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Arboricultural Impact Assessment –
SSD-70283710: 1 Crescent Street, Holroyd

**PREPARED FOR TIBERIUS (HOLROYD) PTY LTD (ABN 61 061 131 959)
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Template 2.8.1

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Abbreviations

Abbreviation	Description
AIA	Arboricultural Impact Assessment
AQF	Australian Qualifications Framework
AS	Australian Standards
DA	Development Application
DAB	Diameter at Base
DBH	Diameter at Breast Height
DCP	Development Control Plan
DPHI	Department of Planning, Housing and Infrastructure
ELA	Eco Logical Australia
GFA	Gross Floor Area
GIS	Geographic Information Systems
IACA	Institute of Australian Consulting Arboriculturists
LGA	Local Government Area
m	Metre
mm	Millimetre
NDE	Non-Destructive Excavation
NO	Number
NSW	New South Wales
SEAR	Secretary's Environmental Assessment Requirement
SP	Species
SRZ	Structural Root Zone
SSDA	State Significant Development Application
STARS	Significance of a Tree Assessment Rating System
SULE	Safe Useful Life Expectancy
TPZ	Tree Protection Zone
VTA	Visual Tree Assessment

Executive Summary

This Arboricultural Impact Assessment (AIA) report has been prepared by Eco Logical Pty Ltd (ELA) to accompany a State Significant Development Application (SSDA) for a proposed mixed-use precinct located at 1 Crescent Street, Holroyd (the site).

This report has also been prepared to address the relevant Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing, and Infrastructure (DPHI) for SSD-70283710 on 6 May 2024. Specifically, this report addresses Item 8 of the SEARs, outlining the number, condition, and significance (retention value) of each tree, and the proposed actions (remove or retain) based on the current design.

A total of **166** trees are proposed for removal, as retention is considered incompatible with the current design, due to high impact (TPZ encroachment >20% and/or SRZ encroachment) levels.

An additional **two** trees are subject to medium impact (TPZ encroachment between 10-20%) and are recommended for retention due to their location on neighbouring lots. A total of **three** trees are subject to low (<10% TPZ encroachment) or no impact from the proposed works, and retention of these trees is viable. Therefore, a total of up to five trees are recommended for retention.

The following actions are recommended:

- Appropriate consultation with the consenting authority to determine or obtain required tree permits and/or approvals prior to removal of any trees. It is also recommended that consultation with the consent authority is undertaken to confirm replacement planting requirements.
- The tree protection plan, recommendations, hold points, inspections and certification requirements outlined in this report are strictly adhered to.
- All works are undertaken in accordance with Australian Standard 4970-2009 *Protection of Trees on Development Sites*.

Following the implementation of the above mitigation measures, the proposed mixed-use precinct development at 1 Crescent Street, Holroyd will allow retention of some existing trees. Those trees will be protected using methods consistent with the tree protection requirements described in the Australian Standard 4970-2009 *Protection of Trees on Development Sites*.

1. Introduction

This Arboricultural Impact Assessment (AIA) report has been prepared by Eco Logical Pty Ltd (ELA) to accompany a State Significant Development Application (SSDA) for a proposed mixed-use precinct located at 1 Crescent Street, Holroyd (the site).

The purpose of this AIA is to:

- undertake a visual tree assessment of the subject trees
- assess the current overall health and condition of the subject trees
- evaluate the retention value of the subject trees
- identify trees to be removed, retained, or transplanted
- determine the likely impacts on trees to be retained
- recommend tree protection measures to minimise adverse impacts

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 6 May 2024 and issued for the SSDA (SSD-70283710). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Table 1: SEARs requirements - SSD-70283710

Item	Description of Requirement	Response & Report Reference
8	<i>Assess the number, location, condition and significance of trees to be removed and retained and note any existing canopy coverage to be retained on-site.</i>	Throughout report (tabulated in Appendix D). Section 5

1.1 Site context

1.1.1 Site Description

The land to which this SSDA relates is located at 1 Crescent Street, Holroyd (the subject site), as shown in Figure 1. The site is legally described as Lot 700 in Deposited Plan 1241836 (Figure 2).

The site comprises an irregularly shaped allotment with an area of 37,877m² and has a primary frontage to Crescent Street to the south and a frontage to Woodville Road to the east. The northern boundary of the site adjoins the Holroyd Sportsground with the M4 Motorway beyond.

The site is located in the Cumberland Local Government Area (LGA) and is currently vacant and cleared after WesTrac ceased operations of an industrial facility at the site in early 2018. The site contains existing scattered pockets or extended garden beds of landscaped vegetation, predominately located along the site's southern and eastern boundaries to Crescent Street and Woodville Road.

The site is bounded by Parramatta Road/Church Street/Woodville Road intersection to the northeast, Woodville Road to the east and Crescent Street to the south. The northern frontage of the site faces the Holroyd Sportsground and the M4 Motorway beyond. It is noted that the eastern portion of the site

fronting Woodville Road has been identified for potential future acquisition by Transport of NSW for future planned intersection upgrades to Woodville/Parramatta Road/M4.

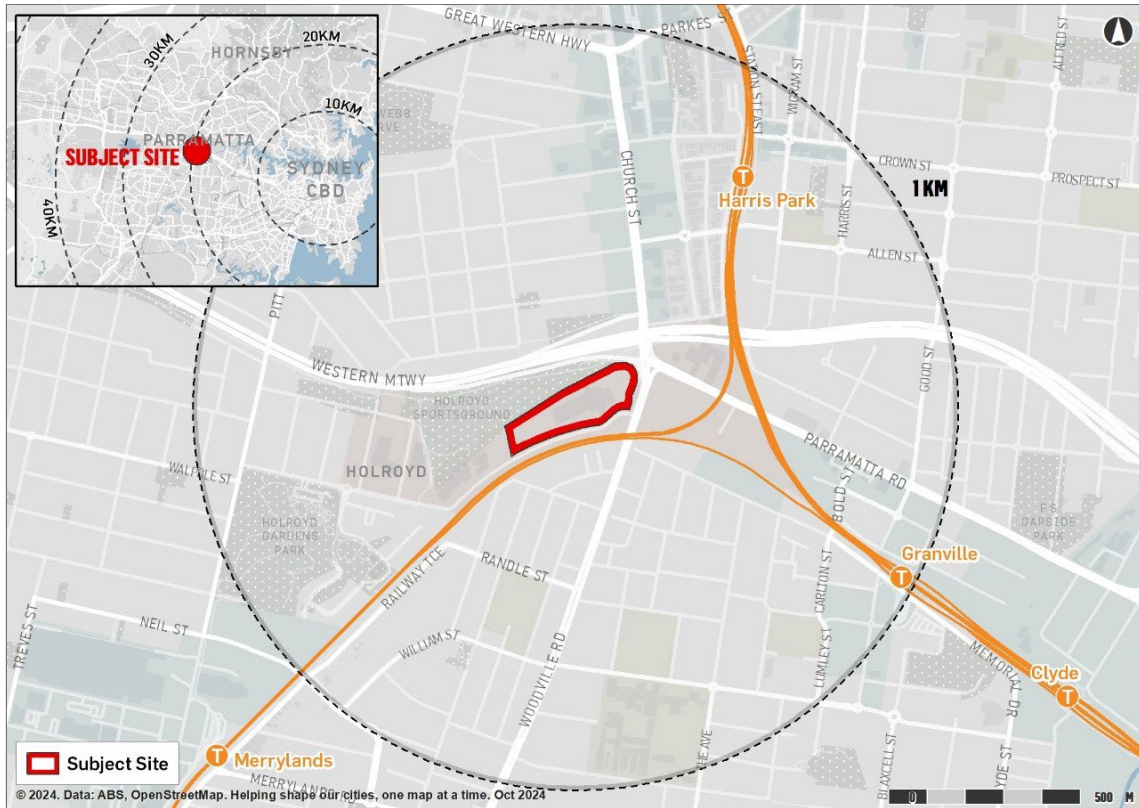


Figure 1: Location of subject site (Urbis, 2024)



Figure 2: Aerial photograph (Urbis, 2024)

1.2 Project Background

1.2.1 Planning Proposal PP-2020-1970

A Planning Proposal (reference number PP-2020-1970) was lodged with the State Planning Panel (following a Rezoning Review) which sought to amend the Holroyd Local Environmental Plan 2013 (now replaced by the Cumberland LEP 2021) to facilitate the redevelopment of 1 Crescent Street, Holroyd for a mixed-use development comprising residential uses with supporting retail, commercial and community land uses. Specifically, the proposal sought to:

- Amend the Land Zoning Map from B5 Business Development to part MU1 Mixed Use (now replaced with the MU1 zone), part R4 High Density Residential, RE1 Public Recreation and part SP2 Infrastructure.
- Amend the maximum height in the Height of Buildings Map from 15m to between 32m and 96m.
- Amend the maximum floor space ratio on the Floor Space Ratio Map from 1:1 to between 3.4:1 and 3.75:1.
- Introduce an additional Clause within Part 6 with Additional local provisions that specify:
 - A maximum Gross Floor Area (GFA) for 'retail premises' permitted on the site of 2,500m²,
 - A maximum GFA for 'commercial premises' permitted on the site of 5,000m², and
 - A ground and first floor levels of buildings located in the MU1 Zone with frontage to Woodville Road be restricted to non-residential uses.

On 29 April 2022, after several years of negotiation, the planning proposal was gazetted bringing to effect the amended zoning and controls now applying to the site. The LEP was updated and became active in November 2022. This established the framework under which this SSDA is being progressed.

1.2.2 Concept Development Application

On 31 March 2023, a Regionally Significant Concept Development Application (Concept DA) was submitted under s.4.22(1) of the *Environmental Planning and Assessment Act 1979* (DA2023/0178). Broadly, the Concept DA sought approval for a mixed-use community including total site GFA, building envelopes, public open space and general site and building configurations.

On 5 August 2023, the applicant filed an appeal to the Land and Environment on a deemed refusal basis following delays in the progression and assessment of the development application. A mediation meeting was held on 12 February 2024.

The Concept DA was withdrawn on 18 March 2024 following the lodgement of a new Concept and Stage 1 in-fill affordable housing SSDA.

1.2.3 Concept and Detailed Stage 1 SSDA

A request for SEARs with an associated Scoping Report was lodged with DPHI for a Concept and Stage 1 in-fill affordable housing SSDA at the site under section 26A, Schedule 1 of the Planning Systems SEPP. Site-specific SEARs were issued on 7 February 2024 under application number SSD-66020958.

The project broadly comprised the staged development of the site under a Concept SSDA for the provision of a total of seven (7) residential flat buildings, as well as an eastern mixed-use podium and associated car parking structures. A detailed first stage development application is concurrently

proposed to deliver the eastern mixed-use podium and three residential buildings, (classified as shoptop housing).

The proposed new SSDA omits the concept aspect from SSD-66020958, pursuing approval for the staged construction of the mixed-use precinct. SSD-66020958 was withdrawn following the receipts of the industry-specific SEARs for the current detailed SSDA.

1.3 Proposed Development

The vision for the project is to deliver a new mixed-use precinct that fosters a dynamic live-work-play lifestyle. This precinct will feature a diverse range of housing options, including affordable housing, all complemented by expansive public open spaces. Retail and commercial uses will also be integrated, establishing a new, local destination that encourages community engagement and interaction.

The proposal broadly seeks approval for an SSDA for a mixed-use precinct with public open spaces comprising the following components:

- Site establishment works, tree removal, site preparation, earthworks and excavation, services augmentation, and remediation works.
- Development of seven residential buildings comprising four shop top housing buildings and three residential flat buildings as outlined below:
 - Buildings 1-3 are integrated with an eastern mixed-use podium building, while Building 4 is situated above mixed residential / commercial space, offering shop-top housing.
 - Buildings 5-7 consist of residential flat buildings.
- Delivery of 15% of the total floor space as affordable housing to be distributed across each of the 7 residential buildings.
- Approximately 134,000m² total floor space comprising:
 - A total of 2,500m² retail GFA and 5,000m² commercial GFA.
 - Communal amenity facilities for residents.
 - Building services areas.
- Activation of Crescent Street through a mix of amenity areas and pockets of open space.
- Shared car parking for Buildings 1-3 and the commercial and retail tenancies within the podium.
- Shared car parking for Buildings 4 to 7 on the lower ground levels and within the above ground parking structures adjoining Buildings 5 and 6.
- The widening of Crescent Street and upgrades to Crescent Street and Woodville Road intersection.
- Landscaping and accompanying place making works including:
 - Public open space, hard and soft landscape works.
 - Ground and rooftop communal open space.
 - Publicly accessible through-site links.
 - At grade car parking for the park, forecourt, and retail areas.
 - Vehicle access via a new internal publicly accessible road and vehicle accessway.
 - New pedestrian footpaths and access arrangements to the site.
 - Café tenancy within park-side structure.
- Staged completion of a public park.

2. Method

2.1 Definition of a tree

A tree is defined under the Australian Standard, *AS 4970-2009, Protection of Trees on Development Sites* (AS4970-2009) as a long-lived woody perennial plant greater than (or usually greater than) 3 m in height with one or relatively few main stems or trunks.

For the purpose of this assessment, this AIA report has assessed trees in line with the local Councils definition of a tree. Cumberland City Council Development Control Plan (DCP) (2021), using the Vegetation in Non-Rural Areas SEPP 2017 definition, defines a tree as:

- a. *‘any woody perennial plant that is 4m or greater in height, measured from the base of the tree at ground level to the highest point of live foliage’*

Trees located within or closely adjacent to the site boundary that met this definition are herein referred to as ‘subject trees’.

2.1.1 Cumberland City Council Development Control Plan considerations

Part G7 of the Cumberland City DCP (2021) outlines several exemptions that may negate the requirement for approvals to undertake tree works. Exemptions that may apply to the site are outlined in the below sections. It is strongly recommended consultation is undertaken with the consenting authority, to confirm whether fauna habitat is present, and/or that no other approvals are required (e.g. *Biodiversity Conservation Act 2016*) prior to removal.

2.1.1.1 Dead trees

Under the Cumberland City Council DCP (2021), a tree may be exempt from requiring approvals for removal, if Council are satisfied the tree is dead and does not provide habitat for native fauna. The tree must be assessed as completely dead, and if any part of the tree is still alive, a permit will be required for its removal.

2.1.1.2 Neighbouring trees

As per the Cumberland City Council DCP (2021), development proposals must consider trees situated on adjacent properties with adequate setbacks to any works, and protection measures stipulated in accordance with AS4970-2009.

If tree works such as removal or pruning are required; it is strongly recommended consultation with *both* the landholder and/or relevant consent authority of adjacent properties is undertaken in order to obtain relevant approval.

2.1.1.3 Exempt species

Section C3 of PartG7.2 of the Cumberland City Council DCP (2021) outlines species that *may* be exempt from requiring approval for removal. If listed as an exempt species, it is strongly recommended consultation is undertaken with the consenting authority prior to removal, to confirm no other sections of the DCP overrule this exemption, or that no other approvals are required (e.g. *Biodiversity Conservation Act 2016*).

2.2 Visual tree assessment

The health and condition of the subject trees were assessed in accordance with a stage one visual tree assessment (VTA) as formulated by Mattheck and Breloer (1994) and practices consistent with modern arboriculture.

A total of **171 trees** were inspected on Wednesday 1 March 2023 by AQF Level 5 Consulting Arborist, David Bidwell, and reinspected on Tuesday 1st of October, and Thursday 3rd of October 2024 by AQF Level 5 Consulting Arborist Daniel McDonald. During the 2023 survey, tree ID numbers were matched to those used in the survey provided by Tree IQ, 2015. Trees assessed as Group 129 as per Tree IQ's report were assessed individually and were assigned individual ID's, starting at 12901. During the latest 2024 survey, several new trees were recorded and were assigned new IDs.

The following limitations apply to this methodology:

- Tree height was measured using a laser clinometer and checked visually.
- Diameter at breast height (DBH) and diameter at base (DAB) was measured using DBH tape.
- Trees were inspected from ground level, without the use of any invasive or diagnostic tools and testing.
- Trees were inspected within limits of site access and were not tagged or directly assessed if located within adjacent properties. On rare occasions, inaccessibility within the site was caused by spikey foliage from nearby plants and these trees were unsafe to directly measure.
- The locations of the subject trees were recorded by ELA in the field using hand-held GPS units which have errors in accuracy of approximately 1-15 m pending satellite availability on the day. Where possible, tree locations were subsequently realigned to the project surveyors '5366-Detail-G' survey. Remaining trees were moved to NearMap (2024) aerial imagery using geographic information systems (GIS) techniques.
- Tree canopy was measured by stepping out the distance within the dripline
- No aerial inspections or root mapping was undertaken.
- Tree identification was based on broad taxonomical features present and visible from ground level at the time of inspection.

2.2.1 Assessment of neighbouring and/or street trees

This AIA has assessed trees within the subject site as well as trees outside of the subject site but close to the boundary. The cadastral boundary for the subject lot does not appear to accurately depict the fence line on site. Therefore, some trees assessed are located within the cadastral boundary, but outside of the true fence line (i.e. along Crescent Street). Consideration should be given to trees located outside of fence lines, if highly impacted, as additional approvals may be required for trees on land owned by consenting authorities or private land holders.

Additionally, some of the trees displayed as growing off-site but close to the northern boundary are growing from the bottom of the concrete culvert. As these trees are growing in atypical conditions the exact location of their roots is unknown. This AIA assumes that as the proposed excavation or fill is deep, the roots of these trees are also likely to be impacted. These off-site trees have been assessed using the same standard methods as described in the Australian Standard AS 4070-2009 *Protection of Trees on Development Sites*.

2.3 Retention value & landscape significance

The retention value, or importance of a tree or group of trees, is determined in accordance with the Institute of Australian Consulting Arborists (IACA) Significance of a Tree Assessment Rating System (STARS®), which is summarised in Appendix A. The method considers the Safe Useful Life Expectancy (SULE) and landscape significance of a tree. Trees are provided one of the following ratings:

- **High:** These trees are considered important and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by Australian Standard *AS 4970–2009 Protection of trees on development sites*.
- **Medium:** These trees are moderately important for retention. Their removal should only be considered if adversely affected by the proposed works and all other alternatives have been considered and exhausted.
- **Low:** These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
- **Priority for removal:** These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.

2.4 Protection zones

2.4.1 Tree protection zone (TPZ)

The TPZ is a specific radius area above and below ground and at a distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by the development. The TPZ (as defined by AS 4970-2009) requires restriction of access during the development process. Groups of trees with overlapping TPZs may be included within a single protection area. Tree sensitive measures must be implemented if works are to proceed within the TPZ. The TPZ radius is determined by multiplying its DBH by 12 however, the TPZ of palms and monocots should not be less than 1 m outside the crown projection.

2.4.2 Structural root zone (SRZ)

The SRZ is the area of the root system (as defined by AS 4970-2009) used for stability, mechanical support, and anchorage of the tree. It is critical for the support and stability of trees. Severance of roots within the SRZ is not recommended as it may lead to the destabilisation and/or decline of the tree. The SRZ does not apply for palms and monocots (as outlined in AS 4970-2009).

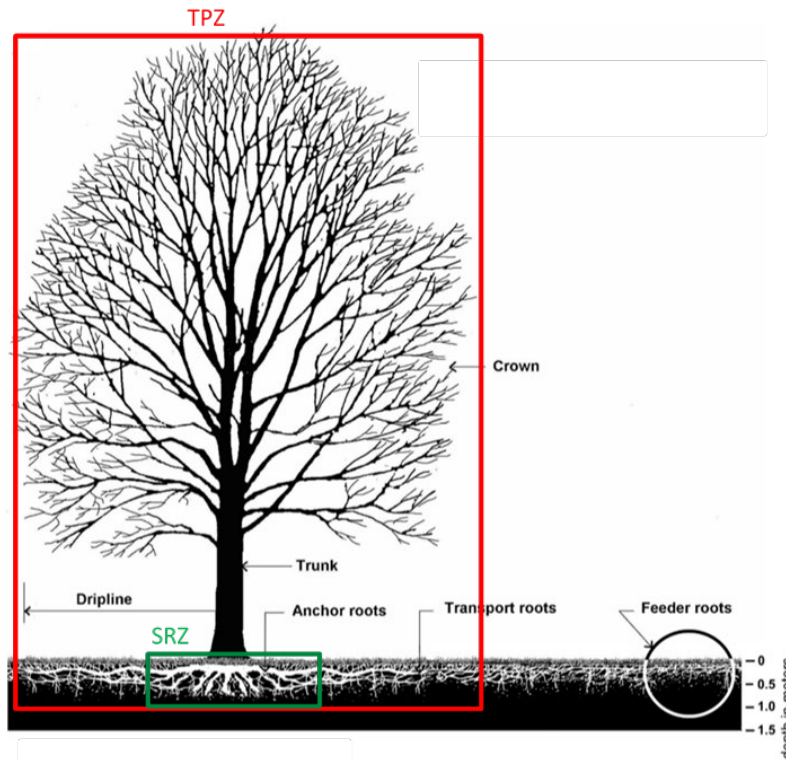


Figure 3: Representative tree structure and indicative TPZ and SRZ

2.5 Potential impacts

Trees may be impacted by physical or chemical damage to roots or above tree parts. Examples include impacts associated with demolition, bulk earthworks, soil compaction, excavation, stock piling within TPZ, as well as changes in site hydrology, removal of surrounding trees, changes in soil level and site contamination.

The extent of encroachment to the TPZ and SRZ determines the level of potential impact. AS 4970-2009 defines types of encroachment as follows and as illustrated in Appendix B.

- **Major encroachment** - If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, the Project Arborist must demonstrate that the tree(s) would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.
- **Minor encroachment** – If the proposed encroachment is less than 10% of the TPZ, and outside of the SRZ. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.

For the purposes of this AIA, impacts were calculated using GIS techniques and defined as follows:

Major Encroachment

- **High impact:** The SRZ is directly affected, or the proposed encroachment of the TPZ is greater than 20%. Trees may not remain viable if they are subject to high impact. These trees cannot

be retained unless the proposal is changed and therefore are recommended for removal based on the current design.

- **Medium impact:** If the proposed encroachment is greater than 10% of the TPZ (but less than 20% of the TPZ) and outside of the SRZ, the Project Arborist will individually investigate each tree, to consider factors such as type of works impacting the tree, retention value, tree age, health and structure, and the capacity to provide adequate tree protection measures. Based on this investigation, trees will either be categorised as proposed for removal, or proposed for retention subject to specific protection measures.

Minor Encroachment

- **Low impact:** If the proposed encroachment is less than 10% (total area) of the TPZ, and outside of the SRZ, these trees can be retained without further investigation and are recommended for retention.
- **No impact:** No likely or foreseeable encroachment within the TPZ and are recommended for retention.

2.5.1 Proposed action

The proposed actions to either retain or remove each tree are determined by the impact from the proposed design footprint, conversations of intent with the client, and corresponding mitigation measures. The following are the definition of these actions:

- **Remove:** Trees that are subject to high or medium impact from the proposed development to the extent whereby retention is not suitable and / or incompatible if the current plans are approved. Dead trees may also be recommended for removal by the arborist, regardless of the type of impact. All tree removal must comply with guidelines specified in Section 4 of this report and subject to regulatory approval.
- **Retain with mitigation measures:** Trees that are subject to medium impact from the proposed development, that are deemed viable for retention subject to implementation of specific mitigation measures. These trees are only suitable for retention granted they follow the specific mitigation measures discussed in Section 4, well as the general tree protection guidelines outlined in Appendix E.
- **Retain:** Trees that are suitable for retention granted they follow the general tree protection measures outlined in Section 4.1 and the tree protection guidelines outlined in Appendix E in accordance with AS4970-2009.

2.5.2 Draft assessment

A draft AIA including indicative TPZs was provided to the client to assist in understanding likely impacts to trees. Following a review of the draft report, additional information about potential tree impacts was provided to ELA. This additional information was incorporated into the assessment and this report is now considered final.

2.6 Canopy coverage

High level canopy change analysis was undertaken by comparing the existing canopy coverage with the proposed future canopy coverage (based on canopy spread estimate at mature size). The existing

canopy coverage was mapped by ELA using GIS techniques and based on the total extent or dripline of the canopy, as seen on Nearmap imagery (2024). Dead trees, or dying trees with significant canopy dieback, were excluded from this mapping, and thus the calculations.

Arcadia have provided estimates for the proposed future canopy coverage, as supported by the landscape masterplan (Arcadia 2024). It is assumed a typical spread radius was used for the proposed tree species at a mature age. This data was used to calculate the difference in proposed canopy change.

3. Results and Proposed Actions

Results of the AIA are summarised in Table 2. Detailed results are included in Appendix C and Appendix D. AS4970-2009 tree protection guidelines are provided in Appendix E and site photos provided in Appendix F.

Table 2: Summary of tree retention values and impacts

Retention Value	Remove	Retain subject to mitigation measures		Retain	
	High Impact (>20% TPZ encroachment and/or SRZ encroached)	Medium Impact (10-20% TPZ encroachment)	Low Impact: <10%	No Impact (no TPZ encroachment)	Total
High	7	-	-	-	7
Medium	76	2	2	1	81
Low	83*	-	-	-	83
Total	166	2	2	1	171

*This total includes a group of 32 trees, estimated by the project arborist.

3.1 Trees subject to high impact

The final civil and landscape plans (BG&E 2024 and Arcadia 2024, respectively) have been reviewed, and while some small areas will be retained at existing ground level, these areas are relatively small. Therefore, this report has assessed all trees within the subject land as experiencing root damage either by demolition, cut, fill or construction works.

A total of **166 trees** are subject to high impact (>20% TPZ encroachment and/or SRZ encroachment) from the proposed works, and therefore retention of these trees is incompatible with the current design. Tree IDs and retention values are broken down under the appropriate headings below.

It is strongly recommended confirmation be sought from the consent authority prior to the removal of any trees, including exempt species, to confirm approval requirements and obtain appropriate permits.

Tree management plans and recommendations for arborist supervision during the removal of these trees have been included in Section 4 of this report, to ensure adjacent trees to be retained are not damaged during removal works.

High impact trees

- **High retention: seven** high retention value trees (Trees 1, 13, 65, 71, 117, 118, and 125)
- **Medium retention: 76** medium retention value trees (Trees 9, 10, 14, 16, 17, 18, 20, 22, 24, 25, 26, 27, 28, 29, 31, 32, 33, 35, 37, 41, 42, 43, 44, 45, 46, 47, 48, 51, 53, 56, 61, 62, 63, 64, 68, 72, 73, 74, 75, 76, 87, 88, 98, 99, 100, 101, 102, 104, 110, 112, 113, 114, 115, 116, 119, 4811, 12901, 12902, 12903, 12904, 12905, 12906, 12908, 12910, 12911, 12912, 12913, 12916, 12917, 12919, 12920, 12921, 12924, 12925, 12927, and 12929)
- **Low retention: 83** low retention value trees (Trees 2, 3, 5, 6, 8, 11, 12, 15, 19, 21, 23, 30, 34, 36, 38, 39, 40, 49, 50, 52, 54, 55, 57, 58, 59, 60, 69, 70, 78, 79, 81, 85, 86, 103, 105, 111, 481, 491)

(group of 32 trees), 651, 781, 782, 783, 861, 871, 872, 873, 1271, 12907, 12909, 12914, 12915, and 12918)

3.2 Trees subject to medium impact

A total of **two trees** (Tree 126 and 127) are subject to medium impact (10-20% TPZ encroachment and no SRZ encroachment) from the proposed works and are recommended for retention subject to the implementation of mitigation measures due to their medium retention value.

Retention of these trees must adhere to the tree protection plan outlined in Section 4.1 and confirmation on the viability for retention must be confirmed by the project arborist prior to construction.

3.3 Trees subject to low or no impact

A total of **three trees** are proposed for retention due to experiencing low (<10% TPZ encroachment) or no impact from the proposed works. Tree IDs and retention values are outlined below:

Low impact trees

- **Medium retention: two** medium retention trees (Trees 12922 and 12923)

No impact trees

- **Medium retention: one** medium retention tree (Tree 128)

General tree management, including the tree protection plan for those trees to be retained, is outlined in Section 4.1. Hold points, inspection schedules and arborist certification are outlined in Section 4.2.

3.4 Dead trees

While several trees were observed to be dying, or partly dead, a total of **five** trees (Trees 21, 39, 40, 42, 52, and 111) were considered **completely** dead, and *may* meet this exemption. One additional tree (Tree 42) was also considered completely dead, however, was recorded as fauna habitat as a stick nest was observed, approximately 30 cm in diameter (however, no evidence that the nest was in use during the 2024 survey). This tree will not meet this exemption and will require approval for removal.

These trees have all been recommended for removal under this report due to high impact levels from the proposed development. It is strongly recommended that consultation is undertaken with the consenting authority to confirm tree removal requirements as fauna habitat is present. The consent authority may also state that other approvals are required (e.g. *Biodiversity Conservation Act 2016*) prior to removal.

3.5 Neighbouring trees

A total of seven subject trees (Trees 128, 12922, 12923, 12924, 12925, 12927, and 12929) are located within adjacent properties, based on cadastral boundaries. Of these trees, four (Trees 12924, 12925, 12927 and 12929) are highly impacted by the proposed development. While currently listed as 'to be removed' in accordance with encroachment categories defined by AS4970-2009, effort should be considered to protect these trees by minimising impacts such as earthworks within the TPZs of these trees.

If redesign is not feasible, it is strongly recommended that consultation with both the landholder and consent authority is undertaken in order to obtain relevant approvals for these trees. Due to the discrepancy between the cadastral boundary and fence line, careful consideration and confirmation of landowners should be undertaken during this consultation.

3.6 Exempt species

A total of six trees (Trees 651, 12922, 12923, 12925, 12927, and 12929) were recorded as exempt species, however, only one tree (Tree 651) is located within the subject site (not on adjacent properties). Therefore, only Tree 651 *may* be exempt from approval requirements regarding its' removal; however, it is strongly recommended consultation is undertaken with the consenting authority to confirm no other approvals are required (e.g. *Biodiversity Conservation Act 2016*) prior to removal.

3.7 Canopy coverage

The current landscape of the site is highly urbanised, as seen in Figure 8. Historically, the site has been cleared and managed, with extremely minimal and sparse vegetation (Appendix G). The current canopy extent is largely comprised of planted vegetation, planted along the borders of the site acting as 'screens' to street frontages, or as intermittent plantings along carparks (Appendix G). The central area of the site is primarily concreted. The most contiguous canopy within the site is located along the eastern boundary.

As determined from Nearmap imagery (2024), the current canopy extent is approximately 4,800 m². The future canopy extent is estimated to cover 8,513 m² once replacement planting has matured (based on the proposed landscape plan as seen in Figure 7; Arcadia 2024). With consideration to the existing

canopy extent, and tree removal required for the proposed development, the net gain in canopy across the site equates to approximately 3,713 m², or an increase of 77%.



Figure 4: Proposed actions, page 1

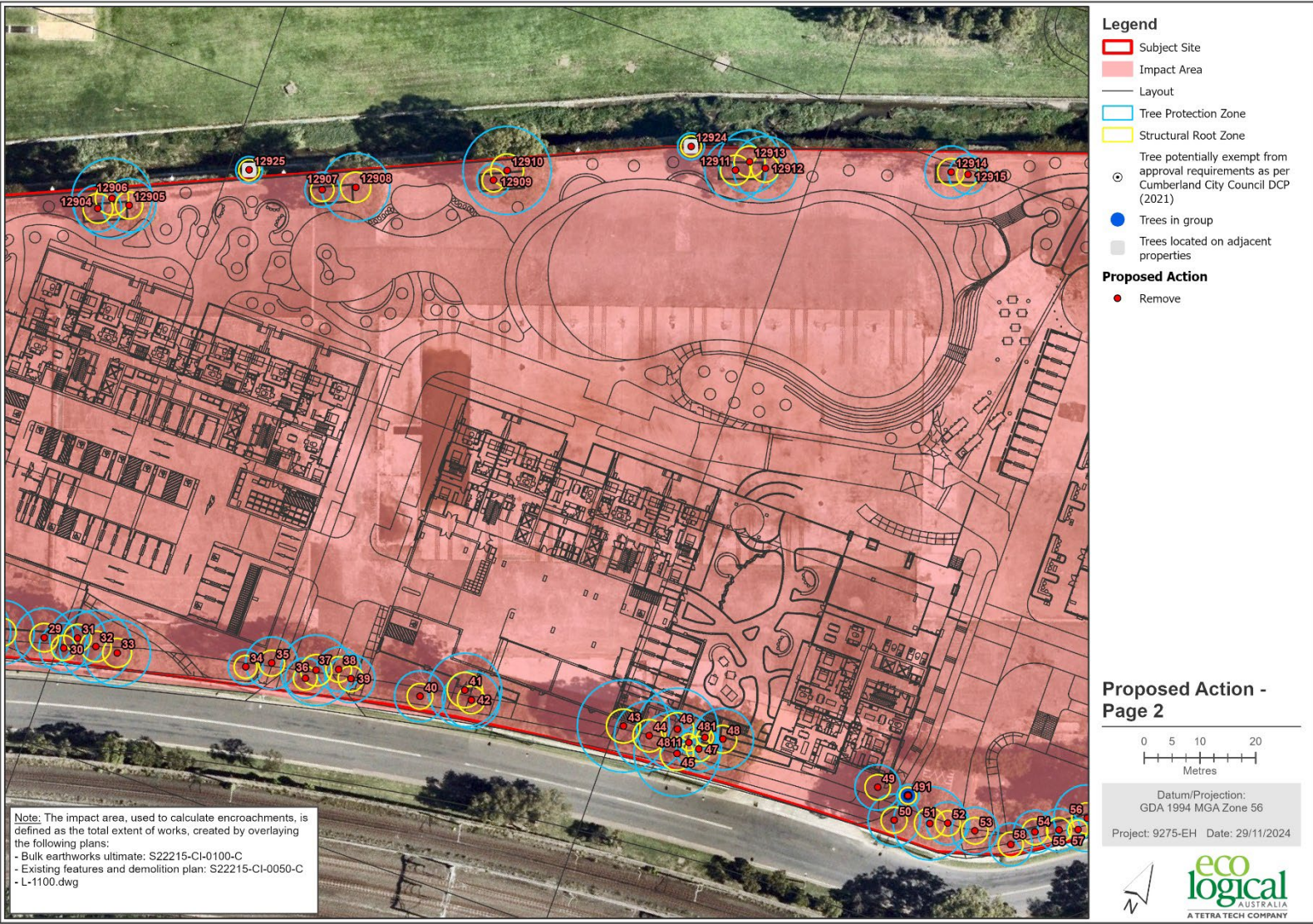


Figure 5: Proposed actions, page 2

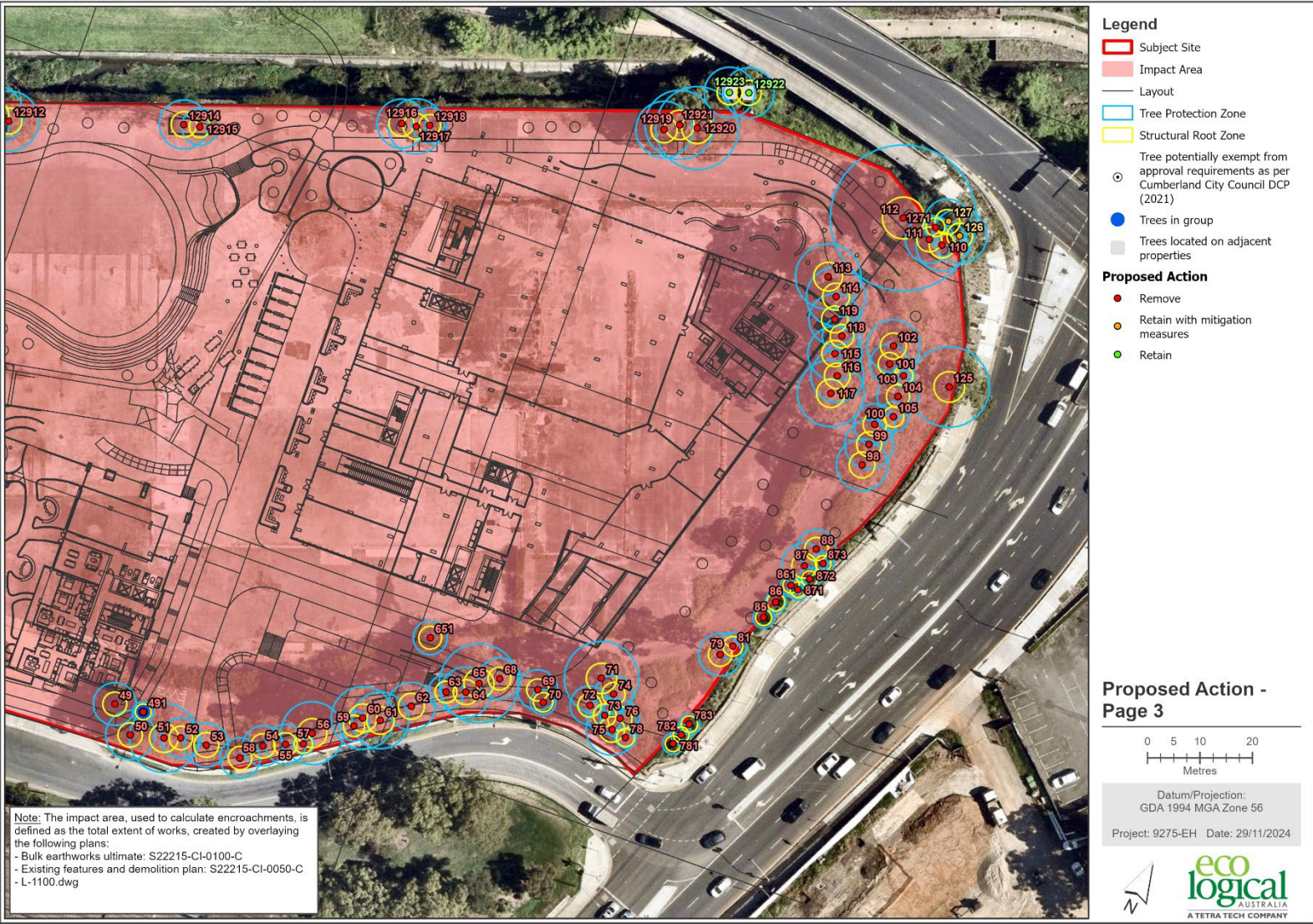


Figure 6: Proposed actions, page 3

4. Tree Management Plan

4.1 General tree protection plan

Before any tree works commence, the following must be in place for all trees to be retained:

- Permission must be granted from the relevant consent authority prior to removing or pruning of any of the subject trees. Approved tree works should not be carried out before the installation of tree protection measures.
- All tree work must be in accordance with Australian Standard *AS 4373-2007, Pruning of Amenity Trees* and the NSW WorkCover Code of Practice for the Amenity Tree Industry (1998).
- Any additional construction activities within the TPZ of the subject trees must be assessed and approved by the project arborist and must comply with *AS 4970-2009 - Protection of trees on development sites*.

An AQF Level 5 Consulting Arborist must be engaged to supervise tree work within the TPZ of trees to be retained, provide advice regarding tree protection, and monitor compliance. The Project Arborist is required to ensure all tree protection measures are implemented, as outlined in this plan, along with any other measures conditioned by the consenting authority or deemed necessary during works.

General tree protection measures applicable are summarised in Table 3 and further information is provided in Appendix E.

Table 3: Summary of general tree protection measures

Type	More details	Comment
Signage	Appendix E1	Prominently sign posted with 300 mm x 450 mm boards stating, "NO ACCESS - TREE PROTECTION ZONE".
Tree protection fencing	Appendix E1	Protective cyclone chain wire link fence to be erected around the TPZ to protect and isolate retained trees from the construction works. Existing boundary fencing may be used.
Crown protection	Appendix E2	Where required, crown protection may include the installation of a physical barrier, pruning selected branches to establish clearance, or the tying/bracing of branches.
Trunk and branch protection	Appendix E3	When fencing is not practical or prior to any activities within the TPZ, trunk protection is required and consists of a layer geotextile fabric or similar followed by 1.8 m lengths of softwood timbers spaced evenly around the trunk and secured with a galvanised hoop strap. If nails or screws are used to attach the hoop strap to the softwood timbers, the nails or screws must not penetrate the tree.
Ground protection	Appendix E4	Install and maintain 100mm thick layer of mulch around tree in TPZ. For machine or vehicle access within TPZ geotextile fabric beneath crushed rock or rumble boards may be required.
Soil moisture		Soil moisture levels should be regularly monitored by the Project Arborist. Temporary irrigation or watering may be required within TPZ.
Root protection and investigation	Appendix E5	If incursions/excavation within the TPZ are unavoidable, root investigation may be needed to determine the extent and location of

Type	More details	Comment
		roots within the area of construction activity using non-destructive excavation (NDE) methods.
Underground services	Appendix E6	All underground services should be routed outside of the TPZ. If underground services need to be installed within the TPZ, they should be installed using horizontal directional drilling, non-destructive excavation methods such as hydro-vacuum, Air Spade or manually excavated trenches.

4.2 Hold points, inspection and certification

A Project Arborist (AQF Level 5 Consulting Arborist) must be engaged to supervise work within the TPZ of trees proposed for retention. A Project Arborist should be engaged to provide advice regarding tree protection and to monitor compliance. Alterations to this schedule may be required due to necessity, however, this shall be through consultation with the Project Arborist only.

A copy of this report must be available on-site prior to the commencement of works, and throughout the entirety of the project. Hold points have been specified in the schedule of works below to ensure trees are adequately protected during construction. It is the responsibility of the principal contractor to complete each of the tasks.

Pre-construction

Approvals for removal of any trees is to be attained from the relevant consent authority prior to construction, including any conditions of consent for trees to be retained.

Trees that are approved for removal should be indicated clearly on site with spray paint on trunks. Trees identified for removal should not be removed until tree protection measures for retained trees within proximity to trees to be removed are installed and deemed to be in accordance with *AS 4970 Protection of Trees on Development Sites* by the Project Arborist.

Tree protection fencing must be installed consistent with AS 4970 must be installed to protect any trees proposed for retention prior to any works, including early site preparation works such as earthworks or tree removal.

Additionally, prior to any construction, the pre-construction site inspection should be conducted with attendance from (but not limited to) the Project Arborist (AQF Level 5 Consulting Arborist), site manager and construction personnel team. During this inspection, a walk through will be undertaken to inspect the general tree protection measures installed for each tree to be retained, as well as to identify additional measures required. The Project Arborist during this inspection is required to ensure that any excavation, compaction, or other works do not extend beyond the footprint as shown in Appendix C. The areas of impact must be clearly marked out on site and works occurring near and within the TPZ of the identified trees must be supervised and directed by the Project Arborist.

This meeting should also serve as an opportunity for the arborist to reassess those listed as medium impact to confirm that trees remain viable for retention, and to determine any additional protection measures required in order to retain these trees.

The project arborist must confirm in a letter report that the tree protection has been inspected and is deemed satisfactory prior to any works.

During construction

Regular inspection of trees by the Project Arborist (or other timing as agreed with the Project Arborist) is recommended to be completed on trees to be retained.

The Project Arborist is to supervise all works to be completed within the TPZ of trees to be retained and provide advice regarding tree protection and monitor compliance.

Post-construction

A final inspection of trees to be retained should be undertaken by Project Arborist after all major construction has ceased and following the removal of tree protection measures.

Reporting

The Project Arborist is to provide brief summary reports throughout works (i.e., following pre-construction stage, following during construction inspections, and at final sign-off), detailing tree protection measures and providing recommendations for further work or rectification of measures (if required).

Replacement planting

Any loss of trees should be offset with replacement planting in accordance with the relevant offset policy and in consultation with Cumberland City Council.

It is recommended that the final landscape plan for the project will include opportunities for replacement planting and is developed with guidance from the Project Arborist.

5. Conclusions

This AIA report has been prepared to accompany the SSDA (SSD-70283710) for a proposed mixed-use precinct located 1 Crescent Street, Holroyd. Specifically, this report addresses Item 8 of the SEARs dated 6 May 2024.

The proposed actions outlined in this report are based on the impact level determined by the encroachment resulting from the proposed works impact area i.e. the total extent of works, derived from overlaying the *Existing Features and Demolition Plan* (BG&E 2024), *Bulk Earthworks Plan – Ultimate* (BG&E 2024), and *Landscape Masterplan* (Arcadia 2024).

A total of **171 trees** were inspected on Wednesday 1 March 2023 by AQF Level 5 Consulting Arborist, David Bidwell, and reinspected on Tuesday 1st of October, and Thursday 3rd of October 2024 by AQF Level 5 Consulting Arborist Daniel McDonald. Based on the current design, a total of **166** trees are subject to removal, **two** are proposed for retention subject to mitigation measures, and **three** trees are recommended to be retained. Tree IDs and detailed information is further outlined in Appendix D.

Appropriate approvals should be obtained from the consenting authority prior to removal of any tree. Additionally, consultation with the consenting authority should be undertaken for trees with potential to be exempt from requiring approvals, to confirm other approvals do not apply (e.g. *Biodiversity Conservation Act 2016*).

The tree management plan outlined in this report, along with the hold points, inspection and certification must be adhered to throughout the works.

5.1 Significance of trees to be removed

A total of 166 trees are subject to removal, due to experiencing high impact from the proposed works. Of these trees, low retention value trees account for the largest percentage, as outlined in Table 4.

Table 4: Retention value/landscape significance as a percentage of all trees proposed for removal

Retention value	Count of trees	Percent of all trees to be removed
Low	83	50%
Medium	76	46%
High	7	4%

Achieving the proposed development will be difficult without the removal of these trees. While the majority of subject trees are proposed to be removed, the current landscape plan (Figure 7) demonstrates how over the medium to long term, the loss of these trees will be offset through the proposed tree planting. With consideration to the existing canopy extent and tree removal required for the proposed development as per the current design, the net gain in canopy across the site equates to approximately 3,713 m², or an increase of 77%.



Figure 7: Landscape masterplan (Arcadia 2024)

6. References

6.1 General references

- Barrell, J. 2001. 'SULE: Its use and status into the new millennium', in *Management of mature trees, Proceedings of the 4th NAAA Tree Management Seminar*, NAAA, Sydney.
- Brooker M.I.H, Kleinig D.A. 2006. *Field Guide to Eucalypts*. Volume 1, South-eastern Australia, 3rd ed Bloomings Books, Melbourne
- Draper, B. and Richards, P., 2009. *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.
- Harris, R.W., Matheny, N.P., and Clark, J.R., 1999. *Arboriculture: integrated management of landscape trees, shrubs, and vines*, Prentice Hall, Upper Saddle River, New Jersey.
- Mattheck, C. and Breloer, H. 1994. 'Field Guide for Visual Tree Assessment' *Arboricultural Journal*, Vol 18 pp 1-23.
- Mattheck, C. 2007. *Updated Field Guide for Visual Tree Assessment*. Karlsruhe: Forschungszentrum Karlsruhe.
- IACA 2010. *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturalists, Australia, www.iaca.org.au.
- Robinson L, 2003. *Field Guide to the Native Plants of Sydney*, 3rd ed, Kangaroo Press, East Roseville NSW
- Standards Australia 2003. *Composition, Soil and Mulches, AS 4454 (2003)*, Standards Australia, Sydney.
- Standards Australia 2007. *Australian Standard: Pruning of amenity trees, AS 4373 (2007)*, Standards Australia, Sydney.
- Standards Australia 2009. *Australian Standard: Protection of trees on development sites, AS 4970 (2009)*. Standards Australia, Sydney.

6.2 Project specific references

- Arcadia 2024. *Landscape Masterplan*. Drawing number L-1100, issue A. Prepared for Australian Capital Equity Ptd Ltd.
- BG&E 2024. *Bulk Earthworks Plans - Ultimate*. Project no. S22215, drawing number CI-0100, revision C. Prepared for HGW Projects & Woods Bagot.
- BG&E 2024. *Existing Features and Demolition Plan*. Project no. S22215, drawing number CI-0050, revision C. Prepared for HGW Projects & Woods Bagot.
- Cumberland City Council 2021. *Part G: Miscellaneous Development Controls, Part G7 Tree Management and Landscaping, Cumberland City Council Development Control Plan 2021*.
- Arcadia 2024. L-1100.dwg.

Spatial Services n.d. [Map of 1 Crescent St, Holroyd]. Retrieved 28th October 2020 from <https://portal.spatial.nsw.gov.au/portal/apps/webappviewer/index.html?id=f7c215b873864d44bccdda8075238cb>

Project Surveyors 2023. 5366-Detail-G(ZONE).dwg.

Appendix A Tree retention assessment method

A1 Tree Significance Assessment Criteria - STARS©

The tree is to have a minimum of three criteria in a category to be classified in that group.

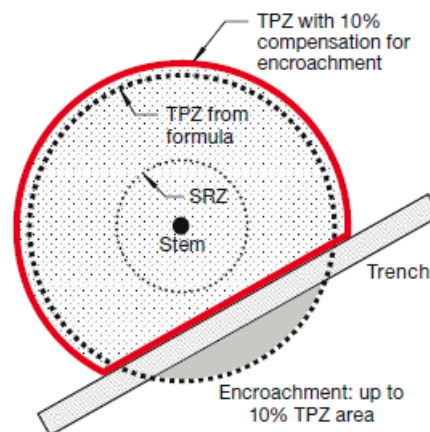
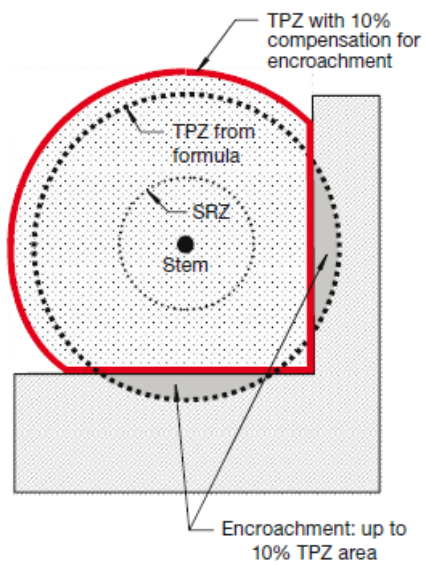
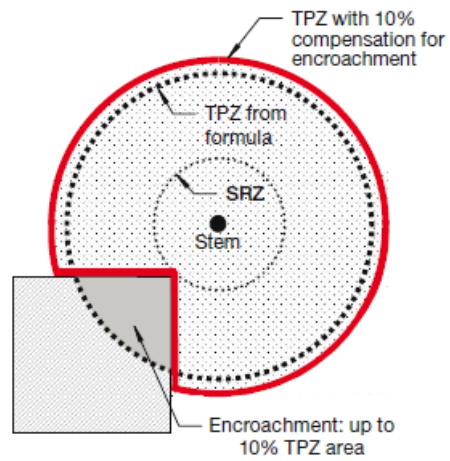
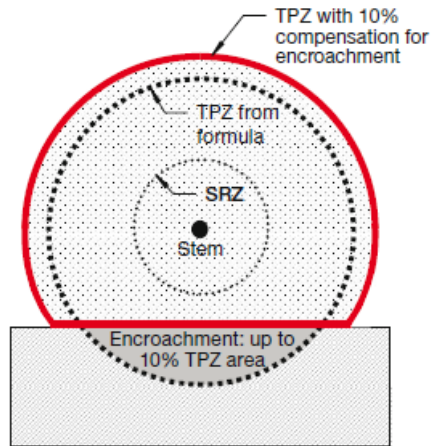
Low	Medium	High
The tree is in fair-poor condition and good or low vigour.	The tree is in fair to good condition and good or low vigour	The tree is in good condition and good vigour
The tree has form atypical of the species	The tree has form typical or atypical of the species	The tree has a form typical for the species
The tree is not visible or is partly visible from the surrounding properties or obstructed by other vegetation or buildings	The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area	The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age.
The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area	The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street	The tree is listed as a heritage item, threatened species or part of an endangered ecological community or listed on Council's significant tree register.
The tree is a young specimen which may or may not have reached dimensions to be protected by local Tree Preservation Orders or similar protection mechanisms and can easily be replaced with a suitable specimen	The tree provides a fair contribution to the visual character and amenity of the local area	The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity.
The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa in situ – tree is inappropriate to the site conditions	The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa in situ	The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values.
The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms		
The tree has a wound or defect that has the potential to become structurally unsound.		
Environmental Pest / Noxious Weed		
The tree is an environmental pest species due to its invasiveness or poisonous/allergenic properties. The tree is a declared noxious weed by legislation.		
Hazardous /Irreversible Decline		
The tree is structurally unsound and / or unstable and is considered potentially dangerous.		
The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.		The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa in situ – tree is appropriate to the site conditions.

A2 Matrix assessment - STARS©

		Tree significance				
		High	Medium	Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest/Noxious Weed Species	Hazardous/ Irreversible Decline
Useful Life Expectancy	Long >40 years					
	Medium 15-40 years					
	Short <1-15 years					
	Dead					

	High: Tree considered important so should be retained and protected. Design modification or re-location of structure should be considered to accommodate the setbacks as prescribed by the <i>Australian Standard AS4970 Protection of trees on development sites</i> . Tree sensitive construction measures must be implemented if works are to proceed within the Tree Protection Zone.
	Medium: Tree considered less important; however, retention should remain priority. Removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.
	Low: Tree not considered important for retention, nor requiring special works or design modification to be implemented for their retention.
Priority for removal: These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.	

Appendix B Encroachment into tree protection zones - AS 4970-2009



Appendix C Maps



Figure 8: Tree locations and map pages



Figure 9: Retention value, page 1



Figure 10: Retention value, page 2



Figure 11: Retention value, page 3



Figure 12: Arboricultural Impact Assessment, page 1

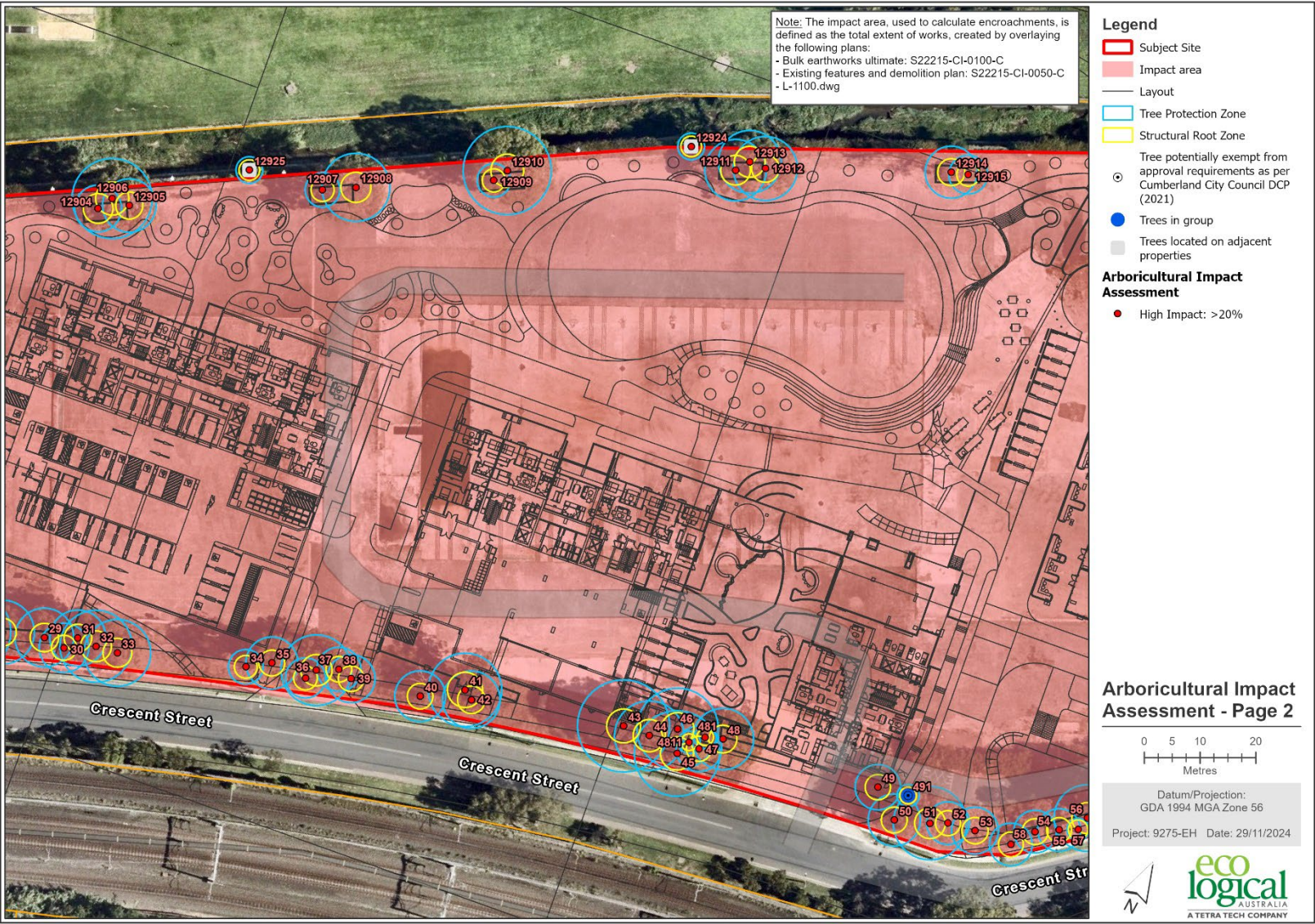


Figure 13: Arboricultural Impact Assessment, page 2

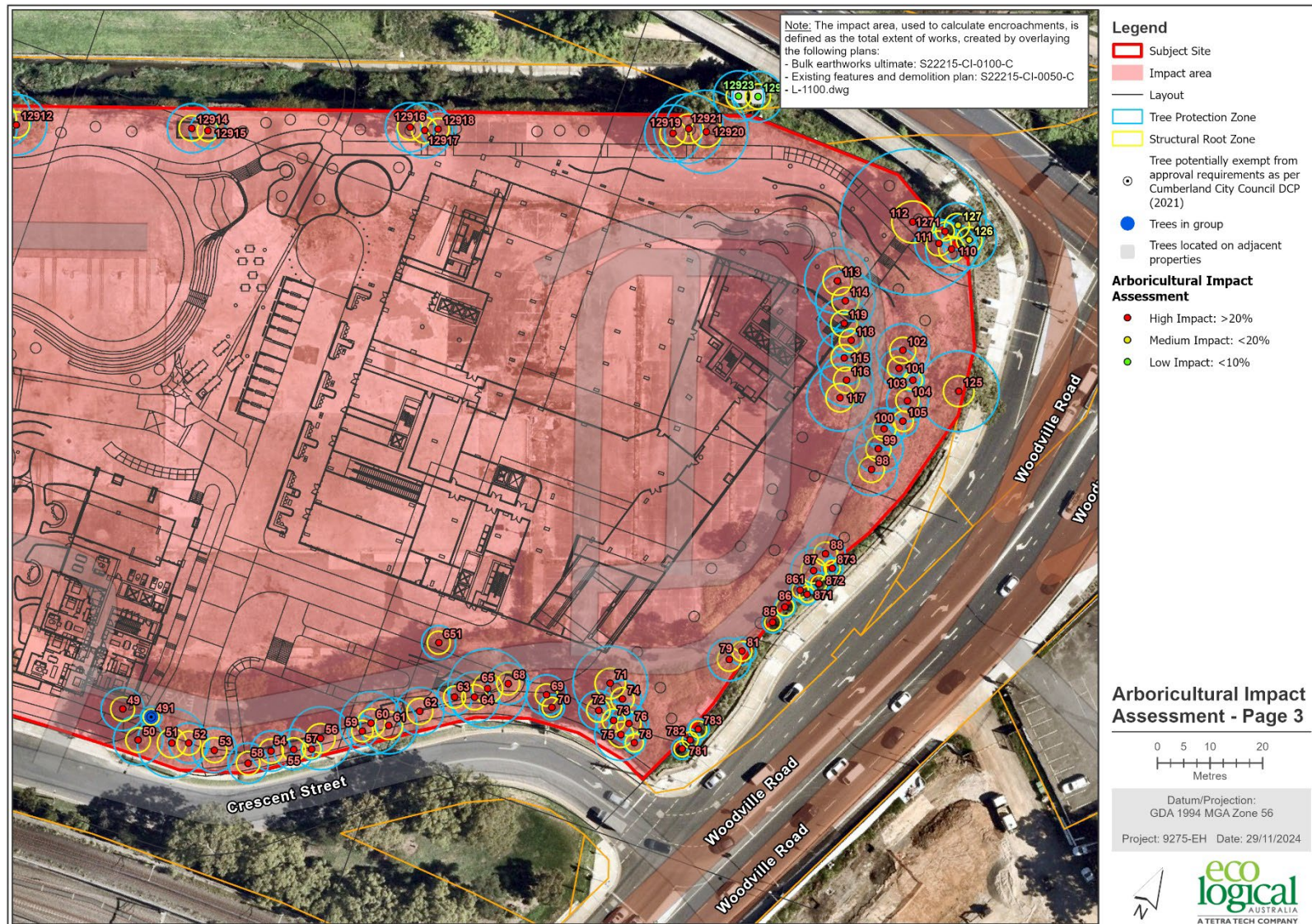


Figure 14: Arboricultural Impact Assessment, page 3

Appendix D Tabulated results of arboricultural assessment

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
1	<i>Eucalyptus grandis</i>	1	24	19	1030	1200	Good	Good	Long (>40 years)	High	High	Mature	5366-Detail-E.dwg			12.36	3.57	58.90	Yes	High Impact: >20%	Remove	Recorded as <i>E. saligna</i> on previous survey
2	<i>Corymbia maculata</i>	1	11	5	220	280	Good	Good	Medium (15-40 years)	Low	Low	Semi-mature	Google Earth/field photos			2.64	1.94	70.62	Yes	High Impact: >20%	Remove	
3	<i>Acacia parramattensis</i>	1	10	5	140	210	Fair	Fair	Short (5-15 years)	Low	Low	Semi-mature	Google Earth/field photos			2.00	1.72	96.29	Yes	High Impact: >20%	Remove	Leaning on fence
5	<i>Corymbia maculata</i>	1	12	5	230	290	Good	Good	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.76	1.97	97.15	Yes	High Impact: >20%	Remove	
6	<i>Corymbia maculata</i>	1	11	5	290	320	Good	Good	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			3.48	2.05	100.00	Yes	High Impact: >20%	Remove	
8	<i>Eucalyptus tereticornis</i>	1	5	3	140	180	Fair	Good	Medium (15-40 years)	Low	Low	Semi-mature	Google Earth/field photos			2.00	1.61	92.63	Yes	High Impact: >20%	Remove	Scar at base
9	<i>Eucalyptus microcorys</i>	1	14	9	440	520	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.28	2.51	98.74	Yes	High Impact: >20%	Remove	
10	<i>Eucalyptus tereticornis</i>	1	14	5	310	390	Fair	Fair	Medium (15-40 years)	Medium	Medium	Semi-mature	5366-Detail-E.dwg			3.72	2.23	99.19	Yes	High Impact: >20%	Remove	Wound on trunk, closed seam
11	<i>Eucalyptus microcorys</i>	1	8	4	230	370	Good	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.76	2.18	100.00	Yes	High Impact: >20%	Remove	
12	<i>Eucalyptus tereticornis</i>	1	7	3	200	200	Fair	Poor	Short (5-15 years)	Low	Low	Over-mature	5366-Detail-E.dwg			2.40	1.68	92.88	Yes	High Impact: >20%	Remove	Lopped under service lines, very large scar at base
13	<i>Eucalyptus microcorys</i>	1	15	11	590	680	Good	Good	Medium (15-40 years)	High	High	Mature	5366-Detail-E.dwg			7.08	2.81	91.58	Yes	High Impact: >20%	Remove	
14	<i>Eucalyptus microcorys</i>	1	12	8	440	570	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.28	2.61	95.84	Yes	High Impact: >20%	Remove	
15	<i>Eucalyptus tereticornis</i>	1	5	3	200	250	Good	Poor	Short (5-15 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.40	1.85	95.24	Yes	High Impact: >20%	Remove	Lopped under service lines
16	<i>Eucalyptus microcorys</i>	1	12	8	360	450	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.32	2.37	95.81	Yes	High Impact: >20%	Remove	Codominant main stems

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
17	<i>Eucalyptus tereticornis</i>	1	12	9	430	520	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.16	2.51	92.95	Yes	High Impact: >20%	Remove	
18	<i>Eucalyptus microcorys</i>	1	12	10	570	690	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.84	2.83	91.86	Yes	High Impact: >20%	Remove	
19	<i>Eucalyptus tereticornis</i>	1	9	3	190	260	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.28	1.88	99.22	Yes	High Impact: >20%	Remove	Scar at base
20	<i>Eucalyptus tereticornis</i>	1	10	8	400	530	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.80	2.53	95.41	Yes	High Impact: >20%	Remove	
21	Dead tree	1	7	1	140	180	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg	Exempt		2.00	1.61	99.50	Yes	High Impact: >20%	Remove	
22	<i>Eucalyptus tereticornis</i>	1	10	7	340	430	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.08	2.32	94.94	Yes	High Impact: >20%	Remove	
23	<i>Eucalyptus microcorys</i>	1	6	5	270	340	Fair	Poor	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			3.24	2.10	90.13	Yes	High Impact: >20%	Remove	Lopped under service lines
24	<i>Eucalyptus tereticornis</i>	1	13	10	510	640	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.12	2.74	91.71	Yes	High Impact: >20%	Remove	Co-dominant @ 1.8 m
25	<i>Eucalyptus microcorys</i>	1	10	6	410	590	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.92	2.65	90.47	Yes	High Impact: >20%	Remove	
26	<i>Eucalyptus microcorys</i>	1	10	9	520	660	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.24	2.78	95.41	Yes	High Impact: >20%	Remove	
27	<i>Eucalyptus microcorys</i>	1	11	10	610	760	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			7.32	2.95	92.68	Yes	High Impact: >20%	Remove	
28	<i>Eucalyptus microcorys</i>	1	10	8	480	520	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.76	2.51	96.29	Yes	High Impact: >20%	Remove	
29	<i>Eucalyptus microcorys</i>	1	10	8	440	540	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.28	2.55	96.36	Yes	High Impact: >20%	Remove	
30	<i>Eucalyptus microcorys</i>	1	8	4	370	400	Fair	Poor	Short (5-15 years)	Medium	Low	Mature	5366-Detail-E.dwg			4.44	2.25	94.26	Yes	High Impact: >20%	Remove	Lopped under service lines

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
31	<i>Eucalyptus microcorys</i>	1	8	4	420	500	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.04	2.47	98.21	Yes	High Impact: >20%	Remove	Asymmetric form
32	<i>Eucalyptus tereticornis</i>	1	14	10	540	650	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.48	2.76	93.16	Yes	High Impact: >20%	Remove	
33	<i>Eucalyptus tereticornis</i>	1	15	10	500	560	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.00	2.59	91.23	Yes	High Impact: >20%	Remove	
34	<i>Eucalyptus tereticornis</i>	1	8	4	260	320	Poor	Fair	Short (5-15 years)	Low	Low	Over-mature	5366-Detail-E.dwg			3.12	2.05	100.00	Yes	High Impact: >20%	Remove	Almost dead (10% canopy), with significant dieback
35	<i>Eucalyptus tereticornis</i>	1	11	8	390	430	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.68	2.32	100.00	Yes	High Impact: >20%	Remove	
36	<i>Eucalyptus microcorys</i>	1	5	5	300	350	Fair	Fair	Medium (15-40 years)	Low	Low	Mature	5366-Detail-E.dwg			3.60	2.13	100.00	Yes	High Impact: >20%	Remove	Lopped under service lines
37	<i>Eucalyptus microcorys</i>	1	12	8	530	680	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.36	2.81	97.82	Yes	High Impact: >20%	Remove	
38	<i>Eucalyptus microcorys</i>	1	11	6	330	420	Poor	Fair	Short (5-15 years)	Medium	Low	Mature	5366-Detail-E.dwg			3.96	2.30	100.00	Yes	High Impact: >20%	Remove	Tree is dying back
39	Dead tree	1	12	5	360	420	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg	Exempt		4.32	2.30	100.00	Yes	High Impact: >20%	Remove	
40	Dead tree	1	10	5	380	420	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg	Exempt		4.56	2.30	93.71	Yes	High Impact: >20%	Remove	
41	<i>Eucalyptus microcorys</i>	1	10	7	550	900	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.60	3.17	97.44	Yes	High Impact: >20%	Remove	Asymmetric form
42	<i>Eucalyptus microcorys</i>	1	12	7	430	500	Poor	Poor	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.16	2.47	95.27	Yes	High Impact: >20%	Remove	Dead tree, but providing fauna habitat - observed stick nest near top of tree (approx 30 cm diameter)
43	<i>Eucalyptus microcorys</i>	1	12	9	690	820	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			8.28	3.04	87.05	Yes	High Impact: >20%	Remove	
44	<i>Eucalyptus microcorys</i>	1	12	9	520	730	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.24	2.90	92.44	Yes	High Impact: >20%	Remove	

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments		
45	<i>Eucalyptus microcorys</i>	1	12	9	640	780	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			7.68	2.98	72.90	Yes	High Impact: >20%	Remove			
46	<i>Eucalyptus microcorys</i>	1	12	10	610	750	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			7.32	2.93	99.73	Yes	High Impact: >20%	Remove			
47	<i>Jacaranda mimosifolia</i>	1	8	7	340	400	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.08	2.25	100.00	Yes	High Impact: >20%	Remove			
48	<i>Jacaranda mimosifolia</i>	1	10	12	460	510	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.52	2.49	100.00	Yes	High Impact: >20%	Remove			
49	<i>Jacaranda mimosifolia</i>	1	8	10	340	410	Fair	Poor	Short (5-15 years)	Medium	Low	Mature	5366-Detail-E.dwg			4.08	2.28	100.00	Yes	High Impact: >20%	Remove	Active split in trunk		
50	<i>Jacaranda mimosifolia</i>	1	10	10	390	430	Fair	Fair	Medium (15-40 years)	Medium	Low	Mature	5366-Detail-E.dwg			4.68	2.32	85.83	Yes	High Impact: >20%	Remove	Lopped under service lines		
51	<i>Eucalyptus tereticornis</i>	1	15	12	550	650	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.60	2.76	88.24	Yes	High Impact: >20%	Remove			
52	Dead tree	1	10	4	320	400	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg	Exempt		3.84	2.25	100.00	Yes	High Impact: >20%	Remove			
53	<i>Eucalyptus tereticornis</i>	1	12	6	350	450	Poor	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.20	2.37	99.75	Yes	High Impact: >20%	Remove			
54	<i>Eucalyptus microcorys</i>	1	10	8	320	430	Fair	Poor	Short (5-15 years)	Low	Low	Mature	5366-Detail-E.dwg			3.84	2.32	95.09	Yes	High Impact: >20%	Remove	Lopped under service lines		
55	<i>Eucalyptus microcorys</i>	1	10	9	320	390	Fair	Poor	Short (5-15 years)	Low	Low	Mature	5366-Detail-E.dwg			3.84	2.23	86.37	Yes	High Impact: >20%	Remove	Lopped under service lines		
56	<i>Eucalyptus microcorys</i>	1	12	12	500	660	Fair	Fair	Medium (15-40 years)	Low	Medium	Mature	5366-Detail-E.dwg			6.00	2.78	82.37	Yes	High Impact: >20%	Remove	Lopped under service lines		
57	<i>Corymbia maculata</i>	1	4	2	140	220	Poor	Poor	Short (5-15 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.75	94.73	Yes	High Impact: >20%	Remove	Lopped under service lines		
58	<i>Eucalyptus microcorys</i>	1	5	6	320	390	Fair	Poor	Short (5-15 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			3.84	2.23	77.04	Yes	High Impact: >20%	Remove	Lopped under service lines		
59	<i>Corymbia maculata</i>	1	12	5	240	310	Fair	Poor	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.88	2.02	98.46	Yes	High Impact: >20%	Remove	Slightly lopped under service lines		

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
60	<i>Corymbia maculata</i>	1	18	10	500	600	Good	Good	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			6.00	2.67	86.71	Yes	High Impact: >20%	Remove	Lopped under service lines
61	<i>Corymbia maculata</i>	1	17	12	450	580	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.40	2.63	77.84	Yes	High Impact: >20%	Remove	
62	<i>Eucalyptus tereticornis</i>	1	18	9	380	500	Fair	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.56	2.47	94.79	Yes	High Impact: >20%	Remove	Sparse canopy
63	<i>Eucalyptus tereticornis</i>	1	15	5	280	330	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.36	2.08	100.00	Yes	High Impact: >20%	Remove	Sparse canopy
64	<i>Eucalyptus tereticornis</i>	1	15	9	400	460	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.80	2.39	96.02	Yes	High Impact: >20%	Remove	
65	<i>Eucalyptus tereticornis</i>	1	20	15	630	700	Good	Good	Medium (15-40 years)	High	High	Mature	5366-Detail-E.dwg			7.56	2.85	92.59	Yes	High Impact: >20%	Remove	
68	<i>Eucalyptus tereticornis</i>	1	13	12	330	370	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.96	2.18	100.00	Yes	High Impact: >20%	Remove	
69	Dead tree	1	7	8	320	340	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg			3.84	2.10	100.00	Yes	High Impact: >20%	Remove	<i>Fraxinus oxycarpus</i> rootstock. Dead apart from basal suckers
70	Dead tree	1	7	4	200	250	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg			2.40	1.85	100.00	Yes	High Impact: >20%	Remove	<i>Fraxinus</i> sp. Dead apart from basal suckers
71	<i>Corymbia maculata</i>	1	20	15	590	730	Good	Good	Medium (15-40 years)	High	High	Mature	5366-Detail-E.dwg			7.08	2.90	100.00	Yes	High Impact: >20%	Remove	
72	<i>Eucalyptus tereticornis</i>	1	14	7	310	390	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.72	2.23	100.00	Yes	High Impact: >20%	Remove	
73	<i>Eucalyptus tereticornis</i>	1	15	6	290	370	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.48	2.18	100.00	Yes	High Impact: >20%	Remove	
74	<i>Corymbia maculata</i>	1	12	6	300	380	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.60	2.20	100.00	Yes	High Impact: >20%	Remove	Sucker at base
75	<i>Eucalyptus tereticornis</i>	1	15	6	410	480	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.92	2.43	94.26	Yes	High Impact: >20%	Remove	

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
76	<i>Eucalyptus microcorys</i>	1	10	10	310	420	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.72	2.30	100.00	Yes	High Impact: >20%	Remove	
78	<i>Eucalyptus tereticornis</i>	1	6	5	130	210	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.72	100.00	Yes	High Impact: >20%	Remove	Asymmetric form
79	<i>Corymbia maculata</i>	1	15	7	340	400	Fair	Fair	Medium (15-40 years)	Medium	Low	Mature	5366-Detail-E.dwg			4.08	2.25	83.08	Yes	High Impact: >20%	Remove	Sparse canopy
81	<i>Corymbia maculata</i>	1	10	5	220	260	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.64	1.88	75.69	Yes	High Impact: >20%	Remove	Sparse canopy
85	<i>Corymbia maculata</i>	1	8	5	140	160	Good	Fair	Short (5-15 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.53	37.46	Yes	High Impact: >20%	Remove	Resprouted from stump
86	<i>Corymbia maculata</i>	1	5	4	140	200	Good	Poor	Short (5-15 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.68	46.39	Yes	High Impact: >20%	Remove	Resprouted from stump
87	<i>Corymbia maculata</i>	1	18	12	360	460	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.32	2.39	66.79	Yes	High Impact: >20%	Remove	Sparse canopy
88	<i>Corymbia maculata</i>	1	14	12	310	390	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.72	2.23	84.33	Yes	High Impact: >20%	Remove	Sparse canopy
98	<i>Corymbia maculata</i>	1	18	12	410	490	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.92	2.45	100.00	Yes	High Impact: >20%	Remove	
99	<i>Corymbia maculata</i>	1	18	12	390	460	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.68	2.39	100.00	Yes	High Impact: >20%	Remove	
100	<i>Corymbia maculata</i>	1	18	8	330	390	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.96	2.23	100.00	Yes	High Impact: >20%	Remove	
101	<i>Corymbia maculata</i>	1	17	8	310	360	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.72	2.15	100.00	Yes	High Impact: >20%	Remove	
102	<i>Corymbia maculata</i>	1	17	10	420	500	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.04	2.47	100.00	Yes	High Impact: >20%	Remove	
103	<i>Corymbia maculata</i>	1	8	3	180	240	Good	Good	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.16	1.82	100.00	Yes	High Impact: >20%	Remove	

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
104	Corymbia maculata	1	18	10	330	380	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			3.96	2.20	100.00	Yes	High Impact: >20%	Remove	Sparse canopy
105	Corymbia maculata	1	12	5	240	280	Good	Good	Medium (15-40 years)	Medium	Low	Semi-mature	5366-Detail-E.dwg			2.88	1.94	100.00	Yes	High Impact: >20%	Remove	
110	Corymbia maculata	1	15	8	410	490	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.92	2.45	63.80	Yes	High Impact: >20%	Remove	
111	Eucalyptus microcorys	1	14	12	380	450	Poor	Poor	Remove (<5 years)	Low	Low	Mature	5366-Detail-E.dwg	Exempt		4.56	2.37	80.93	Yes	High Impact: >20%	Remove	Dead tree
112	Schinus molle	1	14	16	1160	1560	Fair	Fair	Medium (15-40 years)	Medium	Medium	Over-mature	5366-Detail-E.dwg			13.92	3.99	64.70	Yes	High Impact: >20%	Remove	Old tree which has built-up rubble around the base, but is still in good health time of inspection
113	Corymbia maculata	1	17	12	520	640	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg/field photos			6.24	2.74	100.00	Yes	High Impact: >20%	Remove	
114	Corymbia maculata	1	17	12	470	550	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg/field photos			5.64	2.57	100.00	Yes	High Impact: >20%	Remove	
115	Corymbia maculata	1	19	10	430	510	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg/field photos			5.16	2.49	100.00	Yes	High Impact: >20%	Remove	
116	Corymbia maculata	1	18	13	420	490	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg/field photos			5.04	2.45	100.00	Yes	High Impact: >20%	Remove	
117	Corymbia maculata	1	18	11	530	620	Good	Good	Medium (15-40 years)	Medium	High	Mature	5366-Detail-E.dwg/field photos			6.36	2.71	100.00	Yes	High Impact: >20%	Remove	
118	Corymbia maculata	1	15	8	310	400	Good	Good	Medium (15-40 years)	Medium	High	Mature	Field photos			3.72	2.25	100.00	Yes	High Impact: >20%	Remove	
119	Corymbia maculata	1	16	10	410	530	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg/field photos			4.92	2.53	100.00	Yes	High Impact: >20%	Remove	
125	Corymbia maculata	1	22	12	640	740	Fair	Good	Medium (15-40 years)	High	High	Mature	5366-Detail-E.dwg			7.68	2.92	57.03	Yes	High Impact: >20%	Remove	

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
126	<i>Eucalyptus saligna</i>	1	10	8	430	480	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.16	2.43	18.64	0	Medium Impact: <20%	Retain with mitigation measures	
127	<i>Corymbia maculata</i>	1	15	8	370	460	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.44	2.39	16.94	0	Medium Impact: <20%	Retain with mitigation measures	
128	<i>Eucalyptus nicholii</i>	1	9	9	450	520	Poor	Poor	Short (5-15 years)	Medium	Medium	Over-mature	5366-Detail-E.dwg		Yes	5.40	2.51	0.00	0	No Impact: 0%	Retain	Tree on adjacent property, canopy infested with climber
481	<i>Elaeocarpus reticulatus</i>	1	6	3	100	130	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	GPS hand-held unit			2.00	1.50	100.00	Yes	High Impact: >20%	Remove	
491	<i>Acmena smithii</i>	32	4	3	100	150	Good	Fair	Medium (15-40 years)	Low	Low	Semi-mature	Google Earth/field photos			2.00	1.50	100.00	Yes	High Impact: >20%	Remove	Hedge of 32 living <i>Acmena smithii</i>
651	<i>Melia azedarach</i>	1	5	6	270	370	Good	Poor	Short (5-15 years)	Low	Low	Mature	5366-Detail-E.dwg	Exempt		3.24	2.18	100.00	Yes	High Impact: >20%	Remove	
781	<i>Eucalyptus crebra</i>	1	6	3	120	150	Good	Good	Long (>40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.50	13.05	Yes	High Impact: >20%	Remove	
782	<i>Eucalyptus crebra</i>	1	5	3	100	130	Good	Good	Long (>40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.50	13.04	Yes	High Impact: >20%	Remove	
783	<i>Eucalyptus crebra</i>	1	6	3	130	170	Good	Good	Long (>40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.57	17.20	Yes	High Impact: >20%	Remove	
861	<i>Corymbia maculata</i>	1	6	5	110	160	Good	Poor	Short (5-15 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.53	55.11	Yes	High Impact: >20%	Remove	Resprouted from stump
871	<i>Eucalyptus crebra</i>	1	5	3	120	140	Good	Good	Long (>40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.50	9.83	Yes	High Impact: >20%	Remove	
872	<i>Eucalyptus crebra</i>	1	5	3	90	120	Good	Good	Long (>40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.50	9.09	Yes	High Impact: >20%	Remove	
873	<i>Eucalyptus crebra</i>	1	5	3	90	120	Good	Good	Long (>40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.00	1.50	24.88	Yes	High Impact: >20%	Remove	
1271	<i>Corymbia maculata</i>	1	12	5	180	230	Good	Good	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			2.16	1.79	48.30	Yes	High Impact: >20%	Remove	
4811	<i>Elaeocarpus reticulatus</i>	1	5	39	120	140	Good	Fair	Medium (15-40 years)	Low	Medium	Mature	GPS hand-held unit			2.00	1.50	100.00	Yes	High Impact: >20%	Remove	
12901	<i>Eucalyptus microcorys</i>	1	11	11	520	650	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.24	2.76	92.57	Yes	High Impact: >20%	Remove	In planter box

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
12902	<i>Eucalyptus microcorys</i>	1	9	9	440	520	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.28	2.51	97.37	Yes	High Impact: >20%	Remove	In planter box
12903	<i>Eucalyptus microcorys</i>	1	10	8	520	640	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.24	2.74	80.46	Yes	High Impact: >20%	Remove	In planter box
12904	<i>Eucalyptus microcorys</i>	1	8	7	350	600	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.20	2.67	95.97	Yes	High Impact: >20%	Remove	In planter box
12905	<i>Eucalyptus microcorys</i>	1	10	7	400	480	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.80	2.43	90.81	Yes	High Impact: >20%	Remove	In planter box
12906	<i>Eucalyptus microcorys</i>	1	11	11	600	780	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			7.20	2.98	66.59	Yes	High Impact: >20%	Remove	In planter box
12907	<i>Corymbia maculata</i>	1	7	6	260	330	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			3.12	2.08	99.99	Yes	High Impact: >20%	Remove	In planter box
12908	<i>Corymbia maculata</i>	1	10	10	510	620	Fair	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.12	2.71	80.75	Yes	High Impact: >20%	Remove	In planter box
12909	<i>Corymbia maculata</i>	1	7	5	250	330	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			3.00	2.08	100.00	Yes	High Impact: >20%	Remove	In planter box
12910	<i>Corymbia maculata</i>	1	15	15	660	760	Fair	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			7.92	2.95	66.44	Yes	High Impact: >20%	Remove	In planter box
12911	<i>Eucalyptus microcorys</i>	1	10	10	460	600	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.52	2.67	91.33	Yes	High Impact: >20%	Remove	In planter box
12912	<i>Eucalyptus microcorys</i>	1	11	9	480	500	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.76	2.47	86.85	Yes	High Impact: >20%	Remove	Co-dominant at 1.5 m. In planter box
12913	<i>Eucalyptus microcorys</i>	1	15	10	470	660	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.64	2.78	76.34	Yes	High Impact: >20%	Remove	In planter box.
12914	<i>Eucalyptus sp.</i>	1	18	9	390	480	Poor	Poor	Remove (<5 years)	Low	Low	Over-mature	5366-Detail-E.dwg			4.68	2.43	95.11	Yes	High Impact: >20%	Remove	Dead, but resprouting from near base, although in very poor health. In planter box

Tree ID	Botanical Name	Group	Height (m)	Spread (m)	Diameter at Breast Height (mm)	Diameter at Base (mm)	Health	Structure	ULE	Landscape Significance	Retention Value	Age	Location method	Potential for exemption	Neighbour	TPZ	SRZ	TPZ encroachment (%)	SRZ encroached	Impact	Action	Comments
12915	<i>Eucalyptus microcorys</i>	1	5	3	290	320	Fair	Fair	Short (5-15 years)	Low	Low	Mature	5366-Detail-E.dwg			3.48	2.05	100.00	Yes	High Impact: >20%	Remove	In planter box, and has stunted form
12916	<i>Corymbia maculata</i>	1	16	8	390	460	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			4.68	2.39	88.14	Yes	High Impact: >20%	Remove	In planter box
12917	<i>Eucalyptus microcorys</i>	1	13	10	440	490	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.28	2.45	89.16	Yes	High Impact: >20%	Remove	In planter box
12918	<i>Eucalyptus microcorys</i>	1	8	5	280	320	Fair	Fair	Medium (15-40 years)	Low	Low	Semi-mature	5366-Detail-E.dwg			3.36	2.05	99.76	Yes	High Impact: >20%	Remove	In planter box
12919	<i>Eucalyptus microcorys</i>	1	10	9	450	510	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			5.40	2.49	88.09	Yes	High Impact: >20%	Remove	In planter box
12920	<i>Eucalyptus microcorys</i>	1	14	15	660	760	Good	Good	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			7.92	2.95	74.36	Yes	High Impact: >20%	Remove	In planter box
12921	<i>Eucalyptus microcorys</i>	1	15	12	550	670	Good	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg			6.60	2.80	73.93	Yes	High Impact: >20%	Remove	In planter box
12922	<i>Acer negundo</i>	1	10	10	400	450	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg	Exempt	Yes	4.80	2.37	3.04	0	Low Impact: <10%	Retain	Not tagged or directly accessed to assess. Appears to be self sown
12923	<i>Cinnamomum camphora</i>	1	10	10	400	450	Fair	Fair	Medium (15-40 years)	Medium	Medium	Mature	5366-Detail-E.dwg	Exempt	Yes	4.80	2.37	5.58	0	Low Impact: <10%	Retain	Not tagged or directly accessed to assess. Appears to be self sown
12924	<i>Ficus hillii</i>	1	5	6	200	250	Fair	Fair	Medium (15-40 years)	Medium	Medium	Semi-mature	NearMap imagery (2024)		Yes	2.40	1.85	44.55	Yes	High Impact: >20%	Remove	Not tagged or directly accessed to assess. Appears to be self sown
12925	<i>Cinnamomum camphora</i>	1	5	5	200	250	Fair	Fair	Medium (15-40 years)	Medium	Medium	Semi-mature	5366-Detail-E.dwg	Exempt	Yes	2.40	1.85	14.97	Yes	High Impact: >20%	Remove	Not tagged or directly accessed to assess. Appears to be self sown
12927	<i>Cinnamomum camphora</i>	1	7	6	200	250	Fair	Fair	Medium (15-40 years)	Medium	Medium	Semi-mature	5366-Detail-E.dwg	Exempt	Yes	2.40	1.85	25.55	Yes	High Impact: >20%	Remove	Not tagged or directly accessed to assess. Appears to be self sown
12929	<i>Ligustrum lucidum</i>	1	8	5	200	250	Fair	Fair	Medium (15-40 years)	Medium	Medium	Semi-mature	NearMap imagery (2024)	Exempt	Yes	2.40	1.85	45.40	Yes	High Impact: >20%	Remove	Not tagged or directly accessed to assess. Appears to be self sown

Appendix E Tree protection guidelines

The following tree protection guidelines must be implemented during the construction period if no tree-specific recommendations are detailed.

E1 Tree protection fencing

The TPZ is a restricted area delineated by protective fencing or the use of an existing structure (such as a wall or fence).

Trees that are to be retained must have protective fencing erected around the TPZ (or as specified in the body of the report) to protect and isolate it from the construction works. Fencing must comply with the Australian Standard, AS 4687-2007, Temporary fencing and hoardings.

Tree protection fencing must be installed prior to site establishment and remain intact until completion of works. Once erected, protective fencing must not be removed or altered without the approval of the project arborist.

If the protective fencing requires temporary removal, trunk, branch and ground protection must be installed and must comply with AS 4970-2009, *Protection of Trees on Development Sites*.

Tree protection fencing shall be:

- Enclosed to the full extent of the TPZ (or as specified in the Recommendations and Tree Protection Plan).
- Cyclone chain wire link fence or similar, with lockable access gates.
- Certified and Inspected by the Project Arborist.
- Installed prior to any machinery or material are brought to site and before the commencement of works.
- Prominently sign posted with 300 mm x 450 mm boards stating, "NO ACCESS - TREE PROTECTION ZONE".

E2 Crown protection

Tree crowns/canopy may be injured or damaged by machinery such as; excavators, drilling rigs, trucks, cranes, plant and vehicles. Where crown protection is required, it will usually be located at least one meter outside the perimeter of the crown.

Crown protection may include the installation of a physical barrier, pruning selected branches to establish clearance, or the tying/bracing of branches.

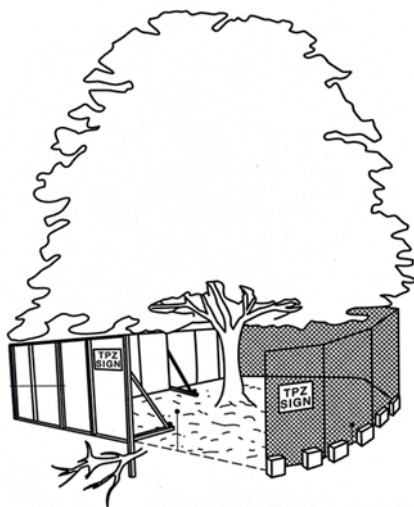
E3 Trunk protection

Where provision of tree protection fencing is impractical or must be temporarily removed, trunk protection shall be installed for the nominated trees to avoid accidental mechanical damage.

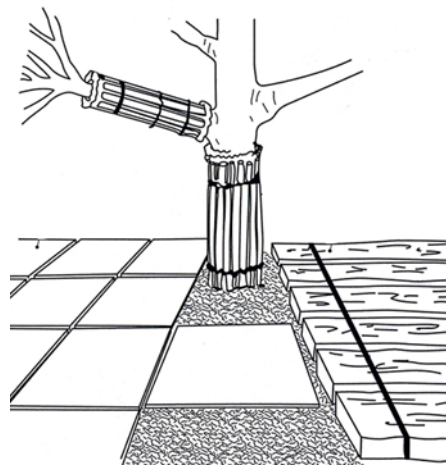
The removal of bark or branches allows the potential ingress of micro-organisms which may cause decay. Furthermore, the removal of bark restricts the trees' ability to distribute water, mineral ions (solutes), and glucose.

Trunk protection shall consist of a layer of either carpet underfelt, geotextile fabric or similar wrapped around the trunk, followed by 1.8 m lengths of softwood timbers aligned vertically and spaced evenly around the trunk (with an approx. 50 mm gap between the timbers).

The timbers must be secured using galvanised hoop strap (aluminium strapping). The timbers shall be wrapped around the trunk but not fixed to the tree, as this will cause injury/damage to the tree.



Tree protection fencing



Trunk protection fencing

E4 Ground protection

Tree roots are essential for the uptake/absorption of water, oxygen and mineral ions (solutes). It is essential to prevent the disturbance of the soil beneath the dripline and within the TPZ of trees that are to be retained. Soil compaction within the TPZ will adversely affect the ability of roots to function correctly.

If temporary access for machinery is required within the TPZ ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Maintain a thick layer of mulch around all retained trees to a depth of 100 mm using coarse pine bark or wood chip material that complies with AS 4454. Where the existing landscape within the TPZ is to remain unaltered (e.g. garden beds or turf) mulch may not be required.

For heavy vehicle access within TPZ, ground protection may include a permeable membrane such as geotextile fabric beneath a layer of crushed rock or rumble boards.

If the grade is to be raised within the TPZ, the material should be coarser or more porous than the underlying material.

E5 Root protection and investigation

If incursions/excavation within the TPZ are unavoidable, root investigation may be needed to determine the extent and location of roots within the area of construction activity. The location and distribution of roots are found through non-destructive excavation (NDE) methods such as hydro-vacuum excavation (sucker truck), air spade and manual excavation. Root investigation does not guarantee the retention of the tree.

If the project arborist identifies conflicting roots that requiring pruning, they must be pruned with a sharp implement such as; secateurs, pruners, handsaws or a chainsaw back to undamaged tissue. The final cut must be a clean cut.

E6 Underground services

All underground services should be routed outside of the TPZ. If underground services need to be installed within the TPZ, they should be installed using horizontal directional drilling (HDD), non-destructive excavation (NDE) methods such as hydro-vacuum, Air Spade or manually excavated trenches. The horizontal drilling/boring must be at minimum depth of 600 mm below grade. Trenching for services is to be regarded as “excavation”. The project arborist should assess the likely impacts of boring and bore pits on retained trees.

Appendix F Site photo



Figure 15: High retention value (Tree 1)



Figure 16: High retention value (Tree 13)



Figure 17: High retention value (Tree 65)



Figure 18: High retention value (Tree 71)



Figure 19: High retention value (Tree 117)



Figure 20: High retention value (Tree 118)



Figure 21: High retention value (Tree 125)



Figure 22: High retention value (Tree 128)

Appendix G Historical aerial imagery

1978



Figure 23: Historical aerial imagery, 1978 (Spatial Services, accessed 28/10/2024)

2013



Figure 24: Historical aerial imagery, 2013 (Spatial Services, accessed 28/10/2024)

