



# Weed control in the City of Swan

## Why does the City need to control weeds?

To address risk management responsibilities including:

- Ensuring the public can safely use the area (particularly with Bindii and Caltrop weed infestations), prevent weeds from becoming trip hazards in paths or lawn, ensure kerbing, paths and infrastructure are not obscured and reduce fire loads in bushland;
- Minimise damage to infrastructure thus increasing the lifespan of the area;
- Ensure the survival of turf, trees and plants in parks and road reserves and improve biodiversity values in bushland; and
- Maintain the City's parks and roads to an appropriate standard.

## What methods of weed control are available?

- Herbicide applications;
- Saturated Steam applications (hot water injected with steam);
- Mechanical whipper-snipping, mowing and/or manual removal;
- Turf Management Programs (mowing, fertilising, watering);
- Mulching; and
- Use of ground covering plants able to smother the weeds.

## What is the definition of a herbicide?

Commonly known as weed killers, herbicides are used to kill, control or inhibit growth of unwanted plants. The types of herbicides used by the City are:

- Selective - They work on a specific range of plants e.g. grasses, broad leafed weeds and can be applied amongst desirable plants without causing them any harm; and;
- Contact\Non-selective - Translocate through all parts of the plant from the initial point of contact. Designed to kill any plants that are sprayed so best suited to spot spraying operations.

## What herbicides does the City of Swan use to control different types of weeds?

The City uses only approved herbicides and these are:

1. *Glyphosate* based-non-selective, contact herbicide used to control annual and broad leafed weeds and some grasses;
2. MCPA based-selective herbicide used to control a variety of weeds found in turf including Bindii (Onehunga), clover, capeweed etc;
3. *Flusifop* based- selective , post-emergence herbicide used to control annual and perennial weed grasses in garden beds and bushland.

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### Who governs the use of herbicides for weed control in the City of Swan?

The Australian Pesticides and Veterinary Medicines Authority (APVMA) controls and regulates pesticides, including herbicides. The APVMA assesses chemical products for toxicology, efficacy, environmental impact, residues, breakdown times and occupational health impacts.

Herbicide use in non-agricultural areas is covered by an Off Label Permit granted to the Department of Agriculture and Food WA by the APVMA. This permit allows WA Local Government Authorities to use herbicides in areas that are non-agricultural such as parks, road reserves and bushland areas.

The WA Health Department controls the City's herbicide operations through the Health (Pesticides) Regulations 2011 and associated guidelines. The legislation permits the City and all WA Local Government Authorities to use herbicides in their weed control programs, in accordance with the product instructions and Safety Data Sheets.

### What weed control programs does the City have in place?

The City has the following weed control programs in place:

- Kerbs, footpaths, median islands - Glyphosate herbicide is applied three times per year with a specially fitted motor vehicle and/or tractor. This is a spot spray, rather than a blanket spray as only areas with visible weeds are sprayed by the operator.
- Park facilities, garden beds, trees, paths, poles, fences etc; Glyphosate herbicide is applied on average three times per year. This program ensures grass weeds are kept under control to protect plants in garden beds, trees in turf and stop grass/weeds from growing onto paths and park facilities. In garden beds the City uses mulch to retain moisture and suppress weeds, reducing the need for chemicals.
- Sportsgrounds and Parks Turf Surfaces (Grass) - Two programs are used to control annual weeds in turf areas:

#### **Turf Management Program**

The City operates various turf management programs including mowing, scarifying, fertilising and irrigation. These programs provide quality turf surfaces and also assist in managing weeds as they reduce the need for weed control. This is because the turf is maintained at a quality standard where weed seeds find it difficult to germinate. However depending on environmental conditions from year to year, if the turf management programs do not appropriately control weeds and turf quality is affected, a herbicide will be used to obtain a level of weed control and ensure the park is safe to use.

- Natural Bushland - The City employs a combination of herbicide and manual weed removal methods to control weeds in natural bushland aimed at allowing native plants to grow and maintain healthy native vegetation. Using mechanical methods such as whipper snippers is not appropriate due to the damage they can cause to native plants.
- A weed control schedule has been developed to target specific weeds that are present at certain times of the year including:
  - Mulching - to retain moisture and suppress weeds;
  - Glyphosate - to target any weed any time of the year and can be sprayed without damaging native plants;
  - Fusilade - to control annual and perennial weed grasses growing amongst native plants in late winter.

The above are not all used at the same time but individually selected to control specific weeds at certain times of the year.

### Why does the City use herbicides to control weeds?

The City has some 560 hectares of maintained parkland, approximately 2,292kms of roads and paths and over 1,200 hectares of bushland and creeklines under its control.

Given the scale of the problem, mechanical and/or hand removal methods to control weeds are not effective in achieving an appropriate level of weed control. Herbicides supplement the non-herbicide methods as they have the ability to control the underground stems of weeds, not just the leaf, so weeds cannot re-grow. Follow-up applications are necessary to control new weeds that have grown from seed blown into the area or have grown from the residual seed bank in the soil.

Weeds are a primary cause of bushland degradation. They are often introduced to bushland areas by wind, domestic animals and walkers or by the dumping of garden refuse, particularly on bushland fringes. If left uncontrolled, weeds smother native vegetation and can penetrate further into bushland changing its

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appearance and greatly reducing its biodiversity value. Healthy native plants support local native animals so it is vital that any threats to bushland health are addressed. Weeds are also a fire hazard as they dry out and die.

When comparing all the methods available for controlling weeds along kerbing and footpaths, the herbicide control method is considered to be the most effective for controlling weeds, the safest method for operators to apply, the quickest to complete, less disruptive to park, road and path users and the most cost effective.

The City cannot completely eradicate weeds but aims to control them. Herbicides are used as a last resort and only if necessary when mechanical methods cannot achieve the level of control required to meet risk management responsibilities and to maintain public open space and road verges safe for public use.

### How many City parks are sprayed with herbicide to control weeds?

The City has 560 hectares of parks including 324.25 hectares of turf. Herbicide weed control in turf changes from year to year and is dependent on amount of weeds present on each park. On average the City treats around 80% or 260 hectares of turf per year to control weeds in parks. Weeds are also controlled by mechanical means including mowing, whipper snipping and edging. In addition garden beds are planted with many spreading shrubs with the aim of smothering weeds.

### How many City roads are sprayed with herbicide to control weeds?

The City has approximately 2,292km of roads and associated paths within road reserves. Although all 2,292km of roads/paths are checked for weeds, and only visible weeds are sprayed (not bare concrete/bitumen). On average this relates to 80% or 1,800km of roads/paths being sprayed with Glyphosate as part of an ongoing program.

### Does the City use non-herbicide methods to control weeds?

The following non-herbicide control methods are in operation or under consideration:

#### Saturated Steam Method (hot water injected with steam)

The City of Swan is working with the EMRC to trial an alternative weed spraying technique using saturated steam. This method requires operators to apply hot water to individual weeds with a specialised machine. This method only controls the leaf part of the weed, the underground parts (stems/roots) remain alive and weeds re-sprout within a few weeks after treatment.

However, it is best used to control weeds growing in kerbs, paths, medians, etc. It does not achieve the same standard as the herbicide control method and is labour intensive. To achieve an appropriate standard of weed control, weeds would need to be treated every six weeks (eight to nine times a year) as opposed to two to three times a year with herbicide control. This would not be practical to achieve as the operators would need to be applying heated water onto weeds non-stop throughout the year.

The saturated steam method is not suitable for controlling weeds in garden beds or bushland as the heat generated has the potential to damage plant roots and small plants.

The saturated steam is not a selective method of weed control so it is not suitable for controlling weeds in turf. It will damage all plants on contact including turf which results in dead patches on the park. Controlling weeds in turf requires a selective product that when applied only kills the weed and allows the surrounding turf to survive.

#### Mechanical Whipper Snipper Method

This method requires operators to cut individual weeds with whipper snippers or edging machines. It is labour intensive and only controls the leaf part of the weed. The underground parts (stems/roots) remain alive and weeds can re-sprout within a couple of weeks after they have been cut.

This method is used when areas have been infested with tall weeds and it is considered more efficient to use this method to quickly cut them down with a follow up spray on any regrowth. This method is similar to mowing so it does not have any effect on underground weed stems and roots and will not achieve the same standard as chemical control. Using whipper snippers along paths and kerbs is not desirable as there is the possibility of flicking debris on to pedestrians, vehicles and private property. It also requires extensive traffic management as operators need to be close to or on the road to cut the weeds.

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### Mulch

The City uses this method of weed control where possible in garden beds, bushland areas and around trees in lawn. A layer of mulch of around 75-100mm thick is not only good for retaining soil moisture but is a very good weed suppressant, as weed seeds find it difficult to germinate.

### Use of Smothering Plants

The City where possible uses plants/groundcovers in garden beds that are able to provide a smothering effect on the ground below. This creates an unfavourable environment for weed seeds to germinate.

### Why is it necessary to apply Glyphosate around trees?

It is an effective method of keeping weeds and turf away from the base of trees. This is important to allow for the infiltration of water, nutrients and oxygen to the root system and assists in developing a healthy tree. In the past this was undertaken (although not as effective) with whipper snippers but damage to the bark of trees was significant and could not be avoided.

### Is it safe to use a park, including dogs and animals, after it's been sprayed with a herbicide, including Glyphosate?

Herbicides, including Glyphosate, are registered by the WA Health Department for commercial and domestic use to be applied in accordance with the manufacturer's product use information and Safety Data Sheets.

These products become inactive after application when the turf has dried and the signs have been removed. The public and animals can then be permitted to use the sprayed areas.

The WA Health Department has previously advised that there is no concrete evidence for the Department to prohibit the use of Glyphosate for weed control programs by local Councils. It does however acknowledge that there may be some residents who may be sensitive to Glyphosate and encourages those residents to request that the kerb and footpath in front of their property be exempt from spraying with Glyphosate.

### What do I do if my dog and I step on wet turf that has just been sprayed with herbicide because I didn't see the signs?

Although the herbicide is diluted to the required concentration prior to being applied to the turf, it is recommended that you and your dog wash any parts of the body that made contact with the wet turf.

### What controls are in place at the City to manage herbicide application programs and ensure they're applied correctly?

The WA Health Department controls the use of all registered herbicides through the Health (Pesticides) Regulations 2011 and associated guidelines. The legislation permits the City and all WA Local Government Authorities to use herbicides in their weed control programs, in accordance with the product instructions and Safety Data Sheets.

The City's herbicide applications are controlled by the WA Health Department Health (Pesticides) Regulations 2011 and associated guidelines including:

- All operators are trained and licensed in accordance with the Regulations;
- Only herbicides registered by the WA Health Department are used in accordance with the products Safety Data Sheets;
- Prior to each herbicide application event, the proposed spraying program of spray locations and chemical concentration is agreed;
- Spraying ceases if wind speeds consistently exceed 13km/hr;
- Herbicide is not applied to the sand soft-fall area of playgrounds;
- Herbicide is applied outside the playground and on rubber soft-fall surfaces but only when there are no children in the playground; and
- Glyphosate Biactive - The City uses this specifically formulated Glyphosate as it contains an aquatic surfactant allowing for use in environmentally sensitive areas such as adjacent to the City's lakes, and drains.

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### What information is provided to the public/residents regarding herbicide use within the City?

The public is advised on programmed spraying works as follows:

- The City's website; and,
- Information signs are placed out on-site during herbicide application works from the commencement of spraying until the herbicide has dried.

### Can I be exempted from having the Council verge kerbing and footpath outside my property treated with herbicide?

Yes - residents can request the City not to apply the herbicide Glyphosate that it normally uses to control weeds adjacent to their property. The resident is required to control weeds to the same standard that can be achieved by the herbicide control method.

### Further Information

Information regarding evaluation and studies on Glyphosate and the impact on wild animals, birds, aquatic animals (fish, shellfish), amphibians, insects and other terrestrial arthropods and earthworms can be found at [www.apvma.gov.au](http://www.apvma.gov.au) or contact the City of Swan on **9267 9267** or email [swan@swan.wa.gov.au](mailto:swan@swan.wa.gov.au)

Waters and Rivers Commission Notes on Herbicide use (search herbicide) can be found at [www.water.wa.gov.au](http://www.water.wa.gov.au)