

## Shade for schools

### Key point

Shade is an effective means of sun protection however shade alone cannot provide total protection. When the UV Index is 3 or above Cancer Council recommends protecting your skin in 5 ways:

- Slip on clothing that covers as much skin as possible
- Slop on 30+, broad-spectrum sunscreen
- Slap on a broad brimmed, bucket or legionnaires hat
- Seek shade
- Slide on wrap around sunglasses.

Providing adequate shade for children and staff is an important health and safety issue that all schools must address.

Cancer Council's Shade Handbook contains a step-by-step approach to conducting a shade audit and how to plan and implement a shade project. Download the Shade Handbook at [www.cancercouncil.com.au/sunsmart](http://www.cancercouncil.com.au/sunsmart).

### Planning and design issues

It is important to note the different areas of a school, including:

- active playground areas for ball games and free play;
- passive playground areas for eating lunch and socialising;
- covered assembly areas;
- canteen areas;
- bus stop areas;
- pedestrian links and transition zones.

Some schools also have specialist facilities such as swimming pools, tennis courts, sports fields or agricultural areas. While each area has its own shade requirements, they should be considered within the context of the whole site.

### Project team

Ideally, representatives from school management, teaching staff and parents, as well as relevant

professionals such as architects and landscape architects, should be involved in the project team. This will help to ensure that the need for shade is considered within the context of other issues, including long-term development plans for the site.

### Existing shade

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

### Existing shade

Try to optimise existing shade before considering additional shade. For example, move fixed seating to a shaded area, remove low branches from trees to allow access to shady areas, and review current playground use.

### 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.

### Active and passive use

There should be sufficient shade for active outdoor activities such as free play, physical education classes and sport, particularly during summer.

There should also be enough shade for eating and socialising, 'lining up' (especially after recess and lunch) and assemblies, particularly during summer. These activities could be undertaken in covered assembly areas, active playground areas or specific passive-use areas.

### 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

Although summer protection is a priority, winter shade is also needed in many parts of NSW. Summer shade provision should minimise UV radiation levels as well as reducing heat and light. Winter shade provision should minimise UV radiation levels, while allowing sufficient levels of heat and light. Adjustable shade systems and deciduous vegetation may provide greater flexibility.

### Reflected UV radiation

Shade structures should be designed to minimise 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.

### Approval

Check with your local education body and the local council to if you will need approval to build a shade structure.

### Natural shade

Natural shade should be a major element of shade provision at a school. Trees with dense foliage and wide-spreading canopies provide the best protection. Choose species that suit local soil and climatic conditions and the character of the environment. Root barriers and subsoil drainage will help to ensure tree roots do not damage pavements. Dense shrubs can also provide shade. Avoid shrubs and trees that:

- are toxic;
- have seed pods or stone fruit;
- attract bees;
- have spikes or thorns

- are known to cause adverse health effects such as asthma or skin irritation;
- drop their 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 (COLAS, pergolas and verandahs);
- demountable shade (marquees and tents);
- adjustable systems (awnings);
- shade sails.

Materials used can range from glass, fibreglass, canvas and polyvinyl chloride (PVC) to steel sheeting. For built structures, regardless of the size, it is recommended to seek 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. 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. Shade cloth often states the level of UV protection it provides, either as an Ultraviolet Protection Factor rating (UPF) or percentage figure. Purchasing good quality shade cloth is important. So too however is the style and size of the structure in providing good shade.

### 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.

### 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.

## Vandalism

As school grounds are often accessible after hours, the risk of vandalism needs to be considered.

## Emergency access

Shade structures and planting should not restrict emergency vehicle access to school buildings and grounds.

## Existing services

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

## Further information

For more information about the SunSmart Primary School Program contact the SunSmart Info Line on (02) 9334 1761, email [sunsmartchildcare@nswcc.org.au](mailto:sunsmartchildcare@nswcc.org.au) or visit [www.cancerCouncil.com.au/sunsmart](http://www.cancerCouncil.com.au/sunsmart)

Download:

- The Shade Handbook [www.cancerCouncil.com.au/publications/sun-smart-resources](http://www.cancerCouncil.com.au/publications/sun-smart-resources)

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 Western 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