

Lambeth Landscapes: An Integrated Pest Management Policy

Part I: Managing weeds and other undesirable plant species in Lambeth's parks, cemeteries and public open spaces



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1. Introduction and Policy Objectives

We want attractive and well-maintained parks in Lambeth and part of this means the presence of colourful flower beds and other planting schemes, particularly because of the health and wellbeing benefits this brings to residents – but this requires a focus on how weeds are controlled. This document sets out Lambeth’s approach to weed control, within the context of an in-house grounds maintenance service; and has been produced in response to growing pressure to demonstrate a reduced reliance on chemical herbicides, specifically Glyphosate, within the public realm.

Lambeth is committed to minimising the use of chemical herbicides in order to control weeds or other undesirable plant species in its parks and other open spaces that it owns and manages.

Since 2016 when grounds maintenance in parks was brought in-house, we have almost eliminated the use of herbicides within our parks and open spaces. Herbicides are no longer used as part of routine grounds maintenance, only for a small number of specific purposes. The ultimate aim is to completely eliminate the use of all chemical herbicides throughout the borough where and when this is realistically achievable, replacing them with non-chemical alternatives.

This policy summarises how Lambeth has reduced the use of chemical herbicides through an Integrated Weed Management approach and sets out the alternative methods we employ. The overall objective is to only use chemical herbicides when there are no effective or reasonable alternatives, and in such cases to ensure that the least harmful methods of use are employed, so that any adverse impacts upon the health of both the environment and the residents of Lambeth is kept to the absolute minimum at all times. This policy explains the circumstances in which we still use chemical herbicides and the methods we use to minimise any adverse impacts.

2. What are Weeds?

‘Weeds’ are often described as plants growing where they are not wanted or needed by humans. Whilst most wild plants are innocuous and don’t cause any problems, some are perceived by us as a threat to something we have or want. We tend to view weeds as threats to those plants we value, by competing with them for available light, food and space.

Weeds are often plants that can rapidly spread or colonise new or existing ground or water, and where there is a need to control them in order to ensure other cultivated or beneficial plants have the chance to establish, thrive and produce what we want and when we want it. In addition, weeds are often viewed as ‘unsightly’ or ‘ugly,’ and so we try to control or eliminate them for aesthetic reasons.

Furthermore, the fast-growing nature of many weeds means that if they were left unchecked, care and maintenance of many places where they occur such as in parks or gardens can require a greater effort, not just in terms of a higher frequency of intervention but increased labour, which all comes with an economic cost. It is often argued that it is more financially advantageous to remove weeds rather than constantly trying to contain or control them.

3. Noxious, Harmful and Invasive Weeds

‘Noxious’ or ‘harmful’ weeds are plants which have been demonstrated to have the potential to cause significant harm to wild or domestic plants and animals, humans or even wildlife habitats. Some contain chemical compounds that can be toxic to other plants, and especially animals and humans. Two examples of such plants often found in public parks and open spaces are Giant Hogweed (*Heracleum mantegazzianum*) whose sap and tissues can cause severe lesions or blisters when in contact with exposed skin, and Deadly Nightshade (*Atropa belladonna*) whose large, dark purple berries are extremely poisonous and a major cause for concern if found growing near playgrounds or in parks.

A number of invasive plant species are also classified as weeds. An invasive species is any kind of living organism which is not native to our normal environment and may cause harm. Many invasive plant species compete for space, food and light with other, often native and beneficial, plants and

spread aggressively as they may have no natural predators or pests to control them. As a result, they can then damage or upset the normal balance of natural ecosystems, and as a consequence threaten the survival or health of our native wildlife.

4. Herbicides

Herbicides are chemical compounds designed to prevent or inhibit the establishment and growth of living plants (herbicide literally means 'plant killer'). They are seen as offering a form of weed management which is supposed to be quick, easy to use, effective, selective and often cheaper than traditional manual methods like weeding or hoeing.

Herbicides bought 'over the shelf' or commercially sourced are usually a mixture of different compounds, some of which are 'active ingredients' which specifically attack unwanted plants, and others designed to modify how the active ingredients work such as prolonging their potency, making them more persistent (less vulnerable to being washed off by rain or destroyed by UV light exposure) or modifying which plants they are more effective against.

Many modern herbicides are 'contact herbicides,' which only work when they are in direct contact with living plant material, or which break down on contact with soil or water to less harmful compounds, making them less indiscriminate in how they work.

5. Environmental Impacts of Herbicides

However, the fact that herbicides kill a wide range of different weeds is an indication of the potentially harmful chemicals they contain, and also the ability to kill beneficial plants and harm animals including many insects and earthworms. The extent of these dangers has become more apparent in recent years, to the point that the potential risks of harm from herbicides is now felt to outweigh many of their benefits. This is reflected in changes to legislation to restrict and reduce herbicide use for weed control where other non-chemical methods exist.

Herbicides are also dangerous because of the long term changes they can cause to plants. Persistent use of herbicides can result in the evolution of plants that become resistant to these chemicals, causing an even greater threat to biodiversity over the longer term.

6. Toxicological Impacts of Herbicides

Most of the more commonly available and widely used herbicides contain the chemical glyphosate as the principal active ingredient. Glyphosate works by preventing plants from making proteins that are necessary for their growth and reproduction. Although on its own glyphosate has low toxicity, when combined with other chemicals in herbicide formulations, its potential toxicity towards other organisms can be greatly increased.

Because the traditional method to apply herbicides was spraying them from a height onto plants, this herbicide spray can easily be caught on the wind and 'drift' to cover a larger area than intended, risking damage to cultivated plants and being breathed in by animals and people. In addition, once applied glyphosate binds tightly to soils and can persist for up to six months or even longer in colder seasonal climates like the UK. It can also be washed into nearby water courses and systems and then have a detrimental effect on any aquatic flora and fauna in streams, rivers and lakes.

Although the European Food Safety Authority (EFSA) stated that glyphosate on its own is safe, most original research on its toxicity come from the industry who created the herbicide, and tests on the effect of glyphosate within commercial formulations are limited. Commercial herbicides, containing glyphosate and other ingredients, have been known to cause skin rashes/irritation, irritation to throat and nasal passages, or affect the body's endocrine system which can give rise to gastrointestinal disorders, obesity and diabetes; other studies associate glyphosate use with non-Hodgkin lymphoma and some reproductive problems.

Some scientific studies have suggested that glyphosate has carcinogenic potential, and a recent legal case in the United States of America where a worker exposed to high levels of glyphosate developed cancer and has secured significant damages from Monsanto/Merck, who originally developed glyphosate, has reignited a fierce debate over the possible risks from its continued use in the UK and Europe.

However, the European Chemicals Agency argued at the time that current scientific evidence does not presently meet the criteria to classify glyphosate as a carcinogen, as a mutagen or as having toxic effects on human reproduction. As a result, the European Commission granted an 18-month extension of its approval for the continued use of glyphosate and has restarted Member State discussions over a further renewal of the licence beyond this period.

Despite the ongoing debate and current EU approval of glyphosate, we believe that the safest option is continue to work to reduce the use of not just glyphosate but also all herbicides (whether they contain glyphosate or not) as far as is reasonably possible, and only authorise its use a very last resort where all other non-chemical methods have failed to have the desired result.

7. Weed Control Methods used in Lambeth's Parks and Open Spaces

Because Lambeth Council is committed to reducing the extent to which it uses chemical-based herbicides within the public realm, including parks and open spaces, it must also equally commit to introducing alternative non-chemical methods for the control and eradication of weeds.

This section summarises the non-chemical methods forming Lambeth's Integrated Weed Management approach for parks and open spaces. Along with a short explanation on how each method works, their advantages and disadvantages are also summarised, along with any cost-benefit evaluations where this is known or available.

7.1 Toleration

The most common reason for wanting to control or eradicate weeds in amenity areas is purely aesthetic: we want these areas to look neat and tidy - 'cared for and attractive.' However, when managing any amenity area, including parks, cemeteries and the public highway, the level of toleration that can be accepted has first to be understood. Does an area really need to be completely free of all weeds, or can a lower tolerance level for weeds be set for it?

Because of the growing popularity of wildflower meadows and less-frequently cut grasslands in many of Lambeth's open spaces, the public's perception of 'attractiveness' is gradually changing, especially if such features have colour and diversity. This is happening along with an increasing acceptance of more natural or biodiverse landscapes in particular locations, notably woodlands, nature reserves, commons and in cemeteries and churchyards.

Recent growing concerns over the decline of the UK's wild bird populations and of invertebrates, especially pollinator species like bees and butterflies, has also made people more understanding and tolerant of 'wilder' or rougher-looking areas, so long as the reasons for them are properly explained and they are still appropriately maintained.

If the degree of toleration for less manicured and weed-free areas is relatively high, then there is usually no need to keep treating these with regular applications of chemical herbicides or indeed most other non-chemical methods. Regular if targeted physical maintenance, including annual, more regular or selective grass cutting, can then help manage and contain weeds in those places where they cannot be tolerated.

Lambeth's policy with respect to increased tolerance of weeds

Since 2016 we have been increasing areas of grassland dedicated to wildlife conservation. An increasing number of non-intervention areas are being created where the grass is no longer cut, and nature is left to its own devices. These areas require no weed control at all. In addition, we are creating wildflower meadows, which are intended to be more showy and colourful areas. Wildflower

meadows do require reasonably intensive management in order to retain an appropriate level of target species. However, our policy is not to use any chemical-based herbicides to control undesirable species within wildflower meadows. Where intervention is required, it will be focused on mechanical removal of vegetation, topsoil, and re-sowing.

In terms of amenity grassland our policy is to be highly tolerant, and no weed control is utilised to remove ruderals or broad-leaved species from amenity grass or sports pitches. From 2019 increased resources dedicated to pitch management means that we may start utilising targeted mechanical weed control on grass sports pitches, however we will not use chemical herbicides.

Case Study: Short grass edge definition around naturalised grasslands

Where a large area is managed as meadow or naturalised grassland, some users tend to view this as 'unkempt,' 'untidy' or 'neglected,' especially where the long grass spills over onto surrounding paths, roads or footways. Our policy is to regularly mow a narrow margin around these areas; and keeping a well-maintained edge, compared to the bulk of the grassland, can create a sense of the whole site being 'well maintained' due to a better definition of boundaries, which then improves the level of tolerance. This is because the public see these strips as being free of obvious weeds, even if the rest of the longer grass may still contain them.

In addition, cutting short-mown paths through extensive areas of long grassland or scrub allow the public to follow desire lines between important entry or access points, which also helps increase overall tolerance, especially if it allows dog walkers or those with children, buggies, etc. to walk safely and quickly through the site.

7.2 Designing out a Weed Problem

A continuous surface cover such as asphalt or resin bonded gravel generally has less weed growth than slab, block or sett paving. This is because the majority of hard surface weed problems occur in cracks and joints where there is a build-up of detritus which then provides a good substrate for weeds to germinate in. Many weed problems can be minimised by considering materials that reduce maintenance requirements at the design stage, as well as regularly replacing cracked or broken surfaces, adequately closing joints with appropriate sealants, and frequent sweeping, collecting and removing any potential detritus build up.

Our policy is that the design of all new landscaping areas should consider weed maintenance factors and parks staff are always heavily involved in the design of any capital projects managed outside of the parks team. As well as consideration over hard surfacing materials, thought to soft landscaping is crucial. For example, combining wildflower plantings with grass mixtures on road verges or in parks can suppress unwanted weed growth, as can replacement of formal shrub or seasonal beds which always have constant weed maintenance issues, with flowering meadow areas or dense herbaceous cover. Underplanting rose or specimen shrub beds with a layer of ground cover plants, can create a dense 'living carpet' that helps suppress weeds without over-competing with the taller plants or shrubs.

7.3 Weed Growth Barriers

Our policy is to make significant use of natural weed suppressants for ornamental and shrub beds. Since 2016 we have utilised revenue S106 monies and events income to purchase large quantities of recycled organic mulches and composts. These are applied annually in winter to beds in an increasing number of parks and have made a huge difference in terms of the need for weed management at those locations. At some parks we have been able to arrange delivery of mulches and Friends groups have applied them.

7.4 Manual and Mechanical Control of Weeds

This is the traditional method for dealing with weeds in parks and gardens, involving hand tools like hoes, weed pullers and claws, with the aim to physically lift or pull the weed out of the ground and prevent it growing back. It works best on annual weeds and certain perennial weeds which don't regenerate from underground roots or rhizomes, and where the roots can be easily pulled out along with the aerial parts of the plant. Manual weeding can be used on hard surfaces, but it works best for removing weeds from rose beds and ornamental borders where most machinery is unsuitable.

However, although precise, it is labour intensive and is a tedious and time consuming exercise and not practical on a large scale. It can also be difficult to identify which plants are weeds and which are cultivated plants when they are in their early growth stages, especially if the person weeding is not suitably experienced; hand weeding is often delayed until the weeds are large enough to be identified. Manual weeding also needs soils to be sufficiently moist and friable so that the weeds can be easily and completely removed, so nothing is left behind that could then regenerate.

Mechanical weed-ripping machines are available which use stiff rotating brushes to control weeds on hard surfaces, by gripping or pulling plants out as the brushes spin. As well as removing weeds they also remove detritus in gaps between paving and stonework which would then form the seed bed for later growth. Machines are available in manual or vehicle formats (including push and sit upon) and are particularly effective on block paving, cobbles and setts, and some have optional heads to adapt to different surfaces or conditions.

Manual and mechanical control methods used by Lambeth

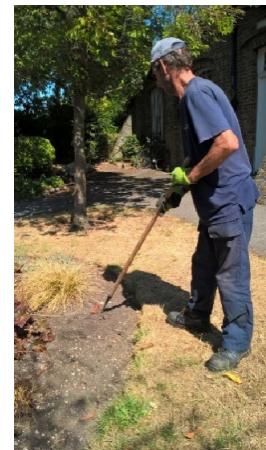
Hand-weeding

Lambeth employs a number of dedicated gardeners and much of their work involves hand-weeding. Under normal circumstances, for the beds they maintain, we only use mulching and manual methods to control weeds. One static gardener covers the walled garden and other ornamental beds within Brockwell Park; and the other static gardener covers the Flower Garden and sunken beds in Kennington Park. Two mobile gardeners use hand-weeding methods across ornamental beds at other parks throughout the borough.

Since 2016 external funding opportunities from planning gain or other development-linked arrangements allowed us to fund additional staff in certain areas of the Borough meaning that we could undertake hand-weeding as the main control method at a number of additional sites. For example, we had a S106-funded static gardener looking after the formal gardens in Vauxhall Park; a S106 funded part-time gardener working in St. John's Churchyard and five NCIL-funded Park Attendants working in specific parts of the borough undertaking horticulture as well as cleansing work. Other opportunities to fund additional staff are in the pipeline and we continue to proactively explore new possibilities.

In addition, we have a small number of community-managed sites where staff, apprentices and volunteers provide a relatively high level of horticultural management. At these sites – The Rookery, Streatham Vale Park and Myatt's Fields Park – all weed control is through manual methods.

Lambeth is extremely fortunate to benefit from a small army of committed Friends groups, many of whom organise regular gardening activities, facilitate Good Gym or other voluntary sessions and even fundraise for contracted gardening work. Again, only manual weed control methods are used, although we are at early stages of exploring thermal treatment options for Friends.



Mechanical weed control methods

We use two main mechanical processes. The first is simply using strimmers to quickly remove weeds and this will generally be undertaken as an ancillary activity by grass-cutting teams in appropriate areas.

Secondly, Lambeth purchased a Nimos Mosquito pedestrian weedripper in 2016 (illustrated opposite). The unit runs on unleaded petrol and is highly manoeuvrable. It has a standard brush head and a heavy duty wire head and has proved very effective at removing weeds, moss and algae from a range of hard surfaces. Care does need to be taken where this is used, especially on fragile or friable surfaces. Some 'heritage' or aged surfaces, such as those composed of York stone paving or old stock bricks set with lime mortar, could be permanently damaged if a weed ripper is used too heavily or repeatedly. The main issue in Lambeth has been where the heavy duty head was used inadvertently instead of the finer brush head.



7.5 Thermal Control of Weeds

Weeds can be treated with an application of heat which destroys plant cells and causes plant proteins to coagulate, disabling normal metabolic functions. This then kills or weakens the weeds, which also makes them easier to remove using manual methods and reduces their ability to out-compete other more beneficial or desirable plants. Heat treatment of weeds can be achieved by using an open flame, hot water, steam, hot foam, infrared, or electricity.

Weeds vary in their response to heat; newly emerged or small weeds, or those with small reserves of nutrients and energy in roots or rhizomes, are more likely to be killed by heat. Well established weeds, perennial weeds and those with substantial root systems recover quickly from heat. As a consequence, repeated treatments may be necessary to keep an area free of weeds. On average about three consecutive hot water/steam applications are required per season; this makes it a financially very efficient solution to weeds, with an estimated average cost of between 10 and 20 pence per m² of ground treated.

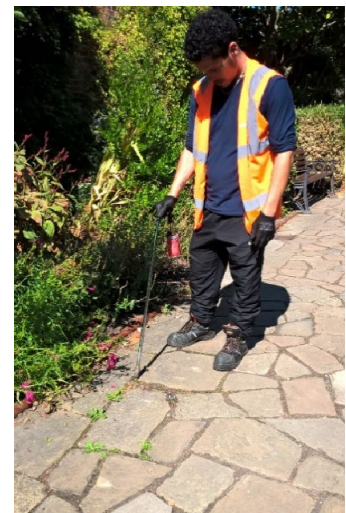
The main advantages of heat treatment systems over chemical herbicides is that they can be applied in wet and dry conditions, and do not require operators to have pesticide application certification.

Thermal control methods used by Lambeth

Flame-guns

Since 2018 Lambeth has been employing a number of flame-guns. These are portable gas torches passed or moved over weeds, producing an intense heat that quickly boils the water in the plant's cells, causing them to burst. Flaming is very effective against annual weeds, but it doesn't often kill the roots of perennial ones; these will then send up new shoots within a week or so after flaming. Additional flame treatments, about two to three weeks apart, will eventually deplete the roots' stored energy and the weeds should die. Flamers are best used in spring and early summer when the main annual and perennial weeds emerge, and attacking weeds in their early stages will also save fuel and time later.

Following the success of small flame-guns, as shown in the picture opposite, we have also recently invested in a larger Sherpa trolley-mounted professional weed burner (Model STJH-1711) to make the process more efficient. This is illustrated below and comes with a 5m hose. Our flame guns are used primarily to control weeds on hard surfaces.



All heat treatments run the risk that they can damage materials such as plastic, paintwork, asphalt and other surfaces. They can also affect soil microorganisms and invertebrates, desirable plants, tree trunks and surface roots and of course any naked flames will be a potential hazard in extended dry periods, and so should be used with caution in such circumstances.

We will be offering to purchase small domestic-style flame-guns for Friends groups running gardening sessions, allowing them to extend their activities and improve our ability to control weeds on hard surfaces, as well as in suitable beds.



7.6 Use of Herbicides 1: Control of Japanese knotweed

Japanese Knotweed (*Fallopia japonica*) is an aggressive invasive species originally introduced to the UK from Japan by Victorian plant collectors. Although an attractive plant in its original formal landscape settings, it rapidly spread out of them and into the wider environment where it is now a major concern for land owners and land managers. It is a scheduled weed under the Wildlife and Countryside Act 1981, and it is illegal to allow it to spread from your land.

The plant is a perennial and quickly regenerates each spring from a deeply-penetrating and extensive root system with rhizomes, producing fast-growing, dense clumps of bamboo-like canes which can reach over 2 metres. Japanese Knotweed is so aggressive it rapidly takes over available open ground and quickly suppresses other plant growth. This has significant impacts upon not just wildlife sites but also formally landscaped features in open spaces, private gardens or estates.

Japanese Knotweed is a priority for control and eradication, due to its potential to cause nuisance and damage to public assets, as well as its harm to the borough's natural and built environment. At present the only effective control method is through the use of chemical herbicides and even this requires at least three years of treatment to ensure eradication. Chemical treatment for Japanese Knotweed is ongoing across a small number of parks and open spaces and new sites are identified on an occasional basis. In addition, the Landscapes service offers a commercial treatment service for Japanese Knotweed and so our policy is to use chemical herbicides to control Japanese Knotweed, however we do not use Glyphosate.

In addition, in order to make the treatment as safe as possible, our policy is to only use stem injection as the application method. All staff treating Japanese Knotweed have the appropriate qualification – PA6 (156): Operating hand held pesticide injection equipment. A concentrated dose of herbicide is injected directly into the plant stem so that it is translocated throughout the plant and into its roots and rhizomes. It eliminates the need for spraying or other surfaces applications, and significantly reduces both the quantities of chemical needed and the risk of harm to non-target species. As stem injection is specific to the target plant, treatment can be undertaken in any weather and also near water or other sensitive habitats.

7.7 Use of Herbicides 2: Dealing with self-set trees in cemeteries

Lambeth owns and manages three historic cemeteries – Lambeth and Streatham Cemeteries in Tooting and the South Metropolitan (West Norwood) Cemetery. Together these sites cover over 130 acres and have not been intensively managed in recent decades. In a number of areas trees have set seed adjacent to memorials, or in masonry gaps. Large numbers of trees at varying stages of maturity are now growing in and beside memorials. In some cases, these have been cut and left untreated, creating coppice stools. As Lambeth looks to restore these cemeteries and bring them all into active use, it is increasingly important that self-set trees are removed, particularly where they are causing damage to memorials. The growth habits of self-sets generally preclude digging out or stump-grinding, so herbicide-based removal methods are required.

Unfortunately, commercial herbicide formulations contain various chemical salts and additives and are usually acidic (e.g., like weak battery acid). This can cause permanent damage to surfaces made of porous or lime-rich materials like marble and limestone, or the lead and soft alloy lettering on them, which many important and protected monuments are made of.

Some graves and monuments are also important habitats for many important or even rare wild plants such as lichens, sedums and herbs, so the indiscriminate use of herbicides around or on them can cause permanent damage or the loss of these plants and other wildlife.

In order to avoid these issues and make treatment as selective and safe as possible, from 2019 onwards Lambeth will be utilising eco-plugs where self-set trees are cut down.

We use the EcoPlug Max, a small, sealed plastic capsule, each one containing 300mg of granular Glyphosate. After felling, holes are drilled into the stump and the plugs are hammered in. The herbicide is slowly released from the plug directly into the roots; and there is no potential for the herbicide to come into contact with people, animals or memorials. All staff using EcoPlugs have the appropriate qualification – PA6 (155): Installing pesticide plugs in tree stumps.



7.8 Use of Herbicides 3: Exceptional circumstances

There may be instances in the future where exceptional circumstances require us to use chemical herbicides to control weeds. For example, a rapid spread of a newly introduced invasive plant species. Our policy is to retain the capacity and flexibility to respond to such a need should it occur.

7.9 Responsible Use of Chemicals in Controlling Weeds

A recent legal case in the United States of America, which made many news outlets and online discussion sites, and resulted in significant legal damages against the original and current manufacturer of glyphosate, is frequently cited as a reason it should be totally banned from sale in the UK and prohibited from use anywhere in the public realm due to its carcinogenic potential.

However, it must be remembered that this was a case where an individual was historically exposed over most of their working life to consistently high levels of glyphosate. In addition, they were often working in the absence of measures to adequately control or reduce their own personal exposure to the chemical, or other chemicals present with it in various commercial formulations, such as provision of suitable clothing, equipment, training and monitoring of their use or storage.

Nowadays, personnel working with chemical herbicides, including those with glyphosate, are governed by much stricter regulations as to their purchase, storage, handling, preparation and application. This includes the use and maintenance of equipment including personal protection equipment (PPE) like overalls, boots, gloves, visors and masks. These procedures and protocols are designed to ensure that personnel working with herbicides, who are at the greatest risk of being harmed from across the entire population, are suitably protected provided they and their employers apply their training correctly and comply with the rules governing handling or use of such chemicals.

Legislation such as COPR 1986 and COSHH 2002 is in place to ensure such individuals have a safe environment when working with chemical herbicides, and protection from being asked to apply them without adequate PPE or safe operating procedures.

Regardless of whether the UK remains in the European Union or not after Brexit in March 2019, all of the current regulations governing the safe handling and use of chemical herbicides, even when available in more sophisticated targeted application methods, will still remain in force, as these are all enabled through retained UK law. Those EU directives currently controlling the use of herbicides will most likely be 'carried' into new UK legislation, partly to provide reassurance to the general public and employees working with chemicals, and to ensure we can still trade in and licence new herbicides across the EU in the future.

At the present time, all staff working for Lambeth Council and who are authorised to handle and applying chemical herbicides have to be aware of the potential risks to them and others, and ensure they are always wearing appropriate PPE, as indicated by both their own training and information provided with the product being used.

All Lambeth staff using chemical herbicides are required to be adequately trained in the safe application of pesticides using pedestrian hand held equipment (Certificate PA6). Only staff who have passed the appropriate sub-modules: 155 (Installing Pesticide Plugs in Tree Stumps) and 156 (Operating Hand Held Pesticide Injection Equipment) are allowed to install Ecoplugs or apply herbicides by stem injection, respectively.

All chemicals are stored and disposed of in compliance with COSHH Regulations and other relevant legislation. All usage is logged in detail on data sheets which are retained in hard copy and electronic form.

7.10 Conclusions

Lambeth has adopted an Integrated Weed Management approach to controlling undesirable plants across its parks and open spaces. A wide range of methods are used, adapted to available resources and the circumstances of each site. Our policy is to prioritise increased tolerance and preventative methods; then manual, mechanical and thermal treatments. Chemical herbicides are only used as a last resort in specific circumstances due to concerns over long-term negative effects on the wider environment. No chemical herbicides, including Glyphosate are used as part of routine grounds maintenance operations in Lambeth's parks and open spaces.

Our policy is backed up by an Integrated Weed Management Statement (see below) that helps staff identify the most suitable approach for weed control specific to parks and open spaces, and the paths, structures and other hard surfaces within them. Areas and features within each site can be zoned to indicate the different methods of weed control that are acceptable within them, and the frequency of application required to have the desired effect.

Investigation to date suggests that the council should focus on the increasing use of manual and cultural maintenance, in combination with weed treatment methods using mechanical and heat treatment, over traditional chemical methods. Where chemical herbicides still have to be used, they should only be applied using the least harmful yet effective products, applied in the safest way that uses the minimal amount of herbicide possible.

8. Responsibilities

The Lambeth Landscapes Integrated Pest Management Policy (IPMP) is the responsibility of each and every member of staff working for or on behalf of the service. This applies not just to personnel who are managing and controlling weeds as part of their day-to-day duties or work programmes, but also to personnel in supervisory, management and administrative roles within the service. This is to ensure that all staff take and have a collective responsibility to ensure that the objectives and outcomes of the IPMP are delivered in everything Lambeth does or is responsible for, regardless of whether or not this relates to weeds and their control or eradication.

The IPMP also applies to any organisation or any individual who is either contracted to work within any of the sites that Lambeth is responsible for, or who has consent to undertake any activities within such sites. This applies to community, non-governmental or governmental organisations who are occupying or using any area within any of Lambeth's parks, cemeteries and other open spaces, and any commercial or utility operator who is working within such sites either to undertake statutory or service related activities or who has been commissioned to work there.

It is also the long term aim to have the IPMP promoted to and then adopted/implemented by the entire council, across all services and by any agencies or third parties that are acting on its behalf or under contract, and in all of the council's properties or buildings including on the public highway.

By first implementing the IPMP in public parks and open spaces, the intention is to use this as a 'showcase' of good practice to demonstrate how the management of weeds and other nuisances can be undertaken without the need for excessive or indiscriminate use of chemical herbicides, and the range and efficacy of various non-chemical or more targeted chemical ones that have the required effect and outcome.

The IPMP also places a responsibility on the council to monitor, review and evaluate its success and also that of the various methods available under the IPMP in terms of managing, controlling or even eradicating weeds. This is essential to ensure that there is a constant cost-benefit analysis process being undertaken, any adverse impacts from the policy and the methods available are being identified and contained or eliminated, and that new, innovative or improved techniques and methods are given appropriate consideration for inclusion into and application through the IPMP.

9. Integrated Pest Management Policy Statement

This is a set of 'golden rules' which sets out, both to the general public and staff working for or on behalf of Lambeth, how it will ensure that the 'right treatment for the right place at the right time' is followed at all times in managing weeds within parks, cemeteries and other public open spaces.

The statement shows that Lambeth will work to ensure chemical herbicides are only considered and used as a means of last resort in dealing with a weed problem, and that other non-chemical methods are applied in preference. Only when these have failed, after exhausting all efforts and using them correctly, can chemical herbicides be approved to deal with the problem. Even then, their use is targeted, timely and monitored, so this can be justified and defended, not just to provide reassurance to the public but also ensure the wellbeing of Lambeth's staff and the environment.

9.1 Policy Statement

1. Lambeth Council is responsible for the management of parks, commons, cemeteries, churchyards and other open spaces that it owns or is responsible for, whether within or outside the borough boundary. Lambeth Landscapes is the service arm of Lambeth Council that is responsible for maintaining and managing these sites.
2. The Lambeth Landscapes Integrated Pest Management Policy (IPMP) directs the control of weeds within all of Lambeth's parks, commons, cemeteries, churchyards and other public open spaces, whether by tolerance, containment, prevention or eradication.
3. Lambeth Landscapes will comply with and implement the IPMP with respect to the management, maintenance and improvement of all sites it owns or is responsible for. This applies equally to sites it currently manages or may maintain in future.
4. Any deviation from the IPMP will be suitably evidenced and explained; justification for a deviation must be open to public scrutiny and challenge, and fully defensible. Where a deviation is necessary for operational, environmental or public safety grounds, or to protect important heritage or ecological assets, it should always be time, quantity and area-limited and must not become the norm or the path of least resistance or cost.
5. For any site or situation where there is a problem with weeds, the most suitable method for their control or eradication will be selected and used, following careful analysis of the problem and after considering any significant constraints or restrictions with respect to protection of the built, heritage and natural environment, and the protection of the public.
6. Lambeth Landscapes will prioritise the control or eradication of species of weed classified as invasive, noxious or harmful to the environment or public health in parks and other open spaces that it manages or maintains, over other less harmful species or those that can be tolerated or contained. This prioritisation includes managing weed species to prevent them spreading to other properties or causing damage to protected sites or assets, such as wildlife sites or heritage structures like walls or monuments.

7. Lambeth Landscapes will always prioritise the use of non-chemical methods for the toleration, management, control or eradication of weeds over any chemical methods.
8. Lambeth Landscapes will only use chemical control methods, e.g., chemical herbicides, as a means of last resort and only when all other non-chemical methods for the control or removal of weeds have failed or been deemed not suitable. Every effort will be made to apply and exhaust all non-chemical methods and give them suitable time to work before the application of chemical control is authorised.
9. Where chemical control methods are deemed necessary or appropriate, Lambeth Landscapes will prioritise those which avoid the use of chemical herbicides like glyphosate or similar and use organic or natural products where these are available and effective.
10. Where chemical herbicides containing compounds including glyphosate can be justified for use, Lambeth Landscapes will apply these using techniques and methods which are highly targeted, selective and proven to be effective against a specific weed problem.
11. Non-selective or indiscriminate methods for the application of chemical herbicides, which can or could cause harm to the environment (including harmless or beneficial plants and animals) or public health, will be avoided unless there is overwhelming justification for their use which is evidenced and fully defended before, during and after application.
12. Whenever any chemical herbicides are used, a detailed record will be kept as to the date, time, duration, site, area, target weed(s) and amount and type of chemical used; these records will be fully documented and available for inspection.
13. An annual audit will be made of these records in order to assess how effective the use of chemical herbicide was in addressing the original weed problem, and whether reductions in the frequency and quantities of use of chemical herbicide can be achieved, including the use of more selective and targeted methods or the increased use of non-chemical methods or changes in site management/maintenance.
14. All Lambeth Landscapes personnel handling and applying chemical herbicides will be fully trained in their use, and hold relevant certification (PA1 and PA6, with additional sub-modules as required). They will be required to comply with the conditions of these certifications and other regulations relating to the use of chemical herbicides, including COSHH, and must wear the correct personal protection equipment (PPE) at all times when using herbicides.
15. Any areas treated with chemical herbicides will be assessed prior to application to ensure the minimum area required for effective treatment and control of a specific weed problem is achieved. The area to be treated must be signposted 48 hours in advance of the application process, and signage will remain for a minimum of eight hours following application, dependent on product safety guidance or site conditions.
16. All Lambeth Landscapes personnel handling and applying chemical herbicides in any of Lambeth's parks, cemeteries, churchyards and other open spaces will be aware of the public nature of such sites and the presence of features and factors which could be exposed to potential harm from such chemicals.
17. Lambeth Landscapes personnel will exercise due caution before, during and after the application of chemical herbicides to ensure that their methods of working and handling of chemicals or equipment does not result in any increased risk of avoidable harm being caused to the environment or general public. This includes the safe storage and disposal of any containers of chemical herbicides, such as triple washing and puncturing of used or contaminated equipment or containers to ensure they are not reused.

18. Lambeth Landscapes will regularly monitor and evaluate all methods currently used to control or eradicate weeds in Lambeth's parks and open spaces which it manages or maintains, in order to review, refine, update and improve the IPMP.
19. Lambeth Landscapes will regularly evaluate new or innovative methods which become available for the non-chemical control of weeds. This includes chemicals which are biodegradable or have a reduced risk of harm to the environment and human health compared to existing chemical herbicides including glyphosate. Subject to evaluation and proof of their efficacy or cost effectiveness, it will aim to apply these new methods to the future management of weeds in Lambeth's parks and open spaces.
20. Lambeth Landscapes will promote the IPMP to other services that are part of or employed by Lambeth Council, and to any organisations or third parties that it works with within all of the borough's parks and other public open spaces, including local residents.

10. Impact Assessments of Implementing the Policy

10.1 Risk Impact Assessment - Compliance and Governance

The adverse impact of adopting the IPMP is assessed as LOW. It ensures that the council is fully compliant with existing legislation (both EU and UK) and Government policy, as well as able to respond effectively to any new legislation which may emerge and be enacted, including following departure of the UK from the EU in January 2021. It will ensure the council is compliant with its own internal policies, especially those regarding improving sustainability, air quality, equalities and health for its residents, and for protecting its staff (and those working on its own behalf) by providing them with a safe working environment.

The IPMP also ensures the council is fully in control and directing an ongoing commitment to reducing the use of non-selective or harmful chemical herbicides in its parks and open spaces. It is then able to defend itself against scrutiny and challenge from both residents and the wider community over increased concerns as to the environmental and health effects of such products. It also enables the council to demonstrate it has a robust risk-assessment based action process in place to protect itself and its residents/staff from avoidable legal and financial challenge or liabilities, and to protect its reputation as a responsible public body.

10.2 Financial Impact Assessment

Although chemical herbicides tend to be seen as offering a cheap, quick and easy solution for weeds, including invasive or noxious species, and so the solution of first resort, this is no longer the case. The financial impacts of this approach have been gradually moving from positive to negative, from beneficial to adverse, concurrently with the same switch in attitudes regarding the environmental and social impacts of the continued and indiscriminate use of chemical herbicides.

Increasing concerns over the toxicological and ecological effects of chemical herbicides, especially impacts on natural ecosystems and human health, have significantly increased the risk that organisations continuing to manufacture, store and use these chemicals could be liable for monetary damages especially if it can be shown, as in the recent case in the United States, that they were negligent in protection of their staff or the public using sites where herbicides have been applied. In addition, many UK-based organisations are proceeding with legal action (often to set case law) the inappropriate or excessive use of herbicides is alleged to have caused harm to wildlife systems, especially watercourses or of species which are themselves legally protected.

Many non-chemical methods for weed control, or chemical ones not requiring use of herbicides, are becoming more widely available, and the cost of equipment and materials is decreasing as the number of suppliers grows and a result of increased competition between them. The reliability and efficacy of these non-herbicide methods is also continually increasing, meaning the cost-benefit analysis is steadily moving in favour of benefit and also offering excellent value for money.

Reducing the quantities of chemical herbicide being used in the borough as a whole also reduces the adverse financial impact upon the council. Increasing regulations as to the use of such products will invariably increase the costs of buying them - suppliers may be forced to offload any costs from ongoing/settled legal claims and liabilities onto consumers of these herbicide-based products. Likewise, increased concerns over their environmental and human health effects will increase the costs for both safely storing and disposing of herbicide-based products (and the containers/equipment contaminated by them), and increase the costs for training, monitoring

Therefore, assessment of adverse financial impacts from implementing the IPMP in Lambeth's parks, cemeteries and other public open spaces is judged as LOW. This is on the basis of reducing the council's long-term financial exposure to costs against it for harm to both the environment and public health through the use of chemical herbicides. Properly evaluating and choosing the right methods and equipment for non-chemical herbicide control of weeds, so that the best, most cost-effective and reliable systems are bought, used and maintained, also reinforces a LOW adverse financial impact outcome for the council.

10.3 Equalities Impact Assessment

Reducing the use of chemical herbicides is judged in all likelihood to exert a positive impact on public health and wellbeing, regardless of gender, age, ethnicity, culture or ability. This is because more people are increasingly concerned as to the harmful effects of chemicals, including herbicides, on not just their own personal health but also of their children (including the unborn) and families.

Knowledge that the council is continuing to indiscriminately use herbicides in its open spaces, where residents of all backgrounds and abilities are gathering and using the site, could deter some individuals and groups from continuing to visit, stay or invest, which could be judged as 'unconscious discrimination.'

A large proportion of the concerns about the use of chemical herbicides and indeed all pesticides revolves around potential impacts upon the food we buy and eat. As well as those who are pregnant or with young children, certain cultural and ethnic groups are often focused on the cleanliness and 'wholesomeness' of the food they consume, and judge even traces of chemical herbicides in them as a potential risk to their own identity and wellbeing.

Lambeth Council is increasingly promoting its parks and public open spaces as places for communities to work together to grow healthy, sustainable – and often chemical free or organic – food, especially from community garden sites or allotments which tend to have a high diversity of individuals from different cultures.

The continued excessive and non-selective use of chemical herbicides within a park or open space conflicts significantly with this ethos. It can deter people from either committing to get and stay involved or engender a sense of discrimination if they are working to grow and eat food that is chemical free and organic when the council is seen to be doing the exact opposite in the same site.

Reducing the quantities and the frequency of use of chemical herbicides in parks and open spaces and replacing them with non-chemical or non-herbicide chemical methods, is judged to have a strongly positive impact upon equalities and diversity. This means the assessment of an adverse impact from the policy will be LOW.

Many members of the public who are already growing food and other plant-based products in parks and open spaces are already using the same non-chemical methods the council will be implementing, so this also engenders a sense of 'teamwork' and cooperation between all parties, which further reduces any negative equality impacts.

10.4 Sustainability Impact Assessment

All chemical herbicides are proven to exert adverse effects upon the natural environment: even glyphosate is a broad spectrum herbicide and will act against almost any living plant it is brought into contact with, if inappropriately stored, handled or used. The continued and excessive or indiscriminate application of chemical herbicides, especially non-selectively or in non-targeted methods, will have a significant adverse impact upon natural ecosystems in the borough. Therefore, reducing the quantities and the non-selective application of chemical herbicides, as confirmed through the IPMP, will counteract this adverse impact and reduce its potential to cause harm to the environment of the borough.

All alternative non-chemical or non-herbicide chemical weed control methods will have some adverse effects on the environment, e.g., flammings or hot water treatment systems can still damage and kill non-weed plants, animals, soils and surfaces, and these can never be completely eliminated. However, if personnel are correctly trained in the use and application of these alternative systems, so that each method is used where it is both most effective in killing or removing weeds without causing significant harm to non-target species or habitats, then the net effect will be positive in the longer term.

There is also justifiable concern that because modern or innovative methods for non-chemical weed control rely on use of machinery, such as generators and batteries, their increased use contributes to a net increase in air pollution and carbon consumption within the borough. However, this is addressed by two important actions: a) prioritising methods to prevent weed growth and avoid the need to control weeds; and b) training personnel in the efficient operation and maintenance of equipment, so that increased fuel consumption, wastage of consumables or a need to constantly repair or buy new equipment to replace damaged ones is minimised.

Provided the above principles of the careful selection, operation, maintenance and monitoring of non-chemical weed control methods is closely applied, combined with a progressive reduction in the use of chemical herbicides with a preference for using only targeted and highly-selective application systems, then the overall adverse impact upon sustainability and the environment of the borough is assessed as LOW.

11. References and Background Material

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Weedingtech (2018). Foamstream Weed Control Website. Weedingtech Ltd., London, UK. www.weedingtech.com/foamstream-weed-control

Appendix 1. Legislation Relating to Weeds and their Control

Inevitably the use of herbicides, and the control/eradication of weeds, is dictated and influenced by various forms of legislation or regulations that have either been developed in the UK as a consequence of EU directives or policy, or which have originated solely within the UK as a response to national or regional policies or issues of concern.

The Weeds Act 1959

The Weeds Act 1959 empowers the Department of Environment, Food and Rural Affairs (DEFRA) or its subsidiary bodies to serve notice requiring an occupier of land to take action to prevent the spread of certain specified weeds. Prosecution under the Act is pursued by DEFRA specifically when agricultural land is threatened by these specified weeds. DEFRA may also elect to have a third party undertake any necessary action and recover costs from the occupier. Specified weeds under the Weeds Act 1959 are Spear Thistle, Creeping Thistle, Curled Dock, Broadleaved Dock and Common Ragwort.

Wildlife and Countryside Act 1981 (as amended)

Section 14 of the Wildlife and Countryside Act 1981 makes it an offence, liable to a fine, to plant or otherwise cause to grow in the wild, certain specified weeds. However, it may be a potential defence to prove that all reasonable steps were taken to prevent these plants growing in the wild. Specified weeds under the Act include Giant Hogweed, Himalayan Balsam and Japanese Knotweed.

Town and Country Planning Act 1990 (England and Wales)

Section 215 (England & Wales) empowers local authorities to serve notice on owners or occupiers of land in order to control weeds that are considered harmful to the amenity of the surrounding area. Failure to take appropriate action may be liable to a fine, or alternatively the local authority may recover costs incurred in employing a third party to take the appropriate action.

EU Sustainable Use Directive 2009

This directive states that member nations must keep the use of pesticides and other forms of intervention to levels that are economically and ecologically justified and reduce or minimise the risks to human health or the environment from these forms of intervention.

Water Framework Directive 2000

This directive relates to the protection of water-based environments, including groundwater and drinking water. In order to reduce or remove the risks of polluting such water environments, the directive states that future weed management strategies must integrate a larger and wider number of practices that do not rely solely on the use of chemical herbicides in order to deliver the sustainable control of weeds.

Control of Pesticide Regulations (COPR) 1986

This UK regulation requires that all operators who wish to apply pesticides must hold the appropriate statutory 'NPTC' certificates for the various applicators that they intend to use – the commonest certifications are PA1 and PA6.

Control of Substances Hazardous to Health Regulations (COSHH) 2002

This is the law that regulates the occupational use of substances hazardous to health within the UK, which all herbicides are classified under. It aims to ensure that the correct control measures are in place in order to reduce the risk of harm from exposure to hazardous substances. This also covers the correct and safe storage of chemicals, including herbicides.

Appendix 2: Integrated Weed Management Action Programme

A. Identify where and what weeds need to be managed

Not all weeds in Lambeth's parks, cemeteries and open spaces need immediate control or total eradication, so resources should be concentrated where there is a genuine need to do this. However, this can't be done if we don't know where the problem is and its extent.

Most weeds needing control will be those located on paths or hardstanding, on playing or sports surfaces, on or along walls, gates or buildings, in landscaped planted beds or around the base of trees. Mapping these different features, either on a Geographic Information System (GIS) or on site specific management plans will assist in understanding the actual scale of the problem, the eventual treatment method required, and the appropriate frequency and intensity of treatment.

In addition, by zoning out areas within a particular site or asset, locations with a genuine weed problem can receive more targeted treatment, along with more regular monitoring, whereas those areas with fewer weed issues or pressures can receive fewer treatments, which will help make the best use of available resources.

Once mapped out, this data can be made accessible via Lambeth Landscape's maintenance management system so that all current and future treatments for weeds will effectively targeted, carefully monitored and justified against existing resources.

Action 1: Identify and plot trees requiring weed control at or around their bases.

Action 2: Identify and plot shrub or flower beds requiring weed control.

Action 3: Identify and plot hardstanding and structures requiring weed control.

Action 4: Zone locations of weeds into treatment zones, based on urgency/necessity.

Action 5: Add all data onto Lambeth Landscapes management database.

B. Determine where weeds can be tolerated or managed within existing specifications

For each site or location where weeds are identified or reported, determine where within that site weeds can be tolerated, or where they can be managed within existing maintenance specifications and programmes. If the current or planned maintenance will pick up and address the weeds, then ensure this is done and carefully monitored to assess the outcomes.

If there is a need to adjust the areas or intensity of maintenance in order to accommodate these weeds so they are suitably dealt with, then implement this subject to it being appropriate or realistic within existing capacity and resources.

Action 6: Identify areas or features where weeds can be controlled or removed within existing maintenance regimes or specifications, with adjustments as appropriate, and ensure effective implementation.

Action 7: Monitor and assess impact of existing maintenance on weed problem, to determine efficacy or if alternative control or management is required.

C. Design out the need for weed control

Many weed problems can be addressed or minimised at the design/construction stage of any new projects or works, and as part of structural maintenance programmes. The majority of weeds on hard surfaces, for example, occur in cracks or joints in the surface, where a build-up of detritus provides an organic medium for seeds to germinate. A continuous surface cover such as asphalt generally has less weed growth than slabbed, block or setted paving.

Weed proliferation in landscaped areas within parks and open spaces can be reduced by the provision and maintenance of weed barriers and mulches, as well as by the choice and density of planted material. In general, densely planted shrub or herbaceous beds ensure fewer incidences of weed growth than sparsely planted annual or fine-leaved bedding.

Action 8: Identify any cracked, gappy or exposed surfaces on areas of path, hardstanding or play/sports surfaces and prioritise for repair or replacement.

Action 9: Select plants and increase planting density in landscaped beds, borders or edge features in order to maximise density of cover and reduce future opportunities for weed growth or regeneration.

D. Identify and agree responsibilities for weed control

Ensure that all aspects of the service, and all personnel, are aware of their responsibilities for identifying, evaluating and dealing with a weed problem in Lambeth's parks, cemeteries and open spaces.

Ensure those that are responsible for landscaping and cleaning the importance of regular mechanical and manual removal of detritus as part of their duties, especially on and alongside footpaths and other hard surfaces including play and sports areas. Personnel responsible for soft landscaping should be aware of the importance and effectiveness of barrier, mechanical, manual and targeted chemical control in all landscaped areas.

Those responsible for the service's fleet, including purchase, hire or maintenance, should be aware of the need for staff to have access to all of the machinery, vehicles and other equipment that are used in the control and treatment of weeds.

Action 10: Identify and confirm the operational roles of all relevant Lambeth Landscapes personnel services in the management and control of weeds.

All of the resources required to manage and remove unwanted weeds in Lambeth's parks and open spaces lie principally within available capital and revenue budgets for Lambeth Landscapes. The budget required by the service to deliver an effective weed management must be determined, and this budget is then made available, as any differentials between the two will invariably influence and affect levels of eventual performance.

Action 11: Determine and then confirm the budget available to the service to meet its weed treatment needs.

E. Confirm and implement methods of weed treatment applied

Each zone identified for weed control will then be treated using information obtained through the earlier mapping exercise, which will include the number of operations, treatment types, cost and constraints.

Timing is an important consideration, as this requires any treatment programme to be undertaken at a time that either maximises its impact against a weed problem, or at that a time that efficiently complements other planned grounds maintenance operations. Account also needs to be taken of awkward areas, particularly obstruction by signage/furniture/buildings, or where there are sensitive or ecologically restricted areas.

Action 12: Confirm and implement weed treatment methods for each site and zone, based on their determined efficacy.

F. Monitor, record and report weed control performance

It is essential that the effectiveness of any method used to treat weeds in order to control or eradicate them is suitably monitored and evaluated – it is wasteful of resources and everybody's time if the treatment doesn't work and the problem returns, it becomes worse or areas that should have been treated have been missed out completely.

A suitable assessment system should be in place, as part of the service's management systems, to revisit any areas treated for weeds to determine success, and whether any further or different forms of treatment are required.

Action 13: Monitor, record and evaluate weed treatment programme against original assessment, and adjust or repeat treatment method(s) as required or advised.

Action 14: Use collected data to report on performance of weed treatment programmes, including on efficacy of each method.

G. Communicate actions and expectations

Applying alternative weed control methods in parks and open spaces will generate increased interest from the public, as integrated weed management will probably result in a more consistent background level of weed coverage than traditionally the case when large quantities of chemical herbicides were being used. Reduced use of such chemicals can risk a higher weed density unless the frequency of alternative treatment is significant.

Having an integrated weed management policy, and statement, available in an easily accessible format will help explain to the public the reasons, benefits, outcomes and consequences, particularly of increased weed growth in certain locations. This can be communicated via traditional media and social media, and by service personnel working on site or with park user groups. This will help minimise the number of enquiries received and help to manage customer expectations.

Action 15: Draft and communicate the integrated weed management policy in simple, accessible formats to ensure expectations and outcomes are clearly understood and suitably managed.

H. Review, adapt and improve weed treatment programme and policy

It is accepted that the mechanical, chemical, heat and electrical technologies currently on the market to treat and control weeds will continue to improve and be refined as the wider industry sector responds to demands from users for alternatives to glyphosate based and other herbicides, or for systems that are much more targeted and selective in how they apply herbicides to control or remove weed. This means that continuous assessment and review of all products being used by the service to manage weeds is constantly required.

Action 16: Review and evaluate all alternative weed control methods currently being used in order to maximise efficiency, cost effectiveness and environmental gains.

Action 17: Monitor the wider sector and markets as to new developments in weed control that improve efficiency (cost and effect), or which enable improved selective or targeted treatment using herbicides which can further reduce the quantities of chemicals required.