

# TREE VALUATION IN THE CITY OF GREATER BENDIGO

Where a public tree removal is approved by Council's Parks and Open Unit for development, construction or works, the associated cost of the tree, its removal and replacement shall be paid by the property owner or representative prior to its removal.

The costs associated with removal of a public tree in the City of Greater Bendigo include:

<b>A – Amenity Value</b>	Calculated in accordance with the City's adopted Amenity Value Formula.
<b>B – Removal Costs</b>	The sum of the fees incurred by the City for physically removing the tree.
<b>C – Reinstatement Costs</b>	The cost of all works required to replace the loss of vegetation from the landscape.

## A - Amenity Value

The following formula has been prepared to assist with calculating the monetary amenity value of a public tree in the City of Greater Bendigo. This formula is based on the City of Melbourne's Amenity Value Formula developed in 1990 by Dr. Peter Yau and has been modified for application in Greater Bendigo.

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

Read through the following formula definitions to calculate the tree amenity value.

## Basic Value (\$)

The basic monetary value of a tree was taken from the internationally accepted table of values devised by the American Council of Tree and Landscape Appraisers and the International Society of Arboriculture, which in the base year 1988 was \$US27 per square inch trunk basal area. This has been converted to Australian dollars to a value corresponding to centimetres in trunk diameter at breast height (DBH). Basic values were updated in January 2017 to reflect the current CTLA value of \$13 per square centimetre. Young trees with a trunk diameter of 6 centimetres or less do not attract an amenity value charge.

### 2018 Basic Values

DBH cm	Base Value	DBH cm	Base Value	DBH cm	Base Value	DBH cm	Base Value
<6	\$ -	42	\$ 18,010.75	79	\$ 63,721.71	116	\$ 137,388.13
6	\$ 367.57	43	\$ 18,878.62	80	\$ 65,345.13	117	\$ 139,767.10
7	\$ 500.30	44	\$ 19,766.90	81	\$ 66,988.97	118	\$ 142,166.49
8	\$ 653.45	45	\$ 20,675.61	82	\$ 68,653.22	119	\$ 144,586.30
9	\$ 827.02	46	\$ 21,604.73	83	\$ 70,337.90	120	\$ 147,026.54
10	\$ 1,021.02	47	\$ 22,554.28	84	\$ 72,043.00	121	\$ 149,487.19
11	\$ 1,235.43	48	\$ 23,524.25	85	\$ 73,768.52	122	\$ 151,968.26
12	\$ 1,470.27	49	\$ 24,514.63	86	\$ 75,514.46	123	\$ 154,469.75
13	\$ 1,725.52	50	\$ 25,525.44	87	\$ 77,280.82	124	\$ 156,991.67
14	\$ 2,001.19	51	\$ 26,556.67	88	\$ 79,067.60	125	\$ 159,534.00
15	\$ 2,297.29	52	\$ 27,608.32	89	\$ 80,874.81	126	\$ 162,096.76
16	\$ 2,613.81	53	\$ 28,680.38	90	\$ 82,702.43	127	\$ 164,679.93
17	\$ 2,950.74	54	\$ 29,772.87	91	\$ 84,550.47	128	\$ 167,283.53
18	\$ 3,308.10	55	\$ 30,885.78	92	\$ 86,418.93	129	\$ 169,907.54
19	\$ 3,685.87	56	\$ 32,019.11	93	\$ 88,307.81	130	\$ 172,551.98
20	\$ 4,084.07	57	\$ 33,172.86	94	\$ 90,217.12	131	\$ 175,216.83
21	\$ 4,502.69	58	\$ 34,347.03	95	\$ 92,146.84	132	\$ 177,902.11
22	\$ 4,941.73	59	\$ 35,541.62	96	\$ 94,096.98	133	\$ 180,607.81
23	\$ 5,401.18	60	\$ 36,756.63	97	\$ 96,067.55	134	\$ 183,333.92
24	\$ 5,881.06	61	\$ 37,992.07	98	\$ 98,058.53	135	\$ 186,080.46
25	\$ 6,381.36	62	\$ 39,247.92	99	\$ 100,069.94	136	\$ 188,847.42
26	\$ 6,902.08	63	\$ 40,524.19	100	\$ 102,101.76	137	\$ 191,634.80
27	\$ 7,443.22	64	\$ 41,820.88	101	\$ 104,154.01	138	\$ 194,442.59
28	\$ 8,004.78	65	\$ 43,137.99	102	\$ 106,226.67	139	\$ 197,270.81
29	\$ 8,586.76	66	\$ 44,475.53	103	\$ 108,319.76	140	\$ 200,119.45
30	\$ 9,189.16	67	\$ 45,833.48	104	\$ 110,433.26	141	\$ 202,988.51
31	\$ 9,811.98	68	\$ 47,211.85	105	\$ 112,567.19	142	\$ 205,877.99
32	\$ 10,455.22	69	\$ 48,610.65	106	\$ 114,721.54	143	\$ 208,787.89
33	\$ 11,118.88	70	\$ 50,029.86	107	\$ 116,896.31	144	\$ 211,718.21
34	\$ 11,802.96	71	\$ 51,469.50	108	\$ 119,091.49	145	\$ 214,668.95
35	\$ 12,507.47	72	\$ 52,929.55	109	\$ 121,307.10	146	\$ 217,640.11
36	\$ 13,232.39	73	\$ 54,410.03	110	\$ 123,543.13	147	\$ 220,631.70
37	\$ 13,977.73	74	\$ 55,910.92	111	\$ 125,799.58	148	\$ 223,643.70
38	\$ 14,743.49	75	\$ 57,432.24	112	\$ 128,076.45	149	\$ 226,676.12
39	\$ 15,529.68	76	\$ 58,973.98	113	\$ 130,373.74	150	\$ 229,728.96
40	\$ 16,336.28	77	\$ 60,536.13	114	\$ 132,691.45		
41	\$ 17,163.31	78	\$ 62,118.71	115	\$ 135,029.58		

Based on CTLAv9 \$AUD13/cm<sup>2</sup>

## Species Factor (S)

A tree is assessed according to its known natural life span and its rate of growth in a particular environment. For example, a long-lived tree will be scored higher than a short-lived tree. Significant features of the tree will also modify how the tree is scored. Judgment regarding species factor must consider how that species performs in Greater Bendigo and must be made by a qualified Arborist.

Group	Characteristics	Example Species	Score
1	<ul style="list-style-type: none"> <li>trees of short life span (less than 50 years)</li> <li>fast growth rate</li> </ul>	<i>Prunus, Acacia, Callistemon</i>	0.5
2	<ul style="list-style-type: none"> <li>trees of short life span (less than 50 years)</li> <li>slow growth rate</li> </ul>	<i>Malus, Pyrus</i>	0.6
3	<ul style="list-style-type: none"> <li>trees of medium life span (50 - 150 years)</li> <li>fast growth rate</li> </ul>	<i>Populus, Liquidambar, Fraxinus, Eucalyptus spp., Corymbia, Angophora, Grevillea, Melaleuca, Casaurina, Hakea, Syzygium</i>	0.7
4	<ul style="list-style-type: none"> <li>trees of medium life span (50 - 150 years)</li> <li>slow growth rate</li> </ul>	<i>Brachychiton, Jacaranda, Zelkova, Shinus, Phoenix, Melia, Lophostemon, Agonis.</i>	0.8
5	<ul style="list-style-type: none"> <li>trees of long life span (more than 150 years)</li> <li>fast growth rate</li> </ul>	<i>Cupressus, Platanus, Ficus, Pinus, Celtis, Eucalyptus camaldulensis</i>	0.9
6	<ul style="list-style-type: none"> <li>trees of long life span (more than 150 years)</li> <li>slow growth rate</li> </ul>	<i>Ulmus, Quercus, Sequoia, Ginko, Araucaria, Agathis</i>	1.0
Modifiers	<ul style="list-style-type: none"> <li>Noxious or environmental weeds in the Bendigo region</li> </ul>	<i>Pittosporum undulatum, Salix spp., Acacia baileyana, Ailanthus spp., Robina pseudoacacia, Ligustrum spp., Cratageus monogyna</i>	-0.1
	<ul style="list-style-type: none"> <li>Listed as a 'significant tree' on either the CoGB or National Trust registers</li> <li>Listed under a schedule of the CoGB planning scheme</li> <li>a large hollow baring tree</li> <li>a rare species in the locality</li> <li>a special cultivated variety</li> <li>has special historical, cultural or other significance</li> </ul>		+0.1

\*Trees named are supplied only as examples in Bendigo conditions **Species Factor (S)**

## Aesthetics (A)

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

Aesthetic Factor	Score
Contributes little to the landscape	0.5
One of a group of close plantings	0.6
Wide plantings	0.7
Irregular spacing between trees; regular spacing one side	0.8
Street or pathway plantings, regular spacing both sides	0.9
Solitary feature specimen tree	1.0
<b>Aesthetics (A)</b>	

## Locality (L)

The locality factor is determined by the tree's geographical situation. Trees in within a highly urbanised environment score highest because of the stressful growing environment in which the tree must survive. As the location becomes more rural, the significance of the tree diminishes.

Locality Factor	Score
In rural areas (outside of urban centres/townships)	0.5
In bushland reserve or public open space within urban centre or township	0.75
Residential or commercial street in urban centre, suburb or township	1
In neighbourhood park or garden	1.25
Part of an avenue planting in urban area, suburb or township	1.5
Part of a key boulevard or town entrance planting; park or garden in city or town centre	1.75
Primary location within city or town centre, main street, mall, or civic space or street within CBD	2
<b>Locality (L)</b>	

## Tree Condition (C)

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

Assessment Criteria	Criteria Condition	Score
Trunk	solid and sound	5
	sections of bark damaged/missing	3
	extensive decay, hollow trunk	1
Growth	>15cm twig elongation this season	3
	5-15cm twig elongation	2
	<5cm twig elongation	1
Structure	healthy, stable and sound	5
	some deadwood and dead limbs	3
	extensive dieback and deadwood	1
Pests and Diseases	no pest/disease infestation	3
	minor symptoms of infestation	2
	advanced symptoms of infestation	1
Canopy Development	full balance canopy	5
	full but unbalanced, lop-sided	3
	unbalanced and lacking full canopy	1
Life Expectancy	>50 years	5
	10-50 years	3
	<10 years	1
<b>Total Condition Score</b>		

Total Score	Tree Condition	Factor
6-9	Very Poor	0.2
10-13	Poor	0.4
14-18	Fair	0.6
19-22	Good	0.8
23-26	Excellent	1.0
<b>Condition Factor (C)</b>		

**Amenity Value = Basic Value (\$) x Species (S) x Aesthetics (A) x Locality (L) x Condition (C)**

## B - Removal Costs

Costs will be based on the current costs of tree removal. It includes the physical removal of the tree and the stump.

## C – Reinstatement Costs

The level of reinstatement required will be determined by Council and will take into consideration the location, significance, biodiversity provision and the amenity of the tree removed. Reinstatement costs will also include a 24-month tree establishment fee and any treatment or Water Sensitive Urban Design (WSUD) measure deemed to be required to establish suitable replacement trees or vegetation.

## Total Costs

<b>A. Amenity Value</b>	
<b>B. Removal Costs</b>	
<b>C. Reinstatement Costs</b>	
<b>Total Costs (A+B+C) =</b>	