

# COMPOST IN COUNCIL PARKS & GARDENS FACT SHEET



## Using compost and mulch in council parks and gardens

Compost and mulch are derived from organic materials through controlled decomposition harnessing biological processes to break down the organic matter into simpler substances. The organic matter is transformed into a valuable resource that can be used in many applications across agriculture, horticulture, landscaping and environmental management.

Compost and mulch offer a cost-effective and sustainable solution for enhancing council parks and gardens. They support the establishment and maintenance of green spaces by improving soil health, reducing water losses, suppressing weeds and protecting topsoil against erosion.

The use of compost and mulch helps councils contribute to the circular economy within their communities and encourages resilient green public spaces. Promoting the use of compost in public spaces can raise awareness of the circular economy and encourage better waste separation of organic streams.

Whether for new developments or ongoing maintenance, these materials provide long-term benefits to public landscapes.

Specific compost and mulch products are Smart Drop Certified (previously Smart Approved WaterMark) which are independently certified as water-efficient products.

## KEY CONSIDERATION

The Australian Standard AS4454 Composts, soil conditioners and mulches provides a recognised framework for ensuring the quality of composts and mulches.

Although compliance is voluntary, the Standard is referenced in most regulatory composting guidelines to establish minimum requirements for production, characterisation and quality testing.

To ensure the safety and reliability of applied products, it is important that councils procure materials that meet AS4454 requirements. Products will be designed for specific applications and should be supplied with standard product information sheets.

## What's the difference between Compost and Mulch?

Compost is an organic product that is formed from the decomposition of organic matter under controlled aerobic (use of oxygen) conditions. The composting process involves a sustained increase in temperature for a specified period of time which pasteurises the compost and ensures that the product does not distribute animal and plant pathogens, as well as plant matter that can spread following its application in the environment.

Composts are often blended with fertilisers to improve their nutrient content. Customised blends can be tailored to lawns or gardens, offering a more bespoke product and a practical solution for application. Mulch, available in raw and composted forms, is an organic product that can be placed on the surface or top layer of soil. It can vary in size, from fine to coarse, and usually acts as a protective ground cover that conserves water, regulates soil temperature and suppresses weeds. Mulch breaks down over time, adding organic matter to the soil.

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### DID YOU KNOW?

Fully composted mulch is stable and does not degrade as rapidly after application compared to pasteurised mulches.

Composted mulch should last a minimum of three years.

## Benefits of Mulch in Parks and Gardens

### WATER RETENTION AND CONSERVATION

Mulch forms a protective layer over soil, significantly reducing evaporation and moisture losses, with the potential to lower irrigation needs by up to 70%

### SOIL TEMPERATURE AND EROSION CONTROL

Mulch can limit erosion and help to regulate soil temperature, minimising fluctuations that can stress plants and improving their overall growth, resilience and survival rate.

### WEED SUPPRESSION

Mulch forms a protective layer that blocks sunlight, suppressing weed germination and growth. This reduces competition for nutrients and water and minimises the need for herbicides.

### LONG-TERM SOIL BENEFITS

Over time, mulch enhances soil structure, increases water-holding capacity and contributes nutrients as it decomposes, often reducing the need for additional fertilisers.

### AESTHETICS

The use of mulch enhances the aesthetics of council parks and gardens.

## Benefits of Compost in Parks and Gardens

### SOIL HEALTH

Compost adds valuable organic matter to the soil, improving soil structure and fertility to retain vital nutrients, and promoting healthier and consistent turf growth.

### WATER RETENTION AND CONSERVATION

Compost increases water retention and penetration in the soil by improving the soil structure, creating a sponge-like effect. In drought conditions, when water use is restricted, compost and mulch-amended sites are more resilient.

### PLANT DISEASE SUPPRESSION

Compost introduces beneficial microbes that compete with plant pathogens, helping to reduce the occurrence of soil-borne diseases. It also enhances plant resilience by improving nutrient availability and root development.

### EROSION CONTROL

Compost stabilises soil, reducing surface water runoff and preventing erosion. Compost binds soil particles together and helps to maintain topsoil integrity, which is essential for plant growth and land conservation.

### REDUCTION IN GREENHOUSE GAS EMISSIONS

Using compost helps sequester (store) carbon in soils, reducing the release of carbon dioxide into the atmosphere. It also minimises methane emissions by diverting organic waste from landfills, where it would otherwise decompose.

### CIRCULAR ECONOMY OUTCOMES

Composting transforms organic material into a valuable resource, reducing landfill volumes and closing the loop on nutrient cycles. It supports sustainable agriculture and landscaping by providing a renewable alternative to virgin derived products and synthetic fertilisers.

## Applying Mulch and Compost in Parks and Gardens

### Surface mulching in green spaces

Mulch can be applied to garden beds, walkways and around trees to a maximum depth of 100mm.

### Mulching for safer playgrounds

Mulch is widely used in playgrounds to improve safety. As a protective ground cover, mulch helps to cushion falls and reduce the risk of injuries by providing a softer landing surface. It also suppresses dust, minimises erosion, and enhances drainage, ensuring a cleaner and more stable play area. Additionally, mulch helps to regulate ground temperature, keeping surfaces cooler in hot weather. Regular maintenance and replenishment of mulch in playgrounds helps to maintain its effectiveness, making it a practical and environmentally friendly choice for recreational spaces. A standard depth of 300mm must be maintained in play spaces to comply with Australian Standard AS4685.6 *Playground equipment and surfacing*. Australian Standard AS4422 *Playground surfacing – Specifications, requirements and test method* specifies the requirements for impact-absorbing surfaces under play equipment.

### Erosion control

Mulch and compost can be used to prevent soil erosion from strong winds, excessive water and overuse. A composting blanket is an effective erosion control method that involves applying a layer of 25-50mm of compost on slopes up to 2:1 grade. Seed can be included in the compost mix as vegetation to retain topsoil from further erosion. Mulch can also protect soils from the erosive forces of wind and rain. Trials indicate that mulch has led to a reduction of runoff by more than 70% and soil erosion by more than 90% on slopes up to 15%.

# Applying Mulch and Compost in Parks and Gardens

## Compost in garden beds

Establishing garden beds can be challenging in areas with compacted soil or little to no remaining topsoil after construction or excavation. In such cases, blending soils with compost or soil conditioners can help restore soil health, improve plant performance, and support successful garden bed establishment. For new beds, a typical approach involves mixing a 50mm layer of compost into the soil to a depth of 150-300mm, requiring approximately 50m<sup>3</sup> of compost per 1000m<sup>2</sup>. The exact amount depends on the existing soil quality – sand- or clay-dominated soils with low organic matter may benefit from up to 100mm of compost, while good-quality soils with sufficient organic content may only require a 25mm application.

Compost also plays a crucial role in renewing garden beds by addressing issues such as waterlogging, poor root penetration, reduced plant growth and erosion. Once established, garden beds can be maintained with regular compost applications, especially when replanting. A 25-50mm layer of compost can be either incorporated into the soil or left on the surface as mulch to sustain soil health and support long-term plant growth.

## Landscaping containers

Using compost and mulch in planter boxes and larger landscaping containers is essential to maintain soil health, improve plant performance and enhance moisture retention. In containerised landscapes, compost-enriched soil blends provide essential nutrients, improve soil structure, and support beneficial microbial activity, ensuring healthy plant growth.

A typical approach to application involves incorporating 20-30% compost into the potting mix to enhance water-holding capacity and nutrient availability. For larger containers or raised planters, a well-balanced blend of compost and soil conditioners can help mitigate drainage issues and prevent soil compaction, creating a more stable growing environment.

## Water Sensitive Urban Design

Compost can be used in the development of public spaces, incorporating Water Sensitive Urban Design (WSUD). This is an approach that incorporates the urban water cycle into the built environment to reduce the impacts of urban development on water resources (e.g. green walls and roofs).

Compost can be combined with the existing soil to improve soil structure, enhance water retention, and support vegetation in green infrastructure projects. In rain gardens and swales, compost-enriched soils promote better infiltration, reducing surface water runoff and helping to filter pollutants from stormwater before it reaches natural waterways. The organic matter in compost also supports microbial activity, which helps in breaking down contaminants and improving overall soil health.

