Information Sheet

Shade

Cancer Council ACT recommends the use of shade for ultraviolet (UV) radiation protection. Shade alone can reduce overall exposure to UV radiation by about 75%. When used with sun protective clothing, hats, sunglasses and sunscreen, maximum sun protection can be achieved.

- **Shade should be correctly designed and installed to offer the greatest coverage during peak UV radiation times and/or peak use periods.**
- **For best protection, choose shade that has extensive overhead or side cover and is positioned away from highly reflective surfaces.**

Planning effective shade

Good planning ensures effective shade. Whatever the scale of the project, planning should include:

- identifying where and when shade is needed
- understanding your shade options
- considering built shade
- considering natural shade.

What is the shaded area to be used for?

Is this area mainly used for passive activities, active play, sports, spectators, or all of these? This will help determine the best type of shade structure to use.

Will the shade affect user comfort?

Shade areas must provide protection in summer while maintaining a cool temperature. It should allow adequate light and ventilation. If the structure is permanent, the shaded area also needs to be warm and protected from the weather in winter so that people will still want to use it.

Shade options

Shade options include the use of trees, built structures (permanent or temporary) or a combination of both.

Built shade

Built shade structures include:

- Permanent systems: these should be able to withstand harsh weather conditions and high winds. Regular maintenance is essential to ensure their long lifespan. The various parts making up your shade structure should be cheap and easy to replace.

- Demountable systems: easy to set up and take down, these include portable structures such as large tents and marquees as well as lightweight tension membrane structures. These are good for a space that only needs shade occasionally or when temporary shade is needed.

- Adjustable systems: these are often very flexible, allowing for changes in shade as the sun moves during the day and at different times of the year.

- Tension membrane structures: often referred to as shade sails, these usually require minimal support structures due to the combined effect of tension and the curved fabric used in the design. The curve of the fabric affects where the shade will fall. As the design and construction of these structures is a specialised field, professionals will need to be engaged to design and build this type of shade.

- Off-the-shelf structures: these are premade structures ready for installation on any site. They can offer a cost-effective, readily available shade solution, but you will still need to ensure that it is safe and provides adequate shade in the right area at the right time.

- Portable shade: such as beach shelters. These are ideal for places where other shade is not available. They often provide a quick and cheap solution to shade problems but may not be effective in protecting people from indirect UV radiation.

Textile and shade cloth covered structures

The quality of the covering material will largely determine the effectiveness of UV radiation protection.

Textile or coated fabric (canvas, etc.) can provide up to 99% UV radiation protection. Features can include tight weave; coating to resist mildew, rot and light exposure; and water resistance. It often has a shorter life span than shade cloth.

Shade cloth may be either woven or knitted. It allows some light, air and water through and usually has a lifespan of up to 15 years but only offers limited protection against UV radiation. Most shade cloth falls below 94% UV radiation protection.

Some tips before you buy

Choose a dark, closely woven *and* heavy fabric that will block and/or absorb more UVR than lighter fabrics. Aim for at least 94% UVR protection or greater.

Consider a shade audit of the site where shade is required. The Cancer Council has publications online to assist you. You can download and view The Shade Handbook from our SunSmart Publications.

Select your installer carefully. Check the credentials of the shade provider and the quality of the shadecloth. Does the company include a structural engineer's report? What warrenty applies? Has the cloth been independently tested to confirm the UVR protection level? are there any ongoing services? What is the durability of the cloth? etc.

Do you need to complete a Development Application (DA) or need approval to erect a shade structure or shadecloth in the ACT? Generally speaking shade structures do not need development or building approval if they comply with rules set out in the **Planning and Development Regulation 2008, Schedule 1.**

Shade (and carport) structures are part of a group called class 10a structures that have different exemption criteria depending on the roofing and level of enclosure. For more information visit the **ACT Planning and Land Authority's** website (and click on 'Do i need to lodge a DA?'). You can also call them on 6207 1923 to speak directly with a **Technical Advisory Service** officer.

And finally, whilst shadecloths sold in Australia should measure up to AS4174, people should also be aware that the Australian Standard specifies that 'care should be taken not to distort cloth structure during the preperation of the test specimens'. Basically there is no standard test method to test the change in UVR transmitted for material under 'stretched' conditions. The true performance of your shadecloth will depend on a combination of its design and installation.

Currently there is no classification or sun protective levels of shadecloth included in the Australian Standard. This is because it is diffilcult to determine an accurate protection measurment (like clothing) due to the many other external elements that play a significant role in the overall UVR protection of the installed product.

Natural shade

The most suitable trees for natural shade have broad canopies, dense foliage and sufficient clearance beneath the canopy to allow access. A higher canopy usually provides less overall shade. Natural shade is particularly well suited to large recreational areas such as parks and reserves.

Species must be carefully selected to ensure they are appropriate for the soil type *and* climate in your area. When choosing a shade tree, consider if it has:

- foliage only when needed (e.g. is it deciduous and does it allow for light in winter?)
- broad, low and dense canopies (i.e. any visible open sky indicates UV radiation can penetrate the shade cover)
- spiky branches, fruit or seed pods that could drop branches or attract bees
- appropriate growth rates and whether it will reach the right size to create the required shade.

Also ensure your tree will cast shade where and when you need it.

Further information and resources

www.actcancer.org
www.actpla.act.gov.au
www.sunsmart.com.au
www.webshade.com.au

For further information contact the Cancer Council Helpline on 13 11 20 or Cancer Council ACT on 6257 9999 or visit our website www.actcancer.org.

UV protective clothing and accessories can be purchased at Cancer Council ACT's SunSmart Fairbairn shop.

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