

# **FACT SHEET**

## **PLANTING IN SCHOOLS GUIDELINE 2**

### **PLANT SELECTION**

**OCTOBER 2017- PLANNING AND INFRASTRUCTURE**

#### **INTRODUCTION**

If you have followed the Planting in Schools Guideline1: Defining your Requirements, you will now have a good idea of what you are trying to achieve with the planting you wish to undertake. In that process, you will have defined the overall functional requirement of the planting – shade/ aesthetics/ habitat/ screening/ educational. It is now time to make your plant selections. There are many plants that are suitable for planting in your school and there are also many plants that may not be suitable. When selecting plants, there are a number of considerations:

- Safety and Risks
- Physical Site Characteristics
- Size
- Maintenance and Irrigation

In selecting plants, it is always useful to use available expertise from horticulturalists, nurseries and/ or landscape architects. These people are trained and have the knowledge to help with good decisions. Selecting the wrong plant can lead to poor results, disappointment and long term costs and even injury to persons.

At the end of this guide is a list of references and links that can assist in plant selection.

#### **SAFETY AND RISKS**

Many plants are poisonous or pose other risks for children and adults. In the case of poisonous plants, only a few would be considered to be extremely toxic – that is they could cause death if eaten. Other plants can have safety risks associated with limb drop, allergies, skin reactions and sharp or thorny parts. These same plants are often found throughout our communities and rarely ever cause issues.

For this reason it is recommended that plant species be assessed against the likelihood of the risk occurring. The table below provides a guide on risks to consider based on the context of the school facility

## RISK ASSESSMENT

LOCATION	RISKS TO CONSIDER
Middle and Senior School Years 7 - 12 Administration and Service Facilities	<ul style="list-style-type: none"> <li>• Unstable trees and/ or trees subject to large limb drop.</li> <li>• Trees that are poorly managed can become unstable.</li> <li>• A qualified arborist should inspect trees twice a year.</li> <li>• Tress with thorns near access ways.</li> </ul>
Primary School Years 1 - 6	All of the above + <ul style="list-style-type: none"> <li>• Climbable trees with fragile branches</li> <li>• Plants with long and sharp thorns, prickles or ends</li> <li>• Highly poisonous plants that have a history of poisoning resulting in hospitalisation</li> </ul>
Special Education, Early Education , Pre school and Transition	All of the above +. <ul style="list-style-type: none"> <li>• Plants that attract wasps.</li> <li>• Plants with toxic or excessive sap</li> <li>• Plants that produce berries or seed pods that would create a choking hazard or are poisonous</li> <li>• Plants known to trigger medical conditions such as allergy, asthma or skin irritation through direct contact.</li> </ul>

Where plants are considered a high risk for the situation, consideration should be given to mitigating actions that could reduce the risks to an acceptable level. For instance:

- Some plants and their pollen can result in allergic reactions. Removal of them, or not planting them at all may have no impact if they are already widespread in the area. If they are used, the impact and risk is greatly reduced and easily managed if they are planted in isolated groups close to existing plants and ideally in a location where the prevailing breezes during their flowering period is away from the school.
- Large trees are not always a risk of failure in high winds. When well planted and managed properly they can provide a stable, long-lived tree that provides substantial shade and other valuable benefits. Ensuring all trees have excellent conditions when they are planted and are appropriately maintained and managed would reduce the risks associated with large tree species. Specialist advice should be sought when selecting and planting trees and should include regular inspection and management by a qualified arborist on an ongoing basis.

Once you have selected your preferred plants, you will need to check their characteristics to understand if they pose any risk. The references listed at the end of this Fact Sheet are a starting point to understand more about the plants and should assist with the selection of commonly used plants.

## PHYSICAL SITE CHARACTERISTICS

All plants will thrive in the right conditions. There are a number of physical site characteristics which should be carefully considered when selecting plants to ensure they thrive:

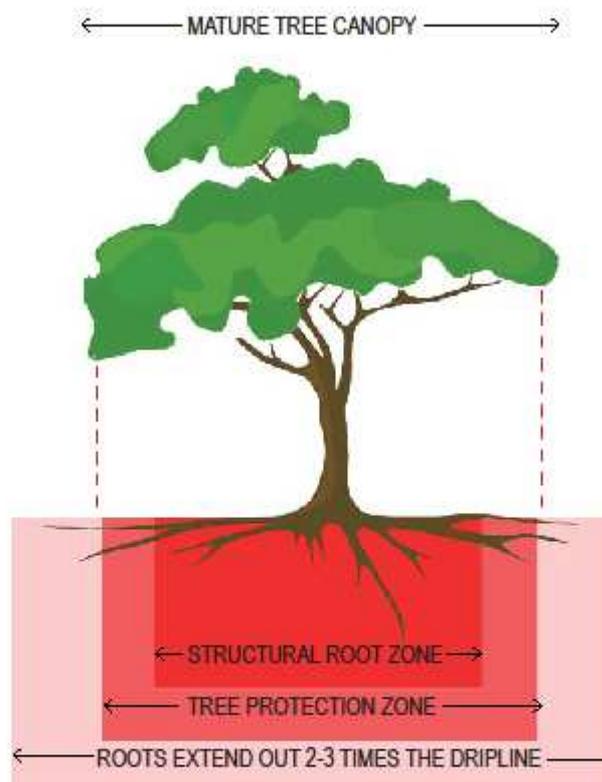
- Existing soil – structure, nutrients, pH
- Drainage – surface and sub-soil (below ground) drainage
- Micro-climate (sun/ shade/ temperature/ wind exposure)
- Existing ground moisture conditions and level of irrigation required for healthy growth. Note that some plants will perform better with no dry season irrigation, once established.

### Size

Plants require sufficient space to thrive and reach maturity. Make sure you understand how big a plant will grow – height and spread. Some trees and shrubs can be pruned and kept to a smaller size, but this may involve regular and expensive maintenance.

The root zone of plants occupy a similar volume of space under the ground as the plant does above ground. Make sure the plant's roots will have room to spread and grow

### Tree space diagram



Note: Structural root zones and tree protection zones subject to horticultural advice

## MAINTENANCE AND IRRIGATION

The whole of life costs are important considerations. These costs include regular maintenance (fertiliser, pest control, pruning, disease control) and watering. Irrigation will often be required to achieve best results and an automatic system is most efficient if well designed and maintained. It is able to deliver the correct level of irrigation at regular intervals and minimise waste or over-watering.

Careful plant selection, including appropriate native plants can result in significant reductions in irrigation and maintenance costs

For more information or to research plant species for your school please refer to the resources listed below. This list is not exhaustive and there are many other resources and online sites available.

## RESOURCES

General Plant Resources if you want to research and find out more about plants

<http://www.growmeinstead.com.au/region/northern-territory.aspx>

Jones, David. *Palms in Australia*. Reed Books, 1987.

Crowder, Sam & Siggers, Boronia. *Grasses of the Northern Territory Savannas – a field guide*. Greening Australia (NT) Ltd, 2010.

### Top End Resources

<https://www.darwin.nt.gov.au/council/about-council/publications-and-forms/creating-habitat-for-darwin-gardens>

<http://www.topendnativeplants.org.au/downloads>

Brock, John. *Native Plants of Northern Territory*, Reed Books, 1993.

Smith, Nicholas. *Native Plants for Top End Gardens*. Greening Australia (NT) Ltd, 2007.

### Central and Arid Areas

*Native Plants for Central Australian Gardens*. Greening Australia (NT) Ltd, 2007.

Urban, Anne. *Wildflowers and Plants of Central Australia*. Southbank Editions, 1990.

Latz, Peter. *Bushfires and Bushtucker – Aboriginal Plant Use in Central Australia*, IAD Press, 1995.

Alice Springs Town Council native plants Database

<http://www.alicesprings.nt.gov.au/living/plants>

### Weed References

<http://www.growmeinstead.com.au/region/northern-territory.aspx>

<https://nt.gov.au/environment/weeds/list-of-declared-weeds-in-the-nt>

*Northern Territory Weed ID Deck*. NRETAS, 2010.

Smith, Nicolas M. *Weeds of Northern Australia – A field guide*. Environment Centre NT Inc. 2011.

Smith, Nicolas M & Schmid, Michael. *Common Urban Weeds of North Australia*. Environment Centre NT Inc. 2012.

Smith, Nicolas M. *Weeds of Natural Ecosystems: A field guide to environmental weeds of the Northern Territory*. The Environment Centre NT Inc. 1995.