

# ARE WE THERE YET? TREE MANAGEMENT IN AUSTRALIA'S OLDEST CAPITAL

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## 1.0 Introduction

Since the first days of the settlement of Sydney Cove, there have been significant challenges for the establishment of an urban forest. Early governors such as Phillip, King and Macquarie had visions of grand boulevards and some understanding of town planning. However, the location of Sydney on a peninsular, its geography and the struggle for survival in those very early years meant that the current narrow and congested streets became reality. In the words of Geoffrey Bolten "Sydney's unplanned growth had its importance not only as setting the character of Australia's oldest city but also as a model to be avoided by subsequent towns"<sup>1</sup>.

This is not to say that there have not been great examples of street trees and grand plantings. The early setting aside of significant open space such as the Domain, the Royal Botanic Gardens and Hyde Park have left Sydney with a priceless green heart.

Despite this historical legacy of narrow streets and the extent of development in the City of Sydney, current tree managers have achieved a reasonable canopy cover which is increasing but still faces many challenges.

This paper is essentially a SWOT analysis of tree management in Australia's oldest Capital, the City of Sydney. The challenge for all tree managers is to turn weaknesses into strengths and threats into opportunities.

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<sup>1</sup> Bolten, G. (1981) *Spoils and Spoilers* George Allen & Unwin, Sydney p.60

**Table 1:** A SWOT Analysis of tree management issues facing the City of Sydney

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Pro-tree Council</li> <li>• Newly established tree management team (3/5 AQF 5)</li> <li>• Large and increasing budget</li> <li>• Access to consultants and support services</li> <li>• Tree Management Policies</li> <li>• Educated community base</li> <li>• Alliances with educational institutions</li> <li>• Some quality contractors</li> <li>• Strong links between the City and arboricultural associations</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Physical constraints – environment, narrow, utilities, developments (ongoing)</li> <li>• Pro tree council</li> <li>• Educated residents</li> <li>• No history of pro-active tree management or policies</li> <li>• Recent amalgamations of LGAs has resulted in a mix of management practices</li> <li>• Quality control problems with some projects, contractors and some in-house staff</li> <li>• Other in-house professionals with limited tree knowledge or commitment to urban forestry</li> <li>• Ageing Tree Population</li> </ul>
<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Developers – private and government</li> <li>• Landscape Architects</li> <li>• Utilities</li> <li>• Tree diseases– little research, limited cures</li> <li>• Politics – self interest groups</li> <li>• State government policies</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• New developments and major upgrades bring the opportunity for new products and rationalization of services</li> <li>• On-going policy development and review</li> <li>• Re-development of significant spaces such as Hyde Park provide an opportunity for public education and the establishment of new trees based on current best practice</li> <li>• Monitoring of growth and performance of the urban forest using new technologies and alliances with educational organisations</li> </ul>

## 2.0 Strengths

In 2003 and then again in 2004, the boundaries of the City of Sydney local government area were increased. In 2004, a very “green” group of councillors, many of whom are independents or from smaller parties, was elected. As is the case with most elections, those elected represent their constituents.

The demographics of the City of Sydney indicate over 25% of the City’s residents have a Bachelor or Higher Degree compared to 15% of the rest of metropolitan Sydney. Similarly, 34% of the City of Sydney residents have no qualification, compared to 48% of the rest of Sydney.<sup>2</sup>

<sup>2</sup> 2001 Census – Australian Bureau of Statistics

This political change provided the impetus for improvements in the management of the City's trees. These improvements include:

- The establishment of a dedicated tree management team of five; three of whom have a Diploma in Arboriculture and a wide range of experience both in local government and in the private sector. This team oversees development applications, manages the Tree Preservation Order, supervises contractors who plant and maintain street trees in the northern sector of the City, liaises with the various utilities and project managers, prepares Tree Management Plans for the 19<sup>th</sup> century parks and develops and implements policies for the establishment and management of the City's urban forest.
- The development and implementation of a range of policies including
  - Urban Tree Management Policy
  - Tree Preservation Order
  - Street Tree Masterplan
  - Register of Significant Trees
  - Tree Management Plans – C19th Parks  
Hyde Park and Redfern Park

These policies and plans of management can be viewed on the City's web site [www.cityofsydney.nsw.gov.au/environment/treemanagement](http://www.cityofsydney.nsw.gov.au/environment/treemanagement)

- A large and increasing budget for tree planting and park improvements
- The hosting of an Urban Forest Forum to promote the Urban Forest Policy of the Local Government Association. This was well-attended by people actively involved in the arboriculture industry and by the public.
- Encouragement to use a wide range of specialists in providing information to the Council and to the public. These specialists include plant pathologists from the nearby Royal Botanic Gardens, soil scientists, GIS experts, consulting arborists, educators, urban planners as well as specialist medical practitioners (when the issue of Plane tree pollen arose).

### **3.0 Weaknesses**

Whilst the political environment is very pro-trees and there is a big push to re-develop parks and to plant more street trees, this also produces some challenges for tree managers.

The amalgamations of several local government areas into one have been positive and there is scope to spread the City's financial resources to areas that were previously under-resourced. However, it has also left the City with two different operational systems in terms of day-to-day tree management.

The northern sector of the City is managed by contractors who provide pro-active and reactive tree management services. Work is planned and tracked using an electronic data base which is regularly updated. Work is performed to a high standard and is regularly audited by the City's tree management team. In the southern sector, the work is carried out on a reactive basis by 'day labour' employed under the previous South Sydney Council.

Street Tree Planting Projects have seen a large increase in both the budget and expectations. While this is mostly positive, there are some problems. This planting

season approximately 1500 trees were planted throughout the local government area. Last year 780 were planted. Next year we are planning for 1200 trees. However in many cases there is not enough quality stock available to meet the demand, and insufficient time to commence tree supply contacts with competing priorities and workload.

Viable planting sites in the City's CBD are limited. The legacy of Sydney's development has resulted in the competition for space being fiercely guarded. Utilities are the main competition for the humble street tree, with electricity, gas, water, telecommunications restricting the location and size of planting pits. Other impacts on our street trees include ongoing development, awnings, narrow footpaths and extremely harsh urban environments that limit a tree's successful performance.

The limited knowledge of other professionals within Council can adversely affect the tree population. Developments, such as new high-rises, hoardings, driveway crossings and footpath upgrades, approved by other departments, can irreversibly damage trees.

While these were common events, they are now only occasionally a problem through the gradual education of these professionals by the Tree Management Team. The advice of the Tree Management Team is increasingly sought and is encouraged despite this leading to an increased workload. The understanding of the importance of trees has also led to these unnecessary events not being tolerated by the community, City's Executive or the Council.

The City's ageing park tree population has the largest impact upon our management practises. Up to 40% of the City's park trees will need to be removed within the next 15 years. The acceptance that change is required has seen further planning, resources and the education of the community commence.

#### **4.0 Threats**

The City of Sydney is no different to most local government areas anywhere in Australia in that there are many threats to the urban forest and its management. Many can be turned into strengths or opportunities, and others will disappear as quickly as they came.

Threats that are common and continue to last are largely outside of our industry and include:

- Development – ever constant developments by both private companies and government will continue to impact upon the urban forest;
- Political self interest groups with a lack of understanding and care for the common good;
- State Government Policies – Recent changes required by the State Government of NSW Local Government Planning Instruments has seen the mechanism for tree protection and management change with reduced scope for the implementation of urban forestry principles;
- Utilities – The four main utilities, gas, water, electricity and telecommunications, will always compete with street trees for space. Competition for space is only one issue; the greater threat comes from the State Government's push for greater reliability of supply. Even if supply is not interrupted, trees are seen as a threat and therefore an easy target.

The challenge is to promote the environmental benefits of trees as 'green' assets along side the 'grey' assets. With a co-operative approach to planning of the urban forest, the demands on the utilities would be reduced, and the parties could achieve more for the community and the environment.

- Landscape Architects – This profession has the ability to do a great deal of good in the world but can inflict a great deal of damage on the urban forest. Unfortunately, many landscape architects are of the opinion that they know more about trees and soils than they actually do and thus fail to take advantage of arboricultural expertise. Many fail to see established trees as constraints in their designs and often cause irreparable damage to them when they create new landscapes around them.
- Tree Diseases – These are a real threat to our urban trees and one that Sydney is coming to terms with. There is limited funding for research in mycology and therefore there are a few cures or controls for many of the virulent and devastating diseases that are having such an impact on sites such as Hyde Park.

## 5.0 Opportunities

Tree managers, if they are not already, need to be good at identifying and creating opportunities for improving their urban forest. Arboriculture is an industry that is still not widely recognised or understood by other professions or the general public. Its promotion relies upon the many passionate, committed and resilient professionals within the industry.

In understanding the City's differing strengths, threats and weaknesses, the opportunities for improvement are more easily recognised. Opportunities must be taken and/or created at every possible level.

The City's Capital Works Programs are large. The 2005/06 budget saw \$203M for capital works. Of this \$20M was on parks and \$30M streetscape upgrades. This year's budget, 2006/07 has \$180M for capital works. Of this \$45M is for parks and \$58M for streetscape upgrades. This is over a 100% increase in the budget for the public domain.

Some examples of the opportunities for extending and revitalizing the City's urban forest include the re-development of Hyde Park and major upgrades of major gateway roads and high profile areas. Examples are given below.

**Hyde Park**, Australia's oldest park, was gazetted in 1810. From these early days the park has had numerous uses, including a cricket ground, race course and, a construction ground for the City's underground railway. The park has been reinvented several times and is now requiring an upgrade to improve the usual suspects (pathways, toilets, facilities etc), but is also required to ready the park for increased use into the 21<sup>st</sup> Century and for major public events.

The impact of several virulent diseases (*Armillaria*, *Phytophthora*, *Phellinus*), failing trees, an ageing tree population and poor site conditions has required Hyde Park's trees to be thoroughly assessed and their replacement planned.

A Tree Management Plan (TMP) has been prepared in conjunction with a new Plan of Management for the entire park (for details, see the City's website).

The TMP proposes that the trees will be removed and replaced in blocks. This will enable drainage and soil conditions to be improved using specially designed soils. The trees will be contract-grown to best quality and then installed and maintained to best industry standards. This major project will involve experts in different fields such as soil scientists and mycologists. The media has been, and will continue to be, informed and involved in the process of communicating the issues with the public.

The upgrade of Hyde Park is currently estimated at \$37 million dollars. This figure provides for the implementation of the very best tree management practises.

**Streetscape upgrades** represent a great opportunity to improve the environment and quality of locally important streets and their trees. Major gateways and high profile areas

have been reviewed. These areas include Darlinghurst Road, Oxford Street, Redfern Street (currently being completed) and William Street (undertaken by the NSW Roads & Traffic Authority on behalf of City of Sydney).

The opportunities to improve the growing environment for trees have included:

- Undergrounding of power
- Relocation and/or rationalising of services
- Structural soils
- Storm water harvesting
- Quality tree stock - 400-1000 litres
- Improved planting techniques – air void, suspended slab etc

The City's Aerial Bundled Cabling (ABC) Program has systematically planned for the conversion of overhead bare electrical conductors to bundled cabling. This will reduce the extent of pruning required on the trees by up to one third, thus improving tree health and maximising the benefits derived from the trees.

The City is prepared to commit \$5 million per annum (about 2,000 spans) until the works are completed. The entire local government area has been assessed and prioritised based on recently planted and well-established trees (significance, tolerance to pruning etc).

Unfortunately, the limiting factor in this program is the ability of Energy Australia to deliver. Only 45 spans have been completed in the last financial year. Negotiations continue between both parties to improve delivery time frame and, if required, modify any priorities to assist in an accelerated delivery.

**Urban forestry** Reviewing our tree management policies always presents further opportunities for improvements. Urban Forestry is the next area the City will be concentrating on introducing through all levels of policy and planning. As Urban Forestry is relatively new to Australia, the development and monitoring of the performance and growth of the urban forest requires a skill set which is subtly different to that which many arborists have.

In commencing the policy development for urban forestry, the skills from other professionals must be utilised. These include GIS and IT specialists as well as Planners. Canopy cover is being measured. The City is also establishing relationships with educational organisations - The University of Technology Sydney and TAFE NSW and is embarking on a range of student projects to measure and monitor various aspects of the urban forest.

## 6.0 Conclusions

Over the past few years, tree management in the City of Sydney has had a dramatic rise in its political and public profile. With that has come a significant increase in the budget, the establishment of a dedicated tree management team and the political blessing to continue to improve the City's urban forest. These are interesting and challenging times and will continue to be so, especially as major tree removal and replacement programmes commence in the C19th parks. We are getting there, but no, we are not there yet!