Please note: This report was prepared by former parish councillor Pete Mulford at the request of the parish council in July 2020. Mr Mulford is no longer a parish councillor, and this report is published by the council as a discussion paper.

Subject: **Becoming a Pesticide-free Parish**

Report of: Cllr Pete Mulford

1. Purpose of report

1.1 To set out the case for the Parish electing to go pesticide-free in order for an informed decision to be taken by the Council.

2. Recommendations:

2.1 That the Council use the opportunity of the end of the current weed spraying contract in April 2021 to end the use of indiscriminate use of Glyphosate in our Parish and take the decision to go Pesticide-Free. The one exception which would need to be considered would be in dealing with the Japanese knotweed; an aggressive invasive plant, currently without any other means of controlling. However, in this case it is suggested that glyphosate could be stem-injected, rather than sprayed, to reduce its spread in the environment.

2.2 That the Council gives consideration to trialling non-chemical and mechanical alternatives during a testing period with a view to reporting on the progress of those trials.

2.3 That the Council organises a series of public meetings/seminars via zoom to explain the importance of the decision and to encourage co-operation and acceptance of the new policy.

3. Context/ background information

The Problem

3.1 Pesticides are used in our Parish to control a range of perceived problems including weeds on pavements, the village green and play areas. These are all areas used, on a daily basis, by our residents and visitors – and often by those most vulnerable to the adverse effects of pesticides: elderly people, young children and pregnant women.

3.2 Pesticide use can have serious human health impacts, harm biodiversity and contaminate water supplies. There is growing evidence that glyphosate - the most commonly-used "systemic" weed-killer, and one currently used by the Council's contractor - is a higher health risk than previously assumed, with growing understanding of the damages caused by other chemical weed killers and pesticides to health and the environment. Childhood health problems and diseases including childhood leukemia, Attention Deficit Hyper-activity Disorder, allergies, and endocrine and immune system disruption have been linked to increases in pesticide use.[1]

3.3 In April 2015, the International Agency for Research on Cancer - part of the World Health Organisation - concluded that Glyphosate is "probably carcinogenic to

1 See PAN Asia Pacific study: Poisoning our Future – Children and Pesticides study http://www.panap.net/sites/default/files/Poisoning-Our-Future-Children-and-Pesticides.pdf

humans". Other studies have linked glyphosate to birth defects and even the rise in antibiotic resistance.

3.4 Pesticide use has a negative effect on urban wildlife and has been identified as a contributory factor in the decline of hedgehogs, for example.

3.5 Finally, pesticides sprayed onto the hard surfaces in towns and cities rapidly run off into drains and sewers and can find their way into water supplies, the cost for removing pesticides from our water supplies runs into the millions of pounds per annum.

Going pesticide-free

3.6 Ending the use of pesticides in urban areas is becoming more common. Hundreds of villages, towns and cities around the world have reduced, and even in some cases banned, pesticide use in their areas. In France, for example, the use of all non-agricultural pesticides has been banned in public green spaces since January 2017. Large cities like Copenhagen, Paris, Rotterdam, Seattle and Tokyo all restrict or ban pesticide use in public spaces.

c.7 Public "pesticide-free" campaigns by residents across the UK are on the increase and several local authorities have already gone pesticide-free: Lewes, Hammersmith & Fulham, Glastonbury, with others set to follow suit. Closer to home, Wadebridge Town Council have also gone Pesticide-free.

Benefits of going pesticide-free

A range of benefits can accrue from adopting a pesticide-free approach. Financial considerations are of course a concern for councils across the UK, but with the costs of non-pesticide maintenance close to, or potentially less than, the chemical approach and the other non-financial benefits so high it can be seen as a positive approach for all.
Overview of benefits:

a) Safeguarding of the general public's health by reducing their exposure to potentially harmful pesticides.
b) Improved health for council contractors due to reduced exposure to pesticides.
c) Potential financial savings due to reduced spending on chemical inputs.
d) Increased ability to support the Council's Climate Emergency initiative.
e) Positive message for the public.
f) Better habitats for bees, pollinators and other wildlife.
g) Reduced contamination of water bodies which could lead to cheaper water bills and cleaner, safer water for the residents.

4. Analysis & consideration of any alternative options

4.1 One alternative option is to trial non-chemical and mechanical alternatives during a testing period (options outlined in Appendix 1)

This option may be felt to be a short term option in order to identify what alternative systems are available for weed management across the Parish, and allow the Parish to make an informed choice once the specifics of efficacy, ease of use and cost implications have been assessed. It would be necessary to continue with the existing spray and treatment regime outside of trial areas so this is not the most precautionary approach but more a fact-finding exercise.

4.2 Another option is to go pesticide-free for almost all uses, but to retain very limited use of a systemic pesticide for Japanese Knotweed, a highly invasive plant which the Council is bound to control effectively by law on any sites where it occurs. This is the approach taken by Cornwall Council.

This option is recommended as it would meet the requirements of a precautionary approach of stopping the use of pesticides in order to protect residents and the environment from potentially harmful effects and it would allow the Parish to meet its legal requirements for dealing with invasive plant species. However, it is essential that the least harmful method for invasive species eradication is adopted to be in line with a pesticide-free / reduction policy.

4.3 There is also an option to reduce the frequency of weed management - effectively tolerating more weeds and growth in pavements - and thus reducing both residents' and staff exposure to pesticides. This would also have the advantage of reducing expenditure - or at least offsetting some of the increase that has come about due to longer growing seasons resulting from climate change.

This approach requires public support and education, and it may be felt that it may send a mixed message about the reasons for going pesticide-free. It may be felt, however, that it would be useful to consider a public consultation about elements of this, especially as the Council have declared a Climate Emergency as this would go hand in hand in encouraging and leaving more 'wild' areas for wildlife and biodiversity. Councillors may feel that the first step is to promote a dialogue with residents about the pesticide-free approach and to gauge support for this

5. Community engagement & consultation

5.1 Any decision to move towards the Parish going pesticide free, should be used to promote a dialogue with residents and local organisations about the pesticide-free approach and to gauge support for this.

6. Financial & other implications:

Financial Implications:

6.1 The pesticide-free approach is broadly cost-neutral if a combination of alternatives is adopted. There is to date limited experience from other councils as this is a relatively new concept, but where systems have been trialled or adopted it has been seen that the costs are broadly in line with current pesticide regimes. Appendix 2 is a case study from Wadebridge Town Council and in paragraph 10, which relates to the financial implications, the report states: "Although there was the investment in the self-drive machine brush weeder, over time this will even itself out as the sprays that were purchased were on a regular basis due to the amount of use. New techniques can require more time and sometimes more staff, however certain areas have gained back time due to weekly strims turning into annual strims/cuts, especially the wild flower areas." Wadebridge Town Council use their own in-house employee to attend to grass and verge maintenance so the outlay in terms of hardware would not be applicable in our case, where we use a contractor. To give a rough idea of costs of a contractor using pesticide-free methods, the contractor who is contracted to Gwennap Parish Council charges £30 ph.

Legal Implications:

6.2 There are legal implications regarding the treatment and eradication of Japanese Knotweed and other invasive species, which would necessitate the use of glyphosate

if found in the Parish. In such cases, it would be prudent that systems such as stem injection of the chemical, rather than spraying, are investigated as they provide a more environmentally sensitive approach to dealing with invasive species.

Sustainability Implications:

6.3 There are positive sustainability implications arising from the report: improved public health and happiness; a reduction in environmental harm to wildlife; and an improvement in run-off pollution, reducing the energy-intensive need to strip pesticides out of water.

7. Conclusion

6.1 The reasons for going pesticide-free as a Parish are sound and the Council should consider beginning this process as soon as possible. In particular, it is vital to the success of this initiative that the Council outreach to the residents (and organisations such as the Cricket Club) to obtain their support by educating them on the need to appreciate more wild spaces and biodiversity within our community, as well as encouraging them to learn to learn about and enjoy more wild plants in our built up areas. From the experience of other Councils who have taken this initiative, getting the public on board with this idea and the reasons behind why Councils elect to go pesticide-free has been found to go a long way towards the success of the project.

Appendix 1

Alternatives to Chemical Spraying for Weed Management

Hot foam systems use high temperature water and foam to kill weeds. The foam, which is made using sustainable vegetable oils, helps keep the water at a high temperature while it kills the weeds – essentially boiling them. One of the many benefits of this system is the fact that it can be used in any weather condition in contrast to herbicides (such as glyphosate) which can only be used when it is not raining or windy. As it is non-toxic and non-bioaccumulative, it is suitable for use in sensitive areas such as nature reserves and in proximity to water bodies. The Foamstream System - developed by UK company Weedingtech - is also approved for use in organic systems by the Soil Association. In addition to being used to control weeds, hot foam systems can also be used to remove chewing gum and moss.

High pressure hot water treatments are similar to foam systems but instead rely solely on hot, high pressure water. They are effective for weed control and, as with foam systems, can also be used for other situations such as chewing gum and moss removal thus making them a versatile option

Electronic control systems are a relatively new approach that is particularly suited to dealing with invasive species. It works by using electricity to boil weeds from the inside out from the root upwards.

Hand weeding is an option, particularly for smaller areas such as playgrounds and on paths running through parks. Many councils have chosen to work with the local community around parks and other areas in order to recruit volunteers to help weed by hand. Not only does this get the job done but it is an effective way of engaging local communities to become more involved in their parks and local area. A sense of community spirit can be engendered and it has proved to be an excellent opportunity for the council to engage with local groups in a positive manner. There are already a number of councils using this approach and other land managers such as Royal Parks in London are also asking for volunteers to come in and hand weed.

Mulching is an age old technique for dealing with weeds by smothering them.

Mulching also offers other benefits including retention of moisture in the soil and, depending on the type of mulch being used, improved soil health. Organic material such as chips and bark from recycled Christmas trees can be used, or there is a wide range of mulch mats available. This is a particularly useful approach in ornamental beds and in parks more generally.

Acetic acid dilutions have been used very effectively to control weeds on hard surfaces in a variety of situations. Acetic acid is essentially just vinegar and, as such, is biodegradable and poses no risk of bioaccumulation. Some of the companies that make and sell pesticide products have started producing alternatives to glyphosate-based herbicides, using acetic acid as the active ingredient. There is some debate about just how effective this can be for large areas of hard surface in urban areas, but it can be a useful tool for smaller areas such as playgrounds.

Flame treatment has been used successfully to eliminate weeds in many parks and green spaces. Whilst flame weeding can be an effective alternative to the use of pesticides, and much work has gone into making them more targeted and therefore safer, there are

potentially health and safety issues for operatives. However, for smaller areas handheld flame weeders might be a suitable tool if proper training is provided.

Steel brushing can be used for larger areas such as pavements and roads and, in combination with the use of acetic acid spraying, can be a very effective alternative. Such systems are particularly useful for removing light weeds and moss from hard surfaces such as paving and tarmac.

Appendix 2
Wadebridge Town Council – case study
Information from Edward Treverton – Senior Groundsman at Wadebridge Town Council

1. When did Wadebridge TC become pesticide free?
   Wadebridge TC became free from spraying weeds in March 2016, following Edward Treverton's appointment as Senior Groundsman. He requested for a no spraying policy in his interview due to having a personal interest in no longer using chemicals.

2. What prompted you become pesticide-free? What local support/opposition did you have?
   Edward introduced no spraying straight away from his position with the full support of the Town Council. Local support has always been strong, except the questioning of roads/pavements/curbs that the TC used to spray on behalf of Cornwall Council. After educating the public, they tend to understand and agree to the cause.

3. What assets do you own/manage that are affected by the change?
   We have 4 large grassed areas including Jubilee Park, Egloshayle Park, Coronation Park & Wadebridge Cemetery. The hard-standing areas affected include our 3 car parks and other roads/pavements around the Town that were in the past sprayed on behalf of Cornwall Council.

4. Does your policy cover just weed killers…or wider pesticides such as rodenticides?
   Our Parks team don't use any kind of pesticide/insecticide, our policy aims to promote the importance and value of a quality environment and its contribution to the quality of life for the community of Wadebridge. Also to support our community in its enjoyment of our local environment and to carry out our work in an efficient way that minimises or eliminates its adverse impact on our environment.

5. What is your pesticide policy/environment strategy?
   (attached) - to be reviewed

6. How do you go about introducing and implementing it?
   The Town Council agreed at a Full Council meeting to introduce the policy and it followed by ceasing all use of herbicides – the parks team didn't use pesticides/rodenticides.

7. What was the view of your contractors regarding change of practice (do you still use the same business as before)?
   All work related to spraying was in house, so no contractors had to deal with any change. Any future contractors would be advised of the policy – this was the case recently due to taking on a new company to clean our toilets and they mentioned using weed killer on the surrounding area for aesthetic reasons but they were told no herbicides etc. only by hand – no issues.

8. What alternative methods do you use?
   We use a self-drive powered brush weeder, gas flame, strimmer and hand

weeding. The wildflower areas are about location and still having a management plan in place.

9. How effective are they?
   The methods are as affective, the difference Edward found was that the spraying just lasted longer – even though spraying is still not a permanent solution.

10. What are the differences in cost between previous and new management techniques/regimes?
    Although there was the investment in the self-drive machine brush weeder, over time this will even itself out as the sprays that were purchased were on a regular basis due to the amount of use. New techniques can require more time and sometimes more staff, however certain areas have gained back time due to weekly strims turning into annual strims/cuts, especially the wild flower areas.

11. What has been the reaction/feedback of going pesticide free from residents, business etc?
    The Town Council has not had any complaints from the public or businesses of the Town. The occasional person does ask the question directly to the staff on the ground who are then informed of the policy – as previously stated this is usually the pavements/roadsides that Cornwall Council used to contract to the TC for spraying.

12. Are there any specific issues/challenges/benefits you have experienced from going pesticide free?
    The only issues that have arisen are the leased land to local clubs such as the Bowling club, Cricket club & Rugby club – these are ongoing discussions to look at the options and bring them fully on board with the TC's policy. The benefits are the increase wildlife and habitats as the public being hugely complimentary once the wild flowers are out.

13. Any lessons learnt/advice to other T&PCs thinking of making the change?
    The advice we would have is that you can do it, to make the leap and not look back. There have been no serious problems that have arisen from this change and the pros far outweigh the cons. The parks that we maintain if anything look better than they did ever before, spraying has not been missed at all.

14. Do you have any images that might be useful to accompany the case study (attached) Wildflower meadows at Coronation Park, Wadebridge.

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