

IMPROVING THE URBAN FOREST BY DESIGN

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Design is an important part of the growth of our urban forest, in fact as development pressures use up more and more available soil, innovative design that is integral to the development process is increasingly essential.

The TREENET bumper sticker says 'A City without Trees isn't fit for a Dog'. Well, it isn't fit for humans either, not to mention the myriad of fauna species both indigenous and introduced that inhabit our urban landscape. As the largest plant type, trees evoke in us a sense of awe, and no matter what their size and origin they remind us of the primeval forest.

Every culture has myths, legends and stories which tell of the spirit of trees and their significance. And even in our fast changing world these stories are not far away, they are alive in indigenous cultures, Taoist and other traditions of the East, and only just over the horizon of the collective European memory.

A treed urban landscape also makes sense from many other perspectives that are also growing in importance; these include reducing temperature in the city heat sink, reducing pollution, reducing energy use, and increasing biodiversity.

Given the above, one would expect that in any logically conceived urban environment, trees would be at the top of the list in terms of essential elements to support a healthy and sustainable human existence. Well TREENET exists because trees are unfortunately well down the list and struggling to hold their position despite the commendable efforts of initiatives such as the Million Tree Program and others. It is my view, biased as I am as a landscape architect, that a sustainable increase in healthy trees in the urban environment will only occur through the marrying of science and design. Increasingly tree placement results from not only a complex matrix of species selection considerations, but also a need to argue strongly for useable space to be set aside.

Many of the sites Taylor Cullity Lethlean has worked on in the last decade have been over old tips, over heavily contaminated industrial sites, in quarries, in salty soils with high saline water tables, or in urban streets where overhead and underground services and road and building footings have made tree placement and healthy growth problematic. We have in fact worked on a few urban sites where trees could simply be placed into existing site soil without consideration of soil remediation, conditioning and drainage.

The ideal of a designed landscape is to bring all the considerations which influence the outcome to bear in the decision-making process. These consideration may be biological, emotional, functional, spatial, horticultural etc. Thus the design process is eminently suited to complex situations such as the development of our urban environment. By weighing up all the factors which impact on the final outcome, design provides the best possibility of a result which will meet the multiplicity of needs, human and non-human, that we expect our cities to meet.

To highlight the role of design in tree placement in the urban landscape, the thought process behind recent projects in Adelaide and Melbourne are described.

NORTH TERRACE

Taylor Cullity Lethlean has worked on the North Terrace Redevelopment since 1999 starting with a broad Urban Design Framework leading to the completion of Stage One in 2005. The street tree selection was subject to influences of many different types: functional, horticultural, visual, spatial, arboricultural, political and eventually hysterical.

Through a series of illustrations the many influences on the street tree selection are described as well as the rationale for retention of large existing trees in the adjacent State Library and SA Museum Forecourts. Issues addressed include the extent of existing tree removal, the relative importance of establishing a uniform avenue, the influence of existing trees on spatial and functional design and a brief discussion on the cultural conundrum regarding exotics versus natives in such a high profile location.

KENSINGTON OVAL

In 1998 Taylor Cullity Lethlean was commissioned to lead a team to convert the old Olympic Sportsfield site on Norwood Parade into a public park. Consisting of an oval surrounded by an athletics track, spectator mounding, fencing and many large mature trees, the site represented a considerable challenge in finding a balance between demolition and re-use.

The process of designing the park around the existing trees and earthworks is described as well as the approach to new tree selection.

QUEEN ELIZABETH HOSPITAL

Stage One of the redevelopment of Queen Elizabeth Hospital represented an opportunity to provide staff, patients and visitors with an integrated site where the landscape, and trees in particular, are part of the healing environment.

The rationale behind the approach to the landscape design is described with particular reference to the benefits of gardens and trees in therapeutic environments.

NEWPORT QUAYS DEVELOPMENT

As part of the redevelopment of Port Adelaide, the Newport Quays project is converting derelict industrial land into medium density and apartment housing. Part of the process involves the full remediation, replacement and compaction of all existing site soil. Taylor Cullity Lethlean has been involved in finding solutions to the challenge of growing trees in these highly artificial soil conditions.

The constraints encountered and solutions devised for the site are illustrated.

THE AUSTRALIAN GARDEN

Since 1995 Taylor Cullity Lethlean has been working with the Royal Botanic Gardens Cranbourne to develop the Australian Garden, a new botanic garden based exclusively on Australian flora.

Situated in a disused sand quarry over a perched aquifer, the site has presented many challenges, both technical and aesthetic, in creating a striking display of Australian plants.

Stage One of the project is illustrated with particular reference to the exploration of landscape patterns derived from the Australian landscape.

CONCLUSION

The purpose of this paper is to highlight the importance of design in the development of the urban forest. It is not enough to plant trees at every opportunity. Without careful consideration of the many influences on tree selection and placement we risk an outcome that is not sustainable.

Horticultural, functional, wider environmental, local ecological, cultural, social, spatial, economic and aesthetic factors should be considered in order to achieve a mosaic of plantings which respond to the needs of each particular community and place.

In an increasingly dense urban environment innovative design solutions are necessary to ensure that trees remain a significant part of the fabric of the city and contribute to the daily experience of city dwellers.