



Kidsafe New South Wales Inc.

PLAYGROUND ADVISORY UNIT

PLAYGROUND NEWS

Issue 16

Summer 2005

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TRAINING SESSIONS 2005

Do you need training in the new suite of Playground Standards? Why not make 2005 a priority for playground safety. The Kidsafe Playground Advisory Unit will be conducting training throughout New South Wales commencing in March 2005.

PLAYGROUND SAFETY AND DESIGN COURSES:

Playground Safety and the new playground standard AS 4685:2004. Course materials are included for all courses. Hosting a venue is also an option if you have a group.

1) Early Childhood Services and Schools

Ideal introduction or update your current knowledge to be compliant with recent changes. Suitable for early childhood services and schools including an on-site inspection. Sydney venues available including the 30th March at West Ryde. Regional early childhood venues; Aberdeen /Upper Hunter, Cooma / Snowy region, and later on the 16th June at Ourimbah /Central Coast.

2) Playground Industry Services

Information sessions regarding Australian Standard 4685:2004 suited to playground professionals; designers, manufacturers, installers, safety inspectors, parks, local/ government managers and risk managers.

12th April, Sydney CBD location. Regional Council venues; Albury/Murray region, Coffs Harbour/ Mid-North Coast region, Central West /Dubbo region and Singleton/ Hunter region.

Please contact us with your individual requirement and we will confirm date, venue and price. Register your interest by:

[email: kidsafe@chw.edu.au](mailto:kidsafe@chw.edu.au)

[or phone \(02\) 9845 0890](tel:(02)98450890)

[or fax this page to \(02\) 9845 0895](#)

Name: _____

Organisation: _____

Address: _____

Phone: _____ email: _____

Please circle : (Course 1) or (Course 2) No. persons____

Note: If you have all ready contacted us and advised your details, we will notify you shortly with the closest venue, date and course fee. (No need to re-register.)

Diary Dates

• Register for Playground Safety Training by Kidsafe Playground Unit on this page.

• 4th March 2005

[Schools Clean Up Day](#)

Register a 'Clean Up Australia' site at www.cleanup.com.au or phone 1800 024 890

Planning pack & Kids Clean Up Kit available.

• 18th March 2005

[Bandaged Bear Day](#)

Order online at www.chw.edu.au/bbd or phone: 9845 3469

• 6th May 2005 [Walk](#)

[Safely to School Day](#)

www.walk.com.au

Register your school & receive free posters & stickers ph: 9968 4555

Shade and Sun Safety for Children's Services in NSW

We all know that protecting ourselves from the sun is important but just how well are we doing? Does your shade cloth offer at least 94% protection against direct UVR? Does your centre meet the DOCS regulations regarding shade? But more importantly do you understand what is meant by that dreaded word "adequate"?

After reading this article you should be a lot clearer on these issues and have gained some practical knowledge about how to make your playground safer with regard to sun protection.

Let's start with shade cloth. When a manufacturer comes to give you a quote on shade cloth they will generally talk about the fabric in terms of its UVR block. UVR Block describes the density of the weave and how much UVR it blocks out, but it is not a recognized scale. Therefore, in order to make it more meaningful, we need to translate it into a UPF measurement. You will have probably heard of a UPF rating in relation to clothing and the table below shows the ratings in relation to their protection category.

UPF	Protection Category
5 – 14	Poor
15 – 24	Good
25 – 39	Very Good
40 – 50+	Excellent

Most of us would assume that a shade cloth with a 90% UVR block would be pretty good, but let's see how this translates to a UPF rating. We need to use a simple formula:

Step 1: $100 - \text{UVR Block} = A$

Step 2: $100 / A = \text{UPF}$

So, for this example (90% UVR Block): $100 - 90 = 10$. Then, $100 / 10 = 10$. If we look at the table, a UPF of 10 is in the poor category. A bit surprised? Now we will look at 94% UVR Block which is the minimum recommendation of The Cancer Council NSW. $100 - 94 = 6$. $100 / 6 = 16.7$.

This now puts the UPF value into the category of "good" but could still be much higher. If we move up to a 98% UVR Block ($100 - 98 = 2$; $100 / 2 = 50$) we can see that it translates to a UPF of 50. So, next time you are looking at purchasing shade cloth, remember this formula and keep in mind that spending that little bit extra to get the 98% UVR block fabric, will give you much better protection in the long term.

People often wonder how long shade cloth lasts. Generally, manufacturers will offer a 10 year pro rata warranty which means that if it lasts only 7 years the manufacturer will give you a 30% refund on the purchase price. Something to keep in mind is that if you plant some natural shade at the same time as you purchase the shade cloth, then when the 10 years are up, you may not need to replace the shade cloth because you should have natural shade that can do the same job. It may seem like an expensive outlay in the beginning but will save money in the long term.

When you look at the DOCS regulations and read the words "adequate shade" do you wonder whether this means your yard should have 50, 60 or 70% of shade? The truth is that the answer is none of the above. Using a percentage wouldn't be fair to those with bigger playgrounds than others, because it would be more expensive to shade. Therefore, it is more practical to assess the amount of shade you need, relative to the number of children and carers in the centre (because adults need shade too).

The Cancer Council NSW recommends a **minimum of 2.5m² of shade per person** at the critical protection time in summer. People often think that this will mean they have to shade their whole playground, however, this is definitely not the case because DOCS regulations state that you must have a minimum of 7 m² of actual outdoor space per child anyway.

So what does critical protection time mean?

The critical protection time is when protection from UVR at your site is most important i.e. when you are outdoors. There is little point in measuring the amount of shade you have at 12pm, if your programming means that children are indoors sleeping at this time. So, if for example you have a morning tea break outdoors between 10 and 10.30am and you are outside again for afternoon play between 3 and 4pm, then you will have two critical protection times during the day and you need to make sure that there is at least 2.5m² of shade for each person (children and carers) that is outside at that time. The shade can consist of both built (verandahs, shade sails, awnings etc.) and natural (trees) shade.

It is best to measure the amount of shade you have in the middle of summer because shade patterns are at their minimum and UVR is generally at its maximum. This means that if you have enough shade at this time, it is reasonable to assume that you will always have enough shade at that same time on any other day.

So how do I determine whether I have enough shade at my nominated critical protection time?

The process used to calculate this is called a "shade audit". There are two ways of doing a shade audit and that is the projection method and the observation method. The projection method involves the use of sun angles and charts to plot where the shade will theoretically fall at the nominated critical protection time. This is generally done by architects and draftsman and could cost you up to \$1000. The observation method is much simpler and involves marking the shade on the ground and measuring it at your nominated critical protection time. If you want to be thorough, you will do it in the middle of summer and the middle of winter, however if you choose only to do one, do it in summer.

How will I do a shade audit using the observation method?

You will need the following:

A pen paper, some chalk, a bag of flour, some rope, and a tape measure .

At your nominated critical protection time (let's say 10am) in the middle of summer on a sunny day, go outside and mark on the ground where the shade is currently falling. If you are measuring the shade cast on grass from a tree you may choose to use either use a piece of rope to lay on the ground or a bag of flour sprinkled lightly on the ground. However, if you are measuring shade cast from a shade sail onto a hard surface, it may be easier to draw on the ground with chalk. Be sure to draw all the shade quickly and before doing any measuring because you will notice that by the time you have marked all the shade, the shade patterns on the ground will have already started to move with the sun. When marking shade cast in an irregular shape such as a tree, do not attempt to draw around the outline of every leaf. It will be much easier to make the shape something that is easy to calculate the area of, such as a circle or oval. However, if you draw the circle around the edge of every leaf you will overestimate the amount of shade that is there because not everything inside the circle will be shaded. Take a conservative approach to get a realistic measurement of what you have.

After you have marked all the shade on the ground go round and measure the area of each piece of shade using calculations such as the area of a rectangle = height x length, or a triangle = $\frac{1}{2}$ base x height.

As you go though, make an assessment of whether the shade is "usable" or not. For example, if a tree is casting shade into an area that is out of bounds, do not include it in your calculation of usable shade. Or, if any piece of shade in its own right is not at least 2.5m² in size, do not calculate it. After you have calculated all the usable shade available at your nominated critical protection time, use the following table to determine whether you have enough shade:

A	Nominated critical protection time (CPT)	
B	Total usable shade at the nominated CPT	m ²
C	Maximum number of people (adults and children) using the site at the CPT	
D	Available shade per person (B divided by C)	m ²
Compare this to the recommended minimum of 2.5m² per person		
E	Additional shade required, if any	m ²

RESOURCES

NEW!

Swing 'Fact Sheet'

Ensure your swings
are compliant

TOP TREES FOR NATURAL SHADE

Lilly Pilly	<i>Acmena smithii</i>
Brush Box	<i>Lophostemon confertus</i>
Chinese Pistachio	<i>Pistacia chinensis</i>
English Oak	<i>Quercus robur</i>
Chinese Tallow	<i>Sapium sebiferum</i>
Chinese Elm	<i>Ulmus parvifolia</i>
Water Gum	<i>Tristania laurina</i>
Crepe Myrtle	<i>Lagerstroemia indica</i>

TIPS FOR MAXIMISING SHADE POTENTIAL IN THE PLAYGROUND

- Have you thought about adding side curtains on existing structures such as shade sails or verandahs to minimize the effects of the early morning and late afternoon sun?
- When having any sort of shade sail installed, make sure that they put the lowest point towards the north as that is the angle that the sun is coming from for most of the day.
- Deciduous trees can be very effective in playgrounds so that they provide good shade in summer and then allow the winter sunlight into the playground in winter.
- Indirect UVR can be reflected off many surfaces (horizontal and vertical) and as a rule of thumb, the smoother the surface the higher the indirect UVR. Therefore, try to avoid large areas of plain concrete or, wherever possible, think about planting a climbing plant to minimize the amount of indirect UVR being reflected.

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NEXT ISSUE:

Budgeting for compliant playgrounds

By Dr David Eager

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