Hunter Horticultural Services Po BOX 3193 Glendale NSW 2285 ABN: 40 747 273 254

*Phone:* (02) 4955 9147 *Fax:* 0409559147 *E-mail:* jwi52886@bigpond.net.au

# **ARBORIST'S REPORT**



PROPERTY:	3 Murray Rose Avenue, Sydney Olympic
	Park
NUMBER OF SUBJECT TREES:	50
DATE OF REPORT:	11/7/2012
REQUESTED BY:	Lend Lease Project Management and
	Construction
CONTACT:	Grant Eckett

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## DISCLAIMER

The recommendations given in this report assumes that reasonable maintenance will be provided by a qualified Arboriculturist working to Australian Standard 4373 (2007), *Pruning Amenity Trees* and *AS* 4970 (2009) *Protection of Trees on Construction Sites*.

Incorrect tree work practices can significantly accelerate tree decline and increase hazard potential.

No liability is accepted for any effects if the recommendations in this report were not followed.

The information in this report does not take into account the effects of unforeseen circumstances or severe weather events on the subject trees.

## INTRODUCTION

## **Project Brief**

Assess the condition of the subject trees, consider a proposed development and supply a written report.

## **Methodology**

A visual inspection was made of the subject trees from ground level on 28<sup>th</sup> of June 2012. No internal testing e.g. Resistograph or drilling, or excavation was carried out. The trees were assessed, and recommendations given, from observations made during the inspection.

## **Glossary of Terminology**

Refer to page 41 for full explanations.

## **LOCATION and SITE DETAILS**



An aerial photograph used as a site plan, showing the position of the subject trees.

## Site Description

The site is a large commercial block, slightly sloping up to the north. The trees along the northern boundary are all native species, and the remainder contain native and exotic species.

A proposed development of a large commercial building will affect the trees.

The square section marked "A" contains non subject trees which are less than 5 metres high and were planted in April 2012 as part of temporary landscape works. These trees require removal for this development.

## SUMMARY OF ACTION PROPOSED FOR THE SUBJECT TREES

The trees are proposed for removal to allow the proposed development to proceed, based on their condition, their availability for replacement as part of the landscape plan and the inability to adequately protect them according to *AS 4970* (2009) if best use of the property is to be achieved.

The term removal does not necessarily mean destruction [of the tree]. Any proposal for relocation of any of the trees, especially the large figs, will need to be considered by qualified specialist contractors, and is not the subject of this report. The economic viability of large tree transplant must be considered in detail as it may not be profitable compared to more carefully cultivated advanced specimens which may have a much longer ULE (Useful Life Expectancy).

The success rate of large tree transplanting is another consideration as well.

Tree Identification	Description		Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 1	<u>Age</u> :	Mature	The tree is in fair	The tree has a poor structure	The tree has been
Botanical			health, having a leaf	having 3 dominant stems	given a ULE of
Name	<u>CBH</u>	1560mm	density of 60%	from 400mm high.	3B due to the
Eucalyptus robusta Common	DBH Height:	(at 200mm high) 496mm (at 200mm high) 11	coverage. Slight deadwood to 70mm diameter is present. The central leader is	Two large epicormic shoots measuring 6 metres long x 150mm diameter are present from 400mm high.	poor structure.
Name		metres			
Swamp Mahogany	<u>Canopy</u> <u>Spread</u> :	10m X 7m	dead from 4 metres high to the top.		
Tree 2	<u>Age</u> :	Early	The tree is in fair	The tree has a poor structure	The tree has been
Botanical		Mature	health, having a leaf	having lost the central	given a ULE of
Name	<u>CBH</u>	920mm	density of 60%	leader (broken off) at 6	3B due to the
Eucalyptus robusta	<u>DBH</u>	290mm	coverage. Slight deadwood to 50mm diameter is	metres high, which has been replaced by a large epicormic shoot 4 metres	poor structure.
Common	Height:	10	present.	long x 80mm in diameter.	
Name		metres			
Swamp Mahogany	<u>Canopy</u> <u>Spread</u> :	10m X 6m			
Tree 3	<u>Age</u> :	Semi	The tree is in fair	The tree has a poor structure	The tree has been
Botanical		Mature	health, having a leaf	having 5 dominant stems	given a ULE of
Name	<u>CBH</u>	470mm	density of 60%	from ground level.	3B due to the
Eucalyptus robusta	<u>DBH</u>	(largest stem) 149mm (largest stem)	coverage. Slight deadwood to 50mm diameter is	A moderate amount of small epicormic growth is present around the lower canopy.	poor structure.
Common	Height:	9.5	present.	around the lower europy.	
Name		metres	prosent.		
Swamp Mahogany	<u>Canopy</u> <u>Spread</u> :	10m X 8m			

Tree	Desci	ription	Health	Structure	U.L.E.
Identification					(Useful Life Expectancy)
Tree 4	Age:	Early	The tree is in poor	The tree has a poor structure	The tree has been
Botanical		Mature	health, having a leaf	having 6 dominant stems	given a ULE of
Name	<u>CBH</u>	780mm	density of 40%	from 250mm high, with 1	4C due to the
Eucalyptus		(at 1100mm high)	coverage in the main	stem dead and broken off at	poor structure.
robusta	<u>DBH</u>	248mm	[upper] canopy and	1 metre high.	
		(at 1100mm high)	60% in the lower	A moderate amount of small	
Common	Height:	10	canopy.	epicormic growth is present	
Name		metres	Slight deadwood to	around the lower canopy	
Swamp	Canopy	10m X	60mm diameter is	(60% leaf density).	
Swamp Mahogany	Spread:	8m	present, as well as a		
Manogany			deadwood stub 500mm		
			long x 120mm		
<b>T</b>			diameter.		TT1 ( 1 1
Tree 5	<u>Age</u> :	Mature	The tree is in fair	The tree has a fair structure	The tree has been
Botanical Name	CBH	1230mm	health, having a leaf $danaity of 60\%$	having 2 large epicormic	given a ULE of
Name			density of 60%	shoots measuring, 5 metres	3B due to the age and fair structure.
Eucalyptus	<u>DBH</u>	391mm	coverage. Slight deadwood to	long x 100mm diameter, at the base.	and fair structure.
robusta			60mm diameter is	ule base.	
Common	Height:	12	present.		
Name		metres			
Swamp	<u>Canopy</u>	11m X			
Mahogany	Spread:	9m			
C J					
Tree 6	Age:	Early	The tree is in fair	The tree has a fair structure	The tree has been
Botanical		Mature	health, having a leaf	having co - dominant stems	given a ULE of
Name	CBH	870mm	density of 60%	from 2.5 metres high.	3B due to fair
Eucalyptus	DBH	277mm	coverage.		condition.
robusta			Slight deadwood to		
Common	Height:	11	50mm diameter is		
Name		metres	present.		
Swamp	Canopy	8m X			
Swamp Mahogany	Spread:	16m			

Tree	Desci	ription	Health	Structure	U.L.E.
Identification	Deser	puon	incantin	Structure	(Useful Life
					Expectancy)
Tree 7	Age:	Early	The tree is in fair	The tree has a poor structure	The tree has been
Botanical		Mature	health, having a leaf	having moderate trunk bow	given a ULE of
Name	<u>CBH</u>	1060mm	density of 60%	at 2.5 metres high.	3B due to the
Eucalyptus	DBH	337mm	coverage.	A moderate amount of small	poor structure.
robusta			Slight deadwood to	epicormic growth measuring	
Common	Height:	11	50mm diameter is	6 metres long x 80mm	
Name		metres	present, as well as a deadwood stub	diameter is present.	
Swamp	Canopy	9m X	measuring 100mm long		
Mahogany	Spread:	8m	x 80mm diameter at 2.5		
			metres high.		
Tree 8	Age:	Early	The tree is in fair	The tree has a poor structure	The tree has been
Botanical		Mature	health, having a leaf	having 3 dominant stems	given a ULE of
Name	<u>CBH</u>	990mm	density of 60%	from 1.8 metres high.	4C due to the
Eucalyptus	DBH	314mm	coverage.	The south west stem is	poor structure.
robusta			Slight deadwood to	broken off at 3 metres high,	
Common	Height:	12	50mm diameter is	and a large epicormic shoot	
Name		metres	present.	measuring 9me long x	
G	Canopy	10m X		120mm diameter has grown	
Swamp	Spread:	4m		from the broken end.	
Mahogany				Some smaller epicormic	
				growth to 6 metres long x	
				80mm diameter is also	
Τ Α	<b>A</b> -	<b>D</b> -1		present	The 4 1 1
Tree 9	<u>Age</u> :	Early	The tree is in fair	The tree has a poor structure	The tree has been
Botanical Name	CDU	Mature	health, having a leaf	having co - dominant stems	given a ULE of 3B due to the
Name	<u>CBH</u>	1150mm	density of 50% coverage.	from 3.5 metres high. The previously mentioned	poor structure.
Eucalyptus	<u>DBH</u>	366mm	Slight deadwood to	deadwood stub is one of the	
robusta			60mm diameter is	co - dominant stems.	
Common	Height:	11	present, as well as a	commune storing.	
Name		metres	deadwood stub,		
Swamp	<u>Canopy</u>	9m X	measuring 400mm long		
Mahogany	Spread:	7m	x 80mm in diameter, at		
			3.5 metres high.		

Tree Identification	Desci	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 10	<u>Age</u> :	Early	The tree has died, and	The structural strength of	The tree has been
Botanical		Mature	swelling of the trunk is	the tree is suspect due to	given a ULE of
Name	<u>CBH</u>	940mm	present at 1.4 metres high.	the dead stems.	4A due to its
Eucalyptus		(at 1 metre high)	This indicates fungal		condition.
robusta	DBH	299mm	activity may be present in		
robusiu		(at 1 metre high)	the stem.		
Common	Height:	11			
Name		metres			
Swamp	<u>Canopy</u>	5m X 5m			
Mahogany	Spread:				
Tree 11	<u>Age</u> :	Early	The tree is in poor health,	The tree has a poor	The tree has been
Botanical		Mature	having a leaf density of	structure having 3	given a ULE of
Name	<u>CBH</u>	1110mm	60% coverage from	dominant stems from 1.7	3B due to the
Eucalyptus	DBH	(largest stem) 353mm	epicormic growth.	metres high.	poor condition.
robusta	<u>DDΠ</u>	(largest stem)	Moderate deadwood to	A moderate amount of	
Common	Height:	8 metres	100mm diameter is	epicormic growth	
Name	<u></u> .	0 11100 00	present.	measuring 5 metres long	
	Canopy	11m X	A dead branch measuring	x 70mm diameter is	
Swamp	Spread:	8m	approximately 3 metres	present.	
Mahogany			long x 100mm diameter is		
			present at 3 metres high.		
			An occlusion measuring		
			400mm long is present at 2		
			metres high. Some		
			swelling is present around		
			this area.		

Tree Identification	Desci	ription	Health	Structure	U.L.E.
Identification					(Useful Life Expectancy)
Tree 12	Age:	Early	The tree is in fair	The tree has a fair	The tree has been
Botanical		Mature	health, having a leaf	structure having co -	given a ULE of 3B
Name	<u>CBH</u>	1170mm	density of 60%	dominant stems from	due to the fair
Eucalyptus	DBH	372mm	coverage.	3.5 metres high.	structure.
robusta			Slight deadwood to	Included bark is present	
Common	Height:	10	50mm diameter is	at the stem union.	
Name		metres	present.		
Swamp	Canopy	11m X			
Mahogany	Spread:	9m			
Whattogarry					
Tree 13	Age:	Semi	The tree is in fair	The tree has a poor	The tree has been
Botanical		Mature	health, having a leaf	structure having co -	given a ULE of 3B
Name	CBH	560mm	density of 60%	dominant stems from 2	due to the poor
Eucalyptus	DBH	178mm	coverage.	metres high.	structure.
robusta		- /	Slight deadwood to	The west stem has	
Common	Height:	9 metres	50mm diameter is	broken off at 3 metres	
Name	<u></u>	<i>y</i>	present.	high, and a scaffold	
	Canopy	5m X		branch has broken off at	
Swamp	Spread:	4m		2.3 metres high.	
Mahogany				Some small epicormic	
				growth measuring 3	
				metres long x 60mm	
Tree 14	<b>A</b> go:	Matura	The tree is in fair	diameter is present.	The tree has been
Tree 14 Botanical	<u>Age</u> :	Mature	health, having a leaf	The tree has a poor structure having the	The tree has been given a ULE of 3B
Name	CBH	1380mm	density of 60%	main leader broken off	due to the poor
		439mm	coverage.	at 4 metres high, with a	structure.
Eucalyptus	<u>DBH</u>	437111111	Slight deadwood to	deadwood stub 500mm	
robusta	<b>TT • 1</b> ·	11	70mm diameter is	long x 80mm diameter	
Common	<u>Height</u> :	11	present.	remaining.	
Name		metres		A moderate amount of	
Swamp	<u>Canopy</u>	10m X		epicormic growth to 7	
Mahogany	Spread:	9m		metres long x 100mm	
				diameter is present.	

Tree Identification	Desc	cription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 15 Botanical Name Eucalyptus robusta Common Name Swamp Mahogany	Age: <u>CBH</u> <u>DBH</u> <u>Height</u> : <u>Canopy</u> <u>Spread</u> :	Early Mature 940mm 299mm 9 metres 9m X 6m	The tree is in fair health, having a leaf density of 60% coverage. Slight deadwood to 50mm diameter is present.	The tree has a fair structure having some small epicormic growth to 2 metres long x 50mm diameter, and a natural lean of 5° to the west [away from Tree 16.	The tree has been given a ULE of 3B due to the fair condition.
Tree 16 Botanical Name Eucalyptus robusta Common Name Swamp Mahogany	Age: <u>CBH</u> <u>DBH</u> <u>Height</u> : <u>Canopy</u> <u>Spread</u> :	Mature 1370mm (at 900mm high) 436mm (at 900mm high) 12 metres 13m X 10m	The tree is in fair health, having a leaf density of 60% coverage. Slight deadwood to 60mm diameter is present. A deadwood stub measuring 300mm long x 80mm diameter is present at 3 metres high.	The tree has a fair structure having scaffold branches from 1100mm high. A moderate amount of epicormic growth measuring 5 metres long x 70mm diameter is present.	The tree has been given a ULE of 3B due to the fair condition.
Tree 17 Botanical Name Corymbia eximia Common Name Yellow Bloodwood	Age: <u>CBH</u> <u>DBH</u> <u>Height</u> : <u>Canopy</u> <u>Spread</u> :	Early Mature 800mm 254mm 11 metres 7m X 4m	The tree is in fair health, having a leaf density of 60% coverage. Slight deadwood to 50mm diameter is present.	The tree has a fair structure having co - dominant stems from 4 metres high.	The tree has been given a ULE of 3B due to the fair condition.

Tree Identification	Desc	cription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 18 Botanical	<u>Age</u> :	Semi Mature	The tree is in fair health, having a leaf	The tree has a fair structure having 3	The tree has been given a ULE of 3B
Name	<u>CBH</u>	680mm	density of 50%	dominant stems from	due to the fair
Corymbia eximia	<u>DBH</u>	216mm	coverage. Slight deadwood to 50mm diameter is	4 metres high.	condition.
Common Name	Height: Canopy	10 metres 5m X 4m	present. Slight tip dieback is		
Yellow Bloodwood	<u>Spread</u> :	5111 24 4111	present on the north side of the canopy.		
Tree 19	Age:	Early	The tree is in fair	The tree has a fair	The tree has been
Botanical Name	<u>CBH</u>	Mature 1070mm (at 900 mm high)	health, having a leaf density of 60%	structure having scaffold branches	given a ULE of 3B due to the fair
Eucalyptus robusta	<u>DBH</u>	340mm (at 900 mm high)	coverage. Moderate deadwood to 80mm diameter is	from 1.2 metres high. Some epicormic growth to 2 metres	condition.
Common Name	Height:	9 metres	present.	long x 60mm diameter	
Swamp Mahogany	<u>Canopy</u> <u>Spread</u> :	10m X 8m		is present.	
Tree 20	Age:	Early	The tree is in fair	The tree has a good	The tree has been
Botanical		Mature	health, having a leaf	structure.	given a ULE of 3B
Name	<u>CBH</u>	1080mm	density of 60%		due to the fair health.
Corymbia eximia	<u>DBH</u>	343mm	coverage. Slight deadwood to		
Common Name	Height:	12 metres	50mm diameter is present.		
Yellow Bloodwood	<u>Canopy</u> <u>Spread</u> :	9m X 6m			

Tree Identification	Desc	cription Health	Structure	U.L.E. (Useful Life Expectancy)	
Tree 21 Botanical Name Eucalyptus robusta Common Name Swamp Mahogany	Age: <u>CBH</u> <u>DBH</u> <u>Height</u> : <u>Canopy</u> <u>Spread</u> :	Early Mature 900mm (at 500mm high) 286mm (at 500mm high) 9 metres 8m X 5m	The tree is in fair health, having a leaf density of 60% coverage. Slight deadwood to 50mm diameter is present.	The tree has a poor structure. The main leader has broken off, and the canopy has 3 dominant stems from 1 metre high, which is all epicormic growth to 8 metres long x 150mm diameter.	The tree has been given a ULE of 4C due to the poor structure.
Tree 22 Botanical Name Eucalyptus robusta Common Name Swamp Mahogany	Age: CBH DBH Height: Canopy Spread:	Early Mature 810mm (at 900mm high) 286mm (at 900mm high) 9 metres 9m X 6m	The tree is in fair health, having a leaf density of 60% coverage. Slight deadwood to 50mm diameter is present.	The tree has a poor structure having co - dominant stems from 1.2 metres high. A moderate amount of epicormic growth measuring 6 metres long x 80mm diameter is present.	The tree has been given a ULE of 3B due to the poor structure.
Tree 23 Botanical Name Corymbia eximia Common Name Yellow Bloodwood	Age: <u>CBH</u> <u>DBH</u> <u>Height</u> : <u>Canopy</u> <u>Spread</u> :	Early Mature 980mm (largest stem) 312mm (largest stem) 8 metres 7.5m X 6m	The tree is in fair health, having a leaf density of 60% coverage. Slight deadwood to 50mm diameter is present.	The tree has a poor structure having co - dominant stems from 200mm high with included bark at the stem union. The largest stem is further co - dominant from 1.5 metres high, while the remaining stem is further co - dominant from 1 metre high.	The tree has been given a ULE of 4C due to the poor structure.

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 24 Botanical	<u>Age</u> :	Semi Mature	The tree is in fair health, having a leaf density of	The tree has a fair structure having co -	The tree has been given a ULE of 3B
Name	<u>CBH</u>	790mm	50% coverage.	dominant stems from	due to the fair
Corymbia eximia	<u>DBH</u>	251mm	Slight deadwood to 50mm diameter is	4.5 metres high.	condition.
Common	Height:	10	present.		
Name		metres			
Yellow	Canopy	8. m X			
Bloodwood	Spread:	5m			
Tree 25	Age:	Semi	The tree is in fair health,	The tree has a poor	The tree has been
Botanical		Mature	having a leaf density of	structure having 3	given a ULE of 4C
Name	<u>CBH</u>	840mm	50% coverage.	dominant stems from	due to the poor
Corymbia	DBH	(largest stem)	Slight deadwood to	200mm high with	structure.
eximia		(largest stem)	50mm diameter is	included bark to 1.3	
Common	Height:	10	present.	metres high.	
Name		metres		The south stem is a	
Yellow	Canopy	10m X		large epicormic shoot	
Bloodwood	Spread:	7m		8 metres long x	
Dioodwood				200mm diameter.	
				Some branch rubbing	
T 2(	A	Sami	The tree is in fair health	is present.	The tree has been
Tree 26	<u>Age</u> :	Semi	The tree is in fair health, having a leaf density of	The tree has a poor	The tree has been
Botanical Name	CDU	Mature 660mm	60% coverage.	structure having co - dominant stems from	given a ULE of 4C due to the poor
	<u>CBH</u>	(largest stem)	Slight deadwood to	ground level.	structure.
Corymbia	<u>DBH</u>	210mm	50mm diameter is	The largest stem is	suuciuic.
eximia		(largest stem)	present.	further co - dominant	
Common	Height:	8 metres		from 2.3 metres high.	
Name	0	<b></b>		The smallest stem is a	
Yellow	Canopy	5m X 5m		large epicormic shoot	
Bloodwood	Spread:			6 metres long x	
				100mm diameter.	

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 27 Botanical Name Ulmus parvifolia Common Name Chinese Elm	Age: <u>CBH</u> <u>DBH</u> <u>Height</u> : <u>Canopy</u> <u>Spread</u> :	Early Mature 930mm (at 100mm high) 296mm (at 100mm high) 6 metres 7m X 8m	The tree is in good health. Slight deadwood to 50mm diameter is present as well a deadwood stub 250mm long x 50mm diameter.	The tree has a poor structure having 4 dominant stems from 300mm high.	The tree has been given a ULE of 3B due to the poor structure.
Tree 28 Botanical Name Ulmus parvifolia Common Name Chinese Elm	Age: CBH DBH Height: Canopy Spread:	Semi Mature 700mm (at 600mm high) 222mm (at 600mm high) 6 metres 5m X 6m	The tree is in good health.	The tree has a fair structure having co - dominant stems from 900mm high.	The tree has been given a ULE of 3B due to the co - dominant stems.
Tree 29 Botanical Name Ulmus parvifolia Common Name Chinese Elm	Age: CBH DBH Height: Canopy Spread:	Early Mature 730mm (at 500mm high) 232mm (at 500mm high) 6 metres 5m X 5m	The tree is in fair health. Slight stem borer activity is present around some branch unions. No live borer specimens were observed.	The tree has a fair structure having co - dominant stems from 800mm high.	The tree has been given a ULE of 3B due to the co - dominant stems.

Tree Identification	Desc	ription	Health	Structure	U.L.E.
ruchtineation					(Useful Life Expectancy)
Tree 30	Age:	Mature	The tree is in fair health,	The tree has a poor	The tree has
Botanical			having a leaf density of 60%	structure having co -	been given a
Name	<u>CBH</u>	1080mm	coverage.	dominant stems from 1.6	ULE of 3B due
Corymbia eximia	<u>DBH</u>	343mm	Slight deadwood to 50mm diameter is present.	metres high.	to the co - dominant stems.
Common	Height:	12			
Name	_	metres			
Yellow Bloodwood	Canopy Spread:	8m X 7m			
Tree 31	Age:	Mature	The tree is in fair health,	The tree has a poor	The tree has
Botanical			having a leaf density of 60%	structure; the main leader	been given a
Name	<u>CBH</u>	1340mm	coverage.	has broken off at 5	ULE of 3B due
Eucalyptus	DBH	426mm		metres high, and a large	to the poor
robusta				epicormic shoot	structure.
Common	Height:	11		measuring 6 metres long	
Name	<u>1101giit</u> .	metres		x 70mm diameter is	
	Canopy	10m X		present at the broken end.	
Swamp	Spread:	11m			
Mahogany	-				
Tree 32	Age:	Mature	The tree is in poor health,	The tree has a poor	The tree has
Botanical			having a leaf density of 40%	structure, the main leader	been given a
Name	<u>CBH</u>	2030mm	coverage.	having broken off.	ULE of 3B due
Eucalyptus		(at 700mm high)	Severe deadwood to 250mm	A moderate amount of	to the poor
globulus	DBH	646mm	diameter is present.	epicormic growth	structure.
gioonnas		(at 700mm high)	Some decay is present in the	measuring 5 metres long	
Common	Height:	10	east scaffold.	x 80mm diameter is	
Name		metres	Severe bark dieback is	present.	
Tasmanian	Canopy	12m X	present around 50% of the	Some trunk twist is	
Blue Gum	Spread:	9m	trunk.	present, and a specimen	
			Some trunk swelling is	of <i>Ficus</i> sp. measuring 3	
			present at 1.1 metres.	metres long x 80mm	
			Some past borer activity	diameter is present is	
			present. No live specimens	growing from a crack in	
			O Hunter Horticultural services	the trunk	

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Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 33	Age:	Mature	The tree is in good	The tree has a fair	The tree has been
Botanical			health.	structure having 3	given a ULE of 3B
Name	<u>CBH</u>	1540mm		dominant stems from 3	due to the
Corymbia eximia	<u>DBH</u>	490mm		metres high. Slight trunk twist is	structural defects.
Common	Height:	12		present, as well as a	
Name		metres		natural lean of 10° to the north east.	
Yellow	Canopy	10m X		north east.	
Bloodwood	Spread:	9m			
Tree 34	Age:	Mature	The tree is in good	The tree has a fair	The tree has been
Botanical			health, having a leaf	structure having scaffold	given a ULE of 3B
Name	<u>CBH</u>	2350mm	density of 80% coverage.	branches from 1.3 metres	due to the
Ficus		(at 1 metre high)		high.	structural defects.
obliqua	<u>DBH</u>	748mm		A branch has broken off	
1		(at 1 metre high)		from a scaffold at 1.7	
Common	Height:	10		metres high, and some	
Name		metres		small epicormic shoots	
Small	<u>Canopy</u>	10m X		measuring 1 metre long x	
Leaved Fig	Spread:	15m		50mm diameter are	
Louvourig				present.	
				Some included bark is	
				present between the	
				scaffolds at 1.5 metres	
				high.	

Tree	Descr	iption	Health	Structure	U.L.E.
Identification		- <b>P</b>			(Useful Life
					Expectancy)
Tree 35	<u>Age</u> :	Mature	The tree is in fair health,	The tree has a fair	The tree has been
Botanical			having a leaf density of	structure having co -	given a ULE of 3B
Name	<u>CBH</u>	2650mm	80% coverage.	dominant stems from 2	due to the fair
Ficus		(at 900mm high)	Slight deadwood to	metres high.	condition.
obliqua	DBH	843mm	60mm diameter is	Scaffold branches are	
-	Haight	(at 900mm hi)	present.	present from 1 metre	
Common	Height:	11	A partial occlusion	high.	
Name	9	metres	measuring 1.4 metres	Some epicormic growth	
Small	<u>Canopy</u>	13m X	long x 50mm wide is	measuring 4 metres long	
Leaved Fig	Spread:	14m	present on a buttress root	x 70mm diameter are	
			north side.	present around old	
				pruning cuts.	
Tree 36	Age:	Early	The tree is in good	The tree has a good	The tree has been
Botanical		Mature	health, having a leaf	structure.	given a ULE of 2B
Name	<u>CBH</u>	750mm	density of 90% coverage.		due to the good
Magnolia	DBH	238mm	Slight deadwood twigs		condition.
grandiflora			are present.		
Common	Height:	8.5			
Name	<u>incigni</u> .	metres			
	Canony	7m X			
Evergreen	<u>Canopy</u>				
Magnolia	Spread:	7m			
Tree 37	<u>Age</u> :	Early	The tree is in good	The tree has a good	The tree has been
Botanical		Mature	health, having a leaf	structure, however, also	given a ULE of 2B
Name	<u>CBH</u>	830mm	density of 90% coverage.	has a natural lean of 5° to	due to the good
Magnolia	DBH	264mm	Slight deadwood twigs	the east.	condition.
grandiflora			are present.		
Common	Height:	8 metres			
Name					
	Canopy	8m X			
Evergreen	Spread:	7m			
Magnolia					

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 38 Botanical Name	<u>Age</u> : <u>CBH</u>	Early Mature 850mm	The tree is in good health, having a leaf density of 90% coverage.	The tree has a fair structure having co - dominant stems from 1.3	The tree has been given a ULE of 2B due to the good
Magnolia grandiflora	DBH	(at 1 metre high) 270mm (at 1 metre high)	Slight deadwood twigs are present.	metres high, and a natural lean of 15° to the east.	condition.
Common Name	Height:	8 metres			
Evergreen Magnolia	Canopy Spread:	7m X 7m			
Tree 39	Age:	Early	The tree is in good	The tree has a fair	The tree has been
Botanical		Mature	health, however, slight	structure having 3	given a ULE of 3B
Name Sapium	<u>CBH</u>	930mm (at 900mm high)	swelling is present around some old pruning	dominant stems from 3.5 metres high.	due to the structural defects.
sebiferum	<u>DBH</u>	296mm (at 900mm high)	cuts at 1 metre high.	Some epicormic growth measuring 4 metres long x 60mm diameter is	
Common	Height:	10		present.	
Name		metres			
Chinese Tallow	Canopy Spread:	8m X 10m			
Tree 40	Age:	Early	The tree is in fair health,	The tree has a fair	The tree has been
Botanical	_	Mature	having some tip dieback.	structure having Scaffold	given a ULE of 3B
Name	<u>CBH</u>	820mm (at 700mm		branches from 800mm high.	due to the fair condition.
Sapium		high)		A broken branch	
sebiferum	<u>DBH</u>	261mm (at 700mm high)		(hanger) measuring 1.5 metres long x 20mm	
Common	Height:	8 metres		diameter is present is in	
Name		0		the canopy on the west	
Chinese Tallow	<u>Canopy</u> <u>Spread</u> :	8m X 13m		side.	

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 41	Age:	Early	The tree is in fair health,	The tree has a fair	The tree has been
Botanical		Mature	having some tip dieback.	structure having Scaffold	given a ULE of 3B
Name	<u>CBH</u>	890mm		branches from 1 metre	due to the fair
Sapium		(at 900mm high)		high, and some	condition.
sebiferum	DBH	283mm		epicormic growth to 4	
seegerunt		(at 900mm		metres long x 60mm	
Common	Height:	high)		diameter.	
Name	<u>8</u> .	metres			
	Canopy	10m X			
Chinese	Spread:	11m			
Tallow					
Tree 42	Age:	Semi	The tree is in good	The tree has a good	The tree has been
Botanical		Mature	health, having a leaf	structure.	given a ULE of 2B
Name	<u>CBH</u>	480mm	density of 90% coverage.	Planted in a raised bed	due to the good
Magnolia	DBH	152mm	Slight deadwood twigs	500mm high.	condition.
grandiflora			are present.		
Common	Height:	6 metres			
Name					
Evergreen	Canopy	7m X 6m			
Magnolia	Spread:				
Magnona					
Tree 43	Age:	Semi	The tree is in good	The tree has a good	The tree has been
Botanical		Mature	health, having a leaf	structure.	given a ULE of 2B
Name	<u>CBH</u>	400mm	density of 90% coverage.	Planted in a raised bed	due to the good
Magnolia	DBH	127mm	Slight deadwood twigs	400mm high.	condition.
grandiflora			are present.		
Common	Height:	6 metres			
Name					
Euororoom	Canopy	5m X 4m			
Evergreen	Spread:				
Magnolia					

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 44	Age:	Semi	The tree is in good	The tree has a fair	The tree has been
Botanical		Mature	health.	structure having co -	given a ULE of 3B
Name	<u>CBH</u>	840mm		dominant stems from 1.8	due to the
Sapium sebiferum	<u>DBH</u>	267mm		metres high. Some small epicormic	structural defects.
Common	Height:	8 metres		shoots measuring to 1	
Name	<u>incigiit</u> .	o metres		metre long x 20mm	
Chinese Tallow	Canopy Spread:	9m X 9m		diameter are present.	
Tree 45	Age:	Semi	The tree is in fair health,	The tree has a fair	The tree has been
Botanical		Mature	having slight tip dieback.	structure having co -	given a ULE of 3B
Name	<u>CBH</u>	690mm		dominant stems from	due to the
Sapium	DBH	219mm		800mm high.	structural defects.
sebiferum				Some small epicormic	
Common	Height:	8 metres		shoots measuring to 1 metre long x 20mm	
Name				diameter are present.	
Chinese Tallow	<u>Canopy</u> <u>Spread</u> :	6m X 10m			
Tree 46	Age:	Semi	The tree is in fair health,	The tree has a poor	The tree has been
Botanical		Mature	having both co -	structure having co -	given a ULE of 3B
Name	<u>CBH</u>	920mm	dominant stems break	dominant stems from 1.1	due to the
Sapium		(at 900 mm high)	off. This may indicate	metres high.	structural defects.
sebiferum	DBH	292mm	some internal decay.	The previously	
seegerun		(at 900 mm		mentioned stems have	
Common	Height:	<sup>high)</sup> 9 metres		been broken off at 2	
Name				metres and 2.5 metres	
Chinese Tallow	<u>Canopy</u> <u>Spread</u> :	7m X 10m		high respectively.	

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 47 Botanical	<u>Age</u> :	Semi Mature	The tree is in fair health, having slight tip dieback.	The tree has a fair structure having co -	The tree has been given a ULE of 3B
Name Sapium sebiferum	<u>CBH</u> <u>DBH</u>	860mm (at 800 mm high) 273mm (at 800 mm high) 0. recented		dominant stems from 1 metre high. Some small epicormic shoots measuring to 800mm long x 10mm	due to the structural defects.
<b>Common</b> <b>Name</b> Chinese Tallow	Height: Canopy Spread:	9 metres 8m X 10m		diameter are present.	
Tree 48 Botanical	<u>Age</u> :	Semi Mature	The tree is in fair health, having slight tip dieback.	The tree has a fair structure having co -	The tree has been given a ULE of 3B
Name Sapium sebiferum	<u>CBH</u> DBH	770mm (at 900 mm high) 245mm (at 900 mm high)		dominant stems from 1 metre high. Some small epicormic shoots measuring to 1 metre long x 20mm	due to the structural defects.
Common Name Chinese Tallow	Height: Canopy Spread:	8 metres 7m X 9m		diameter are present.	
Tree 49 Botanical Name Sapium sebiferum	Age: CBH DBH	Semi Mature 590mm (at 900 mm high) 187mm (at 900 mm high)	The tree is in fair health, having slight tip dieback.	The tree has a fair structure having co - dominant stems from 1 metre high. Some small epicormic shoots measuring to 1 metre long x 10mm	The tree has been given a ULE of 3B due to the structural defects.
Common Name Chinese Tallow	Height: Canopy Spread:	7 metres 7m X 8m		diameter are present. Some branch rubbing is occurring at 3 metres high [on the east side].	

Tree Identification	Desc	ription	Health	Structure	U.L.E. (Useful Life Expectancy)
Tree 50 Botanical	<u>Age</u> :	Mature	The tree is in fair health, having a leaf density of	The tree has a poor structure having 3	The tree has been given a ULE of 3B
Botanical Name Ficus rubiginosa Common Name Port Jackson Fig	CBH         DBH         Height:         Canopy         Spread:	2500mm (at 800 mm high) 796mm (at 800 mm high) 8.5 metres 12 X 13m	having a leaf density of 80 - 90% coverage. Slight deadwood to 60mm diameter is present. Some deadwood stubs to 300mm long x 70mm diameter are present.	structure having 3 dominant stems from 900mm high. An old fence post is embedded in the trunk on the north east side. Some poor pruning has been carried out at 2 metres high, and the branch ends are moderately decayed. Some small epicormic shoots measuring to 2 metre long x 50mm diameter are present. Some included bark is present around the stem union. Some bark damage has	given a ULE of 3B due to the poor structure.
				occurred to some of the surface roots.	

## TREE PROTECTION ZONES (TPZ) and STRUCTURAL ROOT ZONES (SRZ)

The TPZ is the area around each tree in which machinery or stored goods must not be placed. Some encroachment such as boring or excavation with hand tools is permitted.

The SRZ is the area around each tree which must not be encroached upon, except with some horizontal boring. This is the area of root zone which anchors the tree into the soil.

To conform to AS4970 (2009), the following TPZs and SRZs (as a radius in metres from the trunk) would be required for each tree:

No.	TPZ	SRZ
1	6	2.5
2	3.5	2
3	1.8	1.5
4	3	1.8
5	4.7	2.2
6	3.3	1.9
7	4	2.1
8	3.8	2
9	4.4	2.2
10	3.6	2
11	4.2	2.1
12	2.8	2.2
13	2.1	1.6
14	5.3	2.3
15	3.6	2
16	5.2	2.3
17	3	1.9
18	2.6	1.7
19	4.1	2.1
20	4.1	2.1

No.	TPZ	SRZ
21	3.4	2
22	3.1	1.9
23	3.7	2
24	3	1.9
25	3.2	1.9
26	2.5	1.7
27	3.5	2
28	2.7	1.8
29	2.8	1.8
30	4.1	2.1
31	5.1	2.3
32	7.7	2.8
33	5.9	2.5
34	9	2.9
35	10.1	3.1
36	2.8	1.8
37	3.2	1.9
38	3.2	1.9
39	3.5	2
40	3.1	1.9

No.	TPZ	SRZ
41	3.4	1.9
42	1.8	1.5
43	1.5	1.4
44	3.2	1.9
45	2.6	1.8
46	3.5	2
47	3.3	1.9
48	2.9	1.8
49	2.2	1.6
50	9.5	3

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**HEDGES** 

A hedge of *Syzygium* sp. (Lilly Pilly) is present between Trees 30 & 32. It is 3.5 metres high and approximately 16 metres long, in generally good condition, but suitable to remove due to its generally fast growing species (if being replaced).

A smaller hedge of *Acacia* sp. is present beneath Trees 36 - 38. This hedge is in poor condition and suitable for removal.

## CONCLUSION

Trees 1 - 26 are generally poor specimens, and the TPZ table shows the difficulty in creating suitable protection zones whilst achieving best use of the property and being economically viable.

Trees 27 - 29 are also fair – poor specimens and removable on the same grounds as Trees 1 - 26.

Trees 30 - 33 are of a similar condition to the previously mentioned trees, with Tree 32 being an exceptionally poor specimen.

Trees 34 & 35 are in generally good health, but do have some structural defects. As they cannot be adequately protected [during and after construction as required by *AS* 4970 (2009)], their removal (destruction or relocation) should be based on economic viability.

The same considerations must be made for Trees 36 - 38 and 42 & 43. All generally good specimens, but their retention is not viable considering the scope of the development. These trees are all in close proximity to the building proposed for demolition

Trees 39 - 40 and 44 - 49 are generally fair – poor specimens and are a common [exotic] species frequently used in Urban Horticulture. Their protection is considered not viable due to their condition.

Tree 50 is in generally good health, but has some structural defects common in old Figs (as in Trees 34 & 35). The presence of the fence post (the trunk is growing around it) and the poor pruning suggest this tree has also not been treated correctly in the past.

Given the short ULE of the majority of the trees, the economic viability of their retention and protection, whilst achieving best use of the property (physically and economically) is against them.

Overall, the trees cannot be adequately protected if best use of the property is to be achieved.

There are no rare or endangered species amongst the trees.

## RECOMMENDATIONS

Based on the observations made during the inspection and discussion with the contact person, it is recommended that the trees be removed to allow the development to proceed.

A suitable landscape plan is part of the proposed development.

## PHOTOGRAPHS



Tree 1 (left) & Tree 2 (right).



The base of Tree 1.



The base of Tree 3.



Tree 4, thin upper canopy & lower epicormics.



Trees 5 & 6.



The base of Tree 5 (centre).



The stem union of Tree 6.



Trees 7, 8 & 9 (left to right).



Trees 10 & 11 (left to right).



Trees 12, 13 & 14 (left to right).



Trees 15, 16 (left to right).



Trees 17 & 18 (centre).



Trees 19 & 20 (left to right).



Trees 21, 22, & 23 (outlined).



Trees 24, 25, & 26 (outlined).



The base of Tree 25.



The base of Tree 26.



Tree 27.



Tree 28 (centre).



Tree 29.



Tree 30 (outlined right) & Tree 31 (outlined left).



Tree 32 (outlined).



Deadwood in Tree 32.



Tree 33. The 3 stem union is circled.



Tree 34.



Area of broken branch on scaffold Tree 34.



Tree 35.



Tree 35 stem union.



Partial occlusion in buttress of Tree 35.



Tree 36.



Tree 37.



Tree 38.



Trunk lean & stem union of Tree 38.



Tree 39 (centre).



Tree 40.



Tree 41.



Tree 42.



Tree 43.



Tree 44.



Tree 45.



Tree 46.



Tree 47.



Tree 48.



Tree 49.



Tree 50.



Trunk growing around post on Tree 50.

This report has been prepared by Stephen Williams

Opposite view of the base of Tree 50.

Stephen Willef.

Acknowledgements

Aerial Photograph courtesy of nearmap.com

## APPENDICES

U.L.E.	1.1
Glossary of Terminology	1.2
Qualifications	1.3

## ULE

ULE is an acronym for <u>Useful Life Expectancy</u>. There are a number of ULE categories that indicate the safe useful life anticipated for each tree. Factors such as the location, age, condition and health of the tree are significant to determining this rating. Other influences such as the tree's effect on better specimens and the economics of managing the tree successfully in its location are also relevant to ULE (Barrell 1993, 1995). ULE Categories and Subgroups

### 1 = Long ULE of > 40 years

А	В	С
Structurally sound in	Suitable to retain with some	Significant status - requires
suitable location	remedial care	Special care to preserve

### 2 = Medium ULE of 15 - 40 years

А	В	С	D
Lifespan limit	Eventual removal for	Remove for adjacent trees	Requires extensive remedial
	safety	or replanting	care
	or nuisance		

## 3 = Short ULE of 5 - 15 years

А	В	С	D
Lifespan limit	Eventual removal for	Remove for adjacent trees	Requires extensive remedial
	safety	or replanting	care
	or nuisance		

### 4 = Remove tree within 5 years

А	В	С	D	E	F	G
Dead, dying or diseased	Unstable or exposed by new clearing	Structurally defective	Damaged and unsafe	Remove for adjacent trees or replanting	Damaging existing structures	Clearing will affect stability

## 5 = Trees suitable to transplant

А	В	С
Less than 5m high	Young trees over 5m high	Height/width contained by pruning

The ULE rating given to any tree in this report assumes that reasonable maintenance will be provided by a qualified Arboriculturist using correct and acknowledged techniques. Retained trees are to be protected from root damage. Incorrect tree work practices can significantly accelerate tree decline and increase hazard potential.

Appendix 1.1

Glossary of Terminology

DBH:	Trunk diameter at 1.4 metres high or as otherwise stated
Epicormic:	Leaf shoots which arise from under the bark, and are not attached to the heartwood. These can detach, especially as they become larger, and have a high risk factor
Frass	Sawdust and webbing combined to cover holes of certain types of wood borer
Kino:	A type of resin exudated by Eucalypts and Angophoras as a defence mechanism against pathogen attack
Mistletoe:	A family ( <i>Loranthaceae</i> in the southern hemisphere) of several genera [in the Sydney region] of parasitic plants, often hastening the decline of trees in poor health; many species are host specific.
Structure:	The shape of the tree, ranging from very good, with a single straight trunk, to very poor, with misshapen multiple trunks. Trees with multiple trunks etc. can have a higher risk factor, as splitting and trunk collapse may occur.
ULE:	An acronym for Useful Life Expectancy. A system for rating the possible longevity of a tree, designed by English Arborist Jeremy Barrell (see appendix 1.1).
Included Bark: Included ba	<ul> <li>Bark that occurs in a crotch between branch and trunk or between co-dominant stems.</li> <li>ark usually: <ul> <li>prevents the trunk from growing around a branch.</li> <li>occurs on defective V-shaped crotches in which the bark grows inward and on itself, causing a physical weakness where the co-dominant leaders meet.</li> </ul> </li> </ul>
Appendix 1.2	

Contact Details	Qualifications
P.O. Box 3193	<b>Bachelor of Arts Degree (Botany)</b>
Glendale NSW 2285	
Ph 0409 559 147	
Email: jwi52886@bigpond.net au	Horticulture Certificate (1989)
Eman: <u>wiszooo(w/bigpond.net</u> au	with A phorical ture component
	with Arboriculture component
	included.
	Horticulture Certificate (2000 Northern Melbourne Institute of Technology) Diploma of Horticulture (2007 Kurri Kurri Tafe) Arboriculture. 5510397 AQF Level 5

Appendix 1.3