

# Tree Impact Assessment

## Croydon Community Wellbeing Precinct

Version 4 (29 November 2024)  
Tree Logic Ref. 012527

Including addendum for 1 Civic Square,  
Croydon 3136 (2 April 2025)

Prepared for CO-OP Studio  
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**\* Addendum related to the 1 Civic Square, Croydon 3136 can be found in Appendix 3.**

## Introduction

Treelogic was engaged to review preliminary development plans relating to the Croydon Community Wellbeing Precinct and to undertake an assessment of the expected impacts to existing trees growing within the site.

The study area comprises the northern section of the precinct bounded by Civic Square, Croydon to both the east and west and by Mt Dandenong Road to the north.

The relevant trees were included as part of a broader preliminary arboricultural assessment for the project undertaken for Maroondah City Council by Treelogic. This Impact Assessment is primarily based on information collected during the initial assessment with additional site inspection carried out on 3 April 2023 to confirm tree presence and current condition.

- Documents reviewed:
- EXISTING & DEMOLITION PLAN – SITE TP-001 Rev C [pdf], CO-OP Studio, Proj. 100326, 22.11.2029 (sic).
- SITE PLAN – PROPOSED, TP-101 Rev C, CO-OP Studio, 22.11.29 (sic)
- C201 CIVIL SITE PLAN, SHEET 1, Rev P2, Taylor Thomson Whiting, 01.03.24.
- C202 CIVIL SITE PLAN, SHEET 2, Rev P1, Taylor Thomson Whiting, 01.03.24.
- Footing Plan [pdf]\_TTW\_Dwg No. TTW-00-DR-ST-11001 Rev P1 – 01.03.2024
- Arboricultural Assessment and Report, Croydon Community Wellbeing Precinct, Treelogic, 11 February 2021.

Sixty-six (66) of the trees from the previous preliminary tree assessment are located in the current area of interest, these being tree numbers 293 through 358. Re-inspection of the site revealed Trees 338, 339 and 344 have been removed. Details of the remaining 63 trees are provided at Appendix 1 and impacts to retained trees are shown on a copy of the Site plan at Appendix 2.

# 1 Design review and tree impacts

An excerpt from the Existing and Demolition Plan (A001 Rev J) is shown at Figure 1. In conjunction with the proposed development, eighteen (18) of the remaining 63 trees are earmarked for removal. These are Trees 301, 306, 307, 311, 314, 315 and 327 through 336 as listed in Table 1.



**Figure 1:** Excerpt from Demolition Plan with seventeen trees proposed for removal shown in red.

| Tree ID | Species (common name)                                      | DBH (cm)    | Height x Width (m) | Health       | Structure    | Arb. Rating | TPZ (m radius) | SRZ (m radius) |
|---------|------------------------------------------------------------|-------------|--------------------|--------------|--------------|-------------|----------------|----------------|
| 301     | <i>Callistemon viminalis</i> (Weeping Bottlebrush)         | 23,19       | 15x14              | Fair to Poor | Fair to Poor | Low         | 3.6            | 2.8            |
| 306     | <i>Prunus cerasifera</i> 'Nigra' (Purple Leaf Cherry Plum) | 13,11,10,9  | 6x4                | Fair         | Fair         | Mod.C       | 2.4            | 2.3            |
| 307     | <i>Cinnamomum camphora</i> (Camphor Laurel)                | 33          | 13x14              | Fair to Poor | Fair         | Mod.C       | 4              | 2.2            |
| 311     | <i>Eucalyptus kitsoniana</i> (Gippsland Mallee)            | 66,25       | 7x9                | Fair         | Fair to Poor | Mod.C       | 8.5            | 3.1            |
| 312     | <i>Eucalyptus robusta</i> (Swamp Mahogany)                 | 80          | 8x6                | Fair         | Fair         | Mod.A       | 9.6            | 3.3            |
| 314     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)         | 82          | 5x7                | Fair         | Fair         | High        | 9.8            | 3.2            |
| 315     | <i>Melaleuca linariifolia</i> (Snow in Summer)             | 32          | 8x8                | Good         | Fair         | Mod.B       | 3.8            | 2.2            |
| 327     | <i>Arbutus unedo</i> (Irish Strawberry Tree)               | 15,13,12    | 5x5                | Fair         | Fair         | Low         | 2.8            | 2              |
| 328     | <i>Liquidambar styraciflua</i> (Liquidamber)               | 69          | 7x7                | Good         | Fair         | High        | 8.3            | 3              |
| 329     | <i>Arbutus unedo</i> (Irish Strawberry Tree)               | 18,9        | 19x15              | Fair         | Fair         | Mod.C       | 2.2            | 1.8            |
| 330     | <i>Corymbia ficifolia</i> (Red-flowering Gum)              | 70,25       | 12x16              | Fair         | Fair         | Mod.B       | 8.9            | 3.1            |
| 331     | <i>Arbutus unedo</i> (Irish Strawberry Tree)               | 28,10,10    | 8x11               | Fair         | Fair         | Mod.C       | 3.8            | 2.2            |
| 332     | <i>Angophora costata</i> (Smooth-barked Apple)             | 44          | 8x11               | Good         | Fair         | Mod.B       | 5.3            | 2.4            |
| 333     | <i>Malus</i> sp. (Apple)                                   | 28,26       | 5x7                | Good         | Fair         | Mod.C       | 4.6            | 2.6            |
| 334     | <i>Arbutus unedo</i> (Irish Strawberry Tree)               | 21,13       | 7x7                | Fair         | Fair         | Mod.C       | 3              | 1.9            |
| 335     | <i>Liquidambar styraciflua</i> (Liquidamber)               | 40          | 16x12              | Good         | Fair         | Mod.B       | 4.8            | 2.5            |
| 336     | <i>Arbutus unedo</i> (Irish Strawberry Tree)               | 39,37,33,27 | 8x12               | Fair         | Fair to Poor | Mod.B       | 8.2            | 2.9            |

**Table 1:** Details of seventeen trees proposed for removal during Demolition.

Determining the potential impacts from proposed works on those trees intended to be retained involves assessing the type and extent of any changes to their growing environment. The trees' Tree Protection Zones (TPZs) have been calculated based on AS4970-2009 Protection of trees on development sites and they define an area within which any significant disturbance needs to be avoided to have confidence that the trees will not be adversely affected.

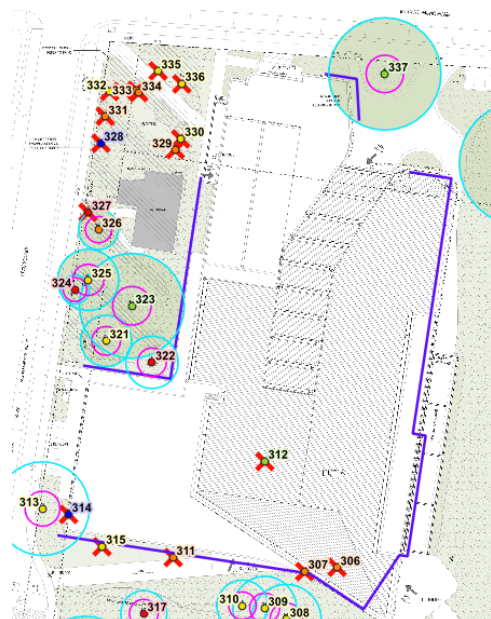
In some circumstances tree characteristics or previous site conditions such as built form or hard surfacing that has been in place while a tree was establishing will allow a greater level of TPZ intrusion to be tolerated, however, AS4970 defines impacts to any more than 10% of a total TPZ area as major encroachment which is to be avoided without further justification.

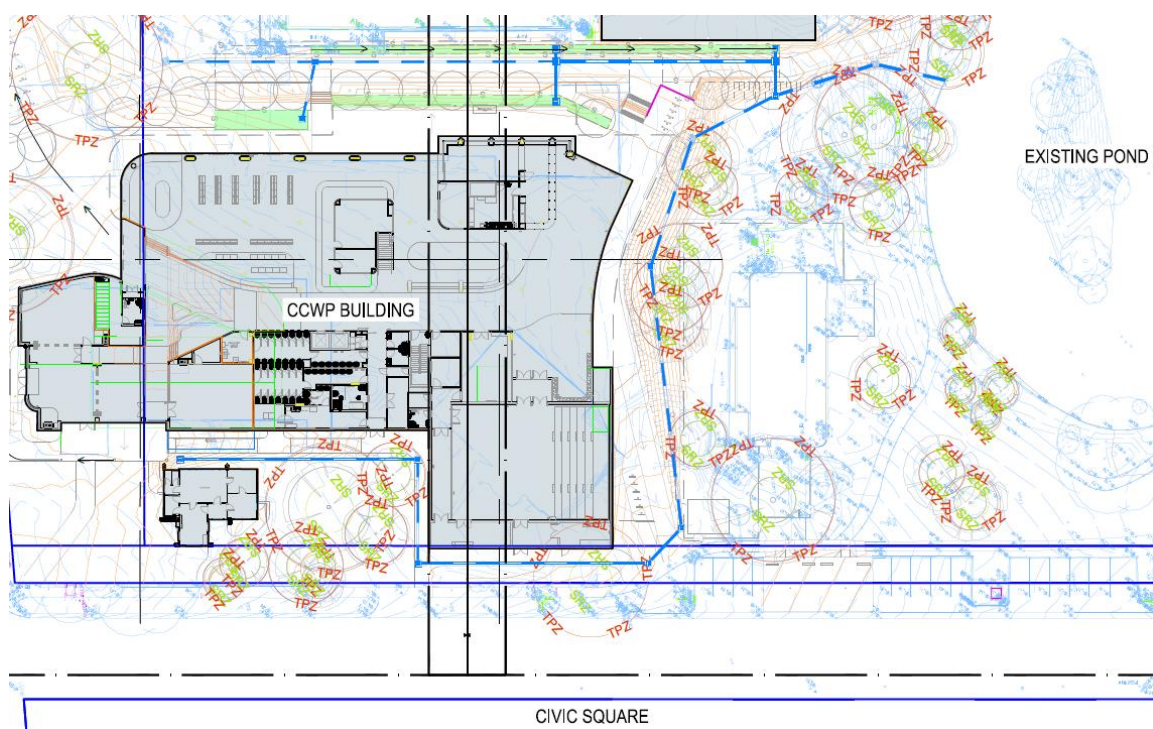
There is potential for damage to occur to the trees during demolition works, however, with adequate planning and care around operation of machinery, these works can usually be completed with minimal impacts. Where possible, TPZ areas should be fenced off, but where elements being demolished are within TPZs, a combination of ground, trunk and major limb protection can be employed along with arboricultural supervision, as required.

During construction, almost any activity that interferes with the soil environment within a TPZ or with a tree's canopy has the potential to cause damage. The most effective means of protecting trees is to erect and maintain protection fencing around the entire TPZ during works, however, this is often unrealistic for many trees where development is to occur in an urban setting.

The plan at Appendix 2 includes the trees' TPZs and Structural Root Zones (SRZs) and shows where encroachments have been identified from the design plans reviewed. Two of the trees intended to be retained (Nos. 313 and 337) would have built form extending into their TPZs while intrusions for other trees would primarily come from drainage lines and root barriers that it is understood are proposed to protect the new building from the effects of potential future root growth. Concept root barrier locations and drainage lines are shown on the plan extracts at Figure 2 and Figure 3 respectively.

**Figure 2:** Locations of proposed root barriers (purple lines) overlaid onto Site Plan.





**Figure 3:** Extract from General Site Plan (Civil) with drainage indicated by blue lines.

Twelve (12) trees have been identified from the supplied plans as having construction or trenching works proposed within their TPZs. Six (6) of these have encroachment calculated as being minor (less than 10% of their TPZs being impacted) while six other trees would be subjected to major TPZ encroachment. (Table 2).

| Tree Nos.       | TPZ encroachment             |
|-----------------|------------------------------|
| 298,302,303,317 | ≤5%                          |
| 323, 337        | 5-10%                        |
| 305             | 32% (drainage)               |
| 308             | 19% (drainage)               |
| 309             | 29% (drainage)               |
| 310             | 28% (drainage)               |
| 313             | 34% (drainage, building)     |
| 322             | 40% (drainage, root barrier) |

**Table 2:** Levels of TPZ encroachments of retained trees.

Provided that adequate protection measures are employed during works, and landscape elements that are introduced around the buildings are designed with minimal level changes and are permeable within TPZs, trees with less than 10% TPZ encroachment are not expected to be adversely affected. Any additional services would also need to be directed outside or bored beneath TPZs at sufficient depth, to avoid impacting roots.

Particular attention is likely to be required around Tree 337 as the proposed encroachment is currently close to 10% on account of the proposed root barrier. While the tree currently has hard surfacing over much of its TPZ, additional root disturbance over and above the root barrier should be avoided.

With respect to trees which would be subjected to greater than 10% TPZ intrusion;

- **Trees 305, 308, 309 and 310** would be impacted by the proposed drainage alignment. Relocating the drainage to impact none or only a minor proportion of their TPZs would appear feasible. Otherwise, the feasibility of boring below the rootzones would need to be investigated.
- **Tree 313** would also have its TPZ most affected by proposed drainage. Boring drainage lines below the root zone would reduce intrusion to approximately 14% from the building footprint. This tree, a *Melaleuca linariifolia*, would be expected to tolerate this level of intrusion.
- **Tree 322** is a small Cherry Plum (*Prunus cerasifera*) which is of little arboricultural merit. Design amendment would not be warranted to preserve this tree over providing a new replacement planting within the site.

Schematic Landscape Designs previously reviewed for the site showed that consideration was being given to minimising TPZ encroachments and preserving ground levels around trees. Further review of Landscape plans will be required during design development to confirm changes will be tolerated by retained trees.

## 2 Conclusions

Treelogic was engaged to review current design plans in relation to development of the Croydon Community Wellbeing Precinct and to assess impacts to trees in the area. Tree details were recorded as part of a broader preliminary arboricultural assessment with sixty-three (63) trees existing in the current study area. Tree characteristics are included at Appendix 1 and tree locations, TPZs and identified encroachments shown on the plan at Appendix 2.

Seventeen (17) trees, Nos. 301, 306, 307, 311, 312, 314, 315, 327, 328, 329, 330, 331, 332, 333, 334, 335 and 336 are proposed to be removed in conjunction with the development.

Of the twelve (12) trees with some proposed encroachment of their allocated TPZs from construction works, six (6) would have a relatively minor 10% or less of their entire TPZ area impacted.

The six (6) trees with more significant TPZ encroachment proposed include Trees 305, 308, 309, 310, 313 and 322.

- Tree 322 is of little arboricultural value and design amendment is not considered warranted to preserve its condition.
- To preserve trees 305, 308, 309, 310 and 313, proposed drainage alignments would need to be bored below the rootzones or amended to affect no more than 10% of the trees TPZs.

With both demolition and construction works proposed in proximity of several trees, works will need to be planned and undertaken with sufficient care and protection measures in place, to ensure trees remain viable.

Any additional underground services required will need to be subjected to further assessment unless directed outside TPZs or bored below root zones.



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There can be no guarantees provided for on-going tree safety. It should be noted that not all of the potential structural concerns associated with trees can be eliminated and that there will always be a residual risk following any mitigation works. Also, not all tree defects are observable and extreme weather events are unpredictable. Since trees are complex, living organisms, it is difficult to quantify and precisely measure all variables when inspecting a standing tree for hazard.

Trees should be reassessed on a regular basis; the scheduled period of reassessment will be dependent on the characteristics of the tree, the landscape context and perceived targets, and resources available to maintain them.

# Appendix 1: Tree Assessment Table:

Key: DBH = Diameter at breast height, 1.4m up trunk, unless otherwise indicated. Basal dimensions is trunk diameter at base immediately above root buttress. ARB rating = arboricultural rating. TPZ = Tree protection zone in radial metres. SRZ = Structural root zone in radial metres. Definition of the descriptor categories used in the assessment can be seen in Appendix 3.

| Tree ID | Species (common name)                                                | Age          | Origin               | DBH (cm)        | Basal (cm) | Height x Width (m) | Health       | Structure    | Arb. Rating | ULE (years) | Comments                                                                                  | TPZ (m radius) | SRZ (m radius) |
|---------|----------------------------------------------------------------------|--------------|----------------------|-----------------|------------|--------------------|--------------|--------------|-------------|-------------|-------------------------------------------------------------------------------------------|----------------|----------------|
| 293     | <i>Eucalyptus nicholii</i> (Narrow-leaved Black Peppermint)          | Maturing     | Australian native    | 73              | 81         | 15x14              | Fair to Poor | Fair to Poor | Mod.C       | 6-10 y      | Past branch failure;Reduced foliage density;Tip dieback                                   | 8.8            | 3              |
| 294     | <i>Callistemon viminalis</i> (Weeping Bottlebrush)                   | Semi-mature  | Australian native    | 10,10,10, 9,8   | 33         | 6x4                | Fair         | Fair         | Low         | 11-20 y     | Suppressed                                                                                | 2.1            | 2.1            |
| 295     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Maturing     | Exotic deciduous     | 51              | 57         | 13x14              | Fair         | Fair         | Mod.A       | >40 y       |                                                                                           | 6.1            | 2.6            |
| 296     | <i>Callistemon viminalis</i> (Weeping Bottlebrush)                   | Maturing     | Australian native    | 34,16,12        | 60         | 7x9                | Fair         | Poor         | Low         | 6-10 y      | Basal decay;Basal wounds                                                                  | 4.7            | 2.7            |
| 297     | <i>Melaleuca styphelioides</i> (Prickly-leaved Paperbark)            | Early-mature | Australian native    | 35              | 38         | 8x6                | Fair         | Fair         | Mod.B       | >40 y       |                                                                                           | 4.2            | 2.2            |
| 298     | <i>Callistemon viminalis</i> (Weeping Bottlebrush)                   | Maturing     | Australian native    | 20,19,18, 15,12 | 40         | 5x7                | Fair         | Fair         | Mod.C       | 21-40 y     |                                                                                           | 4.6            | 2.3            |
| 299     | <i>Eucalyptus camaldulensis</i> (River Red Gum)                      | Semi-mature  | Indigenous (Planted) | 23              | 29         | 8x8                | Fair         | Fair         | Mod.C       | >40 y       | Suppressed;over pond                                                                      | 2.8            | 2              |
| 300     | <i>Eucalyptus sideroxylon</i> (Red Ironbark)                         | Maturing     | Australian native    | 72              | 80         | 18x20              | Fair         | Fair         | Mod.A       | 21-40 y     | Co-dominant stems                                                                         | 8.6            | 3              |
| 301     | <i>Callistemon viminalis</i> (Weeping Bottlebrush)                   | Maturing     | Australian native    | 23,19           | 65         | 7x7                | Fair to Poor | Fair to Poor | Low         | 6-10 y      | Declining                                                                                 | 3.6            | 2.8            |
| 302     | <i>Eucalyptus cladocalyx</i> (Sugar Gum)                             | Maturing     | Australian native    | 70              | 82         | 19x15              | Fair         | Fair         | Mod.A       | >40 y       | Past stem failure;Trunk wounds                                                            | 8.4            | 3              |
| 303     | <i>Eucalyptus camaldulensis</i> (River Red Gum)                      | Early-mature | Indigenous (Planted) | 46,45           | 75         | 12x16              | Fair         | Fair         | Mod.A       | >40 y       | Co-dominant stems;Suppressed;over pond                                                    | 7.7            | 2.9            |
| 304     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Early-mature | Exotic deciduous     | 33              | 35         | 8x11               | Good         | Fair         | Mod.B       | >40 y       |                                                                                           | 4              | 2.1            |
| 305     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Early-mature | Exotic deciduous     | 36              | 41         | 8x11               | Fair         | Fair         | Mod.B       | >40 y       |                                                                                           | 4.3            | 2.3            |
| 306     | <i>Prunus cerasifera</i> 'Nigra' (Purple Leaf Cherry Plum)           | Maturing     | Exotic deciduous     | 13,11,10, 9     | 40         | 5x7                | Fair         | Fair         | Mod.C       | 11-20 y     |                                                                                           | 2.4            | 2.3            |
| 307     | <i>Cinnamomum camphora</i> (Camphor Laurel)                          | Semi-mature  | Exotic evergreen     | 33              | 39         | 7x7                | Fair to Poor | Fair         | Mod.C       | 11-20 y     | Tip dieback                                                                               | 4              | 2.2            |
| 308     | <i>Corymbia maculata</i> (Spotted Gum)                               | Early-mature | Victorian native     | 47              | 58         | 16x12              | Fair         | Fair         | Mod.B       | 21-40 y     | heaving asphalt driveway                                                                  | 5.6            | 2.6            |
| 309     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Maturing     | Exotic deciduous     | 33,27           | 45         | 10x12              | Fair         | Fair         | Mod.B       | 21-40 y     | heaving asphalt driveway                                                                  | 5.1            | 2.4            |
| 310     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Early-mature | Exotic deciduous     | 34              | 38         | 9x11               | Fair         | Fair         | Mod.B       | 21-40 y     | Partly suppressed - crown bias west. heaving asphalt driveway                             | 4.1            | 2.2            |
| 311     | <i>Eucalyptus kitsoniana</i> (Gippsland Mallee)                      | Maturing     | Victorian native     | 66,25           | 84         | 9x11               | Fair         | Fair to Poor | Mod.C       | 6-10 y      | Bracket fungi;Cavity;Main leader dead;Trunk wounds;past crown reduction                   | 8.5            | 3.1            |
| 312     | <i>Eucalyptus robusta</i> (Swamp Mahogany)                           | Maturing     | Australian native    | 80              | 96         | 15x15              | Fair         | Fair         | Mod.A       | 21-40 y     |                                                                                           | 9.6            | 3.3            |
| 313     | <i>Melaleuca linariifolia</i> (Snow in Summer)                       | Maturing     | Australian native    | 34,30,27, 26,20 | 65         | 6x7                | Fair         | Fair         | Mod.B       | 21-40 y     |                                                                                           | 7.5            | 2.8            |
| 314     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous           | 82              | 89         | 13x18              | Fair         | Fair         | High        | 21-40 y     | impact wound on eastern stem.                                                             | 9.8            | 3.2            |
| 315     | <i>Melaleuca linariifolia</i> (Snow in Summer)                       | Early-mature | Australian native    | 32              | 38         | 6x6                | Good         | Fair         | Mod.B       | >40 y       | Occasional care                                                                           | 3.8            | 2.2            |
| 316     | <i>Ulmus glabra</i> (Wych Elm)                                       | Maturing     | Exotic deciduous     | 44,33,32, 23    | 78         | 11x17              | Good         | Fair         | High        | >40 y       | Occasional care                                                                           | 8.1            | 3              |
| 317     | <i>Acacia floribunda</i> (Gossamer Wattle)                           | Maturing     | Victorian native     | 23,16,13        | 44         | 8x8                | Fair to Poor | Fair         | Low         | 1-5 y       | Reduced foliage density;Occasional care                                                   | 3.7            | 2.3            |
| 318     | <i>Lophostemon confertus</i> (Brush Box)                             | Semi-mature  | Australian native    | 29              | 35         | 7x7                | Fair         | Fair         | Mod.B       | 21-40 y     | synthetic surrounding. Occasional care                                                    | 3.5            | 2.1            |
| 319     | <i>Grevillea robusta</i> (Silky Oak)                                 | Semi-mature  | Australian native    | 30              | 39         | 9x6                | Fair         | Fair         | Mod.B       | 21-40 y     | Occasional care                                                                           | 3.6            | 2.2            |
| 320     | <i>Ulmus Xhollandica</i> (Dutch Elm)                                 | Semi-mature  | Exotic deciduous     | 30              | 35         | 8x9                | Good         | Fair         | Mod.B       | >40 y       |                                                                                           | 3.6            | 2.1            |
| 321     | <i>Lophostemon confertus</i> (Brush Box)                             | Early-mature | Australian native    | 34              | 42         | 10x9               | Good         | Fair         | Mod.B       | >40 y       |                                                                                           | 4.1            | 2.3            |
| 322     | <i>Prunus cerasifera</i> (Cherry-plum)                               | Maturing     | Exotic deciduous     | 20,15,14, 14,14 | 40         | 5x7                | Fair         | Fair         | Low         | 11-20 y     | Vine infested                                                                             | 4.2            | 2.3            |
| 323     | <i>Eucalyptus leucoxylon</i> (Yellow Gum)                            | Maturing     | Victorian native     | 70              | 84         | 12x12              | Fair         | Fair         | Mod.A       | 21-40 y     | Previous failures;Trunk wounds;remnant?                                                   | 8.4            | 3.1            |
| 324     | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> (Desert Ash) | Semi-mature  | Exotic deciduous     | 19              | 26         | 8x7                | Fair         | Fair         | Low         | 6-10 y      | Woody weed sp.                                                                            | 2.3            | 1.9            |
| 325     | <i>Lagunaria patersonia</i> (Norfolk Island Hibiscus)                | Early-mature | Australian native    | 41              | 50         | 8x7                | Fair         | Fair         | Mod.B       | >40 y       |                                                                                           | 4.9            | 2.5            |
| 326     | <i>Pittosporum eugenioides</i> 'Variegatum' (Variegated Tarata)      | Maturing     | Exotic evergreen     | 19,14,12, 9     | 35         | 6x6                | Good         | Fair         | Mod.C       | 11-20 y     |                                                                                           | 3.2            | 2.1            |
| 327     | <i>Arbutus unedo</i> (Irish Strawberry Tree)                         | Early-mature | Exotic evergreen     | 15,13,12        | 30         | 5x5                | Fair         | Fair         | Low         | 21-40 y     |                                                                                           | 2.8            | 2              |
| 328     | <i>Liquidambar styraciflua</i> (Liquidamber)                         | Maturing     | Exotic deciduous     | 69              | 78         | 18x18              | Good         | Fair         | High        | 21-40 y     |                                                                                           | 8.3            | 3              |
| 329     | <i>Arbutus unedo</i> (Irish Strawberry Tree)                         | Semi-mature  | Exotic evergreen     | 18,9            | 24         | 7x6                | Fair         | Fair         | Mod.C       | 21-40 y     | Suppressed                                                                                | 2.2            | 1.8            |
| 330     | <i>Corymbia ficifolia</i> (Red-flowering Gum)                        | Maturing     | Australian native    | 70,25           | 85         | 8x10               | Fair         | Fair         | Mod.B       | 21-40 y     | Vine infested;fenced off                                                                  | 8.9            | 3.1            |
| 331     | <i>Arbutus unedo</i> (Irish Strawberry Tree)                         | Early-mature | Exotic evergreen     | 28,10,10        | 37         | 6x6                | Fair         | Fair         | Mod.C       | 21-40 y     | outside fenceline                                                                         | 3.8            | 2.2            |
| 332     | <i>Angophora costata</i> (Smooth-barked Apple)                       | Early-mature | Australian native    | 44              | 48         | 9x9                | Good         | Fair         | Mod.B       | >40 y       | outside fenceline                                                                         | 5.3            | 2.4            |
| 333     | <i>Malus</i> sp. (Apple)                                             | Maturing     | Exotic deciduous     | 28,26           | 55         | 6x9                | Good         | Fair         | Mod.C       | 21-40 y     | outside fenceline                                                                         | 4.6            | 2.6            |
| 334     | <i>Arbutus unedo</i> (Irish Strawberry Tree)                         | Early-mature | Exotic evergreen     | 21,13           | 27         | 5x5                | Fair         | Fair         | Mod.C       | 21-40 y     | outside fenceline                                                                         | 3              | 1.9            |
| 335     | <i>Liquidambar styraciflua</i> (Liquidamber)                         | Early-mature | Exotic deciduous     | 40              | 53         | 10x8               | Good         | Fair         | Mod.B       | 21-40 y     | outside fenceline                                                                         | 4.8            | 2.5            |
| 336     | <i>Arbutus unedo</i> (Irish Strawberry Tree)                         | Maturing     | Exotic evergreen     | 39,37,33, 27    | 75         | 8x12               | Fair         | Fair to Poor | Mod.B       | 11-20 y     | Cracks/splits;Incipient decay;Multi-stemmed;Wounds;outside fenceline                      | 8.2            | 2.9            |
| 337     | <i>Liquidambar styraciflua</i> (Liquidamber)                         | Maturing     | Exotic deciduous     | 75              | 81         | 12x16              | Fair         | Fair to Poor | Mod.A       | 21-40 y     | Epicormic shoots;Incipient decay;Lost main leader;Past powerline clearance;Wounds;planter | 9              | 3              |
| 340     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous (Planted) | 68,46           | 87         | 16x13              | Fair         | Fair         | Mod.A       | 21-40 y     | Croydon central kindergarten                                                              | 9.9            | 3.1            |

| Tree ID | Species (common name)                                                | Age          | Origin               | DBH (cm) | Basal (cm) | Height x Width (m) | Health       | Structure | Arb. Rating | ULE (years) | Comments                                                | TPZ (m radius) | SRZ (m radius) |
|---------|----------------------------------------------------------------------|--------------|----------------------|----------|------------|--------------------|--------------|-----------|-------------|-------------|---------------------------------------------------------|----------------|----------------|
| 341     | <i>Quercus robur</i> (English Oak)                                   | Maturing     | Exotic deciduous     | 66       | 77         | 14x18              | Fair         | Fair      | Mod.A       | >40 y       | Croydon central kindergarten                            | 7.9            | 3              |
| 342     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous (Planted) | 55       | 65         | 15x12              | Fair to Poor | Fair      | Mod.B       | 11-20 y     | Dieback;Croydon central kindergarten                    | 6.6            | 2.8            |
| 343     | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> (Desert Ash) | Maturing     | Exotic deciduous     | 37       | 37         | 12x10              | Good         | Fair      | Mod.B       | >40 y       | Croydon central kindergarten                            | 4.4            | 2.2            |
| 345     | <i>Melaleuca nesophila</i> (Showy Honey-myrtle)                      | Early-mature | Australian native    | 24       | 26         | 6x6                | Good         | Fair      | Mod.C       | 21-40 y     | Croydon central kindergarten                            | 2.9            | 1.9            |
| 346     | <i>Pittosporum eugenioides</i> 'Variegatum' (Variegated Tarata)      | Early-mature | Exotic evergreen     | 16,12,12 | 36         | 6x6                | Fair         | Fair      | Low         | 11-20 y     | Croydon central kindergarten                            | 2.8            | 2.2            |
| 347     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous (Planted) | 51       | 58         | 15x12              | Fair         | Fair      | Mod.B       | 21-40 y     | suppressed to south. Croydon central kindergarten       | 6.1            | 2.6            |
| 348     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous           | 73,64    | 128        | 15x17              | Fair         | Fair      | High        | 21-40 y     | outside fenceline                                       | 11.6           | 3.7            |
| 349     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Semi-mature  | Indigenous           | 33       | 40         | 9x8                | Fair         | Fair      | Mod.B       | 21-40 y     | suppressed to north. outside fenceline                  | 4              | 2.3            |
| 350     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous           | 50       | 56         | 13x9               | Fair         | Fair      | Mod.B       | 21-40 y     | Partly suppressed - crown bias south. outside fenceline | 6              | 2.6            |
| 351     | <i>Lophostemon confertus</i> (Brush Box)                             | Maturing     | Australian native    | 41,23    | 54         | 9x9                | Fair         | Fair      | Mod.B       | >40 y       | Street tree                                             | 5.6            | 2.6            |
| 352     | <i>Eucalyptus cephalocarpa</i> (Mealy Stringybark)                   | Maturing     | Indigenous           | 83       | 97         | 13x12              | Good         | Fair      | Mod.A       | >40 y       | Co-dominant stems;Street tree;50% crown over road       | 10             | 3.3            |
| 353     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Semi-mature  | Exotic deciduous     | 21,13    | 27         | 8x10               | Good         | Fair      | Mod.B       | >40 y       |                                                         | 3              | 1.9            |
| 354     | <i>Gleditsia triacanthos</i> (Honey Locust)                          | Semi-mature  | Exotic deciduous     | 30       | 34         | 8x10               | Good         | Fair      | Mod.B       | >40 y       |                                                         | 3.6            | 2.1            |
| 355     | <i>Eucalyptus</i> sp. (Gum Tree)                                     | Semi-mature  | Australian native    | 9,6,6    | 12         | 3x4                | Fair to Poor | Fair      | Low         | 6-10 y      | mallee sp.                                              | 2              | 1.5            |
| 356     | <i>Eucalyptus ovata</i> (Swamp Gum)                                  | Semi-mature  | Indigenous (Planted) | 18       | 22         | 8x5                | Fair         | Fair      | Mod.C       | >40 y       |                                                         | 2.2            | 1.8            |
| 357     | <i>Eucalyptus</i> sp. (Gum Tree)                                     | Semi-mature  | Australian native    | 19       | 23         | 7x5                | Fair         | Fair      | Mod.C       | 21-40 y     |                                                         | 2.3            | 1.8            |
| 358     | <i>Eucalyptus</i> sp. (Gum Tree)                                     | Semi-mature  | Australian native    | 9,6,6    | 12         | 3x4                | Poor         | Fair      | Very Low    | 1-5 y       |                                                         | 2              | 1.5            |

## Appendix 2: Proposed design, tree protection zones and encroachments

**PROJECT**  
CROYDON COMMUNITY WELLBEING

|                           |                               |
|---------------------------|-------------------------------|
| <b>TL REF.</b><br>012527  | <b>MAP NO.</b><br>1 / 1       |
| <b>DATE</b><br>2024-11-29 | <b>CLIENT</b><br>CO-OP Studio |

## LEGEND

 Trees for removal

TPZ ○

SRZ ○

TPZ encroachments & %

— rootbarriers

— drainage

## DATA SOURCES

- T101 - SITE PLAN [S], CO-OP Studio, Proj. 100326, Rev C 22.11.2024
- Footing Plan [pdf]\_TTW\_Dwg No. TTW-00-DR-ST-11001 Rev P1 – 01.03.2024
- C201-202 TTW CCWP CIVIL Site Plans – 1.03.2024.pdf

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



ABN: 95 080 021 610      **TREELOGIC PTY LTD**  
TEL: 1300 656 926      4 / 21 Eugene Tce



Plan, manage, protect

## Appendix 3: Addendum

The client requested further review and professional opinions on proposed landscape works in the northwest corner of the subject site; 1 Civic Square Croydon 3136. The client requested Treelogic's review of proposed works 1 Civic Square Croydon, including:

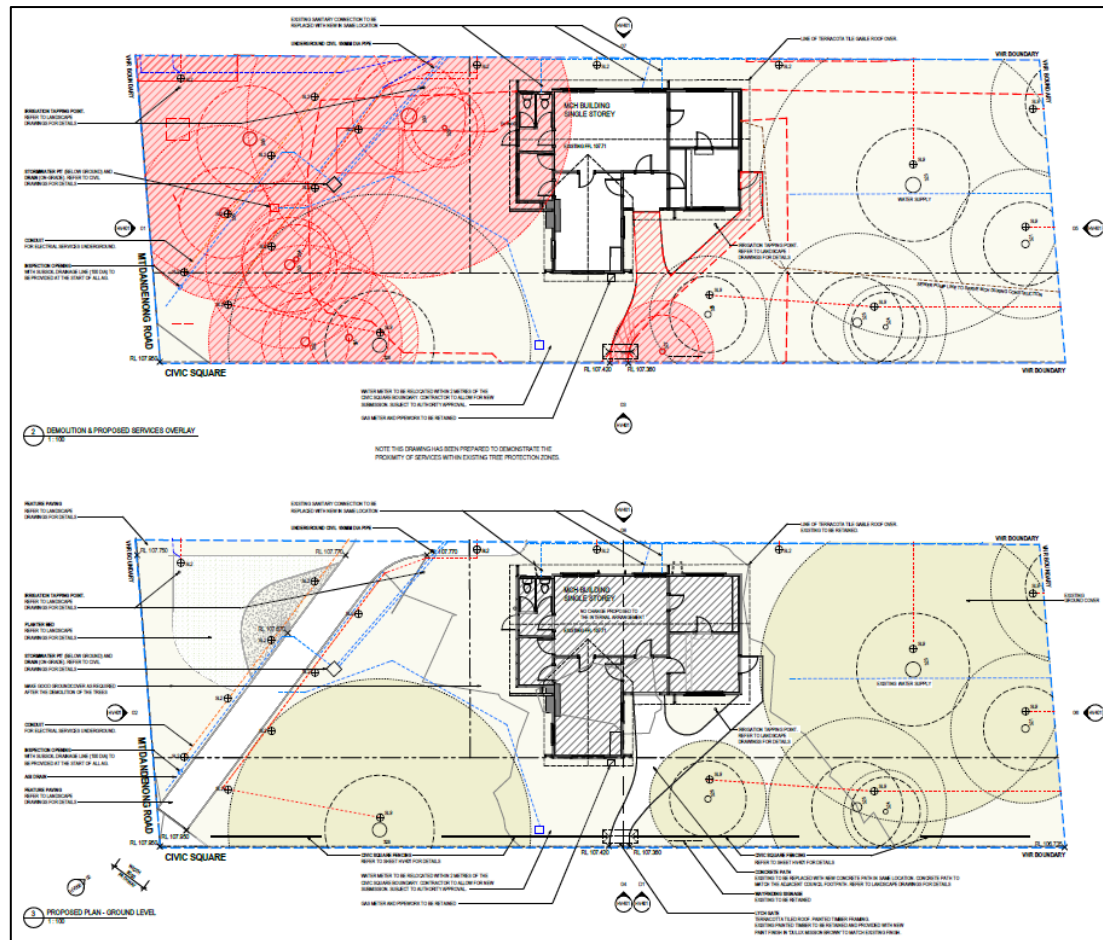
1. Whether tree protection zone changes are applicable since the site inspection approximately 2 years ago.
2. Proposed tree removals.
3. Proposed fencing impacts to retained trees.

Documents supplied for review:

- 'Existing and Demolition Plan – Site' (Sheet A005, undated, unspecified revision)
- 'Site Plan – Proposed' (Sheet A101, undated, unspecified revision)
- 'Landscape Architectural Tender Package' (T1, 15.11.2024, contains 17 sheets)
- '100326\_CCWP\_HV SERIES\_HERITAGE VICTORIA\_250324 FOR REVIEW' (Rev 2, 24.03.25):
  - HVOOO/Cover Page
  - HV005/Existing Plan – Site
  - HV201/Existing & Proposed General Arrangement
  - HV401/Existing & Proposed Elevations
- 'Civil Specification' (TTW, 15 November 2024)
- 'Landscape Specification' (14 March 2025)

Trees within/near the Heritage Victoria VHR Site HO0054 area:

- Assessed: Trees 321-336
- Proposed for removal: Trees 327 & 329-335
- Proposed for retention: Trees 321-326 & 328



*Extract from 'HV201/Existing & Proposed General Arrangement'*

Tree protection zone changes:

- The initial site inspection was conducted in January 2022, a second site visit to confirm tree condition was conducted on 3 April 2023. Based on the maturity of most trees within this section of the site discussed here, it is unlikely trunk dimensions and associated protection zones (e.g. TPZ & SRZ) have increased significantly (e.g. <5%).
- Proposed works within the TPZ of retained trees are primarily landscaping and outside the SRZs, this limits the need for enlarged protection areas (even if trunk dimensions have increase mildly).
- A site visit to re-measure trunk dimensions and recalculate protection zones would be worthwhile if works do not commence in the next 12 months.
- Regarding Trees 327-336 - all but one of these trees are proposed for removal, re-assessing trees being removed has no relevance.

#### Tree removals:

- Trees 328-336 occupy a high-profile part of the site (street intersection), this elevates their landscape significance. Together these trees afford considerable visual and noise buffering to the site, amongst other more generic amenity benefits (e.g. wildlife habitat, stormwater runoff reduction, mitigating the heat island effect...).
- Dimensions of these trees indicate considerable age for most specimens, the time to replace trees to comparable size must not be overlooked. Most trees were assessed as being suitable for long-term retention (e.g. 20+ years).
- Of the trees assessed in this study area Trees 323 & 328 are the dominant specimens, while Trees 330, 332, 335 & 336 are also of elevated arboricultural value.
- Removal of Trees 322, 324, 327 is considered reasonable regardless of necessity based on their limited arboricultural rating and ULE.
- Retention of Trees 321-326 will preserve the bulk of landscape character in this section of the area, the loss of Tree 327 to facilitate access changes and new fencing is reasonable.
- Retention of Tree 328 will preserve moderate landscape character in this immediate vicinity, but removal of Trees 329-336 will significantly degrade streetscape character. Removal of all these trees is not justifiable based on their individual condition.
- The client has noted that 37% of the TPZ for Tree 330 is overlapped by heritage buildings, Tree 336 also has moderate overlap:
  - Roots have capacity to damage built form in two ways; directly (via thickening of roots beneath/against the built form, usually in/near the tree's SRZ), and indirectly (via localised soil drying/shrinking where reactive soils occur, in/near the tree's TPZ).
  - The soil type/reactivity for the site is not known here. Neither are details of heritage building footings (footing quality does impact susceptibility to damage from trees, and older buildings are less likely to have been designed with tree influence in mind).
  - It is worth noting that canopy shading of a soil can limit indirect damage from tree roots as evapotranspiration is reduced. Mulching and irrigation can also be used to mitigate irregularities in soil moisture/volume.
  - No evidence of damage to the buildings adjacent to Trees 330 & 336 was noted during assessment, and no evidence of building damage has been provided.
  - Based on the absence of recorded damage and the maturity/age of Trees 330 & 336 (which limits further root calliper increase), it is considered

unlikely that damage to these heritage buildings from roots will occur in the future.

- Grassed surfacing beneath trees has been indicated by the client as a heritage parameter:
  - Grassed surfacing quality can be hindered by trees in several ways; dense canopies degrade available sunlight, tree roots compete for moisture (but this competition is typically considered a restriction growth to trees rather than grass), and allelopathy (eucalypts and some other species will release chemical inhibitors from roots/leaf litter that restrict growth of other plants).
  - Desirable grass surfacing beneath trees (even eucalypts) can be achieved by; appropriate grass species/cultivar selection, considered canopy pruning (to balance light availability between trees/grass), managing soil fertility (e.g. applications of organic material such as compost/humic acid), fertiliser, inoculation with beneficial mycorrhizae and bacteria, and irrigation.
- Landscape requirements include multiple canopy trees, but retention of existing trees if in good condition is considered preferable. If additional existing trees are retained this may lessen the number of new trees requiring planting.
- Removal of Trees 329-336 is buffered by the retention of the multiple canopy trees across the site, and landscape replacement planting as indicated by the client (e.g. inclusion of multiple indigenous trees). In time canopy cover and landscape character can be restored, but it is not known if new trees will be planted within this same space.
- Concerns regarding undesirable site use and public safety in this Civic Square space (as indicated by the client) may be mitigated via removal of most trees here, but it may be feasible to instead conduct targeted canopy thinning and/or greater uplift pruning and/or strategic tree removal to achieve this objective (e.g. removal of Tree 331 would enhance an open aesthetic on this frontage).
- Where tree protection zones conflict with proposed works, realignment of works and/or utilising low-impact options can often avoid the need for tree removals (e.g. the client has recently refined Civic Square fence locations to avoid the SRZ of Tree 328).
- Site development does often involve removal of desirable trees to achieve broader development objectives. Where efforts are made to retain and protect the more significant specimens, removal of trees with inferior arboricultural rating plus incorporation of new trees to the landscape can be viewed as appropriate change.
- Removal of Trees 329-336 will reduce competition to Tree 328, favouring improved vitality. But issues of reduced surface permeability in the root zone, increased

heat loading, and changed canopy wind dynamic may also cause adverse impacts.

Proposed fencing:

- Removal of existing steel post/wire fencing is expected to have negligible tree impacts if conducted with care/supervision within the TPZ of a retained tree (e.g. Tree 328).
- Proposed fencing is also considered a relatively low-impact style of construction – posts and above-grade infill minimise soil/root disturbance.
- Fence location has been refined to avoid the SRZ of retained trees where possible (e.g. section to east of Tree 328 now removed). Fencing does still encroach the perimeter of the SRZ for Tree 326, and the TPZ of Trees 325 & 328.
- Fencing post holes must be dug by hand where they are within a TPZ and relocated if large/structural roots are encountered (e.g. 50mm diameter for Trees 325 & 326, and 70mm diameter for Tree 328).



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