

Manchester City Council Report for Information

Report to: Environment, Climate Change and Neighbourhoods Scrutiny
Committee – 7 December 2023

Subject: Weed Pilot (Streets)

Report of: Strategic Director (Neighbourhoods)

Summary

This report provides an update on the street weeding pilot.

Recommendations

The Committee is recommended to:

1. Support the Council's approach to reduce dependency on glyphosate in a phased approach, looking at a suite of herbicide free treatments to support this and build on success achieved to date.
 2. Receive future updates on the approach in the annual waste and recycling report.
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Wards Affected: All

Environmental Impact Assessment -the impact of the issues addressed in this report on achieving the zero-carbon target for the city	The Manchester Climate Change Framework 2020-25 is the city's high-level strategy for tackling climate change. It sets out how Manchester will 'play its full part in limiting the impacts of climate change', a commitment in the Our Manchester Strategy 2016-25. The Framework's key aims are to be: 'a cleaner, litter-free city, which recycles more' and '...play its full part in limiting the impacts of climate change and create a healthy, green, socially just city where everyone can thrive.' The highways infrastructure is fundamental to supporting active travel.
Equality, Diversity and Inclusion - the impact of the issues addressed in this report in meeting our Public Sector Equality Duty and broader equality commitments	This report considers that the weed control methodology used on the highway is inclusive and accessible by considering wider stakeholder viewpoints.

Manchester Strategy outcomes	Summary of how this report aligns to the OMS/Contribution to the Strategy
A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities	Effective maintenance of highway infrastructure is key to a thriving and sustainable city..
A highly skilled city: world class and home-grown talent sustaining the city's economic success	The support provided to businesses enables businesses to grow and thrive in Manchester.
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	Working closely with both residents and businesses to support them in improving the neighbourhoods in which they live, work, and socialise.
A liveable and low carbon city: a destination of choice to live, visit, work	Well maintained highway infrastructure forms an essential part of our neighbourhoods and enhance positive outcomes for residents and businesses.
A connected city: world class infrastructure and connectivity to drive growth	Maintenance of the highway infrastructure is fundamental to supporting active travel.

Full details are in the body of the report, along with any implications for:

- Equal Opportunities Policy
- Risk Management
- Legal Considerations

Financial Consequences – Revenue

Not applicable

Financial Consequences – Capital

Not applicable

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Background documents (available for public inspection):

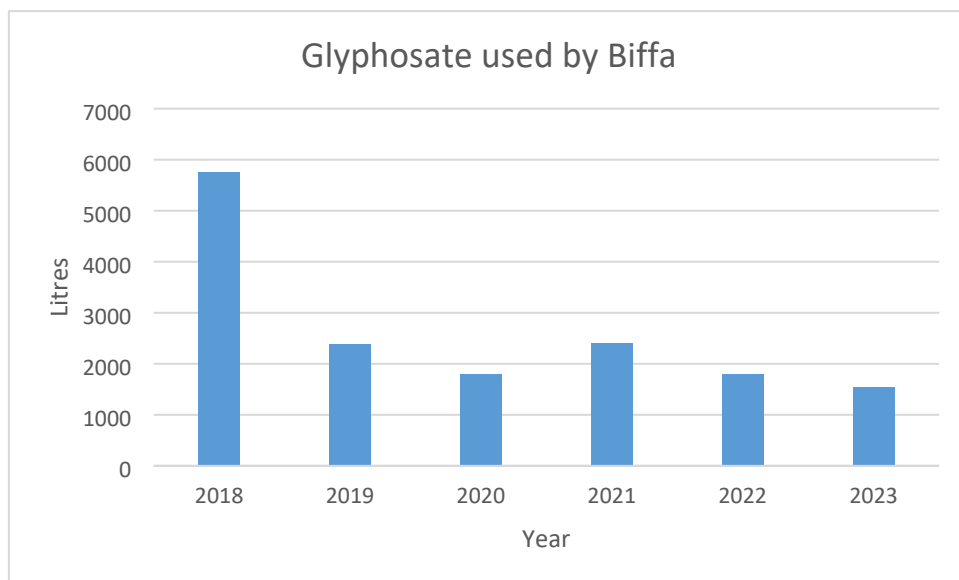
None

1.0 Introduction

- 1.1 This report provides an update on the findings of a project undertaken during 2023 to trial an alternative weed control methodology (hot foam) to assess its effectiveness and viability as a potential alternative to glyphosate for weed control on streets.
- 1.2 This report does not include detail about the weed control approach for other land types maintained by the Council.

2.0 Background

- 2.1 Biffa provide the Council with an annual weed control programme using glyphosate-based products to treat public highways and pavements. Glyphosate is currently licenced and approved for use in the UK and continues to be the most cost-effective way of controlling weeds.
- 2.2 Officers have previously attended the Environment & Climate Change Scrutiny Committee to discuss the Council's approach to weed control on different land types. On 9th December 2021, a report was shared with the committee setting out how the Council has adapted the service across different land types in-line with guidelines published by the Pesticide Action Network (PAN), to support the reduction of the use of glyphosate and utilising alternative approaches. The council are committed to reducing its use on the highway and pavements. The graph below shows the significant reduction in the litres of glyphosate used by Biffa.



Some of the steps taken to reduce glyphosate use are:

- No spraying of tree pits throughout the city since 2018.
- The creation of an 'opt out' list since 2019, allowing residents and community groups to take responsibility for weed control in their own streets.

- The reduction of the maximum number of treatments using glyphosate from 3 to 2 in 2020.
- The further reduction in treatments using glyphosate to 1 treatment per year and spot treatments where required in 2022.
- Successfully trialling an herbicide free weed control programme in 1 ward during 2023.

2.3 In January 2023, Cardiff Council published the results of its weed control trial. During 2021 a trial was undertaken to assess two alternative products (non-herbicide) - acetic acid and hot foam, alongside the standard glyphosate approach. The trial sought to measure the cost, environmental, customer and quality of the products used. The trial concluded that, based on the key criteria, the glyphosate-based product used provided the most effective and sustainable weed control. Hot foam was proven to be effective but unsustainable (due to cost), with acetic acid ineffective and unsustainable. The full report can be accessed via: <https://cardiff.moderngov.co.uk/documents/s66941/Cabinet%2019%20Jan%202023%20Weed%20control%20App%20A.pdf?LLL=0>

2.4 In March 2023, officers took a detailed look at whether hot foam could be utilised as a non-herbicide weed control treatment on streets in Manchester. Hot foam is approved for organic use by the British Soil Association, Defra, and the Environment Agency, meaning it can be used around people, animals, and waterways. The hot foam kills weeds, moss and algae using a combination of near boiling water covered by a biodegradable foam (made from natural plant oils and sugars). Using a lance application, the foam acts as a thermal blanket, ensuring the heat is retained in the water while it's applied to the plant, providing an effective weed control.

2.5 This resource was dedicated to the ward of Chorlton Park. Thus, for the duration of the 2023 weed control programme, Chorlton Park was treated herbicide free. This comprised of 2 operatives, the hot foam weed control technology which needs a dedicated van and is powered by a petrol generator (as shown in the images below). This allowed Officers to fully test the viability, effectiveness, and scalability of this treatment.



Operative applying hot foam treatment via lance



Van required to hold and transport the hot foam technology

3.0 Chorlton Park trial

3.1 Between April 2023 and October 2023 Chorlton Park ward was treated with hot foam as the main form of weed control with no herbicide used at all. Overall, hot foam proved equally as effective as glyphosate in terms of output, killing and controlling weeds. Although, to achieve this a lot more resource is required to be input. In terms of time, cost and fuel, hot foam is less efficient than glyphosate as a means of weed control on streets. The table below highlights some of the key comparisons with Glyphosate based control.

Table 1 Costs associated with Chorlton Park trial vs Glyphosate

	Time (hrs.)	Cost (£000's)	Petrol (ltr)
Hot foam	980	54	1960
Glyphosate	105	6	105

3.2 As discussed previously at Committee, there are no like-for-like alternatives to glyphosate that can match it on cost and operational efficiency.

3.3 On effectiveness, hot foam proved it was equal to glyphosate, needing follow up applications every 6 – 8 weeks. On application, hot foam took around 2-3 days to take effect and kill weeds.

3.4 During the trial, Chorlton Park scored 92% Ni195 grade B or above for weeds, compared to 91% in 2022 when glyphosate was main form of weed control. This again verifies that hot foam is an effective form of weed control on streets.



Images showing the effects of hot foam weed control

3.5 The main issue found with hot foam was the time it takes to complete treatment. It took 980 hours to complete Chorlton Park with hot foam compared to 105 hours with Glyphosate last year. The technology is applied via lance and hose attached to the machine which is housed on a van. The dependency on the van and hose application means progress is very slow and the van needs to constantly move to keep pace with the operation. This leads to much more labour hours being needed to complete the same amount of

work. Application of glyphosate is completed mainly on foot via knapsack and supported by quad bike. The speed of application for glyphosate is far quicker than hot foam.

- 3.6 Access for hot foam treatment was a challenge during the trial. Application is dependent on the dedicated van and lance application. This means the van needs to be always in proximity. Where streets are narrow and heavily parked then access proved difficult. In Chorlton Park around 80% of the ward was accessible. The rest had to be supplemented with manual removal to ensure herbicide free treatment throughout the ward.
- 3.7 Hot foam is safe for unrestricted use around people, animals, and waterways. Its use supports an herbicide free approach to controlling weeds. There are restrictions for use of glyphosate. Hot foam can be applied all year round including in the rain. During the trial, hot foam application was available on 98% of working days with only 2% lost due to severe weather. Glyphosate teams lost 13% of days due to conditions. Glyphosate can't be effectively applied on wet, windy days and during the winter when temperatures drop below the optimal level.
- 3.8 The operational costs associated with the application of hot foam are much higher than that of glyphosate. In the trial ward it cost £54k to treat the trial area using hot foam compared to the cost of glyphosate treatment (£6k). The increased costs were due to additional labour hours, cost of technology, fuel and need for an additional van.
- 3.9 The cost of trial was funded jointly by the Council's contractor (Biffa) and the Council.

4.0 Conclusion

- 4.1 The trial has proven that hot foam is an effective weed control product. However, the increased operational inputs make hot foam less efficient than the current methodology (glyphosate). As a like-for-like replacement for glyphosate, to deliver a weed control programme at scale, hot foam does not yet represent a viable alternative. However, it does provide an additional weed control methodology which Officers would like to continue utilising. This would be on the basis that this supports the Councils strategy to reduce dependency on glyphosate and provides an opportunity to further test application in other parts of the city.
- 4.2 The trial has demonstrated the importance of testing alternative weed control methodology as part of the strategy to reduce dependency on glyphosate. The Council should continue to horizon scan developments in alternative weed control methodologies and working practices within the sector. The Council should seek to test other alternative methods as appropriate.
- 4.3 The scope of the trial did not include a detailed assessment of the environmental or carbon impacts of the two methodologies. The trial showed that more fuel was required to apply hot foam compared to glyphosate which

increases the carbon footprint of the operational delivery model. But this is only part of the process and does not consider the carbon footprint of the production process of glyphosate in comparison to the hot foam product. Glyphosate is derived from fossil fuel and the hot foam is derived from plant oils and sugars. There are also ethical and sustainability considerations with regards to the production of both products. Furthermore, the wider impact of glyphosate and non-herbicide products on natural environments including soil and insects. Further work is required in the wider sector to understand the full environmental impact of non-herbicide weed control methodologies including hot foam compared to glyphosate.

5.0 Recommendations

- 5.1 The council continues with its current strategy of reducing dependency on glyphosate in a phased approach looking at a suite of herbicide free treatments to support this.
- 5.2 Receive future updates on the approach in the annual waste and recycling report.