence - 0.68%,Rain tank - 3.48%	4.2	Arborist supervise fence post in SRZ	8 Lampard
37	<i>Omalanthus nutans</i>	Bleeding Heart	Maturing	Australian native	10	3 x 2	Fair	Fair	Low	1 to 5	Neighbour's tree, trunk wounds. From rubbing on fence. Self-sown-short ULE.	DCPO1	2	1.5		NRZ Minor (<10%)	Fence - 0.47%,Rain tank - 1.71%	2.2	None required	8 Lampard
38	<i>Ligustrum lucidum</i>	Shining Privet	Early-mature	Exotic evergreen	14,13,10	7 x 6	Fair	Fair to Poor	Low	6 to 10	Neighbour's tree, woody weed sp Self-sown, large surface roots extending towards house on subject site.	DCPO1	2.6	1.8		NRZ Minor (<10%)	Fence - 0.01%,Rain tank - 4.47%	4.5	None required	8 Lampard
39	<i>Coprosma repens</i>	Mirror Bush	Maturing	Exotic evergreen	13,12	4 x 4	Fair	Fair to Poor	Low	6 to 10	Neighbour's tree, woody weed sp Self-sown.	DCPO1	2.1	1.8		NRZ Minor (<10%)	Fence - 1.25%	1.25	Arborist supervise fence post in SRZ	8 Lampard
40	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Early-mature	Victorian native	10	4 x 4	Fair	Fair to Poor	Low	6 to 10	Neighbour's tree, woody weed sp Self-sown.	DCPO1	2	1.5		None	Neighbour's tree	0	None required	8 Lampard
41	<i>Omalanthus nutans</i>	Bleeding Heart	Early-mature	Australian native	9	3 x 3	Fair	Fair	Mod.C	6 to 10	Self-sown-short ULE.	DCPO1	2	1.5		X	To be removed	NA	To be removed	4 Lampard
42	<i>Vitis vinifera</i>	Ornamental Grape Vine	Early-mature	Exotic deciduous	6,4,3,2,2	3 x 3	Fair	Fair to Poor	Low	6 to 10	Sprawling - Ornamental Grapevine growing from below oil tank.	DCPO1	2	1.5		X	To be removed	NA	To be removed	4 Lampard
43	<i>Prunus cerasifera</i>	Cherry-plum	Early-mature	Exotic deciduous	17	5 x 5	Fair	Fair to Poor	Low	6 to 10	Weed infested, woody weed sp Blackberry.	DCPO1	2	1.7		X	To be removed	NA	To be removed	4 Lampard
44	<i>Acca sellowiana</i>	Feijoa	Early-mature	Exotic evergreen	7,5,5,4	3 x 4	Fair	Fair to Poor	Low	6 to 10	Weed infested. Overgrown by Blackberry.	DCPO1	2	1.5		X	To be removed	NA	To be removed	4 Lampard

treeid	species	comm_name	age_class	origin_typ	dbh_cm	Height x width	health	structure	arb rating	ule_yrs	comments	overlays	NRZ_rad_m	srz_rad_m	rec_works	Impact	Impact name	% TPZ_enc	Action	Location
45	<i>Syzygium australe</i>	Scrub Cherry	Early-mature	Australian native	5,4,3	3 x 3	Fair	Fair to Poor	Low	6 to 10	Neighbour's tree.	DCPO1	2	1.5		None	Neighbour's tree	0	None required	5 Main South Rd
46	<i>Camellia japonica</i>	Camellia	Early-mature	Exotic evergreen	14	3 x 3	Fair	Fair to Poor	Low	6 to 10	Neighbour's tree.	DCPO1	2	1.6		None	Neighbour's tree	0	None required	5 Main South Rd
47	<i>Dicksonia antarctica</i>	Soft Tree Fern	Early-mature	Victorian native	20	3 x 3	Fair to Poor	Fair	Mod.C	11 to 20	Neighbour's tree. Frond margin scorching.	DCPO1	2.4	1.8		None	Neighbour's tree	0	None required	5 Main South Rd
48	<i>Ligustrum lucidum</i>	Shining Privet	Early-mature	Exotic evergreen	9	3 x 3	Fair	Fair to Poor	Low	6 to 10	Neighbour's tree, woody weed sp	DCPO1	2	1.5		None	Neighbour's tree	0	None required	5 Main South Rd
50	<i>Ulmus procera</i>	English Elm	Young	Exotic deciduous	6	3 x 2	Fair	Fair to Poor	Low	6 to 10	Self-sown sapling or sucker.	DCPO1	2	1.5		X	To be removed	NA	To be removed	4 Lampard
49	<i>Callistemon citrinus</i>	Crimson Bottlebrush	Semi-mature	Victorian native	8	3 x 2	Fair	Fair	Mod.C	11 to 20	Neighbour's tree.	DCPO1	2	1.5		None	Neighbour's tree	0	None required	5 Main South Rd
52	<i>Syzygium paniculatum</i>	Magenta Cherry	Maturing	Australian native	43	5 x 5	Good	Fair to Poor	Mod.C	11 to 20	Lopped, neighbour's tree. At ~3-4m.	DCPO1	5.2	2.5		None	Neighbour's tree	0	None required	5 Main South Rd
51	<i>Omalanthus nutans</i>	Bleeding Heart	Maturing	Australian native	11	3 x 3	Fair	Fair	Low	6 to 10	Self-sown-short ULE.	DCPO1	2	1.5		X	To be removed	NA	To be removed	4 Lampard
G1	<i>Pittosporum tenuifolium</i> 'Aureum'	Kohuhu	Early-mature	Exotic evergreen	9,7,6,5,5	3 x 2	Fair	Fair to Poor	Low	6 to 10	Group of 6 small hedge trees. Basal wounds, epicormic crown, lopped. Hedged-6007.	DCPO1	2	1.6		X	To be removed	NA	To be removed	6 Lampard
G2	<i>Tecomaria capensis</i>	Cape Honeysuckle	Early-mature	Exotic evergreen	2	3 x 1	Fair	Fair to Poor	Low	6 to 10	Multi-stemmed. Cane clipped as screen hedge along fenceline.	DCPO1	2	1.5		X	To be removed	NA	To be removed	6 Lampard

Appendix 2A: Tree location & TPZ map: 2 LAMPARD ROAD, DROUIN.

Refer to following page.

LEGEND

tree data
all_trees status

-  Protect
-  Remove
-  Tree Protection Fencing
-  Ground Buffering
- Tree groups
-  Low
-  easements
-  roads

Notional Root Zone
Structural Root Zone

APPENDIX 2

TREE PROTECTION PLAN
Refer to Arboricultural Impact
Assessment report

PROJECT

2 to 6 LAMPARD ROAD,
DROUIN

TL REF.
13416

MAP NO.
1/1

CLIENT
Housing Choices
Australia

DATE
2026-06-02

DATA SOURCES

Ground Floor GA Plan. Prepared by
Lian Architects. Proj: HC02. Dwg: A004
Rev T1. Date: 24/3/2026

TREE LOCATION DISCLAIMER

Tree locations are derived from Feature
Survey Plan

COORDINATE REFERENCE SYSTEM
EPSG:28355 | GDA 94 MGA Zone 55



TREELOGIC PTY LTD
ABN: 95 080 021 610
TEL: 1300 656 926

4 / 21 Eugene Tce
Ringwood, VIC
Australia 3134



Project Arborist must
* Meet with site manager to be
inducted as the Project
Arborist and convey the
importance of implementing
the Tree Protection Plan (TPP)
to ensure no damage occurs to
Heritage Trees 2-7 or any
other trees required to be
retained.
* The site manager must then
ensure all staff & contractors
engaged on the build are also
informed about the need to
comply with the TPP.
* Meet with pruning contractor
& site manager about canopy
pruning requirements.
* Supervise excavation of
balcony footprints where they
extend into NRZ of Trees 2 to
7. Refer to TPMP-V3 (17/4/26)
• Supervise the scraping of the
soil surface for permeable
pavements extending through
the NRZs of Elm Trees 4 & 5
as well as Tree 8.
• Supervise excavation for the
new driveway crossover within
the NRZ of Trees 8 & 9.
• Supervise excavation of
fence post in SRZ of trees 36 -
39



Tree Protection Zone signage
must be attached to each face of
any tree protection fencing

Appendix 2B: Design Review and TPZ impacts: 2 LAMPARD ROAD, DROUIN.

Refer to following page.

LEGEND

tree data
all_trees status

P Protect

Protection Measures

Arborist Supervision

Ground Protection

Tree Protection Fencing

Tree groups

Low

easements

roads

IMPACTS 260602

NRZ Minor (<10%)

NRZ Moderate (10–20%)

SRZ impacted

Notional Root Zone
Structural Root Zone

APPENDIX 2

TREE PROTECTION PLAN

Refer to Arboricultural Impact
Assessment report& Tree
Protection Specifications

PROJECT

2 to 6 LAMPARD ROAD,
DROUIN

TL REF.

13416

MAP NO.

1/1

CLIENT

Housing Choices
Australia

DATE

2026-06-11

DATA SOURCES

Ground Floor GA Plan. Prepared by
Lian Architects. Proj: HC02. Dwg:
TP100 Rev P. Date: 25/05/2026

TREE LOCATION DISCLAIMER

Tree locations are derived from Feature
Survey Plan

COORDINATE REFERENCE SYSTEM

EPSG:28355 | GDA 94 MGA Zone 55



TREELOGIC PTY LTD

ABN: 95 080 021 610
TEL: 1300 656 926

4 / 21 Eugene Tce
Ringwood, VIC
Australia 3134



Project Arborist must

- * Meet with site manager to be inducted as the Project Arborist and convey the importance of implementing the Tree Protection Plan (TPP) to ensure no damage occurs to Heritage Trees 2-7 or any other trees required to be retained.
- * The site manager must then ensure all staff & contractors engaged on the build are also informed about the need to comply with the TPP.
- * Meet with pruning contractor & site manager about canopy pruning requirements.
- * Supervise excavation of balcony footprints where they extend into NRZ of Trees 2 to 7. Refer to TPMP-V3 (17/4/26)
- Supervise the scraping of the soil surface for permeable pavements extending through the NRZs of Elm Trees 4 & 5 as well as Tree 8.
- Supervise excavation for the new driveway crossover within the NRZ of Trees 8 & 9.
- Supervise excavation of fence post in SRZ of trees 36 - 39
- Meet with Landscaper to confirm hand weeding & planting of 140mm pot size only.



Tree Protection Zone signage must be attached to each face of any tree protection fencing

LEGEND

tree data
all_trees status

- P** Protect
- X** Remove
- Tree groups
- Low**
- easements
- roads
- Canopy encroachment %

Notional Root Zone
Structural Root Zone

APPENDIX 2

TREE PROTECTION PLAN
Refer to Arboricultural Impact
Assessment report& Tree
Protection Specifications

PROJECT

2 to 6 LAMPARD ROAD,
DROUIN

TL REF.
13416

MAP NO.
1 / 1

CLIENT
Housing Choices
Australia

DATE
2026-06-03

DATA SOURCES

Ground Floor GA Plan. Prepared by
Lian Architects. Proj: HC02. Dwg:
TP100 Rev P. Date: 25/05/2026

TREE LOCATION DISCLAIMER

Tree locations are derived from Feature
Survey Plan

COORDINATE REFERENCE SYSTEM
EPSG:28355 | GDA 94 MGA Zone 55



TREELOGIC PTY LTD
ABN: 95 080 021 610
TEL: 1300 656 926

4 / 21 Eugene Tce
Ringwood, VIC
Australia 3134



Project Arborist must
* Meet with the pruning contractor & site manager about canopy pruning requirements.
* All pruning must be completed by suitably and experienced & qualified arborist (minimum AQF Cert 3- Arboriculture) complying with Australian Standard - Pruning of Amenity trees (AS4373-2007).
* The final location of appropriate target pruning will be determined by the pruning arborist based on their best judgement of branching and weight distribution once they have accessed the tree for pruning purposes.
* Pruning must be completed in a controlled manner to avoid damaging any trees that are required to be retained as well as property (fences) or impeding the movement of traffic on Main South Road or Lampard Road.
* Climbing spikes must not be used to climb a tree for pruning purposes only. specify the extent of pruning



Tree Protection Zone signage must be attached to each face of any tree protection fencing



LEGEND

DRAWING SYMBOLS

- TITLE BOUNDARY
- EXISTING TREES TO BE REMOVED
- EXISTING TREES TO BE RETAINED
- PROPOSED EVERGREEN TREE
- STRUCTURAL ROOT ZONE
- TREE PROTECTION ZONE
- TREE REMOVE

SOFT LANDSCAPE

- L01 LAWN
- GB01 TYPICAL GARDEN
- GB02 TOPPINGS MULCH GARDEN
- HABITAT LOG
- LANDSCAPE BOULDERS
- SAWN STONE BASIN

PAVEMENT TYPES

- PV01 BRICK PAVER TYPE 1
- PV02 BRICK PAVER TYPE 2
- PV03 POD & PAVER - BY ARCHITECT
- PV04 EXPOSED AGGREGATE CONCRETE
- PV05 CEMENT STABILISES TOPPINGS
- PV06 ASPHALT - REFER CIVIL
- PV07 PERMEABLE PAVING

EDGES

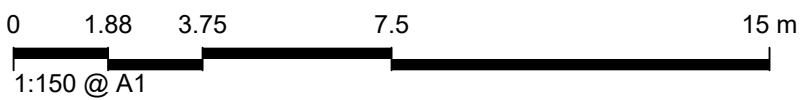
- ED01 STEEL EDGE

SERVICES

- SV01 BRICKSLOT TRENCH GRATE
- SV02 TRENCH GRATE

FIXTURES

- FX01 PICNIC TABLE & STOOL SETTING
- FX02 PICNIC TABLE SETTING
- FX03 DDA PICNIC TABLE SETTING
- FX04 PIATTO CHAIR
- FX05 SMALL TABLE
- FX06 WICKING BED
- FX07 BBQ
- FX08 BIKE HOOP
- FX09 PLATFROM BENCH
- FX10 CUSTOM TIMBER BENCH
- FX11 BOLLARD LIGHT
- FX12 OFF FORM CONCRETE SEAT



1:150 @ A1



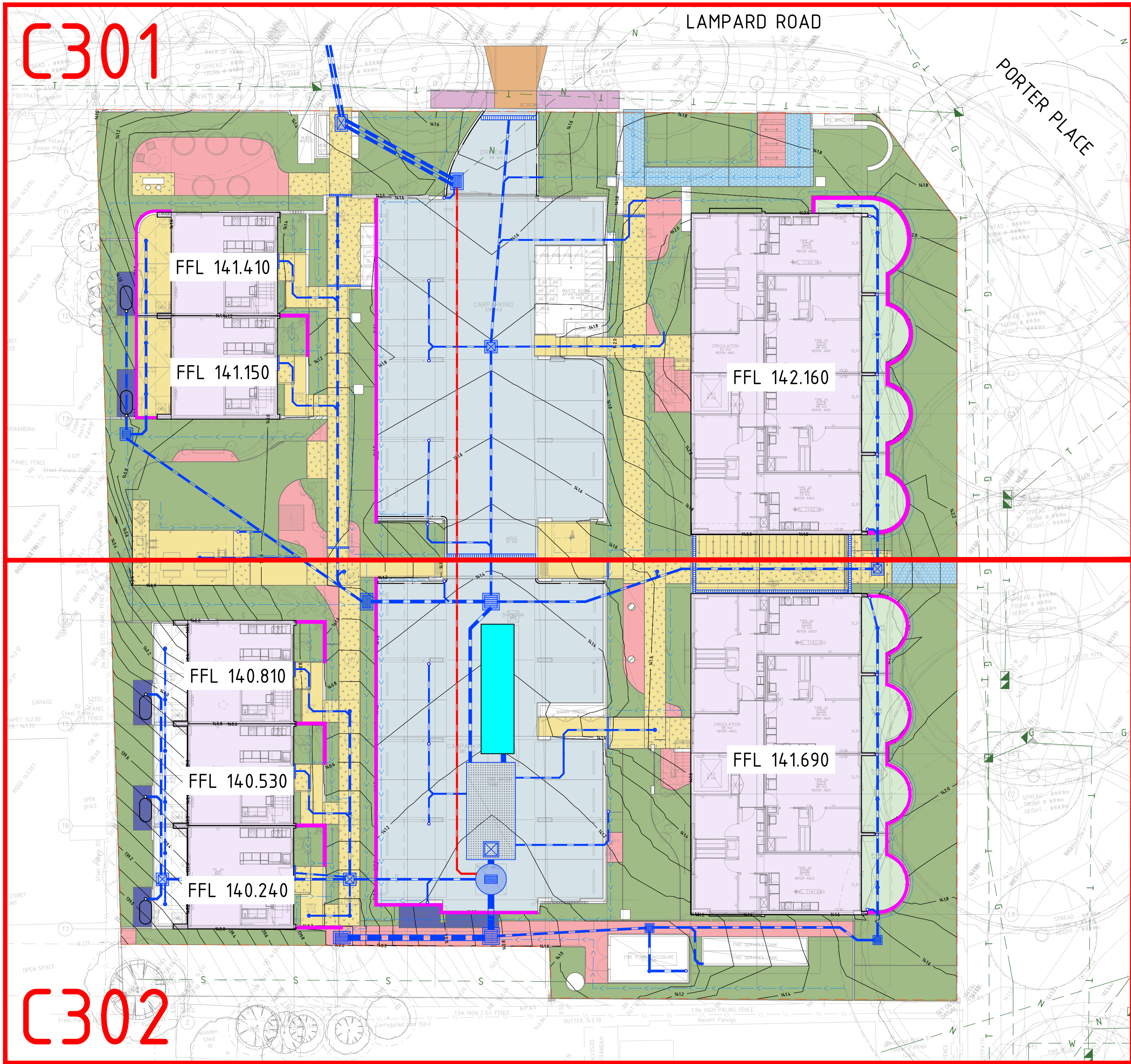
MM @ INTENDED PRINT SCALE

Emergent
Studios

REV	DATE	DR	CH	COMMENT
G	15/06/2026	MH	NS	TOWN PLANNING
F	3/06/2026	AR	MH	TOWN PLANNING
E	26/05/2026	AR	MH	TOWN PLANNING
DRAFT	9/04/2026	AR	NS	DRAFT FOR REVIEW
D	1/04/2026	AR	MH	TOWN PLANNING

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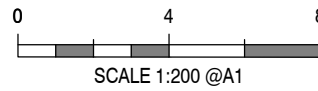
PROJECT NAME HCA LAMPARD ROAD DROUIN	DRAWN BY MH	PROJECT NUMBER 25009
CLIENT HOUSING CHOICE AUSTRALIA	CHECKED BY NS	STAGE TP
ADDRESS 2-6 LAMPARD ROAD, DROUIN, VIC 3818	SCALE 1:150 @ A1	
DRAWING TITLE LANDSCAPE PLAN	SHEET 4 of 9	G



LEGEND

	PROPERTY BOUNDARY		BUILDING REFER STRUCTURAL DWGS
	PROPOSED STORMWATER PIT		CARPARK PAVEMENT REFER DWG C333
	PROPOSED GRATED DRAIN		ABOVEGROUND SERVICES PAVEMENT REFER DWG C333
	PROPOSED STORMWATER PIPE (Ø100 U.N.O.)		PEDESTRIAN PAVEMENT REFER DWG C333
	PROPOSED SUBSOIL DRAIN (Ø100 U.N.O.)		PEDESTRIAN WITH BRICK PAVER REFER LANDSCAPE ARCHITECT
	MINOR CONTOUR		PEDESTRIAN PAVEMENT WITH POD AND PAVER REFER LANDSCAPE ARCHITECT FOR POD AND PAVER DETAILS
	MAJOR CONTOUR		CEMENT STABILISED TOPPINGS REFER LANDSCAPE ARCHITECT
	FINISHED SURFACE LEVEL		PERMEABLE PAVEMENT REFER LANDSCAPE ARCHITECT
	EXISTING SURFACE LEVEL		CONCRETE CROSSOVER REFER IDM SD 240
	INVERT LEVEL		EXTERNAL FOOTPATH REFER IDM SD 205
	Ø100 GRATED OUTLET		LANDSCAPING REFER TO LANDSCAPE DRAWINGS
	DP - PROPOSED DOWNPIPE. REFER HYDRAULICS DWGS.		
	PROPOSED RETAINING WALL. REFER STRUCTURAL DWGS		
	PROPOSED BUILDING OUTLINE		
	PROPOSED BARRIER KERB		
	TREE PROTECTION ZONE. REFER ARBORIST REPORT		
	EXISTING STORMWATER		
	EXISTING WATER		
	EXISTING SEWER		
	EXISTING GAS		
	EXISTING TELECOMMUNICATIONS		
	EXISTING ELECTRICAL		
	EXISTING ELECTRICAL OVERHEAD		

WARNING
THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING SERVICES ON AND EXTERIOR TO THE SITE INCLUDING WATER MAINS, SEWER MAINS, GAS MAINS, TELECOMMUNICATIONS CABLES, ELECTRICAL CABLES, AND STORMWATER PIPES PRIOR TO WORKS COMMENCING. SHOULD ANY CONFLICTS OCCUR, EDGE CONSULTING ENGINEERS ARE TO BE NOTIFIED IMMEDIATELY. ANY DAMAGE TO EXISTING SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.



Rev	Date	Description	By	CHK
P108	21.05.26	ISSUE FOR TENDER	GM	GM
P107	01.04.26	ISSUE FOR TENDER	GM	GM
P106	27.03.26	ISSUE FOR TENDER	GM	GM
P105	20.03.26	ISSUE FOR TENDER	GM	GM
P104	19.03.26	ISSUE FOR TENDER	GM	GM
P103	27.02.26	ISSUE FOR COORDINATION	GM	GM
P102	18.12.25	ISSUE FOR COORDINATION	GM	GM
P101	14.11.25	ISSUE FOR COORDINATION	GM	GM

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DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK!

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Project Name	HCA DROUIN 2-6 LAMPARD ROAD DROUIN, VIC 3818
Client	HOUSING CHOICES AUSTRALIA
Designed	GM
Drawn	GM
Checked	ND

Drawing Title	GROUND FLOOR OVERALL DRAINAGE PLAN
Project No.	AU250718
Drawing No.	C300
Revision	P08

NOTES

- CONTRACTOR TO READ DRAWING IN CONJUNCTION WITH ARCHITECT'S, STRUCTURAL AND HYDRAULIC ENGINEER'S PLANS.
- CONTRACTOR TO CONFIRM LOCATION OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY ENGINEER IF ANY DISCREPANCY OR POTENTIAL CLASH IS NOTED. ALL EXISTING SERVICES TO BE RETAINED UNO. ALL LIDS WITHIN EXTENT OF WORKS TO BE MODIFIED.
- REFER HYDRAULIC ENGINEER FOR ALL ROOF WATER/BALCONY OUTLET/ SUSPENDED DRAINAGE CONNECTIONS. CONTRACTOR TO ALLOW FOR ALL PROPRIETARY FITTINGS/CONNECTIONS TO PROPOSED INGROUND STORMWATER SYSTEM.
- BUILDER TO PROVIDE SUBSOIL DRAINAGE WITHIN LANDSCAPED AREAS AND BEHIND ALL RETAINING STRUCTURES, CONNECTED TO CLOSEST GROUND LEVEL DRAINAGE. SHOWN INDICATIVELY.
- BUILDER TO CONFIRM ALL SURFACE & INVERT LEVELS ON SITE PRIOR TO CONSTRUCTION.
- ARCHITECT AND ODA CONSULTANT TO REVIEW PEDESTRIAN FOOTPATH GRADES AND ACCESSIBILITY.
- DESIGN SUBJECT TO CHANGE PENDING COUNCIL APPROVAL.

Photos

Tree ID: 1. (South Main Rd). *Eucalyptus leucoxylon* (Yellow Gum), Early-mature Victorian native.
DBH: 52cm. Arb. Rating: Mod.B. Deadwood >50mm, main leader dead, minor dieback.. TPZ (rad. m): 6.2. SRZ (rad. m): 2.6. Impact: None - 0%. Action: **None required**



Tree ID: 2. (South Main Rd). *Ulmus procera* (English Elm), Maturing Exotic deciduous.
DBH: 122cm. Arb. Rating: High. Acute forks, over-extended limbs - developing. East, over service wires & west ~7m over subject site, down to 1.5m. K&C 9.3m E, path 2.7m w.. TPZ (rad. m): 14.6. SRZ (rad. m): 3.9. Impact: TPZ - 6.3%. Action: **TPF / Ground buffering / Arborist supervision**



Tree ID: 3. (South Main Rd). *Ulmus procera* (English Elm), Maturing Exotic deciduous.
DBH: 90cm. Arb. Rating: High. Over-extended limbs - developing. West ~6.5m over subject site, down to 1.0m. K&C 10m E, path 2.5m w.. TPZ (rad. m): 10.8. SRZ (rad. m): 3.5. Impact: TPZ - 3.51%. Action: **TPF / Ground buffering / Arborist supervision**



Tree ID: 4. (South Main Rd). *Ulmus procera* (English Elm), Maturing Exotic deciduous.
DBH: 88cm. Arb. Rating: Mod.A. Over-extended limbs - developing. West ~4m over subject site, down to 2m. K&C 11.5m E, path 2.5m w.. TPZ (rad. m): 10.6. SRZ (rad. m): 3.4. Impact: TPZ - 4.67%. Action: **TPF / Ground buffering / Arborist supervision**



Tree ID: 5. (South Main Rd). *Ulmus procera* (English Elm), Maturing Exotic deciduous.

DBH: 84cm. Arb. Rating: Mod.A. Over-extended limbs - developing. East & west ~5m over subject site, down to 3m. K&C 10.4m E, path 2.7m N & w. double telstra pits <1m west - roots cracking.. TPZ (rad. m): 10.1. SRZ (rad. m): 3.4. Impact: TPZ - 4.11%. Action: [TPF / Ground buffering / Arborist supervision](#)



Tree ID: 6. (South Main Rd). *Ulmus procera* (English Elm), Maturing Exotic deciduous.

DBH: 85cm. Arb. Rating: Mod.A. Over-extended limbs - developing. & west ~3.5m over subject site, down to 1.2m. K&C 8m E, path 1m Sth & 3.2m w.. TPZ (rad. m): 10.2. SRZ (rad. m): 3.4. Impact: TPZ - 1.55%. Action: [TPF / Ground buffering / Arborist supervision](#)



Tree ID: 7. (South Main Rd). *Ulmus procera* (English Elm), Maturing Exotic deciduous.

DBH: 76cm. Arb. Rating: Mod.A. Over-extended limbs - developing. Nth & west ~4m over subject site, down to 3m. K&C 3.2m E, path 4m w. Confined growing area to Nth. TPZ (rad. m): 9.1. SRZ (rad. m): 3.2. Impact: TPZ - 0.35%. Action: [TPF / Ground buffering / Arborist supervision](#)



Tree ID: 8. (Lampard Rd). *Corymbia ficifolia* (Red-flowering Gum), Maturing Australian native.

DBH: 71cm. Arb. Rating: Mod.B. Incipient decay, root damage, trunk wounds. 35x200 trunk wound on west extends to main fork from dead/damaged root. ~1m over subject site, down to 2.5m. K&C 1.3m Nth, path 1.5m Sth.. TPZ (rad. m): 8.5. SRZ (rad. m): 3.1. Impact: **TPZ Major** - 24.47%. Action: [TPF / Ground buffering / Arborist supervision](#)



Tree ID: 9. (Lampard Rd). *Photinia serratifolia* (Chinese Hawthorn), Maturing Exotic evergreen.
DBH: 45 @0.8mcm. Arb. Rating: Mod.B. Multi-stemmed. ~1m over subject site, down to 2.5m. K&C 1.3m Nth, path 1.5m Sth.. TPZ (rad. m): 5.4. SRZ (rad. m): 2.5. Impact: TPZ - 6.14%. Action: **TPF / Ground buffering / Arborist supervision**



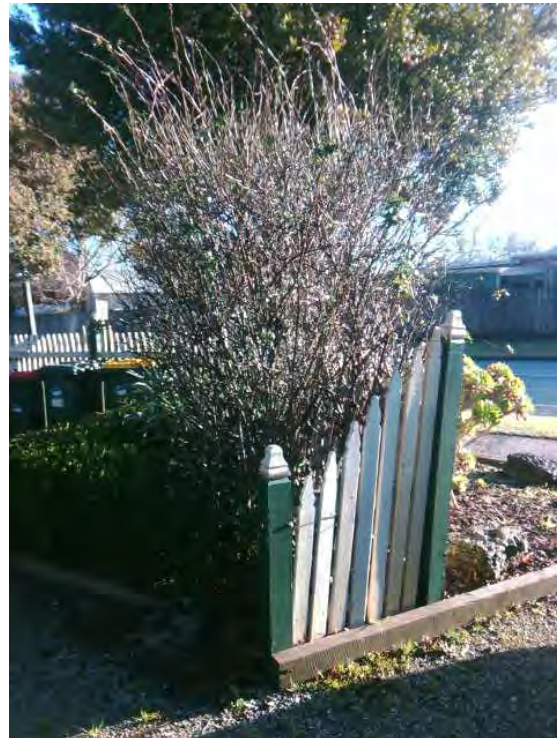
Tree ID: 10. (Lampard Rd). *Syzygium paniculatum* (Magenta Cherry), Maturing Australian native.
DBH: 65 @0.8mcm. Arb. Rating: Mod.B. Co-dominant stems w included bark. ~1m over subject site, down to 2.5m. K&C 1.3m Nth, path 1.5m Sth.. TPZ (rad. m): 7.8. SRZ (rad. m): 2.8. Impact: **TPZ Moderate** - 16.67%. Action: **TPF / Ground buffering / Arborist supervision**



Tree ID: 11. (Lampard Rd). *Corymbia ficifolia* (Red-flowering Gum), Maturing Australian native.
DBH: 91cm. Arb. Rating: Mod.A. Root damage. ~1.5m over PP down to 3.5m. K&C 1.0m Nth - lifting, path 1.0m Sth repaired.. TPZ (rad. m): 10.9. SRZ (rad. m): 3.5. Impact: TPZ - 0.00%. Action: **TPF / Ground buffering / Arborist supervision**



Tree ID: 12. (6 Lampard). *Rosa sp.* (Rose), Early-mature Exotic deciduous.
DBH: 1,1,1cm. Arb. Rating: Low. Multi-stemmed. Rose bush. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%**. Action: **To be removed**



Tree ID: 13. (6 Lampard). *Prunus cerasifera* (Cherry-plum), Early-mature Exotic deciduous. DBH: 4,3,2,2,2cm. Arb. Rating: Low. Epicormic crown, lopped, multi-stemmed.. TPZ (rad. m): 2. SRZ (rad. m): 1.7. Impact: **X - 100%. Action: To be removed**



Tree ID: 14. (6 Lampard). *Prunus cerasifera* (Cherry-plum), Early-mature Exotic deciduous. DBH: 4,3,2,2,2cm. Arb. Rating: Low. Epicormic crown, lopped, multi-stemmed.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 15. (6 Lampard). *Platanus orientalis* (Oriental Plane), Young Exotic deciduous. DBH: 8cm. Arb. Rating: Low. Weed infested. Cotoneaster & Pittosporum growing at base. Wrong trees in wrong location. 6006.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 16. (6 Lampard). *Platycladus orientalis* (Bookleaf Cypress), Early-mature Exotic conifer. DBH: 2,1,1,1,1cm. Arb. Rating: Mod.C. Shrub.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 17. (6 Lampard). *Ficus microcarpa* var. *hillii* (Hill's Weeping Fig), Early-mature Exotic evergreen.
DBH: 13cm. Arb. Rating: Mod.C. Wrong tree-wrong location.. TPZ (rad. m): 2. SRZ (rad. m): 1.6. Impact: **X - 100%. Action: To be removed**



Tree ID: 18. (6 Lampard). *Ficus microcarpa* var. *hillii* (Hill's Weeping Fig), Early-mature Exotic evergreen.
DBH: 13cm. Arb. Rating: Mod.C. Wrong tree-wrong location.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 19. (6 Lampard). *Platycladus orientalis* (Bookleaf Cypress), Early-mature Exotic conifer.
DBH: 2,1,1,1,1cm. Arb. Rating: Mod.C. Shrub.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 20. (6 Lampard). *Pittosporum undulatum* (Sweet Pittosporum), Early-mature Victorian native.
DBH: 12cm. Arb. Rating: Low. Woody weed sp Wrong tree-wrong location.. TPZ (rad. m): 2. SRZ (rad. m): 1.6. Impact: **X - 100%. Action: To be removed**



Tree ID: 21. (6 Lampard). *Omalanthus nutans* (Bleeding Heart), Early-mature Australian native.
DBH: 7cm. Arb. Rating: Low. Self-sown ephemeral small tree / wrong tree-wrong location.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 22. (6 Lampard). *Syzygium australe* (Scrub Cherry), Early-mature Australian native.
DBH: 7,7,5cm. Arb. Rating: Mod.C. Weed infested. Hedged, Cotoneaster out-competing to east.. TPZ (rad. m): 2. SRZ (rad. m): 1.6. Impact: **X - 100%. Action: To be removed**



Tree ID: 23. (6 Lampard). *Syzygium australe* (Scrub Cherry), Early-mature Australian native.
DBH: 7,6cm. Arb. Rating: Mod.C. Hedged shrub.. TPZ (rad. m): 2. SRZ (rad. m): 1.6. Impact: **X - 100%. Action: To be removed**



Tree ID: 24. (6 Lampard). *Pittosporum undulatum* (Sweet Pittosporum), Semi-mature Victorian native.
DBH: 4,3,3,2cm. Arb. Rating: Low. Woody weed sp 6cm Native Bleeding Heart growing from base-short ULE, *Solanum mauritanum*.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 25. (4 Lampard). *Persea americana* (Avocado), Semi-mature Exotic evergreen.
DBH: 3,2cm. Arb. Rating: Low. Lopped. At 30cm.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 26. (6 Lampard). *Citrus Xlimon* (Lemon), Maturing Exotic evergreen.
DBH: 17,14,9cm. Arb. Rating: Low. Canker/galls, incipient decay, wounds.. TPZ (rad. m): 2.6. SRZ (rad. m): 2.1.
Impact: **X - 100%. Action: To be removed**



Tree ID: 27. (6 Lampard). *Eucalyptus botryoides* (Southern Mahogany), Early-mature Victorian native.
DBH: 23,20,10cm. Arb. Rating: Mod.C. Multi-stemmed, stump re-sprout. Decaying stump at base.. TPZ (rad. m): 3.8. SRZ (rad. m): 2.3. Impact: **X - 100%. Action: To be removed**



Tree ID: 28. (6 Lampard). *Eucalyptus botryoides* (Southern Mahogany), Early-mature Victorian native.
DBH: 30cm. Arb. Rating: Mod.C. Lopped, past limb failure. Wrong tree-wrong location.. TPZ (rad. m): 3.6. SRZ (rad. m): 2. Impact: **X - 100%. Action: To be removed**



Tree ID: 29. (6 Lampard). *Grevillea robusta* (Silky Oak), Early-mature Australian native.
DBH: 13cm. Arb. Rating: Mod.C. Trunk wounds. With lots of exudate. 1m from boundary retaining wall, now-wrong tree-wrong location. TPZ (rad. m): 2. SRZ (rad. m): 1.6.
Impact: **X - 100%. Action: To be removed**



Tree ID: 30. (6 Lampard). *Ficus carica* (Common Fig), Over-mature Exotic deciduous.
DBH: 40,40cm. Arb. Rating: Low. Epicormic shoots, lopped, trunk decay, weed infested. Blackberry, Solanum mauritanum.. TPZ (rad. m): 6.8. SRZ (rad. m): 2.9.
Impact: **X - 100%. Action: To be removed**



Tree ID: 31. (6 Lampard). *Omalanthus nutans* (Bleeding Heart), Maturing Australian native.
DBH: 14cm. Arb. Rating: Low. Self-sown-short ULE.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 32. (6 Lampard). *Prunus cerasifera* (Cherry-plum), Early-mature Exotic deciduous.
DBH: 5,4,3,3,2cm. Arb. Rating: Low. Multi-stemmed, woody weed sp. TPZ (rad. m): 2. SRZ (rad. m): 1.5.
Impact: **X - 100%. Action: To be removed**



Tree ID: 33. (6 Lampard). *Pittosporum undulatum* (Sweet Pittosporum), Early-mature Victorian native.
DBH: 23cm. Arb. Rating: Low. Multi-stemmed, woody weed sp Lopped at 1m, <0.5m from retaining wall.. TPZ (rad. m): 2.8. SRZ (rad. m): 1.8. Impact: **X - 100%. Action: To be removed**



Tree ID: 34. (6 Lampard). *Pittosporum undulatum* (Sweet Pittosporum), Early-mature Victorian native.
DBH: 15,11cm. Arb. Rating: Low. Multi-stemmed, woody weed sp., partly suppressed - crown bias nth. Lopped at 1m, <0.5m from retaining wall.. TPZ (rad. m): 2.2. SRZ (rad. m): 1.8. Impact: **X - 100%. Action: To be removed**



Tree ID: 35. (6 Lampard). *Prunus cerasifera* (Cherry-plum), Early-mature Exotic deciduous.
DBH: 12,7,5cm. Arb. Rating: Low. Multi-stemmed, woody weed sp., partly suppressed - crown bias se. Lopped at 1.6m.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 36. (8 Lampard). *Leptospermum* sp. (Tea-tree), Early-mature Australian native.
DBH: 14,11,11cm. Arb. Rating: Low. In irreversible decline, multi-stemmed, neighbour's tree. Partly lopped at 1.8m.. TPZ (rad. m): 2.5. SRZ (rad. m): 1.7. Impact: None - 0%. Action: **None required**



Tree ID: 37. (8 Lampard). *Omalanthus nutans* (Bleeding Heart), Maturing Australian native.
 DBH: 10cm. Arb. Rating: Low. Neighbour's tree, trunk wounds. From rubbing on fence. Self-sown-short ULE..
 TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: None - 0%.
 Action: **Arborist to supervise fence posts in SRZ**



Tree ID: 38. (8 Lampard). *Ligustrum lucidum* (Shining Privet), Early-mature Exotic evergreen.
 DBH: 14,13,10cm. Arb. Rating: Low. Neighbour's tree, woody weed sp Self-sown, large surface roots extending towards house on subject site.. TPZ (rad. m): 2.6. SRZ (rad. m): 1.8. Impact: None - 0%. Action: **None required**



Tree ID: 39. (8 Lampard). *Coprosma repens* (Mirror Bush), Maturing Exotic evergreen.
 DBH: 13,12cm. Arb. Rating: Low. Neighbour's tree, woody weed sp Self-sown.. TPZ (rad. m): 2.1. SRZ (rad. m): 1.8.
 Impact: None - 0%. Action: **Arborist to supervise fence posts in SRZ**



Tree ID: 40. (8 Lampard). *Pittosporum undulatum* (Sweet Pittosporum), Early-mature Victorian native.
 DBH: 10cm. Arb. Rating: Low. Neighbour's tree, woody weed sp Self-sown.. TPZ (rad. m): 2. SRZ (rad. m): 1.5.
 Impact: None - 0%. Action: **None required**



Tree ID: 41. (4 Lampard). *Omalanthus nutans* (Bleeding Heart), Early-mature Australian native.
DBH: 9cm. Arb. Rating: Mod.C. Self-sown-short ULE.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 42. (4 Lampard). *Vitis vinifera* (Ornamental Grape Vine), Early-mature Exotic deciduous.
DBH: 6,4,3,2,2cm. Arb. Rating: Low. Sprawling - Ornamental Grapevine growing from below oil tank.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 43. (4 Lampard). *Prunus cerasifera* (Cherry-plum), Early-mature Exotic deciduous.
DBH: 17cm. Arb. Rating: Low. Weed infested, woody weed sp Blackberry.. TPZ (rad. m): 2. SRZ (rad. m): 1.7. Impact: **X - 100%. Action: To be removed**



Tree ID: 44. (4 Lampard). *Acca sellowiana* (Feijoa), Early-mature Exotic evergreen.
DBH: 7,5,5,4cm. Arb. Rating: Low. Weed infested. Overgrown by Blackberry.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: 45. (5 Main South Rd). *Syzygium australe* (Scrub Cherry), Early-mature Australian native.
DBH: 5,4,3cm. Arb. Rating: Low. Neighbour's tree.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: None - 0%. Action: **None required**



Tree ID: 46. (5 Main South Rd). *Camellia japonica* (Camellia), Early-mature Exotic evergreen.
DBH: 14cm. Arb. Rating: Low. Neighbour's tree.. TPZ (rad. m): 2. SRZ (rad. m): 1.6. Impact: None - 0%. Action: **None required**



Tree ID: 47. (5 Main South Rd). *Dicksonia antarctica* (Soft Tree Fern), Early-mature Victorian native.
DBH: 20cm. Arb. Rating: Mod.C. Neighbour's tree. Frond margin scorching.. TPZ (rad. m): 2.4. SRZ (rad. m): 1.8. Impact: None - 0%. Action: **None required**



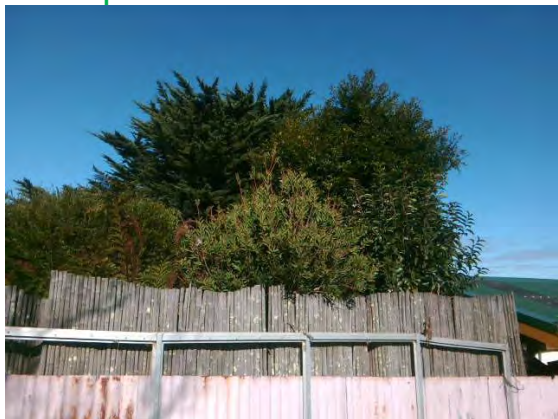
Tree ID: 48. (5 Main South Rd). *Ligustrum lucidum* (Shining Privet), Early-mature Exotic evergreen.
DBH: 9cm. Arb. Rating: Low. Neighbour's tree, woody weed sp. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: None - 0%. Action: **None required**



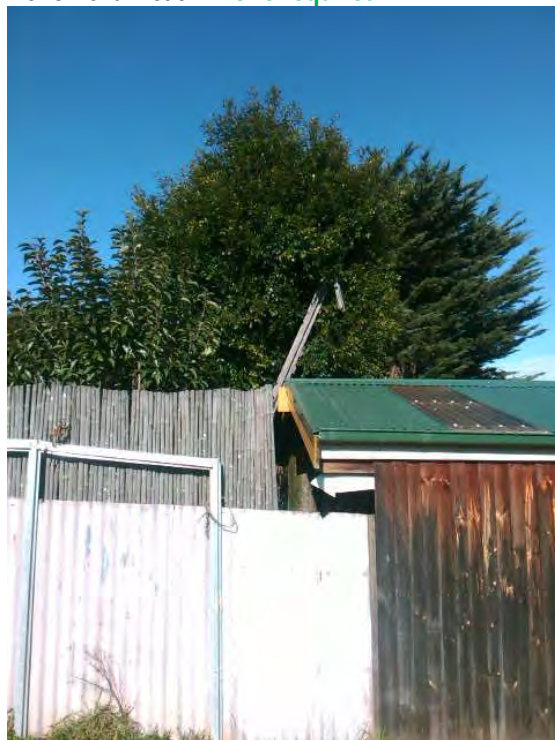
Tree ID: 50. (4 Lampard). *Ulmus procera* (English Elm), Young Exotic deciduous.
DBH: 6cm. Arb. Rating: Low. Self-sown sapling or sucker..
TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%.**
Action: To be removed



Tree ID: 49. (5 Main South Rd). *Callistemon citrinus* (Crimson Bottlebrush), Semi-mature Victorian native.
DBH: 8cm. Arb. Rating: Mod.C. Neighbour's tree.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: None - 0%. Action: **None required**



Tree ID: 52. (5 Main South Rd). *Syzygium paniculatum* (Magenta Cherry), Maturing Australian native.
DBH: 43cm. Arb. Rating: Mod.C. Lopped, neighbour's tree.
At ~3-4m.. TPZ (rad. m): 5.2. SRZ (rad. m): 2.5. Impact: None - 0%. Action: **None required**



Tree ID: 51. (4 Lampard). *Omalanthus nutans* (Bleeding Heart), Maturing Australian native.
DBH: 11cm. Arb. Rating: Low. Self-sown-short ULE.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Tree ID: G1. (6 Lampard). *Pittosporum tenuifolium* 'Aureum' (Kohuhu), Early-mature Exotic evergreen.
DBH: 9,7,6,5,5cm. Arb. Rating: Low. Group of 6 small hedge trees.
Basal wounds, epicormic crown, lopped. Hedged-6007..
TPZ (rad. m): 2. SRZ (rad. m): 1.6. Impact: **X - 100%.**

Action: To be removed



Tree ID: G2. (6 Lampard). *Tecomaria capensis* (Cape Honeysuckle), Early-mature Exotic evergreen.
DBH: 2cm. Arb. Rating: Low. Multi-stemmed. Cane clipped as screen hedge along fenceline.. TPZ (rad. m): 2. SRZ (rad. m): 1.5. Impact: **X - 100%. Action: To be removed**



Appendix 3: Arboricultural Descriptors (June 2021)

Note that not all of the described tree descriptors may be used in a tree assessment and report. The assessment is undertaken with regard to contemporary arboricultural practices and consists of a visual inspection of external and above-ground tree parts.

1. Tree Condition

The assessment of tree condition evaluates factors of health and structure. The descriptors of health and structure attributed to a tree evaluate the individual specimen to what could be considered typical for that species growing in its location under current climatic conditions. For example, some species can display inherently poor branching architecture, such as multiple acute branch attachments with included bark. Whilst these structural defects may technically be considered arboriculturally poor, they are typical for the species and may not constitute an increased risk of failure.

These trees may be assigned a structural rating of fair-poor (rather than poor) at the discretion of the assessor.

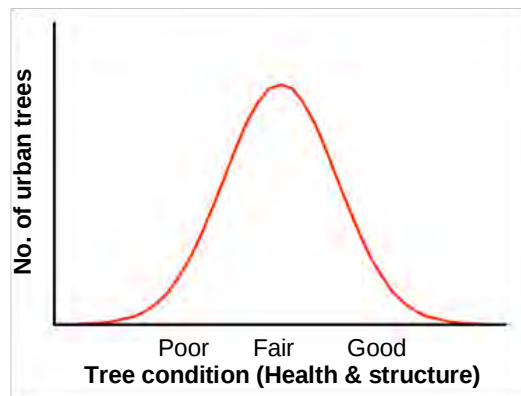


Diagram 1: Indicative normal distribution curve for tree condition

Diagram 1, provides an indicative distribution curve for tree condition to illustrate that within a normal tree population the majority of specimens are centrally located within the condition range (normal distribution curve). Furthermore, that those individual trees with an assessed condition approaching the outer ends of the spectrum occur less often.

2. Tree Name

Provides botanical name, (genus, species, variety and cultivar) according to accepted international code of taxonomic classification, and common name.

3. Tree Type

Describes the general geographic origin of the species and its type e.g. deciduous or evergreen.

Category	Description
Indigenous	Occurs naturally in the area or region of the subject site. Remnant.
Victorian native	Occurs naturally within some part of the State of Victoria (not exclusively) but is not indigenous (component of EVC benchmark). Could be planted indigenous trees.
Australian native	Occurs naturally within Australia but is not a Victorian native or indigenous
Exotic deciduous	Occurs outside of Australia and typically sheds its leaves during winter
Exotic evergreen	Occurs outside of Australia and typically holds its leaves all year round
Exotic conifer	Occurs outside of Australia and is classified as a gymnosperm
Native conifer	Occurs naturally within Australia and is classified as a gymnosperm
Native Palm	Occurs naturally within Australia. Woody monocotyledon
Exotic Palm	Occurs outside of Australia. Woody monocotyledon

4. Height and Width

Indicates height and width of the individual tree; dimensions are expressed in metres. Crown heights are measured with a height meter where possible. Due to the topography of some sites and/or the density of vegetation it may not be possible to do this for every tree. Tree heights may be estimated in line with previous height meter readings in conjunction with assessor's experience. Crown widths are generally paced (estimated) at the widest axis or can be measured on two axes and averaged. In some instances the crown width can be measured on the four cardinal direction points (North, South, East and West).

Crown height, crown spread are generally recorded to the nearest half metre (crown spread would be rounded up) for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m. Estimated dimensions (e.g. for off-site or otherwise inaccessible trees where accurate data cannot be recovered) shall be clearly identified in the assessment data.

5. Trunk diameters

The position where trunk diameters are captured may vary dependent on the requirements of the specific assessment and an individual trees specific characteristics. DBH is the typical trunk diameter captured as it relates to the allocation of tree protection distances. The basal trunk diameter assists in the allocation of a structural root zone. Some municipalities require trunk diameters be captured at different heights, with 1.0 m above grade being a common requirement. The specific planning schemes will be checked to ascertain requirements.

Stem diameters shall be recorded in centimetres, rounded to the nearest 1 cm (0.01 m).

Diameter at Breast Height (DBH)

Indicates the trunk diameter (expressed in centimetres) of an individual tree measured at 1.4m above the existing ground level or where otherwise indicated, multiple leaders are measured individually. Plants with multiple leader habit may be measured at the base. The range of methods to suit particular trunk shapes, configurations and site conditions can be seen in Appendix A of Australian Standard AS 4970-2009 *Protection of trees on development sites*. Measurements undertaken using foresters tape or builders tape.

Basal trunk diameter

The basal dimension is the trunk diameter measured at the base of the trunk or main stem(s) immediately above the root buttress. Used to ascertain the Structural Root Zone (SRZ) as outlined in AS4970.

6. Age class

Relates to the physiological stage of the tree's life cycle.

Category	Description
Young	Sapling tree and/or recently planted. Approximately 5 or less years in location.
Semi-mature	Tree increasing in size and yet to achieve expected size in situation. Primary developmental stage.
Early-mature	Tree established, generally growing vigorously. > 50% of attainable age/size.
Mature	Specimen approaching expected size in situation, with reduced incremental growth.
Over-mature	Mature full-size with a retrenching crown. Tree is senescent and in decline. Significant decay generally present.

7. Health

Assesses various attributes to describe the overall health and vigour of the tree.

Health Category	Vigour, Extension growth	Decline symptoms, Deadwood, Dieback	Foliage density, colour, size, intactness	Pests and or disease
Good	Above typical. Excellent. Full canopy density	Negligible	Better than typical	Negligible
Fair	Typical vigour. >80% canopy density	Minor or expected. Little or no dead wood	Typical. Minor deficiencies or defects could be present.	Minor, within damage thresholds
Fair to Poor	Below typical - low vigour	More than typical. Small sub-branch dieback	Exhibiting deficiencies. Could be thinning, or smaller	Exceeds damage thresholds
Poor	Minimal - declining	Excessive, large and/or prominent amount & size of dead wood	Exhibiting severe deficiencies. Thinning foliage, generally smaller or deformed	Extreme and contributing to decline
Dead	N/A	N/A	N/A	N/A

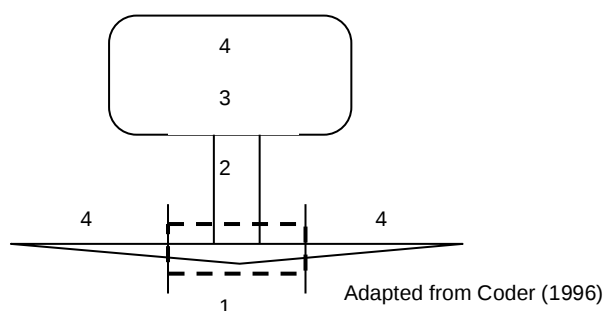
8. Structure

Assesses principal components of tree structure (Diagram 2).

Structure ratings will also take into account general branching architecture, stem taper, live crown ratio, crown symmetry (bias or lean) and crown position such as tree being suppressed amongst more dominant trees.

Diagram 2: Tree structure zones

1. Root plate & lower stem
2. Trunk
3. Primary branch support
4. Outer crown & roots



The lowest or worst descriptor assigned to the tree in any column could generally be the overall rating assigned to the tree. The assessment for structure is limited to observations of external and above ground tree parts. It does not include any exploratory assessment of underground or internal tree parts unless this is requested as part of the investigation. Trees are assessed and then given a rating for a point in time. Generally, trees with a poor or very poor structure are beyond the benefit of practical arboricultural treatments.

The management of trees in the urban environment requires appropriate arboricultural input and consideration of risk. Risk potential will take into account the combination of likelihood of failure and impact, including the perceived importance of the target(s). See table over page.

Structure Category	Zone 1 - Root plate & lower stem	Zone 2 - Trunk	Zone 3 - Primary branch support	Zone 4 - Outer crown and roots
Good	No obvious damage, disease or decay; obvious basal flare / stable in ground	No obvious damage, disease or decay; well tapered	Well formed, attached, spaced and tapered. No history of failure.	No obvious damage, disease, decay or structural defect. No history of failure.
Fair	Minor damage or decay. Basal flare present.	Minor damage or decay	Generally well attached, spaced and tapered branches. Minor structural deficiencies may be present or developing. No history of branch failure.	Minor damage, disease or decay; minor branch end-weight or over-extension. No history of branch failure.
Fair to Poor	Moderate damage or decay; minimal basal flare.	Moderate damage or decay; approaching recognised thresholds	Weak, decayed or with acute branch attachments; previous branch failure evidence.	Moderate damage, disease or decay; moderate branch end-weight or over-extension. Minor branch failure evident.
Poor	Major damage, disease or decay; fungal fruiting bodies present. Excessive lean placing pressure on root plate	Major damage, disease or decay; exceeds recognised thresholds; fungal fruiting bodies present. Acute lean. Stump re-sprout	Decayed, cavities or has acute branch attachments with included bark; excessive compression flaring; failure likely. Evidence of major branch failure.	Major damage, disease or decay; fungal fruiting bodies present; major branch end-weight or over-extension. Branch failure evident.
Very Poor	Excessive damage, disease or decay; unstable / loose in ground; altered exposure; failure probable	Excessive damage, disease or decay; cavities. Excessive lean. Stump re-sprout	Decayed, cavities or branch attachments with active split; failure imminent. History of major branch failure.	Excessive damage, disease or decay; excessive branch end-weight or over-extension. History of branch failure.

Useful life expectancy

Assessment of useful life expectancy provides an indication of health and tree appropriateness and involves an estimate of how long a tree is likely to remain in the landscape based on species, stage of life (cycle), health, amenity, environmental services contribution, conflicts with adjacent infrastructure and risk to the community. It would enable tree managers to develop long-term plans for the eventual removal and replacement of existing trees in the public realm. It is not a measure of the biological life of the tree within the natural range of the species. It is more a measure of the health status and the trees positive contribution to the urban landscape.

Within an urban landscape context, particularly in relation to street trees, it could be considered a point where the costs to maintain the asset (tree) outweigh the benefits the tree is returning.

The assessment is based on the site conditions not being significantly altered and that any prescribed maintenance works are carried out (site conditions are presumed to remain relatively constant and the tree would be maintained under scheduled maintenance programs). See table over page.

Useful Life Expectancy category	Typical characteristics
<1 year (No remaining ULE)	Tree may be dead or mostly dead. Tree may exhibit major structural faults. Tree may be an imminent failure hazard. Excessive infrastructure damage with high risk potential that cannot be remedied.
1-5 years (Transitory, Brief)	Tree is exhibiting severe chronic decline. Crown is likely to be less than 50% typical density. Crown may be mostly epicormic growth. Dieback of large limbs is common (large deadwood may have been pruned out). Tree may be over-mature and senescing. Infrastructure conflicts with heightened risk potential. Tree has outgrown site constraints.
6-10 years (Short)	Tree is exhibiting chronic decline. Crown density will be less than typical and epicormic growth is likely to present. The crown may still be mostly entire, but some dieback is likely to be evident. Dieback may include large limbs. Over-mature and senescing or early decline symptoms in short-lived species. Early infrastructure conflicts with potential to increase regardless of management inputs.
11-20 years (Moderate)	Tree not showing symptoms of chronic decline, but growth characteristics are likely to be reduced (bud development, extension growth etc.). Tree may be over-mature and beginning to senesce. Potential for infrastructure conflicts regardless of management inputs.
21-40 years (Moderately long)	Trees displaying normal growth characteristics but vigour is likely to be reduced (bud development, extension growth etc.). Tree may be growing in restricted environment (e.g. streetscapes) or may be in late maturity. Semi-mature and mature trees exhibiting normal growth characteristics. Juvenile trees in streetscapes.
>40 years (Long)	Generally juvenile and semi-mature trees exhibiting normal growth characteristics within adequate spaces to sustain growth, such as in parks or open space. Could also pertain to maturing, long-lived trees. Tree well suited to the site with negligible potential for infrastructure conflicts.

Note that ULE may change for a tree dependent on the prevailing climatic conditions, which can either increase or decrease, or sudden changes to a tree's growing environment creating an acute stress.

The ULE may not be applicable for trees that are manipulated, such as topiary, or grown for specific horticultural purposes, such as fruit trees.

There may be instances where remedial tree maintenance could be extend a tree's ULE.

9. Arboricultural Rating

Relates to the combination of tree condition factors, including health and structure (arboricultural merit), and also conveys an amenity value. Amenity relates to the trees biological, functional and aesthetic characteristics (Hitchmough 1994) within an urban landscape context. The presence of any serious disease or tree-related hazards that would impact risk potential are taken into account. See table over page.

Arboricultural rating Category	Description
High	Tree of high quality in good to fair condition; good vigour. Generally a prominent arboricultural/landscape feature. Particularly good example of the species; rare or uncommon. Tree may have significant conservation or other cultural value. These trees have the potential to be a medium- to long-term components of the landscape (moderately long to long ULE) if managed appropriately. Retention of these trees is highly desirable.
Moderate	<i>General -</i> Tree of moderate quality, in fair or better condition. Tree may have a condition, and or structural problem that will respond to arboricultural treatment. These trees have the potential to be a moderate- to long-term component of the landscape (moderate to long ULE) if managed appropriately. Retention of these trees is generally desirable. The following sub-categories relate predominately to age and size and amenity.
	A. Moderate to large, maturing tree. Contributes to the landscape character. Tree may have conservation or other cultural value.
	B. Moderate sized, established tree, > 50% of attainable age/size. Contributes to the landscape character. Maturing tree with amenity value but with identified deficiencies
	C. Small and/or semi-mature tree, established, >5 years in the location. May not be a dominant canopy. No special qualities. Maturing tree, accumulating deficiencies, trending towards being of Low arboricultural value.
Low	Unremarkable tree of low quality or little amenity value. Tree in either poor health or with poor structure or a combination. Short to transitory useful life expectancy. Tree is not significant because of either its size or age, such as young trees with a stem diameter below 15 cm. Trees regularly pruned to restrict size. These trees are easily replaceable. Tree (species) is functionally inappropriate to specific location and would be expected to be problematic if retained. Retention of such trees may be considered if not requiring a disproportionate expenditure of resources for a tree in its condition and location.
Very Low	Trees of low quality with an estimated remaining life expectancy of less than 5 years. Tree has either a severe structural defect or health problem or combination that cannot be sustained with practical arboricultural techniques and the loss of the tree would be expected in the short term. Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Tree infected with pathogens of significance to either the health or safety of the tree or other adjacent trees. Tree whose retention would not be viable after the removal of adjacent trees (includes trees that have developed in close spaced groups and would not be expected to acclimatise to severe alterations to surrounding environment – removal of adjacent shelter trees). Tree has a detrimental effect on the environment, for example, the tree is a recognised environmental woody weed with potential to spread into waterways or natural areas. Unremarkable tree of no material landscape, conservation or other cultural value.

Trees have many values, not all of which are considered when an arboricultural assessment is undertaken. However, individual trees or tree group features may be considered important community resources because of unique or noteworthy characteristics or values other than their age, dimensions, health or structural condition. Recognition of one or more of the following criterion is designed to highlight other considerations that may influence the future management of such trees.

Significance	Description
Horticultural Value/ Rarity	Outstanding horticultural or genetic value; could be an important source of propagating stock, including specimens that are particularly resistant to disease or exposure. Any tree of a species or variety that is rare.
Historic, Aboriginal Cultural or Heritage Value	Tree could have value as a remnant of a particular important historical period or a remnant of a site or activity no longer in action. Tree has a recognised association with historic aboriginal activities, including scar trees. Tree commemorates a particular occasion, including plantings by notable people, or having associations with an important event in local history.
Ecological Value	Tree could have value as habitat for indigenous wildlife, including providing breeding, foraging or roosting habitat, or is a component of a wildlife reserve. Remnant Indigenous vegetation that contribute to biological diversity

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Appendix 4: Tree protection zones.

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Introduction

In order to sustain trees on a development site consideration must be given to the establishment of tree protection zones.

The physical dimensions of tree protection zones can sometimes be difficult to define. The projection of a tree's crown can provide a guide but is by no means the definitive measure. The unpredictable nature of roots and their growth, differences between species and their tolerances, and observable and hidden changes to the trees growing environment, as a result of development, are variables that must be considered.

Most vigorous, broad canopied trees survive well if the area within the drip-line of the canopy is protected. Fine root density is usually greater beneath the canopy than beyond (Gilman, 1997). If few to no roots over 3cm in diameter are encountered and severed during excavation the tree will probably tolerate the impact and root loss. A healthy tree can sustain a loss of between 30% and 50% of absorbing roots (Harris, Clark, Matheny, 1999), however encroachment into the structural root system of a tree may be problematic.

The structural root system of a tree is responsible for ensuring the stability of the entire tree structure in the ground. A tree could not sustain loss of structural root system and be expected to survive let alone stand up to average annual wind loads upon the crown.

Allocation of tree protection zone (TPZ)

The method of allocating a TPZ to a particular tree will be influenced by site factors, the tree species, its age and developed form.

Once it has been established, through an arboricultural assessment, which trees and tree groups are to be retained, the next step will require careful management through the development process to minimise any impacts on the designated trees. The successful retention of trees on any particular site will require the commitment and understanding of all parties involved in the development process. The most important activity, after determining the trees that will be retained is the implementation of a TPZ.

The intention of tree protection zones is to:

- mitigate tree hazards;
- provide adequate root space to sustain the health and aesthetics of the tree into the future;
- minimise changes to the trees growing environment, which is particularly important for mature specimens;
- minimise physical damage to the root system, canopy and trunk; and
- define the physical alignment of the tree protection fencing

Tree protection

The most important consideration for the successful retention of trees is to allow appropriate above and below ground space for the trees to continue to grow. This requires the allocation of tree protection zones for retained trees.

The Australian Standard AS 4970-2025 Protection of Trees on Development Sites has been used as a guide in the allocation of TPZs for the assessed trees.

The Notional Root Zone (NRZ) for individual trees is calculated based on trunk (stem) diameter (DBH), measured in metres at 1.4 metres up from ground level. The radius of the NRZ is calculated by multiplying the trees DBH by 12. The method provides a TPZ that addresses both the stability and growing requirements of a tree. NRZ distances are measured as a radius from the centre of the trunk at (or near) ground level. The minimum NRZ should be no less than 2m and the maximum no more than 15m radius. The NRZ of palms should be not less than 1.0m outside the crown projection.

The Structural Root Zone (SRZ) is the area in which the larger woody roots required for tree stability are found close to the trunk and which then generally taper rapidly. This is the minimum area recommended to maintain tree stability but does not reflect the area required to sustain tree health. No works are permitted within the SRZ radius as tree stability maybe compromised. All SRZ distances can be seen in Appendix 1.

Encroachment into the NRZ is permissible under certain circumstances though this is dependent on both site conditions and tree characteristics (See Figure 9 for examples of encroachment). Minor encroachment, up to 10% of the NRZ, is generally permissible provided encroachment is compensated for by recruitment of an equal area contiguous with the NRZ. Encroachment must also consider the crown of the tree and ensure that excessive pruning is not required that would cause the tree to become unbalanced or disfigured.

The 10% encroachment on one side equates to approximately a $\frac{1}{3}$ reduction of the radial distance.

Refer to Figure 1 for examples of acceptable NRZ encroachment.

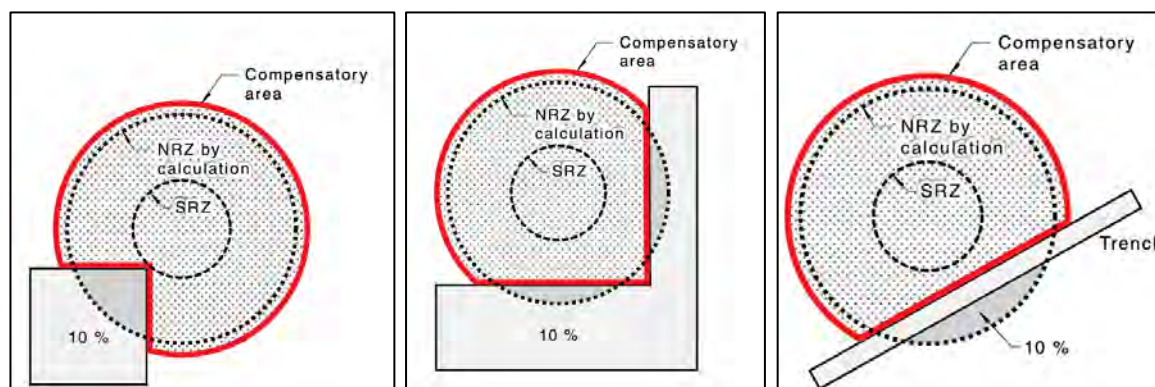


Figure 2: Examples of minor encroachment into the NRZ

Encroachment greater than 10%, less than 20% and outside of the SRZ is considered Moderate encroachment under AS4970-2025 and is only permissible if it can be demonstrated that after such encroachment the tree would remain viable.

- A non-destructive root investigation (NDRI) may be required to investigate and identify the location of roots within the proposed area of encroachment and root sensitive construction methods may need to be utilized.

Encroachment greater than 20% or extending into the SRZ is considered to be Major and has the potential to cause unsustainable damage to the ongoing viability of the affected trees.

Major NRZ encroachment is unlikely to be supported by the arborist and the relevant authority unless specific tree sensitive design & construction methods are developed based on the results of non-destructive root investigation.

The 10% encroachment on one side equates to approximately $\frac{1}{3}$ radial distance. Tree root growth is opportunistic and occurs where the essentials to life (primarily air and water) are present. Heterogeneous soil conditions, existing barriers, hard surfaces and buildings may have inhibited the development of a symmetrically radiating root system.

Existing infrastructure around some trees may be within the TPZ or root plate radius. The roots of some trees may have grown in response to the site conditions and therefore if existing hard surfaces and building alignments are utilised in new designs the impacts on the trees should be minimal. The most reliable way to estimate root disturbance is to find out where the roots are in relation to the demolition, excavation or construction works that will take place (Matheny & Clark, 1998). Exploratory excavation prior to commencement of construction can help establish the extent of the root system and where it may be appropriate to excavate or build.

The TPZ should also give consideration to the canopy and overall form of the tree. If the canopy requires severe pruning in order to accommodate a building and in the process the form of the tree is diminished it may be worthwhile considering altering the design or removing the tree.

General tree protection guidelines

The most important factors are:

- Prior to construction works the trees nominated for tree works should be pruned to remove larger dead wood. Pruning works may also identify other tree hazards that require remedial works.
- Installation of tree protection fencing. Once the tree protection zones have been determined the next step is to mulch the zone with woodchip and erect tree protection fencing. This must be completed prior to any materials being brought on-site, erection of temporary site facilities or demolition/earth works. The protection fencing must be sturdy and withstand winds and construction impacts. The protection fence should only be moved with approval of the site supervisor. Other root zone protection methods can be incorporated if the TPZ area needs to be traversed.
- Appropriate signage is to be fixed to the fencing to alert people as to importance of the tree protection zone.
- The importance of tree preservation must be communicated to all relevant parties involved with the site.
- Inspection of trees during excavation works.

TPZ fencing

TPZ fencing must be in the form of either temporary fencing panels with concrete block feet and locked together or water filled barriers with locking pins installed. TPZ fencing must be sufficiently robust to withstand knocks and bumps from plant and machinery, delivery vehicles, storage of materials and dumping of spoil.

Refer to Figure 1 for fencing example.



Figure 1. Above left - Example of TPZ fencing above right -Example of TPZ signage.

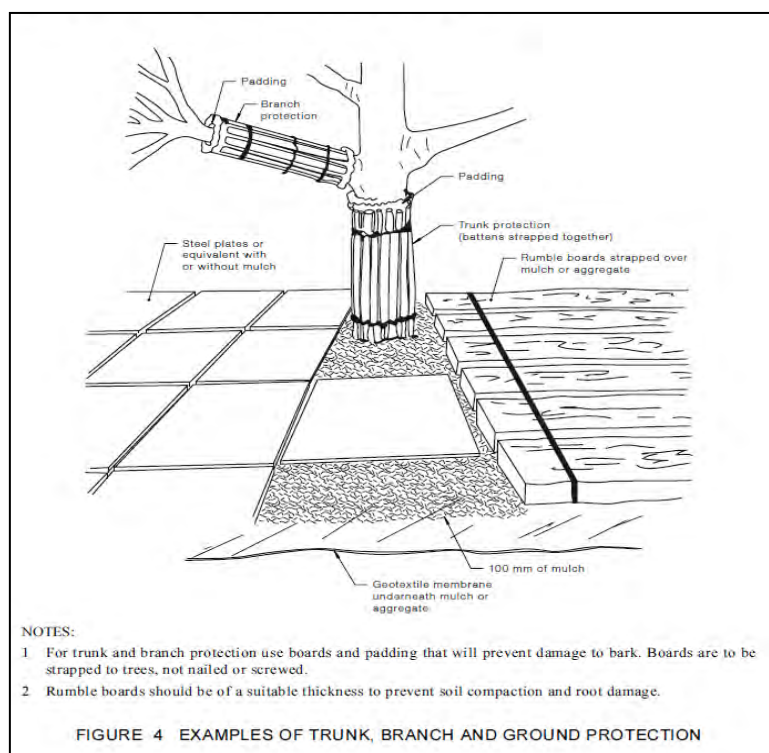
- Appropriate signage stating 'Tree protection Zone- No access' is to be fixed to the fencing to alert people as to importance of the tree protection zone.

Ground buffering

Where works are required to be undertaken within the Tree root zone without penetration of the surface, ground buffering and trunk and limb protection must be provided to minimise the potential for soil to become compacted and avoid potential for impact wounds to occur to surface roots, trunk or limbs.

Refer to Diagram 2 below.

Diagram 2: Examples of ground buffering and trunk and limb protection.



(Extract from: AS4970-2009, Appendix D, pg17)

Exploratory excavation

The most reliable way to estimate root disturbance is to find out where the roots are in relation to the demolition, excavation or construction works that will take place (Matheny & Clark, 1998).

Exploratory excavation prior to commencement of construction can help establish the extent of the root system and where it may be appropriate to excavate or build. This also allows management decisions to be made and allows time for redesign works if required.

Any exploratory excavation within the allocated TPZ is to be undertaken with due care of the roots. Minor exploration is possible with hand tools. More extensive exploration may require the use of high pressure water or air excavation techniques. Either hydraulic or pneumatic excavation techniques will safely expose tree roots; both have specific benefits dependent on the situation and soil type. An arborist is to be consulted on which system is best suited for the site conditions.

Substantial roots are to be exposed and left intact.

Once roots are exposed decisions can be made regarding the management of the tree. Decisions will be dependent on the tree species, its condition, its age, its relative tolerance to root loss, and the amount of root system exposed and requiring pruning.

Other alternative measures to encroaching the TPZ may include boring or tunnelling.

How to determine the diameter of a substantial root

The size of a substantial root will vary according to the distance of the exposed root to the trunk of the tree. The further away from the trunk of a tree that a root is, the less significant the root is likely to be to the tree's health and stability.

The determination of what is a substantial root is often difficult because the form, depth and spread of roots will vary between species and sites. However, because smaller roots are connected to larger roots in a framework, there can be no doubt that if larger roots are severed, the smaller roots attached to them will die. Therefore, the larger the root, the more significant it may be.

Gilman (1997) suggests that trees may contain 4-11 major lateral roots and that the five largest lateral roots account (act as a conduit) for 75% of the total root system.

These large lateral roots quickly taper within a distance to the tree, this distance is identified as the Structural Root Zone (SRZ). Within the SRZ distance, all roots and the soil surrounding the roots are deemed significant.

No root or soil disturbance is permitted within the SRZ.

In the area outside the SRZ the tree may tolerate the loss of one or a number of roots. The table below indicates the size of tree roots, outside the SRZ that would be deemed substantial for various tree heights. The assessment of combined root loss within the TPZ would need to be undertaken by an arborist on an individual basis because the location of the tree, its condition and environment would need to be assessed.

Table 1: Estimated significant root sizes outside SRZ

Height of tree	Diameter of root
Less than 5m	≥ 30mm
Between 5m - 15m	≥ 50mm
More than 15m	≥ 70mm

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Construction Guidelines

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

- The Tree Protection Zone (TPZ) is fenced and clearly marked at all times. The actual fence specifications should be a minimum of 1.2 - 1.5 metres of chain mesh or like fence with 1.8 meter posts (e.g. treated pine or star pickets) or like support every 3-4 metres and a top line of high visibility plastic hazard tape. The posts should be strong enough to sustain knocks from on site excavation equipment. This fence will deter the placement of building materials, entry of heavy equipment and vehicles and also the entry of workers and/or the public into the TPZ. Note: There are many different variations on the construction type and material used for TPZ fences, suffice to say that the fence should satisfy the responsible authority.
- Contractors and site workers should receive written and verbal instruction as to the importance of tree protection and preservation within the site. Successful tree preservation occurs when there is a commitment from all relevant parties involved in designing, constructing and managing a development project. Members of the project team need to interact with each other to minimise the impacts to the trees, either through design decisions or construction practices. The importance of tree preservation must be communicated to all relevant parties involved with the site.
- The consultant arborist is on-site to supervise excavation works around the existing trees where the TPZ will be encroached.
- A layer of organic mulch (woodchips) to a depth of no more than 100mm should be placed over the root systems within the TPZ of trees, which are to be retained so as to assist with moisture retention and to reduce the impact of compaction.
- No persons, vehicles or machinery to enter the TPZ without the consent of the consulting arborist or site manager.
- Where machinery is required to operate inside the TPZ it must be a small skid drive machine (i.e Dingo or similar) operating only forwards and backwards in a radial direction facing the tree trunk and not altering direction whilst inside the TPZ to avoid damaging, compacting or scuffing the roots.
- Any underground service installations within the allocated TPZ 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 TPZ 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 should take place over the root zone of any tree.
- Nothing whatsoever should be attached to any tree including temporary services wires, nails, screws or any other fixing device.
- Supplementary watering should be provided to all trees through any dry periods during and after the construction process. Proper watering is the most important maintenance task in terms of successfully retaining the designated trees. The areas under the canopy drip lines should be mulched with woodchip to a depth of no more than 100mm. The mulch will help maintain soil moisture levels. Testing with a soil probe in a number of locations around the tree will help ascertain soil moisture levels and requirements to irrigate. Water needs to be applied slowly to avoid runoff. A daily watering with 5 litres of water for every 30 mm of trunk calliper may provide the most even soil moisture level for roots (Watson & Himelick, 1997), however light frequent irrigations should be avoided. Irrigation should wet the entire root zone and be allowed to dry out prior to another application. Watering should continue from October until April.

Disclaimer

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