



#PlayToday

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promoting the value of play

TUNNELS AND CRAWLING SPACES

'Tunnels' can include traditional concrete pipes, steel tubes on traditional playground equipment clusters, or any other narrow, enclosed crawl space regardless of shape, such as underneath a deck or platform, or potentially even an accessible passage between stacked boulders.

Tunnels have become increasingly rare in playspaces due to their reputation for attracting undesirable behaviour, problems with maintaining cleanliness, and the need to ensure adequate view-lines to facilitate adult supervision. Children, however, love the sense of enclosure and intimacy offered by child-sized crawl spaces.

While tunnels can have significant downsides, Play Australia nonetheless recommends that intimate 'hidey' spaces are important for healthy child development and that some of the downsides of tunnels can be avoided with good design.

Australian Standards (AS4685:2014)

Australian Standards specify that tunnels should have a minimum internal diameter of 750mm (500mm if open at both ends and less than or equal to 2000mm long). These minimums have been set so as to ensure that a typical adult is able to pass through if she or he needs to.

Tunnels with only one exit may be no more than 2000mm long and must be set level, or tilted slightly upwards ($\leq 5^\circ$) from the entrance. (A shallow incline may be desirable to allow water to drain freely.)

Where the top of the tunnel is reasonably accessible (such as a concrete pipe buried within an earth mound) and each end has a fall from the top of more than 600mm barriers are required like any other item of playground equipment.

For tunnels where highest point is 1500mm or less above the adjacent surface area, a minimum of 1500mm clear space must be provided at each end covered with an appropriate impact attenuating under surfacing.

Although many existing concrete tunnels predate modern playground standards, and standards are not retrospective, Play Australia nonetheless recommends that playspace owners and managers should consider modifying existing playspaces where it is cost effective and reasonably practical to do so.

Design and Maintenance

General

'Tunnels' of any description should be oriented so that the inside is visible from common points of formal and/or informal supervision, such as seats, pathways or building exits.

Ensure adequate drainage so that water is not retained within the tunnel and can get away quickly. Ideally, tunnels should be inclined slightly so that water can flow out naturally.

Limit the length of tunnels, generally 1.5m to 2m is plenty.

Exposing tunnel ends to the weather will allow for some limited amount of natural cleaning.

Tunnels should be checked regularly (daily in Supervised Early Childhood Services) for spiders and other pests.

Like any other item of playground equipment, tunnels must be free of splinters and sharp edges.

Consider dense plants as an alternative to prefabricated concrete or steel pipes.

Planting

As an alternative to formally constructed tunnels, the best solution in many settings may be thick, closely-planted hedging shrubs with an overhanging canopy.

Thick vegetation offers a significantly more complex experience than a lot of traditional playground equipment, without many of the costs or maintenance issues (eg under-surfacing isn't required). Plants also offer significant additional opportunities for sensory/creative play as they provide a near-endless supply of sticks, leaves, bark and dirt.

Australian natives are often good planting choices as they are typically hardy and low maintenance.

Subject to your particular climatic conditions, plant species worth considering for your space include mid-sized (1.5m to 2m tall at maturity) varieties of species such as *Acacia* (Wattle), *Callistemon* (Bottlebrush), *Grevillea*, *Leptospermum* (Tea Tree, especially lemon-scented varieties such as *petersonii*), and *Prostanthera* (Mint Bush – best for sites that do not completely dry out over summer).

Other alternatives include some of the larger growing grasses (such as *Poa labillardieri* (Tussock Grass)), the dwarf/'compact' cultivar of many trees (to 2.5m, especially *Allocasuarinas*), and more or less anything sold as a hedge.

Elongated garden arbour (pergola) structures suitable for training sensory climbers over can also make excellent tunnels.

For best results, plants should be partially protected from trampling for the first two years. (Some light 'tip pruning' from curious hands, however, is usually okay and this can have the added benefit of encouraging denser growth.)

Informal Spaces

Consider repurposing existing spaces to create additional opportunities for enclosure, for example, the deck under an existing platform of a play structure could be partially enclosed with additional panels for walls, windows and shop counters.

Temporary tunnels

Traditional A-frames (trellises) or tables can be repurposed as tunnels with the additional of a blanket, tarpaulin, or cut branches and leaves.

In Supervised Early Childhood Settings, a series of vertical posts can offer opportunities for an evolving tunnel experience when varied with moveable additions such as screens, walls, coverings (eg blankets), and hanging decoration.

See also: Play Australia's notes on 'Cubbies'