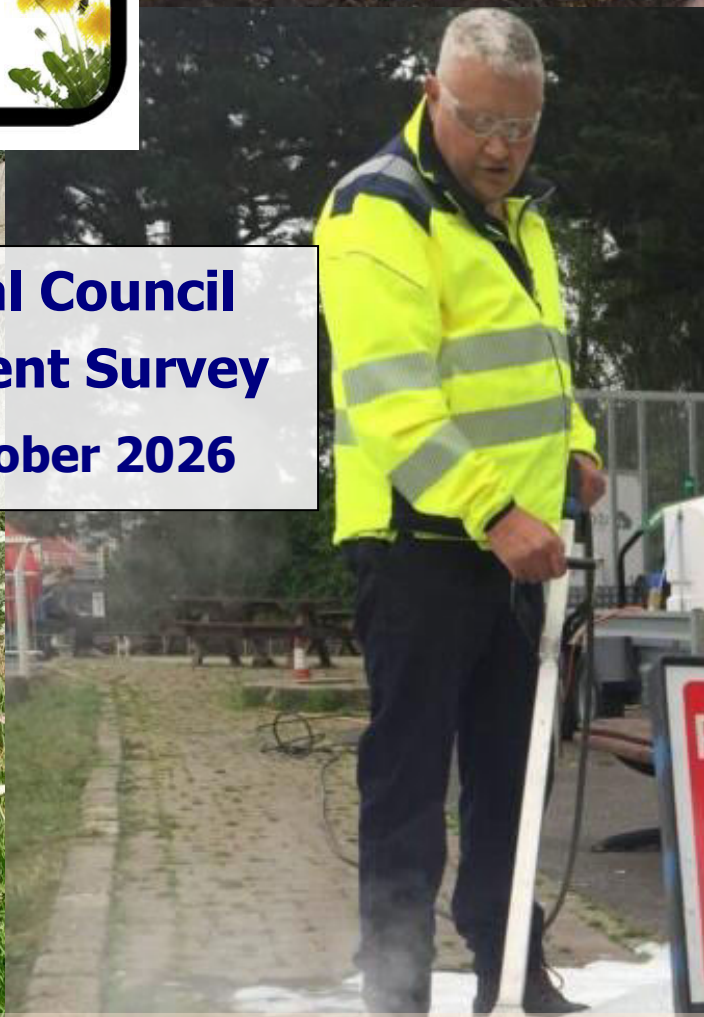




Plants out of Place







The Devon Local Council Weed Management Survey

Full Report – October 2026





Green Futures Devon

DALC Devon Association of Local Councils

Devon Environment Foundation

Devon County Council

Executive Summary

Across the UK Local authorities are thought to be responsible for around 10% of total pesticide use, primarily related to weed management in municipal areas, which amounted to approximately 350 tonnes of pesticides (mainly herbicides) in 2024. There is now a growing body of research which strongly suggests that sustained pesticide use can lead to severe and long term impacts on human health and the health of our wider ecosystem, so there is a growing urgency to help Councils of all sizes to reduce their use of herbicides and other pesticides.

The management of weeds in villages and towns across Devon is often carried out by Local Councils using a range of approaches including hand-weeding, mechanical weeding, herbicides and leaving some areas alone with minimal management, but there is currently no dataset measuring usage levels of these different approaches, particularly the use of herbicides. Green Futures Devon CIC, with support from Devon Environment Foundation, 6 Devon County Councillors and the Devon Association of Local Council's, have now carried out the first comprehensive Weed Management Survey of all 403 Parish and Town Councils across Devon between May and June 2026.

The survey response rate was 15% - a total of 62 Councils representing 21 towns and 42 parishes. This means that the results do not have the level of statistical significance to make definitive statements about the weed management approaches amongst all 403 Local Councils across Devon, but they do provide an excellent insight into some likely trends and patterns amongst Town and Parish Councils.

The key findings were:

1. Hand weeding is by far the most commonly used weed management approach (63% usage rate).
2. 48% of Towns are using synthetic herbicides to control weeds, compared to 19% of Parishes.
3. The most popular methods used to replace synthetic herbicides are hand weeding, mechanical weeding tools, naturally occurring chemicals and leaving areas alone with minimal management.
4. 65% of Councils surveyed had not had any formal discussions or made policy decisions about reducing pesticide use.
5. 26% of Councils surveyed are encouraging other local groups and organisations to reduce their pesticide use.
6. Almost half of Councils surveyed (44%) would like more help and advice to identify alternative methods to the use of synthetic herbicides for weed control.

Our key conclusion is that Devon Town and Parish Councils are responding to the evidence that pesticides are harmful for human and environmental health and seeking alternatives, but more resources are needed to support a structured transition to a health and nature-balanced weed management infrastructure

The proposed next steps are :

- Make the Survey Report available to all Local Councils.
- Work with Councils who have expressed interest in further support to reduce pesticide use.
- Repeat a streamlined survey next year aiming for a greater level of response to provide a more detailed picture of weed management across Devon's Local Councils.

The following Report details the research background, the design and publicity of the survey and a detailed presentation of the results, together with a discussion and conclusions of their relevance for Local Councils and the communities whom they serve and potential next steps for future work.

Contents

Executive Summary 2
Acknowledgments 4
Foreword 5

Section 1 – Background to the Survey

A Brief History of Pesticides 6
The Impacts of Pesticides on Human Health 6
The Impacts of Pesticide use on the Wider Ecosystem 7
The Pesticide-Free Devon Conference (June 2025) 8
The Need to Measure Pesticide Usage by Local Councils 8
The Benefits of Completing the Survey 9

Section 2 – Survey Design and Distribution

Aims 10
A Collaborative Approach 10
The Survey Questions 10
Branding and Publicity 12

Section 3 – Survey Results

Distribution of Survey Responses 14
Operational Approaches to Weed Management 16
Use of Pesticide Products 18
Alternatives to Pesticide Use for Weed Management 19
Policy Making to Reduce Pesticide Use 21
Encouraging Others to Reduce Pesticide Use 24

Section 4 – Discussion of the Results

Councils' Response to the Survey 26
Overall Weed Management Approaches 26
Pesticide Usage 27
Alternatives to Pesticide Use 28
Formal Discussions and Policy Making 29
Encouraging Other Groups and Organisations to Reduce Pesticide Use 30

Section 5 – Conclusions and Next Steps

Conclusions 31
Next Steps 32

References 33
Appendices 36

Acknowledgements

We would like to thank Devon Environment Foundation for their long term support of Green Futures Devon and for providing most of the grant funding which has enabled the Weed Management Survey to happen.

We are also hugely grateful to the following Devon County Councillors who have also pledged their financial and personal support to the initiative:

Victor Abbot – Ivybridge
Denise Bickley – Sidmouth
Sara Wilson – Ilfracombe
Neale Raleigh – Tiverton East
Paul Hayward – Axminster
Henry Gent – Broadclyst

We also want thank all of the staff and the Chairperson of Devon Association of Local Councils, who have helped with the publicity, promotion and development of the Survey and with the distribution of this Report.

We are also very grateful to the following people who's advice and professional expertise has been essential for the design of the Survey and the interpretation of the results:

Simon Heath – Creative consultant and graphic designer
Lucy Wiltshire – Green Futures Devon Director
Philip Sansum – Green Futures Devon Director
Rob Woodger – Facilities and Maintenance Team Leader at Newton Abbot Town Council
Thomas Collard – Green Spaces Officer at Newton Abbot Town Council
Kim Ford – Clerk of Bishopsteignton Parish Council
Amii Shelley – Clerk of Chudleigh Town Council
Cathy Aubertin – Clerk of Broadhempston Town Council
Mark Wells – Clerk of Bovey Tracey Town Council
Sharon Raggett – Clerk of Abbotskerswell Parich Council
Stuart Beck – Projects and Facilities Manager at Dawlish Town Council

Foreword

Across Devon there are 403 town and parish councils, and parish meetings, representing the local council network; the closest tier of local government to their communities. Those authorities are all well placed to serve the needs of those communities.

Weeds are a constant presence in our rural areas and our towns but society is becoming more aware of the concerns surrounding pesticide use, both on our own health and the health of our wider environment. With those concerns in mind, many councils are considering how best to manage weeds in their areas.

The Plants out of Place Weed Management Survey shows the strength of diversity amongst Devon's local councils. Many of the respondents to the survey have stopped using synthetic herbicides altogether for managing weeds and are successfully transitioning to less environmentally toxic alternatives. However, managing weeds is not a straightforward business and people have differing ideas of what a tidy street or park area looks like. Councils have different budgets and resources available, meaning there is no one-size-fits-all approach.

DALC is always an advocate for councils working together to share knowledge, information, and experiences to find solutions for problems. We hope that sense of collaboration will allow councils to feel able to tackle weed management in a way which is affordable and manageable for all councils and the communities they serve.

Liz Brookes – Hocking

Chair of DALC's Board of Directors

Section 1: Background to the Survey

A Brief History of Pesticides

Pesticides are chemicals that have been used by humans to control unwanted plant or animal species over the last 4500 years. The first recorded use of a pesticide was in Mesopotamia where elemental sulphur was used to dust crops. Since then a number of different chemicals have been used to control insects, molds and plant diseases, including arsenic, mercury and lead in the 15th Century, nicotine sulphate in the 17th Century and since the 1940's, a huge range of synthetic chemicals.

Below are several definitions of a pesticide:

"A pesticide is something that prevents, destroys or controls a harmful organism or disease or protects plants or plant products during production, storage and transport. The term includes, amongst others : herbicides, fungicides, insecticides, acaricides, nematicides, molluscicides, growth regulators, repellents, rodenticides and biocides" (European Commission) (1).

"Pesticides, also known as "plant protection products" are used to control pests, weeds and diseases. Examples include insecticides, fungicides, herbicides, molluscicides and plant growth regulators" (Health and Safety Executive) (2).

"Pesticides are designed to kill "pests" and they impact all life on Earth. They include a wide range of compounds including herbicides (designed to kill plants), insecticides, fungicides, rodenticides, molluscicides and nematicides, but also include plant growth regulators, defoliants and desiccants. They are mainly used in the growing of agricultural crops, but are also used in our towns, cities, homes and gardens". (Pesticide Action Network) (3).

While pesticides are hugely successful at controlling the plants, invertebrates and micro-organisms that they are designed to inhibit, there is a growing body of evidence which shows that their active chemicals can remain in the environment for long periods of time and can damage the functioning of many other organisms including insects, aquatic invertebrates and wild plant ecosystems. There is also increasing concern about their effects on human physiology.

The Impacts of Pesticide Use on Human Health

Across the world there is now an increasing body of evidence which links pesticide exposure to a range of human health conditions such as some forms of cancer, respiratory diseases and Parkinson's disease (4).

Local Authorities across the UK are thought to be responsible for 10% of all pesticide use. A Survey carried out by the Pesticide Action Network in 2025 found that around 350 Tonnes of pesticides were used by Councils in 2024 (5). The most common pesticide in use is the herbicide glyphosate, found in a variety of commercial formulations, with over 90 % of English District and County Councils reporting its usage (6).

Glyphosate has been found to have caused non-hodgkinson lymphoma in thousands of agricultural workers in the U.S. and a recent study comparing research from many different sources has concluded that its use increased the risk of developing non-hodgkinson lymphoma by 41%. (7). Another recent study looking at the levels at which glyphosate is able to cause cancer in animals, has now shown that its current acceptable daily intake (ADI) level has the potential to cause leukaemia and many other types of cancer (8).

Exposure to glyphosate and other pesticide compounds has also been linked to the huge rise in Parkinson's disease that has been recorded over the last 20 years (9), with evidence now emerging that farmers have an increased risk of Parkinson's disease, associated with their exposure to pesticide products (10).

For Councils who are regularly using glyphosate and other pesticide formulations, this mounting evidence of its links to serious health issues through prolonged use raises significant concerns for Council employees and for the general public.

The Impacts of Pesticide Use on the Wider Ecosystem

The health of the wider ecosystem matters in its own right because all organisms other than humans have just as much right to a healthy environment as we do, but declines in biodiversity and overall ecosystem health will affect our quality of life as well , the clearest example being our ability to grow food crops.

Pollinators

Over the last 50 years there has been a concerning decline in pollinating insect levels across the world and in the UK. Numerous scientific studies from places around the world like North America, Japan, Puerto Rico and Germany all show alarming population declines of between 75% - 98% over a 20 year period from the late 1980's to the 2010's (11). To have lost such a high percentage of species populations over such a short timescale is shocking and points to the dangerous level of impact that humans are having on insect populations.

In the U.K. there are similar levels of insect decline. Looking at recent data from the annual Butterfly Monitoring Scheme, it is clear that over the last 40 years almost all the of U.K.'s butterfly populations have decreased by between 45% - 91% (12). Bee populations have not fared any better, with evidence showing that there has been a decline in populations across the U.K. between 1980 and 2013, with an average of 11 bee species lost per km^2 and a loss of upland bee species of 55% (14).

Aquatic invertebrates

Aquatic invertebrates are also affected by pesticide pollution with a recent UK study showing evidence of high concentrations of neonicotinoids within freshwater invertebrates (14). Another UK study has shown that as rural pesticide application in the South West has increased between 1970 to 2019, there has been a concurrent reduction in the populations of aquatic invertebrates (15).

Soil fertility

There is a growing body of evidence which shows that sustained pesticide usage causes a reduction in overall soil fertility because it disrupts the lifecycles of important soil invertebrates and micro-organisms. Worms, ants, beetles, millipedes and many other invertebrates are responsible for oxygenating the soil and recycling organic matter to make it more readily available for plants – including the healthy grass needed for sports pitches and human food crops. A detailed study in the U.S. found that all major classes of pesticides negatively affected soil invertebrates, based on over 284 individual species and over 2800 individual observations (16).

Wider biodiversity

Because pesticides tend to reduce the populations of insects, molluscs and other invertebrates in the soil, on plants and in the water, this in turn limits the availability of important food sources for larger animals such as birds and mammals. Pesticides can also have a direct effect on the health of birds and mammals through ingestion and absorption from the external environment. A wide-ranging study European study monitoring 170 common bird species at 20,000 different sites over a 37 year period has confirmed that pesticide use is now one of the major factors associated with the ongoing decline in bird species (17).

The Pesticide – Free Devon Conference (June 2025)

In June 2025, with financial support from Devon Environment Foundation (DEF), over 100 individuals, groups and organisations from across Devon met to find solutions to reduce pesticide use at the Pesticide-Free Devon Conference (18). Devon Association of Local Councils (DALC) helped Green Futures Devon CIC to publicise the event and we had attendance from Officers and Councillors from a number of Town and Parish Councils across the County. The event was a great success and launched the Pesticide-Free Devon initiative with ongoing support from DEF, the Leader of Devon County Council, Clr Julian Brazil and the Cabinet Member for Climate Change and Biodiversity, Jacqi Hodgson.

A key outcome of the Conference was the desire to work in more positive and proactive ways to help Councils across Devon to reduce their pesticide use. Increasing numbers of Town and Parish Councils are now voting to go "pesticide-free" and many Councils now have Biodiversity Policies which refer to the need to reduce and phase out the use of herbicides and other pesticides within municipal operations such as weed management.

The Need to Measure Pesticide Usage by Local Councils

Currently, under the 3-tier system of local government in Devon, there is one County Council, 2 urban unitary authorities (Plymouth City Council and Torbay Council), 8 District Councils (East Devon, Teignbridge, South Hams, West Devon, Torridge, North Devon, Mid Devon and Exeter City) and 403 Town and Parish Councils.

Almost all of the current data that is publicly available for local authority pesticide use in Devon relates to the County, District and Unitary councils. The table below is derived from the national survey of Councils carried out by the Pesticide Action Network in 2025 (see Appendix 1 for the full results).

Table 1 – Pesticide Usage and Expenditure for Devon's County, District and Unitary Councils in 2025

	Devon County Council	East Devon District	Teignbridge District	South Hams District	West Devon District	Torridge District	North Devon District	Mid Devon District	Exeter City	Plymouth City	Torbay Council
What volume of herbicides did the Council use in 2024?	121 l/kg	Unknown	20.65 L/kg	25 L/kg	25 L/kg	0	73.2 l/kg	5 L/kg	56.25 L/kg	1486 L/kg	Unknown
How much money was spent on pesticides in 2024?	£52,000	Unknown	£1,961	£1,200	£1,625	£0	£5,492	0	£6,599	£7,518	Unknown

It is clear from this dataset that the County and most of Devon's District Council's and Unitary Authorities are still using significant amounts of herbicides to manage weeds across their area of responsibility.

However the 403 Town and Parish councils across Devon, also known as Local Councils, have a responsibility for many thousands of acres of parks, verges and other municipal land in their local area and are often involved in directing / requesting the engagement of the District or County Council's involvement if they are the land owner in a particular town or village. Local Councils are also the level of government that is closest to local people across Devon, and in the context of the recent proposals to re-organise the County and District Councils into 4 unitary authorities, they

currently represent the only tier of local governance across the County that is not going to change its geographical responsibilities.

In order to understand how much of an impact that municipal pesticide usage could be having in our local communities across Devon, it is essential to understand how many Local Councils are still actively using pesticides as a weed management tool and how many are researching alternative methods. In addition to measuring the degree of pesticide usage in Local Council weed management, we also wanted to discover how many Local Council's had a policy framework or statement that addressed the usage and impacts of pesticides.

The Benefits of Completing the Survey

There are a number of key benefits for Local Councils and the wider community through carrying out a weed management survey :

- Creating a clearer Devon-wide picture of the different weed management approaches currently being used by Local Councils
- Understanding what the degree of pesticide use is across Local Councils weed management
- Learning about what approaches Councils are taking to implement alternative weed management methods.
- Gaining insight into the role of formal policy-making processes in the reduction of pesticide use by Local Councils.
- Forming the basis of a County-wide support and advisory project to help Local Councils to transition to low-pesticide or pesticide – free approaches.

Section 2: Survey Design and Distribution

Aims

The Survey had the following 5 key Aims

1. Identify the operational approaches that Local Council's are using for weed management.

2. Measure the degree to which herbicides and other pesticides are being used for weed management or for other issues such as infestations.

3. Learn what pesticide products currently Councils have in storage.

4. Understand what scope there is for alternatives to pesticides to be used for weed management and other tasks.

5. Establish how Green Futures Devon CIC and DALC can help Councils to reduce their pesticide use.

A Collaborative Approach

The Survey was designed by Green Futures Devon CIC, with the help and support of DALC staff and initial drafts were sent out to Town and Parish Clerks and a number of Local Council Officers across the Teignbridge District area for their feedback. Draft copies were also sent to each of the 6 Devon County Councillors who were financially supporting the initiative through their Locality Budgets.

This involvement and feedback from Officers and Councillors was absolutely essential to creating a survey structure that gave us the information that we wanted, but also matched closely the operational reality of Local Councils delivering a weed management service to their local communities.

The Survey Questions

The Survey contained the following questions offered to responders on the Google Forms platform.

Organisation Details

1. Name of the Council
2. Name of the Council Clerk
3. Clerk's Email address (essential) and telephone number (if you're happy to provide).
4. The Clerk's contact telephone number.
5. Name and Job Role of the Officer or Councillor completing the Survey if different to the Clerk.
6. Contact details of the Officer or Councillor
7. Population of Parish or Town area (approximate)

Weed Management Approaches

8. What operational approaches does your Council use to manage weeds in the municipal areas for which it is responsible?

(Tick boxes)
□ Hand weeding (including using hand-tools)
□ Mechanical weeding
□ Use of herbicides
□ Leaving alone with minimal management
□ No involvement in weed management
□ Anything else (please specify)

9. Can you place your Weed Management approaches in order of frequency of use with the most frequently used as number 1, and the next most frequent as number 2 etc.

    - Hand weeding (including using hand-tools)
    - Mechanical weeding
    - Use of herbicides
    - Leaving alone with minimal management
    - No involvement in weed management
    - Anything else (please specify)

10. Does your Council currently use herbicide products to control weeds?

11. What herbicide products does the Council currently have in stock?

Use of Pesticides for Tasks other than Weed Management

12. Does the Council use other forms of pesticide such as insecticides, rodenticides, fungicides or moluscicides for purposes other than weed management? Examples could include rodenticides for vermin control, slug pellets or aphid removal sprays.

13. If yes, can you list the products that the Council currently has in stock?

Reducing Pesticide Use

14. Has the Council had any formal discussions about reducing pesticide use?

15. Please give more details about formal discussions to reduce pesticide use.

16. Has the Council made any policy decisions to reduce pesticide use in the last 5 years?

17. If yes please give brief details.

18. If the Council has not had any formal discussions about reducing pesticide use, would these be considered?

19. Is the Council engaged in encouraging other people in it's area to reduce pesticide use?

If Yes please give details below.

20. Details of Council's work to encourage others to reduce pesticide use.

Alternatives to Pesticides

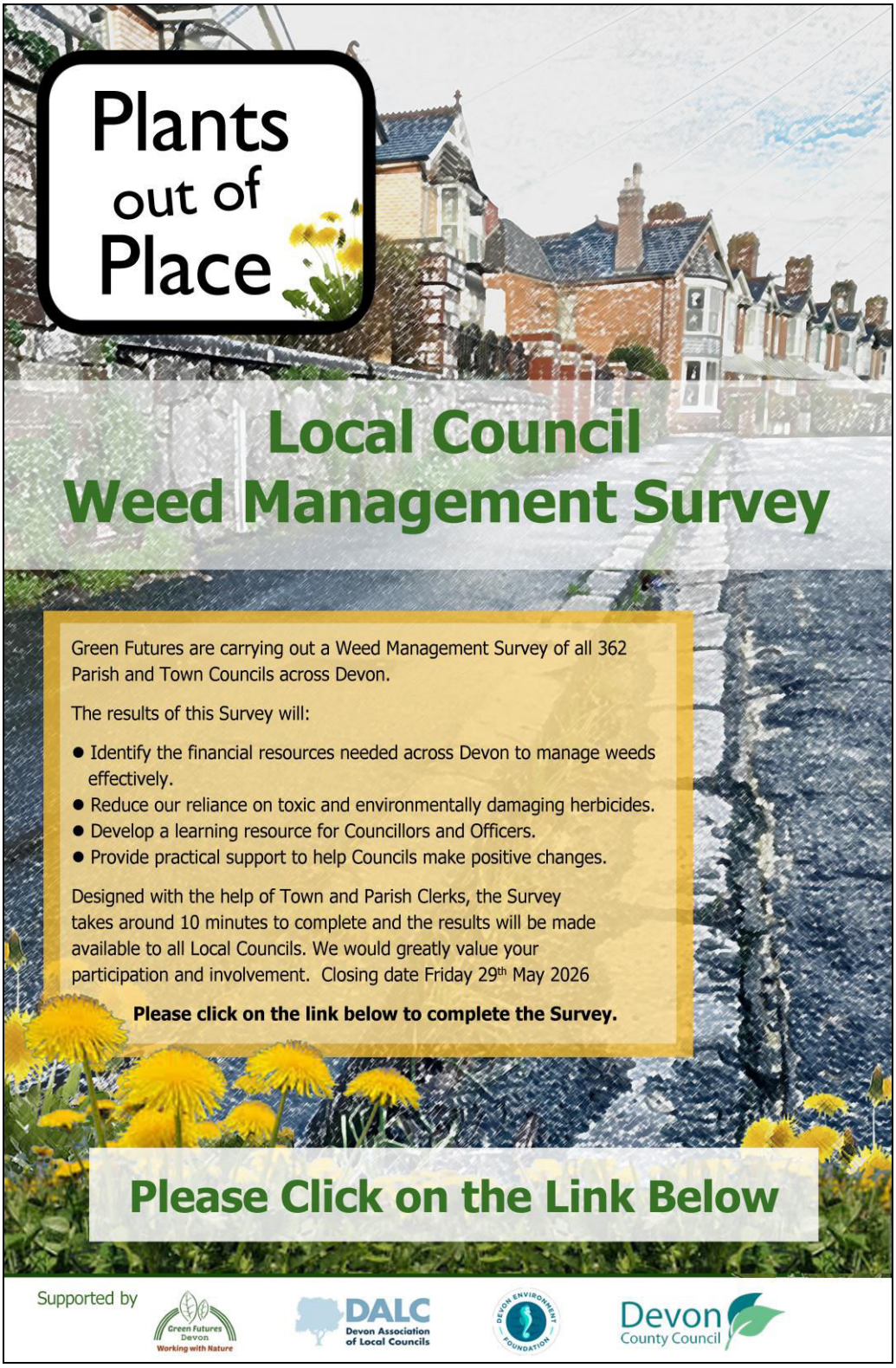
21. Has the Council adopted any alternative weed management strategies to pesticides?

22. If Yes Please describe below.

23. Would the Council like advice and support to explore alternatives to pesticide use?

Branding and Publicity

A recognisable identity for the Survey was created around the idea that the term "weed" is essentially a way of describing a plant that is growing in a place that isn't wanted by humans – hence the brand "Plants out of Place".



The Plants out of Place logo we created is based on the classic Gill sans Font used for UK street signs and we decided to include the dandelion as an iconic "weed" because it is highly prevalent across all

street, park and other municipal environments but is also a really important nectar source for many insects, so it represents healthy biodiversity as well.

The flyer was publicised to all Devon Local Council Clerks via DALC's weekly Electronic Bulletin. We also had copies sent out to a private Devon Town and Parish Clerks WhatsApp group and we sent copies directly to each Town and Parish Clerk via email using publicly available contact data on Local Council and District Council websites.

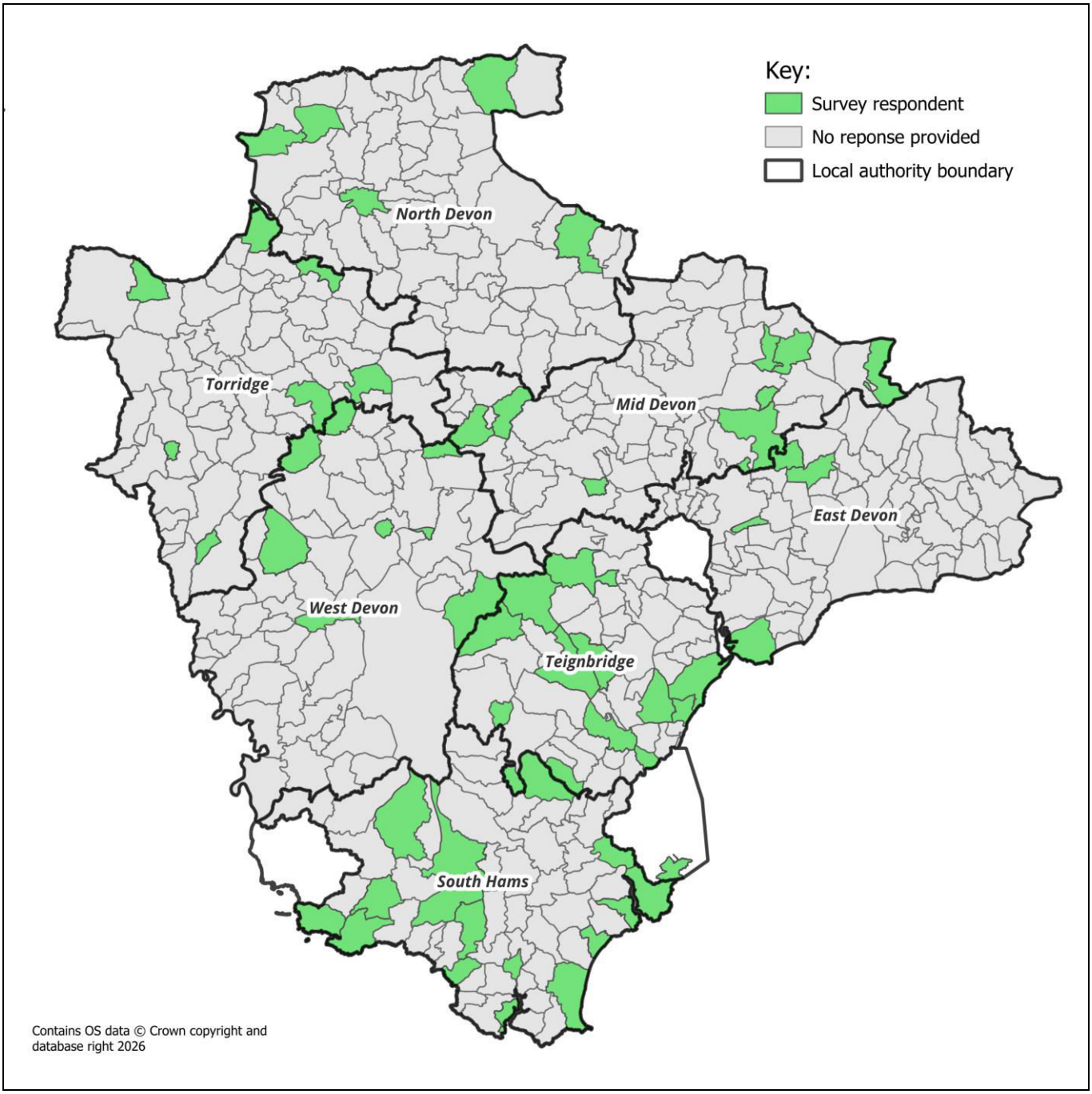
Section 3: The Survey Results

Distribution of Survey Responses

Of the 403 Town and Parish Councils across Devon we received responses from 21 Town Councils and 41 Parish Councils, 62 in total, which is a 15% response rate overall (see Appendix 2 for a full list of the Councils who responded).

The distribution of responses across the 7 rural Districts of Devon, plus Torbay, is set out in Figure 1 and Table 2 below.

Figure 1 – Spatial Distribution of Devon Local Councils who Responded to the Survey



The three areas in white represent the two Devon Unitary Authorities – Plymouth City Council and Torbay Council, together with Exeter City Council. The only Parish or Town Council that exists within these areas in Brixham Town Council, which can be seen in green at the bottom of the Torbay area.

Table 2 – The Distribution of Weed Management Survey Respondents between Parish and Town Councils Across Each District in Devon

District / Area	Parish	Town	Total
East Devon	2	2	4
Mid Devon	6	2	8
North Devon	3	2	5
South Hams	12	4	16
Teignbridge	7	6	13
Torridge	5	2	7
West Devon	6	2	8
Torbay	0	1	1
Total	**41**	**21**	**62**

Measuring the number of responses as a percentage of the overall number of the Council type, 47% of Town Councils responded compared with 11.5 % of Parish Councils.

There were also some significant variations in response rates between Districts, with South Hams having the highest percentage response of Parish Councils with 22% and Teignbridge having the highest percentage of Town Councils with 75%.

Table 3 below shows the estimated margins of error for the degree to which the results in the Town and Parish Council sample groups are likely to differ from their whole population of Councils.

Table 3 – Margins of Error for Town and Parish Council Survey Samples

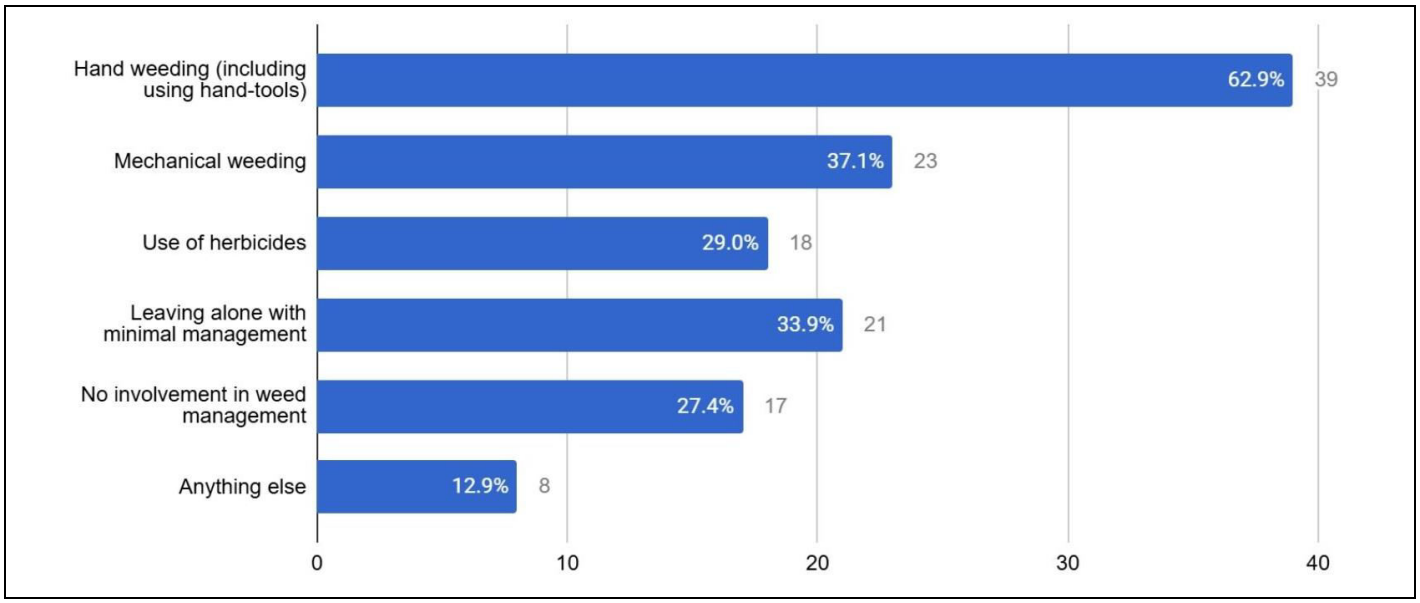
	Town's	Parishes
Total Council Population	45	358
Survey Sample	21	41
Margin of Error (95% Confidence Limit)	16%	11.5%

These margins of error mean that our Survey results for Town Councils could vary from the whole population data by as much as 16% and for Parish Councils by as much as 11.5%.

Operational Approaches to Weed Management

The operational approaches to weed management across the 62 Parish and Town Councils are summarised in Chart 1 below. Across all Councils Hand Weeding is the most common approach with a 63% usage rate**.**

Chart 1 – Basic Operational Approaches to Weed Management



Then, in order of usage, the core approaches were:

- Hand weeding (including use of hand-tools) 63%
- Mechanical weeding – 37 %
- Leaving alone with minimal management – 34%
- Herbicide use – 29 %
- No involvement in weed management – 27%
- Anything else – 13 %

The following responses were included for "Anything else":

- A weed burner
- Foamstream (hot foam treatment)
- Pressure washer
- Mechanical roadsweeping 4 times a year
- Acidic-based application
- Eco-friendly marine algae cleaner

Table 4 – Comparison of Basic Operational Approaches Between Town and Parish Councils

	Towns		Parishes	
Approach	**Number**	**%**	**Number**	**%**
Hand Weeding	17	81%	22	52%
Mechanical	11	52%	11	26%
Herbicides	10	48%	8	19%
Leaving alone	7	33%	14	33%
No Involvement	1	5%	14	33%

Comparing Towns and Parishes main approaches to weed management there are a number of clear trends. 81% of Towns use hand weeding / hand tools as a weeding approach, whereas for Parishes it was just over half (52%). Mechanical weeding methods are used by just over a quarter (26%) of Parishes, whereas it's over half for Towns (52%). When it comes to the use of herbicides there is a big difference, with 48% of Towns using them, but only 19% of Parishes. The same proportions of Town and Parishes are leaving areas alone as a management approach, but when it comes to having no involvement a much greater proportion of Parishes, 33%, are in this category, compared to only 5% for Towns.

There is a large variation however between the statistical significance of these trends due to the differing sample sizes between Town and Parish Councils.

Table 5 – Frequency of Basic Operational Approaches

Frequency	Hand Weeding		Mechanical		Herbicides		Leave Alone		No Involvement	
1 HIGHEST	17	27%	12	19%	7	11%	14	22%	13	21%
2	16	25%	12	19%	2	3%	10	16%	1	2%
3	6	10%	7	11%	6	10%	11	17%	2	3%
4	6	10%	5	8%	5	8%	5	8%	8	13%
5	3	5%	3	5%	4	6%	4	6%	13	21%
6 LOWEST	14	22%	23	37%	38	60%	18	29%	25	40%

It is clear that the highest frequency of usage across the whole group of Council's is Hand Weeding, with 27% and 25% in both No.1 and No.2 positions. The approach with the next highest frequency of usage is Leaving Alone (minimal management) with 22% in the No.1 position and 16% in the No. 2 position. But Mechanical Weeding is similar to this frequency as well with a combined total of 38% in positions 1 and 2.

The weeding approach with the lowest frequency of use amongst Councils was Herbicides, with 60% in the No.6 position. The next lowest frequency of use was having No Involvement at all, which had 40% in the No. 6 position.

Looking at the frequency of use in Town and Parish Councils groups, we can see some marked differences. 57% of Town Councils have Mechanical weeding as the most or second most frequent approaches, compared with 29% for Parish Councils, but 51% of Parish Councils have mechanical weeding as the method with the lowest or second lowest frequency of use, compared with 24% of Town Councils.

With herbicide use, 29% of Town Councils are more frequent users (positions 1 to 3) along with 22% of Parish Councils, but 73% of Parish Councils use herbicides the least frequently (positions No.'s 5 and 6) while only 62% of Town Councils are infrequent users.

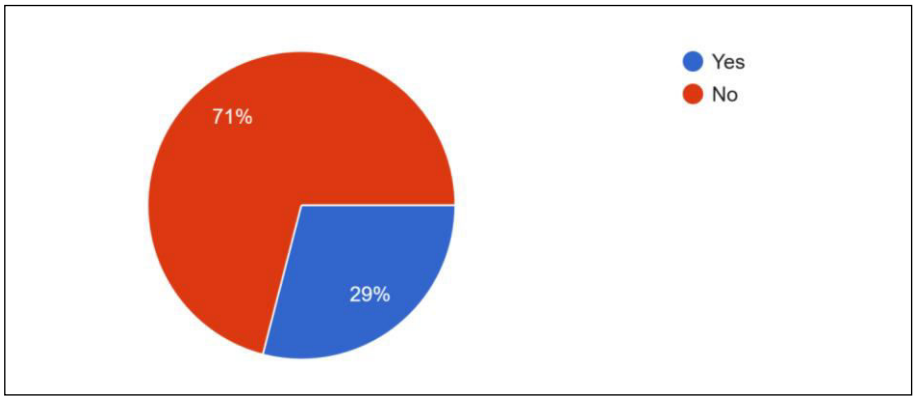
Comparing the relationships between usage frequencies, 67% of Town and Parish Councils who use mechanical weeding the most frequently (positions 1 and 2) are using pesticides the least frequently (positions 5 and 6). However if we look at the more frequent users of herbicides, there doesn't seem to be a similar correlation with lower mechanical or lower use of other methods.

67% of Town Councils who are using the leaving alone with minimal management approach most frequently (positions 1 to 3) are also using herbicides the least frequently (positions 5 and 6) while it is 78% of Parish Councils with this relationship.

Use of Pesticide Products

We know that 29 % of all Councils in the Survey are using herbicides (18 Councils), with a much greater proportion of Town Councils (48%), compared to Parishes (19%).

Chart 2 – Percentage of Councils using Herbicides to Control Weeds



The herbicides that Councils had in stock are set out in Table 6 below.

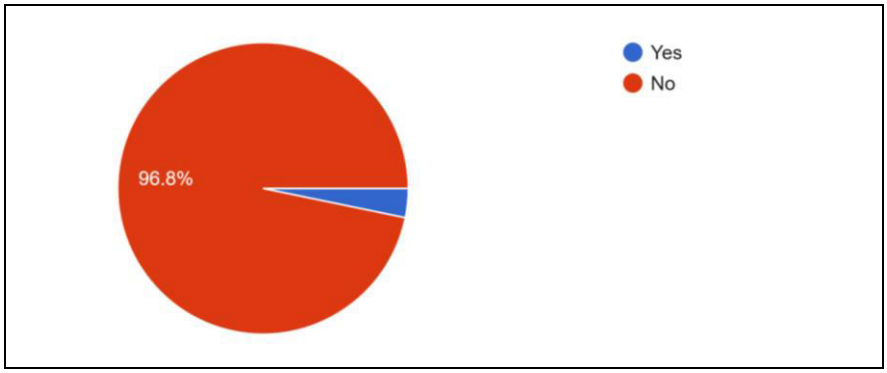
Table 6 – Herbicide Products Currently in Stock

Product	Type
Finalsan (Pelargonic acid)	Natural
Gallup XL (Glyphosate)	Synthetic
Garlon Ultra (Triclopyr)	Synthetic
Nomix G - MAPP18354 (Glyphosate)	Synthetic
Nomix Hilite (Glyphosate)	Synthetic
RHS Weedkiller (Acetic acid)	Natural
Rosate 360 TF (Glyphosate)	Synthetic
Round Up (Glyphosate)	Synthetic
Round Up Pro Active (Glyphosate)	Synthetic

Of the 13 Councils that had herbicides in stock, 10 were synthetic, which equates to 77% of the sample. 9 Councils stored Glyphosate, 1 stored a Triclpyr-based synthetic product and 3 Councils had natural alternatives in stock. 45 Councils (73% of the whole Survey population) had no herbicides of any kind in stock and 5 did not know either way (8% of the whole Survey population). 8 of the Councils storing synthetic herbicides were Town Councils (80% of the sample) and 2 were Parish Councils.

There is only a small percentage (3%) of Councils that are using pesticides other than herbicides, as shown in Chart 3 below.

Chart 3 – Percentage of Councils Using Pesticides other than Herbicides



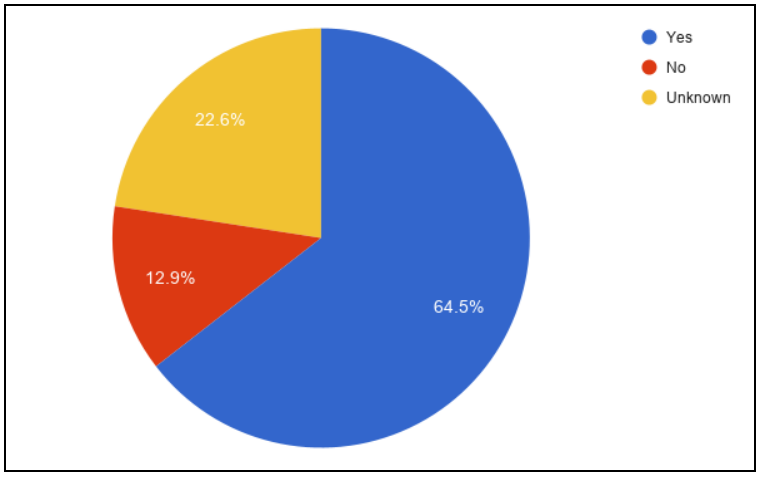
The two products that were recorded are:

- Enclean – a Biocide which contains pelargonic acid which can also be used as a herbicide.
- Aphid sprays (product not specified) for use on flowers

Alternatives to Pesticide Use for Weed Management

Of the 62 Council's in the Survey population, 40 (64.5%) have adopted alternatives to pesticide products, while 8 (13%) have not and 14 did not currently know because services are contracted out (22.5%).

Chart 4 – Percentage of Councils Using Alternatives to Pesticides



Looking in more detail at the data it's possible to see some interesting relationships between herbicide use and the adoption of alternatives.

Table 7 – The Relationship Between Herbicide Use and Adopting Alternatives

Councils using Herbicides	Alternatives Adopted	
Yes (18)	No (8) 44%	Yes (10) 56 %
No (44)	Unknown (14) 32%	Yes (30) 68 %

Of the 18 Councils that are currently using herbicides 10 (56%) have also adopted alternatives and these include:

- Hand weeding and hoeing
- Strimming
- Mowing
- Road sweeper with weeding attachment
- Nimo weed-ripping machine
- Leaving areas to grow for No Mow May as part of Biodiversity Policy
- ENNIS Project to remove non-native species in Exmoor National Park using Rootwave electicution to control Japanese knotweed.
- Kersten UBS Weed Ripper
- Thermal (hot air) lance

Of the 44 Councils that are not using herbicides, 25 (57%) stated that they had not adopted any alternatives. This figure breaks down into the following groupings:

- 14 Councils have no involvement in weed management.
- 1 Council leaves weeds alone with minimal involvement
- 4 Councils are hand-weeding and mechanically weeding
- 1 Council is leaving alone and mechanically weeding
- 5 Councils are hand-weeding and leaving alone with minimal involvement

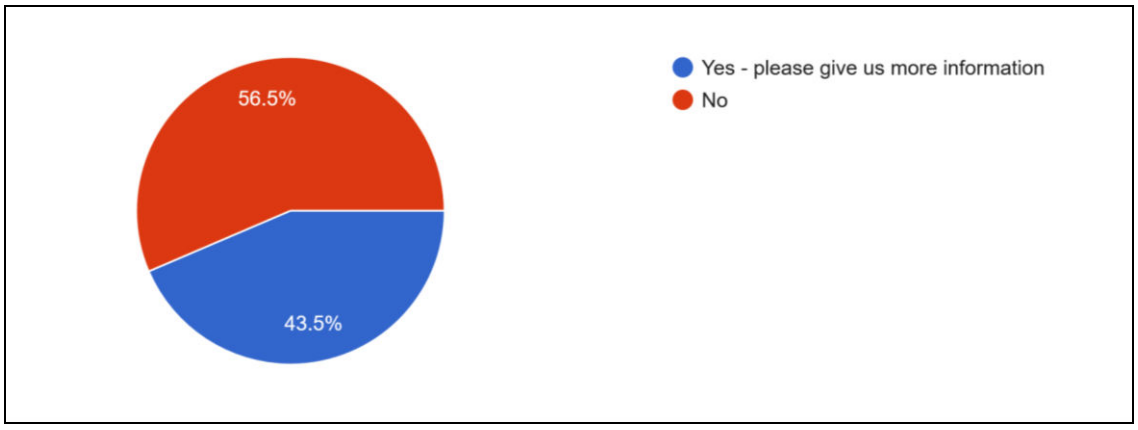
It is therefore possible to say that 11 of these Councils (25% of those not using herbicides) may not have intentionally adopted any alternatives, but their operational models do still use alternative methods of weed management. With the remaining 14 Councils who have no involvement in weed management (32% of those not using herbicides), it is not certain whether herbicides or alternative management practices are being used by private contractors or other agencies.

The 19 Councils who no longer use herbicides and have intentionally replaced them with alternatives use the following:

- Leave weeds alone
- Hand-weeding
- Foamstream machine
- Mechanical weed-ripper (hard rotating brushes)
- Volunteer management of some areas
- Eco-weedkiller
- Terrazza Weedee machine (hard rotating brushes)
- Road sweeper with weeding attachment 4 times a year
- Weed burner (gas powered flame)
- Spade and bucket if weeds get really bad
- Pressure washer
- Electro lance

A significant number of Council's confirmed that they would value further support to explore alternatives to pesticide use.

Chart 5 - Council's Wanting Support to Explore Alternatives to Pesticide Use



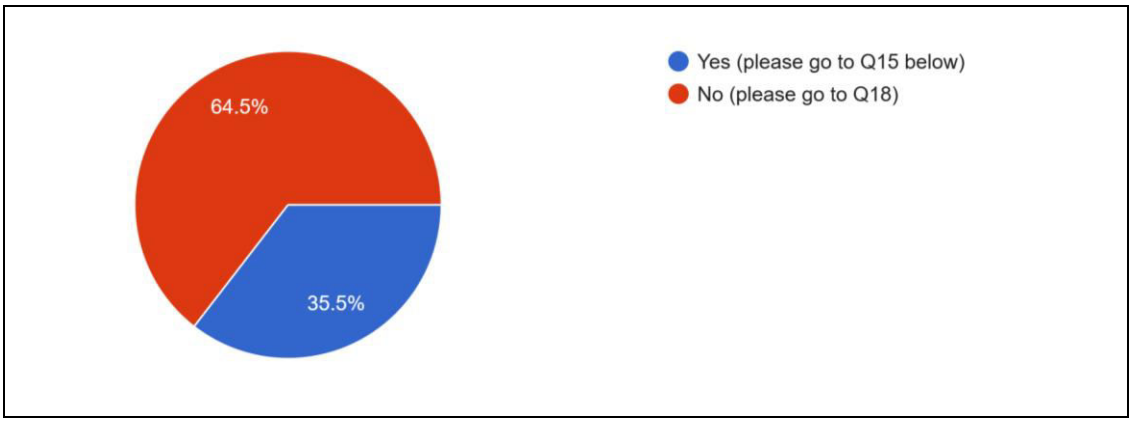
27 Councils (43.5% of the Survey group) requested further support to explore alternatives to pesticide use for controlling weeds. Within this group 12 Councils are currently using herbicides, while the other 15 Councils are not.

Of the 35 Councils that didn't request further support to explore alternatives, 6 are using herbicides while the remaining 29 are not.

Policy Making to Reduce Pesticide Use

Looking at Chart 6 below it is clear that the majority of Councils in the Survey (64.5%) have not had any formal discussions about reducing pesticide use.

Chart 6 – Formal Discussions About Reducing Pesticide Use



The remaining 35.5% (22) Councils have had a wide range of discussions which we have included under a number of headings below:

Supporting a Reduction and Trialling Alternatives

- Multiple different methods trialled, weed burning, hot water treatment, weed removing brush machines but none had a long term desired effect like the spraying. With minimal workforce for the area its the best way still to control them and is only done 3 times a year.

- Yes, the Council is supportive of reducing pesticide use where practical and already prioritises non-chemical methods wherever possible. The Council would welcome an effective glyphosate-free alternative; however, at present there appears to be limited products offering a proven alternative. [*since this statement the Town Council has now invested in a "weed ripping" machine which uses brushes to clear growth September 2026*]

- The Council has chosen to reduce use of glyphosate based weed killer and tried various alternatives. We cannot get around fast enough as nothing seems as effective. Hence the investment in mechanical road weed removers.

- When we changed our Parish Lengthsman contractor we requested not to use glyphosate-based weedkillers. In an ideal world we would be pesticide free, but receive complaints if weeds especially if it effects sight lines for road safety.

Deciding to go Pesticide-Free

- Several years ago parishioners complained about the use of pesticides, so we no longer use them.

- It was agreed in November 2022 to stop using herbicides in maintenance contracts. Contracts were amended to include a statement that herbicides were not permitted and that weeds must be controlled by methods other than herbicides, strimming is acceptable.

- Weeds on pavement edges and across were becoming a problem but the area is rural so it is only more urban areas that this is noticeable. Aware of wildlife needs and also concern for pets it was decided that any form of weed spraying was not acceptable.

- Previous discussions as now pesticide free
- Previous discussions as now pesticide free
- The decision was made to cease use of pesticides.
- Policy to not use them
- Unwilling to use them for ecological concerns
- Do not use
- In 2025, working with ACT Wildlife Wardens and Green Futures Newton Abbot, we voted to become a pesticide free parish.
- The Council resolved to phase out the use of all pesticides, following a formal decision made in 2020.
- There has been concerns raised about these toxic products by parishioners in 2024 and 2025 but we have not been using such products anyway. The Parish Council does not support the use of these product from a health and environmental perspective.

Decision-making Still in Process

- Reports have gone to council.
- It is a contentious issue. Some Councillors and residents want to spray all the pavements, some don't and are very against the use of weedkiller anywhere. Weeds are a common cause of complaint though. We are going to borrow a neighbouring parish's "Weed eezy" mechanical weed remover.
- Estates & Amenities Committee received a researched report from a member on subject
- Ongoing discussions to manage use to where necessary
- Policies around their use since 2019

Staying with Pesticides

- Whether twice yearly weed spraying should continue has been discussed at Council on several occasions however in a survey of residents last year a significant majority wanted to continue with spraying. Other forms of weed control are more expensive.

Based on the above statements out of the 22 Councils who have entered into formal discussions about pesticide use :

55% have decided to go Pesticide-Free

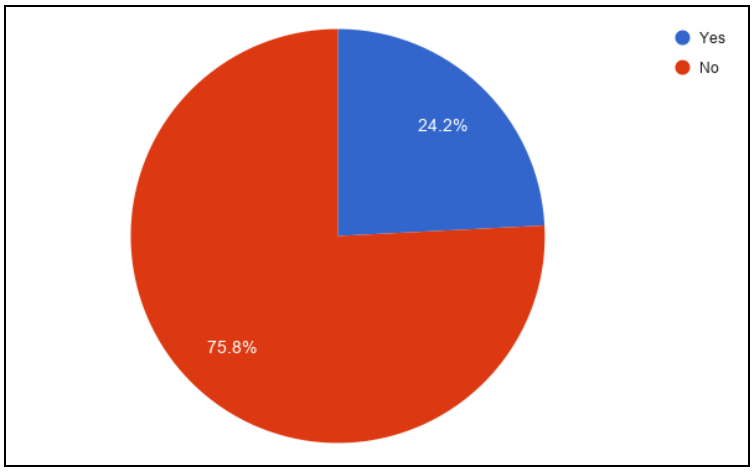
18% are supporting a reduction and trialling alternatives

23% are still in a decision-making process

4% have decided to maintain current pesticide usage

Looking at Chart 7 below, 15 Councils (24%) confirmed that they had made specific policy decisions to reduce pesticides in the last 5 years while the remaining 47 (76%) had not. 8 of the 15 Councils were Parishes and 7 were Towns.

Chart 7 – Policy Decisions to Reduce Pesticide Use in the Last 5 Years

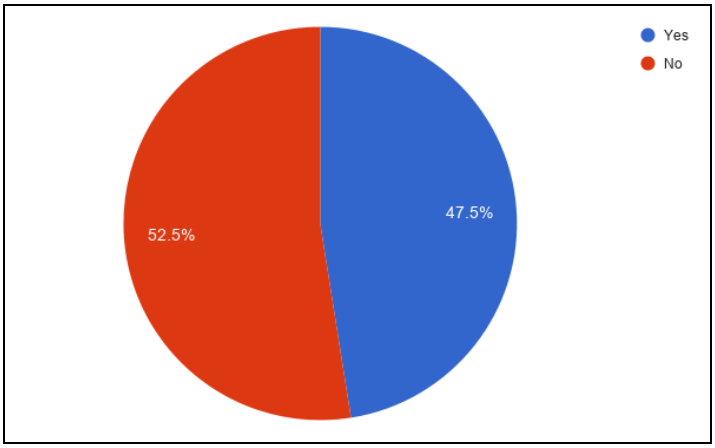


Below are the statements made by 11 Councils showing their pesticide-reduction policy statements:

- It was agreed at a Council meeting that we would not use them.
- The Town Council's Biodiversity Statement reflects the discussions stating the following aim: "Limiting or prohibiting the use of herbicides in grounds maintenance contracts"
- In 2025 the Ranger took a report and policy to committee that was approved to implement a hierarchy of application. This reviewed need for control when considering areas and users. Such as play parks, residential areas and Country Park.
- Council voted to go Pesticide free in 2023
- The decision was made to cease the use of pesticides.
- We have an Environmental Policy where we agreed to reduce use.
- Before I started, but policies and grounds maintenance contract specifies no pesticides
- The use of chemicals harmful to the environment will be avoided where suitable less harmful products exist. The use of harmful chemicals such as insecticides and herbicides on Town Council Sites should be avoided, or minimised where avoidance is possible.
- Stopped using around tree lines and category hedgerows
- Environmental Policy since 2019
- In November 2025 the Parish Council unanimously voted in favour of a proposal that the Council is fully committed to being pesticide-free.

Chart 8 below shows that in Councils where no formal discussion about reducing pesticides has taken place, 47.5% would consider discussions, whereas a slightly higher figure of 52.5% would not consider any formal discussions.

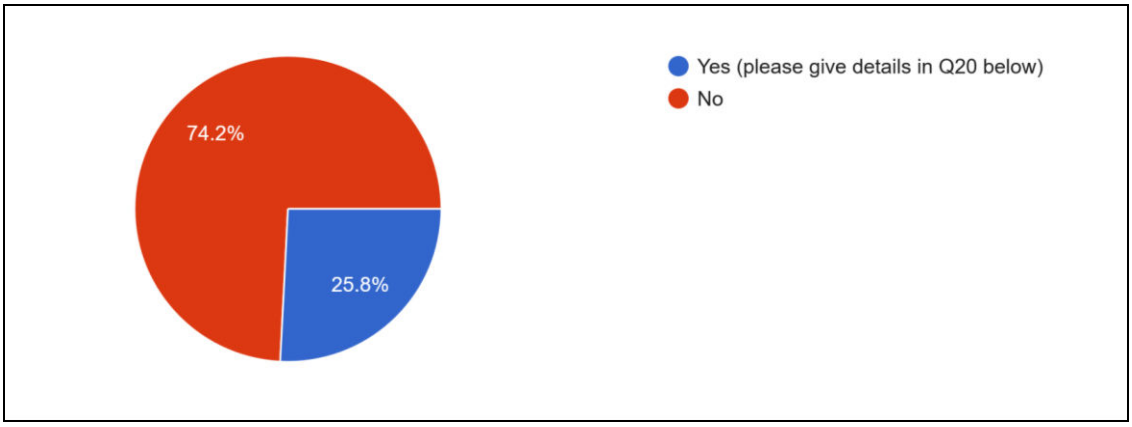
Chart 8 – Would Formal Discussions About Reduction of Pesticides be Considered?



Encouraging Others to Reduce Pesticide Use

Only 26% of all Councils are currently encouraging other groups and organisations to reduce pesticide use across their local area.

Chart 9 – Percentage of Council's Encouraging Others to Reduce Pesticide Use



Of the 16 Councils who are encouraging other groups and organisations, 11 of them are Town Councils (68%) and 5 are Parish Councils (32%) Here are the details of what support is currently being provided:

Community Groups

- Crediton Urban Taskforce [CUT!] meeting monthly to manually weed the streets and pavements in Crediton.
- Modbury Wildlife Action Group
- Partnerships with local organisations
- Written to all leaseholders advising them of the Council's climate declaration and advised not to use.
- We work closely with Exmouth wildlife group and through our Climate change Officer we hold regular educational workshops.

- Our climate action committee and local Wildlife Wardens are organising monthly wildlife talks to install and encourage awareness.

- Weed Monkeys - community lead group & Dartmouth Green partnership

Allotments and Community Gardens

- [Pesticides are] not allowed on allotments

- The Grounds Maintenance team in tender, community garden and allotment holders

- Pesticides not permitted in PC allotments, nor used in the PC orchard. Encourage residents to reduce use with occasional facebook post.

- I have had discussions with the allotment association and the Green Team on reducing and finding alternatives for pesticides. Their answer is that the burden is so great that there is not capacity to hand pull the weeds.

Council – Led Initiatives

- Support of the In Bloom team to not use pesticides.

- Museum display

- We actively encourage all residents in our Parish not to use pesticides.

- Minimal discussions with parishioners through Climate group

- The matter will be discussed at the next Parish Meeting

- Booklet and education

- Letters were sent to all local supermarkets and garden centres requesting that pesticides are not put in entrances/foyers encouraging impulse purchase

- Not yet, but we do intend to. Just working out how without being too 'preachy'.

- The Council's resolution included the use of pesticides on all council-owned or managed assets. Therefore, it is not allowed on the Council's allotment sites. The Council has actively encouraged Torbay Council to reduce pesticide use.

Of the 46 Councils who are not currently encouraging other groups and organisations to reduce pesticide use, 37 are Parish Councils (80%). 19 of the Councils who are not currently encouraging other groups and organisations to reduce pesticide use are requesting support to find alternatives to pesticide use, which is 41% of this particular group. 7 are Town Councils (15%) and 12 are Parish Councils (26%).

Section 4 – Discussion of the Results

Councils' Response to the Survey

In the market research industry response rates of between 10 – 30% are widely seen as good (19), but a study carried out with over 1000 survey response rates in 2022 found an average response rate of 44% (20). The Plants out of Place survey had an overall response of 15% but if response rates are broken down into Town and Parish Councils, there is a marked difference.

21 Town Councils responded to the survey – a 47% response rate for the whole Town Council population of Devon, compared to a much lower response rate from Parish Councils of 11.5%, based on 41 Parish Councils responding from a total Parish Council population of 358.

This difference almost certainly reflects the differing resource capabilities between Town and Parish Councils in terms of staffing. Town Councils have a much greater income from the Council Tax precept than Parish Councils due to their relatively high population density, so they are able to employ more full-time staff. Parish Councils, by contrast, often only have a single employee – the Parish Clerk, who is responsible for all aspects of administration and operational management.

Looking at the statistical margin of error that is generated from the size of the Town and Parish Council Survey groups, compared to their total Devon population, both are greater than the generally accepted level of statistical significance which is +/- 5% within a 95% confidence limit. The larger margins or error of +/- 16% for Town Councils and +/- 14% for Parish Councils mean that the conclusions that we can draw from this Survey may not match the actual situation across the whole 403 Local Councils in Devon. In order to achieve an acceptable margin of error for both survey groups, we would need to have responses from 41 Town Councils and from 174 Parish Councils.

What we *can* say is that the Survey results point to probable trends and patterns within the wider Council population, which can provide a focus for further research and of course they provide valuable data about the behaviour and actions of the 62 Local Councils within the Survey. Based on the level of response to what is the first Survey of its kind amongst Local Councils across Devon, there is certainly a strong case for repeating the Survey, looking at the results and conclusions that we have been able to make about weed management approaches and the use of pesticides by Local Councils.

One possibility could be to create a more simplified and concise survey with a more tailored publicity approach towards Parish Councils. Since Town Councils have more administrative capacity to respond to surveys, perhaps it would be possible to identify Parish hinterlands around particular Towns and then work in partnership with the Town Council's to help improve the publicity and response rates.

There is also a case for ensuring that the results of this survey are easily accessible to all Local Councils and so over time it is possible to build up a greater level of awareness amongst Councils of the value and importance of this research for their operational efficacy and for the wellbeing of local residents and the wider environment. This will hopefully increase the response levels for future weed management surveys.

Overall Weed Management Approaches

Hand-weeding is the most common approach across all Local Councils within the survey with a 63% level of usage across all Councils and a frequency of 81% and 52% respectively between Town and Parish Councils. This is an encouraging result because it shows that Councils are prioritising the least environmentally damaging weed removal technique.

Mechanical weeding is the second most common approach across all Councils with a usage rate of 37%, but there are noticeable differences in usage between Town and Parish Councils. Mechanical weeding is the second most common approach in Town Councils with a 52% usage rate, but the fourth most common in Parishes with a usage rate of 26%. This is almost certainly due to the high capital costs of buying machinery which can be more easily afforded by the higher budget levels of Town Councils. What this result could point to is the need for a more structured system for groups of Parish Councils to work with their local Town Council's in order to co-ordinate the purchase and use of mechanical weeding tools across the rural hinterland as well as the relatively more densely populated urban areas.

Using a minimal approach of leaving weeds alone is the third most popular management approach amongst all Councils with a 34% usage rate and both Parish and Town Councils have a similar usage rate of 33%. This needs to be seen within the context that both Town and Parish Councils are using a range of management approaches, so leaving areas alone is almost certainly an occasional approach where appropriate for local residents and infrastructure.

Pesticide usage is the fourth most common approach across all Councils with a 29 % usage rate, but amongst Town Councils it has a 48% rate of use. Conversely with Parish Councils the use of pesticides to control weeds appears to be the least common approach with only a 19% rate. These figures suggest that although pesticide use is becoming less of a common weed management practice amongst Local Councils, there is a much greater propensity for its use in urban areas.

It is not clear what is driving this marked difference in pesticide usage between Town and Parish Councils. It could be due to resourcing differences, with pesticides being a ore expensive approach to weed management than hand weeding and leaving alone, but these approaches do not have a higher usage rate in Parishes compared to Towns. There may also be factors related to the different weeding requirements of hard landscapes such as paving, road edges and wall edges, of which there is much greater proportion in towns. There is definitely a case for further exploration of the causative factors behind the difference in pesticide usage between Towns and Parishes.

Having no involvement in weed management appears to be the least common approach amongst Councils with a usage rate of 27%, but it is relatively much more common in Parish Councils with a rate of 33% compared with only 5% of Town Councils. This noticeable difference may also be due to financial resourcing capacity for equipment, so it may be more cost-effective for Parish Councils to pay sub-contractors to manage weeds across relatively smaller geographical areas of key villages, as opposed to larger town environments.

The weeding approach amongst all Councils with the highest frequency of use is hand-weeding (52% in positions 1 and 2) with pesticide usage having the lowest frequency of use (60% in position 6). This suggests that although pesticides are being used by 29% of Councils who were surveyed, they are not being used as a regularly as other approaches by most Councils.

Pesticides appear to have a higher frequency of use amongst Town Councils (29% in positions 1 to 3) than in Parish Councils (22% in postions 1 to 3) and are more likely to have the lowest frequency of use amongst Parish Councils (73% at positions 5 and 6) compared to Town Councils (62% at positions 5 and 6). This suggests that pesticides are more likely to be used with greater regularity in towns than they are in rural areas.

Pesticide Usage

97% of the 18 Councils in the survey who currently use pesticides are using herbicides. This confirms the general understanding that most of the pesticides used by Local Councils are herbicides involved in the management of weeds.

75% of those Councils with herbicides in stock have synthetic formulations (made from human designed molecular formulations) and 67% of these are glyphosate – based. This shows that synthetic formulations of pesticides are still the product of choice for those Councils who want to use chemical treatment of weeds. With the growing understanding of the long term health and environmental risks of synthetic herbicide use, this finding is concerning and suggests that more advice and support is needed to help councillors and officers to understand the impacts of synthetic herbicide use.

80% of the Councils who have herbicides in stock are Town Councils, which could reflect the greater need for chemical weed management solutions in urban areas with greater proportions of hard standing which makes mechanical or hand – weeding more difficult.

Glyphosate has now been classed by the International Agency for Research on Cancer as a Group 2A Agent – "probably carcinogenic to humans" (21) and there is a growing body of evidence for its involvement in other human health conditions such as Parkinson's disease and respiratory disorders (9, 10). There is also good evidence that glyphosate persists in soil, surface water and groundwater bodies for between 7 – 60 days (22) , potentially causing wider damage to plant and microbial communities such as plant growth promoting rhyzobacteria and to human beneficial gut bacteria (23). For these reasons and recognising that there is a growing body of research now linking glyphosate to a range of environmental and human health disorders, it certainly seems sensible and responsible to aim to reduce its use wherever possible.

Alternatives to Pesticide Use

It is clear from the results that a significant majority (64.5%) of Councils are adopting alternative approaches to pesticide use for managing weeds, which is greatly encouraging. The main alternatives currently being used sit in the following key categories:

- Naturally occurring chemicals
- Hand – weeding
- Mechanical tools and equipment
- Heat – based tools
- Electricity – based tools

The naturally occurring herbicide formulations being stored by 3 Councils were either concentrated acetic acid or pelargonic acid. Concentrated acetic acid (5% - 20%) has been shown to act as an effectivIe contact herbicide (24) which readily breaks down in soils in under 2 days (25). It does carry the risk of being an irritant and causing damage to the eyes as well as corroding some metals and causing the dissolution of mortar work, but it is not classed as a carcinogen.

Pelargonic acid, sometimes called nonanoic acid is a fatty acid which occurs naturally as esters in the oil of the pelargonium plant. On contact with plants it rapidly disrupts plant cell membranes leading to rapid cellular leakage, tissue dehydration and plant death (26). Similarly to acetic acid it breaks down within soils and water bodies within 2 days and although poses no toxicity threat to humans, can act as an irritant and cause serious damage to the eyes.

Studies comparing acetic acid and pelargonic acid with glyphosate suggest that the natural herbicides are effective (27, 28), but they need to be applied over a longer period of time and with higher volumes to achieve comparable results, which may mean a greater financial expense than for glyphosate.

The three main types of mechanical equipment that are currently being used for weed management are walk-along weed rippers, weed-removal attachments fitted to road-sweepers and strimmers. The larger and more expensive weed rippers are more likely to be used by Town Councils, with Parish

Councils more likely to use a strimmer as their primary mechanical weed management tool. The weed-ripping technology, which uses fast-rotating hard brushes has been found to effectively clear weeds from gaps between paving slabs and other recessed areas within hard landscaping and successfully replaced the use of synthetic herbicides for this purpose (29). With a price-point ranging from £1000 - £3000. This could potentially be a more affordable option for groups of Parish Councils or in Weed Management Partnerships with Town Councils.

The two heat – based tools being currently used are the gas lance which generates a flame to kill weeds and the Foamstream which uses a biodegradable hot foam to kill weeds. Both systems have been found to be effective at killing weeds (30, 31), with the hot foam system providing a more comprehensive impact because it penetrates deeper into the plant's root system. However the hot foam system is much more expensive to purchase with average prices around £25,000 compared to between £500 - £2000 for the gas lance.

The sole reference to the use of electricity for weed control was related to the participation in the Exmoor Non-native Invasive Species Project (ENNIS) for the control of Japanese knotweed (32). This is using a brand of electro lance called Rootwave and the results have been effective enough to warrant the purchase of the equipment for use in Exmoor National Park.

With 27 Councils requesting further support to explore alternatives to pesticide use, there appears to be a definite need for a more comprehensive review of the efficacy of the main different approaches and how they compare in terms of financial, environmental and health costs with synthetic herbicides.

Formal Discussions and Policy Making

The majority of Councils in the Survey, 40 (64.5%) have not had formal discussions or made policy decisions about reducing pesticide use, but 44 Councils (71%) currently do not currently use herbicides to manage weeds. These results suggest that formal discussion and policy-making is not the only route for Local Councils to decide to reduce pesticide use.

The four key subject areas around which Councils have engaged in formal discussions are:

- Supporting a Reduction and Trialling Alternatives
- Going Pesticide-Free
- Decision-making ongoing
- Staying with Pesticides

This spread of debate shows that those Councils who are formally looking at the issue of pesticide use across their area are coming to different conclusions as well as working at different paces.

Of the 15 Councils that have made formal policy decisions around reducing pesticide use, 7 are herbicide users, while 8 are not. This shows clearly that some Councils may still decide to maintain the use of pesticides after making formal policy decisions to reduce their use, while others have decided to stop using these chemicals to control weeds and seek alternatives.

52.5% of Councils that haven't had any formal discussions about reducing pesticide use would not consider any formal policy-making decisions. 21 of these Councils do not use herbicides, so this may suggest that formal decisions were made in the past, over 5 years ago, but it also may further underline the idea that a formal policy-making pathway isn't necessarily needed for Councils to reduce or move away from pesticide use.

There are 5 Councils who would not consider making any formal policy decisions and are still using herbicides. This suggests that these Councils are still committed to using synthetic herbicide products

to control weeds, despite the growing evidence of their impacts on the wider environment and human health. It would be helpful to understand more about how these Councils have come to these decisions with some further research.

Encouraging other Groups and Organisations to Reduce Pesticide Use

With 74% of Local Councils in the survey not actively involved in encouraging other groups and organisations in their local community to reduce pesticide use, this issue appears not to be seen as something for Councils to take a lead on currently. With the emerging evidence of the harm that synthetic herbicides and other synthetic pesticide formulations are causing to peoples health and to the wider environment, it appears as though there is a strong need for more awareness raising and education with Local Councils across Devon around the potential impacts of pesticides and the alternative weed management approaches that are available.

The 16 Councils who are engaged in helping other groups and organisations to reduce pesticide use are showing a great diversity of approaches to partnership-building and support through a wide range of initiatives, which is hugely encouraging. Through this inspiring work the pesticide reduction message is being conveyed to 6 local community groups, 4 allotments and 7 Council-led initiatives.

Section 5 – Conclusions and Next Steps

Conclusions

The Survey Response

1. The response rate is acceptable for a first phase, but has relatively high margin of error, so offering an initial insight into Local Councils weed management approaches and relationships with pesticides, but not necessarily an statistically significant picture of what is happening in all 403 Local Councils across Devon.

2. There is a clear need to repeat the Survey and focus more closely on boosting Parish and Town responses respectively.

Overall Weed Management

3. High levels of hand-weeding and mechanical weeding shows that Councils are adopting methods which are less damaging for peoples' health and the wider environment.

4. Much lower rates of mechanical weeding in Parishes compared to Towns which could be due to resourcing differences.

5. Low overall rates of herbicide use, but relatively high rates of use in Towns compared to Parishes which could be due to a combination of resourcing and to the built-up nature of Town environments requiring more focus on difficult to manage weeds growing out of concrete, paving or tarmac.

6. Contracting out is much more common in Parishes than it is in Towns which may also be due to resourcing and differences in the areas that need to be managed.

Pesticides Used and Alternatives

7. The Vast majority of pesticides used are synthetic herbicides, primarily glyphosate-based. Since glyphosate is being found to last longer in soils than initially thought and is increasingly being linked to a range of human health issues, including several forms of cancer and Parkinson's disease, this could represent an issue for public health.

8. A substantial majority of Councils are now exploring alternatives to herbicides which is a hugely positive response to the emerging challenges of conventional synthetic herbicides.

9. Synthetic herbicides efficacy for weed removal is relatively high for the financial cost, so more work needs to be done to support Councils and communities to adopt a whole-system assessment of the cost-benefits of these chemicals.

10. There is a clear request from Councils for further support to identify the most operationally effective alternatives to synthetic herbicides for the management of weeds, so there is a need to carry out more comprehensive review of the current evidence base, both in the UK and overseas.

Policy-making and Supporting Other Groups and Organisations

11. The majority of Councils in the survey have not had any formal discussions nor made any policy decisions around the reduction of pesticide use to manage weeds.

12. Of the 22 Councils who have entered into formal discussions about reducing pesticide use, over half (55%) have decided to go pesticide-free.

13. There is a need for further research to understand more clearly the decision-making processes where Councils have formally agreed to continue using herbicides to control weeds rather than using safer alternatives.

14. 76% of Councils in the Survey are not involved in encouraging other local groups or organisations to reduce their usage of pesticides.

15. The 16 Councils who are engaging with other groups and organisations have boosted their reach to a further 10 local groups and organisations and another 7 public awareness initiatives.

Next Steps

The Plants out of Place survey has definitely provided a really useful insight into how many Town and Parish Councils across Devon are tackling the priority issue of weed management in their local area whilst balancing the needs of people's health and the needs of our wider ecosystem.

Based on the planning, delivery and the outcomes of the survey we suggest the following next steps with the Plants out of Place initiative:

- Make the Survey Report available to all Local Councils in an electronic format.
- Explore working with Councils who have expressed interest in further support.
- Develop an online database to record the effectiveness of different non-synthetic chemical weed management processes using a traffic-light system which combines weed-removal, cost and environmental and human health impacts.
- Look at streamlining the survey so that it is more focused on the key issues that we want feedback on from Town and Parish Councils.
- Repeat the survey and aim for a greater response so that we can move towards a more statistically significant result.

References

1. Definition of pesticides (2026), European Commission website - https://food.ec.europa.eu/plants/ pesticides_en

2. Definition of pesticides (2026), Health and Safety Executive website - https://www.hse.gov.uk/pesticides/about-pesticides.htm

3. Definition of pesticides (2026), Pesticide Action Network website - https://www.pan-uk.org/key-issues/

4. Zhou, W., Mengmeng, L., Varenyam, A., (2025), "A comprehensive review on environmental and human health impacts of chemical pesticide usage", Emerging Contaminants, Vol 11, Issue 1, pp. 100410.

5. Pesticide Action Network, (2025), "A Snapshot of Pesticide Use by UK Councils after a Decade of Campaigning".

6. Amenity Pesticide Usage in the UK, D Garthwaite, G Parrish & L Ridley, 28/04/2022 - https://pusstats fera co uk/api/report-download/689

7. Zhang, L., Rana, I., Shaffer, RM., Taioli, E. and Sheppard, L. (2019) "Exposure to glyphosate-based herbicides and risk for non-Hodgkin lymphoma: A meta-analysis and supporting evidence", Mutation Research/Reviews in Mutation Research, Vol 781.

8. Panzacchi, S., Tibaldi, E., De Angelis, L., Falcioni, L., Giovanini, R. et al (2025) , "Carcinogenic effects of long-term exposure from prenatal life to glyphosate and glyphosate-based herbicides in Sprague-Dawley rats", Environmental Health, Vol 24, Article 36

9. Bastiaan R Bloem and Tjitske A Boonstra (2023) "The inadequacy of current pesticide regulations for protecting brain health: the case of glyphosate and Parkinson's disease", The Lancet, Volume 7, Issue 12, pp. 948 – 949.

10. Petit, P., Berger, F., Bonneterre, V. and Vuilerme, N., (2025) "Investigating Parkinson's disease risk across farming activities using data mining and large-scale administrative health data." , Nature Portfolio Journal for Parkinson's Disease, Vol 11, Art. 13.

11. Goulson D. (2019). Insect declines and why they matter. A report commissioned by the South West Wildlife Trusts

12. Williams, S. (2021) "Concern for many butterfly species, despite "good year " for populations ",UK Centre for Ecology and Hydrology website.

13. Powney, Gary D et al (2019) " Widespread losses of pollinating insects in Britain", Nature Communications, Vol 10, No. 1018.

14. Ramage, CI., Lopes dos Santos, A., Yon, L., Johnson, MF., Vane, CH (2025) "Widespread pesticide pollution in two English river catchments of contrasting land-use: from sediments to fish", Environmental Pollution, Vol 375.

15. Harrison, XA., Johson, A., Zappala, S., Poyntz-Wright, P., Tyler, CR., (2023) "Pesticide pollution associations with riverine invertebrate communities in England", Science of the Total Environment, Vol 903.

16. Gunstone T., Cornelisse, T., Klein K., Dubey A., Donley, N. (2021) "Pesticides and Soil Invertebrates: A Hazard Assessment", Frontiers of Environmental Science, Vol 9.

17. Rigal, S. and Devictor, V. (2022) "Farmland practices are driving bird population decline across Europe.", Proceedings of the National Academy of Science, Vol 120, Issue 21.

18. Green Futures Devon (2025) The Pesticide-Free Devon Conference Report, https://www.pesticidefreedevon.co.uk/pesticide-free-devon-conference-2025

19.Survey Monkey Website (2026) https://uk.surveymonkey.com/curiosity/how-many-people-do-i-need-to-take-my-survey/

20 Wu MJ., Zao K., Fils-Aime, F., (2022) "Response rates of online surveys in published research : A Meta Analysis", Computers in Human Behaviour Reports, Vol 7, pp. 100206

21 International Agency for Research on Cancer (2026) Website :https://monographs.iarc.who.int/ list-of-classifications/

22. Kanissery, R., Gairhe, B., Kadyampakeni, D., Batuman, O., Alferez, F. (2019) "Glyphosate: Its Environmental Persistence and Impact on Crop Health and Nutrition", Plants (Basel), Vol 13, Issue 8, pp. 499

23 Van Bruggen A.H.C. et al (2021) "Indirect effects of herbicide glyphosate on plant animal and human health through its effects on microbial communities", Frontiers of Environmental Science, Vol 9.

24 Webber, C., Spaunhorst, D., White Jr, P.M., Shrefler, J.W. (2018) "Impact of Acetic Acid Concentration, Application Volume, and Adjuvants on Weed Control Efficacy", Journal of Agricultural Science, Vol 10, No. 8

25 Tagami, K., Uchida, S., Ishii, N. (2011) "Measurement of the fate of acetic acid form carbon in soil solution of flooded soils using high performance liquid chromatography coupled with isotope ratio mass spectrometry", Geoderma, Vol 165, Issue 1, pp. 25 - 30

26 Priesler, A. et al (2026) "Pelargonic Acid: From Historical Uses to Future Perspectives in Sustainable Agriculture", Journal of Agricultural Food Chemistry, Vol. 74, Issue 12, pp. 9903 - 9915

27 Smith-Fiola, D. and Gill Stanton (2024) Vinegar – An alternative to glyphosate?, University of Maryland Extension, https://extension.umd.edu/resource/vinegar-alternative-glyphosate/

28 Ganji, E. and Endert S. (2024) " The effect of two-year application of pelargonic acid on the growth of *Cirsium arvense* (L.) Scop. and *Sonchus arvensis* L", Frontiers in Agronomy, Vol 6.

29 Welsh Government (2026) "Mechanical Weed Control at Bannau Brycheiniog National Park Visitors Centre, https://www.gov.wales/sites/default/files/publications/2026-02/integrated-pest-management-case-study-mechanical-weed-control-at-bannau-brycheiniog-national-park-visitor-centre.pdf

30 Upadhyay, A. et al (2024) "Non-chemical weed management – harnessing flame weeding for effective weed control", Heliyon, Vol. 10, Issue 12

31 Kanatas, P. et al (2023) "Hot foam: Evaluation of a new, non-chemical weed control option in perennial crops", Smart Agricultural Technology, Vol 3, Article 100063.

32 Exmoor National Park, "Rootwave Pro Trails", https://www.exmoor-nationalpark.gov.uk/nature-and-landscape/nature-recovery/ennis-project/about-the-ennis-project/rootwave-pro-trials

33 UK Pesticides National Action Plan (2025), pubs. UK Government.

© Green Futures Devon CIC 2026

Appendix 1 – Devon County, District and Unitary Council Pesticide Usage Data 2024

Pesticide Action Network UK Council Pesticide Survey 2024, based on FOI requests											
Survey Questions	**Devon County Council**	**East Devon District**	**Teignbridge District**	**South Hams District**	**West Devon District**	**Torridge District**	**North Devon District**	**Mid Devon District**	**Exeter City**	**Plymouth City**	**Torbay Council**
Where does this Council still use Pesticides?											
Parks and Green Spaces	No	No	Yes	Yes	No	No	Yes	No	Yes	No	Yes
Cemetries	No	No	Yes	No	No	No	No	No	Yes	No	Unknown
Playing Fields	No	No	No	No	No	No	No	No	Yes	No	Yes
Road Verges and Roundabouts	Yes	No	No	No	No	No	No	Yes	No	No	Yes
Hard surfaces e.g. pavements	Yes	No	Yes	No	No	No	No	No	No	Yes	Yes
Housing Estates	No	No	No	No	No	No	No	Yes	Yes	Yes	Unknown
What volume of herbicides did the Council use in 2024?	121 l/kg	Unknown	20.65 L/kg	25 L/kg	25 L/kg	0	73.2 l/kg	5 L/kg	56.25 L/kg	1486 L/kg	Unkown
Did the Council or its contractors use glyphosate-based herbicides in 2024?	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
How much money was spent on pesticides in 2024?	52,000	Unknown	1961	1200	1625	0	5492	0	6599	7518	Unknown
Does the Council have a policy in place which aims to reduce the use of pesticides on land under its control?	Yes	No	No	Yes	Yes	No	No	Yes	Yes	No	Yes

Appendix 2 – Parish and Town Councils who Responded to the Survey, grouped into their local District Areas

Name of the Council	Type	District
Cranbrook Town Council	Town	East Devon
Plymtree Parish Council	Parish	East Devon
Payhembury Parish Council	Parish	East Devon
Exmouth Town Council	Town	East Devon
Crediton Town Council	Town	Mid Devon
Coldridge Parish Council	Parish	Mid Devon
Clayhidon	Parish	Mid Devon
Sampford Peverell Parish Council	Parish	Mid Devon
Cullompton Town Council	Town	Mid Devon
Willand Parish Council	Parish	Mid Devon
Lapford Parish Council	Parish	Mid Devon
Burlescombe	Parish	Mid Devon
Clayhidon	Parish	Mid Devon
Molland Parish Council	Parish	North Devon
West Down Parish Council	Parish	North Devon
Georgeham Parish	Parish	North Devon
Lynton & Lynmouth Town Council	Town	North Devon
Barnstaple Town Council	Town	North Devon
Stoke Gabriel	Parish	South Hams
Broadhempston Parish Council	Parish	South Hams
Cornwood Parish Council	Parish	South Hams
Kingswear Parish Council	Parish	South Hams
Kingsbridge Town Council	Town	South Hams
MODBURY PARISH COUNCIL	Town	South Hams
Salcombe Town Council	Town	South Hams
Yealmpton Parish Council	Parish	South Hams
Thurlestone Parish Council	Parish	South Hams
Newton and Noss Parish Council	Parish	South Hams
Staverton Parish Council	Parish	South Hams
Aveton Gifford	Parish	South Hams
Strete Parish Council	Parish	South Hams
Wembury	Parish	South Hams
Dartmouth Town Council	Town	South Hams
Ugborough Parish Council	Parish	South Hams
North Bovey	Parish	Teignbridge
Moretonhampstead Parish Council	Town	Teignbridge
Coffinswell Parish Council	Parish	Teignbridge
Stokenham Parish	Parish	Teignbridge
Buckland in the Moor Parish Meeting	Parish	Teignbridge
Buckfastleigh Town Council	Town	Teignbridge
Newton Abbot Town Council	Town	Teignbridge
Dawlish Town Council	Town	Teignbridge
Teignmouth Town Council	Town	Teignbridge

Bovey Tracey Town Council	Town	Teignbridge
Hennock Parish Council	Parish	Teignbridge
Bishopsteignton Parish Council	Parish	Teignbridge
Dunsford Parish Council	Parish	Teignbridge
Alverdiscott & Huntshaw Parish Council	Parish	Torridge
Clovelly	Parish	Torridge
Northam Town Council	Town	Torridge
Virginstow Parish Meeting	Parish	Torridge
Holsworthy Town Council	Town	Torridge
Petrockstowe PC	Parish	Torridge
Dolton Parish Council	Parish	Torridge
Okehampton Town Council	Town	West Devon
Highampton Parish Council	Parish	West Devon
Meeth Parish Council	Parish	West Devon
Bratton Clovelly Parish Council	Parish	West Devon
Chagford Parish Council	Town	West Devon
Sticklepath Parish Council	Parish	West Devon
Lydford Parish Council	Parish	West Devon
Bondleigh Parish Meeting	Parish	West Devon
Brixham Town Council	Town	Torbay