ARBORICULTURAL IMPACT ASSESSMENT REPORT

Prepared For:	New Hope Evergreen
On Behalf of:	NSW Department of Planning & Environment
Site Address:	St Leonards South Precinct Canberra, Holdsworth & Marshall Avenues, St Leonards
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Figure 1: An aerial view of the site showing the development area [shaded].

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1 Introduction

1.1 Background

1.1.1 Blues Brothers Arboriculture has been engaged by the developer to inspect and report on trees for development purposes. Three residential flat buildings are proposed inclusive of basement carparking and new open space communal corridors.

1.1.2 The scope of works is understood to be occurring as part of a NSW Department of Planning and Environment project to upgrade the Southern extents of the St Leonards Precinct.

1.1.3 The scope of works includes the assessment of 51 trees located on, or within the immediate vicinity of proposed development.

1.1.4 Information supplied and relied upon in the preparation of this report included:

- Architectural suite of plans produced by Rothelowman; Revision DEP, Dated 29/06/2022 and inclusive of:
  - Site plan,
  - Floor plans,
  - Elevations,
  - Sections,
  - Details, and
  - Profiles.
- Detail survey produced by LTS Lockley; Reference 50275 003DT, Dated 25/02/2021.
- Landscape plan produced by Arcadia Landscape Architects; Revision 21-795, Dated 14/02/2022
- Dial Before You Dig (DBYD); Job 31408294, Requested 16/02/2022.
- Planning portal property report, Accessed 16/02/2022 for property 1 Canberra Ave.
- Lane Cove Council Request for Information; Reference DA79/2022, Dated 26/08/2022.

1.1.5 The use of these documents / sources is acknowledged with thanks.

1.1.6 The NSW Rural Fire Service online tool for determining eligibility under the '10/50' legislation was interrogated for the purposes of this report. As at the date of this report, the properties are *not eligible* and as such, relevant clearing provisions do not apply to the site.

1.2 Definitions & Abbreviations:

1.2.1 ***The Standard*** refers to the Australian Standard AS4970:2009 – *Protection of trees on development sites.*

1.2.2 ***The site*** refers to the land within the proposed development site.

1.2.3 An ***Exempt Tree*** is a tree that is exempt from planning controls due to meeting Council's definition of exempt vegetation or trees. Exempt Trees may be removed irrespective of development and at any time without Council approval.

1.2.4 ***A significant root*** is defined as any woody root with a diameter of 30mm or larger.

1.2.5 ***AGL*** – Above Ground Level

1.2.6 ***LGA*** – Local Government Area.

1.2.7 ***DBH*** – Diameter at Breast Height; Approximately 1.4 metres above ground level measured in metres.

1.2.8 ***DGL*** – Diameter at Ground Level; Measured above the root flare / collar measured in metres.

1.2.9 ***TPZ*** – Tree Protection Zone. Calculated per the standard:

$$TPZ\ radius = 12\ \times DBH$$

1.2.10 ***SRZ –*** Structural Root Zone. Calculated per the standard:

$$SRZ\ radius = (DGL \times 50)^{0.42} \times 0.64$$

1.2.11 ***FFL***- Finished Floor Level.

1.2.12 ***RL*** – Reduced Level.

1.2.13 ***SEPP*** – State Environmental Planning Policy.

1.2.14 ***DBYD*** – Dial Before You Dig

1.3 Change log:

1.3.1 Version 1 – Original.

1.3.2 Version 2 – Revised plans

1.3.3 Version 3 – Coordination with Landscape Architect & correction of mis-identified tree.

1.4 Disclaimers:

1.4.1 This report is considered limited to what could reasonably be seen from ground level only and expresses no commentary on changes which may have, or will, impact the trees or their environment outside the scope of works.

2 Methodology

2.1 Visual Tree Assessment

2.1.1 The trees were visually inspected from ground level only in accordance with VTA (Visual Tree Assessment); a methodology derived by Mattheck and Breloer (1994).

2.1.2 Canopy Assessment included foliage condition (volume and colour); the presence of pests and diseases, dieback, deadwood and epicormic growth.

2.1.3 Tree condition included assessment of structural stability, previous pruning and any damage/disturbance which may have occurred.

2.1.4 No destructive or aerial investigations occurred to the tree.

2.1.5 Hollows, where found or suspected, were probed to ascertain their size and extent to assist in calculating ratios of notional cavity size and useful life expectancy.

2.1.6 Access to neighbouring trees was not sought during the site inspection.

2.1.7 Tree assessment was limited to protected species on the site. Exempt trees under Northern Beaches Council were not assessed.

2.1.8 The trees were assigned numbers during the site assessment for reference within this report. Tree tagging did not occur.

2.1.9 Tree data is displayed in Appendix 1.

2.1.10 Appendix 2 – Arboricultural mark-up including Tree identification, TPZ and SRZ zones and the degree of encroachment proposed by the development.

2.1.11 Tree height and canopy width were estimated with the assistance of a Leica Disto X4 (Laser Distometer).

2.1.12 A forestry Diameter tape was utilised in the measuring of trunk diameters.

3 Results

3.1 Desktop Research

3.1.1 Research from the NSW Planning portal revealed the following information for the properties:

- Zoning: R2 – Low density residential.
- No Heritage item or conservation area applies to the property.
- Acid Sulfate soils: Class 5

3.1.2 Data obtained via the NSW Government Office of Environment and Heritage online tool, eSPADE, indicates the site is located on *Blacktown* soil profile soil. Possible soil profiling on the site could include:

- Gently undulating rises on Wianamatta Group Shales & Hawkesbury Shale.
- Local relief to 30m,
- Sloped generally <5%,
- Soils shallow to moderately deep (<100cm) red & brown podzolic soils on crests and upper slopes and well-drained areas.
- Deep (150-300cm) Yellow podzolic soils and Soloths on lower slopes and areas of poor drainage.

3.1.3 Development of this site is listed within Lane Cove Council DCP[1] mentioning the creation of minor public open spaces that maintain & enhance existing pedestrian connectivity to Canberra Ave.

3.1.4 The site is defined to include the following properties:

- 1 Canberra Ave — Lot 5 / Section 3 / DP7259
- 3 Canberra Ave — Lot 6 / Section 3 / DP7259
- 5 Canberra Ave — Lot 7 / Section 3 / DP7259
- 4 Marshall Ave — Lot 3 / Section 3 / DP7259
- 6 Marshall Ave — Lot 2 / Section 3 / DP7259
- 8 Marshall Ave — Lot 1 / Section 3 / DP7259
- 2 Holdsworth Ave — Lot 42 / Section 3 / DP7259
- 4 Holdsworth Ave — Lot 41 / Section 3 / DP7259
- 6 Holdsworth Ave — Lot 40 / Section 3 / DP7259
- 8 Holdsworth Ave — Lot 39 / Section 3 / DP7259

[1] Lane Cove Council DCP 2009 (As amended Feb 2016) Part B2, Section 2.2 (c). Accessed 16/02/2022

3.1.5 In accordance with published directives of Lane Cove Council, a protected tree is a tree meeting the following criteria[2]:

- Any tree, whether indigenous or exotic, which has BOTH:
  - A height exceeding 4 metres; AND,
  - A trunk diameter greater than 150mm (measured at 1 metre above the ground)
- Trees in bushland which are not subject to an approved plan of management.

3.1.6 Exemptions under the DCP include:

- Trees not meeting the dimensions listed in 3.1.4.
- Pruning of dead branches.
- Pruning of tree branches that are within 2 metres of electric power lines as required by State Legislation.
- Removal of trees approved through the DA process.
- Pruning or removal of Ornamental fruit trees affected by QLD Fruit Fly
- Pruning and reshaping of Cypress pines (*Cupressus spp & Chamaecyparis spp*) not greater than 10% of whole canopy.
- Pruning or removal of Crepe Myrtle (*Lagerstroemia indica*) or Camphor Laurel (*Cinnamomum camphora*) with a height of less than 6 metres.
- Pruning or removal of any declared noxious weed.
- Pruning or removal of any tree listed on Council's Exempt species list (Refer to DCP).

3.1.7 None of the assessed trees were listed in the Council significant tree register or listed under the Threatened species conservation Act 1995.

3.1.8 Interpretation of DBYD data indicates the existence of the following civil assets either on or within the vicinity of the sitewhich may require additional works (Sewer Encasement, relocation etc):

- Sydney Water Sewer Main traversing 4-8 Marshall Ave & 2-8 (& onwards) Holdsworth Ave.
- Jemena Gas main traversing the road reserve around the site.
- Ausgrid underground cable ducts within the road reserve of Canberra Ave & Marshall Ave.
- NBNco Assets in the road reserve around the site.

[2] Lane Cove Council DCP 2009 (As amended Feb 2016) Part J, Section 2.2. Accessed 16/02/2022

3.2 The Site

3.2.1 Located centrally in St Leonards, the previously developed site presented with a slight southerly aspect, South of the Pacific Highway.

3.2.2 The site is an amalgamation of smaller lots as described within 3.1.4 with most lots containing a single, centrally located dwelling. Some of the lots featured in-ground swimming pools, the majority of which were un-maintained.

3.2.3 The site presented with a 'green-spine' of vegetation that has formed as part of historical development. Abutting rear boundaries of the included lots has been consistently used for the planting of amenity vegetation.

3.2.4 The site presented with little evidence of natural features such as rock escarpment or creeks. Landscaping across the site was consistent amongst lots which featured flat areas of lawn or light paving.

3.2.5 The general condition of dwellings and vegetation across the site appeared either overgrown or un-maintained. This was to be expected considering the lots were mostly unoccupied at the time of assessment.

3.3 The Development

3.3.1 All existing structures on the site are proposed for demolition.

3.3.2 Three new high rise residential flat buildings are proposed for construction on the site. Plans indicate the towers will stand up to 18 floors above ground with a multi-level basement extending up to 5 levels below grade.

3.3.3 Bridges will link the three towers on level 6 which will also feature a sky pool & recreation area. One of the proposed bridges is indicated to be constructed above the canopy of trees of the green spine below.

3.3.4 The sole vehicular access to the site is proposed to utilise Canberra Avenue.

3.3.5 Supplied plans indicate for the removal of multiple trees across the site as part of the development. Several palms are proposed for transplanting within the site boundary.

3.3.6 The supplied landscaping plan include several access paths along the green spine of the precinct. Key features of the landscaping are located on the corner of Holdsworth and Marshall Avenues and includes outdoor exercise equipment, a small amphitheatre, picnic areas and turfed surface

3.3.7 Sections provided indicate significant levels of excavation will be required to accommodate the development.

3.3.8 Supplied plans indicate the courtyards proposed along the Holdsworth Avenue. Plans indicate each of these courtyards are to be built above existing surface RL's

3.4 The Trees

3.4.1 A total of 51 trees were assessed forming the scope of works; the trees were predominantly located within the site and on the Council verge. A small number of trees was located on adjoining property.

3.4.2 Various exempt species were also located within the rear yard of the property. These were a mix of Camphor Laurel (*Cinnamomum camphora*), Privet (*Ligustrum spp.*), Cocos Palms (*Syagrus romanzoffiana*), Leighton's Green (*Cupressus leylandii*).

3.4.3 Several species named within Council's exempt species list within the DCP were noted on the site; however, these trees exceeded the size specifications of the DCP and are considered to be protected under development. These species include Liquidambar (*Liquidambar styraciflua*), Jacaranda (*Jacaranda mimosifolia*), Camphor Laurel (*Cinnamomum camphora*) and Silky Oak (*Grevillea robusta*).

3.4.4 The mature cohort was observed with mostly good scores of health and vigour. Several of the assessed species scored moderate scores of Health and / or vigour.

3.4.5 Tree significance ratings varied across the cohort. Vegetation, when considered as a whole and on average, was of moderate landscape significance. Most of the High significance trees were located on the Council verge or within the front yards of properties within the site.

3.4.6 The street trees were the most damaged specimens of the cohort. Damages to these trees appeared to have been mostly caused by mechanical damage to branches and trunks within the road reserve.

3.4.7 Tree stability scores varied widely across the cohort. In comparison to trees within the site, the street trees generally scored higher values of stability despite observations of exposed surface roots and soil compaction.

3.4.8 The Structural form of the assessed trees was generally good. Many trees were noted to have structural faults within their canopies or in lower scaffold branches.

3.4.9 Evidence of previous development was limited to the isolated replacement of kerb and guttering along the road reserve. No evidence of root pruning associated with these works was noted; however, similar nearby species were seen to have root interaction with existing kerb & guttering.

3.4.10 Further assessment on Tree 30 was recommended at the time of assessment due to the discovery of a cambium injury presenting with heartwood decay.

3.4.11 The majority of trees within the road reserve had been pruned at some point – either for maintenance or for Ausgrid clearance. The pruning of trees within the site was generally limited to what could be reached from ground level and was generally not to standard.

3.4.12 Further commentary, TPZ and SRZ areas for the trees can be found in Appendices 1 & 2.

4 Construction Impacts

4.1 Street Trees

4.1.1 Street trees around the site are likely to be generally impacted by a minor degree, mainly due to associated landscaping. The following table summarises impacts:

Tree ID	Species	Encroachment level (per AS4970:2009)	Comments / Notes
1 & 3	Scribbly Gum	Minor	Encroachment due to the construction of a new driveway, crossover & layback. **Impact:** Low
22	Brushbox	Minor	Impact due to the construction of ground floor features **Impact:** Low
23	Brushbox	Minor	Impacts due to the excavation of the basement & construction of ground floor features. **Impact:** Moderate
30	Brushbox	Minor	Impacts due to the construction of ground floor features. **Impact:** Moderate
37	Brushbox	Major (TPZ encroachment 14.3%)	Impacts due to the excavation of the basement & construction of ground floor features. **Impact:** Moderate
45	Brushbox	Minor	Main impact due to location of Substation kiosk. Other impacts due to the excavation of the basement & construction of ground floor features. **Impact:** Moderate

4.1.2 Many of the street trees on Holdsworth Avenue appeared to have been previously topped. This was a factor in considering the degree of impact associated with the development

4.2 Trees within properties on Canberra Ave

4.2.1 Trees within the properties on Canberra Avenue will be impacted by the excavation of soils necessary to accommodate the basement levels of the development.

4.2.2 The following trees are located within the construction footprint and are unretainable for the development.

Tree ID	Species
2	Liquidambar
5	Canary Island Date Palm (Possible transplant candidate)
6	Privet (Exempt)
7-10	Leighton's Green (Exempt

4.3 Trees within properties on Marshall Ave

4.3.1 Trees within the properties of Marshall Avenue will be impacted predominantly by landscaping associated with the development. The following table summarises development impacts.

Tree ID	Species	Encroachment level (per AS4970:2009)	Comments / Notes
15	Pittosporum	Minor	Impact due to associated landscaping **Impact:** Low
16	White Stringybark	Minor	Impact due to associated landscaping. A Feature tree for the street frontage. **Impact:** Low
18	Himalayan Cedar	Major (22.5% TPZ)	Impact due to the proposed ground floor construction footprint and mostly due to associated landscaping. Moderate levels of canopy pruning is anticipated to accommodate tower & piling rig clearance. **Impact:** Moderate
19	Brushbox	Entire	Located within basement excavation footprint. Retention is not possible
20	Camphor Laurel	Entire	Located within basement excavation footprint. Retention is not possible
21	Canary Island Date Palm	Entire	Located within basement excavation footprint. Retention is not possible. This palm is a possible candidate for transplanting within the site.
51	Jacaranda	Minor	Impact due to associated landscaping **Impact:** Low

4.4 Trees within properties on Holdsworth Ave

4.4.1 Trees within the properties on Holdsworth avenue were in the rear yards nearest the respective eastern property boundaries. Many of these trees are located outside the proposed construction footprint & in the associated landscaping area.

4.4.2 Impacts to each tree are summarised below:

Tree ID	Species	Encroachment level (per AS4970:2009)	Comments / Notes
25 & 27	Cocos Palm	Entire	Located within basement excavation footprint. Retention is not possible
26	Bangalow Palm	Entire	Located within basement excavation footprint. Retention is not possible
28 & 29	Monterey Cypress	Major	Impact due to the proposed excavation for the basement. Retention of these trees is not possible. **Impact:** High
31	Chinese Elm	Major	Proposed for removal on supplied landscape plan. Impacted due to proposed pathway through green spine.
32 & 33	Camphor Laurel	Entire	Located within footprint of primary pedestrian access. Retention is not supported.
34	Vibernum	Minor	Impact due to associated landscaping **Impact:** Low
35	Leightons Green	Major	Impact due to associated landscaping blocking access to the proposed communal path **Impact:** Moderate.

Tree ID	Species	Encroachment level (per AS4970:2009)	Comments / Notes
36	Lilli Pilli	Minor	Impact due to associated landscaping **Impact:** Low
38 & 40	Alexander Palm	Major	Impact due to associated landscaping blocking access to the proposed communal path **Impact:** Moderate.
39 & 41	Mexican Fan Palm	Major	Impact due to associated landscaping blocking access to the proposed communal path **Impact:** Moderate.
44	Jacaranda	Minor	Impact due to the proposed ground floor construction footprint and associated landscaping. Minor canopy pruning is possible. **Impact:** Low
46	Silky Oak	Major	Impact due to associated landscaping blocking access to the proposed outdoor recreation area **Impact:** High.

4.4.3 The primary cause of tree impact in this area will be due to the proposed landscaping plan. Many of the trees in this area are of low significance, exempt or undesirable species, or of a poor structural form resulting from a modified growing habit (such as screen plantings or dwelling influences).

4.4.4 This vegetation, as assessed, is of low landscape significance.

5 Conclusion

5.1.1 51 trees were assessed or identified as part of the scope of works, all seen to be in moderate health or better.

5.1.2 The majority of the assessed trees will be impacted to at least a minor degree by the proposed development.

5.1.3 With exception to trees located on the corner of Marshall and Holdsworth Avenues, trees on the site pose very little constraint on development due to species, small size and low scores of landscape significance.

5.1.4 The primary constraints to the development relate to the avenues of street trees which will require protection throughout construction.

5.1.5 Despite the loss of numerous low value trees, the green spine of the St Leonards South precinct is likely to be bolstered with an extensive replacement planting strategy as indicated on the landscape plan.

5.1.6 The Arborist is satisfied that all avenues of alternative designs have been considered regarding the development.

5.1.7 The arborist supports the proposed development from an Arboricultural perspective.

6 Recommendations:

6.1 Trees for retention:

6.1.1 All neighbouring and street trees are recommended for retention under the proposed development. These trees shall be subject to a future tree protection plan prior to the commencement of construction.

6.1.2 The retention of Tree 16 is recommended. This tree a pivotal feature tree for the development due to its prominence at the site entrance.

6.2 Trees for removal:

6.2.1 The following trees are recommended for removal due to their location within the construction footprint or within the footprint of associated landscaping.

Tree ID	Species
2	Liquidambar
5-10	Canary Island Date Palm, Privet & Leightons Green.
15	Pittosporum
18	Himalayan Cedar
19	Brushbox
20, 21, 25, 26 & 27	Camphor Laurel, Canary Island Date Palm, Cocos Palm, Bangalow Palm
28 & 29	Monterey Cypress
31-33	Chinese Elm & 2x Camphor Laurels
34	Vibernum sp.
35	Leightons green
36	Lilli Pilli
38-41	Alexander Palm, Mexican Fan Palm

6.2.2 The recommendation for the removal of Tree 18 has arisen following consultation with the landscape architects who raised concerns of future health issue surrounding tree retention.

In reconsidering this tree, the Arborist has reached the conclusion that tree retention is not practical & goes against the likely intent of the proposed pocket park. Hence, the removal of tree 18 is recommended.

6.2.3 The supplied landscape plan mentions a possibility of transplanting some of the palms mentioned above. For the purposes of this report, a recommendation for removal will remain with the final discretion of transplanting left with the Landscaper.

6.2.4 Exempt & undesirable species are recommended for removal as a priority.

6.2.5 Cocos Palms are listed as an exempt & undesirable species. These palms should not be considered as candidates for transplanting.

6.3 Construction Recommendations:

6.3.1 Pruning, where required, shall be undertaken in accordance with Council directives, approvals and in accordance with AS4373:2007 – *Pruning of amenity trees*.

6.3.2 It is recommended that any pruning works undertaken on the site are done so by a suitably qualified (AQF3 Arboriculture) and insured contractor.

6.3.3 It is recommended that works within the TPZ area of all trees to be retained are cautious of significant roots which may exist below ground. These roots shall be protected in most circumstances in accordance with the standard.

6.3.4 Supplied plans indicate courtyards are a feature for apartments located along the Holdsworth Ave frontage. Works within this area shall be limited to soil infilling only unless supervised by the project arborist. Excavation of soils must not occur except for what is necessary for the accommodation of the basement. (This includes battering).

6.3.5 A formal tree protection plan has not been commissioned for this report. A tree protection plan & methodology is recommended for the construction phase of the project.

6.4 Supplementary street tree planting:

6.4.1 The arborist is supportive of supplementary planting of street trees along the Holdsworth & Marshall Avenue frontages.

The Arborist understands these frontages are scheduled to receive infrastructure upgrades in the near future. It would be prudent to delay any such planting until the conclusion of works to ensure any new trees are offered the best chance of survival without damage.

6.4.2 Despite most of the street trees showing evidence of past damage or heavy pruning, their mostly high scores of landscape significance warrants tree retention and protection as part of the development.

6.4.3 Collectively, the existing avenue planting of Brushbox trees along Holdsworth & Marshall Avenues should be retained as part of the development due to the amenity they provide and the low levels of impact likely to accompany the development.

Appendix 1 – Tree Data Summary

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Tree Data Summary - "St Leonards South" - Assessed 25/10/2021

Tree ID	Species	Removal proposed	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T1	*Eucalyptus haemastoma* (Scribbly Gum)		16	8n 6s 5e 5w	45	58	Good	Mature	Single	Upright	Bias North/South	Ausgrid	Appears Stable	Good	0-5%	High	STREET TREE Mechanical damage of limbs overarching street. Epicormic shoots on lower canopy Ausgrid assets through canopy	5.4	2.6
T2	*Liquidambar styraciflua* (Liquidambar)		10	10	34	43	Good	Young Mature	Single	Upright	Yes	No	Appears Stable	Good	0-5%	Low		4.1	2.3
T3	*Eucalyptus haemastoma* (Scribbly Gum)		13	6n 7s 8e 7w	54	61	Good	Mature	Single	Bias West (15°)	Distinctly West	Ausgrid	Appears Stable	Good	5-10%	High	STREET TREE Minor cambium injury on Western flank to 40cm Query fungal / biotic influence with above. Ausgrid assets through canopy	6.5	2.7
T4	*Ficus rubigenosa* (Port Jackson Fig)		6	4	22	29	Good	Semi-Mature	Single to 1m then Multi	Upright	Yes	No	Appears Stable	Good	0-5%	Low		2.6	2.0
T5	*Phoenix canariensis* (Canary Island Date Palm)		7	7	78		Good	Mature	Single	Upright	Yes	No	Appears Stable	Good		Moderate	Located within timber planter & adjacent to two masonry retaining walls	9.4	0.0
T6	*Ligustrum lucidum* (Large Leaf Privet)				0												DECLARED WEED SPECIES	0.0	0.0
T7	*Cupressus leylandii* (Leighton's Green)				0												Suspended hanger within canopy	0.0	0.0
T8	*Cupressus leylandii* (Leighton's Green)				0												Poor structural integrity of scaffold branches. Remove irrespective of development.	0.0	0.0
T9	*Cupressus leylandii* (Leighton's Green)				0												Partially impacted by Wisteria vine Poor structural integrity of scaffold branches. Remove irrespective of development.	0.0	0.0
T10	*Cupressus leylandii* (Leighton's Green)				0												Over-run by Wisteria Vine.	0.0	0.0
T11	*Jacaranda mimosifolia* (Jacaranda)		11	16	50	58	Good	Mature	Single	Upright	Bias West/North/East	Ausgrid	Appears Stable	Good	0-5%	Moderate	Large 1st order surface roots visible to West/North/East of trunk. Signs of minor soil erosion around base of tree.	6.0	2.6
T12	*Lophostemon confertus* (Brushbox)		18	8n 6s 8e 6w	71	85	Good	Mature	Single	Upright	Bias West/North/East	Ausgrid	Appears Stable	Good	0-5%	High	Root interaction with Kerb.	8.5	3.1

Tree Data Summary - "St Leonards South" - Assessed 25/10/2021

Tree ID	Species	Removal proposed	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T13	*Tristaniopsis laurina* (Watergum)		8	8	30	42	Good	Mature	Multi	Upright	Yes	Ausgrid	Appears Stable	Good	0-5%	Moderate	Bark inclusion at base of tree (codominant stems)	3.6	2.3
T14	*Tristaniopsis laurina* (Watergum)		7	6	23	33	Good	Mature	Single	Upright	Yes	Ausgrid	Appears Stable	Good	5-10%	Moderate		2.8	2.1
T15	*Pittosporum undulatum* (Sweet Pittosporum)		9	5	23	33	Good	Mature	Single	Upright	Bias South	Ausgrid	Unknown	Good	0-5%	Low	Obstructed visibility around base of tree.	2.8	2.1
T16	*Eucalyptus globoidea* (White Stringybark)		16	11	67	82	Good	Mature	Single	Bias South West	Bias South	Ausgrid	Appears Stable	Good	0-5%	High	Water main at base on northern side of trunk; southern side of trunk supporting mains water tap (screwed into tree). Candidate for deadwood removal / maintenance prune.	8.0	3.0
T17	*Lophostemon confertus* (Brushbox)		15	9n 0s 7e 5w	57	72	Good	Mature	Single	Upright	Bias North	Ausgrid	Appears Stable	Good	0-5%	High	Tree leaning over road. Tension roots likely within development side of TPZ.	6.8	2.9
T18	*Cedrus deodara* (Himalayan Cedar)		14	18	98	99	Good	Mature	Single	Upright	Yes	Historical throughout	Appears Stable	Good	0-5%	Moderate		11.8	3.3
T19	*Lophostemon confertus* (Brushbox)		13	9	50	55	Moderate	Mature	Single	Upright	Yes	Unknown	Unknown	Moderate	5-10%	Moderate	No access to base of tree. Located on inaccessible property.	6.0	2.6
T20	*Cinnamomum camphora* (Camphor Laurel)		9	9	35	40	Moderate	Mature	Single	Upright	Yes	Lower limbs	Appears Stable	Moderate	10-15%	Low		4.2	2.3
T21	*Phoenix canariensis* (Canary Island Date Palm)		9	8	56		Good	Mature	Single	Upright	Yes	No	Appears Stable	Good		Moderate		6.7	0.0
T22	*Lophostemon confertus (Brushbox)*		13	9	69	75	Good	Mature	Single	Upright	Yes	Topped @ 4m Historically	Appears Stable	Good	0-5%	High	Kerb and guttering adjacent to tree has been replaced recently.	8.3	2.9
T23	*Lophostemon confertus* (Brushbox)		15	7	82	90	Good	Mature	Single	Upright	Yes	Road Clearance	Appears Stable	Good	0-5%	High		9.8	3.2
T24	*Lophostemon confertus* (Brushbox)		10	12	40	55	Good	Mature	Single	Upright	Yes	Ausgrid	Appears Stable	Good	5-10%	Moderate		4.8	2.6

Tree Data Summary - "St Leonards South" - Assessed 25/10/2021

Tree ID	Species	Removal proposed	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T25	*Syagrus romanzoffiana* (Cocos Palm)		8	4	40		Good	Mature	Single	Upright	Yes							4.8	0.0
T26	*Archontophoenix cunninghamiana* (Bangalow Palm)		8	5	35		Good	Mature	Single	Upright	Yes					Low		4.2	0.0
T27	*Syagrus romanzoffiana* (Cocos Palm)		8	6	35		Good	Mature	Single	Upright	Yes							4.2	0.0
T28	*Cupressus macrocarpa* (Monterey Cypress)		23	16	93	80	Good	Mature	Single to 1.3m then twin	Upright	Yes	No	Appears Stable	Good	0-5%	Moderate	Minor bark inclusion at codominant stem union. English Ivy climbing tree.	11.2	3.0
T29	*Cupressus macrocarpa* (Monterey Cypress)		23	15	45	48	Good	Mature	Single	Upright	Bias South	No	Appears Stable	Good	0-5%	Moderate	English Ivy climbing tree	5.4	2.4
T30	*Lophostemon confertus* (Brushbox)		11	7n 5s 6e 7w	69	74	Good	Mature	Single	Upright	Bias North West	Topped @ 4m Historically	Appears Stable	Good	0-5%	High	Cambium injury with resultant heartwood decay to 2m. Further testing is recommended for this tree (Resistograph)	8.3	2.9
T31	*Ulmus parvifolia* (Chinese Elm)		14	9n 7s 5e 8w	34	48	Moderate	Moderate	Single	Bias West	Bias West	No	Appears Stable	Good	0-5%	Low	Bark inclusion at junction of codominant stems (1st order branching) High load on western leader & therefore union. Weak branch attachment is more likely to fail during high winds.	4.1	2.4
T32	*Cinnamomum camphora* (Camphor Laurel)		12	7	34	42	Good	Mature	Single	Upright	Yes	Lower limbs	Appears Stable	Good	0-5%	Low		4.1	2.3
T33	*Cinnamomum camphora* (Camphor Laurel)		12	7	34	42	Poor	Mature	Single	Upright	Yes	Lower limbs	Appears Stable	Good	10-15%	Low		4.1	2.3
T34	*Vibernum sp.*		9	5	32	40	Good	Mature	Single to 1m then Multi	Upright	Yes	No	Appears Stable	Good	0-5%	Low	Bark inclusion at primary union.	3.8	2.3
T35	*Cupressus leylandii* (Leighton's Green)		7	2	18	23	Good	Mature	Single	Upright							Stand of 7 Trees	2.2	1.8
T36	*Syzygium leuhmanii* (Lilli Pilli)		9	5	8	11	Good									Low	Stand of 3 Trees	1.0	1.3

Tree Data Summary - "St Leonards South" - Assessed 25/10/2021

Tree ID	Species	Removal proposed	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T37	*Lophostemon confertus* (Brushbox)		16	12	111	115	Good	Mature	Single	Upright	Yes	Topped @ 4m Historically	Appears Stable	Good	0-5%	High	Interaction with Kerb & Gutter.	13.3	3.5
T38	*Archontophoenix alexandrae* (Alexander Palm)		10	6	23		Good	Mature	Single	Upright	Yes					Low		2.8	0.0
T39	*Washingtonia robusta* (Mexican Fan Palm)		13	6	43		Good	Mature	Single	Upright	Yes					Low		5.2	0.0
T40	*Archontophoenix alexandrae* (Alexander Palm)		12	6	30		Good									Low		3.6	0.0
T41	*Washingtonia robusta (Mexican Fan Palm)*		12	6	40		Good									Low		4.8	0.0
T42	*Syzygium sp.* (Lilli Pilli)		12	10	30	35	Good	Mature	Single	Upright	Bias West No	No	Unknown	Good	0-5%	Moderate	Neighbouring tree with no access.	3.6	2.1
T43	*Pittosporum undulatum* (Sweet Pittosporum)		9	9	35	45	Good	Mature	Single	Upright	Bias East	Minor Throughout	Unknown	Good	0-5%	Moderate	Neighbouring tree with no access.	4.2	2.4
T44	*Jacaranda mimosifolia* (Jacaranda)		15	15	65	75	Good	Mature	Single	Upright	Bias North	Lower limbs	Appears Stable	Good	0-5%	High		7.8	2.9
T45	*Lophostemon confertus* (Brushbox)		16	10n 9s 7e 8w	82	93	Good	Mature	Single	Upright	Bias North	Topped @ 4m Historically	Appears Stable	Good	0-5%	High		9.8	3.2
T46	*Grevillea robusta* (Silky Oak)		16	10	60	65	Good	Mature	Single	Upright	Yes	Historical throughout	Appears Stable	Good	5-10%	Moderate		7.2	2.8
T47	*Syagrus romanzoffiana* (Cocos Palm)		12	8	30		Good											3.6	0.0
T48	*Brachychiton acerifolius* (Illawarra Flame Tree)		12	8	28	35	Good	Mature	Single	Upright	Yes	No	Appears Stable	Good	0-5%	Moderate	Suppressed by T47	3.4	2.1

Tree Data Summary - "St Leonards South" - Assessed 25/10/2021

Tree ID	Species	Removal proposed	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Notes	TPZ (M) Radius	SRZ (M) Radius
T49	*Washingtonia robusta* (Mexican Fan Palm)		13	6	35		Good	Mature	Single	Upright						Low		4.2	0.0
T50	*Cinnamomum camphora* (Camphor Laurel)		18	15	120	90	Moderate	Mature	Twin	Upright	Yes	Unknown	Unknown	Moderate	5-10%	Moderate	Very Large specimens located in adjoining land.	14.4	3.2
T51	*Jacaranda mimosifolia* (Jacaranda)		5	7	28	35	Good	Mature	Single	Bias West	Yes	No	Appears Stable	Good	5-10%	Moderate		3.4	2.1
Denotes Exempt Species																			
Denotes listed exempt species with a height exceeding thresholds of the DCP																			

Appendix 2 - Tree identification and incursion potentials

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Blues Bros ARBORICULTURE

Blues Brothers Arboriculture
PO BOX 102,
BALGOWLAH NSW 2094

0439991122
www.bluesbros.com.au
gordon@bluesbros.com.au

Title: Tree Identification

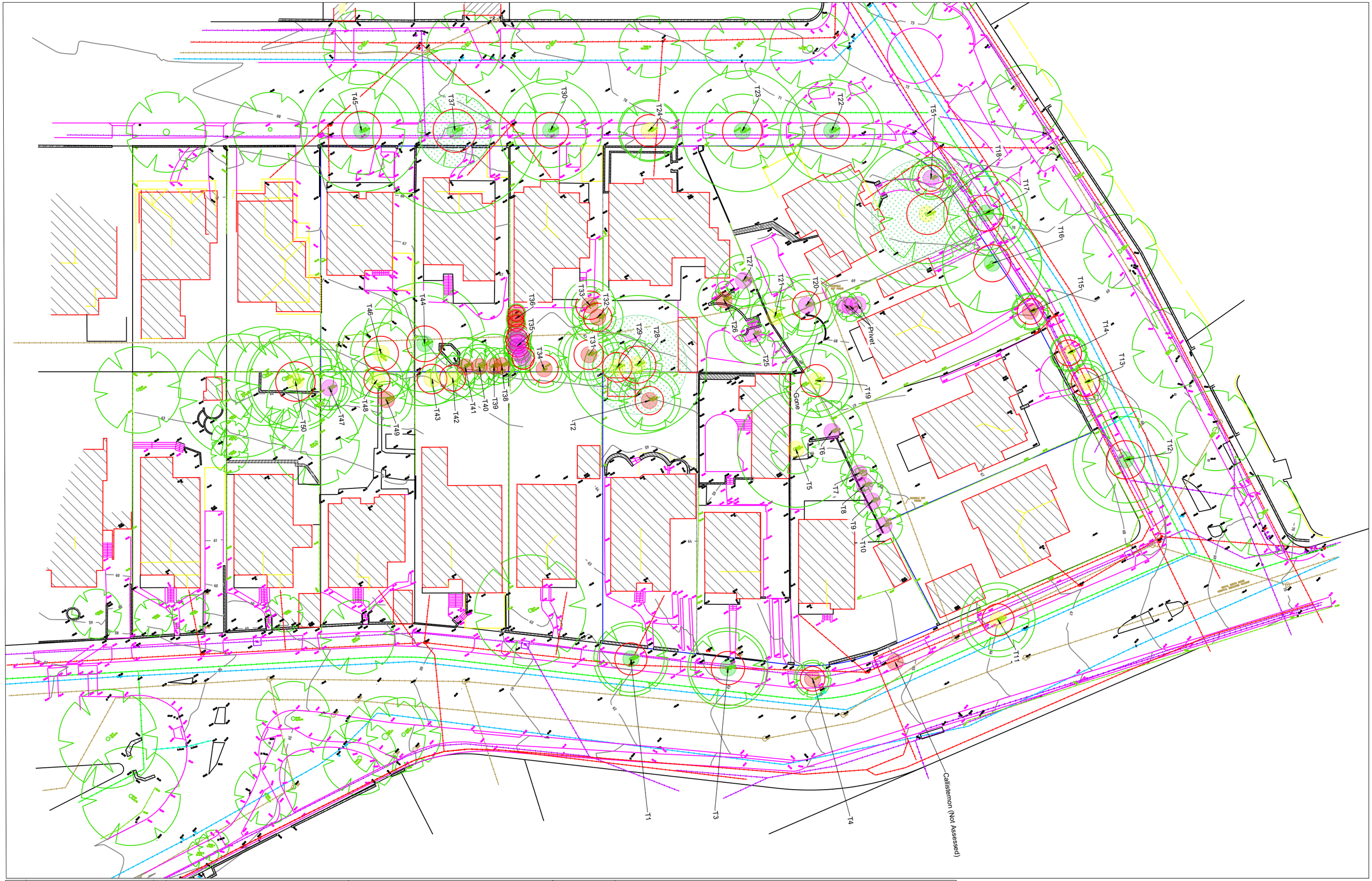
Revision: 02

Project: Arborist St Leonards South DPE.dwg

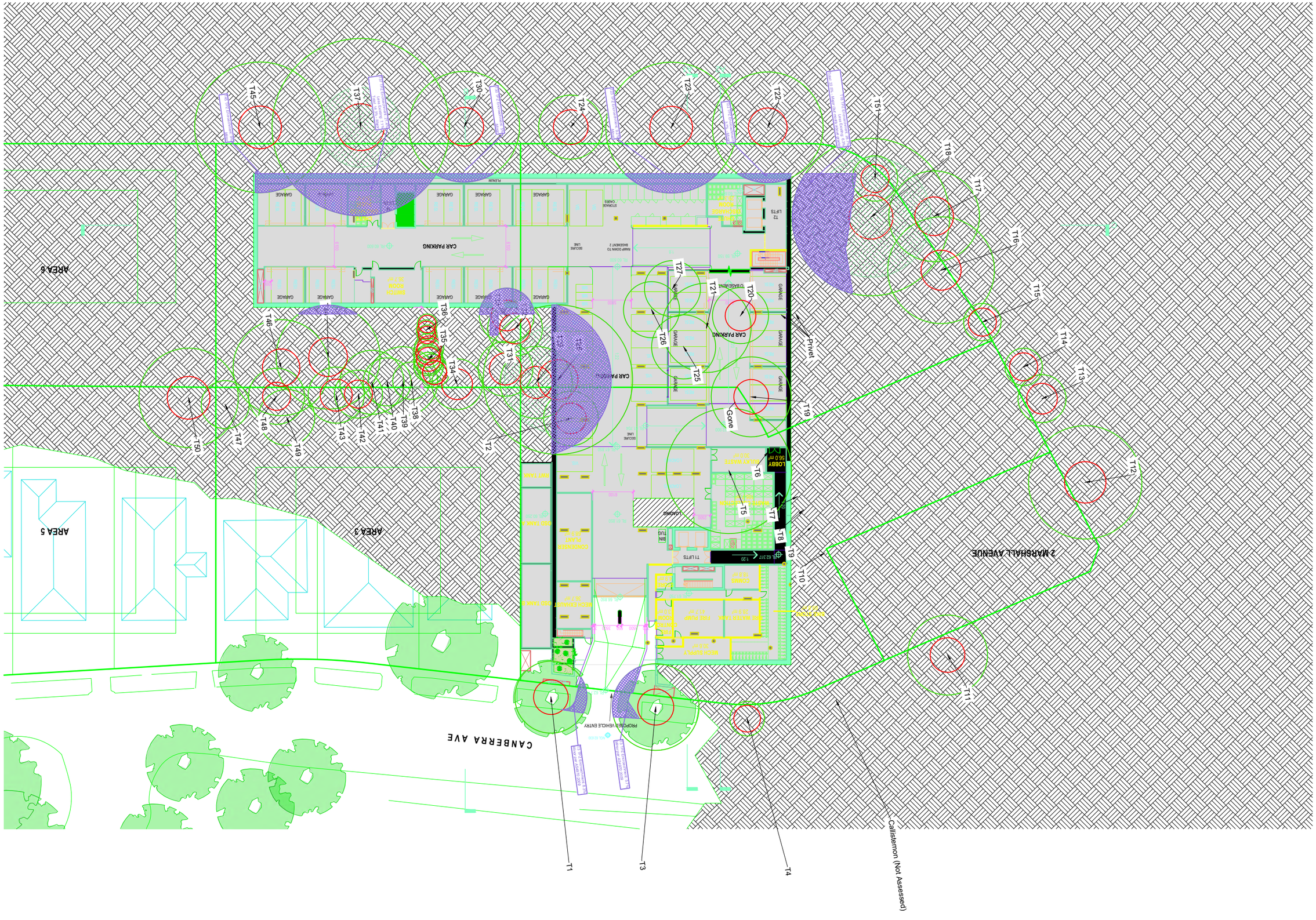
Plot Date: 31/08/2022

Key:

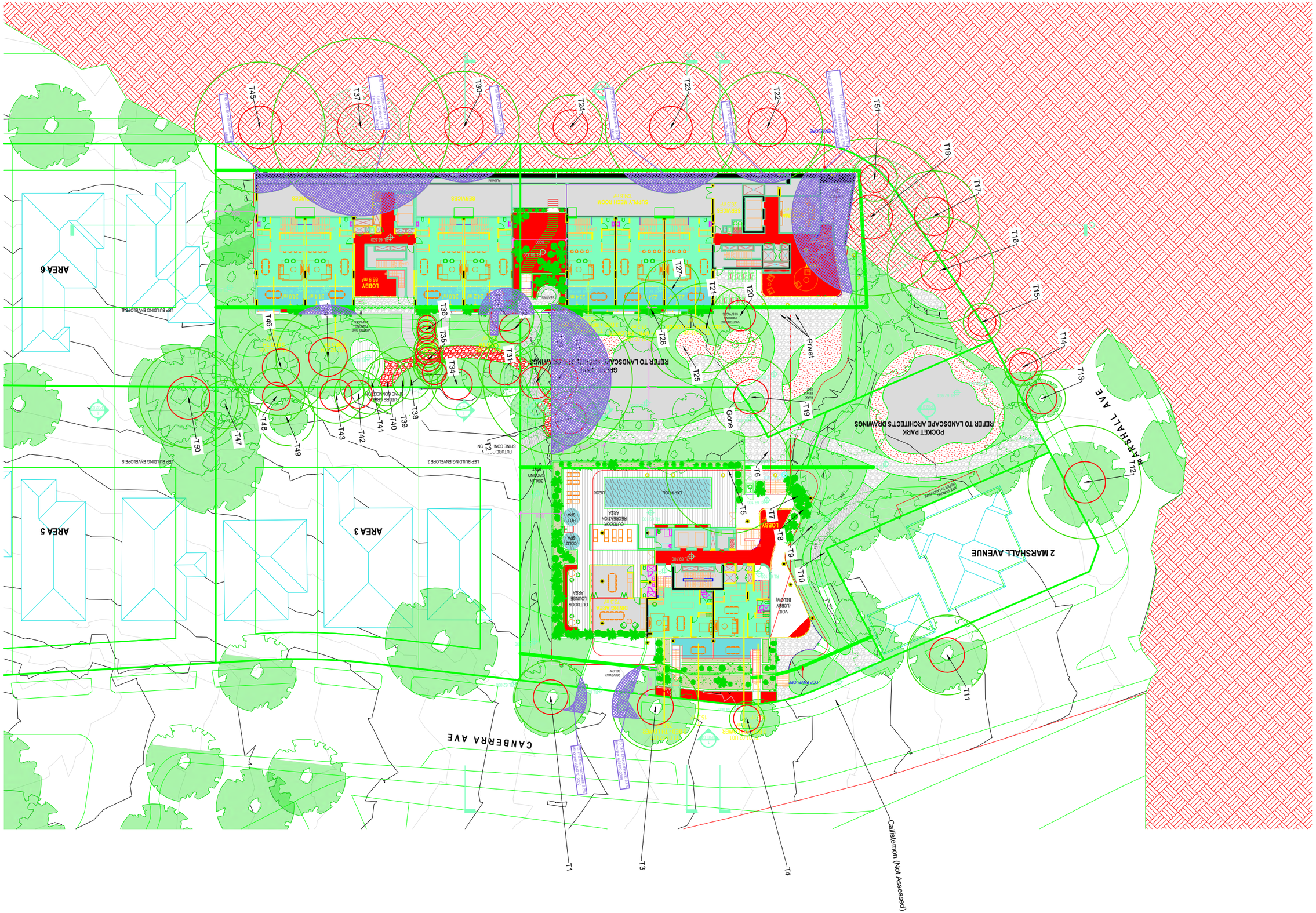
- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)
- Canopy Spread
- Encroachment Area



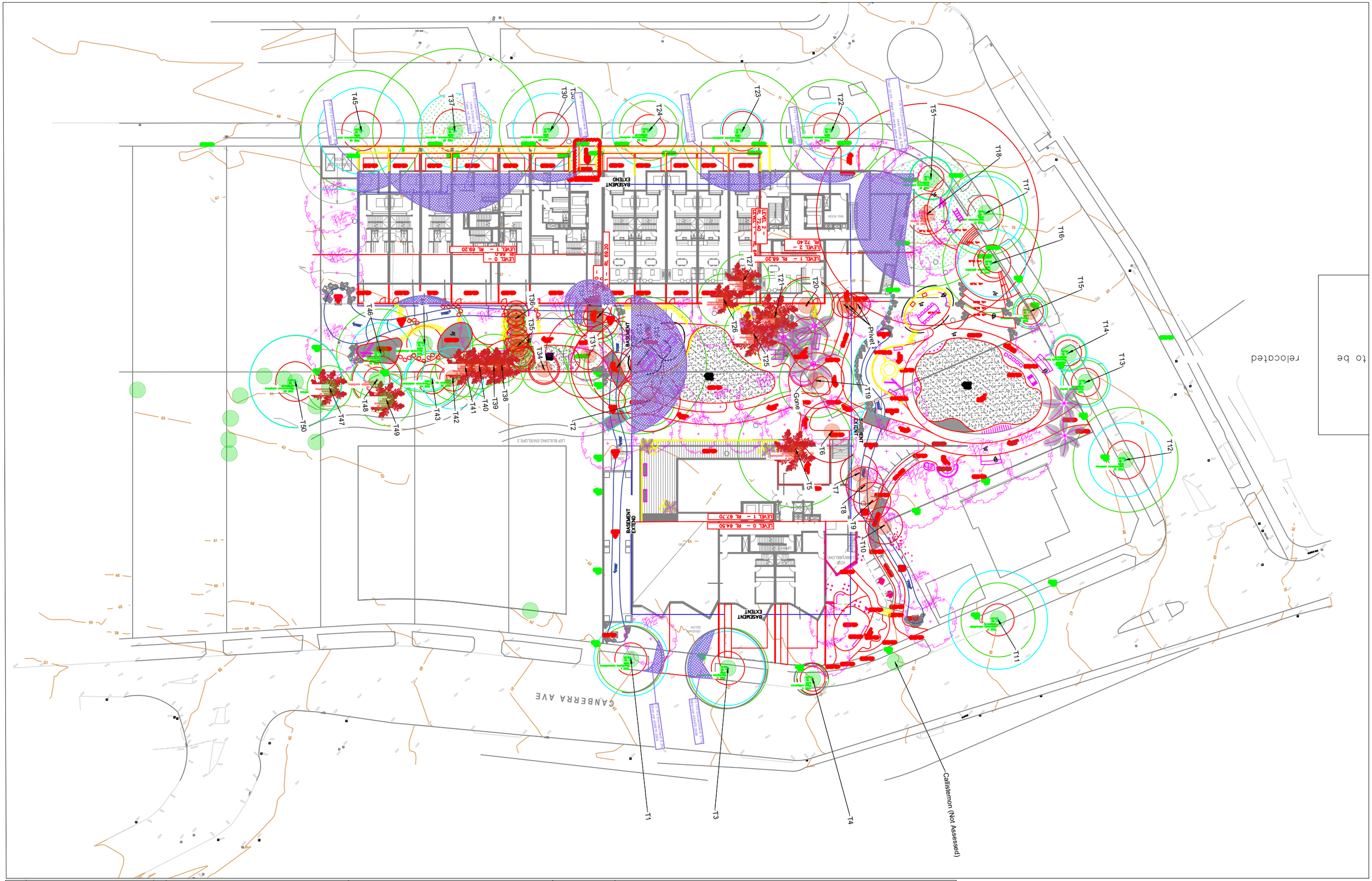
Blues Bros ARBORICULTURE	Blues Brothers Arboriculture PO BOX 102, BALGOWLAH NSW 2094	Title: Tree Significance	Revision: 02	Key: High Significance Moderate Significance Low Significance Exempt Species (per DCP)
	0439991122 www.bluesbros.com.au gordon@bluesbros.com.au	Project: Arborist St Leonards South DPE.dwg	Plot Date: 31/08/2022	



Blues Bros ARBORICULTURE	Blues Brothers Arboriculture PO BOX 102, BALGOWLAH NSW 2094 0439991122 www.bluesbros.com.au gordon@bluesbros.com.au	Title: Encroachment Potentials LG Project: Arborist St Leonards South DPE.dwg	Revision: 02 Plot Date: 31/08/2022	Key: Tree Protection Zone (TPZ) Structural Root Zone (SRZ) Canopy Spread Encroachment Area



Blues Bros ARBORICULTURE	Blues Brothers Arboriculture PO BOX 102, BALGOWLAH NSW 2094 0439991122 www.bluesbros.com.au gordon@bluesbros.com.au	Title: Encroachment Potentials Ground Project: Arborist St Leonards South DPE.dwg	Revision: 02 Plot Date: 31/08/2022	Key: Tree Protection Zone (TPZ) Structural Root Zone (SRZ) Canopy Spread Encroachment Area



Blues Bros ARBORICULTURE	Blues Brothers Arboriculture PO BOX 102, BALGOWLAH NSW 2094	Title: Tree Retention Plan	Revision: 02	Key: Tree for retention Tree for removal or transplanting
	0439991122 www.bluesbros.com.au gordon@bluesbros.com.au	Project: Arborist St Leonards South DPE.dwg	Plot Date: 31/08/2022	

Appendix 3 – Photographs

Image 1: Tree 1 as seen from the street.

Image 2: A panoramic view of vegetation within the rear yard of 5 Canberra Ave.

Image 3: A view of the vegetation on the site from 3 Canberra Ave. T5 pictured [centre].

Image 4: Street trees and vegetation along Marshall Ave as seen.

Image 5: A view of vegetation from within the rear yard of 8 Holdsworth Ave.