

Meeting: Cabinet **Date:** 27 September 2022

Wards affected: All Wards

Report Title: Herbicide Use in Torbay

When does the decision need to be implemented?

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1. Purpose of Report

- 1.1 To update Cabinet on SWISCo's strategy to minimise use of Glyphosate (herbicide), and the trialling of any practical implications or alternative methods.

2. Reason for Proposal and its benefits

- 2.1 The proposals in this report help us to deliver an ambition to reduce the reliance of Glyphosate (herbicide) used by SWISCo for the maintenance of bay wide highway infrastructure (roads, pavements and other public realm areas), parks and public open spaces. This report informs on the current use of Glyphosate (herbicide), consideration of alternatives and measures to reduce usage by SWISCo services. Strict controls are applied by the council on the herbicides that are applied to sites, with alternative methods being researched and trialled.

3. Recommendation(s) / Proposed Decision

- 3.1 That SWISCo commits to minimising the use of all Glyphosate (herbicide), to find a balance between environmental considerations and the statutory responsibilities of the Council and the quality of street scene within the Bay.
- 3.2 That SWISCo move to the use of Nomix Dual distributed in a more controlled manner by way of electric utility vehicles fitted with kerbside application units.
- 3.3 That SWISCo commits to work in partnership with allotment holders to promote and encourage chemical free management of allotments
- 3.4 That SWISCo review herbicide use on an annual basis to ensure progress towards minimisation, compliance with best practice and practical herbicide free techniques.

Appendices

Appendix 1: Nomix Genesis Total Droplet Control System

Appendix 2: Hako Citymaster 1650 – Weed Ripper Head

Background Documents

Monsanto ordered to pay \$289m as jury rules weedkiller caused man's cancer

Please refer to the following link:

[Monsanto ordered to pay \\$289m as jury rules weedkiller caused man's cancer | Monsanto | The Guardian](#)

United States Environmental Protection Agency

Please refer to the following link:

[Glyphosate | US EPA](#)

Cancer Research UK

Please refer to the following link:

[Can pesticides or herbicides cause cancer? | Cancer Research UK](#)

Supporting Information

Parks for London – A Reference Guide for Integrated Weed Management in amenity Space and Public Realm

Glyphosate has been at the centre of recent discussions regarding health, safety and the environment.

Commonly Asked Questions about Glyphosate | Bayer

1. Introduction

- 1.1 Pesticide refers to a substance used for destroying insects or other organisms harmful to cultivated plants or animals. Examples include insecticides, fungicides, herbicides, molluscicides, and plant growth regulators. SWISCo only use herbicide which is a smaller cohort of substances also known as 'plant protection products', and used to control weeds. They can exist in many forms, such as solid granules, powders or liquids and consist of one or more active substances co-formulated with other materials. The active substance or substances within a pesticide has the controlling effect on the pest, weed or disease.
- 1.2 The use of herbicide to control weed growth on hard surfaces is by far the most common form of pesticide in use by SWISCo, with the common use of product currently NOMIX HILITE 144g/l glyphosate. Weed growth can interfere with visibility for road users and weeds in kerbs or around drains can prevent or slow down drainage. Their growth and moss on pavements may eventually become a trip / slip hazard for footway users. Application of chemical herbicide is used ahead of mechanical weed control due to the ease of application, which often saves on the cost of labour and is carefully targeted to minimise product use. It remains the most effective and cost-efficient means of weed control.
- 1.3 Restricted use of selective herbicides is used for the control of weeds on fine turf and sports areas such as cricket squares, bowling greens and golf greens to control broadleaf weeds and retain a safe and uniform playing surface. This is only carried out to affected areas and where it is not practical to manage the control by hand. SWISCo no longer manages area of fine turf, but Torbay council do lease land to sports clubs, but have no or limited control over pesticide use.
- 1.4 SWISCo does also use a small pesticide plug (Ecoplug) which are inserted into tree stumps where access by a mechanical stump grinder is not possible and there is a need to control re-growth or spread.
- 1.5 Torbay also has small pockets of Japanese Knotweed and where this is identified, stems are injected with herbicide (glyphosate) to control this invasive species. Other harmful and invasive plants may be treated to maintain their control.

Use of Glyphosate

- 1.6 In 2015, the World Health Organization's International Agency for Research on Cancer (IARC) identified glyphosate, the world's most commonly used herbicide, as a "probable human carcinogen". This report has been contested by the manufacturers of

glyphosate who maintain the product remains safe to use. Whilst there has probably been more scientific scrutiny of glyphosate than any other weed control product, the evidence relating to this remains both complicated and conflicting.

- 1.7 All products containing glyphosate have previously had to be registered and approved by the European Pesticides Commission having been subjected to a rigorous scrutiny process. From 1 January 2021, an independent pesticides regulatory regime is in operation and new decisions taken under the EU regime will not apply in Great Britain, with the Health and Safety Executive (HSE) the national regulator for the whole of the UK.
- 1.8 The Chemical Regulation Division (CRD), part of the HSE (and responsible for all pesticide products in the UK and how they are used in amenity situations, including pavements, sports areas and parks) have analysed all available information on the active ingredient glyphosate and have decided that it is **perfectly safe to continue to use**, provided label recommendations are adhered to. They will then issue a MAPP number (Ministry Approved Pesticide Product), which gives confidence to users, the public, their pets and the environment at large that the product is completely safe to use in accordance with label recommendations
- 1.9 Bayer have made statements on the situation, which are accurate, current and factual. Please refer to the following link:
<https://www.bayer.com/en/glyphosate/glyphosate-roundup>
- 1.10 Authorised use of glyphosate has a current EU expiry date of 15 December 2022, but the legislation introduced post-Brexit means active substance (glyphosate) approvals due to expire before December 2023 now allows extension for 3 years to allow time to plan and implement the GB review programme. Should this extension be applied to glyphosate, it will remain authorised for use until December 2025 unless the Health and Safety Executive exercises its power to review this approval at any time, should new evidence identify any concerns to human health or the environment.
- 1.11 Regardless of whichever timescale applies to authorised use of glyphosate, there is a will by SWISCo and all Council services to continue reducing dependency on pesticides and using alternative methods to chemical control where these are available and demonstrated to be effective.
- 1.12 In issuing an approval for Nomix Dual to be used in amenity areas (including highway areas), CRD has determined that, when used as directed, there is a very low risk of contamination of drains or watercourses. Furthermore, glyphosate has been given an extension of authorisation for use in Great Britain until 2025.

2. Options under consideration

2.1 Reducing Use of Pesticides

The steps SWISCo are currently taking to reduce and minimise the use of pesticides include:

- Restricting use to a minimum - pesticides are only used where they are required - all treatments are targeted with no preventative treatments carried out, whether that be weed or pest control. Nomix Dual will be our preferred solution once stock of Nomix HILITE have been exhausted. (approximately 8 to 12 months)

- Total Droplet Control (TDC), or CDA, is a unique, low-volume herbicide application system, combining pre-mixed, highly effective herbicides with easy to use, targeted application, including the Kerbside Unit (KSU) which will be attached to quad bikes, sweepers and virtually any motorised vehicle.
- Dual is applied at 9-litres per hectare and so this equates to 9-litres covering 10,000 linear metres at a 1-metre spray width. On this basis, 9-litres would cover approximately 3.33 times further at a 30cm spray width (this is the spray width that a KSU is set at) or 33,300 linear metres (33.3 linear km). Using this reasoning, a 5-litre pack of Dual would cover approximately 18,500 linear metres (18.5 linear km) at a constant application using a 30cm spray width.

By using Dual for 590 km, for example (x4 if you were targeting the front edge and back edge of each pavement either side of the road), then the total measurement would be 2360 linear km.

As 5-litres of Dual will cover approximately 18.5 linear km, then to spray the whole of this distance, we would use approximately 128x5 litres (640 in total) of herbicide. As Dual is residual, then it will give up to 6-months control.

The ready-to-use herbicide packs connect directly to the applicator, eliminating any risk to the operator from mixing chemicals and protecting the environment by avoiding spillages. TDC delivers a constant, uniform droplet size and spray pattern, significantly reducing run-off and virtually eliminating spray drift. This makes TDC safer for the operators, bystanders, animals, the environment, water courses and surrounding desired vegetation.

When using Dual, it has been shown that **70% less glyphosate** is applied per hectare, as opposed to 2-3 applications of conventional glyphosate (HILITE). Furthermore, as Dual only contains 2.22 g-litre of the residual active ingredient sulfosulfuron, that equates to less than **four teaspoonfuls per hectare**. Dual is the only herbicide that has label approval for both hard and soft surfaces.

- A selective herbicide is no longer applied to any grassed area, other than high amenity sports turf (excluding football pitches).
- SWISCo on behalf of Torbay Council are updating the licence agreements for allotments to encourage further biodiversity and move to a less chemical environment. This will form part of the action plan over a 5-to-10-year period. We are continuing to promote the organic allotment approach and are considering a further site for organic principles as part of the wider consultation with allotment holders.
- Use of weed suppressants - increased mulching of shrub beds and new tree plantings using recycled woodchip from tree works carried out in Torbay which helps to suppress weed growth and the need for treatment.
- Overplanting - an annual winter improvements programme allows for planting beds to be supplemented (gapped-up) or re-planted, not only for their aesthetic and environmental gain, but to reduce areas for weed growth and need for future treatment.
- Maintaining surface integrity - working procedures are in place for surveyors to report surface defects and arrange timely repairs. The efficient reporting of repairs reduces the potential for weeds to grow as they would through damaged paved and hard surfaces. Collaborative working between site surveyors and design teams influence future decision making around the type of surfacing and street furniture.

- Reduced mowing of grass - to enhance and support biodiversity, teams have relaxed mowing regimes to an increasing number of areas across Torbay (Blue heart Campaign) and continue to trial expansion of this. Public response has been favourable where this has been introduced and continues to inform further areas where the right balance can be found between increasing wildlife friendly grassland and scrub and public amenity use and respecting walking desire lines. All sites are on a case-by-case assessment and these changes are being monitored.
- Mechanical and manual cultivation - chemical treatment is no longer used when preparing beds for the popular and increasing number of wildflower and meadows seeded areas that have been incorporated across a range of green spaces and adjacent residential housing and highways.
- Mechanical weed ripper machines are used to remove moss and weeds to suitable housing curtilage areas and ball courts.
- Manual weed removal is still employed where relatively small areas are affected and it remains more time-efficient for operatives to undertake the necessary control using hand implements, than for this to be followed up by scheduled herbicide treatment.
- All staff involved in the selection of and use of pesticides have received the necessary training to ensure it is safely applied and is used to a minimum.
- Continual review - teams continue to work with product suppliers to ensure any pesticide used is based on an informed decision and where herbicide is still required, products other than glyphosate are used where possible, or that help reduce the amount used in the weed growing season.

2.3 Alternatives to Weed Control

Whilst SWISCo will continue with targeted use of pesticides where it is required, all are open to and have trialled alternatives that are on the market, each with advantages and disadvantages. These include:

Method	Use	Advantages	Disadvantages
Hot Foam (thermal treatment)	<ul style="list-style-type: none"> • Weeds in hard and gravel surfaces • Moss on hard surfaces and play safety surfacing • Grass, where control is required (ie. tree bases) 	<ul style="list-style-type: none"> • Foam forms a thermal blanket around heated water and the weed, using natural plant oils • Not weather dependent • Claimed to kill high percentage of weeds, including roots 	<ul style="list-style-type: none"> • Does not kill all weeds on first application • Expensive - needs investment of £20k for equipment (estimated to cost £51k to include transport, staffing and materials) • Vehicle transport and boiler are diesel powered, increasing carbon footprint • Not suited to use on highway network or spaces where access is restricted • Resource intensive • Time consuming
Hot water / steam (thermal treatment)	<ul style="list-style-type: none"> • Weeds in hard and gravel surfaces • Moss on hard surfaces and play safety surfacing 	<ul style="list-style-type: none"> • Lower initial purchase cost than hot foam 	<ul style="list-style-type: none"> • Requires repeat treatments as heat does not sufficiently damage plant / root structure • Diesel consumption and transport increases carbon footprint • Resource intensive

Method	Use	Advantages	Disadvantages
			<ul style="list-style-type: none"> Time consuming
Flame gun / weed burners (thermal treatment)	<ul style="list-style-type: none"> Weeds in some hard surfaces 	<ul style="list-style-type: none"> Relatively cheap to purchase 	<ul style="list-style-type: none"> Health and safety risk when used in public areas Not fully effective Diesel consumption increases carbon footprint
Electrocution	<ul style="list-style-type: none"> Weeds in hard and gravel surfaces 	<ul style="list-style-type: none"> Pesticide free 	<ul style="list-style-type: none"> Health and safety risk when used in public areas (high-voltage) Time consuming
Mechanical removal blade (highways) / sweeper ripper attachments (paving) (HAKO Machine)	<ul style="list-style-type: none"> Weeds along kerb lines and in hard surfaces 	<ul style="list-style-type: none"> Attachments can utilise existing machinery 	<ul style="list-style-type: none"> Health and safety risk of projected debris Requires a clear pathway (highways) Ancillary damage to paved areas and kerbing Severs weed head but does not treat root system effectively Risk of manual handling injuries including Hand Arm Vibration Syndrome (HAVs) Resource intensive Time consuming
Vinegar	<ul style="list-style-type: none"> Weeds in hard and gravel surfaces 	<ul style="list-style-type: none"> Low competence level for application 	<ul style="list-style-type: none"> Not fully effective Strong smell
Soda crystals	<ul style="list-style-type: none"> Moss treatment 	<ul style="list-style-type: none"> Cheap and effective Low competence level for application 	<ul style="list-style-type: none"> Labour intensive to mix product, apply and agitate moss Slippery on contact, creating alternative hazard
Manual removal	<ul style="list-style-type: none"> Weeds generally 	<ul style="list-style-type: none"> Effective 	<ul style="list-style-type: none"> Very time consuming
		<ul style="list-style-type: none"> Low set-up cost 	<ul style="list-style-type: none"> Teams would require significant additional staff resource Increased risk of staff injury

3. Financial Opportunities and Implications

3.1 A full financial evaluation has not been carried out for each alternative method to pesticide use due to the perceived disadvantages outweighing the advantages, that means they are not considered a viable alternative at an early stage. Where this includes a capital outlay cost or increase in staff resource, this results in a financial implication in addition to assessment of effectiveness.

3.2 The Cost of Nomix HILITE

Chemical total cost 2020/21 - **£22,844.50**. 1525 Litres used. Approximately spraying 2 times per year

The cost of Nomix Dual is more expensive per Litre the effectiveness is improved, distributed in the correct way using a KSU with 70% less Glyphosate.

There is not likely to be any financial impact between the two chemical types.

The KSU investment is estimated at between £8,000 and £10,000 on standard petrol engine available within weeks An EV KSU estimated as between £18,000 and £24,000 availability is challenging with long lead times with no commitment, however likely to be between 12 to 15 months

4. Legal Implications

- 4.1 There are not consider to be any legal implications at this time as the use of Glyphosate (herbicide) is approved by the Chemical Regulation Division (CRD), part of the HSE and responsible for all pesticide products in the UK.

5. Engagement and Consultation

- 5.1 No consultation has been carried out at this time, as SWISCo is following the guidance set out by the Chemical Regulation Division (CRD), part of the HSE (and responsible for all pesticide products in the UK).

6. Purchasing or Hiring of Goods and/or Services

- 6.1 The purchase of Chemical is agreed through the existing supply chain at SWISCo

7. Tackling Climate Change

- 7.1 Using currently available vehicles and technology the alternative options to Glyphosate (herbicide) involve a higher level of diesel consumption than the proposed use of Nomix Dual.

8. Associated Risks

- 8.1 If SWISCo are not permitted to continue to use Glyphosate (pesticide) in its reduced form <70% from its current use within the next 12 months. Alternative options would be considered a significantly higher cost and resource with a less effective solution. Resulting

in significantly increased number of complaints and a greater impact on the highway infrastructure from weed growth.

9. Equality Impacts - Identify the potential positive and negative impacts on specific groups

	Positive Impact	Negative Impact & Mitigating Actions	Neutral Impact
Older or younger people			x
People with caring Responsibilities			x
People with a disability			x
Women or men			x
People who are black or from a minority ethnic background (BME) (Please note Gypsies / Roma are within this community)			x
Religion or belief (including lack of belief)			x
People who are lesbian, gay or bisexual			x
People who are transgendered			x
People who are in a marriage or civil partnership			x
Women who are pregnant / on maternity leave			x
Socio-economic impacts (Including impact on child poverty issues and deprivation)			x
Public Health impacts (How will your proposal impact on the general health of the population of Torbay)			x

10. Cumulative Council Impact

10.1 None

11. Cumulative Community Impacts

11.1 None