

Appendix G: Tree Retention and Replacement Strategy

Byford Rail Extension Tree Canopy Vision and Strategy

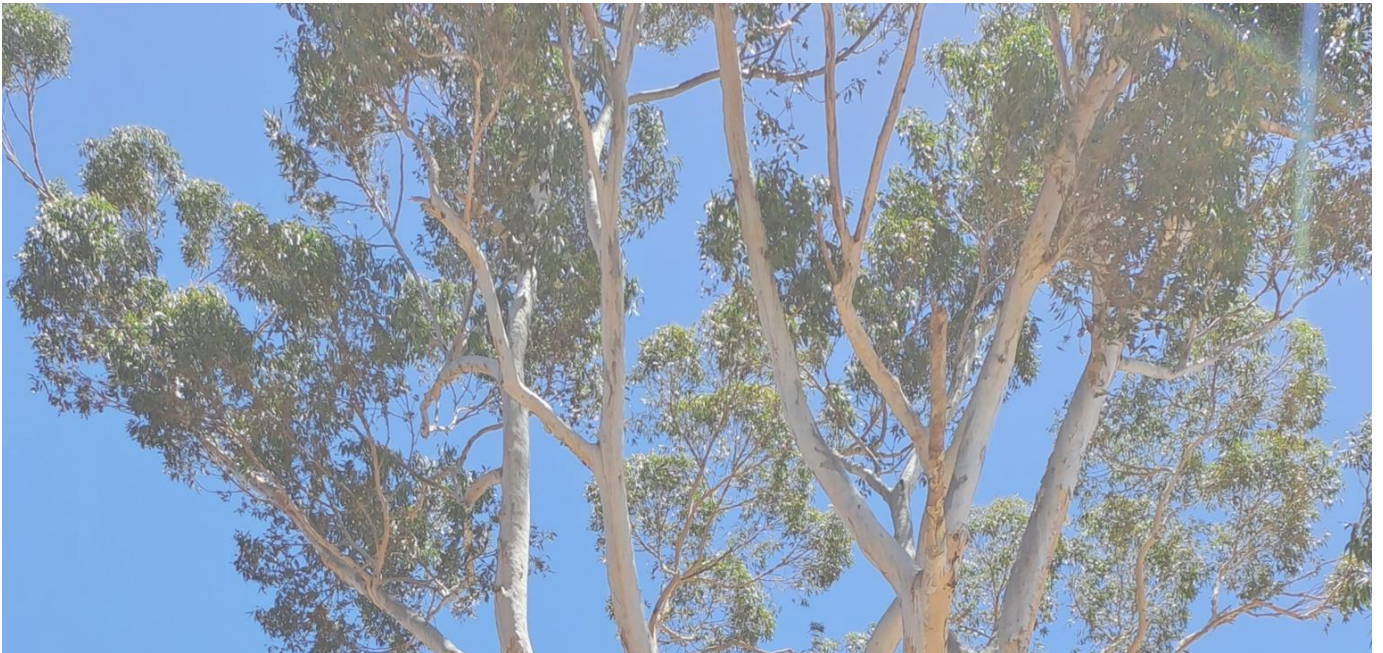


Figure 1: Existing Heritage Sugar Gum located within Armadale Precinct

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Issue Register

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Common Abbreviations

AS 2303 - Australian Standard AS 2303 (2018) – Tree Stock for Landscape Use

AS 4373 – Australian Standards AS 4373 (2007) – Pruning of Amenity Trees

AS 4970 (2009) - Australian Standards AS 4970 Tree Protection on Development Sites (2009)

BRE - Byford Rail Extension

SRZ - Structural Root Zone

SWTC - Scope of Works and Technical Criteria

TPZ - Tree Protection Zone

TWG – Tree Working Group

VTA – Visual Tree Assessment

1. Executive Summary

This project represents a once-in-a-generation opportunity to revitalise the existing City and town centres and neighbourhoods along the Byford to Armadale Rail Extension by creating new train stations, elevated rail, providing new and enhanced community open spaces, and removing unsafe level crossings.

The project will open-up opportunities for improved connectivity of existing town centres and neighbourhoods and providing the catalyst for high quality public realm upgrades.

The Tree Retention Strategy (the 'strategy') has been developed as a best practice document to guide tree retention for the duration of the project.

The requirements of the Scope of Works and Technical Criteria (SWTC) and AS4970 (2009) Tree Protection on Development Sites are imbedded within the strategy and are used to guide the Tree Retention Specification and other supporting documentation.

The strategy outlines an overarching vision and objectives to achieve the proposed tree canopy retention and projected canopy growth. The requirements and methods for tree protection and retention for the project are summarised within the strategy.

Ensuring the appropriate resources are provided is critical to ensure the successful management of existing trees, and support the procurement, installation and maintenance of new trees is critical to support the strategy.

The strategy should be considered a live document, and with regular review should be updated as new knowledge and greater understanding develops within the project lifespan.

2. Introduction

The existing trees support and enhance Armadale's existing sense of place, provide significant shade and amelioration of the urban heat island, and support many health, aesthetic and environmental outcomes that benefit the broader community. The project team recognises that trees are an important feature of the Armadale area and notes the importance to the community as outlined in the City of Armadale's (the City) Urban Forest Strategy **"... 56% of participants felt the close to nature, country feel and natural environment was one the best aspects about living in the City of Armadale"**.

A robust and diverse urban forest will provide important green infrastructure as a legacy for future generations. The project teams' approach to the retention, protection and planting of trees within the project's development envelope is based upon:

- working collaboratively with the City of Armadale to retain, protect, and select trees.
- maximise the retention and protection of existing trees.
- retain and protect nominated heritage trees.
- increase the existing tree canopy within a defined time period.
- replace "like for like" tree species removed.

- utilise a minimum of 50% endemic tree species.
- build on and enhance the tree diversity in tree selections.
- utilise mature tree planting stock for use high amenity and/or areas with greater tree removal.
- visual screening of noise walls and viaducts to minimise scale and visual impact and improve visual amenity.

Whilst it is acknowledged that not all trees are able to be retained due to the proposed viaduct and other works, the Tree Working Group has improved the number of trees that are now able to be retained due to:

- changes in design and construction methodologies.
- canopy pruning and management to minimise impacts; and;
- relocating service infrastructure, lay-down and access areas to areas with less impacts to trees.

3. Vision & Objectives

The Strategy is a critical component for the delivery of the Byford Rail Extension project. Whilst the proposed alignment of the rail and viaduct will necessitate the removal of a number of existing trees the retention of the remaining trees is a key objective of the strategy.

3.1 Tree Retention Vision

In consultation with the City a Tree Retention Vision has been developed to guide the retention, protection and proposed planting to provide a strong legacy.

Build on and enhance the City's botanic heritage and landscape character with a legacy of strong retention and protection of existing trees. Expand the City's urban forest with a significant and diverse range of tree species.

3.2 Objectives

The objectives identify the outcomes of the strategy and outline a clear methodology to achieve these. The objectives are outlined below.

Objective 01: Retain as many existing trees as possible throughout the project lifespan.

- A projected 65% of tree canopy is currently noted for retention.
- Minimise encroachment within TPZ's to reduce impacts to existing trees.
- Retaining all heritage trees within the development envelope.
- Preference the retention of healthy mature and semi-mature trees.

Objective 02: Regular communication and engagement with the City.

- The project team shall engage regularly with the City to provide updates to tree retention and to gain input and review at key stages of the project.

Objective 03: A net increase in canopy from 18.78% to greater than 30% by 2045.

- Select and locate additional trees to grow the tree canopy to greater than 30% within 20 years.
- Ensure selected trees are suitable for location, function and context and are healthy specimens capable of reaching maturity.
- Regular maintenance including formative pruning to ensure development of trees with good structure and form.

Objective 04: Increase urban forest species diversity.

- Augment the existing diversity with additional tree genus and species that are climate resilient, suitable for context and function, and resilient to pest and disease to build a healthy and diverse urban forest.

Objective 05: An Arboricultural-led approach innovate and use methodologies and techniques that meet or exceed best practice.

- An Arboricultural-led Approach utilising best practice strategies coupled with retention and protection strategies that meet or exceed the requirements of AS 4970 (2009).
- The nominated Project Arborist shall approve all works within the TPZ.

4. Work Undertaken to Date

The retention of trees is a holistic and ongoing process from design, through construction, and into maintenance. The work completed to date outlines the work that has been undertaken to enhance tree retention within the project.

4.1 Visual Tree Assessment (VTA)

A VTA and preliminary report has been undertaken by a qualified (AQF Level 5) consulting arborist. The VTA and report identifies species, health, size, SRZ/TPZ, general notes, and useful life expectancy and is included as Appendix 05 within the strategy. This information will guide the design and construction team in setting TPZ's and Structural Root Zones (SRZ) to ensure that any proposed works are reviewed by the Project Arborist.

4.2 Tree Working Group (TWG)

A TWG comprising of the Project Arborist, Landscape Architect, Environmental Manager, and Construction Managers, was formed to facilitate greater engagement and collaboration with the City and with a focus on maximising tree retention within the development envelope. The TWG is working across the projects design and construction disciplines to ensure that tree retention and protection is maximised across the project's lifespan.

The TWG has undertaken a number of tree retention workshops and site walks with the City to review trees and develop different design and construction methodologies to maximise tree retention. Ongoing engagement and collaboration with the City shall occur to ensure that any changes to tree retention are communicated promptly and transparently.



Figure 2: TWG inspecting existing trees within Development Envelope.

4.3 Tree Retention, Pruning and Removal Specifications

A Tree Retention Specification, Tree Pruning Specification and Tree Removal Specification (included within the Appendix) has been developed by the Project Arborist which provides guidance to contractors, design teams, and construction teams to ensure works within the TPZ's is undertaken in a tree sensitive manner and in line with AS 4970 (2009) and AS 4373 (2007) including but not limited to:

- Arborist approval for works within TPZ.
- Controls in place to protect retain trees - identification, fencing and signage.
- Tree protection documentation across all disciplines.
- Reviewing construction methodologies to maximise tree retention.
- Ongoing reporting and assessment of retained trees during works.
- Formative pruning during maintenance as per AS 4373.
- Arborist to review and assess all trees prior to project handover.

4.4 Canopy Mapping

4.4.1 Baseline Canopy

A 'baseline' canopy mapping exercise was undertaken to establish the existing 18.78% canopy cover within the development envelope (refer Fig. 3).

A canopy mapping existing was undertaken to develop baseline canopy data. The existing canopy pre-development is:
~43,880 M² OF CANOPY
~18.78% CANOPY COVERAGE WITHIN DEVELOPMENT ENVELOPE



Figure 3: Baseline canopy indicating the existing (pre-development) tree canopy as a percentage of the development envelope.

4.4.2 Baseline Canopy Clearing

A Baseline Canopy Clearing was undertaken (refer Fig. 4) which highlighted that the originally proposed viaduct works was to result in ~64% canopy loss.

~15,615M² CANOPY REMAINING
~6.68% CANOPY REMAINING
~64% REDUCTION IN CANOPY

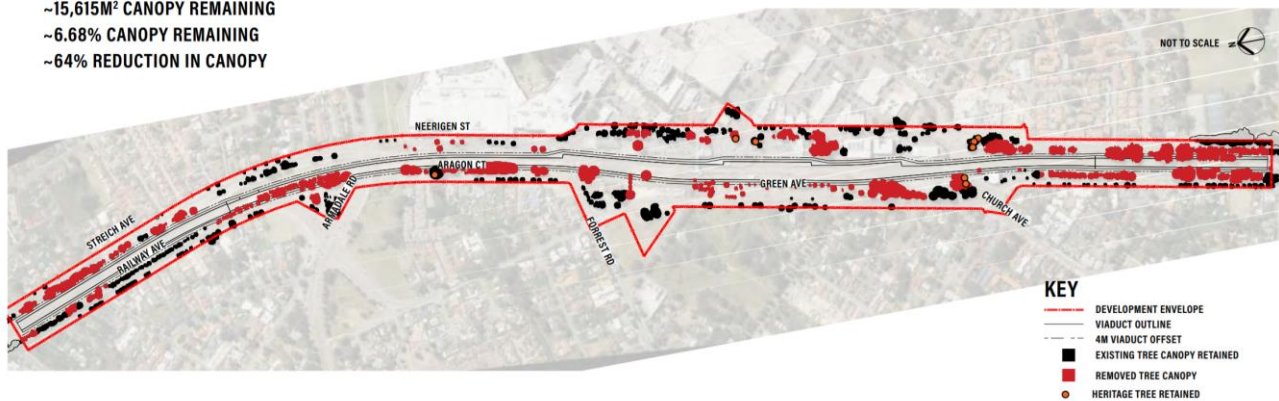


Figure 4: Baseline clearing originally proposed prior to TWG involvement.

4.4.3 Improvements to Canopy Retention

Through extensive design changes, cross discipline review and coordination, on-ground inspections and desktop reviews, an estimated 65% of canopy is likely to be able to be retained (refer Fig. 5) with 3% under investigation.

Through extensive cross discipline on-ground and desktop reviews, an estimated 65% of canopy is likely to be retained.

- ~65% CANOPY LIKELY RETAINED
- ~28,540M² CANOPY REMAINING
- ALL HERITAGE TREES CAN BE RETAINED
- 3% UNDER INVESTIGATION

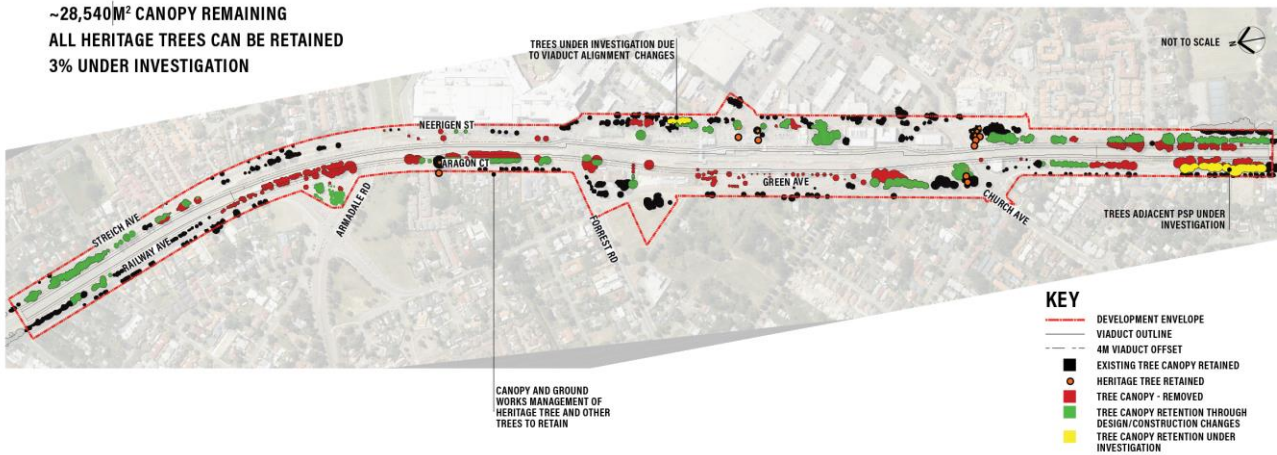


Figure 5: Proposed improvements to existing canopy through changes to design, coordination and on-ground inspections.

4.4.4 Projected Canopy Modelling

Canopy modelling calculations were developed based upon the retention of existing trees and the proposed planting of 1000 trees (comprised of 800 x 45L and 200 x mature tree stock).

The projected average growth of the proposed tree species was based upon the personal observations by the Project Arborist and Landscape Architect of average tree growth of various species in similar conditions (refer to Figure 6 as example for 45L). A number of likely canopy projections have been modelled at day 1; year 5; year 10; and year 20 to establish. For consistency in the modelling, it has been assumed that the existing tree canopy is unchanged during the modelling period.

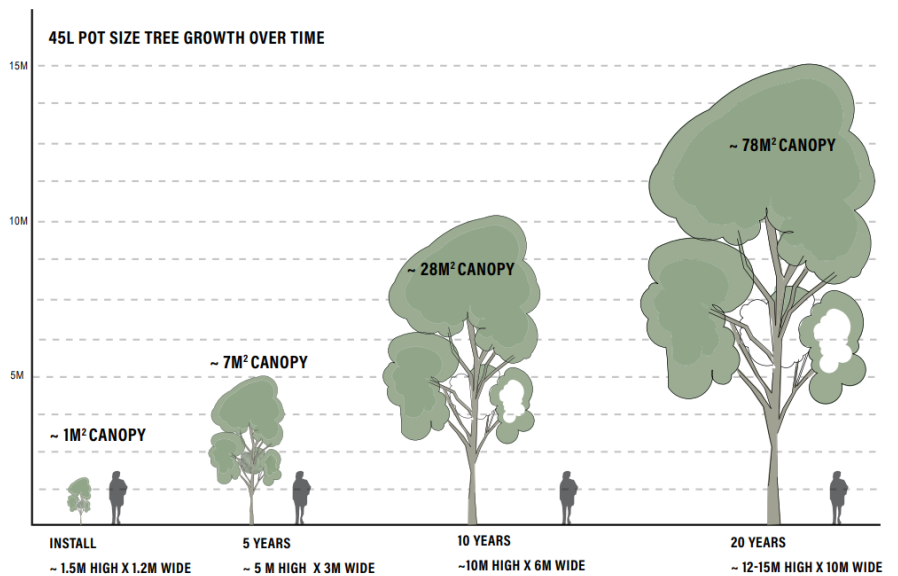


Figure 6: Project average growth of a 45L tree over time used for canopy modelling projects.

4.4.5 Additional Feature Survey & VTA

It was identified that the original feature surveys undertaken did not collect information on trees with trunks less than 300mm in diameter. In accordance with the SWTC for all retained vegetation to be surveyed an additional feature survey and VTA has been undertaken to collect information on trees not originally surveyed.

This information has been included within the Tree Retention, Removal and Pruning plans to provide greater clarity and certainty.



Figure 7: Project Arborist reviewing pruning requirements with Construction team.

4.4.6 Canopy Projection

A series of canopy project models were developed to indicate the proposed canopy a Year 1, Year 5, Year 10 and Year 20 which are summarised below (refer Fig. 8).

- ~ 76,036M² PROJECTED CANOPY
- ~ 32.18% PROJECTED CANOPY



Figure 8: Tree canopy projection at Year 20 indicating approximately 32% canopy cover.

4.4.7 Summary

The key outcomes of the strategy are outlined in below (refer Fig. 10) and includes:

- 65% of existing canopy likely to be installed.
- 1000 trees to be installed (refer to Fig 9).
- All Heritage trees to be retained.
- Exceed the current baseline canopy within approximately +5 years; and;
- Exceed 30% tree canopy by Year 20.

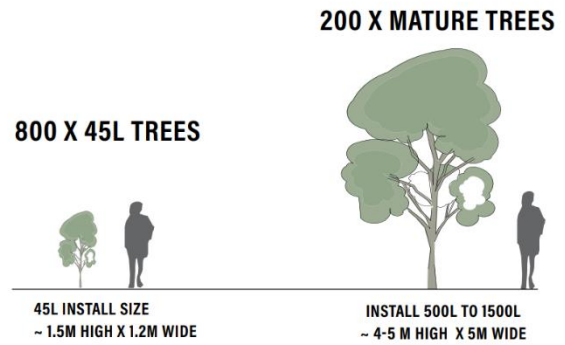
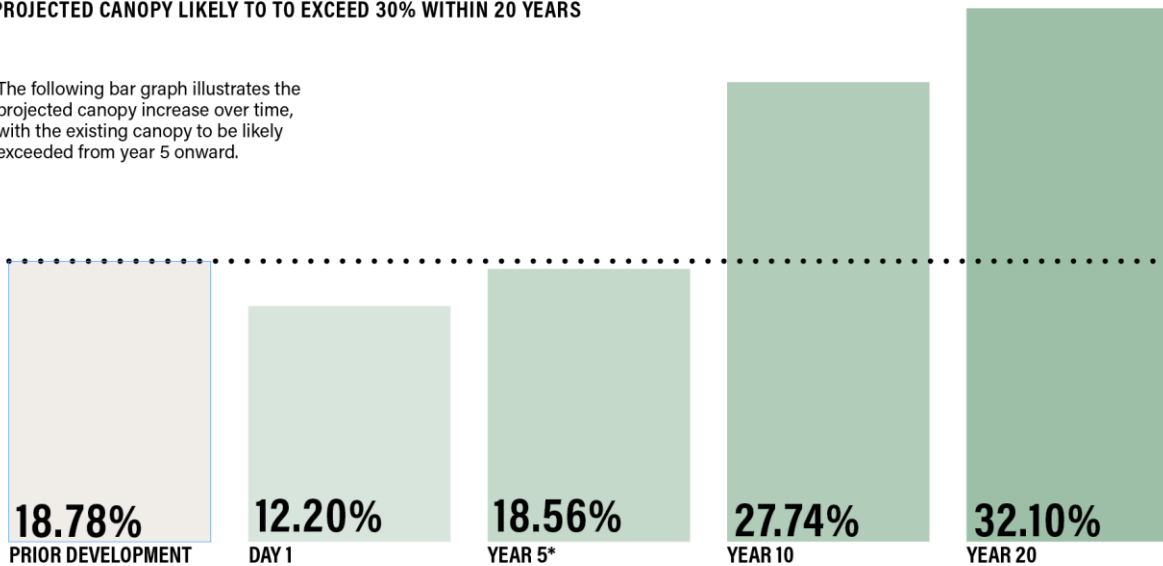


Figure 9: Proposed numbers and sizing of trees to be installed.

~65% EXISTING CANOPY LIKELY RETAINED
1000 PROPOSED TREES TO BE INSTALLED
HERITAGE TREES TO BE RETAINED
PROJECTED CANOPY LIKELY TO TO EXCEED EXISTING ~ +5 YEARS
PROJECTED CANOPY LIKELY TO TO EXCEED 30% WITHIN 20 YEARS

The following bar graph illustrates the projected canopy increase over time, with the existing canopy to be likely exceeded from year 5 onward.



***ALL NUMBERS ARE INDICATIVE ONLY BASED ON CANOPY MODELLING**

Figure 20: Summary of tree retention and tree canopy cover projections over time.

5. Structure of the document

The SWTC outlines the requirement to develop a Tree Retention Strategy and to retain trees in accordance with AS 4970.1 (2009). This diagram illustrates the relationship of the strategy to the SWTC and AS 4970.1 documents and other key documents and specifications as companion documents that will support the strategies implementation.

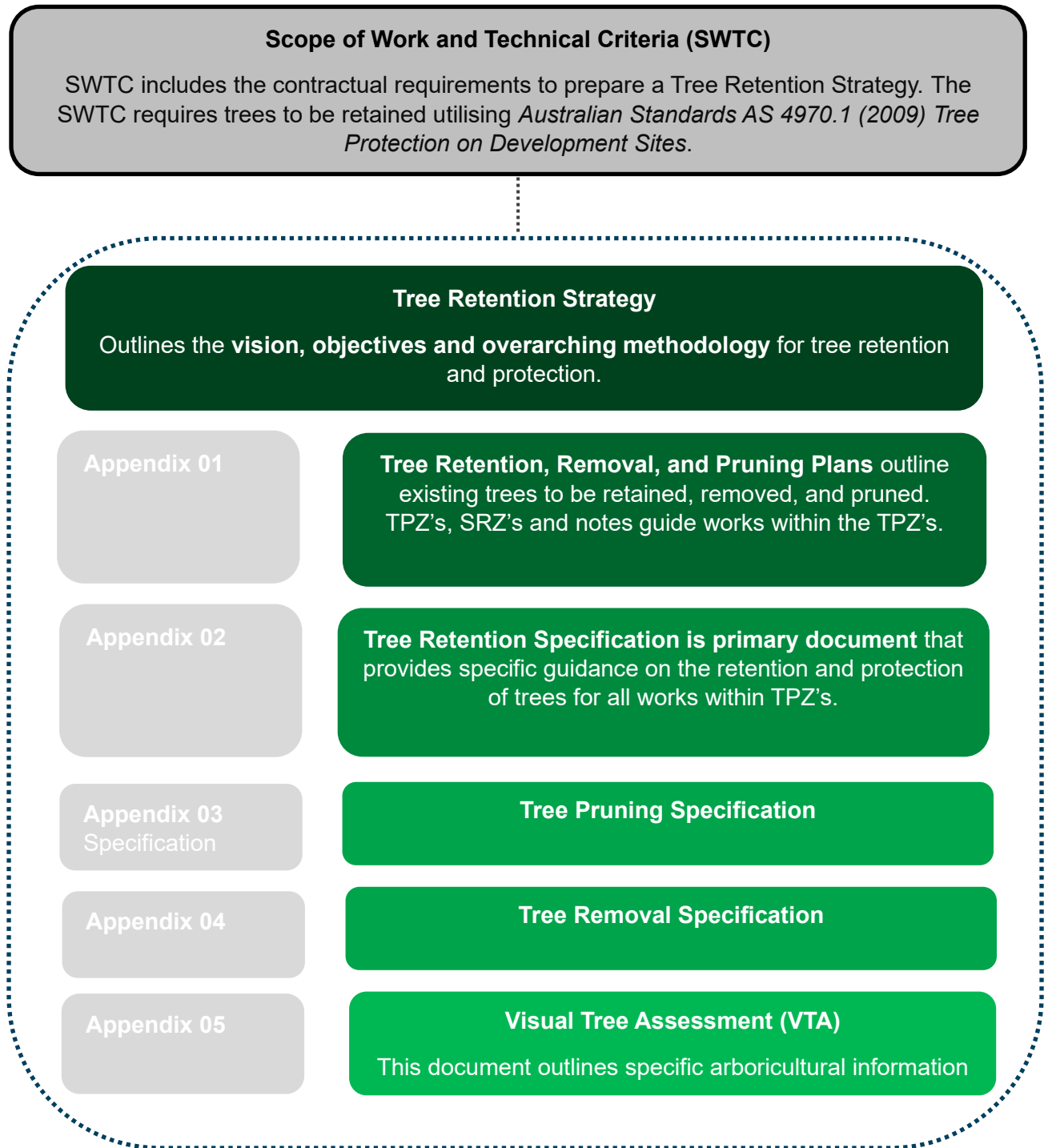


Figure 13: Structure of the document.

6. Tree Retention Methodology

The implementation of the strategy will require coordination with a wide range of other design, construction and other activities across the project lifespan. It is the responsibility of all consultants and contractors to ensure proper coordination with proposed works or access with TPZ's. A step-by-step process is to ensure thorough coordination between any works or access within TPZ's.

Upon reviewing the strategy all consultants and contractors shall follow the process outlined below:

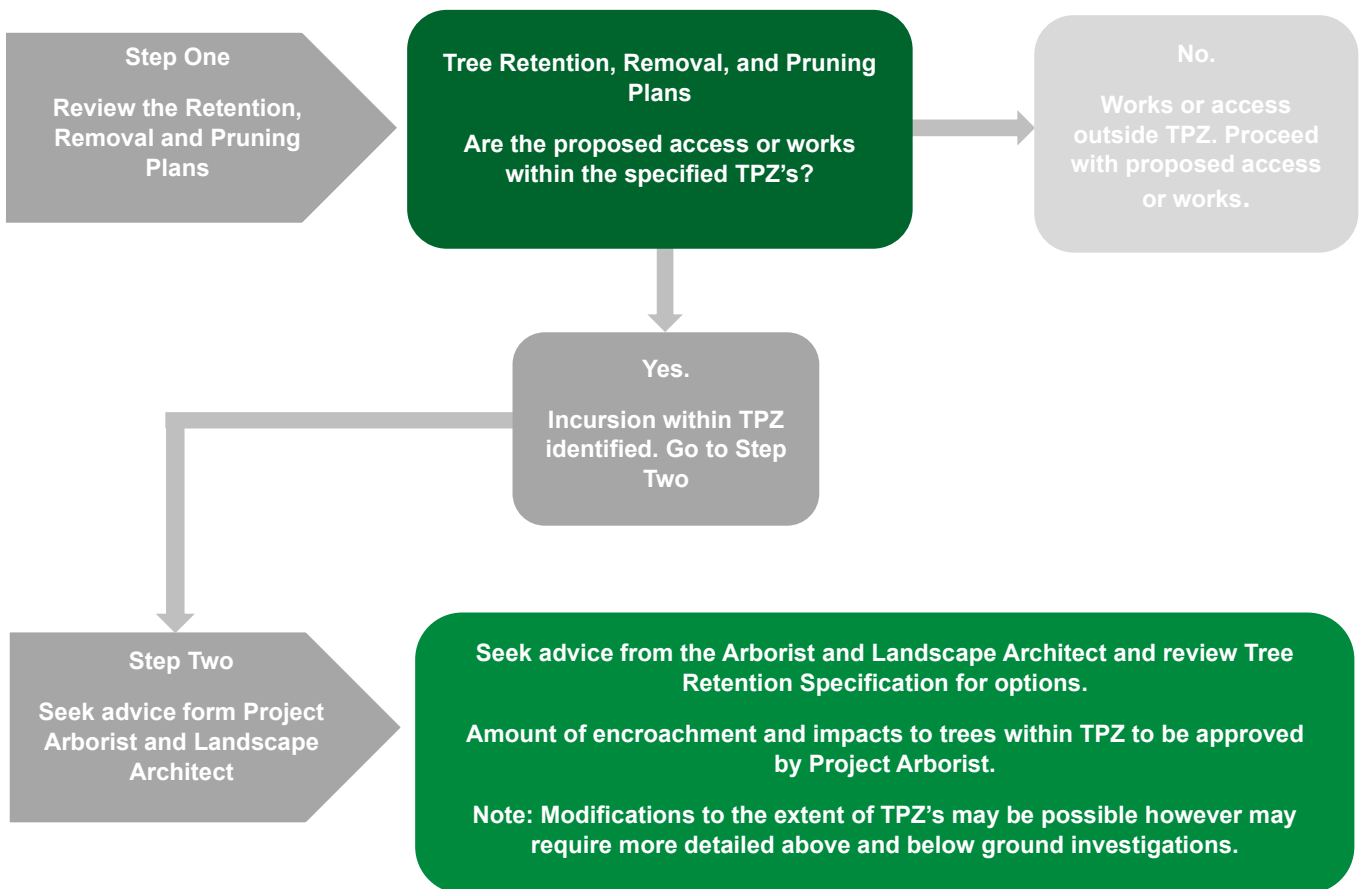


Figure 12: Tree Retention Methodology

7. Tree Protection Measures by Stage

The following tree protection measures are summarised by stage and shall be read in conjunction with the relevant specifications within the strategy.

7.1 Design Stage

All consultants and contractors shall review the TPZ's noted on the Tree Retention, Pruning and Removal Plans (refer to Appendix 01). Trees identified for retention shall be retained and preserved as outlined in the Tree Retention Specification (refer to Appendix 02).

Design and construction documentation from all consultants and contractors (e.g. Civil and Structural Engineers, Construction team, Electrical Engineering, Hydraulic engineering etc.) to be reviewed in relation to the TPZs and modifications made to relocate works from TPZ's or reduce impacts to trees by minimising encroachments within the TPZ.

The following methodology is outlined and shall be undertaken during the design stage.

Step 1 – TPZ notes on all Consultant and Contractor Documentation

TPZ notes (refer Fig. 13) as shown to be added to all consultant and contractor drawings and specifications to ensure coordination and clearly communicate the requirements for access and works within TPZ's.

ANY ACCESS OR WORKS WITHIN THE TREE PROTECTION ZONE (TPZ) TO BE UNDERTAKEN UNDER THE GUIDANCE OF THE PROJECT ARBORIST AND TO COMPLY WITH TREE RETENTION SPECIFICATION.

Figure 13: Tree Protection Note to be used by all consultants.

Step 2 – Avoid Tree Protection Zones

Consideration shall be given to minimising impacts to trees above and below ground (i.e., roots, trunk and canopy) by avoiding TPZ's in the first instance. Re-routing below and above ground infrastructure to occur outside of TPZ's is the best method to minimise impacts to existing trees.

Step 3 – Advise Project Arborist and Landscape Architect

Any works or access proposed within TPZ's shall be communicated to the Project Arborist and Landscape Architect to review the proposed encroachment and impacts and advise on methods to minimise impacts.

Step 4 – Works and Access Undertaken in a Tree Sensitive Manner

Where all other alternatives have been explored and encroachment within a TPZ is unavoidable works shall be designed and implemented in a "tree sensitive manner" to limit tree impacts e.g., directional drilling, maintaining of levels, micro tunnelling, and use of soil vacuum for excavation works. All works shall be to the approval of the Project Arborist and in accordance with the Tree Retention Specification (included in Appendix 02).

Step 5 – TPZ and Tree Protection Education

Consultant and contractor/subcontractor awareness and education on TPZ's and tree protection is critical to ensure all parties are aware of their obligations and project requirements regarding tree protection. TPZ and tree retention information is to be incorporated into (but not limited to) design and coordination meetings, inductions, pre-start meetings, and contractor meetings.

7.2 Early Works Stage

The Tree Retention Specification outlines specific tree retention activities which are summarised below for works and access within TPZ's:

- **Install TPZ Fences:** Establish TPZ fencing, signage and sign off/approval and to be photographed, documented and detailed by the nominated Project Arborist in accordance with the Tree Retention Specification (included in Appendix 02).
- **Construction Toolbox:** Tree retention and protection included in construction meetings with sufficient meeting time to allow formal documentation of TPZ issues to be raised and actioned in a timely fashion.
- **Establish temporary Irrigation system or water delivery – i.e.,** to be able to deliver specified rates and frequencies for the duration of works to be photographed, documented and detailed by the nominated Project Arborist
- **Site Arborist:** The AQF Level 5 Arborist to attend contractor meetings as and where required, by MetCONNx and meetings where required by the design/project team.
- **Ground Protection:** Approved ground protection within TPZ's to be approved by the Project Arborist and where required where tracking or storage may be required in TPZs. Works to be photographed, documented and detailed by the nominated Project Arborist
- **Mulch and Supplementary Works:** Mulching, soil drenches and similar supplementary works within TPZ's to be photographed, documented and detailed by the nominated contractor for review and approval by the Project Arborist.
- **Tagging and Identification:** The identification of trees to be pruned or removed shall be physically tagged/identified and approved on site by the Landscape Architect and Project Arborist prior to the commencement of works. Any discrepancies or anomalies between documentation shall be reported to the Landscape Architect and Arborist prior to any works commencing.

7.2.1 Canopy Pruning and Tree Removal

Canopy pruning shall be undertaken as per the Tree Removal Specification and Pruning Specification. Pruning and removal works shall be documented by the nominated contractor for review and approval by the Project Arborist. TPZ fencing, signage shall be installed by the nominated contractor for review and approval by the Project Arborist. Proposed works within TPZs shall be under the guidance of the Project Arborist.

To minimise the impacts to trees being pruned the following shall occur under the direction of the Project Arborist:

- **Supplementary watering** to deliver specified rates and frequencies for the duration of works to be photographed, documented and detailed by the nominated Project Arborist.
- **Installation of Mulch** in TPZs to be photographed, documented and detailed by the nominated Project Arborist.

- Ground protection measures approved by the Project Arborist and where required where tracking or storage may be required in TPZs to be photographed, documented and detailed by the nominated Project Arborist.
- Implement remedial soil wetting agent and organic drenches to all TPZ's upon the guidance of the Project Arborist to be verified and validated via official/formal sign off sheet.
- Removal of organic layer/initial stripping in TPZs to be supervised, photographed, documented and detailed by the nominated Project Arborist.
- Establish laydown, site access egress areas (including tracks and haulage roads etc.) with nominated Project Arborist. Demolition of existing structures and excavations within TPZ to be supervised, photographed, documented and detailed by the nominated Project Arborist.
- Root pruning and documentation (including photos) of works within TPZ to be supervised, photographed, documented and detailed by the nominated Project Arborist
- Ongoing compliance reporting of early works to be completed by the nominated Project Arborist to be submitted to the Landscape Architect and Arborist for review and comment.
- Under the guidance of the Arborist during the crane pad installation, crane/drill rig access into TPZs or where collision impact may occur to canopies etc. to be photographed, documented and detailed by the nominated Project Arborist. Ground protection shall be used within TPZ's to the approval of the Project Arborist.

7.3 Construction Stage

Any works or access within TPZ's require the prior approval and guidance by the Project Arborist. Regular review and ongoing assessment and monitoring of TPZ status shall be undertaken and documented.

Some modification of TPZ's may be possible with further investigation by the Project Arborist. Final changes to TPZ's shall be approved and documented by the nominated Project Arborist and submitted to the Landscape Architect for comment. If root or canopy pruning is identified to occur works shall be approved and supervised and documented by the nominated Project Arborist.

- Ongoing monitoring of TPZ fencing and signage at specified alignments. Monitoring of mulch levels, moisture levels and general tree status (health and structure) as part of status reporting.
- Project arborist to attend contractor meetings as and where required, by MetCONNx and meetings where required by the design/project team.
- Tree protection included into construction meetings. Tree Protection needs to be stated and specific area allocated in the meeting minutes to allow formal documentation of TPZ issues to be raised and actioned in a timely fashion.

Ongoing compliance reporting of construction works to be completed by the nominated Project Arborist to be submitted to the Landscape Architect and Arborist for review and comment.

7.4 Civil / Groundworks Phase

As outlined in the Soil Management section all crane pads, access paths and similar works shall be removed from all TPZ's and all areas of proposed planting areas (i.e. areas of garden beds, tree planting, turf, swales etc) shall include the decompaction and remediation of these soils as documented and detailed by the nominated Project Arborist.

- Root pruning and documentation (including photos) of works within TPZ to be supervised, photographed, documented and detailed by the nominated Project Arborist
- Ongoing compliance reporting of civil works to be completed by the nominated Project Arborist to be submitted to the Landscape Architect and Arborist for review and comment.
- Ongoing monitoring of TPZ fencing and signage at specified alignments. Monitoring of mulch levels, moisture levels and general tree status (health and structure) as part of status reporting.
- Site arborist managing – to attend contractor meetings as and where required, by MetCONNx and meetings where required by the design/project team.
- Tree protection included as a standing item into construction meetings. Tree Protection needs to be stated and specific area allocated in the meeting minutes to allow formal documentation of TPZ issues to be raised and actioned in a timely fashion.

7.5 Landscape Construction Phase

The decompaction and remediation within TPZ's shall be under the guidance of the Project Arborist and proposed planting areas under the guidance of the Landscape Architect.

Remediation works shall consider:

- Remediation in TPZs to be photographed, documented and detailed by the nominated Project Arborist.
- Root pruning and documentation of works within TPZ under the guidance to be supervised, photographed, documented and detailed by the nominated Project Arborist.
- Ongoing monitoring of TPZ fencing and signage at specified alignments. Monitoring of mulch levels, moisture levels and general tree status (health and structure) as part of status reporting.
- Tree protection included into construction meetings. Tree Protection needs to be stated and specific area allocated in the meeting minutes to allow formal documentation of TPZ issues to be raised and actioned in a timely fashion.
- Final sign off/completion report to be completed by the nominated Project Arborist to be submitted to Landscape Architect / Arborist for review and comment.

7.6 Maintenance Stage

Ensuring newly planted trees are maintained in the first years after planting is critical to their long-term health and vigour.

Within the maintenance period inspections of new trees shall include:

- ongoing assessments for growth, health and vigour.
- inspection to ensure free of pest and disease.
- health and structural assessments by suitably qualified and experienced Arborists including formative pruning as required to facilitate healthy structure and growth where required.
- ensuring sufficient watering amounts, timing and frequencies.
- staking of trees to be monitored noting some species benefitting with removal of staking early, whilst other species may require longer periods of staking.
- mulching and soil conditioner/compost requirements (type, depth application rates etc) as documented.
- any remedial treatments or amendments required or specific analytical testing or further inputs that may be required.

A final tree inspection of all existing and new trees shall be undertaken prior to handover to identify any trees that do not present the health, vigour, and growth expected for the particular species after two years by the nominated project arborist.

8. Tree Damage or Removal

Damage to existing trees identified for retention are be logged immediately and assessed by the Project Arborist with advice sought regarding the level of remediation required.

Removal of existing trees identified for retention due to construction purposes must be assessed by the Project Arborist prior to removal to include a review of and advice as to why the tree cannot be successfully retained.

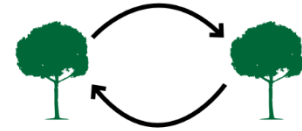
9. Tree Selection

The following preliminary considerations will be further developed with the City and stakeholders to finalise tree selections including, but not limited to

- Functional requirements;
- Canopy coverage and shade.
- Biodiversity and Habitat.
- Climate and environmental resilience.
- Aesthetic and sense of place.
- Below and above ground space.
- Sightlines and safety.
- Maintenance; and;
- Mature size and width.



Principle 01
Right tree, for right reason in right location



Principle 02
Like for like - replace similar species



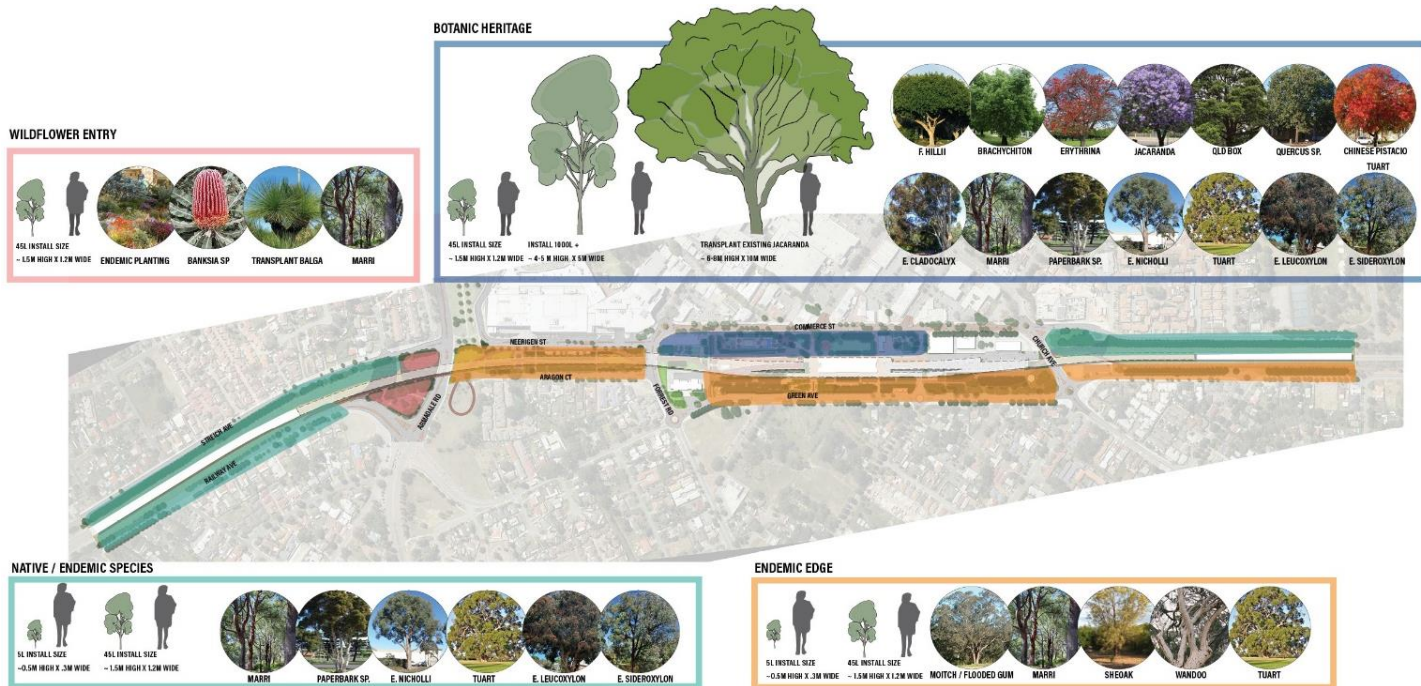
Principle 03
Tree diversity - 50% endemic : 50% native / exotic



Principle 04
Canopy intensification - focus on high impact & amenity areas

All proposed tree stock shall meet the Australian Standard AS 2303 – Tree Stock for Landscape Use and be inspected and approved by the Landscape architect.

The following illustrates the preliminary tree selections and zones for use. Final locations and species indicative only.



10. Soil Management

Healthy trees and plants require quality, uncompacted and free draining soils in order to thrive. The SWTC requires “...***all planting areas are not constructed from compacted fill material, and that all planting areas are de-compacted, during preparation works.***” (SWTC 12.4-9-14).

The removal of areas of compacted fill (e.g., crane pads, and access paths) post construction from all proposed planting areas (i.e., areas of garden beds, tree planting, turf, swales etc) shall include the decompaction and remediation of these soils which may include:

- Soil ripping to facilitate decompaction and aeration.
- Mixing of imported topsoil’s into existing soils during preparation; and;
- Watering with a suitable specified wetting agent and organic soil drenches.

10.1 Soil Management within TPZ’s

The protection and management of existing soils within TPZ’s is critical to the ongoing health of trees. Minimising access and works within the TPZ is the first – if all options have been explored and this is unavoidable then the following shall be used under the guidance of the Project Arborist:

- Limit compaction of soils within the TPZ.
- Ground protection in the form of Geo-Grid,BOGMAT, plywood etc installed over 100mm of mulch or washed aggregate.
- Use of geo-fabric to physically separate existing soils from imported fill.

Upon completion of works soils to be decompacted and aerated with the final methodology to be specific to the arboricultural context and approved by the nominated Project Arborist. Methods to decompact and aerate soils may include:

- Low pressure ‘hydrovac’ or soil vacuum.
- Mulching 50-75mm of an approved organic mulch.
- Hand digging.

- Watering (including wetting agents and organic drenches) as specified by the arborist.

11. Vegetation Pruning, Removal, and Reuse


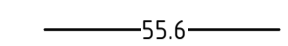





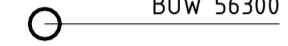
The use of vegetation from the pruning and removal of trees and vegetation shall be reused in the project or in projects in the surrounding area including;

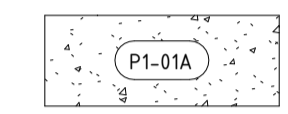
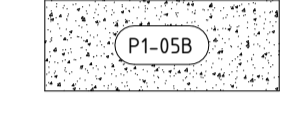
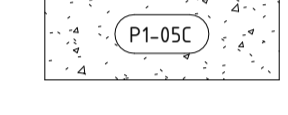

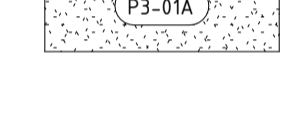
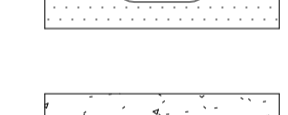
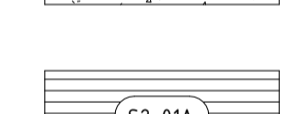
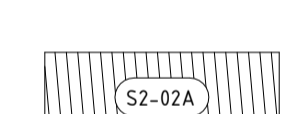
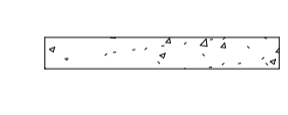

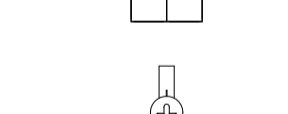
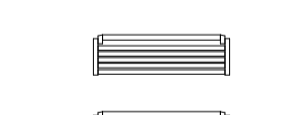

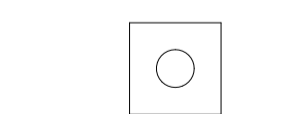
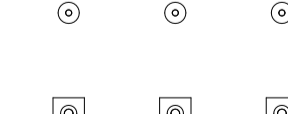

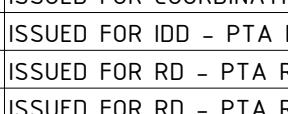
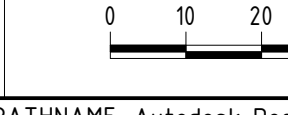

- Logs shall be removed to ensure 1m-2m in length and stockpiled on site for reuse on the site or for projects within the City of Armadale.
 - Tree branches with seed and nuts to be provided to organisations e.g., Kaarakin Black Cockatoo Conservation Centre (Kaarakin).
 - Logs secured and used as habitat elements or features within garden beds.
 - Mulched and stockpiled for use in the project.
-

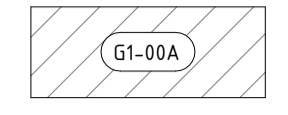

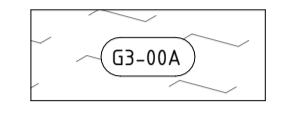

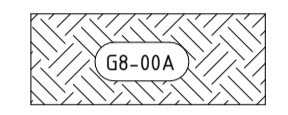

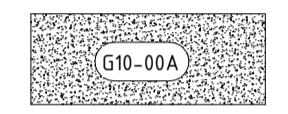
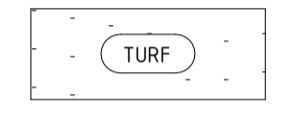
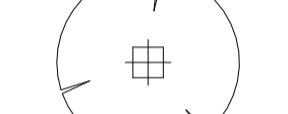
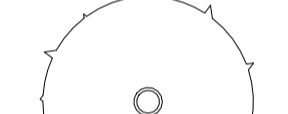
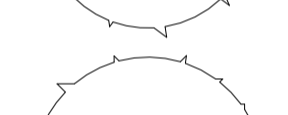






12. Appendix

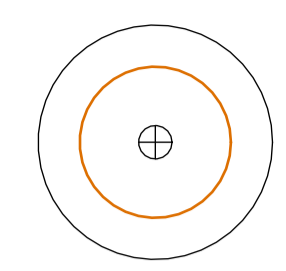
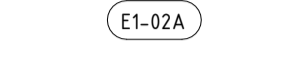
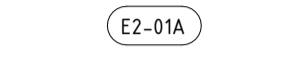
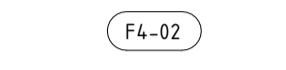
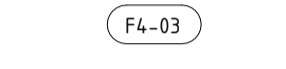
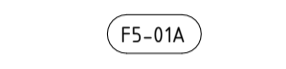
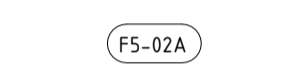
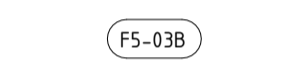
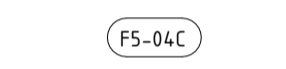
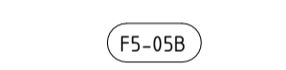
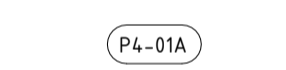
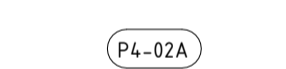
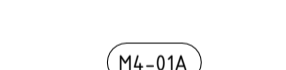
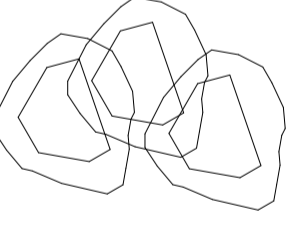
12.1 Appendix 01 – Tree Retention, Pruning and Removal Plans

LEGEND

-  EXTENT OF WORKS BOUNDARY
-  -5.6 EXISTING CONTOURS
-  RAIL RESERVE BOUNDARY
-  EDGE OF PROPOSED CRANE PAD
-  EDGE OF PROPOSED VIADUCT
-  RL 56300 PROPOSED SPOT ELEVATION
-  TOW 56300 TOP OF WALL SPOT ELEVATION
-  BOW 56300 BOTTOM OF WALL SPOT ELEVATION

-  P1-01A INSITU CONCRETE EXP AGGREGATE PAVING TYPE 01
-  P1-05B STANDARD GREY BROOM FINISH INSITU CONCRETE PAVING
-  P1-05C STANDARD GREY BROOM FINISH INSITU CONCRETE PAVING WITH SPORT SURFACE FINISH
-  P2-01A CONCRETE UNIT PAVER TYPE 01
-  P3-01A CEMENT STABILISED SUMMERSTONE FINES
-  M2-01A RUBBER SOFTFALL
-  S1-00A IN-SITU CONCRETE STAIR/RAMP
-  S2-01A TIMBER DECKING & RAMPS
-  S2-02A BOARDWALK
-  W2-00A INSITU CONCRETE WALL
-  W3-00A PRECAST CONCRETE SEATING WALL
-  F1-01A BIKE RACKS
-  F2-01A BINS
-  F3-01A DRINK FOUNTAIN
-  F4-01A BENCH SEAT W/ BACK & ARMREST (STANDALONE)
-  F4-01B SEATING WALL TOPPER (BACKREST & ARMREST)
-  F4-01C BENCH SEAT SYSTEM (WITH FLAT BENCH)
-  F4-01D FLAT BENCH SEAT
-  F6-01A TREE GRATE
- F7-01A FIXED BOLLARD
- F7-02A REMOVABLE BOLLARD

-  G1-00A HIGH QUALITY GARDEN BED REFER DETAILS AND PLANTING SCHEDULE.
-  G2-00A STANDARD GARDEN BED REFER DETAILS AND PLANTING SCHEDULE.
-  G3-00A BASIC GARDEN BED REFER DETAILS AND PLANTING SCHEDULE.
-  G4-00A BIORETENTION BASIN REFER DETAILS AND PLANTING SCHEDULE.
-  G8-00A ORGANIC MULCH ONLY REFER DETAILS AND PLANTING SCHEDULE.
-  G9-00A STONE GRAVEL MULLH REFER DETAILS AND MATERIAL SCHEDULE.
-  G10-00A PLAY SAND REFER DETAILS AND MATERIAL SCHEDULE.
-  TURF REFER DETAILS AND MATERIAL SCHEDULE.
-  45L TREE REFER DETAILS AND PLANTING SCHEDULE.
-  500L TREE REFER DETAILS AND PLANTING SCHEDULE.
-  1500L TREE REFER DETAILS AND PLANTING SCHEDULE.
-  T7-01 GRASS TREE TRANSPLANT
-  EXISTING TREE TO BE RETAINED AND PROTECTED.
-  EXISTING TREE TO BE TRANSPLANTED SUBJECT TO ARBORIST ADVICE & METHODOLOGY
-  EXISTING TREE TO BE REMOVED.
-  TREE PROTECTION ZONE
-  TREE TO BE PRUNED

-  STRUCTURAL ROOT ZONE
-  E1-02A CONCRETE MOW KERB
-  E2-01A STEEL EDGE
-  F4-02 PRECAST CONCRETE SEATING ELEMENTS WITH RECYCLED TIMBER TOP
-  F4-03 PRECAST CONCRETE SEATING ELEMENTS WITH RECYCLED TIMBER TOP
-  F5-01A STAINLESS STEEL HANDRAIL
-  F5-02A STAINLESS STEEL HANDRAIL WITH BALUSTER INFILL
-  F5-03B 800MM LOW FENCE
-  F5-04C CHAIN LINK REBOUND FENCE
-  F5-05B DOG PARK FENCE
-  P4-01A HAZARD TACTILE
-  P4-02A DIRECTIONAL TACTILE
-  M4-01A ENGINEERED PAVER - SHOTBLAST STAIR NOSING
-  M1-01A BOULDERS

NOTE:

- DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE TREE RETENTION STRATEGY AND APPENDICES.
- ANY ANOMALIES IDENTIFIED SHALL BE BROUGHT TO THE PROJECT ARBORIST AND LANDSCAPE ARCHITECTS ATTENTION PRIOR TO COMMENCEMENT OF ANY WORKS OR ACCESS.


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REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
F	04.07.23	ISSUED FOR DEVELOPMENT APPLICATION	DF	PW	MH	AE
E	30.06.23	ISSUED FOR DEVELOPMENT APPLICATION	DF	PW	MH	AE
D	26.06.23	ISSUED FOR COORDINATION	DF	PW	MH	AE
C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
A	05.08.22	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE



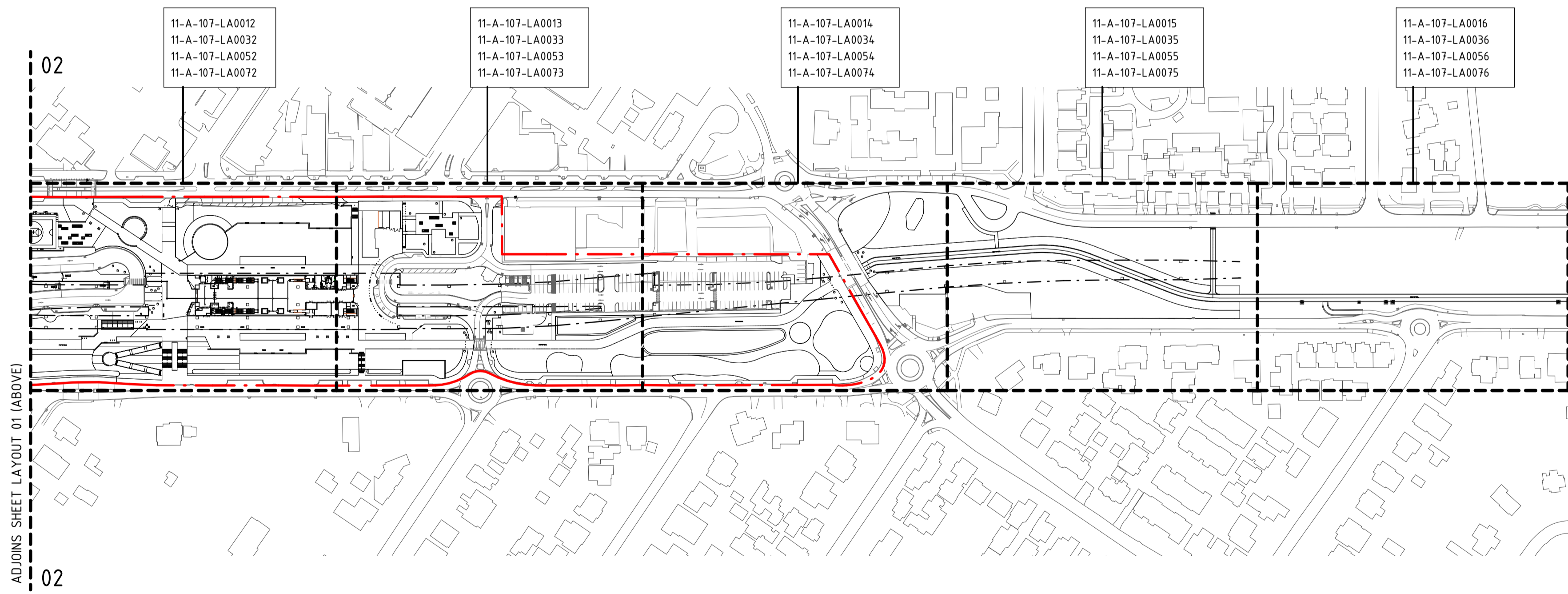
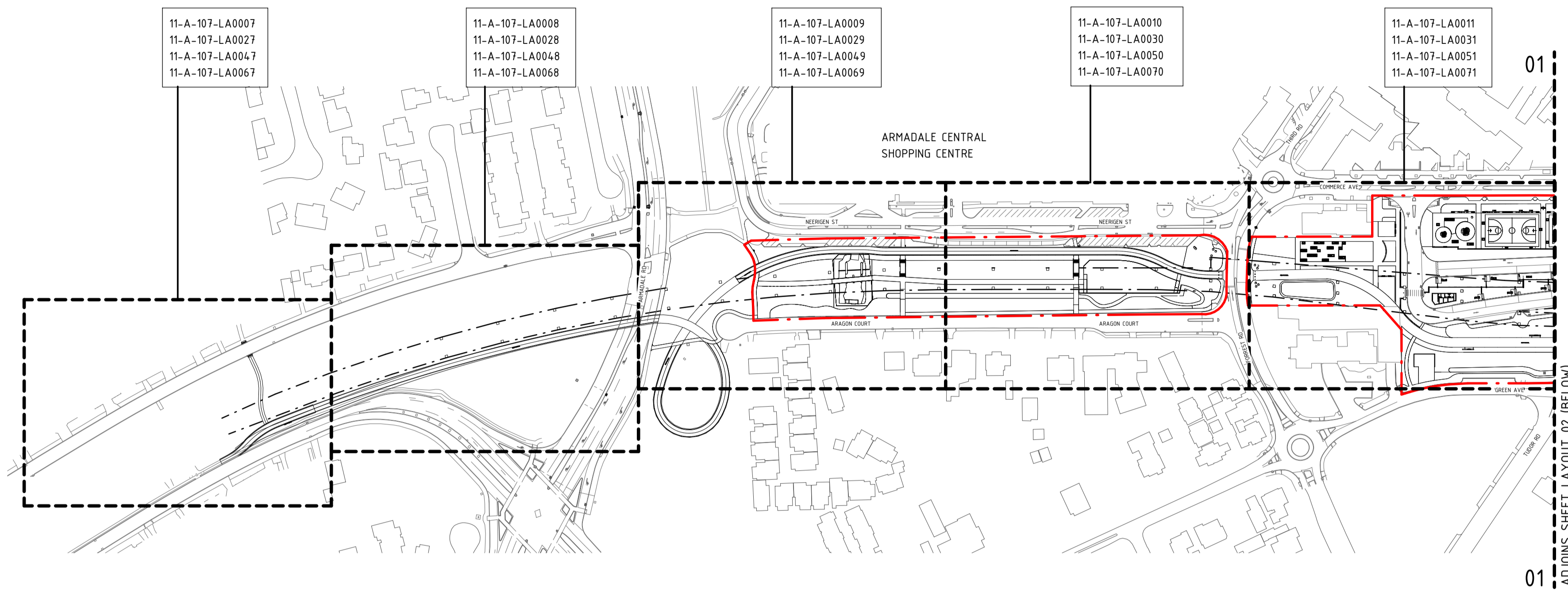
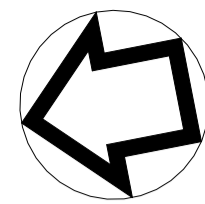
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REFERENCES	SCALE 1 : 100	DESIGNED D.Firns
DATUM HORIZONTAL: PCG2020 VERTICAL: AHD71	CHECKED M.Harris	DRAWN P. Werner
	APPROVED A.Eyres	
	DATE 04.07.23	



LEGEND & NOTES

PTA Drawing No: 11-A-107-LA0002 Rev: F



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REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
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E	30.06.23	ISSUED FOR DEVELOPMENT APPLICATION	DF	PW	MH	AE
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C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
A	05.08.22	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE

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Contractor No: _____ Rev: F

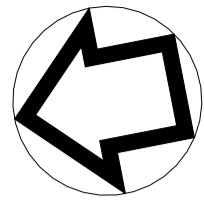
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DATUM	HORIZONTAL: PCG2020 VERTICAL: AHD71

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DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

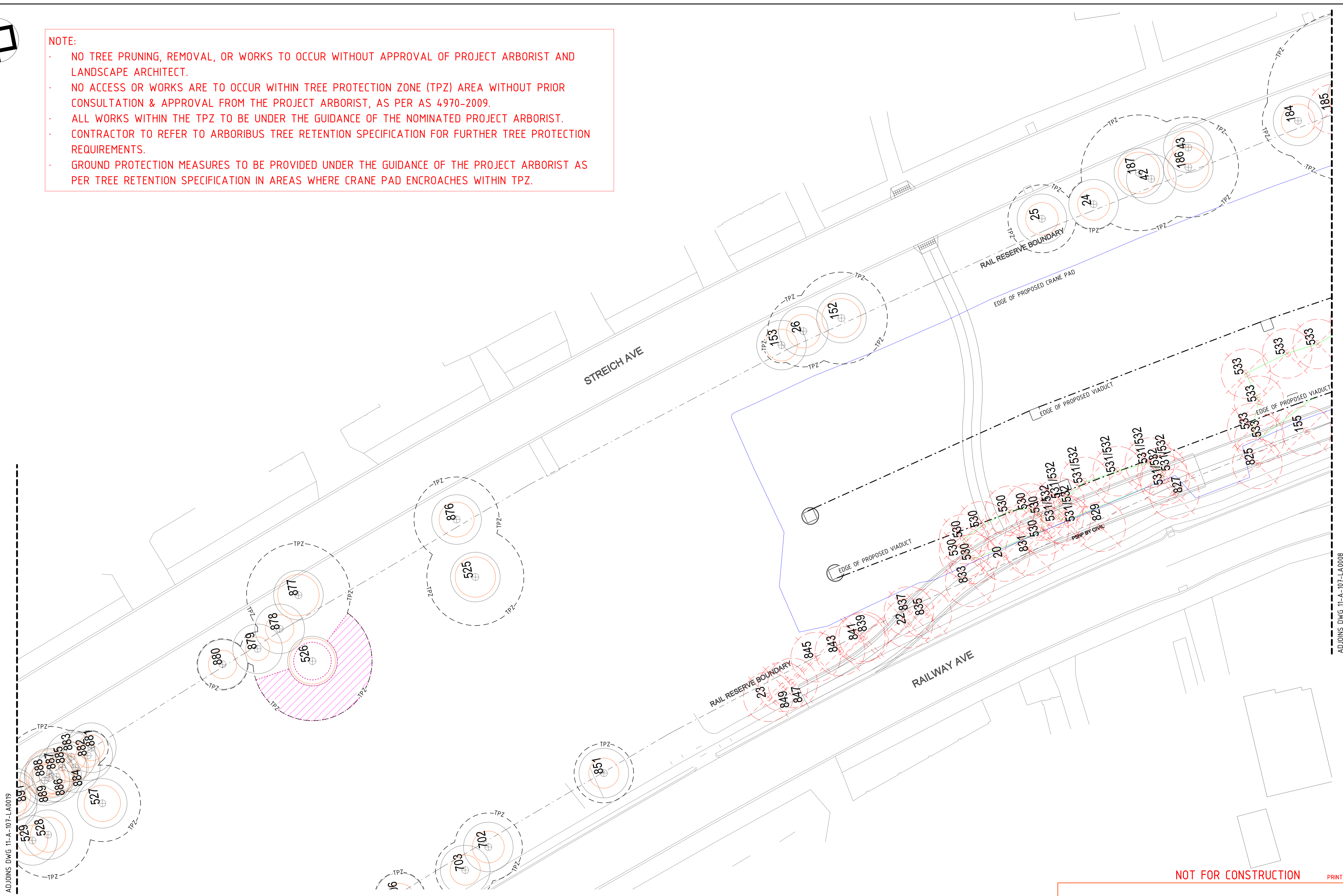


SHEET LAYOUT PLAN
PTA Drawing No: 11-A-107-LA0006 Rev: F



NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
- ALL WORKS WITHIN THE TPZ TO BE UNDER THE GUIDANCE OF THE NOMINATED PROJECT ARBORIST.
- CONTRACTOR TO REFER TO ARBORIBUS TREE RETENTION SPECIFICATION FOR FURTHER TREE PROTECTION REQUIREMENTS.
- GROUND PROTECTION MEASURES TO BE PROVIDED UNDER THE GUIDANCE OF THE PROJECT ARBORIST AS PER TREE RETENTION SPECIFICATION IN AREAS WHERE CRANE PAD ENCLOSES WITHIN TPZ.



ADDJONS DWG 11-A-107-LA0019

ADDJONS DWG 11-A-107-LA0008

NOT FOR CONSTRUCTION PRINT IN COLOUR

REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
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C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
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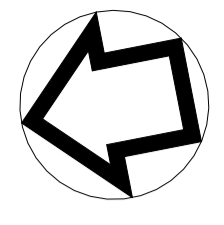
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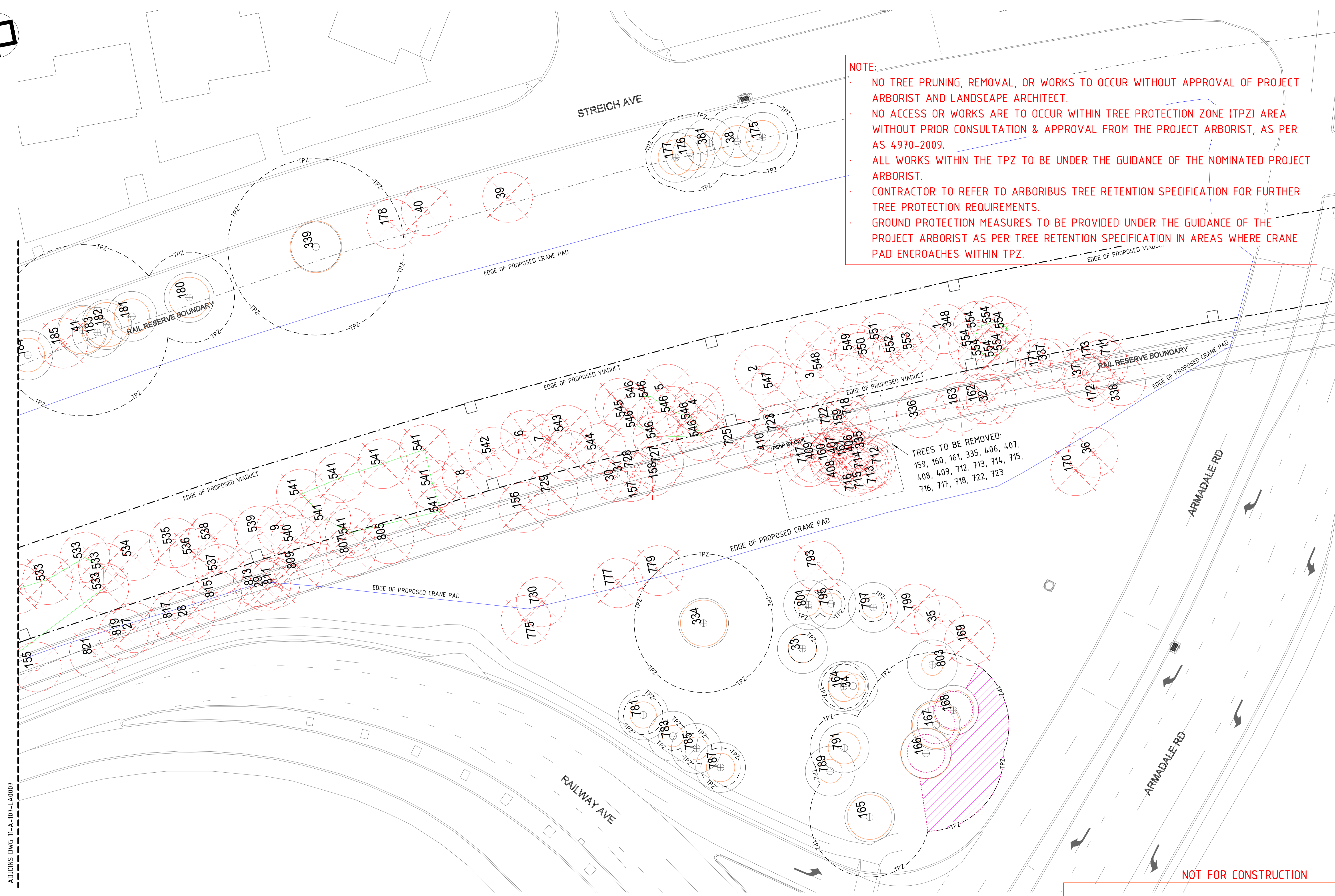
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	HORIZONTAL: PCG2020	P. Werner
	VERTICAL: AHD71	CHECKED
		M.Harris
		APPROVED
		A.Eyres
		DATE
		04.07.23

TREE RETENTION PLAN 01
PTA Drawing No: 11-A-107-LA0007 Rev: F



NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
- ALL WORKS WITHIN THE TPZ TO BE UNDER THE GUIDANCE OF THE NOMINATED PROJECT ARBORIST.
- CONTRACTOR TO REFER TO ARBORIBUS TREE RETENTION SPECIFICATION FOR FURTHER TREE PROTECTION REQUIREMENTS.
- GROUND PROTECTION MEASURES TO BE PROVIDED UNDER THE GUIDANCE OF THE PROJECT ARBORIST AS PER TREE RETENTION SPECIFICATION IN AREAS WHERE CRANE PAD ENCLOSES WITHIN TPZ.



AD JOINS DWG 11-A-107-LA0007

AD JOINS DWG 11-A-107-LA0009

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C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
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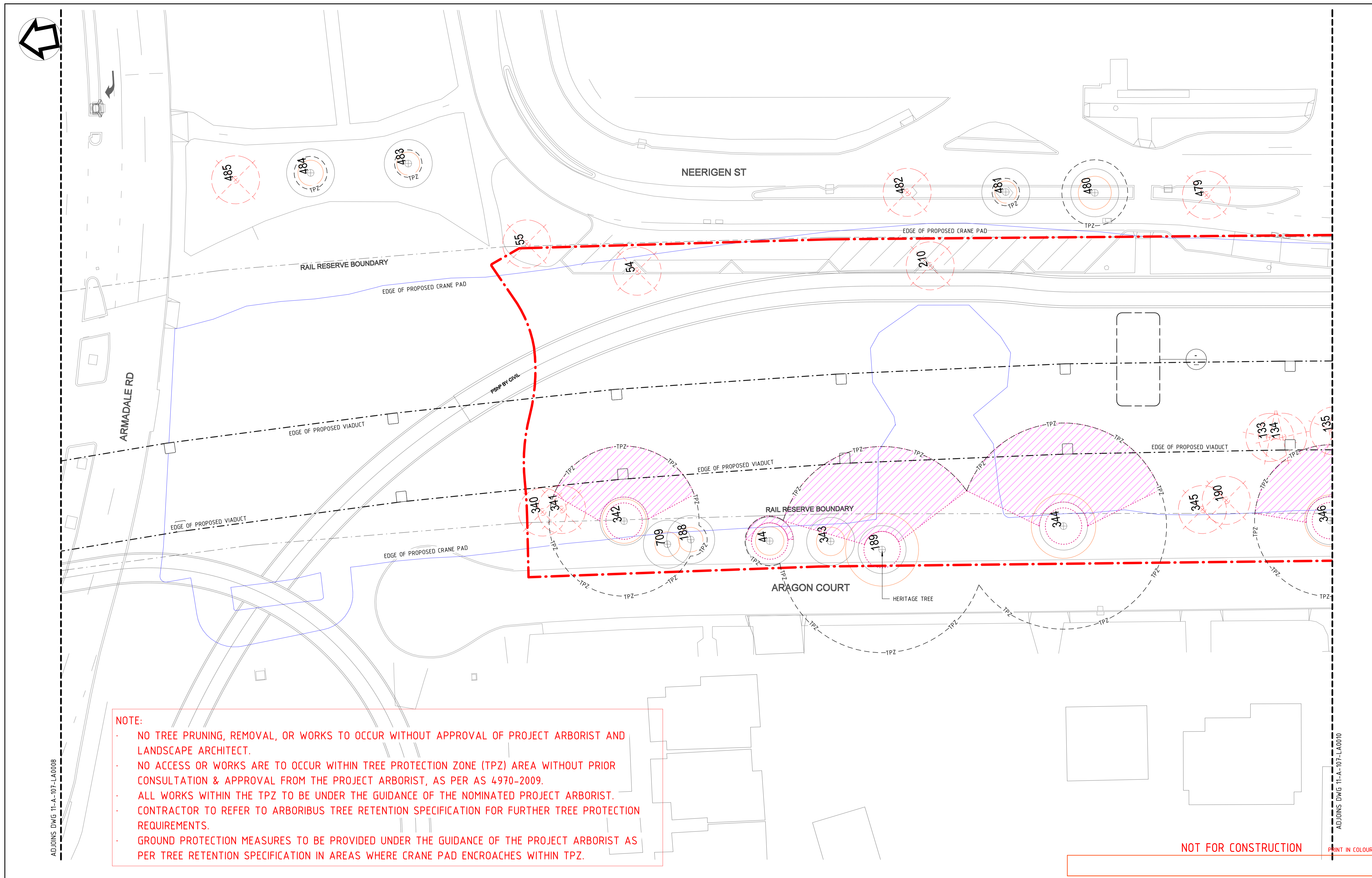
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DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

Government of Western Australia
Public Transport Authority

TREE RETENTION PLAN 02

PTA Drawing No: 11-A-107-LA0008

Rev: F



NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
- ALL WORKS WITHIN THE TPZ TO BE UNDER THE GUIDANCE OF THE NOMINATED PROJECT ARBORIST.
- CONTRACTOR TO REFER TO ARBORIBUS TREE RETENTION SPECIFICATION FOR FURTHER TREE PROTECTION REQUIREMENTS.
- GROUND PROTECTION MEASURES TO BE PROVIDED UNDER THE GUIDANCE OF THE PROJECT ARBORIST AS PER TREE RETENTION SPECIFICATION IN AREAS WHERE CRANE PAD ENCRACHES WITHIN TPZ.

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REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
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E	30.06.23	ISSUED FOR DEVELOPMENT APPLICATION	DF	PW	MH	AE
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C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
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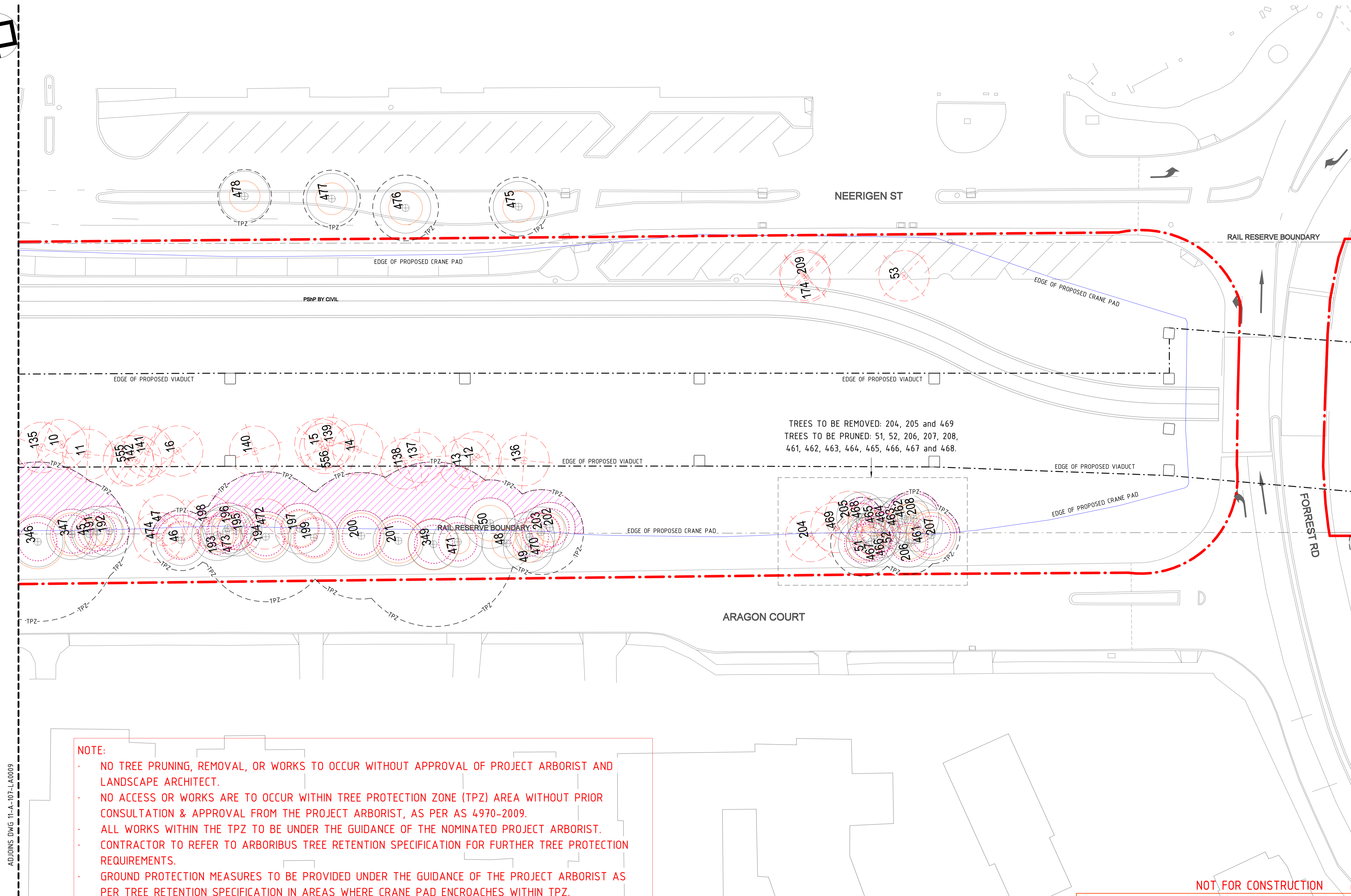
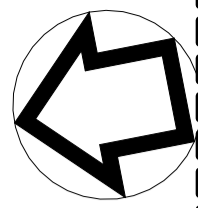
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	DATUM	DRAWN
	HORIZONTAL: PCG2020	P. Werner
	VERTICAL: AHD71	CHECKED
		M.Harris
		APPROVED
		A.Eyres
		DATE
		04.07.23

Government of Western Australia
Public Transport Authority

TREE RETENTION PLAN 03

PTA Drawing No: 11-A-107-LA0009

Rev: F



TREES TO BE REMOVED: 204, 205 and 469
 TREES TO BE PRUNED: 51, 52, 206, 207, 208,
 461, 462, 463, 464, 465, 466, 467 and 468.

NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
- ALL WORKS WITHIN THE TPZ TO BE UNDER THE GUIDANCE OF THE NOMINATED PROJECT ARBORIST.
- CONTRACTOR TO REFER TO ARBORIBUS TREE RETENTION SPECIFICATION FOR FURTHER TREE PROTECTION REQUIREMENTS.
- GROUND PROTECTION MEASURES TO BE PROVIDED UNDER THE GUIDANCE OF THE PROJECT ARBORIST AS PER TREE RETENTION SPECIFICATION IN AREAS WHERE CRANE PAD ENCRACHES WITHIN TPZ.

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E	30.06.23	ISSUED FOR DEVELOPMENT APPLICATION	DF	PW	MH	AE
D	26.06.23	ISSUED FOR COORDINATION	DF	PW	MH	AE
C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
A	05.08.22	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE

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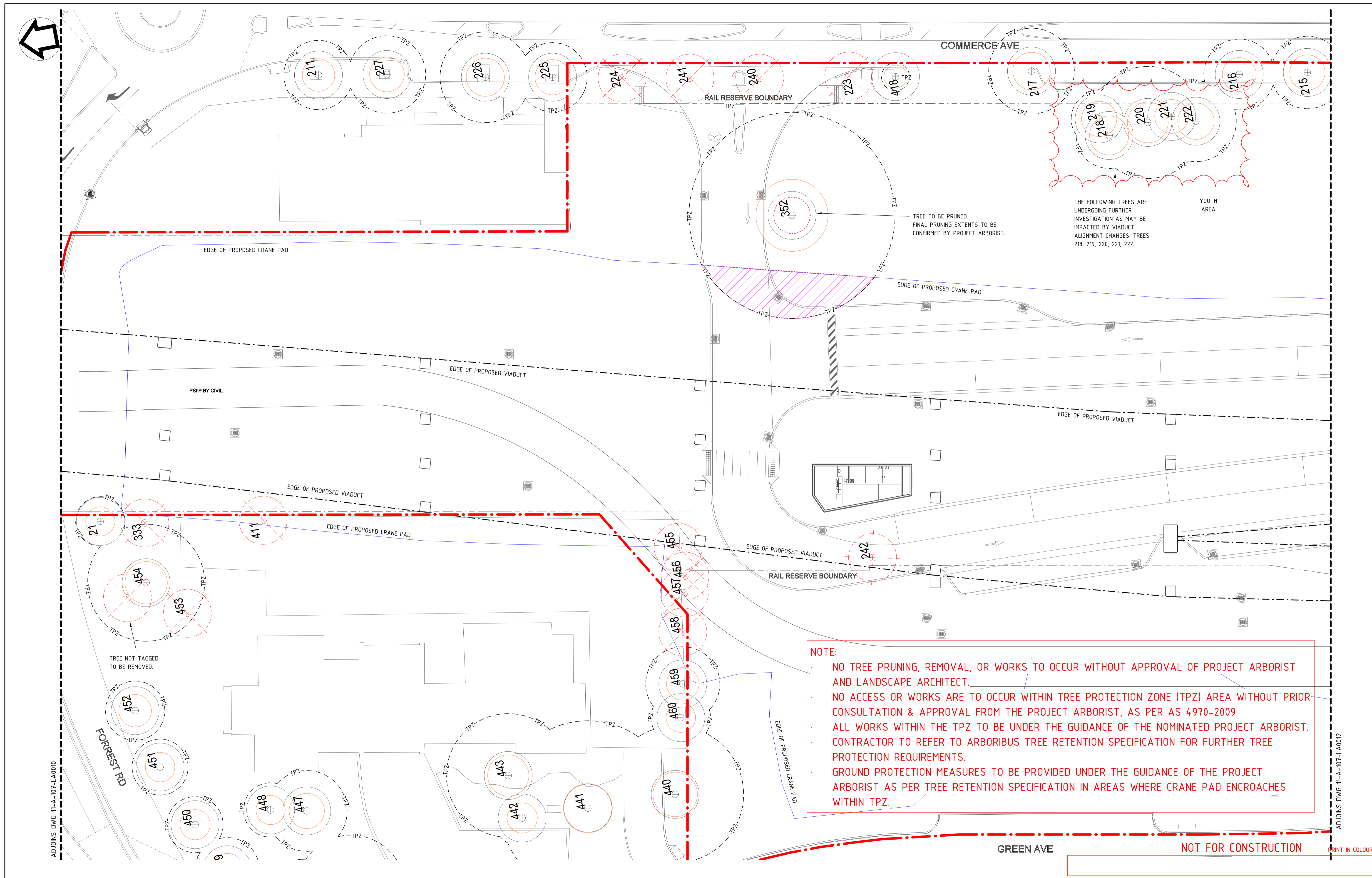
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DESIGNED	D.Firns
DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

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TREE RETENTION PLAN 04
 PTA Drawing No: 11-A-107-LA0010

Rev: F



NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
- ALL WORKS WITHIN THE TPZ TO BE UNDER THE GUIDANCE OF THE NOMINATED PROJECT ARBORIST. CONTRACTOR TO REFER TO ARBORIBUS TREE RETENTION SPECIFICATION FOR FURTHER TREE PROTECTION REQUIREMENTS.
- GROUND PROTECTION MEASURES TO BE PROVIDED UNDER THE GUIDANCE OF THE PROJECT ARBORIST AS PER TREE RETENTION SPECIFICATION IN AREAS WHERE CRANE PAD ENCLOSES WITHIN TPZ.

REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
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E	30.06.23	ISSUED FOR DEVELOPMENT APPLICATION	DF	PW	MH	AE
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C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
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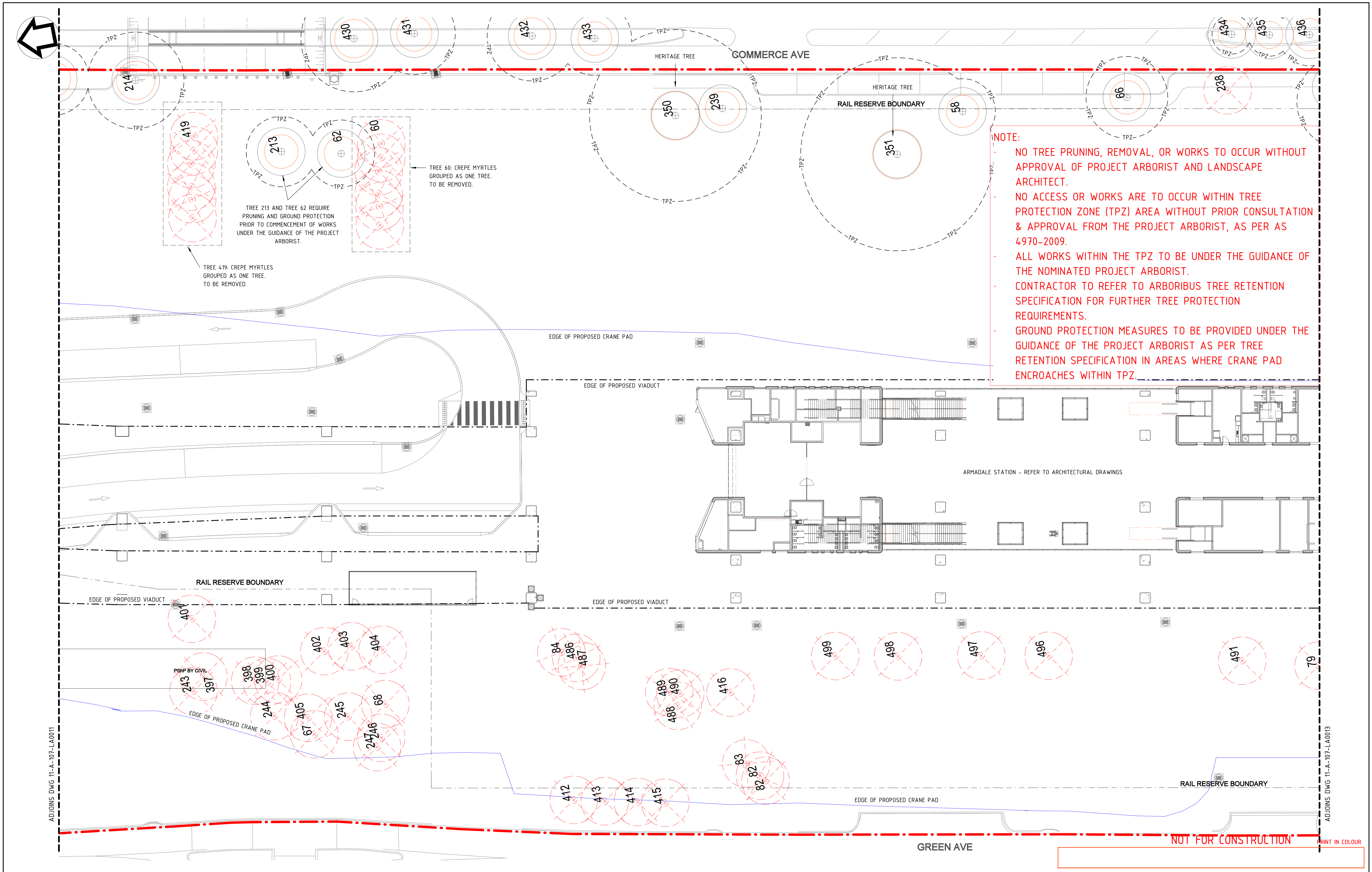
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	VERTICAL: AHD71	CHECKED
		M.Harris
		APPROVED
		A.Eyres
		DATE
		04.07.23

TREE RETENTION PLAN 05
PTA Drawing No: 11-A-107-LA0011 Rev: F



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D	26.06.23	ISSUED FOR COORDINATION	DF	PW	MH	AE
C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
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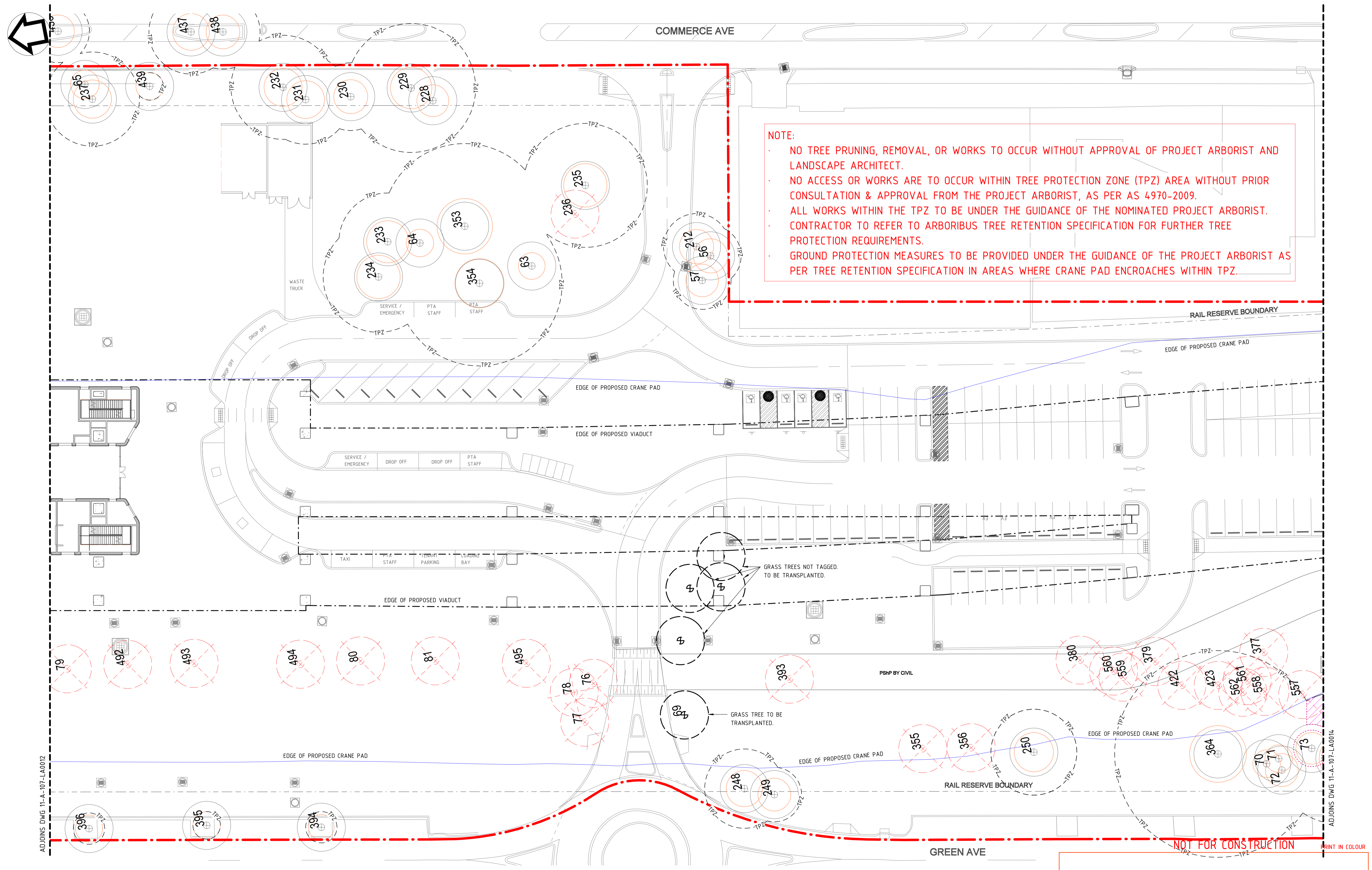
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	DATUM
	HORIZONTAL: PCG2020
	VERTICAL: AHD71

DESIGNED	D.Firns
DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

TREE RETENTION PLAN 06
 PTA Drawing No: 11-A-107-LA0012
 Rev: F



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D	26.06.23	ISSUED FOR COORDINATION	DF	PW	MH	AE
C	02.06.23	ISSUED FOR IDD - PTA REVIEW	DF	YD	MH	AE
B	10.02.23	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE
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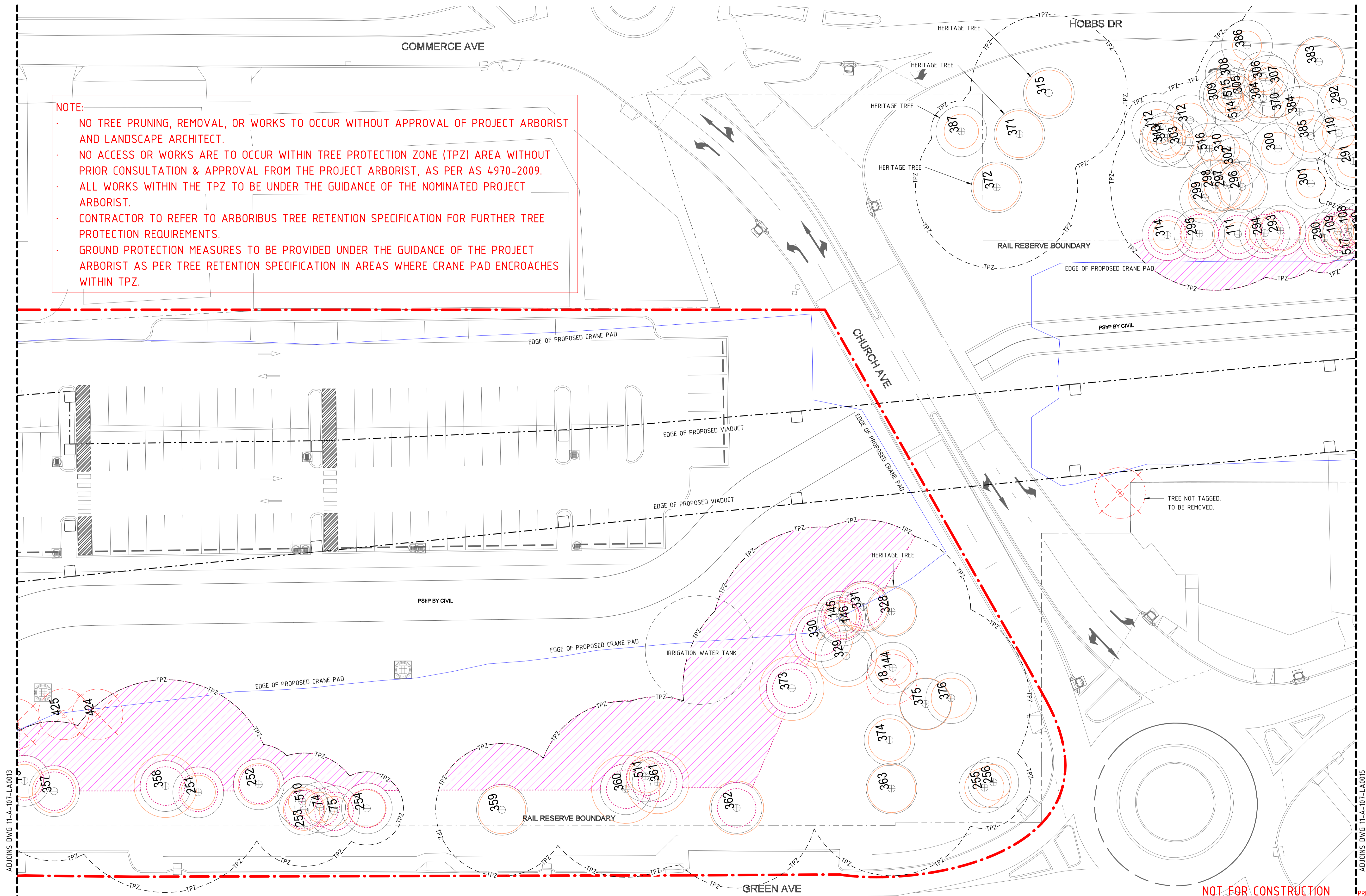
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DATUM	HORIZONTAL: PCG2020 VERTICAL: AHD71

DESIGNED	D.Firms
DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

TREE RETENTION PLAN 07
 PTA Drawing No: 11-A-107-LA0013
 Rev: F

NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
- ALL WORKS WITHIN THE TPZ TO BE UNDER THE GUIDANCE OF THE NOMINATED PROJECT ARBORIST.
- CONTRACTOR TO REFER TO ARBORIBUS TREE RETENTION SPECIFICATION FOR FURTHER TREE PROTECTION REQUIREMENTS.
- GROUND PROTECTION MEASURES TO BE PROVIDED UNDER THE GUIDANCE OF THE PROJECT ARBORIST AS PER TREE RETENTION SPECIFICATION IN AREAS WHERE CRANE PAD ENCLOSES WITHIN TPZ.



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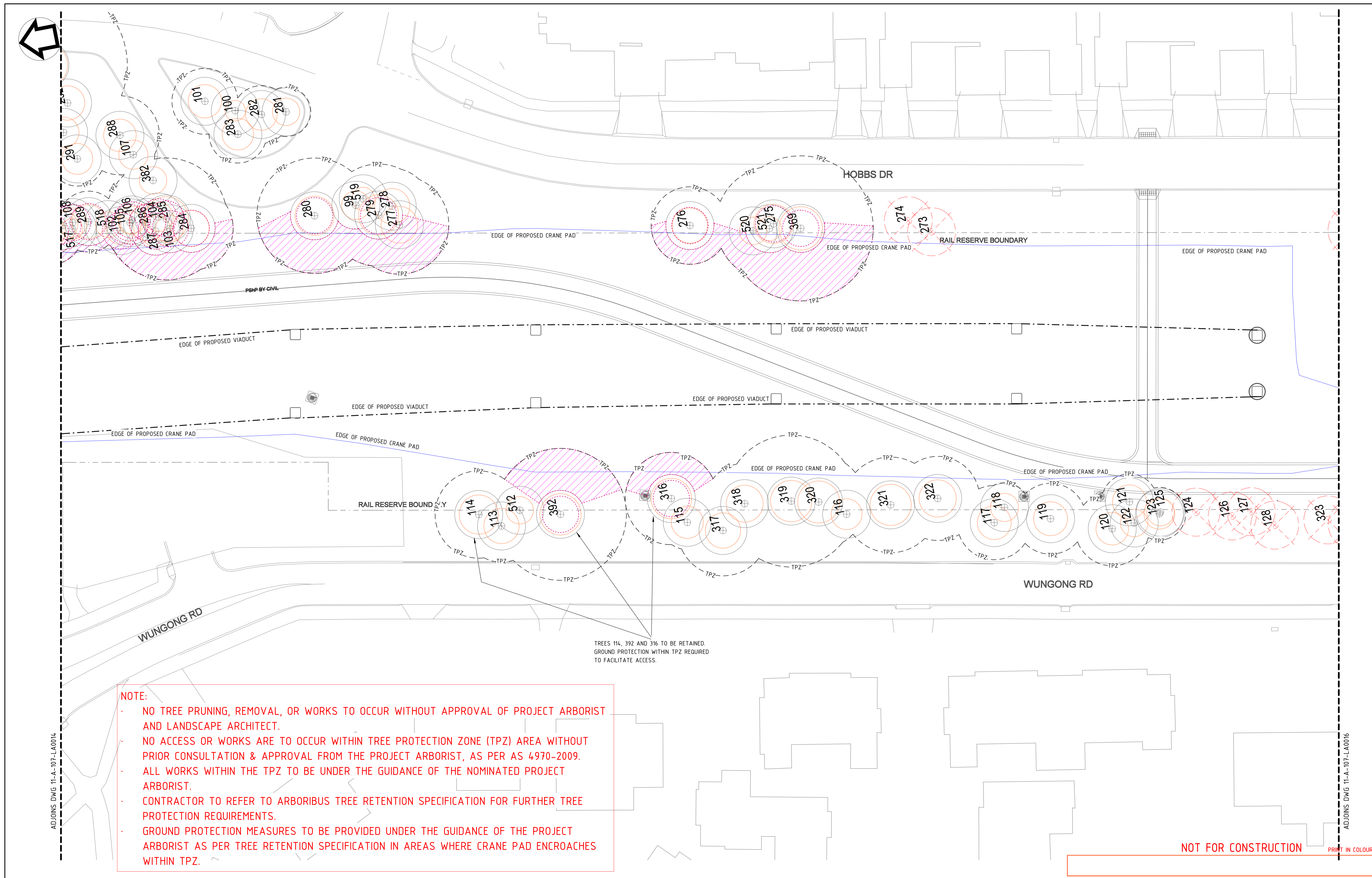
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DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

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TREE RETENTION PLAN 08

PTA Drawing No: 11-A-107-LA0014

Rev: F



NOTE:

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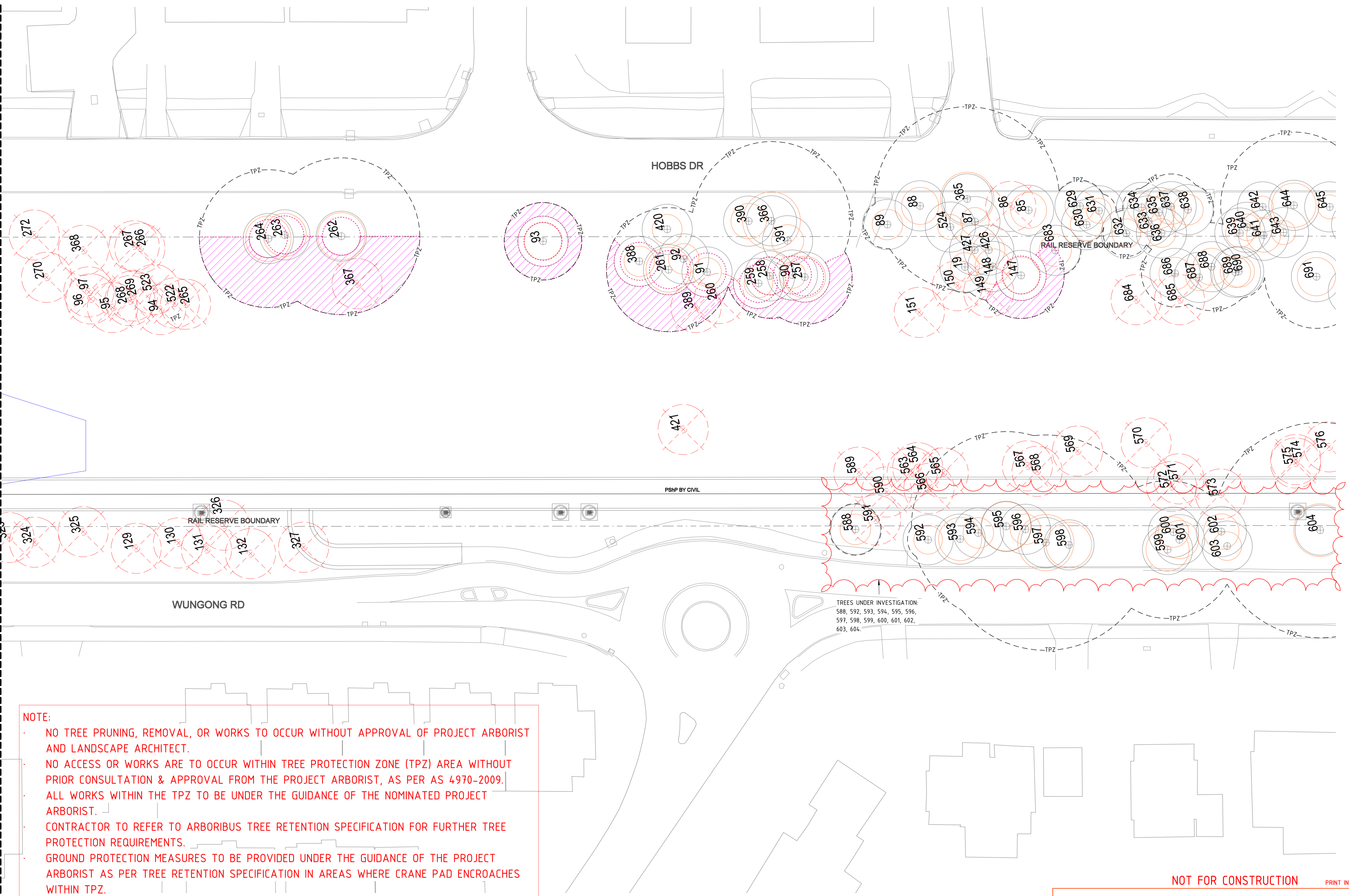
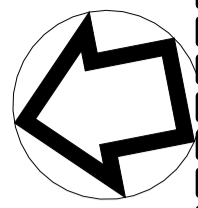
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	DATUM	DRAWN
	HORIZONTAL: PCG2020	P. Werner
	VERTICAL: AHD71	CHECKED
		M.Harris
		APPROVED
		A.Eyres
		DATE
		04.07.23

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Public Transport Authority

TREE RETENTION PLAN 09
 PTA Drawing No: 11-A-107-LA0015
 Rev: F



NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
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A	05.08.22	ISSUED FOR RD - PTA REVIEW	DF	YD	MH	AE

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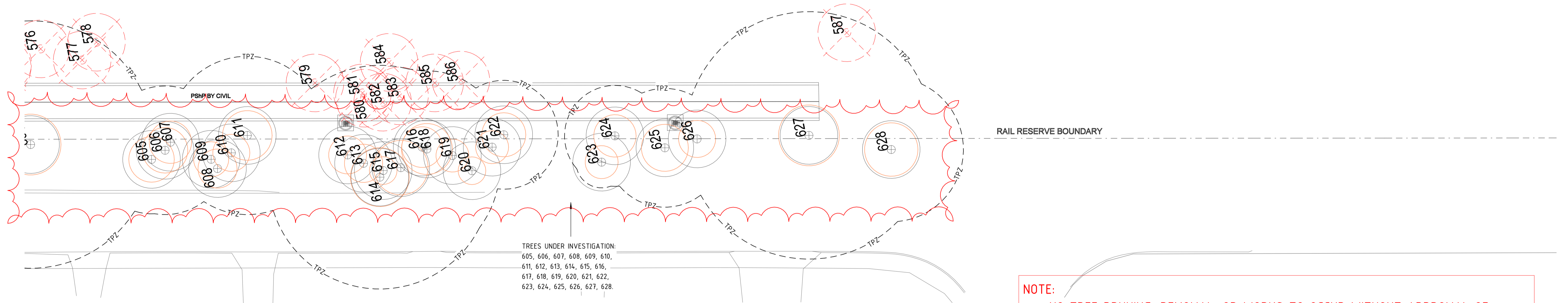
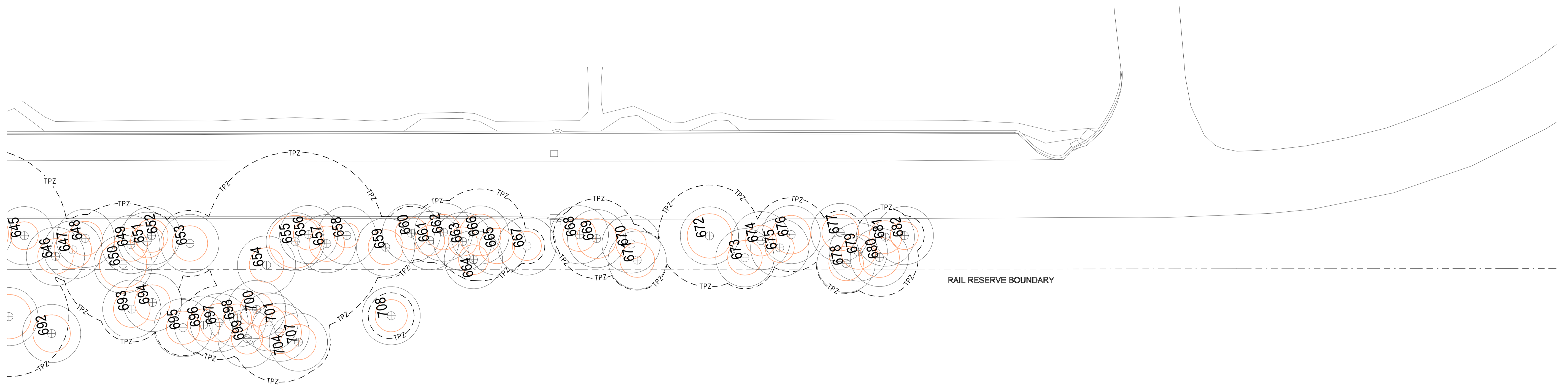
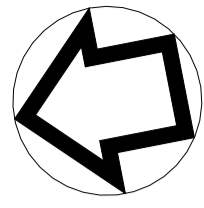
DESIGNED	D.Firns
DRAWN	P. Werner
CHECKED	M.Harris
APPROVED	A.Eyres
DATE	04.07.23

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TREE RETENTION PLAN 10

PTA Drawing No: 11-A-107-LA0016

Rev: F



NOTE:

- NO TREE PRUNING, REMOVAL, OR WORKS TO OCCUR WITHOUT APPROVAL OF PROJECT ARBORIST AND LANDSCAPE ARCHITECT.
- NO ACCESS OR WORKS ARE TO OCCUR WITHIN TREE PROTECTION ZONE (TPZ) AREA WITHOUT PRIOR CONSULTATION & APPROVAL FROM THE PROJECT ARBORIST, AS PER AS 4970-2009.
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REFERENCES	SCALE 1 : 250	DESIGNED Designer
	DATUM HORIZONTAL: PCG2020 VERTICAL: AHD71	DRAWN P. Werner
		CHECKED Checker
		APPROVED Approver
		DATE 04.07.23

TREE RETENTION PLAN 11
PTA Drawing No: 11-A-107-LA0017
Rev: F

12.2 Appendix 02 – Tree Retention Specification



ARBORIBUS

CONSULTING

ARMADALE PRECINCT & VIADUCT EXTENTS TREE RETENTION SPECIFICATION (FINAL)

PREPARED FOR:
UDLA ON BEHALF OF THE PUBLIC TRANSPORT AUTHORITY
OF WESTERN AUSTRALIA PTA200142

PREPARED BY:
LUKE LUMBUS
ARBORICULTURAL CONSULTANT
E: LUKE@ARBORIBUS.COM.AU – M: 0406 396 778
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DATE ISSUED: JUNE 2023

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1 BACKGROUND TO THIS TREE RETENTION SPECIFICATION

1.1 PURPOSE OF THIS SPECIFICATION

- The following Tree Retention Specification has been developed for The Armadale Precinct & Viaduct Extents, in keeping with the procedures identified in Australian Standard AS 4970 'Protection of Trees on Development Sites' 2009 and; industry best practice.
- Tree location, project specific numbering, Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) radii are identified in UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023.

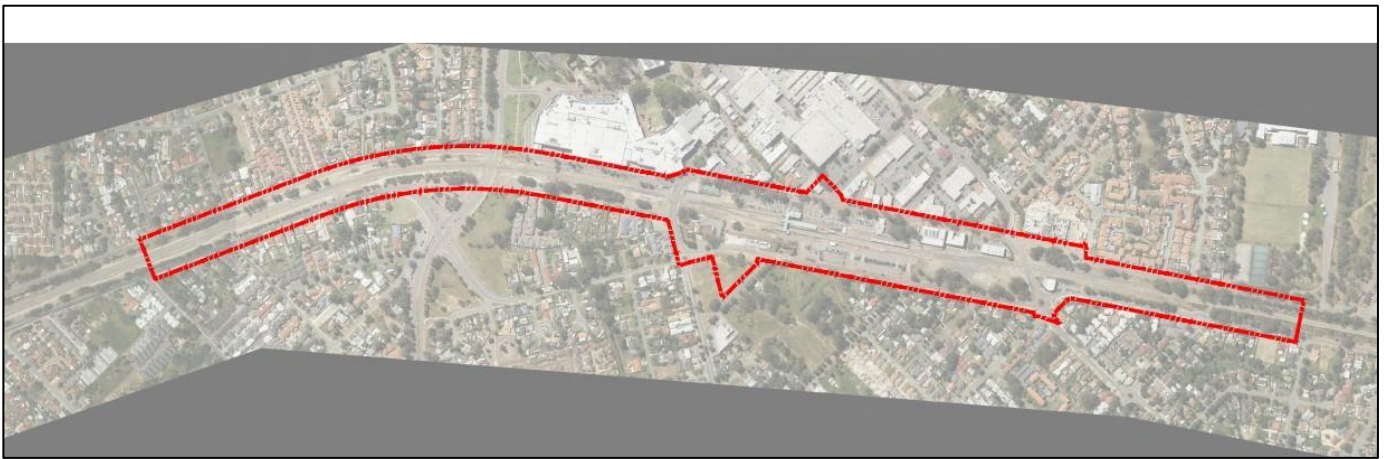


Figure 1. Aerial Image showing Extent of Works - Image Source: UDLA 2023

1.2 ARBORICULTURAL REPORTING DEVELOPED FOR THE ARMADALE STATION PRECINCT

- Arboricultural reporting developed for the project by Arboribus Consulting include:
 - Arboribus Consulting 'Preliminary Arboricultural Comment Proposed Armadale Bus Terminal' Prepared for UDLA - Prepared by Luke Lumbus 23 June 2022.
 - Arboribus Consulting 'R30-UDL-RPT-LA-230-00004 Armadale Station Precinct Visual Tree Assessment and Preliminary Report' Prepared for UDLA - Prepared by Luke Lumbus 27 September 2022.
 - Arboribus Consulting 'Armadale Station Precinct - Tree Retention Specification (FINAL) - June 2023 (This document)
 - Arboribus Consulting 'Armadale Station Precinct - Tree Pruning Specification (FINAL) - June 2023
 - Arboribus Consulting 'Armadale Station Precinct - Tree Removal Specification (FINAL) - June 2023
 - Arboribus Consulting 'Armadale Station Precinct - Visual Tree Assessment and Preliminary Report- September 2022.
- Tree pruning, removal and retention drawing plans have been developed for the project by UDLA that include:

- UDLA 'Tree Retention Strategy' May 2023
- UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023

1.3 LIMITATIONS OF THIS TREE RETENTION SPECIFICATION

- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Any alterations, modification or additions to this Tree Removal Specification, shall be specified by the nominated AQF Level 5 Arborist; approved prior by Arboribus Consulting and shall be formally documented as part of ongoing Arboricultural compliance reporting for the project.

2 IMPORTANT PROJECT INFORMATION

2.1 TREE PROTECTION NOTES AND TPZ DELINEATIONS FOR INCLUSION INTO PROJECT DRAWINGS

- To inform all contractors, subcontractors and/or project persons regarding trees to be retained and their tree protection requirements, all project specific drawings and plans shall be updated to include:
 - Project specific tree identification numbering
 - Accurate Tree Protection Zone (TPZ) & Structural Root Zone (SRZ) radii
 - Refer Arboribus Consulting 'Armada Station Precinct - Visual Tree Assessment Table of Results June 2023 & UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023
- Specific Tree Protection reference notes shall be included on all project specific drawings and plans that state the following:
 - 'Trees identified for retention shall be retained and preserved as outlined in Arboribus Consulting's June 2023 Tree Retention Specification'
 - 'No access or works shall be permitted within the specified TPZs without prior approval of the nominated AQF Level 5 Arborist'

2.2 MINIMUM QUALIFICATIONS FOR THE NOMINATED AQF LEVEL 5 ARBORIST

- For the tree preservation requirements associated with the Armadale Precinct & Viaduct Extents construction, an AQF Level 5 Arborist with experience in tree preservation projects, shall be engaged and implement this Tree Retention Specification.
- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Arboricultural compliance reporting shall be in keeping with the procedures identified in AS 4970 'Protection of Trees on Development Sites' 2009 and industry best practice.
- Any alterations, modification or additions to this Tree Retention Specification, shall be specified by the nominated AQF Level 5 Arborist; approved prior by Arboribus Consulting and shall be formally documented as part of ongoing Arboricultural compliance reporting for the project.

2.3 CONTRACTOR'S ALLOWANCE (\$) FOR TREE PROTECTION OBLIGATIONS

- Contractors shall ensure that sufficient allowance has been factored into their budget submissions for ongoing compliance with all items specified within this Tree Retention Specification (expressed or implied) including (but not limited to):
 - Arboricultural approvals (and supervision where identified by the Project Arborist) for works within Tree Protection Zones (TPZ's)

- Formal applications and approvals from the City of Armadale (as and where required for City assets)
- Regular Arboricultural reporting and correspondence
- Supply, installation and maintenance of TPZ fencing and signage
- Root sensitive excavations within TPZs
- Any canopy or root protective measures specified for trees identified for retention
- Any canopy and root pruning specified for trees identified for retention
- Monthly application(s) of supplementary irrigation, wetting agent and organic drenches within TPZs
- Ongoing application(s) of Mulch within TPZs
- Shoring and stabilisation measures within or near TPZs and/or
- Any other works that occur near or within the specified Tree Protection Zones specified for the site.

3 INTRODUCTION TO TREE PROTECTION ZONES (TPZ)

3.1 GENERAL TREE PROTECTION ZONE (TPZ) INFORMATION

- Tree Protection Zones (TPZ) have been specified for this construction (refer Arboribus Consulting 'Armada Station Precinct – Visual Tree Assessment Table of Results June 2023 & UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023).
- The calculated TPZ includes both the above ground and below ground parts of the tree.
- Any works proposed to occur within the TPZ shall be in accordance with this Tree Retention Specification and will require assessment & approval from the nominated AQF level 5 Arborist prior to commencement.
- Modification of the design and/or construction materials and/or methodologies may be necessary to allow the proposed works to proceed within or near TPZs.
- **Special Note:** Modifications to the shape of the TPZs or; significant encroachments into the TPZs may be achievable however; shall be subject to prior approval of the nominated AQF level 5 Arborist and may require detailed root investigations and consequence of impacts that may be imposed as a result of specific activities.
- Ongoing Arboricultural review of methodologies and works within the TPZs shall be carried out by the nominated AQF level 5 Arborist for the duration of the development and/or construction works.

3.2 WORKING NEAR AND WITHIN TREE PROTECTIONS ZONES

- Access shall be restricted within the specified Tree Protection Zones (TPZ).
- The TPZ shall be kept free from construction materials, placement of fill, storage of vehicles and machinery etc...
- Access into the TPZ may be necessary as part of the proposed construction of the Armadale Station Precinct however, this shall require review and prior approval from the nominated AQF level 5 Arborist and; shall be undertaken in accordance with this Tree Retention Specification.
- When required, further tree sensitive methodologies and approaches shall be recommended by the nominated AQF level 5 Arborist and measures implemented to ensure that tree health and inground stability remain sustainable.
- **Special Note:** Modifications to the shape of the TPZs or; significant encroachments into the TPZs may be achievable however; shall be subject to prior approval of the nominated AQF level 5 Arborist and may require detailed root investigations and consequence of impacts that may be imposed as a result of specific activities.

3.2.1 RESTRICTED ACTIVITIES WITHIN TPZS

- Any works without prior approval of the AQF Level 5 Project Arborist
- Unauthorised access into the fenced TPZ areas

- Unauthorised pruning of branches or roots.
- Parking, fuelling, tracking, or storage of vehicles or machinery of any kind
- Unauthorised mechanical excavation, trenching or unapproved works of any kind
- Unauthorised modification of existing grade (i.e., raising or lowering of soil levels)
- Storage of construction materials, fuels, or phytotoxic chemicals etc...
- Unauthorised placement of site facilities or waste disposal bins
- Unauthorised stockpiling of soil, spoil or any construction debris
- Cleaning or washing of tools, equipment and vehicles
- Disposal of liquid waste including paint and concrete and/or any wash outs etc..

3.3 TPZ INFORMATION TO BE INCLUDED INTO CONTRACTOR SITE INDUCTIONS

- This Tree Retention Specification is to form part of contractor inductions for the project.
- All contractors, subcontractors and/or persons engaged for the proposed construction of the Armadale Precinct & Viaduct Extents, shall be made aware that prior approval shall be sought from the nominated AQF level 5 Arborist for access into the fenced TPZs and that their works and methodologies shall be modified & monitored in accordance with this Tree Retention Specification and as directed by the nominated AQF level 5 Arborist.
- All contractors, subcontractors and/or persons engaged for the proposed construction of the Armadale Station Precinct, shall be informed that penalties may be imposed for TPZ breaches & non-compliance and/or avoidable damages caused to the trees identified for retention.

3.4 CITY OF ARMADALE AUTHORISATION & APPROVALS

- The nominated contractors shall be aware that works to any City of Armadale (CoA) street tree or works within any CoA trees TPZ delineations, shall require formal approval obtained from the City of Armadale Parks and Landscape department prior to commencement of works.
- All tree works approved by the City of Armadale Parks and Landscape department shall be approved prior by the nominated AQF level 5 Arborist and be undertaken in accordance with the following documentation:
 - *Arboribus Tree Retention Specification (this document)*
 - *Arboribus Tree Removal Specification*
 - *Arboribus Tree Pruning Specification*
 - *Australian Standards AS 4373 & AS 4970*
- When requested, the CoA reserves the right to inspect any works being undertaken to council trees during the works phase.
- Works shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

3.5 DAMAGE TO TREES SPECIFIED FOR RETENTION (RECOVERABLE COSTS)

- Any damage and/or impact that occurs to above and/or below ground parts of the trees identified for retention resulting from failing to comply with the *Tree Retention Specification*, shall be reported to the nominated AQF level 5 Arborist and MetConnx Environmental Manager immediately and advice sought regarding the level of remedial intervention required and; how to proceed.
- Any specified remediation measures shall be implemented in a timely fashion by the nominated pruning contractor, to the satisfaction of the nominated AQF level 5 Arborist and MetConnx Environmental Manager.
- Any damage and/or impacts shall be documented by the nominated AQF 5 Project Arborist as part of ongoing Arboricultural compliance reporting for the project.
- Where damage/impact is not able to be remediated to an acceptable level, replacement of the tree is to be undertaken at the expense of the nominated pruning contractor. Costs to be borne by the contractor include (but may not be limited to):
 - Calculated Amenity Value (\$AUD) as specified by CoA
 - Removal of remaining tree parts and stump
 - Remediation of the area;
 - Supply and install of
 - like for like or
 - 6: 1 ratio replacement of 100 litre bag stock of approved species or
 - Mature Tree Transplant (at CoA approval) and
 - All associated installations, establishment, irrigation, monitoring etc costs.

3.6 UNFORESEEN CIRCUMSTANCES

- Where unforeseen situations arise during works that have the potential to impact Tree Protection Zones and/or trees specified for retention, the contractor is to advise the nominated AQF level 5 Project Arborist, make the area safe and continue working elsewhere until a response on how to proceed is provided by the Project Team.
- The nominated AQF level 5 Arborist is to advise UDLA/Arboribus (in collaboration with the MetConnx Environmental Manager) of the matter and communicate the response from the Project Team on how to proceed.

4 TREE RETENTION SPECIFICATION

4.1 PRIOR TO COMMENCEMENT OF WORKS

4.1.1 TREES IDENTIFIED FOR REMOVAL

- Refer Arboribus Consulting 'Armada Station Precinct - Tree Removal Specification (FINAL) – June 2023 & UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023 for project specifics.

4.1.2 CANOPY PRUNING

- Refer Arboribus Consulting 'Armada Station Precinct - Tree Pruning Specification (FINAL) – June 2023 & UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023 for project specifics.

4.1.3 TREES IDENTIFIED FOR RELOCATION

- Trees identified for relocation shall be undertaken by suitably experienced Arborists with a minimum qualification AQF level 3 in Arboriculture.
- No access into TPZs of the trees identified for retention is permitted for heavy machinery or vehicles.
- Relocation of identified trees shall be undertaken such that no damage occurs to the canopies and/or root systems of the trees identified for retention.
- Once relocated, ongoing monitoring, maintenance and irrigation of the tree(s) will be required by the nominated relocation contractor.
- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

4.1.4 ESTABLISH TREE PROTECTION ZONES (TPZ) WITHIN THE SITE

- Tree Protection Zones (TPZ) have been specified for this construction - refer Arboribus Consulting 'Armada Station Precinct - Visual Tree Assessment Table of Results June 2023 & UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023 for detail.
- Site works shall not commence until TPZ fencing has been installed by the nominated contractors, subcontractors and/or project persons engaged and; the TPZ installation approved and documented by the nominated AQF level 5 Arborist.
- TPZs for the trees identified for retention shall be accurately marked out on site utilising the TPZ measurements specified within UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023.
- All TPZs shall be identified at their perimeter via 1.8-meter chain wire fencing panels (refer figure 2 for detail).

- **Note:** TPZ Fencing may be substituted for agreed alternative(s) however is subject to prior approval from the nominated AQF level 5 Arborist in collaboration with the Project Manager/Project team.

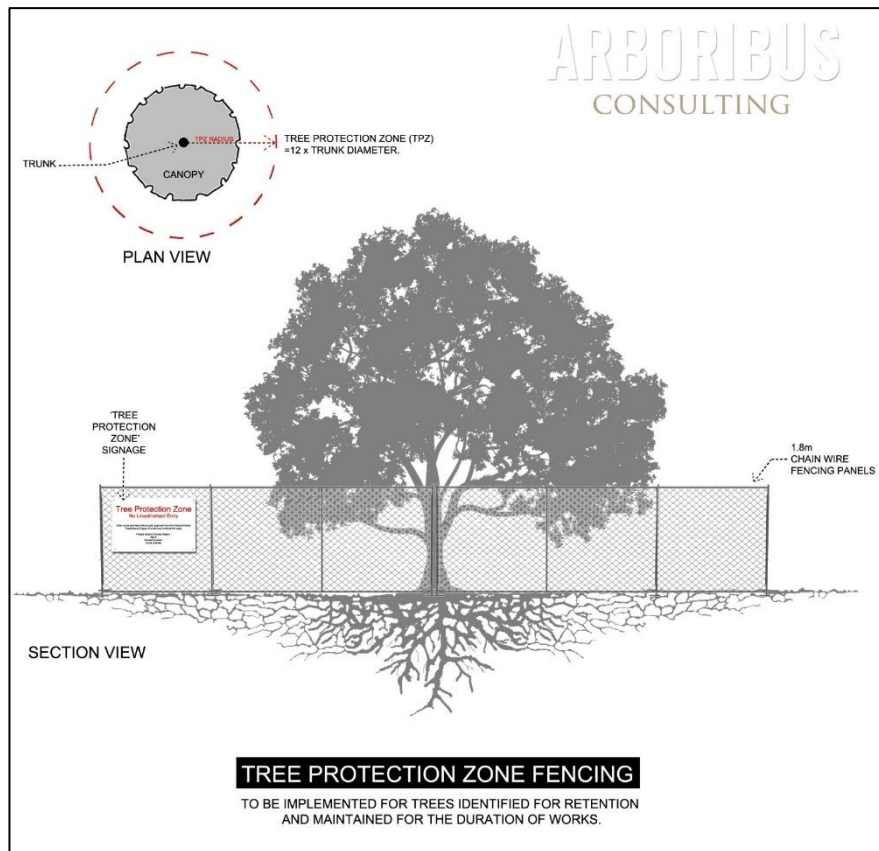


Figure 2. Example of AS4970 TPZ fencing requirements. Image source Arboribus Consulting 2022 as depicted in AS4970 2009

- TPZ Fencing is to have signage installed that identifies the TPZ as a protected area and that no access is permitted without prior approval from the nominated AQF level 5 Arborist. TPZ signs are to clearly display the Nominated AQF level 5 Arborist name, mobile number and email address (refer figure 3 below for example TPZ signage).



Figure 3. Example of TPZ Signage. Image source Arboribus Consulting 2022

- TPZ signage shall be securely fixed to the TPZ fencing at 10 meter intervals and be visible within the construction site.
- **Special Note:** *Modifications to the shape of the TPZs or; significant encroachments into the TPZs may be achievable however; shall be subject to prior approval of the nominated AQF level 5 Arborist and may require detailed root investigations and consequence of impacts that may be imposed as a result of specific activities.*
- TPZ fencing & signage is to remain for the duration of the construction phase. Maintenance and general upkeep of the fencing & signage shall be the responsibility of the nominated contractors, subcontractors and/or project persons engaged.
- Any alteration or modification of the fencing shall be approved prior by the nominated AQF level 5 Arborist and shall be documented as part of ongoing Arboricultural compliance reporting for the project.

4.1.5 MULCHING OF TREE PROTECTION ZONES

- Decomposed, organic, large grade woodchip mulch shall be installed at depths between 50 mm – 75 mm within TPZs of trees identified for retention.
- Mulch recommended for the project is C-wise product 'Forest Mulch and Forest Feeding Mulch' or equivalent approved by the AQF Level 5 Arborist.
- Installation of mulch shall be undertaken by hand tools or via slinger or blower truck from beyond the TPZs and spread by hand tools.
- Installation of mulch shall not be permitted via mechanical means (i.e. bobcat, excavator etc) within TPZs.
- The nominated AQF level 5 Arborist shall review mulch levels and specify if and where reapplication may be required during construction.
- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

4.1.6 IDENTIFY SITE ACCESS, EGRESS AND LAYDOWN AREAS

- Access and egress points and laydown areas (site offices, storage of materials, vehicular parking etc) for the site shall avoid TPZs.
- Where this is unattainable or impractical, ground protection shall be installed prior (refer para. 4.2.5 *Protective measures within TPZ* for detail) and any services associated with offices or amenities shall be installed above ground or; shall be installed below ground via non-destructive methods (i.e. industrial soil vacuum truck) as directed by the nominated AQF level 5 Arborist.
- Modification to the locations of site access and egress and laydown areas shall be minimised to limit unnecessary impact to the soil profile and root systems within TPZs of the retained trees.

- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

4.2 PROJECT COMMENCEMENT

4.2.1 HOLD POINTS - ARBORICULTURAL APPROVAL FOR WORKS WITHIN TPZS

- Any works proposed within TPZs of trees identified for retention shall be approved prior by the nominated AQF level 5 Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Hold points shall be released by the nominated AQF level 5 Project Arborist (in collaboration with MetConnx Environmental Manager).
- It is the responsibility of the contractors to advise the nominated AQF level 5 Arborist of any tree related issues (damage to or; unforeseen circumstance that may affect the retained trees) that arise as part of their works.

4.2.2 IRRIGATION, WETTING AGENTS & ORGANIC DRENCH DURING CONSTRUCTION

- Delivery of irrigation may be via temporary (above ground) irrigation system, water truck (from beyond the TPZs) or hand watered.
- Potable water shall be used for irrigation purposes. Where this isn't possible or practical, routine analytical testing of bore water samples shall be required to ensure tree health isn't compromised.
- Supplementary irrigation shall be applied evenly over the TPZs at:
 - 1000 litres 1 x time per week for mature trees with trunk diameters equal to and greater than 500 mm - for the duration of the construction.
 - 500 litres per week for mature trees with trunk diameters less than 500 mm - for the duration of the construction.
- Liquid soil wetting agent & Organic Drench (i.e. Seasol or Bioprime Trace) shall be applied monthly to all TPZs at dilution rates as per manufactures specification.
- The nominated AQF level 5 Arborist is to review tree performance and specify if and where additional watering may be required during construction and/or during seasonal periods of drought.
- Irrigation and liquid applications shall be authenticated, documented and detailed by the nominated AQF level 5 Arborist as part of ongoing Arboricultural compliance reporting for the project.

4.2.3 DEMOLITION OF EXISTING FORMS & STRUCTURES

- Any demolition works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Positioning of machinery shall recognise the TPZ delineations to limit impacts to root systems and collision impacts to trunks and canopies.

- Types of machinery, working room and swing radius etc.. shall be considered to ensure damage is avoided to the retained trees. Demolition works may require the installation of protective measures prior to their commencement within TPZs – refer para. 4.2.5 *Protective Measures in TPZs* for further detail.
- Decommissioned below ground services may require to remain in situ where their removal may adversely impact TPZs or root systems of the trees identified for retention.
- Any canopy pruning required for demolition works shall be approved prior by the nominated AQF level 5 Arborist and; undertaken in keeping with the Australian Standard AS 4373 '*Pruning of Amenity Trees*' 2007.

4.2.4 EXCAVATIONS AND INSTALLATIONS WITHIN TPZS

- Any works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- No mechanical excavations shall be permitted within the TPZ.
- Below ground services that are proposed to be installed within the TPZ shall be redirected beyond the specified TPZ delineations. Where this unattainable, non-destructive installation methods (i.e., subterranean boring, micro tunnelling or industrial soil vacuum) shall be utilised.
- Any Take off and or tie in points and/or any infrastructure proposed to be installed within the TPZ shall be relocated beyond the specified TPZ delineations. Where this unattainable or not achievable, non-destructive methods (i.e. industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) are to be utilised to verify where root mass exists, and structures placed/positioned accordingly to retain roots and achieve a tree sensitive outcome.
- Any structures proposed to be installed within the TPZ shall be relocated beyond the specified TPZ delineations. Where this unattainable or not achievable, non-destructive methods (i.e. industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) are to be utilised to verify where root mass exists, and structures placed/positioned accordingly to retain roots and achieve a tree sensitive outcome.
- Modification of existing soil levels shall be avoided within TPZ areas. Where fill is being proposed within TPZs, washed and screened single grade gravel or aggregate with no fines shall be used (amount/levels subject to approval from the nominated AQF level 5 Arborist).
- Roots measuring over 30 mm in diameter shall be retained and protected and accommodated during works.
- Where approved by the AQF Level 5 Arborist, roots less than 30 mm in diameter shall be pruned appropriately (refer para. 4.2.6 *Root Pruning Approved by the nominated AQF Level 5 Arborist* for detail).
- Any exposed roots shall be wrapped or covered with hessian (or equivalent approved by the AQF Level 5 Arborist) and kept moist to prevent drying out until backfilling occurs.

- Types of machinery, working room and swing radius shall be considered to ensure damage is avoided to the retained trees.

4.2.5 PROTECTIVE MEASURES WITHIN TPZS

4.2.5.1 GROUND PROTECTION

- Any Ground protection to be installed within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Where approved, ground protection measures shall be installed within TPZs for:
 - Access for vehicles or machinery via BOGMAT, marine type plywood, rumble boards (or equivalent approved by the AQF Level 5 Arborist) installed on top of a 100 mm layer of mulch or washed aggregate prior to access.
 - Storage of soil or mulch via geotextile fabric (or equivalent approved by the AQF Level 5 Arborist) and installed prior to storage.
- Ground protection measures shall be checked on a regular basis by the nominated contractors, subcontractors and/or project persons engaged and; maintained in good order.

4.2.5.2 TRUNK PROTECTION

- Trunk protection measures to be installed shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Where approved, trunk protection measures shall be installed where approved vehicles or machinery are proposed to be working within swing radius or where collision impact may occur to the main stems of the trees.
- Trunk protective measures may include wooden battens fastened together with padding installed on the tree side (or equivalent approved by the AQF Level 5 Arborist) and fixed in a non-invasive tree sensitive manner (i.e. not nailed or screwed to the trunks).
- Trunk protection measures shall be checked on a regular basis by the nominated contractors, subcontractors and/or project persons engaged and; maintained in good order.

4.2.5.3 INSTALLATION OF SHORING OR GROUND STABILISATION MEASURES

- Any proposed Ground stabilisation or shoring to be installed within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

- Where excavations are proposed in close proximity to or may result in soil slippage within or immediately adjacent TPZs, installation of Box shoring, shutter boards, piling or utilisation of jet grouting (grout injection) may be necessary.
- Location and extent; types of stabilisation measures and; installation methodologies, shall be approved prior and installation supervised by the nominated AQF level 5 Arborist.

4.2.6 ROOT PRUNING APPROVED BY THE NOMINATED AQF LEVEL 5 PROJECT ARBORIST

- No mechanical excavations shall be permitted within the TPZ.
- Any excavations within TPZs shall be undertaken via non-destructive methods (i.e., industrial soil vacuum) and shall be prior approved by the nominated AQF level 5 Arborist.
- Roots measuring over 30 mm in diameter shall be retained and protected and accommodated during works. **Note:-** *Where this unattainable or impractical pruning of roots measuring over 30 mm in diameter shall be approved prior and pruning at the discretion of the nominated AQF level 5 Arborist.*
- Where approved by the AQF Level 5 Arborist, roots less than 30 mm in diameter shall be pruned appropriately. Any approved root pruning shall be carried out by the nominated contractors, subcontractors and/or project persons engaged under the guidance of the nominated AQF level 5 Arborist.
- Any pruning equipment (i.e., Secateurs, loppers or hand saws) shall be sharp and cleaned regularly with isopropyl alcohol to limit disease and pathogen spread.
- Any exposed roots shall be wrapped or covered with hessian (or equivalent approved by the AQF Level 5 Arborist) and kept moist to prevent drying out until backfilling occurs.
- Any root pruning to City assets shall require prior approval be obtained from the City of Armadale Parks and Landscape department.
- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

4.2.7 ADDITIONAL CANOPY PRUNING (IF REQUIRED)

- If required, any further canopy pruning beyond what has been specified within the *Tree Pruning Specification & UDLA Drawings 'Tree Retention, Removal and Pruning Plan'* shall necessitate formal approval be obtained from the nominated AQF level 5 Arborist (in collaboration with the Project team) prior to commencement.
- Any additional canopy pruning to city assets shall require formal approval be obtained from the City of Armadale Parks and Landscape department.
- All canopy pruning works shall be undertaken in keeping with Australian Standard AS 4373 '*Pruning of Amenity Trees*' 2007 and carried out by suitably qualified and experienced AQF 3 Arborists under the guidance of the nominated AQF level 5 Arborist.

4.2.8 HARD LANDSCAPING

- No mechanical excavations shall be permitted within the TPZ.
- All hard landscaping methodologies and materials proposed to occur within TPZs shall be prior approved by the nominated AQF level 5 Arborist.
- Any hard landscaping installations proposed within TPZs shall be undertaken via non-destructive methods (i.e., industrial soil vacuum) and shall be prior approved by the nominated AQF level 5 Arborist.
- Roots measuring over 30 mm in diameter shall be retained and protected. Location of footings or structures shall be adjusted to avoid roots greater than 30 mm in diameter.
- Where approved by the AQF Level 5 Arborist, roots less than 30 mm in diameter shall be pruned appropriately. Any approved root pruning shall be carried out by the nominated contractors, subcontractors and/or project persons engaged under the guidance of the nominated AQF level 5 Arborist (refer para. 4.2.6 *Root Pruning Approved by the Nominated AQF Level 5 Arborist* for detail).
- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

4.2.9 SOFT LANDSCAPING (PLANTING & IRRIGATION)

- No mechanical excavations shall be permitted within the TPZ.
- Any tree stock proposed for planting into the project, shall be grown in accordance with the processes identified in the Australian Standards AS 2303 '*Tree Stock for Landscape Use*' 2015 and planted in accordance with industry best practice.
- Planting of vegetation within TPZs shall be undertaken such that roots measuring over 30 mm in diameter be retained and protected. Planting hole location shall be adjusted to avoid roots greater than 30 mm in diameter.
- Where approved by the AQF Level 5 Arborist, roots less than 30 mm in diameter shall be pruned appropriately. Any approved root pruning shall be carried out by the nominated contractors, subcontractors and/or project persons engaged under the guidance of the nominated AQF level 5 Arborist (refer para. 4.2.6 *Root Pruning Approved by the Nominated AQF Level 5 Arborist* for detail).
- Irrigation (and all associated infrastructure) proposed within TPZs shall be undertaken via non-destructive methods (i.e., industrial soil vacuum) and shall be prior approved and supervised by the nominated AQF level 5 Arborist. Alignments and locations of infrastructure shall be adjusted to avoid roots over 30 mm in diameter. Roots less than 30 mm in diameter shall be pruned appropriately (refer para. 4.2.6 *Root Pruning Approved by the Nominated AQF Level 5 Arborist* for detail).
- Any tree works and/or works within TPZs shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised,

photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

4.2.10 TPZ COMPLIANCE REPORTING

- Ongoing Arboricultural monitoring and compliance reporting shall be undertaken by the nominated AQF level 5 Arborist as part of the Tree Protection obligations for the project. Monthly summary reporting to include TPZ compliance checklist to detail (but may not be limited to) the following items:
 - General health and structural condition of the individual tree(s)
 - Tree protection fencing in place and in working order
 - TPZ signage attached at 10 meter intervals and in working order
 - Photographic images
 - Details of any works approved within the TPZs by the nominated AQF Level 5 Arborist (including dates, details of works, images and ongoing recommendations)
 - Temporary Irrigation installed/operational (or alternate delivery method)
 - Soil moisture status
 - Mulch Status
 - Trunk protection in place and in working order
 - Ground protection in place and in working order
 - Evidence of modification to tree protection fencing
 - Evidence of tree damage
 - Evidence of unauthorised machinery movements, foot traffic or work within identified TPZ.
- TPZ Compliance reporting shall be submitted to Arboribus Consulting for review and comment on a monthly basis.

4.3 PROJECT COMPLETION

4.3.1 FINAL ARBORICULTURAL REPORT

- Final reporting shall be developed by the nominated AQF level 5 Arborist that documents:
 - Approved (or otherwise) TPZ encroachments and/or modification of TPZ delineations for the project.
 - The health and structural condition of the trees post completion of the project.
 - Reinspection timeframes, remediation required, and/or other matters specific to the individual tree and project.
 - Final sign off report shall be submitted to Arboribus Consulting for review and comment.

5 REFERENCES AND READING

- Arboribus Consulting '*Preliminary Arboricultural Comment Proposed Armadale Bus Terminal*' Prepared for UDLA- Prepared by Luke Lumbus 23 June 2022.
- Arboribus Consulting '*R30-UDL-RPT-LA-230-00004 Armadale Station Precinct Visual Tree Assessment and Preliminary Report*' Prepared for UDLA- Prepared by Luke Lumbus 27 September 2022.
- Arboribus Consulting '*Armadale Station Precinct - Tree Retention Specification (FINAL)*' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- Arboribus Consulting '*Armadale Station Precinct - Tree Pruning Specification (FINAL)*' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- Arboribus Consulting '*Armadale Station Precinct - Tree Removal Specification (FINAL)*' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- *Public Transport Authority of Western Australia, 2021, 'Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works, 8 April 2022 (BRE - PTAWA-PM-RPT-00004)*
- Standards Australia, 2007, Australian Standard AS 4373: *Pruning of amenity trees*, Standards Australia, Sydney, Australia
- Standards Australia, 2009, Australian Standard AS 4970: *Protection of Trees on Development Sites*, Standards Australia, Sydney, Australia
- Standards Australia, 2015, Australian Standard AS 2303: *Tree Stock for Landscape Use*, Standards Australia, Sydney, Australia
- UDLA Drawing Package '*Tree Retention, Removal and Pruning Plan*' May 2023
- UDLA '*Tree Retention Strategy*' May 2023

If you have any queries or if I can be of further assistance, do not hesitate to contact me on 0406 396 778.

Regards,



Luke Lumbus

COMPANY AND CONSULTANTS DETAILS

Consultant Details:	Luke Lumbus – Consulting Arboriculturist & Director
Qualifications:	AQF 8 - Graduate Certificate in Arboriculture (Melbourne University) AQF 5 - Diploma in Arboriculture – (Challenger TAFE, Western Australia) International Society of Arboriculture (ISA) Certified Arborist - AU 0014A Quantified Tree Risk Assessment (QTRA) User Number 1935
Company Trading Name:	Arboribus Pty Ltd
Established:	October 2021
Australian Business Number:	82 653 281 782
Australian Company Number:	653 281 782
Contact Number:	0406 396 778
Email Address:	luke@arboribus.com.au
Website:	www.arboribus.com.au
Insurance:	Public Liability Insurance \$20 Million (QBE Insurance Australia) Professional Indemnity \$5 Million (Dual Australia)

DISCLAIMER

- The Consultant is trained, qualified and competent in their field of expertise and will employ their knowledge, training, and skill to provide informed comments and recommendations. However, the Client acknowledges there may be latent conditions and factors the Consultant cannot reasonably determine from a visual inspection. Unless otherwise agreed with the Client and documented in the Report, the Consultant's inspection will be conducted visually and so will not determine any latent conditions hidden within the tree or below the ground level.

- The Client hereby acknowledges that the information contained in this report is intended to provide preliminary guidance and recommendations for how to manage and protect the tree(s) that are the subject of this report, however, given the nature of the subject matter, trees as living organisms are subjected to many varied and dynamic factors.

This report does not attempt to predict or anticipate potential future failure(s) of the subject tree(s) and/or its above and/or below ground parts – failure of trees and their parts can be influenced by numerous factors including (but not be limited to):

- Age
- Health and Structural status of both above and/or below ground component(s)
- Recent, historic or prolonged impacts to root(s)
- Sudden or unapproved alterations to the trees growing environ(s)
- Storm events, high winds, persistent heat and/or other severe climatic events
- Standard and quality of previous works undertaken.

This report and the advice within it cannot and shall not be construed as a guarantee the subject trees will not at some point deteriorate further and/or not survive.

- Where recommendations or advice have been provided, and the Client (or approved third party) does not adhere to such recommendations this shall be deemed to be an act or omission of the Client and the Client shall indemnify the Consultant for any damage, injury or loss that may occur as a result. It is the client's responsibility to organise any required re-inspections at the intervals specified.
- The Client warrants that it has disclosed all complete and accurate information in relation to the trees that are the subject of this report and the like and the Client hereby indemnifies and holds the Consultant harmless from any costs, losses or damage resulting in any way from matters not disclosed by the Client.
- The Client must acknowledge that it is their responsibility, prior to any work being conducted in connection with the Report, to obtain all necessary approvals in relation to carrying out the work that may be recommended by this report, including without limitation: approval from any local council, local or state government agency, or other authorised body, landlord, neighbour or any other persons or body corporate with legislative, regulatory or other interest over the trees or land that is the subject of this report.
- Arboribus shall not be required to attend court or provide evidence regarding this report unless predetermined provisions are agreed to between Arboribus and the Client, including additional payment of fees for such services.
- This report is confidential and for the exclusive use by the client for whom it was prepared. This report shall not be modified, reissued, printed, or distributed partially and/ or in its entirety without the formal permission provided by Arboribus Pty Ltd. Any unauthorised modification of this report invalidates the entire report. © Arboribus Consulting 2023. All Rights Reserved.

12.3 Appendix 03 – Tree Pruning Specification



ARBORIBUS

CONSULTING

ARMADALE PRECINCT & VIADUCT EXTENTS TREE PRUNING SPECIFICATION (FINAL)

PREPARED FOR:

UDLA ON BEHALF OF THE PUBLIC TRANSPORT AUTHORITY
OF WESTERN AUSTRALIA PTA200142

PREPARED BY:

LUKE LUMBUS

ARBORICULTURAL CONSULTANT

E: LUKE@ARBORIBUS.COM.AU – M: 0406 396 778

WWW.ARBORIBUS.COM.AU

DATE ISSUED: JUNE 2023

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1 INTRODUCTION

1.1 PURPOSE OF THIS SPECIFICATION

- This Tree Pruning Specification has been developed for The Armadale Precinct & Viaduct Extents, in keeping with AS 4373 'Pruning of Amenity Trees' 2007, industry best practice and; provides direction for the nominated tree pruning contractor when undertaking the specified canopy pruning works for the project – refer figure 1 for detail.

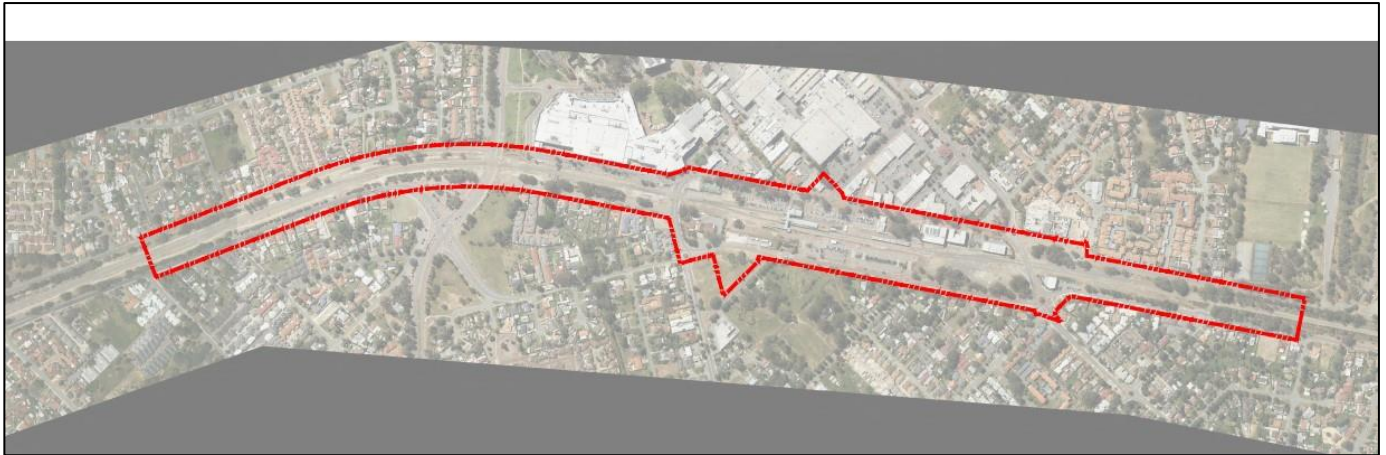


Figure 1. Aerial Image showing Extent of Works - Image Source: UDLA 2023

1.2 LIMITATIONS OF THIS TREE PRUNING SPECIFICATION

- Works shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Any alterations, modification or additions to this Tree Pruning Specification, shall be specified by the nominated AQF Level 5 Arborist; approved prior by Arboribus Consulting and shall be formally documented as part of ongoing Arboricultural compliance reporting for the project.

2 OVERVIEW - ESSENTIAL PROJECT DOCUMENTATION

2.1 KEY ARBORICULTURAL DOCUMENTATION

- This Tree Pruning Specification has been developed for The Armadale Precinct & Viaduct Extents and references the following documents:
 - Australian Standard AS 4373: *Pruning of Amenity Trees* 2007
 - Australian Standard AS 4970: *Protection of Trees on Development Sites* 2009
 - SWTC *Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works*
 - UDLA *'Tree Retention Strategy'* May 2023
 - UDLA *Drawings 'Tree Retention, Removal and Pruning Plan'* May 2023
 - Arboribus Consulting *'Armadale Station Precinct - Tree Retention Specification (FINAL) - June 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Tree Removal Specification (FINAL) - June 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Visual Tree Assessment and Preliminary Report-* September 2022.

- This Tree Pruning Specification shall be read in conjunction with the following reporting developed for the Armadale Precinct works:
 - UDLA *Drawings 'Tree Retention, Removal and Pruning Plan'* May 2023
 - Arboribus Consulting *'Armadale Station Precinct - Tree Retention Specification (FINAL) - June 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Tree Removal Specification (FINAL) - June 2023.*

2.2 ACKNOWLEDGEMENT OF DOCUMENTS BY THE NOMINATED CONTRACTOR

- Prior to the commencement of any tree works on site, the nominated Tree Pruning contractor is to read, acknowledge and fully understand this specification; the "*UDLA Tree Retention, Removal and Pruning Plan'*" and Arboribus Consulting *'Armadale Station Precinct - Tree Retention Specification - June 2023* and; all staff working on the project are to confirm by signing the below.
- The Nominated Tree pruning Contractor shall retain copies of all tree specific specifications and the UDLA Plan at all times whilst undertaking any tree works within the Armadale Station Precinct project.

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

DATE _____

3 ESSENTIAL CONTRACTOR REQUIREMENTS

3.1 PROJECT REQUIREMENTS

3.1.1 MINIMUM QUALIFICATIONS

- For the tree pruning requirements associated with the Armadale Precinct & Viaduct Extents construction, only competent Arborists with a minimum AQF Level 3 in Arboriculture (or international equivalent) along with all other tickets or licences required, shall undertake the specified tree pruning works.
- Substitution of staff for any part of the Tree works is to be formally requested and must advise and confirm the individuals name, years of experience, photographic image and qualifications for approval prior by UDLA/Arboribus (in collaboration with MetConnx) to that staff member commencing work.

3.1.2 EQUIPMENT & MACHINERY

- The nominated contractor is to supply all appropriate/necessary equipment and machinery that is maintained fit for purpose and required for all canopy pruning works identified for the project.

3.1.3 HORTICULTURAL HYGIENE

- The nominated contractor is to ensure all pruning equipment and machinery be appropriately sanitised, disinfected and cleaned prior to entering site and; be disinfected in an ongoing basis during works to ensure good horticultural hygiene is maintained such that any potential pest and/or disease(s) encountered do not further contaminate other areas within the extent of works.
- Any pruning equipment (i.e., Chainsaws, Secateurs and/ or hand saws) shall be sharp and disinfected regularly with isopropyl alcohol to limit pest, disease and pathogen spread.
- Sanitation methods are to be specified by the Nominated Contractor within JSA and/or SWMSs and the methodology approved by UDLA/Arboribus.
- Any identification (positive, suspected or otherwise) of Polyphagous shot-hole borer (PSHB) within the works area is to be reported to the nominated AQF Level 5 Arborist, MetConnx Environmental Manager and; the Department of Primary Industries and Regional Development (DPIRD) via the pest reporter app or email padis@dpird.wa.gov.au. The contractor is to make the works area safe, disinfect all equipment and continue working in other areas until a response on how to proceed is provided.
- Any identification (positive, suspected or otherwise) of *Quambalaria coyrecup* (Marri Canker) within the works area is to be reported to the nominated AQF Level 5 Arborist & MetConnx Environmental Manager. The contractor is to make the works area safe, disinfect all equipment and continue working in other areas until a response on how to proceed is provided.

- Any material that is removed from a tree suspected of being contaminated must be disposed of in an appropriate manner (i.e. landfill) and not utilised for any other purpose.

3.2 CITY OF ARMADALE AUTHORISATION & APPROVALS

- The nominated contractors shall be aware that works to any City of Armadale (CoA) street tree or works within any CoA trees TPZ delineations, shall require formal approval obtained from the City of Armadale Parks and Landscape department prior to commencement of works.
- All tree works approved by the City of Armadale Parks and Landscape department shall be approved prior by the nominated AQF level 5 Arborist and be undertaken in accordance with the following documentation:
 - *Arboribus Tree Retention Specification*
 - *Arboribus Tree Removal Specification*
 - *Arboribus Tree Pruning Specification (this document)*
 - *Australian Standards AS 4373 & AS 4970*
- When requested, the CoA reserves the right to inspect any works being undertaken to council trees during the works phase.
- Works shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

3.3 CANOPY PRUNING METHODOLOGIES & APPROVALS BY UDLA & ARBORIBUS

- Work methodologies for the proposed canopy pruning process shall be submitted to UDLA/Arboribus for approval prior to commencement of works.
- Methodologies are to clearly reference the documentation stated in 2.1 of this specification and; all other requirements stipulated within this canopy pruning specification.

3.4 HOLD POINTS

- The nominated contractors shall be aware that Hold Points have been specified for all Tree works identified for the project. Hold points shall be released by the nominated AQF level 5 Project Arborist (in collaboration with MetConnx Environmental Manager).
- Any works proposed within TPZs and/or any canopy pruning works shall be approved prior by the nominated AQF level 5 Project Arborist (in collaboration with MetConnx Environmental Manager).
- Hold points have been specified for the commencement and upon completion for:
 - Any works within specified TPZs of trees identified for retention.
 - In proximity to and/or where any works are specified to the CoA Heritage Trees (Tag Numbers 189, 328, 315, 371, 372, 387, 350, 351 & 352) and;
 - At the commencement of any works within the following areas as specified by MetCONNx:

- Area 2 (Church) Arborist Works (P6 17/07)
 - Area 1 (Station) Arborist Works
 - Area 5 (North Armadale Rd) Arborist Works
 - Area 4 (Aragon Ct) Arborist Works
 - Area 3 (Fire Station) Arborist Works
 - And/or any other zones and/or areas specified for canopy pruning works to be undertaken as part of the Armadale Precinct & Viaduct Extents.
- It is the responsibility of the nominated tree pruning contractors to advise the nominated AQF level 5 Project Arborist of any tree related issues (damage to or; unforeseen circumstance that may affect the retained trees) that arise as part of their works.

3.5 DAMAGE TO TREES SPECIFIED FOR RETENTION (RECOVERABLE COSTS)

- Any damage and/or impact that occurs to above and/or below ground parts of the trees identified for retention resulting from failing to comply with the *Tree Retention Specification*, shall be reported to the nominated AQF level 5 Arborist and MetConnx Environmental Manager immediately and; advice sought regarding the level of remedial intervention required and; how to proceed.
- Any specified remediation measures shall be implemented in a timely fashion by the nominated pruning contractor, under the supervision of and; to the satisfaction of the nominated AQF level 5 Project Arborist and MetConnx Environmental Manager.
- Any damage and/or impacts shall be documented by the nominated AQF 5 Project Arborist as part of ongoing Arboricultural compliance reporting for the project.
- Where damage/impact is not able to be remediated to an acceptable level, replacement of the tree is to be undertaken at the expense of the nominated pruning contractor. Costs to be borne by the contractor include (but may not be limited to):
 - Calculated Amenity Value (\$AUD) as specified by CoA
 - Removal of remaining tree parts and stump
 - Remediation of the area;
 - Supply and install of
 - like for like or
 - 6: 1 ratio replacement of 100 litre bag stock of approved species or
 - Mature Tree Transplant (at CoA approval) and
 - All associated installations, establishment, irrigation, monitoring etc costs.

3.6 UNFORESEEN CIRCUMSTANCES

- Where unforeseen situations arise during canopy pruning works that have the potential to impact Tree Protection Zones and/or trees specified for retention, the nominated contractor is to advise the nominated AQF level 5 Project Arborist, make the area safe and continue working elsewhere until a response on how to proceed is provided by the Project Team.

- The nominated AQF level 5 Project Arborist is to advise UDLA/Arboribus (in collaboration with the MetConnx Environmental Manager) of the matter and communicate the response from the Project Team on how to proceed.

3.7 SALVAGING & REUSE OF HOLLOWES, BRUSH AND MULCH

- Any appropriate hollows, brush, arisings, branches, seeds, nuts and Woodchips etc are to be reused/repurposed as and where required.
- Please refer the following documents and contacts for further detail
 - *SWTC Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works*
 - Landcare Shire of Serpentine Jarrahdale
 - Kaarakin Black Cockatoo Conservation Centre
 - UDLA/Arboribus/ MetCONNX Project Team.

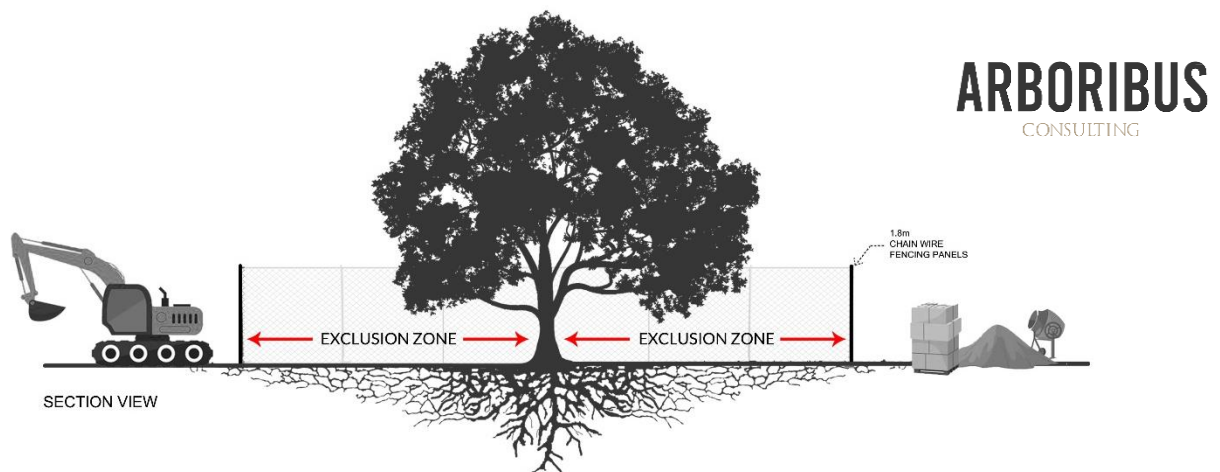
4 TREE PROTECTION ZONES (TPZ)

4.1 TREE PROTECTION ZONE DELINEATIONS & WORKS NEAR OR WITHIN TPZS

- The nominated tree pruning contractor shall acknowledge that:
 - Trees identified for retention in 'UDLA Tree Retention, Removal and Pruning Plan' are to be protected in accordance with Arboribus Consulting's June 2023 *Tree Retention Specification* and
 - That no access or works shall be permitted within the specified TPZs without prior approval of the nominated AQF Level 5 Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- The nominated contractor shall acknowledge that penalties have been specified for non-compliance and/or avoidable damages caused to any trees identified for retention (refer 3.5 for further detail).

4.1.1 RESTRICTED ACTIVITIES WITHIN TPZS – REFER FIGURE 2

- Any works without prior approval of the AQF Level 5 Project Arborist
- Unauthorised access into the fenced TPZ areas
- Unauthorised pruning of branches or roots.
- Parking, fuelling, tracking, or storage of vehicles or machinery of any kind
- Unauthorised mechanical excavation, trenching or unapproved works of any kind
- Unauthorised modification of existing grade (i.e., raising or lowering of soil levels)
- Storage of construction materials, fuels, or phytotoxic chemicals etc...
- Unauthorised placement of site facilities or waste disposal bins
- Unauthorised stockpiling of soil, spoil or any construction debris
- Cleaning or washing of tools, equipment and vehicles
- Disposal of liquid waste including paint and concrete and/or any wash outs etc..



NO ACCESS OR WORKS SHALL BE PERMITTED WITHIN THE SPECIFIED TPZS WITHOUT PRIOR APPROVAL OF AND; UNDER THE SUPERVISION OF THE NOMINATED AQF LEVEL 5 ARBORIST.

Figure 2. Graphic Image showing Exclusion Zones within the TPZs Image Source: Arboribus Consulting 2023

5 CANOPY PRUNING WORKS SPECIFICATION

5.1 BACKGROUND

- All Trees identified for pruning have been specified in 'UDLA Tree Retention, Removal and Pruning Plan' May 2023 (refer figure 3 below).

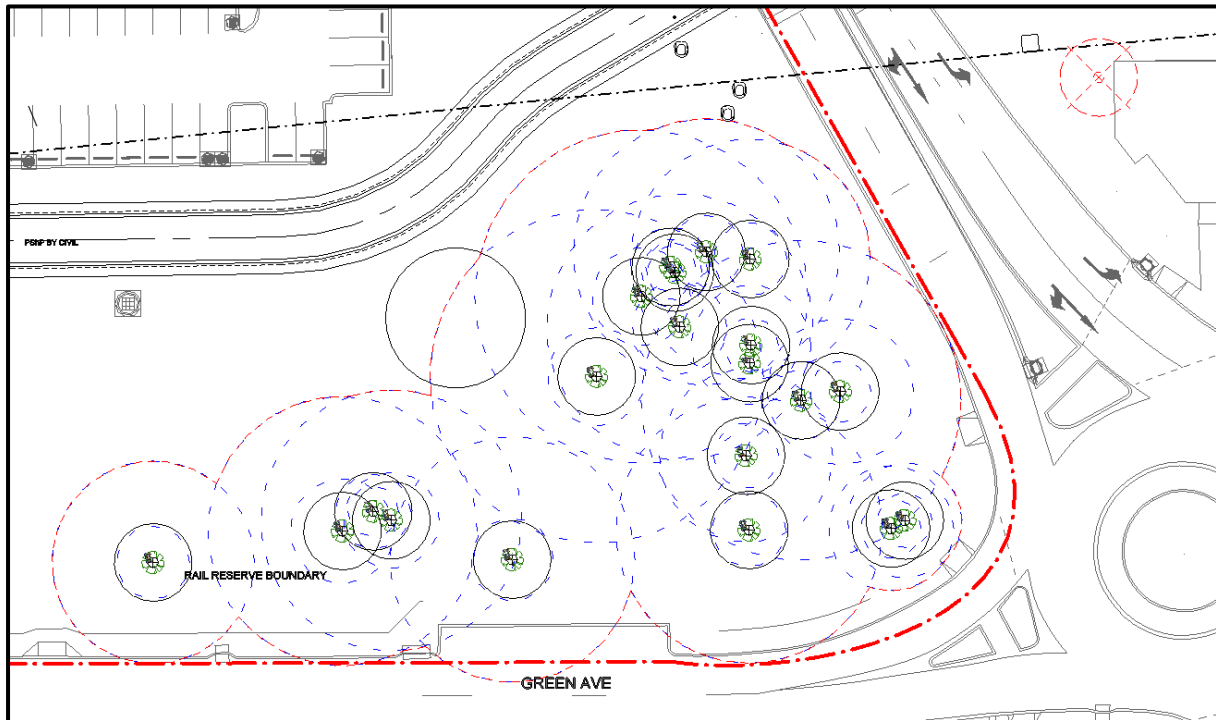


Figure 3. Image showing sample of 'UDLA Tree Retention, Removal and Pruning Plan' May 2023 Image Source: UDLA

- All Trees identified for retention or removal for the Armadale Station Precinct construction, have round, individually numbered tree tags installed approx. 1.5 meters from ground level (where possible) on main stems - refer figure 4 below. Where trees have Tags missing or vandalised, no works are to proceed to the tree and the contractor is to continue working in other areas until a response on how to proceed is provided from UDLA & Arboribus (in collaboration with the MetConnx Environmental Manager).
- No further trees shall be pruned without prior approval from UDLA/Arboribus (in collaboration with the MetConnx Environmental Manager).



Figure 4. Image showing metal tree tag and numbering of the identified trees installed approx. 1.5 meters from ground level where possible

5.2 DESIRED OUTCOMES



Figure 5. Image showing pegged pruning alignments at Aragon Ct as specified by MetCONNx and estimated pruning alignment (red dashed line) for construction purposes.

- Selective canopy pruning is required adjacent the proposed works areas to improve clearances for construction purposes and permanent works footprint (only). These pruning works will allow greater retention of trees adjacent to the works area whilst allowing construction of the viaduct structure to proceed with limited impact or conflict with the neighbouring canopies during construction works.
- Agreed pruning alignments shall be pegged out on site by MetCONNx prior to the commencement of works (refer Figure 5 for detail).
- The nominated canopy pruning contractor is to undertake all works:
 - As specified within
 - UDLA Drawings 'Tree Retention, Removal and Pruning Plan' May 2023 &
 - Arboribus Consulting 'Armada Station Precinct - Tree Retention Specification - June 2023
 - In keeping with Australian Standard AS 4373: *Pruning of Amenity Trees* 2007;
 - With the prior approval from the nominated AQF level 5 Project Arborist.

5.3 CANOPY PRUNING WORKS

5.3.1 TREE PROTECTION ZONES (TPZ) & WORKS COMPLIANCE

- All trees to be pruned shall be clearly communicated on the UDLA Tree Retention works and be approved prior at a tool box meeting between the nominated tree pruning contractor, the nominated AQF level 5 Arborist, City of Armadale, MetCONNx and UDLA/Arboribus.
- Where identified by the Project Arborist, canopy pruning works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- TPZ fencing & signage is to remain for the duration of the Tree Works phase. Any alteration or modification of the fencing shall be approved prior by the nominated AQF level 5 Arborist (in

collaboration with the MetConnx Environmental Manager) and shall be documented as part of ongoing Arboricultural compliance reporting for the project.

- No access into TPZs of the trees identified for retention is permitted for any machinery or vehicles. Where required and approved by the nominated AQF level 5 Arborist, vehicular access into TPZs shall require the installation of ground protective measures within TPZs prior to commencement – refer *June 2023 Tree Retention Specification* for further detail.
- Types of machinery, working room and swing radius etc.. shall be considered to ensure damage is avoided to the trees specified for retention.
- Positioning of machinery shall recognise the TPZ delineations to avoid any impacts to root systems and collision impacts to trunks and canopies.

5.3.2 SELECTIVE CANOPY PRUNING (ADJACENT PROPOSED WORKS AREAS)

- Only competent Arborists with a minimum AQF Level 3 in Arboriculture (or international equivalent) along with all other tickets or licences required shall undertake the specified tree pruning works. All works shall be in keeping with Australian Standard AS 4373: *Pruning of Amenity Trees 2007*; under the guidance of the nominated AQF level 5 Arborist and in keeping with the Tree Retention Plan.
- Canopy Pruning works are to be undertaken such that (as far as reasonably practical) no damage shall occur to the Above Ground parts (trunk, canopies, branches, limbs etc) and/or Below Ground parts (root crown, root system etc) of other trees identified for retention.
 - Where specified and prior approved by the nominated AQF level 5 Arborist, the installation of trunk and/or ground protective measures within TPZs shall occur to limit any impacts identified for retention refer *June 2023 Tree Retention Specification* for further detail.
- Any pruning equipment (i.e., Chainsaws, Secateurs and/ or hand saws) shall be sharp and cleaned regularly with isopropyl alcohol to limit pest, disease and pathogen spread.
- Lopping (indiscriminate pruning that does not conform to AS 4373) shall not occur to any parts of the trees specified for retention.
- No Climbing spikes or spurs shall be used for any canopy pruning works.
- Any climbing, rigging or rope work shall utilise non invasive/non injurious rigging techniques/systems such as pulleys, friction savers and/or porta wraps.
- Branches to be pruned with diameters greater than 200 mm will require prior approval from the nominated AQF level 5 Arborist and; agreed to at initial start up meeting.
- All final cuts are to be undertaken in keeping with the Australian Standard AS 4373: *Pruning of Amenity Trees 2007*. All final cuts are to be made at the correct location with no jagged edges or torn bark, such to preserve the integrity of the Branch collar and Branch Bark Ridge.
- Branch reductions shall be at least $\frac{1}{3}^{\text{rd}}$ of the diameter of the parent stem (or otherwise directed by the nominated AQF level 5 Arborist).

- Any tree tags that are removed as part of the pruning works are to be reinstalled onto main trunks at 1.5 meters and the nominated AQF level 5 Arborist informed for compliance purposes.
- Any branch/habitat hollows encountered as part of the canopy pruning works are to be assessed by the nominated AQF level 5 Arborist & MetConnx Environmental Manager and advice provided on retention (or otherwise).
- Any appropriate hollows, brush, arisings, branches, seeds, nuts and Woodchips etc are to be reused/repurposed as and where required.
- No further trees shall be pruned (or removed) without prior approval from UDLA/Arboribus (in collaboration with MetConnx Environmental Manager).

5.3.3 COMPLIANCE REPORTING

- Where identified and documented by the Project Arborist, TPZ Compliance & tree works compliance reporting shall be submitted to UDLA/Arboribus for review and comment on a monthly basis..

6 REFERENCES AND READING

- Arboribus Consulting 'Preliminary Arboricultural Comment Proposed Armadale Bus Terminal' Prepared for UDLA- Prepared by Luke Lumbus 23 June 2022.
- Arboribus Consulting 'R30-UDL-RPT-LA-230-00004 Armadale Station Precinct Visual Tree Assessment and Preliminary Report' Prepared for UDLA- Prepared by Luke Lumbus 27 September 2022.
- Arboribus Consulting 'Armadale Station Precinct - Tree Retention Specification (FINAL)' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- Arboribus Consulting 'Armadale Station Precinct - Tree Pruning Specification (FINAL)' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- Arboribus Consulting 'Armadale Station Precinct - Tree Removal Specification (FINAL)' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- City of Armadale (n.d.) Retrieved 31 May 2023 *Rediscover Armadale's Heritage Trees* via https://www.perthhillsarmadale.com.au/sites/default/files/assets/documents/Rediscover_Armadale_Heritage_Trees_Booklet.pdf
- Department of Primary Industries and Regional Development. (2023) Polyphagous shot-hole borer (PSHB) Retrieved 31 May 2023 via <https://www.agric.wa.gov.au/borer>
- Paap, T., Burgess, T. I., McComb, J. A., Shearer, B. L., & Hardy, G. E. S. J. (2008). *Quambalaria species, including Q. coyrecup sp. nov., implicated in canker and shoot blight diseases causing decline of Corymbia species in the southwest of Western Australia*. Mycological Research, 112, 57– 69.
- Public Transport Authority of Western Australia, 2021, 'Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works, 8 April 2022 (BRE – PTAWA-PM-RPT-00004)
- Standards Australia, 2007, Australian Standard AS 4373: *Pruning of amenity trees*, Standards Australia, Sydney, Australia
- Standards Australia, 2009, Australian Standard AS 4970: *Protection of Trees on Development Sites*, Standards Australia, Sydney, Australia
- UDLA Drawing Package 'Tree Retention, Removal and Pruning Plan' May 2023
- UDLA 'Tree Retention Strategy' May 2023

If you have any queries or if I can be of further assistance, do not hesitate to contact me on 0406 396 778.

Regards,



Luke Lumbus

COMPANY AND CONSULTANTS DETAILS

Consultant Details:	Luke Lumbus – Consulting Arboriculturist & Director
Qualifications:	AQF 8 - Graduate Certificate in Arboriculture (Melbourne University) AQF 5 - Diploma in Arboriculture – (Challenger TAFE, Western Australia) International Society of Arboriculture (ISA) Certified Arborist - AU 0014A Quantified Tree Risk Assessment (QTRA) User Number 1935
Company Trading Name:	Arboribus Pty Ltd
Established:	October 2021
Australian Business Number:	82 653 281 782
Australian Company Number:	653 281 782
Contact Number:	0406 396 778
Email Address:	luke@arboribus.com.au
Website:	www.arboribus.com.au
Insurance:	Public Liability Insurance \$20 Million (QBE Insurance Australia) Professional Indemnity \$5 Million (Dual Australia)

DISCLAIMER

- The Consultant is trained, qualified and competent in their field of expertise and will employ their knowledge, training, and skill to provide informed comments and recommendations. However, the Client acknowledges there may be latent conditions and factors the Consultant cannot reasonably determine from a visual inspection. Unless otherwise agreed with the Client and documented in the Report, the Consultant's inspection will be conducted visually and so will not determine any latent conditions hidden within the tree or below the ground level.

- The Client hereby acknowledges that the information contained in this report is intended to provide preliminary guidance and recommendations for how to manage and protect the tree(s) that are the subject of this report, however, given the nature of the subject matter, trees as living organisms are subjected to many varied and dynamic factors.

This report does not attempt to predict or anticipate potential future failure(s) of the subject tree(s) and/or its above and/or below ground parts – failure of trees and their parts can be influenced by numerous factors including (but not be limited to):

- Age
- Health and Structural status of both above and/or below ground component(s)
- Recent, historic or prolonged impacts to root(s)
- Sudden or unapproved alterations to the trees growing environ(s)
- Storm events, high winds, persistent heat and/or other severe climatic events
- Standard and quality of previous works undertaken.

This report and the advice within it cannot and shall not be construed as a guarantee the subject trees will not at some point deteriorate further and/or not survive.

- Where recommendations or advice have been provided, and the Client (or approved third party) does not adhere to such recommendations this shall be deemed to be an act or omission of the Client and the Client shall indemnify the Consultant for any damage, injury or loss that may occur as a result. It is the client's responsibility to organise any required re-inspections at the intervals specified.
- The Client warrants that it has disclosed all complete and accurate information in relation to the trees that are the subject of this report and the like and the Client hereby indemnifies and holds the Consultant harmless from any costs, losses or damage resulting in any way from matters not disclosed by the Client.
- The Client must acknowledge that it is their responsibility, prior to any work being conducted in connection with the Report, to obtain all necessary approvals in relation to carrying out the work that may be recommended by this report, including without limitation: approval from any local council, local or state government agency, or other authorised body, landlord, neighbour or any other persons or body corporate with legislative, regulatory or other interest over the trees or land that is the subject of this report.
- Arboribus shall not be required to attend court or provide evidence regarding this report unless predetermined provisions are agreed to between Arboribus and the Client, including additional payment of fees for such services.
- This report is confidential and for the exclusive use by the client for whom it was prepared. This report shall not be modified, reissued, printed, or distributed partially and/ or in its entirety without the formal permission provided by Arboribus Pty Ltd. Any unauthorised modification of this report invalidates the entire report. © Arboribus Consulting 2023. All Rights Reserved.

12.4 Appendix 04 – Tree Removal Specification



ARBORIBUS

CONSULTING

ARMADALE PRECINCT & VIADUCT EXTENTS TREE REMOVAL SPECIFICATION (FINAL)

PREPARED FOR:

UDLA ON BEHALF OF THE PUBLIC TRANSPORT AUTHORITY
OF WESTERN AUSTRALIA PTA200142

PREPARED BY:

LUKE LUMBUS

ARBORICULTURAL CONSULTANT

E: LUKE@ARBORIBUS.COM.AU - M: 0406 396 778

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DATE ISSUED: JUNE 2023

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1 INTRODUCTION

1.1 PURPOSE OF THIS SPECIFICATION

- This Tree Removal Specification has been developed for The Armadale Precinct & Viaduct Extents, in keeping with industry best practice and; provides direction for the nominated tree removal contractor when undertaking the specified tree dismantling/removal works for the project- refer figure 1 for detail.

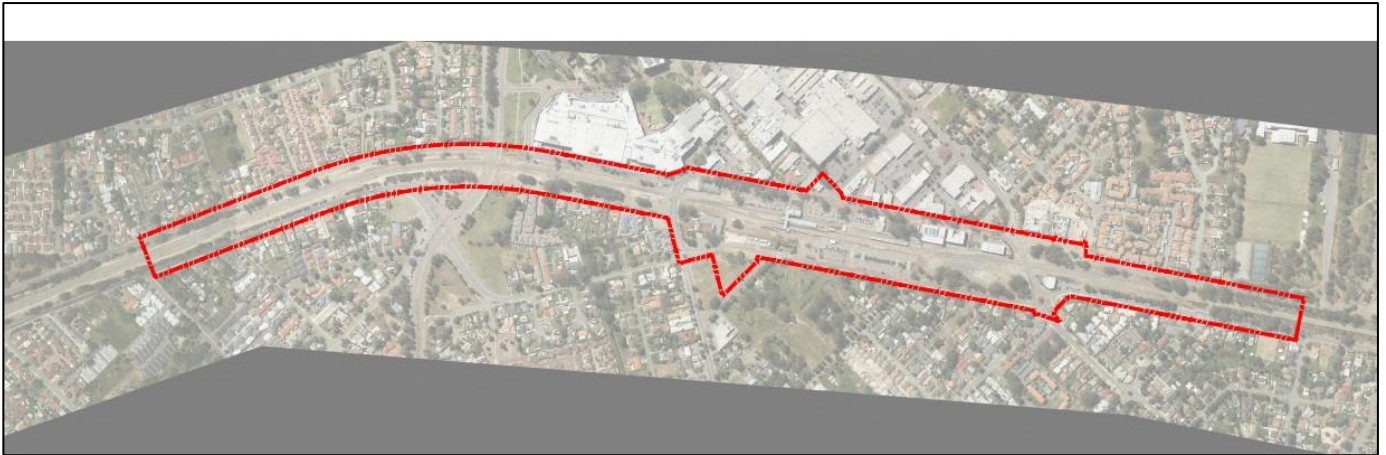


Figure 1. Aerial Image showing Extent of Works - Image Source: UDLA 2023

1.2 LIMITATIONS OF THIS TREE REMOVAL SPECIFICATION

- Works shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- Any alterations, modification or additions to this Tree Removal Specification, shall be specified by the nominated AQF Level 5 Arborist; approved prior by Arboribus Consulting and shall be formally documented as part of ongoing Arboricultural compliance reporting for the project.

2 OVERVIEW - ESSENTIAL PROJECT DOCUMENTATION

2.1 KEY ARBORICULTURAL DOCUMENTATION

- This Tree Removal Specification has been developed for The Armadale Precinct & Viaduct Extents and references the following documents:
 - Australian Standard AS 4373: *Pruning of Amenity Trees 2007*
 - Australian Standard AS 4970: *Protection of Trees on Development Sites 2009*
 - SWTC *Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works*
 - UDLA *'Tree Retention Strategy' May 2023*
 - UDLA *Drawings 'Tree Retention, Removal and Pruning Plan' May 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Tree Retention Specification (FINAL) - June 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Tree Pruning Specification (FINAL) - June 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Visual Tree Assessment and Preliminary Report- September 2022.*
- This Tree Removal Specification shall be read in conjunction with the following reporting developed for the Armadale Precinct & Viaduct Extents works:
 - UDLA *Drawings 'Tree Retention, Removal and Pruning Plan' May 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Tree Retention Specification (FINAL) - June 2023*
 - Arboribus Consulting *'Armadale Station Precinct - Tree Pruning Specification (FINAL) - June 2023*

2.2 ACKNOWLEDGEMENT OF DOCUMENTS BY THE NOMINATED CONTRACTOR

- Prior to the commencement of any tree works on site, the nominated Tree Pruning contractor is to read, acknowledge and fully understand this specification; the *"UDLA Tree Retention, Removal and Pruning Plan"* and Arboribus Consulting *'Armadale Station Precinct - Tree Retention Specification - June 2023* and; all staff working on the project are to confirm by signing the below.
- The Nominated Tree Removal Contractor shall retain copies of all tree specific specifications and the UDLA Plan at all times whilst undertaking any tree works within the Armadale Precinct & Viaduct Extents project.

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

SIGN _____ NAME _____

DATE _____

3 ESSENTIAL CONTRACTOR REQUIREMENTS

3.1 PROJECT REQUIREMENTS

3.1.1 MINIMUM QUALIFICATIONS

- For the tree removal requirements associated with the Armadale Precinct & Viaduct Extents construction, only competent Arborists with a minimum AQF Level 3 in Arboriculture (or international equivalent) along with all other tickets or licences required, shall be engaged for the tree removal works.
- Substitution of staff for any part of the Tree works is to be formally requested and must advise and confirm the individuals name, years of experience, photographic image and qualifications for approval prior by UDLA/Arboribus (in collaboration with MetConnx) to that staff member commencing work.

3.1.2 EQUIPMENT & MACHINERY

- The nominated contractor is to supply all appropriate/necessary equipment and machinery that is maintained fit for purpose and required for all Tree Removal works identified for the project.

3.1.3 HORTICULTURAL HYGIENE

- The nominated contractor is to ensure all pruning equipment and machinery be appropriately sanitised, disinfected and cleaned prior to entering site and; be disinfected in an ongoing basis during works to ensure good horticultural hygiene is maintained such that any potential pest and/or disease(s) encountered do not further contaminate other areas within the extent of works.
- Any pruning equipment (i.e., Chainsaws, Secateurs and/ or hand saws) shall be sharp and disinfected regularly with isopropyl alcohol to limit pest, disease and pathogen spread.
- Sanitation methods are to be specified by the Nominated Contractor within JSA and/or SWMSs and the methodology approved by UDLA/Arboribus.
- Any identification (positive, suspected or otherwise) of Polyphagous shot-hole borer (PSHB) within the works area is to be reported to the nominated AQF Level 5 Project Arborist, MetConnx Environmental Manager and; the Department of Primary Industries and Regional Development (DPIRD) via the pest reporter app or email padis@dpiird.wa.gov.au. The contractor is to make the works area safe, disinfect all equipment and continue working in other areas until a response on how to proceed is provided.
- Any identification (positive, suspected or otherwise) of *Quambalaria coyrecup* (Marri Canker) within the works area is to be reported to the nominated AQF Level 5 Project Arborist & MetConnx Environmental Manager. The contractor is to make the works area safe, disinfect all equipment and continue working in other areas until a response on how to proceed is provided.

- Any material that is removed from a tree suspected of being contaminated must be disposed of in an appropriate manner and not utilised for any other purpose.

3.2 CITY OF ARMADALE AUTHORISATION & APPROVALS

- The nominated contractors shall be aware that works to any City of Armadale (CoA) street tree or works within any CoA trees TPZ delineations, shall require formal approval obtained from the City of Armadale Parks and Landscape department prior to commencement of works.
- All tree works approved by the City of Armadale Parks and Landscape department shall be approved prior by the nominated AQF level 5 Arborist and be undertaken in accordance with the following documentation:
 - *Arboribus Tree Retention Specification*
 - *Arboribus Tree Removal Specification (this document)*
 - *Arboribus Tree Pruning Specification*
 - *Australian Standards AS 4373 & AS 4970*
- When requested, the CoA reserves the right to scrutinise any works being undertaken to council trees during the works phase.
- Works shall be approved prior by the nominated AQF level 5 Project Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.

3.3 TREE REMOVAL WORKS METHODOLOGIES & APPROVALS BY UDLA/ARBORIBUS

- Work methodologies for the proposed tree dismantling and removal process shall be submitted to UDLA/Arboribus for approval prior to commencement of works.
- Methodologies are to clearly reference the documentation stated in 2.1 of this specification and; all other requirements stipulated within this tree removal specification.

3.4 HOLD POINTS

- The nominated contractors shall be aware that Hold Points have been specified for all Tree Removal works identified for the project. Hold points shall be released by the nominated AQF level 5 Project Arborist (in collaboration with MetConnx Environmental Manager).
- Any works proposed within TPZs and/or any tree removal works shall be approved prior by the nominated AQF level 5 Project Arborist (in collaboration with MetConnx Environmental Manager).
- Hold points have been specified for the commencement and upon completion for:
 - Any works within specified TPZs of trees identified for retention.
 - In proximity to and/or where any works are specified to the CoA Heritage Trees (Tag Numbers 189, 328, 315, 371, 372, 387, 350, 351 & 352) and;
 - At the commencement of any works within the following areas as specified by MetCONNx:

- Area 2 (Church) Arborist Works (P6 17/07)
 - Area 1 (Station) Arborist Works
 - Area 5 (North Armadale Rd) Arborist Works
 - Area 4 (Aragon Ct) Arborist Works
 - Area 3 (Fire Station) Arborist Works
 - And/or any other zones and/or areas specified for tree removal works to be undertaken as part of the Armadale Precinct & Viaduct Extents.
- It is the responsibility of the nominated tree pruning contractors to advise the nominated AQF level 5 Arborist of any tree related issues (damage to or; unforeseen circumstance that may affect the retained trees) that arise as part of their works.

3.5 DAMAGE TO TREES SPECIFIED FOR RETENTION (RECOVERABLE COSTS)

- Any damage and/or impact that occurs to above and/or below ground parts of the trees identified for retention resulting from failing to comply with the *Tree Retention Specification*, shall be reported to the nominated AQF level 5 Arborist (in collaboration with MetConnx Environmental Manager) immediately and advice sought regarding the level of remedial intervention required and; how to proceed.
- Any specified remediation measures shall be implemented in a timely fashion by the nominated tree contractor, under the supervision of and; to the satisfaction of the nominated AQF level 5 Arborist and MetConnx Environmental Manager.
- Any damage and/or impacts shall be documented by the nominated AQF 5 Arborist as part of ongoing Arboricultural compliance reporting for the project.
- Where damage/impact is not able to be remediated to an acceptable level, replacement of the tree is to be undertaken at the expense of the nominated removal contractor. Costs to be borne by the contractor include (but may not be limited to):
 - Calculated Amenity Value (\$AUD) as specified by CoA
 - Removal of remaining tree parts and stump
 - Remediation of the area;
 - Supply and install of
 - like for like or
 - 6: 1 ratio replacement of 100 litre bag stock of approved species
 - Mature Tree Transplant (at CoA approval) and
 - All associated installations, establishment, irrigation, monitoring etc costs.

3.6 UNFORESEEN CIRCUMSTANCES

- Where unforeseen situations arise during Tree Removal works that have the potential to impact Tree Protection Zones and/or trees specified for retention, the nominated contractor is to advise

the AQF level 5 Project Arborist, make the area safe and continue working elsewhere until a response on how to proceed is provided by the Project Team.

- The nominated AQF level 5 Arborist is to advise UDLA & Arboribus (in collaboration with MetConnx Environmental Manager) of the matter and communicate the response from the Project Team on how to proceed.

3.7 SALVAGING & REUSE OF HOLLOWES, BRUSH AND MULCH

- Any appropriate hollows, brush, arisings, branches, seeds, nuts and Woodchips etc are to be reused/repurposed as and where required.
- Please refer the following documents and contacts for further detail
 - *SWTC Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works*
 - Landcare Shire of Serpentine Jarrahdale
 - Kaarakin Black Cockatoo Conservation Centre
 - UDLA/Arboribus/ MetCONNX Project Team

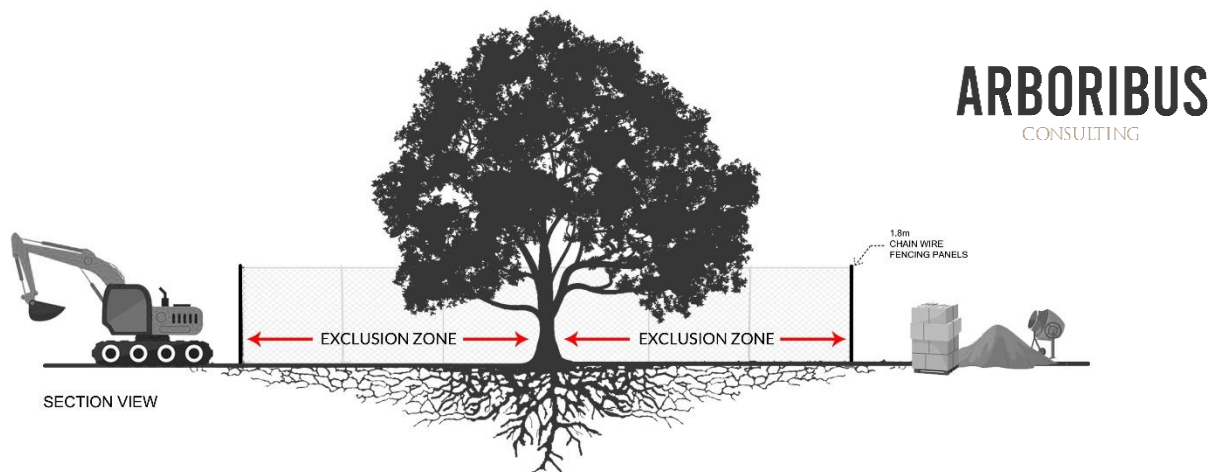
4 TREE PROTECTION ZONES (TPZ)

4.1 TREE PROTECTION ZONE DELINEATIONS & WORKS NEAR OR WITHIN TPZS

- The nominated tree pruning contractor shall acknowledge that:
 - Trees identified for retention in 'UDLA Tree Retention, Removal and Pruning Plan' are to be protected in accordance with Arboribus Consulting's June 2023 *Tree Retention Specification* and
 - That no access or works shall be permitted within the specified TPZs without prior approval of the nominated AQF Level 5 Arborist. Where identified by the Project Arborist, critical works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- The nominated contractor shall acknowledge that penalties have been specified for non-compliance and/or avoidable damages caused to any trees identified for retention (refer 3.5 for further detail).

4.1.1 RESTRICTED ACTIVITIES WITHIN TPZS – REFER FIGURE 2

- Any works without prior approval of the AQF Level 5 Project Arborist
- Unauthorised access into the fenced TPZ areas
- Unauthorised pruning of branches or roots.
- Parking, fuelling, tracking, or storage of vehicles or machinery of any kind
- Unauthorised mechanical excavation, trenching or unapproved works of any kind
- Unauthorised modification of existing grade (i.e., raising or lowering of soil levels)
- Storage of construction materials, fuels, or phytotoxic chemicals etc...
- Unauthorised placement of site facilities or waste disposal bins
- Unauthorised stockpiling of soil, spoil or any construction debris
- Cleaning or washing of tools, equipment and vehicles
- Disposal of liquid waste including paint and concrete and/or any wash outs etc..



NO ACCESS OR WORKS SHALL BE PERMITTED WITHIN THE SPECIFIED TPZS WITHOUT PRIOR APPROVAL OF AND, UNDER THE SUPERVISION OF THE NOMINATED AQF LEVEL 5 ARBORIST.

Figure 2. Graphic Image showing Exclusion Zones within the TPZs Image Source: Arboribus Consulting 2023

5 TREE REMOVAL WORKS SPECIFICATION

5.1 BACKGROUND

- All Trees identified for removal have been specified in 'UDLA Tree Retention, Removal and Pruning Plan' May 2023 (refer figure 3 below).

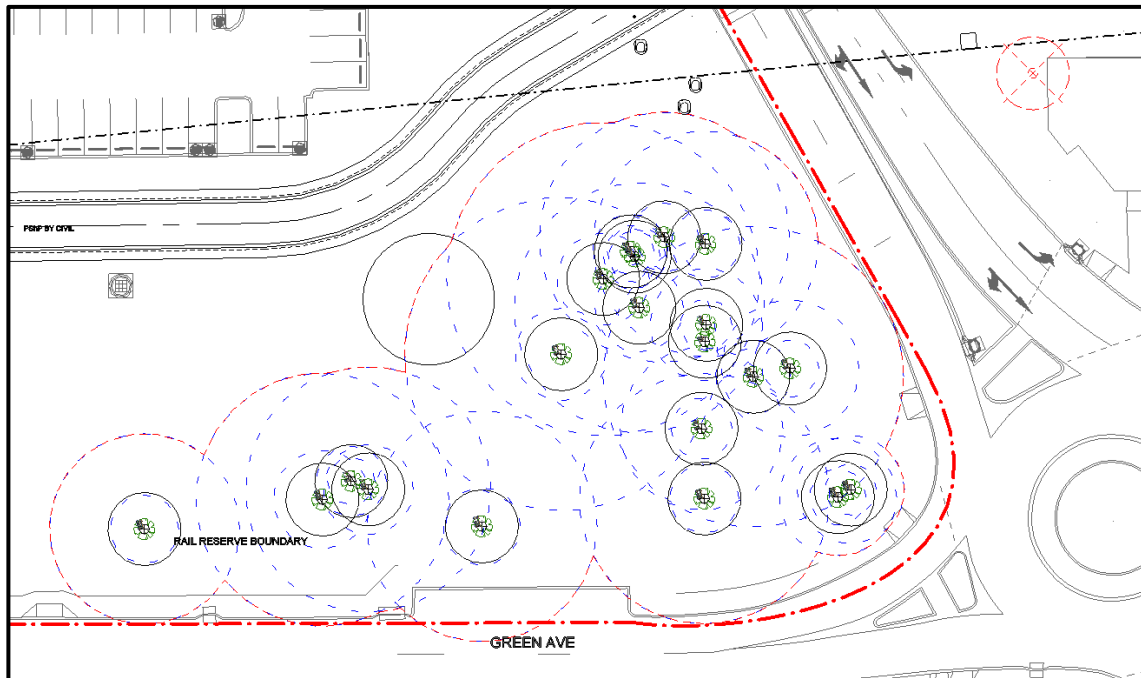


Figure 3. Image showing sample of 'UDLA Tree Retention, Removal and Pruning Plan' May 2023 Image Source: UDLA

- All Trees identified for retention or removal for the Armadale Precinct & Viaduct Extents construction, have round, individually numbered tree tags installed approx. 1.5 meters from ground level (where possible) on main stems - refer figure 4 below. Where trees have Tags missing or vandalised, no works are to proceed to the tree and the contractor is to continue working in other areas until a response on how to proceed is provided from UDLA/Arboribus.
- No further trees shall be removed without prior approval from UDLA & Arboribus (in collaboration with the MetConnx Environmental Manager).



Figure 4. Image showing metal tree tag and numbering of the identified trees installed approx. 1.5 meters from ground level (where possible)

5.2 TREES SPECIFIED FOR REMOVAL

5.2.1 TREE PROTECTION ZONES (TPZ) & WORKS COMPLIANCE

- All Trees to be removed shall be clearly communicated on the UDLA Tree Retention Plan and; approved prior at a tool box meeting between the nominated tree removal contractor, the nominated AQF level 5 Arborist, City of Armadale, MetCONNx and UDLA/Arboribus.
- Where identified by the Project Arborist, tree removal works are to be supervised, photographed, documented and detailed as part of ongoing Arboricultural compliance reporting for the project.
- TPZ fencing & signage is to remain for the duration of the Tree Works phase. Any alteration or modification of the fencing shall be approved prior by the nominated AQF level 5 Arborist (in collaboration with the MetConnx Environmental Manager) and shall be documented as part of ongoing Arboricultural compliance reporting for the project.
- No access into TPZs of the trees identified for retention is permitted for any machinery or vehicles. Where required and approved by the nominated AQF level 5 Arborist, vehicular access into TPZs will require the installation of ground protective measures within TPZs prior to commencement – refer *June 2023 Tree Retention Specification* for further detail.
- Types of machinery, working room and swing radius etc.. shall be considered to ensure damage is avoided to the trees specified for retention.
- Positioning of machinery shall recognise the TPZ delineations to avoid any impacts to root systems and collision impacts to trunks and canopies.

5.2.2 TREE REMOVAL WORKS

- Only competent Arborists with a minimum AQF Level 3 in Arboriculture (or international equivalent) along with all other tickets or licences required shall undertake the specified tree removal works. All works shall be undertaken under the guidance of the nominated AQF level 5 Arborist and in keeping with the *June 2023 Tree Retention Specification*.
- Dismantling of trees identified for removal be undertaken such that no damage shall occur to the Above Ground parts (trunk, canopies, branches, limbs etc) and/or Below Ground parts (root crown, root system etc) of trees identified for retention.
 - Where specified and prior approved by the nominated AQF level 5 Arborist, the installation of trunk and/or ground protective measures within TPZs shall occur to limit any impacts refer *June 2023 Tree Retention Specification* for further detail.
- Any equipment (i.e., Chainsaws, Secateurs and/ or hand saws) shall be sharp and cleaned regularly with isopropyl alcohol to limit pest, disease and pathogen spread.
- Any appropriate hollows, brush, arisings, branches, seeds, nuts and Woodchips etc are to be reused/repurposed as and where required.

- Stumps shall be ground out via Stump Grinding Machinery or soil removed and extracted via vacuum excavation. Mechanical excavation/grubbing out of stumps is not permitted within TPZs without prior approval from the AQF Level 5 Project Arborist.
- No further trees shall be removed without prior approval from UDLA & Arboribus (in collaboration with the MetConnx Environmental Manager).

5.2.3 COMPLIANCE REPORTING

- Where identified and documented by the Project Arborist, TPZ Compliance & tree works compliance reporting shall be submitted to UDLA/Arboribus for review and comment on a monthly basis.

6 REFERENCES AND READING

- Arboribus Consulting 'Preliminary Arboricultural Comment Proposed Armadale Bus Terminal' Prepared for UDLA- Prepared by Luke Lumbus 23 June 2022.
- Arboribus Consulting 'R30-UDL-RPT-LA-230-00004 Armadale Station Precinct Visual Tree Assessment and Preliminary Report' Prepared for UDLA- Prepared by Luke Lumbus 27 September 2022.
- Arboribus Consulting 'Armadale Station Precinct - Tree Retention Specification (FINAL)' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- Arboribus Consulting 'Armadale Station Precinct - Tree Pruning Specification (FINAL)' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- Arboribus Consulting 'Armadale Station Precinct - Tree Removal Specification (FINAL)' Prepared for UDLA- Prepared by Luke Lumbus June 2023.
- City of Armadale (n.d.) Retrieved 31 May 2023 *Rediscover Armadale's Heritage Trees* via https://www.perthhillsarmadale.com.au/sites/default/files/assets/documents/Rediscover_Armadale_Heritage_Trees_Booklet.pdf
- Department of Primary Industries and Regional Development. (2023) Polyphagous shot-hole borer (PSHB) Retrieved 31 May 2023 via <https://www.agric.wa.gov.au/borer>
- Paap, T., Burgess, T. I., McComb, J. A., Shearer, B. L., & Hardy, G. E. S. J. (2008). *Quambalaria species, including Q. coyrecup sp. nov., implicated in canker and shoot blight diseases causing decline of Corymbia species in the southwest of Western Australia*. Mycological Research, 112, 57– 69.
- *Public Transport Authority of Western Australia, 2021, 'Byford Rail Extension Scope Of Work And Technical Criteria Book 3: Part A - Scope Of Works, 8 April 2022 (BRE – PTAWA-PM-RPT-00004)*
- Standards Australia, 2007, Australian Standard AS 4373: *Pruning of amenity trees*, Standards Australia, Sydney, Australia
- Standards Australia, 2009, Australian Standard AS 4970: *Protection of Trees on Development Sites*, Standards Australia, Sydney, Australia
- UDLA Drawing Package 'Tree Retention, Removal and Pruning Plan' May 2023
- UDLA 'Tree Retention Strategy' May 2023

If you have any queries or if I can be of further assistance, do not hesitate to contact me on 0406 396 778.

Regards,



Luke Lumbus

COMPANY AND CONSULTANTS DETAILS

Consultant Details:	Luke Lumbus – Consulting Arboriculturist & Director
Qualifications:	AQF 8 - Graduate Certificate in Arboriculture (Melbourne University) AQF 5 - Diploma in Arboriculture – (Challenger TAFE, Western Australia) International Society of Arboriculture (ISA) Certified Arborist - AU 0014A Quantified Tree Risk Assessment (QTRA) User Number 1935
Company Trading Name:	Arboribus Pty Ltd
Established:	October 2021
Australian Business Number:	82 653 281 782
Australian Company Number:	653 281 782
Contact Number:	0406 396 778
Email Address:	luke@arboribus.com.au
Website:	www.arboribus.com.au
Insurance:	Public Liability Insurance \$20 Million (QBE Insurance Australia) Professional Indemnity \$5 Million (Dual Australia)

DISCLAIMER

- The Consultant is trained, qualified and competent in their field of expertise and will employ their knowledge, training, and skill to provide informed comments and recommendations. However, the Client acknowledges there may be latent conditions and factors the Consultant cannot reasonably determine from a visual inspection. Unless otherwise agreed with the Client and documented in the Report, the Consultant's inspection will be conducted visually and so will not determine any latent conditions hidden within the tree or below the ground level.

- The Client hereby acknowledges that the information contained in this report is intended to provide preliminary guidance and recommendations for how to manage and protect the tree(s) that are the subject of this report, however, given the nature of the subject matter, trees as living organisms are subjected to many varied and dynamic factors.

This report does not attempt to predict or anticipate potential future failure(s) of the subject tree(s) and/or its above and/or below ground parts – failure of trees and their parts can be influenced by numerous factors including (but not be limited to):

- Age
- Health and Structural status of both above and/or below ground component(s)
- Recent, historic or prolonged impacts to root(s)
- Sudden or unapproved alterations to the trees growing environ(s)
- Storm events, high winds, persistent heat and/or other severe climatic events
- Standard and quality of previous works undertaken.

This report and the advice within it cannot and shall not be construed as a guarantee the subject trees will not at some point deteriorate further and/or not survive.

- Where recommendations or advice have been provided, and the Client (or approved third party) does not adhere to such recommendations this shall be deemed to be an act or omission of the Client and the Client shall indemnify the Consultant for any damage, injury or loss that may occur as a result. It is the client's responsibility to organise any required re-inspections at the intervals specified.
- The Client warrants that it has disclosed all complete and accurate information in relation to the trees that are the subject of this report and the like and the Client hereby indemnifies and holds the Consultant harmless from any costs, losses or damage resulting in any way from matters not disclosed by the Client.
- The Client must acknowledge that it is their responsibility, prior to any work being conducted in connection with the Report, to obtain all necessary approvals in relation to carrying out the work that may be recommended by this report, including without limitation: approval from any local council, local or state government agency, or other authorised body, landlord, neighbour or any other persons or body corporate with legislative, regulatory or other interest over the trees or land that is the subject of this report.
- Arboribus shall not be required to attend court or provide evidence regarding this report unless predetermined provisions are agreed to between Arboribus and the Client, including additional payment of fees for such services.
- This report is confidential and for the exclusive use by the client for whom it was prepared. This report shall not be modified, reissued, printed, or distributed partially and/ or in its entirety without the formal permission provided by Arboribus Pty Ltd. Any unauthorised modification of this report invalidates the entire report. © Arboribus Consulting 2023. All Rights Reserved.

12.5 Appendix 05 – Visual Tree Assessment



ARBORIBUS

CONSULTING

R30-UDL-RPT-LA-230-00004

ARMADALE STATION PRECINCT

VISUAL TREE ASSESSMENT AND PRELIMINARY REPORT

PREPARED FOR:
PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA
PTA200142

PREPARED BY:
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DATE ISSUED: 27 SEPTEMBER 2022

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1 PURPOSE OF THIS REPORT

- To inspect the trees within the areas specified by UDLA (outlined in Figure 1) and provide comment regarding tree status and; identify preliminary tree protection considerations to be further developed as part of the proposed MetroNet Armadale Station Precinct development.



Figure 1. Area of assessment specified by UDLA (outlined yellow).
Aerial image source UDLA- Date supplied - 27 April 2022

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2 BACKGROUND

2.1 BRIEF

- At the request of Mike Harris (Associate Landscape Architect at UDLA), Arboribus Consulting has been engaged to assess: all City of Armadale Street trees; trees with trunk diameter greater than 400 mm within the Rail corridor and large groups of trees within the area specified within Figure 1, and provide the following information:
 - Assess the trees as per the UDLA provided feature survey shape file
 - Install individually numbered metal tree tags (refer Appendix A for detail)
 - Identify genus, species and common name
 - Comment on current health, structure & age of the subject trees
 - Obtain height, canopy spread and trunk diameter measurement(s)
 - Provide Tree Protection Zone and Structural Root Zone measurements
 - Detail observations and comments for each tree
 - Provide preliminary recommendations and canopy pruning considerations
 - Provide background information regarding the Australian Standard AS 4970 'Protection of Trees on Development Sites' 2009 – refer Appendix D for detail
 - Provide Arboricultural comment regarding potential impacts and modifications necessary to achieve a more 'tree sensitive' design (refer Point 5. *Preliminary Arboricultural Inputs into the Design*) and
 - Conclusions and Recommendations.

2.2 ARBORICULTURAL INSPECTION

- Arboribus Consulting undertook ground level assessments of the trees over a number of days during the months of August and September 2022.

2.3 LIMITATIONS OF THIS REPORT

- The Arboricultural assessment was undertaken at ground level and did not incorporate any aerial inspection or; below ground or; specialist investigations, for the subject trees.

2.4 ARBORIBUS REPORTING DEVELOPED FOR THE PROJECT

- For further detail please refer:
 - Arboribus Consulting '*Preliminary Arboricultural Comment Proposed Armadale Bus Terminal*' Prepared for UDLA- Prepared by Luke Lumbus 23 June 2022.

3 SUMMARY OF FINDINGS

3.1 GENERAL SITE OVERVIEW

- The specified area of assessment is approximately 1700 meters in length and extends north of Armadale Road down to Armadale Senior High School at its southern extent. The area assessed included all City of Armadale verge trees and significant vegetation that exists within the rail corridor.
- The assessed areas ranged from street verges, to rail corridor areas to; native bush/mulched gardens to; urban hardstands and walkways; through to carparks and hostile, highly modified urban areas. Locations varied from formal landscaped settings to informal native bush arrangements.
- Refer *Trees of Note and Appendix C General Site Images* for further detail.

3.2 TOTAL NUMBER OF TREES INSPECTED

- A total of x 418 trees were assessed as part of the proposed MetroNet Armadale Station Precinct development - refer *Appendix A Tree Location and Numbering Map & Appendix B Table of Results* for detail.
- All identified Trees have aluminium number tags installed at approximately 1.5 metres from ground level on main stems – refer figure 2 for example of tags utilised for the project.



Figure 2. Showing metal tree tag and numbering of the identified trees installed approx. 1.5 meters from ground level

3.3 TREE SPECIES INSPECTED

- Of the 418 trees assessed, the following species were documented:
 - *Corymbia species* x 188 (~45% of the total trees assessed)
 - *Eucalyptus species* x 120 (~29% of the total trees assessed)
 - *Casuarina species* x 34 (~8% of the total trees assessed)

- Other Species x 76 (~18% of the total trees assessed)
- All of the assessed trees are considered well suited to the Armadale locale.

3.4 AGE STATUS

- Synopsis of general age status for the assessed trees was broken down into the following:
 - Juvenile = x 2
 - Semi Mature = x 12
 - Early Mature = x 78
 - Mature = x 313
 - Post Mature = x 0

3.5 USEFUL LIFE EXPECTANCY (ULE)

- Synopsis of Useful Life Expectancy (ULE) for the assessed trees was broken down into the following:
 - Dead (no chance of recovery) = x 7
 - <5 Years = x 12
 - 5 - 15 Years = x 25
 - 15 - 40 Years = x 152
 - 40 + Years = x 209

3.6 SUMMARY OF CANOPY HEALTH

- Synopsis of canopy health for the assessed trees was broken down into the following:
 - Good = x 280
 - Reasonable = x 93
 - Questionable = x 17
 - Poor = x 8
 - Dead (no chance of recovery) = x 7

Refer Appendix B Definitions Canopy Health for detail.

- The Majority of trees assessed were considered to be in Good or Reasonable health status. Various (minor) health issues identified are considered manageable within the scope of general horticultural management for the assessed areas.
- 25 Trees displayed Questionable or Poor health status. If identified for retention into the development, these trees will require specific Arboricultural input and/or targeted remedial treatments to improve general health status during construction - refer *Appendix B Table of Results* for detail.
- 7x Trees (18, 86, 126, 170, 185, 198 & 205) were confirmed dead at the time of inspection and are considered currently unsuitable for incorporation into the development. Further discussion with an

AQF level 5 Arborist is required to ascertain if removal is required or if the trees may be pruned and retained for habitat purposes– refer *Appendix B Table of Results* for detail.

3.7 SUMMARY OF CANOPY STRUCTURE

- Synopsis of individual canopy structure for the assessed trees was broken down into the following:
 - Good = x 132
 - Reasonable = x 226
 - Questionable = x 46
 - Poor = x 1

Refer *Appendix B Definitions Canopy Structure* for detail.

- The Majority of trees assessed displayed Good or Reasonable canopy structure. A number of minor structural problems were identified; however, are considered manageable as part of general tree pruning maintenance responsibilities for the assessed areas.
- 47 Trees displayed Questionable or Poor Canopy Structure. If identified for retention into the development, these trees will require further specific Arboricultural input/ongoing monitoring and/or targeted remedial treatments implemented, to address identified issues and improve site safety – refer Appendix B for detail.

3.8 PEST AND DISEASES

- Evidence of Termite mud was noted on the main stems on trees 37, 63, 153, 157, 171, 178, 187, 189, 247, 338, 358, 359 & 370 however; no active termites were observed at time of inspection. Consideration should be given to the installation of non-invasive termite baiting & monitoring systems for the subject trees as part of general management responsibilities for the assessed areas.
- Aside the noted termite mud, no obvious visual presence of any significant pest infestations or fungal sporophores were observed at the time of assessment.

3.9 TREE RELOCATIONS FOR CONSIDERATIONS

- Mature *Jacaranda mimosifolia* (Jacaranda), *Lagerstroemia indica* (Crepe Myrtle), *Agonis flexuosa* (WA Peppermint) *Melaleuca species* (Paperbark) *Platanus x acerifolia* (London Plane), *Xanthorrhoea preissii* (Grass Tree) *Brachychiton acerifolius* (Illawarra Flame Tree) can (typically) tolerate the relocation process - subject to appropriate level of horticultural intervention and the implementation of remedial measures to assist recovery.
- The majority of these amenable species assessed were considered good to reasonable specimens and worthwhile considering for relocation within the project (or elsewhere in the CoA).
- If relocation of any mature trees is considered for the project, further discussion with a tree relocation company will need to be undertaken to discuss (but may not be limited to): preparation

timeframes, timing, logistic requirements, final planting location, maintenance and after care, estimated costs etc.

3.10 CITY OF ARMADALE HERITAGE TREES WITHIN ASSESSED AREA

- 8x trees within the specified area of assessment have been identified by the City of Armadale within the 'Rediscover Armadale's Heritage Trees' booklet. These trees have been numbered by Arboribus Consulting within Appendix A & B as:
 - Number 189 - *Eucalyptus rudis* (Flooded Gum) located at the northern end of Railway Road (formally Aragon Way)
 - Numbers 315, 371, 372 (& 387) *Eucalyptus marginata* (Jarrah) x4 located at the corner of Hobbs Drive and Church Avenue
 - Number 328 - *Syncarpia glomulifera* (Turpentine Tree) located within the Rail Corridor at the corner of Green Avenue and Church Avenue
 - Number 351 & 350 - *Eucalyptus cladocalyx* (Sugar Gum)x2 located on Commerce Avenue (opposite Fourth Road).
- Refer City of Armadale 'Rediscover Armadale's Heritage Trees' booklet for further detail and tree locations.

3.11 SUMMARY OF PRELIMINARY RECOMMENDATIONS

- Trees 10, 18, 29, 86, 126, 170, 176, 178, 185, 186, 187, 198, 205, 261, 273, 275, 279, 281, 285, 317, 340, 352, 358, 359, 363, 364, 370, 374, 379, 411 & 425 have been identified as Requiring 'Further Arboricultural Input and/or Assessment Required in Regard to Structural Issues Identified at The Time of Inspection'. Further input and consideration of the identified issues are required before making a definitive conclusion on their incorporation into the proposed development.
- The remainder of the x 374 trees assessed should be considered for retention and the site specific Tree Protection Plan (TPP) be developed Arboribus Consulting and implemented for the duration of the proposed Armadale Station Precinct development.

3.12 CANOPY PRUNING REQUIREMENTS

- Canopy pruning requirements are to be developed and specified based on final design and construction methodologies being proposed in proximity to the trees identified for retention. Works may include (but may not be limited to):
 - The removal of major dead wood, friction stems and broken branch stubs
 - Selective branch removal or reduction and/or raising of canopies to improve working room and clearances to structures
 - Specific/specialist canopy management
 - Ongoing monitoring of health, structure or identified issues

- Aerial inspections are to be undertaken throughout the canopies by nominated tree pruning contractor(s) to identify (and address) structural issues not able to be seen from the ground level inspection and further recommendations made as and where required by the nominated AQF level 5 Arborist.
- All canopy pruning works are to be undertaken in keeping with Australian Standard AS 4373 'Pruning of Amenity Trees' 2007 by suitably qualified and experienced AQF 3 Arborists under the guidance of the nominated AQF level 5 Arborist.
- **Special Note:** *If any project specific pruning is required to City of Armadale tree assets, formal permission is to be obtained from the City of Armadale Parks and Landscape department and approved by the nominated AQF level 5 Project Arborist prior to any works commencing.*

3.13 SALVAGING OF TREES & TIMBER

- Where the design is not compatible with successful tree retention and existing trees are required to be removed as part of the project, the following should be considered by the Project Team:
 - Potential Transplant/relocation elsewhere
 - Milling of timber into slabs for furniture or features for integration into the design
 - Crafting or turning wood into features/items/furniture/art interpretive sculpture etc by woodturners, craftsmen or artists
 - Dependent on species, consideration could be given to using the brush and logs as bank or ground stabilisation for regeneration works or habitat creation in bush or POS areas
 - Consideration could be given to harvesting of the seed (if the trees have viable fruit) and germinate from existing source as ceremonial replanting once the works have completed. Any tree stock proposed for this type of approach are to be grown in accordance with the processes identified in the Australian Standards AS 2303 'Tree Stock for Landscape Use' 2015 and planted in accordance with best industry practice.

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4 TREES OF NOTE



A: Stand of mature Marri in mulched garden area
B: Stand of mature Marri, Wandoo and Flooded gums in mulched garden area
C: Stand of mature Eucalypts in mulched garden area adjacent bus lane
D: Stand of mature Sugar Gums in verge area of Green Avenue
E: Tree 328 *Syncarpia glomulifera* (Turpentine Tree)
F: Stand of Mature Marri adjacent open stormwater drain
G: Stand of Marri, Jarrah and Sheoak in bush area on Hobbs Drive
H: Remnant Flooded Gums in verge area of Railway Avenue
I: Stand of Marri in verge area of Railway Avenue
J: Avenue of Mature Spotted Gums in Commerce Avenue

Aerial image source <https://web.metromap.com.au/map>
 Image Date - 13 April 2022
 Images by Arboribus Consulting (2022)

5 PRELIMINARY ARBORICULTURAL INPUTS INTO THE DESIGN

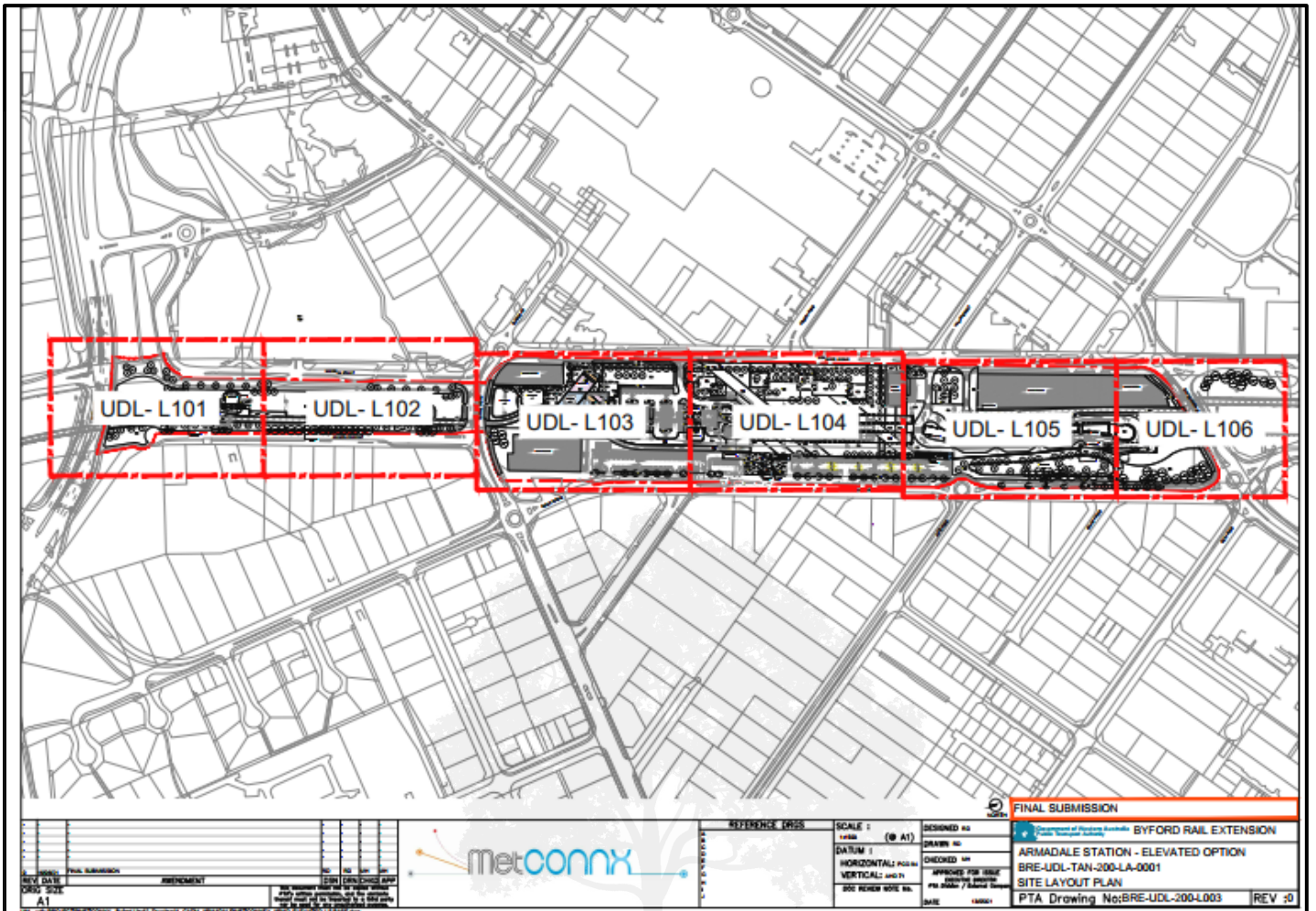


Figure 3. Metconnx Drawings Armadale Station – Elevated Option BRE-UDL-TAN-200-LA-0001 Rev 0

5.1 TREE PROTECTION ZONE (TPZ) BACKGROUND AND OVERVIEW

- Tree Protection Zone (TPZ) is defined in AS4970 'Protection of Trees on Development Sites 2009' as:
"A specified area above and below ground and at a given distance from the trunk set aside for the protection of a trees roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development."
- To calculate the TPZ, the formula 12 times (x) the Trunk Diameter (DBH - Diameter at Breast Height measured at 1.4 meters from ground level) is utilised (for the majority of tree species and types).
- The TPZ is measured in meters as a radius from the centre of the main stem.
- Refer Appendix B Table of Results' for TPZ projections for each of the trees identified for retention.

5.2 ARBORICULTURAL DESIGN REVIEW BACKGROUND INFORMATION

- Tree protection measures in keeping with AS 4970 'Protection of Trees on development sites' 2009' must be incorporated into the proposed design in order to achieve tree sensitive outcomes for the project.
- Review of all proposed designs for the development should recognise the specified TPZ delineations and that all efforts are made by the design team to avoid/minimise any proposed works or structures within these specific TPZ areas.
- Where minor encroachments into a Tree Protection Zone (TPZ) are planned, input from an AQF level 5 Arborist will be required to review proposed works or structures; provide tree sensitive measures or alternatives and; assist in the development of appropriate methodologies to ensure tree root and canopy impact can be minimised.
- Where significant incursions are proposed within TPZs (i.e., greater than 10%), an AQF level 5 Arborist is to demonstrate how the encroachment or works can occur without adversely impacting the health and/or inground stability of the tree or; identify where modifications to the design or alternative methodologies are required.

5.3 ARBORICULTURAL COMMENT ON THE PROPOSED DESIGN

5.3.1 CONSTRUCTION WORKS PROPOSED WITHIN TREE PROTECTION ZONES

- Considerable construction and works are being proposed within Tree Protection Zones (TPZs) of the assessed trees. This will necessitate modification to the proposed design(s) and; the development of appropriate work methodologies in order to alleviate unnecessary/avoidable impacts to the trees identified for retention. Works planned to be undertaken within or immediately adjacent specified TPZs for the proposed Armadale Station Precinct development include (but may not be limited to):
 - Establishment of site and works boundaries
 - Dismantling of trees identified for removal
 - Establishment of the specified Tree Protection Zones (TPZs)
 - Demolition and removal of existing /structures/buildings/fencing/ etc
 - Decommissioning of existing services and below ground infrastructure
 - Demolition of existing roads, road infrastructure and crossovers/kerbing
 - Forward works & site preparation to set levels, batters and soil contours, removal of organic layer etc...
 - Cut to fill works
 - Installation of all proposed below ground services (and their associated infrastructure and components)
 - Construction (and installation of) Neerigen Brook stormwater infrastructure (Railway Road)

- Construction of stormwater infrastructure in CoA verge areas
- Installation of new roads and carpark areas (i.e. preparation for levels, boxing out, installation of subbase and compaction, bitumen and kerbing etc..)
- Construction of retaining walls/soundwalls and ramps etc
- Construction and installation of the Viaduct substructure
- Construction of flyover pedestrian bridges and walkways
- Installation and establishment of Bioretention areas and WSUD zones
- Hard and Soft landscaping (i.e.. levels and contouring, retaining walls and identified structures, planting of vegetation, mulching, soiling, installation of irrigation etc).

5.3.2 PROPOSED MODIFICATIONS TO THE CURRENT DESIGN

- Modification of existing soil levels is to be avoided within TPZ areas. Moderate raising of soil levels may be considered (refer below dot point) within/adjacent the TPZ areas as an alternative to cutting, lowering, and/or boxing out existing levels. The current proposed grade cuts required for levels, footings and road boxouts etc.. can injure arterial/surface roots and will need to be addressed to limit root loss and associated impact to the trees identified for retention.
- Where fill is being proposed within TPZs, washed and screened single grade gravel or aggregate with no fines is recommended to be used (**Note:** *any required areas of fill to be installed greater than 150 mm within TPZs will be subject to prior approval from the nominated AQF level 5 Arborist and the potential installation of remediation measures (or materials) to assist with aeration and infiltration within TPZs*).
- Roads, crossovers, kerbs, paths, ramps etc.. being proposed within TPZs should be designed to 'float' (i.e., installed on top of existing ground levels) to limit box outs and root impacts and allow root mass to be retained beneath roadways and paths.
- Alignments and locations of any below ground services and associated infrastructure that travel within/through TPZs are to be installed via non-destructive methods (i.e., subterranean boring, micro tunnelling or industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) and shall be adjusted to avoid/accommodate roots greater than 30 mm in diameter. *Note: Mechanical excavation is not permitted within TPZs.*
- Any footings for proposed structures (i.e. retaining walls/soundwalls, ramps, fencing, viaduct structures, bridges etc) are to be designed to 'float' (i.e., installed on top of existing ground levels) or lintels designed and installed to protect and bridge over the roots to allow for their retention. Where this may be impractical/cost prohibitive, rootzone investigations are to be undertaken via non-destructive methods (i.e., industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) to locate and accommodate roots greater than 30 mm in diameter. This may require any concrete footings to be poured at locations where no large roots are encountered.
- Any hardscape structures being proposed within TPZs should also be designed to 'float' (i.e., installed on top of existing ground levels) to limit excavations and associated root impacts (i.e. applicable to hard landscaping, retaining walls, finishes etc..). Where this unattainable or not achievable, non-

destructive methods (industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) are to be utilised to verify where root mass exists, and structures placed/positioned accordingly to retain roots and achieve a tree sensitive outcome. Roots measuring over 30 mm in diameter are to be retained and protected. Location of footings and/or structures are to be adjusted to avoid roots greater than 30 mm in diameter. Roots less than 30 mm in diameter are to be pruned appropriately by the nominated contractor under the direction of the nominated AQF level 5 Arborist.

5.3.3 PROPOSED METHODOLOGIES FOR WORKS IN TPZS

- Prior to any works on site, erection of dedicated TPZ fencing (and TPZ signage), is to identify the nominal TPZ delineations and are to be established by the nominated contractor(s) and; signed off by the nominated AQF level 5 Project Arborist prior to site works *Note:- Any alteration or modification of the fencing is to be approved prior by an AQF level 5 Arborist and documented as part of ongoing tree preservation reporting for the site.*
- That any works proposed within the nominal TPZ delineations will require prior approval from the nominated AQF level 5 Arborist. (in collaboration with the Project team) and may require supervision by the nominated AQF level 5 Arborist.
- Dismantling of trees identified for removal is to be undertaken such that no damage occurs to the canopies and/or root systems of the trees identified for retention. Stumps are to be ground out only *Note: Mechanical excavation/grubbing out of stumps is not permitted within TPZs.*
- Any Demolition works (including but not limited to: existing dwellings /structures /fencing /sheds /roads etc) are to be undertaken under the guidance of the nominated AQF level 5 Arborist such that roots are protected and retained within TPZs. Positioning of machinery is to recognise the TPZ delineations to limit impacts to root systems and collision impacts to trunks and canopies and will necessitate ground protection measures being installed. Types of machinery, working room and swing radius etc.. will need to be considered to ensure damage is avoided for the retained trees. *Note:- Any canopy pruning required for demolition or civils works is to be approved prior by the nominated AQF level 5 Arborist (in collaboration with the Project team) the CoA (if required) and documented as part of ongoing tree preservation reporting for the Armadale Station Precinct development.*
- Alignments and locations of any below ground services and associated infrastructure that travel within/through TPZs are to be installed via non-destructive methods (i.e., subterranean boring, micro tunnelling or industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) and shall be adjusted to avoid/accommodate roots greater than 30 mm in diameter. *Note: Mechanical excavation is not permitted within TPZs.*
- Take off and/or tie in points and proposed infrastructure designed within TPZs are to be installed via non-destructive installation methods (industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) and shall be adjusted to avoid/accommodate roots greater than 30

mm in diameter. Roots less than 30 mm in diameter are to be pruned appropriately). *Note: Mechanical excavation is not permitted within TPZs.*

- Any Mechanical tracking in TPZs will require prior approval from the nominated AQF level 5 Arborist and need to facilitate prior installation of ground protection measures. Access and egress and; screwing of tracks within TPZs is to be minimised.
- Where excavations are proposed in close proximity to or may impact TPZs, installation of Box shoring, shutter boards, piling or utilisation of jet grouting (grout injection) may be necessary to limit soil slippage and undermining of root systems.
- Any proposed footings within TPZs are to be undertaken via non-destructive methods (i.e., industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist) and accommodate roots greater than 30 mm in diameter. Roots less than 30 mm in diameter may be pruned subject to approval of the nominated AQF level 5 Arborist). *Note: Mechanical excavation is not permitted within TPZs.*
- Canopy pruning works are to be undertaken in keeping with Australian Standard AS 4373 'Pruning of Amenity Trees' 2007 by suitably qualified and experienced AQF 3 Arborists under the guidance of the nominated AQF level 5 Arborist.
- Alignments and locations of any irrigation infrastructure proposed within TPZs are to be adjusted to avoid/accommodate roots greater than 30 mm in diameter and installed via non-destructive methods (i.e., industrial soil vacuum under the guidance of the nominated AQF level 5 Arborist). *Note: Mechanical excavation is not permitted within TPZs.*
- Any tree stock proposed for planting, are to be grown in keeping with the processes identified in the Australian Standards AS 2303 'Tree Stock for Landscape Use' 2015 and planted in accordance with industry best practice. Consideration will need to be given to the proposed planting areas and suitable tree species selection able to thrive appropriately (both above and below ground) in each given circumstance proposed.
- Planting of any vegetation within TPZs is to be undertaken that planting holes are strategically placed to avoid any tree roots greater than 30 mm in diameter.

5.3.4 OTHER TPZ ISSUES TO BE CONSIDERED FOR THE PROJECT

- Other site issues that may impact or encroach the specified TPZs, are to be recognised and addressed as part of site works. It is recommended that the matters below avoid the specified protection delineations of the trees. Where this isn't achievable, ground protection measures are to be installed prior. Matters include (but may not be limited to):
 - Dedicated access and egress points for the POS and greater site
 - Location of site offices and amenities
 - Parking/storage of vehicles and machinery
 - Lay down areas and storage of construction materials
 - Or any other activity that may compromise tree health or structure not identified above.

- Consideration will need to be given to the timing of the proposed works and the impacts that may arise during seasonal weather extremes i.e. avoiding the heat of Summer and scheduling works and planting in the cooler months of Autumn and early Winter (if possible) to limit unnecessary stress to the vegetation.
- To help maintain current health displays and offset impacts sustained during the development works, supplementary irrigation & monthly applications of Liquid wetting agent & Organic soil drench, will need to be accommodated during the construction and works phase. These applications are to be applied evenly within the TPZs of all trees identified for retention.
- Ongoing Arboricultural assessment and inputs will be required for the project to gauge tree response and address health and or structural issue that may arise prior to, during and post completion of the Armadale Station Precinct development.



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6 CONCLUSIONS

- Tree protection measures in keeping with AS 4970 'Protection of Trees on development sites' 2009' must be incorporated into the proposed design and into any proposed works methodologies in order to achieve tree sensitive outcomes for the Armadale Station Precinct development.
The retention of existing ground levels; limiting excavations within the specified TPZs and; implementing appropriate remedial measures will be important in the future success for the trees identified for incorporation. Where encroachments into TPZs are necessary, further input from an AQF level 5 Arborist will be required to review proposed encroachments and assist in the development of appropriate methodologies to allow works to occur in a sensitive manner.
Consideration needs to be given to the sensitivity of some of our native tree species and their lack of tolerance to close proximity rootzone disturbance (and subsequent root loss) that is common with urban developments and typical construction methods.
- As part of the Tree Protection responsibilities for the project, only suitable qualified and experienced AQF 5 Arborists should be engaged to:
 - Identify worthwhile specimens to be incorporated into the development
 - Undertake ongoing reviews and provide Arboricultural inputs into the design; methodologies and/or proposed encroachments for the trees identified for retention
 - Develop a site-specific Tree Protection Plan in keeping with AS 4970 'Protection of Trees on Development Sites' 2009
 - Provide approval (and supervision where required) of works within TPZs
 - Approve and oversee canopy pruning works
 - Monitor tree health and structure during works
 - Provide ongoing reporting and assessments as and where required
 - Provide sign off reporting that documents the trees post completion of the works.
- The nature of Arboricultural works required for the site can be expected to evolve and change over time. It is important to acknowledge that trees are dynamic, living organisms which are influenced by their above and below ground environs. Regular Arboricultural inspections are recommended to; monitor, document and respond to potential future tree changes that may require further arboricultural intervention not covered within this report.

7 RECOMMENDATIONS

1. That Trees 10, 18, 29, 86, 126, 170, 176, 178, 185, 186, 187, 198, 205, 261, 273, 275, 279, 281, 285, 317, 340, 352, 358, 359, 363, 364, 370, 374, 379, 411 & 425 receive further specialist input from an AQF level 5 Arborist before making a definitive conclusion on their incorporation into the proposed development.
2. The remainder of the x 374 trees are considered for retention and incorporation into the project.
3. That all project specific drawings are updated to include Tree specific numbering & accurate Tree Protection Zones (TPZ) & Structural Root Zones (SRZ) delineations for the subject trees identified for retention - refer *Appendix B Table of Results* for TPZ & SRZ projections for each of the trees identified for assessment.
4. That appropriate refinements, design modifications and the development of tree sensitive works methodologies identified in Point 5. *Preliminary Arboricultural Inputs into the Design* are incorporated into drawings and specifications and implemented for the project. Where appropriate modification is not achievable within TPZ areas, removal of the tree(s) may be required – subject to review and approval by an AQF level 5 Arborist.
5. That a site-specific Tree Protection Plan (TPP) be developed by Arboribus Consulting for trees identified for retention in keeping with the processes identified in Australian Standards AS 4970 *'Protection of Trees on Development Sites'* 2009 to be implemented by the nominated contactor for the duration of the works.
6. That based on the agreed final designs within TPZs, the identified Trees are retained and protected as under the guidance of the nominated AQF level 5 Arborist and all measures specified by Arboribus Consulting in the Tree Protection Plan (TPP) are to be implemented by the nominated contactor(s) for the duration of the works.
7. That Tree Protection Zones (TPZs) are established at the commencement of construction and are maintained for the duration of the construction works for all trees identified for retention (refer Appendix D for detail).
8. That the trees are monitored and any proposed works within the TPZs are approved & documented by the nominated AQF level 5 Arborist in keeping with the Australian Standards AS 4970 *'Protection of Trees on Development Sites'* 2009 & AS 4373 *'Pruning of Amenity Trees'* 2007.

9. That any canopy pruning works for trees identified for retention are undertaken in keeping with Australian Standard AS 4373 'Pruning of Amenity Trees' 2007 by suitably qualified and experienced AQF 3 Arborists under the guidance of the nominated AQF level 5 Arborist. *Note: If any project specific pruning is required to City of Armadale tree assets, formal permission is to be obtained from the City of Armadale Parks and Landscape department prior to any works commencing.*

10. That sign off reporting be undertaken by the nominated AQF level 5 Arborist that documents the condition of the trees post completion of the project and that provides a maintenance schedule post completion of the construction works.



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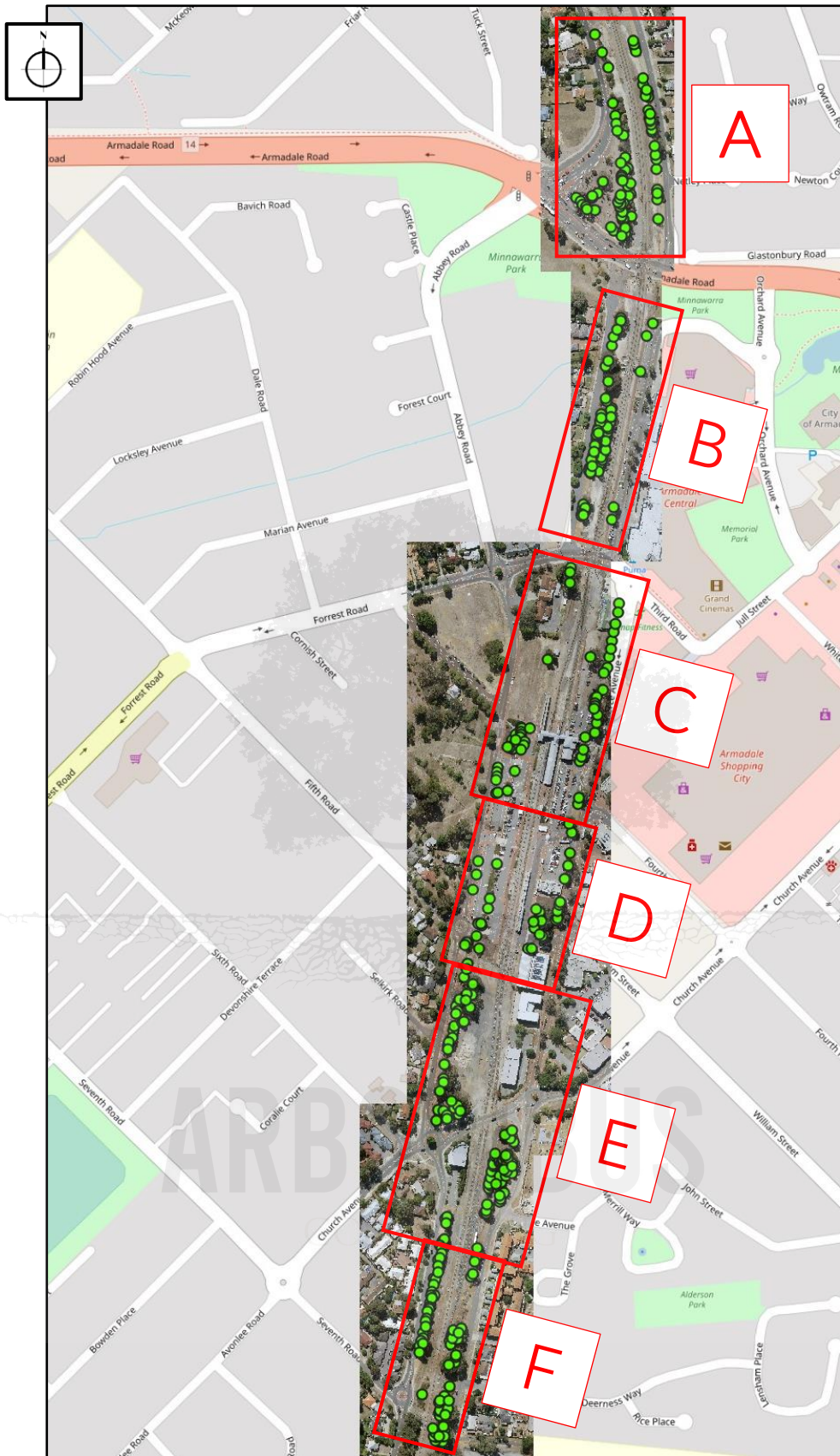
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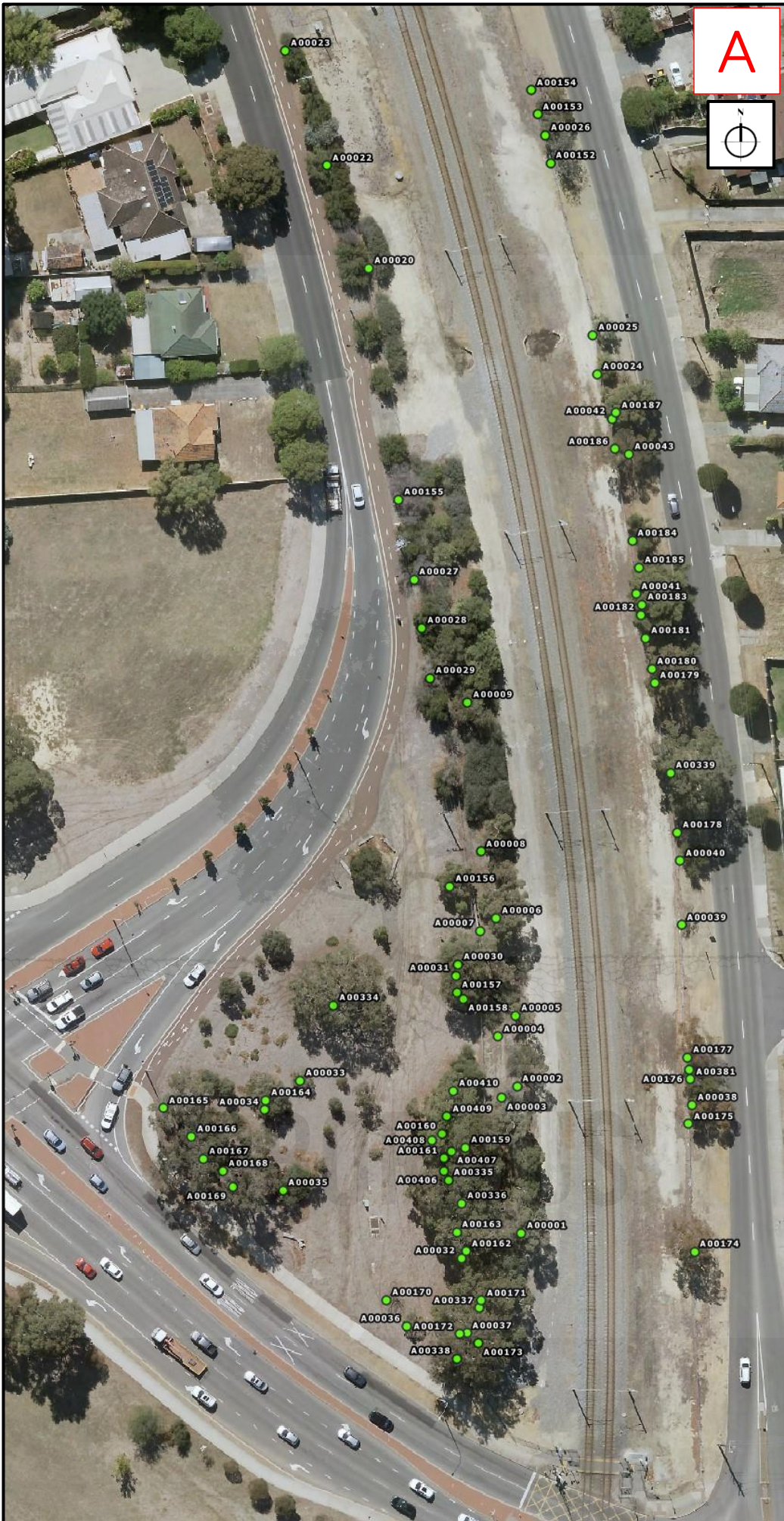
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APPENDIX A – TREE LOCATION & NUMBERING MAP



Figures 4 - 10. Tree Location & Individual Tree Tag ID Numbering

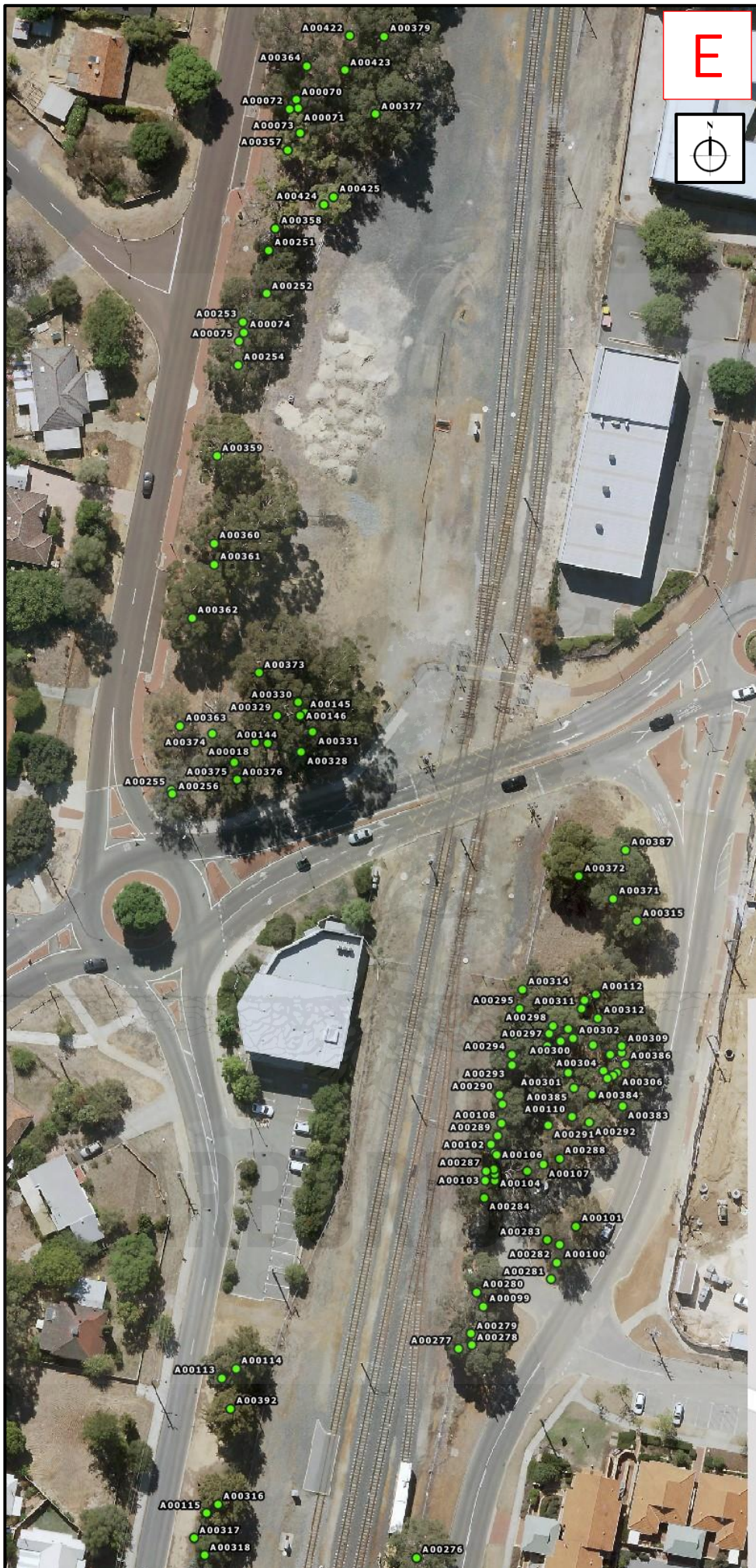
Image source: Aerial image source <https://web.metromap.com.au/map> Image Date - 14 April 2022













APPENDIX B – TABLE OF RESULTS & DEFINITIONS

DEFINITIONS - GENERAL

Tree Tag ID Number	Provides individual identification tree tag number.
Nomenclature & Tree Identification	Identifies the genus, species and common name for the tree.
Estimated Age	Estimated age at the time of assessment. (Juvenile, Semi Mature, Early Mature, Mature, Post Mature).
Estimated Tree Height	Estimate of the Trees Height in meters.
Estimated Canopy Spread	Estimate of the Trees canopy spread in meters.
Useful Life Expectancy (ULE)	Estimate of the trees Useful Life Expectancy (ULE) (less than 5 Years, 5 – 15 years, 15 – 40 years, or over 40 years).
Canopy Health	Identifies the visual health display at the time of assessment. (Exceptional, Good, Reasonable, Questionable, Poor, Dead) – refer Canopy Health Definitions below for further detail.
Canopy Structure	Identifies the canopies visual structural form at the time of assessment. (Good, Reasonable, Questionable, Poor, Dead) – refer Canopy Health Definitions below for further detail.
Trunk Diameter At Widest Point	Measurement of trunk diameter in millimetres. Typically measured at 1.4 meters above ground level and measured at the widest point for single trunks, multi stemmed and bifurcated trunks
Tree Protection Zone (TPZ) Radius (M)	Calculated as: $x12$ Trunk Diameter measured in meters as a radius taken from the centre of the main stem at ground level Identified in AS 4970 'Protection of Trees on Development Sites' 2009 'as <i>the area of root and canopy area requiring protection during construction so the tree remains viable. Any works proposed within this area requires approval from an AQF 5 Arborist prior to commencement.</i>
Trunk Diameter above Buttress	Measurement of trunk diameter in millimetres measured above buttress. Measurement essential for accurate calculation of Structural Root Zone (SRZ) radius
Structural Root Zone (SRZ) Radius (M)	Calculated as: Diameter at ground level $\times 50)^{0.42} \times 0.64$ measured in meters as a radius taken from the centre of the main stem at ground level Identified in AS 4970 'Protection of Trees on Development Sites' 2009 'as <i>the area required for tree stability</i> '. <i>Special Note:- the SRZ is not to be mistaken for; or utilised as a Tree Protection Zone (TPZ) refer TPZ definition above for detail.</i>
Comments	General information for the assessed tree.
Preliminary Recommendation	Identifies preliminary recommendations for the individual (remove, retain, or additional Arboicultural input/assessments required).
Recommended Canopy Management	Provides Canopy pruning recommendations for the individual tree. <i>Special Note:- All canopy pruning works are to be undertaken in keeping with Australian Standard AS 4373 'Pruning of Amenity Trees' 2007 by suitably qualified and experienced Arborists under the guidance of Arboribus Consulting.</i>
Latitude & Longitude	Supplied coordinates of accurate tree location

DEFINITIONS – CANOPY HEALTH

Exceptional
The tree is demonstrating exceptional growth and exhibits a full dense canopy of foliage for a specimen of the species. Leaf colouration, distribution and size are all exceptional for the species. No visual signs of any pests and/or disease impacting tree health. Seasonal growth and/or callous development is active and evident.
Good
Tree displays typical foliage size, colouration, and density for a specimen of the species. Seasonal growth and/or callous development all appear typical. Seasonal deadwood may be apparent however likely as a result of natural attrition and not an indication of reduction in the trees wellbeing. May have minor seasonal pest (or disease) issues; however, unlikely to impact general health and wellbeing.
Reasonable
Tree displays typical foliage size and colouration; however, may display a reduction in ideal growth. The tree may exhibit modest visual health issues or minor areas of concern. Canopy density may be affected or have a slightly higher percentage of deadwood than what would be considered 'typical'. Seasonal growth and/or callous development may be slightly impeded. Presence of a pest or disease may be evident. However, issues noted considered easily addressed within the scope of proactive tree management.
Questionable
Canopy starting to indicate decline. Apical/terminal sections of the canopy may be actively declining or dead. Pests or diseases may be prevalent and impacting health that require intervention. Subject tree will require a tree specific management plan to be developed to address health issues noted and/or require targeted remedial intervention(s) and/or analysis or further investigation and/or monitored on a more detailed basis.
Poor
Canopy Indicates decline. Canopy may display less than 25% live photosynthetic mass. Majority of tertiary and secondary limbs are dead or compromised. Current health condition such that significant remedial intervention is unlikely to assist in appropriate/worthwhile recovery.
Dead
Tree has no active conductive tissue - indicating no chance of recovery.

DEFINITIONS – CANOPY STRUCTURE

Good
Primary and secondary framework and Primary and secondary branch attachments (unions) display typical form for a specimen of the species. Tree exhibits no significant visual issues within the canopy; however, may display minimal/minor structural imperfections (that may be addressed within the scope of proactive tree management).
Reasonable
Tree displays reasonable canopy structural form and generally free of significant issues; however, the tree may exhibit modest visual issues, structural defects or areas of concern that may require to be addressed with remedial work or require to be monitored. This may include, minor competition/suppression issues, minor leans, codominant stems and branches, minor bark inclusions, noticeable wounding & damage, previously lopped canopies; storm damaged and/or vandalisms where epicormic regeneration has developed satisfactory branch attachment etc... However, issues can be addressed or monitored within the scope of proactive tree management.
Questionable
Primary and secondary canopy structural form displays defects, flaws or areas of concern that may lead to future issues. This could include issues that may affect structural integrity including Storm damage & previous deleterious pruning, significant asymmetry & competition issues, problematic leans, codominant stems with bark inclusions and swelling present, substantial wounding & damage, major decay, poor branch taper etc that will require to be addressed with remedial intervention; be further investigated and/or; specifically monitored in an ongoing basis.
Poor
Tree displays substantial/major structural flaws within its primary and/or secondary (or beyond) canopy structural form i.e.: extensive decay and/or hollows, broken or compromised unions, substantial splits breaks and/or fractures etc.. where remedial, Arboricultural or Engineering intervention is unlikely to improve form or substantially reduce site risk.

TABLE OF RESULTS



ARBORIBUS
CONSULTING



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00001	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	9	8	40+ years	Reasonable	Reasonable	0.300	3.60	0.350	2.13	Canopy noted to be slightly sparse, Tree is considered to be a reasonable specimen of the species, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.014045986853	-32.1476145746165
A00002	<i>Corymbia calophylla</i> (Marri)	Early Mature	9	7	40+ years	Reasonable	Reasonable	0.320	3.84	0.400	2.25	Canopy noted to be slightly sparse, Tree on lean (minor), Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.014038155570	-32.1473733877171
A00003	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	11	8	40+ years	Good	Reasonable	0.300	3.60	0.350	2.13	Included bark unions noted (minor), Tree is considered to be a reasonable specimen of the species, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.014008507565	-32.1473922363154
A00004	Unknown Specimen											Tree no longer here - cut down by others, Tree situated within rail corridor			116.014000779471	-32.1472910975155
A00005	<i>Corymbia calophylla</i> (Marri)	Early Mature	10	6	40+ years	Good	Questionable	0.310	3.72	0.380	2.20	Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.014035926679	-32.1472561795175
A00006	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	8	7	15-40 years	Reasonable	Reasonable	0.200	2.40	0.300	2.00	Canopy displays leggy structural form, Canopy noted to be slightly sparse, Damage to surface roots (minor), Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree on lean (minor), Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013997373385	-32.1470957837161
A00007	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	10	8	15-40 years	Reasonable	Reasonable	0.350	4.20	0.450	2.37	Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013967223279	-32.1471172670144
A00008	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	7	8	15-40 years	Good	Questionable	0.350	4.20	0.380	2.20	Canopy displays leggy structural form, Damage noted to main stem (significant), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays questionable form, Tree on lean (minor), Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013967488489	-32.1469863537150
A00009	<i>Corymbia calophylla</i> (Marri)	Early Mature	10	7	15-40 years	Reasonable	Reasonable	0.350	4.20	0.400	2.25	Canopy noted to be slightly sparse, Tree is considered to be a reasonable specimen of the species, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013941362104	-32.1467408755146
A00010	<i>Corymbia calophylla</i> (Marri)	Early Mature	12	4	<5 years	Questionable	Questionable	0.350	4.20	0.450	2.37	Tree displays questionable form, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified		116.013782833052	-32.1497781954926
A00011	<i>Corymbia calophylla</i> (Marri)	Mature	16	9	15-40 years	Good	Reasonable	0.400	4.80	0.500	2.47	Included bark unions noted (minor), Minor canopy suppression noted, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013761390247	-32.1498075380913
A00012	<i>Corymbia calophylla</i> (Marri)	Early Mature	12	7	15-40 years	Reasonable	Reasonable	0.600	7.20	0.600	2.67	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates at ground level, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013649612295	-32.1502864532831
A00013	<i>Corymbia calophylla</i> (Marri)	Mature	12	7	15-40 years	Reasonable	Good	0.550	6.60	0.550	2.57	Major canopy suppression noted, Tree is considered to be a reasonable specimen of the species, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013642873195	-32.1502679166828
A00014	<i>Corymbia calophylla</i> (Marri)	Mature	17	10	40+ years	Good	Good	0.500	6.00	0.550	2.57	Tree is considered to be a reasonable specimen of the species, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013692701412	-32.1501394158861
A00015	<i>Corymbia calophylla</i> (Marri)	Mature	16	8	15-40 years	Good	Reasonable	0.380	4.56	0.450	2.37	Minor canopy suppression noted, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013711779718	-32.1500949964873



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00016	<i>Corymbia calophylla</i> (Marri)	Early Mature	13	10	15 - 40 years	Reasonable	Reasonable	0.330	3.96	0.400	2.25	Canopy noted to be slightly sparse, Minor canopy suppression noted, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013741860536	-32.1499182987898
A00017	Unknown Specimen											Tree no longer here - cut down by others, Tree situated within rail corridor			116.013773110348	-32.1498203062919
A00018	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	10	3	Dead	Dead	Questionable	0.400	N/A	0.550	N/A	Dead Tree - no chance of recovery, Hollows (habitat) noted throughout canopy, tree is situated within rail corridor, situated in fill sand and ballast to unknown depths,	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified		116.011757439202	-32.1571926016495
A00019	<i>Allocasuarina fraseriana</i> (WA Sheoak)	Early Mature	3	4	15 - 40 years	Good	Reasonable	0.300	3.60	0.300	2.00	Main stem bifurcates at ground level, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011584977918	-32.1606325999250
A00020	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.013749150730	-32.1460250762073
A00021	<i>Eucalyptus leucoxylon</i> (S.A. Yellow Gum)	Mature	4	5	15 - 40 years	Reasonable	Good	0.300	3.60	0.350	2.13	Canopy noted to be slightly sparse, Minor canopy suppression noted, tree situated within grounds of Fire station	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013276739160	-32.1513680596580
A00022	<i>Corymbia calophylla</i> (Marri)	Early Mature	4	5	15 - 40 years	Good	Questionable	0.300	3.60	0.700	2.85	poor specimen for location, Trees displays multi stemmed form, Part of group of x31 trees in various sizes Includes Acacia, Marri, Bottlebrush located in verge of road under high and low voltage and adjacent cycle path, CoA Verge Trees	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013668620131	-32.1458563303037
A00023	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	3	4	5 - 15 years	Good	Questionable	0.400	4.80	0.400	2.25	Trees displays multi stemmed form, Part of group of x31 trees in various sizes Includes Acacia, Marri, Bottlebrush located in verge of road under high and low voltage and adjacent cycle path, CoA Verge Trees	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013587304534	-32.1456669835001
A00024	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	4	4	5 - 15 years	Reasonable	Reasonable	0.300	3.60	0.400	2.25	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014194730081	-32.1461995335308
A00025	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	4	5	5 - 15 years	Questionable	Reasonable	0.400	4.80	0.420	2.30	Canopy indicates decline, Canopy noted to be sparse, Deadwood noted within canopy (< 50 mm dia.), Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014185225185	-32.1461358245306
A00026	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Mature	7	7	5 - 15 years	Reasonable	Reasonable	0.420	5.04	0.450	2.37	Canopy noted to be slightly sparse, Canopy starting to indicate decline, Deadwood noted within canopy (< 50 mm dia.), Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014093565196	-32.1458069315270
A00027	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.013837264204	-32.1465384309098
A00028	<i>Corymbia calophylla</i> (Marri)	Early Mature	4	4	15 - 40 years	Good	Questionable	0.300	3.60	1.000	3.31	Trees displays multi stemmed form, Part of group of x31 trees in various sizes Includes Acacia, Marri, Bottlebrush located in verge of road under high and low voltage and adjacent cycle path, CoA Verge Trees	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013852219300	-32.1466183012103
A00029	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	4	6	<5 years	Poor	Reasonable	0.300	3.60	0.320	2.05	Canopy indicates decline, Canopy noted to be sparse, limited ULE, Trees displays multi stemmed form, Part of group of x31 trees in various sizes Includes Acacia, Marri, Bottlebrush located in verge of road under high and low voltage and adjacent cycle path, CoA Verge Trees	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.013868644997	-32.1467009736108
A00030	<i>Corymbia calophylla</i> (Marri)	Mature	11	10	40 + years	Good	Reasonable	0.300	3.60	0.350	2.13	Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, stand of 2, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013922872969	-32.1471725479117
A00031	<i>Corymbia calophylla</i> (Marri)	Semi-Mature	8	2	40 + years	Good	Reasonable	0.180	2.16	0.210	1.72	Canopy displays leggy structural form, Minor canopy suppression noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013918618267	-32.1471911105114
A00032	<i>Corymbia calophylla</i> (Marri)	Early Mature	8	4	40 + years	Good	Reasonable	0.210	2.52	0.300	2.00	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013929521033	-32.1476559397100
A00033	<i>Corymbia calophylla</i> (Marri)	Semi-Mature	3	4	40 + years	Reasonable	Good	0.160	2.00	0.300	2.00	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013616438310	-32.1473641350942
A00034	<i>Corymbia calophylla</i> (Marri)	Semi-Mature	5	3	40 + years	Good	Reasonable	0.160	2.00	0.210	1.72	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013547658997	-32.1474110975902



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00035	<i>Corymbia calophylla</i> (Marri)	Juvenile	3	4	40+ years	Good	Reasonable	0.300	3.60	0.300	2.00	Tree displays multi stemmed form, Stand of 3x, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013582535892	-32.1475445978915
A00036	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Early Mature	3	5	<5 years	Questionable	Reasonable	0.300	3.60	0.330	2.08	Canopy indicates decline, Canopy noted to be sparse, Deadwood noted within canopy (< 50 mm dia.), CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013822978710	-32.1477678625037
A00037	<i>Corymbia calophylla</i> (Marri)	Early Mature	9	6	15 - 40 years	Reasonable	Reasonable	0.400	4.80	0.400	2.25	Main stem bifurcates at ground level, Minor canopy suppression noted, Minor deadwood noted within canopy, Termite mud noted but no active termites observed at the time of inspection, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013940744326	-32.1477795897100
A00038	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	6	6	15 - 40 years	Good	Reasonable	0.400	4.80	0.400	2.25	Main stem bifurcates at ground level, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014379299428	-32.1474034609955
A00039	<i>Eucalyptus leucoxylon</i> (S.A. Yellow Gum)	Mature	4	10	5 - 15 years	Questionable	Reasonable	0.170	2.04	0.300	2.00	Canopy indicates decline, Canopy noted to be sparse, Deadwood noted within canopy (< 50 mm dia.), Tree on lean (minor), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014358393737	-32.1471073646358
A00040	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	4	6	15 - 40 years	Good	Reasonable	0.360	4.32	0.400	2.25	Main stem bifurcates between ground level and 500 mm, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014356077344	-32.1470014224361
A00041	<i>Acacia species</i> (Wattle)	Early Mature	2	6	5 - 15 years	Good	Questionable	1.000	12.00	1.000	3.31	Tree displays multi stemmed form, coppice/sucker regrowth, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014269715765	-32.1465619937333
A00042	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.014223278380	-32.1462737944321
A00043	<i>Eucalyptus gomphocephala</i> (Tuart)	Early Mature	4	3	40+ years	Good	Questionable	0.260	3.12	0.410	2.28	Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Multi stem form previously cut to ground level, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014256452680	-32.1463315954336
A00044	<i>Albizia saman</i> (Rain Tree)	Early Mature	3	8	40+ years	Good	Good	0.300	3.60	0.330	2.08	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013795406913	-32.1489964381967
A00045	<i>Corymbia calophylla</i> (Marri)	Mature	13	8	15 - 40 years	Reasonable	Reasonable	0.280	3.36	0.330	2.08	Minor canopy suppression noted, Minor deadwood noted within canopy, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013650978332	-32.1497924130854
A00046	<i>Corymbia calophylla</i> (Marri)	Mature	15	5	40+ years	Good	Good	0.350	4.20	0.500	2.47	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013622752322	-32.1498744697835
A00047	<i>Corymbia calophylla</i> (Marri)	Early Mature	9	5	40+ years	Good	Reasonable	0.250	3.00	0.250	1.85	Canopy displays leggy structural form, Main stem bifurcates at ground level, Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013648867425	-32.1498830250848
A00048	<i>Corymbia calophylla</i> (Marri)	Mature	11	6	40+ years	Good	Good	0.250	3.00	0.320	2.05	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013520224075	-32.1503010740760
A00049	<i>Corymbia calophylla</i> (Marri)	Mature	12	10	40+ years	Good	Reasonable	0.290	3.48	0.360	2.15	Main stem bifurcates above 4 meters+, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013506933171	-32.1503284907752
A00050	<i>Corymbia calophylla</i> (Marri)	Mature	12	7	15 - 40 years	Reasonable	Questionable	0.500	6.00	0.500	2.47	Canopy displays leggy structural form, Minor canopy suppression noted, Minor deadwood noted within canopy, Tree displays multi stemmed form, Wounding noted on main stem, stand of 3, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013527622376	-32.1503108254764
A00051	<i>Corymbia calophylla</i> (Marri)	Mature	16	10	40+ years	Good	Reasonable	0.380	4.56	0.450	2.37	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates above 4 meters+, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of stand of 6x juveniles growing at ground level, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013423112928	-32.1507368838688
A00052	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.013444726629	-32.1507681314698
A00053	<i>Eucalyptus sideroxylon</i> (Iron Bark)	Mature	12	10	15 - 40 years	Good	Questionable	0.420	5.04	0.500	2.47	Included bark unions with swelling noted, Main stem bifurcates between 3 meters and 4 meters, Damage to surface e roots noted, surface roots pushing through bitumen, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013793565073	-32.1508507720885
A00054	<i>Eucalyptus sideroxylon</i> (Iron Bark)	Early Mature	7	5	40+ years	Good	Reasonable	0.230	2.76	0.290	1.97	Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014235879584	-32.1488913354212



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00055	<i>Eucalyptus sideroxylon</i> (Iron Bark)	Early Mature	8	5	40+ years	Reasonable	Reasonable	0.250	3.00	0.370	2.18	Canopy noted to be slightly sparse, Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014309903205	-32.1487587903258
A00056	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	10	40+ years	Good	Reasonable	0.370	4.44	0.510	2.49	Canopy displays leggy structural form, Included bark unions noted (minor), Minor canopy suppression noted, Tree situated within garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012779426080	-32.1554590222129
A00057	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	8	40+ years	Reasonable	Reasonable	0.350	4.20	0.450	2.37	Canopy displays leggy structural form, Included bark unions noted (minor), Minor canopy suppression noted, Tree situated within garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012742616376	-32.1554428362110
A00058	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	11	10	40+ years	Good	Good	0.400	4.80	0.450	2.37	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, tree situated in fill soil, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013292307748	-32.1542044752464
A00060	<i>Lagerstroemia indica</i> (Crepe Myrtle)	Early Mature	3	3	15 - 40 years	Good	Good	0.100	2.00	0.100	1.50	Stand of 6 Crepe Myrtles, All Trees considered to be good specimen of the species, species are considered amenable to being relocated/transplanted, trees in raised planter box adjacent train station	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013387890720	-32.1534383710550
A00062	<i>Jacaranda mimosifolia</i> (Jacaranda)	Mature	8	14	40+ years	Good	Good	0.410	4.92	0.510	2.49	Tree is considered to be a good specimen of the species, Surface roots noted, 1x girdling root, trees in dedicated garden adjacent train station, species are considered amenable to being relocated/transplanted	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013415770027	-32.1533890596567
A00063	<i>Eucalyptus caesia</i> subsp. <i>magna</i> (Silver Princess)	Mature	7	5	5 - 15 years	Questionable	Good	0.200	2.40	0.280	1.94	Canopy indicates decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Termite mud noted in main stem - no active termites observed at time of inspection, tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012812243902	-32.1552251781157
A00064	<i>Xanthorrhoea preissii</i> (Grass Tree)	Mature	3	2	40+ years	Good	Good	0.350	2.00	0.400	2.00	Tree is considered to be a good specimen of the species, tree situated in garden adjacent bus lane, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012879675322	-32.1550884945200
A00065	<i>Eucalyptus rudis</i> (Flooded Gum)	Early Mature	9	6	15 - 40 years	Reasonable	Reasonable	0.260	3.12	0.330	2.08	Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, tree situated in fill soil, tree in close proximity to tree 237, main leader rubbing with 237, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013210318699	-32.1546949276398
A00066	<i>Casuarina species</i> (Sheoak)	Mature	6	5	15 - 40 years	Reasonable	Reasonable	0.500	6.00	0.500	2.47	Main stem bifurcates at ground level, Minor canopy suppression noted, Minor deadwood noted within canopy, Tree displays multi stemmed form, tree situated in fill soil, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013267250529	-32.1544166492441
A00067	Unknown Specimen											Dead Tree - no chance of recovery, Tree no longer here - cut down by others, CoA Verge Tree			116.012530211513	-32.1532091297092
A00068	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Early Mature	8	5	40+ years	Good	Good	0.300	3.60	0.350	2.13	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012543034908	-32.1533079925095
A00069	<i>Xanthorrhoea preissii</i> (Grass Tree)	Mature	2	2	40+ years	Good	Good	0.300	2.00	0.400	2.00	Tree is considered to be a good specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012079679790	-32.1553083780754
A00070	<i>Corymbia calophylla</i> (Marri)	Early Mature	10	5	40+ years	Good	Good	0.220	2.64	0.300	2.00	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, 2 juvenile Marri noted at base, part of stand of 5 Marri, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011842953200	-32.1560464778592
A00071	<i>Corymbia calophylla</i> (Marri)	Early Mature	12	5	40+ years	Good	Reasonable	0.220	2.64	0.300	2.00	Canopy displays leggy structural form, Minor canopy suppression noted, Part of stand of 5 marri, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011847331200	-32.1560619859594
A00072	<i>Corymbia calophylla</i> (Marri)	Mature	13	8	40+ years	Good	Good	0.360	4.32	0.460	2.39	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree on lean (minor), Part of stand of 5 marri, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011829463197	-32.1560629506584
A00073	<i>Corymbia calophylla</i> (Marri)	Mature	13	8	40+ years	Good	Good	0.320	3.84	0.420	2.30	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, Part of stand of 5 marri, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011851938897	-32.1561064277595
A00074	<i>Corymbia calophylla</i> (Marri)	Mature	11	7	40+ years	Good	Good	0.240	2.88	0.330	2.08	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011732916453	-32.1564618631514



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00075	<i>Corymbia calophylla</i> (Marri)	Mature	11	6	40+ years	Reasonable	Reasonable	0.260	3.12	0.320	2.05	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011723341751	-32.1564776530508
A00076	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	4	5	15 - 40 years	Good	Questionable	0.330	3.96	0.400	2.25	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, main stem has failed, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012156214010	-32.1551953325801
A00077	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	5	6	40+ years	Good	Reasonable	0.330	3.96	0.330	2.08	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Prior branch failures noted within canopy (< 50 mm dia.), Tree displays multi stemmed form, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012112014505	-32.1551766930777
A00078	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	5	6	15 - 40 years	Good	Reasonable	0.400	4.80	0.400	2.25	Main stem bifurcates at ground level, Minor canopy suppression noted, Tree displays multi stemmed form, stand of 3, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012144658910	-32.1551763493795
A00079	<i>Brachychiton acerifolius</i> (Illawarra Flame Tree)	Early Mature	6	6	40+ years	Good	Good	0.330	3.96	0.400	2.25	Tree is considered to be a good specimen of the species, Part of Avenue of 8x Illawarra Flame Trees located in carpark area, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012340346786	-32.1545363553930
A00080	<i>Brachychiton acerifolius</i> (Illawarra Flame Tree)	Early Mature	5	5	40+ years	Good	Good	0.220	2.64	0.300	2.00	Tree is considered to be a good specimen of the species, Part of Avenue of 8x Illawarra Flame Trees located in carpark area, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012255969546	-32.1549077025868
A00081	<i>Brachychiton acerifolius</i> (Illawarra Flame Tree)	Early Mature	4	5	40+ years	Good	Good	0.240	2.88	0.300	2.00	Tree is considered to be a good specimen of the species, Part of Avenue of 8x Illawarra Flame Trees located in carpark area, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012233538535	-32.1550088440851
A00082	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	5	7	15 - 40 years	Good	Good	0.260	3.12	0.300	2.00	Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012334135142	-32.1537811455960
A00083	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	5	5	15 - 40 years	Good	Reasonable	0.330	3.96	0.380	2.20	Main stem bifurcates at ground level, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012359218947	-32.1537690442974
A00084	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	5	5	15 - 40 years	Reasonable	Reasonable	0.300	3.60	0.300	2.00	Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, 2x juvenile Bottlebrush near tree in same garden bed, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012568321293	-32.1535475898098
A00085	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	15	8	15 - 40 years	Good	Good	0.400	4.80	0.520	2.51	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011643465019	-32.1607282421278
A00086	<i>Corymbia eximia</i> (Yellow Bloodwood)	Early Mature	7	5	Dead	Dead	Questionable	0.300	N/A	0.330	N/A	Dead Tree - no chance of recovery, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011654892522	-32.1607104432285
A00087	<i>Corymbia calophylla</i> (Marri)	Early Mature	8	5	40+ years	Good	Good	0.220	2.64	0.290	1.97	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011651232425	-32.1606594356285
A00088	<i>Corymbia calophylla</i> (Marri)	Mature	13	10	40+ years	Good	Good	0.450	5.40	0.560	2.59	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011682940935	-32.1605954260305
A00089	<i>Corymbia calophylla</i> (Marri)	Early Mature	5	5	40+ years	Reasonable	Good	0.280	3.36	0.350	2.13	Canopy noted to be slightly sparse, Main stem bifurcates between ground level and 500 mm, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011665560335	-32.1605540578297
A00090	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	6	3	40+ years	Good	Reasonable	0.180	2.16	0.250	1.85	Canopy displays leggy structural form, tree situated adjacent Low Voltage power, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011608922338	-32.1604076715273
A00091	<i>Casuarina obesa</i> (Swamp Sheoak)	Early Mature	12	5	15 - 40 years	Reasonable	Reasonable	0.220	2.64	0.300	2.00	Friction stems noted within canopy (< 50 mm dia.), Included bark unions noted (major), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011648637251	-32.1603147496299



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00092	<i>Callistemon species (Bottlebrush)</i>	Mature	4	3	5 - 15 years	Reasonable	Reasonable	0.350	4.20	0.350	2.13	Canopy noted to be slightly sparse, Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011678401057	-32.1602836296316
A00093	<i>Casuarina obesa (Swamp Sheoak)</i>	Mature	9	8	15 - 40 years	Good	Reasonable	0.450	5.40	0.560	2.59	Included bark unions noted (minor), Main stem bifurcates between ground level and 500 mm, Tree is considered to be a reasonable specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011746849679	-32.1601256799361
A00094	<i>Corymbia calophylla (Marri)</i>	Mature	15	8	40 + years	Good	Good	0.320	3.84	0.430	2.32	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011748809816	-32.1596369699383
A00095	<i>Corymbia calophylla (Marri)</i>	Mature	14	8	40 + years	Good	Reasonable	0.320	3.84	0.430	2.32	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Canopy extends into rail corridor , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011766034123	-32.1595780760395
A00096	<i>Corymbia calophylla (Marri)</i>	Semi-Mature	4	4	40 + years	Good	Good	0.150	2.00	0.200	1.68	Tree is considered to be a good specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011784039628	-32.1595522395406
A00097	<i>Corymbia calophylla (Marri)</i>	Mature	12	6	40 + years	Good	Reasonable	0.300	3.60	0.390	2.23	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Canopy extends into rail corridor , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011798347630	-32.1595530806414
A00099	<i>Corymbia calophylla (Marri)</i>	Mature	5	4	15 - 40 years	Reasonable	Reasonable	0.250	3.00	0.330	2.08	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Wounding noted on main stem , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012238012695	-32.1581998200713
A00100	<i>Melaleuca species (Paperbark Sp.)</i>	Mature	2	3	<5 years	Poor	Reasonable	0.100	2.00	0.100	1.50	Canopy indicates decline, Canopy noted to be sparse, Tree displays multi stemmed form , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012398088427	-32.1580892022805
A00101	<i>Casuarina obesa (Swamp Sheoak)</i>	Mature	6	8	15 - 40 years	Reasonable	Reasonable	0.400	4.80	0.480	2.43	Main stem bifurcates between 1 meter and 2 meters, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012433834934	-32.1580566917826
A00102	<i>Corymbia calophylla (Marri)</i>	Early Mature	11	4	15 - 40 years	Good	Reasonable	0.220	2.64	0.300	2.00	Wounding noted on main stem, majority of the canopy extends into rail corridor , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012253202919	-32.1579107506734
A00103	<i>Corymbia calophylla (Marri)</i>	Early Mature	9	3	15 - 40 years	Good	Good	0.180	2.16	0.300	2.00	Wounding noted on main stem, canopy extends over into main rail corridor , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012242684613	-32.1579742098726
A00104	<i>Corymbia calophylla (Marri)</i>	Early Mature	7	4	15 - 40 years	Reasonable	Reasonable	0.300	3.60	0.350	2.13	Deadwood noted within canopy (150 mm to 300 mm dia.), Minor canopy suppression noted , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012261432516	-32.1579637364736
A00105	<i>Corymbia calophylla (Marri)</i>	Mature	11	3	15 - 40 years	Reasonable	Reasonable	0.150	2.00	0.200	1.68	Canopy displays leggy structural form, Minor canopy suppression noted, Likely 1 tree with 106 , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012262670219	-32.1579254961739
A00106	<i>Corymbia calophylla (Marri)</i>	Mature	11	4	15 - 40 years	Reasonable	Reasonable	0.180	2.16	0.300	2.00	Canopy noted to be slightly sparse, Main stem bifurcates at ground level, Likely 1 tree with 105 , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012265618820	-32.1579284263740
A00107	<i>Casuarina obesa (Swamp Sheoak)</i>	Mature	11	7	15 - 40 years	Good	Reasonable	0.260	3.12	0.350	2.13	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012364375132	-32.1579465672793
A00108	<i>Corymbia calophylla (Marri)</i>	Early Mature	7	3	15 - 40 years	Good	Questionable	0.260	3.12	0.350	2.13	Canopy displays leggy structural form, Main stem bifurcates at ground level , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012277043825	-32.1578721339749
A00109	<i>Corymbia calophylla (Marri)</i>	Early Mature	11	5	40 + years	Good	Good	0.210	2.52	0.350	2.13	Minor canopy suppression noted, Tree is considered to be a good specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012277985328	-32.1578377784751
A00110	<i>Casuarina obesa (Swamp Sheoak)</i>	Mature	13	6	15 - 40 years	Good	Reasonable	0.300	3.60	0.400	2.25	Canopy displays leggy structural form, Included bark unions noted (minor), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012424544948	-32.1578614612830
A00111	<i>Corymbia calophylla (Marri)</i>	Early Mature	6	4	15 - 40 years	Good	Reasonable	0.170	2.04	0.200	1.68	Canopy displays leggy structural form, Majority of canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012302988941	-32.1577155447770



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00112	<i>Corymbia calophylla</i> (Marri)	Mature	8	7	15 - 40 years	Good	Reasonable	0.380	4.56	0.450	2.37	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree on lean (minor), CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012476482371	-32.1576421656868
A00113	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Mature	7	9	40 + years	Good	Good	0.440	5.28	0.550	2.57	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011686721206	-32.1583274982407
A00114	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	11	10	15 - 40 years	Good	Reasonable	0.530	6.36	0.700	2.85	Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011715920412	-32.1583108115423
A00115	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Mature	8	6	40 + years	Good	Reasonable	0.330	3.96	0.440	2.34	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011654951283	-32.1585682599379
A00116	<i>Casuarina obesa</i> (Swamp Sheoak)	Early Mature	9	9	40 + years	Reasonable	Reasonable	0.240	2.88	0.400	2.25	Canopy noted to be slightly sparse, Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011605442961	-32.1587715922343
A00117	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	9	10	15 - 40 years	Good	Good	0.450	5.40	0.500	2.47	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011548217638	-32.1589702910303
A00118	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Early Mature	7	6	15 - 40 years	Good	Reasonable	0.300	3.60	0.320	2.05	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011567935039	-32.1589834333313
A00119	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	9	8	40 + years	Reasonable	Good	0.430	5.16	0.500	2.47	Deadwood noted within canopy (< 50 mm dia.), Damage to surface roots noted in verge, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011540011032	-32.1590330340296
A00120	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	10	6	15 - 40 years	Reasonable	Reasonable	0.450	5.40	0.450	2.37	Canopy displays leggy structural form, Included bark unions noted (minor), Main stem bifurcates at ground level, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, Damage to surface roots noted in verge, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011516908222	-32.1591164098280
A00121	<i>Eucalyptus rudis</i> (Flooded Gum)	Early Mature	10	7	40 + years	Good	Good	0.340	4.08	0.500	2.47	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011550573325	-32.1591458206296
A00122	<i>Casuarina obesa</i> (Swamp Sheoak)	Early Mature	8	6	15 - 40 years	Good	Good	0.240	2.88	0.300	2.00	Included bark unions noted (minor), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011509108419	-32.1591461718274
A00123	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	5	7	40 + years	Good	Reasonable	0.320	3.84	0.400	2.25	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, Low spreading canopy, basal wound, close proximity to 125 likely to be same tree, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011516692417	-32.1591810831277
A00124	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	11	11	15 - 40 years	Good	Good	0.470	5.64	0.710	2.87	Tree is considered to be a good specimen of the species, Damage to surface roots noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011502308712	-32.1592238477267
A00125	<i>Eucalyptus wandoo</i> (Wandoo)	Early Mature	7	5	40 + years	Good	Reasonable	0.220	2.64	0.300	2.00	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Close proximity to 123, likely to be same tree, wounding noted on main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011521101818	-32.1591828216279
A00126	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Mature	4	4	Dead	Dead	Questionable	0.470	N/A	0.550	N/A	Dead Tree - no chance of recovery, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011490318207	-32.1592714113258
A00127	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	11	7	15 - 40 years	Good	Good	0.340	4.08	0.500	2.47	Tree is considered to be a good specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011491199505	-32.1592960936258
A00128	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Early Mature	4	5	15 - 40 years	Reasonable	Reasonable	0.300	3.60	0.300	2.00	Canopy noted to be slightly sparse, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011467571900	-32.1593196301244
A00129	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	12	11	15 - 40 years	Good	Reasonable	0.440	5.28	0.620	2.71	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a reasonable specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011406639673	-32.1595511285200



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00130	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Early Mature	8	7	15 - 40 years	Good	Reasonable	0.350	4.20	0.350	2.13	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Tree displays multi stemmed form , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011405821869	-32.1596085201197
A00131	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	13	12	40 + years	Good	Reasonable	0.540	6.48	0.630	2.73	Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011386483164	-32.1596323766186
A00132	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	7	10	40 + years	Good	Reasonable	0.450	5.40	0.450	2.37	Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree displays multi stemmed form, Low spreading canopy , CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011366501457	-32.1596914398172
A00133	<i>Corymbia calophylla</i> (Marri)	Mature	11	10	15 - 40 years	Good	Reasonable	0.500	6.00	0.550	2.57	Minor canopy suppression noted, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013791602462	-32.1496675205936
A00134	<i>Corymbia calophylla</i> (Marri)	Mature	14	10	15 - 40 years	Good	Reasonable	0.500	6.00	0.550	2.57	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013790703461	-32.1496843301935
A00135	<i>Corymbia calophylla</i> (Marri)	Mature	17	15	15 - 40 years	Reasonable	Reasonable	0.800	9.60	0.900	3.17	Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013782453554	-32.1497550671927
A00136	<i>Corymbia calophylla</i> (Marri)	Mature	17	11	40 + years	Good	Reasonable	0.600	7.20	0.650	2.76	Deadwood noted within canopy (< 50 mm dia.), Included bark unions noted (minor), Included bark unions with swelling noted, Main stem bifurcates between 3 meters and 4 meters, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013630054588	-32.1503432495818
A00137	<i>Corymbia calophylla</i> (Marri)	Mature	15	9	15 - 40 years	Good	Questionable	0.520	6.24	0.650	2.76	Canopy displays leggy structural form, Decay of woody tissue noted in main stem (significant), All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013671484304	-32.1502136159846
A00138	<i>Corymbia calophylla</i> (Marri)	Mature	16	11	40 + years	Good	Good	0.750	9.00	0.750	2.93	Decay of woody tissue noted in main stem (minor), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a reasonable specimen of the species, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013662947304	-32.1501919917842
A00139	<i>Corymbia calophylla</i> (Marri)	Mature	17	10	40 + years	Good	Reasonable	0.550	6.60	0.600	2.67	Tree is considered to be a reasonable specimen of the species, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013712655217	-32.1501069486873
A00140	<i>Corymbia calophylla</i> (Marri)	Mature	14	12	15 - 40 years	Good	Reasonable	0.420	5.04	0.600	2.67	Main stem bifurcates between ground level and 500 mm, Tree is considered to be a reasonable specimen of the species, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013719178725	-32.1500125092881
A00141	<i>Corymbia calophylla</i> (Marri)	Mature	17	13	15 - 40 years	Reasonable	Reasonable	0.420	5.04	0.550	2.57	Deadwood noted within canopy (< 50 mm dia.), Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013749126840	-32.1498837189903
A00142	<i>Corymbia calophylla</i> (Marri)	Mature	15	12	40 + years	Good	Good	0.430	5.16	0.500	2.47	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, Tree on lean (minor), All Marri in this rail corridor area are situated in fill sand and ballast to unknown depths, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013739339140	-32.1498656551899
A00144	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	15	10	15 - 40 years	Reasonable	Reasonable	0.450	5.40	0.500	2.47	Canopy noted to be slightly sparse, Damage noted to main stem (minor), Tree is considered to be a reasonable specimen of the species, tree is situated in fill sand and ballast to unknown depths , tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011783027305	-32.1571943808509
A00145	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	5	5	15 - 40 years	Reasonable	Reasonable	0.300	3.60	0.400	2.25	Canopy displays leggy structural form, Minor canopy suppression noted, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011861113221	-32.1571390843554



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00146	<i>Eucalyptus rudis</i> (Flooded Gum)	Early Mature	7	4	5 - 15 years	Reasonable	Questionable	0.250	3.00	0.500	2.47	Canopy displays leggy structural form, Fire damage noted in main stem (significant), Tree displays questionable health, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011852270819	-32.1571455472549
A00147	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	21	10	40 + years	Good	Good	0.500	6.00	0.550	2.57	Tree is considered to be a good specimen of the species, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011563457709	-32.1607072188235
A00148	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	19	5	15 - 40 years	Good	Reasonable	0.400	4.80	0.500	2.47	Canopy displays leggy structural form, Minor canopy suppression noted, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011581634414	-32.1606708007247
A00149	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	12	9	15 - 40 years	Good	Reasonable	0.600	7.20	0.600	2.67	Canopy displays leggy structural form, Main stem bifurcates between ground level and 500 mm, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011542427410	-32.1606553625226
A00150	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	20	13	40 + years	Good	Good	0.650	7.80	0.750	2.93	Tree is considered to be a good specimen of the species, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011571186716	-32.1606228696243
A00151	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	13	11	40 + years	Good	Good	0.700	8.40	0.800	3.01	Tree is considered to be a good specimen of the species, Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011537657316	-32.1605696773227
A00152	<i>Hakea laurina</i> (Pin Cushion Hakea)	Mature	8	7	5 - 15 years	Reasonable	Reasonable	0.540	6.48	0.650	2.76	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Tree displays multi stemmed form, decay of woody tissue noted in main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014103205494	-32.1458519511274
A00153	<i>Eucalyptus platypus</i> var. <i>heterophylla</i> (Coastal Moort)	Mature	4	4	15 - 40 years	Good	Reasonable	0.210	2.52	0.400	2.25	Friction stems noted within canopy (< 50 mm dia.), Main stem bifurcates at ground level, Tree is considered to be a reasonable specimen of the species, termite mud noted in main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014078124297	-32.1457721503263
A00154	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.014066270798	-32.1457323831259
A00155	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.013808042510	-32.1464063447088
A00156	<i>Corymbia calophylla</i> (Marri)	Early Mature	5	8	40 + years	Good	Good	0.500	6.00	0.500	2.47	Main stem bifurcates at ground level, Tree is considered to be a good specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013907040276	-32.1470439173114
A00157	<i>Corymbia calophylla</i> (Marri)	Mature	14	16	40 + years	Reasonable	Reasonable	0.970	11.64	1.020	3.34	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Termite mud noted at base of main stem, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013920444765	-32.1472182608114
A00158	<i>Corymbia calophylla</i> (Marri)	Semi-Mature	3	4	40 + years	Good	Reasonable	0.200	2.40	0.400	2.25	Main stem bifurcates at ground level, Stand of 2x, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013933014366	-32.1472289878120
A00159	<i>Corymbia calophylla</i> (Marri)	Mature	15	16	40 + years	Good	Good	0.610	7.32	0.810	3.03	Tree is considered to be a good specimen of the species, Stand of 4x juveniles noted at base of tree, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013937383548	-32.1474742554112
A00160	<i>Corymbia calophylla</i> (Marri)	Mature	6	6	40 + years	Good	Reasonable	0.300	3.60	0.380	2.20	Friction stems noted within canopy (150 mm to 300 mm dia.), Major canopy suppression noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013892683544	-32.1474508795088
A00161	<i>Corymbia calophylla</i> (Marri)	Mature	12	8	40 + years	Good	Reasonable	0.330	3.96	0.420	2.30	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013895570441	-32.1474914973088
A00162	<i>Corymbia calophylla</i> (Marri)	Mature	15	16	40 + years	Good	Good	0.670	8.04	0.840	3.08	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013939691888	-32.1476445604318
A00163	<i>Corymbia calophylla</i> (Marri)	Mature	10	13	40 + years	Good	Reasonable	0.450	5.40	0.600	2.67	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Tree on lean (minor), CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013920638736	-32.1476135507119



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00164	<i>Eucalyptus rudis</i> (Flooded Gum)	Early Mature	6	8	40+ years	Good	Good	0.260	3.12	0.350	2.13	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013549225598	-32.1473955483904
A00165	<i>Corymbia calophylla</i> (Marri)	Mature	14	15	40+ years	Reasonable	Reasonable	0.700	8.40	0.880	3.14	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013349456368	-32.1474089860794
A00166	<i>Corymbia calophylla</i> (Marri)	Mature	16	20	40+ years	Good	Reasonable	0.730 + 0.540	10.92	1.200	3.57	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013404276973	-32.1474553468822
A00167	<i>Corymbia calophylla</i> (Marri)	Mature	17	20	15 - 40 years	Reasonable	Reasonable	0.850	10.20	1.000	3.31	Canopy displays leggy structural form, Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Wounding on main stem,, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013427512273	-32.1474922074833
A00168	<i>Corymbia calophylla</i> (Marri)	Mature	17	16	40+ years	Good	Good	0.560	6.72	0.700	2.85	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Wounding on main stem,, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013466163277	-32.1475122435853
A00169	<i>Corymbia calophylla</i> (Marri)	Juvenile	4	2	40+ years	Good	Good	0.100	2.00	0.150	1.50	Tree is considered to be a good specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013485083078	-32.1475392956862
A00170	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Early Mature	1	3	Dead	Dead	Poor	0.300	N/A	0.500	N/A	Dead Tree - no chance of recovery, Tree has failed at ground level, CoA POS Tree, tree situated in mulched POS	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.013783689807	-32.1477252954017
A00171	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	13	13	40+ years	Good	Reasonable	0.460	5.52	0.700	2.85	Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Close proximity to 337, termite mud noted at base of main stem, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013968038334	-32.1477260109117
A00172	<i>Corymbia calophylla</i> (Marri)	Mature	10	9	40+ years	Good	Reasonable	0.340	4.08	0.500	2.47	Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013926748424	-32.1477811161093
A00173	<i>Corymbia calophylla</i> (Marri)	Mature	11	8	40+ years	Good	Good	0.370	4.44	0.500	2.47	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013962293228	-32.1477956044111
A00174	<i>Eucalyptus leucoxylon</i> (S.A. Yellow Gum)	Mature	11	10	15 - 40 years	Good	Good	0.420	5.04	0.620	2.71	Tree is considered to be a good specimen of the species, Wounding noted on main trunk, CoA Verge Tree, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014383423100	-32.1476456822348
A00175	<i>Eucalyptus leucoxylon</i> (S.A. Yellow Gum)	Mature	8	7	15 - 40 years	Reasonable	Reasonable	0.410	4.92	0.450	2.37	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Wounding noted on main trunk, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014372150214	-32.1474350801351
A00176	<i>Acacia species</i> (Wattle)	Mature	8	9	<5 years	Poor	Questionable	0.450	5.40	0.500	2.47	Canopy indicates decline, Canopy noted to be sparse, Main stem bifurcates between ground level and 500 mm, Limited ULE, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.014372656021	-32.1473457479355
A00177	<i>Eucalyptus leucoxylon</i> (S.A. Yellow Gum)	Mature	9	9	15 - 40 years	Good	Good	0.350	4.20	0.500	2.47	Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014369435522	-32.1473257364354
A00178	<i>Acacia species</i> (Wattle)	Mature	5	6	<5 years	Questionable	Reasonable	0.310	3.72	0.520	2.51	Canopy indicates decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Limited ULE, termite mud noted on main stem, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.014350259747	-32.1469553944360
A00179	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.014305994459	-32.1467083140346
A00180	<i>Corymbia maculata</i> (Spotted Gum)	Mature	15	11	40+ years	Good	Good	0.530	6.36	0.700	2.85	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014300411560	-32.1466852738345
A00181	<i>Acacia species</i> (Wattle)	Mature	3	4	<5 years	Questionable	Questionable	0.500	6.00	0.500	2.47	Canopy indicates decline, Canopy noted to be sparse, Main stem bifurcates between ground level and 500 mm, Significant deadwood noted within canopy (300 mm + dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014288823662	-32.1466345421340
A00182	<i>Corymbia maculata</i> (Spotted Gum)	Mature	16	12	40+ years	Good	Good	0.690	8.28	0.860	3.11	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014279606464	-32.1465968179337



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00183	<i>Hakea laurina</i> (Pin Cushion Hakea)	Mature	3	4	15 - 40 years	Reasonable	Reasonable	0.330	3.96	0.350	2.13	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014281975665	-32.1465797833339
A00184	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	4	6	15 - 40 years	Good	Reasonable	0.420	5.04	0.450	2.37	Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014262216270	-32.1464740825333
A00185	<i>Hakea laurina</i> (Pin Cushion Hakea)	Mature	4	4	Dead	Dead	Questionable	0.300	N/A	0.400	N/A	Dead Tree - no chance of recovery, Tree has failed at ground level, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.014276373269	-32.1465182649339
A00186	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	9	9	15 - 40 years	Reasonable	Questionable	0.590	7.08	0.730	2.90	Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Significant branch failures noted (300 mm + dia.), Wounding noted on main stem, Decay in main trunk, good habitat tree, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.014228100477	-32.1463234364321
A00187	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	9	8	15 - 40 years	Good	Questionable	0.680	8.16	0.750	2.93	Deadwood noted within canopy (150 mm to 300 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Decay and hollows in main structure, good habitat tree, termite mud noted at base, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.014231214082	-32.1462637518325
A00188	<i>Albizia saman</i> (Rain Tree)	Early Mature	3	5	40 + years	Good	Reasonable	0.200	2.40	0.230	1.79	Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013818268724	-32.1488959765984
A00189	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	26	26	40 + years	Good	Reasonable	2.300 + 1.290	15.00	3.100	5.32	Beehive noted in main stem, Deadwood noted within canopy (150 mm to 300 mm dia.), Hollows (habitat) noted throughout canopy, Main stem bifurcates at ground level, Significant branch failures noted (300 mm + dia.), old remnant specimen, wounding noted on main stem, termite mud noted on main stem, Opposite storm water drain, consider development of specific canopy management plan, memorial tree plaque #8, CoA Verge Tree, identified as tree 16 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013721440686	-32.1492150068918
A00190	<i>Acacia species</i> (Wattle)	Mature	4	4	5 - 15 years	Good	Reasonable	0.300	3.60	0.300	2.00	Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013726429058	-32.1495913419904
A00191	<i>Corymbia calophylla</i> (Marri)	Mature	10	6	15 - 40 years	Good	Reasonable	0.240	2.88	0.300	2.00	Minor canopy suppression noted, Tree on lean (minor), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013653456832	-32.1498014747855
A00192	<i>Corymbia calophylla</i> (Marri)	Mature	9	6	15 - 40 years	Good	Reasonable	0.230	2.76	0.300	2.00	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013647050230	-32.1498173245850
A00193	<i>Corymbia calophylla</i> (Marri)	Mature	15	6	15 - 40 years	Good	Reasonable	0.350	4.20	0.420	2.30	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Wounding noted on main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013617128119	-32.1499041943830
A00194	<i>Corymbia calophylla</i> (Marri)	Mature	14	8	15 - 40 years	Reasonable	Reasonable	0.750	9.00	0.840	3.08	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, Stand of 7x juveniles surrounding tree, CoA Verge Tree,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013602396109	-32.1500085497818
A00195	<i>Corymbia calophylla</i> (Marri)	Mature	12	8	40 + years	Good	Good	0.410	4.92	0.580	2.63	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013608289113	-32.1499715808822
A00196	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.013607533114	-32.1499466766823
A00197	<i>Corymbia calophylla</i> (Marri)	Mature	9	7	15 - 40 years	Reasonable	Reasonable	0.460	5.52	0.510	2.49	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between ground level and 500 mm, Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013591247604	-32.1500521018810
A00198	<i>Corymbia calophylla</i> (Marri)	Mature	15	10	Dead	Dead	Questionable	0.380	N/A	0.460	N/A	Dead Tree - no chance of recovery, Canopy extends towards rail corridor and track area, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.013629742019	-32.1499278134836
A00199	<i>Corymbia calophylla</i> (Marri)	Mature	14	9	40 + years	Good	Reasonable	0.410	4.92	0.700	2.85	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a reasonable specimen of the species, Wounding noted at base of main trunk., CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013585564802	-32.1500642147806
A00200	<i>Corymbia calophylla</i> (Marri)	Mature	16	15	40 + years	Good	Good	0.730	8.76	0.900	3.17	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013557997991	-32.1501683189786



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00201	<i>Corymbia calophylla</i> (Marri)	Mature	16	11	15 - 40 years	Reasonable	Good	0.690	8.28	0.850	3.09	Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013538071984	-32.1502142756773
A00202	<i>Corymbia calophylla</i> (Marri)	Early Mature	5	5	40 + years	Good	Reasonable	0.210	2.52	0.300	2.00	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013525382271	-32.1503584481760
A00203	<i>Corymbia calophylla</i> (Marri)	Mature	11	8	15 - 40 years	Good	Reasonable	0.490	5.88	0.550	2.57	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates at ground level, Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013521375272	-32.1503464997759
A00204	<i>Corymbia calophylla</i> (Marri)	Mature	16	14	40 + years	Good	Good	0.750	9.00	1.000	3.31	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, Numerous juvenile Marri at base, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013440928034	-32.1506894361700
A00205	<i>Corymbia calophylla</i> (Marri)	Mature	16	10	Dead	Dead	Questionable	0.500	N/A	0.600	N/A	Dead Tree - no chance of recovery, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.013458232334	-32.1507315990707
A00206	<i>Corymbia calophylla</i> (Marri)	Mature	14	7	40 + years	Good	Good	0.370	4.44	0.450	2.37	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013413280823	-32.1507937334680
A00207	<i>Corymbia calophylla</i> (Marri)	Mature	14	6	40 + years	Good	Good	0.330	3.96	0.900	3.17	Canopy displays leggy structural form, Main stem bifurcates at ground level, Minor canopy suppression noted, tree situated adjacent High voltage infrastructure, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013408625620	-32.1508209374676
A00208	<i>Corymbia calophylla</i> (Marri)	Mature	17	9	40 + years	Good	Good	0.320	3.84	0.410	2.28	Minor canopy suppression noted, Minor wounding on main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013435846525	-32.1508046816692
A00209	<i>Eucalyptus sideroxylon</i> (Iron Bark)	Mature	13	10	40 + years	Good	Reasonable	0.440	5.28	0.540	2.55	Canopy displays leggy structural form, Friction stems noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, Damage to surface roots, roots noted pushing through bitumen, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013821150286	-32.1507262893905
A00210	<i>Eucalyptus sideroxylon</i> (Iron Bark)	Mature	9	8	40 + years	Good	Good	0.440	5.28	0.530	2.53	Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a good specimen of the species, CoA Verge, Tree Opposite storm water drain	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014153011044	-32.1492676085151
A00211	<i>Corymbia maculata</i> (Spotted Gum)	Mature	13	10	40 + years	Reasonable	Good	0.420	5.04	0.450	2.37	Damage to surface roots (minor), Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates above 4 meters+, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013891835719	-32.1517561654899
A00212	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	9	40 + years	Good	Good	0.400	4.80	0.510	2.49	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, Tree situated within garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012788068682	-32.1554445149134
A00213	<i>Jacaranda mimosifolia</i> (Jacaranda)	Mature	8	11	40 + years	Good	Good	0.430	5.16	0.500	2.47	Main stem bifurcates between 1 meter and 2 meters, Major canopy suppression noted, Tree is considered to be a good specimen of the species, tree in dedicated garden adjacent train station, species are considered amenable to being relocated/transplanted	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013432064336	-32.1533122614579
A00214	<i>Corymbia maculata</i> (Spotted Gum)	Mature	20	14	40 + years	Good	Good	0.590	7.08	0.690	2.83	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates above 4 meters+, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013579554870	-32.1531346241668
A00215	<i>Corymbia maculata</i> (Spotted Gum)	Mature	18	10	40 + years	Good	Good	0.440	5.28	0.550	2.57	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, Wounding noted on main stem., CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013601381481	-32.1530285184684
A00216	<i>Corymbia maculata</i> (Spotted Gum)	Mature	11	19	40 + years	Good	Good	0.430	5.16	0.500	2.47	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013621260391	-32.1529404932699
A00217	<i>Corymbia maculata</i> (Spotted Gum)	Mature	17	11	40 + years	Good	Good	0.520	6.24	0.630	2.73	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013682243720	-32.1526720606744
A00218	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	12	9	15 - 40 years	Good	Reasonable	0.400	4.80	0.700	2.85	Canopy displays leggy structural form, Damage to surface roots (minor), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Surface roots noted possible compacted soil surrounding tree (sub base/road base), tree situated in PTA car park	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013577842898	-32.1527616588683



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00219	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	12	9	15 - 40 years	Good	Reasonable	0.340	4.08	0.550	2.57	Canopy displays leggy structural form, Damage to surface roots (minor), Included bark unions noted (minor), Main stem bifurcates above 4 meters+, Surface roots noted possible compacted soil surrounding tree (sub base/road base) , tree situated in PTA car park	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013601692402	-32.1527518808697
A00220	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	20	13	40 + years	Good	Reasonable	0.680	8.16	0.770	2.97	Damage to surface roots (minor), Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Surface roots noted possible compacted soil surrounding tree (sub base/road base) , tree situated in PTA car park	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013585147495	-32.1528158610685
A00221	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	20	10	40 + years	Good	Good	0.380	4.56	0.500	2.47	Damage to surface roots (minor), Tree is considered to be a good specimen of the species, Surface roots noted possible compacted soil surrounding tree (sub base/road base) , tree situated in PTA car park	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013584031192	-32.1528471959683
A00222	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	21	11	40 + years	Good	Reasonable	0.490	5.88	0.590	2.65	Canopy displays leggy structural form, Damage to surface roots (minor), Main stem bifurcates between 3 meters and 4 meters, Surface roots noted possible compacted soil surrounding tree (sub base/road base) , tree situated in PTA car park	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013569818988	-32.1528773590674
A00223	<i>Corymbia maculata</i> (Spotted Gum)	Mature	19	11	40 + years	Good	Reasonable	0.460	5.52	0.550	2.57	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates above 4 meters+, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013734554445	-32.1524378283783
A00224	<i>Corymbia maculata</i> (Spotted Gum)	Mature	18	12	40 + years	Good	Reasonable	0.510	6.12	0.590	2.65	Main stem bifurcates between 2 meters and 3 meters, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013801081376	-32.1521477749832
A00225	<i>Corymbia maculata</i> (Spotted Gum)	Mature	17	11	40 + years	Reasonable	Good	0.420	5.04	0.550	2.57	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013822300886	-32.1520591474847
A00226	<i>Corymbia maculata</i> (Spotted Gum)	Mature	18	12	40 + years	Good	Good	0.550	6.60	0.660	2.78	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013843249996	-32.1519710553863
A00227	<i>Corymbia maculata</i> (Spotted Gum)	Mature	19	13	40 + years	Good	Good	0.470	5.64	0.530	2.53	Deadwood noted within canopy (< 50 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013872936410	-32.1518429842885
A00228	<i>Corymbia calophylla</i> (Marri)	Mature	7	11	15 - 40 years	Good	Reasonable	0.350	4.20	0.430	2.32	Canopy displays leggy structural form, Minor canopy suppression noted, tree situated in fill soil., CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013084399148	-32.1551374649310
A00229	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	19	14	15 - 40 years	Reasonable	Good	0.780	9.36	0.800	3.01	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, tree situated in fill soil., CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013109415653	-32.1551149585324
A00230	<i>Corymbia maculata</i> (Spotted Gum)	Mature	14	10	40 + years	Good	Good	0.410	4.92	0.500	2.47	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013113374660	-32.1550363892330
A00231	<i>Corymbia maculata</i> (Spotted Gum)	Mature	23	12	40 + years	Good	Good	0.540	6.48	0.640	2.74	Deadwood noted within canopy (< 50 mm dia.), Friction stems noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013129489367	-32.1549733351341
A00232	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Mature	10	11	15 - 40 years	Good	Reasonable	0.630	7.56	0.650	2.76	Included bark unions noted (minor), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, tree situated in fill soil., CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013148035471	-32.1549475614353
A00233	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	12	40 + years	Good	Good	0.590	7.08	0.830	3.06	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree on lean (minor) , tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012884042126	-32.1550464167204
A00234	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	19	13	40 + years	Good	Good	0.670	8.04	0.890	3.15	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Minor friction stems noted within canopy, Tree is considered to be a good specimen of the species, tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012844630122	-32.1550252753184
A00235	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	18	15	40 + years	Good	Good	0.750	9.00	0.890	3.15	Deadwood noted within canopy (< 50 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012921565011	-32.1553098077213



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00236	<i>Eucalyptus caesia</i> subsp. <i>magna</i> (Silver Princess)	Mature	7	6	5 - 15 years	Questionable	Good	0.270	3.24	0.450	2.37	Canopy indicates decline, Canopy noted to be sparse, Deadwood noted within canopy (150 mm to 300 mm dia.), tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012886975208	-32.1552922729195
A00237	<i>Corymbia calophylla</i> (Marri)	Mature	14	13	15 - 40 years	Reasonable	Reasonable	0.570	6.84	0.660	2.78	Canopy noted to be slightly sparse, Main stem bifurcates between 1 meter and 2 meters, Tree in fill close proximity to tree 65, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013197544997	-32.1547002481390
A00238	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	14	16	40 + years	Good	Good	0.680	8.16	0.770	2.97	Canopy displays leggy structural form, Friction stems noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, Situated in footpath, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013247827615	-32.1545546855424
A00239	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	9	10	15 - 40 years	Good	Reasonable	0.430	5.16	0.520	2.51	Deadwood noted within canopy (< 50 mm dia.), Tree on lean (minor), tree situated in fill soil, wounding noted at base, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013372662983	-32.1538958748521
A00240	<i>Corymbia maculata</i> (Spotted Gum)	Mature	18	12	40 + years	Good	Good	0.480	5.76	0.560	2.59	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, Wounding noted on main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013759229057	-32.1523237339801
A00241	<i>Corymbia calophylla</i> (Marri)	Mature	19	8	40 + years	Reasonable	Good	0.370	4.44	0.450	2.37	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013780427867	-32.1522358207817
A00242	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	11	20	40 + years	Good	Good	0.750	9.00	0.870	3.12	Canopy displays leggy structural form, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Tree is considered to be a good specimen of the species, tree situated adjacent power infrastructure/power house?	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012989572144	-32.1523499371380
A00243	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Mature	8	5	40 + years	Good	Reasonable	0.500	6.00	0.550	2.57	Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012647067940	-32.1530788394162
A00244	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Mature	8	8	15 - 40 years	Good	Questionable	0.500	6.00	0.550	2.57	Canopy displays leggy structural form, Included bark unions noted (minor), Main stem bifurcates between 1 meter and 2 meters, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012575747224	-32.1531575588119
A00245	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Early Mature	5	7	40 + years	Good	Good	0.350	4.20	0.400	2.25	Main stem bifurcates between ground level and 500 mm, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012553571613	-32.1532547350103
A00246	<i>Eucalyptus marginata</i> (Jarrah)	Mature	12	11	15 - 40 years	Questionable	Reasonable	0.550	6.60	0.650	2.76	Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Canopy yellowing, possibly 1 tree with Tree Tag 247, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012496112502	-32.1532929048070
A00247	<i>Eucalyptus marginata</i> (Jarrah)	Mature	6	8	15 - 40 years	Reasonable	Questionable	0.410	4.92	0.650	2.76	Deadwood noted within canopy (< 50 mm dia.), Friction stems noted within canopy (< 50 mm dia.), Tree on lean (major), Likely one tree with 246 failed at ground level, termite mud noted at main stem, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012484047901	-32.1532887454063
A00248	<i>Corymbia calophylla</i> (Marri)	Mature	12	13	40 + years	Good	Good	0.480	5.76	0.580	2.63	Friction stems noted within canopy (< 50 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011955070468	-32.1553702770683
A00249	<i>Corymbia calophylla</i> (Marri)	Mature	12	8	40 + years	Good	Good	0.330	3.96	0.460	2.39	Minor deadwood noted within canopy, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011940073463	-32.1554048909674
A00250	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	12	40 + years	Good	Reasonable	0.520	6.24	0.700	2.85	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011930146136	-32.1557483833653
A00251	<i>Corymbia calophylla</i> (Marri)	Mature	9	10	40 + years	Good	Reasonable	0.350	4.20	0.450	2.37	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Basal wound noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011786078472	-32.1563154072550
A00252	<i>Corymbia calophylla</i> (Marri)	Mature	8	10	40 + years	Good	Good	0.460	5.52	0.700	2.85	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011780443465	-32.1563926497543
A00253	<i>Corymbia calophylla</i> (Marri)	Mature	12	13	15 - 40 years	Questionable	Questionable	0.650	7.80	0.700	2.85	Canopy starting to indicate decline, Significant deadwood noted within canopy (300 mm + dia.), Wounding noted on main trunk, wire wrapped around trunk, decline appears to have stabilised at the time of inspection, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011731408055	-32.1564431747514



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00254	<i>Corymbia calophylla</i> (Marri)	Mature	10	12	40+ years	Reasonable	Good	0.420	5.04	0.550	2.57	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011721348647	-32.1565189943505
A00255	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	8	8	40+ years	Reasonable	Good	0.470	5.64	0.620	2.71	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Close proximity to 256 - likely one tree, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011580729370	-32.1572780024395
A00256	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	7	8	40+ years	Reasonable	Reasonable	0.430	5.16	0.500	2.47	Deadwood noted within canopy (< 50 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Close proximity to 255 - likely one tree, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011582152470	-32.1572852891396
A00257	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	16	10	40+ years	Good	Reasonable	0.550	6.60	0.730	2.90	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), tree situated adjacent Low Voltage power, Majority of canopy extends in rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011618007438	-32.1604333798277
A00258	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	12	9	40+ years	Good	Reasonable	0.490	5.88	0.570	2.61	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011625832842	-32.1603917631283
A00259	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Early Mature	8	5	40+ years	Reasonable	Reasonable	0.200	2.40	0.300	2.00	Canopy noted to be slightly sparse, Minor canopy suppression noted, Tree on lean (minor), Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011617898241	-32.1603821942279
A00260	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	16	12	40+ years	Good	Reasonable	0.470	5.64	0.550	2.57	Canopy displays leggy structural form, Friction stems noted within canopy (< 50 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011606800046	-32.1602986729277
A00261	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	16	13	15 - 40 years	Good	Questionable	0.720	8.64	0.880	3.14	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Inclusion at main union is questionable, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011674629458	-32.1602754353314
A00262	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	20	40+ years	Good	Good	0.910	10.92	0.990	3.30	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a good specimen of the species, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011809304807	-32.1598702516406
A00263	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	15	12	15 - 40 years	Good	Reasonable	0.700	8.40	0.800	3.01	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a good specimen of the species, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011827640215	-32.1598085931419
A00264	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	11	12	40+ years	Good	Reasonable	0.800	9.60	0.900	3.17	Canopy displays leggy structural form, Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011827403316	-32.1597926248419
A00265	<i>Corymbia calophylla</i> (Marri)	Mature	14	12	40+ years	Good	Reasonable	0.750	9.00	0.900	3.17	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a reasonable specimen of the species, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011753959914	-32.1596732151384
A00266	<i>Corymbia calophylla</i> (Marri)	Mature	14	13	40+ years	Good	Good	0.900	10.80	1.300	3.69	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a good specimen of the species, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011842439031	-32.1596271579435
A00267	<i>Corymbia calophylla</i> (Marri)	Mature	8	6	15 - 40 years	Good	Reasonable	0.350	4.20	0.440	2.34	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011849728032	-32.1596194644439
A00268	<i>Corymbia calophylla</i> (Marri)	Mature	15	7	40+ years	Good	Reasonable	0.350	4.20	0.430	2.32	Canopy displays leggy structural form, Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Close proximity to 269, majority of canopy extends into rail	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011772780922	-32.1596013704398
A00269	<i>Corymbia calophylla</i> (Marri)	Mature	16	10	40+ years	Good	Good	0.420	5.04	0.510	2.49	Tree is considered to be a good specimen of the species, Close proximity tree 268, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011775631422	-32.1596058545399
A00270	<i>Corymbia calophylla</i> (Marri)	Mature	12	11	40+ years	Good	Good	0.680	8.16	0.680	2.81	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Canopy extends into rail corridor, low spreading canopy, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011795941732	-32.1595190754414
A00272	<i>Corymbia calophylla</i> (Marri)	Mature	11	7	40+ years	Reasonable	Reasonable	0.360	4.32	0.500	2.47	Canopy noted to be slightly sparse, Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011894520448	-32.1594988977469
A00273	<i>Acacia species</i> (Wattle)	Mature	5	9	<5 years	Poor	Questionable	0.350	4.20	0.580	2.63	Canopy indicates decline, Canopy noted to be sparse, Main stem bifurcates between 2 meters and 3 meters, Significant deadwood noted within canopy (300 mm + dia.), Wounding noted on main stem, limited ULE, consider removing, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.012017512507	-32.1589538726560



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00274	<i>Corymbia citriodora</i> (Lemon-scented Gum)	Mature	11	10	40+ years	Good	Good	0.430	5.16	0.520	2.51	Tree is considered to be a good specimen of the species, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012040296512	-32.1589258707573
A00275	<i>Corymbia calophylla</i> (Marri)	Mature	10	10	5 - 15 years	Questionable	Questionable	0.700	8.40	0.700	2.85	Canopy indicates decline, Canopy noted to be sparse, Significant deadwood noted within canopy (300 mm + dia.), Tree displays multi stemmed form, Stand of semi mature Marri noted at base, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.012079343832	-32.1587400357603
A00276	<i>Corymbia citriodora</i> (Lemon-scented Gum)	Mature	13	12	40+ years	Good	Reasonable	0.470	5.64	0.550	2.57	Canopy displays leggy structural form, Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a reasonable specimen of the species, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012097657741	-32.1586480275617
A00277	<i>Corymbia calophylla</i> (Marri)	Mature	11	11	40+ years	Good	Reasonable	0.600	7.20	0.600	2.67	Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012185806282	-32.1582743059681
A00278	<i>Corymbia calophylla</i> (Marri)	Mature	11	10	40+ years	Good	Good	0.460	5.52	0.550	2.57	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012213217486	-32.1582685419697
A00279	<i>Corymbia calophylla</i> (Marri)	Mature	12	13	<5 years	Poor	Questionable	0.620	7.44	0.750	2.93	Canopy indicates decline, Canopy noted to be sparse, Significant deadwood noted within canopy (300 mm + dia.), Terminal deadwood noted within canopy, Significant wounding on main stem and base, canopy extends into rail corridor, basal wounds problematic, tree canopy leading towards tracks, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.012212304788	-32.1582483205697
A00280	<i>Corymbia calophylla</i> (Marri)	Mature	11	11	15 - 40 years	Good	Reasonable	0.700	8.40	0.700	2.85	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012224216195	-32.1581736010707
A00281	<i>Melaleuca species</i> (Paperbark sp.)	Mature	2	4	<5 years	Poor	Questionable	0.300	3.60	0.300	2.00	Canopy indicates decline, Canopy noted to be sparse, Tree displays multi stemmed form, Limited ULE, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.012380160119	-32.1581511191793
A00282	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	7	6	15 - 40 years	Good	Good	0.350	4.20	0.420	2.30	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012393083523	-32.1581212335801
A00283	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	7	7	15 - 40 years	Reasonable	Reasonable	0.350	4.20	0.420	2.30	Friction stems noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (minor), Minor canopy suppression noted, Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012372298123	-32.1580801788792
A00284	<i>Corymbia calophylla</i> (Marri)	Mature	12	11	40+ years	Good	Good	0.510	6.12	0.580	2.63	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Majority of canopy extends into rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012239097410	-32.1580049441722
A00285	<i>Corymbia calophylla</i> (Marri)	Mature	12	12	5 - 15 years	Questionable	Reasonable	0.740	8.88	0.950	3.24	Canopy indicates decline, Canopy noted to be sparse, Significant deadwood noted within canopy (300 mm + dia.), Basal wound noted, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.012262065716	-32.1579752156736
A00286	<i>Corymbia calophylla</i> (Marri)	Mature	14	10	40+ years	Good	Reasonable	0.530	6.36	0.610	2.69	Minor canopy suppression noted, Tree on lean (minor), Majority of canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012259382817	-32.1579540721736
A00287	<i>Corymbia calophylla</i> (Marri)	Early Mature	11	4	40+ years	Good	Reasonable	0.350	4.20	0.400	2.25	Tree is considered to be a reasonable specimen of the species, Majority of canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012244881614	-32.1579577199727
A00288	<i>Eucalyptus patens</i> (Blackbutt)	Mature	11	9	15 - 40 years	Good	Good	0.480	5.76	0.450	2.37	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between ground level and 500 mm, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012398267038	-32.1579348250812
A00289	<i>Corymbia calophylla</i> (Marri)	Mature	15	11	15 - 40 years	Good	Reasonable	0.370	4.44	0.500	2.47	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Included bark unions noted (minor), Main stem bifurcates between 3 meters and 4 meters, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012267960622	-32.1578948493743
A00290	<i>Corymbia calophylla</i> (Marri)	Mature	12	8	15 - 40 years	Good	Reasonable	0.400	4.80	0.400	2.25	Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Majority of canopy extends into rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012271558628	-32.1578214744748
A00291	<i>Eucalyptus cinerea</i> (Argyle Apple)	Mature	5	10	15 - 40 years	Good	Questionable	0.330	3.96	0.400	2.25	Tree is considered to be a reasonable specimen of the species, Tree has Failed and is lying on the ground but still actively growing, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012375368439	-32.1578764702802



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00292	<i>Eucalyptus patens</i> (Blackbutt)	Mature	12	8	15 - 40 years	Good	Reasonable	0.420	5.04	0.520	2.51	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012461192052	-32.1578707266849
A00293	<i>Corymbia calophylla</i> (Marri)	Mature	15	12	40 + years	Good	Good	0.560	6.72	0.670	2.80	Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012298129536	-32.1577682702765
A00294	<i>Corymbia calophylla</i> (Marri)	Mature	9	5	15 - 40 years	Good	Reasonable	0.270	3.24	0.350	2.13	Canopy displays leggy structural form, Minor canopy suppression noted, Majority of canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012297734238	-32.1577493890765
A00295	<i>Corymbia calophylla</i> (Marri)	Mature	12	6	40 + years	Good	Reasonable	0.270	3.24	0.350	2.13	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Majority of canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012315492846	-32.1576673389779
A00296	<i>Corymbia calophylla</i> (Marri)	Mature	11	12	40 + years	Good	Reasonable	0.900	10.80	0.900	3.17	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012372274750	-32.1577338660807
A00297	<i>Corymbia calophylla</i> (Marri)	Mature	17	10	40 + years	Good	Reasonable	0.750	9.00	0.900	3.17	Included bark unions noted (minor), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012377023052	-32.1577124089810
A00298	<i>Corymbia calophylla</i> (Marri)	Mature	12	13	15 - 40 years	Reasonable	Questionable	1.200	14.40	1.300	3.69	Canopy noted to be slightly sparse, Main stem bifurcates at ground level, Tree displays multi stemmed form, Stand of 3, wounding noted at base of main stem, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012384451154	-32.1576986515815
A00299	<i>Corymbia calophylla</i> (Marri)	Mature	8	6	40 + years	Good	Reasonable	0.260	3.12	0.400	2.25	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Tree on lean (minor), CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012364177052	-32.1576832753805
A00300	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	10	6	15 - 40 years	Good	Reasonable	0.230	2.76	0.400	2.25	Canopy displays leggy structural form, Minor canopy suppression noted, Tree on lean (minor), CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012401378754	-32.1577267214823
A00301	<i>Casuarina obesa</i> (Swamp Sheoak)	Early Mature	10	4	15 - 40 years	Reasonable	Reasonable	0.170	2.04	0.300	2.00	Canopy displays leggy structural form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012417299852	-32.1577824358829
A00302	<i>Corymbia calophylla</i> (Marri)	Mature	12	7	40 + years	Good	Good	0.260	3.12	0.320	2.05	Canopy displays leggy structural form, Tree is considered to be a good specimen of the species, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012427111459	-32.1577206393837
A00303	<i>Corymbia calophylla</i> (Marri)	Early Mature	8	4	40 + years	Good	Good	0.150	2.00	0.200	1.68	Canopy displays leggy structural form, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012417308558	-32.1577031322833
A00304	<i>Corymbia calophylla</i> (Marri)	Mature	10	14	40 + years	Good	Good	0.510	6.12	0.630	2.73	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012491689163	-32.1577792995870
A00305	<i>Corymbia calophylla</i> (Marri)	Mature	12	9	40 + years	Good	Reasonable	0.330	3.96	0.450	2.37	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012504766568	-32.1577502768878
A00306	<i>Corymbia calophylla</i> (Marri)	Early Mature	7	6	15 - 40 years	Reasonable	Reasonable	0.230	2.76	0.300	2.00	Canopy noted to be sparse, Minor canopy suppression noted, Tree on lean (minor), CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012519217967	-32.1577828821885
A00307	<i>Corymbia calophylla</i> (Marri)	Early Mature	7	6	15 - 40 years	Reasonable	Reasonable	0.200	2.40	0.280	1.94	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012512659366	-32.1577880282881
A00308	<i>Corymbia calophylla</i> (Marri)	Mature	7	5	15 - 40 years	Good	Reasonable	0.220	2.64	0.300	2.00	Minor canopy suppression noted, Tree on lean (minor), CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012529082271	-32.1577458585892
A00309	<i>Corymbia calophylla</i> (Marri)	Mature	12	10	40 + years	Good	Reasonable	0.410	4.92	0.500	2.47	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Adjacent storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012530834972	-32.1577351309893
A00310	<i>Corymbia calophylla</i> (Marri)	Early Mature	8	5	15 - 40 years	Reasonable	Reasonable	0.210	2.52	0.280	1.94	Canopy displays leggy structural form, Canopy noted to be slightly sparse, Main stem bifurcates between 3 meters and 4 meters, Minor canopy suppression noted, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012470104564	-32.1577322039860



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00311	<i>Eucalyptus marginata</i> (Jarrah)	Mature	13	11	40+ years	Good	Good	0.440	5.28	0.490	2.45	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a good specimen of the species, Adjacent storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012444578765	-32.1576686495849
A00312	<i>Corymbia calophylla</i> (Marri)	Mature	15	11	40+ years	Reasonable	Good	0.430	5.16	0.450	2.37	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Tree is considered to be a reasonable specimen of the species, Adjacent storm water drain	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012479414969	-32.1576852116867
A00313	<i>Eucalyptus marginata</i> (Jarrah)	Mature	9	10	40+ years	Good	Reasonable	0.410	4.92	0.490	2.45	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Tree on lean (minor), Adjacent storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012452002967	-32.1576530794854
A00314	<i>Corymbia calophylla</i> (Marri)	Early Mature	11	6	15 - 40 years	Good	Reasonable	0.230	2.76	0.300	2.00	Canopy displays leggy structural form, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012320349550	-32.1576342505783
A00315	<i>Eucalyptus marginata</i> (Jarrah)	Mature	13	12	40+ years	Good	Reasonable	0.900	10.80	0.900	3.17	Deadwood noted within canopy (< 50 mm dia.), Included bark unions noted (minor), Main stem bifurcates at ground level, Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree, identified as tree 26 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012562734494	-32.1575117393921
A00316	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	14	11	15 - 40 years	Good	Reasonable	0.560	6.72	0.760	2.95	Canopy displays leggy structural form, Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011678048088	-32.1585527742392
A00317	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	8	5	<5 years	Questionable	Questionable	0.550	6.60	0.550	2.57	Canopy indicates decline, Canopy noted to be sparse, Tree displays multi stemmed form, Limited ULE, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011627443076	-32.1586127557362
A00318	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	12	10	15 - 40 years	Good	Good	0.490	5.88	0.610	2.69	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011649689377	-32.1586434755373
A00319	<i>Eucalyptus cinerea</i> (Argyle Apple)	Mature	9	10	40+ years	Good	Good	0.800	9.60	0.800	3.01	Main stem bifurcates between ground level and 500 mm, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011641609971	-32.1587069606366
A00320	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	14	10	15 - 40 years	Good	Reasonable	0.570	6.84	0.830	3.06	Included bark unions noted (minor), Main stem bifurcates above 4 meters+, Tree is considered to be a reasonable specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011618132465	-32.1587457296351
A00321	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	12	12	15 - 40 years	Good	Good	0.580	6.96	0.790	3.00	Tree is considered to be a good specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011602258056	-32.1588334508339
A00322	<i>Eucalyptus cinerea</i> (Argyle Apple)	Mature	8	9	40+ years	Good	Good	0.510	6.12	0.620	2.71	Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011597152550	-32.1589035248333
A00323	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	13	12	15 - 40 years	Good	Reasonable	0.650	7.80	0.720	2.88	Tree is considered to be a good specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011457356192	-32.1593957447235
A00324	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	9	8	40+ years	Good	Reasonable	0.600	7.20	0.600	2.67	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, Stand of 4x, wounding noted on main trunk, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011445585489	-32.1594255834227
A00325	<i>Eucalyptus cinerea</i> (Argyle Apple)	Mature	10	10	40+ years	Reasonable	Reasonable	0.640	7.68	0.720	2.88	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011445719284	-32.1594887105224
A00326	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	16	15	15 - 40 years	Good	Good	1.300	15.00	1.500	3.92	Included bark unions noted (minor), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011411322966	-32.1596613260198
A00327	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	13	12	15 - 40 years	Good	Reasonable	0.780	9.36	0.790	3.00	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, Damage to surface roots noted in verge area, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011364258952	-32.1597608785168
A00328	<i>Syncarpia glomulifera</i> (Turpentine Tree)	Mature	17	14	40+ years	Good	Reasonable	0.900	10.80	0.990	3.30	Tree is considered to be a good specimen of the species, tree is situated within rail corridor, identified as tree 25 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011853779514	-32.1572101822547



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00329	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	27	17	15 - 40 years	Reasonable	Reasonable	1.000	12.00	1.800	4.24	Beehive noted in main stem, Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011803955412	-32.1571452868523
A00330	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	25	20	15 - 40 years	Good	Reasonable	2.000	15.00	2.000	4.43	Canopy displays leggy structural form, Damage noted to main stem (minor), Deadwood noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (minor), Minor canopy suppression noted, Tree displays multi stemmed form, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011848185920	-32.1571217667548
A00331	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	8	10	15 - 40 years	Reasonable	Reasonable	1.000	12.00	1.000	3.31	Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, tree is situated in fill sand and ballast to unknown depths, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011878308721	-32.1571738166562
A00333	<i>Corymbia maculata</i> (Spotted Gum)	Mature	13	12	5 - 15 years	Questionable	Good	0.580	6.96	0.750	2.93	Canopy noted to be sparse, Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), tree situated within grounds of Fire station	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013268238955	-32.1514180878573
A00334	<i>Corymbia calophylla</i> (Marri)	Mature	12	17	15 - 40 years	Reasonable	Good	0.810	9.72	0.950	3.24	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013680811929	-32.1472398947982
A00335	<i>Corymbia calophylla</i> (Marri)	Mature	12	10	40 + years	Good	Reasonable	0.350	4.20	0.420	2.30	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013904637039	-32.1475277173092
A00336	<i>Corymbia calophylla</i> (Marri)	Mature	14	17	15 - 40 years	Reasonable	Good	0.910	10.92	1.410	3.82	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Damage to surface roots noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013930065040	-32.1475660432104
A00337	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	15	10	40 + years	Good	Reasonable	0.340	4.08	0.670	2.80	Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Close proximity to tree 171, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013965264632	-32.1477381768115
A00338	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	19	16	15 - 40 years	Reasonable	Reasonable	2.300	15.00	2.500	4.86	Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (150 mm to 300 mm dia.), Significant friction stems noted (300 mm + dia.), Tree displays multi stemmed form, Termites mud, bitumen at base of trunk, remnant tree, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013920645120	-32.1478211210087
A00339	<i>Corymbia calophylla</i> (Marri)	Mature	16	18	40 + years	Good	Good	1.030	12.36	1.240	3.62	Deadwood noted within canopy (150 mm to 300 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014336815052	-32.1468564849357
A00340	<i>Corymbia calophylla</i> (Marri)	Mature	15	15	5 - 15 years	Reasonable	Questionable	0.800 + 0.700	12.72	1.100	3.44	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Tree displays multi stemmed form, significant cavity noted in base of union, CoA Verge Tree, tree displays questionable structural form	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.013903909751	-32.1487024913040
A00341	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	8	7	15 - 40 years	Reasonable	Reasonable	0.340	4.08	0.450	2.37	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), Minor canopy suppression noted, Tree on lean (minor), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013906306149	-32.1487278200040
A00342	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	15	11	40 + years	Good	Good	0.910	10.92	0.950	3.24	Main stem bifurcates between ground level and 500 mm, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013865804536	-32.1488206453014
A00343	<i>Albizia saman</i> (Rain Tree)	Early Mature	3	7	5 - 15 years	Good	Good	0.300	3.60	0.330	2.08	Tree is considered to be a good specimen of the species, CoA Verge Tree, Opposite storm water drain	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013749229794	-32.1491538989935
A00344	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	21	27	40 + years	Good	Good	1.980	15.00	2.300	4.70	Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (150 mm to 300 mm dia.), Tree displays multi stemmed form, Tree is considered to be a good specimen of the species, Old remnant specimen, CoA, Verge Tree Opposite storm water drain	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013752666678	-32.1493760182927
A00345	<i>Acacia species</i> (Wattle)	Mature	3	4	5 - 15 years	Good	Reasonable	0.300	3.60	0.300	2.00	Tree displays multi stemmed form, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013721910360	-32.1495591711903
A00346	<i>Corymbia calophylla</i> (Marri)	Mature	21	18	40 + years	Good	Good	0.920	11.04	1.350	3.75	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013664893639	-32.1497285337864



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00347	<i>Corymbia calophylla</i> (Marri)	Mature	19	10	40+ years	Good	Good	0.650	7.80	0.780	2.98	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013660067335	-32.1497714782860
A00348	Unknown Specimen											Tree no longer here - cut down by others, CoA Verge Tree			116.013572432396	-32.1501280492796
A00349	<i>Corymbia calophylla</i> (Marri)	Mature	15	13	40+ years	Good	Good	0.950	11.40	1.200	3.57	Main stem bifurcates between 1 meter and 2 meters, Significant deadwood noted within canopy (300 mm + dia.), Tree is considered to be a good specimen of the species, Numerous juveniles x10 at base, tree on lean towards east, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013548988181	-32.1502810052777
A00350	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	19	15	15 - 40 years	Reasonable	Reasonable	1.050	12.60	1.230	3.61	Beehive noted in main stem, Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), tree situated in fill soil, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013375058988	-32.1538318404525
A00351	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	25	18	15 - 40 years	Reasonable	Reasonable	1.180	14.16	1.240	3.62	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (150 mm to 300 mm dia.), Hollows noted for habitat throughout canopy, wounding noted at base, CoA Verge Tree, identified as tree 21 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013251833949	-32.1541091687446
A00352	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	25	25	15 - 40 years	Reasonable	Questionable	1.170 + 0.940	15.00	3.000	5.25	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, tree in carpark in small planter, tree situated in PTA car park	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.013529261124	-32.1523269668676
A00353	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	26	23	40+ years	Good	Good	1.000	12.00	1.600	4.03	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, Surface roots, tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012901894221	-32.1551462279210
A00354	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	21	15	40+ years	Good	Reasonable	1.000	12.00	1.200	3.57	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, tree situated in garden adjacent bus lane	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012809484707	-32.1551574488159
A00355	<i>Corymbia citriodora</i> (Lemon-scented Gum)	Mature	13	12	40+ years	Good	Reasonable	0.600	7.20	0.600	2.67	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between ground level and 500 mm, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011966717151	-32.1556082648679
A00356	Unknown Specimen											Dead Tree - no chance of recovery, stump only, CoA Verge Tree			116.011958198446	-32.1556642159672
A00357	<i>Eucalyptus marginata</i> (Jarrah)	Mature	11	13	40+ years	Reasonable	Reasonable	0.800	9.60	0.800	3.01	Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Tree displays multi stemmed form, Canopy yellowing, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011826175191	-32.1561356750579
A00358	<i>Eucalyptus marginata</i> (Jarrah)	Mature	20	15	15 - 40 years	Questionable	Questionable	1.220	14.64	1.900	4.33	Canopy indicates decline, Canopy noted to be sparse, Significant deadwood noted within canopy (300 mm + dia.), Terminal deadwood noted within canopy, Remnant tree, wounding on main stem, beehive and hollows noted, termite mud noted at base, canopy yellowing, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011800023977	-32.1562756614559
A00359	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	21	14	15 - 40 years	Good	Reasonable	0.760	9.12	0.980	3.28	Canopy displays leggy structural form, Deadwood noted within canopy (< 50 mm dia.), Termite mud noted at root crown, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011675565828	-32.1566818881473
A00360	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	16	20	15 - 40 years	Good	Reasonable	1.010	12.12	2.300	4.70	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, 3 basal sucker approx 300 mm noted, majority of canopy heading east into corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011669761916	-32.1568381128463
A00361	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	21	14	15 - 40 years	Good	Reasonable	0.980	11.76	1.900	4.33	Canopy displays leggy structural form, Friction stems noted within canopy (50 mm to 150 mm dia.), Significant branch failures noted (300 mm + dia.), Majority of canopy east into corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011670423813	-32.1568760269462
A00362	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	15	16	15 - 40 years	Good	Reasonable	0.920	11.04	1.320	3.72	Canopy displays leggy structural form, Deadwood noted within canopy (150 mm to 300 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011623513799	-32.1569706071432
A00363	<i>Eucalyptus wandoo</i> (Wandoo)	Mature	9	12	5 - 15 years	Reasonable	Questionable	1.000	12.00	1.000	3.31	Canopy noted to be sparse, Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Fire damage noted at basal area (significant), Fire damage noted in main stem (significant), Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between ground level and 500 mm, Minor canopy suppression noted, Wounding to main stem noted,, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011597852981	-32.1571639803410
A00364	<i>Corymbia calophylla</i> (Marri)	Mature	22	24	15 - 40 years	Reasonable	Questionable	1.370	15.00	1.680	4.12	Deadwood noted within canopy (150 mm to 300 mm dia.), Significant branch failures noted (300 mm + dia.), Remnant specimen, beehive at base, wounding at main stem, habitat hollows, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.011866499109	-32.1559860195608



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00365	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	22	21	40+ years	Good	Good	1.070	12.84	1.330	3.73	Deadwood noted within canopy (50 mm to 150 mm dia.), Significant deadwood noted within canopy (300 mm + dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011675688829	-32.1606611242298
A00366	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	19	18	40+ years	Good	Good	0.920	11.04	1.600	4.03	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, Basal suckers x2 300 mm noted, adjacent Low Voltage infrastructure, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011702990552	-32.1604047184324
A00367	<i>Pinus pinea</i> (Stone Pine)	Mature	17	18	40+ years	Good	Reasonable	2.000	15.00	2.000	4.43	Deadwood noted within canopy (150 mm to 300 mm dia.), Included bark unions noted (minor), Tree displays multi stemmed form, Canopy extends into rail corridor, adjacent storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011733826995	-32.1598942411364
A00368	<i>Corymbia calophylla</i> (Marri)	Mature	13	14	15 - 40 years	Reasonable	Reasonable	1.700	15.00	2.000	4.43	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, Opposite storm water drain, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011863389239	-32.1595550517449
A00369	<i>Corymbia calophylla</i> (Marri)	Mature	11	12	40+ years	Good	Reasonable	0.880	10.56	0.900	3.17	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a good specimen of the species, Canopy extends into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012061837826	-32.1587842292591
A00370	<i>Eucalyptus marginata</i> (Jarrah)	Mature	10	13	5 - 15 years	Poor	Questionable	0.910	10.92	1.150	3.51	Canopy indicates decline, Canopy noted to be sparse, Hollows (habitat) noted throughout canopy, Significant deadwood noted within canopy (300 mm + dia.), Termite mud noted at base, CoA Verge Tree	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified	Responsibility of City of Armadale	116.012500416064	-32.1577918235874
A00371	<i>Eucalyptus marginata</i> (Jarrah)	Mature	16	15	40+ years	Good	Good	0.750	9.00	0.950	3.24	Deadwood noted within canopy (< 50 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, identified as tree 26 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012511717689	-32.1574724579894
A00372	<i>Eucalyptus marginata</i> (Jarrah)	Mature	13	12	40+ years	Good	Reasonable	0.930	11.16	0.950	3.24	Friction stems noted within canopy (150 mm to 300 mm dia.), Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a good specimen of the species, CoA Verge Tree, identified as tree 26 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012439797282	-32.1574318278857
A00373	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	Mature	30	25	15 - 40 years	Good	Reasonable	1.500	15.00	2.000	4.43	Canopy displays leggy structural form, Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Significant friction stems noted (300 mm + dia.), Tree is considered to be a reasonable specimen of the species, Tree on lean (minor), tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011764184912	-32.1570686957505
A00374	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	11	5	<5 years	Poor	Questionable	0.650	7.80	0.750	2.93	Avian activity and/or fauna observed, Hollows (habitat) noted throughout canopy, Significant tree with structural issues (worthwhile retaining), Tree displays problematic health, Tree displays problematic structural form, Consider retention for habitat, adjacent dead tree is caught up in canopy, tree is situated within rail corridor	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified		116.011666026090	-32.1571765997446
A00375	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	16	18	40+ years	Good	Good	1.200	14.40	1.200	3.57	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, tree is situated within rail corridor, situated in fill sand and ballast to unknown depths	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011712462693	-32.1572291388469
A00376	<i>Eucalyptus rudis</i> (Flooded Gum)	Mature	13	10	15 - 40 years	Reasonable	Reasonable	0.550	6.60	0.650	2.76	Damage noted to main stem (minor), Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Tree on lean (minor), tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011717840391	-32.1572598652471
A00377	<i>Corymbia calophylla</i> (Marri)	Mature	20	20	15 - 40 years	Good	Reasonable	1.100	13.20	1.500	3.92	Damage noted to main stem (minor), Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, Also tagged as 332 (but 332 has been deleted), tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012010298323	-32.1560720534683
A00379	<i>Corymbia calophylla</i> (Marri)	Mature	20	19	15 - 40 years	Reasonable	Questionable	0.850	10.20	0.900	3.17	Canopy noted to be slightly sparse, Decay of woody tissue noted in main stem (significant), Main stem bifurcates between 3 meters and 4 meters, Also tagged as 178 (but 178 has been deleted), tree is situated within rail corridor	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified		116.012028701936	-32.1559326337699
A00380	<i>Corymbia calophylla</i> (Marri)	Mature	20	20	40+ years	Good	Good	0.930	11.16	0.990	3.30	Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012039406745	-32.1558264917709
A00381	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	6	9	15 - 40 years	Good	Reasonable	0.200	2.40	0.200	1.68	Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.014375402511	-32.1473614903249



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00382	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	11	7	15 - 40 years	Good	Reasonable	0.210	2.52	0.300	2.00	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012329908681	-32.1579578926847
A00383	<i>Corymbia calophylla</i> (Marri)	Mature	7	7	15 - 40 years	Good	Questionable	1.000	12.00	1.000	3.31	Tree displays multi stemmed form, Stand of 4, located in verge area adjacent Hobbs drive, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012531398342	-32.1578425647936
A00384	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	13	5	15 - 40 years	Good	Reasonable	0.210	2.52	0.300	2.00	Canopy displays leggy structural form, Prior branch failures noted within canopy (50 mm to 150 mm dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012467403202	-32.1578221812388
A00385	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	12	10	15 - 40 years	Good	Reasonable	0.230	2.76	0.400	2.25	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012429386288	-32.1578093074124
A00386	<i>Corymbia calophylla</i> (Marri)	Mature	6	5	15 - 40 years	Reasonable	Reasonable	0.220	2.64	0.300	2.00	Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, canopy rubbing with tree 304, CoA Verge Tree, Opposite storm water drain,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012537100885	-32.1577669310673
A00387	<i>Eucalyptus marginata</i> (Jarrah)	Mature	10	9	40 + years	Good	Reasonable	0.350	4.20	0.450	2.37	Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, CoA Verge Tree, identified as tree 26 in the Rediscover Armadales Heritage Trees booklet	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012537734529	-32.1573855430212
A00388	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	9	7	15 - 40 years	Good	Reasonable	0.280	3.36	0.350	2.13	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011683170991	-32.1602235788898
A00389	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	16	10	40 + years	Good	Reasonable	0.400	4.80	0.450	2.37	Canopy displays leggy structural form, Minor canopy suppression noted, Majority of canopy overhangs into rail corridor, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011619627231	-32.1602773726568
A00390	<i>Eucalyptus marginata</i> (Jarrah)	Mature	8	10	40 + years	Good	Reasonable	0.500	6.00	0.500	2.47	Main stem bifurcates at ground level, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011722331667	-32.1603618163077
A00391	<i>Eucalyptus marginata</i> (Jarrah)	Early Mature	9	5	40 + years	Good	Reasonable	0.330	3.96	0.400	2.25	Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Tree is considered to be a reasonable specimen of the species, tree situated adjacent Low Voltage power, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011689082023	-32.1604274946426
A00392	<i>Casuarina cunninghamiana</i> (River Sheoak)	Mature	14	12	15 - 40 years	Good	Reasonable	0.800	9.60	0.800	3.01	Main stem bifurcates at ground level, Tree displays multi stemmed form, Damage to surface roots noted in verge, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011704513358	-32.1583812717419
A00393	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	11	10	40 + years	Good	Good	0.450	5.40	0.550	2.57	Main stem bifurcates between 2 meters and 3 meters, Tree is considered to be a good specimen of the species, Bike lock stuck around tree trunk, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012116787229	-32.1554443289597
A00394	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Semi-Mature	3	5	40 + years	Good	Reasonable	0.190	2.28	0.250	1.85	Prior branch failures noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012036400304	-32.1548110037905
A00395	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Semi-Mature	2	4	40 + years	Reasonable	Reasonable	0.160	2.00	0.300	2.00	Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012080849583	-32.1546524716470
A00396	<i>Corymbia ficifolia</i> (Red Flowering Gum)	Semi-Mature	3	5	40 + years	Good	Reasonable	0.190	2.28	0.290	1.97	Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a good specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012112058654	-32.1545043479299
A00397	<i>Eucalyptus caesia</i> subsp. <i>magna</i> (Silver Princess)	Mature	8	8	5 - 15 years	Reasonable	Reasonable	0.320	3.84	0.350	2.13	Canopy noted to be slightly sparse, Main stem bifurcates between ground level and 500 mm, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012657804329	-32.1530850631993
A00398	<i>Eucalyptus caesia</i> subsp. <i>magna</i> (Silver Princess)	Mature	5	5	5 - 15 years	Reasonable	Questionable	0.300	3.60	0.400	2.25	Main stem bifurcates between 1 meter and 2 meters, canopy previously lopped, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012646935403	-32.1531245001095
A00399	<i>Eucalyptus caesia</i> subsp. <i>magna</i> (Silver Princess)	Mature	9	6	5 - 15 years	Reasonable	Reasonable	0.300	3.60	0.400	2.25	Canopy displays leggy structural form, Canopy noted to be slightly sparse, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012648488104	-32.1531564878136



Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00400	<i>Eucalyptus caesia</i> subsp. <i>magna</i> (Silver Princess)	Mature	9	7	5 - 15 years	Reasonable	Reasonable	0.400	4.80	0.450	2.37	Canopy displays leggy structural form, Canopy noted to be slightly sparse, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012631925933	-32.1531836554429
A00401	<i>Agonis flexuosa</i> (WA Peppermint)	Mature	5	5	40 + years	Good	Reasonable	0.290	3.48	0.330	2.08	Tree is considered to be a reasonable specimen of the species, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012760180575	-32.1530874162186
A00402	<i>Agonis flexuosa</i> (WA Peppermint)	Mature	6	9	40 + years	Good	Reasonable	0.420	5.04	0.460	2.39	Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Tree is considered to be a good specimen of the species, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012689036777	-32.1532257520766
A00403	<i>Agonis flexuosa</i> (WA Peppermint)	Early Mature	6	6	40 + years	Good	Reasonable	0.500	6.00	0.500	2.47	Main stem bifurcates at ground level, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012678873376	-32.1532687751482
A00404	<i>Agonis flexuosa</i> (WA Peppermint)	Early Mature	3	7	40 + years	Reasonable	Reasonable	0.330	3.96	0.400	2.25	Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, tree situated within carpark area, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012652292177	-32.1533164314491
A00405	<i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Early Mature	7	6	40 + years	Questionable	Reasonable	0.500	6.00	0.500	2.47	Canopy noted to be slightly sparse, Canopy starting to indicate decline, Tree displays multi stemmed form, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012577239399	-32.1532078809422
A00406	<i>Corymbia calophylla</i> (Marri)	Mature	7	5	40 + years	Good	Reasonable	0.280	3.36	0.380	2.20	Friction stems noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013895612309	-32.1475123513504
A00407	<i>Corymbia calophylla</i> (Marri)	Mature	9	8	40 + years	Good	Reasonable	0.290	3.48	0.360	2.15	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013910256166	-32.1474801147956
A00408	<i>Corymbia calophylla</i> (Marri)	Mature	7	4	40 + years	Good	Reasonable	0.260	3.12	0.330	2.08	Minor canopy suppression noted, Tree on lean (minor), CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013872182146	-32.1474615167755
A00409	<i>Corymbia calophylla</i> (Marri)	Mature	10	5	40 + years	Good	Reasonable	0.250	3.00	0.320	2.05	Friction stems noted within canopy (150 mm to 300 mm dia.), Minor canopy suppression noted, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013901469858	-32.1474224609269
A00410	<i>Callistemon viminalis</i> (Bottlebrush)	Mature	6	6	15 - 40 years	Good	Reasonable	0.400	4.80	0.400	2.25	Minor canopy suppression noted, Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, Group of 3 bottlebrush, CoA POS Tree, tree situated in mulched POS	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013913917137	-32.1473809253225
A00411	<i>Eucalyptus botryoides</i> (Southern Mahogany)	Mature	19	16	15 - 40 years	Good	Questionable	0.800	9.60	0.900	3.17	Canopy displays leggy structural form, Included bark unions noted (minor), Main stem bifurcates between 3 meters and 4 meters, Partial assessment only viewed from roadside due to access restrictions (tree situated within fire station)	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified		116.013265783720	-32.1515274538944
A00412	<i>Platanus x acerifolia</i> (London Plane)	Semi-Mature	5	4	40 + years	Good	Good	0.200	2.40	0.250	1.85	Friction stems noted within canopy (< 50 mm dia.), Tree is considered to be a good specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012353654794	-32.1535081290832
A00413	<i>Platanus x acerifolia</i> (London Plane)	Semi-Mature	5	4	40 + years	Good	Good	0.150	2.00	0.200	1.68	Tree is considered to be a good specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012348858329	-32.1535527979365
A00414	<i>Platanus x acerifolia</i> (London Plane)	Semi-Mature	6	5	40 + years	Good	Good	0.190	2.28	0.250	1.85	Tree is considered to be a good specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012341663632	-32.1535988203684
A00415	<i>Platanus x acerifolia</i> (London Plane)	Semi-Mature	6	5	40 + years	Good	Reasonable	0.180	2.16	0.220	1.75	Deadwood noted within canopy (< 50 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree, species are considered amenable to being relocated/transplanted,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.012327274244	-32.1536394283768
A00416	<i>Callistemon viminalis</i> (Bottlebrush)	Early Mature	4	5	15 - 40 years	Good	Reasonable	0.300	3.60	0.300	2.00	Main stem bifurcates at ground level, Tree is considered to be a reasonable specimen of the species, tree situated within carpark area	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.012479162194	-32.1537531307145

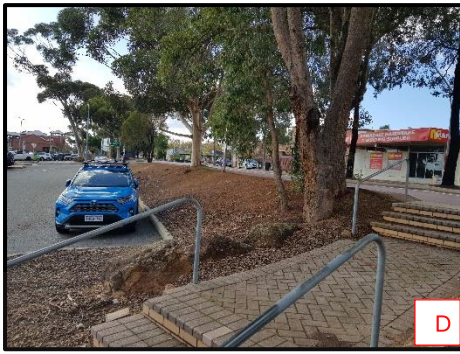


Tree Tag ID Number	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter (at widest point)	Tree Protection Zone (TPZ) Radius (M)	Trunk Diameter Above Buttress	Structural Root Zone (SRZ) Radius (M)	Comments	Preliminary Recommendation	Recommended Canopy Management	LONGITUDE (EPSG 4326)	LATITUDE (EPSG 4326)
A00418	<i>Corymbia maculata</i> (Spotted Gum)	Early Mature	12	4	40+ years	Reasonable	Reasonable	0.170	2.04	0.200	1.68	Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50 mm dia.), CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.013693684369	-32.1524920656653
A00419	<i>Lagerstroemia indica</i> (Crepe Myrtle)	Early Mature	3	3	15 - 40 years	Good	Good	0.100	2.00	0.100	1.50	Stand of 5 Crepe Myrtles, All Trees considered to be good specimen of the species, species are considered amenable to being relocated/transplanted, trees in raised garden planters adjacent train station	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.013457922390	-32.1531820901053
A00420	<i>Casuarina obesa</i> (Swamp Sheoak)	Mature	9	4	15 - 40 years	Reasonable	Reasonable	0.220	2.64	0.330	2.08	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, CoA Verge Tree	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Responsibility of City of Armadale	116.011733065601	-32.1602749011343
A00421	<i>Xanthorrhoea preissii</i> (Grass Tree)	Mature	2	2	40+ years	Good	Good	0.300	2.00	0.400	2.00	Stand of grass trees approx group of x20, All Trees considered to be good specimen of the species, species are considered amenable to being relocated/transplanted, Trees all situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011398948696	-32.1602049667578
A00422	<i>Corymbia calophylla</i> (Marri)	Mature	17	14	40+ years	Good	Reasonable	0.550	6.60	0.600	2.67	Minor canopy suppression noted, Tree is considered to be a good specimen of the species, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011956346038	-32.1559323906241
A00423	<i>Corymbia calophylla</i> (Marri)	Mature	16	12	15 - 40 years	Good	Good	0.380	4.56	0.430	2.32	Tree is considered to be a good specimen of the species, tree is situated within rail corridor, situated in fill sand and ballast to unknown depths,	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011945593079	-32.1559939321710
A00424	<i>Eucalyptus marginata</i> (Jarrah)	Mature	10	11	15 - 40 years	Reasonable	Reasonable	0.400	4.80	0.500	2.47	Deadwood noted within canopy (50 mm to 150 mm dia.), Fire damage noted in main stem (minor), Minor canopy suppression noted, Tree on lean (minor), Tree situated in fill sand/ballast, tree is situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011901012432	-32.1562332205418
A00425	<i>Corymbia calophylla</i> (Marri)	Mature	9	10	5 - 15 years	Questionable	Reasonable	0.350	4.20	0.450	2.37	Canopy starting to indicate decline, Decay of woody tissue noted in main stem (significant), Minor canopy suppression noted, Significant terminal deadwood noted within canopy, Tree displays questionable health, tree is situated within rail corridor	Further Arboricultural input and/or assessment required in regard to health, structural or other issues identified		116.011921996364	-32.1562199838790
A00426	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Mature	18	6	40+ years	Good	Reasonable	0.320	3.84	0.400	2.25	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Tree on lean (minor), Tree situated within rail corridor	Retain - Develop and implement Tree Protection Plan (TPP) in accordance with AS4970-2009	Pruning requirements to be developed based on final design and construction methodologies	116.011607661071	-32.1606571319884



APPENDIX C – GENERAL SITE IMAGES





APPENDIX D - TREE PROTECTION ZONE (TPZ) OVERVIEW

INTRODUCTION

- Tree protection measures in keeping with AS 4970 'Protection of Trees on development sites' 2009' must be incorporated into the proposed design and implemented under the guidance of a AQF Level 5 Consulting Arboriculturist in order to achieve tree sensitive outcomes for the project.
- Reporting is to be in keeping with the stages identified within AS 4970 'Protection of Trees on Development Sites' 2009 and industry best practice.

TPZ BACKGROUND INFORMATION

- To determine a Tree Protection Zone (TPZ), the trunk Diameter measured at Breast Height (1.4 meters from ground level) is multiplied by x 12. This is to be measured as a radius from the centre of the main stem at ground level. As identified in AS 4970 *The TPZ is to not be less than 2 meters and no greater than 15 meter radius.*
- The calculated TPZ includes both the above ground and below ground parts of the tree.
- Any construction works proposed to occur within the TPZ will require Arboricultural assessment and approval from a AQF 5 Project Arborist prior to commencement.
- Modification of the design and/or construction methodologies may be necessary to allow the proposed design to proceed.
- Ongoing Arboricultural review of methodologies and works within the TPZs will be required by the Project Arborist for the duration of the development or construction works.

ESTABLISH TREE PROTECTION ZONES (TPZ) WITHIN THE SITE

- TPZs are to be identified at their perimeter via 1.8-meter chain wire fencing panels (refer below figure for detail).
- This dedicated Fencing is to have signage installed (refer below figure for detail) that identifies the TPZ as a protected area and that no access is permitted without prior approval from the Project Arborist.
- TPZ Fencing is to remain for the duration of the construction phase. Maintenance and general upkeep of the fencing is the responsibility of the nominated Contractor.
- Any alteration or modification of the fencing is to be approved prior by the Project Arborist and documented as part of ongoing tree preservation reporting for the site.

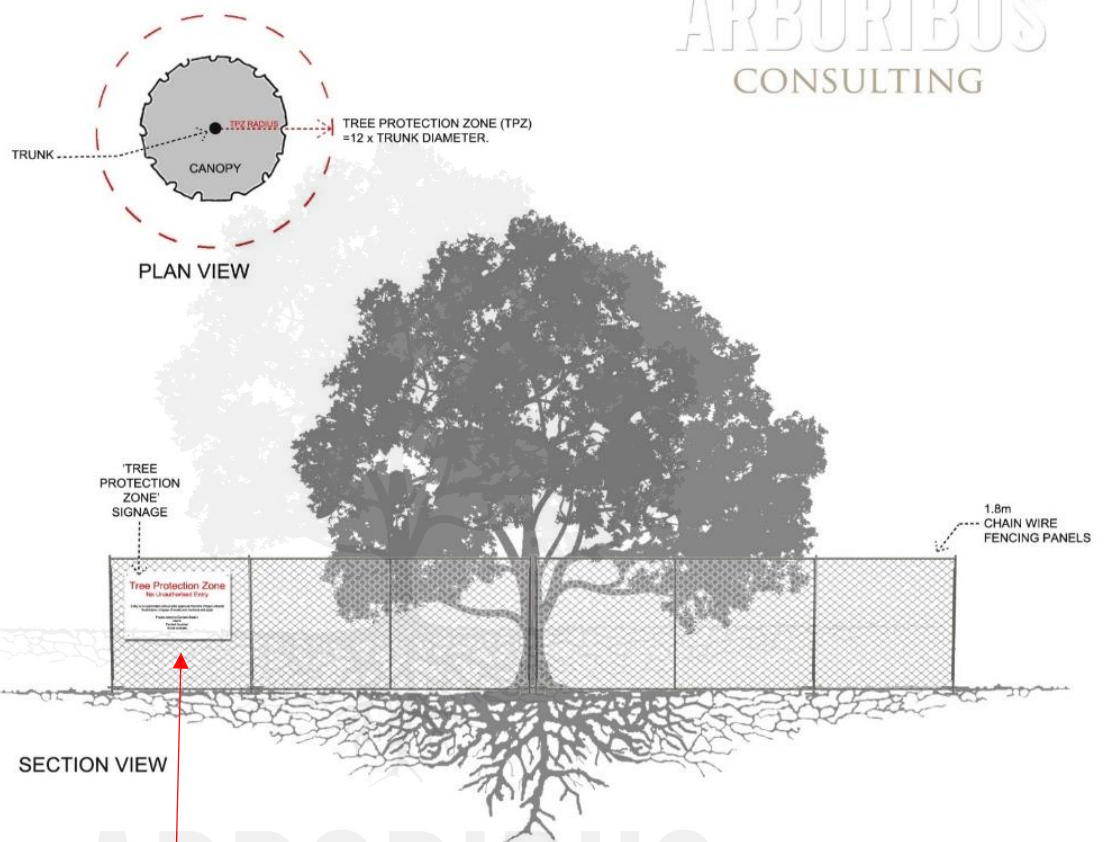
PROHIBITED ACTIVITIES WITHIN TPZS

- Unauthorised access.
- Mechanical Excavation, trenching or unapproved works of any kind.

- Unauthorised modification of existing grade (i.e., raising or lowering of soil levels).
- Storage of construction materials, fuels, or phytotoxic chemicals etc...
- Parking, fuelling, tracking, or storage of vehicles or machinery of any kind.
- Unauthorised placement of site facilities or waste disposal bins.
- Stockpiling of soil, spoil or any construction debris.
- Disposal of liquid waste including paint and concrete wash out.
- Cleaning or washing of tools and equipment.
- Unauthorised pruning of branches or roots.

TPZ EXAMPLE

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TREE PROTECTION ZONE FENCING

TO BE IMPLEMENTED FOR TREES IDENTIFIED FOR RETENTION AND MAINTAINED FOR THE DURATION OF WORKS.



If you have any queries or if I can be of further assistance, do not hesitate to contact me on 0406 396 778.

Regards,



Luke Lumbus

COMPANY AND CONSULTANTS DETAILS

Consultant Details:	Luke Lumbus – Consulting Arboriculturist & Director
Qualifications:	AQF 8 - Graduate Certificate in Arboriculture (Melbourne University) AQF 5 - Diploma in Arboriculture – (Challenger TAFE, Western Australia) International Society of Arboriculture (ISA) Certified Arborist - AU 0014A Quantified Tree Risk Assessment (QTRA) User Number 1935
Company Trading Name:	Arboribus Pty Ltd
Established:	October 2021
Australian Business Number:	82 653 281 782
Australian Company Number:	653 281 782
Contact Number:	0406 396 778
Email Address:	luke@arboribus.com.au
Website:	www.arboribus.com.au
Insurance:	Public Liability Insurance \$20 Million (Dual Australia) Professional Indemnity \$5 Million (Dual Australia)

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DISCLAIMER

The Consultant is trained, qualified and competent in their field of expertise and will employ their knowledge, training, and skill to provide informed comments and recommendations. However, the Client acknowledges there may be latent conditions and factors the Consultant cannot reasonably determine from a visual inspection. Unless otherwise agreed with the Client and documented in the Report, the Consultant's inspection will be conducted visually and so will not determine any latent conditions hidden within the tree or below the ground level.

The Client hereby acknowledges that the information contained in this report is intended to provide preliminary guidance and recommendations for how to manage and protect the tree(s) that are the subject of this report, however, given the nature of the subject matter, trees as living organisms are subjected to many varied and dynamic factors.

This report does not attempt to predict or anticipate potential future failure(s) of the subject tree(s) and/or its above and/or below ground parts – failure of trees and their parts can be influenced by numerous factors including (but not be limited to): -

- Age
- Health and Structural status of both above and/or below ground component(s)
- Recent, historic or prolonged impacts to root(s)
- Sudden or unapproved alterations to the trees growing environ(s)
- Storm events, high winds, persistent heat and/or other severe climatic events
- Standard and quality of previous works undertaken.

This report and the advice within it cannot and shall not be construed as a guarantee the subject trees will not at some point deteriorate further and/or not survive.

Where recommendations or advice have been provided, and the Client (or approved third party) does not adhere to such recommendations this shall be deemed to be an act or omission of the Client and the Client shall indemnify the Consultant for any damage, injury or loss that may occur as a result. It is the client's responsibility to organise any required re-inspections at the intervals specified.

The Client warrants that it has disclosed all complete and accurate information in relation to the trees that are the subject of this report and the like and the Client hereby indemnifies and holds the Consultant harmless from any costs, losses or damage resulting in any way from matters not disclosed by the Client.

The Client must acknowledge that it is their responsibility, prior to any work being conducted in connection with the Report, to obtain all necessary approvals in relation to carrying out the work that may be recommended by this report, including without limitation: approval from any local council, local or state government agency, or other authorised body, landlord, neighbour or any other persons or body corporate with legislative, regulatory or other interest over the trees or land that is the subject of this report.

Arboribus shall not be required to attend court or provide evidence regarding this report unless predetermined provisions are agreed to between Arboribus and the Client, including additional payment of fees for such services.

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