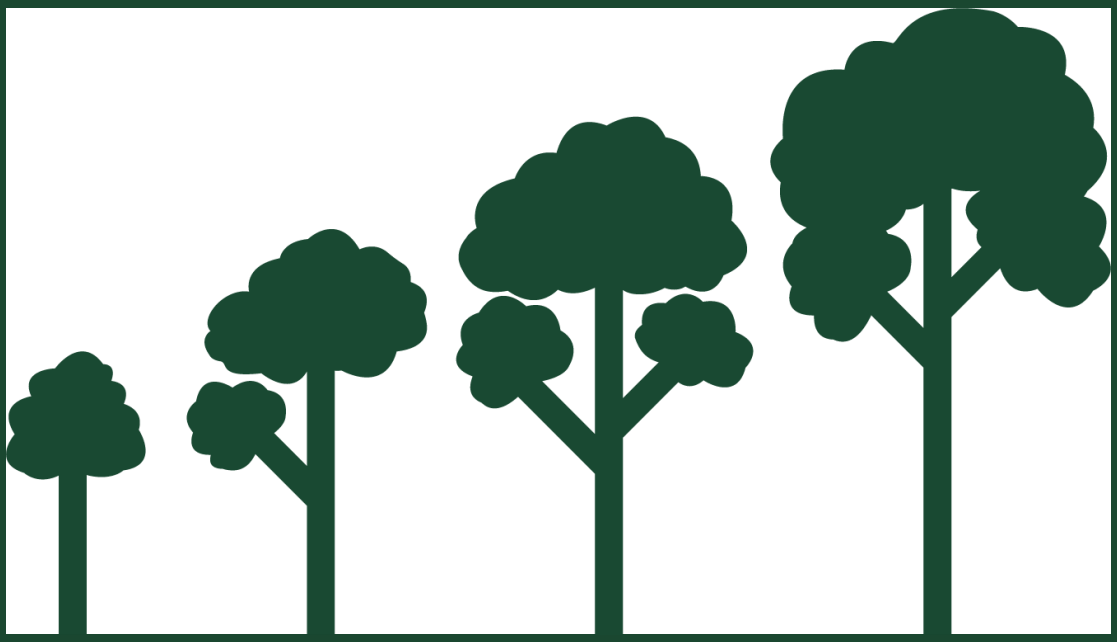
Temporal
TREE MANAGEMENT

Arboricultural Impact Assessment



28 Edinburgh Road, Forestville
NSW, 2087
21/-/DP200283
DA2025/0057 - PAN-504235
26/02/2025

PREPARED BY:

Temporal Tree Management Pty Ltd.

William Dunlop: Project Arborist
(M. UrbHort, Grad. Dip(Arb), B.Sc).

ISA Member: 290269

TRAQ Qualified

p: 0414 137 659
e: wdunlop@temporaltreemanagement.com

PREPARED FOR:

The Property Owner

Aleks Cerovic

c/- Rapid Plans: Project Designer

Table of Contents

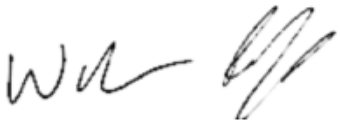
DISCLAIMER and LIMITATIONS

This report has been prepared for the Property Owner(s) of 28 Edinburgh Road, Forestville to assess the impact associated with a proposed development on seven trees positioned inside and within 5 metres of the property boundary of the subject site.

The author of this report is *Temporal Tree Management Pty Ltd.* This report is not designed for any other purpose. The author accepts no responsibility for the use of this report for purposes other than as an Arboricultural Impact Assessment or if used by any other person / party.

All observations, recommendations and advice expressed in this report are based on the measured tree dimensions and ground-based visual assessment data collected during the site inspection on 25/02/2024. Recommendations provided in this report are made in relation to *the Australian Standard for the Protection of Trees on Development Sites (AS 4970 2009).*

Trees are dynamically growing organisms that change over time. All recommendations are provided based on the ground-based data collected on the day of assessment. No root mapping or advanced testing was undertaken as part of this assessment. No guarantee is implied with respect to future tree condition or safety beyond the advice and recommendations within the report.



William Dunlop of *Temporal Tree Management Pty Ltd.*
Consulting Arborist
B. Sc (Adv.), Grad. Dip (Arb) (AQF Level 8), M. UrbHort.
26th February 2025

1. Executive Summary

The purpose of this report is to provide an Arboricultural Impact Assessment for the trees located inside and within 5 metres of the property boundaries at 28 Edinburgh Road, Forestville (21/-/DP200283). An assessment of seven trees was undertaken by *Temporal Tree Management Pty Ltd* on 10/02/2025.

Tree 3 was determined to be of High Retention Value within the surrounding landscape. Tree 1 was determined to be of Moderate retention value within the surrounding landscape. Trees 2, 4, 5, 6 and 7 were determined to be of Low retention value.

Trees 2, 3 and 4 are proposed for removal as part of the proposed development. Tree 3 is within the footprint of the proposed vehicle crossing and cannot be retained under the proposed design. Trees 2 and 4 will sustain major encroachments within their TPZs that are likely to negatively impact their viability within the landscape (Figure 7) (Table 3). These three trees will require removal to facilitate the proposed development.

Trees 2 and 4 are positioned within the property boundaries of the subject site and are of species that are listed in *Table 1 – Exemption Species* of *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025). Trees 2 and 4 may therefore be removed without prior consent from Northern Beaches Council. Tree 3 is a scheduled tree under *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025). Prior approval for the removal of this tree must be obtained from Northern Beaches Council as part of the consent conditions for the proposed development. It is recommended that Tree 3 is replaced with at least one specimen of an indigenous or native species that is capable of reaching a mature height of no less than 20 metres or two specimens of native or indigenous species capable of reaching a mature height of 12 metres.

Trees 1, 5, 6 and 7 are proposed for retention. These four trees will not be directly impacted by the proposed works (Table 3). Tree 1 can be suitably retained without the installation of tree protection measures. Two fenced protection zones compliant with the specifications outlined in *Section 4.3* of *AS4970 (2009)* must be installed around Tree 2, Tree 3 and Tree 5 (Figure 8 and Figure 10). Fenced protection zones must remain in place for the duration of the development. Any required access

within one of the fenced protection zones must be approved by the Project Arborist prior to entry. Replacement tree(s) should be positioned within the western and / or south-eastern boundary of the subject site (Figure 10).

2. Location

2.1. Site Location

The subject site for this Arboricultural Impact Assessment is 28 Edinburgh Road, Forestville (21/-/DP200283). The subject site is approximately 700 square metres in area (Planning NSW 2025). This report has relied upon the following plans and documents:

- Architectural Plans, prepared by *Rapid Plans* (Project No: RP0919CER, Revision: -, drawn 19/12/2024).
- Detail Survey prepared by *Total Surveying Solutions* (Job No: 240794, Drawing No: A000757, Revision: A1, drawn 09/12/2024).
- Site Plan, prepared by *Rapid Plans* (Project No: RP0919CER, Drawing No: DA1004, Revision: -, drawn 19/12/2024).
- *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025).
- The Australian Standard for the Protection of Trees on Development Sites (*AS4970 – 2009*).

2.2. Relevant Legislation and Policy Controls

This property is located within the Northern Beaches Council local government area. The property is within an R2 Low-density Residential zone (Planning NSW 2024) (**Appendix A**). The environmental policy regulations relevant to the trees within the subject site are outlined in *the NSW State Environmental Planning Policy (SEPP) (Biodiversity and Conservation) 2021*.

The policy controls governing the management of the trees are outlined in *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025). This policy control supports the policy controls outlined in the Warringah Local Environmental Plan (*WLEP 2011*). *Part 5.9 of the WLEP (2011)*, which previously governed the management of trees within this portion of the Northern Beaches LGA. This planning control was repealed circa. 2017. These policy controls draw from *the*

Australian Standard for the Protection of Trees on Development Sites (AS4970 2009) and *the Australian Standard for Pruning Amenity Trees* (AS4373 2007).

The subject site does not contain a Heritage Item and is not within a Heritage Conservation Area (Planning NSW 2025). The subject site is positioned close to but does not contain any threatened ecological communities or species (SEED NSW 2025) (**Appendix A)**. The subject site does not contain identified Biodiversity Values Mapped area (Planning NSW 2025). The subject site is positioned adjacent to but is not within a Bushfire Prone Land zone (**Appendix A**).

2.3. Tree Locations

An assessment of the surveyed trees within and adjacent to the subject site was undertaken by *Temporal Tree Management P/L* on 25/02/2025. All trees inside and within 5 metres of the property boundaries of the subject site were assessed. As stipulated in *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011), perennial woody vegetation is classified as a tree if it has a height of or greater than 5 metres (Northern Beaches Council 2025). Seven trees were assessed and are included in this report (Figure 1 and Figure 2). Ownership of the assessed trees varied slightly. Tree 1 is positioned outside the north-eastern boundary of the subject site and is within the property of 30 Edinburgh Road. All other trees are within the property boundaries of the subject site. Trees 2-4 are positioned on the eastern and southern sides of the existing dwelling while Trees 5-7 are positioned on the western side (Figure 3 and Figure 4).

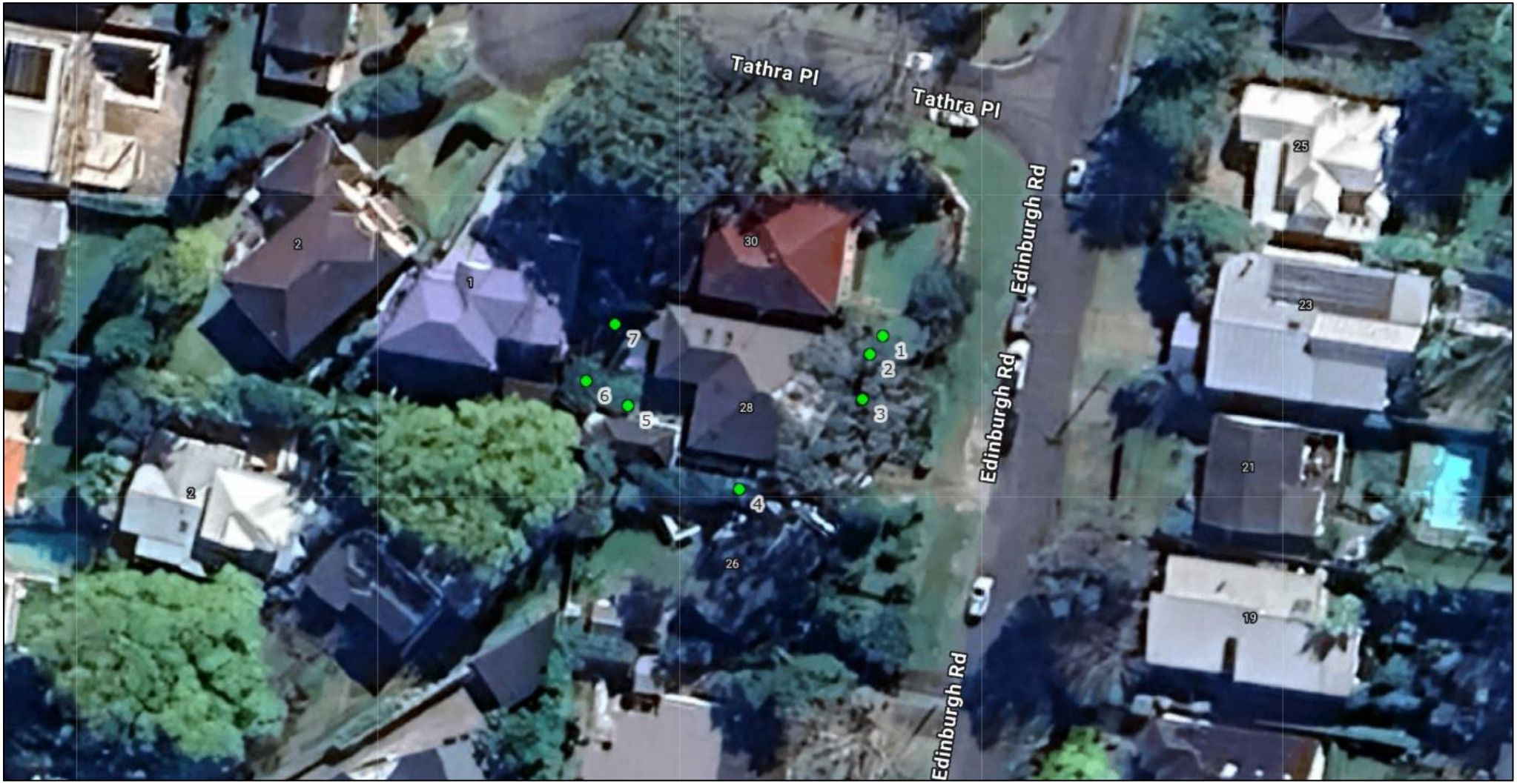


Figure 1. Position of seven assessed trees within and adjacent to the subject site. Image sourced from Google (2025).

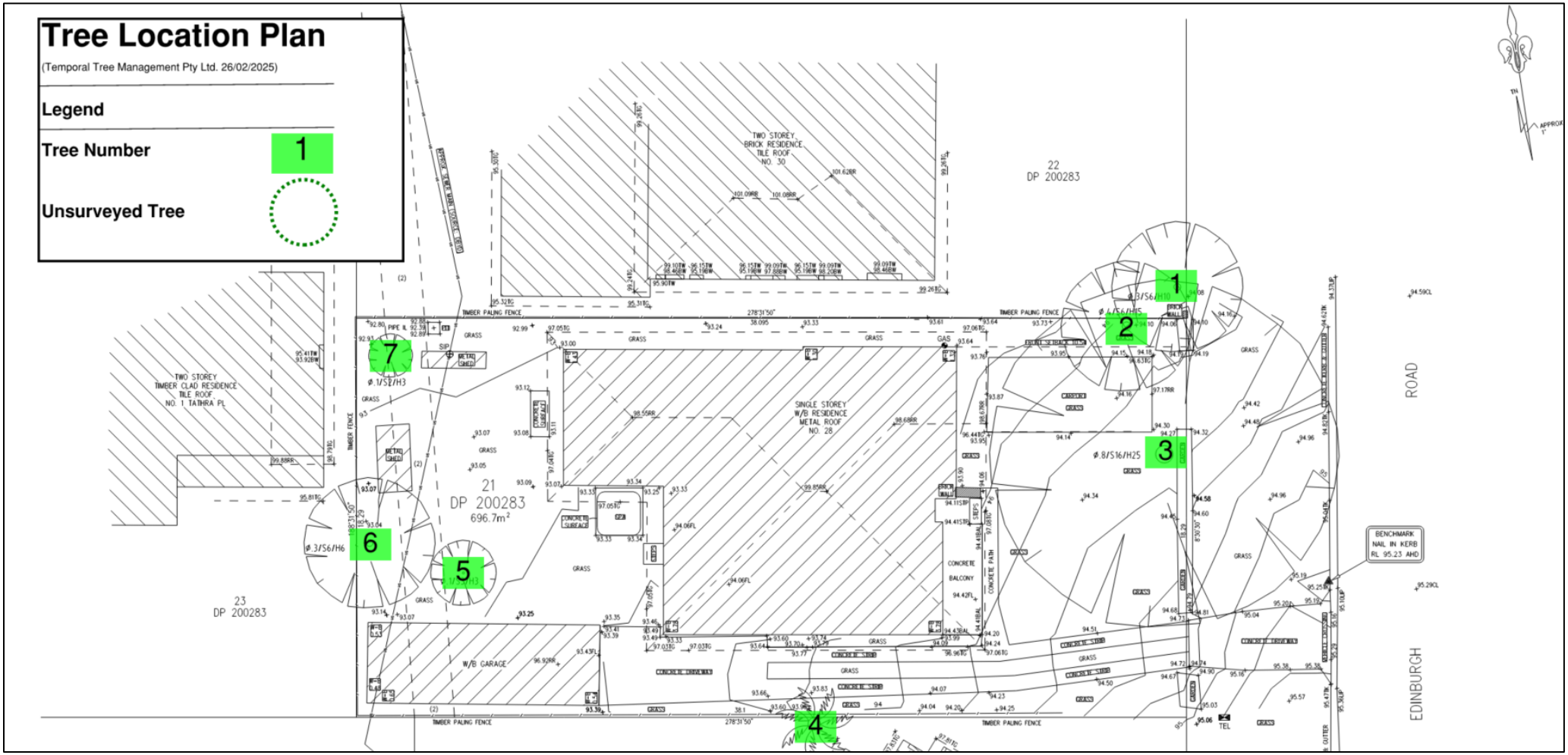


Figure 2. Tree Location Plan. Detail Survey prepared by *Total Surveying Solutions* (Job No: 240794, Drawing No: A000757, Revision: A1, drawn 09/12/2024). Annotated by Temporal Tree Management Pty Ltd. (26/02/2025).

Figure 3. Trees 1-4 positioned within and adjacent to the eastern portion of the subject site.

Figure 4. Trees 5-7 positioned within the western portion of the subject site.

3. Development Plans and Impact on Assessed Trees

The proposed development involves alteration and addition to the existing dwelling (Figure 5). A vehicle crossing, driveway and carport proposed to be built within and adjacent to the north-eastern boundary of the subject site. A new storage area is proposed to be built adjacent to the south-eastern corner of the dwelling and a new deck is proposed to be attached to the south-western corner. The existing driveway and detached garage are proposed to be demolished as art of the development (Figure 5).

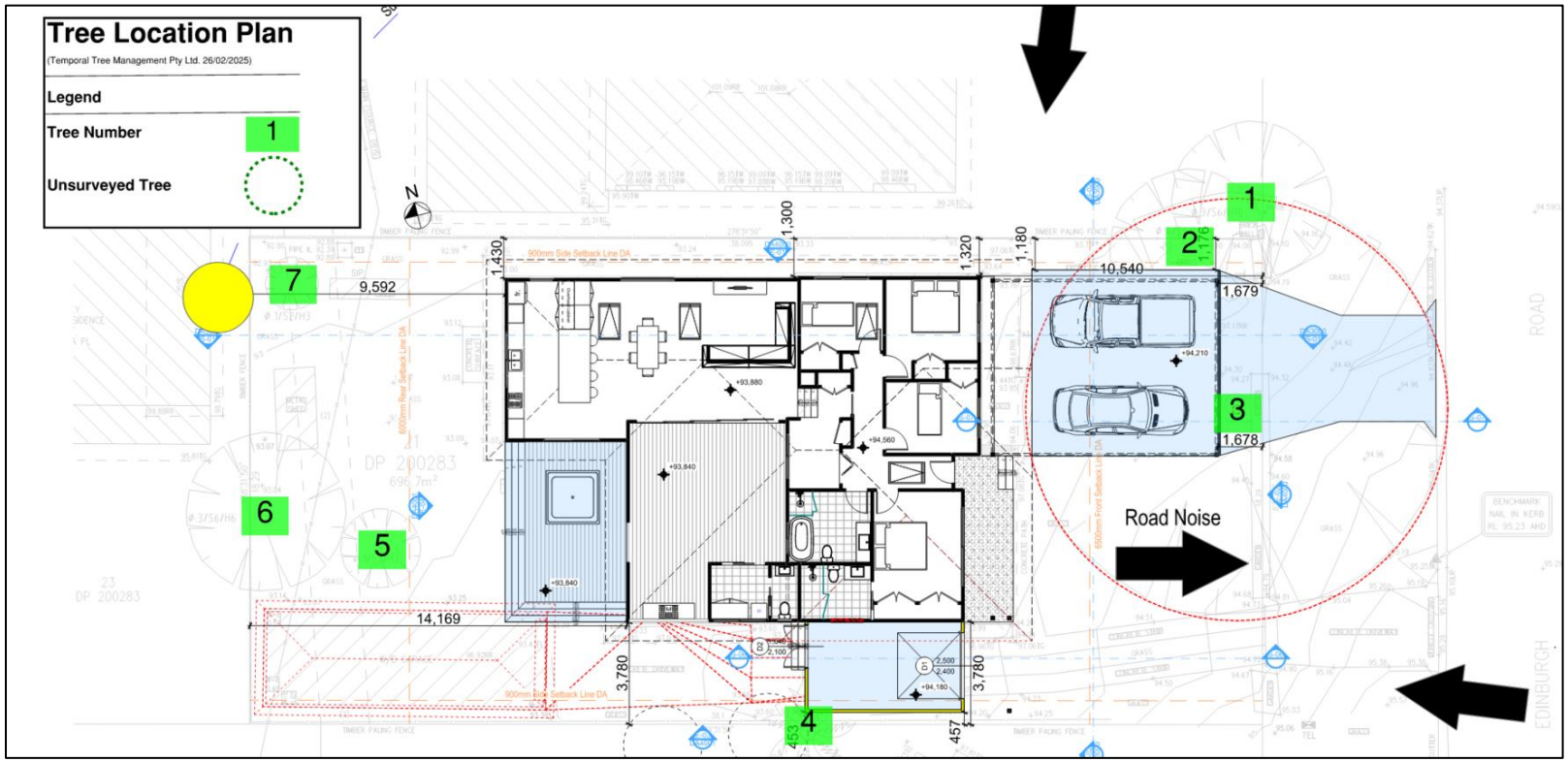


Figure 5. Site Plan, prepared by *Rapid Plans* (Project No: RP0919CER, Drawing No: DA1004, Revision: -, drawn 19/12/2024). Annotated by Temporal Tree Management Pty Ltd. (26/02/2025).

4. Preliminary Assessment

4.1 Assessment Methodology

A ground-based visual assessment of Trees 1-7 was undertaken by *Temporal Tree Management Pty Ltd* on 25/02/2025. The data collected includes:

Ø Tree Number: Tree schedule determined in Figure 1 and Figure 2.

Ø Scientific Name: Vegetation was identified and described using botanical names.

Ø Common Name: One common is provided.

Ø Maturity: **Juvenile, Semi – mature, Mature or Over Mature**. Judgement on these four categories was determined by professional knowledge and research on the species present.

Ø Height: Estimated in **metres**.

Ø Canopy Width: Diameter of canopy Estimated in **metres** as an average in metres of two directional planes (north-south and east-west).

Ø Diameter at Breast Height (DBH): DBH was measured at 1.4 metres height in **centimetres** using a diameter tape and is described in centimetres. DBH was estimated for Tree 1 due to restricted access into the neighbouring property.

Ø Diameter at Root Flare (DRF): DRF was measured in **centimetres** using a diameter tape at the height of the trees' root flare and is described in centimetres. DRF was estimated for Tree 1 due to restricted access into the neighbouring property.

Ø Health: **Dead, Poor, Fair, Good or Excellent**. Professional experience along with the visual vitality index established by Johnston et al. (2012) was used to underpin this category **(Appendix B).**

Ø Structure: **Failed, Very Poor, Poor, Fair, Good or Excellent**. Professional experience along with Visual Tree Assessment methodology established by Mattheck and Breloar (1994) was used.

Ø Useful Life Expectancy (ULE): This estimate provides an important estimate of a tree's remaining safe life span within a landscape (Barrell 1996). Estimates are based on species knowledge and an individual's structure, health and position within the landscape. ULE estimate categories used were: **Long** (>40 years), **Medium** (between 15 and 40 years), **Short** (between 5 and 15 years), **Negligible** (Less than 5 years) or **Dead** (less than 12 months). A framework for the ULE determination methodology is provided in **Appendix E** (Barrell 1996).

Ø Landscape Value: **Significant** (1), **Very High** (2), **High** (3), **Moderate** (4), **Low** (5), **Very Low** (6), **Insignificant** (7). These categories account for each tree's size, ecological significance as a food or habitat resource, structural integrity, visual prominence within the landscape and any additional heritage or protection controls that may be relevant to it. A framework for the Landscape Significance determination methodology is provided in **Appendix D** (Morton 2011).

Ø Retention Value: **High, Moderate, Low and Very Low**. ULE and Landscape Significance categories were used for each tree to determine their retention value (Figure 5). The retention and protection of trees determined to be of **High** retention value should be prioritised for any proposed development within the subject site. Trees determined to be of **Moderate** retention value should be retained and protected if feasible. The retention of trees determined to be of **Low** retention value should not obstruct any proposed development within the subject site. Tree determined to be of **Very Low** retention value should be removed as part of any development within the site. A framework and Matrix for the Retention Value priorities is provided in **Appendix C** (Morton 2011).

Ø Tree Protection Zone Radius (R_{TPZ}): A Tree Protection Zone is a circular area surrounding a tree that provides the principal means of protecting trees on development sites. Tree Protection Zones aim to prevent soil compaction, contamination and physical damage to trees above and below ground through the exclusion of all development activity from within the specified radius (Matheny and Clark 1994). A Tree Protection Zone (TPZ) radius (R_{TPZ}) may be calculated using the equation from the Australian Standard for the Protection of Trees on Development Sites (AS 4970 2009):

$$\mathbf{R_{(TPZ)} = DBH \times 12.}$$

As per *Section 3.2 of AS4970 (2009),* the RTPZ for palm specimens was calculated using the following equation:

$$R_{(TPZ)} = \text{Canopy radius} + 1 \text{ metre.}$$

Ø Structural Root Zone Radius (R_{SRZ}): This measure provides an indication of the portion of a tree's root plate that is considered fundamentally important for the maintenance of basal anchorage. The volume of root plate estimated within an SRZ is not related to the physiological viability of a tree (Mattheck and Breloer 1994). It is important to note that SRZ area is not an absolute figure. Rather, it is an estimate based on a line of best fit drawn from research relating to observation of tree failures within forested areas. The SRZ area must therefore be viewed as an approximation that may be smaller or greater in size depending on site conditions and the vitality of individual assessed trees.

No SRZ radius was calculated for assessed palm specimens as per *AS470 (2009).* An SRZ radius (R_{SRZ}) may be calculated using the equation from the *Australian Standard for the Protection of Trees on Development Sites* (AS 4970 2009):

$$R_{(SRZ)} = (DRF \times 50)^{0.42 \times} 0.64$$

The tree protection zone radius (R_{TPZs}) and structural root zone radius (R_{SRZs}) were calculated as *per Section 3 of AS4970 (2009)* (Figure 6). The R_{TPZ} and R_{SRZ} for the six assessed trees are provided in Table 1 and Figure 7.

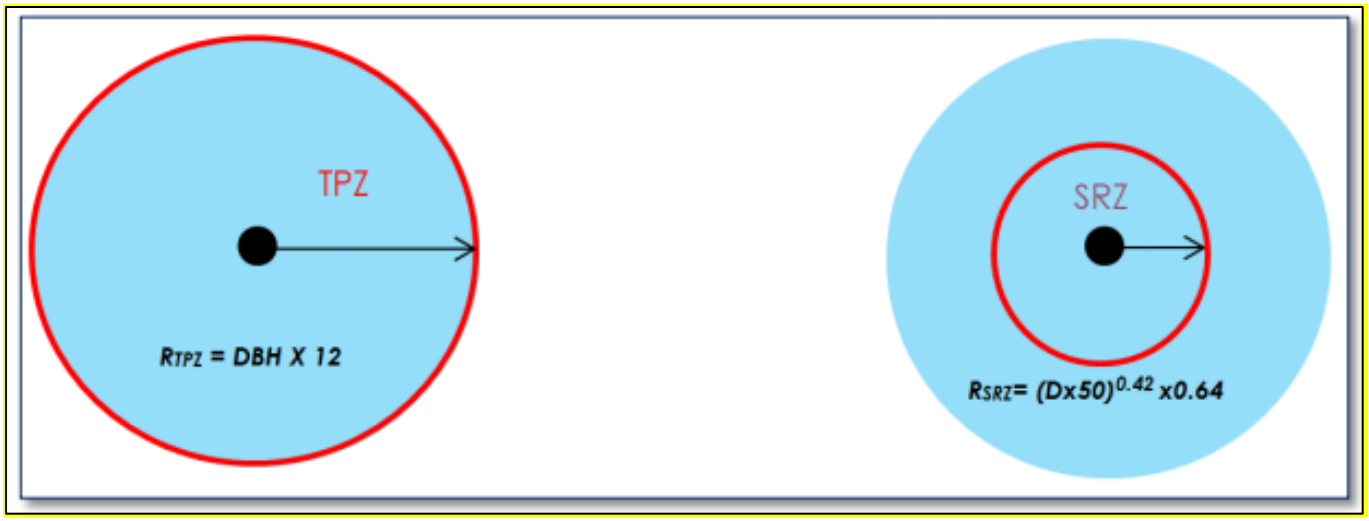


Figure 6. TPZ and SRZ radial measurement equations.

4.1 Tree Data

Table 1. Data collected on 25/02/2025 for seven assessed trees.

Tree	Scientific Name	Common Name	Maturity	Height (m)	Width (m)	DBH (cm)	DRF (cm)	Health	Structure	ULE	Landscape Significance	Retention Value	R_{TPZ} (m)	R_{SRZ} (m)	Comments
1	*Robinia pseudoacacia*	Black Locust	Mature	10	6	15	20	Good	Fair	Medium	High	Moderate	2.0	1.7	Medium-sized tree of low species value positioned 2.5 metres outside the north-eastern boundary of the subject site. External ownership renders low value tree of High Landscape Significance.
2	*Cupressus torulosa*	Bhutan Cypress	Mature	16	4	38	44	Good	Good	Medium	Low	Low	4.6	2.3	Large tree of reduced species value within LGA positioned inside the northern boundary of subject site. Tree partially suppressed by larger adjacent tree.
3	*Corymbia citriodora*	Lemon-scented Gum	Mature	23	15	79	93	Good	Good	Long	High	High	9.5	3.2	Large tree of native species value observed to be in good condition.
4	*Howea forsteriana*	Kentia Palm	Mature	7	4	15	25	Good	Fair	Short	Medium	Low	3.0	N/A	Medium-sized palm said reduced species value in LGA. Canopy with signs of dieback.
5	*Citrus reticulata*	Mandarin	Mature	3	3	15	20	Good	Fair	Medium	Low	Low	2.0	1.7	Small fruit tree of reduced species value.
6	*Murraya paniculata*	Orange Jessamine	Mature	6	5	27	35	Good	Fair	Medium	Low	Low	3.2	2.1	Small fruit tree of reduced species value.
7	*Citrus Xsoulangeana*	Sweet Orange	Mature	3	3	15	20	Good	Fair	Medium	Low	Low	2.0	1.7	Small fruit tree of reduced species value.

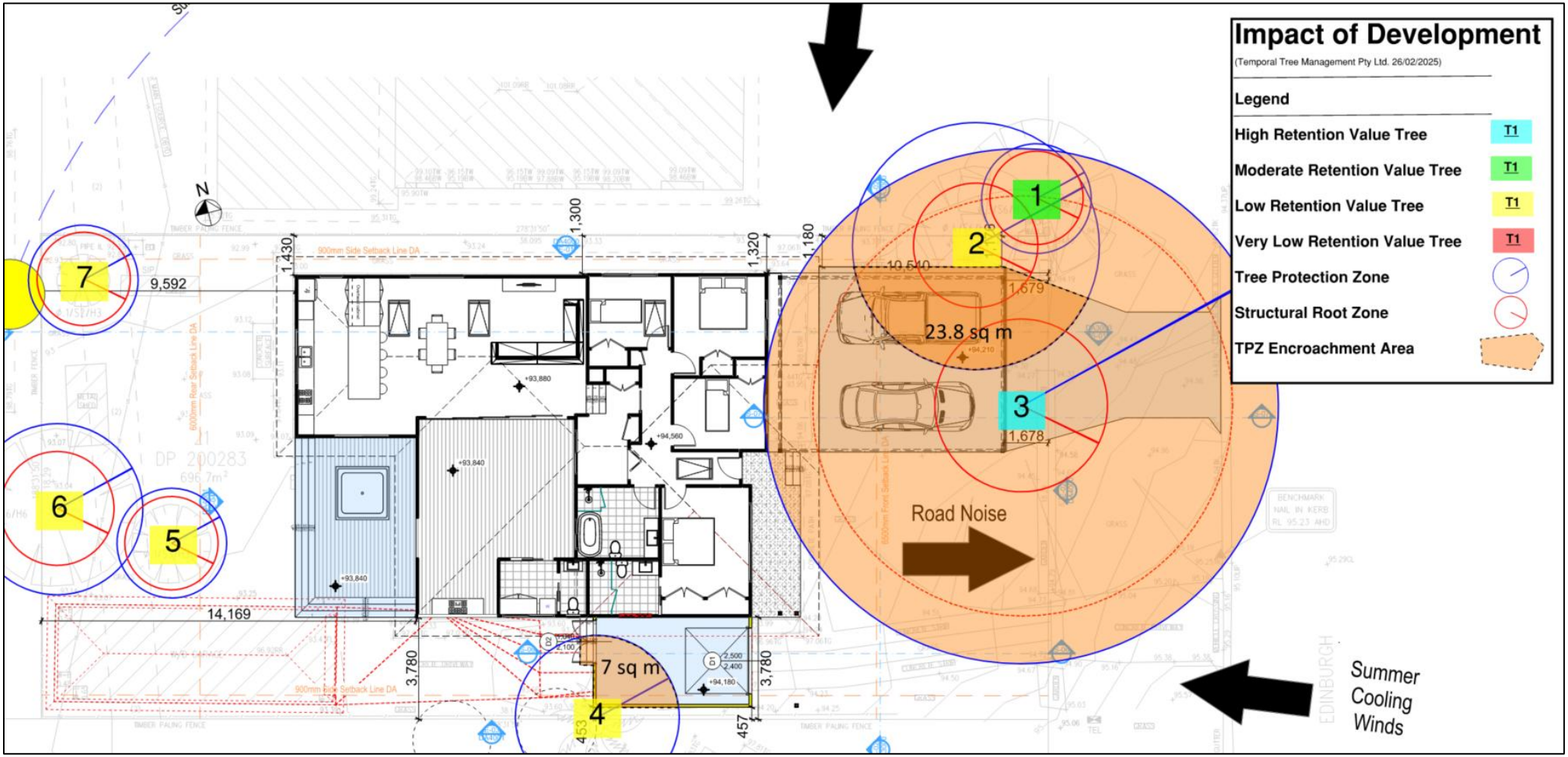


Figure 7. Retention values, TPZs, SRZs and Encroachments for seven trees positioned within the subject site. Site Plan, prepared by *Rapid Plans* (Project No: RP0919CER, Drawing No: DA1004, Revision: -, drawn 19/12/2024). Annotated by Temporal Tree Management Pty Ltd. (26/02/2025).

5. Tree Retention Values

Table 2. Summarised retention value data for seven trees assessed on 10/02/2025 within the subject site.

Retention Values Determined for Seven Assessed Trees			
Very Low	Low	Moderate	High
N/A	Trees 2, 4, 5, 6 and 7	Tree 1	Tree 3

Of the seven assessed trees, one was determined to be of High Retention Value within the surrounding landscape, one was determined to be of Moderate Retention Value, five were determined to be of Low Retention Value and none were of Very Low Retention Value.

Tree 3 was determined to be of High Retention Value within the surrounding landscape. This large tree is of native species value and is visually prominent within the landscape. This underpinned the High Landscape Significance determined for it. Tree 3 was observed to be in good condition, which underpinned the Long ULE estimates determined for it. Tree 3 should be retained and protected as part of the proposed development. If removal is required, Tree 3 must be suitably replaced as part of the Landscape Plan for the proposed development.

Tree 1 was determined to be of Moderate retention value within the surrounding landscape. Despite its low species significance, Tree 1 was determined to be of High Landscape Significance due to its external ownership. A shortened ULE was determined for Tree 1 due to its reduced species life span and low species significance. Tree 1 should be retained if feasible.

Trees 2, 4, 5, 6, and 7 were determined to be of Low retention value. All five trees are of species that are listed in *Table 1 – Exemption Species* of *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025). Their low species value in the Northern Beaches Council LGA underpinned the Low Landscape Significance determined for these five trees. The retention of Trees 2, 4, 5, 6, and 7 and should not obstruct or require alteration of the proposed development. These five trees are suitable for removal and replacement if required.

6. Impact of Development

6.1 TPZ Encroachments

A TPZ encroachment is the proportional area of a tree's TPZ that will be absorbed, disturbed or exposed as part of a development. As defined in *Sections 3.3.2 and 3.3.3 of AS4970 (2009),* minor TPZ encroachments absorb less than 10% of a trees' TPZ area while major encroachments exceed 10%.

Minor encroachments of less than 10% of the total TPZ area may occur without the site presence of the Project Arborist providing there is an equal compensation of protected area elsewhere adjacent to the TPZ. The potential impact on the viability of tree with a TPZ encroachment that is less than 10% is unlikely to impact the viability of a tree and is defined as Low in this assessment.

Major encroachments of more than 10% of the total TPZ area may occur if it can be demonstrated that the impact of the encroachment is mitigated or won't impact the viability of the affected tree. The impact of a major TPZ encroachment that is between 10-20% is defined as Moderate in this assessment and is generally considered to be acceptable providing the tree's condition is shown to be Good/Fair, it can be shown that the affected tree will remain viable. The impact on the viability of tree with a major TPZ encroachment that is between 20-30% is defined as High in this assessment. The impact of a major encroachment within this range may compromise the viability of an impacted tree. Retention under a High impact major TPZ encroachment must demonstrate mitigation of impact from existing infrastructure and / or demonstrate it through a Root Mapping Assessment to show that the affected tree will remain viable. Modification of the design plan may be required to mitigate the impact of the encroaching structure. There must also be an equal compensation of protected area elsewhere adjacent to the TPZ.

The impact on the viability of tree with a major TPZ encroachment that is greater than 30% is defined as Severe in this assessment. Major encroachments of this magnitude are likely to impact a tree's health and may impact the structural integrity of their root plate. Retention under such encroachments is unacceptable unless there will be significant mitigation of impact from existing infrastructure and / or it can be shown through a Root Mapping Assessment and significant mitigation of the impact. Modification of the design plan may be required to mitigate the impact of the encroaching structure. There must also be an equal compensation of protected area elsewhere adjacent to the TPZ. Existing structural features that will remain unchanged or require no additional excavation were not included in the encroachments calculated for the nine assessed trees.

6.3. Impact of Proposed Works on Assessed Trees

Table 3. Summarized impacts of TPZ encroachments associated with the proposed development calculated for Trees 1-7. Existing structures within the TPZs of assessed trees that will not be altered under the proposed design plans were not included in the encroachment calculations determined for each tree.

Tree	SRZ Encroached	Encroachment (%)	Impact	Mitigation	Proposed Management
1	N/A	**0**	N/A	Tree will not be directly impacted by proposed development.	**Retain.** Tree can be retained without the installation of tree protection measures.
2	N/A	**36**	Severe	Tree will sustain a major encroachment within the southern portion of its TPZ during excavation for the proposed carport and driveway. This encroachment will breach this tree's SRZ. The level of encroachment and close proximity of proposed excavation to the tree's stem is likley to compromise its viability within the landscape.	**Remove.** Tree will require removal to facilitate the proposed development.
3	N/A	**100**	Total	Tree's stem is positioned within the footprint of the proposed vehicle crossing and driveway.	**Remove.** Tree will require removal to facilitate the proposed development.
4	N/A	**25**	High	Palm will sustain a major encroachment within the northern portion of its TPZ during excavation for the proposed addition. The level of encroachment and close proximity of proposed excavation to the palm's stem is likley to compromise its viability within the landscape.	**Remove.** Tree will require removal to facilitate the proposed development.
5	N/A	**0**	N/A	Tree will not be directly impacted by proposed development.	**Retain.** Install tree protection measures compliant with Section 4 of AS4970 (2009).
6	N/A	**0**	N/A	Tree will not be directly impacted by proposed development.	**Retain.** Install tree protection measures compliant with Section 4 of AS4970 (2009).
7	N/A	**0**	N/A	Tree will not be directly impacted by proposed development.	**Retain.** Install tree protection measures compliant with Section 4 of AS4970 (2009).

7. Tree Protection / Removal Plan

7.1. Proposed Tree Removal / Pruning

Trees 2, 3 and 4 are proposed for removal as part of the proposed development. Tree 3 is within the footprint of the proposed vehicle crossing and cannot be retained under the proposed design. Trees 2 and 4 will sustain major encroachments within their TPZs that are likely to negatively impact their viability within the landscape (Figure 7) (Table 3). These three trees will require removal to facilitate the proposed development.

Trees 2 and 4 were determined to be of Low Retention Value in Section 4.2 of this report due to their low species value within the Northern Beaches Council LGA (Table 1). The removal of these two trees as part of the proposed development is supported in this assessment. Tree 3 was determined to be of High Retention Value. This large tree must be suitably replaced as part of the landscape plan for the proposed development. It is recommended that Tree 3 is replaced with at least one specimen of an indigenous or native species that is capable of reaching a mature height of no less than 20 metres or two specimens of native or indigenous species capable of reaching a mature height of 12 metres. The replacement specimens must be positioned within the subject site to ensure their ULEs are entirely fulfilled. The replacement trees must come in a 45L pot and in compliance with *the Australian Standard for Tree Stock for Landscape Use (AS 2303 2015).*

Trees 2 and 4 are positioned within the property boundaries of the subject site and are of species that are listed in *Table 1 – Exemption Species* of *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025). Trees 2 and 4 may therefore be removed without prior consent from Northern Beaches Council. Tree 3 is a scheduled tree under *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (WDCP 2011) (Northern Beaches Council 2025). Prior approval for the removal of this tree must be obtained from Northern Beaches Council as part of the consent conditions for the proposed development.

If approved, proposed tree removal works should be undertaken by a suitably qualified arborist (minimum AQF Level 3) and in compliance with the *Work Safe Guide to Managing Risks of Tree Trimming and Removal Work (2016).* All tree removal work must stop, and an ecologist suitably qualified in animal handling must be contacted immediately if any nesting birds or arboreal mammals are encountered during the removal works. Continuation of works must be guided by the ecologist.

7.2. Tree Protection Measures

Fenced protection zones must be established where possible to delineate construction activities from the TPZs and SRZs of retained trees. Fenced protection zones must be enclosed by 1.8 metre steel fencing that is securely fixed to the ground as stated in *Section 4.3 of AS4970 (2009)* (Figure 8). Shade cloth must be securely fastened to the steel fencing to reduce transport of dust and debris into tree protection areas. Plywood may be used as an alternative if steel fencing cannot be suitably installed.

Signage stating the purpose of these exclusion zones should be fixed to the fencing so that it is visible from all points within the site. Coarse-grained wood-chip mulch may be required within a fenced protection zone if specified. Bracing is permissible within the fenced protection zone providing supports avoid any damage to surface roots.

As per *Section 4.2 of AS4970 (2009),* the following activities are not permitted inside delineated protection zones:

(a) Machine excavation including trenching;
(b) Excavation for silt fencing;
(c) cultivation;
(d) storage;
(e) preparation of chemicals, including preparation of cement products;
(f) parking of vehicles and plant;
(g) refuelling;
(h) dumping of waste;
(i) wash down and cleaning of equipment;
(j) placement of fill
(k) lighting of fires;
(l) soil level changes;
(m) temporary or permanent installation of utilities and signs, and
(n) physical damage to the tree."

Once installed, fenced tree protection zones must remain undisturbed for the duration of proposed development works. No services either temporary or permanent are to be located within a specified fenced protection zone. If services are to be located within a Tree Protection Zone, special details will need to be provided by the Project Arborist for tree protection regarding the location of services.

Figure 8. Protection fencing should be erected around the specified perimeter of TPZs in accordance with Section 4.3 of *AS4970 (2009).* Figure 8 a. depicts correctly installed steel or plywood fence panelling (1 and 2) with mulch inside the protection area (3). Figure 8 b. shows depicts protection fencing signage.

Where specified, stem protection measures must be installed on retained trees in situations where the establishment of protection fencing is not feasible. Stem protection measures compliant with *Section 4.5.2 of AS4970 (2009)* may be installed using hessian or carpet underlay padding wrapped around the trees' stems and fixed in place using duct tape. Timber battens (20mm x 100mm) must then be spaced no greater than 150 mm around the stems and fixed to one another using steel strapping. Timber battens must not be fixed directly to the trees' stems (Figure 9).

Temporary access within a fenced protection zone may only occur under the supervision of the Project Arborist. The installation of ground protection measures compliant with *Section 4.5.3 of AS4970 (2009*) is required if any vehicles or machinery is required to temporarily access a specified fenced protection zone. In such cases, a geotextile membrane must be installed over the specified ground protection area. Coarse-grained wood-chip mulch must be installed to a depth of no less than 70mm and no more than 100 mm over the geotextile membrane. Timber rumble boards or heavy

vehicle protection plates/mats must then be installed over the mulch (Figure 9). Ground protection measures must remain in place for the entire duration of required vehicle or machinery access within a fenced protection zone. Protection fencing must be reinstalled to its original shape immediately after the completion of required works within the fenced protection zone.

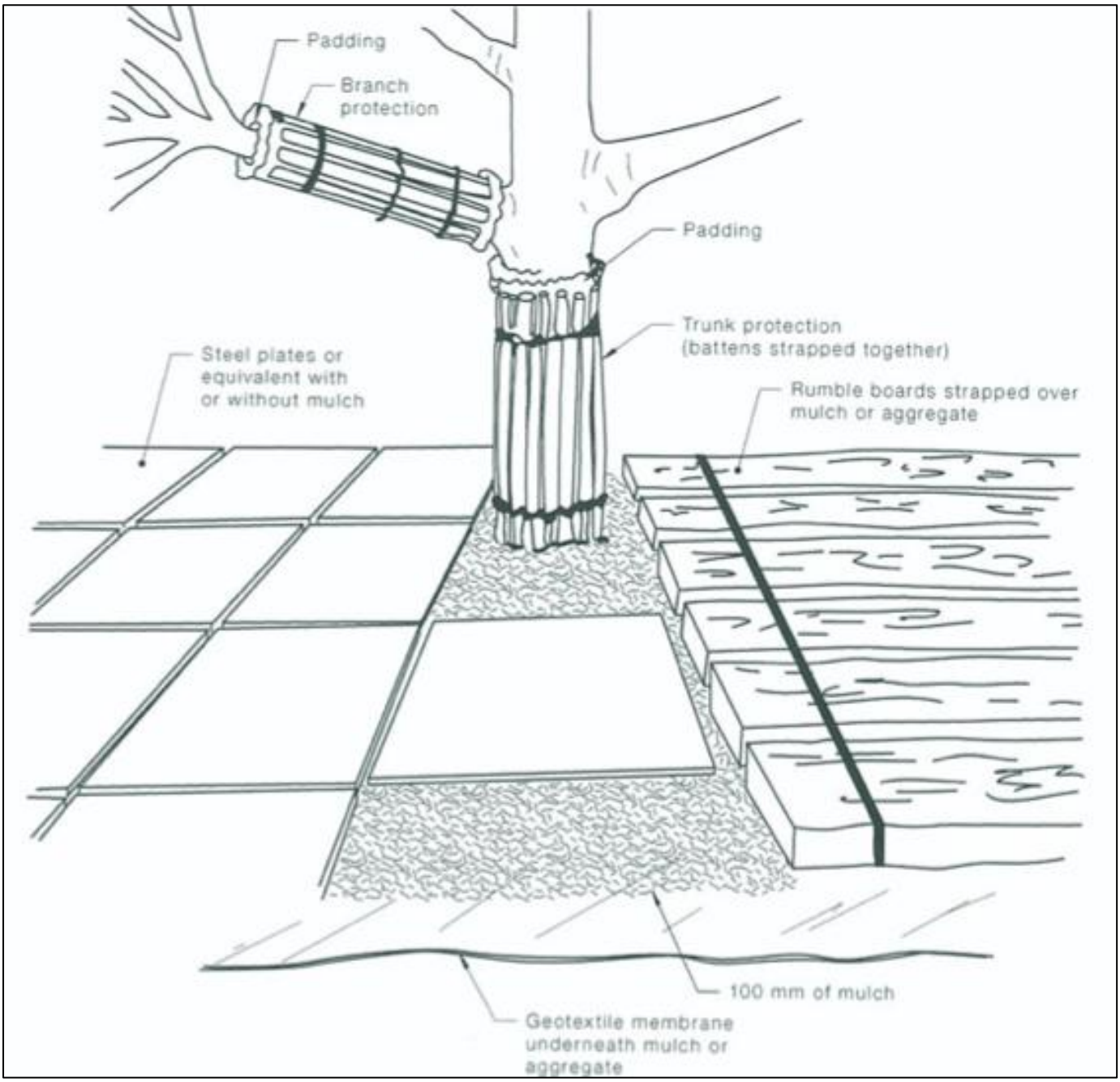


Figure 9. Stem and ground protection measures specified in Section 4.5.3 of *AS4970 (2009)* for temporary access within a fenced protection zone. Steel plates or rumble boards are shown to be suitable for ground protection over mulch and geotextile fabric.

7.3. Tree Protection Plan

Trees 1, 5, 6 and 7 are proposed for retention. These four trees will not be directly impacted by the proposed works (Table 3). The retention of these four trees as part of the development is supported providing the following protection measures are in implemented:

7.3.1. Prior to Commencement of Practical Works

- A Project Arborist must be engaged prior to the commencement of practical works and remain in place for the duration of this development to ensure ongoing compliance with the requirements outlined in Section 7 of this report.
- Tree 1 is positioned outside the north-eastern boundary of the subject site and can be suitably retained without the installation of tree protection measures.
- Two fenced protection zones compliant with the specifications outlined in *Section 4.3* of *AS4970 (2009)* must be installed around Tree 2, Tree 3 and Tree 5 (Figure 8 and Figure 10).
- Tree protection fencing must be installed prior to the commencement of practical works.
- The R_{TPZs} of retained trees must be used to establish the fenced protection zone boundaries wherever possible (Figure 10).
- Protection fencing must be established no less than 500mm from the nearest proposed structure or surface when the R_{TPZ} boundaries cannot be reached.
- TPZ signage compliant with *Section 4.4 of AS4970 (2009)* must be installed on all three fenced protection zones (Figure 8.b.).

7.3.2. During Construction Works

- Fenced protection zones must remain in place for the duration of the development. Any required access within one of the fenced protection zones must be approved by the Project Arborist prior to entry.
- Suitable ground or stem protection measures must be temporarily installed for the duration of required access as specified in *Sections 4.5.2 and 4.5.3 of AS4970 (2009)* (Figure 9).
- There must be no major root (diameter of 40mm or greater) damage or disturbance during the excavation within the R_{TPZs} of retained trees. Any major roots identified must be preserved and inspected by the Project Arborist prior to any further works.
- Minor root pruning of retained trees is only considered to be suitable if design amendments are not possible. All major root cutting must be undertaken by the Project Arborist using a handsaw in compliance with *AS4373 (2007)* (p. 18).

- Documentation of all supervised excavation and any encountered major roots, and an ongoing monitoring schedule for all affected trees must be provided by the Project Arborist as part of the final arboricultural checklist.
- New utility services are to be located outside the R_{TPZs} of retained trees. Any additional excavation required for service installation within a retained tree's R_{TPZ} must be assessed and certified by the Project Arborist.

7.3.3. Post Construction - Landscaping

- Where required, excavation for landscape planting within a retained Tree's TPZ must be undertaken using hand tools only.
- It is recommended that tree replacement specifications outlined in Section 7.1 of this report are adhered to. Tree(s) should be positioned within the western and / or south-eastern boundary of the subject site (Figure 10).

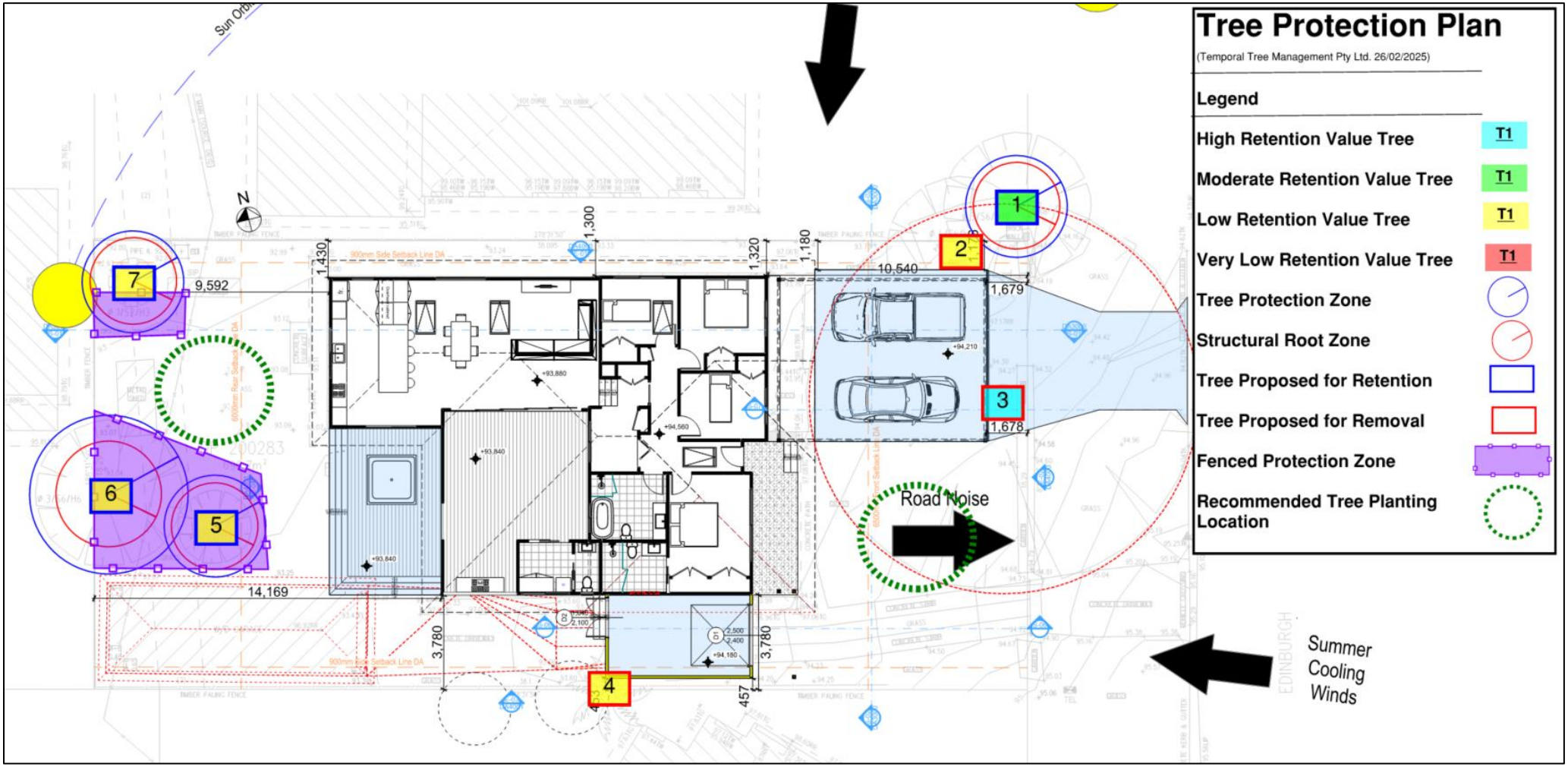


Figure 10. Tree Protection / Removal Plan for proposed development. Site Plan, prepared by *Rapid Plans* (Project No: RP0919CER, Drawing No: DA1004, Revision: -, drawn 19/12/2024). Annotated by Temporal Tree Management Pty Ltd. (26/02/2025).

7.4. Certifications

To ensure the proposed development meets the objectives of the Tree Removal/Protection Plan, monitoring and certification process will be undertaken at the following hold points in line with *AS4970 (2009).*

· Installation of Tree Protection Measures – Inspection and certification by the Project Arborist of the three fenced protection zones as specified in the Tree Protection Plan (Section 7.3 of this report) (Figure 10). This hold point must be complete prior to the commencement of any practical works. Inspection of the removal of only Trees 2, 3 and 4 must also be undertaken at this time.

· Certification of Required Root Pruning–Any major roots that require pruning must be assessed and, if deemed suitable, severed by the Project Arborist using a hand saw as specified in *Section 3.3.3 of AS4970 (2009*) and *AS4373 (2007) (*p. 18). This hold point must be carried at any stage during the development as required.

· Monitoring of Retained Trees– Regular inspection and certification by the Project Arborist of tree protection measures and condition of retained trees. Any required maintenance of the tree protection measures or retained trees must be undertaken by the Project Arborist at this time.

· Final Project Arborist Inspection– Final inspection by Project Arborist and certification of compliance with the Tree Protection Plan as specified in Section 7.3 of this report. All specified protection measures outlined in Section 7.3. must remain in place until this final inspection. Inspection of the suitable replacement tree planting for Tree 3 should be undertaken at this time.

References:

Australian Standard AS 4970 (2009) Protection of trees on development sites. Standards Australia.

Johnstone, D., Tausz, M., Moore, G. and Nicolas, M. (2012) Chlorophyll florescence of the trunk rather than leaves indicates visual vitality in *Eucalyptus saligna.* Published online via Springer; Trees.

Mattheck, C. and Breloer, H. (1994) A practical guide for tree inspection (Chapter 14). The Body Language of Trees, HMSO, London.

Morton, A. (2011) Tree Retention Values Assessment Methodolgy. Accessed via Leichardt Council Tree Technical Manual: file:///C:/Users/WD/Downloads/Tree%20Management%20Technical%20Manual.pdf (26/02/2025).

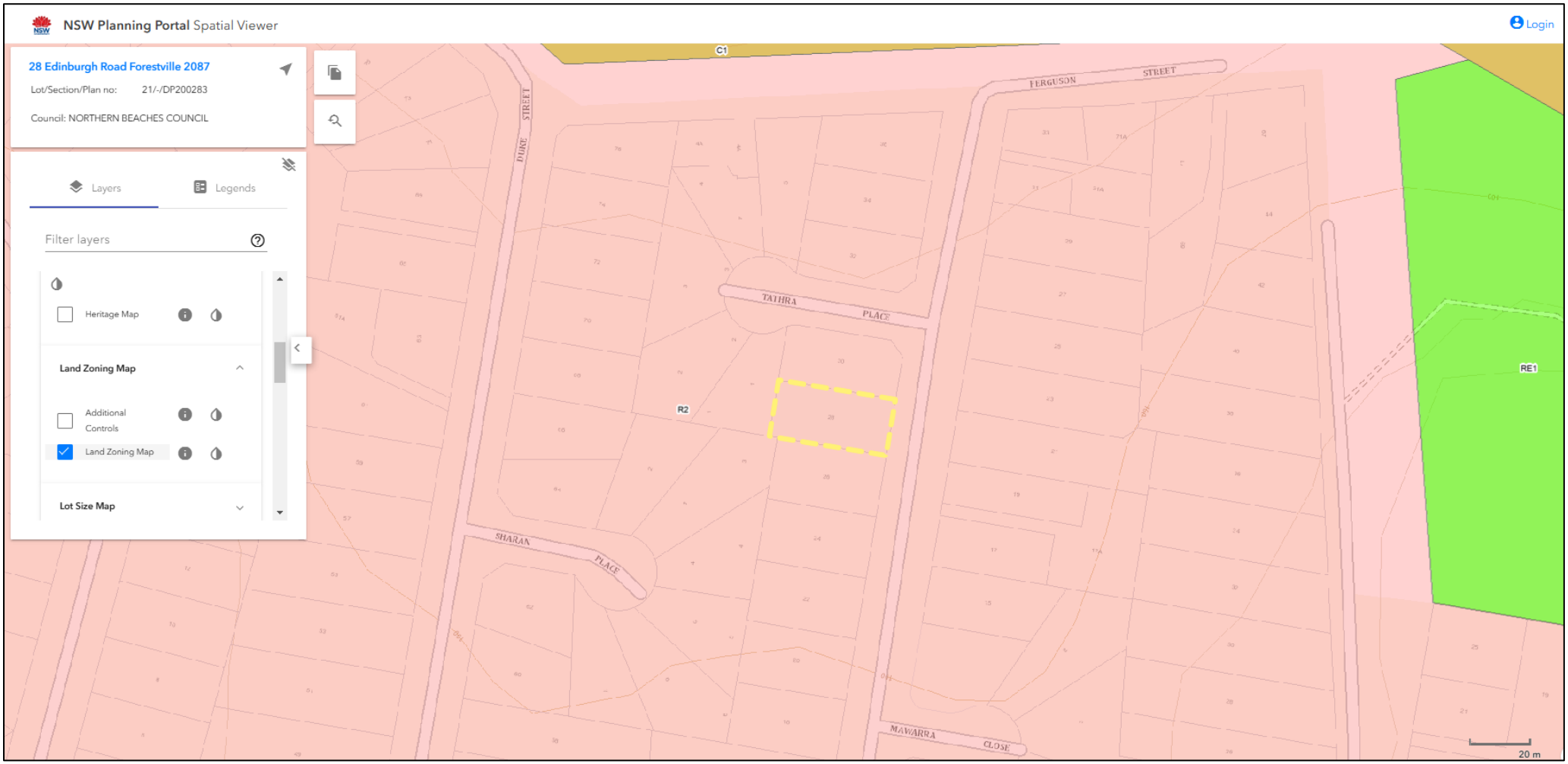
Northern Beaches Council (2025) *Part E – The Natural Environment, Chapter 1 – Preservation of Trees or Bushland Vegetation* of the Warringah Development Control Plan (2011). Accessed via: https://www.northernbeaches.nsw.gov.au/planning-and-development/planning-controls (26/02/2025).

Northern Beaches Council (2025) Warringah Local Environmental Plan (2011). Accessed via: https://www.northernbeaches.nsw.gov.au/planning-and-development/planning-controls (26/02/2025).

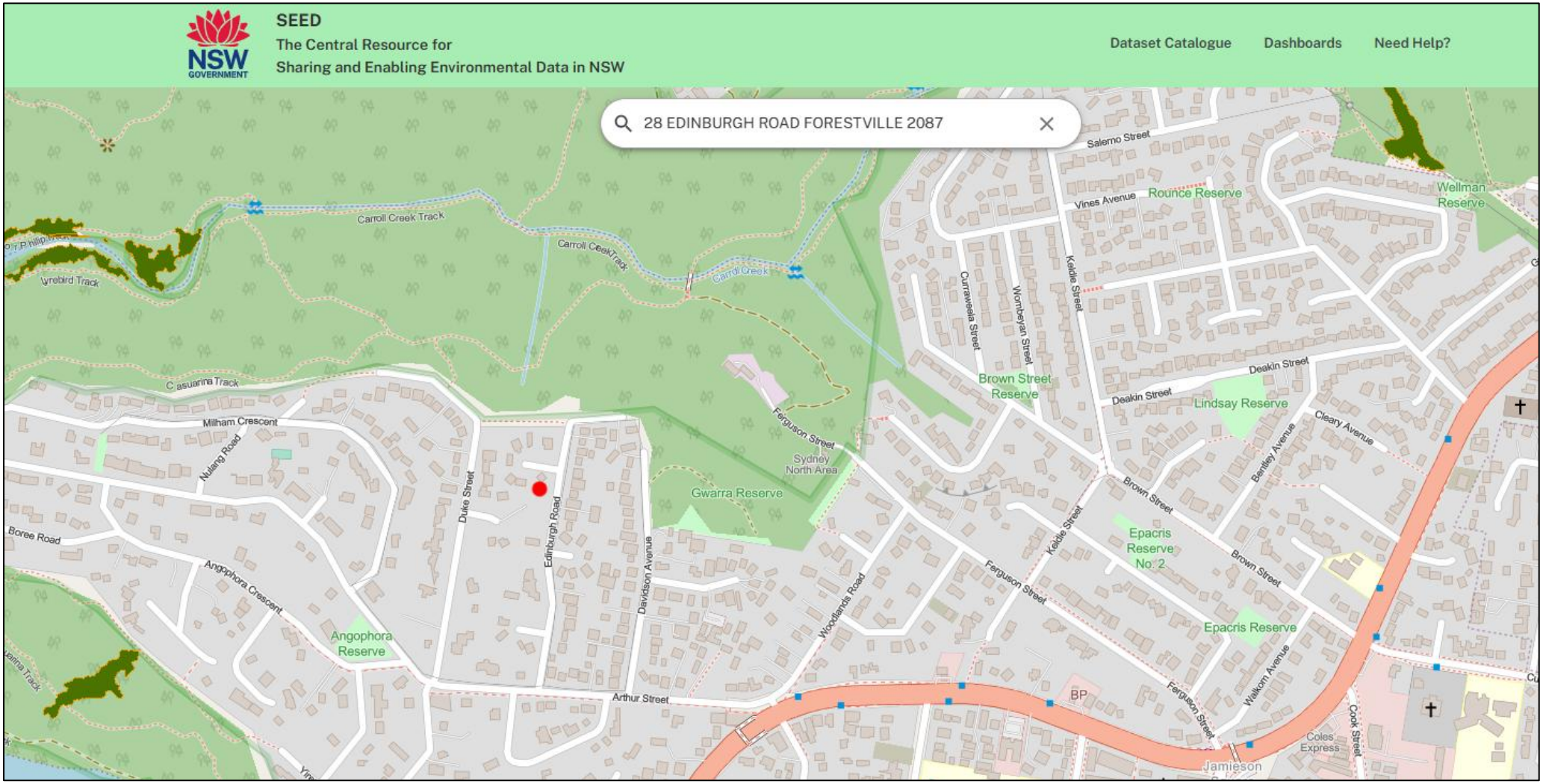
NSW Government SEED Initiative (2025) The Central Resource for Sharing and Enabling Environmental Data in NSW. Accessed from: https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU (26/02/2025).

Planning New South Wales (2025). Property Portal. Accessed from https://www.planningportal.nsw.gov.au/find-a- https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address (26/02/2025).

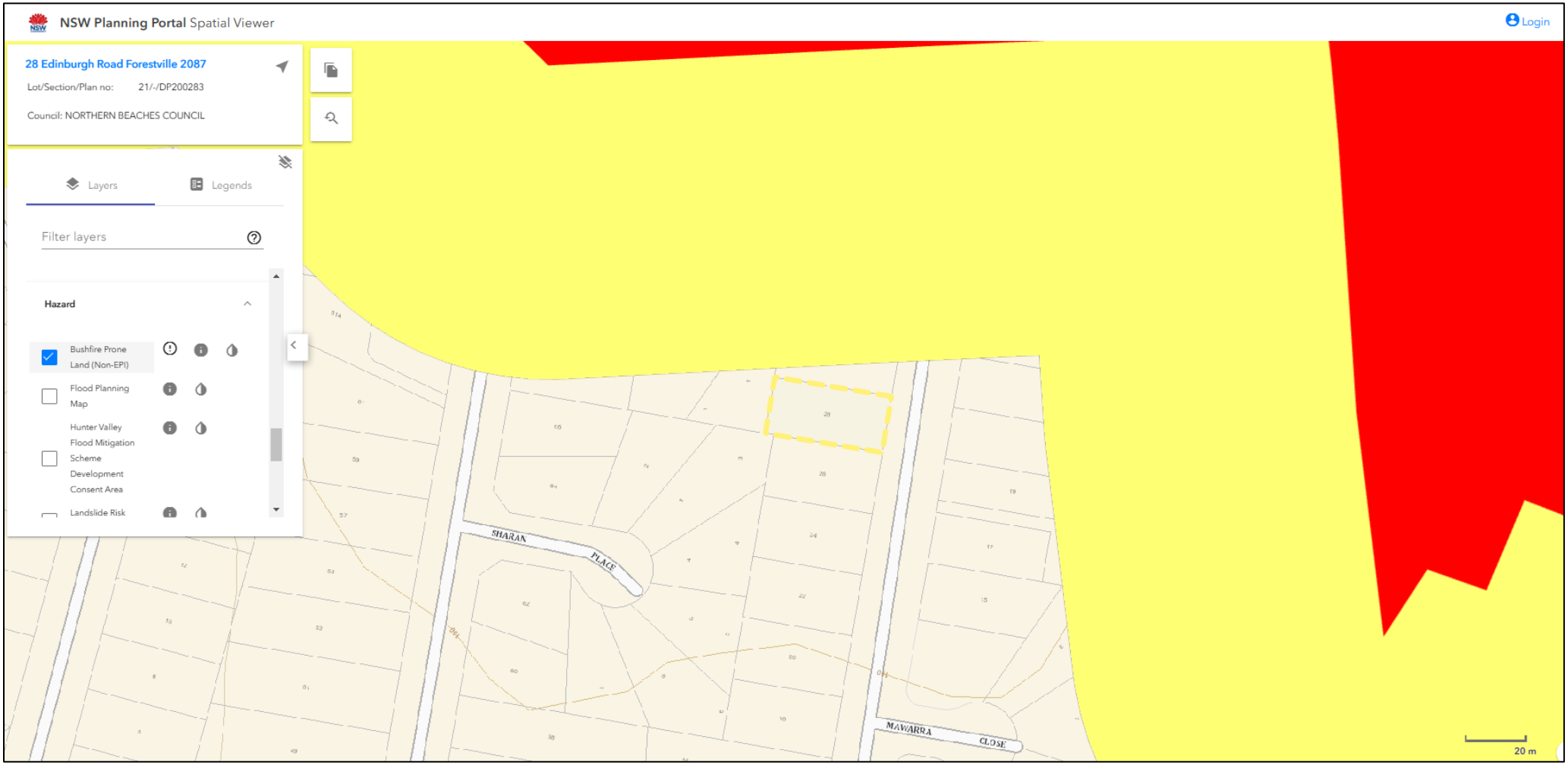
Appendix A: Site Location Maps



Subject site (Yellow boundary) positioned within R2 Low-density Residential zone. Image sourced from Planning NSW (2025).



Subject site (RED dot) is not positioned within a Threatened Ecological Community (GREED polygon). Image sourced from Planning NSW (2025).

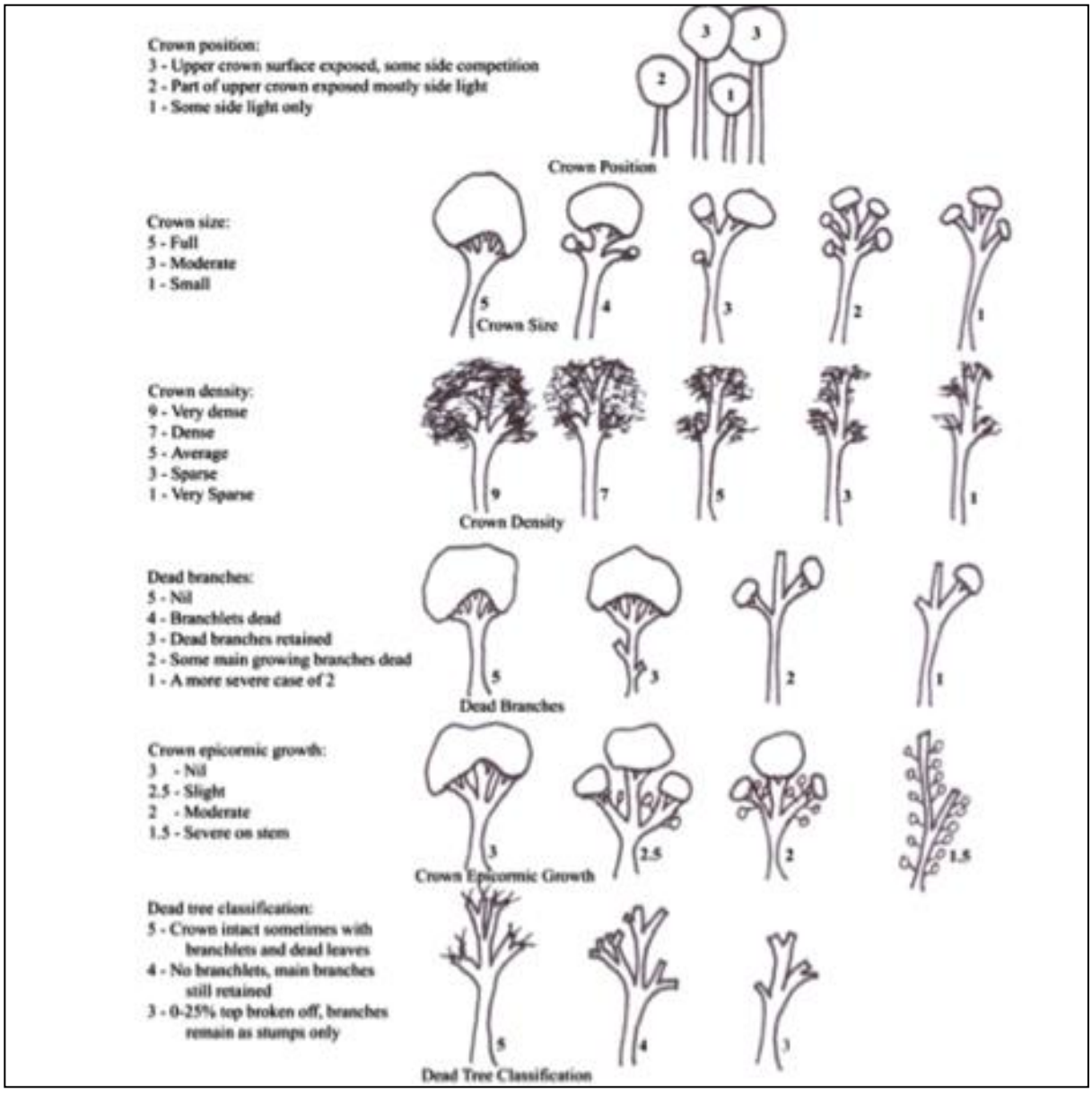


Subject site (Yellow boundary) is positioned adjacent to but is not within a Bushfire Prone Land zone (YELLOW and RED polygons). Image sourced from Planning NSW (2025).

Appendix B: Vitality using Visual Vitality Index (Johnstone et al. 2012).

VVI = 3/3 (Upper crown exposed) + 5/5 (Good crown size) + 8/9 (Good crown density) + 4/5 (Very little deadwood) + 2/3 (Moderate epicormic growth) + 5/5 (Crown in tact).

=26/30.



Appendix C: Tree Retention Values Priority Requirements

From Morton (2011). Accessed via the Leichardt Council Tree Technical Manual.

Retention value	Recommended action
"High"	• These trees are considered worthy of preservation; as such careful consideration should be given to their retention as a priority. • Proposed site design and placement of buildings and infrastructure should consider the Tree Protection Zones as discussed in the following sections to minimise any adverse impact. • In addition to Tree Protection Zones, the extent of the canopy (canopy drip-line) should also be considered, particularly in relation to high rise developments. Significant pruning of the trees to accommodate the building envelope or temporary scaffolding is generally not acceptable.
"Moderate"	• The retention of these trees is desirable. • These trees should be retained as part of any proposed development if possible, however these trees are considered less critical for retention. • If these trees must be removed, replacement planting should be considered in accordance with Council's Tree Replacement Policy to compensate for loss of amenity.
"Low"	• These trees are not considered to worthy of any special measures to ensure their preservation, due to current health, condition or suitability. They do not have any special ecological, heritage or amenity value, or these values are substantially diminished due to their SULE. • These trees should not be considered as a constraint to the future development of the site.
"Very Low"	• These trees are considered potentially hazardous or very poor specimens, or may be environmental or noxious weeds. • The removal of these trees is therefore recommended regardless of the implications of any proposed development.

Appendix C: Tree Retention Values Methodology

From Morton (2011)

	Landscape Significance Reading						
Tree Sustainability	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Greater than 40 years	**High Retention Value**						
15 to 40 years			**Moderate**				
5 to 15 years				**Low**			
Less than 5 years					**Very Low Retention Value**		
Dead or hazardous							

Appendix D: Landscape Significance Definitions

From Morton (2011). Accessed via the Leichardt Council Tree Technical Manual.

Rating	Heritage value	Ecological value	Amenity value
1. SIGNIFICANT	The subject site is listed as a Heritage Item under the Local Environment Plan (LEP) with a local, state or national level of significance or is listed as a Significant Tree.	The subject tree is scheduled as a Threatened Species as defined under the *Threatened Species Conservation Act 1995 (NSW)* or the *Environmental Protection and Biodiversity Conservation Act 1999.*	The subject tree has a very large live crown size exceeding 100m² with normal to dense foliage cover, is located in a visually prominent position in the landscape, exhibits very good form and habit typical of the species.
	The subject tree forms part of the curtilage of a Heritage Item (building /structure /artefact as defined under the LEP) and has important association with that item.	The tree is a locally indigenous species, representative of the original vegetation of the area and is known as an important food, shelter or nesting tree for endangered or threatened fauna species.	The subject tree makes a significant contribution to the amenity and visual character of the area by creating a sense of place or creating a sense of identity.
	The subject tree is a Commemorative Planting having been planted by an important historical person (s) or to commemorate an important historical event.	The subject tree is a Remnant Tree, being a tree in existence prior to development of the area.	The tree is visually prominent in view from surrounding areas, being a landmark or visible from a considerable distance.
2. VERY HIGH	The tree has a strong historical association with a Heritage Item (building/structure/artefact/garden etc) within or adjacent the property and/or exemplifies a particular era or style of landscape design associated with the original development of the site.	The tree is a locally-indigenous species, representative of the original vegetation of the area and is a dominant or associated canopy species of an Endangered Ecological Community (EEC) formerly occurring in the area occupied by the site.	The subject tree has a very large live crown size exceeding 60m²; a crown density exceeding 70% (normal-dense), is a very good representative of the species in terms of its form and branching habit or is aesthetically distinctive and makes a positive contribution to the visual character and the amenity of the area.

Rating	Heritage value	Ecological value	Amenity value
3. HIGH	The tree has a suspected historical association with a heritage item or landscape supported by anecdotal or visual evidence.	The tree is a locally-indigenous species and representative of the original vegetation of the area and the tree is located within a defined Vegetation Link / Wildlife Corridor or has known wildlife habitat value.	The tree is a good representative of the species in terms of its form and branching habit with minor deviations from normal (e.g. crown distortion/suppression) with a crown density of at least 70% (normal); the subject tree is visible from the street and/or surrounding properties and makes a positive contribution to the visual character and the amenity of the area.
4. MODERATE	The tree has no known or suspected historical association, but does not detract or diminish the value of the item and is sympathetic to the original era of planting.	The subject tree is a non-local native or exotic species that is protected under the provisions of this Development Control Plan.	The subject tree has a medium live crown size exceeding 25m²; the tree is a fair representative of the species, exhibiting moderate deviations from typical form (distortion/suppression etc) with a crown density of more than 50% (thinning to normal); and The tree is visible from surrounding properties, but is not visually prominent – view may be partially obscured by other vegetation or built forms. The tree makes a fair contribution to the visual character and amenity of the area.
5. LOW	The subject tree detracts from heritage values or diminishes the value of a Heritage Item.	The subject tree is scheduled as exempt (not protected) under the provisions of this Development Control Plan due to its species, nuisance or position relative to buildings or other structures.	The subject tree has a small live crown size of less than 25m² and can be replaced within the short term (5-10 years) with new tree planting.
6. VERY LOW	The subject tree is causing damage to a Heritage Item.	The subject tree is listed as an Environment Weed Species in the Leichhardt Local Government Area, being invasive, or is a known nuisance species.	The subject tree is not visible from surrounding properties (visibility obscured) and makes a negligible contribution or has a negative impact on the amenity and visual character of the area. The tree is a poor representative of the species, showing significant deviations from the typical form and branching habit with a crown density of less than 50% (sparse).

Appendix E: Useful Life Expectancy Definitions

From Barrell (1996). Accessed via the Leichardt Council Tree Technical Manual.

	1. Long	2. Medium	3. Short	4. Removal	5. Moved or replaced
	Trees that appeared to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.	Trees that appeared to be retainable at the time of assessment for 15 - 40 years with an acceptable level of risk.	Trees that appeared to be retainable at the time of assessment for 5 - 15 years with an acceptable level of risk.	Trees that should be removed within the next 5 years	Trees which can be reliably moved or replaced.
A	Structurally sound trees located in positions that can accommodate future growth.	Trees that may only live between 15 and 40 years.	Trees that may only live between 5 and 15 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions.	Small trees less than 5m in height.
B	Trees that could be made suitable for retention in the long term by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through instability or recent loss of adjacent trees.	Young trees less than 15 years old but over 5m in height.
C	Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	Trees that may live for more than 40 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting.	Trees that may live for more than 15 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Damaged trees through structural defects including cavities, decay, included bark, wounds or poor form.	Trees that have been pruned to artificially control growth.
D		Trees that could be made suitable for retention in the medium term by remedial tree care.	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are clearly not safe to retain.	
				Trees that may live for more than 5 years but should be	

Appendix F: Tree Data Sheets and Photographs for Trees 1-7

**********(See Over)**********

Temporal Tree Management Pty Ltd.
William Dunlop: Consulting Arborist
(M. UrbHort, Grad. Dip(Arb), B.Sc).

Black Locust Primary ID #1071459

28 Edinburgh Road

Tree Details

Tree Id:	1
Scientific Name:	Robinia pseudoacacia
Common Name:	Black Locust
Health:	Good
Status:	Alive
DBH [cm]:	15
Tree Height (Estimated) [m]:	10
Risk Rating:	
Priority:	
Canopy Width (m):	6
Useful Life Expectancy:	9-20 years
Maturity:	Mature
Structure:	Fair
Retention Value:	Medium
Tree Work:	
Last Modified:	26/02/2025
Observations:	
Tree Comments:	Medium-sized tree of low species value positioned 2.5 metres outside the north-eastern boundary of the subject site. External ownership renders low value tree of High Landscape Significance.

Tree Location

Longitude:	151.205408
Latitude:	-33.757019
Address:	28 Edinburgh Road
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025

Bhutan Cypress Primary ID #1071460

28 Edinburgh Road

Tree Details

Tree Id:	2
Scientific Name:	Cupressus torulosa
Common Name:	Bhutan Cypress
Health:	Good
Status:	Alive
DBH [cm]:	38
Tree Height (Estimated) [m]:	16
Risk Rating:	
Priority:	
Canopy Width (m):	4
Useful Life Expectancy:	20-40 years
Maturity:	Mature
Structure:	Good
Retention Value:	Low
Tree Work:	
Last Modified:	26/02/2025
Observations:	
Tree Comments:	Large tree of reduced species value within LGA positioned inside the northern boundary of subject site. Tree partially suppressed by larger adjacent tree.

Tree Location

Longitude:	151.205393
Latitude:	-33.757037
Address:	28 Edinburgh Road
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025

Lemon-scented Gum Primary ID #1071461

28 Edinburgh Road

Tree Details

Tree Id:	3
Scientific Name:	Corymbia citriodora
Common Name:	Lemon-scented Gum
Health:	Good
Status:	Alive
DBH [cm]:	79
Tree Height (Estimated) [m]:	23
Risk Rating:	
Priority:	
Canopy Width (m):	15
Useful Life Expectancy:	40+ years
Maturity:	Mature
Structure:	Good
Retention Value:	High
Tree Work:	
Last Modified:	26/02/2025
Observations:	
Tree Comments:	Large tree of native species value observed to be in good condition.

Tree Location

Longitude:	151.205385
Latitude:	-33.757079
Address:	28 Edinburgh Road
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025

Kentia Palm Primary ID #1071462

26 Edinburgh Road

Tree Details

Tree Id:	4
Scientific Name:	Howea forsteriana
Common Name:	Kentia Palm
Health:	Good
Status:	Alive
DBH [cm]:	15
Tree Height (Estimated) [m]:	7
Risk Rating:	
Priority:	
Canopy Width (m):	4
Useful Life Expectancy:	6-10 years
Maturity:	Mature
Structure:	Fair
Retention Value:	Low
Tree Work:	
Last Modified:	25/02/2025
Observations:	
Tree Comments:	Medium-sized palm said reduced species value in LGA. Canopy with signs of dieback.

Tree Location

Longitude:	151.205244
Latitude:	-33.757164
Address:	26 Edinburgh Road
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025

Mandarin Primary ID #1071463

28 Edinburgh Road

Tree Details

Tree Id:	5
Scientific Name:	Citrus reticulata
Common Name:	Mandarin
Health:	Good
Status:	Alive
DBH [cm]:	15
Tree Height (Estimated) [m]:	3
Risk Rating:	
Priority:	
Canopy Width (m):	3
Useful Life Expectancy:	20-40 years
Maturity:	Mature
Structure:	Fair
Retention Value:	Low
Tree Work:	
Last Modified:	25/02/2025
Observations:	
Tree Comments:	Small fruit tree of reduced species value.

Tree Location

Longitude:	151.205118
Latitude:	-33.757085
Address:	28 Edinburgh Road
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025

Orange Jessamine Primary ID #1071464

1 Tathra Place

Tree Details

Tree Id:	6
Scientific Name:	Murraya paniculata
Common Name:	Orange Jessamine
Health:	Good
Status:	Alive
DBH [cm]:	26.91
Tree Height (Estimated) [m]:	6
Risk Rating:	
Priority:	
Canopy Width (m):	5
Useful Life Expectancy:	20-40 years
Maturity:	Mature
Structure:	Fair
Retention Value:	Low
Tree Work:	
Last Modified:	25/02/2025
Observations:	
Tree Comments:	Small fruit tree of reduced species value.

Tree Location

Longitude:	151.205070
Latitude:	-33.757061
Address:	1 Tathra Place
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025

Sweet Orange Primary ID #1071465

30 Edinburgh Road

Tree Details

Tree Id:	7
Scientific Name:	Citrus Xsoulangeana
Common Name:	Sweet Orange
Health:	Good
Status:	Alive
DBH [cm]:	15
Tree Height (Estimated) [m]:	3
Risk Rating:	
Priority:	
Canopy Width (m):	3
Useful Life Expectancy:	20-40 years
Maturity:	Mature
Structure:	Fair
Retention Value:	Low
Tree Work:	
Last Modified:	25/02/2025
Observations:	
Tree Comments:	Small fruit tree of reduced species value.

Tree Location

Longitude:	151.205103
Latitude:	-33.757008
Address:	30 Edinburgh Road
City:	Forestville

Photos Street View Map View

image.jpg
25/02/2025