

Introduction

Within Derby City Council, the Streetpride service undertakes Weed Control and Street Sweeping operations to provide an overall cleaner, tidier and a weed free environment across the city streets and parks.

What is a weed?

A weed is a plant growing in a location where it is not wanted. On our highways, any plants growing in pavements and kerbs or around drains and street furniture are considered weeds and they can come in hundreds of different forms.

Who controls the weeds in Derby City Council?

There are currently three departments within Streetpride that deals with Weed Control in the city of Derby.

- Grounds Maintenance teams applies treatment directly to areas of weed growth between the months of March and October. Due to warmer climates however, this operation can be extended.
- Street Cleansing utilises mechanical sweepers to clear roads and kerbsides of detritus and silt, which act as natural beds for weeds to grow, while street cleansing operatives can remove weeds manually from the roads and pavements.
- The Highways department deals with the manual clearance of any weed growth within Gullies, Drains and under Manhole covers.

Currently, each department work independently and there are no synchronised operations within Derby City Council to control weeds.

Where are Weeds Controlled?

1. 3,112 streets, including highways are weed sprayed and swept.
2. 42,899 Gullies, Drains and Manhole Covers are manually cleaned by Highways.
3. The Kerbsides, Wallside's, Obstacles on 375+ parks are sprayed. If required, extra application to heavily affected areas are also treated.
4. Public furniture, obstacles and fence / boundary railings are weed sprayed.
5. Private premises and other quotable works can incorporate all three operations.

Why we control weeds?

If allowed to grow unchecked in an unwanted area, Weeds can affect the:

- Appearance - weeds detract from the overall appearance of an area and trap litter.
- Safety - weed growth can interfere with visibility for road users and obscure traffic signs. Weeds in kerbs or around drains can prevent or slow down drainage. Their growth on pavements may damage their surface causing broken and uneven slabs.
- Weeds are also slip and trips hazards.
- Structure - weed growth can destroy paving surfaces, force kerbs apart and crack walls, increasing our maintenance costs.

How we control weeds?

Derby City Council utilises registered herbicides approved by DEFRA and so far, is the most efficient and cost-effective method for the broad-spectrum treatment of common weeds. Some alternative methods that have been trialled previously do serve some uses, but none currently approach the value and efficacy of total herbicide application (specifically herbicide), particularly when addressing the scale of treatment required for street pavements. Moreover, alternative methods (for example flame and heated foam) often come at the price of a significant increase in carbon footprint as well as not being able to kill the weeds root.

Current Operation:

As mentioned earlier in the report, there are currently three departments that deal with weed control across Derby City.

- Grounds Maintenance teams applies herbicide and carries out an integrated weed management approach to areas that need to be weed free on parks. Highways are treated with herbicide. Depending on requirement of the street, areas affected by weeds can be treated up to three times a year.
- Street Cleansing teams sweep the roads and kerbsides of leaves, detritus, and silts. Depending on the requirements of the street, they can be swept on a daily, weekly, monthly or annual basis.
- The Highways teams manually clean gullies, drains and manhole covers. Depending on requirements of the gullies, they can be cleaned on an annual, two yearly or four yearly bases.

Currently, each of these departments have their own scheduled works.

Limitations of Current Operations:

- There are currently three departments undertaking weed control operations within Derby City. Whilst they each undertake individual tasks, they work independently of each other and there is no current synchronisation of works, resulting in inefficiency in time and resource.
- Weed Spraying, Street Sweeping and Gulley clearances struggle to operate in areas of heavy vehicle presence. This is especially present within the Normanton and Arboretum wards.
- Inaccessible areas are challenging for street cleansing, grounds, and highways. When street cleansing cannot access pavements or roads due to parked cars, bins on streets or other reasons, the only feasible cleaning method is to sweep by hand. This is incredibly time consuming and is limited to the removal of the visible part of a living weed, leaving the root in situ.
- Current street sweepers are not currently able to remove all the weeds across roads and footpaths.

- If weeds are growing in areas where the roadside or deteriorating condition, weeds return significantly quicker than surfaces in better condition.
- There have been public concerns raised between the usage of the Herbicide, other herbicides and pesticides within the wider environment and the reduction in biodiversity within Derby. This led to a Council motion passing on the 26th of May 2021 and subsequently pledging to reduce the usage of Herbicide and other threats to biodiversity, like night-time light pollution.

“Council therefore agrees to stop the routine use of pesticides in the wider environment (such as herbicide for weed-suppression) and will seek to minimise night-time light pollution through Planning and other advice.”

This has placed pressure on the service to find alternatives that are more biodiverse but also offer the same level of effectiveness in treating and removing weeds.

Moving Forward:

Before reviewing the usage of herbicide already in use, there are several solutions that can be implemented to improve service delivery of Derby City’s weed control operation.

Grounds Maintenance Teams:

- Replace the paper-based system with the Whitespace Work software for Grounds Maintenance. This software creates a live link between crews and back-office staff via a platform that can be accessed via mobile phones, tablets, and desktops, thus making it easier to identify scheduled progress and ad Hoc requests.
- To review the usage of herbicide-based products and identify biodiverse alternatives that are effective in application as well as being cost effective.
- With both Grounds Maintenance and Street Cleansing departments utilising Whitespace Work Software, review the scheduled works of Grounds Maintenance and Street Cleansing to create better cohesion between the two departments.
- Utilisation of targeted mail drops and community engagement to inform residents in advance of any planned works, meaning they can move their vehicles to allow team to have proper access to apply herbicide and clean.
- To review the role of the public within the operation to control weeds and if there could there be a way of encouraging members of the community to control weeds on their own street. This would assist in the self-maintenance of areas previously posing inaccessible for crews to access, this has been attempted in the past but involvement from Councillors and the Neighbourhoods team would be required.
- To assess the carbon cost of running 3 quad bikes for Weed Spraying and to identify any ‘greener’ options that are viable and cost effective. This would be assessed in the longer term, however.
- To encourage proactive lines of communication between departments to ensure any problems (deteriorating roads etc), are reported as and when they are noticed. This could be achieved through crews proactively reporting issues outside of their own remits through Whitespace and could be referred on to the relevant crews.

Street Cleansing:

- To assess the use of a ‘weed ripper’ attachment on the footway sweepers which will remove both dead and alive weeds.
- To assess the use of Weed Spraying applicators on several ‘Channel Sweepers.’
- To assess the usage of weed rippers and vacuums for the manual street sweeping teams. This will be of particular use in areas with access issues.
- Review the carbon cost of applying herbicide and any carbon emissions.
- Review the carbon cost of running 7-8 mechanical sweepers and to identify more biodiverse options that are viable and cost effective. This would be assessed in the longer term, however.
- To encourage proactive lines of communication between departments to ensure any problems (deteriorating roads etc), are reported as and when they are noticed. This could be achieved through crews proactively reporting issues outside of their own remit through Whitespace and could be referred on to the relevant crews.

Highways:

No suggestions at present.

Future usage of Herbicide

1. Herbicide is cost effective compared to other trialled methods.
2. Grounds Maintenance teams use specialised equipment like controlled droplet applicators and hydraulic sprayers to limit the chance of drift.
3. The herbicide is applied directly to the plant only by certificated operators.
4. Application of herbicide results in zero carbon emissions when compared to other alternatives like hot water, foam and burning applications, which rely on diesel to operate.
5. The International Agency for Research on Cancer initially categorized herbicide as a probable carcinogen for humans. In 2020, the EPA released a statement that herbicide does not pose a risk to humans if it is used according to directions, and it is unlikely that it causes cancer in humans.

In relation to the usage of herbicide and the environmental impact, the Council continually reviews the use of the pesticides and has trialled some pesticide free alternatives to weed removal in the past including mechanical equipment, gas burners and hot foam. None of these trials so far have been as efficient or cost effective and we will continue to use Herbicide as part of an integrated approach in conjunction with mulching and the manual control of weeds.

In November 2021, an APSE ‘ask the network’ surrounding potential alternatives to herbicide. 22 local authorities responded to the question:

	Yes %	No %
Q1: Do you use Herbicide?	100%	0%

Q2: Are you looking to reduce Herbicide?	64%	36%
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	Tried alternatives %	Did not try alternatives %
Q3: Have you tried alternative herbicides?	77%	23%
Q4: Have you tried any alternative methods?	64%	36%

What is encouraging to see that almost two thirds of Local Authorities have attempted to use alternatives. However, when assessing the different alternatives taken by the responding authorities and subsequent drawbacks, it becomes clear that there is still a lot of work required to find an alternative to herbicide that is both sustainable and viable.

Q3 - Alternate Options		
	Option	Problems
1	Steam	Saw minimal results in halting weeds growth.
2	Acid	Saw minimal results in halting weeds growth.
3	Flame	Too costly and relies on fossil fuel to feed it.
4	Thermal Control	Helps to treat against moss but does not kill weed roots entirely.
5	Electric	Too costly and requires cables to charge whilst operating.
6	Hot Water	Run on a diesel engine, not eco-friendly. Also does not kill the roots of the weeds entirely.
7	Hot Foam	Run on a diesel engine, not eco-friendly. Also does not kill the roots of the weeds entirely.
8	Alternate Herbicides	Not potent enough to kill the whole weed root. Also, incredibly more costly than normal herbicide.
9	Jet Wash	Only Cleans Silt and Detritus and does not tackle the weed.

Safety Measures of Herbicide

Herbicide has still been subject to regular regulation checks and controls are still in place to ensure public health and biodiversity is ensured.

- The chemical herbicides allowed within UK markets are carefully regulated by the Department for Environment, Food and Rural Affairs (DEFRA).
- Application of herbicide is only used in instances where weeds are growing, what is not absorbed by the weeds. Any chemical that is absorbed into the soil and detritus breaks down and becomes harmless.
- Herbicides are not applied near any source of water like rivers, streams, and lakes. This also includes drains, gullies, and maintenance hole covers, unless licensed to do so.
- The herbicide has a low toxicity to humans, animals and insects and is safe to use in areas open to the public. EPA also released a statement in 2020 that herbicide does not pose a risk to humans if it is used according to directions, and it is unlikely that it causes cancer in humans.
- All staff using herbicides are fully trained and certificated in handling and applying chemicals.
- Application of herbicides in high footfall areas like town centres, public buildings, hospitals, and schools are treated during off peak times to minimize risk to the public.