

7.1 WEED MANAGEMENT: GLYPHOSATE PHASE OUT PLAN

Director City Infrastructure Anita Curnow

Open Space and Environment

Officer Recommendation

That Council:

1. Notes that to date, despite considerable investigation of options, none of the alternatives to using glyphosate for weed management has shown to be as effective or viable economically or environmentally.
2. Notes that current guidance from the Australian regulatory authorities and WorkSafe Victoria, is that products containing glyphosate can continue to be used safely, as long as adhering to directions in the Safety Data Sheet and labels and does not represent a health risk to the public.
3. Notes that glyphosate has already ceased to be used in high risk exposure sites across Moreland.
4. In the light of the high cost and unproven effectiveness of currently available alternative treatments, undertakes a trial of a large 'no glyphosate' zone with a comparison control zone over a two-year period and evaluates the trial using metrics including worker hours, equipment hours, material costs and community feedback.
5. By agreeing to the trial, sets aside previous Council decisions to cease the use of glyphosate by August 2021, made at the:
 - 14 August 2019 Council Meeting - "Weed Management Review – Further Report to Review of Pest and Weed Management Policy (from 6 December 2017)"; and
 - 12 August 2020 Council Meeting - "Weed Management – Glyphosate Phase Out Update"
6. Continues a phased approach to both reducing and then potentially ceasing the use of glyphosate at all other low risk and environmentally sensitive sites in the future, with an update report on the findings of current Deakin University research and the application of any promising alternatives to Moreland that may impact on the 2022/23 Budget be received by Council in December 2021.

REPORT

Executive Summary

On 14 August 2019, there was significant media and international concern about the effects of glyphosate herbicide on human health. While acknowledging advice of Australian regulatory bodies that glyphosate was safe to use in accordance with the Safety Data Sheet and label, Council resolved to ceasing use of this specific herbicide in its operations, by August 2021. The timeline then was to allow for incremental changes to the budget, continued testing and cost analyses of alternate herbicide products and weed control methods.

Work has been undertaken by Council officers to trial alternatives products and weed treatment methods, as well as keeping abreast of, reviewing and participating in research undertaken into non-glyphosate weed management alternatives.

Trials have included non-glyphosate herbicides including Glufosinate ('Basta'), organic ones like Slasher (Nonanoic acid, plant extract) and BioWeed (Pine oil), and Hot-water steam treatments. A ban on glyphosate use has been implemented at high risk sites around playgrounds, schools and child-care centres and the successful introduction of a 'No Spray' Register, where residents have opted to maintain their nature strips without using glyphosate.

Moreland is also participating with several Victorian Councils, in a Municipal Association of Victoria (MAV) funded 12-month study with Deakin University, which is expected to be completed by June 2021. Preliminary findings from field studies have indicated limited products and technologies to replace glyphosate, with all trial products being less effective and/or costlier.

This would be undertaken in line with the identification of viable weed treatment alternatives and the completion of research work commissioned by the Municipal Association of Victoria (MAV) and further deliberation with other key stakeholders including Melbourne Water and various environmental groups about any impacts in environmentally sensitive sites.

While there is an available option (Option A) to implement glyphosate phase out as at August 2021, there is a significant unbudgeted cost capital of \$775,000 in 2021-22 and unbudgeted additional operating expenses each year of \$793,000. With the combination of the uncertainty over the known alternative treatment and significant pressure on the 2021-22 Council budget, Council officers recommend that the resolution to stop using glyphosate by August 2021 be rescinded. This will allow further research and the development of a suite of targeted solutions to inform potential business cases and job creation opportunities for consideration by Council in future financial years (Option B).

Under Option B, glyphosate herbicides will continue to be used in low risk exposure areas as part of integrated weed management practices with strict safety, recording and monitoring, as well as a phased overall reduction in total usage. A *No glyphosate trial zone* will also be established in Brunswick immediately to understand community perception and further evaluate costs for alternative treatments in managing weed growth, compared to control zones of similar size and mix of open space facilities. This trial would be undertaken over a two-year period and would be evaluated using metrics including worker hours, equipment hours, material costs and community feedback. The trial as part of Option B will not require additional capital or operational funding.

Previous Council Decisions

Weed Management Review – Further Report to DCI70/17 (Review of Pest and Weed Management Policy decision 6 December 2017) - 14 August 2019

That Council:

- 1. Notes the potential negative health impacts of glyphosate on residents, workers and bystanders, and notes the well-established negative impacts on bees and insect populations which are critical to agriculture and native ecosystems as well as the development of weed resistance to glyphosate.*
- 2. Adopts a phased approach to ceasing the use of glyphosate products by August 2021.*
- 3. Receives a report in August 2020, providing an update on the progress of moving to banning glyphosate by 2021.*
- 4. Continues to advocate for viable alternate products to replace glyphosate.*
- 5. Notes that Council officers are progressing an initiative to provide a sign to all residents currently on the 'No Spray Register' and those who sign up to the register, noting that the resident is committed to maintaining the weeds on the public areas that abut the property, including footpaths, laneways, verges and gutters.*

Weed Management – Glyphosate Phase Out Update - 12 August 2020

That Council

1. *Notes the work currently undertaken to phase glyphosate products out of Council operation by August 2021.*
2. *Receives a report at the March 2021 Council meeting highlighting the timing and cost implications of the full 'Phase Out Plan'.*
3. *Notes that residents can register their property on the 'No Spray Register' which stops the use of glyphosate on land abutting their property. Property owners who sign up to the register, acknowledge that they are committing to maintaining the weeds on the public areas that abut the property, including footpaths, laneways, verges and gutters.*

1. Policy Context

The Pest and Weed Management Policy 2016-2026 was adopted by Council in September 2016.

The policy underscored the benefits of an integrated pest and weed management strategy in public open space, ensure proper selection and use of herbicides and pesticides and investigate the use of viable alternatives that lead to more sustainable environmental outcomes. The main objectives of the policy are:

- Seek to reduce the use of chemically based herbicide and pesticides as a weed control and landscape management measure where possible and replace with environmentally sustainable alternatives.
- Continue to investigate cost effective alternatives to herbicide and pesticide use where available.
- Trial environmentally sustainable herbicide and pesticide alternatives for weed control spray applications utilising a risk management approach.
- Utilise aspects of Integrated Pest Management Plan methodologies for Open Space Management.
- Guide and implement best practice methods and clear and accountable management systems for weed control and pesticide application to minimise environmental and human impacts.
- Review the process for assessing new chemicals to ensure that herbicide and/or pesticide use is justified, minimised and the lowest toxicity necessary to achieve the desired outcome.
- Create a safe environment for all staff and the community in relation to chemical application within the municipality.

Before being adopted, the policy went through a full community consultation process. Feedback received through this consultation period helped form the final policy.

2. Background

Use of glyphosate as a herbicide

Application of glyphosate-based herbicides has been a common method for weed control on public land in Moreland including parks, passive open space, nature strips, streetscape gutters (bluestone and concrete), natural resource management (NRM) areas along our creeks and waterways. It is also used on private land when residents use the popular retail herbicide 'Round-Up'.

Glyphosate became a subject of public and media interest in 2015 when the International Agency for Research on Cancer (IARC) in Europe determined that it was a probable carcinogen and subsequently in 2018 when a California court in the USA ruled glyphosate weedkiller caused a groundskeeper to develop lymphoma cancer. Scientific research has been continuing in understanding its off-target toxicity, particularly in humans, where it potentially may lead to carcinogenesis. The danger posed by a pesticide can be assessed in two ways namely:

- Hazard assessment: if a substance is capable of causing harm
- Risk assessment: if it can cause harm under conditions of normal exposure

While public interest was triggered by a determination that glyphosate may be capable of causing cancer (hazard assessment), it did not specify the circumstances (risk assessment) of how it might lead to that circumstance. In Australia, decisions about pesticides are the responsibility of the Australian Pesticides and Veterinary Medicines Authority (APVMA); an independent, statutory authority. The APVMA commissioned a review from the Office of Chemical Safety within the federal Department of Health in 2016. This review led the APVMA and WorkSafe Victoria to re-assert a previous finding from a Risk Assessment perspective, that glyphosate is safe to use if the safety instructions are followed and this advice is still current.

The MAV's current position on glyphosate is also guided by the APVMA and Worksafe Victoria. In its 2019 survey report for members, the MAV suggested that Maribyrnong Council and City of Port Phillip had ceased use of glyphosate in its operations. The City of Frankston had also instituted a ban on the use of glyphosate in July 2020 but then rescinded that decision in February this year, approving a reintroduction of glyphosate in specific, low risk instances. Byron Shire Council in northern New South Wales resolved in 2013 to cease use of all pesticides in highly frequented public places in favour of mechanical slashing and brush-cutting. This was reversed also in 2019 with glyphosate use permitted in specific low-risk scenarios, for example where the management of native vegetation was compromised and environmental outcomes deteriorating, without herbicide interventions to contain weeds.

3. Issues

Current application of glyphosate

Applying targeted and discrete application of glyphosate, usually spot spraying or cut-and-paint, allows for control of tenacious, perennial (woody) weeds in our environmentally sensitive sites, like our Creeks and waterways. In situ herbicide treatment also has an advantage over manual removal because if weeds must be decapitated and removed this leads to soil disturbance which can lead to further weed germination. The steam/hot water treatment, as an alternative treatment strategy, is not advisable in environmentally sensitive sites because of access issues for machinery as well as the effects of the treatment on soil microbe and insect populations and diversity. 'Round-up Bioactive', which contains glyphosate, is approved by Melbourne Water for weed control near water because it has a non-lethal surfactant that also protects aquatic life.

Some of the primary Weeds of National Significance ('WoNS') rampant along our NRM sites include Chilean Needle Grass, Blackberry, African Boxthorn and Serrated Tussock. Council manages these areas using bushland contractors, such as Merri Creek Management Committee (MCMC), specifically trained in plant identification and weed control techniques. Spot spaying, usually with glyphosate based products, is the main (and most efficient) weed control technique but it is used as part of a wider toolbox of integrated controls including grooming (woody weeds), hand-removal, brush-cutting, broadleaf/grass/bulb specific herbicides, flame-weeding, mulching and burning.

Herbicide use reduces over time as native vegetation is restored and provides its own competition but until WoNS have been completely eradicated, banning the use of glyphosate will have significant ramifications for these sites and jeopardise Council's ability to meet exotic weed management obligations under the *Catchment and Land Protection Act 1994*.

High risk exposure sites in Moreland where glyphosate ban in place

Since the Pest and Weed Management Policy was adopted in September 2016, glyphosate is no longer used around playgrounds, childcare centres, schools and kindergartens and chemical herbicide use is prohibited in a buffer zone maintained around these sites. Manual weeding is the current norm although steam/heat treatments have been carried out on occasion, since the ban came into effect.

Residents/property owners have also had the option to register their property on a 'No Spray' Register, stipulating that Council does not spray chemical herbicide including glyphosate in nature strips and immediate vicinity of their property boundary. To date, 415 properties have been included on the Register and have accepted maintenance responsibilities of weed control, rather than depending on Council maintenance programs.

Council has also banned the use of inorganic herbicides in controlling weeds in Rights of Way. The *Laneway Weed control and tidying contract* (894ST, DCI18/20) commenced in September 2020 utilising mechanical brush cutting rather than glyphosate. The additional cost of \$59,875 per annum has been factored into current Base (operational) budgets and is in the proposed 2021-22 budget.

Ongoing action being taken including trial treatments and sites

Council officers established a working group in response to Council's August 2019 resolution to phase out use of glyphosate by August 2021. The following measures have already been put in place:

- Council carried out trials using alternative products and treatments in February 2018. Report was presented to Council (DCI14/19) outlining results of the trial and a report also provided by Dr Peter May (University of Melbourne).
- Since 2018, Council officers have also significantly reduced overall usage in glyphosate by 30 per cent, by using alternative products as well as the use of a pre-emergent, non-scheduled herbicide 'Barricade'. Barricade (chemical ingredient 'Prodiamine'), when used in tandem with glyphosate, extends the frequency between spray applications and has reduced the need for spot-spraying treatments in between, because of the greater efficacy of the pre-emergent.
- Council officers have explored the use of heat treatment technology in managing weed growth along its streetscapes, which accounts for the greatest use of glyphosate herbicide at present. Contact has been established with a reputable heat treatment technology supplier in Norway called 'Heatweed' to understand the technology and consider purchase of plant and equipment. In the meantime, two established maintenance contracting firms in Australia have already deployed vehicles from the same manufacturer in Norway, fitted with specialised sensors, to treat weeds along roads and street frontages using this technology. The second of these contractors has only just purchased and deployed its first vehicle in Victoria in April. Council has recently met with the contractor and trialled the technology in Moreland in May along nominated streets, to assess its effectiveness.
- Moreland City Council joined with Frankston, Maribyrnong, Whittlesea, Ballarat, Casey, Whitehorse, Greater Geelong, Banyule, Darebin and Kingston to commission a Deakin University research study in 2019, under the auspices of the MAV, into 'Weed management strategy at Victorian councils - Alternatives to

glyphosate'. A draft report was released to member Councils in February this year, with the final report due in June 2021.

- Thus far the research team have not proposed any viable and cost-effective alternatives, aside from further consideration of the use of Basta (chemical ingredient 'Glufosinate ammonium'), a similar, inorganic, broad spectrum herbicide to glyphosate. It is twice as costly as glyphosate and notably requires higher safety protection measures in its use because of human toxicological effects as well as being very toxic to aquatic life. This additional safety and handling requirements for the use of any alternative herbicide, effect on soil biomes and other environmental impacts, are still being considered by the researchers.
- Council's Natural Resource Maintenance (NRM) staff trialled Heatweed technology in a small bushland site in Glenroy that had good access. The team determined a cost of \$2.06 per sqm to treat an equivalent NRM area versus \$0.24 per sqm using glyphosate. A Working for Victoria team also attempted the manual removal of weeds in an NRM grassland site abutting the JP Fawkner Reserve to remove Chilean Needle Grass. An area that would normally take specialist contractors with glyphosate treatment costing \$0.26-\$0.52 per sqm over 2-4 working days, took a Working for Victoria crew 32 days, to completely hand weed the site. This equated to \$4.62 per sqm and 8-10 times slower by hand.

Proposed Approach

The following options are presented for consideration by Council:

Option A – Implement glyphosate ban by August 2021

Continue with the intended ban of all glyphosate products by Council and its contractors on Council managed lands by August 2021. This will require additional resource provision, the purchase of unbudgeted additional plant and equipment of \$775,000 in 2021-22 and unbudgeted operating expenses each year of \$793,000.

In 2021-22, this is a total of \$1,568,000. A cost breakdown is provided in **Confidential Attachment 1** - Costings for OPTION A for FY2021-22 - Glyphosate ban report - May 2021.

Option B – Risk-based approach, larger-scale trial and ongoing research

Continue "No Spray Zones"

Continue with a partial ban of all glyphosate products by Council and its contractors on Council managed lands at all high-risk exposure sites.

Larger-scale trial

To better understand community perception to service levels along with the service levels required to manage weeds without the use of glyphosate, a large "No Glyphosate Trial Zone" is proposed in Brunswick commencing 1 July 2021. The site is bounded by Melville Road (west), Albion Street (north), Sydney Road (east) and Victoria Street (south), where the use of glyphosate will be banned in weed management and instead alternative treatment strategies used (**Attachment 2** - No Glyphosate Trial Zone & Control Sites May 2021).

The Trial Zone features roadways, streetscapes, the AG Gillon Oval, Raeburn Reserve (Brunswick), Clifton Park West and Brunswick Park. The "Control Sites" for this trial will span two sites to allow for a similar size and mix of open space type areas; one bounded by Victoria Street (north), Melville Road (west), Dawson Street (south) and Sydney Road (east) and the other by Sydney Road (west), Albion Street (north), Victoria Street (south) and Lygon Street (east). This trial would be undertaken over a two-year period and would be evaluated using metrics including worker hours, equipment hours, material costs and community feedback.

Present phase-out options to Council

This would be undertaken in line with the identification of viable weed treatment alternatives and will enable completion of research work commissioned by the MAV and further deliberation with other key stakeholders including Melbourne Water and various environmental groups about any impacts in environmentally sensitive sites. This will also support a staged consideration by Council of budget priorities and community appetite to eliminate the use of glyphosate over the coming years.

Option B demonstrates a phased approach to both reducing and then potentially ceasing the use of glyphosate at all other low risk and environmentally sensitive sites.

Community impact

Council receives on average 150-200 customer service requests per year relating to weed management. Of these requests, less than 5 per cent relate to concerns of chemical use. A vast majority call for Council to manage weed control within the municipality. It is important to strike a balance between community expectation and implications of alternate products on service delivery. Option B would enable Council officers to understand impacts on service levels within the identified No Spray Zone by both scrutinising customer service requests and carrying out public surveys.

Climate emergency and environmental sustainability implications

Moreland City Council is taking a leading role within the region by declaring a climate emergency and continues to seek new initiatives to preserve and enhance the environment for community wellbeing. The projected increase in global temperatures will favour proliferation of weeds with their physiological tolerances to climate stressors, so control and management of weeds especially environmentally significant ones, will prove challenging without the use of glyphosate, which is the main herbicide used against bushland weeds.

Economic sustainability implications

Any phasing out of use of glyphosate herbicide (Option A) will result in additional expenditure to manage weeds in the municipality and to maintain an acceptable level of service, in the absence of alternate cost-effective solutions. Increased budget requirements associated with weed management activities have already been forecast in the 2021-22 budget and will be required to be maintained (minus initial capital investments) in future financial year operating budgets.

Legal and risk considerations

Environmental risks have already been outlined. Public health risks with use of alternative chemical products is not always fully understood, without the passing of time. Option B also maintains a lower reputational risk, mitigated by demonstrating a clear, lower cost future pathway to ultimately achieving the same outcome as Option A by emphasising other initiatives that are sensitive to and support environmental outcomes.

Human Rights Consideration

The implications of this report have been assessed in accordance with the requirements of the Charter of Human Rights and Responsibilities.

Gender Equality Impact Assessment

In accordance with the Gender Equality Act, the recommendations in this report were assessed for the extent of "direct and significant impact on the public". The recommendations were not deemed to have direct and significant impact, and so a Gender Impact Assessment was not undertaken.

4. Community consultation and engagement

Relevant Council departments were consulted during the creation of this report. The timing and nature of implementation of the phase out of glyphosate has not been subject to community engagement or consultation at this time.

A community consultation and engagement plan will be developed for the no glyphosate zone trial.

5. Officer Declaration of Conflict of Interest

Council officers involved in the preparation of this report have no conflict of interest in this matter.

6. Financial and Resources Implications

Option A as outlined will require additional budget provision in both Capital and Base in 2021-22 amounting to \$1,567,808 as well as increases to ongoing future year base budgets. Option B will not require any additional budget provision in 2021-22. We will be putting up a future business case for funding, once we realise a workable solution to weed management.

7. Implementation

If the officer recommended approach of Option B is accepted;

- the current practice of No Spray Zones will continue;
- the 'no glyphosate zone' trial will commence 1 July 2021; and
- an update report on outcomes of research and new information that may inform considerations for the 2022-23 budget will be presented to Council in December 2021.

Attachment/s

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| 1 | Costings for OPTION A for FY2021-22 - Glyphosate ban report - May 2021 | D21/158661 |
| | <i>Pursuant to sections 66(2) and 3(1)(a) of the Local Government Act 2020 this attachment has been designated as confidential because it relates to Council business information, being information that would prejudice the Council's position in commercial negotiations if prematurely released.</i> | |
| 2 | No Glyphosate Trial Zone and Control Sites May 2021 | D21/163345 |