

TREE AMENITY VALUATION CALCULATION

The following formula has been adapted from the City of Melbourne "Calculating a Tree's Amenity Value" to assist in the determination of a reasonable amount that DCC would be paid by a Developer or resident for the unscheduled removal of a public tree.

This formula only calculates the amenity value of the tree. Further charges including the cost of removal, stump grinding, tree planting and 24 months of establishment costs would be determined and charged separately in most cases.

The tables below relate directly to the "Calculation Sheet".

Table 1 Species Factor

Species Group	Characteristics
1	trees of short life span (<50yrs), Fast growth. <i>Examples: Prunus, Acacia, Virgillia, Laburnum</i>
2	trees of short life span (<50yrs), slow growth. <i>Examples: Malus, Crataegus, Eugenia, Waterhousia, Pyrus</i>
3	trees of medium life span (50 – 150 yrs), fast growth rate. <i>Examples: Populus, Liquidamber, Eucalyptus, Angophora, Grevillea, Melaleuca, Michelia, Salix, Casuarina, Hakea, Celtis, Acmena</i>
4	trees of medium life span (50 – 150 yrs), slow growth rate. <i>Examples: Brachychiton, Fraxinus, Gleditsia, Lagunaria, Jacaranda, Shinus, Phoenix, Melia, Robinia, Lophostemon, Lirodendron, Agonis, Metrosideros, Syzgium</i>
5	trees of long life span (>150 yrs), fast growth rate. <i>Examples: Cupressus, Platanus, Ficus, Pinus</i>
6	trees of long life span (>150 yrs), slow growth rate. <i>Examples: Ulmus, Quercus, Sequoia, Ginkgo, Araucaria</i>

Table 2. Modifier

0	Normal plant status
1	an ubiquitous species (grows like a weed) Example: Salix, Fraxinus rotundafolia, Pittosporum undulatum.
2	a rare species in the locality, a special precious cultivated variety, a tree on the "significant tree register" , has special historical or other significances

Table 3. Aesthetics Factor

1	contributes little to the landscape
2	one of a group of close plantings
3	wide plantings
4	irregular spacing between trees: regular spacings one side
5	street or pathway plantings, regular spacing both sides
6	solitary feature specimen tree

Table 4. Locality Factor

	Locality (L)
1	in undeveloped bushland or reserves
2	in villages
3	in outer suburb areas and residential streets
4	in inner city suburbs
5	in City Park or Reserve, significant street near City centre
6	in City Garden or City Centre secondary street
7	City Centre Main Street, Principal Boulevard

Table 5. Tree Condition

	TREE CONDITION (C)	RATING
1	6, 7, 8, 9	very poor
2	10, 11, 12, 13	poor
3	14, 15, 16, 17, 18	fair
4	19, 20, 21, 22	good
5	23, 24, 25, 26	excellent

TREE AMENITY VALUATION CALCULATION

CTAV

Tree amenity valuation formula:

$$\text{Value (V)} = \text{Basic Value (\$)} \times \text{Species (S)} \times \text{Aesthetics (A)} \times \text{Locality (L)} \times \text{Condition (C)}$$

Tree #

Species

Location

Step 1. Determination of Basic Monetary Value (\$)

The basic monetary value of a tree is determined by measuring the trunk diameter at breast height (DBH).
DBH = 1.4m above ground surface.

DBH

Basic Value

Step 2. Determination of species factor (S)

A tree is assessed according to its known natural lifespan and its rate of growth in a particular environment (**Characteristics**). For example a long lived tree will be scored higher than a short lived tree. Significant features to the tree will also modify how the tree is scored. Judgement regarding species factor must be made by a qualified arborist.

Characteristics

Table trees of short life span (<50yrs), Fast growth. Examples: Prunus, Acacia, Virgillia, Laburnum

Character value

Modifier value

Table Normal plant status

Modifier value

Total S factor

Step 3 Determination of aesthetics factor (A)

The aesthetic value of a tree is determined by the impact on the landscape if the tree was removed. This category is closely tied to the locality factor (L), see Step 4.

Aesthetics

Table wide plantings

Total A factor

Step 4. Determination of Locality factor (L)

The locality factor is determined by the tree's geographical situation. Trees in the CBD or a major arterial road (urban) score highest because of the stressful growing environment that the tree has to survive in. As the locality becomes more rural the significance of the location of the tree diminishes.

Locality	
Table	3 in outer suburb areas and residential streets
Total L factor	
1.5	

Step 5. Determination of Tree Condition (C)

Tree condition value is determined by the corresponding total score of the assessment criteria.

Condition		Rating	Score
Trunk	Solid and Sound	5	5
	Sections of bark damaged / missing	3	
	Extensive Decay, hollow trunk	1	
Growth	> 15cm twig elongation this season	3	1
	5 to 15 cm twig elongation	2	
	< 5 cm twig elongation	1	
Structure	Healthy, stable and sound	5	3
	Some deadwood and dead limbs	3	
	Extensive dieback and deadwood	1	
Pests & Diseases	No pest / disease infestation	3	3
	Minor symptoms of infestation	2	
	Advanced symptoms of infestation	1	
Canopy Developm	Full balanced canopy	5	3
	Full but unbalanced, lop – sided	3	
	Unbalanced and lacking full canopy	1	
Life Expectancy	> 50 years	5	3
	10 – 50 years	3	
	< 10 years	1	
			18

Total C Factor	0.6
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TOTAL AMENITY VALUE OF TREE	\$5,955
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TABLE 1	DBH (cm)	2020
	6	\$368.01
	7	\$500.98
	8	\$654.36
	9	\$828.16
	10	\$1,022.43
	11	\$1,259.34
	12	\$1,472.29
	13	\$1,727.90
	14	\$2,003.94
	15	\$2,300.45
	16	\$2,617.41
	17	\$2,954.80
	18	\$3,312.65
	19	\$3,690.95
	20	\$4,089.69
	21	\$4,508.88
	22	\$4,948.53
	23	\$5,408.63
	24	\$5,889.16
	25	\$3,690.14
	26	\$6,911.58
	27	\$7,453.51
	28	\$8,015.80
	29	\$8,598.57
	30	\$9,201.81
	31	\$9,825.50
	32	\$10,469.62
	33	\$11,134.19
	34	\$11,819.20
	35	\$12,524.68
	36	\$13,250.60
	37	\$13,996.97
	38	\$14,763.80
	39	\$15,551.07
	40	\$16,358.77
	41	\$17,186.94
	42	\$18,035.55
	43	\$18,904.61
	44	\$19,794.12
	45	\$20,704.08
	46	\$21,634.48
	47	\$22,585.33
	48	\$23,556.64
	49	\$24,548.38
	50	\$25,560.58
	51	\$26,593.23
	52	\$27,646.33
	53	\$28,719.88
	54	\$29,813.86

	55	\$30,928.31
	56	\$32,063.19
	57	\$33,218.53
	58	\$34,394.33
	59	\$35,590.56
	60	\$36,807.24
	61	\$38,044.38
	62	\$39,301.95
	63	\$40,579.99
	64	\$41,878.45
	65	\$43,197.39
	66	\$44,536.76
	67	\$45,896.58
	68	\$47,276.85
	69	\$48,677.57
	70	\$50,098.74
	71	\$51,540.36
	72	\$53,002.42
	73	\$54,484.94
	74	\$55,987.89
	75	\$57,511.31
	76	\$59,055.17
	77	\$60,619.48
	78	\$62,204.23
	79	\$63,809.43
	80	\$65,435.09
	81	\$67,095.18
	82	\$68,747.74
	83	\$70,434.75
	84	\$72,141.69
	85	\$73,870.08
	86	\$75,618.42
	87	\$77,387.22
	88	\$79,176.46
	89	\$80,986.15
	90	\$82,816.28
	91	\$84,666.88
	92	\$86,537.91
	93	\$88,429.39
	94	\$90,341.33
	95	\$92,273.71
	96	\$94,226.53
	97	\$96,199.82
	98	\$98,193.53
	99	\$100,207.72
	100	\$102,242.34
	101	\$104,297.40
	102	\$106,372.92
	103	\$108,468.88
	104	\$110,585.29
	105	\$112,722.17

	106	\$114,879.48
	107	\$117,057.25
	108	\$119,255.45
	109	\$121,474.11
	110	\$123,713.22
	111	\$125,972.78
	112	\$128,252.78
	113	\$130,553.23
	114	\$132,874.13
	115	\$135,215.48
	116	\$137,577.28
	117	\$139,959.53
	118	\$143,028.55
	119	\$144,785.36
	120	\$147,228.95
	121	\$149,693.00
	122	\$152,177.48
	123	\$154,682.42
	124	\$157,207.81
	125	\$159,753.65
	126	\$162,319.93
	127	\$164,906.66
	128	\$167,513.84
	129	\$170,141.46
	130	\$172,789.55
	131	\$175,458.20
	132	\$178,147.04
	133	\$180,856.47
	134	\$183,586.34
	135	\$186,336.65
	136	\$189,107.42
	137	\$191,898.63
	138	\$194,710.29
	139	\$197,542.41
	140	\$200,394.97
	141	\$203,267.99
	142	\$206,161.44
	143	\$209,075.34
	144	\$212,009.70
	145	\$214,964.51
	146	\$216,829.20
	147	\$220,935.46
	148	\$223,951.61
	149	\$226,988.21
	150	\$230,045.24

TABLE 2		Species Factor (S)	
	Species Group	Characteristics	Score

	1	trees of short life span (<50yrs),Fast growth. <i>Examples: Prunus, Acacia, Virgillia, Laburnum</i>	0.5
	2	trees of short life span (<50yrs), slow growth. <i>Examples: Malus,Crataegus, Eugenia, Waterhousia, Pyrus</i>	0.6
	3	trees of medium life span (50 – 150 yrs), fast growth rate. <i>Examples: Populus, Coryomba, Liquidamber, Eucalyptus, Angophora, Grevillea, Melaleuca, Michelia, Salix, Casuarina, Hakea, Celtis, Acmena</i>	0.7
	4	trees of medium life span (50 – 150 yrs), slow growth rate. <i>Examples: Brachychiton, Fraxinus, Lagunaria, Jacaranda, Shinus Phoenix Melia</i>	0.8
	5	trees of long life span (>150 yrs), fast growth rate. <i>Examples: Cupressus, Platanus, Ficus, Pinus</i>	0.9
	6	trees of long life span (>150 yrs), slow growth rate. <i>Examples: Ulmus, Quercus, Sequoia, Ginkgo, Araucaria</i>	1.0
	MODIFIERS		
	0	Normal plant status	0.0
	1	an ubiquitous species (grows like a weed) Example: Salix, Fraxinus rotundafolia, Pittosporum undalatum. Dangerous (poor branch attachment). Example: Ulmus fastigata, Eucalyptus nicholii). Has undesirable characteristics (eg: allergenic). <i>Example: Lagunaria patersonii</i>)	-0.1
	2	a rare species in the locality, a special precious cultivated variety, a tree on the "significant tree register", has special historical or other significances	0.1

TABLE 3	Aesthetics_A	Score_A
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1	contributes little to the landscape	0.5
2	one of a group of close plantings	0.6
3	wide plantings	0.7
4	irregular spacing between trees: regular spacings one side	0.8
5	street or pathway plantings, regular spacing both sides	0.9
6	solitary feature specimen tree	1

TABLE 4	Locality (L)	Score
1	in undeveloped bushland or reserves	0.5
2	in villages	1
3	in outer suburb areas and residential streets	1.5
4	in inner city/town areas	1.75
5	in Regional Park or Reserve, significant street near City/town centre	2
6	in Historical Park or City/town secondary street	2.25
7	City Centre Main Street, Principal Boulevard	2.5

TABLE 5	TREE CONDITION (C)	SCORE
	6	0.2
	7	0.2
	8	0.2
	9	0.2
	10	0.4
	11	0.4
	12	0.4
	13	0.4
	14	0.6
	15	0.6
	16	0.6
	17	0.6
	18	0.6
	19	0.8
	20	0.8
	21	0.8
	22	0.8
	23	1
	24	1

	25	1
	26	1

Tree List

Acacia baileyana
Acacia deanei
Acacia decurrens
Acacia melanoxylon
Acacia mearnsii
Acacia pendula
Acacia pravissima
Acacia salicina
Acacia spectabilis
Acer buergerianum
Acer negundo
Acer x freemanii 'Autumn Blaze'
Acmena smithii
Agonis flexuosa
Albizia julibrissin
Alphitonia excelsa
Alnus cordata
Alnus jorullensis
Angophora costata
Angophora floribunda
Araucaria bidwillii
Araucaria columnaris
Araucaria cunninghamii
Araucaria heterophylla
Arbutus unedo
Backhousia citriodora
Banksia serrata
Bauhinia x blakeana
Bauhinia variegata
Betula pendula
Brachychiton acerifolius
Brachychiton discolour
Brachychiton populneus
Brachychiton rupestris
Backhousia citriodora
Callistemon citrinis
Callistemon 'Harkness'
Callistemon salignus
Callistemon viminalis
Callitris glaucophylla
Callitris rhomboidea
Casuarina cunninghamiana
Casuarina glauca
Crataegus laevigata
Cedrus atlantica
Cedrus deodara
Celtis australis

<i>Celtis occidentalis</i>
<i>Cercis siliquastrum</i>
<i>Chamaecyparis lawsoniana</i>
<i>Cinnamomum camphora</i>
<i>Corymbia citriodora</i>
<i>Corymbia eximia</i>
<i>Corymbia ficifolia</i>
<i>Corymbia gummiferum</i>
<i>Corymbia maculata</i>
<i>Corymbia ptychocarpa</i>
<i>Corymbia torelliana</i>
<i>Cupressus sempervirens</i>
<i>Dodena vicosa</i>
<i>Elaeocarpus reliculatus</i>
<i>Erythrina crista-galli</i>
<i>Eucalyptus albens</i>
<i>Eucalyptus bicostata</i>
<i>Eucalyptus blakelyi</i>
<i>Eucalyptus botryoides</i>
<i>Eucalyptus camaldulensis</i>
<i>Eucalyptus cladocalyx</i>
<i>Eucalyptus cinerea</i>
<i>Eucalyptus conica</i>
<i>Eucalyptus crebra</i>
<i>Eucalyptus dunnii</i>
<i>Eucalyptus forrestiana</i>
<i>Eucalyptus leucoxylon</i>
<i>Eucalyptus leucoxylon dwarf form</i>
<i>Eucalyptus leucoxylon ssp. megalocarpa</i>
<i>Eucalyptus mannifera subsp. maculosa</i>
<i>Eucalyptus melliodora</i>
<i>Eucalyptus microcarpa</i>
<i>Eucalyptus microtheca</i>
<i>Eucalyptus nicholii</i>
<i>Eucalyptus platypus</i>
<i>Eucalyptus polyanthemus</i>
<i>Eucalyptus robusta</i>
<i>Eucalyptus rossii</i>
<i>Eucalyptus sideroxylon</i>
<i>Eucalyptus stricklandii</i>
<i>Eucalyptus tereticornis</i>
<i>Eucalyptus torquata</i>
<i>Ficus microcarpa</i> var. <i>hillii</i>
<i>Fraxinus americana</i> var.
<i>Fraxinus excelsior</i>
<i>Fraxinus excelsior</i> 'Aurea'
<i>Fraxinus graffithii</i>
<i>Fraxinus ornus</i>
<i>Fraxinus oxycarpa raywoodii</i>

Geijera parviflora
Ginkgo biloba
Ginkgo biloba 'Princeton Sentry'
Gleditsia triacanthos var.inermis Varieties
Grevillea robusta
Hakea laurina
Hakea salicifolia
Hymenosporum favum
Jacaranda mimosifolia
Koelreuteria paniculata
Lagerstroemia indica x L. fauriei varieties
Lagunaria patersonia
Leptospermum petersonii
Liquidambar formosana
Liquidambar styraciflua"Goduzam" Gold Dust
Lophostemon confertus
Maclura pomifera 'Wichita'
Magnolia grandiflora 'Exmouth'
Malus floribunda
Malus ioensis "Plena"
Malus tschonoskii
Melia azedarach
Melaleuca linariifolia
Melaleuca quinquenervia
Melaleuca styphelioides
Metasequoia glyptostroboides
Nerium oleander
Nyssa sylvatica
Olea europea
Paulownia tomentosa
Phoenix canariensis
Phoenix reclinata
Photinia robusta
Pinus canariensis
Pinus halepensis
Pinus pinea
Pistacia chinensis
Platanus X acerifolia
Podocarpus elatus
Populus x canadensis "Evergreen 65 – 1"
Populus x P. euramericana "Veronese"
Populus nigra cv. "Italica"
Populus yunnanensis
Prunus cerasifera "nigra"
Pyrus calleryana Bradford
Pyrus calleryana Chanticleer
Pyrus nivalis

Pyrus ussuriensis
Quercus coccinea
Quercus palustris
Quercus suber
Robinia pseudoacacia (Varieties)
Salix babylonica
Sapium sebiferum
Schinus areira
Sophora japonica 'Princeton Upright'
Stenocarpus sinuatus
Syzygium paniculatum
Tristaniopsis laurina
Ulmus glabra 'Lutescens'
Ulmus parvifolia
Ulmus procera
Waterhousea floribunda
Washingtonia robusta
Zelkova serrata 'wireless'

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