

Comments on Sheffield City Council's Five Year Tree Management Strategy 2012 -2017

My view of this document is that it is deficient in its scope - most of it relates to material better included into contract documentation and more suited to Appendices. I question whether much of it can be described as a 'Strategy' as it contains no overarching vision. The overall impression gained from the document is that trees are seen as a problem by the City Council, rather than as presenting opportunities for the betterment of the environment and urban life in general. There are ample data to support the value of trees in environmental, social and fiscal terms. These issues have not been addressed in the preparation of this document. The document relates solely to street trees. It is not clear to me if there is a wider strategy which deals with the City's trees in general.

There is no recognition of work which shows how trees and other greenspace elements impact positively on human health and well-being. A considerable body of work on this subject has been carried out in Scandinavia and reveals substantial benefits in terms of both mental and physical health.

There is no recognition of the eco-system service benefits provided by trees. These include carbon sequestration and climate regulation, purification of water and air as well as nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences

Street trees are visually extremely important. This was recognised in the first study of Trees in Towns commissioned by the Department of the Environment in 1993.

Strategic goals

The goals are laudable, however, they are repetitive and there is no detailed statement of how they are to be achieved. They do not show strategic thinking.

Canopy cover is best achieved by the growing and management of large tree species. Trees stay in the mature phase of their life-cycles for much of their lives. A European lime may be 'mature' for 250 years, an English oak for 500 years. A far more useful indicator is that of safe, useful life expectancy. This recognises the difference between the possible life-spans of different species - for example cherries and other small ornamentals will be overmature by the age of 60 years, whereas larger species will only just be entering the mature phases of their life-cycles. It cannot be stressed too strongly - trees have very long life-spans.



PRINCIPAL:

B.G. CRANE

ASSOCIATES:

G.M. CAUSEY, B.SC.(HONS),

F.ARBOR A.

K. MAGUIRE, B.SC (HONS)

ENVIRONMENTAL SCIENCE

N. GREGORI, B.A.(HONS) COMPUTER

STUDIES

**PO BOX 305
HERTFORD
SG13 9EL**

T. 01992 552199

M. 07973 224617

E. BGC.ASSOCIATES@GARE4FREE.NET

W. WWW.BGCASSOCIATES.ORG.UK

The graphs of the City's tree population are small and difficult to read, however, because of the long life-spans of trees, they show what seems to me to be a fairly uneven age-class distribution (this is good, in tree population management terms), with smaller numbers in the older classes from 80 years old onwards.

The graphs show that the older trees (generally) are of larger species - this is unsurprising as these are longer-lived. Larger trees may require periodic crown management, however, they give the greatest eco-system benefits due to their large crowns. It is interesting that there have been more recent planting of *Fraxinus* spp. as these are generally considered to present problems in urban areas.

Street Tree Maintenance

This section of the document is basically padding and should have been included as a series of Appendices.

Data storage

Again, should be in an Appendix. Data collected shows no safe, useful life expectancy. This is a missed opportunity as classification of this is an essential tree management tool. British Standard 5837: 2012. Trees in Relation to Demolition, Design and Construction. Recommendations - as its name suggests, refers to the assessment and protection of trees on development sites. It is difficult to see what its relevance here is.

Tree replacements

'The removal of street trees will only be considered as a last resort where there are no other reasonably practicable management options available to ensure safety or prevent damage to surrounding structures'. From my viewing of photographs taken of areas where tree removals are proposed, this replacement criterion does not appear to have been observed.

The use of the word 'discriminatory' is unclear - its dictionary meaning does not have an arboricultural application (see Concise Oxford Dictionary and Collins English Dictionary).

If the firm carrying out the assessments are also the tree works contractors the system is fraught with opportunities for abuse. In my experience, tree works contractors wildly over-specify the need for works to trees.

Who carries out the independent assessment when there is a question of felling a tree?

Engineering solutions

Generally, these are good, provided they are implemented - it appears that this has not been the case.

Street tree species

Again, best included as an Appendix. Some of the species selected are suspect to say the least.

Air quality

No attempt is made to show the value of trees in carbon capture and sequestration (which are not the same). Note that when a tree is felled the carbon captured within it is released to the atmosphere unless the wood is utilised. Most Local Authorities dispose of trees to landfill or composting - both of these methods release carbon. Carbon stored by London's trees is estimated at 2,367,000 tonnes with a value of £142 million per annum to the economy and carbon sequestered annually at 77,2000 tonnes valued at £4.63 million per annum.

The reference to the work of Taylor, Sinnett and Freer Smith is misleading as the abstract goes on...' *The evidence provided here suggests that the targeting of tree planting in the most polluted areas of the GLA (Greater London Area) and particularly the use of street trees which have the greatest exposure to PM10, would have the greatest benefit to future air quality*'.

A more recent study, using the i-Tree Eco system developed by the United States Department of Agriculture and Wildlife puts London's tree cover at 14% of land area. This gives a carbon storage of 2,367,000 tonnes per annum, carbon sequestration of 77,200 tonnes per hectare per year and pollution removal of 2,241 tonnes per hectare per year.

To my knowledge no studies have measured the pollution 'trapping' of roadside trees only. It would appear likely that they trap more than trees which are further away from roads. The document's reference to amount of PM10s captured by trees appears defeatist and almost 'anti-tree'.

The London i-Tree Eco study found that trees removed 299 tonnes of PM10 particulates and 153 tonnes of PM2.5 particulates, together with 32 tonnes of Carbon monoxide, 698 tonnes of Nitrogen dioxide, 997 tonnes of Ozone and 62 tonnes of sulphur dioxide. The total value of the removal of these pollutants is put at £126 million based on estimated externality costs associated with pollution and UK social costs published by the UK Government.

A study from the West Midlands suggests that a doubling of tree cover would reduce PM10 concentration by 25%, preventing 140 air pollution related premature deaths per year.

No mention is made of the value of trees in reducing storm water run-off. The London i-Tree study shows that the capital avoided 3414000 cubic metres of water run-off with a value of almost £2,8 million.

In addition to the London i-Tree Eco project, a similar assessment using the methodology carried out in Torbay returned similar results.

Yours sincerely,

Brian Crane

