

Building Near Trees

Development Information 8

Why protect trees?

Trees, particularly mature trees, provide a valuable contribution to the amenity of an area. In addition, they provide shade and a habitat for wildlife.

One of the largest negative influences on urban trees is development. Construction work associated with buildings often proceeds in ignorance of damage caused to the root systems or environment near trees. The symptoms of damage may not become obvious for a number of years.

However, it is possible for trees and buildings to co-exist within the suburban environment. While this has been legislated with "significant trees", it is possible to maintain other forms of trees and assist in improving the urban landscape.

This information leaflet will provide a guide to implementing a tree protection zone. This is important in providing an effective preservation system where trees on or adjoining development sites are prevented from unnecessary damage to root systems.

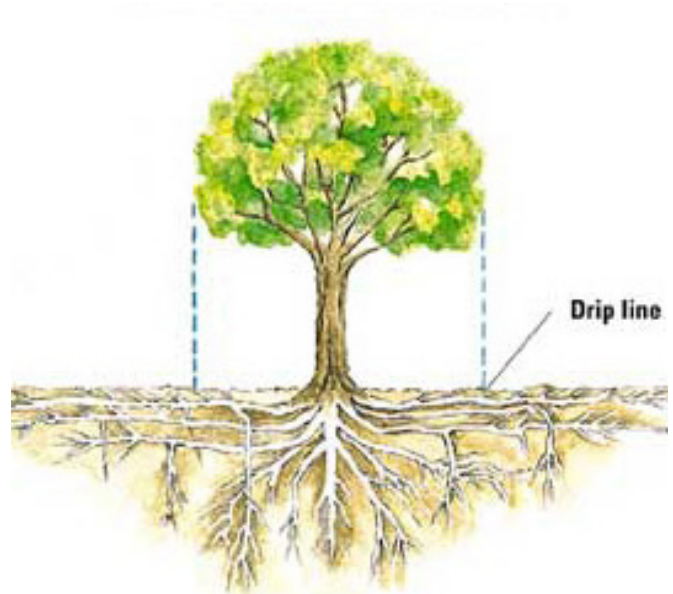


Well established trees can add appeal to a development, as well as provide valuable shade from the hot summer sun

What is a Tree Protection Zone?

A Tree Protection Zone is an important area around the trunk of a tree in which key feeder and stabilising roots can be found. This area must be protected to prevent instability and minimise the loss of health of the woody root system of the tree.

The majority of roots are found within 1 metre of the surface, and most of these are within the top 600mm. Removing topsoil or filling within a tree Protection Zone will be detrimental to the health of the tree.



Most feeder roots are within the first 600mm of soil and extend beyond the drip line of the tree

How do you determine a Tree Protection Zone?

The most effective tree protection zone can be determined simply by using the canopy of the tree as a guide. This is known as the 'drip line'. Any earthworks within the drip line of the tree is likely to impact on the root system of the tree. However, in many cases, a tree protection zone in line with the drip line is not viable. Therefore, Council recommends the use of the following commonly

accepted Arboricultural formula called the Trunk Diameter Method.

The Trunk Diameter Method involves measuring the diameter of the tree at breast height (1.5 metres above the ground level). The Tree Protection Zone (also known as Critical Root Zone) is simply ten times this diameter measurement. For example, using a tree with a diameter of 0.5m at breast height, the Tree Protection Zone would be a minimum of 5 metres radius around the trunk of the tree.

A Tree Protection Zone will vary with species and location and should be determined by a qualified arborist.

How do you maintain the Tree Protection Zone during construction?

It is important that Tree Protection Zones are in place before any construction work commences (including demolition) and kept in place during all construction work undertaken on the site. In order to achieve this, it is critical that the Tree Protection Zone is bound by solid fencing (such as a cyclone fence) of at least 1.5 metres in height and clearly signposted "Tree Protection Zone – Do Not Enter".

In addition, this area must not be used to store rubbish or materials associated with construction work and vehicles must be kept outside the area to avoid compaction. The Tree Protection Zone should remain clear throughout the entire construction period.

In order to encourage root growth and maintain future root growth, it is also wise to spread mulch (such as woodchips) to a depth of 10 cm around the base of the trunk within the Tree Protection Zone. This assists in the retention of moisture, provides organic nutrients and reduces the potential of compaction.



A good tree protection zone in place during construction

What other development options are there for buildings near trees?

There are alternative construction techniques that are tree friendly in that they require less solid disturbance. However, buildings in general should be placed as far as possible from trees and these measures should only be considered as a last resort.

There are alternative footing designs that allow construction within close proximity to trees. Footings construction methods, such as pier and beam construction, not only involve less soil and root disturbance, but also provide for future root growth without significant structural movements within buildings.

Council recommends you seek the advice of a structural engineer and qualified arborist regarding the most appropriate alternative to your particular situation.