

Sunshine Coast Open Space Landscape Infrastructure Manual

Play Spaces

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Also see:

Information Sheet	(INFO)
Technical Drawings	(DWGS)



1.0 Overview

This category of the LIM has been developed to provide guidance for the design and construction of play spaces.

This specification section addresses the following:

- **Project specifications**

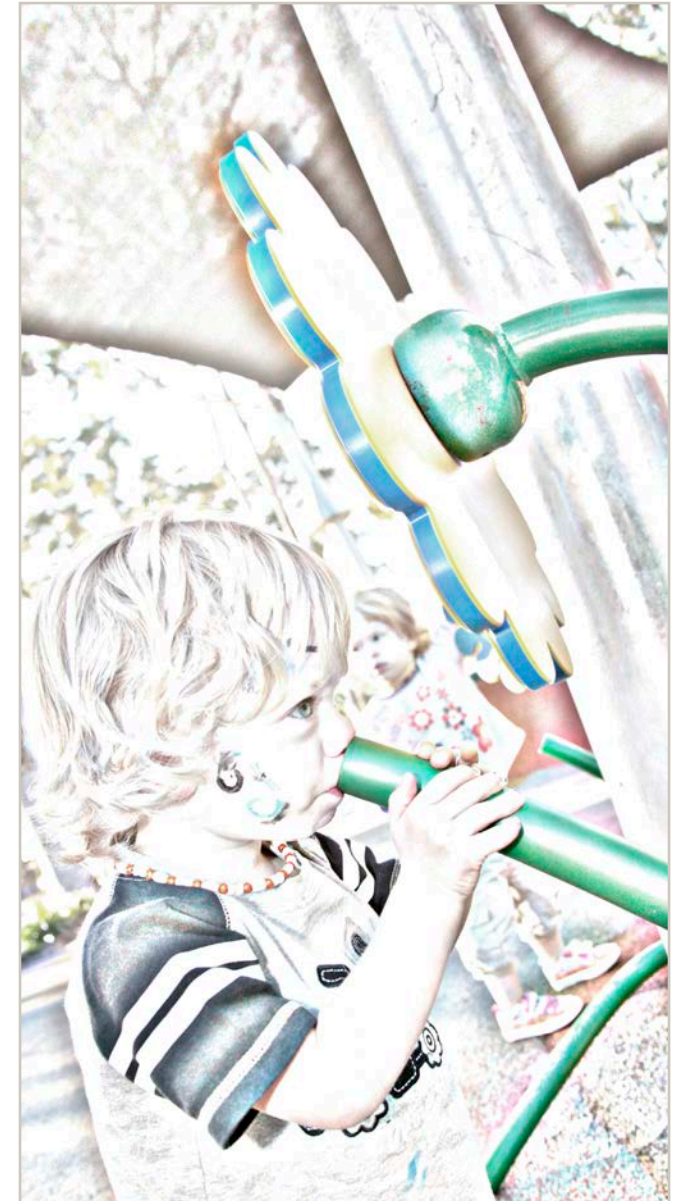
Important notes:

- This resource does not try to replicate all of the provisions of Legislation, Australian Standards and corporate documentation in words and pictures, nor does it seek to define their requirements.
- This specification does not over ride requirements stipulated in a development approval.
- It aims to draw attention to the fact that effectively applied technical requirements translate into desirable qualities for end users.
- Please refer to the relevant authority websites for updated information and current document distribution dates. These documents are subject to amendments from time to time.
- Product design, manufacture and installation require an appropriately qualified professional to provide site specific solutions.
- The specifications outline councils minimum acceptable standard, which may be above the expectations of current workplace standards.
- This document is intended for use as a component within a contract document, however the accuracy and execution may vary as site and project specific conditions dictate.
- It is recommended that an appropriately qualified professional undertakes irrigation design.

For further guidance see:

- *LIM Planting (Landscape)*
- *LIM Preliminaries*
- *LIM Shade Sails.*
- *LIM Signage*

These Play space specifications are prescribed for open space 'landscape design' projects such as parks, landscaped areas and sports grounds.



Project specifications

1.0 Play space equipment - Manufactured

General

- Play space equipment to be designed and manufactured in accordance with *AS 4685 Playground Safety Set*.
- Play space equipment over 3.0 metres in height requires building approval
- Installation to be carried out according with manufacturers instructions for assembly, erection and siting of material in accordance with *AS 4685.0 Playground equipment and surfacing - Development, installation, inspection, maintenance and operation*.
- Concrete work (footings etc) associated with the installation of play space equipment and shade structure to engineer's specification. Footing detail to *AS 4685*.
- Fixtures inside the playground footprint to comply with *AS 4685*
- A thread locker to be used (to prevent fixings from becoming loose through vibration and movement).
- Water play areas to have a gate valve installed within 3.0 metres of the water play but not within play space footprint. Gate valve to be on a separate water supply to other plumbed units e.g. toilet, drinking fountain.
- Coastal areas - All coastal locations (east of the Bruce Highway), must be constructed of coastal hardy materials and fixings such as:
 - 316 Stainless steel
 - Aluminium
 - HDPE / Poly panels
 - Timber (appropriate species, mounted on marine grade 316 stainless steel stirrups – with approval from SCC Parks and Gardens).
 - It is preferred that timber products are to be treated with alkaline copper quaternary (ACQ), a water based wood preservative. CCA is not to be used.
- Hinterland areas - materials, finishes and fixings shall be specified as stated above, but 316 Stainless Steel elements are optional.
- Compliance ID plate and basic level marking, should be installed on the equipment so it isn't a hazard for users & still in range for viewing for maintenance purposes.

Positioning

- Slides must be installed in a southerly direction (to reduce the effect of direct sunlight onto the slide surface) unless the slide is shaded from full sun by trees or shade sail.
- Swings to be installed facing north / south unless otherwise shaded.
- Swings to have 6mm short-link chain 316 Stainless Steel. Conduit must not be used over swing chains.
- Ensure items of play equipment are placed to consider the safe movement of playing children (if two items of play equipment were placed either side of a swing, children running between these elements would be in the path of the swing, and at risk of injury).
- Do not place entry gates so they lead into fall zones where the traverse would be through a forced movement area such as a slide or swing.
- Music play elements shall be at a maximum level of noise as per *Environmental Protection (Noise) Policy 2008 Schedule 1 - Acoustic quality objectives*, and be located in a park or garden that is open to the public for use other than sport or organised entertainment.

2.0 Play space equipment - Natural activity areas

General

- Natural play elements incorporated into a play space are subject to the requirements of *AS 4685 (series)*. Where the requirements of this Standard cannot be applied to natural elements incorporated into a playground, a 'risk benefit assessment' is to undertaken to determine the suitability of such elements. This report must be submitted to Council prior to approval.
- Natural play elements to be designed, manufactured and installed by an approved play space company.
- Natural play elements to meet all play space standards
- Natural play elements be independently certified
- Logs must be secured to prevent rolling, have rounded edges with minimum 15mm radius, no splits, be certified stress graded and have a compliance certificate by an independent play space compliance engineer.
- A qualified arborist should be consulted to determine the appropriate timber species to be used for logs and the like, in order to prevent rot and de-lamination. A 'non-toxic' termite deterrent must be used.
- Natural balance equipment e.g. boulders, logs, to be maximum 495mm high unless safety surfacing and fall zones are installed as per Australian Standards for Play Spaces.
- Grass mounds to be maximum 1:4 grade (minimum 2.5m wide) with a near level top at least 3.0m wide.

Positioning

- Dry creek beds to be located away from formal play space safety surfacing areas as rocks can contaminate the safety surfacing zones. If dry creek beds are within 50m of equipment or safety surfacing, that section of rocks must be secured in a concrete bed.
- Natural Play that utilises rocks and sticks must be designed to prevent rocks contaminating grass areas (they require removal by hand to prevent mowers turning them into projectiles).

Project specifications

3.0 Natural bushland areas adjoining formal play spaces requirements

- Remnant or natural bush land areas that may be accessed by children must include a sign “natural hazards may exist in this area”. Sample sign shown is currently under review. See *Figure 1: Natural hazards may exist in this area sample sign*
- These areas must not include any formal play equipment.
- As per *AS 4685.0*, a risk benefit assessment must be undertaken and report submitted to Council prior to approval.



Figure 1: Natural hazards may exist in this area sample sign

4.0 Safety surfacing

General

- Non-compacting sand, bark, takura manufactured bark or rubber as per *AS 4422 Playground surfacing - Specifications, requirements and test method*.
- Safety surfacing depth as per play space manufacturer's Australian Play Space Standards and impact attenuation test compliance certificate relative to equipment height.

Loose fill surfacing requirements:

- Surfacing depth to comply with *AS 4422*. Loose bark surfacing, takura manufactured wood (or equivalent) and sand surfacing as per compliance depth. In accordance with *AS 4422* an additional 20% is to be installed in fall zones for swings, run out of slides and other risk impact fall zones.
- SCC specifies a minimum 400mm depth of loose fill surfacing material to allow for compaction and depletion.
- Surfacing to be free from sharp edged parts or hazardous projections eg splinters, sticks and to be free of toxic substances, chemically treated wood chips, and to be A Grade quality as per Test Certificate.
- Takura manufactured wood (or equivalent) safety surfacing is preferred over bark surfacing.
- Note: Geofabric must NOT be installed between the ground and safety surfacing.

Unitary (rubber) surfacing requirements:

- Play equipment is to have unitary surfacing under equipment where displacement of loose fill surfacing is likely. Surfacing depth to comply with *AS 4422*. Unitary surfacing is to be installed under fall zones of swings, fire poles, exit run-out for slides, rotating elements, carousels, spinning discs etc.
- Unitary surfacing is to be installed on a cement treated base (CTB) or concrete slab - refer drawings
- Unitary surfacing must be installed with a concrete edge
- Unitary surfacing edges to be installed minimum 100mm below the bottom of the safety surfacing, back filled and compacted.
- The design of the unitary under surfacing must consider the following, but not exclusively:
 - Sub-base
 - Materials
 - Slip resistance
 - Fire resist
 - Impact absorbency
 - Critical fall height analysis (fall heights to be identified by the play space)
 - Manufacturer
 - Fall zones
 - Colour
 - Permanency of colour
 - Wearability / maintenance in use.
- Surfacing manufacturer to liaise with play space manufacturer to obtain accurate information regarding items listed above that will affect design and installation of unitary surfacing and sub-base.

Project specifications

5.0 Planting, shade and shade sails

- Planting and shade sails to comply with *LIM Planting and LIM Shade sails, LIM Play spaces and LIM Site set up drawings*.
- Do not select plants which have sharp thorns. Do not select poisonous plants.
- Do not select plants that will inhibit clear sightlines to and from play space when mature. Refer to Crime Prevention Through Environmental Design Guidelines Ensure low profile planting to maximise child safety and increase sight lines for parents and carers (planting to be generally below 500mm and trees to be lift pruned).
- Sensory gardens to be clearly signed with a children's language sign depicting 'do not eat'. Positive signage such as 'smell' and 'touch' is to be used at appropriate planting.
- See LIM Shade sails for provision and design guidance.
- Install shade trees to the north and west to protect play equipment at the hottest part of the day.
- Ensure that tree roots do not compromise the surfacing or create trip hazards in the fall zone.
- Provision should be made in each playground for areas of sun protection and shade, both for the children using the playground as well as for any caregivers present.
- Care should be taken with respect to site equipment so that it is correctly positioned with respect to sun exposure. Uncovered platforms and some under-surfacing materials can become uncomfortably hot if exposed to too much direct sunlight.
- Provide site specific shade modelling (shade diagram). Refer *LIM Shade sails* for shade requirements.

See the following for further guidance:

- *LIM Shade sails*
- *LIM Play spaces*
- *LIM Planting (Landscape)*
- *LIM Preliminaries*

6.0 Drainage

- Drainage to comply with SCC Standard drawings.
- Install adequate subsurface and surface drainage to avoid water pooling nuisance.
- A brass 'D' marker to be fitted to both sides of edging to indicate position of drainage pipes.
- Site construction drawings to identify location of subsurface drainage.
- Surfacing material to be free draining, sheet flow to swale, to sub-surface agricultural pipe, to soakage trench or to piped gully pit system.

7.0 Edge treatment and tree root growth

- Edge treatment and root barrier to comply with *LIM Play spaces* technical drawings
- Install edge treatment to surrounds of play spaces. Fall zones to comply with *AS 4685* and *AS 4422* (or manufacturers recommendations whichever is the higher requirement).
- Spade cut edging to bark, Takura or sand safety surfacing.
- Concrete edging for bark, Takura, sand or rubber safety surfacing.
- Timber edging for bark, Takura and sand. In cases where timber sleepers are used as footprint edging then a treatment of acrylic topcoat non-slip/splinter containment paint should be applied to manufacturers instructions, with a minimum 2 coats.
- Concrete and timber edging to be installed flush with adjoining turf.
- Consider both existing and future tree root growth potential in playground footprints.
- For any advice on tree roots and specific treatments contact project Arborist and refer *LIM Vegetation Management - Tree sensitive design (existing and new trees)*.

8.0 Fencing

- Safety fencing to comply with SCC play space safety fence technical drawing (see *LIM Fences and gates*).
- Play space safety fence to be installed near hazardous areas, or where there are identified use conflicts. Fencing must be commercial grade heavy duty (suitable for open space use) and the design (height, gap sizes and latch requirements) must comply with *AS 1926 Swimming pool safety*.
- The fence profile is to be free of entrapment sites (may be present with a partially bound opening on the top rail). A suitable top rail is flat.

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Acknowledgements

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