

PDA Practice note no. 6

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Tree retention in residential subdivisions

Why retain trees

Often a criticism of the suburban development process is that it results in a sea of roofs. With all houses being built at the same time and street tree planting taking a considerable time to reach maturity, new developments will take many years before landscaping softens the raw edges of the development.

- » Even modest retention of existing trees within suburban development:
- » can reduce significantly the unsightly 'sea of roofs' and
- » provides a frame for the street tree and lot landscaping treatments.

However, street tree retention is difficult in practice, particularly as residential densities increase, and requires pre-planning, a multi-disciplinary approach and often additional expense.

Consequently, a collective vision for tree retention, supported by senior management, staff and consultants is absolutely vital for successful tree retention to be achieved.



Meandering street pavement



Tree retention in practice

By its very nature, land development leads to significant disturbance of the natural environment and as a result, the retention of trees will be difficult to achieve unless planned from the outset. The following process, if followed and rigorously applied, will maximise tree retention while not unduly impacting on development costs or the ability to deliver density and diversity outcomes.

Identify and protect your best

Prior to concept design a tree survey should be undertaken to identify those trees that by their cultural, historical or aesthetic values must be preserved. These trees should be located in a park to ensure their retention. No other tree identification is required at this stage, apart from a general overview of tree type, location and suitability for retention.

Concept design to achieve 'green streets'

After parks, the next best place for tree retention is the street reserve. The street pattern in the concept design will be a function primarily of existing road pattern, topography, desired lot shape and density. However some techniques will assist in tree retention at the initial concept stage:

- » increase the road reserve in this area by 1.5 metres in those areas with a number of trees to allow for the road pavement to be meandered and
- » if some individual 'standout trees' have been previously identified, but were not of significantly value to include in a park, consider whether intersections can be located to achieve retention of these trees.



Engineering design to achieve 'green streets'

Prior to the engineering design commencing the street centrelines should be located on site and a tree survey undertaken by the landscape architect to identify those trees within the verge areas and at intersections or other traffic management devices.

A 'first cut' street pattern should be undertaken by the landscape architect in consultation with the civil engineer to consider ways of retaining the identified trees in the street reserve by:

- » minimising cut and fill within the road reserve
- » meandering the pavement or pavement narrowing and
- » design of traffic management devices to include trees.

The engineering design of the development undertaken after this step should be reviewed by a landscape architect to confirm that alternative treatments could not be utilised to increase tree retention, for example:

- » split level or one way cross falls to minimise earthworks
- » enlarged or non-conventional traffic management devices
- » areas where non-standard cross sections may assist and
- » alternate storm water, sewer or water main locations.



Tree retention in lots

Within allotments is the least suitable area for tree retention, particularly as residential densities increase.

In general, unless the allotments are large (greater than 450m²), all trees should be cleared from the allotments at the time of initial tree clearing. For the larger allotments tree retention outside of the building zone at the front and rear can be considered.

Retention of trees within the allotments with the future landowner removing them at the time of building construction is not preferred as it leads to un-necessary expense without any significant tree retention benefit.

Construction control

Prior to the commencement of the civil contractor:

- » the identified trees to be preserved in the open space areas and within the road reserve should be marked on site and surrounded by fencing
- » a tree clearing plan should be prepared to highlight the trees to be preserved and the areas to be cleared within the lots
- » civil contracts should be drafted with monetary penalties for unapproved removal of identified trees and
- » induction of contractors prior to tree clearing operations

On-site monitoring to ensure compliance with the tree clearing plan, protection of identified trees and construction practices do not impact on tree roots, trunk or canopy.

