



**10.1 COUNCIL PARKS & OPEN SPACE MAINTENANCE-
HERBICIDE APPROACH FOR TREATMENT OF WEEDS**

**EXECUTIVE MEMBER: LACHLAN JOHNSON, GENERAL MANAGER, OPERATIONS AND
INFRASTRUCTURE**

**PREPARED BY: MARK THOMPSON, ACTING MANAGER MAINTENANCE &
ASSETS**

GREG MITCHELL, COORDINATOR PARKS

1. PURPOSE

- 1.1 To inform Council of the outcome of community consultation on the proposed reintroduction of the selective use of the herbicide, Glyphosate for the treatment of weeds at low-risk locations when deemed necessary.
- 1.2 The report recommends that Council endorse the reintroduction of the use of Glyphosate in select, low-risk locations.

2. EXECUTIVE SUMMARY

- 2.1 On 19 April 2023 a report was presented to Council outlining the research and guidance material that formed the basis of a proposal to reintroduce the use of the herbicide Glyphosate at select sites across the City as part of an overall weed management approach.
- 2.2 The use of Glyphosate has been the subject of considerable community interest over a number of years.
- 2.3 At its April meeting, Council considered the latest research on the use of Glyphosate, including Deakin University and Municipal Association of Victoria (MAV) commissioned research which investigated the environmental impacts of a number of chemicals including Glyphosate. Based on a multifaceted criterion of cost, availability, ease of use, any known off-target toxic effects, and known hazards for use, storage and negative environmental impacts were assessed through the research. The report concluded 'based on the results of field trials, and taking into consideration cost, safety information and off-target impacts, Glyphosate is considered to be the most effective weed management strategy of the different approaches scrutinised by this study'.

A copy of this study is attached marked Annexure A

- 2.4 Council sought community feedback through Council's "Have Your Say" website which was open for community comment throughout May. Council's website on weed control was updated as part of the community consultation program.
- 2.5 Council received forty-three (43) feedback contributions from thirty-nine (39) contributors. Officers meet with a number of engaged environmental community groups including Port Phillip Emergency Action Network (PECAN) to seek their feedback on the proposal.



A copy of Community Feedback is attached marked Annexure B and is summarised in the following table:

Strongly against	16	Council should not use Glyphosate
Against	10	Council should not use any herbicide product
Neutral	9	Council should not remove weeds or should look at alternatives.
For	8	Practical suggestion in low-risk environments and city amenity and cost effectiveness matters

2.6 Council and its contractors have implemented a broad range of integrated weed management practices since 2018 which have included the following;

Thermal Weed Control Steaming	The heating of the steam using diesel generators was not a cost-effective solution. The burning of diesel to create steam also had a negative environmental outcome. The truck and equipment used was too large to navigate narrow laneways. High water usage was required.
Organic Sprays Acid based	High OHS risk from potential chemical burns. Products 2-3 times the cost of non-acid herbicides. Effectiveness very dependent on favourable weather conditions. Currently principal method for control of weeds.
Hand picking	Immediately effective for improved amenity. Extremely high cost and additional OHS risk in the road environment. Removing roots and seed banks difficult. On-going program cost prohibitive. Used when Organic herbicide not effective
Planting out with indigenous plants	Trials underway for Council garden beds. Purchasing of suitable plant species have a long lead time from nurseries. Soil profiles, irrigation and drought tolerance have to be considered

2.7 The overall amenity of Council’s road reserves and garden beds has continued to decline. As of 12 June 2023, Council had received **562** weed complaints this financial year. The trend over the past three years is that weed complaints are continually increasing and our current practices despite increased investment are failing short community expectations.

2.8 The use of Glyphosate is recommended in low-risk areas, along with increased contract management assurance and continuation with the trails to plant out road reserve garden beds with Indigenous plants and mixed flowering perennials. Low risk areas include laneways and roadside reserves. Continuing to prohibit its use in high-risk areas such as at childcare centres, near playgrounds and open spaces and in all areas where run-off may immediately enter waterways will mitigate many community concerns. This approach will help reduce the number community complaints in relation to the poor amenity outcomes experienced across the City.



2.9 The following councils were contacted in regards to the use of glyphosate;

Council	Comments
City of Greater Dandenong	Uses Glyphosate as part of a comprehensive weed control approach which includes mechanical weeding, hand weeding, weed steaming and other chemical controls.
City of Casey	Uses Glyphosate in selected locations. They have used the MAV and Deakin University trial results to inform decision making.
Cardinia Shire Council	Both the council and its contractors use Glyphosate. As a semi-rural LGA they also offer weed control grants, and the purchasing of herbicides is eligible for funding.
Kingston City Council	Uses Glyphosate in selected locations. They have used the MAV and Deakin University trial results to inform decision making.
Monash City Council	Uses Glyphosate and reaffirmed its continued use on 27 July 2021 on the basis of the MAV and Deakin University trials.
Mornington Peninsula Shire	Uses Glyphosate as a weed control option along with other non-herbicide approaches including hand weeding, motorised weed control (particularly along roadsides), gas burner and steam weeding, using herbicides where necessary and under strict controls.
Frankston City Council	Frankston rescinded its ban on Glyphosate in February 2021, now using it in non-high risk locations very similar to what is proposed in this report.

3. RECOMMENDATION

That Council:

- 3.1 Thanks the community for their submissions on the proposal to change Council's approach to weed control.
- 3.2 Considering the feedback provided, and the academic and industry advice, resolves to reintroduce the use of Glyphosate in low-risk locations across the City to assist in managing weed growth.

4. KEY POINTS/ISSUES

- 4.1 Research undertaken by Deakin University and MAV has investigated chemicals and alternatives for weed control, including Glufosinate; Picloram; Imazapyr; Prodiamine; Nonanoic Acid; Acetic Acid; Clove Oil; Sodium Chloride; Glyphosate; and Pine Oil, along with steam.



- 4.2 The research looked at a multifaceted criterion of cost, availability, ease of use, any known off-target toxic effects and known hazards for use, storage and negative environmental impacts. Findings indicate Glufosinate is as effective as Glyphosate but is twice the cost; in some climatic conditions Glufosinate requires additional applications; with Glufosinate and Glyphosate have similar impacts on soil profile and microbial populations.
- 4.3 The Municipal Association of Victoria's (MAV) current position on Glyphosate is guided by the Australian Pesticides and Veterinary Medicines Authority (APVMA) and Worksafe stating that APVMA approved products containing Glyphosate can continue to be used safely following the directions in the Safety Data Sheet and labels.
- 4.4 Several people who provided feedback referred to the commitment made by the German government to remove Glyphosate from their market by the end of 2023. Whilst legislation in Germany has been enshrined the continued approval of the widely used herbicide Glyphosate remains a source of controversy both in Germany and the European Union (EU) more broadly.
- 4.5 While critics warn of considerable environmental and human health risks, proponents see no scientific basis for this. Soon, the EU is set to decide on whether it will renew its own authorisation of Glyphosate as an active substance in plant protection products, which is currently in place until 15 December 2023

Health Research

- 4.6 Whilst the MAV and Deakin University research focused on the impacts of chemicals on soil biota, arthropods and microbial populations, there is much existing evidence and research on human health.

International Agency for Research on Cancer (IARC)

- 4.7 In 2015 the International Agency for Research on Cancer (IARC), an agency affiliated with the World Health Organisation (WHO), classified Glyphosate as a Group 2A agent 'probably carcinogenic to humans'. The IARC assessment looked at the intrinsic toxic potential or 'hazard' of the chemical Glyphosate as a cancer causing agency. The IARC assessment does not consider how risk can be mitigated or if risk from likely exposure scenarios is low. Indoor emissions from burning wood and high temperature frying, shift work, mobile phone use, and consumption of red meat are also classified as Group 2A agents 'probably carcinogenic to humans'. According to IARC items considered 'carcinogenic to humans' include bacon, red wine, sun exposure and tobacco.

Joint Meeting on Pesticide Residues (JMPR)

- 4.8 The JMPR is a joint expert taskforce comprising scientists from the WHO, national governments and universities. In 2015 the taskforce reviewed the information considered by the IARC and recommended a full risk-based, weight of evidence re-evaluation of Glyphosate. The JMPR met in May 2016 in Geneva, Switzerland at WHO headquarters to discuss their assessment. In May 2016 the JMPR published the following findings:
- 4.9 While there was some evidence for a positive correlation between occupational Glyphosate exposure and non-Hodgkin lymphoma in some studies, the only well-designed large cohort study found no association at any exposure level.



- 4.10 Overall weight of evidence indicates that Glyphosate and Glyphosate based formulations are not genotoxic in mammals, even at high oral doses, and is unlikely to be genotoxic to humans at likely levels of dietary exposure.
- 4.11 Glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through the diet.

Australian Pesticides and Veterinary Authority

- 4.12 The Australian Pesticides and Veterinary Authority (APVMA) is the Australia Government agency responsible for registration of agricultural and veterinary products. Before a chemical product can be sold or manufactured in Australia it must first go through scientific assessment by the APVMA to check its safety and whether it works as expected and claimed by the manufacturer. These checks are designed to protect the health and safety of people, animals and the environment.
- 4.13 As part of the regulatory process undertaken by the APVMA and pesticide regulators in other countries, a hazard assessment such as that undertaken by the IARC is just one part of the overall risk assessment required to determine the risk of using a registered chemical product. Risk assessments also include estimating the exposure magnitude, frequency and duration as well as population exposed and potential exposure pathways.
- 4.14 The APVMA evaluated the IARC report and other contemporary scientific assessments and concluded that Glyphosate does not pose a carcinogenic risk to humans and there are no grounds to place it under reconsideration. The APVMA’s position is aligned with other international regulators and the Joint FAO/WHO Meeting on Pesticide Residues, including recent comprehensive reviews of Glyphosate conducted by the US and Canada.
- 4.15 The APVMA continues to monitor any new scientific information about Glyphosate and remains satisfied products containing Glyphosate can continue to be used safely according to label directions.

5. CONSULTATION AND STAKEHOLDERS

- 5.1 Council’s Sustainability Team have been consulted on this report and provided input on the practical reintroduction including prohibiting use near waterbodies.
- 5.2 Officers have undertaken extensive discussions with other councils and bodies to assess current practice and in the formulation of the proposal to reintroduce the select use of Glyphosate for weed control.
- 5.3 A summary of concerns raised from our Community Engagement and officers response are contained in the following table; For transparency respondents full responses are provided in **Annexure B**

<i>Key Points Raised during consultation</i>	<i>Officers Response</i>
No weed spraying- Biodiversity	Our Council Plan supports biodiversity. Council are trialling indigenous and mixed flowing perennials in our garden beds and we are committed to improving our planting practices



Germany & UE Banning Glyphosate	Germany has approved legislation to ban Glyphosate by 1 January 2024. The European Union are considering extending the approval for use of Glyphosate beyond this date. Media reports not clear on what this outcome will be.
Weeds are Colonisers	Agree, they can also be evasive. Customer complaints continue to rise requesting Council to remove weeds to improve City amenity
Use more Indigenous plants with less mulch	Agree, plant trials have commenced and will be rolled out further in coming months. Priority has been allocated to shopping precincts garden beds. Stock of indigenous plants have longer led times.
Create more bee friendly habitat	Agree, our planting program has been improved to ensure we increase biodiversity
Is it harmful to humans and dogs	Research since 2018, has indicated this is not true if products are used correctly
Have clear signage when spraying	Agree, signage and food dye are used when spraying any chemicals
Working with toxic chemicals is dangerous	Organic herbicides are acid based and have higher OHS risk and PPE requirements than using Glyphosate based products
Employ real gardeners-hand pick weeds	Hand picking of weeds is not a cost effective option for Council to control weeds. It increases OHS risks when working in road reserves and often the roots and seed banks are missed when hand picking
Using Glyphosate products is logical overgrown weeds is utterly unacceptable-cost effectiveness matters	The use of Glyphosate products will be used only when necessary in low risk locations. Council aims to improve amenity through biodiversity and improved planting programs. Delivering community value meeting service expectations the community are willing to pay for is part of our asset management vision.

6. LEGAL AND RISK IMPLICATIONS

- 6.1 The proposed reintroduction of the selective use of Glyphosate would be undertaken in accordance with industry best practice including guidelines from the Australian Pesticides and Veterinary Medicines Authority (APVMA) and Worksafe.
- 6.2 Furthermore, and in recognition of community concern and in-line with other councils, it is proposed that Council limit the reintroduction of Glyphosate to low-risk areas and not use the herbicide in the vicinity of playgrounds, at childcare centres, etc.



7. FINANCIAL IMPACT

- 7.1 Council average spend on the treatment of weeds has increased over the past 5 years from \$98,000 in 2018 to \$380,000 in 2023. This increase can be attributed to CPI increases provided in the contract and increase in hand picking of weeds under Part B-Schedule of rates which responds to customer complaints.
- 7.2 The savings from the use of Glyphosate will be used to continue the trials of planting out roadside gardens beds with Indigenous plant species and mixed flowing perennials.

8. ENVIRONMENTAL IMPACT

- 8.1 Whilst the MAV and Deakin University research focused on the impacts of chemicals on soil biota, arthropods and microbial populations the information contained on the Safety Data Sheet for the Round-up Bioactive which is proposed to be used (subject to ongoing availability) covers some other ecological information.

8.2 Eco Toxicity

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) is a system developed by the United Nations for standardising and harmonising the classification and labelling of chemicals globally. Specifically, it seeks to:

- Define the physical, health and environmental hazards of chemicals and harmonise classification criteria
- Standardise the content and format of the chemical labels and Safety Data Sheets

- 8.3 Acute aquatic toxicity data and chronic aquatic toxicity data are essential for determining the environmental hazard classification of a chemical substance under the GHS

- 8.4 Aquatic toxicity is defined as the study of the effects of chemical substances to aquatic species which is usually determined on organisms representing the three trophic level i.e. vertebrates (fish), invertebrates (crustaceans as Daphnia) and plants (algae)

- 8.5 Below summarises how study results are given.

- Acute toxicity to fish (96hrs, LC50 in mg/l): The acute toxicity is expressed as the median lethal concentration (LC 50) that is the concentration in water which kills 50% of a test batch of fish within a continuous period of exposure which is usually 96hrs.
- Long term toxicity (28days, NOEC in mg/l): The chronic toxicity is expressed as number of observed effect concentrations (NOEC) that is the concentration in water which below an unacceptable effect is unlikely to be observed

8.6 Daphnia

Acute toxicity to Daphnia (48hrs, EC50mg/l): the acute toxicity is expressed as the medium effective concentration (EC 50) for immobilisation. This is the concentration which immobilises 50% of Daphnia in a test batch within a continuous period of exposure which is usually 48hrs.

Long term toxicity to Daphnia (21days, NOEC in mg/l): this chronic eco-tox study assesses the effect of chemicals on the reproductive output of Daphnia magna. Sometimes, the lowest observed effect concentration (LOEC) is given.



8.7 Algae

Acute toxicity to algae (72-96 hrs, EC50 in mg/l): EC50 is the concentration of test substance which results in a 50 percent reduction in either growth (EbC50) or growth rate (ErC50) relative to the control within 72 hrs exposure.

The Safety Data Sheet for the product Council is proposing to use has the following Eco toxicity information:

- 48hr EC50 (Daphnia magna): 243 mg/L
- 96hrs LC50 (rainbow trout): >1039 mg/L

8.8 Using a concentration of Roundup Bio 360 at 3.6g/L, contamination of waterways would have no known impacts to aquatic organisms subject to the waterway capacity.

8.9 This does not take into account the rate at which Glyphosate breaks down, nor the substances into which it breaks down (which are naturally occurring substances that are broken down by microbes). These factors would further reduce the toxicity risk to aquatic organisms.

8.10 In summary, it is prudent to consider limiting Glyphosate use in and around waterways, waterbodies, and near standing water, such as in kerb and gutters. It is recommended that any reintroduction include usage limitations for these situations.

9. COMMUNITY IMPACT

9.1 The use of Glyphosate became a sensitive topic since a highly media documented lawsuit in America in 2018, where frequent users of the Glyphosate based product. "Round up" pursued legal compensation with the company Bayer after they were diagnosed with non-Hodgkin's lymphoma. Studies have suggested that human and animal dermal absorption of Glyphosate is poor. Research has also shown that as Glyphosate is non-volatile, absorption from inhalation does not pose a threat and that Glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through the diet.

9.2 The reintroduction will abide by Council's existing process is for signage to be displayed at the time of spraying in reserves and for dye to allow the applicator to ensure full coverage and the community to identify where spraying has occurred. Additionally, existing practices wherein Council contractors keep detailed records of locations of chemical applications, dilutions and amount applied will continue to be implemented.

10. ALIGNMENT TO COUNCIL PLAN AND COUNCIL POLICY

10.1 Liveable Port Phillip

Delivery of a high standard of amenity, ensuring compliance with planning and building requirements, legislation and local laws to support public health and community safety

10.2 Sustainable Port Phillip

Port Phillip has cleaner streets, parks, foreshore areas and waterways where biodiversity flourishes.



11. IMPLEMENTATION STRATEGY

11.1 TIMELINE

11.1.1 A variation to the Open Space maintenance contract to remove clause 6.16 (3) "The contractor must not apply chemicals which contain glyphosate" would be executed. Citywide has indicated this variation would be agreed and a changeover date would be negotiated based supply and use of existing stock.

11.2 COMMUNICATION

11.2.1 Council website will be updated with new information on weed treatment including new planting trials of garden beds in commercial precincts

11.2.2 All respondents who provided feedback via "have your say" have been informed of that this report is before Council on 5 July 2023. Respondents will be informed of Council's resolution.

12. OFFICER DIRECT OR INDIRECT INTEREST

12.1 No officers involved in the preparation of this report have any material or general interest in the matter.

ATTACHMENTS

1. Annexure A - CERRF Weed Management Options for Victorian councils - Alternatives to Glyphosate [↓](#)
2. Annexure B - Have Your Say Port Phillip - Managing Weeds In Our Open And Urban Spaces - Data Results [↓](#)
3. Annexure B - Have Your Say Port Phillip - Managing weeds in our open and urban spaces - Form Results Summary [↓](#)