Appendix D – Tree Assessment Summary

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
U-R1	*Eucalyptus camaldulensis*	Unregulated	4.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R2	*Eucalyptus sideroxylon*	Regulated	9.12 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
S-S1	*Eucalyptus cladocalyx*	Significant	11.04 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
R-R3	*Eucalyptus cladocalyx*	Regulated	5.52 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S2	*Eucalyptus cladocalyx*	Significant	13.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R4	*Eucalyptus cladocalyx*	Regulated	9.36 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R5	*Eucalyptus cladocalyx*	Regulated	8.16 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S3	*Eucalyptus cladocalyx*	Significant	12 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R6	*Eucalyptus cladocalyx*	Regulated	7.68 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R7	*Eucalyptus cladocalyx*	Regulated	8.4 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R8	*Eucalyptus cladocalyx*	Regulated	8.64 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
S-S4	*Eucalyptus cladocalyx*	Significant	11.52 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R9	*Eucalyptus cladocalyx*	Regulated	7.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R10	*Eucalyptus cladocalyx*	Regulated	7.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S5	*Eucalyptus cladocalyx*	Significant	12.12 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R11	*Eucalyptus cladocalyx*	Regulated	7.8 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R12	*Eucalyptus cladocalyx*	Regulated	7.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R14	*Eucalyptus cladocalyx*	Regulated	7.8 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S6	*Eucalyptus cladocalyx*	Significant	14.28 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R15	*Eucalyptus cladocalyx*	Regulated	10.08 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S7	*Eucalyptus cladocalyx*	Significant	13.8 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

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Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S8	*Eucalyptus cladocalyx*	Significant	12.96 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S9	*Eucalyptus cladocalyx*	Significant	15.00 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R16	*Eucalyptus cladocalyx*	Regulated	7.68 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R17	*Eucalyptus cladocalyx*	Regulated	8.16 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S10	*Eucalyptus cladocalyx*	Significant	13.2 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

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Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R19	*Eucalyptus cladocalyx*	Regulated	9 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S11	*Eucalyptus cladocalyx*	Significant	13.44 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S12	*Eucalyptus cladocalyx*	Significant	12.84 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S13	*Eucalyptus cladocalyx*	Significant	12.24 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

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Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S14	*Eucalyptus cladocalyx*	Significant	11.76 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R20	*Eucalyptus cladocalyx*	Regulated	8.28 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R21	*Eucalyptus cladocalyx*	Regulated	10.68 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R22	*Eucalyptus cladocalyx*	Regulated	10.44 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-S47	*Eucalyptus camaldulensis*	Regulated	6.6 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R23	*Melaleuca armillaris*	Regulated	5.64 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
E-R24	*Brachychiton acerifolius*	Exempt	7.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R25	*Brachychiton acerifolius*	Regulated	9.6 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R26	*Brachychiton acerifolius*	Regulated	7.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R27	*Eucalyptus cladocalyx*	Regulated	10.8 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S15	*Eucalyptus cladocalyx*	Significant	12 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S16	*Eucalyptus cladocalyx*	Significant	11.28 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
S-S17	*Eucalyptus cladocalyx*	Significant	15 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
S-S18	*Eucalyptus cladocalyx*	Significant	11.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S19	*Eucalyptus cladocalyx*	Significant	12 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

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Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S20	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R28	*Eucalyptus cladocalyx*	Regulated	7.92 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R29	*Eucalyptus cladocalyx*	Regulated	9.36 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S21	*Eucalyptus cladocalyx*	Significant	13.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S22	*Eucalyptus cladocalyx*	Significant	11.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S23	*Eucalyptus cladocalyx*	Significant	13.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S24	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R30	*Eucalyptus cladocalyx*	Regulated	10.32 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R31	*Eucalyptus cladocalyx*	Regulated	10.8 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R32	*Eucalyptus cladocalyx*	Regulated	9.24 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S25	*Eucalyptus cladocalyx*	Significant	14.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R33	*Eucalyptus cladocalyx*	Regulated	11.4 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R34	*Eucalyptus cladocalyx*	Regulated	9 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R35	*Eucalyptus cladocalyx*	Regulated	9.24 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R39	*Eucalyptus cladocalyx*	Regulated	10.32 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R40	*Eucalyptus cladocalyx*	Regulated	10.32 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S28	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R38	*Eucalyptus cladocalyx*	Regulated	10.08 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R37	*Eucalyptus cladocalyx*	Regulated	9.84 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S27	*Eucalyptus cladocalyx*	Significant	11.88 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S26	*Eucalyptus cladocalyx*	Significant	13.92 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R36	*Eucalyptus cladocalyx*	Regulated	10.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R44	*Agonis flexuosa*	Regulated	7.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R45	*Agonis flexuosa*	Regulated	9.6 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R46	*Agonis flexuosa*	Regulated	8.16 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S29	*Eucalyptus cladocalyx*	Significant	12.96 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S30	*Eucalyptus cladocalyx*	Significant	11.52 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R41	*Eucalyptus cladocalyx*	Regulated	8.88 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S31	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S32	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S33	*Eucalyptus cladocalyx*	Significant	12.12 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R42	*Eucalyptus cladocalyx*	Regulated	8.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S34	*Eucalyptus camaldulensis*	Significant	15 metres	Whilst the encroachment on this tree is substantial the majority of the encroachment is existing and tree friendly design and construction methodologies are available to minimise any impact.	This tree will require the implementation of tree friendly design and construction methodologies. The existing carpark is to be removed resulting in an overall improvement in the root zone.	Substantial
R-R43	*Eucalyptus camaldulensis*	Regulated	10.2 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-S35	*Eucalyptus camaldulensis*	Regulated	11.28 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S36	*Eucalyptus camaldulensis*	Significant	12 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S37	*Eucalyptus camaldulensis*	Significant	12.24 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R50	*Eucalyptus saligna*	Regulated	8.4 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R49	*Corymbia citriodora*	Regulated	8.88 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S39	*Eucalyptus camaldulensis*	Significant	13.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S38	*Eucalyptus camaldulensis*	Significant	14.04 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R48	*Corymbia maculata*	Regulated	9.36 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
U-R53	*Corymbia citriodora*	Unregulated	6.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R52	*Corymbia citriodora*	Regulated	7.68 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R51	*Corymbia citriodora*	Regulated	7.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S40	*Eucalyptus camaldulensis*	Significant	12.36 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S41	*Eucalyptus cladocalyx*	Significant	11.4 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R56	*Eucalyptus leucoxylon*	Regulated	8.88 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S42	*Corymbia maculata*	Significant	12 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R57	*Eucalyptus saligna*	Regulated	6.6 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R58	*Eucalyptus globulus ssp. Maidenii*	Regulated	7.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R59	*Ficus macrophylla*	Regulated	4.92 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R60	*Eucalyptus globulus ssp. Maidenii*	Regulated	5.88 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S43	*Eucalyptus globulus ssp. Maidenii*	Significant	7.44 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R61	*Eucalyptus camaldulensis*	Regulated	9.96 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R63	*Eucalyptus leucoxylon*	Regulated	8.28 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R64	*Eucalyptus camaldulensis*	Regulated	9.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-S44	*Eucalyptus camaldulensis*	Regulated	9.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S45	*Eucalyptus camaldulensis*	Significant	15.00 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R65	*Eucalyptus camaldulensis*	Regulated	10.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R66	*Eucalyptus camaldulensis*	Regulated	7.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
U-R62	*Eucalyptus leucoxylon*	Unregulated	6.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R54	*Phoenix canariensis*	Regulated	10.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R55	*Phoenix canariensis*	Regulated	10.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
E-R18	*Eucalyptus cladocalyx*	Exempt	9 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree is dead and will require the implementation of design and construction methodologies that will not impact its structure.	Substantial

Appendix E – Tree Protection Zone Guidelines

Tree Protection Zone General Specifications and Guidelines

The Tree Protection Zone(s) is identified on the site plan. The TPZ is an area where construction activities are regulated for the purposes of protecting tree viability. The TPZ should be established so that it clearly identifies and precludes development/construction activities including personnel.

If development activities are required within the TPZ then these activities must be reviewed and approved by the Project Arborist. Prior to approval, the Project Arborist must be certain that the tree(s) will remain viable as a result of this activity.

Work Activities Excluded from the Tree Protection Zone:

a) Machine excavation including trenching;

b) Excavation for silt fencing;

c) Cultivation;

d) Storage;

e) Preparation of chemicals, including preparation of cement products;

f) Parking of vehicles and plant;

g) Refuelling;

h) Dumping of waste;

i) Wash down and cleaning of equipment;

j) Placement of fill;

k) Lighting of fires;

l) Soil level changes;

m) Temporary or permanent installation of utilities and signs, and

n) Physical damage to the tree.

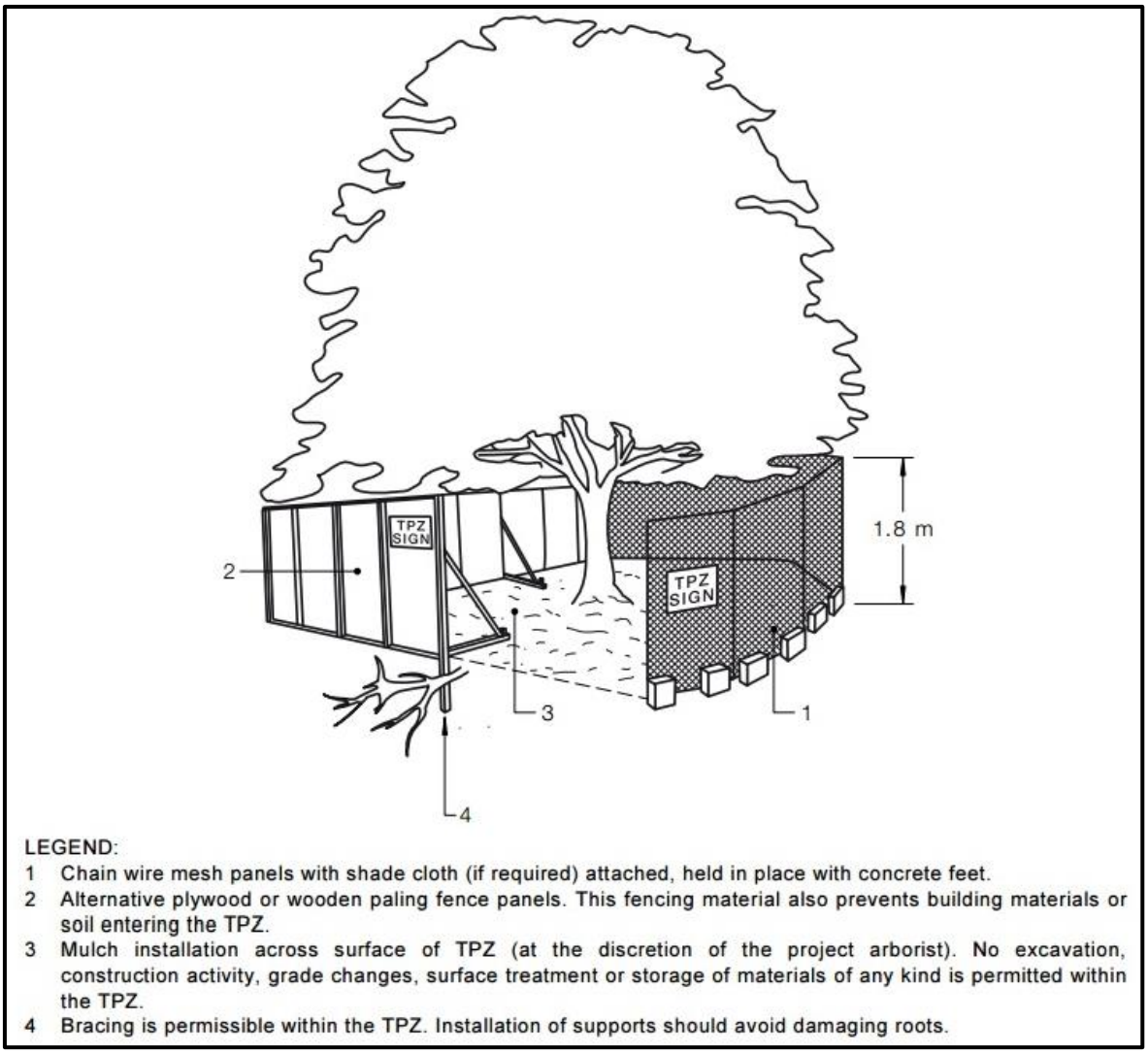
Protective Fencing
Protective fencing must be installed around the identified Tree Protection Zone (See Figure1). The fencing should by chain wire panels and compliant with AS4687 - 2007 *Temporary fencing and hoardings*. Shade cloth or similar material should be attached around the fence to reduce dust, other particulates and liquids entering the protected area.

Temporary fencing on 28kg bases are recommended for use as this eliminates any excavation requirements to install fencing. Excavation increase the likelihood of root damage therefore should be avoided where possible throughout the project.

Existing perimeter fencing and other structures may be utilised as part of the protective fencing.

Any permanent fencing should be post and rail with the set out determined in consultation with the Project Arborist.

Where the erection of the fence is not practical the Project Arborist is to approve alternative measures.



LEGEND:
1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 1 Showing example of protection fencing measures suitable.

Other Protection Measures

General
When a TPZ exclusion area cannot be established due to practical reasons or the area needs to be entered to undertake construction activities then additional tree protection measures may need to be adopted. Protection measures should be compliant with AS4970-2009 and approved by the Project Arborist

Installation of Scaffolding within Tree Protection Area.
Where scaffolding is required within the TPZ branch removal should be minimised. Any branch removal required should be approved by the Project Arborist and performed by a certified Arborist and performed in accordance with AS4373-2007. Approval to prune branches must be documented and maintained.

Ground below scaffold should be protected by boarding (e.g. scaffold board or plywood sheeting) as shown in Figure below. The boarding should be left in place until scaffolding is removed.

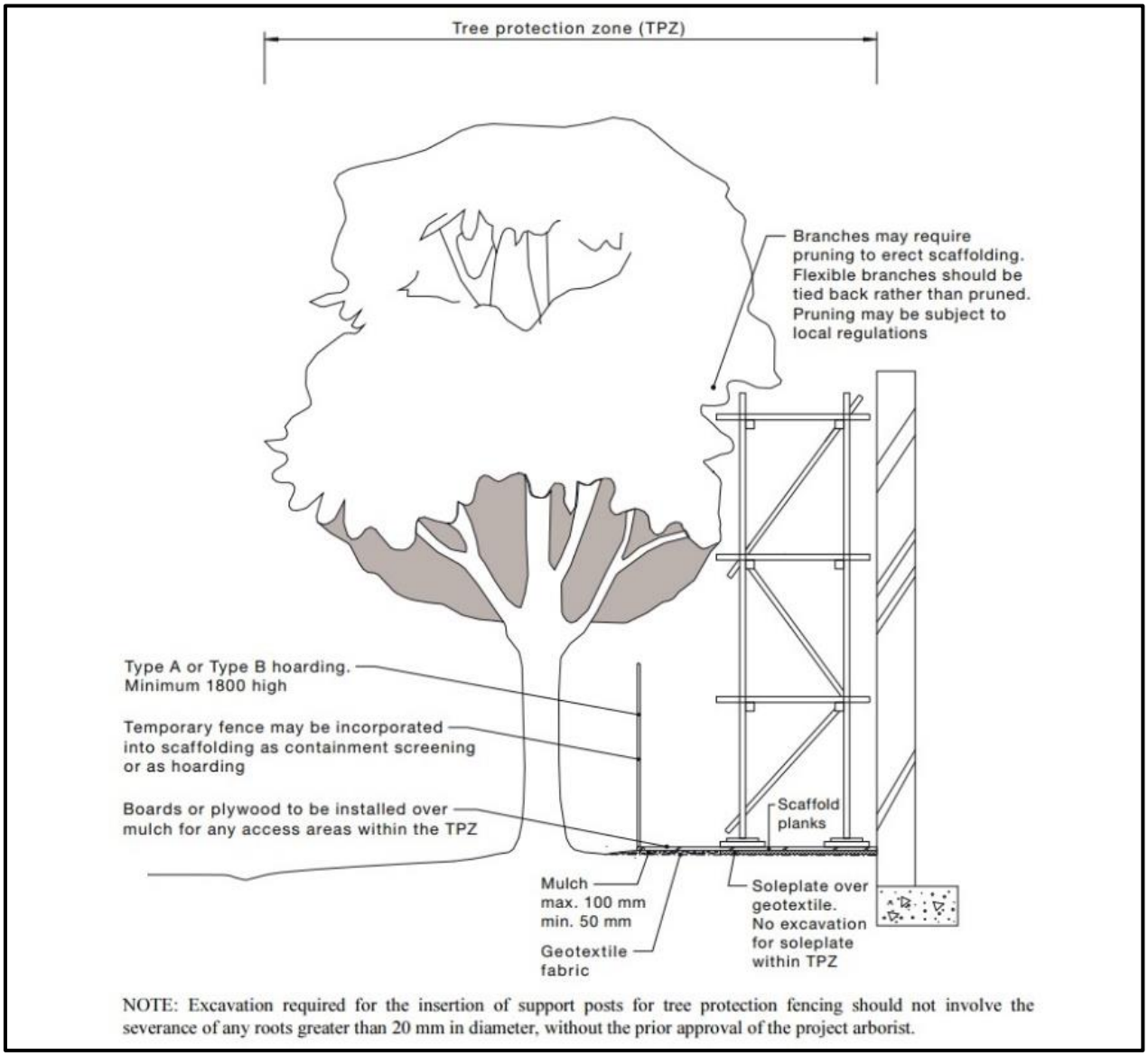
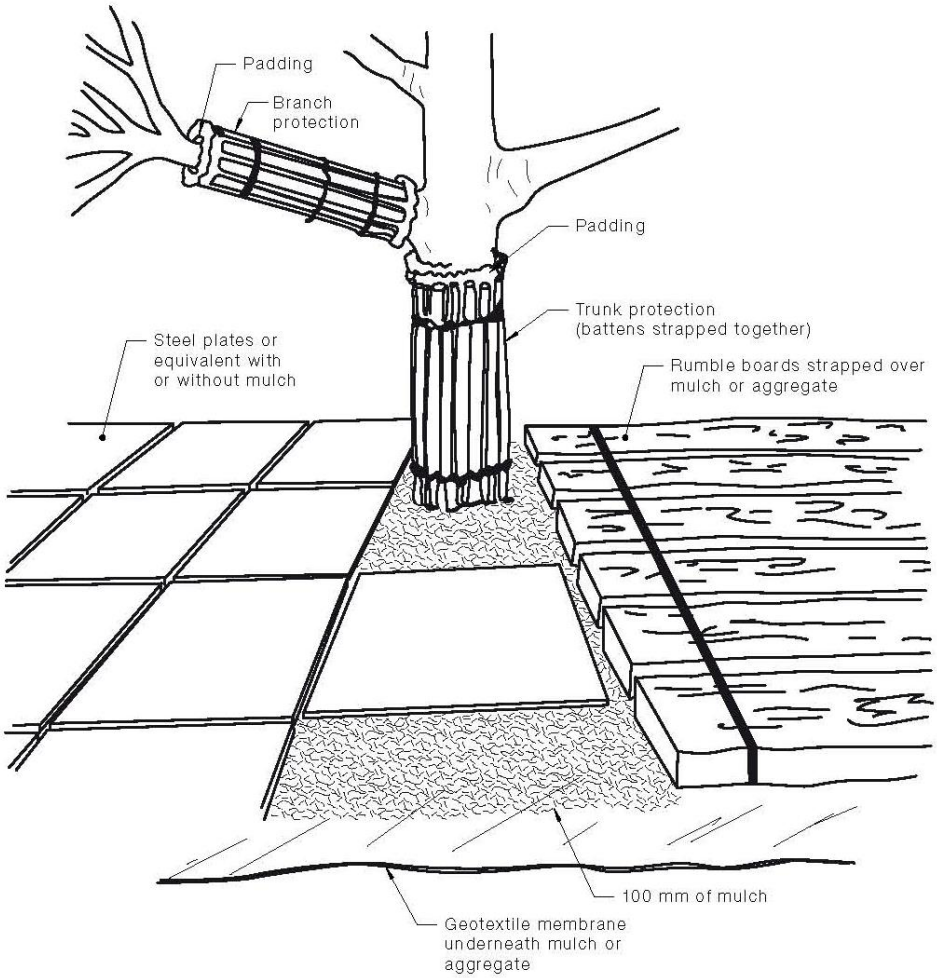


Figure 2 – Showing scaffold constructed within TPZ.

Ground Protection
Where access is required within the TPZ ground protection measures are required. Ground protection is to be designed to prevent both damage to the roots and soil compaction.

Ground protection methods include the placement of a permeable membrane beneath a layer of non-compactable material such as mulch or a no fines gravel which is in turn covered with rumble boards or steel plates.



NOTES:

1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.

2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Figure 3 – Ground protection methods.

Document Source:
Diagrams in this document are sourced from AS4970-2009 Protection of trees on development sites*. Further information and guidelines are available in within that document.*

Paving Construction within a Tree Protection Zone
Paving within any Tree Protection Zone (TPZ) must be carried out above natural ground level unless it can be shown with non-destructive excavation (AirSpade® or similar) that no or insignificant root growth occupies the proposed construction area.

Due to the adverse effect filling over a Tree Protection Zone (TPZ) can have on tree health; alternative mediums other than soil must be used. Available alternative mediums include structural soils or the use of a cellular confinement system such as *Ecocell*®.

Ecocell®
Ecocell® systems are a cellular confinement system that can be filled with large particle sized gravels as a sub-base for paving systems to reduce compaction to the existing grade.

Site preparation
- Clearly outline to all contracting staff entering the site the purpose of the TPZ's and the contractors' responsibilities. No fence is to be moved and no person or machinery is to access the TPZ's without consent from the City of Unley and/or the Project Arborist.

- Fence off the unaffected area of the TPZ with a temporary fence leaving a 1.5 metre gap between the work area and the fence; this will prevent machinery access to the remaining root zone.

Installation of Ecocell® and EcoTrihex Paving®
- Install a non-woven geotextile fabric for drainage and separation from sub base with a minimum of 600mm overlap on all fabric seams as required.

- Add Ecocell®, fill compartments with gravel and compact to desired compaction rate.

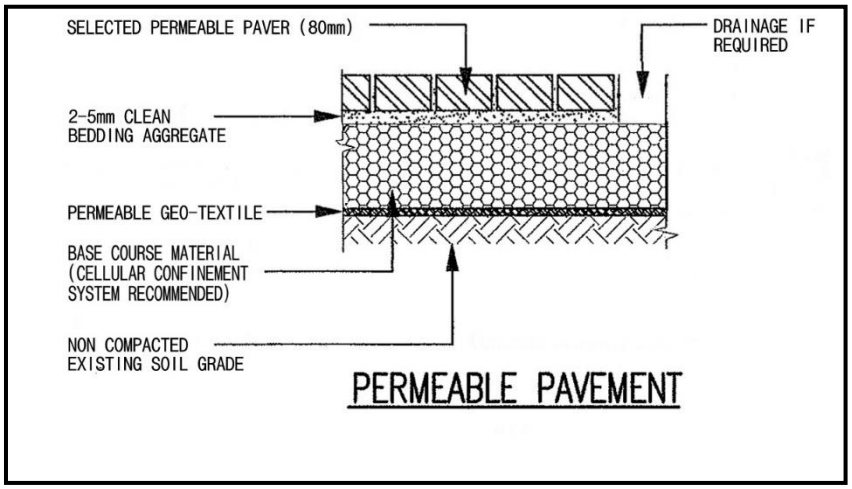
- If excessive groundwater is expected incorporate an appropriate drainage system within the bedding sand level.

- Add paving sand to required depth and compact to paving manufacturer's specifications.

- Lay EcoTrihex Paving® as per manufactures specifications and fill gaps between pavers with no fines gravel.

- Remove all debris, vegetation cover and unacceptable in-situ soils. No excavation or soil level change of the sub base is allowable for the installation of the paving.

- Where the finished soil level is uneven, gullies shall be filled with 20 millimetre coarse gravel to achieve the desired level.



This construction method if implemented correctly can significantly reduce and potentially eliminated the risk of tree decline and/or structural failure and effectively increase the size of the Tree Protection Zone to include the area of the paving.

Certificates of Control

Stage in development	Tree management process	
	Matters for consideration	**Actions and certification**
Development submission	Identify trees for retention through comprehensive arboricultural impact assessment of proposed construction. Determine tree protection measures Landscape design	Provide arboricultural impact assessment including tree protection plan (drawing) and specification
Development approval	Development controls Conditions of consent	Review consent conditions relating to trees
Pre-construction (Sections 4 and 5)		
Initial site preparation	State based OHS requirements for tree work Approved retention/removal Refer to AS 4373 for the requirements on the pruning of amenity trees Specifications for tree protection measures	Compliance with conditions of consent Tree removal/tree retention/transplanting Tree pruning Certification of tree removal and pruning Establish/delineate TPZ Install protective measures Certification of tree protection measures
Construction (Sections 4 and 5)		
Site establishment	Temporary infrastructure Demolition, bulk earthworks, hydrology	Locate temporary infrastructure to minimize impact on retained trees Maintain protective measures Certification of tree protection measures
Construction work	Liaison with site manager, compliance Deviation from approved plan	Maintain or amend protective measures Supervision and monitoring
Implement hard and soft landscape works	Installation of irrigation services Control of compaction work Installation of pavement and retaining walls	Remove selected protective measures as necessary Remedial tree works Supervision and monitoring
Practical completion	Tree vigour and structure	Remove all remaining tree protection measures Certification of tree protection
Post construction (Section 5)		
Defects liability/ maintenance period	Tree vigour and structure	Maintenance and monitoring Final remedial tree works Final certification of tree condition

Document Source:

This table has been sourced from AS4970-2009 Protection of trees on development sites. *Further information and guidelines are available in within that document.*

Tree Protection Zone

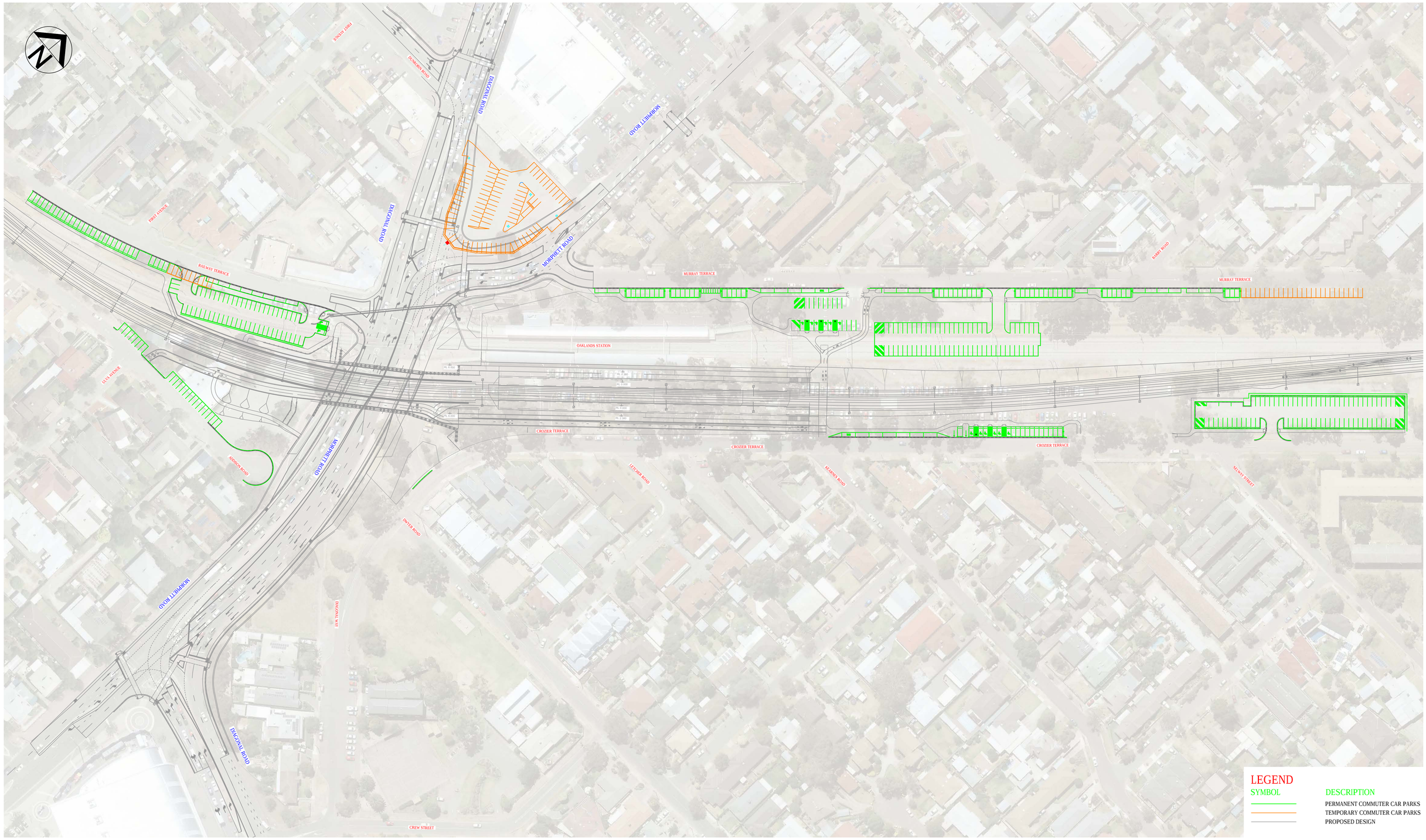
NO ACCESS

Contact: Arborman Tree Solutions

Ph. 8240 5555
m: 0418 812 967
e: arborman@arborman.com.au

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

APPENDIX F – CAR PARKING PLAN



LEGEND

SYMBOL	DESCRIPTION
	PERMANENT COMMUTER CAR PARKS
	TEMPORARY COMMUTER CAR PARKS
	PROPOSED DESIGN

PTPA DRAWING No.: PTPA-OAKL-10285-SKT-1200-03-0010

NOT FOR CONSTRUCTION

No.	AMENDMENT DESCRIPTION	BY	CHECK	ACCEPTANCE	DATE

INDEX SHEET REFERENCE: SHEET

UNCONTROLLED COPY WHEN PRINTED ◄ 100 MILLIMETRES ON ORIGINAL DRAWING ► ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE

PTP ALLIANCE

Government of South Australia
Department of Planning, Transport and Infrastructure

PROJECT No.: PTPA_	FILE No.:
DESIGN No.:	SURVEY No:
PROJECT START ROAD RUNNING DISTANCE:	
PROJECT END ROAD RUNNING DISTANCE:	
SCALES: 6 0 3 6 9 12	

RN 6952/ RN6607

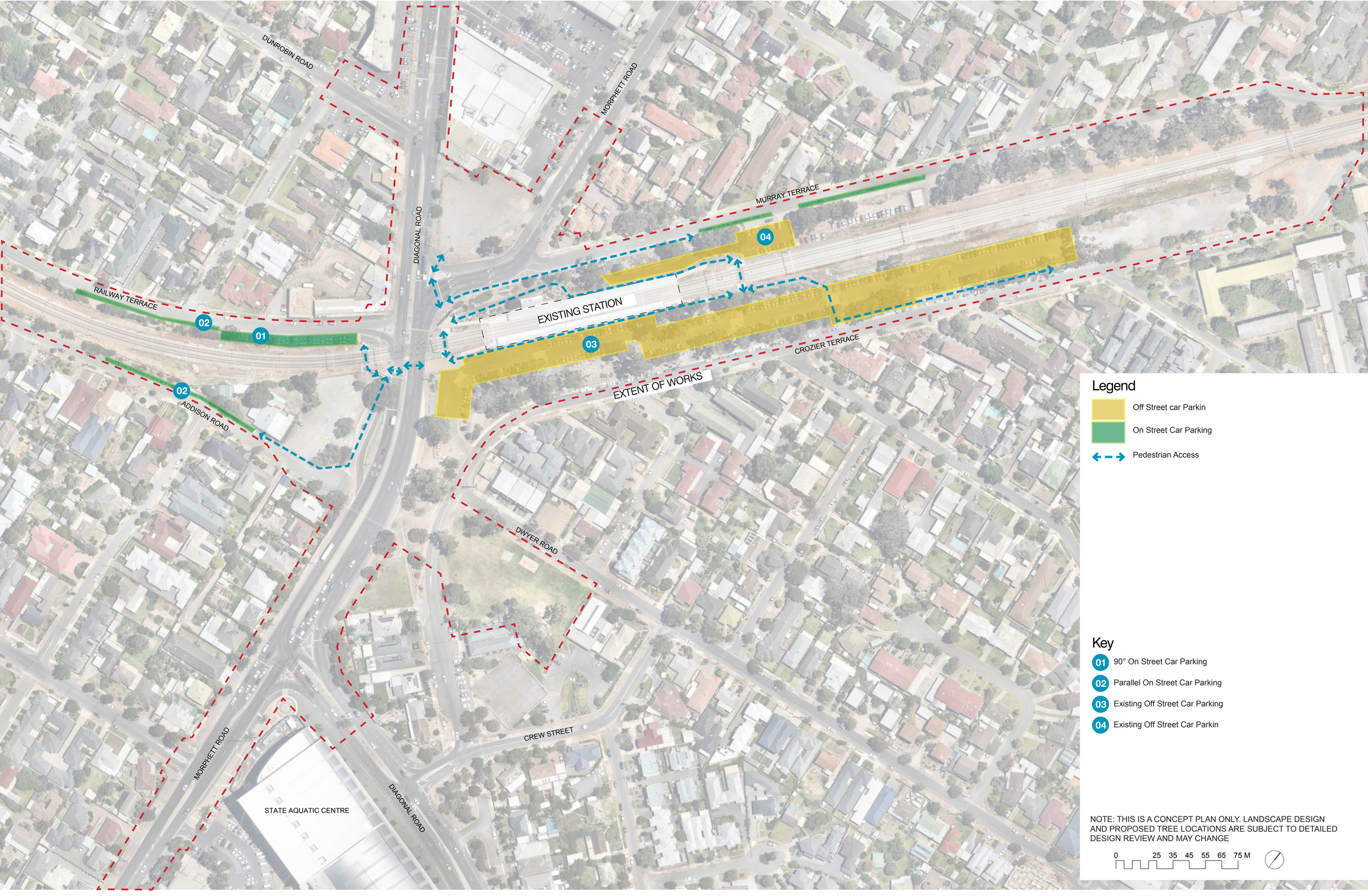
PUBLIC TRANSPORT PROJECTS ALLIANCE

OAKLANDS CROSSING

DESIGNED:	DRAFTED:	ACCEPTED FOR USE:	ACCEPTANCE FORM KNET No.:	DRAWING No.:	SHEET No.:	AMEND No.:
CHECKED:	CHECKED:	TITLE: DATE:	IN ACCORDANCE WITH DP013	SHEET LATITUDE	SHEET LONGITUDE	

CAD FILE NAME: PTPA-OAKL-10285-SKT-1200-03-0010.DWG

APPENDIX G – ACCESS ARRANGMENTS



Legend

- Off Street car Parkin
- On Street Car Parking
- Pedestrian Access

Key

01 90° On Street Car Parking

02 Parallel On Street Car Parking

03 Existing Off Street Car Parking

04 Existing Off Street Car Parkin

NOTE: THIS IS A CONCEPT PLAN ONLY. LANDSCAPE DESIGN AND PROPOSED TREE LOCATIONS ARE SUBJECT TO DETAILED DESIGN REVIEW AND MAY CHANGE

0 25 35 45 55 65 75 M

PTPA Oaklands Rail Crossing

ASPECT Studios™

Car Parking and Pedestrian Access Plan - Existing Layout

Scale 1:1000 @ A1

Date: **14.03.2018**
Dwg no.: **SK-013 - 01**
Rev: **-**

DUNROBIN ROAD
MORPHETT ROAD
DIAGONAL ROAD
MURRAY TERRACE
RAILWAY TERRACE
EXISTING STATION
CROZIER TERRACE
EXTENT OF WORKS
ADDISON ROAD
DWYER ROAD
CREW STREET
MORPHETT ROAD
STATE AQUATIC CENTRE
DIAGONAL ROAD

01
02

Legend

- Temporary Parking
- Pedestrian Access
- Existing Tree to be retained
- New 100L Semi-Advanced Tree
- Opportunity for New Street Tree
- Irrigated Landscape: 80% Turf / 20% Planting @ 2 Plants / m2
- Irrigated Planting @ 3 Plants / m2
- High Quality Pavement
- High Quality Pavement
- Greenway - Exposed Aggregate Concrete
- Concrete Pedestrian Paving to Council's Specificatio
- Proposed Asphalt Car Parking
- Direct Seed Dryland Grass Planting (TBC)

Key

01 Temporary Commuter Car Parking

02 Temporary Commuter Car Parking

NOTE: THIS IS A CONCEPT PLAN ONLY. LANDSCAPE DESIGN AND PROPOSED TREE LOCATIONS ARE SUBJECT TO DETAILED DESIGN REVIEW AND MAY CHANGE

0 25 35 45 55 65 75 M

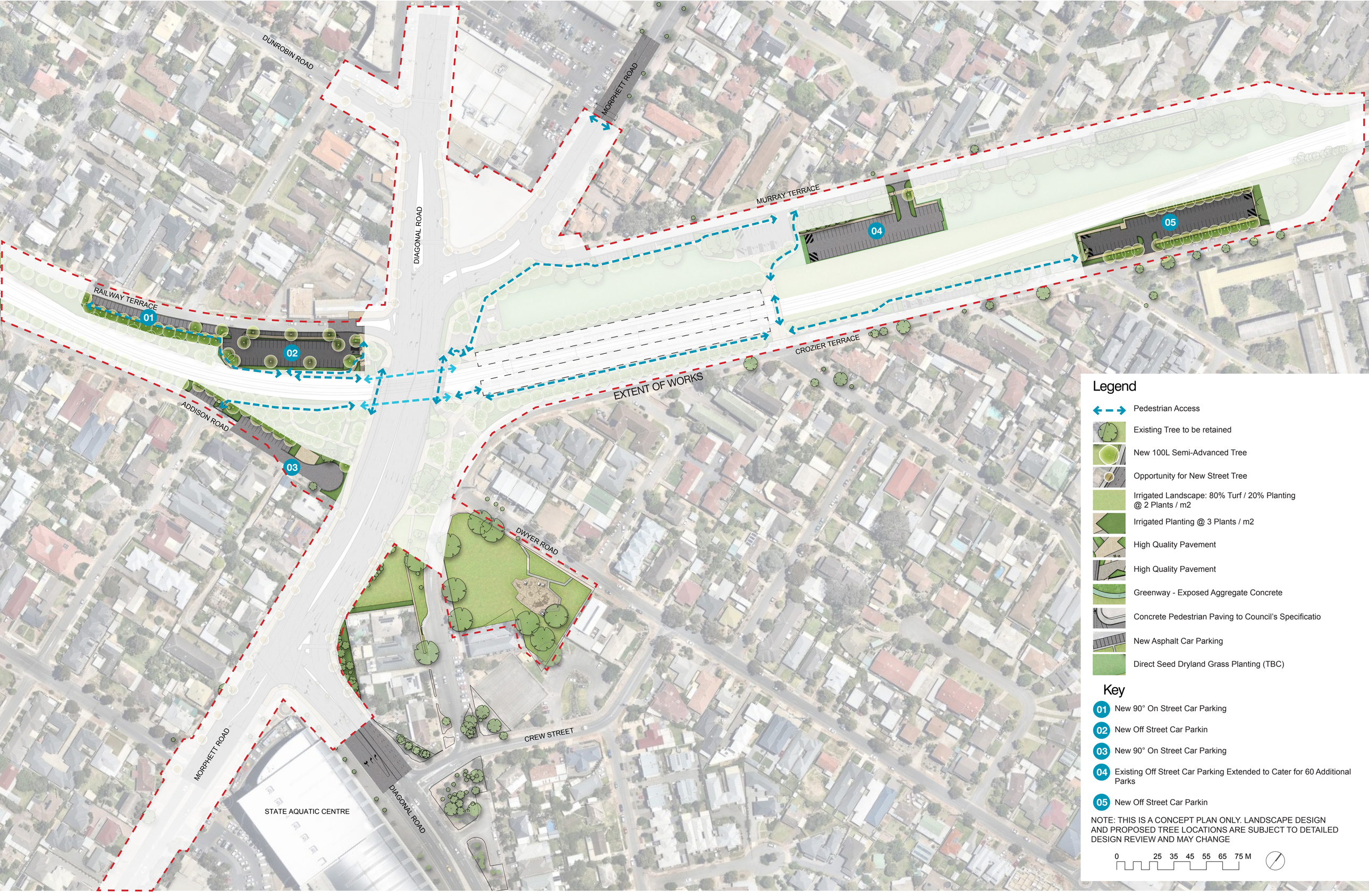
PTPA Oaklands Rail Crossing

ASPECT Studios™

Car Parking and Pedestrian Access Plan - Construction Layout

Scale 1:1000 @ A1

Date: **14.03.2018**
Dwg no.: **SK-013 - 02**
Rev: **-**



Legend

- Pedestrian Access
- Existing Tree to be retained
- New 100L Semi-Advanced Tree
- Opportunity for New Street Tree
- Irrigated Landscape: 80% Turf / 20% Planting @ 2 Plants / m2
- Irrigated Planting @ 3 Plants / m2
- High Quality Pavement
- High Quality Pavement
- Greenway - Exposed Aggregate Concrete
- Concrete Pedestrian Paving to Council's Specificatio
- New Asphalt Car Parking
- Direct Seed Dryland Grass Planting (TBC)

Key

01 New 90° On Street Car Parking

02 New Off Street Car Parkin

03 New 90° On Street Car Parking

04 Existing Off Street Car Parking Extended to Cater for 60 Additional Parks

05 New Off Street Car Parkin

NOTE: THIS IS A CONCEPT PLAN ONLY. LANDSCAPE DESIGN AND PROPOSED TREE LOCATIONS ARE SUBJECT TO DETAILED DESIGN REVIEW AND MAY CHANGE

0 25 35 45 55 65 75 M

PTPA Oaklands Rail Crossing

ASPECT Studios™

Car Parking and Pedestrian Access Plan - Completed Works Layout

Scale 1:1000 @ A1

Date: **14.03.2018**
Dwg no.: **SK-013 - 03**
Rev: **A**

APPENDIX H – LANDSCAPING PLAN

Tree Schedule

	Botanical Name	Common Name	Number
Av	*Allocasuarina verticillata*	Drooping Sheoak	12
CH	*Callistemon viminalis 'Harkness'*	Harkness Bottlebrush	7
CS	*Corymbia citriodora 'Scentuous'*	Dwarf Lemon Scented Gum	TBC
Ca	*Cupaniopsis anacardioides*	Tuckeroo	65
Ec	*Eucalyptus camaldulensis*	River Red Gum	7
El	*Eucalyptus leucoxylon*	SA Blue Gum	31
ElD	*Eucalyptus leucoxylon 'Euky Dwarf'*	Euky Dwarf	3
Em	*Eucalyptus macrocarpa*	Grey Box	18
Hf	*Hymenosporum flavum*	Native Frangipani	18
Pc	*Pistachia chinensis*	Chinese Pistachio	9
Tl	*Tristaniopsis laurina*	Water Gum	48
Jm	*Jacaranda mimosifolia*	Jacaranda	18

Legend

- Existing Tree to be retained
- New 100L Semi-Advanced Tree
- Opportunity for New Street Tree
- Irrigated Landscape: 80% Turf / 20% Planting @ 2 Plants / m2
- Irrigated Planting @ 3 Plants / m2
- High Quality Pavement
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- Greenway - Exposed Aggregate Concrete
- Concrete Pedestrian Paving to Council's Specificatio
- New Asphalt Car Parking
- Direct Seed Dryland Grass Planting (TBC)

NOTE: THIS IS A CONCEPT PLAN ONLY. LANDSCAPE DESIGN AND PROPOSED TREE LOCATIONS ARE SUBJECT TO DETAILED DESIGN REVIEW AND MAY CHANGE

0 25 35 45 55 65 75 M

PTPA Oaklands Rail Crossing

ASPECT Studios™

Tree Planting Plan

Scale 1:1000 @ A1

Date: **14.03.2018**
Dwg no.: **SK-008**
Rev: **B**

APPENDIX I – RELEVANT DEVELOPMENT PLAN PROVISIONS

Infrastructure

OBJECTIVES

1 Infrastructure provided in an economical and environmentally sensitive manner.

2 Infrastructure, including social infrastructure, provided in advance of need.

3 Suitable land for infrastructure identified and set aside in advance of need.

4 The visual impact of infrastructure facilities minimised.

5 The efficient and cost-effective use of existing infrastructure.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should not occur without the provision of adequate utilities and services, including:

(a) electricity supply

(b) water supply

(c) drainage and stormwater systems

(d) waste disposal

(e) effluent disposal systems

(f) formed all-weather public roads

(g) telecommunications services

(h) social infrastructure, community services and facilities

(i) gas services.

2 Development should only occur only where it provides, or has access to, relevant easements for the supply of infrastructure.

3 Development should incorporate provision for the supply of infrastructure services to be located within common service trenches where practicable.

4 Development should not take place until adequate and co-ordinated drainage of the land is assured.

5 Development in urban areas should not occur without provision of an adequate reticulated domestic quality mains water supply and an appropriate waste treatment system.

6 In areas where no reticulated water supply is available, buildings whose usage is reliant on a water supply should be equipped with an adequate and reliable on-site water storage system.

7 Urban development should not be dependent on an indirect water supply.

8 Electricity infrastructure should be designed and located to minimise its visual and environmental impacts.

9 In urban areas, electricity supply serving new development should be installed underground.

10 Utilities and services, including access roads and tracks, should be sited on areas already cleared of native vegetation. If this is not possible, their siting should cause minimal interference or disturbance to existing native vegetation and biodiversity.

11 Utility buildings and structures should be grouped with non-residential development where possible.

12 Development in proximity to infrastructure facilities should be sited and be of a scale to ensure adequate separation to protect people and property.

Interface between Land Uses

OBJECTIVES

1 Development located and designed to minimise adverse impact and conflict between land uses.

2 Protect community health and amenity from adverse impacts of development.

3 Protect desired land uses from the encroachment of incompatible development.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should not detrimentally affect the amenity of the locality or cause unreasonable interference through any of the following:

(a) the emission of effluent, odour, smoke, fumes, dust or other airborne pollutants

(b) noise

(c) vibration

(d) electrical interference

(e) light spill

(f) glare

(g) hours of operation

(h) traffic impacts.

2 Development should be sited and designed to minimise negative impacts on existing and potential future land uses desired in the locality.

3 Development adjacent to a Residential Zone should be designed to minimise overlooking and overshadowing of adjacent dwellings and private open space.

4 Residential development adjacent to non-residential zones and land uses should be located, designed and/or sited to protect residents from potential adverse impacts from non-residential activities.

5 Sensitive uses likely to conflict with the continuation of lawfully existing developments and land uses desired for the zone should be designed to minimise negative impacts.

6 Non-residential development on land abutting a residential zone should be designed to minimise noise impacts to achieve adequate levels of compatibility between existing and proposed uses.

Noise Generating Activities

7 Development that emits noise (other than music noise) should include noise attenuation measures that achieve the relevant Environment Protection (Noise) Policy criteria when assessed at the nearest existing noise sensitive premises.

8 Development with the potential to emit significant noise (e.g. industry) should incorporate noise attenuation measures that prevent noise from causing unreasonable interference with the amenity of noise sensitive premises.

9 Outdoor areas (such as beer gardens or dining areas) associated with licensed premises should be designed or sited to minimise adverse noise impacts on adjacent existing or future noise sensitive development.

10 Development proposing music should include noise attenuation measures that achieve the following desired noise levels:

Noise level assessment location	Desired noise level
Adjacent existing *noise sensitive development* property boundary	Less than 8 dB above the level of background noise ($L_{90,15min}$) in any octave band of the sound spectrum and Less than 5 dB(A) above the level of background noise ($LA_{90,15min}$) for the overall (sum of all octave bands) A-weighted level.
Adjacent land property boundary	Less than 65dB(Lin) at 63Hz and 70dB(Lin) in all other octave bands of the sound spectrum or less than 8 dB above the level of background noise ($L_{90,15min}$) in any octave band of the sound spectrum and 5 dB(A) overall (sum of all octave bands) A-weighted level.

Air Quality

11 Development with the potential to emit harmful or nuisance-generating air pollution should incorporate air pollution control measures to prevent harm to human health or unreasonable interference with the amenity of sensitive uses within the locality.

12 Chimneys or exhaust flues associated with commercial development (including cafes, restaurants and fast food outlets) should be designed to ensure they do not cause a nuisance or health concerns to nearby sensitive receivers by:

(a) incorporating appropriate treatment technology before exhaust emissions are released to the atmosphere

(b) ensuring that the location and design of chimneys or exhaust flues maximises dispersion and takes into account the location of nearby sensitive uses.

Landscaping, Fences and Walls

OBJECTIVES

1 The amenity of land and development enhanced with appropriate planting and other landscaping works, using locally indigenous plant species where possible.

2 Functional fences and walls that enhance the attractiveness of development.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should incorporate open space and landscaping in order to:

(a) complement built form and reduce the visual impact of larger buildings (eg taller and broader plantings against taller and bulkier building components)

(b) enhance the appearance of road frontages

(c) screen service yards, loading areas and outdoor storage areas

(d) minimise maintenance and watering requirements

(e) enhance and define outdoor spaces, including car parking areas

(f) provide shade and shelter

(g) assist in climate control within buildings

(h) maintain privacy

(i) maximise stormwater re-use

(j) complement existing native vegetation

(k) contribute to the viability of ecosystems and species

(l) promote water and biodiversity conservation.

2 Landscaping should:

(a) include the planting of locally indigenous species where appropriate

(b) be oriented towards the street frontage

(c) result in the appropriate clearance from powerlines and other infrastructure being maintained.

3 Landscaped areas along road frontages should have a width of not less than 2 metres and be protected from damage by vehicles and pedestrians.

4 Landscaping should not:

(a) unreasonably restrict solar access to adjoining development

(b) cause damage to buildings, paths and other landscaping from root invasion, soil disturbance or plant overcrowding

(c) introduce pest plants

(d) increase the risk of bushfire

(e) remove opportunities for passive surveillance

(f) increase autumnal leave fall in waterways

(g) increase the risk of weed invasion.

5 Fences and walls, including retaining walls, should:

(a) not result in damage to neighbouring trees

(b) be compatible with the associated development and with existing predominant, attractive fences and walls in the locality

(c) enable some visibility of buildings from and to the street to enhance safety and allow casual surveillance

(d) incorporate articulation or other detailing where there is a large expanse of wall facing the street

(e) assist in highlighting building entrances

(f) be sited and limited in height, to ensure adequate sight lines for motorists and pedestrians especially on corner sites

(g) in the case of side and rear boundaries, be of sufficient height to maintain privacy and/or security without adversely affecting the visual amenity or access to sunlight of adjoining land

(h) be constructed of non-flammable materials.

Natural Resources

OBJECTIVES

1 Retention, protection and restoration of the natural resources and environment.

2 Protection of the quality and quantity of South Australia's surface waters, including inland, marine and estuarine and underground waters.

3 The ecologically sustainable use of natural resources including water resources, including marine waters ground water, surface water and watercourses.

4 Natural hydrological systems and environmental flows reinstated, and maintained and enhanced.

5 Development consistent with the principles of water sensitive design.

6 Development sited and designed to:

(a) protect natural ecological systems

(b) achieve the sustainable use of water

(c) protect water quality, including receiving waters

(d) reduce runoff and peak flows and prevent the risk of downstream flooding

(e) minimise demand on reticulated water supplies

(f) maximise the harvest and use of stormwater

(g) protect stormwater from pollution sources.

7 Storage and use of stormwater which avoids adverse impact on public health and safety.

8 Native flora, fauna and ecosystems protected, retained, conserved and restored.

9 Restoration, expansion and linking of existing native vegetation to facilitate habitat corridors for ease of movement of fauna.

10 Minimal disturbance and modification of the natural landform.

11 Protection of the physical, chemical and biological quality of soil resources.

12 Protection of areas prone to erosion or other land degradation processes from inappropriate development.

13 Protection of the scenic qualities of natural and rural landscapes.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should be undertaken with minimum impact on the natural environment, including air and water quality, land, soil, biodiversity, and scenically attractive areas.

2 Development should ensure that South Australia's natural assets, such as biodiversity, water and soil, are protected and enhanced.

3 Development should not significantly obstruct or adversely affect sensitive ecological areas such as creeks, wetlands, estuaries and significant seagrass and mangrove communities.

4 Development should be appropriate to land capability and the protection and conservation of water resources and biodiversity.

Water Sensitive Design

5 Development should be designed to maximise conservation, minimise consumption and encourage re-use of water resources.

6 Development should not take place if it results in unsustainable use of surface or underground water resources.

7 Development should be sited and designed to:

(a) capture and re-use stormwater, where practical

(b) minimise surface water runoff

(c) prevent soil erosion and water pollution

(d) protect and enhance natural water flows

(e) protect water quality by providing adequate separation distances from watercourses and other water bodies

(f) not contribute to an increase in salinity levels

(g) avoid the water logging of soil or the release of toxic elements

(h) maintain natural hydrological systems and not adversely affect:

(i) the quantity and quality of groundwater

(ii) the depth and directional flow of groundwater

(iii) the quality and function of natural springs.

8 Water discharged from a development site should:

(a) be of a physical, chemical and biological condition equivalent to or better than its pre-developed state

(b) not exceed the rate of discharge from the site as it existed in pre-development conditions.

9 Development should include stormwater management systems to protect it from damage during a minimum of a 1-in-100 year average return interval flood.

10 Development should have adequate provision to control any stormwater over-flow runoff from the site and should be sited and designed to improve the quality of stormwater and minimise pollutant transfer to receiving waters.

11 Development should include stormwater management systems to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure the carrying capacities of downstream systems are not overloaded.

12 Development should include stormwater management systems to minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system.

13 Stormwater management systems should preserve natural drainage systems, including the associated environmental flows.

14 Stormwater management systems should:

(a) maximise the potential for stormwater harvesting and reuse, either on-site or as close as practicable to the source

(b) utilise, but not be limited to, one or more of the following harvesting methods:

(i) the collection of roof water in tanks

(ii) the discharge to open space, landscaping or garden areas, including strips adjacent to car parks

(iii) the incorporation of detention and retention facilities

(iv) aquifer recharge.

15 Where it is not practicable to detain or dispose of stormwater on site, only clean stormwater runoff should enter the public stormwater drainage system.

16 Artificial wetland systems, including detention and retention basins, should be sited and designed to:

(a) ensure public health and safety is protected

(b) minimise potential public health risks arising from the breeding of mosquitoes.

17 On land north of Seacombe Road, all new buildings and building extensions of 40 square metres or more in floor area, should incorporate sufficient on-site stormwater detention/retention to limit the rate of stormwater runoff from the subject land so that flows determined using the following runoff coefficients are not exceeded:

(a) within residential zones

(i) 5 year average return interval flood event (runoff coefficient 0.25)

(ii) 100 year average return interval flood event (runoff coefficient 0.45)

(b) within non-residential urban zones

(i) 5 year average return interval flood event (runoff coefficient 0.65)

(ii) 100 year average return interval flood event (runoff coefficient 0.85).

Water Catchment Areas

18 Development should ensure watercourses and their beds, banks, wetlands and floodplains are not damaged or modified and are retained in their natural state, except where modification is required for essential access or maintenance purposes.

19 No development should occur where its proximity to a swamp or wetland will damage or interfere with the hydrology or water regime of the swamp or wetland.

20 A wetland or low-lying area providing habitat for native flora and fauna should not be drained, except temporarily for essential management purposes to enhance environmental values.

21 Along watercourses, areas of remnant native vegetation, or areas prone to erosion, that are capable of natural regeneration should be fenced off to limit stock access.

22 Development such as cropping, intensive animal keeping, residential, tourism, industry and horticulture, that increases the amount of surface run-off should include a strip of land at least 20 metres wide measured from the top of existing banks on each side of a watercourse that is:

(a) fenced to exclude livestock

(b) kept free of development, including structures, formal roadways or access ways for machinery or any other activity causing soil compaction or significant modification of the natural surface of the land

(c) revegetated with locally indigenous vegetation comprising trees, shrubs and other groundcover plants to filter runoff so as to reduce the impacts on native aquatic ecosystems and to minimise soil loss eroding into the watercourse.

23 Development resulting in the depositing of an object or solid material in a watercourse or floodplain or the removal of bank and bed material should not:

(a) adversely affect the migration of aquatic biota

(b) adversely affect the natural flow regime

(c) cause or contribute to water pollution

(d) result in watercourse or bank erosion

(e) adversely affect native vegetation upstream or downstream that is growing in or adjacent to a watercourse.

24 Development resulting in the depositing of an object or solid material in a watercourse or floodplain or the removal of bank and bed material should only occur where it involves one or more of the following:

(a) the construction of an erosion control structure (such as, but not limited to, a rock chute or rip rap)

(b) devices or structures used to extract or regulate water flowing in a watercourse (such as, but not limited to, diversion weirs)

(c) devices used for scientific purposes (such as, but not limited to, flow measuring devices)

(d) the rehabilitation of watercourses.

25 The location and construction of dams, water tanks and diversion drains should:

(a) occur off watercourse

(b) not take place in ecologically sensitive areas or on erosion prone sites

(c) provide for low flow by-pass mechanisms to allow for migration of aquatic biota

(d) not negatively affect downstream users

(e) minimise in-stream or riparian vegetation loss

(f) incorporate features to improve water quality (eg wetlands and floodplain ecological communities)

(g) protect ecosystems dependent on water resources.

26 Irrigated horticulture and pasture should not increase groundwater induced salinity.

27 Development should comply with the current Environment Protection (Water Quality) Policy.

Biodiversity and Native Vegetation

28 Development should retain existing areas of native vegetation and where possible contribute to revegetation using locally indigenous plant species.

29 Development should be designed and sited to minimise the loss and disturbance of native flora and fauna, including marine animals and plants, and their breeding grounds and habitats.

30 Native vegetation should be conserved and its conservation value and function not compromised by development if the native vegetation does any of the following:

(a) provides an important habitat for wildlife or shade and shelter for livestock

(b) has a high plant species diversity or includes rare, vulnerable or endangered plant species or plant associations and communities

(c) provides an important seed bank for locally indigenous vegetation

(d) has high amenity value and/or significantly contributes to the landscape quality of an area, including the screening of buildings and unsightly views

(e) has high value as a remnant of vegetation associations characteristic of a district or region prior to extensive clearance for agriculture

(f) is growing in, or is characteristically associated with a wetland environment.

31 Native vegetation should not be cleared if such clearing is likely to lead to, cause or exacerbate any of the following:

(a) erosion or sediment within water catchments

(b) decreased soil stability

(c) soil or land slip

(d) deterioration in the quality of water in a watercourse or surface water runoff

(e) a local or regional salinity problem

(f) the occurrence or intensity of local or regional flooding.

32 Development that proposes the clearance of native vegetation should address or consider the implications that removing the native vegetation will have on the following:

(a) provision for linkages and wildlife corridors between significant areas of native vegetation

(b) erosion along watercourses and the filtering of suspended solids and nutrients from runoff

(c) the amenity of the locality

(d) bushfire safety

(e) the net loss of native vegetation and other biodiversity.

33 Where native vegetation is to be removed, it should be replaced in a suitable location on the site with locally indigenous vegetation to ensure that there is not a net loss of native vegetation and biodiversity.

34 Development should be located and occur in a manner which:

(a) does not increase the potential for, or result in, the spread of pest plants, or the spread of any non-indigenous plants into areas of native vegetation or a conservation zone

(b) avoids the degradation of remnant native vegetation by any other means including as a result of spray drift, compaction of soil, modification of surface water flows, pollution to groundwater or surface water or change to groundwater levels

(c) incorporates a separation distance and/or buffer area to protect wildlife habitats and other features of nature conservation significance.

35 Development should promote the long-term conservation of vegetation by:

(a) avoiding substantial structures, excavations, and filling of land in close proximity to the trunk of trees and beneath their canopies

(b) minimising impervious surfaces beneath the canopies of trees

(c) taking other effective and reasonable precautions to protect both vegetation and the integrity of structures and essential services.

36 Horticulture involving the growing of olives should be located at least:

(a) 500 metres from:

(i) a national park

(ii) a conservation park

(iii) a wilderness protection area

(iv) the edge of a substantially intact stratum of native vegetation greater than 5 hectares in area

(b) 50 metres from the edge of stands of native vegetation 5 hectares or less in area.

37 Horticulture involving the growing of olives should have at least one locally indigenous tree that will grow to a height of at least 7 metres sited at least every 100 metres around the perimeter of the orchard.

Soil Conservation

38 Development should not have an adverse impact on the natural, physical, chemical or biological quality and characteristics of soil resources.

39 Development should be designed and sited to prevent erosion.

40 Development should take place in a manner that will minimise alteration to the existing landform.

41 Development should minimise the loss of soil from a site through soil erosion or siltation during the construction phase of any development and following the commencement of an activity.

Orderly and Sustainable Development

OBJECTIVES

1 Orderly and economical development that creates a safe, convenient and pleasant environment in which to live.

2 Development occurring in an orderly sequence and in a compact form to enable the efficient provision of public services and facilities.

3 Development that does not jeopardise the continuance of adjoining authorised land uses.

4 Development that does not prejudice the achievement of the provisions of the Development Plan.

5 Development abutting adjoining Council areas having regard to the policies of that Council's Development Plan.

6 Urban development contained within existing townships and settlements and located only in zones designated for such development.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should not prejudice the development of a zone for its intended purpose.

2 Neighbourhood identity should be reinforced by locating local employment opportunities and a range of community, retail, recreational and commercial facilities at focal points.

3 Land outside of townships and settlements should primarily be used for primary production and conservation purposes.

4 The economic base of the region should be expanded in a sustainable manner.

5 Urban development should form a compact extension to an existing built-up area.

6 Ribbon development should not occur along the coast, water or arterial roads shown in *Overlay Maps - Transport*.

7 Development should be located and staged to achieve the economical provision of public services and infrastructure, and to maximise the use of existing services and infrastructure.

8 Where development is expected to impact upon the existing infrastructure network (including the transport network), development should demonstrate how the undue effect will be addressed.

9 Vacant or underutilised land should be developed in an efficient and co-ordinated manner to not prejudice the orderly development of adjacent land.

10 Development should be undertaken in accordance with:

- *Concept Plan Map Mar/1 - Centre and Commercial (Clovelly Park)*
- *Concept Plan Map Mar/2 - District Centre (Hallett Cove)*
- *Concept Plan Map Mar/3 - Neighbourhood Centre (Marion/Mitchell Park)*
- *Concept Plan Map Mar/4 - Neighbourhood Centre (Park Holme)*
- *Concept Plan Map Mar/5 - Regional Centre (Marion)*
- *Concept Plan Map Mar/6 - Winery Site Development (Dover Gardens)*
- *Concept Plan Map Mar/7 - Laffer's Triangle*
- *Concept Plan Map Mar/8 - Tonsley*.

Regulated Trees

OBJECTIVES

1 The conservation of regulated trees that provide important aesthetic and/or environmental benefit.

2 Development in balance with preserving regulated trees that demonstrate one or more of the following attributes:

(a) significantly contributes to the character or visual amenity of the locality

(b) indigenous to the locality

(c) a rare or endangered species

(d) an important habitat for native fauna.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should have minimum adverse effects on regulated trees.

2 A regulated tree should not be removed or damaged other than where it can be demonstrated that one or more of the following apply:

(a) the tree is diseased and its life expectancy is short

(b) the tree represents a material risk to public or private safety

(c) the tree is causing damage to a building

(d) development that is reasonable and expected would not otherwise be possible

(e) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree.

3 Tree damaging activity other than removal should seek to maintain the health, aesthetic appearance and structural integrity of the tree.

Significant Trees

OBJECTIVES

1 The conservation of significant trees, in Metropolitan Adelaide, that provide important aesthetic and environmental benefit.

2 The conservation of significant trees in balance with achieving appropriate development.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should preserve the following attributes where a significant tree demonstrates at least one of the following attributes:

(a) makes an important contribution to the character or amenity of the local area; or

(b) is indigenous to the local area and its species is listed under the *National Parks and Wildlife Act 1972* as a rare or endangered native species

(c) represents an important habitat for native fauna

(d) is part of a wildlife corridor of a remnant area of native vegetation

(e) is important to the maintenance of biodiversity in the local environment

(f) forms a notable visual element to the landscape of the local area.

2 Development should be undertaken so that it has a minimum adverse effect on the health of a significant tree.

3 Significant trees should be preserved, and tree-damaging activity should not be undertaken, unless:

(a) in the case of tree removal:

(i) the tree is diseased and its life expectancy is short

(ii) the tree represents an unacceptable risk to public or private safety

(iii) the tree is within 20 metres of a residential, tourist accommodation or habitable building and is a bushfire hazard within a Bushfire Prone Area

(iv) the tree is shown to be causing or threatening to cause substantial damage to a substantial building or structure of value

(v) all other reasonable remedial treatments and measures have been determined to be ineffective

(vi) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.

(b) in any other case, any of the following circumstances apply:

(i) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree

(ii) the work is required due to unacceptable risk to public or private safety

(iii) the tree is within 20 metres of a residential, tourist accommodation or habitable building and is a bushfire hazard within a Bushfire Prone Area

(iv) the tree is shown to be causing or threatening to cause damage to a substantial building or structure of value

(v) the aesthetic appearance and structural integrity of the tree is maintained

(vi) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.

4 Development involving ground work activities such as excavation, filling, and sealing of surrounding surfaces (whether such work takes place on the site of a significant tree or otherwise) should only be undertaken where the aesthetic appearance, health and integrity of a significant tree, including its root system, will not be adversely affected.

5 Land should not be divided or developed where the division or development would be likely to result in a substantial tree-damaging activity occurring to a significant tree.

Siting and Visibility

OBJECTIVES

1 Protection of scenically attractive areas, particularly natural, rural and coastal landscapes.

PRINCIPLES OF DEVELOPMENT CONTROL

1 Development should be sited and designed to minimise its visual impact on:

(a) the natural, rural or heritage character of the area

(b) areas of high visual or scenic value, particularly rural and coastal areas

(c) views from the coast, near-shore waters, public reserves, tourist routes and walking trails

(d) the amenity of public beaches.

2 Buildings should be sited in unobtrusive locations and, in particular, should:

(a) be grouped together

(b) where possible be located in such a way as to be screened by existing vegetation when viewed from public roads.

3 Buildings outside of urban areas and in undulating landscapes should be sited in unobtrusive locations and in particular should be:

(a) sited below the ridgeline

(b) sited within valleys or behind spurs

(c) sited in such a way as to not be visible against the skyline when viewed from public roads.

(d) set well back from public roads, particularly when the allotment is on the high side of the road.

4 Buildings and structures should be designed to minimise their visual impact in the landscape, in particular:

(a) the profile of buildings should be low and the rooflines should complement the natural form of the land

(b) the mass of buildings should be minimised by variations in wall and roof lines and by floor plans which complement the contours of the land

(c) large eaves, verandas and pergolas should be incorporated into designs so as to create shadowed areas that reduce the bulky appearance of buildings.

5 The nature of external surface materials of buildings should not detract from the visual character and amenity of the landscape.

6 The number of buildings and structures on land outside of urban areas should be limited to that necessary for the efficient management of the land.

7 Driveways and access tracks should be designed and surfaced to blend sympathetically with the landscape and to minimise interference with natural vegetation and landforms.

8 Development should be screened through the establishment of landscaping using locally indigenous plant species:

(a) around buildings and earthworks to provide a visual a screen as well as shade in summer, and protection from prevailing winds

(b) along allotment boundaries to provide permanent screening of buildings and structures when viewed from adjoining properties and public roads

(c) along the verges of new roads and access tracks to provide screening and minimise erosion.

Transportation and Access

OBJECTIVES

1 A comprehensive, integrated, affordable and efficient air, rail, sea, road, cycle and pedestrian transport system that will:

(a) provide equitable access to a range of public, community and private transport services for all people

(b) ensure a high level of safety

(c) effectively support the economic development of the State

(d) have minimal negative environmental and social impacts

(e) maintain options for the introduction of suitable new transport technologies.

2 Development that:

(a) provides safe and efficient movement for all transport modes

(b) ensures access for vehicles including emergency services, public infrastructure maintenance and commercial vehicles

(c) provides off-street parking

(d) is appropriately located so that it supports and makes best use of existing transport facilities and networks

(e) provides convenient and safe access to public transport stops.

3 A road hierarchy that promotes safe and efficient transportation in an integrated manner throughout the State.

4 Provision of safe, pleasant, accessible, integrated and permeable pedestrian and cycling networks that are connected to the public transport network.

5 Safe and convenient freight and people movement throughout the State.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

1 Land uses arranged to support the efficient provision of sustainable transport networks and encourage their use.

Movement Systems

2 Development should be integrated with existing transport networks, particularly major rail, road and public transport corridors as shown on *Location Maps* and *Overlay Maps - Transport*, and designed to minimise its potential impact on the functional performance of the transport network.

3 Transport corridors should be sited and designed so as to not unreasonably interfere with the health and amenity of adjacent sensitive land uses.

4 Roads should be sited and designed to blend with the landscape and be in sympathy with the terrain.

5 Land uses that generate large numbers of visitors such as shopping centres, places of employment, schools, hospitals and medium to high density residential uses should be located so that they can be serviced by the public transport network and encourage walking and cycling.

6 Development generating high levels of traffic, such as schools, shopping centres and other retail areas, and entertainment and sporting facilities should incorporate passenger pick-up and set-down areas. The design of such areas should minimise interference to existing traffic and give priority to pedestrians, cyclists and public and community transport users.

7 The location and design of public and community transport set-down and pick-up points should maximise safety and minimise the isolation and vulnerability of users.

8 Development should provide safe and convenient access for all anticipated modes of transport.

9 Development at intersections, pedestrian and cycle crossings, and crossovers to allotments should maintain or enhance sightlines for motorists, cyclists and pedestrians to ensure safety for all road users and pedestrians.

10 Driveway crossovers affecting pedestrian footpaths should maintain the level and surface colour of the footpath.

11 Driveway crossovers should be separated and the number minimised to optimise the provision of on-street visitor parking (where on-street parking is appropriate).

12 Development should be designed to discourage commercial and industrial vehicle movements through residential streets and adjacent other sensitive land uses.

13 Industrial/commercial vehicle movements should be separated from passenger vehicle car parking areas.

14 Development should provide for the on-site loading, unloading and turning of all traffic likely to be generated.

Cycling and Walking

15 Development should ensure that a permeable street and path network is established that encourages walking and cycling through the provision of safe, convenient and attractive routes with connections to adjoining streets, paths, open spaces, schools, pedestrian crossing points on arterial roads, public and community transport stops and activity centres.

16 Development should provide access, and accommodate multiple route options, for pedestrians and cyclists by enhancing and integrating with:

(a) open space networks, recreational trails, parks, reserves, and sport and recreation areas

(b) Adelaide's principal cycling network (Bikedirect), which includes arterial roads, local roads and off-road paths as depicted in *Overlay Maps - Transport*.

17 New developments should give priority to and not compromise existing designated bicycle routes.

18 Where development coincides with, intersects or divides a proposed bicycle route or corridor, development should incorporate through-access for cyclists.

19 Development should encourage and facilitate cycling as a mode of transport by incorporating end-of-journey facilities including:

(a) showers, changing facilities and secure lockers

(b) signage indicating the location of bicycle facilities.

20 On-site secure bicycle parking facilities should be:

(a) located in a prominent place

(b) located at ground floor level

(c) located undercover

(d) located where surveillance is possible

(e) well lit and well signed

(f) close to well used entrances

(g) accessible by cycling along a safe, well lit route.

21 Pedestrian and cycling facilities and networks should be designed and provided in accordance with relevant provisions of the *Australian Standards and Austroads Guides*.

Access

22 Development should have direct access from an all-weather public road.

23 Development should be provided with safe and convenient access which:

(a) avoids unreasonable interference with the flow of traffic on adjoining roads

(b) provides appropriate separation distances from existing roads or level crossings

(c) accommodates the type and volume of traffic likely to be generated by the development or land use and minimises induced traffic through over-provision

(d) is sited and designed to minimise any adverse impacts on the occupants of and visitors to neighbouring properties.

24 Development should not restrict access to publicly owned land such as recreation areas.

25 The number of vehicle access points onto arterial roads shown on *Overlay Maps - Transport* should be minimised and, where possible, access points should be:

(a) limited to local roads (including rear lane access)

(b) shared between developments.

26 Development with access from roads with existing or projected traffic volumes exceeding 6000 vehicles per day should be sited to avoid the need for vehicles to reverse onto or from the road.

27 Development with access from arterial roads or roads as shown on *Overlay Maps – Transport* should be sited to avoid the need for vehicles to reverse onto or from the road.

28 The number of vehicle access points onto a public road should be minimised and each access point should be a minimum of 6 metres apart to maximise opportunities for on street parking.

29 Structures such as canopies and balconies that encroach onto the footpath of a road should not cause visual or physical obstruction to:

(a) signalised intersections

(b) heavy vehicles

(c) street lighting

(d) overhead electricity lines

(e) street trees

(f) bus stops.

30 Driveways, access tracks and parking areas should be designed and constructed to:

(a) follow the natural contours of the land

(b) minimise excavation and/or fill

(c) minimise the potential for erosion from surface runoff

(d) avoid the removal of existing vegetation

(e) be consistent with *Australian Standard AS: 2890 - Parking facilities*.

31 The length of driveways should be minimised and together with manoeuvring areas be only sufficient to allow the proper functioning of the parking areas and their access.

Access for People with Disabilities

32 Development should be sited and designed to provide convenient access for people with a disability.

33 Where appropriate and practical, development should provide for safe and convenient access to the coast and beaches for disabled persons.

Vehicle Parking

34 Development should provide off-street vehicle parking and specifically marked accessible car parking places to meet anticipated demand in accordance with *Table Mar/2 - Off-street Vehicle Parking Requirements*.

35 Development should be consistent with *Australian Standard AS: 2890 - Parking facilities*.

36 Vehicle parking areas should be sited and designed to:

(a) facilitate safe and convenient pedestrian linkages to the development and areas of significant activity or interest in the vicinity of the development

(b) include safe pedestrian and bicycle linkages that complement the overall pedestrian and cycling network

(c) not inhibit safe and convenient traffic circulation

(d) result in minimal conflict between customer and service vehicles

(e) avoid the necessity to use public roads when moving from one part of a parking area to another

(f) minimise the number of vehicle access points onto public roads

(g) avoid the need for vehicles to reverse onto public roads

(h) where practical, provide the opportunity for shared use of car parking and integration of car parking areas with adjoining development to reduce the total extent of vehicle parking areas and the requirement for access points

(i) not dominate the character and appearance of a site when viewed from public roads and spaces

(j) provide landscaping that will shade and enhance the appearance of the vehicle parking areas

(k) include infrastructure such as underground cabling and connections to power infrastructure that will enable the recharging of electric vehicles.

37 Where vehicle parking areas are not obviously visible or navigated, signs indicating the location and availability of vehicle parking spaces associated with businesses should be displayed at locations readily visible to users.

38 Vehicle parking areas that are likely to be used during non-daylight hours should provide floodlit entry and exit points and site lighting directed and shaded in a manner that will not cause nuisance to adjacent properties or users of the parking area.

39 Vehicle parking areas should be sealed or paved to minimise dust and mud nuisance.

40 To assist with stormwater detention and reduce heat loads in summer, outdoor vehicle parking areas should include landscaping.

41 Vehicle parking areas should be line-marked to delineate parking bays, movement aisles and direction of traffic flow.

42 On-site visitor parking spaces should be sited and designed to:

(a) not dominate internal site layout

(b) be clearly defined as visitor spaces not specifically associated with any particular dwelling

(c) be accessible to visitors at all times.

Vehicle Parking for Residential Development

43 On-site vehicle parking should be provided having regard to:

(a) the number, nature and size of proposed dwellings

(b) proximity to centre facilities, public and community transport within walking distance of the dwellings

(c) the anticipated mobility and transport requirements of the likely occupants, particularly groups such as aged persons

(d) availability of on-street car parking

(e) any loss of on-street parking arising from the development (e.g. an increase in number of driveway crossovers).

44 Vehicle parking areas servicing more than one dwelling should be of a size and location to:

(a) serve users, including pedestrians, cyclists and motorists, efficiently, conveniently and safely

(b) provide adequate space for vehicles, including emergency service vehicles, to manoeuvre between the street and the parking area

(c) reinforce or contribute to attractive streetscapes.

45 The provision of ground level vehicle parking areas, including garages and carports (other than where located along a rear lane access way), should:

(a) not face the primary street frontage

(b) be located to the rear of buildings with access from a shared internal laneway

(c) ensure vehicle park entries are recessed at least 0.5 metres behind the main face of the building.

Vehicle Parking for Mixed Use and Corridor Zones

46 Development should provide off-street vehicle parking and specifically marked accessible car parking places to meet anticipated demand in accordance with *Table Mar/2 – Off-street Vehicle Parking Requirements*.

47 Loading areas and designated parking spaces for service vehicles should:

(a) be provided within the boundary of the site

(b) not be located in areas where there is parking provided for any other purpose.

48 Vehicle parking spaces and multi-level vehicle parking structures within buildings should:

(a) enhance active street frontages by providing land uses such as commercial, retail or other non-car park uses along ground floor street frontages

(b) complement the surrounding built form in terms of height, massing and scale

(c) incorporate facade treatments along major street frontages that are sufficiently enclosed and detailed to complement neighbouring buildings consistent with the desired character of the locality.

49 In mixed use buildings, the provision of vehicle parking may be reduced in number and shared where the operating hours of commercial activities complement the residential use of the site.

Undercroft and Below Ground Garaging and Parking of Vehicles

50 Undercroft and below ground garaging of vehicles should only occur where envisaged in the relevant zone or policy area or precinct and ensure:

(a) the overall height and bulk of the undercroft structure does not adversely impact on streetscape character of the locality or the amenity of adjacent properties

(b) vehicles can safely enter and exit from the site without compromising pedestrian or cyclist safety or causing conflict with other vehicles

(c) driveway gradients provide for safe and functional entry and exit

(d) driveways and adjacent walls, fencing and landscaping are designed to provide adequate sightlines from vehicles to pedestrians using the adjacent footpath

(e) openings to undercroft areas are integrated with the main building so as to minimise visual impact

(f) landscaping, mounding and/or fencing is incorporated to improve its presentation to the street and to adjacent properties

(g) the overall streetscape character of the locality is not adversely impaired (eg visual impact, building bulk, front setbacks relative to adjacent development)

(h) the height of the car park ceiling does not exceed 1 metre above the finished ground level.

51 In the case of undercroft and below ground car parks where cars are visible from public areas, adequate screening and landscaping should be provided so as to avoid any loss of amenity.

Neighbourhood Centre Zone

Refer to the *Map Reference Tables* for a list of the maps that relate to this zone.

OBJECTIVES

1 A centre providing a range of facilities to meet the shopping, community, business, and recreational needs of the surrounding neighbourhood.

2 A centre that provides the main focus of business and community life outside a district centre, and provides for the more frequent and regularly recurring needs of a community.

3 A centre accommodating residential development in conjunction with non-residential development.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

1 The following forms of development are envisaged in the zone:

- bank
- child care facility
- consulting room
- dwelling in conjunction with non-residential land uses
- library
- health centre
- office
- petrol filling station
- place of worship
- playing field
- pre-school
- primary school
- recreation area
- restaurant
- shop
- supermarket.

2 Development listed as non-complying is generally inappropriate.

3 Residential development and development comprising a variety of residential and non-residential uses may be undertaken provided such development does not prejudice the operation of existing or future retail activity within the zone.

Form and Character

4 Dwellings should be located only behind or above non-residential uses on the same allotment.

5 The maximum gross leasable retail floor areas in the following centres should generally be in the order of the amounts shown in the table below:

Location of Neighbourhood Centre	Area (square metres)
Marion Road - Ascot Park	2000
Marion Road - Marion/Mitchell Park	2500
Marion Road - Park Holme	4500
Marion Road - South Plympton	1200
South Road - Clovelly Park	2000

6 Development of the following respective centres should be carried out in accordance with the concepts shown on:

(a) *Concept Plan Map Mar/1 - Clovelly Park Centre and Commercial*

(b) *Concept Plan Map Mar/3 - Marion/Mitchell Park Neighbourhood Centre*

(c) *Concept Plan Map Mar/4 - Park Holme Neighbourhood Centre*.

Vehicle Parking

7 Vehicle parking should be provided in accordance with the rates set out in *Table Mar/2 - Off Street Vehicle Parking Requirements* or *Table Mar/2A - Off Street Vehicle Parking Requirements for Designated Areas* (whichever applies).'

Land Division

8 Land division in the zone is appropriate provided new allotments are of a size and configuration to ensure the objectives of the zone can be achieved.

PROCEDURAL MATTERS

Complying Development

Complying developments are prescribed in schedule 4 of the *Development Regulations 2008*.

In addition, the following forms of development (except where the development is non-complying) are complying:

A change of use to a shop, office, consulting room or any combination of these uses where all of the following are achieved:

(a) the area to be occupied by the proposed development is located in an existing building and is currently used as a shop, office, consulting room or any combination of these uses

(b) the building is not a State heritage place

(c) it will not involve any alterations or additions to the external appearance of a local heritage place as viewed from a public road or public space

(d) if the proposed change of use is for a shop that primarily involves the handling and sale of foodstuffs, it achieves either (i) or (ii):

(i) all of the following:

(A) areas used for the storage and collection of refuse are sited at least 10 metres from any Residential Zone boundary or a dwelling (other than a dwelling directly associated with the proposed shop)

(B) if the shop involves the heating and cooking of foodstuffs in a commercial kitchen and is within 30 metres of any Residential Zone boundary or a dwelling (other than a dwelling directly associated with the proposed shop), an exhaust duct and stack (chimney) exists or is capable of being installed for discharging exhaust emissions

(ii) the development is the same or substantially the same as a development, which has previously been granted development approval under the *Development Act 1993* or any subsequent Act and Regulations, and the development is to be undertaken and operated in accordance with the conditions attached to the previously approved development

(e) if the change in use is for a shop with a gross leasable floor area greater than 250 square metres and has direct frontage to an arterial road, it achieves either (i) or (ii):

(i) the primary vehicle access (being the access where the majority of vehicles access / egress the site of the proposed development) is from a road that is not an arterial road

(ii) the development is located on a site that operates as an integrated complex containing two or more tenancies (and which may comprise more than one building) where facilities for off-street vehicle parking, vehicle loading and unloading, and the storage and collection of refuse are shared

(f) off-street vehicular parking is provided in accordance with the rate(s) specified in *Table Mar/2 - Off Street Vehicle Parking Requirements* or the desired minimum rate in *Table Mar/2A - Off Street Vehicle Parking Requirements for Designated Areas* (whichever table applies) to the nearest whole number, except in any one or more of the following circumstances:

(i) the building is a local heritage place

(ii) the development is the same or substantially the same as a development, which has previously been granted development approval under the *Development Act 1993* or any subsequent Act and Regulations, and the number and location of parking spaces is the same or substantially the same as that which was previously approved

(iii) the development is located on a site that operates as an integrated complex containing two or more tenancies (and which may comprise more than one building) where facilities for off-street vehicle parking, vehicle loading and unloading, and the storage and collection of refuse are shared.

Non-complying Development

Development (including building work, a change in the use of land, or division of an allotment) for the following is non-complying:

Form of Development	Exceptions
Advertisement and/or advertising hoarding	Except where the advertisement and/or advertising hoarding achieves any one of the following: (a) it is attached to a building or structure where the height of the advertisement does not exceed the height of the roof of the walls or parapet of the building or structure by more than 2 metres (b) it is freestanding and has a height not exceeding 8 metres (c) it is located on a side or rear wall facing and not within 50 metres of an abutting residential zone.

Form of Development	Exceptions
Dwelling	Except where in conjunction with a non-residential development.
Fuel depot	
Horticulture	
Industry	
Major public service depot	
Motor repair station	
Prescribed mining operation	
Road transport terminal	
Special industry	
Stadium	
Store	
Transmitting station above 30 metres in height	
Warehouse	
Waste reception, storage, treatment or disposal	
Wrecking yard	

Public Notification

Categories of public notification are prescribed in Schedule 9 of the *Development Regulations 2008*.

PROCEDURAL MATTERS

Complying Development

Complying developments are prescribed in Schedule 4 of the *Development Regulations 2008*.

Non-complying Development

Development (including building work, a change in the use of land, or division of an allotment) for the following is non-complying:

Form of Development	Exceptions
Advertisement and /or advertising hoarding	Except where the advertisement and/or advertising hoarding achieves any one of the following: (a) it is attached to a building or structure where the height of the advertisement does not exceed the height of the roof of the walls or parapet of the building or structure by more than 2 metres (b) it is located on a side or rear wall facing and not within 50 metres of an abutting residential zone.
Amusement machine centre	
Caravan park located within **Hallett Cove Buffer Policy Area 9.**	
Consulting room	
Crematorium	
Dairy	
Dwelling	
Fuel depot	
Hospital	
Hotel	
Industry	
Intensive animal keeping	
Land division	Except where no additional allotments are created partly or wholly within the zone.
Motel	
Motor repair station	
Nursing home	
Office	Except in association with recreation facilities.
Petrol filling station	
Place of worship	
Pre-school	
Prescribed mining operations	

Form of Development	Exceptions
Restaurant	
Road transport terminal	
Service trade premises	
Shop or group of shops	Except where not located within **Hallett Cove Buffer Policy Area 9** and the gross leasable area is 80 square metres or less.
Stock sales yard	
Stock slaughter works	
Store	
Tourist accommodation	
Warehouse	
Waste reception, storage, treatment or disposal	
Wrecking yard	

Public Notification

Categories of public notification are prescribed in Schedule 9 of the *Development Regulations 2008*.

Residential Zone

Refer to the *Map Reference Tables* for a list of the maps that relate to this zone.

OBJECTIVES

1 An attractive residential zone comprising a range of dwelling types including a minimum of 15 per cent affordable housing.

2 Increased dwelling densities in close proximity to centres, public and community transport routes and public open spaces.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

1 The following forms of development are envisaged in the zone:

- affordable housing
- outbuilding in association with a dwelling
- domestic structure
- dwelling including a residential flat building
- dwelling addition
- small scale non-residential uses that serve the local community, for example:
  - child care facilities
  - consulting rooms
  - health and welfare services
  - offices
  - open space
  - primary and secondary schools
  - recreation areas
  - shops
- supported accommodation.

2 Development listed as non-complying is generally inappropriate.

3 Vacant or underutilised land should be developed in an efficient and co-ordinated manner to increase housing choice by providing dwellings at densities higher than, but compatible with adjoining residential development.

4 Non-residential development such as shops, offices and consulting rooms should be of a nature and scale that:

(a) primarily serves the needs of the local community

(b) is consistent with the character of the locality

(c) does not detrimentally impact on the amenity of nearby residents.

5 The use and placement of outbuildings should be ancillary to and in association with a dwelling or dwellings.

Form and Character

6 Dwellings should be designed within the following parameters:

Parameter	Value
Minimum setback from primary road frontage where no established streetscape exists	8 metres from arterial roads shown on *Overlay Map – Transport* and any road within **Hills Policy Area 11**. 5 metres in all other circumstances.
Minimum setback from primary road frontage where an established streetscape exists	5 metres within **Medium Density Policy Area 12** and **Regeneration Policy Area 16** except where located on an arterial road. 8 metres from arterial roads shown on *Overlay Map – Transport* and any road within **Hills Policy Area 11**.
Minimum setback from secondary road frontage	2 metres within **Medium Density Policy Area 12, Northern Policy Area 13, Regeneration Policy Area 16** and **Worthing Mine Policy Area 20**. 3 metres in all other circumstances.
Minimum setback from side boundaries	Where the wall height is not greater than 3 metres: (a) 2 metres within **Hills Policy Area 11** (b) 0.9 metres in all other circumstances. Where the wall height is between 3 metres and 6 metres: (a) 3 metres if adjacent southern boundary (b) 2 metres in all other circumstances. Where the wall height is greater than 6 metres: (a) if not adjacent the southern boundary, 2 metres plus an additional setback equal to the increase in wall height above 6 metres (b) if adjacent the southern boundary, 3 metres plus an additional setback equal to the increase in wall height above 6 metres.
Maximum length and height when wall is located on side boundary	Not applicable in **Hills Policy Area 11,** that part of **Residential Character Policy Area 17** within the suburb of Marion, and **Watercourse Policy Area 19**, as walls on boundaries are generally not appropriate in these policy areas. In all other policy areas of the **Residential Zone** – (a) where the wall does not adjoin communal open space or a public reserve – 8 metres in length and 3 metres in height (b) where wall adjoins communal open space or a public reserve – 50 per cent of the length of the boundary and 4 metres in height.

Parameter	Value
Minimum setback from rear boundary	(a) 6 metres for single storey parts of the dwelling (where no wall height exceeds 3 metres), and (b) 8 metres for all other parts of the dwelling with a wall height greater than 3 metres, subject to the following variations: (i) within **Hills Policy Area 11** - (a) is 8 metres; (ii) within Medium **Density Policy Area 12** and **Regeneration Policy Area 16** - (b) is 6 metres; (iii) within **Medium Density Policy Area 12**, **Northern Policy Area 13**, **Racecourse Policy Area 15**, **Regeneration Policy Area 16**, **Southern Policy Area 18**, **Worthing Mine Policy Area 20** - (a) may be reduced to 3 metres for no more than 50 per cent of the width of the rear boundary.
Maximum building height (from natural ground level)	Within: (a) **Medium Density Policy Area 12**: (i) 2 storeys of not more than 9 metres (ii) 2 storeys with an ability to provide a 3 storey addition within the roof space of not more than10 metres (b) **Regeneration Policy Area 16,** 3 storeys of not more than 12 metres (c) **Residential Character Policy Area 17**: (i) within the suburb of Marion, 2 storeys of not more than 9 metres (ii) in all other areas, one storey with an ability to provide a 2 storey addition within the roof space subject to Principles of Development Control within the policy area of not more than 7 metres (d) all other policy areas, 2 storeys of not more than 9 metres.

7 Dwellings at ground level should provide private open space in accordance with the following table:

Site area of dwelling	Minimum area of private open space	Provisions
Less than 175 square metres	20 per cent of the site area or 35 square metres, whichever is the greater	Balconies, roof patios and the like can comprise part of this area provided the area of each is 8 square metres or greater and they have a minimum dimension of 2 metres. One part of the space should be directly accessible from a living room, have an area of 16 square metres with a minimum dimension of 4 metres and a maximum gradient of 1-in-10. The remainder of the space should have a minimum dimension of 2.5 metres.

Site area of dwelling	Minimum area of private open space	Provisions
175 square metres or greater	20 per cent of site area	Balconies, roof patios, decks and the like, can comprise part of this area provided the area of each is 10 square metres or greater and they have a minimum dimension of 2 metres. One part of the space should be directly accessible from a living room and have an area equal to or greater than 10 per cent of the site area with a minimum dimension of 5 metres and a maximum gradient of 1-in-10. The remainder of the space should have a minimum dimension of 2.5 metres.

8 Dwellings used for supported accommodation should have average site areas and site gradients not less than that shown in the following table:

Location	Average site area	Maximum site gradient
Worthing Mine Policy Area 20	250 square metres	1-in-20
Medium Density Policy Area 12, **Northern Policy Area 13**, **Oaklands Park Policy Area 14**, **Regeneration Policy Area 16** and **Southern Policy Area 18**	200 square metres	n/a
All other areas	As set by the relevant policy area for dwellings generally	

Site Coverage

9 Site coverage should not exceed the amount specified by the relevant policy area unless it is demonstrated that doing so:

(a) would not be contrary to the relevant setback and private open space provisions

(b) would not adversely affect the amenity of adjoining properties

(c) would not conflict with other relevant criteria of this Development Plan.

Affordable Housing

10 Development should include a minimum 15 per cent of residential dwellings for affordable housing.

11 Affordable housing should be distributed throughout the zone and/or policy areas to avoid over-concentration of similar types of housing in a particular area.

PROCEDURAL MATTERS

Complying Development

Complying developments are prescribed in Schedule 4 of the *Development Regulations 2008*.

Non-complying Development

Development (including building work, a change in the use of land, or division of an allotment) for the following is non-complying:

Form of Development	Exceptions
Advertisement and/or advertising hoarding	Except where an advertisement and/or advertising hoarding satisfies all of the following: (a) the message contained thereon relates entirely to a lawful use of land (b) the advertisement is erected on the same allotment as the use it seeks to advertise (c) it does not exceed the following dimensions: (i) a display area or panel size of 4 square metres (2 square metres if double-sided) (ii) a maximum height of 4 metres if freestanding (d) there will not be more than one advertisement on the allotment; (e) no part of it will be located above the eaves of any building on that allotment.
Amusement machine centre	
Caravan park	
Cemetery	
Consulting room	Except where the gross leasable floor area is less than 150 square metres.
Crematorium	
Dairy	
Farming	
Fuel depot	
Funeral parlour	
Group dwelling where located within **Cement Hill Policy Area 10**, **Racecourse Policy Area 15**, **Residential Character Policy Area 17** or **Watercourse Policy Area 19**.	
Gymnasium	
Horse keeping	Except where located within **Racecourse Policy Area 15**.
Horticulture	
Hospital	
Hotel	

Form of Development	Exceptions
Indoor recreation centre	
Industry	
Intensive animal keeping	
Land division resulting in the creation of battle-axe or similar allotments where located within the **Residential Character Policy Area 17**.	
Mortuary	
Motor repair station	
Multiple dwelling where located within **Cement Hill Policy Area 10, Hills Policy Area 11**, **Racecourse Policy Area 15**, **Residential Character Policy Area 17**, **Watercourse Policy Area 19** or **Coastal Policy Area 21**.	
Office	Except where the gross leasable floor area is less than 150 square metres
Petrol filling station	
Public service depot	
Residential flat building where located within **Cement Hill Policy Area 10, Hills Policy Area 11, Racecourse Policy Area 15, Residential Character Policy Area 17**, **Watercourse Policy Area 19** or **Coastal Policy Area 21**.	
Restaurant	
Road transport terminal	
Row dwelling where located within **Cement Hill Policy Area 10, Hills Policy Area 11, Racecourse Policy Area 15**, **Residential Character Policy Area 17 Watercourse Policy Area 19** or **Coastal Policy Area 21**.	
Semi-detached dwelling where located within **Cement Hill Policy Area 10**, **Hills Policy Area 11**, **Racecourse Policy Area 15, Watercourse Policy Area 19**, **Coastal Policy Area 21** or **Residential Character Policy Area 17** (within the suburb of Marion)	
Service trade premises	

Form of Development	Exceptions
Shop or group of shops	Except where: (a) the gross leasable area is less than 150 square metres; and (b) located outside of **Racecourse Policy Area 15**.
Stadium	
Stock sales yard	
Stock slaughter works	
Store	
Warehouse	
Waste reception, storage, treatment or disposal	
Wrecking yard	

Public Notification

Categories of public notification are prescribed in Schedule 9 of the *Development Regulations 2008*.

Further, the following forms of development (except where the development is non-complying) are assigned:

Category 1	Category 2
Recreation area Retaining wall/s and/or earthworks which, in the opinion of the relevant authority, are of a minor nature only and will not unreasonably impact on owners or occupiers of adjacent land.	A residential building of 2 or more storeys on a battle-axe site. Demolition of a Local Heritage Place or State Heritage Place. Wall (excluding retaining wall) for residential development which exceeds a length of 8 metres and/or exceeds a height of 3 metres when measured from natural ground level where abutting a side or rear boundary (other than a common wall of semi-detached dwellings, row dwellings or residential flat buildings). Retaining wall/s and/or earthworks, other than where assigned Category 1. Horse keeping and associated facilities where located within **Racecourse Policy Area 15** where the subject property is adjacent a property in a different residential policy area.

Table Mar/2A - Off Street Vehicle Parking Requirements for Designated Areas

Interpretation

1 The vehicle parking rates table applies to Designated Areas listed below except where:

(a) any applicable condition(s) is/are not met

(b) the zone provisions require a lesser amount of on-site vehicular parking spaces than the amount determined using the vehicle parking rates tables below.

Designated Areas

2 The following are Designated Areas:

Designated Area	Conditions
Regional Activity Zone **Suburban Activity Node Zone** **Mixed Use Zone**	None
District Centre Zone **Local Centre Zone** **Neighbourhood Centre Zone** **Regional Centre Zone**	Any part of the development site is located in accordance with at least one of the following: (a) within 200 metres of any section of road reserve along which a bus service operates as a high frequency public transit service(2) (b) within 400 metres of a bus interchange(1) that is part of a high frequency public transit service(2) (c) within 400 metres of an O-Bahn interchange(1) (d) within 400 metres of a passenger rail station(1) that is part of a high frequency public transit service(2) (e) within 400 metres of a passenger tram station(1) (f) within 400 metres of the Adelaide Parklands.

(1) *Measured from an area that contains any platform(s), shelter(s) or stop(s) where people congregate for the purpose waiting to board a bus, tram or train, but does not include areas used for the parking of vehicles*

(2) *A high frequency public transit service is a route serviced every 15 minutes between 7.30 am and 6.30 pm Monday to Friday and every 30 minutes at night, Saturday, Sunday and public holidays until 10.00 pm.*

Applicable off-street vehicular parking requirements

1 Development should provide off-street vehicle parking in accordance with the table(s) below. A lesser number of parking spaces may be provided based on the nature of the development and parking conditions in the wider locality including (but not limited to) the following:

(a) the development is a mixed use development with integrated (shared) parking where the respective peak parking demands across the range of uses occurs at different times

(b) the development is sited in a locality where the respective peak demands for parking for the range of uses (existing and proposed) occurs at different times and suitable arrangements are in place for the sharing of adjoining or nearby parking areas

(c) the development involves the retention and reuse of a place of heritage value, where the provision of on-site parking is constrained

(d) suitable arrangements are made for any parking shortfall to be met elsewhere or by other means (including a contribution to a car parking fund)

(e) generous on-street parking and/or public parking areas are available and in convenient proximity, other than where such parking may become limited or removed by future loss of access, restrictions, road modifications or widening

(f) the site of the development is located within distances specified in the conditions applicable to Designated Areas for at least two different public transit modes

(g) development that involves the reuse of the Main Assembly Building (MAB) at Tonsley which includes significant infrastructure to support cycling: where a reduction of up to 20 percent may be acceptable.

TABLES: VEHICLE PARKING RATES

Table 1: Non-residential development (excluding light industry and tourist accommodation)

Location of development	Desired minimum number of vehicle parking spaces	Maximum number of vehicle parking spaces
All **Designated Areas** (unless otherwise stated)	3 spaces per 100 square metres of gross leasable floor area	6 spaces per 100 square metres of gross leasable floor area
Core Area as shown on *Concept Plan Map Mar/7 - Laffer's Triangle* and *Concept Plan Map Mar/8 - Tonsley* of the **Regional Activity Zone** and **Suburban Activity Node Zone**	3 spaces per 100 square metres of gross leasable floor area	5 spaces per 100 square metres of gross leasable floor area

Table 2: Tourist accommodation

Location of development	Desired minimum number of required vehicle parking spaces	Maximum number of vehicle parking spaces
Regional Activity Zone **Suburban Activity Node Zone**	1 space for every 4 bedrooms up to 100 bedrooms and 1 space for every 5 bedrooms over 100 bedrooms	1 space for every 2 bedrooms up to 100 bedrooms and 1 space for every 4 bedrooms over 100 bedrooms

Table 3: Residential development in the form of residential flat buildings and residential development in multi-storey buildings

Location of development	Rate for each dwelling based on number of bedrooms per dwelling	Plus number of required visitor parking spaces
Core Area as shown on *Concept Plan Map Mar/7 - Laffer's Triangle* and *Concept Plan Map Mar/8 - Tonsley* of the **Regional Activity Zone** and **Suburban Activity Node Zone**	0.25 per studio (no separate bedroom) 0.75 per 1 bedroom dwelling 1 per 2 bedroom dwelling 1.25 per 3 + bedroom dwelling	0.25 per dwelling
Transition Area / Any other area not designated as shown on *Concept Plan Map Mar/7 - Laffer's Triangle* and *Concept Plan Map Mar/8 - Tonsley* of the **Regional Activity Zone** and **Suburban Activity Node Zone**	0.5 per studio (no separate bedroom) 1 per 1 bedroom dwelling 1.5 per 2 bedroom dwelling 2 per 3+ bedroom dwelling	0.25 per dwelling
Mixed Use Zone	1 per studio (no separate bedroom) 1 per 1 bedroom dwelling 1.25 per 2 bedroom dwelling 1.5 per 3+ bedroom dwelling	0.25 per dwelling

Table 4: Row, semi-detached and detached dwellings

Location of development	Number of bedrooms, or rooms capable of being used as a bedroom	Number of required vehicle parking spaces
Regional Activity Zone	1 or 2 bedrooms	1
Suburban Activity Node Zone	3 + bedrooms	2

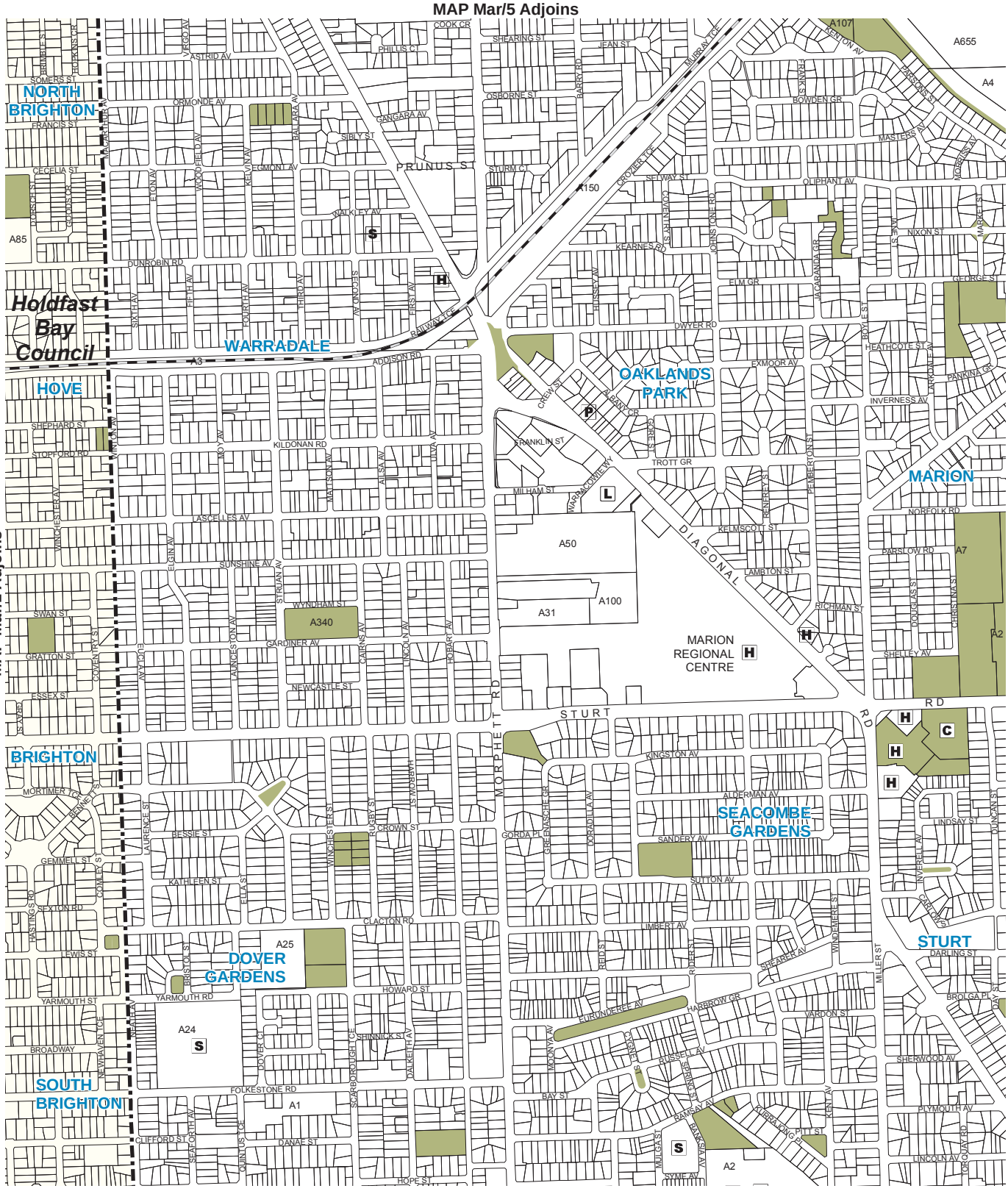
Table 5: Student accommodation

Location of development	Number of required vehicle parking spaces	Number of required visitor parking spaces
Regional Activity Zone **Suburban Activity Node Zone**	0.25 per bedroom per dwelling	0.03 per bedroom per dwelling

MAP Mar/5 Adjoins

MAP Mar/1 Adjoins

MAP Mar/8 Adjoins



MAP Mar/10 Adjoins

MAP Mar/11 Adjoins

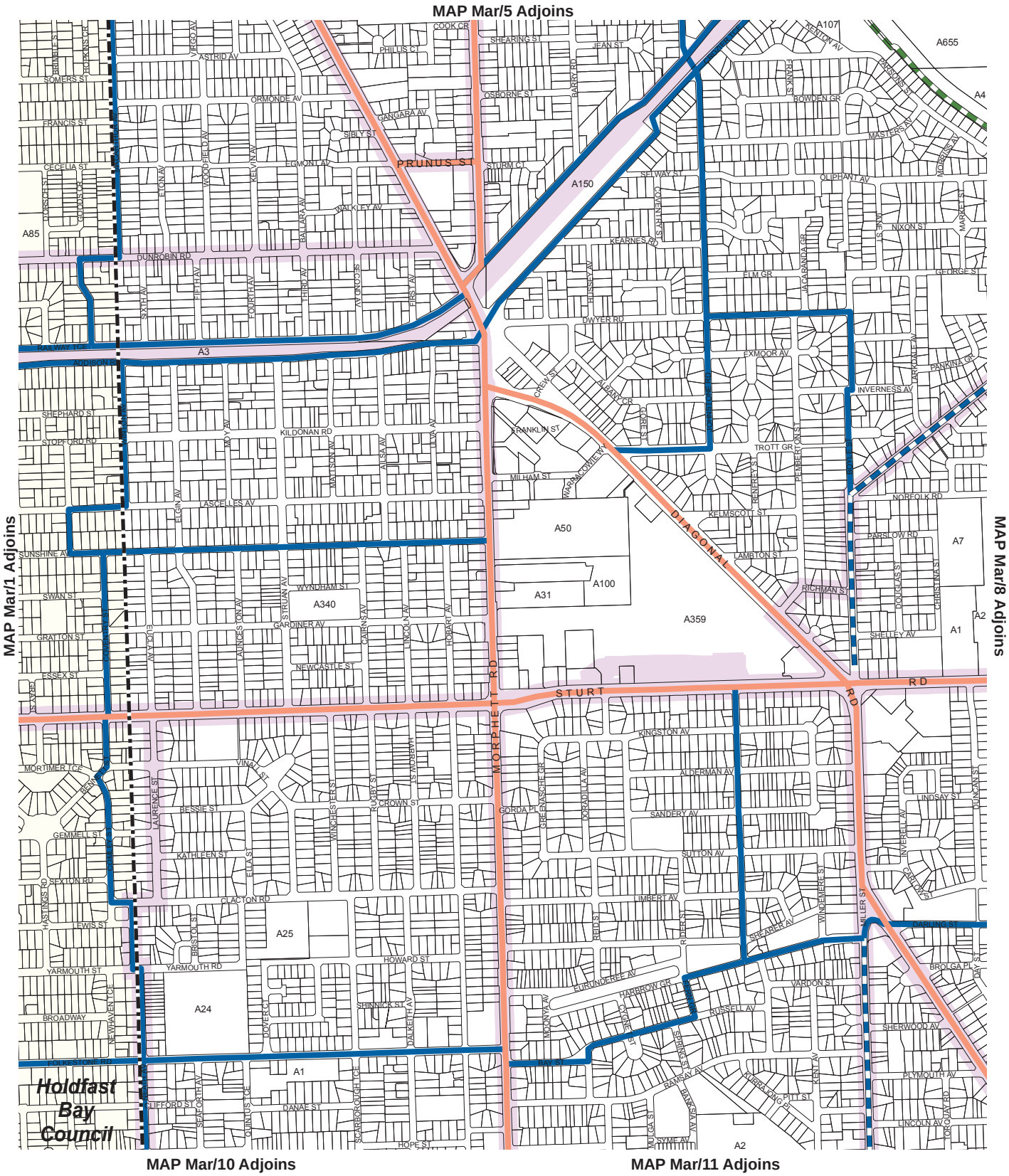
N

0 500 m

- S School
- L Public Library
- C Council Office
- P Post Office
- H Other Health Services
- Railways
- Local Reserves
- Development Plan Boundary

Location Map Mar/7

MARION COUNCIL
Consolidated - 20 February 2018



Secondary Arterial Roads

Bikedirect Network

Secondary Road - Bike Lane

Secondary Road

Off Road Sealed Path

Public Transport

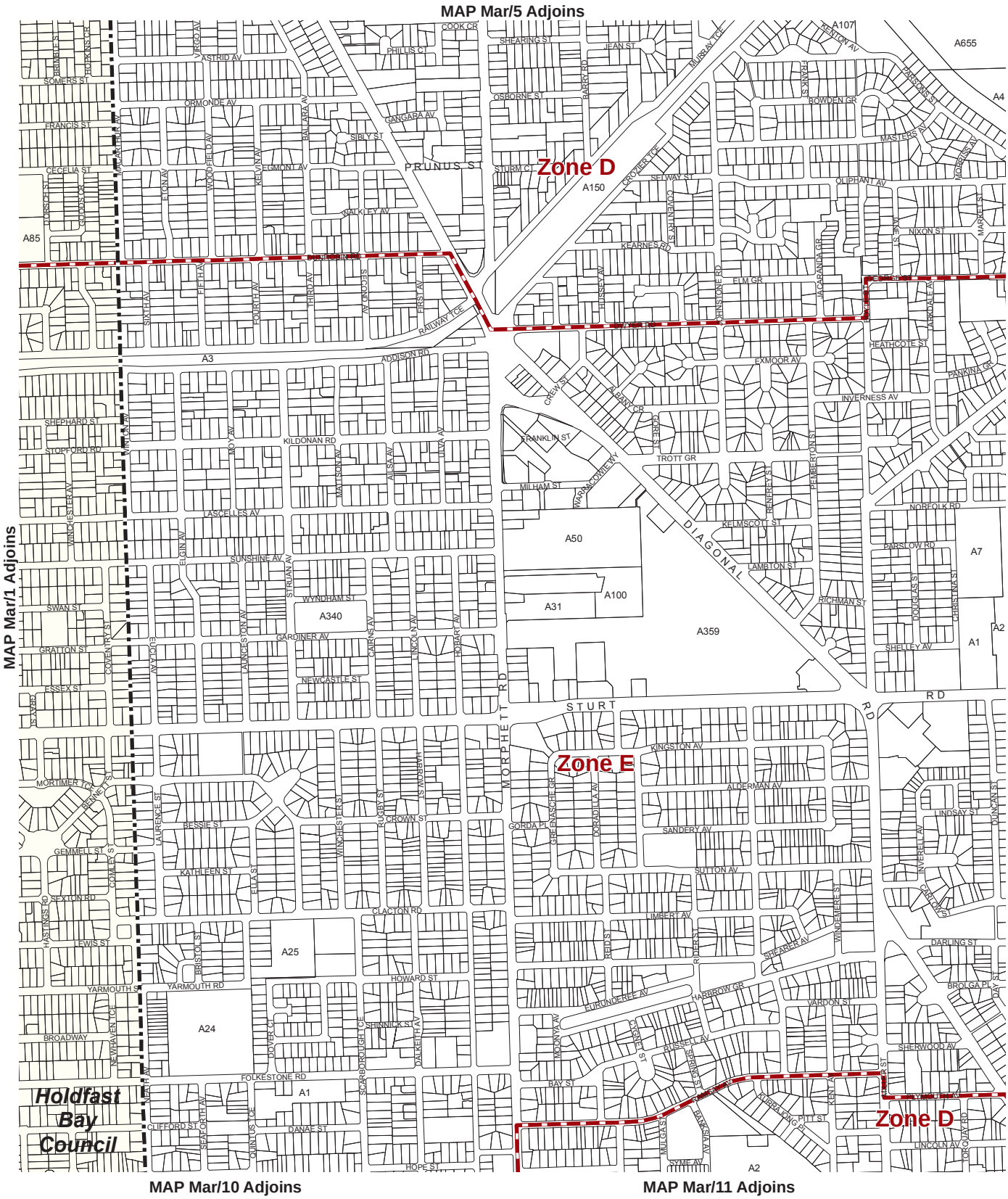
Development Plan Boundary

Overlay Map Mar/7

TRANSPORT

MARION COUNCIL

Consolidated - 20 February 2018



Airport Building Heights
Zone D All Structures Exceeding 45 metres above existing ground level
Zone E All Structures Exceeding 100 metres above existing ground level

Overlay Map Mar/7

DEVELOPMENT CONSTRAINTS

Airport Building Heights

Development Plan Boundary

MARION COUNCIL
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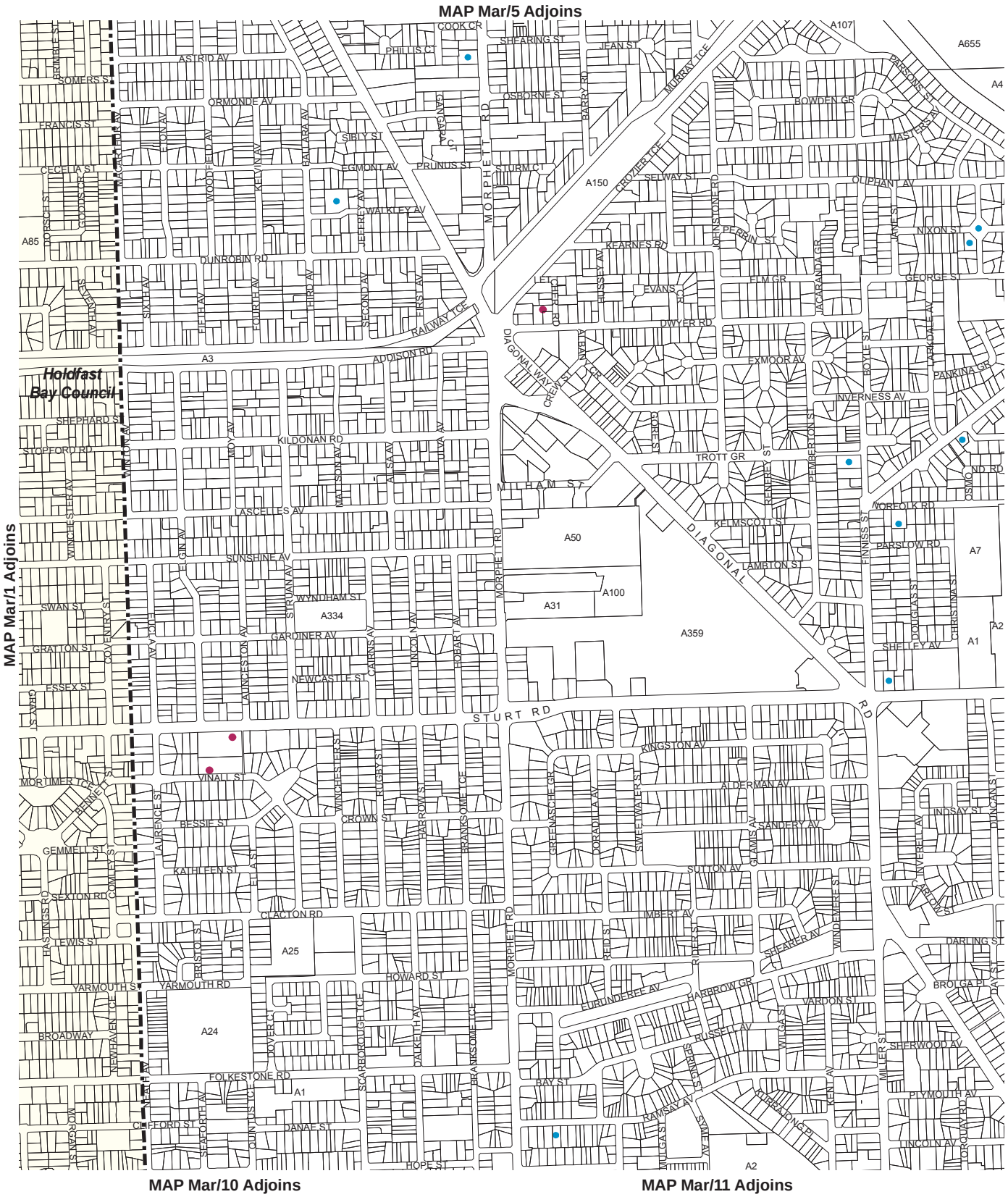


Heritage points are indicative only.
For further information on State and Local Heritage Places and Contributory Items please refer to the relevant tables within this document.

N

0 500 m

Overlay Map Mar/7

HERITAGE

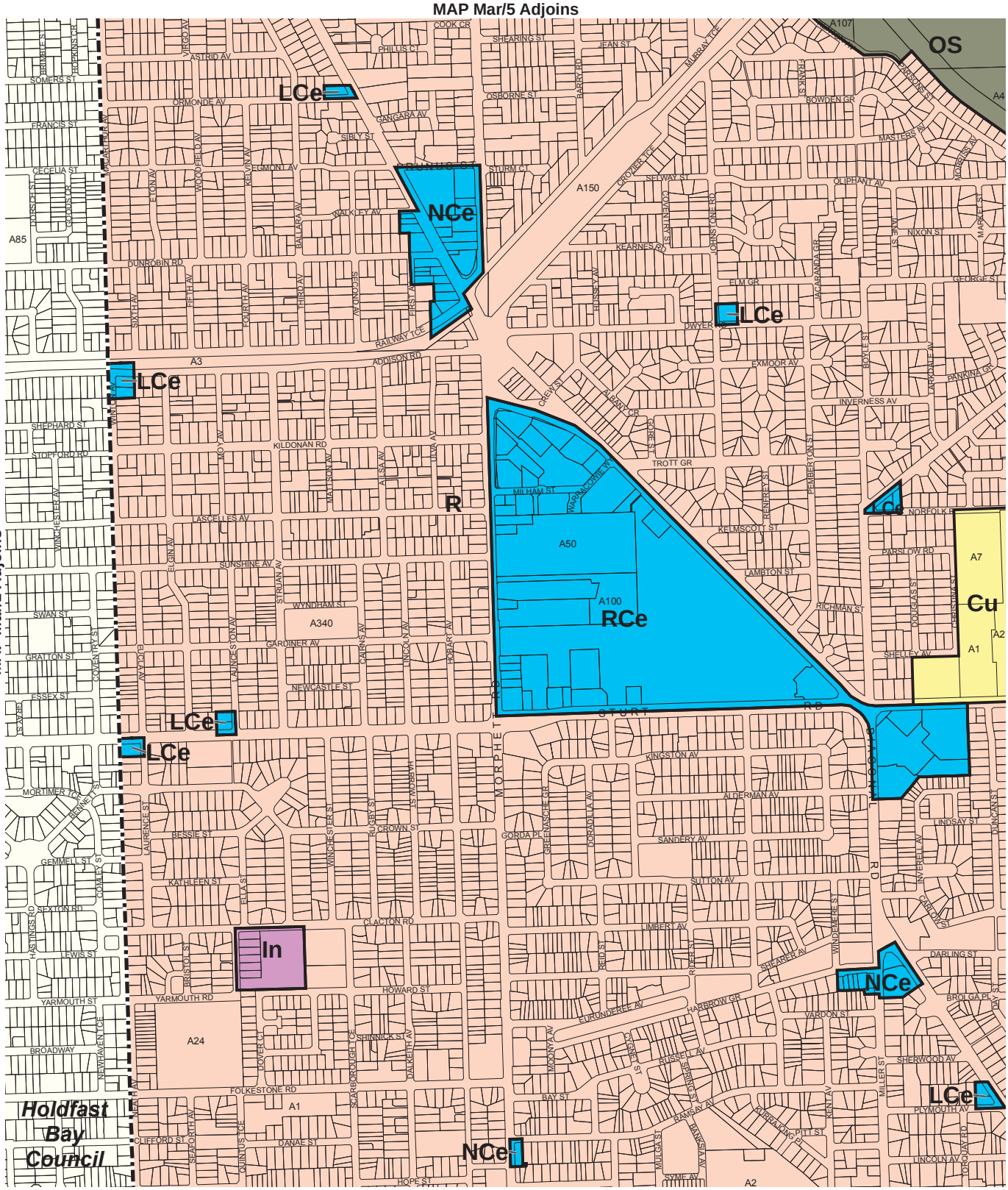
- Local heritage place
- State heritage place
- Development Plan Boundary

MARION COUNCIL
Consolidated - 20 February 2018

MAP Mar/5 Adjoins

MAP Mar/1 Adjoins

MAP Mar/8 Adjoins



MAP Mar/10 Adjoins

MAP Mar/11 Adjoins

Lamberts Conformal Conic Projection, GDA94

N

0 500 m

Zones

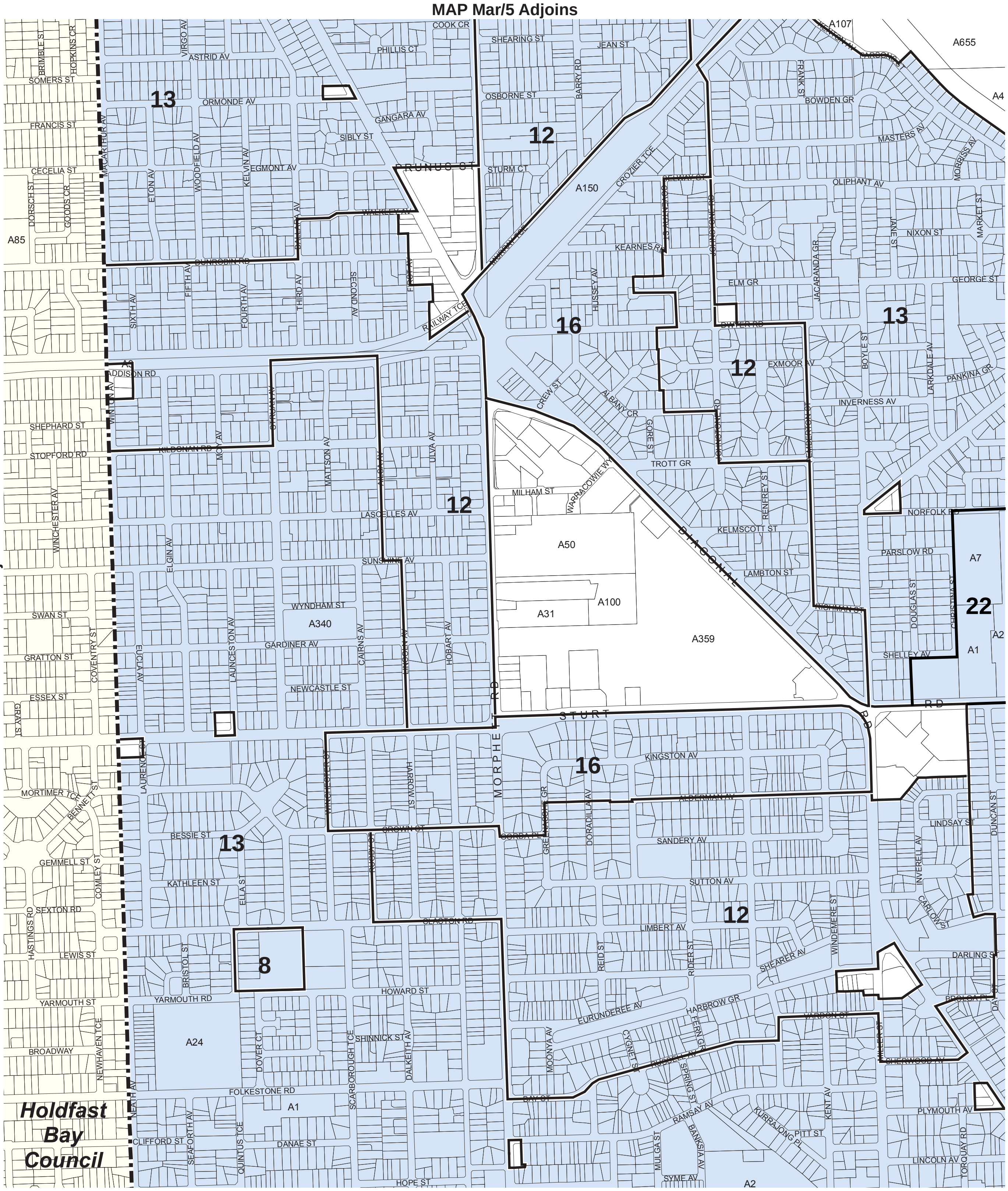
- Cu Community
- In Industry
- LCe Local Centre
- NCe Neighbourhood Centre
- OS Open Space
- RCe Regional Centre
- R Residential
- Zone Boundary
- Development Plan Boundary

Zone Map Mar/7

MARION COUNCIL
Consolidated - 20 February 2018

MAP Mar/5 Adjoins

MAP Mar/1 Adjoins



MAP Mar/8 Adjoins

MAP Mar/10 Adjoins

MAP Mar/11 Adjoins

Lamberts Conformal Conic Projection, GDA94

Policy Area

12	Medium Density
13	Northern
16	Regeneration
8	Winery
22	Recreation

N

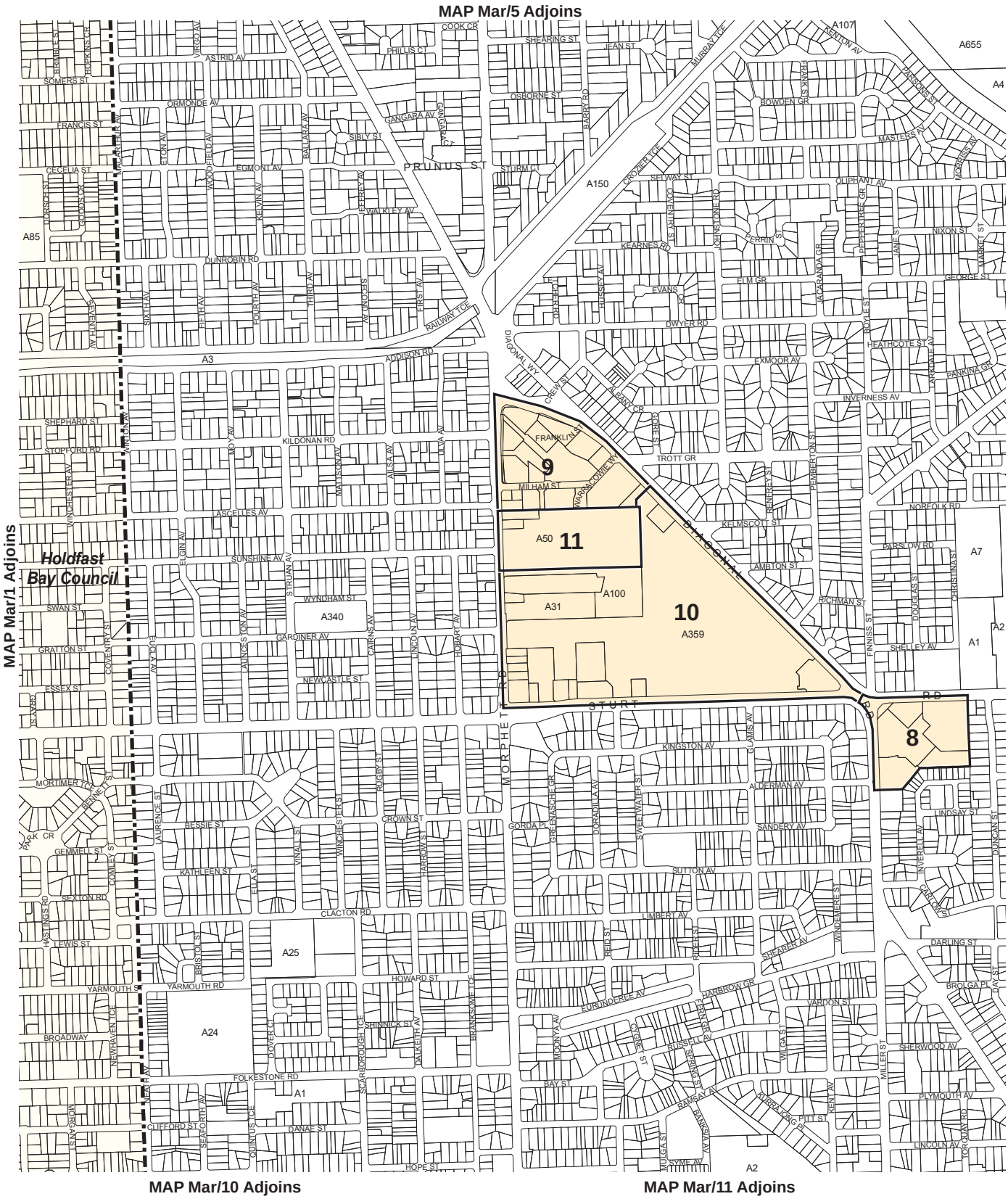
0 500 m

Policy Area Map Mar/7

Policy Area Boundary

Development Plan Boundary

MARION COUNCIL
Consolidated - 20 February 2018



Lamberts Conformal Conic Projection, GDA94

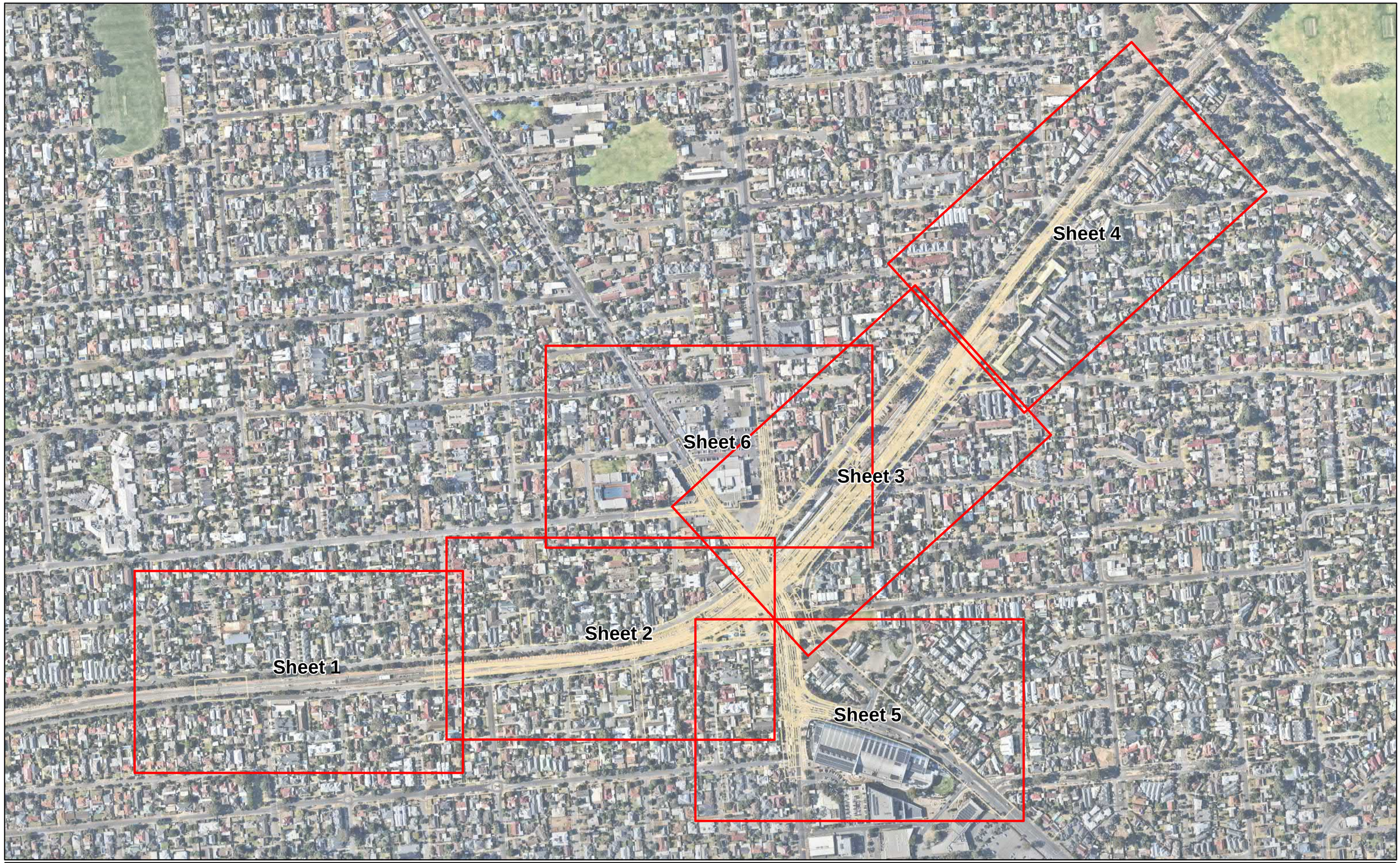
Precinct

10 Retail Core Marion
11 Retail Support Marion
8 Community Services Marion
9 Northern Fringe Marion

Precinct Map Mar/7

MARION COUNCIL
Consolidated - 20 February 2018

APPENDIX J – TREE RETENTION RATINGS

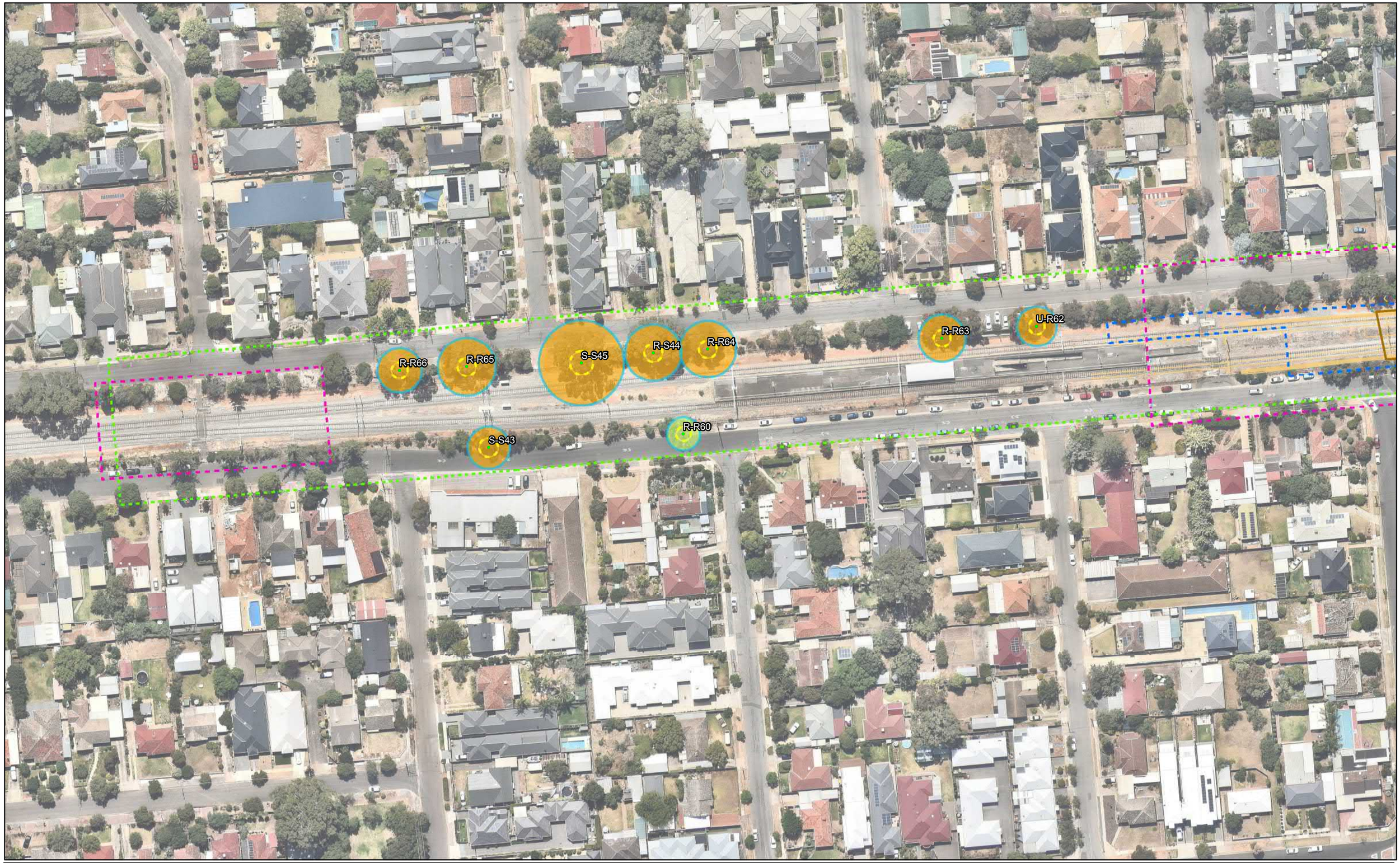


PTP ALLIANCE

Oaklands Grade Separation - Sheet Index

N

0 50 100 200 Meters



PTP ALLIANCE

Oaklands Crossing - Regulated and Significant Tree Impact Assessment

Sheet 1 of 6

Legend

- Conflicted Impact (remove)
- Substantial Impact (>40% TPZ)
- Major Impact (>10% TPZ)
- Minor Impact (<10% TPZ)
- No Impact
- Structural Root Zone
- Ret Rating - Important
- Ret Rating - High
- Ret Rating - Moderate
- Ret Rating - Low
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey Boundary
- Design

N

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Crossing - Regulated and Significant Tree Impact Assessment

Sheet 2 of 6

Legend

- Conflicted Impact (remove)
- Substantial Impact (>40% TPZ)
- Major Impact (>10% TPZ)
- Minor Impact (<10% TPZ)
- No Impact
- Structural Root Zone
- Ret Rating - Important
- Ret Rating - High
- Ret Rating - Moderate
- Ret Rating - Low
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey Boundary
- Design

N

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Crossing - Regulated and Significant Tree Impact Assessment

Sheet 3 of 6

Legend

- Conflicted Impact (remove)
- Substantial Impact (>40% TPZ)
- Major Impact (>10% TPZ)
- Minor Impact (<10% TPZ)
- No Impact
- Structural Root Zone
- Ret Rating - Important
- Ret Rating - High
- Ret Rating - Moderate
- Ret Rating - Low
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey Boundary
- Design

0 12.5 25 50 Meters

Oaklands Crossing - Regulated and Significant Tree Impact Assessment

Sheet 4 of 6

Legend

- Conflicted Impact (remove)
- Substantial Impact (>40% TPZ)
- Major Impact (>10% TPZ)
- Minor Impact (<10% TPZ)
- No Impact
- Structural Root Zone
- Ret Rating - Important
- Ret Rating - High
- Ret Rating - Moderate
- Ret Rating - Low
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey Boundary
- Design

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Crossing - Regulated and Significant Tree Impact Assessment

Sheet 5 of 6

Legend

- Conflicted Impact (remove)
- Substantial Impact (>40% TPZ)
- Major Impact (>10% TPZ)
- Minor Impact (<10% TPZ)
- No Impact
- Structural Root Zone
- Ret Rating - Important
- Ret Rating - High
- Ret Rating - Moderate
- Ret Rating - Low
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey Boundary
- Design

N

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Crossing - Regulated and Significant Tree Impact Assessment

Sheet 6 of 6

Legend

- Conflicted Impact (remove)
- Substantial Impact (>40% TPZ)
- Major Impact (>10% TPZ)
- Minor Impact (<10% TPZ)
- No Impact
- Structural Root Zone
- Ret Rating - Important
- Ret Rating - High
- Ret Rating - Moderate
- Ret Rating - Low
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey Boundary
- Design

N

0 12.5 25 50 Meters

APPENDIX K– ARBORMAN REPORT

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Arboricultural Impact Assessment

Site: Oaklands Park Interchange

Date: Wednesday, 14 March 2018
ATS4887-OaklandsRailDIR

Contents

Report Reference Number: ATS4887-OaklandsRailDIR

Report prepared for

Adam Kilsby, Environment Lead, Public Transport Projects Alliance

Author

Marcus Lodge, Consulting Arborist, Arborman Tree Solutions Pty Ltd

Brief

Arborman Tree Solutions was engaged to undertake an Arboricultural Impact Assessment and provide a Development Impact Report at the Oaklands Park Interchange. The purpose of a Development Impact Report is to identify potential impacts the proposed development will have on the trees to be retained within the site and to recommend impact mitigation strategies in accordance with *Australian Standard 4970-2009 Protection of trees on development sites.* This includes the demolition of the existing railway station, construction of a new station and supporting infrastructure.

In accordance with section 2.2 of the *Australian Standard 4970-2009 Protection of trees on development sites (2.2)* the following information is provided:

- Assessment of the general condition and structure of the subject trees.
- Identification of the legislative status of trees on site as defined in the *Development Act 1993,* the City of Marion development plan.
- Identify and define the Tree Protection Zone and Structural Root Zone for each tree.
- Identify potential impacts the development may have on tree health and/or stability.
- Recommend impact mitigation strategies in accordance with *Australian Standard 4970-2009 Protection of trees on development sites* for trees to be retained.
- Provide information in relation to the management of trees.

Documents and Information Provided

The following information was provided for the preparation of this assessment

- PTPA GIS Tree Design Drawings 20180219 Sheet 1-7
- Original Survey Data

Executive Summary

Arborman Tree Solutions was engaged to undertake an Arboricultural Impact Assessment and provide a Development Impact Report for all Regulated or Significant trees within the site. The purpose of this assessment is to identify the impacts on the trees within the site and to determine if trees can be retained.

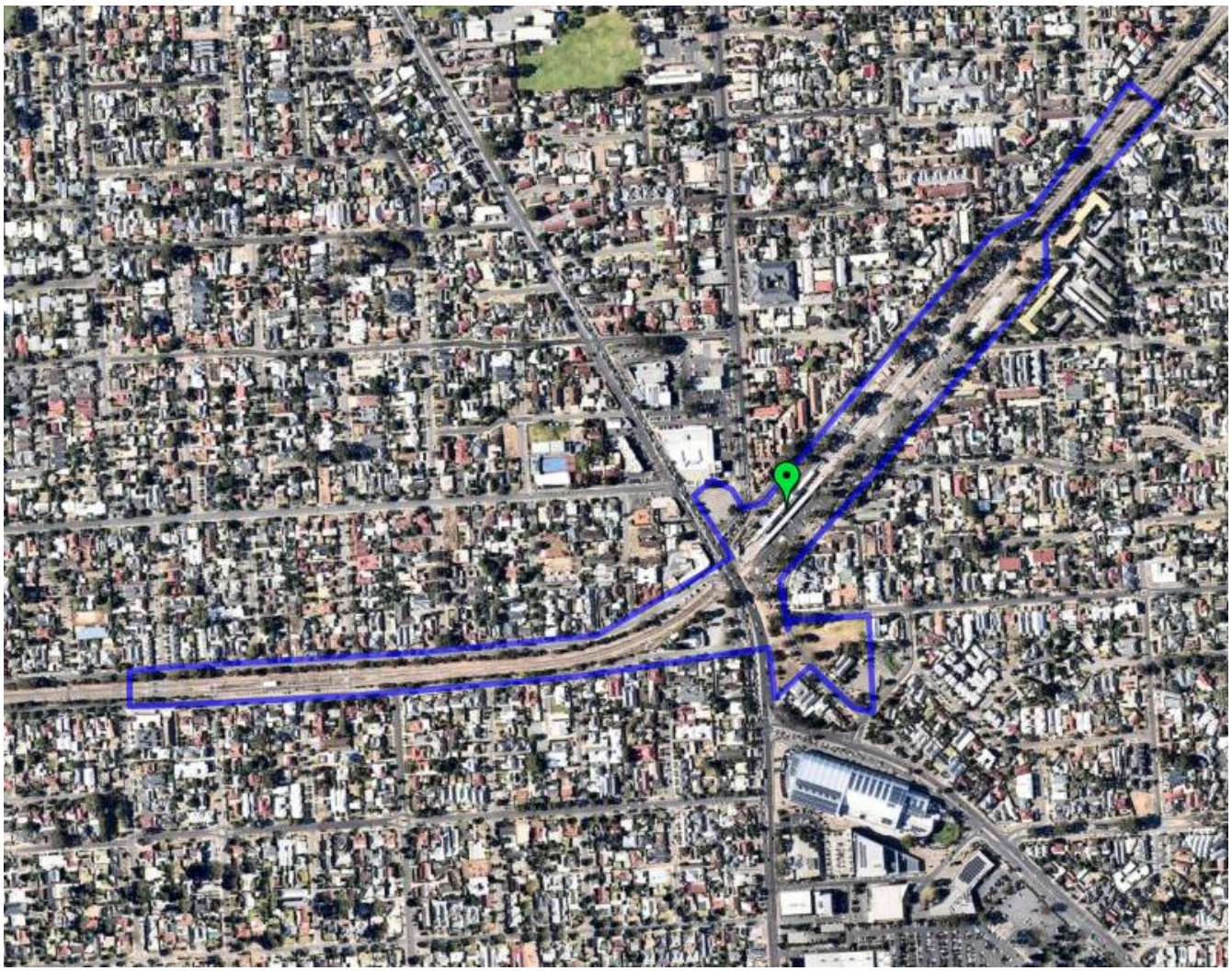
A total of 110 trees were assessed and 43 were identified as Significant Trees, 62 as Regulated Trees, three as unregulated trees and two as exempt trees under the *Development Act 1993*. Of the Regulated or Significant Trees total of 70 have been identified as suitable for retention and 34 trees are in direct conflict with the proposed development and will require removal.

The existing conditions and opportunities to incorporate tree friendly design and construction methodologies indicates that the impact of the proposal on the 70 trees to be retained can be minimised such that their condition will not be compromised.

This report recommends a Project Arborist be appointed to assist in the design around trees to be retained and the compilation of a Tree Protection Plan as identified in Australian Standard AS4970 2009 *Protection of trees on development sites*. The Tree Protection Plan should be included in all construction documents and in the induction program.

Site Location

Figure 1: Survey site location - Oaklands Park Interchange



Methodology

The proposed design was reviewed in association with the information supplied in the Design Drawings and CAD files as supplied by Client Name.

When determining potential impacts of encroachment in to the TPZ, the following should be considered as per AS4970-2009 section 3.3.4;

a) Location of roots and root development.

b) The potential loss of root mass from the encroachment.

c) Tree species and tolerance to root disturbance.

d) Age, vigour and size of the tree.

e) Lean and stability of the tree.

f) Soil characteristics and volume, topography and drainage.

g) The presence of existing or past structures or obstacles affecting root growth.

h) Design factors.

Potential development impacts were determined in accordance with Australian Standard 4970-2009 *Protection of trees on development sites*. Impacts were classified into the following categories;

a) None - no encroachment into the TPZ has been identified.

b) Minor - the identified encroachment is less than 10% of the TPZ area.

c) Major - the identified encroachment is greater than 10% and less than 40% of the TPZ area.

d) Substantial - the identified encroachment is greater than 40% of the TPZ area but does not impact the structural root zone or the trunk.

e) Conflicted - the identified encroachment is greater than 40% of the TPZ area and impacts the structural root zone and the trunk.

***Note**: the categories of Substantial and Conflicted are additional to the categories used in* Australian Standard AS4970-2009 *Protection of trees on development sites and have been used here to assist in identifying the actual level of a Major encroachment.*

Findings

Arborman Tree Solutions was engaged to undertake an Arboricultural Impact Assessment for all Regulated and Significant Trees within the Oaklands Rail Interchange development site.

1. Tree Population

The assessment included 110 trees that had previously been surveyed as part of a DPTI vegetation survey which included one indigenous species, eleven Australian native species and one exotic palm species.

Table 1 Tree Population

Botanic Name	Common Name	Number of Trees	Origin
Eucalyptus cladocalyx	Sugar Gum	69	Native
Eucalyptus camaldulensis	River Red Gum	16	Indigenous
Corymbia citriodora	Lemon Scented Gum	4	Native
Eucalyptus leucoxylon	South Australian Blue Gum	3	Native
Eucalyptus globulus ssp maidenii	Maiden's Gum	3	Native
Brachychiton acerifolius	Illawarra Flame Tree	3	Native
Agonis flexuosa	Willow Myrtle	3	Native
Phoenix canariensis	Canary Island Date Palm	2	Exotic
Eucalyptus saligna	Sydney Blue Gum	2	Native
Corymbia maculata	Spotted Gum	2	Native
Melaleuca armillaris	Bracelet Honey Myrtle	1	Native
Ficus macrophylla	Moreton Bay Fig	1	Native
Eucalyptus sideroxylon	Mugga or Red Ironbark	1	Native

Findings on individual tree health and structure are presented within Appendix B, Tree Assessment Findings.

2. Legislation

Of the 110 trees assessed, 43 are Significant Trees and 62 are Regulated Trees under the *Development Act 1993*. The remaining trees are Exempt from control or are unregulated. Significant and Regulated Trees should be protected if they meet the criteria under the local development plan or are listed as Significant Trees under the local development plan.

Table 2 Legislative Tree Status

Legislative Status	Number of Trees
Unregulated	3
Significant	43
Regulated	62
Exempt	2

3. Retention Rating

Trees that provide important environmental and/or aesthetic contribution to the area and are in good overall condition achieved an Important or High Retention Rating and their protection is encouraged. Trees that achieved a Moderate Retention Rating could be retained in a future development. Trees which achieved a Low Retention Rating indicate that development constraint, alternative designs or tree friendly construction methodologies are not warranted. Trees with a Low Retention Rating achieve one or more of the following attributes: -

a) provide limited environmental/aesthetic benefits to the area,

b) are a short lived species,

c) represent a material risk to people or property,

d) identified as causing or threatening to cause substantial damage to a structure of value,

e) have a short Useful Life Expectancy.

f) are young and easily replaced (less than five metres tall).

Of the 105 Regulated or Significant Trees 70 trees are suitable for retention as they achieved a High or Moderate Retention Rating. The Regulated and Significant Trees that achieved these ratings meet one or more criteria within the *Development Act 1993* that warrant retention.

Table 3 Retention Rating

Retention Rating	Number of Trees
High	5
Moderate	65
Low	25

The remaining 37 trees achieved a Low Retention Rating indicating that development constraint, alternative designs or tree-friendly construction methodologies are not warranted. As such, tree removal could be considered to achieve the proposed development (this includes Regulated/Significant Trees).

4. Development Encroachments

The encroachment of the development into the Tree Protection Zones of the 105 Regulated and Significant Trees has been calculated as per Australian Standard AS4970-2009 *Protection of trees on development sites*. The encroachment calculation is used to assist in determining impact on the trees and can inform design and construction regarding additional tree protection/management requirements.

The following categories are used to identify the level of encroachment:

f) None - no encroachment into the TPZ has been identified.

g) Minor - the identified encroachment is less than 10% of the TPZ area.

h) Major - the identified encroachment is greater than 10% and less than 40% of the TPZ area.

i) Substantial - the identified encroachment is greater than 40% of the TPZ area but does not impact the structural root zone or the trunk.

j) Conflicted - the identified encroachment is greater than 40% of the TPZ area and impacts the structural root zone and the trunk.

Table 4 Development Encroachments

Encroachment	Number of Trees
None	38
Minor	5
Major	10
Substantial	18
Conflicted	34

***Note**: the categories of Substantial and Conflicted are additional to the categories used in* Australian Standard AS4970-2009 *Protection of trees on development sites and have been used here to assist in identifying the actual level of a Major encroachment.*

5. Tree Impacts

The impact on the trees has been assessed as per the Australian Standard AS4970-2009 *Protection of trees on development sites* and considers factors such as:

a) The potential loss of root mass resulting from the encroachment including the number and size of roots.

b) Tree species and tolerance to root disturbance.

c) Age, vigour and size of the tree.

d) Lean and stability of the tree.

e) Soil characteristics and volume, topography and drainage.

f) The presence of existing or past structures or obstacles affecting root growth.

g) Design factors.

Given the above it is unlikely that even the trees with major or substantial encroachments will be negatively impacted for the following reasons:

a) The majority of the trees are in existing carparking, both formal and informal, areas or adjacent to existing infrastructure which already constitute a major or substantial encroachment.

b) Where trees are in areas of proposed carparking this can constructed using tree friendly methodologies to minimise impact.

c) Trees S34-37 and R43 are identified as *Eucalyptus camaldulensis* (River Red Gum) which is a species that tolerates substantial change to its root zone.

***Note**: the trees which are in direct conflict with the proposal cannot be retained without impact and as such they have been identified for removal.*

Discussion

The proposal seeks to construct a rail tunnel to replace the existing surface level rail crossing through this road junction. The construction of this tunnel requires the removal of sixteen Regulated and eighteen Significant trees and has the potential to impact on fourteen Regulated and nineteen Significant trees.

The area around the eighty trees to be retained is highly modified and in the most part the trees are already subject to major encroachment. The existing encroachment and ground conditions are not conducive to root growth at or near the surface and it is expected that the trees have adapted to the conditions and are exploiting soil at a greater depth.

Eucalyptus camaldulensis (River Red Gum) is the most wide spread and best known of the Australian eucalypts. As the common name would suggest it is generally found along waterways and on floodplains, despite this it is a very adaptable tree and will grow in a wide variety of soils and conditions. An advantage of this species heritage as a floodplain tree is that it can adapt to changes in soil levels and moisture content to a much greater extent than many other species being able to withstand changes in soil level, drought and water logging for extended periods. This is at least partially due to the species dimorphic root system that includes sinker roots that can extend considerable depths in to the soil to areas of permanent water. The presence of the naturally occurring *Eucalyptus camaldulensis* (River Red Gum) within the site and in the surrounding area indicates there is sub-surface water available.

The majority of the trees are in areas that are proposed to be used for carparking much of which is already existing either formally or informally as compacted ground. There is potential to alter the design of the new carparking to minimise the impact on the trees this can be through a number of methods including but not necessarily limited to the following:

1. Redesign of the carpark to create larger areas around the trees.
2. Reduce the number of carparks in the vicinity of trees.
3. Use alternate materials to reduce the compaction and allow water and oxygen to infiltrate the soil.

As a result of the above it is reasonable to suggest that even the trees with substantial and major encroachments can be successfully retained within the development without a substantial impact on their condition.

Recommendation

The following recommendations are presented based on the Arboricultural Impact Assessment:

1. Trees that are in direct conflict with the development require removal.

2. Alternative design and construction methodologies are to be investigated where encroachment is identified as substantial or major.

3. All trees to be retained onsite require protection as per Australian Standard AS4970 *Protection of trees on site* and should be included within the Tree Protection Plan.

4. A Project Arborist should be appointed to assist in the design around trees to be retained and the compilation of a Tree Protection Plan as identified in Australian Standard AS 4970 2009 *Protection of trees on development sites*.

5. The Tree Protection Plan should be included in all construction documents and in the induction program.

Thank you for the opportunity to provide this report. Should you require further information, please contact me and I will be happy to be of assistance.

Yours sincerely

MARCUS LODGE
Senior Consulting Arboriculturist
Diploma in Arboriculture
International Society of Arboriculture – Tree Risk Assessment

Glossary

Size: approximate height and width of tree in metres.

Age: identification of the maturity of the tree.

Useful Life Expectancy: expected number of the years that the tree will remain alive and sound in its current location and/or continues to achieve the relevant Principles of Development Control.

Health: visual assessment of tree health.

Structure: visual assessment of tree structure.

Circumference: trunk circumference measured at one metre above ground level. This measurement is used to determine the status of the tree in relation to the *Development Act 1993*.

Diameter at Breast Height (DBH): trunk diameter measured at 1.4 metres above ground level used to determine the Tree Protection Zone as described in Australian Standard AS4970-2009 *Protection of trees on development sites*.

Diameter at Root Buttress (DRB): trunk diameter measured immediately above the root buttress as described in Australian Standard AS4970-2009 *Protection of trees on development sites* and is used to determine the Structural Root Zone.

Tree Damaging Activity Tree damaging activity includes those activities described within the *Development Act 1993* such as removal, killing, lopping, ringbarking or topping or any other substantial damage such as mechanical or chemical damage, filling or cutting of soil within the TPZ. Can also include forms of pruning above and below the ground.

Tree Protection Zone: area of root zone that should be protected to prevent substantial damage to the root system.

Structural Root Zone: calculated area within the tree's root zone that is considered essential to maintain tree stability.

Project Arborist A person with the responsibility for carrying out a tree assessment, report preparation, consultation with designers, specifying tree protection measures, monitoring and certification. The Project Arborist must be competent in arboriculture, having acquired through training, minimum Australian Qualification Framework (AQTF) Level 5, Diploma of Horticulture (Arboriculture) and/or equivalent experience, the knowledge and skills enabling that person to perform the tasks required by this standard.

References

Australian Standard AS4970–2009 ***Protection of trees on development sites***: Standards Australia.

Matheny N. Clark J. 1998: ***Trees and Development a Technical Guide to Preservation of Trees During Land Development***: International Society of Arboriculture, Champaign, Illinois, USA.

Appendix A - Tree Assessment Methodology

Tree Assessment Form (TAF©)

Record	Description
Tree	A perennial woody plant with a mature height of greater than 5 metres and life expectancy of more than 10 years.
Genus and Species	Trees are identified using normal field plant taxonomy techniques. Due to hybridisation and plant conditions available on the day of observation it may not always be possible to identify the tree to species level; where species cannot be ascertained *sp.* is used.
Height	Tree height is observed and recorded in the following ranges; <5m, 5-10m, 10-15m and >20m.
Spread	Crown width (projection) diameter is recorded by the following fields <5m, 5-10m, 10-15m, 15-20m, >20m.
Tree Health	Tree health was assessed using the Arborman Tree Solutions - Tree Health Assessment Method that is based on international best practice.
Tree Structure	Tree structure was assessed using Arborman Tree Solutions - Tree Structure Assessment Method that is based on international best practice.
Tree Risk Assessment	Trees were assessed using the International Society of Arboriculture Level 1 Tree Assessment method. The person conducting the assessment has acquired the International Society of Arboriculture Tree Risk Assessment Qualification (TRAQ).
Legislative Status	Legislation status was identified through the interpretation of the *Development Act 1993*, and the *Natural Resource Management Act 2004* as well as other relevant legislation, therefore determining regulatory status of the subject tree.
Mitigation	Measures to reduce tree risk may be recommended in the form of pruning and this listed in the Tree Assessment Findings (Appendix C). Tree pruning is recommended in accordance with AS4373-2007 *Pruning amenity trees* where practicable. Where measures to mitigate risk is not possible and the risk is unacceptable, then tree removal or further investigation is recommended.

Useful Life Expectancy (ULE)

ULE Rating	Definition
Surpassed	The tree has surpassed its Useful Life Expectancy.
<10 years	The tree displays either or both Poor Health and/or Structure and is considered to have a short Useful Life Expectancy of less than ten years.
>10 years	The tree is displays Fair Health or Structure and Good Health and Structure and is considered to have a Useful Life Expectancy of more than ten years.
>20 years	The tree displays Good Health and Structure and is considered to have an extended Useful Life Expectancy of more than twenty years.

Maturity (Age)

Age Class	Definition
Senescent	The tree has surpassed its optimum growing period and is declining and/or reducing in size. May be considered as a veteran in relation to its ongoing management. Tree will have generally reached greater than 80% of its expected life expectancy.
Mature	A tree which has reached full maturity in terms of its predicted life expectancy and size, the tree is still active and experiencing cell division. Tree will have generally reached 20-80% of its expected life expectancy.
Semi Mature	A tree which has established, but has not yet reached maturity. Normally tree establishment practices such as watering will have ceased. Tree will generally not have reached 20% of its expected life expectancy.
Juvenile	A newly planted tree or one which is not yet established in the landscape. Tree establishment practices such as regular watering will still be in place. Tree will generally be a newly planted specimen up to five years old; this may be species dependant.

Tree Health Indication (THI©)

Category	Description
Good	Tree displays high vigour, uniform leaf colour, no or little dieback (<5%), crown density (>85%) and or healthy axillary buds and typical internode length. The tree has little to no pest and/or disease infestation.
Fair	Tree displays low vigour, dull leaf colour, little dieback (<15%), crown density (>70%) and/or reduced axillary buds and internode length. Minor pest and/or disease infestation potentially impacting on tree health.
Poor	Tree displays no vigour, chlorotic or dull leaf colour, moderate to high crown dieback (>15%), low crown density (<70%) and/or few or small axillary buds and shortened internode length. Pest and or disease infestation is evident and/or widespread.
Dead	The tree has died and has no opportunity for recovery.

Tree Structural Assessment (TSA©)

Category	Description
Good	Little to no branch failure observed within the crown, well-formed unions, no included bark, good branch and trunk taper present, root buttressing and root plate are typical.
Fair	History of minor branch failure observed in crown, well-formed unions, no included bark, acceptable branch and trunk taper present, root buttressing and root plate are typical.
Poor	History of significant branch failure observed in crown, poorly formed unions, included bark present, branch and trunk taper absent, root buttressing and root plate are atypical.
Failed	The structure of the tree has or is in the process of collapsing.

Tree Retention Rating (TRR)

The Tree Retention Rating is based on a number of factors that are identified as part of the standard tree assessment criteria including Condition, Size, Environmental, Amenity and Special Values. These factors are combined in a number of matrices to provide a Preliminary Tree Retention Rating and a Tree Retention Rating Modifier which combine to provide a Tree Retention Rating that is measurable, consistent and repeatable

Preliminary Tree Retention Rating

The Preliminary Tree Retention Rating is conducted assessing Tree Health and Structure to give an overall Condition Rating and Height and Spread to give an overall Size Rating. The following matrices identify how these are derived.

Condition Matrix				
Structure	**Health**			
	Good	**Fair**	**Poor**	**Dead**
Good	C1	C1	C3	C4
Fair	C1	C2	C3	C4
Poor	C3	C3	C4	C4
Failed	C4	C4	C4	C4

Size Matrix					
Spread	**Height**				
	>20	**15-20**	**10-15**	**5-10**	**<5**
>20	S1	S1	S1	S2	S3
15-20	S1	S1	S2	S3	S3
10-15	S1	S2	S2	S3	S4
5-10	S2	S3	S3	S4	S5
<5	S3	S3	S4	S5	S5

The results from the Condition and Size Matrices are then placed in the Preliminary Tree Retention Rating Matrix.

Preliminary Tree Retention Rating				
Size	**Condition**			
	C1	**C2**	**C3**	**C4**
S1	High	High	Low	Low
S2	High	Moderate	Low	Low
S3	Moderate	Moderate	Low	Low
S4	Moderate	Moderate	Low	Low
S5	Low	Low	Low	Low

The Preliminary Tree Retention Rating gives a base rating for all trees regardless of other environmental and/or amenity factors and any Special Value considerations. The Preliminary Tree Retention Rating can only be modified if these factors are considered to be of high or low enough importance to warrant increasing or, in a few cases, lowering the original rating.

Tree Retention Rating Modifier

The Preliminary Tree Retention Rating is then qualified against the recognised Environmental and Amenity benefits that trees present to the community thereby providing a quantitative measure to determine the overall Tree Retention Rating. Data is collected in relation to Environmental and Amenity attributes which are compared through a set of matrices to produce a Tree Retention Rating Modifier.

Environmental Matrix				
Origin	**Habitat**			
	Active	**Inactive**	**Potential**	**No Habitat**
Indigenous	E1	E1	E2	E3
Native	E1	E2	E3	E3
Exotic	E2	E3	E3	E4
Weed	E3	E3	E4	E4

Amenity Matrix				
Character	**Aesthetics**			
	High	**Moderate**	**Low**	**None**
Important	P1	P1	P2	P3
Moderate	P1	P2	P3	P3
Low	P2	P3	P3	P4
None	P3	P3	P4	P4

Tree Retention Rating Modifier				
Amenity	**Environment**			
	E1	**E2**	**E3**	**E4**
P1	High	High	Moderate	Moderate
P2	High	Moderate	Moderate	Moderate
P3	Moderate	Moderate	Moderate	Moderate
P4	Moderate	Moderate	Moderate	Low

Tree Retention Rating

The results of the Preliminary Tree Retention Rating and the Tree Retention Rating Modifier matrices are combined in a final matrix to give the actual Tree Retention Rating.

Tree Retention Rating Matrix			
Tree Retention Rating Modifier	**Preliminary Tree Retention Rating**		
	High	**Moderate**	**Low**
High	Important	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Low

Special Value Trees

There are potentially trees that have Special Value for reasons outside of normal Arboricultural assessment protocols and therefore would not have been considered in the assessment to this point; to allow for this a Special Value characteristic that can override the Tree Retention Rating can be selected. Special Value characteristics that could override the Tree Retention Rating would include factors such as the following:

Cultural Values

Memorial Trees, Avenue of Honour Trees, Aboriginal Heritage Trees, Trees planted by Dignitaries and various other potential categories.

Environmental Values

Rare or Endangered species, Remnant Vegetation, Important Habitat for rare or endangered wildlife, substantial habitat value in an important biodiversity area and various other potential categories.

Where a tree achieves one or more Special Value characteristics the Tree Retention Rating will automatically be overridden and assigned the value of Important.

Tree Retention Rating Definitions

Important These trees are considered to be important and will in almost all instances be required to be retained within any future development/redevelopment. It is highly unlikely that trees that achieve this rating would be approved for removal or any other tree damaging activity. Protection of these trees should as a minimum be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites* however given the level of importance additional considerations may be required.

High These trees are considered to be important and will in most instances be required to be retained within any future development/redevelopment. It is unlikely that trees that achieve this rating would be approved for removal or any other tree damaging activity. Protection of these trees should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Moderate These trees are considered to be suitable for retention however they achieve less positive attributes than the trees rated as Important or High and as such their removal or other tree damaging activity is more likely to be considered to be acceptable in an otherwise reasonable and expected development. The design process should where possible look to retain trees with a Moderate Retention Rating. Protection of these trees, where they are identified to be retained, should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Low These trees are not considered to be suitable for retention in any future development/redevelopment; trees in this category do not warrant special works or design modifications to allow for their retention. Trees in this category are likely to be approved for removal and/or other tree damaging activity in an otherwise reasonable and expected development. Protection of these trees, where they are identified to be retained, should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Appendix B - Tree Assessment Findings

Eucalyptus camaldulensis

Tree No: U-R1

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	1.25 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	4.8 metres

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Unregulated

Encroachment Rating
No Encroachment

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Eucalyptus sideroxylon

Tree No: R-R2

Mugga or Red Ironbark

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.45 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9.12 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
Minor

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Eucalyptus cladocalyx

Tree No: S-S1

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3.15 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	11.04 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

There is decay in the primary structure.

Development Impact Comments

The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
Minor

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Eucalyptus cladocalyx

Tree No: R-R3

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.13 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	5.52 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: S-S2

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.56 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	13.2 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: R-R4

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.45 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	9.36 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: R-R5

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Good
Trunk Circumference:	2.16 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	8.16 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: S-S3

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.16 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: R-R6

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Good
Trunk Circumference:	2.1 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.68 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: R-R7

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.2 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	8.4 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: R-R8

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.26 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	8.64 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
Minor

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Eucalyptus cladocalyx

Tree No: S-S4

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	3.12 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	11.52 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Major

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Eucalyptus cladocalyx

Tree No: R-R9

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.2 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R10

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.14 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S5

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.18 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12.12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Major

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R11

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.11 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Major

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R12

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.17 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.56 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R14

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.03 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S6

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.74 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	14.28 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R15

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.65 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	10.08 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S7

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.6 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	13.8 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S8

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	3.3 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	12.96 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S9

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	5.12 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R16

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.1 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.68 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R17

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.13 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	8.16 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S10

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.46 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	13.2 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R19

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.5 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	9 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S11

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	3.52 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	13.44 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S12

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.36 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12.84 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S13

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3.25 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	12.24 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S14

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.05 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.76 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R20

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	2.15 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	8.28 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

There is decay in the primary structure.

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R21

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.8 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	10.68 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Substantial

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R22

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.73 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	10.44 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Major

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-S47

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.83 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	6.6 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

This tree is epicormic regrowth from the stump of a previously removed tree.

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Major

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Melaleuca armillaris

Tree No: R-R23

Bracelet Honey Myrtle

Inspected:	Tuesday, 20 February 2018
Height:	<5 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Failed
Trunk Circumference:	2.37 metres
Useful Life Expectancy:	Surpassed
Tree Protection Zone (TPZ):	5.64 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
Minor

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Brachychiton acerifolius

Tree No: E-R24

Illawarra Flame Tree

Inspected:	Tuesday, 20 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.1 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.56 metres

Legislative Status Comments

This tree is exempt from control under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Exempt

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Brachychiton acerifolius

Tree No: R-R25

Illawarra Flame Tree

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.83 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	9.6 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Brachychiton acerifolius

Tree No: R-R26

Illawarra Flame Tree

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.1 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.56 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R27

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Poor
Structure:	Poor
Trunk Circumference:	2.82 metres
Useful Life Expectancy:	Surpassed
Tree Protection Zone (TPZ):	10.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
Minor

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S15

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Trunk measurements have been estimated due to an active beehive in the lower trunk.

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S16

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.08 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.28 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Major

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S17

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	4 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	15 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Major

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S18

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3.05 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	11.64 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S19

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Trunk measurements have been estimated due to an active beehive in the lower trunk.

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S20

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3.97 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

There is decay in the primary structure.

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R28

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Poor
Structure:	Poor
Trunk Circumference:	2.1 metres
Useful Life Expectancy:	Surpassed
Tree Protection Zone (TPZ):	7.92 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Major

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R29

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Poor
Structure:	Fair
Trunk Circumference:	2.45 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	9.36 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S21

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.45 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	13.2 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S22

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.05 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.64 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S23

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3.46 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	13.2 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

There is decay in the primary structure.

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S24

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	4.78 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R30

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.7 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	10.32 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R31

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.83 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	10.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R32

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.4 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9.24 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S25

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.2 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	14.64 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R33

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.98 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.4 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R34

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.35 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R35

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.43 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	9.24 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R39

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Poor
Structure:	Fair
Trunk Circumference:	2.7 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	10.32 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R40

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.7 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	10.32 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S28

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	4.33 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R38

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.64 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	10.08 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R37

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.57 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	9.84 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S27

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.11 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.88 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S26

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.6 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	13.92 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R36

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.68 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	10.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Agonis flexuosa

Tree No: R-R44

Willow Myrtle

Inspected:	Tuesday, 20 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.05 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Agonis flexuosa

Tree No: R-R45

Willow Myrtle

Inspected:	Tuesday, 20 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.5 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9.6 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Agonis flexuosa

Tree No: R-R46

Willow Myrtle

Inspected:	Tuesday, 20 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.4 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	8.16 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S29

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.4 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12.96 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S30

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	3.05 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	11.52 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R41

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.3 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	8.88 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S31

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	3.95 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S32

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.98 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S33

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	>20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.18 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12.12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: R-R42

Sugar Gum

Inspected:	Tuesday, 20 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.25 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	8.64 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S34

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	4 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	15 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial the majority of the encroachment is existing and tree friendly design and construction methodologies are available to minimise any impact.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies. The existing carpark is to be removed resulting in an overall improvement in the root zone.

Legislative Status
Significant

Encroachment Rating
Substantial

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-R43

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	2.66 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	10.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Substantial

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-S35

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	>20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.95 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.28 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Substantial

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S36

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	3.15 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S37

River Red Gum

Inspected:	Tuesday, 20 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.2 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12.24 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Significant

Encroachment Rating
Substantial

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus saligna

Tree No: R-R50

Sydney Blue Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Poor
Trunk Circumference:	2.2 metres
Useful Life Expectancy:	<10 years
Tree Protection Zone (TPZ):	8.4 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Corymbia citriodora

Tree No: R-R49

Lemon Scented Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.33 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	8.88 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S39

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.55 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	13.56 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S38

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.68 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	14.04 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Corymbia maculata

Tree No: R-R48

Spotted Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.45 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9.36 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Corymbia citriodora

Tree No: U-R53

Lemon Scented Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	1.98 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	6.96 metres

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Unregulated

Encroachment Rating
No Encroachment

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Corymbia citriodora

Tree No: R-R52

Lemon Scented Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.01 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.68 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Corymbia citriodora

Tree No: R-R51

Lemon Scented Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.05 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S40

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Good
Trunk Circumference:	3.24 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12.36 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus cladocalyx

Tree No: S-S41

Sugar Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	3.03 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	11.4 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: R-R56

South Australian Blue Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.34 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	8.88 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

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PROFESSIONALS IN ARBORICULTURE

Corymbia maculata

Tree No: S-S42

Spotted Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	3.15 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	12 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Significant

Encroachment Rating
Direct Conflict

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Eucalyptus saligna

Tree No: R-R57

Sydney Blue Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Good
Structure:	Fair
Trunk Circumference:	2.42 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	6.6 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus globulus ssp. Maidenii

Tree No: R-R58

Maindens Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Good
Trunk Circumference:	2.08 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	7.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is in direct conflict with the works and will require removal as part of this project.

Recommendation

This tree will require removal.

Legislative Status
Regulated

Encroachment Rating
Direct Conflict

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PROFESSIONALS IN ARBORICULTURE

Ficus macrophylla

Tree No: R-R59

Moreton Bay Fig

Inspected:	Wednesday, 21 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.15 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	4.92 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Major

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus globulus ssp. Maidenii

Tree No: R-R60

Maindens Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Good
Trunk Circumference:	2.2 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	5.88 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus globulus ssp. Maidenii

Tree No: S-S43

Maindens Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	3.89 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.44 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-R61

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Fair
Structure:	Fair
Trunk Circumference:	2.6 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone (TPZ):	9.96 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree will require the implementation of tree friendly design and construction methodologies.

Legislative Status
Regulated

Encroachment Rating
Major

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: R-R63

South Australian Blue Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.24 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	8.28 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-R64

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.6 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9.96 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-S44

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.92 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	9.96 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: S-S45

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	5.03 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	15.00 metres

Legislative Status Comments

This tree is a Significant Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Significant

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-R65

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.68 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	10.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: R-R66

River Red Gum

Inspected:	Wednesday, 21 February 2018
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.05 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	7.8 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: U-R62

South Australian Blue Gum

Inspected:	Wednesday, 21 February 2018
Height:	10-15 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Trunk Circumference:	1.88 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	6.96 metres

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Unregulated

Encroachment Rating
No Encroachment

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Phoenix canariensis

Tree No: R-R54

Canary Island Date Palm

Inspected:	Wednesday, 21 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.6 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	10.2 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Phoenix canariensis

Tree No: R-R55

Canary Island Date Palm

Inspected:	Wednesday, 21 February 2018
Height:	5-10 metres
Spread:	5-10 metres
Health:	Good
Structure:	Good
Trunk Circumference:	2.76 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone (TPZ):	10.56 metres

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Development Impact Comments

This tree is not impacted by the proposed development.

Recommendation

Apply tree protection as appropriate.

Legislative Status
Regulated

Encroachment Rating
No Encroachment

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Eucalyptus cladocalyx

Tree No: E-R18

Sugar Gum

Inspected:	Wednesday, 21 February 2018
Height:	5-10 metres
Spread:	<5 metres
Health:	Dead
Structure:	Fair
Trunk Circumference:	2.2 metres
Useful Life Expectancy:	Surpassed
Tree Protection Zone (TPZ):	9 metres

Legislative Status Comments

This tree is exempt from control under the Development Act 1993.

General Observations

This tree is absent of live foliage.

Development Impact Comments

Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.

Recommendation

This tree is dead and will require the implementation of design and construction methodologies that will not impact its structure.

Legislative Status
Exempt

Encroachment Rating
Substantial

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Appendix C - Mapping

N

Encroachment Summary

34	Conflicted
18	Substantial
10	Major
5	Minor
38	None

Date: 9/03/2018 Rev: 3
Ref: ATS4887-OaklandsRailDIR r3

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Sheet Locality and Encroachment Summary

(Not to Scale)

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Legislative Status

S	Significant
R	Regulated
U	Unregulated
E	Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 1

0 30 60 m

1:750 @ A3

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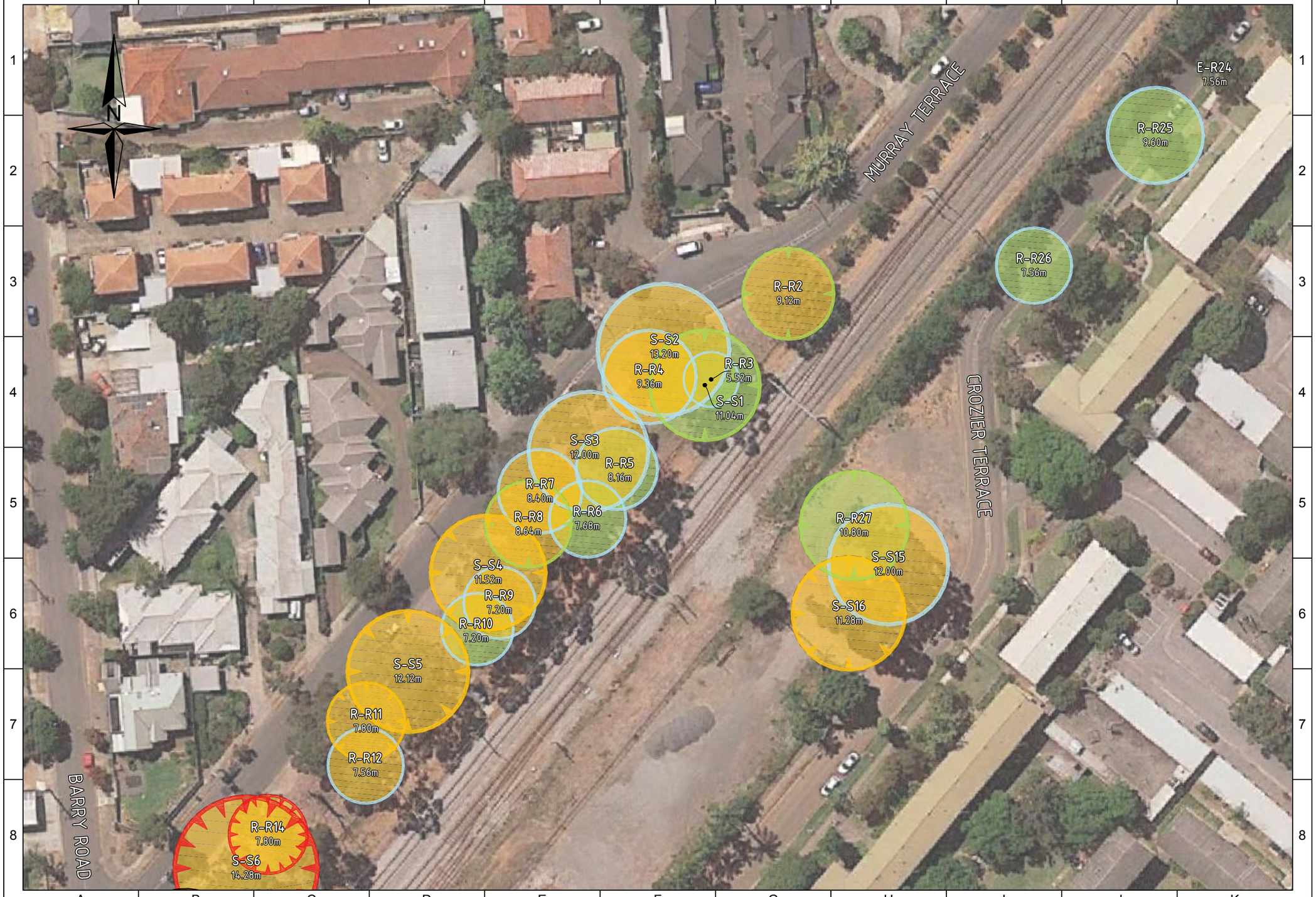

Legislative Status

S	Significant
R	Regulated
U	Unregulated
E	Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 2

0 30 60 m

1:750 @ A3

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Legislative Status

S	Significant
R	Regulated
U	Unregulated
E	Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 3

0 30 60 m

1:750 @ A3

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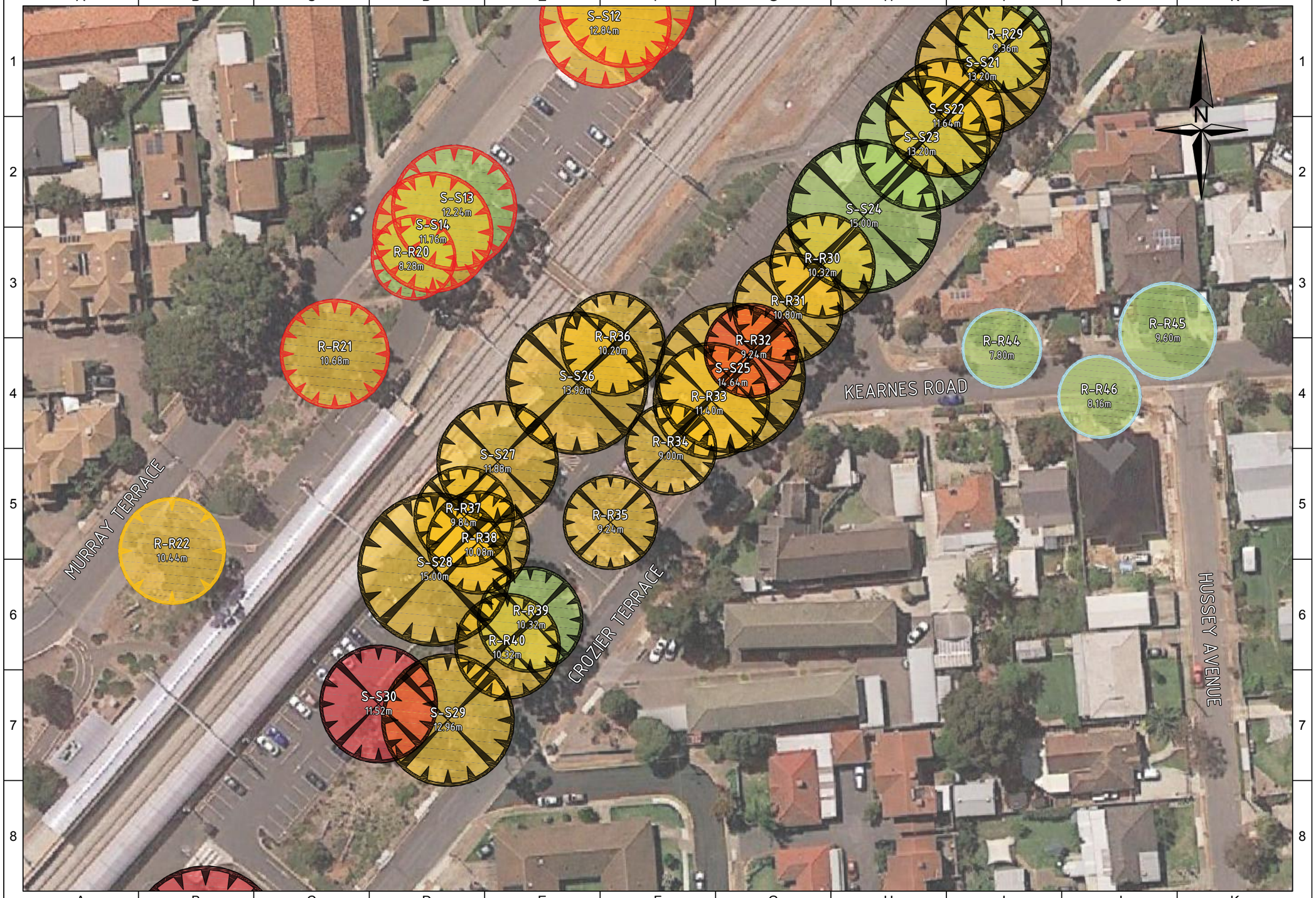

Legislative Status

- S Significant
- R Regulated
- U Unregulated
- E Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 4

0 30 60 m

1:750 @ A3

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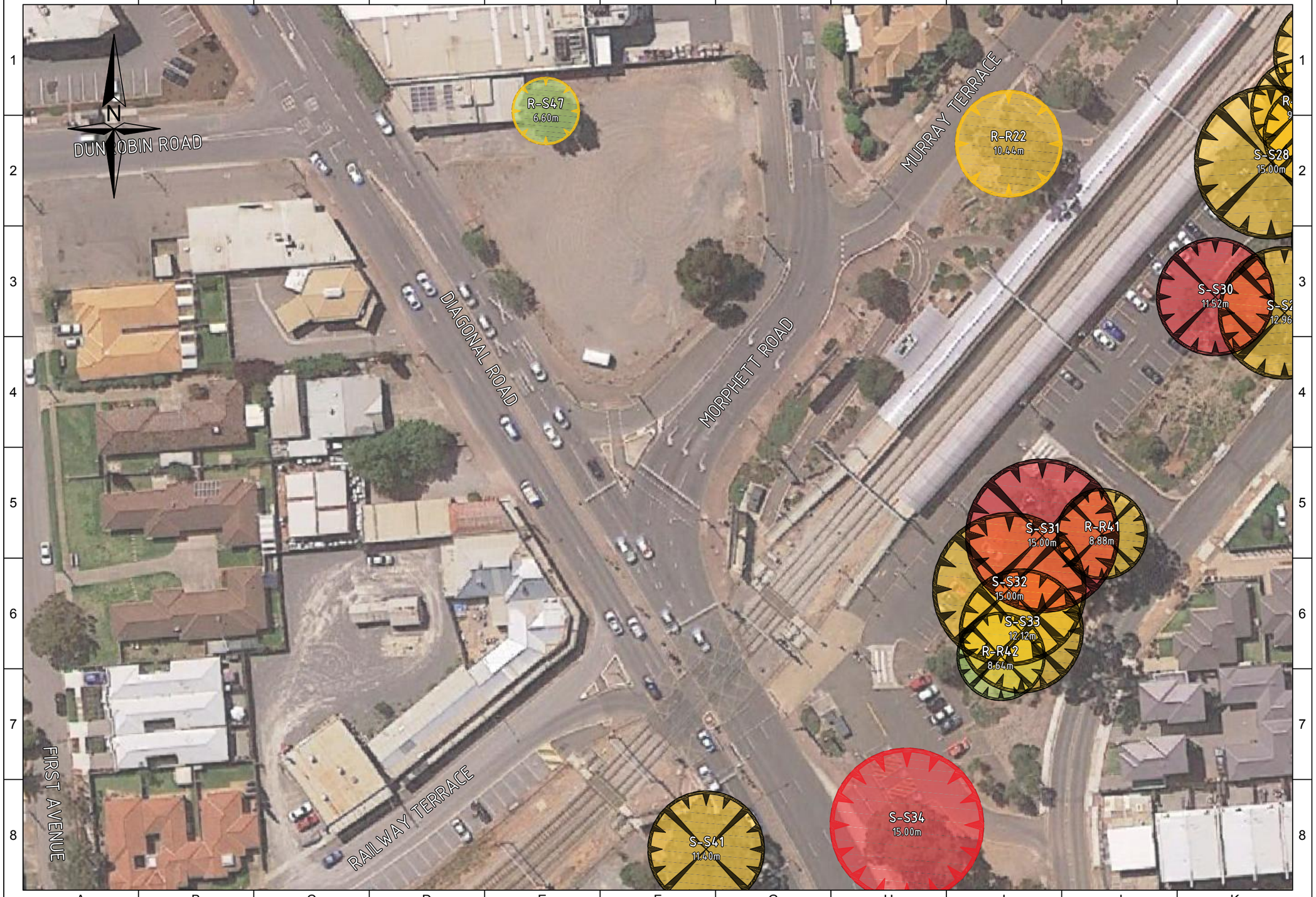

Legislative Status

- S Significant
- R Regulated
- U Unregulated
- E Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 5

0 30 60 m

1:750 @ A3

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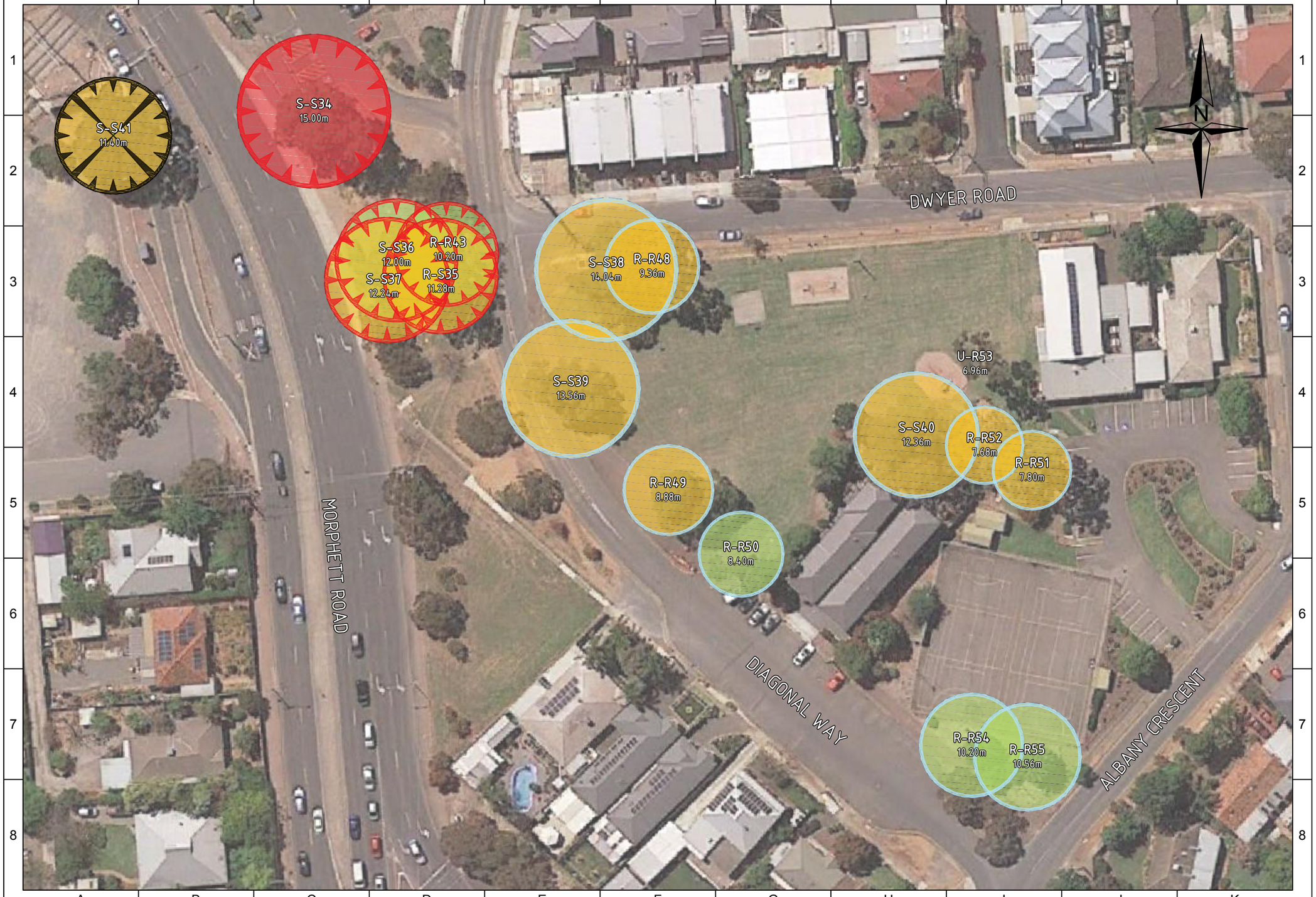

Legislative Status

- S Significant
- R Regulated
- U Unregulated
- E Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 6

0 30 60 m

1:750 @ A3

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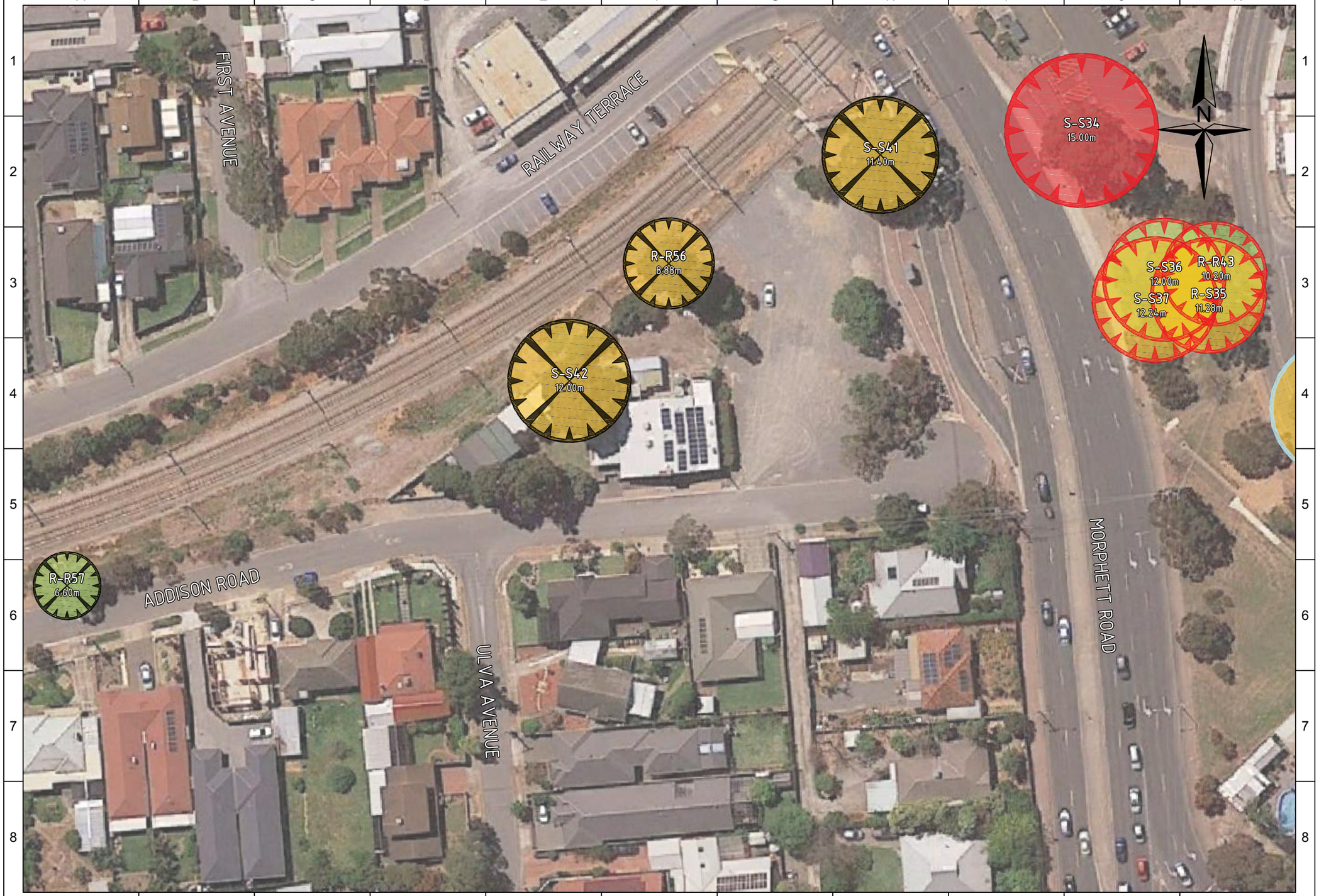

Legislative Status

- S Significant
- R Regulated
- U Unregulated
- E Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 7

0 30 60 m

1:750 @ A3

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Legislative Status

S	Significant
R	Regulated
U	Unregulated
E	Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 8

0 30 60 m

1:750 @ A3

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Legislative Status

S	Significant
R	Regulated
U	Unregulated
E	Exempt

TPZ Encroachment

- Conflicted
- Substantial
- Major
- Minor
- None

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote legislative status, tree identifier and TPZ radius in metres unless otherwise shown.

Date: 13/03/2018 Rev: 4
Ref: ATS4887-OaklandsRailDIR

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TPZ Encroachment - Sheet 9

0 30 60 m

1:750 @ A3

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Appendix D – Tree Assessment Summary

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Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
U-R1	*Eucalyptus camaldulensis*	Unregulated	4.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R2	*Eucalyptus sideroxylon*	Regulated	9.12 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
S-S1	*Eucalyptus cladocalyx*	Significant	11.04 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
R-R3	*Eucalyptus cladocalyx*	Regulated	5.52 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S2	*Eucalyptus cladocalyx*	Significant	13.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R4	*Eucalyptus cladocalyx*	Regulated	9.36 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R5	*Eucalyptus cladocalyx*	Regulated	8.16 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S3	*Eucalyptus cladocalyx*	Significant	12 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R6	*Eucalyptus cladocalyx*	Regulated	7.68 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R7	*Eucalyptus cladocalyx*	Regulated	8.4 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R8	*Eucalyptus cladocalyx*	Regulated	8.64 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
S-S4	*Eucalyptus cladocalyx*	Significant	11.52 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R9	*Eucalyptus cladocalyx*	Regulated	7.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R10	*Eucalyptus cladocalyx*	Regulated	7.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S5	*Eucalyptus cladocalyx*	Significant	12.12 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R11	*Eucalyptus cladocalyx*	Regulated	7.8 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R12	*Eucalyptus cladocalyx*	Regulated	7.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R14	*Eucalyptus cladocalyx*	Regulated	7.8 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S6	*Eucalyptus cladocalyx*	Significant	14.28 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R15	*Eucalyptus cladocalyx*	Regulated	10.08 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S7	*Eucalyptus cladocalyx*	Significant	13.8 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S8	*Eucalyptus cladocalyx*	Significant	12.96 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S9	*Eucalyptus cladocalyx*	Significant	15.00 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R16	*Eucalyptus cladocalyx*	Regulated	7.68 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R17	*Eucalyptus cladocalyx*	Regulated	8.16 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S10	*Eucalyptus cladocalyx*	Significant	13.2 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R19	*Eucalyptus cladocalyx*	Regulated	9 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S11	*Eucalyptus cladocalyx*	Significant	13.44 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S12	*Eucalyptus cladocalyx*	Significant	12.84 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S13	*Eucalyptus cladocalyx*	Significant	12.24 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S14	*Eucalyptus cladocalyx*	Significant	11.76 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R20	*Eucalyptus cladocalyx*	Regulated	8.28 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R21	*Eucalyptus cladocalyx*	Regulated	10.68 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R22	*Eucalyptus cladocalyx*	Regulated	10.44 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-S47	*Eucalyptus camaldulensis*	Regulated	6.6 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R23	*Melaleuca armillaris*	Regulated	5.64 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor
E-R24	*Brachychiton acerifolius*	Exempt	7.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R25	*Brachychiton acerifolius*	Regulated	9.6 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R26	*Brachychiton acerifolius*	Regulated	7.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R27	*Eucalyptus cladocalyx*	Regulated	10.8 metres	The encroachment within the Tree Protection Zone of this tree is less than 10% and is not expected to impact on tree condition.	Apply tree protection as appropriate.	Minor

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S15	*Eucalyptus cladocalyx*	Significant	12 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S16	*Eucalyptus cladocalyx*	Significant	11.28 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
S-S17	*Eucalyptus cladocalyx*	Significant	15 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
S-S18	*Eucalyptus cladocalyx*	Significant	11.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S19	*Eucalyptus cladocalyx*	Significant	12 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S20	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R28	*Eucalyptus cladocalyx*	Regulated	7.92 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R29	*Eucalyptus cladocalyx*	Regulated	9.36 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S21	*Eucalyptus cladocalyx*	Significant	13.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S22	*Eucalyptus cladocalyx*	Significant	11.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S23	*Eucalyptus cladocalyx*	Significant	13.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S24	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R30	*Eucalyptus cladocalyx*	Regulated	10.32 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R31	*Eucalyptus cladocalyx*	Regulated	10.8 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R32	*Eucalyptus cladocalyx*	Regulated	9.24 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S25	*Eucalyptus cladocalyx*	Significant	14.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R33	*Eucalyptus cladocalyx*	Regulated	11.4 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R34	*Eucalyptus cladocalyx*	Regulated	9 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R35	*Eucalyptus cladocalyx*	Regulated	9.24 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R39	*Eucalyptus cladocalyx*	Regulated	10.32 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R40	*Eucalyptus cladocalyx*	Regulated	10.32 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S28	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R38	*Eucalyptus cladocalyx*	Regulated	10.08 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R37	*Eucalyptus cladocalyx*	Regulated	9.84 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S27	*Eucalyptus cladocalyx*	Significant	11.88 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S26	*Eucalyptus cladocalyx*	Significant	13.92 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R36	*Eucalyptus cladocalyx*	Regulated	10.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R44	*Agonis flexuosa*	Regulated	7.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R45	*Agonis flexuosa*	Regulated	9.6 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R46	*Agonis flexuosa*	Regulated	8.16 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S29	*Eucalyptus cladocalyx*	Significant	12.96 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S30	*Eucalyptus cladocalyx*	Significant	11.52 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R41	*Eucalyptus cladocalyx*	Regulated	8.88 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S31	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S32	*Eucalyptus cladocalyx*	Significant	15.00 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S33	*Eucalyptus cladocalyx*	Significant	12.12 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R42	*Eucalyptus cladocalyx*	Regulated	8.64 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S34	*Eucalyptus camaldulensis*	Significant	15 metres	Whilst the encroachment on this tree is substantial the majority of the encroachment is existing and tree friendly design and construction methodologies are available to minimise any impact.	This tree will require the implementation of tree friendly design and construction methodologies. The existing carpark is to be removed resulting in an overall improvement in the root zone.	Substantial
R-R43	*Eucalyptus camaldulensis*	Regulated	10.2 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-S35	*Eucalyptus camaldulensis*	Regulated	11.28 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S36	*Eucalyptus camaldulensis*	Significant	12 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
S-S37	*Eucalyptus camaldulensis*	Significant	12.24 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Substantial
R-R50	*Eucalyptus saligna*	Regulated	8.4 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R49	*Corymbia citriodora*	Regulated	8.88 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S39	*Eucalyptus camaldulensis*	Significant	13.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S38	*Eucalyptus camaldulensis*	Significant	14.04 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R48	*Corymbia maculata*	Regulated	9.36 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
U-R53	*Corymbia citriodora*	Unregulated	6.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R52	*Corymbia citriodora*	Regulated	7.68 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R51	*Corymbia citriodora*	Regulated	7.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
S-S40	*Eucalyptus camaldulensis*	Significant	12.36 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S41	*Eucalyptus cladocalyx*	Significant	11.4 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R56	*Eucalyptus leucoxylon*	Regulated	8.88 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
S-S42	*Corymbia maculata*	Significant	12 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R57	*Eucalyptus saligna*	Regulated	6.6 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict
R-R58	*Eucalyptus globulus ssp. Maidenii*	Regulated	7.2 metres	This tree is in direct conflict with the works and will require removal as part of this project.	This tree will require removal.	Direct Conflict

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R59	*Ficus macrophylla*	Regulated	4.92 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R60	*Eucalyptus globulus ssp. Maidenii*	Regulated	5.88 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S43	*Eucalyptus globulus ssp. Maidenii*	Significant	7.44 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R61	*Eucalyptus camaldulensis*	Regulated	9.96 metres	Whilst the encroachment on this tree is major there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree will require the implementation of tree friendly design and construction methodologies.	Major
R-R63	*Eucalyptus leucoxylon*	Regulated	8.28 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R64	*Eucalyptus camaldulensis*	Regulated	9.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-S44	*Eucalyptus camaldulensis*	Regulated	9.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
S-S45	*Eucalyptus camaldulensis*	Significant	15.00 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R65	*Eucalyptus camaldulensis*	Regulated	10.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R66	*Eucalyptus camaldulensis*	Regulated	7.8 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
U-R62	*Eucalyptus leucoxylon*	Unregulated	6.96 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	TPZ Radius	Development Impact Comments	Recommendation	Development Encroachment
R-R54	*Phoenix canariensis*	Regulated	10.2 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
R-R55	*Phoenix canariensis*	Regulated	10.56 metres	This tree is not impacted by the proposed development.	Apply tree protection as appropriate.	No Encroachment
E-R18	*Eucalyptus cladocalyx*	Exempt	9 metres	Whilst the encroachment on this tree is substantial there are tree friendly design and construction methodologies available to minimise the impact of the encroachment.	This tree is dead and will require the implementation of design and construction methodologies that will not impact its structure.	Substantial

Appendix E – Tree Protection Zone Guidelines

Tree Protection Zone General Specifications and Guidelines

The Tree Protection Zone(s) is identified on the site plan. The TPZ is an area where construction activities are regulated for the purposes of protecting tree viability. The TPZ should be established so that it clearly identifies and precludes development/construction activities including personnel.

If development activities are required within the TPZ then these activities must be reviewed and approved by the Project Arborist. Prior to approval, the Project Arborist must be certain that the tree(s) will remain viable as a result of this activity.

Work Activities Excluded from the Tree Protection Zone:

a) Machine excavation including trenching;

b) Excavation for silt fencing;

c) Cultivation;

d) Storage;

e) Preparation of chemicals, including preparation of cement products;

f) Parking of vehicles and plant;

g) Refuelling;

h) Dumping of waste;

i) Wash down and cleaning of equipment;

j) Placement of fill;

k) Lighting of fires;

l) Soil level changes;

m) Temporary or permanent installation of utilities and signs, and

n) Physical damage to the tree.

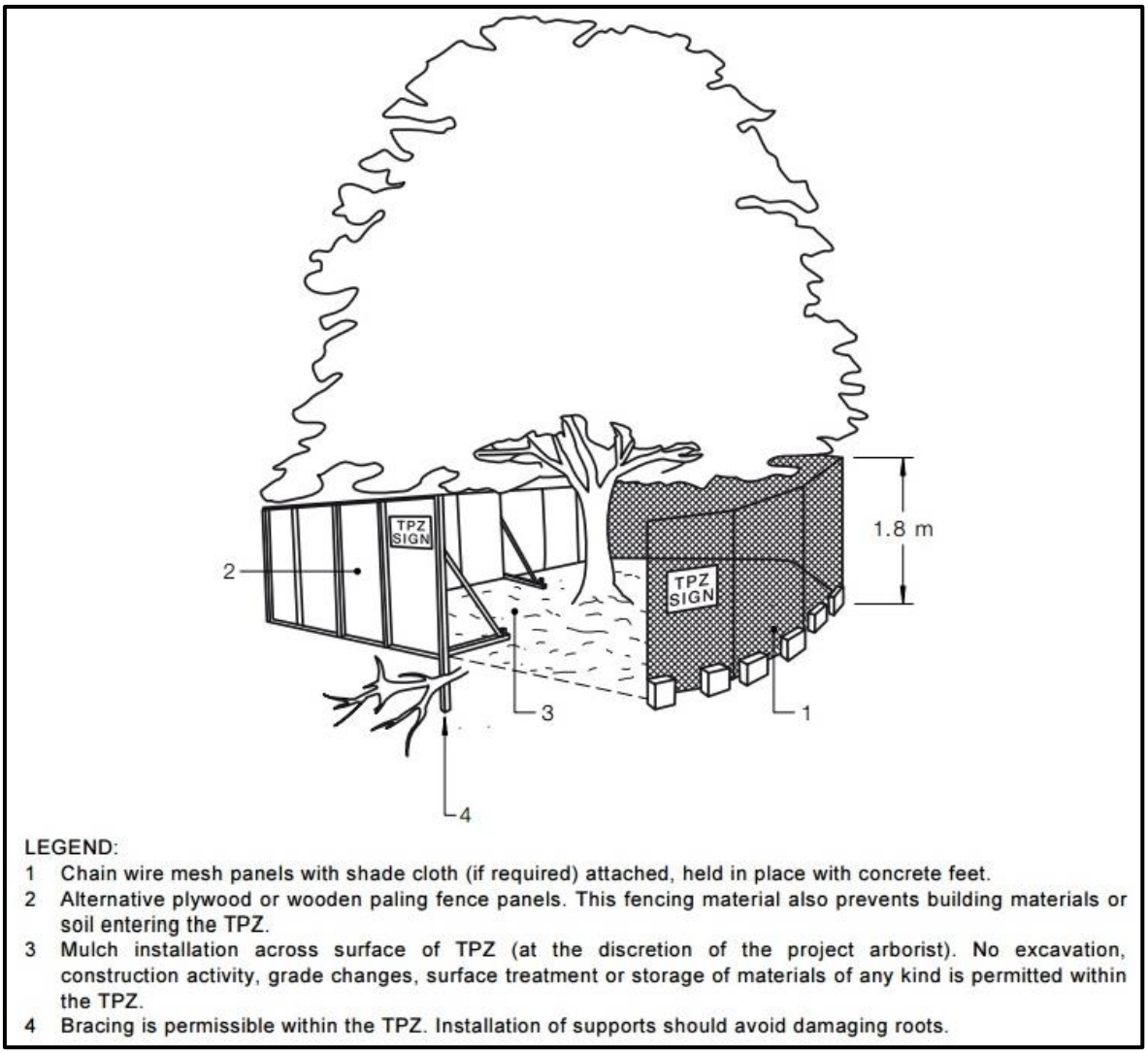
Protective Fencing
Protective fencing must be installed around the identified Tree Protection Zone (See Figure1). The fencing should by chain wire panels and compliant with AS4687 - 2007 *Temporary fencing and hoardings*. Shade cloth or similar material should be attached around the fence to reduce dust, other particulates and liquids entering the protected area.

Temporary fencing on 28kg bases are recommended for use as this eliminates any excavation requirements to install fencing. Excavation increase the likelihood of root damage therefore should be avoided where possible throughout the project.

Existing perimeter fencing and other structures may be utilised as part of the protective fencing.

Any permanent fencing should be post and rail with the set out determined in consultation with the Project Arborist.

Where the erection of the fence is not practical the Project Arborist is to approve alternative measures.



LEGEND:
1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 1 Showing example of protection fencing measures suitable.

Other Protection Measures

General
When a TPZ exclusion area cannot be established due to practical reasons or the area needs to be entered to undertake construction activities then additional tree protection measures may need to be adopted. Protection measures should be compliant with AS4970-2009 and approved by the Project Arborist

Installation of Scaffolding within Tree Protection Area.
Where scaffolding is required within the TPZ branch removal should be minimised. Any branch removal required should be approved by the Project Arborist and performed by a certified Arborist and performed in accordance with AS4373-2007. Approval to prune branches must be documented and maintained.

Ground below scaffold should be protected by boarding (e.g. scaffold board or plywood sheeting) as shown in Figure below. The boarding should be left in place until scaffolding is removed.

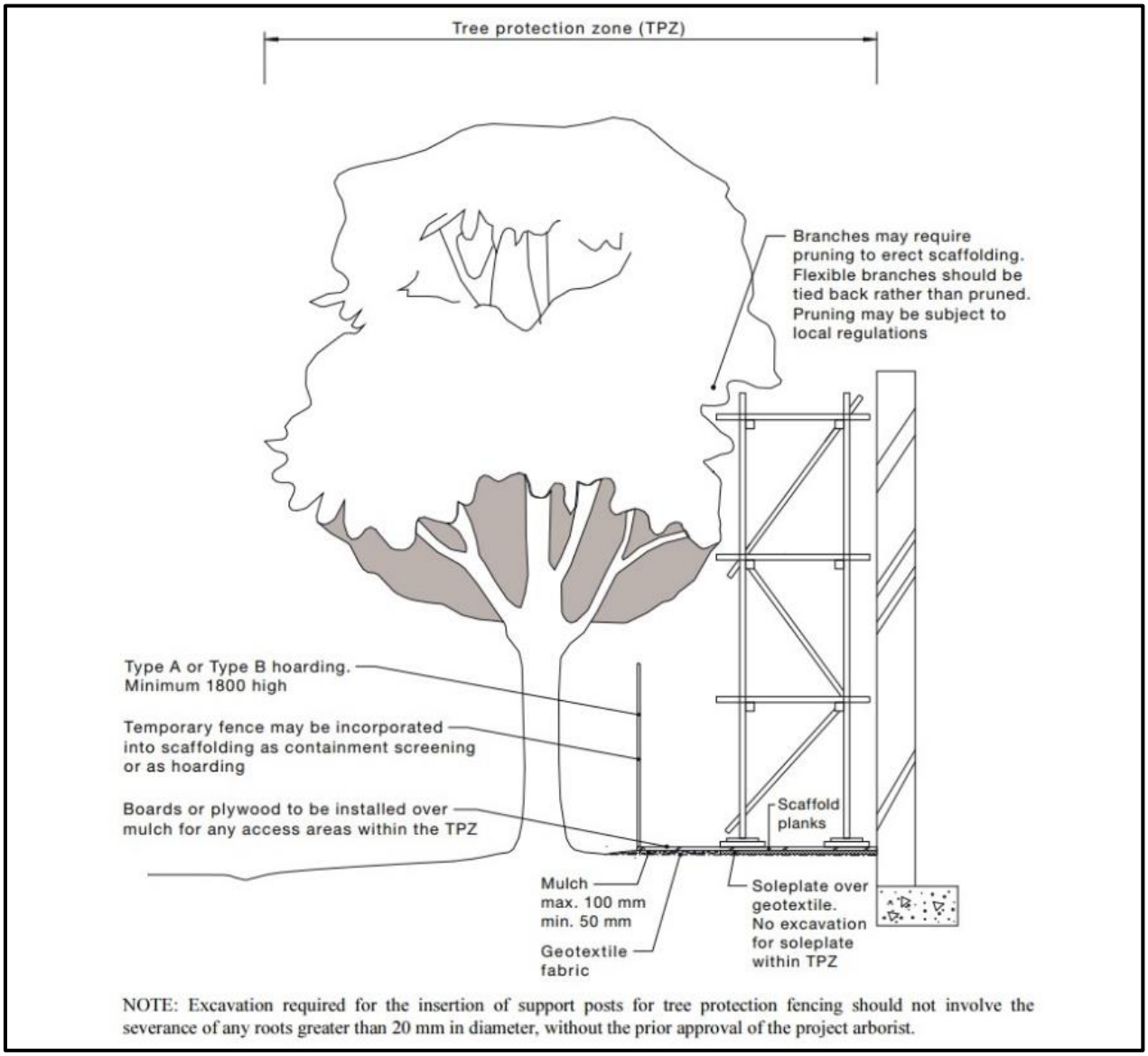
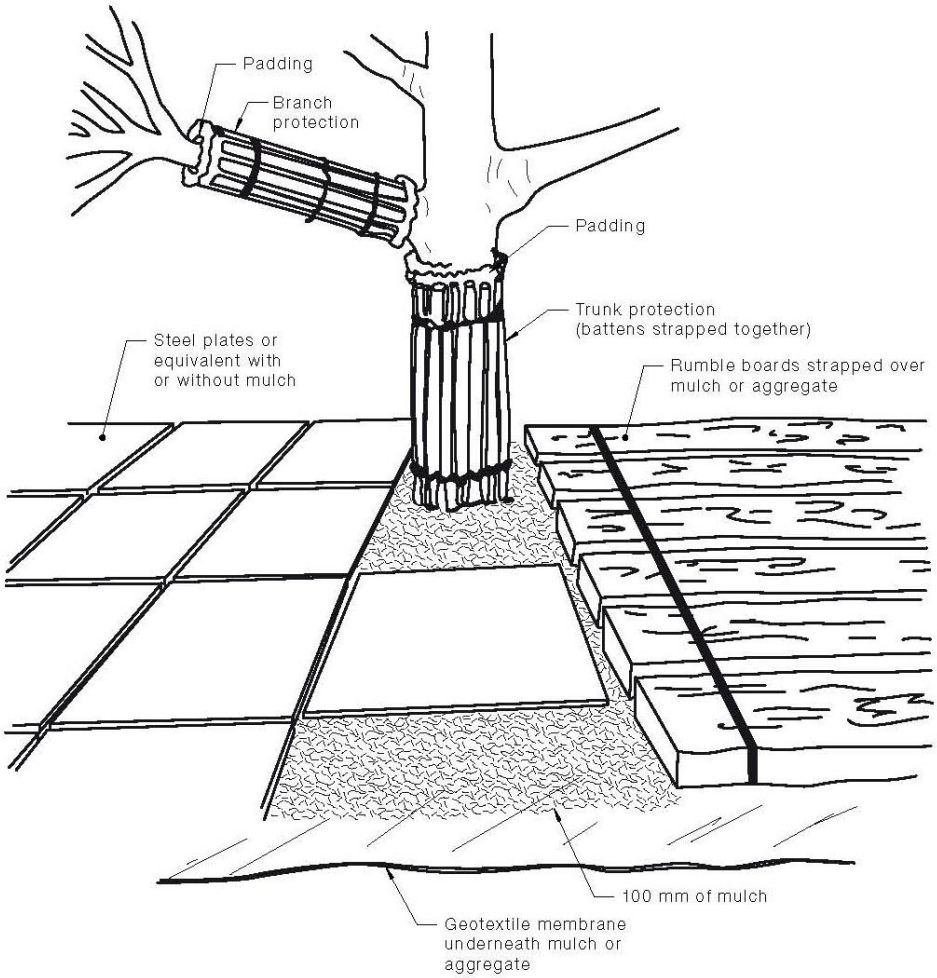


Figure 2 – Showing scaffold constructed within TPZ.

Ground Protection
Where access is required within the TPZ ground protection measures are required. Ground protection is to be designed to prevent both damage to the roots and soil compaction.

Ground protection methods include the placement of a permeable membrane beneath a layer of non-compactable material such as mulch or a no fines gravel which is in turn covered with rumble boards or steel plates.



NOTES:

1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.

2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Figure 3 – Ground protection methods.

Document Source:
Diagrams in this document are sourced from AS4970-2009 Protection of trees on development sites*. Further information and guidelines are available in within that document.*

Paving Construction within a Tree Protection Zone
Paving within any Tree Protection Zone (TPZ) must be carried out above natural ground level unless it can be shown with non-destructive excavation (AirSpade® or similar) that no or insignificant root growth occupies the proposed construction area.

Due to the adverse effect filling over a Tree Protection Zone (TPZ) can have on tree health; alternative mediums other than soil must be used. Available alternative mediums include structural soils or the use of a cellular confinement system such as *Ecocell*®.

Ecocell®
Ecocell® systems are a cellular confinement system that can be filled with large particle sized gravels as a sub-base for paving systems to reduce compaction to the existing grade.

Site preparation
- Clearly outline to all contracting staff entering the site the purpose of the TPZ's and the contractors' responsibilities. No fence is to be moved and no person or machinery is to access the TPZ's without consent from the City of Unley and/or the Project Arborist.

- Fence off the unaffected area of the TPZ with a temporary fence leaving a 1.5 metre gap between the work area and the fence; this will prevent machinery access to the remaining root zone.

Installation of Ecocell® and EcoTrihex Paving®
- Install a non-woven geotextile fabric for drainage and separation from sub base with a minimum of 600mm overlap on all fabric seams as required.

- Add Ecocell®, fill compartments with gravel and compact to desired compaction rate.

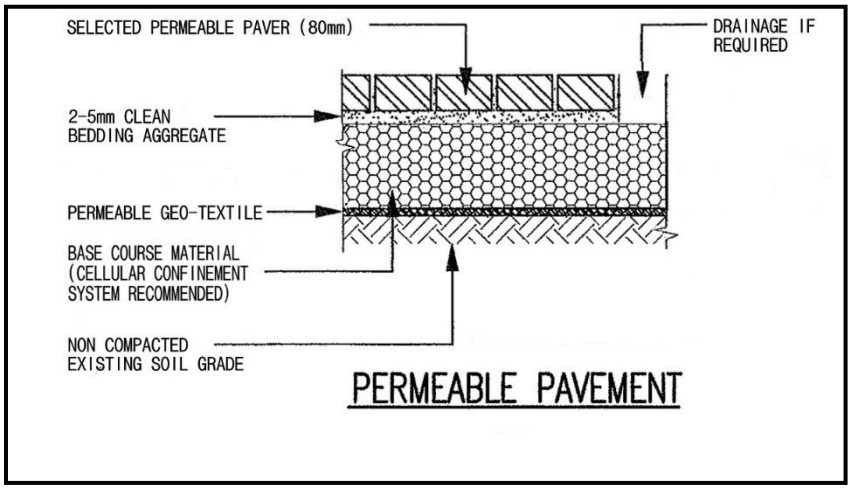
- If excessive groundwater is expected incorporate an appropriate drainage system within the bedding sand level.

- Add paving sand to required depth and compact to paving manufacturer's specifications.

- Lay EcoTrihex Paving® as per manufactures specifications and fill gaps between pavers with no fines gravel.

- Remove all debris, vegetation cover and unacceptable in-situ soils. No excavation or soil level change of the sub base is allowable for the installation of the paving.

- Where the finished soil level is uneven, gullies shall be filled with 20 millimetre coarse gravel to achieve the desired level.



This construction method if implemented correctly can significantly reduce and potentially eliminated the risk of tree decline and/or structural failure and effectively increase the size of the Tree Protection Zone to include the area of the paving.

Certificates of Control

Stage in development	Tree management process	
	Matters for consideration	**Actions and certification**
Development submission	Identify trees for retention through comprehensive arboricultural impact assessment of proposed construction. Determine tree protection measures Landscape design	Provide arboricultural impact assessment including tree protection plan (drawing) and specification
Development approval	Development controls Conditions of consent	Review consent conditions relating to trees
Pre-construction (Sections 4 and 5)		
Initial site preparation	State based OHS requirements for tree work Approved retention/removal Refer to AS 4373 for the requirements on the pruning of amenity trees Specifications for tree protection measures	Compliance with conditions of consent Tree removal/tree retention/transplanting Tree pruning Certification of tree removal and pruning Establish/delineate TPZ Install protective measures Certification of tree protection measures
Construction (Sections 4 and 5)		
Site establishment	Temporary infrastructure Demolition, bulk earthworks, hydrology	Locate temporary infrastructure to minimize impact on retained trees Maintain protective measures Certification of tree protection measures
Construction work	Liaison with site manager, compliance Deviation from approved plan	Maintain or amend protective measures Supervision and monitoring
Implement hard and soft landscape works	Installation of irrigation services Control of compaction work Installation of pavement and retaining walls	Remove selected protective measures as necessary Remedial tree works Supervision and monitoring
Practical completion	Tree vigour and structure	Remove all remaining tree protection measures Certification of tree protection
Post construction (Section 5)		
Defects liability/ maintenance period	Tree vigour and structure	Maintenance and monitoring Final remedial tree works Final certification of tree condition

Document Source:

This table has been sourced from AS4970-2009 Protection of trees on development sites. *Further information and guidelines are available in within that document.*

Tree Protection Zone

NO ACCESS

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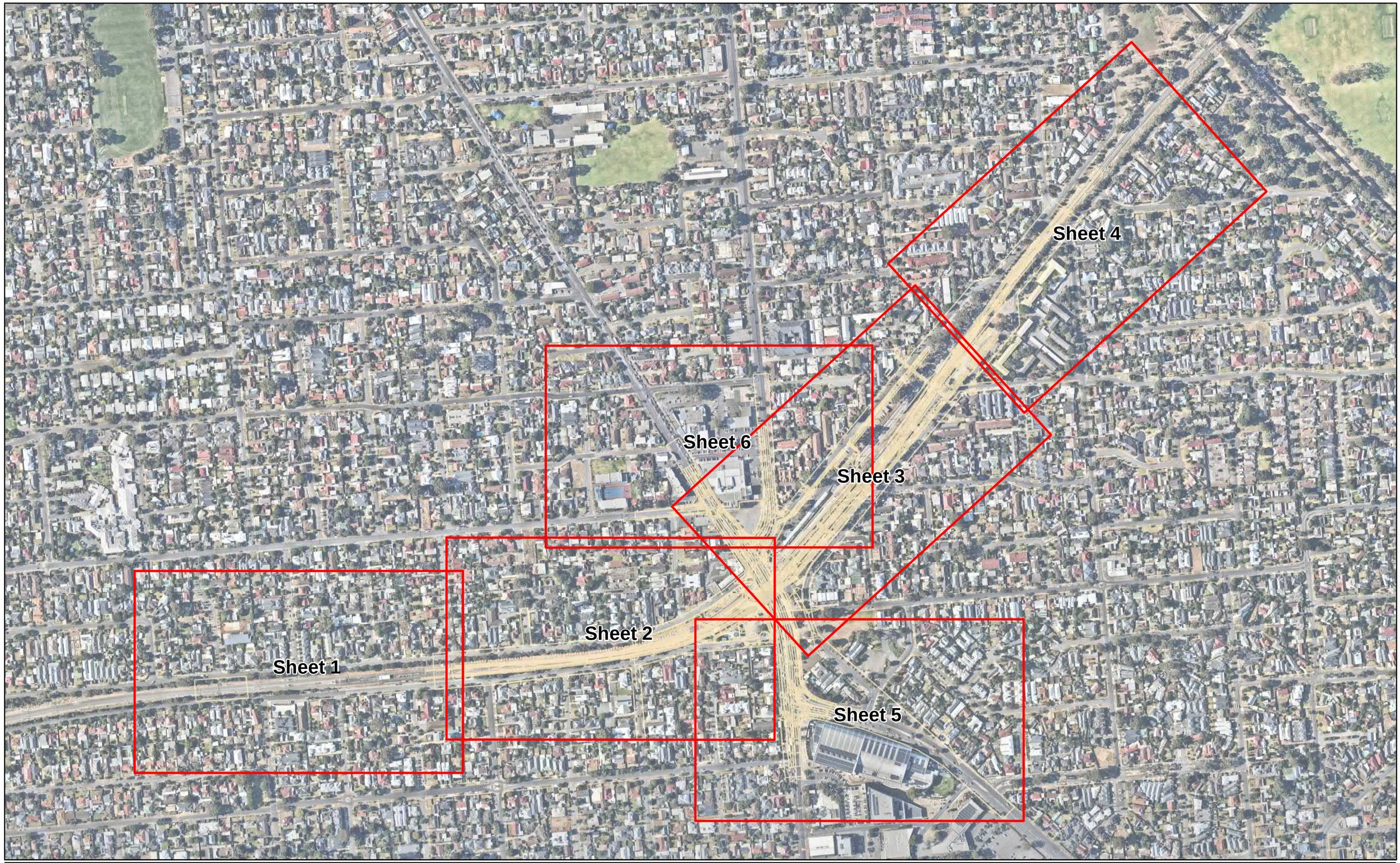
e: arborman@arborman.com.au

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

APPENDIX L– NON-REGULATED VEGETATION IMPACT PLAN

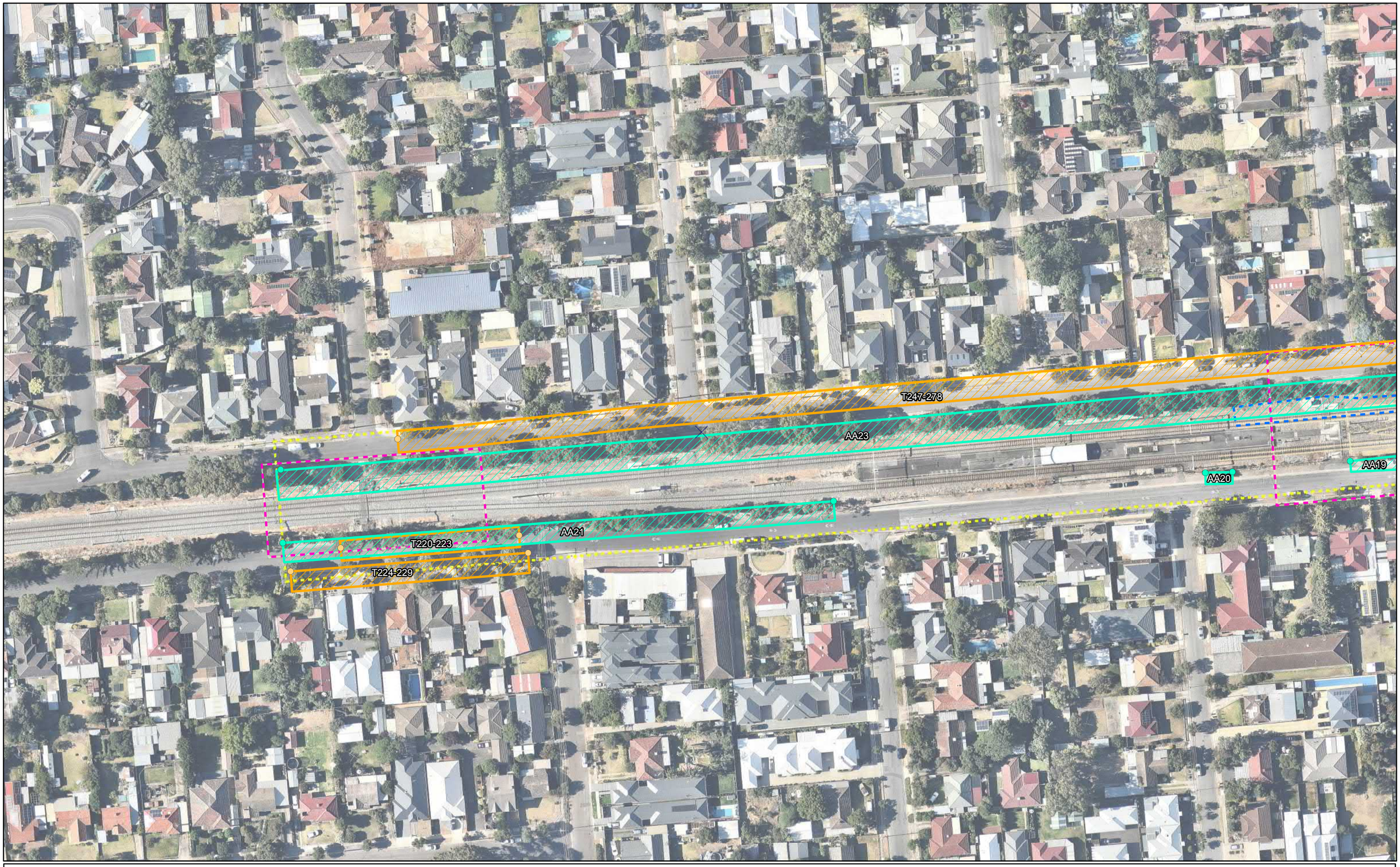


PTP ALLIANCE

Oaklands Grade Separation - Sheet Index

N

0 50 100 200 Meters



PTP ALLIANCE

Oaklands Grade Separation - Non-Regulated Vegetation Areas

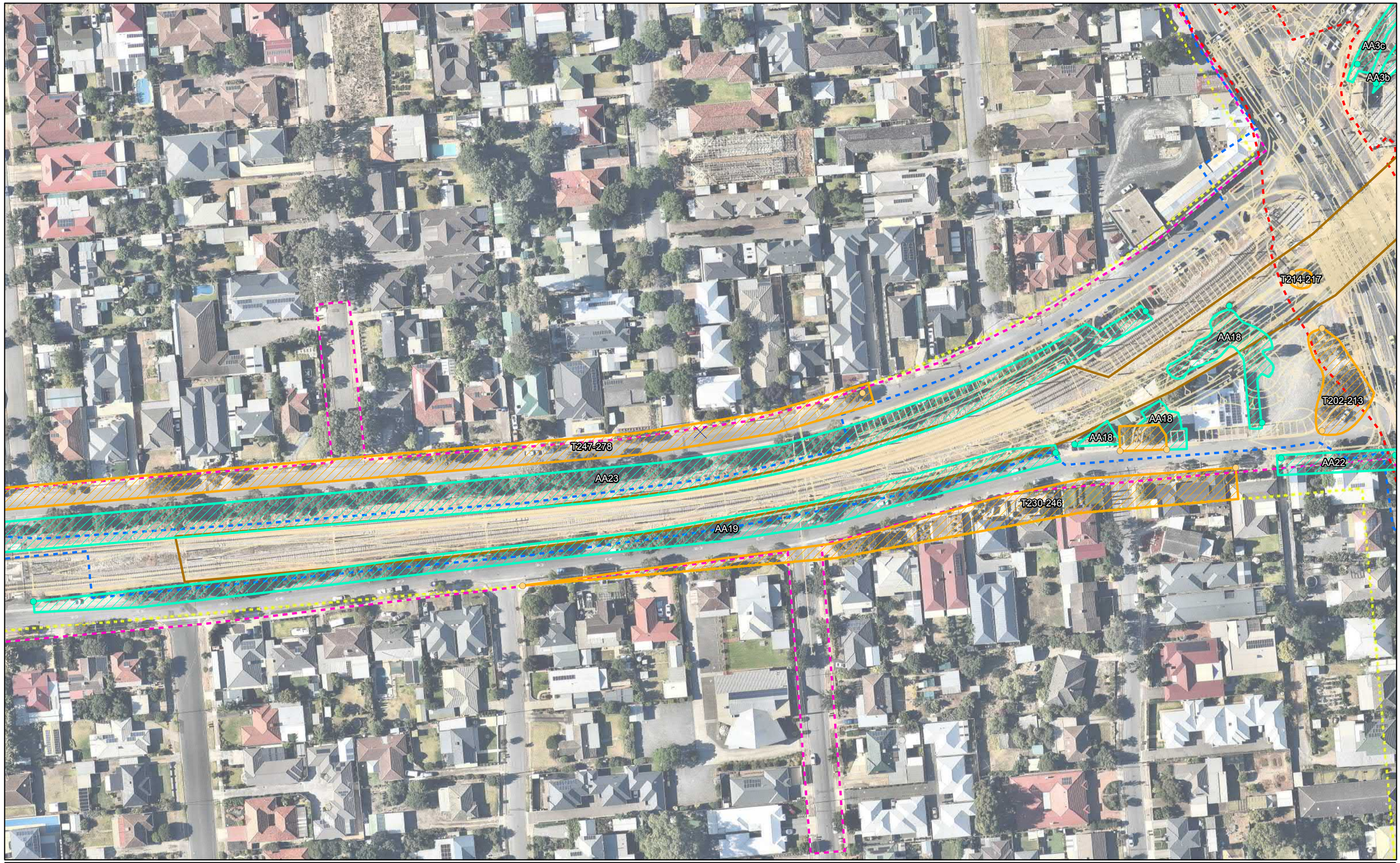
Sheet 1 of 6

Legend

- Vegetation group
- Vegetation area
- Vegetation area start / end
- Vegetation group start / end
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey area
- Design

N

0 12.5 25 50 Meters



PTP ALLIANCE

Oaklands Grade Separation - Non-Regulated Vegetation Areas

Sheet 2 of 6

Legend

- Vegetation group
- Vegetation area
- Vegetation area start / end
- Vegetation group start / end
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey area
- Design

N

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Grade Separation - Non-Regulated Vegetation Areas

Sheet 3 of 6

Legend

- Vegetation group
- Vegetation area
- Vegetation area start / end
- Vegetation group start / end
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey area
- Design

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Grade Separation - Non-Registered Vegetation Areas

Sheet 4 of 6

Legend

- Vegetation group
- Vegetation area
- Vegetation area start / end
- Vegetation group start / end
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey area
- Design

0 12.5 25 50 Meters

Oaklands Grade Separation - Non-Regulated Vegetation Areas

Sheet 5 of 6

PTP ALLIANCE

Legend

- Vegetation group
- Vegetation area
- Vegetation area start / end
- Vegetation group start / end
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey area
- Design

N

0 12.5 25 50 Meters

PTP ALLIANCE

Oaklands Grade Separation - Non-Regulated Vegetation Areas

Sheet 6 of 6

Legend

- Vegetation group
- Vegetation area
- Vegetation area start / end
- Vegetation group start / end
- Excavation Boundary
- Detailed Design Boundary
- Temporary Works Boundary
- Project Boundary
- Tree Survey area
- Design

N

0 12.5 25 50 Meters