

## Appendix 1

### NOTICE OF MOTION

#### **Motion to eliminate use of glyphosate herbicide formulation in ESCC/Highways' weed control.**

It is recognised that there has been reduction in ESCC's use of glyphosate (herbicide) in ESCC green spaces, increased collaboration with local environmentally-concerned groups and coordination with other local authorities, in accord with the County's 2020 Environmental Strategy. However, as has been made excessively clear in the recent IPCC Report, and as the Strategy notes, 'the pace and scale of action needs to be far greater'.<sup>1</sup>

#### **MOTION: East Sussex County Council agrees to request the Cabinet to:**

**ban the spraying of glyphosate formulation herbicide and other toxic herbicides in its treatment of unwanted foliage on all council owned land and land managed by the County Council from 01 January 2022.**

#### **Instead:**

1. Where safe<sup>2</sup> to do so, plants will be left to grow and die in their natural cycle, supporting wildlife, addressing the Council's particular concern to support pollinators and other invertebrates and in accord with the Council's and the Government's commitment to bio-diversity net gain. This will further enhance East Sussex Highway's agreement to leave agreed wildflower verges uncut/unmown until the end of the flowering season to improve food sources for pollinators in accord with ESCC's well-publicised Environmental Strategy and Sussex Local Nature Partnership.<sup>3</sup>

Natural Capital Investment Strategy  
Strategic work themes



<sup>1</sup> <https://www.eastsussex.gov.uk/media/15587/east-sussex-environment-strategy-2020.pdf>, p. 4.

<sup>2</sup> Safe in this context means: not causing trip hazards, not leading to building or pavement degradation.

<sup>3</sup> <http://sussexlnp.org.uk/natures-recovery-and-net-gain/>



## Main messages



1. Formal commitment to the use of the natural capital approach only where this results in a positive result for nature, and in particular a '**net gain**' for **biodiversity**.
  2. **Protect** existing natural capital assets – particularly assets 'at risk'
  3. **Enhance** what we have.....improve its condition!
  4. **Expand and connect** – enhance natural capital assets via nature recovery network
  5. **Invest in natural solutions** – to deliver key benefits/services
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2. Where plants cause a trip hazard for pedestrians, or weaken built structures, alternative prevention and removal processes will be used, to include, as appropriate:
    - a. manual and mechanical removal, including lifting at the roots and removal of embedded soil to be replaced where appropriate with low-growth foliage or a growth resistant medium, such as clean sand
    - b. mechanical brushing/sweeping, especially to remove unwanted plant seeds and thereby reduce new growth
    - c. hot-foam spray application
    - d. electrical treatment
    - e. strimming.

**Proposer:**  
**Councillor Maples**

**Seconder:**  
**Councillor Hilton**

**Dated: 20 September 2021**

### **Background**

**Glyphosate is a chemical herbicide (a type of pesticide) used to kill unwanted plants. The use of glyphosate and other toxic herbicide formulae compound the biodiversity crisis, brings significant economic and environmental costs.**

**Glyphosate has been linked to damage to and death of invertebrate species including bees and other important pollinators. It remains in soil and leaches into waterways where it poisons plants and animals. It has been linked to cancer in humans, with its manufacturer Monsanto (now owned by Bayer) subject to now innumerable lawsuits, for which over \$11 billion has been set aside for anticipated pay-outs. Its efficacy (in killing**

**plants) significantly diminishes over time (average 5-7 years), requiring other methods of weed removal.**

**In other words: Glyphosate is toxic and disruptive to animal, plant, soil, waterway and human health. It is potentially very expensive should residents or operatives decide to take ESCC to court. Current spraying practices will likely soon become ineffective. There is already evidence in rapid regrowth along treated areas that this is already the case.**

#### **Pollinator impact – recent studies**

- Flying insects, many of which are pollinators we rely upon to ensure our own food supplies, have reduced by more than 75% over 27 years, even in protected areas.<sup>4</sup>
- Exacerbating biodiversity loss, particularly of pollinators, will be at humans' as well as nature's expense. More than three out of four crops producing seeds or fruits used for human food depend on pollinators.

Graziano da Silva, director-general of the Food and Agriculture Organization from 2012 to 2019 notes,

*'The absence of bees and other pollinators would wipe out coffee, apples, almonds, tomatoes, and cocoa, to name just a few of the crops that rely on pollination.'*

In South East England's arable farms, the impact of herbicides on pollinators risks lower yields and potential loss of apples, strawberries, raspberries, cherries, and all vine fruits including grapes in our surging viniculture businesses.

- Peer-reviewed scientific research demonstrates that glyphosate has significant negative effects on our most potent pollinators, bees:
  - weakening their gut bacteria leading to 'greater susceptibility to pathogens and malnutrition' and higher bee mortality rate<sup>5</sup>
  - affecting individual bee neuro-pathways, reducing foraging ability
  - reducing water up-take which has a wider effect on the hive: reduced water up-take leads to poor larvae development.<sup>6</sup>
- Peer-reviewed scientific research demonstrates that even where glyphosate does not lead to the immediate death of individual bees, the co-formulants (such as surfactants)

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<sup>4</sup> Caspar A. Hallmann et al, Oct 2017, <https://doi.org/10.1371/journal.pone.0185809>

<sup>5</sup> Writing in the international, peer-reviewed journal, *Insects*, Farina et al (2019) suggest that honeybees suffer considerable and longterm effects of glyphosate exposure, even where application of glyphosate is not on a primary food source (suggesting application drift) – for instance, studies on organic honey find glyphosate traces. As noted, effects include damage to gut microbiota; in addition, 'GLY negatively affects associative learning processes of foragers, cognitive and sensory abilities of young hive bees and promotes delays in brood development'. Importantly, authors note that due to honeybees' social habits, it is essential to analyse longer-term effects of exposure in situ (i.e. in the hive, not just clinical trials on individual bees).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6835870/>

<sup>6</sup> See also footnote 5 (above): Farina et al (2019)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6835870/>

used in standard commercial and domestic glyphosate products have serious adverse effects, with marked reductions in foraging ability, from climbing, to proboscis motility, to the basic ability to locate food sources.<sup>7</sup>

According to very recent research (Smith, Carmacho and Thakur, 2021), over time,

*glyphosate's environmental accumulation could render insects more susceptible to microbial pathogens due to melanin inhibition, immune impairment, and [as noted above] perturbations in microbiota composition.<sup>8</sup>*

- There is further evidence that glyphosate is toxic to earthworms, another species we rely on to support food production through soil improvement.
- Further evidence still indicates that glyphosate inhibits mycorrhizal fungi. Recent research shows the importance of mycorrhizal fungi to soil health and plant productivity: they are essential for tree health, collecting nutrients and water to feed their host plant and protecting tree roots from harmful fungi and root rot diseases.

**We are facing increasing toxicity in our environment, including our food and bodies.**

- Glyphosate residues have been found even in organic honey, as pollinators may forage in glyphosate-treated verges, or in nearby non-organic farms.
- A study commissioned by Friends of the Earth, testing across 18 countries found glyphosate in between 10% (Macedonia) and 90% (Malta) of human urine samples. In Great Britain, 70% of human urine samples contained glyphosate.<sup>9</sup>

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<sup>7</sup> Recent research – albeit a single trial in closed, non-typical environment and application (direct spraying of a single bee species) – suggests that other ingredients in glyphosate-based herbicides are responsible for high levels of immediate/short-term morbidity in bee populations (trial resulted in morbidity of 30% to 94% with use of variations of commercially-available ‘Round-Up’). Where the ‘active’ ingredient of glyphosate was removed, a significantly high morbidity from direct application remained. The study concludes that the bees died from the surfactants and/or other undisclosed proprietary co-formulants in the herbicide. Accepting that this is only one study, with an atypical testing regime, used on one species of bee, the trial authors nevertheless argue that until such time as all ingredients are listed, Round-Up and similar herbicide applications should be withdrawn from use in any area likely to be foraged by bees (and by extension other pollinators). It should also be noted that the study was short term and, as the mortality of the bees in the study was so high, longer-term effects to individual bees, or to hives, etc. was not observed.

<https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.13867>.

<sup>8</sup> Smith, Carmacho and Thakur (2021)

<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3001182>

<sup>9</sup> Friends of the Earth study results released in June 2013 <https://friendsoftheearth.eu/press-release/weed-killer-found-in-human-urine-across-europe/>. The press release from Friends of the Earth notes that: ‘Volunteers were all city-dwellers and included vegetarian and non-vegetarian diets. No two samples were tested from the same household. The samples were analysed by Dr Hoppe at Medical Laboratory Bremen in Germany.’

- A larger study with 2000 volunteers in Germany, found traces of glyphosate in 99.6% of urine samples, 3/4 of which were above safety limits, with the highest levels found in children.<sup>10</sup>
- The now famous IARC International Agency for Research on Cancer (IARC) of the World Health Organisation (WHO) Monograph 112 which declares that human indicators and results of animal testing suggest that glyphosate is a probable carcinogen and that, on the precautionary principle, it should be banned.

#### **Continuing use increases wider financial risks as well as baseline costs**

- Monsanto (now owned by Bayer) has made a number of pay-outs to individuals whose cancer has been linked to glyphosate exposure. It is worth noting that in the first three of these cases, the plaintiffs were a groundskeeper, a home gardener and two landscape gardeners.<sup>11</sup>
- In February 2021, Bayer set aside \$2 billion (USD) to manage known upcoming lawsuits, with estimated pay-outs up to \$200,000 each over the next four years.<sup>12</sup> This is in addition to a previous \$9.6 billion (USD) settlement in June 2020 to address 100,000 existing Round-Up related lawsuits in the US.<sup>13</sup>
- As the public's awareness of the risks of glyphosate herbicide exposure increases, it may be only a matter of time before those councils and contractors who persist in using glyphosate may be sued for negligence.
- Where glyphosate is the only or virtually only weed treatment, resistance builds up naturally (see below for details). Over the course of three years or so, particularly where roots and seed are left behind (as per current practice), East Sussex Highways will have created weed specimens that will set down longer, stronger root systems and will have selected for plants that are increasingly glyphosate tolerant. In a few short years, increasing amounts of herbicide, applied more often, will be needed to kill weeds along the same lengths of roads and pavements, thereby increasing both labour and materials costs and, where weeds remain unaffected by herbicide treatment, further damaging built structures and pavements.
- ESCC has to balance demands from residents who believe weeds to be an eyesore, and those who would wish to see a more pollinator-friendly approach. Current

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<sup>10</sup> Reporting on a 2016 study conducted by the Heinrich Böll Foundation:

<https://www.euractiv.com/section/agriculture-food/news/overwhelming-majority-of-germans-contaminated-by-glyphosate/>

<sup>11</sup> Pesticide Action Network, citing US court rulings:

Glyphosate%20Myth%20Buster%20-%20updated%20July%202019.pdf

<sup>12</sup> \$2 billion settlement for non-Hodgkin's lymphoma cases: <https://www.reuters.com/article/us-bayer-glyphosate-idUSKBN2A32MX>

<sup>13</sup> \$9.6 billion settlement for pending US lawsuits: <https://www.reuters.com/article/us-bayer-glyphosate-idUSKBN2A32MX>

practice provides the worst of both worlds, with glyphosate spray damaging plants and pollinators, and sprayed plants left to go brown and not removed, resulting in continued complaints from residents who would wish for tidier streets and pavements as well as from those preferring ESCC not use herbicide sprays.

### What are the options and costs?

With costs of alternative weed-reduction programmes reducing alongside their increased availability, the number of chemical-free local authorities is increasing.

While there are different parameters to be considered in the County, a recent cost analysis by Glastonbury Council suggests – perhaps surprisingly – that, once hot foam equipment is purchased, hot foam becomes the cheapest option:<sup>14</sup>

#### Results of Glastonbury Council's cost analysis of weed control options

	Cost per linear metre
Hand Weeding by contractor	£00.32
Hot water treatment by contractor	£00.26
Glyphosate treatment by contractor	£00.23
Foamstream factoring in costs of diesel, foam, in-house application, van and water. Excluding initial cost of equipment	£00.07

In addition, evidence has accrued of longer-term improved performance, notably of hot water and hot foam.

However, despite apparently high costs, mechanical and manual weeding may prove to be the most effective and, in the longer term, most cost-efficient practices for East Sussex/ES Highways:

1. Across the larger road gutter infrastructure, additional road sweeping with more robust ‘weeding’ brushes may be the most efficient practice in terms of labour costs; with the added benefits of:
  - a. reducing waterway toxins
  - b. reducing the number of seeds left to germinate
  - c. not selecting for more resistant weeds
  - d. not causing potential illnesses – including non-Hodgkins lymphoma – amongst equipment operators.
2. Hand weeding (including pulling, and the use of hoes and angled scrapers) ensures that visible parts of the weed and, where possible, the roots are removed completely. Where root removal is not possible, the weed is nevertheless weakened (due to lack of sunlight), reducing the need for more regular intervention. Unlike current herbicide treatment practice:
  - a. Seeds are not left to germinate
  - b. Nor are more resistant weeds selected for (see chart below).
  - c. Full removal is longer lasting and reduces building and pavement damage.
  - d. Complaints about ‘unsightly’ weeds, including those left to go brown, is reduced.

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<sup>14</sup> <https://www.pan-uk.org/site/wp-content/uploads/Alternatives-to-herbicides-a-guide-for-the-amenity-sector.pdf>

3. PA6A and PA6WA certification are not required (though non-chemical weed management training would be encouraged), improving the ability of contractors to recruit staff.
4. Where manual/mechanical weeding is the best option, essential equipment such as hoes, strimmers, hedge-trimmers and mechanical brushes are at the lower end of cost.
5. With minimal training, ‘accidental’ damage to valuable wildflower species should not occur, with plants that provide food for native wildlife species being consumed in a natural cycle (see the Toadflax example below).

### Comparison table of alternative approaches to weed control

	<b>Hot foam</b>	<b>Hot water</b>	<b>Brushing</b>	<b>Electricides</b>	<b>Hand weeding</b>
<b>Initial cost</b>	High – for the cost of the machinery if purchasing outright	High – for the cost of the machinery if purchasing outright	Medium – depending on the size of the brushing machine	Medium – one off purchase of Rootwave machine	Low – almost nothing required
<b>Ongoing cost</b>	Medium	Medium	Low	Low	Low
<b>Efficacy</b>	Good	Good	Good	Good	Good
<b>Ease of use</b>	Small amount of initial training required but no certification necessary	Small amount of initial training required but no certification necessary	Small amount of initial training required but no certification necessary	Small amount of initial training required but no certification necessary	Small amount of initial training required but no certification necessary
<b>Noise</b>	High	High	High	Low	Low
<b>Versatility</b>	High – can be used for other purposes such as moss and chewing gum removal. Not always suitable for use in restricted access areas.	High - can be used for other purposes such as moss and chewing gum removal. Not always suitable for use in restricted access areas.	High – can be used for general cleaning of areas as well as weed removal. Different size machines allow access to a wide variety of areas.	Low – really only suited to weed removal, but can be very effective with invasive species and woody species of plant. Limited to use where a suitable grounding point can be accessed.	Low – really only aimed at weed removal. However, with proper training desirable species can be left to grow while species considered to be ‘weeds’ can be effectively removed.
<b>Operator Safety</b>	High	High	High	High	High
<b>Environment</b>	Medium – concerns about the use of diesel for powering the machine. Safe to use around aquatic environments.	Medium – concerns about the use of diesel for powering the machine. Safe to use around aquatic environments.	Medium – concerns about the use of petrol for powering some machines. Possibility of damage to particular surfaces with some brush types.	High – safe to use in all environments	High – safe to use in all environments

In short, over the near medium and longer term, using methods other than sprayed herbicide treatment will cost the County less than continuing the use of glyphosate spraying.

The following section details reasons why glyphosate may in any case soon be ineffective: to understand this, it is necessary to understand how it is intended to work, in context.

#### How does glyphosate work, cause problems and fail?

Glyphosate is predominantly used as part of a system of weed-control used by commercial growers who invest in genetically modified (GM) seeds that are glyphosate resistant. Because of this resistance, glyphosate can be widely sprayed across a crop, with the result that only the non-GM plants will be killed (until they too develop resistance).

The recent peer-reviewed study by Johns Hopkins molecular biology researchers, DFQ Smith, et al. (May 2021)<sup>15</sup>, explains:

*'Glyphosate is commonly applied at concentrations of approximately 28 to 57 mM [33] or in formulations of 360 g/L (2 M), with 720 g (4 mol) per hectare [34]. Glyphosate-based herbicides are sprayed onto crops where the glyphosate is taken up by plant leaves and translocated to growing tissues throughout the plant [35]. Glyphosate is translocated to the roots where it is released into the soil [34]. In total, about 88% of the sprayed glyphosate ends up in the topsoil [36–38]. Less than 1% of [agricultural-use] glyphosate has been shown to enter water bodies, typically following heavy rain, snowmelt, ploughing, or erosion [37], but concentrations from <1 nM to approximately 30 μ M in nearby water have been reported [39]. Further, glyphosate has been shown to enter the air through wind erosion and deposit via rain [40].'*

*Glyphosate is remarkably stable, with half-life ranging from weeks to years depending on the surrounding microbial populations, which provide the primary mechanism of glyphosate degradation, while temperature, light, acidity, and salinity also play roles in the degradation process. Microbes mostly break down glyphosate into aminomethylphosphonic acid (AMPA), which persists up to 20 times longer than glyphosate and is often found in higher concentrations in topsoil and water [41–45].'<sup>16</sup>*

In other words: glyphosate is persistent, working its way through plants, fungi and bacteria, some of which help with degradation (breaking down glyphosate toxicity). Glyphosate nevertheless remains in the soil for weeks or years in its original form and as AMPA, as well as leaching into water (water run-off at the point of application and into ground water as it is absorbed into the soil) and air.

Glyphosate is used prolifically in commercial agriculture, e.g. where GM soy, etc. are bred to be Round-Up (the commercial formulation created by Monsanto) resistant. The non-preferred plants will be killed while the GM soy, hops, grapes, etc. survive. It is important to be clear: crops are still tainted with glyphosate and co-formulants, they just don't die. Eventually, as noted above, 'target' weeds themselves build up tolerance for glyphosate. This leads to farmers increasing the amounts of herbicide used.

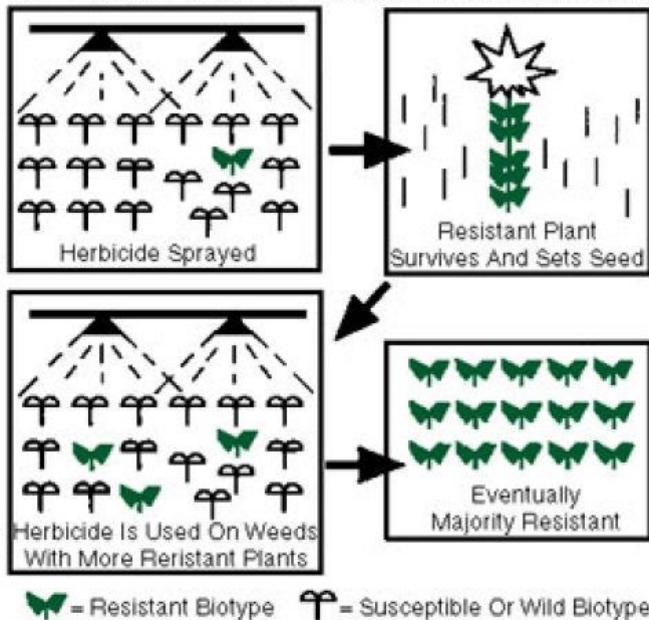
This simple chart from a University of Minnesota land managers' programme explains:

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<sup>15</sup> <https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3001182>

<sup>16</sup> NB, I have left the author's footnotes in the text as live, should you wish to go to the claim source.

### How Does Selection For Herbicide Resistance Occur?

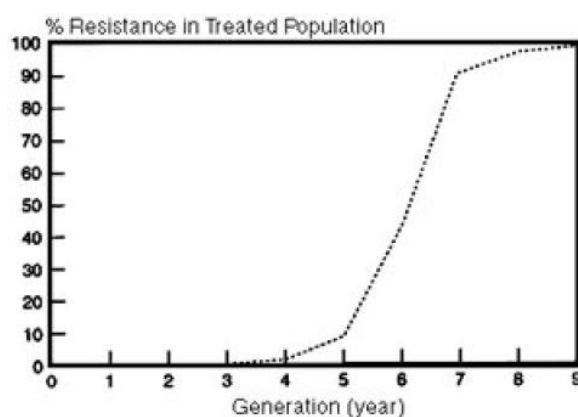


According to UofM, a 'herbicide-resistance problem could develop after repeatedly using a product for more than two years, depending on the proportion of the population initially resistant to an herbicide.'

According to UofM, 17 glyphosate resistant weeds were already identified in the USA as of 2018.<sup>17</sup> With wider application of glyphosate treatment worldwide, resistance will increase.

UofM explains that with repeated use of the same herbicide,

'It's very common to go from excellent control of a particular weed species to very poor control within a growing season. A gradual performance decline is rarely seen.'



<sup>17</sup> <https://extension.umn.edu/herbicide-resistance-management/herbicide-resistant-weeds#selection-intensity%3A-the-key-to-prevention-92896>

Figure 5: Simulated progression: Assumes a 1 in 10 million chance of resistant biotypes, 90 percent weed control and 100,000 seeds per sq. meter.<sup>18</sup> Less effective herbicides, poor application practices, poor post-application removal of seeds and higher incidence of wild resistance will, of course, result in earlier increases in herbicide tolerance.

The recommended practice for weed management is to ‘only use herbicides when necessary’, to rotate practices and to include mechanical weed control (such as hoeing). Importantly, UoM advises its land managers to,

*‘Encourage railroads, public utilities, highway departments and similar organizations ... to use vegetation management systems that don’t lead to the selection of herbicide-resistant weeds.’<sup>19</sup>*

In other words, not to use the same herbicide repeatedly and, wherever possible, to seek alternative – *non-chemical* – means of weed management. There are two reasons for this:

1. This will reduce the burden of resistant weeds on the public utility (over time);
2. Where there is nearby farmland, using more effective measures will eliminate glyphosate-resistant weed-creep (increasing costs to farmers).

### **Glyphosate myths and facts**

There is an abundance of myths about glyphosate, the most unhelpful being that it is ‘safe’.

As far back as 1996, however, Monsanto was ordered by a New York state judge to retract Round-Up advertising that claimed the herbicide was ‘practically non-toxic’, ‘biodegradable’ and ‘environmentally-friendly’. Monsanto also paid \$50,000 plaintiff’s case costs.<sup>20</sup>

Since then, the evidence of glyphosate’s damage to the environment and to individual and human and animal species has mounted.

Crucially, for ESCC, which in correspondence with residents complaining about the use of glyphosate states that the chemical is ‘deemed safe’, the EU’s 2017 relicensing directive (on which UK government policy is based) did *not* state that glyphosate is ‘safe’. Indeed, the relicensing directive was cautious, only permitting glyphosate’s use with the condition that Member States ‘Minimise the use in public spaces...’<sup>21</sup> due to concerns about its safety.

Round-Up’s own website warns home gardeners that children and animals should be kept out of the garden during use because of safety concerns. Of course, where glyphosate is sprayed

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<sup>18</sup> <https://extension.umn.edu/herbicide-resistance-management/herbicide-resistant-weeds#selection-intensity%3A-the-key-to-prevention-92896>

<sup>19</sup> <https://extension.umn.edu/herbicide-resistance-management/herbicide-resistant-weeds#selection-intensity%3A-the-key-to-prevention-92896>

<sup>20</sup> <https://apnews.com/article/d196b9a5bb54637a7b281760b0f7a966>

<sup>21</sup> Pesticide Action Network, citing EU relicensing agreement: Glyphosate%20Myth%20Buster%20-%20updated%20July%202019.pdf

on neighbourhood streets and pavements, there is no forewarning to keep children and pets indoors. A further warning on the Round-Up website:

*'...If you have treated your garden weeds with a glyphosate-based weedkiller and your pets have escaped into the garden before it has dried, or perhaps a neighbour's cat has popped into your yard at the wrong time (accidents happen), check for any abnormal behaviour or symptoms and contact a veterinarian if need be.'*<sup>22</sup>

Abnormal behaviour includes: vomiting, diarrhoea, hyper-salivation, shaking, convulsions. Smaller and more vulnerable animals may die.

Home-gardeners are warned to wear gloves when applying Round-Up and to wash hands afterwards. Of course slow worms, beetles and bees are not able to access soap and water to remove the substance should accidental spraying occur.

Glyphosate spray is considered 'easy to use', but it is less easy to use correctly and safely. This is why operatives are required to undertake PA6A and PA6WA training – for their own safety and to reduce other risks. Other risks include:

- Rain-related mis-timing. Glyphosate is not only less effective if rain occurs within 48 hours of its application; it also leaches into nearby soils and washes off into drains and waterways, posing a threat to soil-based and aquatic life;
- In windy conditions, 'misting' onto nearby foliage;
- Accidental spraying of non-targetted plants;
- Accidental spraying of hidden invertebrates;
- Accidental spraying of animals such as hedgehogs and slow worms;
- Spraying at the 'wrong' time of year, particularly at peak flowering, when insects seeking food will alight on treated plants, due to county-wide schedules.

Despite training (all operatives should have PA6A and PA6WA certificates, updated every three to five years), as the Round-Up website itself notes, 'accidents happen'. Correct and optimum use of glyphosate is actually quite difficult to achieve in the UK where weather conditions are rarely consistently warm, dry and still for the average 48 hours specified post-application best practice.

Then there is cost. Glyphosate is presented by advocates as the most 'cost-effective' system. As the grids above show, however, there are cost-effective alternatives.

Lewes District has banned glyphosate in all but the most extreme cases of invasive species (and even then seeks alternative treatments). This resulted in their contractor purchasing a hot foam system, which is used for Lewes District work 30 days a year and on other contracts the rest of the time. There are fewer weather – and related safety – restrictions for hot foam, so it is a more flexible system than glyphosate.

While hand and mechanical removal are certainly more expensive in the short term, in the longer term, removal of weeds and seeds will reduce their re-establishment. Even where roots are difficult to lift, repeated weeding of stems and leaves weakens the plants.

#### **Ensuring policy coherence, applied in the new Highways maintenance contract**

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<sup>22</sup> <https://rug.hrocdigital.co.uk/news/can-i-use-a-weedkiller-if-i-have-dogs-or-cats>

ESCC has committed to reducing the mowing and strimming of verges as a step towards reducing biodiversity loss, and yet continues to use a herbicide that kills the same insects on paths and kerb edges that it seeks to save on proximate verges. ESCC's Environment Strategy notes that our water is contaminated 'mostly' due to 'historic farming practices' – in other words, the heavy use of chemical fertiliser, pesticides and herbicides:

*the quality of some ground waters, which provide about 70% of drinking water, has decreased due to rising nitrate levels, mostly due to historic farming practices.<sup>23</sup>*

This motion will ensure there is coherence between policy and practice.

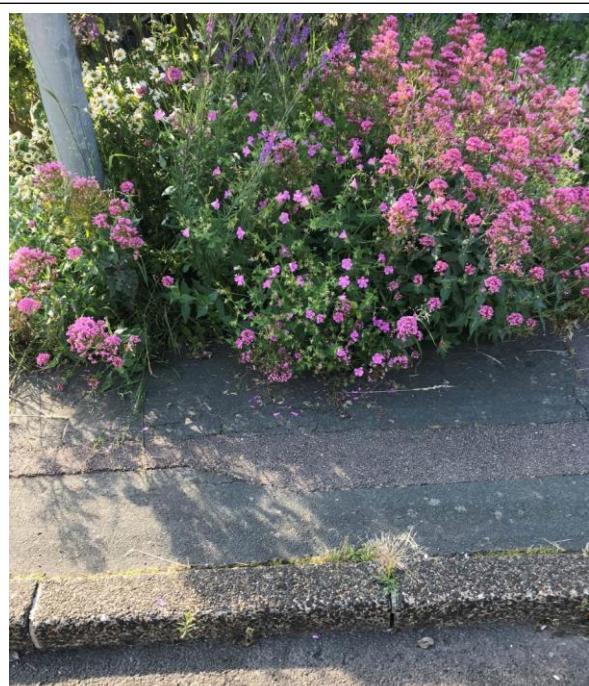
ES Highways explain that they follow the guidance for application of the product. Unfortunately, this guidance may include phrases such as: 'Treat established perennial weeds at the start of flowering to give best results' (Roundup® Ready-To-Use Label, cited in BES study by Straw, Carpentier and Brown (April 2021).<sup>24</sup> This is, of course, exactly the point at which plants have a high level of attractiveness to pollinators, thereby causing the greatest likelihood of individual poisoning and, in the case of social pollinators such as honeybees, taking toxin-laden pollen back to the hive.

Our unified County should not be pitting town aesthetics against the survival of arable farms, vineyards and orchards. In our towns, insect foraging areas are likely to be road and pavement verges and other 'corridor' grass and wildflower areas. Where there is intentional planting of pollinator-friendly plant species, and accompanying or following spraying of edges, we are effectively luring to their death the very pollinators we are desperate to save.

This latter point is made plainly in correspondence and photos sent in by Lewes resident, Peter Heslip:

*We were recently taking small pleasure at the way that highways respected our new wildflower verges. Also how the allotment behind Highdown road has gone pesticide free. But using roundup within the pollinator catchment would seem to undermine all this good work. From the photos below you will observe: 1) the spray is within a foot of many flowers attracting bees who will undoubtedly be exposed to the poison. 2) the spray is not being 'targeted' but rather blanket sprayed right down the road.*

*For our town is there an option of using the foamstream machine we own more widely across the town? Presumably the two complications are administrative responsibility and cost. But surely with a bit of focussed energy these are not insurmountable?*



ESCC is soon to establish a new contract for Highways maintenance, with ‘Option B’ – a contract that includes all aspects of Highway maintenance provision, including management of pavements, kerbs, gutters and verges – the likely outcome. This is the perfect opportunity to adopt a fit-for-future approach and to proactively seek contractors offering herbicide-free provision. Such provision would reduce the need for PA6A and PA6AW qualified (although these are lifelong qualifications, operatives are legally obliged to retrain every three to five years) and would increase the need for staff trained in wildflower recognition and best soil, water and plant sustainability practice. A number of local organisations might provide training, with ESCC/Highways contractor thus investing in the local economy.

#### **A small but important example of bad practice**

Officers and some Members will know Lesley Healey as secretary of Wildflower Lewes. She and the Wildflower Lewes group, in coordination with East Sussex Highways have worked incredibly hard to expand the pollinator friendly areas in Lewes and has collaborated with other wildflower groups across the County. She is enormously generous with her time and knowledge. I was mortified to receive an email from her, having that very day publicly noted ES Highways’ more pollinator friendly verge-trimming practices.

Lesley Healey says:

*On 24th June, Highways’ contractor sprayed glyphosate along Nevill estate pavement margins, including quite large groups of wildflowers that the verge mowers had deliberately left uncut elsewhere.*

*Today, I discovered these Toadflax Brocade moth caterpillars [image below] clinging to the very ends of dying purple toadflax, looking for food. I rehomed them, of course, onto purple toadflax plants in uncut verges, but these are just a small number of the thousands of animals that have died or will die because you have killed their food plants.*

*Ironically these are the very animals that would reduce the plants for you, had you left them alone.*



### **Addressing a crisis requires clear leadership and consistent policy**

- Increasing numbers of Councils and government bodies at all levels and around the world, have banned or heavily restricted the use of glyphosate, including Lewes District Council. Other weed control practices are being used across the District and LDC's contractor has invested in a hot foam system.
- ESCC has indicated concern regarding the use of glyphosate herbicide treatment, having committed to reducing its use, particularly in green spaces. That reduction is welcome: however, where it continues to be used, it still poses a hazard for animals and people. To ensure consistent environment and biodiversity policy and practice, and to be seen to be coherent, the leadership that decided to decrease glyphosate spraying should simply ban its use altogether.

### **Where can you find out more?**

I am very happy to talk about the different aspects of this Motion with Members, Officers and Staff.

Links for all the articles, chapters and studies cited are provided in the footnotes.

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