

# DRAFT AUSTRALIAN STANDARD FOR THE PLANNING AND PROTECTION OF TREES ON DEVELOPMENT SITES

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## INTRODUCTION

Contrary to popular opinion, standards are not forced upon us by a governing body. Rather, they are developed by industry when there is a need for uniform national guidelines for the industry and for the wellbeing of the broader community.

Several areas have been recognised by the arboricultural industry requiring standards. The Australian Standard for Pruning Amenity Trees (AS 4373) was published in 1996. It has recently undergone review. Draft standards being developed and nearing completion include the areas of amenity tree valuation, specifying trees, and tree protection.

While Australia has undergone rapid development in the last 200 years, development continues to forge ahead as we find new areas to establish housing and industry, as well as squeezing more people into established cities, suburbs and towns. Let's face it – in Australia, we have space.

We also have trees; and in general, as a community, we value them. So trees are often retained on development sites, large and small. Sometimes this has been successful; more often it has not. The successful protection of trees on development sites requires good planning, thorough protection, and ongoing management. Arborists, councils, designers and developers all have different opinions of how this is best achieved. (Financial returns can be significantly affected.)

An Australian Standard will provide uniform guidelines across the country. For tree managers, the pruning standard can be referred to when specifying pruning contracts. Similarly, planners, designers and arborists will be able to refer to the tree protection standard when specifying tree protection measures for development.

## PROCESS

The need for a tree protection standard has been recognised by industry for some time, and a committee formed approximately five years ago. The draft standard has undergone several years of evolution – committee members are all busy people, so meetings often happen at wide intervals. Other standards, such as the British Standard for Trees in Relation to Construction—Recommendations (BS 5837:2005) and its predecessor have been useful references.

Organisations that have nominated members onto the committee include:

- Australian Council of National Trusts
- Australian Institute of Building Surveyors
- Australian Institute of Horticulture Inc
- Australian Institute of Landscape Architects
- Australian Local Government Association

- Australian Pipeline Industry Association
- Australian Property Institute
- Energy Networks Association
- Institute of Australian Consulting Arboriculturists
- International Society of Arboriculture – Australia Chapter
- Local Government Tree Resources Association
- National Arborists Association of Australia
- Nursery & Garden Industry Australia
- Parks and Leisure Australia
- TAFE NSW
- The University of Melbourne
- Water Services Association of Australia

The draft is nearing completion and will soon be available for public comment. *It is important that all interested parties review the draft at that stage and provide feedback.* All feedback is considered by the committee and any necessary changes made. Finally, if approved by the main committee, the standard is published.

## **THE DRAFT STANDARD**

The draft standard aims to provide guidelines for tree protection not only on construction sites, but also in any other situation where trees may be affected by works, such as for events in public spaces.

The standard will provide guidelines for all stages of development:

### *Planning*

- Detail surveys – consider local planning controls and government legislation
- Tree assessment – tree condition, quality, life expectancy (Preliminary Report)
- Preliminary development design – setbacks to buildings and services
- Development submission – review plans (Comprehensive Tree Protection Report)
- Development approval – review consent/permit conditions

### *Pre-construction*

- Initial site preparation – tree removal and pruning; establish tree protection
- Site establishment – locate temporary infrastructure

### *Construction*

- Site work – demolition, earthworks; maintain tree protection
- Construction work – liaise with site manager; maintain tree protection

### *Post-construction*

- Final certification – tree health; remedial works
- Maintenance period – maintain and monitor

### **Arborist input**

1. Receive site survey plans, which should show all trees (with numbering), actual crown spreads, other relevant features, and spot levels.
2. Tree assessment – collection of all relevant tree data. The draft standard does not recommend one particular method for rating trees, but provides several resources.
3. Preliminary Arboricultural Report – this will provide sufficient details to planners and designers to facilitate the design layout. The report should list all trees with their species, location, dimensions, condition, quality and suitability, along with any other relevant details.
4. Design review – review the design and provide relevant feedback to designers and planners.
5. Comprehensive Tree Protection Report – outlining any special construction methods required and tree protection measures for all stages of the development. The report is to include a Tree Protection Plan showing Tree Protection Zones for trees being retained.

### **TREE PROTECTION ZONES**

Different methods have been used in Australia and other countries for determining the size of the Tree Protection Zone. Widely used methods include the earlier British Standard (BS 5873:1991), the latest British Standard (BS 5873:2005), Matheny and Clark's method and publications by Kim Coder in the US.

The draft Australian Standard recommends calculating a Root Protection Zone based on stem diameter, tree age and tree vigour.

Minor encroachment (up to 10% by area) will be allowed into the RPZ provided the RPZ is increased elsewhere to compensate for this.

For major encroachment (more than 10% by area) to occur, an arborist must be able to demonstrate that this would not adversely affect the tree's viability – its stability and vigour – in the long term.

The draft Australian Standard further recommends that, where any works may affect the tree canopy, a Crown Protection Zone is also required. This would usually be one metre outside the canopy perimeter.

The Tree Protection Zone to be marked on plans is therefore a combination of the Root Protection Zone and the Crown Protection Zone.

### **TREE PROTECTION MEASURES**

The draft standard will provide extensive guidelines for tree protection measures to be established and maintained on the development site. Usually, Tree Protection Zones will require protective fencing. The area must be clearly signed. Irrigation may also be required.

The standard will list activities that are to be excluded from the TPZ, such as storage of materials, parking of vehicles and plant, cleaning of equipment and so on.

Guidelines will provide protection when access is required within the Tree Protection Zone, for instance when scaffolding is to be erected.

#### **Other information**

The draft standard will contain background information written in plain English, along with several diagrams and tables, to make it useable by all. Although it still requires that arborists be involved at all stages of the development, it is still important that those in related professions can understand and use the standard.