

Shade Policy 2019

1. Policy alignment

The Shade Policy (Policy) supports the strategic objective of the Cardinia Shire' Liveability Plan; Municipal Public Health and Wellbeing Plan (2017-29) to ensure *'Open space in Cardinia Shire is strategically planned, developed and maintained to create a sense of place, encourage participation, protect the natural environment and promote health and wellbeing'*.

It also aligns with the Council Plan 2017 key themes:

1. Our people

1.4. Improved health and wellbeing for all

- 1.4.1. Source funding and deliver a range of initiatives that promote health and wellbeing.
- 1.4.3. Routinely investigate community health and wellbeing issues to inform Council's planning and activities.
- 1.4.4. Support children, young people, families, older adults and people of all abilities by providing a range of accessible services and facilities.

3. Our environment

3.1. Provision and maintenance of assets on a life-cycle basis

- 3.1.2. Develop new and maintain existing parks, gardens and reserves in a sustainable way.
- 3.1.4. Manage Council's assets like roads, drainage, footpaths and buildings, etc. in a way that ensures they are adequately maintained over their life.

3.4. Natural and built environments supporting the improved health and wellbeing of our communities

- 3.4.1. Plan and develop built environments that support improved health and wellbeing of our communities through implementation of the Healthy by Design guidelines.
- 3.4.2. Raise awareness of our environment's impact on people's health and wellbeing by integrating the concept of liveability across all Council business units and including liveability indicators within the municipal public health and wellbeing plan.

Council's Play Space Strategy (2014) identifies that maximising natural solutions for shade is the preferred option, however, recognises that a balance is required. Combining natural and built shade has many benefits. Built shade structures offer protection from direct UV radiation and provide an interim shade solution while trees mature. Natural shade including trees, shrubs and other vegetation reduces exposure to indirect UV radiation and helps cool the area by reducing the heat island effect. It also allows for sun exposure during winter, assisting in the reduction of vitamin D deficiencies.

2. Purpose

The purpose of the Policy is to outline Council's direction on the provision of shade (natural and built form) within Council owned and managed open space and facilities. It provides a framework to guide decisions and to ensure that the local community and those utilising Council facilities and open space have access to quality shade, whilst encouraging the community to adopt personal sun protection practices.

3. Scope

The Policy applies to all Council owned and managed open space including; active and passive reserves, play spaces, skate parks and BMX tracks, civic space, shared paths and walking routes, and in and around key destinations.

The Policy also applies to all Council owned and managed facilities i.e. swimming pools, recreation clubs, kindergartens and early learning facilities.

4. Background

As part of creating healthy and safe environments for the community, Council has a key role to play in providing public places, open space, and facilities that offer some protection from the sun.

Too much of the sun's ultraviolet (UV) radiation can cause sunburn, skin and eye damage and skin cancer. Australia has one of the highest rates of skin cancer in the world. In Cardinia Shire, 102 residents were diagnosed with melanoma between 2013-2015.¹

Sunburn can occur in less than 15 minutes of sun exposure on a clear January day with cumulative UV exposure over time adding to skin damage. UV radiation is present in the sun's rays in varying degrees throughout the year.² Sun protection is recommended whenever UV levels reach three and above. In Victoria, UV levels are typically three and above from mid-August to the end of April. Good-quality shade can reduce UV exposure by up to 75% (Parsons et al 1998).³ When used in conjunction with other protective measures, such as sun-protective clothing, hats, sunglasses and sunscreen, shade is the best way to provide maximum protection against UV radiation.

With an increasing awareness of the damaging effects of exposure to UV radiation, rising temperatures and frequency of heatwaves, there is an opportunity for Council to improve the way it provides shade in open space and facilities across the municipality.

Key benefits of shade provision includes:

- **Reducing exposure to UV radiation and infrared radiation (heat).** Shade should be provided to reduce exposure at varying times of the day. Even when shaded from direct sun, people can still be exposed to indirect UV radiation reflected from surfaces such as buildings, paved areas, sand and water and UV scattered by particles in the air.
- **Promoting a healthy, active lifestyle.** Public open space provides opportunities for people to socialise, recreate, exercise, walk, play and be in contact with nature. Shade encourages and allows people to access open space safely and at varying times of the day.
- **Reducing urban heat island effect.** The localised increase in air and surface temperatures in urban areas resulting in longer periods of heat, particularly during the afternoon and evening and heightened during heatwaves. Shade provided by trees on hot days can help reduce ambient temperatures by up to two degrees Celsius and surface temperatures by up to 20 degrees Celsius.⁴

UV damage accumulated during childhood and adolescence is strongly associated with an increased risk of skin cancer in later life. Therefore, shade is particularly important in areas highly frequented by children and young people.⁵ Shade provision is also important for older people and people with

¹ Victorian Cancer Registry, Cancer Council Victoria, Melanoma incidence and mortality (numbers and rates) in three year period 2013-2015 by sex and Local Government Area of usual residence, Melbourne 2017

² SunSmart Victoria, 2015, Shade Guidelines, Cancer Council Victoria, Melbourne.

³ Parsons P, Neale R, Wolksi P and Green A. 1998. *The shady side of solar protection*. Medical Journal of Australia 168:327-30.

⁴ Norton, B., Bosomworth K, Coutts A, Williams N, Livesley S, Trundle A, Harris R, McEvoy D. 2013. *Planning for a Cooler Future: Green Infrastructure to Reduce Urban Heat*. Victorian Centre for Climate Change Adaptation Research.

⁵ SunSmart. 2004. *Shade for Everyone: A practical guide for shade development*. The Cancer Council Australia. Carlton, Victoria.

disabilities as walking trips by these users can often take longer, increasing exposure to heat and UV radiation.

The community accesses open space and facilities in a number of different ways; understanding this will assist in informing the shade requirements for particular sites.

5. Shade Policy Statements

The following Policy Statements identify Council's direction for shade provision across the Shire:

- 5.1 Council will prioritise natural shade solutions involving the strategic planting of trees and other vegetation. Incorporation of interim built form shade will be considered on a site by site basis. Once trees are established and providing adequate shade, a review of the ongoing need of the built form structure will be undertaken and removed if deemed appropriate.
- 5.2 Council will actively seek opportunities to improve the provision of shade across existing and newly developed Council open space and facilities.
- 5.3 Council will inform developers of the Shade Policy and be encouraged to conform to the requirements of shade provision.
- 5.4 Council aims to provide affordable, sustainable, and quality shade that meets best practice, is safe and attractive within open space and facilities for the community.
- 5.5 Council will actively seek funding to support the provision of shade at key locations across the municipality that align with the Policy's Guiding Principles.
- 5.6 Council considers high use play spaces a priority for shade provision. Play spaces located within kindergartens and children's centres are governed by regulatory applicable standards for sun shading; any shade provision must comply with these regulations.
- 5.7 Council will encourage community members within the municipality to adopt personal sun protection practices as recommended by SunSmart.
- 5.8 Council will ensure shade provides protection from solar UV radiation at the right place at the right time through appropriate planning and alignment with best practice. Priority areas for shade provision are places where people gather at times of peak UV, in particular between 10am and 2pm Eastern Standard Time and 11am and 3pm Daylight Saving Time from mid-August to the end of April.
- 5.9 Council will apply asset management principles for effective lifecycle management of all shade structures including; service need, project planning, project implementation, maintenance (routine and reactive), inspections (defect and condition), renewal, and disposal.
- 5.10 Safety will be a major consideration in the provision of natural and/or built form shade to ensure the provision of shade does not create safety hazards or risks.

6. Shade options

There are two main types of shade options:

- **Natural shade** - reduces exposure to indirect UV radiation and helps cool the space by allowing airflow.
 - Landscape:
 - Tall dense canopy trees, mid-level canopy trees, and lower shrubs.
 - Deciduous and non-deciduous tree species.
- **Built form shade structures** - protect people from direct UV radiation and include:
 - Tension membrane structures (TMS) / shade sails.
 - Demountable systems (umbrellas).
 - Permanent shade systems; pergolas, rotundas, verandas, covered decks.

All built form shade consists of two components:

- Supporting structure (footings and supporting elements) – keeps the shade structure in place and holds it up.
- Primary shading element – which is the material that makes up the canopy or roof of the shade device.

7. Guiding Principles

Council's priority is for the provision of natural shade provided by trees over built form shade structures to enhance and maintain the natural amenity of parks and open space. However, where this is not achievable in the short term or deemed appropriate, a combination of built form and natural shade solutions will be utilised. Once vegetation and trees are established and provide adequate shade, the ongoing need for the built form structure will be reviewed and removed if deemed appropriate.

The following Guiding Principles offer a framework for shade provision across the Municipality:

- 7.1 Prioritise the use of natural shade in open space as a long term, cost effective solution, maximising the environmental and community wellbeing benefits.
- 7.2 Plant additional trees on key cycling and pedestrian routes, around key public space destinations, and around the periphery of sports grounds, ensuring tree planting does not have a negative impact on existing or future use of the recreation facilities. Choose the right tree for the right place.
- 7.3 Incorporate tree planting where practicable when upgrading carparks, shopping centre streetscapes and civic spaces. Such shading will provide sun protection and other amenity, environmental and health and well-being benefits.
- 7.4 Locate and design new Council facilities and infrastructure in open space (such as pavilions, play spaces and supporting infrastructure) to take advantage of existing shade where practicable, removing or reducing the need for additional built form shade structures.
- 7.5 Ensure built form shade structure designs take into account materials that minimise heat conduction and block at least 90% of UV radiation.
- 7.6 Prioritise natural and built form shade at Regional, Municipal and District level play spaces.
- 7.7 For the design of new or upgrading existing Neighbourhood level playgrounds, make use of roofs on multi-unit play structures, shade from existing trees where available, and incorporate new tree planting. Where there is no natural shade available, interim built form shade options will be considered on a case-by-case basis.
- 7.8 Provide roofed picnic shelters at Regional, Municipal and some District playgrounds; ensure there is an equitable spread across the municipality, aligning with Council's Play Space Strategy.
- 7.9 Incorporate built form shade over sandpits in early learning and kindergarten facilities that align with regulatory requirements.
- 7.10 At new skate parks, skateable areas and BMX tracks provide shade over some of the skating elements, as well as over seating to support users and spectators.
- 7.11 Council will take advantage of existing campaigns and strategies to encourage community members to adopt personal sun protection practices for themselves and others in their care.
- 7.12 Adopt Best Practice and follow guidelines provided by agencies such as SunSmart and Cancer Council Victoria for the provision of natural and built form shade structures. sunsmart.com.au/protect-your-skin/seek-shade

8. Roles and Responsibilities

A detailed description of the roles and responsibilities over the life of the asset can be found in Council's Asset Management Roles & Responsibilities Matrix.

9. Implementation

Implementation of this Policy is to be progressive and ongoing. It will be rolled out in conjunction with programed renewal, new and upgrade project works, along with one off capital works projects at key sites.

Key departments across Council have a role to play in the provision and lifecycle management of sustainable; quality shade for all Council owned and managed open space and facilities. In particular, Community Wellbeing, Operations, and Assets & Services are responsible for ensuring compliance with this Policy.

10. Financial Implications

The provision of natural and built form shade will require funding. Where interim built form shade structures are required, funding will need to allow design, implementation, monitoring, maintenance, renewal, and disposal. These costs will be factored into annual and 5-yearly budget planning processes.

11. Related documents

Type of document	Title
Commonwealth/Victorian legislation and regulations / Standards	Local Government Act 1989 Building Code of Australia Education and Care Services National Regulations 2011: Regulation 113 – Outdoor Space –natural environment Regulation 114 – Outdoor space – shade Regulation 168 – Policies and Procedures (2)(a)(ii) – Sun Protection AS/NZS 4685.0:2017, Playground equipment and surfacing - Development, installation, inspection, maintenance and operation.6.2.1: General considerations, 6.3.9: Shade and sun protection, Appendix A: Shade and sun protection AS 4174:2018 Australian Standard for Knitted and woven shade fabric
Policies, Procedures	Shade Structure Procedure Shade Sail Structure Design Specifications Cardinia Shire' Liveability Plan Municipal Public Health and Wellbeing Plan (2017-29) Play Space Strategy (2014) Recreation Strategy 2014-2024 Skate and BMX Strategy 2016 Open Space Management Framework (2015) Pedestrian and Bicycle Strategy (2017) Asset Management Policy (2017)