NORTHERN TERRITORY GOVERNMENT

DEPARTMENT OF EDUCATION

FACT SHEET

PLANTING IN SCHOOLS GUIDELINE 3
GETTING PLANTS IN THE GROUND AND THRIVING

OCTOBER 2017- PLANNING AND INFRASTRUCTURE

When you have done the planning and made your plant selections, it is time to get them in the ground.

PLANTING PROCEDURES

Timing of works
Best planting times are during spring for the Central Region and during the wet season in the Top End. Consideration should also be given to undertaking major works during the extended school holiday periods where possible.

Plant Supply
The supply of plants can be difficult in the Northern Territory. This is more so in central Australia and regional areas. If possible, make enquiries from local nurseries and think about placing an order for the plant supply a minimum of 3 months before the intended planting dates to ensure there is stock available. In some instances a longer period of up to 1 year may be required where there are large orders, specific size requirements or species that are generally unavailable and may require cultivation from seed or cuttings.

Plant Size
Bigger is not always better. Smaller plants that are well looked after will often outperform larger plants. Native tree and shrub species in particular tend to perform better when they spend less time in pots and are planted from smaller stock. Where possible tree planting should be carried out using smaller stock and providing adequate protection around them until they are well established.

Larger stock may be needed in some situations where young children can quickly destroy a plant all as part of their play!

Garden bed planting principles:

- Planting of shrubs grasses and groundcovers should occur on mass and spacing of around one third of the mature plant size to allow for future thinning if required in later years.
- Adequate drainage and irrigation must be achieved for plants to survive and thrive.
- Grouping of plants must address the watering required to keep the plants at optimal health but might also be grouped for sizing and to provide interest and colour at different times of the year.

Tree planting principles

- Trees are to be planted a minimum of 1500mm from paths, driveways or paved areas
- Do not plant trees that will encroach on the clearance zone around power lines. The clearance zone is 1 m around power lines and 1.5 m around high voltage power lines. Plant trees far enough from power lines so that if a fully grown tree blows over, it will not encroach on the clearance zone around the wires.
- Trees are to be planted at a distance equal to half their mature spread from building eaves and overhangs or a minimum of 4000mm (Tree's with vigorous root systems should not be planted next to buildings)
- Adequate drainage must be achieved for plants to survive and thrive.

Plant Protection

Trees will generally be staked to provide good support for them as they grow. Depending on their situation, they may also need protective fencing to avoid damage by students. Where there are large areas of planting, consider installing barrier fencing to the full perimeter or adopt other management approaches to protect the plants and allow them to establish. Often staking and protective fencing will be required for 3 months after they are planted.

Irrigation

Quantity and frequency of watering depends on soil type, time of year and local rainfall. Deep watering twice a week is preferable to shallow watering every day. Deep watering encourages strong root systems that help your plant to withstand dry periods better. Shallow watering encourages undesirable surface roots. Always consider the need for specific deep watering provision for trees in irrigated grass to ensure long term health and stability. This allows additional watering during the dry season when the deeper layers of the soil would generally be drying out.

Permanent Irrigation system requirements

- Automatic control, inclusive of soil moisture monitors
- In-ground pop-up irrigation to grass areas – provide appropriate performance matched to water pressure to give sprinkler head to sprinkler head coverage
- Depending on facility, risks of vandalism and levels of maintenance, garden beds should be irrigated with high-rise pop-ups or stake mounted sprinklers/ micro-sprayers
- Dry monsoon tropic plantings of native plants can utilise pressure compensating dripper irrigation, typically with minimum 2 per plant.

Establishment Irrigation requirements

- Establishment irrigation should be minimum 6 months and ideally extend for 12 months to ensure the planting is well established.
- Watering levels will typically be higher during the establishment period so grass and plants are not under stress. Irrigation should be matched to a suitable fertiliser program to assist establishment
- Three months out from the completion, depending on the type of planting and season, progressively reduce the frequency of watering and increase the duration so that the plants establish a deep and extensive root system. This 'hardening off' sets up the plant to be strong when irrigation is discontinued.
- A typical establishment and hardening off for a new 3.0m tree planting may be as follows:

Establishment irrigation (Week 1 - 13)	20L/ every second day
Establishment irrigation (Week 14 - 39)	30L/ every second day
Hardening off irrigation (Week 40 - 43)	40L/ twice a week
Hardening off irrigation (Week 44 - 47)	60L/ week
Hardening off irrigation (Week 48 - 52)	80L/ fortnight

Note: This rates would be adjusted subject to wet season rainfall.

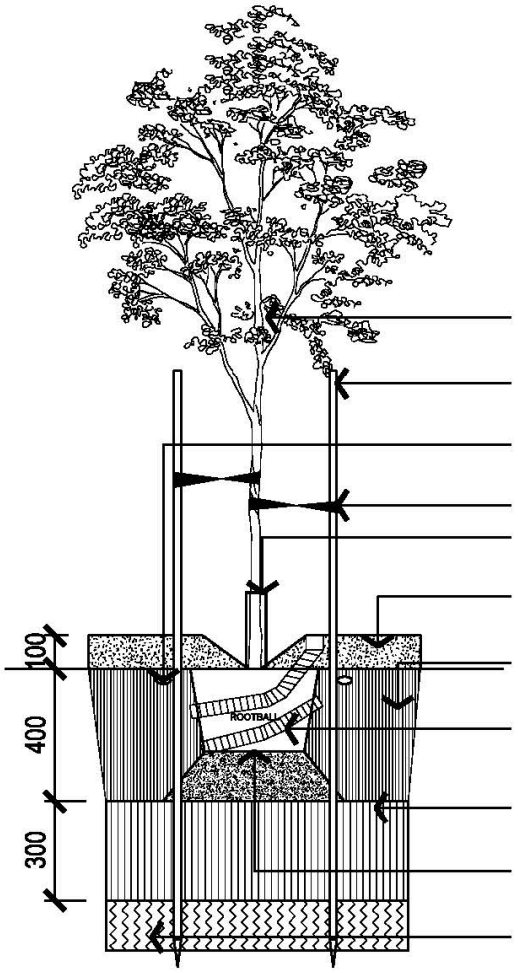
Root control barrier
Some tree roots, in their search for moisture, may cause considerable amounts of damage to paving, buildings and underground services if they are planted too close to these structures. Table 1 Where To Plant in PLANTING GUIDELINE 1 provides guidance of when root barriers should be used.

Root barriers are also used in the following situations:

- contain and prevent the spread of some species such as bamboos and heliconias
- Protect the stability of pavements and other sub-surfaces areas by limiting water egress from adjoining areas, including irrigated landscape areas

Use of root barriers can be used for new or existing plantings and will help prevent damage to paved areas. When used on existing plantings root and canopy pruning may be needed as well. This should be undertaken on the advice of an experienced Landscape Architect, Horticulturalist or Arborist since such actions have the potential to impact on overall plant health and stability.

Typical details
The following pages provides typical planting details



Tree set vertical. Tease out base of rootball prior to planting.

Treated hardwood stake 50 x 50 x 2400mm to be kept clear of rootball. Stake to penetrate min. 200mm into existing subgrade.

Osmocote or similar approved fertiliser. Install as per manufacturers recommendations.

50mm Propylene ties stappled to stake

Sentree sapling protector to all tree's in grass. Install as per manufacturers recommendation

Organic mulch as specified 500mm diameter around tree (keep clear of base of tree trunk).

Quality sandy loam topsoil with min. 10% organic content. Backfill to lightly compact. Prepare topsoil mixes to the dripline.

Breather and watering pipe 80mm diameter ag. pipe wrapped around rootball. (Min. 3m length)

Tree pits excavated with backhoe to 1500 x 1500mm. Backfilled with 50:50 mix sandy loam topsoil : approved site topsoil.

Position tree on base of sand. Depth of sand will vary to ensure tree sits flush in ground.

Rip and cultivate subsoil to 150mm depth and incorporate gypsum at the rate of 0.25 kg/m2.

NOTE:
Nylex rootbarrier or equivalent. Laid against all infrustructure (path, kerbs etc) where required. Refer to Root control barrier guidelines table.

01 TYPICAL TREE PLANTING DETAIL

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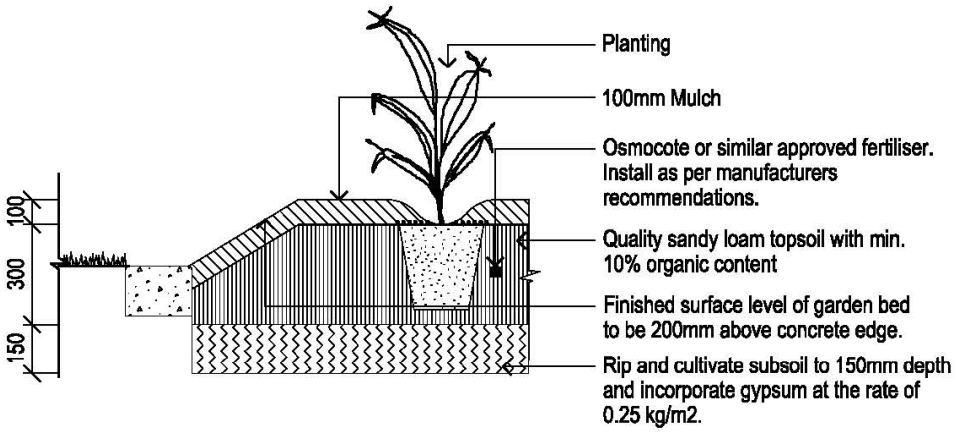

02 TYPICAL GARDEN BED DETAIL
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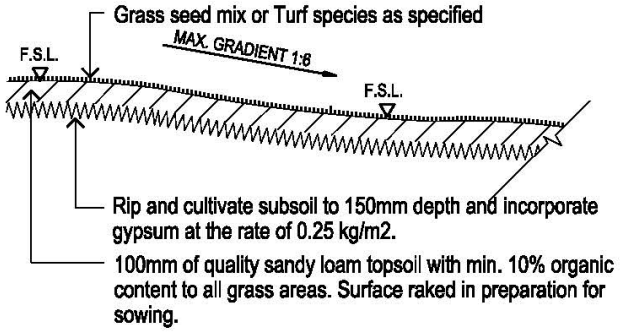

03 TYPICAL GRASSING DETAIL
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