Sunderland City Council

**Item No. 13**

## CABINET MEETING – 20 JUNE 2024

## EXECUTIVE SUMMARY SHEET – PART I

**Title of Report:**
Environmental Services – Promoting biodiversity and effective sustainable weed management

**Author(s):** Director of Environmental Services

**Purpose of Report:**
This report submits for Cabinet's consideration proposals for the council's future approach to promoting biodiversity and effective sustainable weed management.

**Description of Decision:**
Cabinet is recommended to:

(i) Note the council's commitment to biodiversity in support of effective and sustainable weed management.
(ii) Approve the council's continued investigation and testing of the suitability of new weed management methods that enter the market; and
(iii) Approve the council's continued responsible use of Glyphosate for weed management, with a commitment to further reducing the overall amount of the product used.

**Is the decision consistent with the Budget/Policy Framework? *Yes**
**If not, Council approval is required to change the Budget/Policy Framework**

**Suggested reason(s) for Decision:**
The need to manage weed growth throughout the city is essential. The council has a legal responsibility to manage invasive species within the city under the Environmental Protection Act 1990 and the Wildlife and Countryside Act 1981. Under the Highways Act 1980, the council is responsible for maintaining footways to ensure they are accessible and free from obstructions.

**Alternative options to be considered and recommended to be rejected:**
**Option 1: Do nothing.** This option is not considered appropriate in the context of the council's aspirations to biodiversity, effective sustainable weed management and its legal responsibilities.
**Option 2: Cease the use of Glyphosate.** This option is not considered appropriate at this stage as it would prevent the council from fulfilling its legal responsibility to manage invasive species within the city.
**Option 3: Implement alternative weed management methods on a broader scale.** This option is not considered appropriate at this stage as all other methods

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| have been found to be less effective, significantly more expensive, have a greater detrimental environmental and ecological impact, and impact resident satisfaction. |
| **Impacts analysed;**<br><br>**Equality** ☐ **Privacy** ☐ **Sustainability** ☐ **Crime and Disorder** ☐ |
| **Is the Decision consistent with the Council's co-operative values? Yes/~~No~~** |
| **Is this a "Key Decision" as defined in the Constitution? Yes/~~No~~**<br>**Is it included in the 28 day Notice of Decisions? Yes/~~No~~** |

**CABINET – 20 JUNE 2024**

**ENVIRONMENTAL SERVICES – PROMOTING BIODIVERSITY AND EFFECTIVE SUSTAINABLE WEED MANAGEMENT**

**REPORT OF THE DIRECTOR OF ENVIRONMENTAL SERVICES**

## 1. PURPOSE OF THE REPORT

1.1 This report submits for Cabinet's consideration proposals for the council's future approach to promoting biodiversity and effective sustainable weed management.

## 2. DESCRIPTION OF DECISION (RECOMMENDATIONS)

2.1 Cabinet is recommended to:

(i) Note the council's commitment to biodiversity in support of effective and sustainable weed management.

(ii) Approve the council's continued investigation and testing of the suitability of new weed management methods that enter the market; and

(iii) Approve the council's continued responsible use of Glyphosate for weed management, with a commitment to further reducing the overall amount of the product used.

## 3. CONTEXT

3.1 At its meeting on 24 March 2021, Council resolved to:

- Produce an action plan on the elimination of the use of pesticides by the council, inclusive of Glyphosate, within no more than 3 calendar years following the adoption of this motion by Full Council.
- Support our key partners and anchor institutions to follow suit and develop their own strategy for ending the use of pesticides on land under their control.
- Encourage the public to stop the use of pesticides in gardens, allotments, and other areas.
- Develop a wider pollination strategy that will show how as a city we will encourage biodiversity and local ecosystems through regeneration and protection of local habitats. For example, through development of local community orchards/gardens, introduction of a wild flowering programme or simple re-wilding areas of the city.

## 4. PROMOTING BIODIVERSITY

4.1 As an organisation the council is committed to developing a comprehensive pollination strategy that goes beyond effective and sustainable weed management. Many existing plans, frameworks and strategies are already delivering outputs which support efforts in achieving a pollination strategy that will show how as a city we encourage biodiversity and support local ecosystems.

4.2 These broader initiatives demonstrate the city's commitment to biodiversity and local ecosystems through the regeneration and protection of habitats. Environmental planning documents include:

- Local Nature Recovery Strategy.
- Biodiversity Supplementary Planning Document.
- Greenspace Audit.
- Green Infrastructure Strategy.
- North East Community Forest.
- Low Carbon Framework.

4.3 Operational approaches also have biodiversity at their core, delivering outputs that promote biodiversity. Activities include:

- Wildflower planting.
- Tree Planting – 62,000 planted since 2021.
- Plantation management - 65,000 sqm of plantation managed creating richer biodiversity.
- Bus stop ‘rewilding’.
- Area enhancements - flora in shopping areas.

## 5. WEED MANAGEMENT PILOT AND TRIAL

5.1 Further to the 24 March 2021 resolution, an initial pilot of alternative weed management methods was conducted between April and September 2022 where strimming, wild flowering, pelargonic acid and hand weeding were tested in six parks, six cemeteries and six tree pits across the city. Details of the pilot including the full conclusions arising from it are contained in Appendix 4 of this report.

5.2 The overall conclusion from the pilot was that it did not find sufficient evidence to support an alternative or inform the long-term decision on future weed management strategies for the council.

5.3 Following the pilot, the council undertook to:

- Complete a further trial period when the residual impact of existing Glyphosate in the ground had reduced to fully appreciate and understand the impact of additional weed growth across the city.
- Complete a further period of resident engagement specifically around the use of Glyphosate on the highway.
- Acknowledge and understand trials by other Local Authorities that had sought to cease the use of Glyphosate-based products but who have subsequently had to roll back their position following extensive feedback from unhappy residents.

5.4 The subsequent trial took place from 1 April to 30 November 2023 to ensure a full season was captured and to allow the council to:

- Monitor the effectiveness of using alternative methods to Glyphosate.
- Assess their resource, cost, equipment/training implications.

- Understand their environmental and visual impacts,
- Take account of experience and practice of partners and other Local Authorities
- Consult with city residents.

Details of the trial including the full conclusions arising from it are contained in Appendix 5 of this report.

5.5 Key results from the trial were:

- Glyphosate was the quickest product to apply with hot foam and strimming taking the longest to apply/undertake.
- Glyphosate and Acetic Acid had the least detrimental environmental impact with Hot Foam having the most detrimental environmental impact.
- Taking no action was the cheapest method tested, however this did not account for future cost implications of increased weed growth and associated damage to the city's public highways network. Hot Foam and Strimming were the most expensive methods to apply.
- Glyphosate was the most effective method with the slowest weed regrowth in treated areas.
- Research was unable to identify any Local Authorities that had successfully managed weeds on their public highways network for a prolonged period without the use of Glyphosate.
- Taking no action meant prolific weed growth across the city and resulted in very high levels of resident concern.
- When the consultation activity described under 4.4 above was undertaken, residents responded positively to examples showing areas treated with Glyphosate.

## 6. Conclusion

6.1 The weed management pilot and subsequent trial and research concluded that Glyphosate is the most effective solution currently available for controlling weeds. All alternative methods have been found to be less effective, more expensive, have a greater detrimental environmental and ecological impact, and result in reduced resident satisfaction.

## 7. Reasons for Decision

7.1 The need to manage weed growth throughout the city is essential. The council has a legal responsibility to manage invasive species within the city under the Environmental Protection Act 1990 and the Wildlife and Countryside Act 1981. Under the Highways Act 1980, the council is responsible for maintaining footways to ensure they are accessible and free from obstructions.

## 8. Alternative Options

8.1 Alternative Options considered and rejected as part of the consideration of options for the council's future approach to biodiversity and effective sustainable weed management were:

**Option 1: Do nothing.** This option is not considered appropriate in the context of the council's aspirations to biodiversity, effective sustainable weed management and its legal responsibilities.

**Option 2: Cease the use of Glyphosate.** This option is not considered appropriate at this stage as it would prevent the council from fulfilling its legal responsibility to manage invasive species within the city.

**Option 3: Implement alternative weed management methods on a broader scale.** This option is not considered appropriate at this stage as all other methods have been found to be less effective, significantly more expensive, have a greater detrimental environmental and ecological impact, and impact resident satisfaction.

## 9. Other Relevant Considerations

9.1 **Financial Implications -** The costs of continuing the responsible use of Glyphosate for managing weed growth can be met from the existing service revenue budget.

9.2 **Legal Implications -** As referenced in Sections 7.1 and 8.1, to not permit the use of Glyphosate would prohibit the council's ability to manage invasive species within the city. This core responsibility is outlined in the Environmental Protection Act 1990 and Wildlife and Countryside Act 1981.

## 10. Background Papers

Appendix 1 - Definitions.
Appendix 2 - Wider strategies supporting biodiversity.
Appendix 3 - Council use of Glyphosate 2020/21 to 2022/23
Appendix 4 - Weed Management Pilot.
Appendix 5 - Weed Management Trial.

# APPENDIX 1: DEFINITIONS

## Pesticides

Pesticides are used to control pests, weeds and diseases. The definition of a pesticide is: any substance, preparation or organism prepared or used, among other uses, to protect plants or wood or other plant products from harmful organisms; to regulate the growth of plants; to give protection against harmful creatures; or to render such creatures harmless. The term pesticides, therefore, has a very broad definition which embraces herbicides, fungicides, insecticides, rodenticides, soil-sterilant and wood preservatives. Pesticide treatments can take many different forms, such as sprays, dips, coatings, powders and gels.

## Glyphosate

Glyphosate is the active substance in many herbicides (weed killers) and is widely used around the world. It is a non-selective, systemic herbicide /weedkiller and was first used in the UK in 1976. Glyphosate is effective in controlling most weed species including perennials and grasses in many situations including amenity, forestry, aquatic and industrial situations. It is used by lots of people from farmers to foresters to gardeners to biologists trying to control invasive exotic plants. As Glyphosate is approved for use in many countries, it has been subject to extensive testing and regulatory assessment in the EU, USA and elsewhere, and by the World Health Organisation.

The current GB licence for Glyphosate is due to expire in December 2025. However, it is expected that the UK government will initiate a renewal process before then. The EU relicensed the weedkiller glyphosate for a further 10 years, to December 2033, subject to certain conditions and restrictions.

In 2023 the European Food Safety Authority (EFSA) did not identify any critical areas of concern in its peer review of the risk assessment of the active substance Glyphosate in relation to the risk it poses to humans and animals or the environment. A concern is defined as critical when it affects *all* proposed uses of the active substance under evaluation (e.g. pre-sowing uses, post-harvest uses etc.), thus preventing its approval or renewal.

In 2022, the European Chemicals Agency (ECHA) carried out a hazard assessment of glyphosate and concluded that it did not meet the scientific criteria to be classified as a carcinogenic, mutagenic or reprotoxic substance. EFSA used ECHA’s hazard classification for the purposes of the EU risk assessment on Glyphosate.

# APPENDIX 2: WIDER STRATEGIES SUPPORTING BIODIVERSITY

### Local Nature Recovery Strategy

Local Nature Recovery Strategies are a new system of spatial strategies linked to nature recovery. They will plan, map, and help drive more locally coordinated, practical, focussed action and investment for nature's recovery across the areas they cover.

The South of Tyne and Wear Local Nature Recovery Strategy will be one of 48 strategies that will together cover the whole of England. The South of Tyne and Wear Local Nature Recovery Strategy will cover the Sunderland, South Tyneside and Gateshead authority areas and is being jointly prepared by the three local authorities, with Gateshead appointed as the responsible authority.

As they develop the Local Nature Recovery Strategy together, working with a wide range of organisations, partners and community groups, the three local authorities will agree priorities for nature's recovery. They will map the most valuable existing areas for nature and will also map specific proposals for creating or improving habitat for nature and for wider environmental goals.

### Biodiversity Supplementary Planning Document

The Council is currently preparing a joint Biodiversity Supplementary Planning Document (SPD) in collaboration with Gateshead and South Tyneside Councils. Amongst other things, the SPD will set out the Council's approach to delivering mandatory biodiversity net gain within the city. This has been introduced by Government as part of the Environment Act and will be secured as part of any new development.

### Greenspace Audit

In order to better understand the quantity and quality of greenspace provision within the city, a Greenspace Audit has been undertaken. This was originally developed as part of the evidence for the Core Strategy & Development Plan. An interactive map of the audit has also been published. The audit will continue to be updated regularly as part of the evidence base for the Local Development Plan and will help to provide a basis on which to identify areas for improvement.

### Green Infrastructure Strategy

As part of the evidence base for the Core Strategy and Development Plan, a Green Infrastructure Strategy and supporting Green Infrastructure Delivery and Action Plan were prepared. These documents identify key Green Infrastructure Corridors within the city and identify potential actions which can be taken to improve these corridors. These documents will be updated as necessary as part of the evidence base supporting the preparation of the new Local Development Plan.

## North East Community Forest

The Council is a partner organisation within the North East Community Forest (NECF). The project was established in 2021 and the Council is on-track to achieve its target of 45 hectares of planting by 2025.

Since 2021 62,000 trees and hedgerow plants have been planted, furthermore over 65,000 sqm of planation has been managed creating richer biodiversity. Other initiatives include:

- Flower gardens on top of many bus shelters.
- Development of local community orchards and gardens.
- Introduction of a wild flowering programme.
- Implementation of re-wilding initiatives in various areas of the city.

## Low Carbon Framework

The Council is working to improve the natural environment across the city for the benefit of visitors and residents, as well as supporting its low carbon aims, outlined in the Council's Low Carbon Framework.

## Key Partners

To support key partners and anchor institutions the Council will actively engage with stakeholders, encouraging them to develop their strategies for ending the use of pesticides on the land under their control. Collaboration with these entities has begun and will be pivotal in fostering a city-wide commitment to pesticide reductions.

The Council will continue on its public awareness campaign building on the ‘Let’s Talk Weeds’ initiative to encourage individuals to cease the use of pesticides in gardens, allotments, and other areas.

## APPENDIX 3: COUNCIL USE OF GLYPHOSATE

The Council currently uses Glyphosate to control weed growth, it is applied by Council operatives during the growing season and also by an agreed third-party contractor who manages the control of weeds on our adopted footpath network.

The Council has been actively reducing the volume of Glyphosate used by its operatives since 2020 through focused spraying and a more targeted approach to weed control. The focus on reducing usage equates to a 48% reduction in the last three years from 925 to 480 litres.

The Council also employs alternative methods across the city comprising of:

- **Soft Surface Areas –** The Council has already reduced the use of Glyphosate on soft surface areas in the last 4 years by only applying it for any regrowth. The alternative used during the 2022 pilot was a Katana/Chikara mix which lasts between 6 - 7 months, however it can only be applied once a year. It should also be noted both Katana/Chikara are classed as herbicides.
- **Green Flag Parks -** Changes have already been implemented in the 5 Green Flag parks across the city by eliminating the use of Glyphosate and using petrol strimmers and manual removal as the alternative.
- **Cemeteries -** Changes have been introduced in all cemeteries with operatives using petrol strimmers as the alternative. Operatives need to visit the cemeteries on a constant cycle to keep the grounds neat and tidy but are often impacted by the weather. Using a strimmer does pose its own risks, with potential damage to gravestones, curb sets, loose stones whipped up into the line of traffic/people, and health and safety risks for staff with the constant vibrations and emissions.
- **Wildflower meadows -** Wildflower meadows have already been introduced to many areas across the city.

Sunderland City Council's overall glyphosate reduction.

## APPENDIX 4: 2022 WEED CONTROL PILOT

An initial pilot of alternative weed control methods was conducted between April and September 2022 where strimming, wild flowering, pelargonic acid and hand weeding were tested in the following areas:

| Land Type | Location | | |
|---|---|---|---|
| **All play areas** | Across the city | | |
| **6 formal parks** | City Centre | - | Burn Park |
| | Coalfield | - | Hetton Park |
| | East | - | Barley Mow Park |
| | North | - | Thompson Park |
| | West | - | Silksworth Park |
| | Washington | - | Princess Anne Park |
| **6 cemeteries** | City Centre | - | Minster Park |
| | Coalfield | - | Hetton Closed Cemetery |
| | East | - | Sunderland Cemetery |
| | North | - | Mere Knolls Cemetery |
| | Washington | - | Donwell Closed Cemetery |
| | West | - | Bishopwearmouth Cemetery |
| **Tree pits** | City Centre | - | Norfolk Street |
| | Coalfield | - | East and West Bridge Street Fatfield |
| | East | - | Grangetown bus depot |
| | North | - | Thompson Road, Charlton Road, Station Road |
| | Washington | - | Rickleton Village |
| | West | - | Durham Road |

2022 Weed Control Pilot Conclusion:

- In 2022 the UK had the joint hottest summer on record and the driest on record since 1976 (based on Met Office Data Joint hottest summer on record for England - Met Office) which did not promote weed growth as would be expected in usual weather conditions and as a result, Sunderland did not see the volume of weeds anticipated across the 2022 pilot areas. This resulted in a much lower level of resident engagement than the Council would have liked for such an important pilot.
- There was a significant volume of residual Glyphosate still active in the ground from previous weed control methods and the Council expected this to continue to inhibit weed growth.
- Some chosen areas of the trial were locations that see lower footfall (cemeteries), and this may have impacted the volume of resident feedback received.
- In the areas that weeds did grow, the alternative methods used had little effect; strimmed weeds grew back quickly and required significant resource to manage effectively. This was because pelargonic acid and other solutions must be used on weeds that are above ground. This was challenging for teams to resource as weeds grow at different speeds in each area and weed control schedules are

produced months ahead and consider operative availability, chemical delivery timeframes and other seasonal work that must be completed at the same time. There was also the matter of the 1,720km (1,069 miles) of footpath and 1,226km (762) of roads, including back lanes that must be treated across the city.

- Increased strimming has a health & safety impact on staff by increasing exposure to hand-arm vibration which can cause significant ill health. An operative can only strim for 3 continuous hours per day or 15 hours per week due to HAV guidance. This means the Council could not strim one complete hectare per week.
- The additional use of petrol strimmers has a negative carbon impact.
- Many metres of additional strimming cord were used during the trial that has been lost in the grass which has an environmental impact.
- Many areas are heavily supported by clean & tidy groups that exchanged litter picking for weeding to suppress weed growth during this pilot, minimising the visual impact of weeds.
- The Council's Highways team highlighted significant concerns around allowing weeds to grow in Sunderland's 3,000 km of footways, cycle routes, hardened verges, central reserves, filter drains and along kerb lines as this may cause structural damage or drainage issues. They also noted that weeds can be hazardous to users, especially the vulnerable.
- There are significant areas of highway that could not receive manual treatment be that strimming or manual removal because of the health and safety implications for operatives and potential claims for damage caused by strimming.
- The national Code of Practice on Highway Maintenance also comments on the possibility of infrastructure damage caused by weeds and the implications for pedestrian safety.
- The Council's Local Services experts also observed that the weeds that did grow and were subsequently treated with pelargonic acid, turned brown but did not die completely and grew back quickly following the chemical application. They consider that pelargonic acid is in no way as effective as Glyphosate as a weed killer. This is supported by other local authorities' experiences outlined in the Association for Public Service Excellence (APSE) report.
- The volume of resident feedback received relating to this pilot and weed growth was significantly less than expected due to the lack of weed growth across the city.
- The Council contacted the APSE around Glyphosate alternatives and the unanimous feedback from over 100 Local Authorities was that there is no comparable alternative to Glyphosate in relation to cost, time and effectiveness.
- Those Local Authorities that did cease use of glyphosate very quickly reinstated its use due to the impact on communities.

**<u>In Conclusion</u>, the trial did not find sufficient evidence to support an alternative or inform the long-term decision on future weed control strategies for the Council.**

The 2022 Weed Control Pilot Recommended as follows:

- To fully appreciate and understand the impact of additional weed growth across the city it is recommended that the Council complete a further trial period when the residual impact of glyphosate has reduced. This will allow the Council to

measure how increased weed growth affects the look of our city, impacts health & safety, resourcing, complaints and costs.

- The pilot recommends completing a further period of resident engagement specifically around the use of glyphosate on the highway.
- The pilot recommends acknowledging and understanding trials in other "Local Authorities that have attempted to cease the use of Glyphosate-based products but who have subsequently had to roll back their position following extensive feedback from unhappy residents".
- In August 2021, North Lanarkshire Council, after introducing a ban on Glyphosate-based herbicides in April 21, decided to reverse their decision stating that green spaces were unmanageably overgrown. In February 2022, the Isle of Wight made the decision to reallow the use of Glyphosate on highways claiming that they were receiving a large number of complaints from the public due to the increase in weeds. Brighton & Hove Council experienced similar negative feedback in September 22 around increased weed growth following their decision to stop using glyphosate.
- Cardiff Council trialled Glyphosate alternatives earlier this year and found all alternatives to be less effective, more expensive and returned mixed results. As a result of this inconclusive trial, they commissioned an independent consultant to produce a report which is due to be published in December 2022.
- In the initial report 2022 Weed Control Pilot Report.docx all known alternative treatments were outlined with many being discounted for trial purposes based on health & safety concerns, prohibitive upscaling costings and treatments not being appropriate for highways. This leaves the Council with the option to conduct a further pilot comparing some of the options previously discounted but potentially still suitable for highway use - Hot Foam and acetic acid against taking no action. Industry experts have advised that there are no new alternatives coming to market to test.

# APPENDIX 5: 2023 WEED MANAGEMENT TRIAL

The trial took place from 1 April to 30 November 2023 to ensure a full season was captured, and it allowed the Council to monitor the impact of using alternative methods to Glyphosate, understand how effective other weed control methods could be, the impact these treatments had on the effectiveness of maintenance, resource, costs, equipment/training requirements, environmental and visual impact, whilst taking into account the views of the city's residents.

Officers worked with Members to identify locations and Wards prior to the trial commencing.

The 2023 trial areas were:

| Locations of future trial (inc highways): | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North | | East | West | City Centre | | Coalfield | | | Washington | | |
| | PLAY AREA: Hylton Castle Dene Play Park | | PLAY AREA: Pocket Park Millfield | PLAY AREA: Herrington | Mowbray Park Play Area | | PLAY AREA: Rectory Park | | | PLAY AREA: Harraton Play Area | | |
| Ward | Redhill | Fulwell | Ryhope | Barnes | Millfield | St Michaels | Houghton Ward | Ward | Houghton Ward | North Ward | West Ward | South Ward |
| Glyphosate | Rupert Square<br>Ramsay Square | Martindale Avenue | Aysgarth Avenue | Barnard Street | Beechwood Terrace<br>Ashwood Street<br>Thornhill Terrace | Claremont Terrace<br>Tunstall Road | Chester Street<br>Grasswell Terrace | Baulkham Hills | Longacre | Warwick Drive | Windsor Road (adopted part) | Sheridan Green |
| Acetic Acid | Roedean Road | Crummock Avenue | St Aidans Avenue | Abingdon Street | Shakespeare Terrace<br>Elwin Terrace<br>Derby Street | Azalea Terrace North | Ruby Street | Thirkeld Place | Willow Road | Hampshire Place | Meadowfield | Harwood Close |
| No treatment | Rosyth Road | Ambleside Terrace | Ayton Avenue | Colchester Terrace | Otto Terrace<br>Fox Street<br>Evelyn Street<br>Oakwood Street | Argyle Square<br>Belvedere Road | Lumley Street | Whitefield Crescent | Ninelands | Essex Drive | West View | Eddleston |
| Hot foam | Rhyl Square<br>Rosyth Square | Hawes Court | Askrigg Avenue | Dunbar Street | Beechwood Street<br>Elmwood Street<br>Havelock Terrace | Worcester Street<br>Argyle Street<br>Cresswell Terrace | Hylton Street | Carlisle Crescent | Dunelm Drive | Westmorland Avenue | Fell Road | Hargill Drive |

The following alternative methods were used within the 2023 trial and Glyphosate was used to allow benchmarking of the tested methods. There are currently no other weed control treatments approved for use on the Highway:

- **No action –** No intervention with any chemical or manual treatment in some trial roads to gauge the impact of no active weed control.
- **Acetic Acid (contact herbicide) –** Application of acetic acid (New Way), a vinegar-based product, via targeted knapsack spray.
- **Hot Foam (contact herbicide) –** Application of hot foam. This method works by mixing a chemical with boiling water to create a robust foam that is sprayed on the area; the heat contained in the foam kills the weed.
- **Strimming –** Local Services increased the size of its workforce in April by hiring additional agency staff to strim all of the open cemeteries.

The trial measured the following aspects:

- Treatment Effectiveness
- Treatment Application Process
- Environmental Impact
- Application Cost

## Key Trial Findings - Treatment Effectiveness

- Acetic Acid was found to be less effective than Glyphosate and Hot Foam, the product “New Way Weed Spray” carries the COSHH warning symbol, “corrosive” and on the latest label version to “Risk to non-target insects or other arthropods”. It is also classed as a herbicide.
- The Acetic Acid treatment did not fully kill off the weeds.
- Hot Foam did kill unwanted vegetation, including weeds, moss and algae. The foam stops the heat from escaping into the atmosphere, keeping the heat on the plant for longer and ensuring a more effective kill than other alternative methods of commercial weed killer. However, this approach was likely to kill everything the foam touches including insects.
- At sites treated with Glyphosate, weed regrowth remined lower than if treated with Hot Foam or Acetic Acid.

**Table 1 - Treatment Effectiveness**

| Method | Positive trial analysis | Negative trial analysis |
|---|---|---|
| **No action** | | • Areas have become overgrown with weeds quickly<br>• Trailing weeds presented a trip hazard<br>• Litter and debris were trapped in dense weed growth |
| **Acetic Acid** | | Weeds were found to grow back much quicker than when treated with glyphosate – see pictures below |
| **Glyphosate** | • Proven to be the most effective weed killing product within the current market.<br>• APSE feedback confirms glyphosate is used by all local authorities that responded to the feedback<br>• Kills the whole weed, including roots<br>• This is the only known effective treatment for Japanese Knotweed, a prolific weed that the authority has a statutory duty to treat. | |
| **Hot Foam** | | Only killed the visual part of the weed and so regrowth was much quicker than when treated with Glyphosate & acetic acid |
| **Strimming** | | Only killed the visual part of the weed and so regrowth was much quicker than when treated with Glyphosate & acetic acid |

## Key Trial Findings - Treatment Application

- Hot Foam took almost 4 times longer to apply than Glyphosate, when Glyphosate was applied with a knapsack within the trial areas, however Glyphosate is applied to the majority of the city's network via quads.
- Glyphosate is 86 times quicker to apply than Hot Foam when applied using quads. Trial data shows that 998m$^2$ of footpath can be treated using Hot Foam per day in comparison to 86,296 m$^2$ via an ATV (All-Terrain Vehicle) applying Glyphosate.
- It takes over 2 times longer to strim a m$^2$ than to apply Glyphosate to the same area via a knapsack. Trial data shows a strim time of 7 seconds per m$^2$ in comparison to 3.2 seconds to apply Glyphosate. However as noted above Glyphosate is applied to much of the network via quads.

**Table 2 - Treatment Application**

| Method | Positive trial analysis | Negative trial analysis |
|---|---|---|
| No action | • No time taken as no action applied to area<br>• Will create budget capacity within Local Services to be redistributed elsewhere within the service | |
| Acetic Acid | • Applied with a knapsack spray so can be applied accurately to the weed area only | • Can only be applied in dry conditions<br>• Strong smell for public & operatives – can cause headaches<br>• Can only be applied to hard surfaces |
| Glyphosate | • Can be applied on all terrain<br>• Applied by contractor using ATV, covering extensive amount of network in a short time.<br>• Can be applied by a knapsack spray so reaches areas the ATV cannot. | • Can only be applied in dry conditions |
| Hot Foam | • Can be applied in all weathers | • Only suitable for use on hard surfaces<br>• Would need to be tested on all surfaces prior to use as water is at boiling temperature and so may cause damage (cannot be used on the patio in Mowbray Park for this reason)<br>• Can not be applied accurately, foam covers large areas on application<br>• Due to the size of vehicle required to transport the machine this product can only be applied in areas with suitable wide vehicle access.<br>• To operate this vehicle staff, need to hold a license to drive 6.5t. This |

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|---|---|---|
| | | is held by less than 25% of our operatives.<br>• Due to the length of the hose the machine can only be used where the large vehicle can be parked close to the treatment area<br>• Long hose can be public safety issue – trip hazard<br>• Parked cars, wheeled bins & pedestrians all impacted the ability of the crew to manoeuvre the machinery around the trial area and successfully treat the whole road.<br>• Hot Foam vehicle was challenging to park close to the treatment area due to the size<br>• In some roads the vehicle had to be parked in the middle of the road whilst the area was treated, causing traffic congestion<br>• Water tank needs refilling every hour and so crew must return to depot to refill adding to their application and travel time significantly<br>• Floor slippery after Hot Foam application – slip/ trip hazard for members of the public<br>• Very slow to treat – treating using Hot Foam takes 86 times longer per $m^2$ than Glyphosate applied via ATV. Trial data shows that 998$m^2$ of footpath can be treated using Hot Foam per day in comparison to 86,296 $m^2$ via an ATV using Glyphosate.<br>• Hot Foam also takes almost 4 times longer to apply than glyphosate & acetic acid when applied by knapsack. It takes an operative on average 30 minutes to spray a standard street with glyphosate & 36 minutes to spray with acetic acid. Records show it takes 1hr 46 minutes to treat one street with Hot Foam.<br>• No authority can treat its whole network exclusively with Hot Foam due to the cost & time taken to apply<br>• Significant noise from the vehicle & generator for both the operator & residents<br>• Hot Foam machine must be transported on a 6.5t vehicle capable of carrying a load of 1250kg. Local Services do not have suitable spare vehicle capacity and other operations were negatively |

| | | |
|---|---|---|
| | | impacted upon to conduct the trial. Also due to this no contingency plan if this needs maintenance<br>• Our Fleet team have confirmed that additional vehicles cannot be procured on the open market easily as 18 – 24 months wait for vehicles<br>• Not suitable for graffiti removal as suggested by manufacturer – tests by operatives confirmed our existing hot wash machine is more effective on all types of graffiti |
| Strimming | • Can be completed in all weathers | • Nationwide shortage of workers available for this work resulted in a challenging recruitment process for the Local Services Managers. Jobs were advertised 3 times before sufficient staff were recruited to strim the cemeteries as this is seasonal work<br>• Increased insurance impact from public areas due to stone throws & damage to property<br>• Significant noise impact for residents & operative<br>• HAV implications for workforce as an operative can only strim for 3 continuous hours a day or 15 hours per week. |

## Key Trial Findings – Environmental Impact

- Hot Foam kills everything it touches including healthy plants, insects and wildlife.
- The Council's Ecology Officer has raised concerns over the use of a Hot Foam machine and the biodiversity impact of this non-selective weed control method being used across the city.
- The Hot Foam machine had significant fuelling requirements: Diesel 7.9 litres per hour (equating to 137,460 litres per treatment) and Petrol 1.2 litres per hour (20,880 litres per treatment).
- The Hot Foam machine also had high water volume usage - 780 litres per hour (equating to 13,920,000 litres per treatment) each hour requiring a round trip to the nearest depot to refill, incurring further time and vehicle usage.
- The fuel requirement and emissions from the Hot Foam machine if upscaled would significantly impact the Council's carbon neutral target.
- Calculations made by the Low Carbon Team show that 1 treatment of Hot Foam would emit 394.13 tonnes of carbon in comparison to 1.69 tonnes emitted by a treatment of Glyphosate.
- The two engines required to operate the Hot Foam unit also emitted a considerable level of noise.
- Strimming is noisy and uses additional petrol and oil that negatively impacts our carbon reduction plan.

- 62 times more Acetic Acid is used than Glyphosate to treat the same area (250 litres per hectare compared to 4 litres of Glyphosate).
- Acetic Acid licenced for weed control used within the trail areas is classified as herbicide and therefore may not be a viable alternative.

**Table 3 - Environmental Impact**

| Method | Positive trial analysis | Negative trial analysis |
|---|---|---|
| **No action** | • Promotes biodiversity and ecological growth | • Areas can become pest ridden<br>• Weeds can disrupt general maintenance of areas<br>• Large areas of weeds will trap litter and debris |
| **Acetic Acid** | | • Acetic Acid was found to be less effective than Glyphosate and Hot Foam, the product carries the COSHH warning symbol, "corrosive" and on the latest label version to "Risk to non-target insects or other arthropods" It is also classed as an herbicide. |
| **Glyphosate** | • Glyphosate molecule only acts in plants – it is highly specific and cannot affect non plant cells. | Misconception that Glyphosate has been banned in some EU countries when in fact it has been deemed safe by scientists and approved for use until 2025. All councils that responded to the APSE feedback confirmed that use glyphosate as their primary method of weed control. |
| **Hot Foam** | | • Significant noise is emitted from the generator when in use – disturbing to residents & wildlife<br>• Vehicle must run constantly when machine is being used and so constant fumes are emitted<br>• Additional Hot Foam machine fuelling requirements: Diesel 7.9 litres per hour (137,000 litres per treatment) Petrol 1.2 litres per hour (20,880 litres per treatment), significantly impacting SCC's carbon neutral target<br>• High water volume usage - 780 litres per hour (13,920.000 litres per treatment)<br>• Non-selective application – kills everything that it contacts |
| **Strimming** | | • Additional diesel & oil impacts carbon neutral target<br>• Significant noise impact is disturbing for residents & wildlife<br>• Meters of strimming cord used and left in grassed areas |

# Environmental Impact – Carbon Emissions

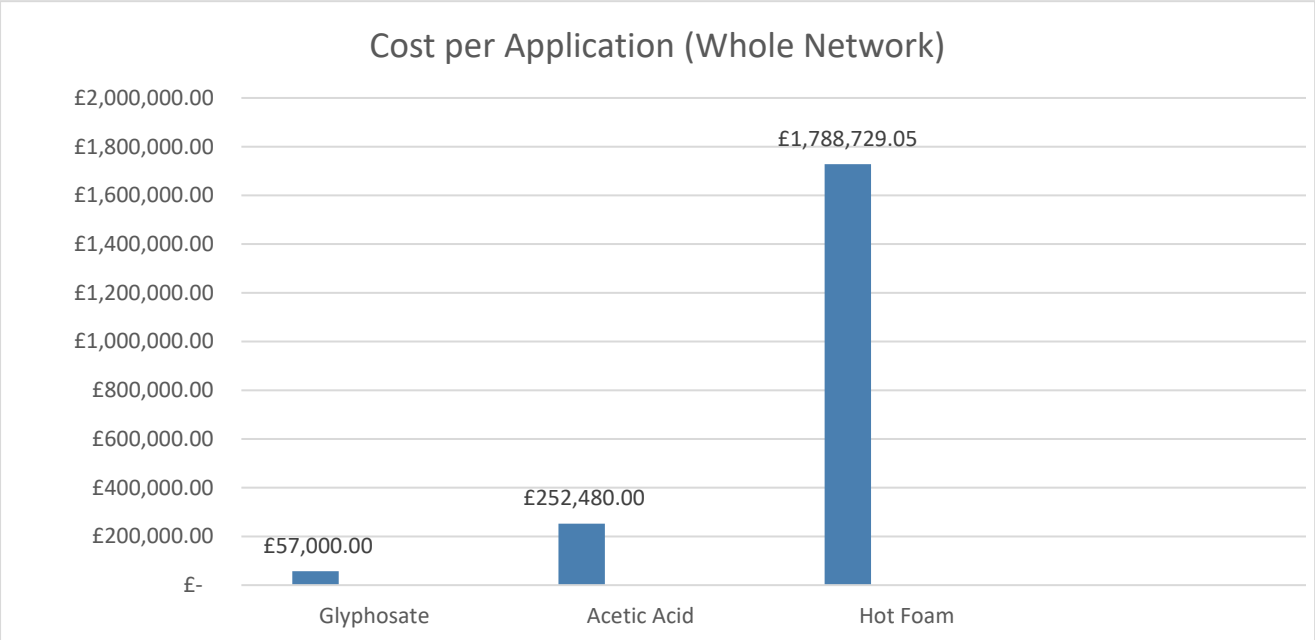
**Hot Foam – 1 treatment**
Petrol
1.2 litres per hour x 4 per day x 5 working days x 30 weeks x 29 machines = 20,880 litres
(14,400 L x 2.10 $kgCO_2e/L$)/1000 = **30.24 $tCO_2e$**
Diesel
7.9 litres per hour x 4 per day x 5 working days x 30 weeks x 29 machines = 137,460 litres
(94,800 L x 2.51 $kgCO_2e/L$)/1000 = **237.95 $tCO_2e$**
Water Supply and Treatment
800 litres per hour x 4 per day x 5 working days x 30 weeks x 29 machines = 13,920,000 litres
(13.92 x 176.7 $kgCO_2e$/million litres)/1000 for water supply + (13.92 x 201.3 $kgCO_2e$/million litres for water treatment)/1000 = 2.46 + 2.80 = **5.26 $tCO_2e$**
**Total = 43.85 + 345.02 + 5.26 = 394.13 $tCO_2e$**

**Hot Foam – 3 treatments**
Petrol
1.2 litres per hour x 4 per day x 5 working days x 30 weeks x 87 machines = 62,640 litres
(62,640 L x 2.10 $kgCO_2e/L$)/1000 = **131.54 $tCO_2e$**
Diesel
7.9 litres per hour x 4 per day x 5 working days x 30 weeks x 87 machines = 412,380 litres
(412,380 L x 2.51 $kgCO_2e/L$)/1000 = **1,035.07 $tCO_2e$**
Water Supply and Treatment
800 litres per hour x 4 per day x 5 working days x 30 weeks x 87 machines = 41,760,000 litres
(41.76 x 176.7 $kgCO_2e$/million litres)/1000 for water supply + (41.76 x 201.3 $kgCO_2e$/million litres for water treatment)/1000 = **15.79 $tCO_2e$**
**Total = 131.54 + 1,035.07 + 15.79 = 1,182.4 $tCO_2e$**

**Glyphosate – 1 treatment**
Petrol
(500 litres x 2.10 kgCO2e/L)/1000 = **1.05 $tCO_2e$**
Diesel
(250 litres x 2.51 kgCO2e/L)/1000 = **0.63 $tCO_2e$**
Water Supply and Treatment
(0.032 million litres x 176.7 kgCO2e/million litres)/1000 for water supply) + (0.032 million litres x 201.3 $kgCO_2e$/million litres for water treatment)/1000 = **0.012 $tCO_2e$**
**Total = 1.05 + 0.63 + 0.012 = 1.69 $tCO_2e$**

**Glyphosate – 3 treatments**
Petrol
(1500 litres x 2.10 kgCO2e/L)/1000 = **3.15 $tCO_2e$**
Diesel
(750 litres x 2.51 kgCO2e/L)/1000 = **1.88 $tCO_2e$**
Water Supply and Treatment
(0.032 million litres x 176.7 kgCO2e/million litres)/1000 for water supply) + (0.032 million litres x 201.3 $kgCO_2e$/million litres for water treatment)/1000 = **0.012 $tCO_2e$**
**Total = 3.15 + 1.88 + 0.012 = 5.04 $tCO_2e$**

## Key Trial Findings – Application Cost




- Hot Foam is over 30 times more expensive to apply than Glyphosate.
- To treat the whole network with Hot Foam **once** within the weed growing season in Sunderland, the Council would need 29 Hot Foam machines and 29 x 6.5 tonne vehicles (total combined cost to lease over five-year period; £2.6m) and 58 additional staff to operate (17.5k per year each) at an estimated annual cost of £1.5m.
- To treat the whole network with Hot Foam three times which is the average application rate of glyphosate based on the past 5 years, would require 87 vehicles with an estimated 5-year lease cost of £7.9m.
- Strimming is 4 times more expensive to apply than Glyphosate per $m^2$ and could not be used as a city-wide solution.
- Using strimming as a method to control weed growth is both costly and ineffective. In June, to meet increased demand, the number of agency staff had to be raised from 9 to 13. These operatives carried out strimming with Local Services until October 6$^{th}$ 2023 to manage weed growth, resulting in an additional overall cost of £145,170. However, aligning the strimming requirement with the true grass cutting / weed growth season and securing additional resources from April each year would increase the cost to £226,720 per annum for the Council.

**Table 4 - Cost**

| Method | Positive trial analysis | Negative trial analysis |
|---|---|---|
| No action | • No initial cost so budget can be diverted to other areas of Local Services | • Unknown costs as significant weed growth can cause highway & drainage damage - the value of our highway assets is in the region of £2bn. |
| Acetic Acid | | • Additional staffing and water costs are associated with this treatment<br>• More product is needed to treat the same area and as a result costs 1450% more per application to treat than glyphosate |
| Glyphosate | • This is the most cost-effective product used in our trial | |
| Hot Foam | | • Vehicle, diesel, water, chemical, oil & additional staff are all extra costs associated with this method.<br>• For the 87 vehicles required to treat 3 times, the 5-year lease cost would be in the region of £7.9m and the purchase costs would be in the region of £7m<br>• 2 staff are needed to administer one Hot Foam unit & the driver needs a specialist license |
| Strimming | | • High additional costs for seasonal workers not contained within in annual Local Services budget.<br>• Recruitment process for additional workers is time consuming for managers.<br>• Due to rising staffing costs trimming in cemeteries is costing £226K and we have only budgeted £150k for this.<br>• This year it has taken 13 strimmer's to maintain the open cemeteries. |

**Table 5 – Cost Comparison**

| Method | Staffing Cost | Petrol cost per treatment | Diesel cost per treatment | Chemical cost per treatment | Water cost per treatment | Application cost (including equipment/ contractors) | Total cost per treatment |
|---|---|---|---|---|---|---|---|
| **Glyphosate** | 0 (Covered within contract) | 0 (Covered within contract) | 0 (Covered within contract) | 0 (Covered within contract) | 0 (Covered within contract) | £60,000.00 | **£60,000.00** |
| **Hot Foam** | £1,027,000.00 | £31,320.00 | £162,202.80 | £28,806.25 | £13,920.00 | £525,480.00 | **£1,788,729.05** |
| **Acetic Acid** | 0 (Would be covered within contract) | 0 (Would be covered within contract) | 0 (Would be covered within contract) | 0 (Would be covered within contract) | 0 (Would be covered within contract) | 0 | **£252,480.00** |
| **Strimming – only covers weed control in Cemeteries / Green Flag Parks** ** Health & Safety implications via HAV legislation limit trigger time to 3 hours per day, estimated to be 5 hours work with natural trigger breaks ** | £226,720.00 | £5,616.00 | 0 | 0 | 0 | 0 | **£232,336.00** Cemeteries / Green Flag Parks only |

**Table 6 - Hot Foam – Detailed Costs 1 treatment (Lease)**

| | 1 Treatment | Cost Per Unit | Overall Cost | |
|---|---|---|---|---|
| Staffing | 58 | £17,707.00 | £1,027,000.00 | Based on staff working 7 months April to end of October. |
| Hot Foam Unit & Vehicle | 29<br>29 | £1510.00 | £525,480.00 | Based on price secured following a procurement exercise |
| Foam L | 4609 | £6.25 | £28,806.25 | Based on 0.002 litres per $m^2$ |
| FM Petrol L | 20,880 | £1.50 | £31,320.00 | 1.2 litres per hour x 4 per day x 5 working days x 30 weeks x 29 machines |
| FM diesel L | 137,460 | £1.18 | £162,202.80 | 7.9 litres per hour x 4 per day x 5 working days x 30 weeks x 29 machines |
| FM water L | 13,920,000 | £0.001 | £13,920.00 | 800 litres per hour x 4 per day x 5 working days x 30 weeks x 29 machines |
| **TOTAL** | | | **£1,788,729.05** | |

**Table 7 Hot Foam – Detailed Costs 3 treatments (Lease)**

| | 3 Treatments | Cost Per Unit | Overall Cost | |
|---|---|---|---|---|
| Staffing | 174 | £17,707.00 | £3,081,000.00 | Based on staff working 7 months April to end of October. |
| Hot Foam Unit & Vehicle | 87<br>87 | £1510.00 | £1,576,440.00 | Based on price secured following a procurement exercise |
| Foam L | 13,827 | £6.25 | £86,414.75 | Based on 0.002 litres per $m^2$ |
| FM Petrol L | 62,640 | £1.50 | £93,000.00 | 1.2 litres per hour x 4 per day x 5 working days x 30 weeks x 87 machines |
| FM diesel L | 412,380 | £1.18 | £486,608.40 | 7.9 litres per hour x 4 per day x 5 working days x 30 weeks x 87 machines |
| FM water L | 41,760,000 | £0.001 | £41,760.00 | 800 litres per hour x 4 per day x 5 working days x 30 weeks x 87 machines |
| **TOTAL** | | | **£5,365,223.15** | |

**Table 8 - Cost comparison based on area:**

| Method | Cost Per m2 (£) | Cost Per Hectare (£) |
|---|---|---|
| **Glyphosate** | **0.02** | **200.00** |
| **Hot Foam** | **0.50** | **5,000** |
| **Acetic Acid** | **0.07** | **731.00** |

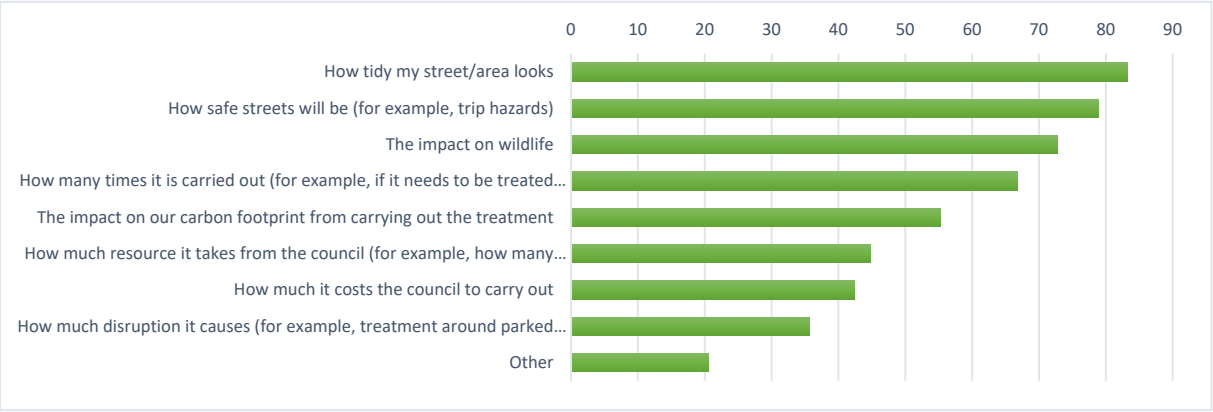
## 2023 Trial Results - Engagement

The Council had a full resident communication plan and an online consultation to collate feedback on the trial areas which could be accessed on the dedicated web page "Let's Talk Weeds". This page was also used to make residents aware of the trial, provide information and education about the scheme, engage them in identifying priorities for managing weeds across the city and ensure they fully understood what was to be expected as part of the trial.

- Signage was erected across all trial areas to advertise the 'Let's Talk Weeds' web page and to give an overview of the trial including why and what we were doing. There was a QR code on all signage that linked to the feedback form on the web page to encourage resident interaction.
- Letters were sent to all addresses within trial areas informing residents of the planned action within their street and area, including a clear link to share feedback.
- The Council engaged with residents via the feedback form on the "Let's Talk Weeds" web page and changed these questions as the trial progressed to gauge how they were feeling and to offer them the opportunity to put forward their ideas and views.
- Updates were posted with images of the trial areas on social media with a reminder to look out for the signage and to feedback their views via the 'Let's Talk Weeds' feedback form.
- Members have been briefed regularly throughout the trial period and information provided to them around our approaches taken and resident communications.
- Online reporting platforms were enhanced to give clear information on the trial at the point of reporting an issue via an educational pop-up message.
- Contact was made to 'Friends Of' groups that are active in trial areas to provide them with information about the scheme and direct them to the web page for more detailed guidance and how to get involved.
- The Council engaged with Voluntary Community Sector (VCS) groups and Ageing Well Boards to ensure they and their members were encouraged to complete the online feedback form.
- Gentoo colleagues have shared the communications on their social media platform to encourage all tenants to complete the feedback form to share their views on weed control.

## Priorities for Weed Control

Residents were asked to rank most to least important factors in weed control. The chart below shows the rankings for each factor for those who rated it within their top five.




This view is echoed in the open-ended comments, with the majority focused on the look and feel of people's streets and neighbourhoods as well as the safety / perceptions of the area, some comments are listed below:

- *I think the weeds need killing off as they make Sunderland look like a third world city. The roots will start to undermine the roads and brickwork and will take a lot more killing off in future so will require more treatment.*

- *Sometimes we might have to bear an environmental cost. Already run down pot holed roads /weeds against walls and on pavements/litter /fly tipping makes our estates look run down. Some residents do what they can but we need street maintenance on a regular basis.*

- *I think that the growth of weeds in our streets during the trial had been alarming. The developing atmosphere of neglect in our estates has impacted in the overall living environment for many residents who found the need to comply with the trial very difficult. Most people take a pride in their homes, gardens and living environments and so take care of these areas, this failed experiment lowers the standards in the streets and estates and gives an overall impression of environmental neglect and dereliction. I suggest that the council finds something that works or reverts to tried and tested methods. The mental well-being of residence is very important and I would list it as number one if I could on the list below.*

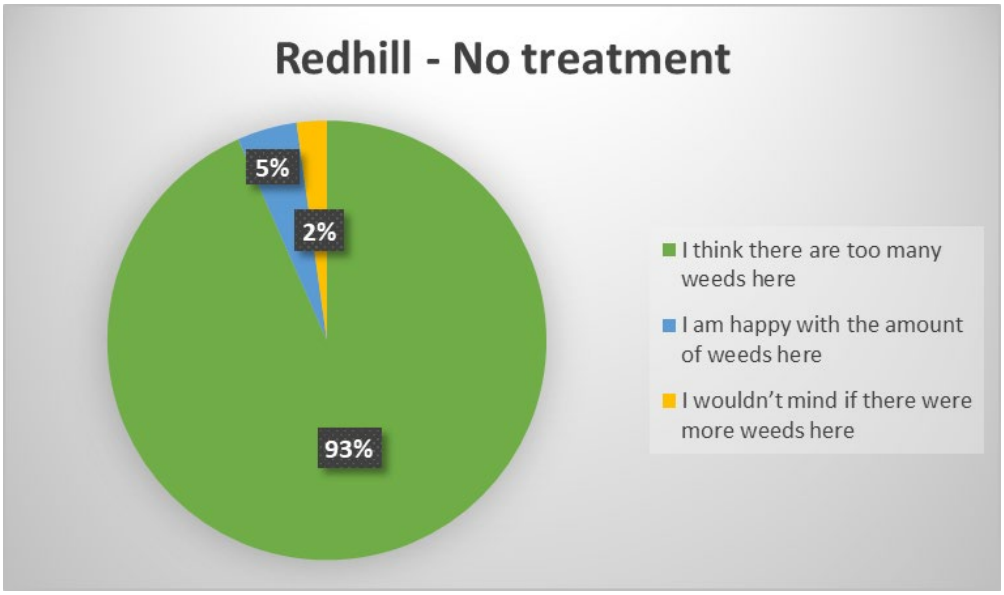
- *Treat them. It is a disgrace that I cannot see the fence beside my garage for weeds that are over 10 feet tall. There are Nettles growing through my Garden Fence that I can do nothing with due to neglect and this ridiculous scheme. As a Fully Paid Up Council Tax payer, this should be addressed urgently. The streets in our area are a disgrace*

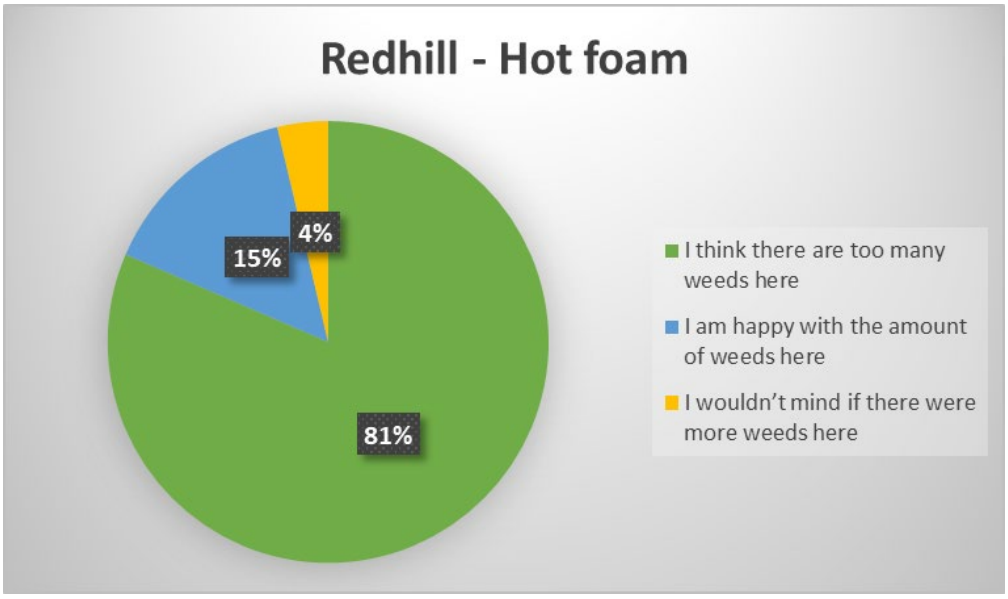
- *I am an advocate for keeping free weeded areas in parks and green areas but I don't think there is any kind of benefit to anyone having weeds on street paths.*

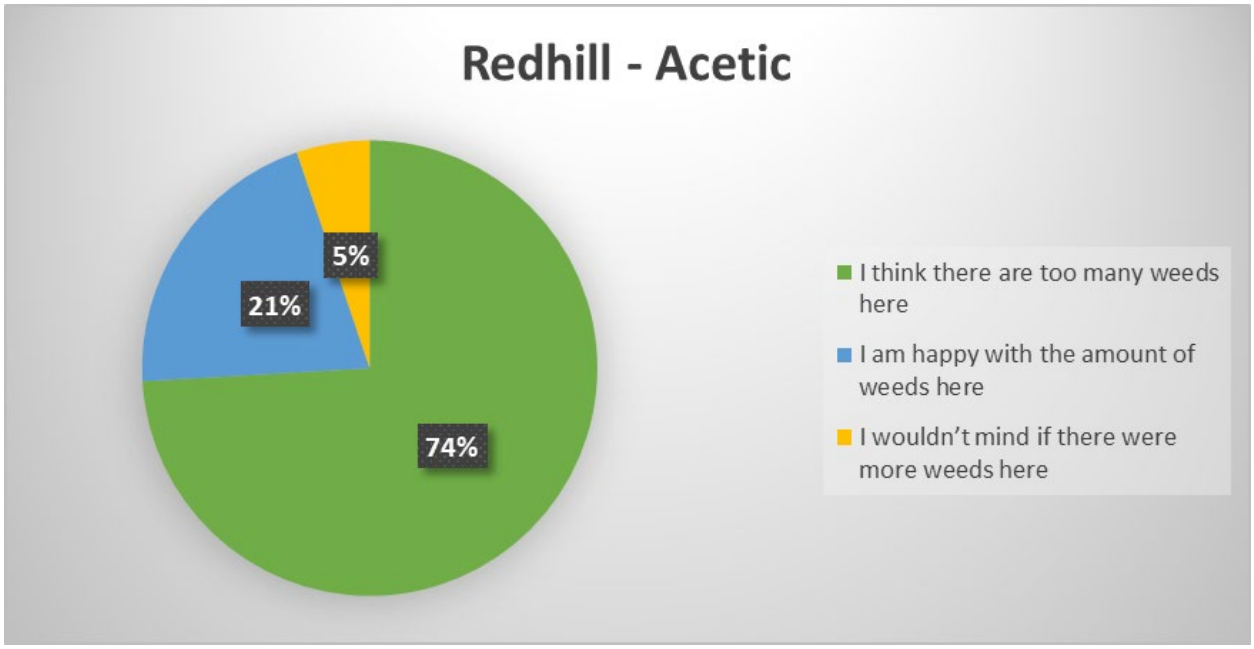
- *Whilst happy with the reduction in weedkillers used the problem is that it makes an area look uncared for encourages litter dropping etc. I think it also means that paving stones lift etc if weeds are never cut back.*

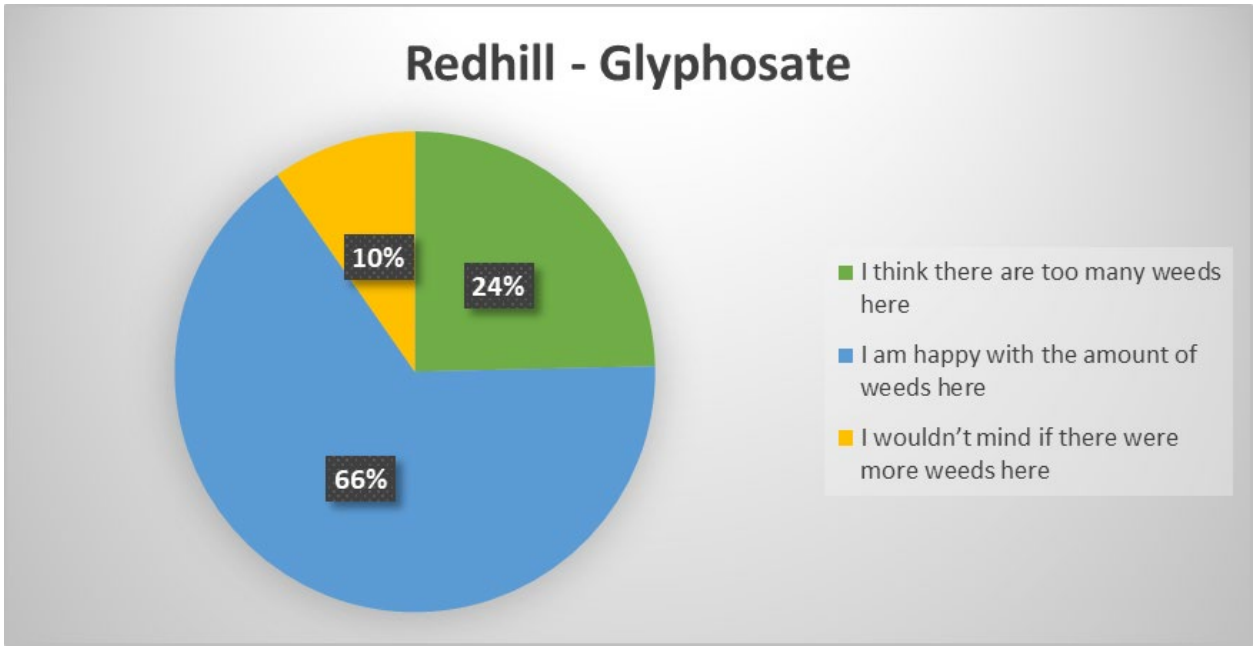
- *I think it makes the streets and estate look untidy. I also worry about my mother who walks a lot but can be unsteady on her feet. She could very easily trip over if she caught her foot on the weeds.*

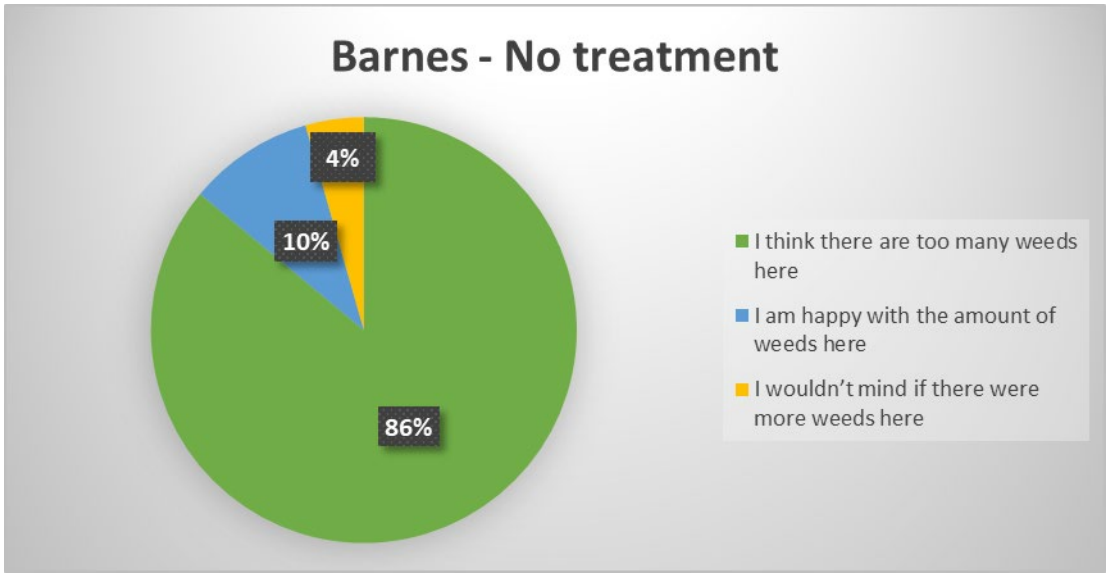
- *Sometimes the overgrown weeds obstruct the view of the edge of the curb which is dangerous. My estate now has many weeds which I feel has lead to a lack of pride in the area and more litter being dropped. I love seeing wild flowers on the estate now and feel there are many areas where wild flowers can be left to grow without regular cutting. However, the grass on pathway edges needs to be cut back to re-establish the full width of the paths for the safety of the sight impaired, elderly, buggies, wheelchairs and young children.*

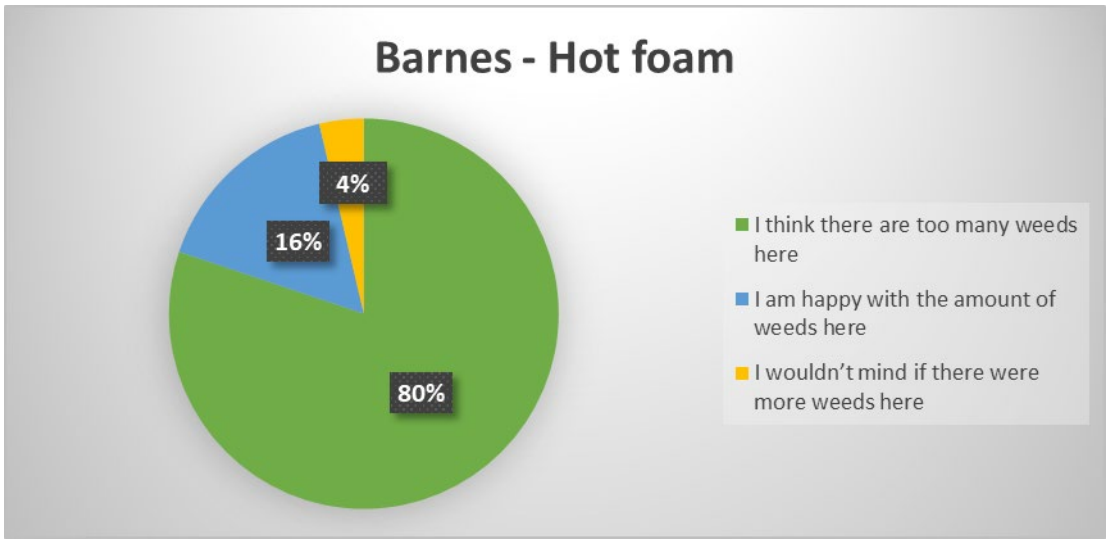


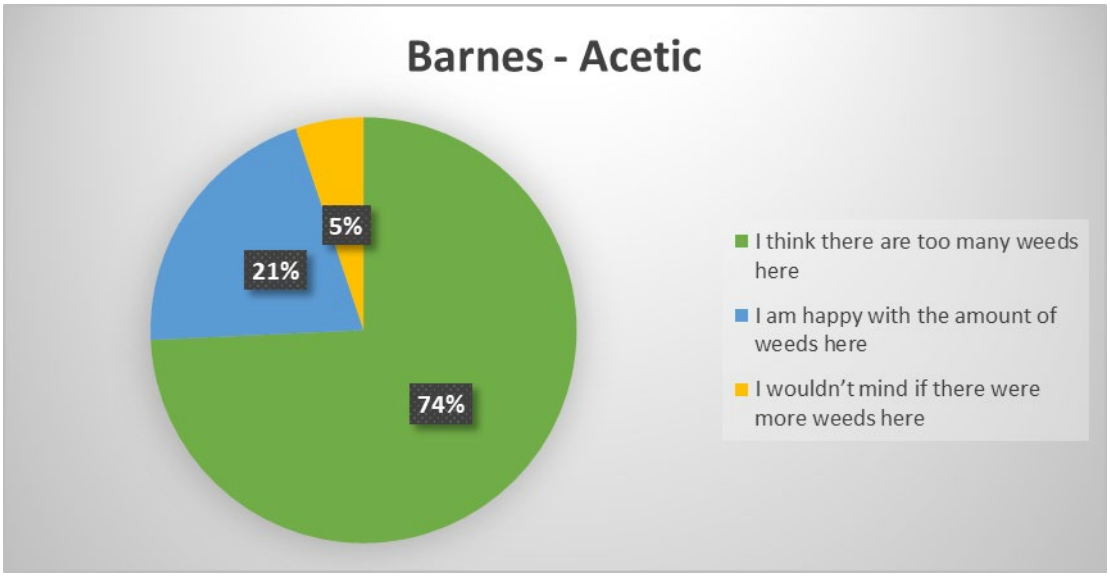



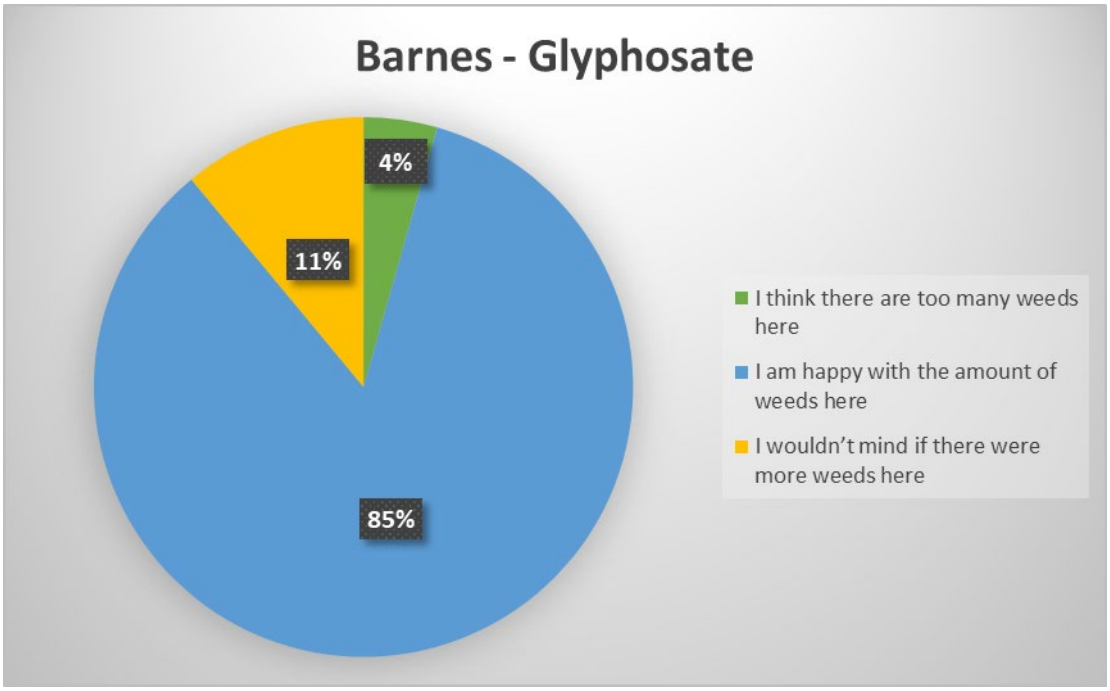

Redhill - Acetic
5%
21%
74%
I think there are too many weeds here
I am happy with the amount of weeds here
I wouldn't mind if there were more weeds here


Redhill - Glyphosate
10%
24%
66%
I think there are too many weeds here
I am happy with the amount of weeds here
I wouldn't mind if there were more weeds here


Barnes - No treatment
4%
10%
86%
I think there are too many weeds here
I am happy with the amount of weeds here
I wouldn't mind if there were more weeds here


Barnes - Hot foam
4%
16%
80%
I think there are too many weeds here
I am happy with the amount of weeds here
I wouldn't mind if there were more weeds here


Barnes - Acetic
5%
21%
74%
I think there are too many weeds here
I am happy with the amount of weeds here
I wouldn't mind if there were more weeds here




**The 2023 Resident Survey** and subsequent Ipsos report highlighted figures of those feeling safe and the impact this has on other questions. If residents feel more unsafe, they are more dissatisfied with local area overall, and the open-ended responses which reflect environmental factors. The survey also looks at what residents see as priorities for making somewhere a good place to live, and what services residents think need most improvement across the city.

*In 2023, overall satisfaction with streets and maintenance services has remained largely consistent with 2022. However, on specific service measures, in 2023, significantly fewer residents reported they are satisfied with pavement maintenance – the one area to see a significant and consistent decrease over the series (21% satisfied v 26% satisfied in 2022).*

*When asked about issues that are important in making somewhere a good place to live, tackling anti-social behaviour rose to the top of the list (52% vs 44% in 2022). Road and pavement maintenance also increased in importance since 2022 (30% vs 24% in 2022).*

*When asked about areas most in need of improvement, the level of anti-social behaviour was something that most residents felt needed to be improved, and this is higher than in 2022 (54% vs. 51%). Clean streets continue to feature, as they did in 2022 (45% vs. 41%), closely followed by road and pavement repairs (43% vs 42%).*

**Internal Council Services Feedback**

**Highways** - The Highways team have been consulted on this trial throughout the process and have requested that the following concerns of increased weed growth is noted within the final report:

- Under Highways Act 1980 a Local Authority has a duty to maintain footways to allow everyone to access and keep them free from obstruction, this includes the visually impaired, disabled, people in wheelchairs and people using walking aids
- Narrow pavements due to weeds will reduce access.
- Increased weed growth will result in additional cracks in the city pavements because of root damage, these cracks will cause additional trip hazards.
- A trip hazard of 25mm and above is potentially actionable with a local authority potentially at risk of claims where this height is exceeded.
- Maintaining the footway network is challenging; additional weeds will result in additional footway damage that they will be unable to maintain. This is demonstrated in the Highways Annual Report 2022, page 17 details the Council's satisfaction score.
- Weeds can mask trip hazards.
- Access to electricity cabinets & street light electrics will be hampered by increased weed growth.
- The use of Hot Foam machines and boiling water will wash away the joints of roads and footways and accelerate erosion and damage to the highway network.

**Fleet** – The Council's Fleet Service facilitates any vehicle purchases and they have advised that *'any additional quads and trailers would have a delivery timescale of 6-9 months, as they are not an 'off the shelf' product. Vehicles, such as additional Hot Foam machines would take longer. For a capital purchase or a contract lease, recent experience is that deliveries for chassis conversions are around 18 months from order, this would also need to go through a tender process, so would take up to 2 years to procure.'*

*'The size of the vehicle required would necessitate that drivers would need to possess licences which permits them to drive 6.5t which attracts higher rates of pay and CPC qualification or training. Furthermore, to introduce additional vehicles of this weight would have a substantial impact upon the Council's O' Licence requirement'.*

**Environmental Health –***The Council has a statutory duty to ensure, as far as practicable, that the district is kept free from rats and mice, having particular regard to its own land, and other land that the local authority occupies. The Council is also required to ensure that other owners and occupiers of land comply with their similar duties. As such the Council provides a comprehensive pest control service which is available without cost to Sunderland residents, and with a competitive charge to commercial customers throughout the city.*

*There is a clear need for a balanced approach to pest control and the service is delivered in an integrated and managed way which combines judicious pesticide use with alternative methods, where possible. Notwithstanding this, the use of pesticides to control pests is a vital tool for mitigating the risks associated with disease-carrying pests such as rats and mice and an effective measure to safeguard public health across the City. Whilst alternatives exist, they are often considered to be less effective and often take longer to become impactful and it is considered that removal of the use of pesticides would have a significant adverse impact on residents and the City.*

*There are stringent regulatory and best practice frameworks governing pesticide use which provide a structured approach to minimise environmental impacts and protect the health and safety of both residents and local environment. The Pest Control Service is committed to using a balanced approach to pesticide application, adhering to established guidelines, and seeking ways to enhance service provision and environmental sustainability.*

**Insurance** - The Council's Insurance department has confirmed that there is likely to be an increased level of Council liability as more trips, slips and fall claims are received in the event that there is increased weed growth across the city.

**Integrated Impact Assessment -** Prior to the commencement of the 2023 trial an Integrated Impact Assessment was completed that highlighted how increased weed growth would disadvantage certain demographics such as the disabled & people with a visual impairment, by impacting accessibility of our footpath network.

**2023 Trial Results – Partnership Position**

The Council contacted neighbouring partners and larger landowners across the region to understand their current weed control, environmental and biodiversity priorities and requested that they also shared their future plans so that the different organisations could work together to form long-term environmental strategy.

- **Durham County Council** – *We use chemical herbicide to treat grass/weeds around trees, obstacles, fences, along walls and road signs to reduce the need for strimming and to improve the visual appearance of grass growth around fixtures. We also apply it to footpath surfaces and roadside channels. The chemical herbicide we use is based on a substance called glyphosate, which kills all types of vegetation. Glyphosate has an extremely low toxicity to animals and poses minimal risk to humans who may accidentally come into contact with the substance. Glyphosate is shown as the most cost-effective method of controlling weeds and vegetation. We have lots of natural areas where we do not use herbicide including cemeteries but if left unchecked in an urban area the pathways and paving can quickly become unsightly and hazardous. Glyphosate has been approved as safe and effective for a number of years now and we continue to monitor and review Government and the Health and Safety Executive advice on the use of weed killers.*

- **South Tyneside Council** – *There are no plans to cease using Glyphosate based weedkillers on adopted highway, footpaths, and other hard surfaces within South Tyneside, and the constant review of usage and further measured reduction where possible, appear to be the preferred method for managing the responsible usage of weedkillers and pesticides.*

- **Gateshead Council** – *Although every effort will be made to identify and trial non-chemical control systems, there are many areas where alternative methods are not currently viable or effective. Wherever this is the case, minimal pesticide will be used with the least effect on the environment. The maintenance of hard surfaces such as paths, garage blocks, highway weeds etc., on a large scale, will still require the use of herbicide where other methods cannot be used due to*

*operational and financial viability issues. When this operation is carried out, weeds will be individually targeted (reduced – volume spraying) by the applicator, therefore considerably reducing the amount of herbicide used, and preventing any excess herbicide being lost into the environment.*

- **Gentoo** – *Since transfer from the City Council we have generally used only Glyphosate chemical to control weeds. However, following the introduction of products like Chikara and Katana, we have successfully cut the use of Glyphosate by 2/3rds as these products when mixed with glyphosate give much more effective weed control. The Glyphosate controls any weeds already growing and the Chikara/Katana prevents future weeds from growing. The impact of this is that previously we used to complete three full rounds of our land using glyphosate, we now only complete one full round using the new mixture of glyphosate/Chikara/Katana and then only spot weed where regrowth has occurred, however as you can imagine this has risen with the reduction of use. We have risk assessments, COSHH assessments, PPE in place and are reviewed annually, we are closely monitored by our health and safety teams. Any member of staff that is involved in the chemical process has the relevant qualifications and attend regular refreshers at Houghall College. We continue to look for and will work with partners to trial other options however we are running dry on ideas now and a lot of what we have tried as mentioned above has resulted in some real unsightly areas that we have had to go back and do heavy manual work or spot spray to gain control again.*

- **Sunderland University** – *In 2023 the University and its Grounds Maintenance Contractors began a trial cessation of herbicide use on hard landscaped areas at the Precinct Accommodation Site. Our contractors removed weeds only using strimmers. This worked well for the first part of the year, however from Spring onwards it became too labour intensive and began to affect other landscaping tasks on the University Estate. Herbicide use on the site was recommenced from May. Again, due to the size and location of the University estate we plan to continue a managed approach to weed control. The University will reduce herbicide use where possible and is open to exploring alternatives to herbicides. Alternatives would need to be cost effective, efficient in weed control and have a positive environmental impact when compared with herbicides so as not to adversely affect biodiversity in the areas we manage.*

**2023 Trial Results – The National Scene**

**Cardiff Council** undertook a trial, focusing on pavement treatment which commenced in the Spring of 2021 and commissioned an independent assessment of the process and outcomes through Advanced Invasives Ltd, a leading invasive plant consultancy in the UK. The associated independent scientific report assessing three different types of weed killer to manage plant growth on Cardiff's highways and pavements has concluded that Glyphosate is "the most effective and environmentally sustainable weed control method currently available".

**Oxford City Council** ran a comprehensive assessment of alternative methods for weed control and removal in 2022 and concluded that all other approaches are significantly more costly and substantially less effective than using Glyphosate.

Adopting one or more of the other approaches would require a significant budget bid, and the level of success in managing weeds would be in doubt.

**Brighton & Hove City Council** banned the use of Glyphosate in 2019, however in January 2024 councillors agreed to support its use to manage weeds. This came after a period of 5 years of undertaking alternative control measures, Brighton concluded the problems presented by weeds is now out of control and many pavements present serious safety and accessibility problems for residents. Manual weeding alone simply hasn't been effective and has left some streets inaccessible to wheelchair users, parents and carers with buggies and those with visual or mobility impairments. The cost to rectify the issues has been estimated at 60 million pounds.

**Cambridge Council** stopped using herbicides in 2023 and opted instead to physically remove weeds where they "presented a hazard or nuisance" to people. However, following a review it was found that the carbon saving wasn't as forecasted, nor were the financial savings as significant as hoped, furthermore additional spend is now required to address the issues with the highway network. A resident survey also found the majority of respondents to a survey were unhappy with the change and concluded the policy was not delivering the benefits anticipated. Weed-killing using chemicals will resume again on Cambridgeshire's roads and paths after the county council admitted it had "not got it right" following a policy change.

**South Lanarkshire Council's** grounds services team tried out four alternative methods of weed control throughout 2021. Unfortunately, their trials did not identify any suitable replacement that could be used across all land types.

**Sheffield City Council** declared a Nature Emergency in June 2021 part of which concerned the use of Glyphosate. Following this, a petition was presented to Full Council in July 2021 to ask Sheffield City Council to ban the use of Glyphosate on Council land. The petition triggered a debate on the plan to reduce and remove use of Glyphosate where possible and received cross party support. Following a trial of alternative (non-Glyphosate based) they concluded critically none are yet licensed for application on hard surfaces as needed for highways (for footpaths, roads etc). They also established that many of these alternative products do not manage weeds with the same efficacy as Glyphosate. Simply put, they did not achieve the same results in reducing the prevalence of weeds. In addition, they require more product to be used and treatments, both of which mean considerably greater cost for less effective results. Sheffield Council therefore intends to continue to use Glyphosate on surfaces where no other alternative is viable and reduce the use of Glyphosate elsewhere.

**Salisbury City Council** declared a climate change emergency in 2019 to move the council towards carbon neutrality and to enhance biodiversity. However, in October 2023 agreed to reintroduce the use of Glyphosate with Councillors expressing the view that the Council had been too quick to "jump on the green bandwagon" before it realised the consequences of its actions.

**Isle of Wight Council** in 2021 announced it would be ending the decades-old method of using quad bikes to spray chemical weedkillers. Instead, the highways

Private Finance Initiative contractor said it would employ extra staff and use non-Glyphosate herbicides and manual tools to get rid of the weeds. However, in March 2022, less than a year later, it was decided that the plan has failed with local residents submitting hundreds of complaints about the state on their roads. As a result, Glyphosate was reinstated to keep the streets free of weeds.

**Midlothian Council** banned Glyphosate in 2019, however after a rise in complaints reintroduced it in 2021.

## 2023 Trial - Result Summary

| Treatment/Results | Application time<br>Low = applied quickly<br>High = longer application time | Environmental<br>Low = minimal environmental impact<br>High = negative environmental impact | Cost<br>Low = cheapest per $m^2$<br>High = most expensive | Effectiveness<br>High = slow regrowth<br>Low = weeds quickly grew back | Engagement<br>Low = low level of negative feedback<br>High = increased feedback volumes |
|---|---|---|---|---|---|
| No action | LOW | MEDIUM | LOW | LOW | HIGH |
| Acetic Acid | LOW | LOW | MEDIUM | MEDIUM | MEDIUM |
| Glyphosate | LOW | LOW | LOW | HIGH | LOW |
| Hot Foam | HIGH | HIGH | HIGH | MEDIUM | HIGH |
| Strimming | HIGH | MEDIUM | HIGH | MEDIUM | MEDIUM |

- Glyphosate was the quickest product to apply with hot foam and strimming taking the longest to administer.
- Glyphosate and Acetic Acid had the least negative environmental impact with Hot Foam having the most detrimental environmental impact to the city.
- Taking no action was the cheapest method tested, however this does not account for future cost implications of increased weed growth across the city and the damage this can do to the highway network. Hot Foam and Strimming were the most expensive methods to administer.
- Glyphosate was the most effective method with the slowest weed regrowth in treated areas.
- Taking no action meant prolific weed growth across the city and resulted in very high levels of negative engagement and dissatisfaction, whilst residents were most happy with examples showing areas treated with Glyphosate.

## Audit Statement

The Council's Internal Audit service has made the following statement regarding the 2023 Weed Control Trial:

- Upon review of the evidence and documentation set out, it is clear that the Environmental Services team has undertaken a thorough and concise investigation into the feasibility and impacts of alternative options to the use of pesticides, and Glyphosate in particular, taking into account the wider implications of the options. The Council still has the statutory obligation to control

Japanese Knotweed, Giant Hogweed and Himalayan Balsam for which an effective herbicide is required.
- It is noted that whilst this review has consulted on and considered potential impacts within these wider service areas across the council, the scale of the impact has not been assessed to the same level of robustness as to the areas delivered by Environmental Services. It is therefore unclear whether other relevant services within the council are prepared to enact the motion agreed by the council.
- The conclusion of the review undertaken by Environmental Services appears to be appropriate and is supported by the evidence collated.

**Conclusion**

There is no weed control product or method available on the market currently that is as effective at controlling weeds as a glyphosate solution. All alternative methods have been found to be significantly more expensive, less effective at controlling weed growth and have a greater environmental and ecological impact on the city.

Further points to note are:

- The trial and associated research has not been able to find another local authority that has managed its weeds on the public highway without the use of glyphosate for a prolonged period, the longest known time was at Brighton and Hove City Council which was 5 years, however as noted they now have reintroduced the use of glyphosate.
- To stop using glyphosate would prevent the Council performing its legal responsibility to manage invasive species within its areas of jurisdiction. This core responsibility is outlined in the Environmental Protection Act 1990 and Wildlife and Countryside Act 1981.
- Alternative methods used had little effect – strimmed weeds grew back quickly and required significant resource to manage effectively. This is because strimming like acetic acid and hot foam can only tackle weed growth above ground level. Weed growth below the surface continues and the weed quickly regenerates, unlike when treated with glyphosate which kills the entire weed from root to tip.
- The requirement to frequently return to areas where weeds had quickly regenerated is challenging for teams to resource. Another consideration is the matter of the 1,720km (1,069 miles) of footpath and 1,226km (762 miles) of roads, including back lanes that must be treated, in both directions across the city.
- Increased strimming has a health & safety impact on staff by increasing exposure to hand-arm vibration which can cause significant ill health. An operative can only strim for 3 continuous hours per day or 15 hours per week due to HAV guidance. This means we could not strim one complete hectare per week.
- The Highways team also highlighted significant concerns around allowing weeds to grow in the city's footways, cycle routes, hardened verges, central reservations, filter drains and along kerb lines as this may cause structural damage and or drainage issues. This issue has been a significant pressure to Brighton Council who now face repairs totalling 60 million pounds.

- There are significant areas of highway that could not receive manual treatment be that strimming or manual removal because of the health and safety implications for staff and potential claims for damage caused by strimming.
- The national Code of Practice on Highway Maintenance also comments on the possibility of infrastructure damage caused by weeds and the implications for pedestrian safety.
- It would not be possible to remove all weeds from highways and pavements manually and there would be more visible weeds for longer periods of time.
- The Council's biodiversity duties need to be balanced against the equality duties and the duty to keep the city's highways clear and free of obstructions.
- The Council's Local Services experts also observed that the weeds that did grow and were subsequently treated with acetic acid, turned brown but did not die completely and grew back quickly following the chemical application. They consider that Acetic Acid is in no way as effective as Glyphosate as a weed killer. This is supported by other LAs' experience outlined in the APSE report.
- Contact was made with APSE around Glyphosate alternatives and the unanimous feedback from almost 100 Local Authorities was that there is no comparable alternative to Glyphosate in relation to cost and time. Those local authorities that did cease use of glyphosate have mostly reinstated its use due to the impact on communities.
- To stop using Glyphosate would prevent the Council delivering grounds maintenance services in line with the agreed Service Level Agreements with schools and other third parties, it would be possible to drop this element of service however this would reduce income and would not prevent the school or business applying their own glyphosate treatment.
- Key city stakeholders not ceasing Glyphosate use will result in a two-tier system in the city.
- As experienced during the trial, residents will be inclined to use Glyphosate on Council land which is close to their property in greater volumes/ concentration