

## Early childhood services

---

Early childhood services typically include centre-based, mobile child care, family day care and home-based care services. While the focus of this section is on the centre-based service, many of the issues discussed will be of interest to other service types.

Early childhood services can play a significant role in the prevention of skin cancer. There are a number of reasons for this:

- part of the critical period for sustaining damaging levels of solar UVR exposure occurs during early childhood
- children attend these services up to five days per week throughout the year, often during the high UVR risk period of each day
- children frequently play outdoors while attending these services.

In addition, all services are required to have policies and procedures to ensure the health and safety of the children in their care. Long day care services accredited under the National Quality Improvement and Accreditation System are required to ensure that children are clothed appropriately for outdoor play.

While the provision of sufficient UVR protective shade is an important element of an early childhood service's sun protection strategy, it will not guarantee total UVR protection. Shade should be one component of a comprehensive strategy which also includes personal protection measures, ie wearing sun protective clothing, hats, sunscreen and sunglasses. Care should also be taken to minimise the time spent outdoors between 11am and 3pm daylight saving time (10am and 2pm eastern standard time), when daily UVR levels are generally at their peak.

It should also be noted that in regard to the staff at these services, employers are obliged under Occupational Health and Safety regulations to protect them from injury by the sun while at work. Under the regulations, employees must cooperate with the measures that their employer puts in place to protect them.

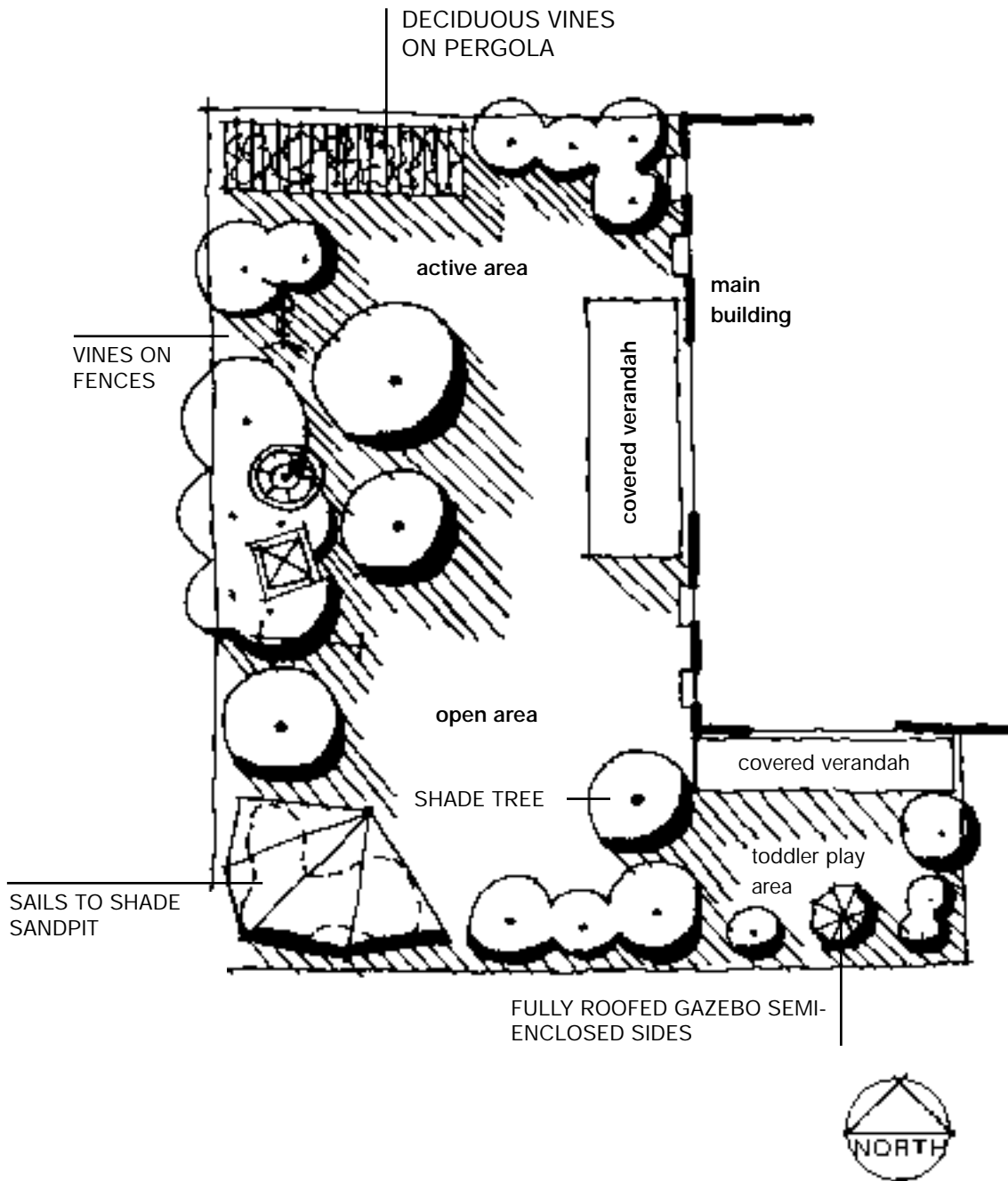
---

### note

It is essential that an assessment of existing shade be made before the planning and design of additional shade commences.

Chapter 5 contains a step-by-step approach to conducting a Shade Audit, as well as advice on managing a shade project.

an example of shade at an early childhood centre



---

## planning and design issues

Many of the following considerations refer to concepts discussed in more detail in other parts of this publication. For this reason it is recommended that readers familiarise themselves with the content of Chapters 1 to 5 as well as Appendix C, before considering the specific issues for early childhood services.

### service types

Shade planning and design for each service type will be influenced by the number of children in care and the size of the outdoor play space.

### project team

Ideally, representatives from management, teaching staff and parent groups as well as relevant professionals, eg architects, landscape architects, should be involved. This will help to ensure that the need for shade is considered within the context of other issues and requirements.

### existing shade

Plans should be made to optimise the use of existing shade before additional shade is considered, eg play equipment could be re-located to a shaded area, low branches could be removed from trees to allow children to play underneath.

### site usage patterns

It is important to take into account the usage patterns at the site, including the type of activities that occur and the time of day they occur. Within the outdoor space at a centre-based service there are usually a number of distinct play areas including:

- an open area for gross motor skills, eg running
- a quiet area for focused play, eg a sandpit
- a formal quiet area for contained play, eg finger painting
- an active area for busy physical play, eg climbing
- a transition zone between indoor and outdoor areas, eg a verandah.

If babies and toddlers are being catered for, there should be a separate play area for them, within the outdoor space.<sup>1</sup>

While each of these areas has its own shade requirements, the design approach should aim to create shade that complements and reinforces the ordering of different play areas and movement paths.<sup>2</sup>

### climatic conditions

It is important to take into account any local conditions, eg strong wind. When these are understood it is possible to use design strategies to modify adverse conditions. The effects of local conditions, particularly salt (in relation to corrosion) and wind, also need to be considered in the selection and design of shade structures as well as the selection of tree species.

### seasonal considerations

Although summer protection is a priority, provision for winter shade should also be made. Care needs to be taken to ensure that new shade initiatives do not intensify winter conditions at the site. Summer shade provision should minimise UVR levels as well as reduce heat and light. Winter shade provision should minimise UVR levels, while allowing for transmission of sufficient levels of heat and light. The use of adjustable shade systems and/or deciduous vegetation may provide greater flexibility.

---

1 NSW Department of Community Services. *Best practice guidelines in early childhood physical environments*. Sydney, 1996. pg 91.

2 Queensland Health and Department of Architecture, University of Queensland. *Shade for young children*. Brisbane, 1997. pg 17.

### indirect UVR

Indirect UVR is an important factor to consider when designing built shade structures and selecting ground surfaces for outdoor play spaces. Coarse and/or soft surfaces eg brick pavers or grass, will reflect less UVR than hard and/or smooth surfaces, eg trowelled concrete. Existing surfaces can be modified if they reflect high levels of UVR.

### aesthetics

Shade design should aim to be aesthetically pleasing as well as practical. Generally, an approach which combines both built and natural shade is preferable. Using a variety of forms of shade will help to create a different identity for each area and a more interesting play space. Visually attractive components include:

- coloured sails
- structures with textured sides or spaces to view through
- structures that support flowering vines
- trees, shrubs and vines (deciduous and evergreen) with different seeding, flowering and fruiting habits (ensure that these are not potentially hazardous to children).

Using a variety of tree and shrub species will also help to create a more interesting and stimulating environment for the children.

### supervision

Children need to be readily viewed by staff at all times for both safety reasons and teaching purposes. Examples of designs that may hinder supervision include shade structures with solid and/or opaque sides and low placement of overhead 'sails'. Trees and shrubs also have the potential to obstruct supervision if they are inappropriately located.

### approval

Development approval must be obtained from the local council, or for government properties from the Development Assessment Commission.

### natural shade

Natural shade should be a major element of shade provision within an outdoor play space. Trees with dense foliage and wide spreading canopies provide the best protection, although leaves can create ongoing maintenance problems for sandpits.

Species should be selected to suit local soil and climatic conditions as well as the character of the surrounding environment. Generally, they should be planted on the north, north-eastern and north-western sides of the play space. Root barriers and subsoil drainage will help to ensure that adjacent paved areas are not damaged by tree roots.

Dense shrubs also have the potential to provide shade. They should be planted around the perimeter of the site so they do not obstruct supervision. Pruning shrubs on the underside may allow for shaded play nooks to be created underneath. Shrubs and trees selected for the play space should be non-toxic and should not be dangerous in other ways. For example, avoid species that:

- have seed pods or stone-fruit (a potential choking hazard for children under five years of age)
- attract bees
- have thorns or spikes
- are known to cause adverse health effects such as asthma and skin irritation.

Also note that some species of trees have a tendency to drop their branches.

If natural shade is the long term favoured option for areas within the site, 'short life' built structures, ie with a lifespan of 6 to 10 years, can be used until trees planted for shade purposes mature.

### Early childhood services

---

#### **safety**

It is important to ensure that shade structures do not create safety hazards. Support systems, eg upright posts, should be clearly visible and ideally have rounded edges and/or padding. They should be placed so as to minimise intrusion into play and circulation areas. Where possible, guy ropes should be avoided, as they may be a trip hazard. In addition, vertical barriers at the sides of shade structures should be designed to prevent children using them for climbing.

#### **scale**

Scale is an important issue to consider when designing shade for early childhood environments. For example, what may seem a comfortably sized space for an adult may be overwhelming to a small child.

This issue however, needs to be balanced with the need for adult access to children's play spaces. For this reason, a head clearance height of approximately two metres is recommended for shade structures. If vertical barriers are to be placed at the side of structures, they should allow for views through at child height, rather than adult height.

The useability of the floor space underneath the structure is another issue that needs to be considered. It should be of a sufficient size and shape to allow children to gather or play actively underneath.

#### **demountable structures**

Demountable shade structures should only be used to supplement more permanent forms of shade. Some demountable structures, eg umbrellas, offer limited protection. Umbrellas also provide limited group space underneath and may be unstable during windy conditions.

#### **off-the-shelf structures**

In the appropriate situation, off-the-shelf structures can provide a readily available, cost-effective shade solution. However, unless a Shade Audit has been conducted, it is difficult to tell if they will meet the site's shade requirements. If the decision is made to purchase an off-the-shelf structure, the issues outlined in Chapter 4 of this publication should be considered.

#### **rain protection**

It may be desirable to incorporate built structures into the design that offer both UVR and rain protection.

#### **minimum regulation size play spaces**

In outdoor play spaces built to minimum regulation size, it is not always possible to use the variety of shade solutions suggested in this publication. The placement of a permanent or adjustable shade system over a major part of the play space may be the only viable solution.

#### **existing services**

The location of shade structures and planting should take account of existing services, eg drainage, power lines, gas, water.

#### **an additional resource**

The Queensland Health publication *Shade for Young Children* is a useful additional resource. Full reference details can be found under *further reading* at the end of this section.

---

## recommendations and considerations

The recommendations below are minimum shade guidelines for centre-based services. It is acknowledged that it may not be possible in the short term to implement all these recommendations due to funding constraints. However, medium term plans should include improvements to summer shade provision as a priority.

---

<b>open area</b>	<p>Partial shade is recommended, especially over grass which needs some sun for growth.</p> <p>Natural shade is the most appropriate option.</p> <p>Consider arranging planting in clusters so that groups of children can access shade.</p> <p>Deciduous trees will allow for penetration of warmth and light to the play space during winter.</p>
<b>quiet area</b>	<p>Shade throughout the year is recommended, particularly over sandpits.</p> <p>A permanent shade system is the most appropriate option.</p> <p>The need for winter warmth and light should be considered.</p>
<b>formal quiet area</b>	<p>Shade throughout the year is recommended.</p> <p>Consider using a combination of built and natural shade.</p> <p>The need for winter warmth and light should be considered.</p>

---

Early childhood services

---

---

**active area**

Shade throughout the year is recommended over fixed play equipment and areas where children play for extended periods of time, eg a digging patch.

Moveable equipment used for active play, eg climbing frames, should be placed in the shade. Consider using a combination of built and natural shade.

The need for winter warmth and light should be considered.

*fixed play equipment*

Safety is a major consideration for shade provision over fixed play equipment.

Shade structures over fixed play equipment should not have footholds or grip surfaces which would allow for climbing.

The roofline of the shade structure should extend at least 500 millimetres beyond the edge of the deck of the play equipment, to prevent child access on to the roof.

The roof of the shade structure should allow for a minimum head clearance height of two metres above the deck of the play equipment.

Tree trunks and the upright posts of shade structures should be located a minimum distance of two metres away from the most fully extended part of the play equipment, eg the side of a climbing platform or the end of an extended swing arc. This will ensure sufficient freefall zones.

Any shade structure in the play area should be designed with reference to AS/NZS 4486.1:1997 (see *further reading*).

---

**transition zone**

Verandahs will provide permanent shade as well as rain protection.

The angle of the roof and the extent of overhang should be designed to maximise shade for the major part of the day, especially during summer.

The width of the verandah should be a minimum of four metres to allow for shaded play space underneath.

Roof materials should be selected to minimise heat build-up during summer. The roof should be insulated (with at least a ceiling cavity, and preferably with insulation material too) and airflow points should be provided.

---

---

transition zone continued	<p>Terraces, with a deciduous, vine-covered pergola or an adjustable shade system, will provide seasonal shade. Some canopies will also provide rain protection.</p> <p>Retractable or louvred shade canopies should be easily adjustable, ideally by one person at ground level.</p> <p>A combination of fixed roof verandah and terrace spaces may be desirable for some services.</p> <p>Vertical pull-down blinds at the side of a verandah or terrace can provide additional protection from UVR when the sun is low in the sky.</p>
<b>baby/toddler area</b>	<p>Shade throughout the year is recommended.</p> <p>Consider using a combination of natural and built shade.</p> <p>The need for winter warmth and light should be considered.</p>

---

## further reading

- *AS/NZS 4422:1996 Playground surfacing—Specifications, requirements and test methods.* Standards Australia and Standards New Zealand.
  - *AS/NZS 4486.1:1997 Playgrounds and playground equipment Part 1—Development, installation, inspection, maintenance and operation.* Standards Australia and Standards New Zealand.
  - The Asthma Foundation of South Australia. *The Low Allergen Garden* pamphlet.
  - Family Day Care and Home Based Child Care Services Regulation 1996 (NSW).
  - National Childcare Accreditation Council. *Putting children first—Quality improvement and accreditation system handbook.* Sydney, 1993.
  - Queensland Health and Department of Architecture, Queensland University. *Shade for young children.* Brisbane, 1997.
  - Walsh P. *Early childhood playgrounds — Planning an outside learning environment.* Alberts Park: Robert Andersen and Associates, 1988.
-