

VEGETATION MANAGEMENT ASSESSMENT

Date:

PLANS AND DOCUMENTS

DEVELOPMENT APPROVAL

16 March 2018

referred to in the PDA

For the Attention of: Building and Asset Services – Brisbane Metropolitan

Kirsty Barrie (Project Manager)

P O Box 626

Cannon Hill Qld 4170

Please be advised that during our assessment of the property detailed below we identified the following vegetation related issues which may warrant consideration. Our recommendations are made subject to the criteria provided by your department to identify those trees which: 1) May represent risk to people or property; 2) May contribute to property damage; 3) May be a species which is either undesirable or declared; 4) May be poorly suited to their location in relation to species, size and growth habit. If you have any queries relating to our assessment please feel free to contact this office.

ASSESSMENT NO.: J14535A

Report Conducted on 29 August 2017

Property Address: Go Print, 371 Vulture Street, Woolloongabba

Details Provided: Arborist Report

W/O: U80489





						Canopy	1 1 2 4				
Tree			DBH	TPZ	Height	Spread	BCC				
D	Scientific Name	Common Name	(cm)	(m)	(m)	(m)	SLT	Health	Form	Age	Comments
T001	Grevillea robusta	Silky Oak	36.6	6.25	10.50	10	No No	Poog	Fair to poor	Semi-Mature	Multi-stem. Tight fork unions. Included bark.
T002	Grevillea robusta	Silky Oak	40.6	5.93	11.20	11	No	Good	Fair	Semi-Mature	Multi-stem DBH: 28.3cm.
T003	Grevillea robusta	Silky Oak	36.8	4.42	11.90	∞	No	Fair	Fair	Semi-Mature	Suppressed crown with a bias to the South East. Services present.
T004	Grevillea robusta	Silky Oak	41.8	5.02	11.40	8	No	Good	Fair to poor	Semi-Mature	Suppressed crown with a bias to the North.
T005	Casuarina glauca	Swamp She Oak	17.2	2.06	10.30	3	No	Poog	Poor	Semi-Mature	Suppressed crown with a bias to the East. Footpath present.
T006	Casuarina glauca	Swamp She Oak	23.8	2.86	10.70	5	No	Good	Good	Semi-Mature	Good crown density.
T007	Casuarina glauca	Swamp She Oak	29.1	3.49	8.80	7	No	Poop	Fair to poor	Semi-Mature	Suppressed crown with a bias to the South.
T008	Casuarina glauca	Swamp She Oak	17.0	2.04	5.80	8	No	Fair	Fair to poor	Semi-Mature	Suppressed crown with a bias to the North.
T009	Casuarina glauca	Swamp She Oak	19.5	2.34	6.20	7	No	Good	Fair to poor	Semi-Mature	Suppressed crown with a bias to the North.
T010	Casuarina glauca	Swamp She Oak	16.4	2.00	5.70	5	No	Fair	Poor	Semi-Mature	Suppressed crown with a bias to the North East.
T011	Casuarina glauca	Swamp She Oak	15.5	2.00	6.10	9	No No	Poog	Fair to Good	Semi-Mature	Suppressed crown with a bias to the North.
T012	Casuarina alauca	Swamp She Oak	16.5	2.00	6.20	9	02	Good	Fair to	Semi-Mature	Suppressed crown with a bias to the North.
T013	Casuarina glauca	Swamp She Oak	19.4	2.33	9.20	9	No	Bood	Good	Semi-Mature	Good crown density.
T014	Casuarina glauca	Swamp She Oak	17.9	2.15	7.60	9	No	Fair	Poor	Semi-Mature	Suppressed crown with a bias to the North East.
T015	Casuarina glauca	Swamp She Oak	15.1	2.00	7.10	7	No	Good	Poor	Semi-Mature	Suppressed crown with a bias to the North East.
T016	Casuarina glauca	Swamp She Oak	27.6	3.31	11.30	7	No	Poop	Poor	Semi-Mature	Stem is an epicormic regrowth stump.
T017	Casuarina glauca	Swamp She Oak	22.0	2.64	5.80	7	No	Fair	Fair	Semi-Mature	Suppressed crown with a bias to the North.
T018	Casuarina glauca	Swamp She Oak	23.3	2.80	7.90	7	No	Good	Poor	Semi-Mature	Suppressed crown with a bias to the North East.
T019	Casuarina glauca	Swamp She Oak	21.7	2.60	8.30	8	No	Good	Fair	Semi-Mature	Structure typical of the species.



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Tree			DBH	TPZ	Height	Canopy Spread	BCC				
ID	Scientific Name	Common Name	(cm)	(m)	(m)	(m)	SLT	Health	Form	Age	Comments
T020	Casuarina glauca	Swamp She Oak	17.8	2.14	8.90	9	o N	Poog	Fair to Good	Semi-Mature	Structure typical of the species.
T021	Casuarina glauca	Swamp She Oak	39.5	4.74	13.10	6	No	Good	Fair	Semi-Mature	Structure typical of the species.
T022	Casuarina glauca	Swamp She Oak	19.1	2.29	12.60	∞	N _O	Good	Fair	Semi-Mature	Suppressed crown with a bias to the North West.
T023	Casuarina glauca	Swamp She Oak	17.0	2.04	8.30	5	No	poog	Fair	Semi-Mature	Structure typical of the species.
T024	Casuarina glauca	Swamp She Oak	24.5	2.94	7.40	8	No	Good	Poor	Semi-Mature	Suppressed crown with a bias to the West.
T025	Casuarina glauca	Swamp She Oak	15.0	2.00	4.30	4	No	Fair	Fair to poor	Semi-Mature	Suppressed crown with a bias to the East.
T026	Casuarina glauca	Swamp She Oak	21.1	2.53	10.30	7	No	Good	Poor	Semi-Mature	Suppressed crown with a bias to the East.
T027	Casuarina glauca	Swamp She Oak	24.3	2.92	7.90	9	No	Good	Fair	Semi-Mature	Suppressed crown with a bias to the North.
T028	Casuarina glauca	Swamp She Oak	21.2	2.54	7.20	7	No	Good	Poor	Semi-Mature	Suppressed crown with a bias to the South.
T029	Casuarina glauca	Swamp She Oak	22.7	3.68	11.20	8	No	Good	Poor	Semi-Mature	Multi-stem. Tight fork union at base.
T030	Casuarina glauca	Swamp She Oak	23.9	2.87	8.80	7	No	Good	Fair	Semi-Mature	Structure typical of the species.
T031	Casuarina glauca	Swamp She Oak	20.6	2.47	8.40	9	No	Good	Fair	Semi-Mature	Structure typical of the species.
T032	Casuarina glauca	Swamp She Oak	41.4	4.97	13.80	11	No	Good	Good	Semi-Mature	Structure typical of the species.
T033	Casuarina glauca	Swamp She Oak	17.5	2.10	9:90	9	No	Good	Fair	Semi-Mature	Suppressed crown with a bias to the North East.
T034	Casuarina glauca	Swamp She Oak	26.8	3.22	12.10	80	No	Good	Poor	Semi-Mature	Suppressed crown with a bias to the South.
T035	Casuarina glauca	Swamp She Oak	35.3	4.24	13.50	11	No	Fair	Fair	Semi-Mature	Furrowed bark.
T036	Casuarina glauca	Swamp She Oak	20.6	2.47	6.20	9	No	Fair	Poor	Semi-Mature	Suppressed crown.
T037	Casuarina glauca	Swamp She Oak	33.1	3.97	11.80	8	No	Fair	Fair	Semi-Mature	Suppressed crown with a bias to the South.
T038	Grevillea robusta	Silky Oak	35.8	4.30	13.60	10	No	Fair	Fair	Semi-Mature	Suppressed crown.
T039	Casuarina glauca	Swamp She Oak	28.1	3.37	12.20	∞	No	Good	Fair	Semi-Mature	Twin-stem at 3m.
T040	Casuarina glauca	Swamp She Oak	23.8	2.86	12.00	9	No	Good	Fair	Semi-Mature	Crown has a bias to the West.
T041	Casuarina equisetifolia subsp. Incana	Beach She Oak	16.9	2.03	3.80	4	No	Fair	Poor	Semi-Mature	Tree has been "topped". Bark delamination at the base on the Southern side.

		Comments	ure Tree has been "topped".		Tree has been "topped". Bauhinia ure understorey to the South West.		ure Potential stick nest.	ure Structure typical of the species.	ure Structure typical of the species.	ure Fruiting seeds present.	Structure typical of the species. Roots ure stabilise the embankment.	ure Multi-stem DBH: 15.2cm.	ure Fruiting seeds present.	ure Structure typical of the species.	Suppressed crown with a bias to the South ure East.	Tree has been "topped". Crown has a bias use to the North East. Tree is seeding.	Crown has a bias to the South with limited ure lateral growth to the North.	Crown has a bias to the South. Raised roots ure present.	ure Crown has a bias to the North.
		Age	Semi-Mature	Semi-Mature	Semi-Mature		Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi Mature	Semi-Mature	Semi-Mature	Semi-Mature
		Form	Poor	Poor	Poor	***	Fair to poor	Good	Fair	Fair	Fair	Fair to poor	Fair	Fair	Fair to poor	Fair to poor	Fair	Fair	Fair
	JS	Health	Fair	Dead	Good	IONALLY BLANK — TREE NUMBER NOT USED ***	Good	Good	Poog	Poog	Good	Poor	Good	Poog	Poog	P009	Poog	Good	Fair
482	eration	BCC	O Z	N O N	No	: – TREE NUME	No	No	No	No	No	8	No	No	No	S O N	No	No	No
Arbor Operations	Canopy Spread (m)	ļ	2	7	ALLY BLANK	9	9	4	4	6	5	4	4	8	4	8	6	8	
	Height (m)	4.10	3.60	5.00	*** INTENTION,	8.90	13.30	5.40	6.70	12.40	6.30	7.80	6.50	8.70	7.10	17.70	17.00	15.10	
	TPZ (m)	2.28	2.00	3.17	/ ***	2.50	2.84	2.00	2.68	6.22	2.66	2.54	2.06	4.27	2.45	6.13	5.54	6.76	
	DBH (cm)	19.0	16.1	26.4		20.8	23.7	16.4	22.3	51.8	16.1	21.2	17.2	35.6	20.4	51.1	46.2	56.3	
	Common Name	Beach She Oak	Beach She Oak	Beach She Oak		Tuckeroo	Hoop Pine	Bangalow Palm	Bangalow Palm	Silky Oak	Macaranga	Bangalow Palm	Bangalow Palm	Tuckeroo	Red Ash	Silky Oak	Silky Oak	Silky Oak	
		Scientific Name	Casuarina equisetifolia subsp. Incana	Casuarina equisetifolia subsp. Incana	Casuarina equisetifolia subsp. Incana		Cupaniopsis anacardioides	Araucaria cunninghamii	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana	Grevillea robusta	Macaranga tanarius	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana	Cupaniopsis anacardioides	Alphitonia excels	Grevillea robusta	Grevillea robusta	Grevillea robusta
		Tree	T042	T043	T044	T045	T046	T047	T048	T049	T050	T051	T052	T053	T054	T055	T056	T057	T058



Tree	Scientific Name	Common Name	DBH (cm)	TPZ (m)	Height (m)	Canopy Spread (m)	BCC SLT	Health	Form	Age	Comments
T059	Yucca sp.	Yucca	17.5	3.05	4.60	4	No	Good	Fair	Semi-Mature	Twin-stem structure.
T060				// ***	ITENTIONAL	LY BLANK	*** INTENTIONALLY BLANK – TREE NUMBER NOT USED ***	'R NOT USED	***		
T061				// ***	*** INTENTIONAL	LY BLANK	ONALLY BLANK – TREE NUMBER NOT USED ***	'R NOT USED	***		
T062				// ***	ITENTIONAL	LY BLANK	*** INTENTIONALLY BLANK – TREE NUMBER NOT USED ***	'R NOT USED	***		
T063				W ***	ITENTIONAL	LY BLANK	*** INTENTIONALLY BLANK – TREE NUMBER NOT USED ***	'R NOT USED	***		
T064	Casuarina glauca	Swamp She Oak	16.9	2.68	11.20	4	No	Good	Poor	Semi-Mature	Multi-stem with a weak union at the base.
T065	Casuarina glauca	Swamp She Oak	17.9	2.15	10.20	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T066	Casuarina glauca	Swamp She Oak	20.0	2.40	11.40	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T067	Casuarina glauca	Swamp She Oak	15.9	2.00	10.30	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T068	Casuarina glauca	Swamp She Oak	16.2	2.00	11.50	5	No	Good	Fair to Poor	Semi-Mature	Crown has a bias to the North East.
T069	Casuarina glauca	Swamp She Oak	24.8	3.68	12.60	7	No	Good	Poor	Semi-Mature	Multi-stem with a weak union at the base.
T070	Casuarina glauca	Swamp She Oak	22.1	3.38	13.40	9	No	Good	Poor	Semi-Mature	Multi-stem with a weak union at the base.
T071	Casuarina glauca	Swamp She Oak	16.0	2.00	8.60	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T072	Casuarina glauca	Swamp She Oak	16.8	2.02	12.70	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T073	Casuarina glauca	Swamp She Oak	18.7	2.24	12.70	5	No	Good	Fair	Semi-Mature	Structure typical of the species.
T074	Casuarina glauca	Swamp She Oak	15.4	2.97	11.30	5	No	Good	Poor	Semi-Mature	Multi-stem with a weak union at the base.
T075	Casuarina glauca	Swamp She Oak	17.4	2.09	12.70	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T076	Casuarina glauca	Swamp She Oak	19.1	2.29	12.20	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T077	Casuarina glauca	Swamp She Oak	15.2	2.27	10.20	5	No	Good	Poor	Semi-Mature	Multi-stem with a weak union at the base.
T078	Casuarina glauca	Swamp She Oak	19.8	2.38	10.80	5	No	Good	Fair	Semi-Mature	Structure typical of the species.
T079	Casuarina glauca	Swamp She Oak	16.2	2.00	10.60	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T080	Casuarina glauca	Swamp She Oak	23.0	2.76	10.70	5	No	Good	Fair to poor	Semi-Mature	Crown has a bias to the North East.
T081	Casuarina glauca	Swamp She Oak	16.8	2.02	11.10	2	No	Good	Fair to poor	Semi-Mature	Crown has a bias to the East.

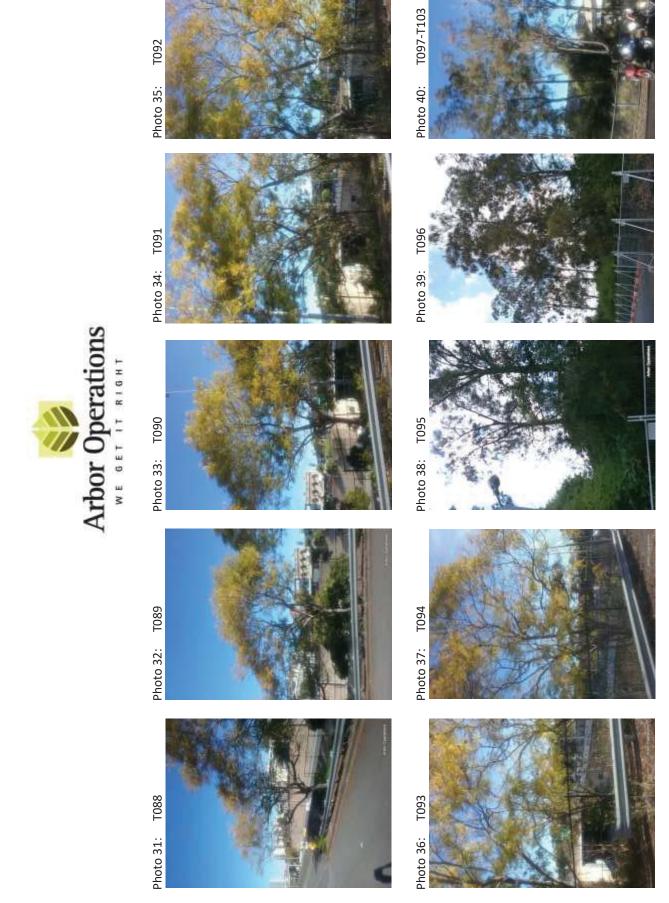
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Tree	Scientific Name	Common Name	DBH (cm)	TPZ (m)	W E G Height (m)	Canopy Spread (m)	BCC SLT	Health	Form	Age	Comments
T082	Casuarina glauca	Swamp She Oak	16.9	2.03	11.00	5	No	Good	Fair to poor	Semi-Mature	Crown has a bias to the South East.
T083	Casuarina glauca	Swamp She Oak	19.6	3.19	10.90	5	No	poog	Fair to poor	Semi-Mature	Multi-stem with a weak union at the base.
T084	Casuarina glauca	Swamp She Oak	15.0	2.23	10.00	5	No	poog	Poor	Semi-Mature	Multi-stem with a weak union at the base.
T085	Casuarina glauca	Swamp She Oak	25.4	3.05	12.20	5	No	Good	Poor	Semi-Mature	Reaction wood is present at the union at 3m.
T086	Casuarina glauca	Swamp She Oak	20.0	2.40	10.60	5	No	poog	Fair to poor	Semi-Mature	Tri-stem at 3m.
T087				*** INTENT	TENTIONAL	LY BLANK	10NALLY BLANK – TREE NUMBER NOT USED ***	ER NOT USED	*		
T088	Jacaranda mimosifolia	Jacaranda	32.5	3.90	5.90	10	No	Poop	fair	Semi-Mature	Tree has been "topped". Crown density is fair.
T089	Jacaranda mimosifolia	Jacaranda	29.2	3.50	06.90	10	No	poog	fair	Semi-Mature	Tree has been "topped".
T090	Jacaranda mimosifolia	Jacaranda	29.8	3.58	7.20	6	No	Good	Fair	Semi-Mature	This tree is impacting on the light pole.
T091	Jacaranda mimosifolia	Jacaranda	41.5	4.98	7.60	11	No	Fair	Fair to poor	Semi-Mature	This tree is impacting on the light pole.
T092	Jacaranda mimosifolia	Jacaranda	29.0	3.48	7.60	8	No	Fair	Fair to poor	Semi-Mature	Fair crown density.
T093	Jacaranda mimosifolia	Jacaranda	17.8	3.36	5.80	9	No	Fair	Fair	Semi-Mature	Tri-stem.
T094	Jacaranda mimosifolia	Jacaranda	26.8	4.40	8.20	10	No	Fair	Fair	Semi-Mature	Multi-stem.
T095	Casuarina glauca	Swamp She Oak	32.2	3.86	11.20	7	No	poog	Fair to good	Semi-Mature	Bauhinia understorey is present.
T096	Casuarina glauca	Swamp She Oak	25.1	3.01	10.90	9	No	Poob	Fair to poor	Semi-Mature	Crown has a bias to the East. Bauhinia understorey is present.
T097	Casuarina glauca	Swamp She Oak	32.5	3.90	10.10	4	No	Fair	poor	Semi-Mature	Tip dieback.
T098	Casuarina glauca	Swamp She Oak	21.1	2.53	8.20	5	No	Fair	poor	Semi-Mature	Tip dieback.
T099	Casuarina glauca	Swamp She Oak	17.0	2.04	10.30	3	No	Fair	Poor	Semi-Mature	Structure typical of the species.
T100	Casuarina glauca	Swamp She Oak	24.4	2.93	10.00	5	No	Good	Fair	Semi-Mature	Structure typical of the species.
T101	Casuarina glauca	Swamp She Oak	25.5	3.06	11.60	5	No	Good	Fair	Semi-Mature	Structure typical of the species.
T102	Casuarina glauca	Swamp She Oak	22.1	2.65	11.10	9	No	Good	Fair	Semi-Mature	Stick nest x2.















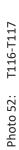




Photo 53: T118







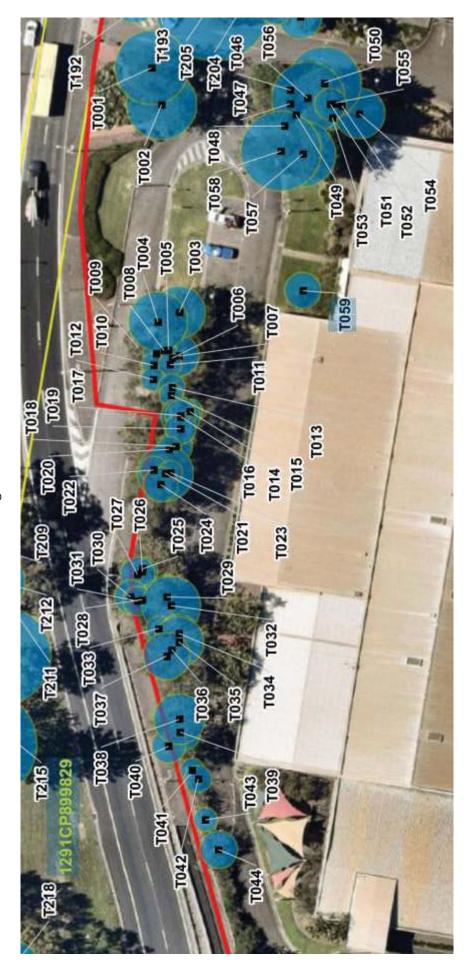


Site Survey



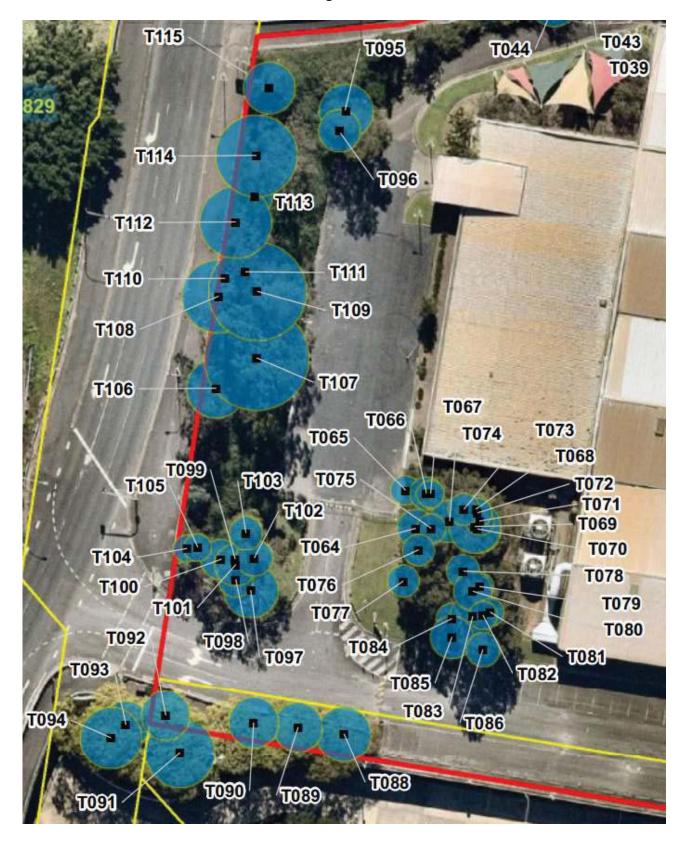


Zoomed in image for T001 – T059





Zoomed in image for T060 - T115

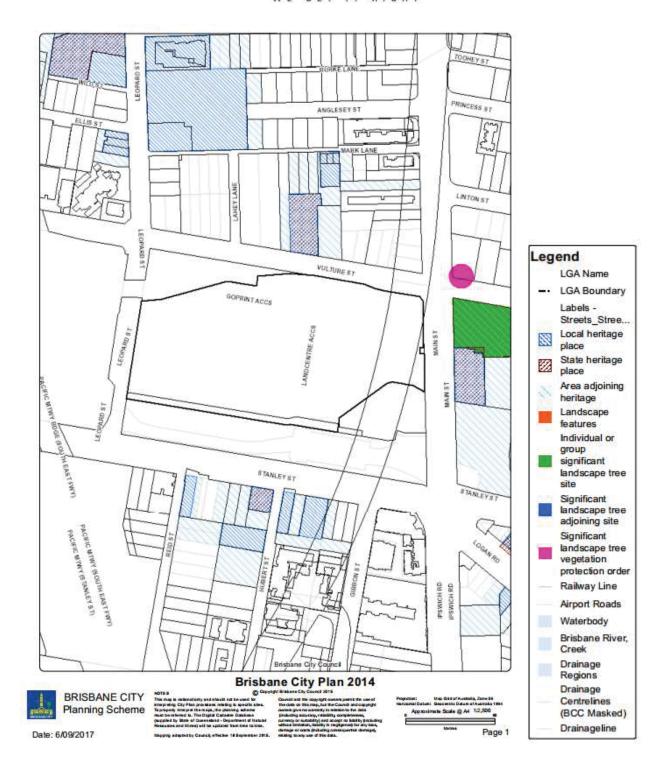




Zoomed in image for T116-T118









Recommendations:

1) T001-T002

- a) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- b) Monitor the co-dominant union at the base of these specimens. Should the future intended use require retention, the existing intrusions for the current road layout are allowed.
- c) Retention short term provides a green screen to the site whilst operational works is occurring.
- d) These specimens display numerous structural flaws, their inclusion in future landscape plans would be not be supported given structural flaws and potential high pedestrian traffic flows at the entrance to the site.

2) T003-T040

- a) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fence will serve as an adequate TPZ. Retention of the stand will allow for a green buffer whilst demolition and/or future construction works are being undertaken.
- b) Should future design require intrusion into the TPZs set out, (which intrude into the hardstand area to the south of the specimen's location) these works shall be authorised and supervised by the project arborist.
- c) Given the brittle nature of species, consideration should be given longer term to removing specimens with suppressed habits subject to the intended use and future pedestrian traffic flow rates.

3) T041-T044

- a) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fence will serve as an adequate TPZ.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken.
- c) These specimens are in poor health and have a relatively short ULE. Long term should not be included in any landscape concept plan.
- 4) T045 (Tree number not used. Intentionally deleted.)



5) T046-T053

- d) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fence will serve as an adequate TPZ. Retention of the stand will allow for a green buffer whilst demolition works are being undertaken.
- e) Curlews frequent the area beneath the crowns of these specimens. A fauna spotter catcher shall be appointed and pre and post clearing reports undertaken.
- f) These specimens are in fair to good health and form and can be included in future landscape concept plans.
- d) T47 (Hoop Pine) displays good health and form. Consideration should be given to its retention if other vegetation is removed.
- e) As part of the future landscape plan, consideration should be given longer term to removing specimens with suppressed habits subject to the intended use.
- g) Understorey vegetation should be removed which includes small dead trees under 150mm DBH.

6) T054 -T055

- a) The location of these two specimens will not be compatible with proposed demolition works. Associated understorey shall require removal for access to the wall of the structure. Erection of scaffolding may be required to facilitate initial works.
- b) Remove trees, cut as low as possible and apply chemicals to prevent regrowth. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- c) Should removal be undertaken prior to building demolition works, a copy of the Asbestos Register should be sited given the age of the structure to identify the location of any asbestos building products.
- d) We have noted the presence of a potential stick bird's nest. Curlews frequent the area beneath the crowns of these specimens. A fauna spotter catcher shall be appointed and pre and post clearing reports undertaken.
- e) As part of the future landscape plan, suppressed understorey vegetation should be removed which includes small dead trees under 150mm DBH.



7) T056-T058

- a) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fence will serve as an adequate TPZ however shall require an extension to the western side of the location of the stand.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken. These specimens are in fair to good health and can be included in any landscape concept plan. It is important that retention is on the basis of the three trees being treated as one as they have developed symbiotically.
- c) Raised roots are present extending to the South toward the structure. Care should be taken with machinery movements to the South West of these specimens.
- d) As part of the future landscape plan, suppressed understorey vegetation should be removed. This includes small dead trees under 150mm DBH.
- e) Curlews frequent the area beneath the crowns of these specimens. A fauna spotter catcher shall be appointed and pre and post clearing reports undertaken.

8) T059

- a) The specimen's location is not compatible with demolition works.
- b) Curlews frequent the area beneath the crowns of these specimens. A fauna spotter catcher shall be appointed and pre and post clearing reports undertaken.
- 9) T060-T063 (Tree numbers not used. Intentionally deleted.)

10) T064-T086

- a) Establish TPZ around the edge of the kerb to the south and west to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fence will serve as an adequate TPZ however shall require an extension to the north and east of the location of the stand.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken. These specimens are in fair to good health and can be included in any landscape concept plan however multi-stem structured specimens should be removed.
- c) Consideration should be given to the brittle nature of the specimens and the significant amount of leaf litter shed with any future building design.
- d) Small saplings around the fringe to the north and east of the stand may be removed.



11) T087 (Tree number not used. Intentionally deleted.)

12) T088-T094

- a) Establish TPZ around the edge of the kerb to the south of the main access road to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the skid rail fencing will suffice as an adequate TPZ barrier.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken. It further provides a green screen to the site as viewed from the South West. These specimens are in fair to good health and can be included in any landscape concept plan.
- c) Directional prune away from the light pole. Not more than 15-20 percent of vegetative matter to be removed in any one year. These works shall be performed by an appropriately qualified AQF level 3 arborist and authorised by the project arborist.

13) T095

- a) Establish TPZ around the edge of the kerb to the west of the main access road to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fencing will suffice as an adequate TPZ barrier.
- b) Retention of the specimen allows for a green buffer whilst demolition works are being undertaken. It further provides a green screen to the site as viewed from the West. The specimen can be included in the future landscape concept plan. Consideration should be given to altered exposure should it be retained and the brittle nature of the species.

14) T096

- a) Establish TPZ around the edge of the kerb to the West of the main access road to ensure the tree is not impacted by traffic movements associated with demolition works. We note the location of the existing construction fencing will suffice as an adequate TPZ barrier.
- b) Retention of the specimen allows for a green buffer whilst demolition works are being undertaken. It further provides a green screen to the site as viewed from the South West.
- c) Given this specimen is suppressed, potential removal is supported to allow for larger building footprint and better utilisation of the area in the future landscape concept plan.



15) T097-T105

- a) Establish TPZ around the edge of the kerb to the south of the main access road to ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fencing will suffice as an adequate TPZ barrier to the East.
- b) Retention of these specimens allows for a green buffer whilst demolition works are being undertaken. They further provide a green screen to the site as viewed from the South West and West. These specimens vary in form with some suppressed. Suppressed specimens should be removed long term however, the balance can be included the future landscape concept plan.

16) T106-T115

- a) Establish TPZ around the edge of the kerb to the East. Location of these specimens with a Bauhinia understorey will ensure trees are not impacted by traffic movements associated with demolition works. We note the location of the existing construction fence will serve as an adequate TPZ.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken. These specimens are in fair to good health and can be included in any landscape concept plan.
- c) Tree 107 is large enough to be categorised as a Brisbane City Council (BCC) Significant Landscape Tree. Consultation with BCC should be undertaken should design not allow for its retention. These trees should be viewed as a stand which have developed symbiotically and therefore treated as one.
- d) They represent good examples which have not been subjected to the rigours of a built environment and amenity pruning.
- e) Bauhinia understorey can be retained as it prevents easy ingress for pedestrians to the area, however T106 requires the bauhinia removing from the crown as it is currently constraining growth.
- f) Remove major deadwood over the BCC footpath to the West.

17) T116-T118

- a) These specimens are located within the busway precinct to the South. Establish crown protection zone around the edge of the concrete barrier wall to the South of the site to ensure trees are not impacted by traffic movements associated with demolition works.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken and provide a green screen to the site as viewed from the South. These specimens are in fair to good health and can be included in any landscape concept plan.
- c) Minor crown trimming may be required for construction related activity. Not more than 15-20 percent of vegetative matter to be removed in any one year. These works shall be performed by an appropriately qualified AQF level 3 arborist and authorised by the project arborist.



- **18)** Dwarf Phoenix Palms located to the South of the main structure fall below the 150mm DBH. Should scaffold be required for demolition works, these shall require removal.
- **19)** Vegetation below 150mm DBH not subject to individual assessment located around the balance of the main structure represents minimal amenity value. Removal is supported for erection of scaffolding should it be required for demolition works.
- **20)** Appoint a project arborist to supervise works to the vegetation. All pruning work undertaken should adhere to the Australian Standard AS4373-2007 for Pruning of Amenity Trees. Development and construction related activities require management through the AS4970-2009 Protection of Trees on Development Sites.

Your Arborist: Peter Mumford Dip. Horticulture (Arboriculture)

Date: 6.09.2017

Email <u>sales@arboroperations.com.au</u>

Ph: (07) 3861 9933 Fax: (07) 3861 9944

Classification and Tree Description

AGE	
Young	Juvenile tree between 1 – 5 years
Early-Semi-Mature	Tree is still growing (6 years to 15 years)
Semi-Semi-Mature	Tree is still growing (over 15 years to 25 years, depending on the species)
Semi-Mature	Species has reached expected size
Senescent	Over Semi-Mature (tree has reached its useful life expectancy) and in decline
Dead	Tree is dead

APPEARANCE	
Excellent	Exceptional specimen. Crown full and balanced. Foliage is entire with good colour. Minimal or no pathogen damage.
Good	Crown is full (can be unbalanced). Foliage is entire with good colour. Minimal or no pathogen damage.
Fair	Tree has < 30% deadwood. Canopy may be unbalanced. Foliage generally with good colour, however may have some discolouration present. Minor pathogen damage present (typical for species in location).
Poor	Tree has >30% deadwood. Foliage may be discoloured or distorted and stress symptoms may be apparent that could lead to decline of tree.
Dead	Tree is dead.

STRUCTURE	
Excellent	Excellent branch attachment, no structural defects. Trunk sound. No damage to roots and good root buttressing present.
Good	Good branch attachment and or no minor structural defects. Trunk sound or minor damage. No damage to roots and or good buttressing.
Fair	Some minor structural defects and or minor damage to trunk. Bark may be missing & cavities could be present. Minor damage to roots.
Poor	Major structural defects and or trunk damage and or girdling or damaged roots that are problematic.
D.B.H.	Diameter at Breast Height, measured at between 1.4 and 1.9m above the ground.

PRIORITY CLASSIFICA	ATION
Imminent Failure	This tree is a health and safety risk and could fail at any time. It is recommended that immediate action be taken to eliminate the associated risk to people and infrastructure. This tree will fail in an extreme weather event such as high winds or thunder storms.
High	This tree is likely to fail within a 6 month period, if exposed to extreme weather events such as high winds or thunder storms.
Medium	This tree may fail within a 6 to 12 month period. If exposed to extreme weather events such as high winds or thunder storms this tree may fail.
Low	This tree is unlikely to fail in the next 12 months. Remedial action may be taken to such as pruning to mitigate the risk to people or infrastructure.
Non-native Invasive Plant	This tree has been deemed by Biosecurity Queensland and local city councils as an Environmental Weed Species and should be removed during the normal course of maintenance.

PROCESS DESCRIPTIONS	
Removal	Complete tree removal leaving stump as close as possible to ground level. Process will include chipping of all foliage limbs and timber and re-instatement of work site. Recommendation typically based on tree being assessed as representing a health and safety concern [Dead, dying, structurally unsound, unstable, poor form].
Remove and Grind	Complete tree removal to include grinding of stump to a depth of 75 millimetres unless otherwise specified. Process will include chipping of all foliage limbs and timber and reinstatement of work site. Stump site will be cleaned of all grinding debris and sawdust and backfilled with premium topsoil free from weeds.
General Pruning	Pruning process will include removal of broken, crossing, rubbing, diseased, stressed or dying branches or limbs with poor attachment. Additional work process will include pruning to define leaders, balance the crown, reduce the weight load or clear the tree from obstructions. In summary, to rectify, as far as is possible, any structural defects and eliminate undesirable growth.
Canopy Lift / Raise	Pruning process will be restricted to raising of the tree's lower canopy to a height specified the defaulted parameters will be to provide 2.5 metres clearance from ground level. From time to time pruning requirements may be altered to accommodate various factors such as view, light penetration, vehicle thoroughfare etc and consulting arborist will advise accordingly.
Remedial Pruning	Pruning process will encompass crown restoration and remedial works where the tree has been previously lopped or otherwise damaged. Not feasible when tree has extensive decay and should only be considered when there is evidence of healthy regrowth. When performed correctly, the process of remedial pruning will most likely take several years to complete.
Hanger Limb	Pruning process will be restricted to the removal of any hangers or dangerous/dead/dying limbs and will typically involve the removal of a single limb. In some instances, removal of an individual limb may be necessary to accommodate an obstruction and the consulting arborist will advise accordingly.
Directional Pruning	Pruning process will be restricted to pruning canopy away from buildings/service wires/property boundary and will typically be performed to avoid future growth in these areas [where necessary clean trunking of undesirable growth]. Where appropriate future growth will be directed away from obstruction selecting new leaders.
Boundary Pruning	Pruning process will involve pruning of tree back to tree owners' boundary. In every situation every effort should be made to obtain the relevant authorisation to perform pruning to Australian Standards and to avoid "lopping" limbs to the immediate boundary. As with directional pruning, optimum results will be achieved when it's feasible to eliminate undesirable growth and direct future growth. If authority to enter and work in neighbouring property is not forthcoming processes will be restricted to access on clients property and work standards will be appropriately comprised. Consulting arborist will duly advise client as appropriate.

GENERAL TERMS	
Australian Pruning Standard AS4373-2007	The Standard for Arborists, Tree workers, Government Departments, Property Owners and Contractors for defining uniform tree pruning procedures and practices, to reduce the risk of hazard development, branch failure, pathogen infection and preSemi-Mature tree death.
Australian Standard Protection of Trees on Development Sites AS 4970- 2009	This Standard give guidance to horticulturists, arborists, architects, builders, engineers, land managers, landscape architects, contractors, planners, certifying authorities, building surveyors, those concerned with the care and protection of trees and all others involved in the management of trees and developments.
Deadwood	Removal of all major/significant deadwood and dead branches up to and including 30mm in diameter unless otherwise specified. Or Deadwood is a naturally occurring feature of most tree species and comprises dead or decaying branches within the canopy of a tree. Branches>30mm diameter overhang pedestrian or vehicular areas should be removed.
Leader	Branches> 50mm diameter in a playground or similar should be removed. Primary terminal shoot or trunk which s usually upright. It dominates a portion of the crown
Lateral	by suppressing lateral branches. A secondary or subordinate branch.
Lopping	Tree works to remove in excess of 50% of the tree canopy and/or structure including pruning which is not to the collar, resulting in exposed stubs. 'Lopping' is poor pruning practice and is contrary to Australian Standard Pruning of Amenity Trees 4373-2007. The unacceptable practice of cutting branches or stems between branch unions or at internodes on young trees. It is generally accepted that 'lopping' will shorten the length of a tree's life and may lead to the decline and ultimate death of a tree.
	Topping/heading back/lopping involves cutting back to a stub, bud or a lateral branch not large enough to assume apical dominance. Severe heading causes branch dieback, decay and epicormic growth from the cut ends, resulting in a potentially dangerous situation once the sprouts become elongated and heavy. Topping or heading back is not recommended pruning practice.
Apical Dominance	Condition where the terminal buds inhibit growth and development of lateral buds on the same stem.
Foliage Removal	The amount of live wood and foliage that can be removed per season depends on the growth rate of the tree. For actively growing medium age trees, up to 20% of the foliage may be removed per season. More severe pruning slows root growth by shifting the root to shoot growth ratio. This adds significant stress to the tree. Heavy pruning also reduces carbohydrate reserves, making the tree less tolerant of insects, diseases and drought stress. (Ref: Colorado State University Master Gardener Program - Garden Notes #616 – Pruning Semi-Mature Shade Trees)
Co-Dominant Stems/Tri- Dominant Stems	Originate from same position of the main stem (trunk) and grow to about the same diameter. Over time stems push on each other and cracks develop below the stems. If cracks form, the stems become a high risk for failure under low to moderate loading. Included Bark develops by being covered by the growing together of adjacent, vertically growing stems or branches, creating a weakened internal joint. Or Stems or trunks of about the same size originating from the same position from the main stem. When the stem bark ridge turns upwards, the union is strong; when the ridge turns inward, the union is weak, a likely point of failure in storm or windy swather conditions or where increasing weight causes undue stress on the defective union. (Australian Standard Pruning of Amenity Trees 4373-2007)
Epicormic Growth	Epicormic buds lie dormant beneath the bark, their growth suppressed by hormones from active shoots higher up the plant. Under certain conditions they develop into active shoots, such as when damage occurs to higher parts of the plant or light levels are increased following removal of nearby plants. Epicormic buds and shoots occur in many woody species, but are absent from many others, such as most conifers.
Nectria	Fungi most often encountered on decaying wood but some species can also occur as parasites of trees, especially fruit trees (for example apple) and a number of other hardwood trees. Some species are significant pests causing diseases such as apple canker.
Kino	A dark red to brown resin-like substance produced by some species of trees. Kino forms when living cells are injured and infected.
	(Ref: A New Tree Biology Dictionary – Alex L. Shigo).

Useful Life Expectancy	A guide or measure of tree life expectancy and how long a tree could be expected to be retained safely, and usefully, in normal circumstances [when not subject to abnormal or adverse conditions such as adverse or extreme weather, mechanical interference, property development or impact by machinery etc].
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Tree Protection Zone (TPZ)

A TPZ is determined by setbacks calculated for each tree based on its age class, vigour class and crown spread (where necessary) and each tree fenced off to form an enclosure around the tree with the tree at its centre, or may utilise an existing structure being retained such as a wall of fence.

The TPZ should be secured by a lockable gate to restrict access and the area identified with signage. The area of the TPZ should be mulched except where turfed, and kept free of weeds. Where encroachment is required within the TPZ this should be done only with the approval of the project arborist.

Indicative Tree Protection Zone

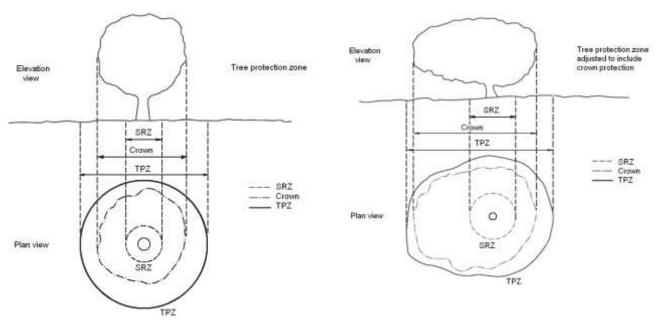


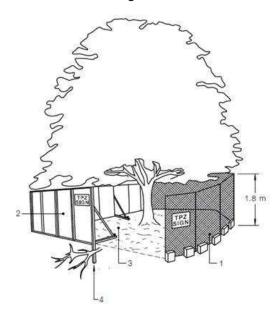
Figure 1: Balanced Canopy

Figure 2: Unbalanced Canopy

Signage

Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site. The lettering on the sign should comply with AS 1319.

Indicative Protective Fencing



LEGEND:

- 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 from 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.
- Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Source: Australian Standard Protection of Trees on Development Sites AS 4970-2009

Structural Root Zone (SRZ) (AS 4970-2009)

The area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright, so the entire profile (depth) of the root zone is included in the Structural Root Zone (SRZ). The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres.

This zone considers a tree's structural stability only, not the root zone required for a tree's vigour and long-term viability, which will usually be a much larger area.

The SRZ is the critical area required for tree stability and does not consider tree health, which will generally require a much larger area. While there are many factors that affect the actual size of the SRZ (e.g. tree heights, crown area, soil type, soil moisture, etc.), the area determined using the trunk diameter provides a general guide indicating where structural roots are likely to be located. Only thorough root investigation would show the actual location of these roots. Determine SRZ radius from the trunk diameter (measured immediately above the root buttress) using the following formula or Figure 1.

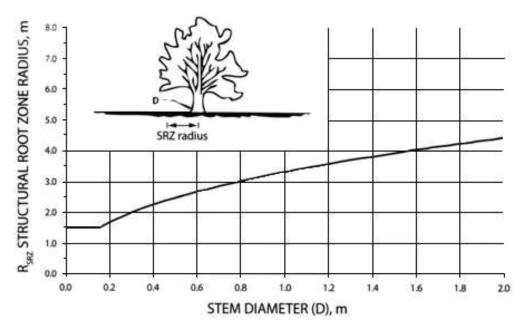
SRZ radius =
$$(D \times 50)^{0.42} \times 0.64$$

where

D = trunk diameter, in metres, measured above the root buttress

Note: The SRZ for trees with trunk diameters less than 0.15 metres will be 1.5 metres.

Figure 1: Structural Root Zone



The curve can be expressed by the following formula: $R_{SRZ} = (D \times 50)^{0.42} \times 0.64$

$$R_{SRZ} = (D \times 50)^{0.42} \times 0.64$$

NOTES:

- R_{SRZ} is the Structural Root Zone radius.
- D is the stem diameter measured immediately above root buttress. 2.
- The SRZ for trees less than 0.15 metres diameter shall be 1.5 metres 3.
- The SRZ formula and graph do not apply to palms, other monocots, cycads and tree ferns.
- This does not apply to trees with an asymmetrical root plate.

Source: Australian Standard Protection of Trees on Development Sites AS 4970-2009

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NOTE:

- Tree identifications are sourced from numerous national and international publications as well as extensive field experience.
- Pruning recommendations are in line with Australian Standard AS4373-2007 Pruning of Amenity Trees.



VEGETATION MANAGEMENT ASSESSMENT

For the Attention of: Building and Asset Services – Brisbane Metropolitan

Kirsty Barrie (Project Manager)

P O Box 626

Cannon Hill Qld 4170

Please be advised that during our assessment of the property detailed below we identified the following vegetation related issues which may warrant consideration. Our recommendations are made subject to the criteria provided by your department to identify those trees which: 1) May represent risk to people or property; 2) May contribute to property damage; 3) May be a species which is either undesirable or declared; 4) May be poorly suited to their location in relation to species, size and growth habit. If you have any queries relating to our assessment please feel free to contact this office.

ASSESSMENT NO.: J14535C

Report Conducted on 29 August 2017

Property Address: Land Centre, 867 Main Street, Woolloongabba

Details Provided: Arborist Report

W/O: U80489



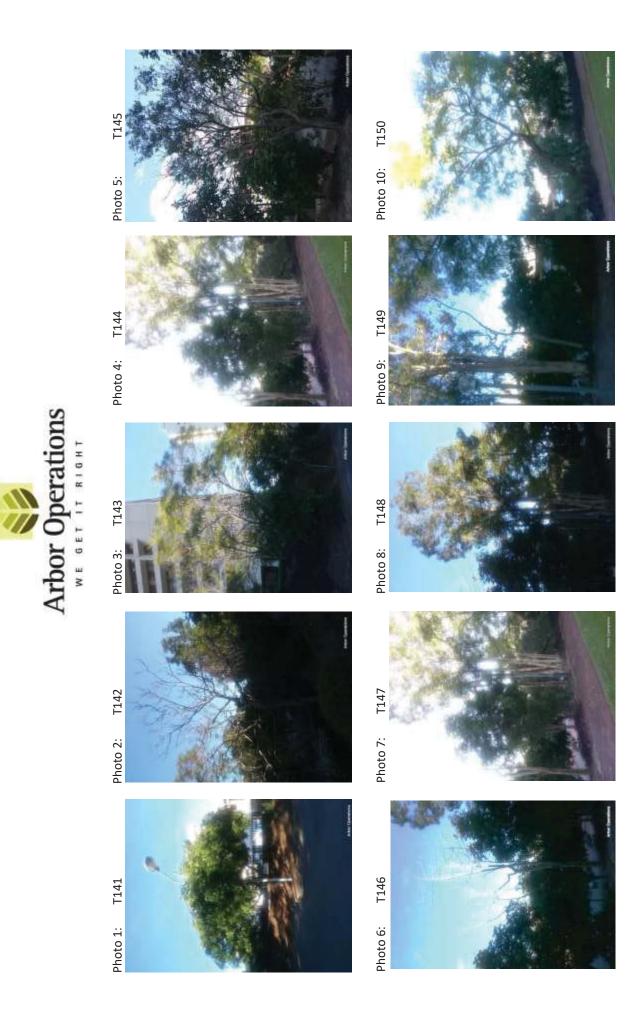
			•	•							
- 1				!	:	Canopy					
Tree	Scientific Name	Common Name	DBH (cm)	TPZ (m)	Height (m)	Spread (m)	BCC SLT	Health	Form	Age	Comments
!			(ma)	ì	()	()			Fair to		
T141	Cupaniopsis anacardioides	Tuckeroo	23.9	3.71	4.40	8	No	Good	good	Semi-Mature	Good crown density. Multi-stem.
T142	Jagera pseudorhus	Foambark	29.6	3.55	7.40	∞	No	Fair	Fair	Semi-Mature	Dormant crown returning.
T143	Jacaranda mimosifolia	Jacaranda	22.7	3.93	7.20	6	o Z	Fair	Fair	Semi Mature	Crown has a bias to the South East. Tree is seeding.
T144	Cupaniopsis anacardioides	Tuckeroo	15.2	2.13	6.60	4	No	Good	Fair	Semi-Mature	Multi-stem structure. Good crown density.
T145	Syzygium smithii	Lilly Pilly	19.5	2.66	4.80	4	No	Fair	Fair	Semi-Mature	Multi-stem upright structure.
T146	Jagera pseudorhus	Foambark	18.9	2.27	7.80	9	No	Fair		Semi-Mature	Dormant crown returning.
T147	Syagrus romanzoffiana	Cocos Palm	18.8	2.26	06.9	8	No	Good	Fair	Semi-Mature	Environmental Weed Species.
T148	Melaleuca quinquenervia	Swamp Paperbark	25.0	3.14	10.20	9	No	Good	Fair to good	Semi-Mature	Tall upright structure.
T149	Melicope elleryana	Pink Doughwood	16.3	2.00	8.10	7	No	Good	Fair to poor	Semi-Mature	Sparse crown with a brittle structure.
											Crown has a bias to the South West. Tree is
T150	Jacaranda mimosifolia	Jacaranda	29.4	3.53	10.20	12	No	Good	Fair	Semi-Mature	seeding.
T151	Syagrus romanzoffiana	Cocos Palm	26.1	3.13	9.30	7	No	Good	Fair	Semi-Mature	Environmental Weed Species.
T152	Cupaniopsis anacardioides	Tuckeroo	15.3	2.00	4.10	3	ON.	Poob	poob	Semi-Mature	Suppressed crown with a bias to the South West.
									Fair to		Suppressed multi-stem crown with a bias to
T153	Melaleuca viminalis	Weeping Bottlebrush	16.4	2.74	4.50	9	No	Good	good	Semi-Mature	the South East.
											Suppressed crown with a bias to the South
T154	Hymenosporum flavum	Native Frangipani	22.8	2.74	9.10	4	No	Fair	Poor	Semi-Mature	East.
									Fair to		
T155	Melaleuca viminalis	Weeping Bottlebrush	17.4	2.86	3.50	5	No	Good	good	Semi-Mature	Multi-stem structure.
T156	Auranticarpa rhombifolia	Holly Wood	17.5	2.10	7.20	4	Ċ Z	Good	Poor	Semi-Mature	Suppressed crown with a bias to the South East.
											Suppressed crown with a bias to the South
T158	Melaleuca viminalis	Weeping Bottlebrush	15.8	3.08	4.70	9	No	Good	Fair	Semi-Mature	East.
T159	Cinanionsis anacardioides	Tuckeroo	696	3 14	8 40	7	Q.	poor	Poor	Semi-Mature	Crown has a bias to the South East. Good
CCTI	CUPULITOPSIS UTTUCUTURES	Incheiou	7.07	0.14	0.40	,	NO	noon	ייסטי	שוווי-ויומנטי כ	CLOWIT GETISTLY.

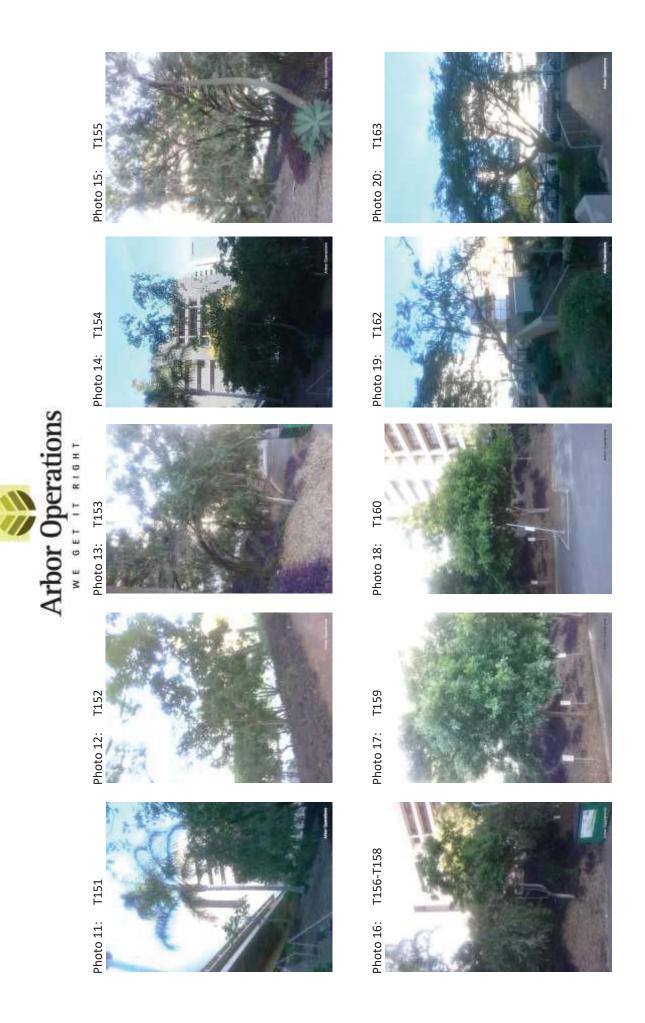
		Δσο Comments	i-Mature	Suppressed crown with a bias to the South Semi Mature East. Tree is seeding.	Semi-Mature Multi-stem. Raised roots to the East.	Dead Multi-stem. Dead crown.	Semi-Mature Multi-stem structure. Invasive roots.	Good example of the species. Tip extension Semi-Mature is good.	Semi-Mature Sparse crown.	Semi-Mature Sparse crown with tip dieback.	Semi-Mature Dead crown to the North East quadrant.	Semi-Mature Stick Nest is present.	Semi-Mature Multi-stem structure typical of the species.	Good crown density. Multi-stem structure Semi-Mature typical of the species.	Semi-Mature Tall upright structure.	Semi-Mature Multi-stem.	Semi-Mature Tall upright structure.	Semi-Mature Low light area.	Semi-Mature Structure typical of the species.	Semi-Mature Structure typical of the species.	Semi-Mature Structure typical of the species.
		Form		Poor	Good	Dead	Fair	Excellent	Fair	Poor	Fair	Fair	Fair to Good	Fair to good	Fair to Good	Fair	Fair	Fair	Fair	Fair	Fair
	JS	++ H 0 0 1	poog	Fair	Good	Dead	Good	Good	Poop	Good	Fair	Fair	Bood	Bood	Good	Poop	Good	Good	Good	Good	Fair
	eration	BCC	9	N O N	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No
	Arbor Operations	Canopy Spread	7	∞	13	2	4	9	9	4	4	3	4	15	3	5	4	4	4	5	2
		Height	7.10	6.60	7.00	4.30	5.50	4.10	4.80	4.30	6.40	5.00	5.10	10.60	10.90	10.50	9.50	6.50	7.10	6.80	6.50
		TPZ (m)	3.24	4.01	8.99	3.02	3.19	7.07	3.20	3.32	2.40	2.27	3.41	15.00	2.42	3.77	2.06	2.06	2.22	2.26	2.00
		DBH (m)	27.0	28.2	54.1	19.5	25.6	58.9	26.7	20.0	20.0	18.9	24.6	150.0	20.2	28.3	17.2	17.2	18.5	18.8	15.4
		Common Name	Tuckeroo	Poinciana	Poinciana	Dead	Small-Leaved Fig	Date Palm	Prickly Paperbark	Prickly Paperbark	Prickly Paperbark	Prickly Paperbark	Banyan Fig	Banyan Fig	Holly Wood	White Cedar	Holly Wood	Bangalow Palm	Bangalow Palm	Bangalow Palm	Bangalow Palm
		Scientific Name	Cupaniopsis anacardioides	Delonix regia	Delonix regia	Unknown sp. (dead)	Ficus obliqua	Phoenix sp.	Melaleuca stypheloides	Melaleuca stypheloides	Melaleuca stypheloides	Melaleuca stypheloides	Ficus benghalensis	Ficus benghalensis	Auranticarpa rhombifolia	Melia azedarach	Auranticarpa rhombifolia	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana
		Tree	T160	T162	T163	T164	T165	T166	T167	T168	T169	T170	T171	T172	T173	T174	T175	T176	T177	T178	T179

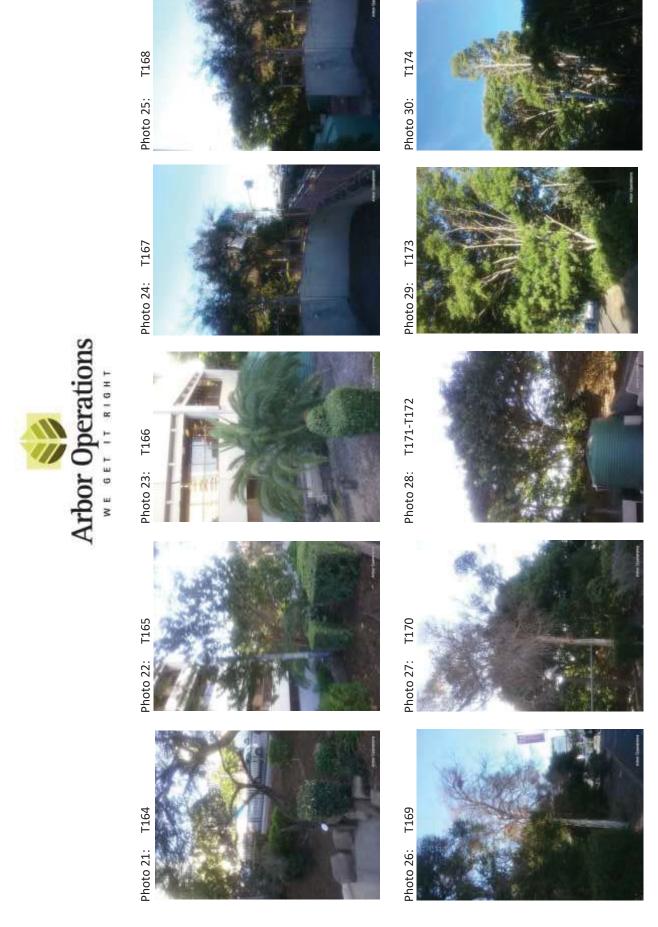
					10	11)	40.				
				₹	vrbor ***		rbor Operations	SI			
Tree	Scientific Name	Common Name	DBH (cm)	TPZ (m)	Height (m)	Canopy Spread (m)	BCC SLT	Health	Form	Age	Comments
T180	Archontophoenix Cunninghamiana	Bangalow Palm	18.3	2.20	7.40	4	o Z	Poog	Fair	Semi-Mature	Structure typical of the species.
T181	Archontophoenix Cunninghamiana	Bangalow Palm	18.3	2.20	7.20	4	OZ Z	Poog	Fair	Semi-Mature	Structure typical of the species.
T182	Archontophoenix Cunninghamiana	Bangalow Palm	19.4	2.33	6.80	4	No	Good	Fair	Semi-Mature	Structure typical of the species.
T183	Cupaniopsis anacardioides	Tuckeroo	15.9	2.00	4.90	4	No	Good	Fair	Semi-Mature	Crown bias to east
T184	Ficus benghalensis	Banyan Fig	150.0	15.00	2.00	2	No	Dead	Dead	Semi-Mature	Large stump >150cm DBH.
T185	Ficus benghalensis	Banyan Fig	40.9	7.24	8.90	12	No	Good	Fair	Semi-Mature	Tree is seeding. Multi-stem.
T186	Ficus benghalensis	Banyan Fig	150.0	15.00	11.00	41	Yes	Good	Fair	Semi-Mature	Tree is seeding.
T187	Livistona australis	Cabbage Palm	44.7	5.36	10.40	4	No	Good	Good	Semi-Mature	Tall structure typical of the species.
T188	Araucaria cunninghamii	Hoop Pine	25.9	3.11	13.10	5	No	Fair	Fair	Semi-Mature	Competing with Ficus.
T189	Grevillea robusta	Silky Oak	22.6	2.71	12.00	5	No	Fair	Fair to poor	Semi-Mature	Crown has a bias to the South. Girdled roots.
T190	Melia azedarach	White Cedar	20.8	2.50	8.10	5	No	Fair	Poor	Semi-Mature	This tree has been "topped" resulting in an epicormic crown structure.
T191	Acacia disparrima	Hickory Wattle	32.4	3.89	8.40	9	No	Good	Fair	Semi-Mature	Short lifespan due to a "lopped" central leader.
T192	Grevillea robusta	Silky Oak	17.1	2.05	9:90	5	No	Good	Fair	Semi-Mature	Structure typical of the species.
T193	Archontophoenix Cunninghamiana	Bangalow Palm	20.9	2.51	7.80	4	No	Poob	Fair	Semi-Mature	Wound on the stem to the West.
T194	Archontophoenix Cunninghamiana	Bangalow Palm	16.1	2.00	6.50	4	No	Poob	Fair	Semi-Mature	Structure typical of the species.
T195	Archontophoenix Cunninghamiana	Bangalow Palm	20.3	2.44	5.80	2	No	Fair	Fair	Semi-Mature	Wound on the stem at 4m high.
T196	Archontophoenix Cunninghamiana	Bangalow Palm	19.5	2.34	7.70	4	No	Poob	Fair	Semi-Mature	Structure typical of the species.
T197	Archontophoenix Cunninghamiana	Bangalow Palm	24.0	2.88	6.50	3	No	Good	Fair	Semi-Mature	Structure typical of the species.

		Anomonte		Semi-Mature Structure typical of the species.	Semi-Mature Structure typical of the species.	Semi-Mature Structure typical of the species.	Semi-Mature Structure typical of the species.	Semi-Mature Good crown density. Multi-stem structure.	Semi-Mature Suitable for transplanting.	Semi-Mature Suitable for transplanting.	Semi-Mature Suitable for transplanting.	Semi-Mature Curlews present.	Semi-Mature Tight fork union at 3m high.	Semi-Mature Broken laterals.		Semi-Mature Structure typical of the species.	Semi-Mature Tip dieback and deadwood present.	Suppressed structure with a crown bias to the South.	Wound at base of the stem on the Southern side of the tree. BCC	Semi-Mature environmental weed species.	Semi-Mature Previously "lopped". 1x hollow in the base.	Semi-Mature Structure typical of the species.
		30		Fair	Fair	fair	Fair	Good	Good	Good	Good	Good	Fair to good	Fair to	fair	Fair	Fair	Poor		poor	Fair	Good
Ş	JS	4+1001	3	Good	Good	Poop	Good	Good	Good	Good	Poop	Good	Good	poog	Good	Good	Fair to poor	Poob		Fair	Fair	Good
	Arbor Operations	BCC	5	No	No	No No	o _N	No	No	No	No	No	No	oN N	No	No	No	No		No	No	No
		Canopy Spread		4	4	4	4	5	3	5	9	2	9	10	7	8	6	5		3	6	10
-		t t	()	7.10	6.90	6.70	6.30	7.60	5.30	5.50	5.80	3.30	12.00	13.30	9.40	8.20	17.40	6.40		3.80	13.80	7.50
•	ł			2.51	2.18	2.00	2.30	3.68	2.57	2.76	10.08	2.00	4.76	5.41	2.92	4.06	5.06	2.28		2.42	8.28	4.90
			(200	20.9	18.2	16.7	19.2	22.0	21.4	23.0	84.0	16.2	39.7	45.1	24.3	33.8	42.2	19.0		20.2	0.69	40.8
		Ommon Namo		Bangalow Palm	Bangalow Palm	Bangalow Palm	Bangalow Palm	Illawarra Flame Tree	Narrow-Leaved Bottle Tree	Broad-Leaved Bottle Tree	Narrow-Leaved Bottle Tree	Ponytail Palm	Tallowwood	Tallowwood	Tindale's Stringybark	Tallowwood	Spotted Gum sub sp Variegata	Hickory Wattle		Golden Shower Tree	Cheese Tree	Moreton Bay Fig
		Cciontific Namo	Archontophoenix	Cunninghamiana	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana	Archontophoenix Cunninghamiana	Brachychiton acerifolius	Brachychiton rupestris	Brachychiton australis	Brachychiton rupestris	Beaucarnea recurvata	Eucalyptus microcorys	Eucalyptus microcorys	Eucalyptus tindaliae	Eucalyptus microcorys	Corymbia citriodora	Acacia disparrima		Cassia fistula	Glochidion ferdinandi	Ficus macrophylla subsp. macrophylla
		Tree)	T198	T199	T200	T201	T202	T203	T204	T205	T206	T207	T208	T209	T210	T211	T212		T213	T214	T215

		Comments	Bifurcation at 12m.		Structure typical of the species.	Crown has a bias to the South East with tip	dieback present.	Multi-stem structure with a bias to the	North East.		Structure typical of the species.	Multi-stem structure.	Structure typical of the species.	Structure typical of the species.	Structure typical of the species.	Multi-stem structure.
		Age	Semi-Mature		Flowering		Semi-Mature		Semi-Mature		Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature	Semi-Mature
		Form	Good	Fair to	boog		Fair		Poor	Fair to	boog	Fair	Good	Good	Good	Fair to poor
SU		Health	Good		Good		Good		Good		Good	Good	Good	Good	Good	Good
bor Operations	BCC	SLT	Yes		No		No		No		No	No	No	No	No	No
r O	Canopy Spread	(m)	10		11		8		4		7	9	9	6	9	6
Arbor	Height	(m)	19.60		9.70		10.90		7.40		10.50	8.40	8.90	17.40	10.20	13.50
7	TPZ	(m)	9.38		4.22		4.90		2.95		4.18	2.06	2.28	5.42	3.18	5.93
	DBH	(cm)	78.2		35.2		40.8		15.5		34.8	15.0	19.0	45.2	26.5	28.5
		Common Name	Hoop Pine		Tindale's Stringybark		Tallowwood		Tindale's Stringybark		Forest Red Gum	Hickory Wattle	Small Fruited Grey Gum	Smooth-Barked Apple	Small Fruited Grey Gum	Tindale's Stringybark
		Scientific Name	Araucaria cunninghamii		Eucalyptus tindaliae		Eucalyptus microcorys		Eucalyptus tindaliae		Eucalyptus tereticornis	Acacia disparrima	Eucalyptus propinqua	Angophora leiocarpa	Eucalyptus propinqua	Eucalyptus tindaliae
	Tree	□	T216		T217		T218		T219		T220	T221	T222	T223	T224	T225



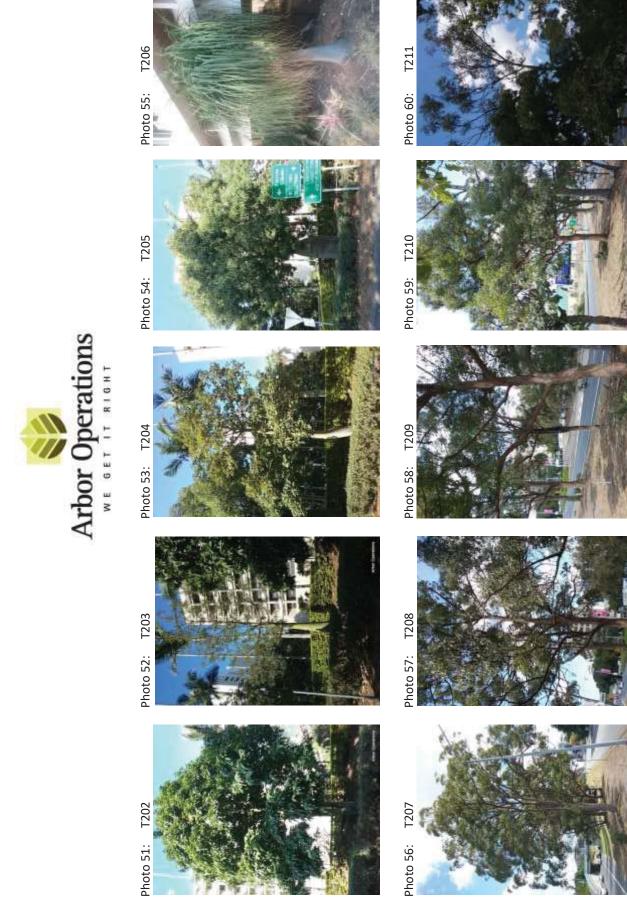


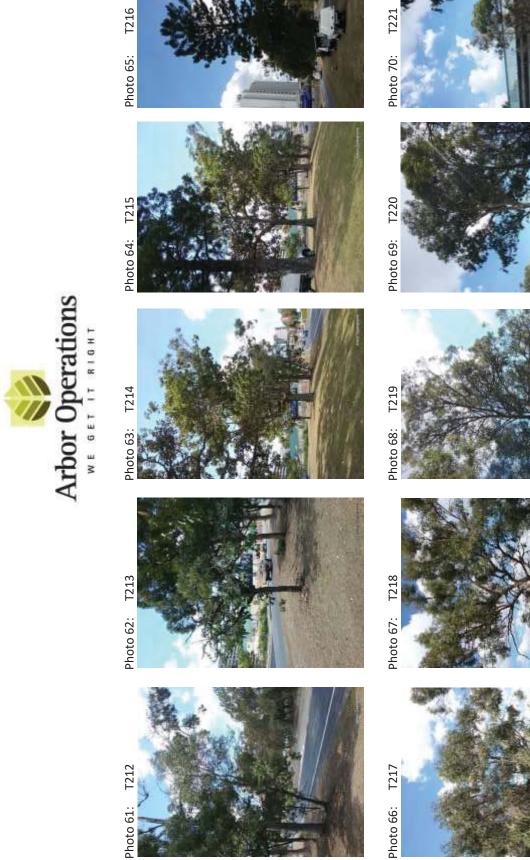


























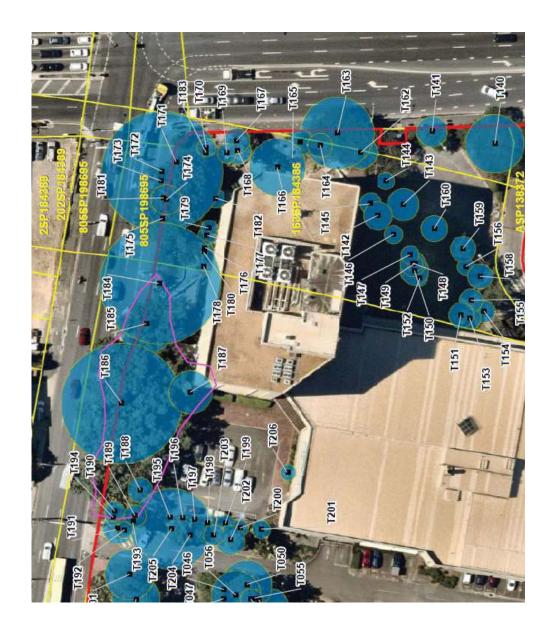




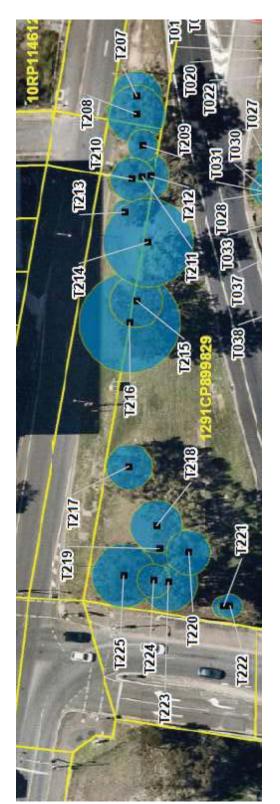




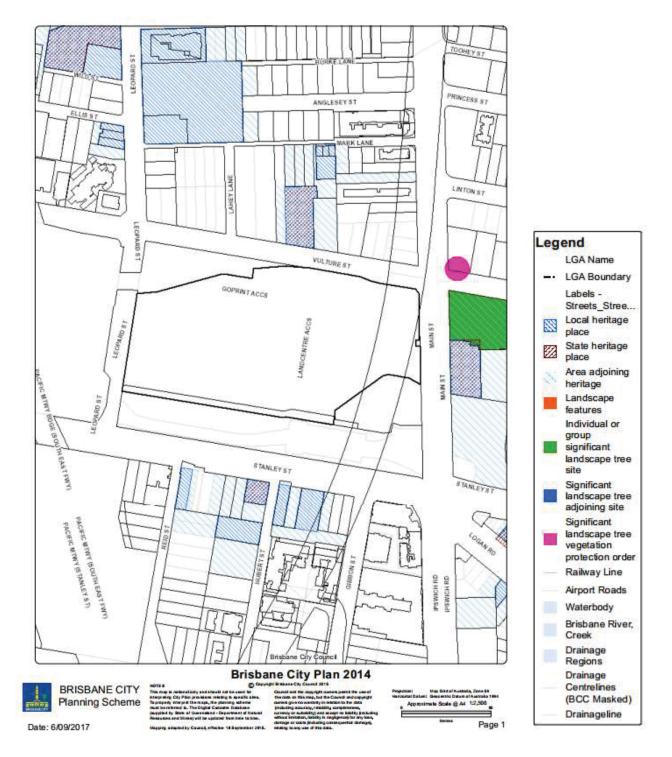














Recommendation:

Land Centre

1) T141

- a) Establish TPZ around the edge of the kerb to the west to ensure trees are not impacted by traffic movements associated with demolition works.
- b) Monitor the codominant union at the base of these specimens. Should the future intended use require retention the existing intrusions for roads is allowed.
- c) However any works which fall within the TPZ shall be supervised by the project arborist.

2) T142-158

- a) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic and machinery movements associated with demolition works. Retention of the stand will allow for a green buffer whilst demolition works are being undertaken.
- b) Should future design require intrusion into the TPZs set and extend into the hardstand area to the south of the specimen's location, these works shall be authorised and supervised by the project arborist.

3) T159-T160

- a) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- b) Retention of the specimens will allow for a green buffer whilst demolition works are being undertaken.
- c) Long term these specimens may be suitable to be included in any landscape concept plan.

4) T161

(Tree number not used intentionally deleted).

5) T162

- a) The specimen is growing beneath the crown of T163 and is therefore suppressed with a bias to the south.
- b) Remove tree and shallow grind stump. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- c) The specimen possessed poor form and should not be included in any landscape concept plan.



6) T163

- a) Establish TPZ around the edge of the kerb and footpath to the south to ensure trees are not impacted by traffic and machinery movements associated with demolition works.
- b) Retention will allow for a green buffer whilst demolition works are being undertaken.
- c) These specimens are in fair to good health and can be included in any landscape concept plan.
- d) Raised roots are present extending to the east toward the BCC footpath. Care should be taken with machinery movements in close proximity to the specimen.

7) T164-T165

a) The specimen's location is not compatible with demolition works.

8) T166

- a) Establish TPZ around the edge of the kerb to the west to ensure trees are not impacted by machinery and traffic movements associated with demolition works.
- b) Retention of the stand will not allow for a green buffer whilst demolition works are being undertaken due to its low lying location.
- c) The specimen is in good health and can be included in any landscape concept plan. However optimal use of the site may require its removal. Consideration may be given to transplanting the specimen to a more appropriate location within the site and can be included in future building design.

9) T167-T170

- a) These specimens are in poor health and are therefore suppressed with a bias to the east.
- b) Remove trees, shallow grind stumps. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- c) These specimens possess poor form and should not be included in any landscape concept plan.



10) T171-T172

- a) Establish crown protection zone around the edge of the concrete barrier wall to the north of the site to ensure trees are not impacted by traffic movements associated with demolition works.
- b) Retention of the stand will allow for a green buffer whilst demolition works are being undertaken and provide a green screen to the site as viewed from the North East.
- c) These specimens are in fair to good health and can be included in any landscape concept plan.
- d) Minor crown trimming may be required for construction related activity. Not more than 15-20% of vegetative matter to be removed in any one year. These works shall be performed by an appropriately qualified AQF level 3 arborist and authorised by the project arborist.
- e) These specimens possess poor form and should not be included in any landscape concept plan. Consideration should be given to the growth habit of the specimen which has a propensity to put down aerial roots. They are growing on the edge of the BCC footpath and close to a major intersection.

11) T173

- a) The specimen is growing beneath the crown of T171-T172 and is therefore suppressed with a bias to the west.
- b) The species is an environmental weed and is a prolific seeder with an invasive root system.
- c) Remove tree, cut as low as possible. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- d) This specimen possesses poor form and should not be included in any landscape concept plan. However may be retained for the purpose of a green screen during demolition works.

12) T174-T175

- a) These specimens are growing beneath the crown of T171-T172 and are therefore suppressed.
- b) Meilia azedarach is a prolific seeder and toxic if ingested.
- c) Remove trees, cut as low as possible. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- d) This specimen possesses poor form and should not be included in any landscape concept plan. However may be retained for the purpose of a green screen during demolition works.



13) T176-T182

- a) These specimens are growing beneath the crown of T171-T172 and are therefore suppressed. The close proximity to the building to the south limits light penetration.
- b) Installation of scaffolding shall require removal of these specimens due to their proximity to the building.

14) T183

- a) The specimen is suppressed however displays good crown density.
- b) Establish TPZ around the edge of the kerb to ensure tree is not impacted by traffic movements associated with demolition works.
- c) Retention of the tree will allow for a green buffer whilst demolition works are being undertaken.
- d) However any works which fall within the TPZ shall be supervised by the project arborist.
- e) This specimen can be included in any landscape concept plan.

15) T184

- a) The specimen is an old Banyan stump which is large in stature.
- b) This specimen possesses poor form and should not be included in any landscape concept plan.
- c) Care should be taken with its removal due to the proximity to services in the road reserve. It is highly likely that roots will be present is the services trench to the north.

16) T185-T186

- a) Establish crown protection zone around the edge of the concrete barrier wall to the north of the site to ensure trees are not impacted by traffic movements associated with demolition works.
- b) Retention of these trees will allow for a green buffer whilst demolition works are being undertaken and provide a green screen to the site as viewed from the North.
- c) These specimens are in fair to good health and can be included in any landscape concept plan. They are large enough to be classified as BCC significant landscape trees.
- d) Minor crown trimming may be required for construction related activity. Not more than 15-20% of vegetative matter to be removed in any one year. These works shall be performed by an appropriately qualified AQF level 3 Arborist and authorised by the project arborist.
- e) These specimens can be included in the landscape concept plan. Consideration should be given to the growth habit of the species which has a propensity to put down aerial roots. New design concept should be mindful of its growth habit. The root system of the species is invasive, building design concepts should be modified accordingly to cater for its growth habit. We note that there is a low lateral (less than 1.8m in height) extending west over the pedestrian footpath from vulture street. Should the footpath be retained, it shall require removal to prevent the current obstruction hazard.



17) T187

- a) This specimen is growing in close proximity to the building to the south.
- b) Installation of scaffolding shall require removal of the specimens due to their proximity to the building.

18) T188

- a) The specimen is competing with the dominant ficus to the east however displays good crown density.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will contribute to a green buffer whilst demolition works are being undertaken.
- d) However any works which fall within the TPZ shall be supervised by the project arborist.
- e) This specimen can be included in any landscape concept plan.

19) T189

- a) The specimen possesses a girdled root system and is competing with the dominant ficus to the east, however displays good crown density.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will contribute to a green buffer whilst demolition works are being undertaken.
- d) However any works which fall within the TPZ shall be supervised by the project
- e) Consideration should be given to not including this specimen in any future landscape concept plan.

20) T190

- a) The specimen is competing with the dominant Ficus to the east, it has been topped and displays poor form.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will not contribute to a green buffer whilst demolition works are being undertaken.
- d) Meilia azedarach is a prolific seeder and is toxic if ingested.
- e) Remove tree, cut as low as possible. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- f) This specimen should not be included in any landscape concept plan.



21) T191

- a) The specimen has been topped and displays poor form and the species generally possesses a short lifespan.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will contribute to a green buffer whilst demolition works are being undertaken.
- d) Remove tree, cut as low as possible. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- e) This specimen should not be included in any landscape concept plan.

22) T192

- a) The specimen is competing with the dominant Ficus to the east and displays poor form.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will contribute to a green buffer whilst demolition works are being undertaken.
- d) Remove tree, cut as low as possible. Removal to be undertaken by an appropriately qualified AQF level 3 arborist and supervised by the project arborist.
- e) This specimen should not be included in any landscape concept plan.

23) T193-T201

- a) The specimens display fair vigour with some minor stem defects.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will be a minor contributor to a green buffer whilst demolition works are being undertaken.
- d) These specimens can be included in any landscape concept plan.

24) T202

- a) The specimen displays good vigour with a multi-stem structure and weak union at its base.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will contribute to a green buffer whilst demolition works are being undertaken.
- d) These specimens can be included in any landscape concept plan.



25) T203-205

- a) The specimens display good vigour.
- b) Establish TPZ around the edge of the kerb to ensure trees are not impacted by traffic movements associated with demolition works.
- c) Retention of the specimen will contribute to a green buffer whilst demolition works are being undertaken.
- d) These specimens can be included in any landscape concept plan. It should be noted if design does not allow for their retention, these are suitable for transplanting elsewhere on the site.

26) T206

- a) The specimen displays good vigour.
- b) Its location is not compatible with demolition works.
- c) It should be noted if design does not allow for this specimen' retention, this is suitable for transplanting elsewhere on the site.

27) T207-225

a) These specimens are located outside the main site on the road reserve and have been surveyed for the purpose of identifying the extent of the urban forest within the precinct.

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Date: 6.09.2017

Email <u>sales@arboroperations.com.au</u>

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Classification and Tree Description

AGE	
Young	Juvenile tree between 1 – 5 years
Early-Semi-Mature	Tree is still growing (6 years to 15 years)
Semi-Semi-Mature	Tree is still growing (over 15 years to 25 years, depending on the species)
Semi-Mature	Species has reached expected size
Senescent	Over Semi-Mature (tree has reached its useful life expectancy) and in decline
Dead	Tree is dead

APPEARANCE	
Excellent	Exceptional specimen. Crown full and balanced. Foliage is entire with good colour. Minimal or no pathogen damage.
Good	Crown is full (can be unbalanced). Foliage is entire with good colour. Minimal or no pathogen damage.
Fair	Tree has < 30% deadwood. Canopy may be unbalanced. Foliage generally with good colour, however may have some discolouration present. Minor pathogen damage present (typical for species in location).
Poor	Tree has >30% deadwood. Foliage may be discoloured or distorted and stress symptoms may be apparent that could lead to decline of tree.
Dead	Tree is dead.

STRUCTURE	
Excellent	Excellent branch attachment, no structural defects. Trunk sound. No damage to roots and good root buttressing present.
Good	Good branch attachment and or no minor structural defects. Trunk sound or minor damage. No damage to roots and or good buttressing.
Fair	Some minor structural defects and or minor damage to trunk. Bark may be missing & cavities could be present. Minor damage to roots.
Poor	Major structural defects and or trunk damage and or girdling or damaged roots that are problematic.
D.B.H.	Diameter at Breast Height, measured at between 1.4 and 1.9m above the ground.

PRIORITY CLASSIFICATION				
Imminent Failure	This tree is a health and safety risk and could fail at any time. It is recommended that immediate action be taken to eliminate the associated risk to people and infrastructure. This tree will fail in an extreme weather event such as high winds or thunder storms.			
High	This tree is likely to fail within a 6 month period, if exposed to extreme weather events such as high winds or thunder storms.			
Medium	This tree may fail within a 6 to 12 month period. If exposed to extreme weather events such as high winds or thunder storms this tree may fail.			
Low	This tree is unlikely to fail in the next 12 months. Remedial action may be taken to such as pruning to mitigate the risk to people or infrastructure.			
Non-native Invasive Plant	This tree has been deemed by Biosecurity Queensland and local city councils as an Environmental Weed Species and should be removed during the normal course of maintenance.			



PROCESS DESCRIPTIONS	
Removal	Complete tree removal leaving stump as close as possible to ground level. Process will include chipping of all foliage limbs and timber and re-instatement of work site. Recommendation typically based on tree being assessed as representing a health and safety concern [Dead, dying, structurally unsound, unstable, poor form].
Remove and Grind	Complete tree removal to include grinding of stump to a depth of 75 millimetres unless otherwise specified. Process will include chipping of all foliage limbs and timber and reinstatement of work site. Stump site will be cleaned of all grinding debris and sawdust and backfilled with premium topsoil free from weeds.
General Pruning	Pruning process will include removal of broken, crossing, rubbing, diseased, stressed or dying branches or limbs with poor attachment. Additional work process will include pruning to define leaders, balance the crown, reduce the weight load or clear the tree from obstructions. In summary, to rectify, as far as is possible, any structural defects and eliminate undesirable growth.
Canopy Lift / Raise	Pruning process will be restricted to raising of the tree's lower canopy to a height specified the defaulted parameters will be to provide 2.5 metres clearance from ground level. From time to time pruning requirements may be altered to accommodate various factors such as view, light penetration, vehicle thoroughfare etc and consulting arborist will advise accordingly.
Remedial Pruning	Pruning process will encompass crown restoration and remedial works where the tree has been previously lopped or otherwise damaged. Not feasible when tree has extensive decay and should only be considered when there is evidence of healthy regrowth. When performed correctly, the process of remedial pruning will most likely take several years to complete.
Hanger Limb	Pruning process will be restricted to the removal of any hangers or dangerous/dead/dying limbs and will typically involve the removal of a single limb. In some instances, removal of an individual limb may be necessary to accommodate an obstruction and the consulting arborist will advise accordingly.
Directional Pruning	Pruning process will be restricted to pruning canopy away from buildings/service wires/property boundary and will typically be performed to avoid future growth in these areas [where necessary clean trunking of undesirable growth]. Where appropriate future growth will be directed away from obstruction selecting new leaders.
Boundary Pruning	Pruning process will involve pruning of tree back to tree owners' boundary. In every situation every effort should be made to obtain the relevant authorisation to perform pruning to Australian Standards and to avoid "lopping" limbs to the immediate boundary. As with directional pruning, optimum results will be achieved when it's feasible to eliminate undesirable growth and direct future growth. If authority to enter and work in neighbouring property is not forthcoming processes will be restricted to access on clients property and work standards will be appropriately comprised. Consulting arborist will duly advise client as appropriate.



GENERAL TERMS	
Australian Pruning Standard AS4373-2007	The Standard for Arborists, Tree workers, Government Departments, Property Owners and Contractors for defining uniform tree pruning procedures and practices, to reduce the risk of hazard development, branch failure, pathogen infection and preSemi-Mature tree death.
Australian Standard Protection of Trees on Development Sites AS 4970- 2009	This Standard give guidance to horticulturists, arborists, architects, builders, engineers, land managers, landscape architects, contractors, planners, certifying authorities, building surveyors, those concerned with the care and protection of trees and all others involved in the management of trees and developments.
Deadwood	Removal of all major/significant deadwood and dead branches up to and including 30mm in diameter unless otherwise specified. Or Deadwood is a naturally occurring feature of most tree species and comprises dead or decaying branches within the canopy of a tree.
	Branches>30mm diameter overhang pedestrian or vehicular areas should be removed. Branches> 50mm diameter in a playground or similar should be removed.
Leader	Primary terminal shoot or trunk which s usually upright. It dominates a portion of the crown by suppressing lateral branches.
Lateral	A secondary or subordinate branch.
Lopping	Tree works to remove in excess of 50% of the tree canopy and/or structure including pruning which is not to the collar, resulting in exposed stubs. 'Lopping' is poor pruning practice and is contrary to Australian Standard Pruning of Amenity Trees 4373-2007. The unacceptable practice of cutting branches or stems between branch unions or at internodes on young trees. It is generally accepted that 'lopping' will shorten the length of a tree's life and may lead to the decline and ultimate death of a tree.
	Topping/heading back/lopping involves cutting back to a stub, bud or a lateral branch not large enough to assume apical dominance. Severe heading causes branch dieback, decay and epicormic growth from the cut ends, resulting in a potentially dangerous situation once the sprouts become elongated and heavy. Topping or heading back is not recommended pruning practice.
Apical Dominance	Condition where the terminal buds inhibit growth and development of lateral buds on the same stem.
Foliage Removal	The amount of live wood and foliage that can be removed per season depends on the growth rate of the tree. For actively growing medium age trees, up to 20% of the foliage may be removed per season. More severe pruning slows root growth by shifting the root to shoot growth ratio. This adds significant stress to the tree. Heavy pruning also reduces carbohydrate reserves, making the tree less tolerant of insects, diseases and drought stress. (Ref: Colorado State University Master Gardener Program - Garden Notes #616 – Pruning Semi-Mature Shade Trees)
Co-Dominant Stems/Tri- Dominant Stems	Originate from same position of the main stem (trunk) and grow to about the same diameter. Over time stems push on each other and cracks develop below the stems. If cracks form, the stems become a high risk for failure under low to moderate loading. Included Bark develops by being covered by the growing together of adjacent, vertically growing stems or branches, creating a weakened internal joint. Or Stems or trunks of about the same size originating from the same position from the main stem. When the stem bark ridge turns upwards, the union is strong; when the ridge turns inward, the union is weak, a likely point of failure in storm or windy swather conditions or where increasing weight causes undue stress on the defective union. (Australian Standard Pruning of Amenity Trees 4373-2007)
Epicormic Growth	Epicormic buds lie dormant beneath the bark, their growth suppressed by hormones from active shoots higher up the plant. Under certain conditions they develop into active shoots, such as when damage occurs to higher parts of the plant or light levels are increased following removal of nearby plants. Epicormic buds and shoots occur in many woody species, but are absent from many others, such as most conifers.
Nectria	Fungi most often encountered on decaying wood but some species can also occur as parasites of trees, especially fruit trees (for example apple) and a number of other hardwood trees. Some species are significant pests causing diseases such as apple canker.
Kino	A dark red to brown resin-like substance produced by some species of trees. Kino forms



	when living cells are injured and infected. (Ref: A New Tree Biology Dictionary – Alex L. Shigo).
Useful Life Expectancy	A guide or measure of tree life expectancy and how long a tree could be expected to be retained safely, and usefully, in normal circumstances [when not subject to abnormal or adverse conditions such as adverse or extreme weather, mechanical interference, property development or impact by machinery etc].