

impact of development on trees - moore theological college, newtown

prepared by

Melanie Howden - Ass. Dip. Hort. (HaC), SoA Arb. (TAFE) , MAIH. MNAAA, MIACA

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Background

This report has been prepared to assess the condition and significance of a number of trees on and adjacent the proposed development areas within Moore Theological College, in Newtown and assess the impact of the proposed development on the existing trees. The report has been commissioned by Allen Jack & Cottier on behalf of the College and site instructions have been provided by Allen Jack & Cottier.

Site inspections and field work were conducted on the 8th May, 2009 with additional field assessment carried out on the 30th July 2009.

Existing Site & Proposed Development

The existing site encompasses a number of developed allotments consisting of the College's Newtown campus with associated grounds, buildings and facilities, commercial premises, carparking areas and a child care centre. Amongst these developments the site contains a number of trees which are a mix of non-indigenous native and exotic trees planted in groups or as specimen trees.

The proposed development involves demolition of several buildings and structures and redevelopment of the site for the purposes of providing College accommodation, academic studies, carparking and administrative functions.

Scope of Tree Assessments

For the purposes of this report the definition of a tree is consistent with the Sydney City Council's Tree Preservation Order, 2004 being a tree with:

- a height equal to or exceeding 5 metres; or
- for a single trunk species, a trunk circumference exceeding 300mm at a height of 1m above ground level; or
- for a multi-trunk species, a trunk circumference exceeding 100mm at a height of 1m above ground level.

There are 109 trees considered in this report of which:

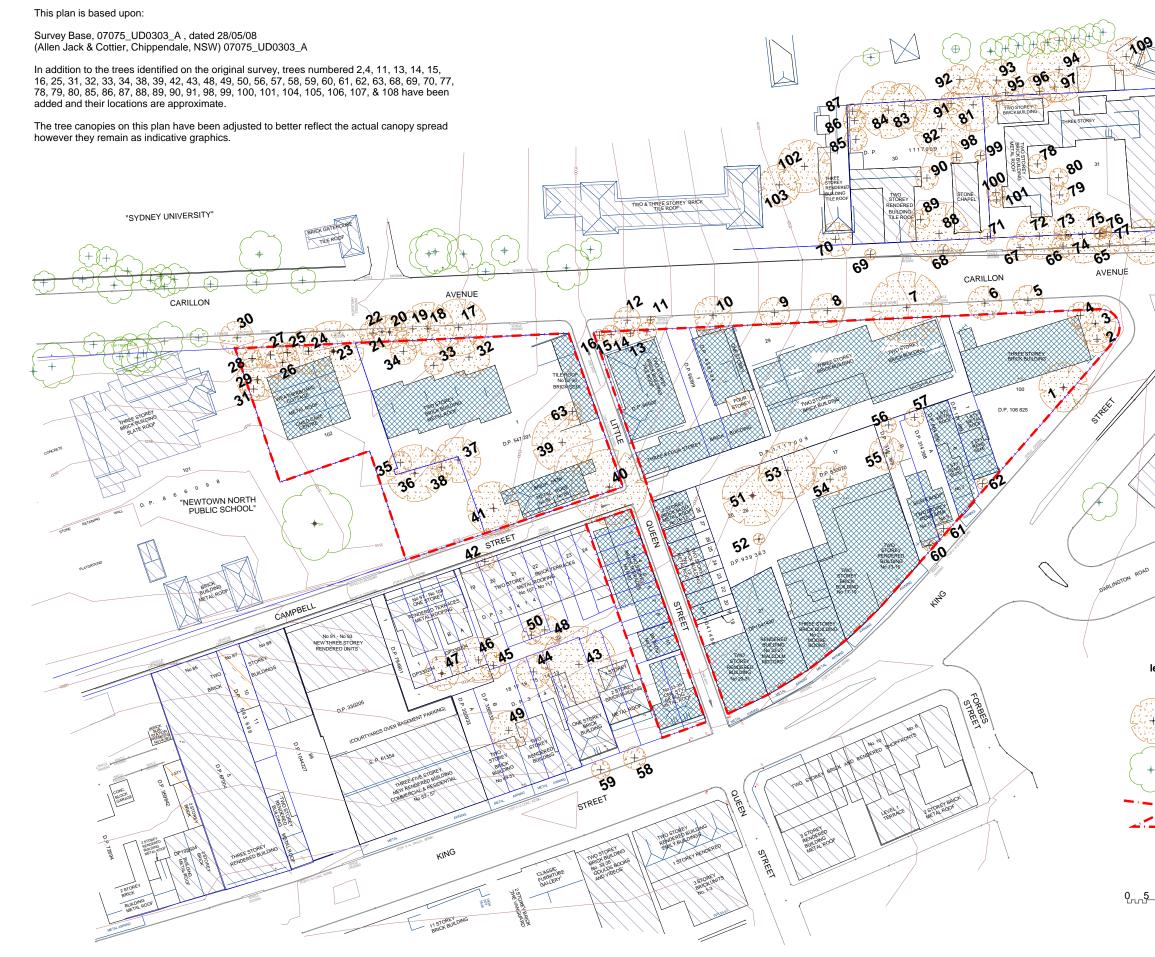
- 37 trees are located on the site;
- 17 trees are located within the road reserves adjacent the site,
- 9 trees are located on allotments adjacent the site, and
- 46 trees located on the College's property, on the northern side of Carillon Avenue.

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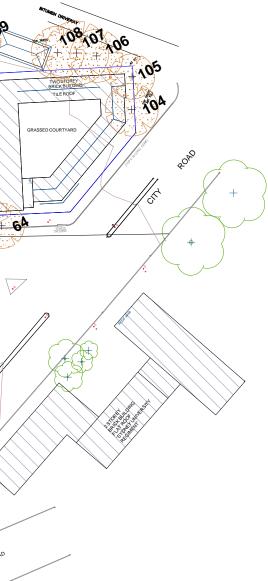
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legend

_**99** _____

trees considered in this report

other trees not specifically addressed in this report

site boundaries

0<u>5 10 15 2</u>0 2<u>5</u> <u>5</u>0

drawing title tree locations & reference numbers significance in the environment

specific legislation such as

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Noxious Weeds Act (NSW) 1993.

Noxious Weeds Act (NSW) 1993

Environmental Pest Species

reducing natural biodiversity.

Preservation Order.

categorised as either

perspective;

perspective

significance in the landscape

Trees need to be considered in the overall environment and are subject to

The Threatened Species Conservation Act lists in its schedules a number of species, populations or ecological communities that are either endangered or vulnerable. The Act requires the preparation of a species

impact statement if an activity or development is going to have a significant effect on species, populations or endangered ecological communities listed

threatened tree species are considered in this report, however no attempt is made to identify threatened ecological communities or populations.

The Noxious Weeds Act provides the Minister with the powers to issue an

Order declaring a plant noxious and these plants can be either a gricultural or significant environmental pest species. The Minister's declaration may

may specify the level of noxious weed control required for that species.

There are a number of environmental pest species that commonly cause

can be problematic in natural bushland areas degrading habitats and

as pest species and are exempt from protection under Council's Tree

Assessment of a tree's significance in the landscape is generally

· Significant in the Landscape - prominent from a broad landscape

· High Landscape Significance - prominent from a neighbourhood

 Moderate Landscape Significance, prominent from adjacent areas surrounding the site, and Low Landscape Significance prominent from a site perspective

Many of these are not considered noxious but are recognised by Councils

problems in developed urban areas or readily spread into natural bushland areas. In urban areas these species can have aggressive root systems and cause damage to built structures or services. Alternatively some species

specify a plant to be noxious in part or all of the State and the Minister also

in the schedules of the Act. Where identified on or adjacent the site.

• Threatened Species Conservation Act (NSW) 1995, and

Threatened Species Conservation Act (NSW) 1995

tree condition & life expectancy

condition

The assessment of the trees condition is undertaken by visual inspection of the trees themselv es, surrounding vegetation and the site condition

An assessment of each tree is undertaken taking into account the condition of the tree's roots, trunk, branches, foliage, previous pruning works, pests and disease, nesting hollows and the surrounding environment that may influence the condition of the tree.

Safe Useful Life Expectancy (SULE)

The condition information is used to determine the Safe Useful Life Expectancy (SULE) of each tree and takes into account the age of the tree, the life span of the species, local environmental conditions, estimated life expectancy, the location of the tree and safety aspects.

The SULE method takes into account whether a tree can be retained with an acceptable level of risk based on the information available at the time of inspection. A SULE assessment is not static as it relates to the tree's health and the surrounding conditions. Whilst it is recognised that changes to the tree's condition will effect the assessment, changes to the surrounding environment may result in changes to the SULE assessment.

Table 1 Safe Useful Life Expectancy (SULE), (Barrell, 2001)

Category	Description
1	Long, Life span greater than 40 years
2	Medium, Life span from 15 to 40 years
3	Short, Life span from 5 to 15 years
4	Remove, Should be removed within 5 years

5 Small, Young or Regularly Pruned, Trees that can readily be moved or replaced.

In addition to the categories listed above, trees that show signs of nent structural failure are listed as Unstab

Unstable in the ground or have significant trunk Unstable damage rendering them structurally hazardous

development planning

tree protection setbacks

Where trees are intended to be retained, development footprints should be located away from trees so as to provide adequate clearances for a tree protection zone

Disturbance within tree protection zones can be detrimental to the tree's root system and in turn affect the stability, health and condition of the tree. In many cases damage to the root systems is the major cause of tree decline in urban areas.

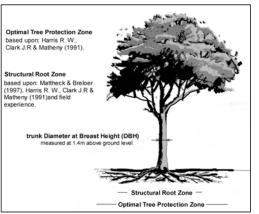


Figure 5.1 Typical diagram of Optimal Tree Protection Zone & Structural Root Zone of a tree.

Where trees are multi-trunk specimens an individual assessment needs to be made based upon the number of trunks, the trunk diameters and the canopy spread of the tree.

Tree protection zones have been described by many authors British Standards 5837(1991), Mattheck & Breloer (1997), Harris *et al* (1999) and each method has considered various criteria to produce guidelines.

For the purposes of this report the method outlined in Harris et al (1999) coupled with experience is used to identify tree protections zones.

Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	Structural Root Zone (m radius)	Optimal Tree protection Zone (m radius)
1	Harpephyllum caffrum	Kaffir Plum	13	3	650	Mature twin trunk (at 2m) tree with a broad spreading form; a slight trunk lean to the south east and balanced canopy and branch development. Lower limbs of the tree have been pruned on the northern side adjacent a building.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	Surface roots are evident being confined in a garden bed and retaining wall.	2	On site	4	8
2	Eucalyptus elata	River Peppermint	9	7	260	Semi-mature single trunk tree with a broad spreading form; an upright trunk/s and majority of canopy and branch development is towards the south east. Lower limbs of the tree have been pruned to 3m.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	The tree appears suppressed by the adjacent vegetation.	1	On site	2.5	4
3	Corymbia maculata	Spotted Gum	16	11		Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	3	5
4	Callistemon viminalis	Weeping Bottlebrush	6	7	4*100- 160	Semi-mature multi trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays good vigour.	Good	5%	None evident	2	On site	2	4
5	Liquidambar styraciflua	Sweet Gum	12	8	420	Mature single trunk tree with an upright pyramidal form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 3m on the southern side adjacent the footpath.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within road reserve	3	5
6	Liquidambar styraciflua	Sweet Gum	12	9	500	Mature twin trunk (at 1.5m) tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned on the southern side.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	The tree has small pockets of decay in old branch stubs.	1	Within road reserve	3	6
7	Jacaranda mimosifolia	Jacaranda	14	19	550	Mature single trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned on the southern side adjacent overhead wires.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	5%	None evident	1	Within road reserve	3.5	7
8	Jacaranda mimosifolia	Jacaranda	11	9	330	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned on the southern side.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within road reserve	2.5	4.5
9	Jacaranda mimosifolia	Jacaranda	7	8	260	Semi-mature single trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 3m.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within road reserve	2.5	4
10	Jacaranda mimosifolia	Jacaranda	12	10	480	Mature single trunk tree with a broad spreading form; an upright trunk/s and majority of canopy and branch development is towards the north. Lower limbs of the tree have been pruned to 3m.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within road reserve	3	5

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designed tree protection for trees to be retained

Proposed developments must provide an adequate setback from trees that are proposed to be retained. This setback varies depending upon the tree's age, condition, species and immediate environment.

This setback area is set aside for the tree's root zone and it is essential for the stability and longevity of the tree. Development design should consider setbacks in terms of the both the tree's Structural Root Zone and the Optimal Tree protection Zone.

Unless a specific assessment states otherwise, proposed developments must retain at least:

• 80% of the total Optimal Tree Protection Zone, and 100% of the Structural Root Zone of the tree.

developments within the tree's Structural Root Zone

Developments should not encroach into the tree's Structural Root Zone and existing soil levels should remain undisturbed. Structural tree roots are likely to occur within this area and the severance of these roots will affect the tree's stability. Excavation should not occur within this area and fill material is also detrimental to the health and condition of the tree.

In some cases minor encroachments into this zone can occur provided that the structure is elevated above the ground and allows rain water infiltration and gaseous exchange to the soil. Where elevated developments are to occur within this zone a detailed assessment and specific tree protection measures are required.

opments within the tree's Optimal Tree Protection Zone

Developments in the vicinity of trees, can occur in the Optimal Tree Protection Zone provided that the entire Structural Root Zone remains undisturbed and 80% of the total area of the Optimal Tree Protection Zone remains undisturbed with no excavation or fill occurring.

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ree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	Structural Root Zone (m radius)	Optimal Tr protectio Zone (m radius)
	lacaranda mimosifolia	Jacaranda	3	2	60	Immature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within road reserve	1.5	3
	lacaranda nimosifolia	Jacaranda	9	7	260	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within road reserve	2.5	4
	Jlmus barvifolia	Chinese Weeping Elm	6	5	120	Semi-mature single trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	1.5	3
	Jlmus barvifolia	Chinese Weeping Elm	4	2	100	Semi-mature single trunk tree with an upright form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	On site	1.5	3
	Jlmus barvifolia	Chinese Weeping Elm	6	5	1*100, 1*140	Semi-mature twin trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.		Very Good	<5%	None evident	1	On site	1.5	3
	Jlmus barvifolia	Chinese Weeping Elm	6	3	160	Semi-mature single trunk tree with an upright form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.		Very Good	<5%	None evident	1	On site	1.5	3
	lacaranda nimosifolia	Jacaranda	15	15	500	Mature twin trunk (at 1.8m) tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 3m.	High L/scape Sig.		Very Good	<5%	None evident	1	Within road reserve	3.5	7
8 S	Sorbus sp.	Rowan	18	14	550	Mature twin trunk (at 5m) tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.		Deciduous None	5%	None evident	1	Within road reserve	3.5	7
	lacaranda nimosifolia	Jacaranda	14	9	300	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.		Very Good	<5%	None evident	1	Within road reserve	3	4.5
	Melaleuca quinquenervia	Paperbark	17	9	650	Mature twin trunk (at 3m) tree with an upright elliptical form; an upright trunk's and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.		Fair	15%	The tree has a cavity in the northern leader at 3m and at 4.0 -4.5m.	3	Within road reserve	4	8
	Melaleuca quinquenervia	Paperbark	18	8	500	Mature twin trunk (at 2m) tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north. No evidence of significant branch pruning.	High L/scape Sig.		Fair	15%	None evident	2	Within road reserve	3.5	7
	Melaleuca quinquenervia	Paperbark	18	7	400	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch oruning.	Moderate L/scape Sig.		Fair	10%	None evident	1	Within road reserve	3	6
3 C	Celtis sp.	Hackberry	20	16	750	Mature multi trunk (at 2m) tree with a broad spreading form; an upright trunk's and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.		Good	5%	None evident	2	On site	4.5	8
	Corymbia naculata	Spotted Gum	22	12	400	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.		Very Good	<5%	None evident	1	On site	3	6
	Eucalyptus sp.	-	9	5	220	Semi-mature single trunk tree with a broad spreading form; a distinct trunk lean to the north west and balanced canopy and branch development. No levidence of significant branch pruning.	Low L/scape Sig.		Good	<5%	None evident	1	On site	1.5	3
	Corymbia naculata	Spotted Gum	22	9	450	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	3.5	7
7 E s	Eucalyptus sp.	-	11	7	2*260	Semi-mature twin trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north. No evidence of significant branch pruning.	Low L/scape Sig.		Good	5%	None evident	1	On site	3	6
	Eucalyptus sp.	-	11	5	220	Semi-mature single trunk tree with a broad spreading form; a distinct trunk lean to the north east and majority of canopy and branch development is towards the north east. No evidence of significant branch pruning.	Low L/scape Sig.		Fair	5%	None evident	2	On site	2	3
9 C	Celtis sp.	Hackberry	14	11	320	Mature twin trunk (at 2.2m) tree with a broad spreading form; an upright trunk's and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	5%	None evident	1	On site	2.5	4
	lacaranda mimosifolia	Jacaranda	12	9	300	Mature single trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.		Good	<5%	Minor decay evident in old branch stubs.	1	Within road reserve	2.5	4
	Brachychiton acerifolius	Illawarra Flame Tree	12	6	300	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.		Fair	10%	The tree's canopy appears sparse.	2	On site	2.5	4
	Callistemon salignus	Willow Bottlebrush	14	11	4*200	Mature multi trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.		Fair	25%	None evident	3	On site	3	5
	Eucalyptus naemastoma	Scribbly Gum	10	5	240	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.		Good	<5%	None evident	1	On site	2.5	4
	Callistemon salignus	Willow Bottlebrush	13	7	1*300, 1*280	Mature twin trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.		Fair	15%	None evident	2	On site	3	5
	Allocasuarina sp.		20	6	340	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.		Very Good	<5%	None evident	1	On site	3	5
	Corymbia citriodora	Lemon Scented Gum	25	15	600	Mature single trunk tree with an upright forest form; a distinct trunk lean to the south and majority of canopy and branch development is towards the north. No evidence of significant branch pruning.	Significant L/scape Sig.	 The tree appears stable and its branch attachment appears fair. The tree is considered to be in good health and displays good vigour. 	Very Good	5%	There is evidence that 5 substantial limbs have failed in the past and the leaf size on the upper foliage appears to be reduced. The tree requires some remedial pruning & monitoring	3	On site	4.5	9
	Corymbia citriodora	Lemon Scented Gum	22	12	440	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	monitoring. None evident	1	On site	3.5	5.5

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ree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)		Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Cano py Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	Structural Root Zone (m radius)	Optimal Tro protection Zone (m radius)
38	Eucalyptus sp.	-	9	6	180	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in poor health and displays poor vigour.	Poor	35%	None evident	4	On site	1.5	3
39	Celtis sp.	Hackberry	14	16	600	Mature multi trunk (at 3m) tree with a broad spreading form; a slight trunk lean to the north and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	4	8
40	Celtis sp.	Hackberry	18	20	600	Mature multi trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 4m.	High L∕scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	5%	There is evidence of cracking appearing on the southern leader at 9m above ground level and there is decay present in old branch stubs.	1	On site	4	8
41	Quercus robur	English Oak	13	14	580	Mature single trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 4m.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	10%	None evident	1	On site	4	8
	Lagerstroemia indica	Crepe Myrtle	7	5	1*100	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good		None evident		Within the College grounds adjacent the site	1.5	3
	Jacaranda mimosifolia	Jacaranda	16	20	700	Mature multi trunk (at 2m) tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.			There is minor decay in branch stubs.	2	Within the College grounds adjacent the site	4.5	9
	Corymbia citriodora	Lemon Scented Gum	20	9	380	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.			None evident		Within the College grounds adjacent the site	3	5
	Grevillea robusta	Silky Oak	21	7	400	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.		<5%	None evident	1	Within the College grounds adjacent the site	3.5	5.5
	Acer negundo	Box Elder	10	12	380	Mature multi trunk tree with a broad spreading form; a distinct trunk lean to the north and balanced canopy and branch development. Lower limbs of the tree have been pruned to 2m.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	None	10%	The tree has bark inclusions throughout and been poorly pruned in the past.		Within the College grounds adjacent the site	3	5
	0	Box Elder	12	9	1*260	, Mature multi trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 1m.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears poor. The tree is considered to be in moderate health and displays fair vigour.	None		The tree has bark inclusions throughout.		Within the College grounds adjacent the site	3	5
(Corymbia citriodora	Lemon Scented Gum	16	8	300	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.			None evident	1	Within the College grounds adjacent the site	3	4.5
	Mangifera indica	, , , , , , , , , , , , , , , , , , ,	9	10	460	Mature single trunk tree with a broad rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within the College grounds adjacent the site	3.5	6
0	Callistemon sp.	Bottlebrush	8	5	2*100, 1*200	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within the College grounds adjacent the site	2	3
51	Celtis sp.	Hackberry	10	16		, Mature multi trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	5%	The southern trunk has several decayed sections and the tree appears to have previously failed at 4m. There is evidence of decay in old branch stubs and the tree requires remedial pruning.	2	On site	4	8
	Washingtonia sp.	Cotton Palm	22	3	400	Mature single trunk tree with an elevated rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1/5	On site	1	2
3	Eucalyptus sp.	-	23	15	500	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	5%	The trees shows signs of previous limb drop and the foliage shows signs of Psyllid damage.	1	On site	4	8
	Flindersia australis	Crows Ash / Australian Teak	13	9	400	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	3.5	7
5	Acer negundo	Box Elder	8	9	3*240	Mature multi trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 4m.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Deciduous None	10%	The tree has bark inclusions throughout.	2	On site	3	5
	Robinia pseudoacacia	False Acacia	5	4	200	Mature single trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On site	2	3
	Robinia pseudoacacia	False Acacia	5	5	240	Mature single trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 2m.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On site	2	3
(Platanus orientalis	Plane Tree	5	6	240	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	,	<5%	None evident	1	Within road reserve	2	3
	Platanus orientalis	Plane Tree	5	5	200	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.		<5%	None evident	1	Within road reserve	1.5	3
	Callistemon sp.		4	3		Mature twin trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.			None evident		On site	2	3
	Acer palmatum	Maple	5	4		Mature twin trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.			None evident		On site	2	3
	Washingtonia sp.	Cotton Palm	16	3	600	Mature single trunk tree with an elevated rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.			None evident		On site	1	2
	Grevillea robusta	Silky Oak	11	5	180	Immature single trunk tree with an upright pyramidal form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Fair	<5%	None evident	1	On site	2	3

(table continued next sheet)



date dwg no. rev. sheet of 09/10/09 mtcd1.03 0.3 5 11

prepared by

melanie howden nts

scale at A3

project impact of development on trees - moore theological college, newtown

drawing title arboricultural assessment - tree data sheet C

Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Cano py Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	Structural Root Zone (m radius)	Optimal Tree protection Zone (m radius)
64	Liquidambar styraciflua	Sweet Gum	9	12	480	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Upper branches have been pruned to accommodate overhead wires.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	Minor decay in pruning branch stubs, callusing satisfactorily.	1	Within road reserve	2.5	5
65	Liquidambar styraciflua	Sweet Gum	6	6	280	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Upper branches have been pruned to accommodate overhead wires and minor terminal pruning of lower limbs.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	Decay present in an elongated wound on the southern side of the tree located 1.3metres above ground level.	2	Within road reserve	2	4
66	Liquidambar styraciflua	Sweet Gum	9	6	280	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Upper branches and the central leader have been pruned to accommodate overhead wires.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	Minor decay in branch stubs	1	Within road reserve	2	4
67	Liquidambar styraciflua	Sweet Gum	12	7	440	Mature single trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	Decay in old wound on the main trunk at 1.8 - 2.3m.	1	Within road reserve	2.5	5
68	Jacaranda mimosifolia	Jacaranda	5	3	70	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within road reserve	1.5	2
69	Jacaranda mimosifolia	Jacaranda	5	3	100	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears poor. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within road reserve	1.5	2
70	Magnolia soulangeana	Magnolia	7	9	240*2, 120*3	Mature multi trunk tree with an upright spreading form; an upright trunk's and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	None evident	1	On adjacent allotment	2.5	5
71	Olea europaea	Common Olive	6	4	400	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. The tree has been significantly pruned on all scaffolds and there is evidence of remedial tree works and painting of an old wound site on the southern side.	Env. Pest Species - Exempt from Council's TPO	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays good vigour.	Fair	<5%	None evident	2	Within the College grounds adjacent the site	2.5	5
72	Jacaranda mimosifolia	Jacaranda	12	12	330*1,300*1	Mature twin trunk at .7m tree with a upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north. There is evidence of pruning of numerous limbs on the northern side of the tree adjacent the existing dwelling.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site	3	6
73	Washingtonia robusta	Cotton palm	22	3	460	Mature single trunk tree with an upright rounded form; an upright trunk and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site	1	1.5
74	Liquidambar styraciflua	Sweet Gum	16	15	400*1,480*1	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. The tree has been significantly pruned to 5metres	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	Decay located in the pruning branch stubs and callusing satisfactorily	2	Within the College grounds adjacent the site	4	8
75	Washingtonia robusta	Cotton palm	23	3	440	Mature single trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site	1	1.5
76	Callistemon viminalis	Weeping Bottlebrush	4	3	100*1,60*1	Semi-mature twin trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	Within the College grounds adjacent the site	1.5	3
77	Callistemon viminalis	Weeping Bottlebrush	5	3	100*2,60*1,50 *1	D Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within the College grounds adjacent the site	1.5	3
78	Betula pendula	Birch	13	5	230	Mature single trunk tree with an upright elliptical form; a slight lean that has corrected and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	None evident	2	Within the College grounds adjacent the site	2	4
79	Camellia japonica	Camellia	6	5	100*1,200*1	Mature multi trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	Within the College grounds adjacent the site		4
80	Plumeria acutifolia	Frangipani (rubra)	5	5	120*3	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	Minor decay in old branch stubs	2	Within the College grounds adjacent the site	1.5	2
81	Eucalyptus sp.	-	16	14	740	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree stability is suspect and its branch attachment appears fair. The tree is considered to be in poor health and displays fair vigour.	Fair	20%	Dieback throughout the canopy, psyllid damage to the foliage and the foliage is sparse with reduced leaf size in the upper canopy.	Unstable	 Within the College grounds adjacent the site 	4.5	9
82	Gleditsia tricanthos	Pseudo Acacia	20	15	550	Mature twin trunk at 2m tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	None evident	1	Within the College grounds adjacent the site	4	8
83	Cupressus sp.	Cypress	20	12	620	Mature multi trunk tree with an upright pyramidal form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site		7
84	Jacaranda mimosifolia	Jacaranda	14	15	460	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site	3	6
85	Acmena sp.	Lilly Pilly	15	6	200	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within the College grounds adjacent the site	2	4
86	Arecastrum romanzoffianum	Cocos Palm	15	6	340	Mature single trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Env. Pest Species - Exempt from Council's TPO	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within the College grounds adjacent the site	1	1.5
87	Howea forsteriana	Kentia Palm	8	4	200	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1/5	Within the College grounds adjacent the site	1	1.5
88	Jacaranda mimosifolia	Jacaranda	15	16	400*1,440*1	Mature twin trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning, however some pruning has been undertaken and some remedial work/painting has been undertaken on old wounds.	High L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	Within the College grounds adjacent the site	4	8

(table continued next sheet)

dwg no.



prepared by melanie howden nts

scale at A3 date 09/10/09

rev. sheet of mtcd1.04 0.1 6 11

project impact of development on trees - moore theological college, newtown drawing title

arboricultural assessment - tree data sheet D

Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Cano py Dead Wood		SULE	On / off site	Structural Root Zone (m radius)	Optimal Tree protection Zone (m radius)
89	Michelia figo	Port Wine Magnolia	5	5		Mature multi trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	Within the College grounds adjacent the site	2	4
90	Plumeria acutifolia	Frangipani (rubra)	6	6	200*!,180* 1,140*1	Mature twin trunk tree with a broad spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	None evident	1	Within the College grounds adjacent the site	1.5	2
91	Syzygium sp.	Bush Cherry (horticultural hybrid)	9	6	180	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	Evidence of sooty mould, and psyllid damage to the foliage is present.	1	Within the College grounds adjacent the site	1.5	3
	Araucaria heterophylla	Norfolk Pine	22	8	380	Mature single trunk tree with an upright pyramidal form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	On adjacent allotment	3	6
	Lophostemon confertus	Brushbox	17	11	650	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On adjacent allotment	4	8
94	Lophostemon confertus	Brushbox	22	17	580	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On adjacent allotment	4	8
	Jacaranda mimosifolia	Jacaranda	15	7	300	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. Minor pruning at approximately 5metres and overhanging the building	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	Decay is present on the northern side of the tree from the base to 1.2metres in height and some suckering regrowth is apparent.	2	On adjacent allotment	2.5	5
96	Jacaranda mimosifolia	Jacaranda	15	9	330	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Minor pruning as the tree currently overhangs the building	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Fair	<5%	None evident	2	On adjacent allotment	3	6
97	Jacaranda mimosifolia	Jacaranda	14	8	380	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Minor pruning as the tree currently overhangs the building. Suckering growth occurs from ground level to Smetres.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within the College grounds adjacent the site	3.5	7
98	Plumeria acutifolia	Frangipani (rubra)	4	3	200*3	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Deciduous None	<5%	None evident	2	Within the College grounds adjacent the site	1.5	2
99	Malus sp.	Crabapple	4	4	350	Over mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Evidence of significant pruning to prolong longevity	Low L/scape Sig.	The tree displays some signs of instability and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Deciduous None	15%	Decay in the main trunk	4	Within the College grounds adjacent the site	2	4
100	Howea forsteriana	Kentia Palm	10	4	200	Mature single trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1/5	Within the College grounds adjacent the site	1	1.5
101	Howea forsteriana	Kentia Palm	10	4	200	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1/5	Within the College grounds adjacent the site	1	1.5
	Lophostemon confertus	Brushbox	16	4	800	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	On adjacent allotment	5	10
	Lophostemon confertus	Brushbox	11	10		Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays good vigour.	Very Good	<5%	Evidence of basal trunk damage on three trunks to a height between 1- 2metres.Decay in wound located on the southern trunk of the tree.	1	On adjacent allotment	5	10
	Lophostemon confertus	Brushbox	15		4	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Evidence of pruning to a height of 5metres on the western side of the tree	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site	4	8
	Cinnamomum camphora	Camphor Laurel	15	12	4	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	Within the College grounds adjacent the site	5	10
	Cinnamomum camphora	Camphor Laurel	16	14		Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.			<5%	None evident	1	On adjacent allotment	5	10
	Cinnamomum camphora	Camphor Laurel	18	17	1*200, 5* 400	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.		5%	None evident	1	On adjacent allotment	6	12
	Lophostemon confertus	Brushbox	18	14	750	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Significant L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	5%	None evident	1	On adjacent allotment	4.5	9
109	Grevillea robusta	Silky Oak	15	10	440	Mature single trunk tree with an upright pyramidal form; an upright trunk/s and majority of canopy and branch development is towards the north. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	5%	None evident	1	On adjacent allotment	3	6



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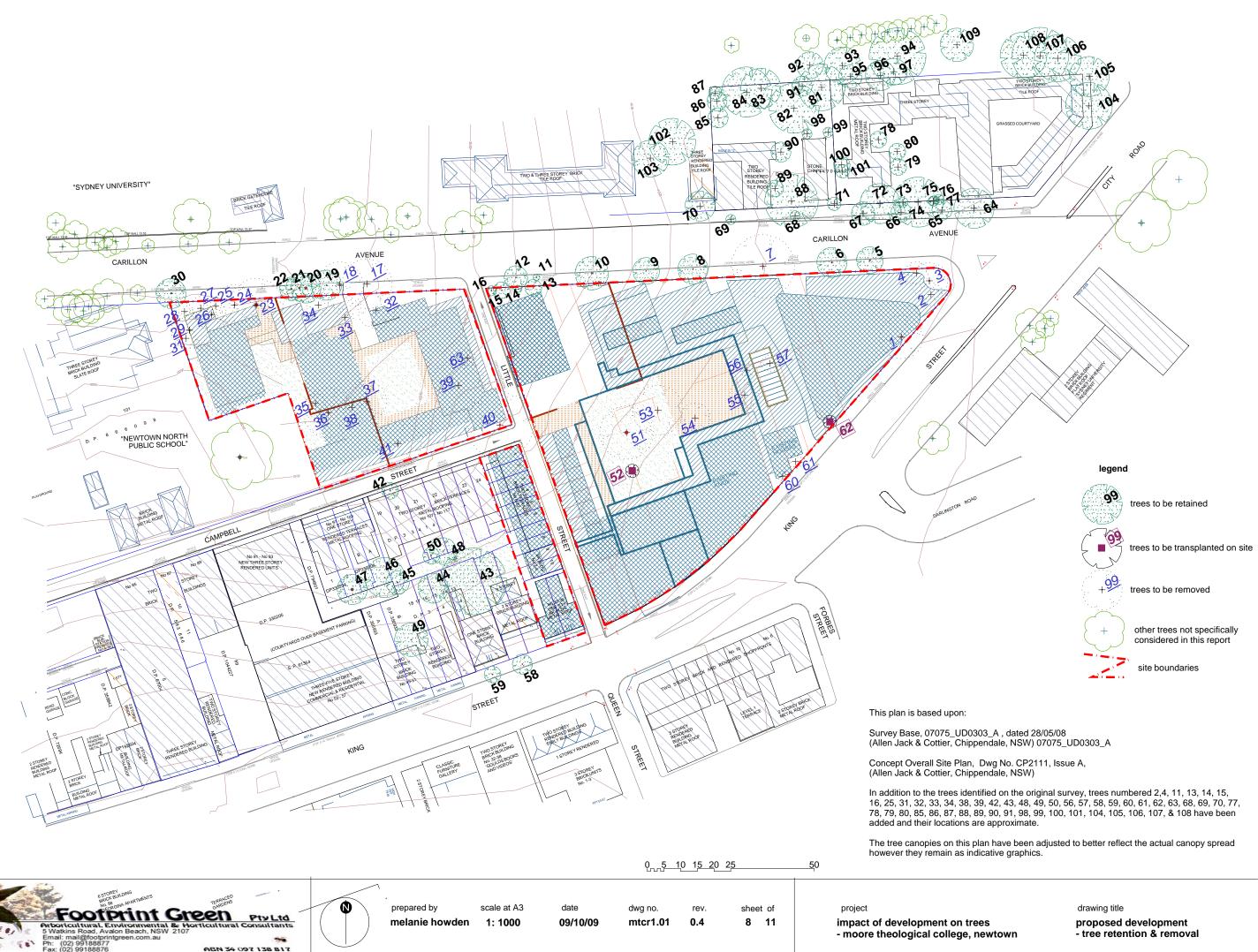
prepared by scale at A3 melanie howden nts

date 09/10/09

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project impact of development on trees - moore theological college, newtown



Tree No	Genus Species	Common Name	DBH (mm)	Env. / Lscape Significance	SULE	Optimal Tree Protect. Zone (m radius)	Structural Root Zone (m radius)	Adjacent Works	Influence on Tree	Plan Status	On / Off Site
1	Harpephyllum caffrum	Kaffir Plum	650	High L/scape Sig.	2	8	4	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
2	Eucalyptus elata	River Peppermint	260	Low L/scape Sig.	1	4	2.5	The proposed building footprint spatially conflicts with the location	Not applicable	To be Removed	On site
3	Corymbia maculata	Spotted Gum	420	High L/scape Sig.	1	5	3	of the tree. The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
4	Callistemon viminalis	Weeping Bottlebrush	4*100- 160	Low L/scape Sig.	2	4	2	The proposed building footprint spatially conflicts with the location	Not applicable	To be Removed	On site
5	Liquidambar styraciflua	Sweet Gum	420	Moderate L/scape Sig.	1	5	3	of the tree. The proposed building footprint is within 3.5m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
6	Liquidambar styraciflua	Sweet Gum	500	Moderate L/scape Sig.	1	6	3	The proposed building footprint is within 4.0m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
7	Jacaranda mimosifolia	Jacaranda	550	High L/scape Sig.	1	7	3.5	The proposed building footprint and lower ground car park is within 3.2m (south) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	Within road reserve
8	Jacaranda mimosifolia	Jacaranda	330	Moderate L/scape Sig.	1	4.5	2.5	The proposed building footprint is within 4.4m (south east) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
9	Jacaranda mimosifolia	Jacaranda	260	Moderate L/scape Sig.	1	4	2.5	The proposed building footprint is within 3.7m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
10	Jacaranda mimosifolia	Jacaranda	480	High L/scape Sig.	1	5	3	The proposed building footprint is within 7.7m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
11	Jacaranda mimosifolia	Jacaranda	60	Low L/scape Sig.	1	3	1.5	The existing building is to be retained within 4.6m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
12	Jacaranda mimosifolia	Jacaranda	260	Moderate L/scape Sig.	1	4	2.5	The existing building is to be retained within 6.0m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
13	Ulmus parvifolia	Chinese Weeping Elm	120	Low L/scape Sig.	1	3	1.5	The existing building is to be retained within 1.7m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	On site
14	Ulmus parvifolia	Chinese Weeping Elm	100	Low L/scape Sig.	1	3	1.5	The existing building is to be retained within 2.7m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	On site
15	Ulmus parvifolia	Chinese Weeping Elm	1*100, 1*140	Low L/scape Sig.	1	3	1.5	The existing building is to be retained within 4.0m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	On site
16	Ulmus parvifolia	Chinese Weeping Elm	160	Low L/scape Sig.	1	3	1.5	The existing building is to be retained within 5.2m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	On site
17	Jacaranda mimosifolia	Jacaranda	500	High L/scape Sig.	1	7	3.5	The proposed driveway crossing is within 0.7m (west) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	Within road reserve
18	Sorbus sp.	Rowan	550	High L/scape Sig.	1	7	3.5	The proposed driveway crossing is within 0.7m (east) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	Within road reserve
19	Jacaranda mimosifolia	Jacaranda	300	Moderate L/scape Sig.	1	4.5	3	The4 proposed driveway is within 4.8m (west) of the tree. The proposed building footprint is within 6.2m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	
20	Melaleuca quinquenervia	Paperbark	650	High L/scape Sig.	3	8	4		No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	

Tree No	Genus Species	Common Name	DBH (mm)	Env. / Lscape Significance	SULE	Optimal Tree Protect. Zone (m radius)	Structural Root Zone (m radius)	Adjacent Works	Influence on Tree	Plan Status	On / Off Site
21	Melaleuca quinquenervia	Paperbark	500	High L/scape Sig.	2	7	3.5	The proposed basement carpark is within 6.0m (south) of the tree. The proposed building footprint is within 4.4m (south) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	Within road reserve
22	Melaleuca quinquenervia	Paperbark	400	Moderate L/scape Sig.	1	6	3	The proposed basement carpark is within 7.0m (south east) of the tree. The proposed building footprint is within 4.5m (south east) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	Within road reserve
23	Celtis sp.	Hackberry	750	Significant L/scape Sig.	2	8	4.5	The proposed basement carpark and building footprint is within 0.4m (south west) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
24	Corymbia maculata	Spotted Gum	400	High L/scape Sig.	1	6	3	The proposed basement carpark and building footprint is within 1.9m (south) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
25	Eucalyptus sp.	-	220	Low L/scape Sig.	1	3	1.5	The proposed building footprint is within 1.1 (west) of the tree and	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
26	Corymbia maculata	Spotted Gum	450	High L/scape Sig.	1	7	3.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
27	Eucalyptus sp.	-	2*260	Low L/scape Sig.	1	6	3	The proposed building footprint is within 0.5m (south) of the tree and the proposed basement carpark is within 4.0m (south) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
28	Eucalyptus sp.	-	220	Low L/scape Sig.	2	3	2	The proposed building footprint is within 1.0m (south) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
29	Celtis sp.	Hackberry	320	High L/scape Sig.	1	4	2.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
30	Jacaranda mimosifolia	Jacaranda	300	Moderate L/scape Sig.	1	4	2.5	The proposed building footprint is within 8.0m (south east) of the tree.	No significant impact with appropriate tree protection measures.	Retained with General Tree protection measures	Within road reserve
31	Brachychiton acerifolius	Illawarra Flame Tree	300	Moderate L/scape Sig.	2	4	2.5	The proposed building footprint and basement carpark is within 1.5m (east) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
32	Callistemon salignus	Willow Bottlebrush	4*200	Moderate L/scape Sig.	3	5	3	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
33	Eucalyptus haemastoma	Scribbly Gum	240	Low L/scape Sig.	1	4	2.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
34	Callistemon salignus	Willow Bottlebrush	1*300, 1*280	Moderate L/scape Sig.	2	5	3	The proposed building footprint is within 1.4m (south) of the tree and the proposed basement carpark is within 3.2m (west) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
35	Allocasuarina sp.		340	High L/scape Sig.	1	5	3	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
36	Corymbia citriodora	Lemon Scented Gum	600	Significant L/scape Sig.	3	9	4.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
37	Corymbia citriodora	Lemon Scented Gum	440	High L/scape Sig.	1	5.5	3.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
38	Eucalyptus sp.	-	180	Low L/scape Sig.	4	3	1.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site

(table continued next sheet)



prepared by scale at A3 melanie howden nts

date 09/10/09

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drawing title impact of proposed development on individual trees - sheet A

Tree No	Genus Species	Common Name	DBH (mm)	Env. / Lscape Significance	SULE	Optimal Tree Protect. Zone (m radius)	Structural Root Zone (m radius)	Adjacent Works	Influence on Tree	Plan Status	On / Off Site
39	Celtis sp.	Hackberry	600	High L/scape Sig.	1	8	4	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
40	Celtis sp.	Hackberry	600	High L/scape Sig.	1	8	4	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
41	Quercus robur	English Oak	580	High L/scape Sig.	1	8	4	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
42	Lagerstroemia indica	Crepe Myrtle	1*100	Low L/scape Sig.	2	3	1.5		Not applicable	Retained	Within the College grounds adiacent the site
43	Jacaranda mimosifolia	Jacaranda	700	Significant L/scape Sig.	2	9	4.5	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
44	Corymbia citriodora	Lemon Scented Gum	380	High L/scape Sig.	1	5	3	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
45	Grevillea robusta	Silky Oak	400	High L/scape Sig.	1	5.5	3.5	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
46	Acer negundo	Box Elder	380	Moderate L/scape Sig.	3	5	3	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
47	Acer negundo	Box Elder	1*200, 1*200, 1*260	Moderate L/scape Sig.	2	5	3	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
48	Corymbia citriodora	Lemon Scented Gum	300	Moderate L/scape Sig.	1	4.5	3	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
49	Mangifera indica	Mango Tree	460	Moderate L/scape Sig.	1	6	3.5	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
50	Callistemon sp.	Bottlebrush	2*100, 1*200	Moderate L/scape Sig.	1	3	2	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within the College grounds adjacent the site
51	Celtis sp.	Hackberry	1*300, 1*350, 1*400, 1*450	High L/scape Sig.	2	8	4	The proposed carpark spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
52	Washingtonia sp.	Cotton Palm	400	Moderate L/scape Sig.	1/5	2	1	The proposed carpark spatially conflicts with the location of the tree.	Not applicable	Transplant on Site	On site
53	Eucalyptus sp.	-	500	Significant L/scape Sig.	1	8	4	The proposed carpark spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
54	Flindersia australis	Crows Ash / Australian Teak	400	High L/scape Sig.	1	7	3.5		Not applicable	To be Removed	On site
55	Acer negundo	Box Elder	3*240	Moderate L/scape Sig.	2	5	3	The proposed carpark spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
56	Robinia pseudoacacia	False Acacia	200	Low L/scape Sig.	2	3	2	The proposed carpark spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
57	Robinia pseudoacacia	False Acacia	240	Low L/scape Sig.	2	3	2	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
58	Platanus orientalis	Plane Tree	240	Low L/scape Sig.	1	3	2		Not applicable	Retained	Within road reserve
59	Platanus orientalis	Plane Tree	200	Low L/scape Sig.	1	3	1.5	No proposed works within the vicinity of the tree.	Not applicable	Retained	Within road reserve
60	Callistemon sp.	Bottlebrush	2*200, 1*100	Low L/scape Sig.	2	3	2	The proposed paved area spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
61	Acer palmatum	Japanese Maple	1*200, 1*100	Low L/scape Sig.	2	3	2	The proposed paved area spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
62	Washingtonia sp.	Cotton Palm	600	Moderate L/scape Sig.	1/5	2	1	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	Transplant on Site	On site
63	Grevillea robusta	Silky Oak	180	Moderate L/scape Sig.	1	3	2	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site





Note: Whilst Tree No's 64- 109 are within the grounds of the College, no development assessment impact has been carried out on these trees. Tree No's 64 - 109 are on the northern side of Carillon Avenue on the opposite side of the road to the development site.

Details of the description and condition of Tree No's 64 - 109 are found on sheets 6 & 7 of this report.



prepared by melanie howden

scale at A3 nts

date 09/10/09 mtci1.02 0.4

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figure 8.2 - tree no. 1, Kaffir Plum on the site fronting King Street

figure 8.3 - tree no. 53 (front) with tree no. 54 (rear) viewed from Campbell Street

drawing title impact of proposed development on individual trees - sheet B

general tree protection measures during construction

Prior to demolition or earthworks, the removal of trees identified in this report should be undertaken with particular attention given to ensure that no damage occurs to the canopy foliage and branch structure of the trees to be retained.

Prior to demolition or earth works, secure protective fencing is to be erected around individual trees or groups of trees identified as being retained. Protective Fencing should be located no closer than the Optimal Tree Protection Zone of each tree (refer tables, sheets 7-8), however where structures are to be demolished within the Optimal Tree Protection Zone of the trees, the protective fencing must be aligned to be no further than 0.5m away from the proposed structure to be demolished.

The purpose of the fencing is to protect the tree roots and trunk and branches and minimise detrimental impacts on the trees during demolition and construction. Fencing shall be 1.8m high chain mesh material securely fixed to steel supporting posts with top and bottom strainer top or steel pipe rails.

The building contractor shall ensure that at all times during site works no activities, stock piles, storage or disposal of materials shall take place within the fenced off areas and that all Protective Fences remain secure throughout the development work period.

Prior to earth works or construction, where the protective fencing encroaches within the approved building footprint, the protective fencing can be realigned and must be no further than 0.5m away from the structure to be built.

Construction scaffolding can be erected within the tree protection fencing provided that the weight distribution points are spread over a minimum of 2m² and these points are over existing levels to avoid soil compaction.

Specific excavation for services that require critical fall (eg. sewer, stormwater) may be undertaken within the fenced off areas provided that trenching is dug using hand tools or thrust boring and tree roots are not severed unless they spatially conflict with the service pipes. This work within the tree protection fencing must be carried out under the instructions of an experienced and qualified arborist.

Protective fencing shall remain in functional condition for the duration of building works and can be removed to allow for works identified in the landscape plan.

Outside the approved building footprints or retaining walls, landscape works in the vicinity of the trees must be sympathetic to tree retention and existing ground levels within the trees' Optimal Tree Protection Zone (refer tables, sheets 7-8) must remain unchanged.

Any tree damage that occurs to trees or tree roots during site works is to be treated by an experienced and qualified arborist. Where branch pruning works are required, all pruning works including the removal of deadwood are to be undertaken in accordance with Australian Standard AS 4373-2007 Pruning of Amenity Trees and the work is to be undertaken by an experienced and qualified arborist.

summary

This report has been prepared to assess the condition and significance of a number of trees on and adjacent the proposed development areas within Moore Theological College, in Newtown and assess the impact of the proposed development on the existing trees. The report has been commissioned by Allen Jack & Cottier on behalf of the College and site instructions have been provided by Allen Jack & Cottier.

Site inspections and field work were conducted on the 8th May, 2009 with additional field assessments carried out on the 30th July 2009.

The existing site encompasses a number of developed allotments consisting of the College's Newtown campus with associated grounds, buildings and facilities, commercial premises, carparking areas and a child care centre.

The proposed development involves demolition of several buildings and structures and redevelopment of the site for the purposes of providing College accommodation, academic studies, carparking and administrative functions.

There are 109 trees considered in this report of which 63 trees are on and adjacent the proposed development site and **46** trees are located on the College's property on the northern side of Carillon Avenue opposite the site.

Of the 63 trees on and adjacent the proposed development site based upon the development plans and this assessment:

- 34 trees are to be removed,
- 2 trees/palms are to be transplanted on the site, and
- 27 trees are to be retained.

The 34 trees to be removed consist of:

- 1 tree is in poor/fair condition and considered to be of low landscape significance (Tree No 38):
- 10 trees are in fair/good condition and is considered to be of low landscape significance (Tree No's 2, 4, 25, 27, 28, 33, 56, 57, 60 & 61);
- 5 trees are in fair/good condition and is considered to be of moderate landscape significance (Tree No's 30, 31, 34, 55 & 63);
- 15 trees are in fair/good condition and is considered to be of high landscape significance (Tree No's 1, 3, 7, 17, 18, 24, 26, 29, 35, 37, 39, 40, 41, 51 & 54)
- 1 tree is in fair/good condition and is considered to be prominent in the broader landscape (Tree No 36) and;
- 2 trees are in fair/good condition and are considered to be prominent in the broader landscape (Tree No's 23 & 53).

The 2 trees/ palms identified as being transplanted are:

• 2 Cotton Palms (*Washingtonia sp.*) are suitable species capable of being transplanted (Tree No's 52 & 62).

In relation to the 27 trees identified as being retained on and adjacent the proposed development site, provided that the tree protection measures referred to on this sheet are implemented and works are undertaken in a sensitive manner, the proposed development will not have a significant impact on the long-term health of the trees identified as being retained.

For the purposes of this report the 46 trees located on the College's property, on the northern side of Carillon Avenue opposite the site, are not affected by this proposed development.



prepared by

PtyLtd

scale at A3 melanie howden nts

date 09/10/09 dwg no. mtcs1.01

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