

# Shade for early childhood services

This information sheet has been written to assist directors, coordinators and management committees of early childhood services to improve the quality of shade provided for babies, toddlers and children during outdoor play. It has been designed to accompany *The Shade Handbook*, which contains general information essential to developing effective shade.

**To order a copy of *The Shade Handbook*, go to [www.cancercouncil.com.au/sunsmart](http://www.cancercouncil.com.au/sunsmart) or call (02) 9334 1900.**

## The importance of shade at early childhood centres

Australia has the highest rate of skin cancer in the world, with most skin cancers caused by overexposure to ultraviolet (UV) radiation from the sun. Reducing exposure to the sun's rays can reduce the number of people affected by skin cancer.

Sun protection is an important health and safety issue that early childhood services need to address. All services, regardless of their size, can help prevent skin cancer because:

- One of the crucial periods for sustaining damage from overexposure to UV radiation occurs during childhood. Sun protection in childhood and adolescence reduces the future risk of skin cancer
- Children and staff may attend services up to five days a week, often during the peak UV radiation period of each day
- Children frequently play outdoors while attending these services.

Providing adequate shade is an important element in any early childhood service's sun protection strategy. However, as shade alone cannot provide total protection, other protection measures should be encouraged. These include:

- Scheduling outdoor activities to avoid the middle of the day when UV radiation levels are most intense
- Encouraging the use of sun protection measures, such as wearing sun safe clothing, a broad-brimmed hat and sunscreen

- Ensuring staff act as role models by demonstrating appropriate sun protection behaviours
- Educating children and their parents about the importance of sun protection.

It is essential to assess existing shade before starting to plan and design additional shade. Part 2 of *The Shade Handbook* contains a step-by-step approach to conducting a shade audit and how to plan and implement a shade project.

## Planning and design issues

The following planning and design issues should be considered when planning shade development at early childhood services. These issues are examined in greater detail in *The Shade Handbook*.

It is important to note the different areas of the outdoor space of an early childhood service. These areas may include:

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

While each area has its own shade requirements, they should be considered within the context of the whole site.

## 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.

## Decision-making process

Depending on the type of service, it can be of benefit to gather together representatives from management, staff, parents and relevant professionals such as architects or landscapers to be involved in the design process. This will ensure that the need for shade is considered within the context of other issues and requirements.

## Existing shade

Try to optimise the use of existing shade. For example, move play equipment to a shaded area or prune low branches from trees to allow children to play underneath.

## Use of outdoor area

It is important to take into account the usage patterns of the outdoor area, including the type of activities that occur, where they occur, and when they occur. Sufficient shade should be available at the times of heaviest use, particularly when UV radiation levels are most intense.

## Climatic conditions

Consider the characteristics of the climate zone as well as any local weather conditions, such as strong winds or salt (which leads to corrosion). These factors will affect the design of a shade structure as well as the selection of tree species.

## Seasonal considerations

Ensure new shade does not make an area uncomfortable and cold in winter. A shade structure can also provide rain protection.

## Reflected UV radiation

Shade structures should be designed to minimize reflected UV radiation. Shade structures should be of a sufficient size to ensure people can move away from the edges. The shade canopy should extend at least

one metre past the areas of use with vertical barriers built into the sides.

Modify or select surfaces to reduce reflected UV radiation. For example, replace smooth concrete with brick or grass. Vertical surfaces such as walls should also be made of materials that reduce reflected UV radiation.

## Aesthetics

Shade design should be both practical and attractive to encourage use. An approach that combines both natural and built shade is preferable. Using a range of different shade structures will help to create a more interesting play space. Attractive components include:

- coloured sails
- structures with textured sides or spaces to look through
- structures that support flowering vines
- trees, shrubs and vines with different seeding, flowering and fruiting habits (ensure 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 children.

## Supervision

Staff and children need to have a clear view of each other during teaching activities and outdoor play. Designs that may hinder supervision and views include shade structures with solid or opaque sides, or low placement of overhead sails. Trees and shrubs can obstruct supervision if they are inappropriately located.

## Approval

Check local government requirements for built shade structures, as you may need development approval.

## Natural shade

Natural shade should be a major element of shade in 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 and may build up on paths.

Choose species that suit local soil and climatic conditions and the character of the environment. Root barriers and subsoil drainage will ensure that tree roots don't damage nearby paved areas.

Dense shrubs can also provide shade. They should be planted around the perimeter of a site so they don't obstruct supervision. Pruning shrubs on the underside may create shaded play nooks 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)
- attract bees
- have thorns or spikes
- are known to cause adverse health effects such as asthma and skin irritation
- drop branches.

Temporary built structures can provide shade until trees mature.

## Built shade structures

In many situations, combining built and natural shade will be the best option. There are many types of built structures that can provide effective shade, including:

- permanent structures – pergolas and verandahs
- demountable shade – marquees and tents
- adjustable systems – awnings
- shade sails
- portable shade.

Materials used can range from glass, fibreglass, canvas and PVC to steel sheeting. For built structures, regardless of the size, it is a good idea to get professional advice from a shade installer, builder, landscaper or architect to ensure it is safe and will provide the desired amount of shade. Permanent shade structures usually require council approval before installation.

## Selecting shade cloth

Shade cloth is often the most common and simplest way to provide sun protection. When choosing the type of cloth, keep in mind that different fabrics have different abilities to block or absorb UV radiation. Fabric that is dark, close weave and heavy will block or absorb more UV radiation. It is best to source shade cloth that states the level of UV protection either as an Ultraviolet Protection Factor rating (UPF) or percentage figure. A UPF of 40-50+ is rated as excellent and blocks more than 97.5% of UV radiation. As a general guide, shade cloth should provide at least 94% UV protection (UPF 15) or greater.

## Safety

It is important to ensure that shade structures do not create safety hazards. Support systems such as upright posts should be clearly visible and ideally have rounded edges or padding. Wherever possible, avoid guy ropes, which can be a tripping hazard. Vertical barriers at the sides of shade structures should be designed to prevent children using them for climbing.

## Scale

Shade structures should allow adults to view and access the children's play areas. A head clearance of about two metres is recommended for shade structures.

The useability of the floor space underneath the structure must also 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, such as umbrellas, offer only limited protection and may be unstable during windy conditions.

## Rain protection

It may be desirable to design shade structures that offer protection from both UV radiation and rain.

## Existing services

Consider the location of existing services such as drainage, power lines, gas and water.

## Further information

Cancer Council's SunSmart Early Childhood Program recognises early childhood services that are taking a proactive role in protecting the children and staff in their care from harmful UV radiation from the sun.

The resources, *SunSmart Childcare: A guide for service providers*, and *SunSmart Family Day Care: A guide for Schemes*, provide more detailed information about how early childhood service providers can develop a sun protection policy and apply to become SunSmart.

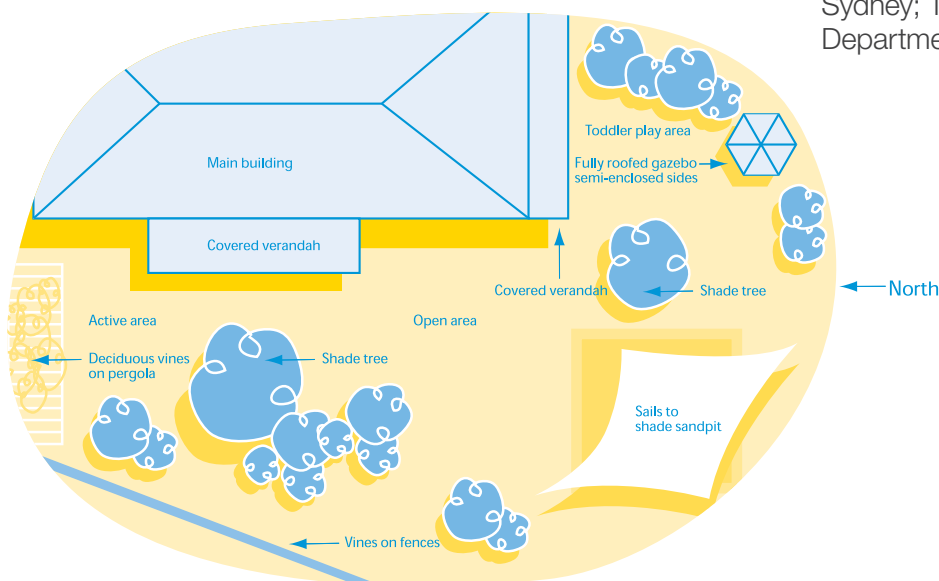
For more information about the SunSmart Early Childhood Program or to order a copy of *The Shade Handbook*, contact the SunSmart Info Line on (02) 9334 1761, email [sunsmarthildcare@nswcc.org.au](mailto:sunsmarthildcare@nswcc.org.au) or visit [www.cancercouncil.com.au/sunsmart](http://www.cancercouncil.com.au/sunsmart)

Also refer to the website for information sheets:

- Shade for playgrounds
- Shade for homes.

The information contained in this resource has been sourced from:

- The Cancer Council Western Australia. *The Shade Handbook; A practical guide for shade development in Werstern Australia*. Perth; The Cancer Council WA; 2007
- The Cancer Council Victoria. *Shade for everyone; a practical guide for shade development*. Melbourne: The Cancer Council Victoria; 2004
- Greenwood JS, Soulos GP, Thomas ND. *Under cover: Guidelines for shade planning and design*. Sydney; The Cancer Council NSW and NSW Health Department; 1998



## Recommendations

<b>Open areas</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 cooler months.</p>
<b>Quiet areas</b>	<p>Shade throughout the year is recommended, particularly over sand pits.</p> <p>A permanent shade system is the most appropriate option.</p> <p>The need for winter warmth and light should be considered where appropriate.</p>
<b>Active areas</b>	<p>It is recommended that there is shade throughout the year over fixed play equipment and areas where children play for extended periods of time, such as a sandpit.</p> <p>Moveable equipment used for active play, such as a climbing frame, should be placed in the shade.</p> <p>Consider using a combination of built and natural shade.</p> <p>The need for winter warmth and light should be considered where appropriate.</p>
<b>Fixed play equipment</b>	<p>Safety is a major consideration for shade provision over fixed play equipment.</p> <p>Shade structures over fixed play equipment should not have footholds, grips, or surfaces that would allow for climbing.</p> <p>The roofline of the shade structure should extend at least 500mm beyond the edge of the deck of the play equipment, to prevent child access to the roof.</p> <p>The roof of the shade structure should allow for a minimum head clearance height of two metres above the deck of the play equipment.</p> <p>Tree trunks and 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, such as the side of a climbing platform or the end of an extended swing arc. This will ensure sufficient freefall zones.</p>
<b>Transition zones</b>	<p>Verandahs will provide permanent shade as well as rain protection.</p> <p>The angle of the roof and the extent of overhang should be designed to maximise shade for the majority of the day, especially during summer.</p> <p>The width of the verandah should be a minimum of four metres to allow for shaded play space underneath.</p> <p>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) and airflow points should be provided.</p> <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 UV radiation 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>