Tree Valuation is one of those nebulous subjects that have been avoided by most people up to now. The value placed on a tree naturally varies from person to person and place to place. The current interest in conservation necessitates the placing of monetary values on items that until now have been regarded mainly for their aesthetic value. Bearing this in mind, it was felt that the article following, which appeared in "Australian Parks", August 1974, was worth reprinting. It is included in Forest Notes with the kind permission of the Australian Institute of Parks and Recreation.

TREE VALUATION

A Formula for Assessing the Economic Value of Ornamental Trees in Public Open Spaces Under the Control of the Parks, Gardens and Recreations Committee of the Melbourne City Council.

A. Throughout the world in recent years, various systems have been developed in order to evaluate trees which have been established, or retained for their aesthetic values, or for other conservation purposes. Any such system is rather difficult to formulate and must be interpreted wisely. However, it is logical that such trees do have an economic value, for apart from the pure aesthetics concerned, they have actually cost a considerable amount of money over many years in such things as the cost of production, watering, pruning, removing dead wood and repairing wounds, fertilising and spraying for pests and diseases and in the protection of roots, etc. Methods for the valuation of such trees have been developed in various countries, and today we have such systems known as German, Swiss, American, Swedish and recently, Scottish.

There are many instances when the value of a tree is required, not only to have a tangible financial figure in order to claim against complete destruction, but to be able to assess the partial reduction of value to the community when actions which inhibit the health of trees occur. The best example of such in Melbourne is that of the trees in the east or "top" end of Collins Street. Over the past thirty years, these trees have decreased in

health by at least 70% due to the cutting of roots, the removal of moisture because of modern street and building techniques, the removal of light by tall building, the increase of wind turbulence and the concentration of polluted air by increased motor traffic.

There are many other reasons why it is desirable to place an economic value on such trees. These include:

1. Vandalism
2. Motor and other accidents
3. Installation of underground utility services
4. Installation of overhead wires
5. Construction of new roads, footpaths, freeways etc.
6. Construction of new buildings
7. Crossings to new or existing buildings
8. Effects by specific pollutants including plant poisons
9. Other related reasons.

The actual figures included in the various systems have been developed as a result of close study of the economics related to city park systems in the associated countries, and all arrive at similar conclusions. The system set out in (B) is based on the Maurer Hoffman System, developed in Germany and it is believed that this system is the most applicable to Melbourne. The basic value of a tree under this system (T) is similar to the cost of a young tree having like trunk diameter, and available on the open market in this State.

B. The following are adaptions of the Maurer-Hoffman method made to suit local conditions in Melbourne.

T = Trunk diameter, measured at 1 metre above the ground level

S = Tree species, which are divided into four groups.

A = Aesthetic value of tree.

H = Health of tree.

L = Locality of tree.

The estimated total value of the tree is obtained as follows:

T x S x L x H x A

The individual values of the above factors are:

T = Trunk Size

Commencing at 15 cm in diameter size.

CM	Inches	Value ($A)
15	(5.9)	100
20	(7.9)	150
25	(9.8)	210
30	(11.8)	280

Plus $80 for every extra 5 cm in diameter.

S = Tree Species

Below are examples of the value of "S" in the four groups.

GROUP I. 0.2 - 0.4

Virgilia capensis
Acacia elata
Acacia decurrens
Populus nigra 'Italica'

GROUP II. 0.4 - 0.6

Fraxinus oxycarpa
Acacia saligna
Eugenia smithii
Populus alba

GROUP III. 0.6 - 0.8

Fraxinus raywoodii
Quereus palustris
Eucalyptus maculata
Eugenia ventenati

GROUP IV. 0.8 - 1.0

Agonis flexuosa variegata
Ulmus campestris
Quercus rubra
Tristania conferta variegata

A = Aesthetic value of the tree

0.5 Trees of little importance
0.6 Closely planted trees (groups)
0.7 Plantings having reasonable space between trees
0.8 Wide plantings
0.9 Avenue plantings
1.0 Solitary planting (specimen tree)

H = Health of tree

0.5 Tree of poor form and little life expectancy
0.6 Tree of reasonable form but of limited life expectancy
0.7 Tree of reasonable health but of poor form
0.8 Reasonable health and form
0.9 Average health and form
1.0 Healthy and vigorous tree

L = Locality of tree

GROUP

(a) 0.25 Growing in undeveloped country
(b) 0.75 Rural area
(c) 1.50 Suburban area
(d) 2.50 City park
(e) 3.00 City street or plaza
(f) 3.50 City garden

References

1. Proceedings of the 6th International Congress of Park and Recreation Administration in Canberra 1970. (Paper by A. Raad - Rotterdam).

2. "Australian Parks" Volume 8, No. 4.