KENT'S PLAN BEE

Kent County Council's Pollinator Action Plan

Public Perception of Pollinators Survey Report

September 2021

For a Pollinator Friendly Garden of England

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Executive Summary

Pollinators, and bees in particular, have become big news stories in the last few years. National and local media carry frequent reports covering the widely-recorded and ongoing decline of insect numbers and diversity, and its impact – and pollinating insects are often the focus for these stories. Numerous podcasts, general studies and popular books are available about pollinators and their importance and plight – they have even attracted a dedicated weekend on national radio in the form of BBC Radio 2's recent Big Bee Challenge.

But how much do the general public know, understand and care about the facts and figures behind this pollinator zeitgeist? How much public support is there for the suggested ways that we can help the decline of insects, and pollinators in particular?

In early 2021, as one part of taking forward *Kent's Plan Bee: Kent County Council's Pollinator Action Plan*, it was realised that greater information was needed to answer these questions. A public perception of pollinators survey was duly undertaken in May 2021 across Kent. The overall purpose for this survey was to better understand the knowledge and attitudes of the people of Kent about pollinating insects and to gauge how the Kent public feel about work and management that could be taken to address the conservation of Kent's pollinators.

This report provides details of this perception survey, setting out the methods used, the results that have been produced and the findings and conclusions of the survey.

The survey collected a large and notable sample of 4655 responses. Participants of the survey came from across Kent and from all age-groups, with the 55-64 age group providing the most responses. Young people under the age of 24 were the least represented. From the survey, we have gathered important and useful information including:

- From the number of people that engaged with the survey, it would seem that many are interested in, and supportive of, the pollinator agenda.
- There is good general understanding of pollination and many people were able to recognise some, if not all, groups of pollinators; and there is a very strong understanding of the causes of pollinator decline and the possible consequences of such a decline.
- Respondents showed a strong preference for less-frequently cut grassland in public spaces and road verges, although a much smaller group did highlight concerns about issues relating to weeds, driver-visibility, tidiness, and litter.
- In response to further information provided about Plantlife's recommended best-practice for species-rich grassland for pollinators, the majority of respondents supported a twice-yearly cut.
- Furthermore, there was strong support shown for wilder verges, wild spaces generally and flower-rich grassland in urban as well as rural settings, managed for pollinators and wildlife.

Recommendations and further action proposed include:

1. Wide dissemination of this report to partners, interested bodies and the general public.
2. Well-planned public communications and awareness-raising to continue, which reaches wider audiences and builds a greater understanding of the importance and needs of Kent's pollinators, their habitats and conservation management

requirements. Emphasis includes communicating the benefits and significance of introducing a twice-yearly cut for the management of wilder verges and public grassland.

3. Where widespread changes to grassland management is planned or considered, ensure this is accompanied by clear communications that includes why the change is being made, the benefits it will bring and addresses some of the public concerns about wilder verges that the survey has identified.
4. Use the findings of this survey for designing and planning subsequent similar survey work in the future.

Background and Introduction to the Perception Survey

Over the last decade, a growing body of scientific evidence strongly points to the decline of insect numbers and diversity within the UK and internationally, with studies highlighting the causes and implications of these declines. General awareness, amongst practitioners, decision-makers, and the general public, has also increased, focused on the importance and the plight of insect populations, and specifically insect pollinators, with increasing amounts of action being planned and undertaken.

In 2014, the first national Pollinator Strategy was published by the Department for the Environment, Food and Rural Affairs (Defra) for England. In a subsequent Implementation Plan published by Defra in 2018, actions were prepared by a Pollinator Advisory Steering Group, which was made up of 30 different organisations from across national and local government, public bodies, universities, research organisations and conservation, farming, and countryside groups. Two of the 45 actions contained within the report sought to:

> *'Encourage and support major landowners/managers including government departments, County farm managers and other public bodies to take action and agree plans and targets for pollinators';* and,
>
> *'Support the adoption of new 'best practice' management guidelines for road verge biodiversity.'*

At the same time, Kent County Council started taking steps in 2013 to address pollinators locally within Kent, recognising pollinators' vital economic and environmental importance across the county. The first Kent's Bee summit was held in October 2013 and moves were started to develop action to conserve Kent's pollinating species.

In 2019, Kent County Council adopted **Kent's Plan Bee,** the county council's pollinator action plan**.** Over the last 18 months, work has been underway to deliver the plan and working towards achieving the aims of Plan Bee.

One of Kent's Plan Bee objectives is '***To mobilise the people of Kent, to take action themselves. Kent's Plan Bee aims to help them to greater awareness of the importance of pollinators in all our lives and everybody's need and ability to act to protect them.***'

In order to be able to address this objective and raise levels of public awareness, it was recognised that a survey was needed to establish what, and how much, the people of Kent understand about the role of pollinators, their importance and their needs. To date, there has been no systematic collation of such information in the county. With this in mind, in

spring 2021, the KCC Kent's Plan Bee team designed and carried out an online **Public Perception of Pollinators Survey**.

The survey's three main purposes were to collect data and baseline information to:

1. Gauge the public's current understanding of what pollinators are, their needs and issues;
2. Determine how people feel about public green spaces (roadside verges, park edges, grassy open spaces) being managed specifically for pollinators and being cut less frequently to manage grassland habitats for biodiversity, and;
3. Make recommendations on future engagement to inform the public on pollinators and how managing green spaces for pollinators can be beneficial to both pollinators and people.

An additional aim of the survey was to determine Kent's public perceptions of road verge and green space management. To date this has been limited to feedback received by Kent Highways, with such complaints about uncut grass verges are often quoted as a barrier to establishing more wilder verges. Therefore, one important, underlying intention of the survey is objectively to collate quantified and qualitative information that helps to determine the public's potential reception of unmown or less-frequently mown grassland and verges.

Survey Method

The online survey consisted of 15 main questions about pollinators, with 4 optional personal questions which sought to collect more information about the participating audience. The questionnaire was designed on, and used, the Microsoft Forms survey platform, as recommended by the Data Protection Office of KCC. Full details of the GDPR privacy notice were made available to all participants at the beginning of the questionnaire.

The questions sought to collect responses on a range of issues relating to: people's understanding of pollinators and the process of pollination; people's knowledge of pollinating species and of wild flowers; and importantly, people's perception and reaction to different types of grassland management at the beginning and end of the survey. Results and analysis of the findings are presented below.

This survey was carried out throughout May 2021 and coincided with the national campaign 'No Mow May', run by Plantlife, the national Wild Plant Conservation Charity. 'No Mow May' urges all owners and managers of grassland and lawns, big and small, not to use mowers and grass cutters for May to maximise spring flowers and nectar production. 'No Mow May' 2021 received significant coverage in national and local press and media channels, as well as through social media. This raised the public's awareness of the campaign to reduce grass-cutting for the benefit of biodiversity generally and pollinators specifically[1].

The intended audience for the perception survey was set to be as wide as possible, with no particular focus aimed at any specific age-groups, backgrounds or interest groups. It was hoped it would generate responses from 'cold audiences'- those people who have no

[1] https://www.plantlife.org.uk/uk/discover-wild-plants-nature/no-mow-may

previous involvement or interest in pollinators and wildlife - as well as 'warm' audiences who may already be interested or active in this subject. Therefore, the survey audience was all residents of Kent, people who travel through and commute to Kent, and visitors and users of public spaces and green space in Kent. The digital questionnaire was only made available online, and was advertised through social media partners, specifically Explore Kent and Kent Green Action, as well as Kent County Council's own Facebook page. It was also shared and publicised by other partners and online sites, as well as local authority media and newsletters, parish councils and other local newsletters and other media. The survey also coincided with the launch of the new Kent's Plan Bee Facebook page in May 2021, which was used to promote the questionnaire.

After May 31st, when the online questionnaire closed, the results were tabulated and anonymised. The results were handled following KCC's DPO protocol[2] . Confidential information from each respondent was separated from the questionnaire responses. Detailed analysis has subsequently been carried out on all the responses and prepared for presentation in both graphic and written formats in the following section.

[2] https://www.kent.gov.uk/about-the-council/information-and-data/access-to-information/gdpr-privacy-notices/environment,-planning-and-enforcement/kents-plan-bee-public-perception-survey-privacy-notice/_nocache

Results

The following section presents the results and analysis for each question.

Q1) Image association – initial positive and negative associations with wilder verges

Participants were asked how the images in Figure 1 of wilder verges made them feel, ranging from Very Positive to Very Negative.

Figure 1: Images of wilder verges used in the survey

Out of 4655 respondents, 3794 (81.5%) of people answered that they felt very positive about the wilder verge images. 763 out of 4655 (16.39%) answered that they felt positive. 72 (1.55%) people felt neutral, 17 (0.37%) negatively and 9 (0.19%) very negatively.

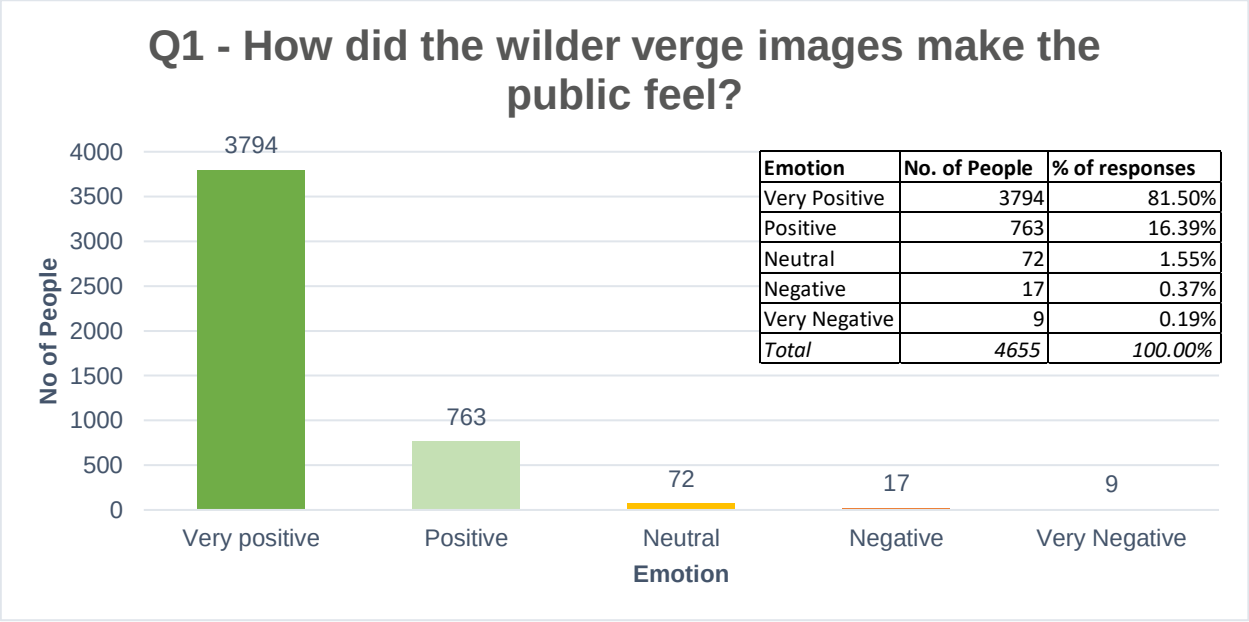


Figure 2: The range of emotions selected by participants

The overwhelming majority of people felt positive or very positive about the wilder verge images (97.89% of 4655 people either answered positive or very positive, 2.11% either answered neutral, negative, or very negative).

Q2) Wilder verge image word association

Participants were asked which of the following words they associated with the images from the previous question. A list of words or ideas was provided to associate with the wilder verge images, which were shown randomly on the survey. People were able to select as many associations as seemed relevant. These words and ideas have been presented below, split into positive and negative remarks.

Table 1: Range of associations participants could select from

Positive Associations	**Negative Associations**
Wildlife haven	Restricted view
Cost effective	Unsafe
Wildlife corridor	Litter
Bee food	Messy
Natural	Neglected
Money saving	Waste of money
Beautiful	Weeds
Happiness	Ugly
	Anger

Of 4655 results, 4324 people (92.89%) responded with positive answers only. 301 people (6.47%) responded with both positive and negative answers. 30 people (0.64%) responded with negative answers only.

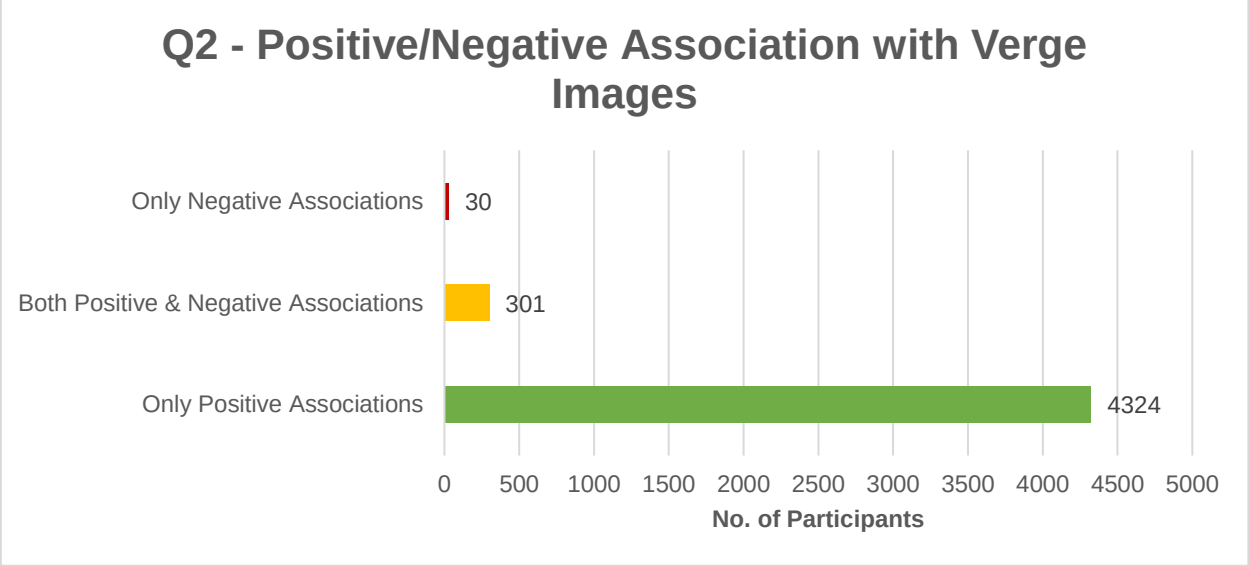


Figure 3: The number of participants that chose positive, negative or a mixture of associations

Positive Associations

Table 2: The number of times each positive association was selected and the proportion of the 4655 participants who chose that association

Positive Associations	Number of times selected	% Of Participants
Money saving	1378	29.60%
Cost effective	1625	34.91%
Happiness	3125	67.13%
Wildlife corridor	3789	81.40%
Beautiful	3848	82.66%
Natural	3939	84.62%
Bee food	4018	86.32%
Wildlife haven	4249	91.28%
Total number of positive associations	**25971**	

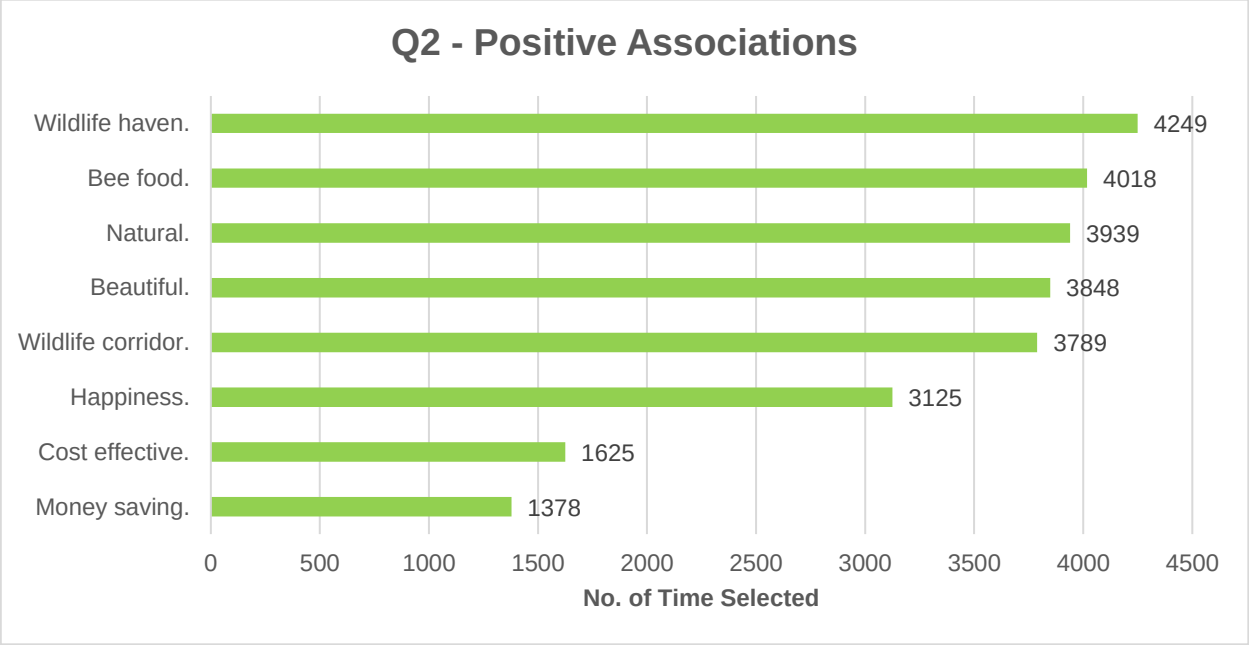


Figure 4: The number of times each positive association was selected

For the public, their main association with the wilder verge images was that they were “Wildlife Havens”, with 4249 of 4655 people (91.28%) selecting this option. This was closely followed by “Bee Food” with 4018 of 4655 people (86.32%) selecting this option. This indicates that people’s top concerns are that we have spaces purposely for wildlife and pollinators, to feed them and provide shelter.

The least associated terms were the ones related with money; “Money Saving” was selected by only 1378 of 4655 people (29.60%), closely followed by “Cost effective” at 1625 of 4655 people (34.91%). This may indicate that people are either not concerned with the cost or are not aware that there are potentially costs to be saved by reducing the number of cuts per year.

Negative Associations

Table 3: The number of times each negative association was selected and the proportion of the 4655 participants who chose that association

Negative Associations	Number of times selected	% Of Participants
Anger.	4	0.086%
Ugly.	5	0.107%
Waste of money.	7	0.150%
Unsafe.	24	0.516%
Neglected.	51	1.096%
Messy.	68	1.461%
Litter.	87	1.869%
Weeds.	100	2.148%
Restricted view.	124	2.664%
Total number of negative associations	**470**	

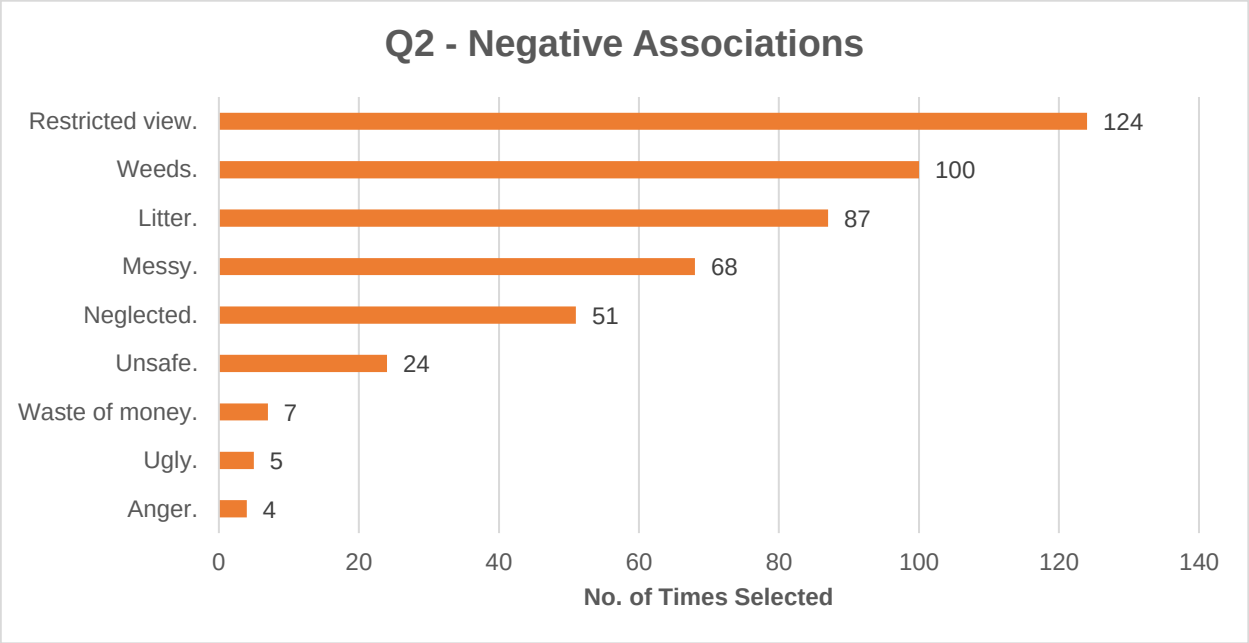


Figure 5: The number of times each negative association was selected

By comparison to the number of positive associations, the number of negative associations selected is significantly smaller.

The top concern for people in terms of negative associations was “Restricted view”, with 124 of 4655 people (2.66%) selecting this term as an issue. This may indicate that people’s biggest concerns are over traffic safety, and that perhaps letting verges grow wilder, it could restrict drivers views and cause more accidents, although restricted views might also be perceived as beneficial because people drive more slowly with restricted views. However, the term “Unsafe” received a lot less votes.

The least associated term with the wilder verges was “Anger”, with only 4 people out of 4655 (0.086%) selecting this, closely followed by “Ugly” at 5 out 4655 people (0.107%) and “Waste of Money” at 7 out of 4655 people (0.15%). This could indicate that the majority of

people are not enraged at the thought of verges being left to go wild, nor are they unattractive. Interestingly, in both the positive and negative associations, financial issues were seemingly not a major factor to the public. However, more people did associate it with “Cost Effective” and “Money Saving” over “Waste of Money”, suggesting that people feel that there would be financial benefits to put these procedures into place rather than disbenefits.

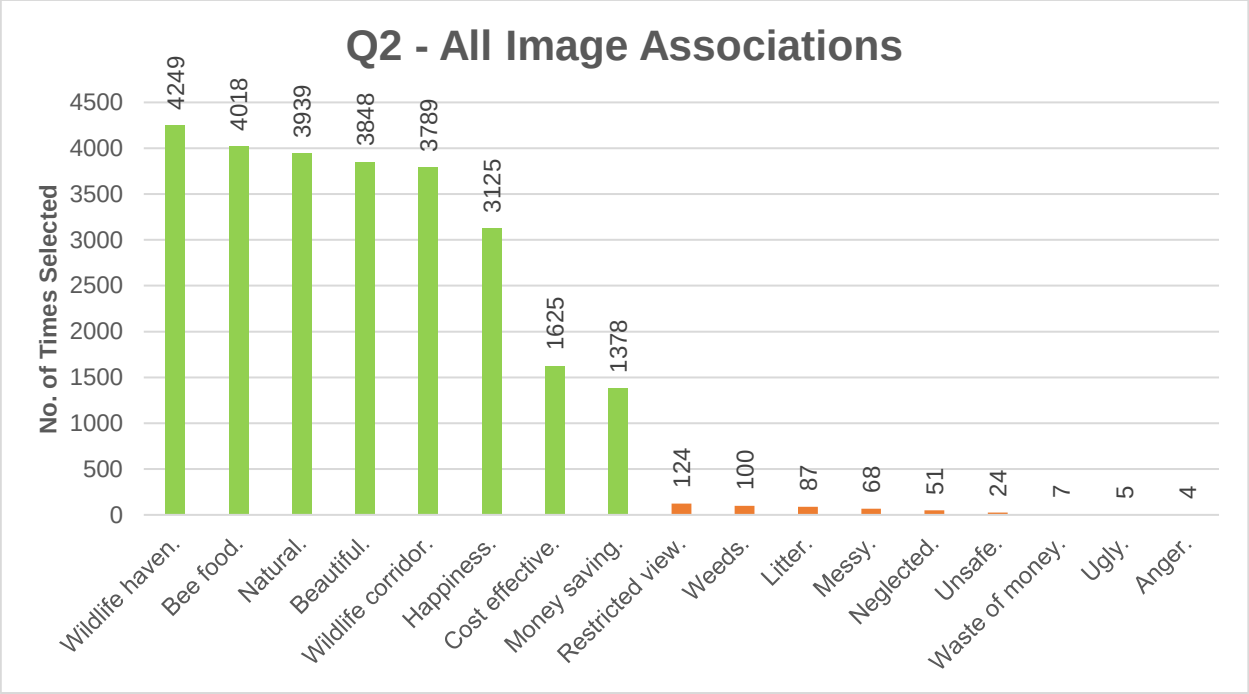


Figure 6: The number of times all associations were selected. Positive associations are in green, negative in orange.

Q3) Understanding of Pollinators

A randomly presented selection of ideas was provided to gauge participants’ understanding of the term ‘pollinator’. Respondents were asked to pick which of the following statements are correct and more than one option could be selected:

Table 4: The statements split into correct and incorrect understandings of a pollinator

Pollinator (Correct)	**Not a Pollinator (Incorrect)**
Anything that helps transfer pollen from one plant to another	I do not know what a pollinator is
Animals are pollinators	Insects are pollinators
Butterflies and bees are pollinators	Plants are pollinators

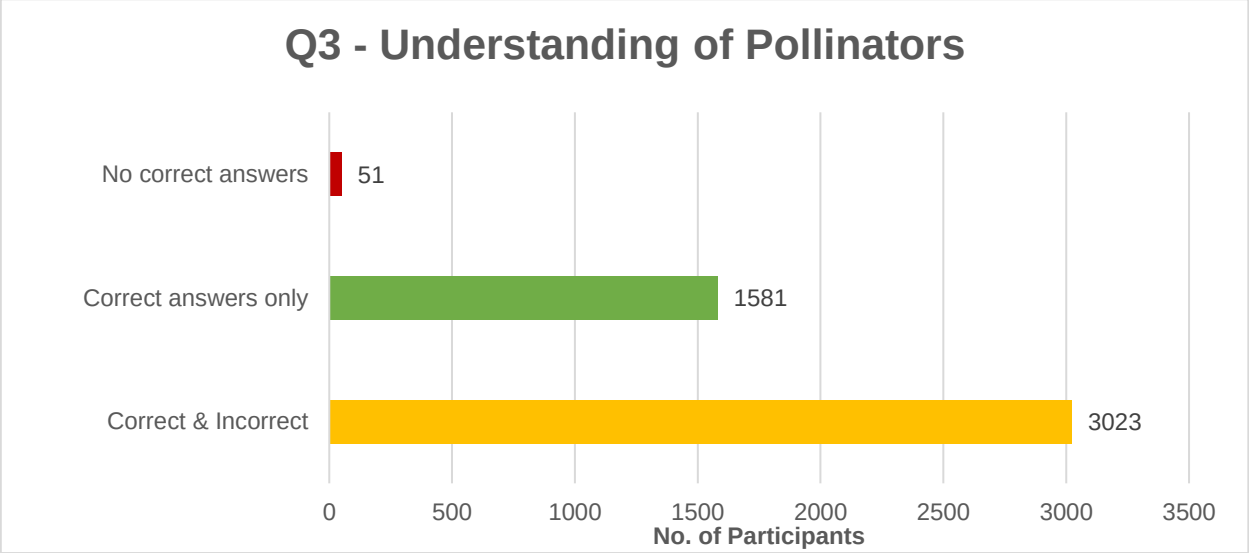


Figure 7: The number of participants who selected correct, incorrect or a mixture of both statements

Of 4655 people, 1581 (33.96%) had correct answers selected only, 3023 (64.94%) had both correct and incorrect answers, and 51 (1.1%) had no correct answers.

Whilst most of the public appear to know what a pollinator is, there is less clarity in the answers to what a pollinator is, specifically a UK pollinator.

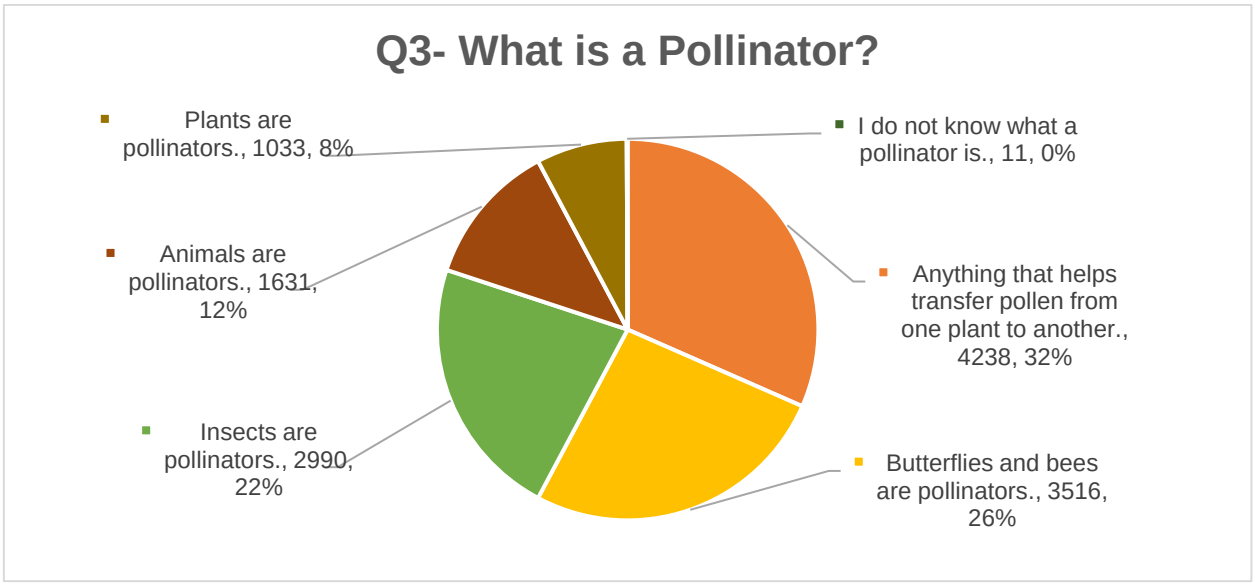


Figure 8: The number of times each statement was selected

Very few (11 people) responded that they do not know what a pollinator is.

A third of people selected the correct answers, with a large proportion of people also understanding that animals, bees, and butterflies are pollinators.

Some people selected the incorrect answer “Plants are pollinators”. It is not clear whether respondents, when selecting this response, considered that some plants self-pollinate. Likewise, the selection of the response ‘Insects are pollinators’ is technically correct, although not all insects are pollinators. If further perception surveys are undertaken, this is one question that could be refined. These points can be covered through future posts on the Kent’s Plan Bee Facebook page.

Q4) Examples of UK Pollinators

Participants were asked which of these they recognised as UK pollinators, by ticking as many answers as they decided were correct:

Table 5: The animals split into correct and incorrect answers

UK Pollinators (Correct)	Not Pollinators (Incorrect)
Bees	Dog
Wasps	Cat
Butterflies	Hedgehog
Mosquitoes	Fox
Hoverflies	Rabbit
Moths	Badger
Beetles	*Other*

Of 4655 people, 3878 respondents (83.31%) gave only correct answers from only the pollinator column, 771 people (16.56%) had both correct and incorrect answers from both columns, and only 1 (0.02%) person had an incorrect answer only. All 5 (0.11%) of the participants that commented in the “Other” box said that all the options available were pollinators. The majority of people seem to know examples of pollinators, but some reinforcement may be useful.

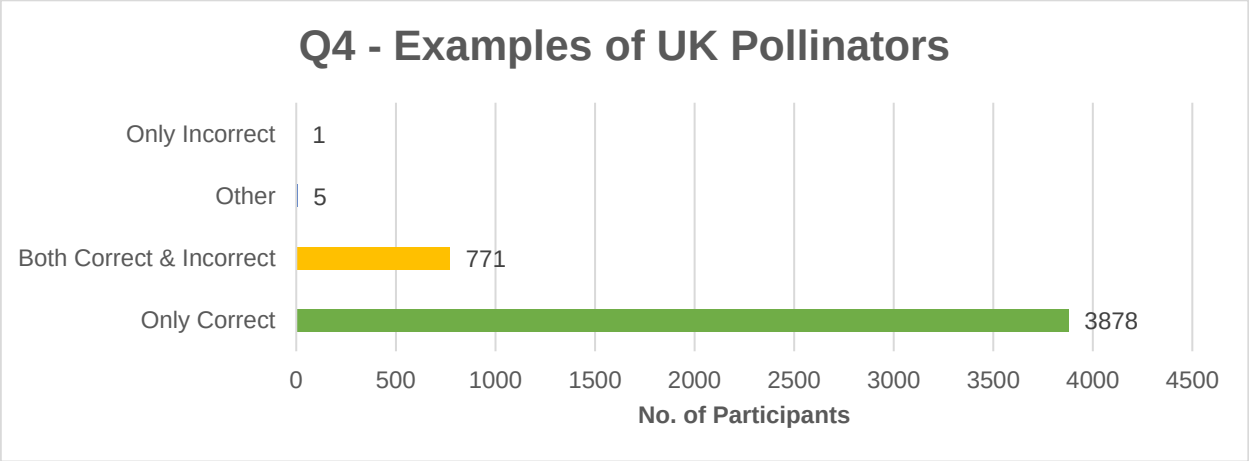


Figure 9: The number of participants who selected correct, incorrect or a mix of both statements

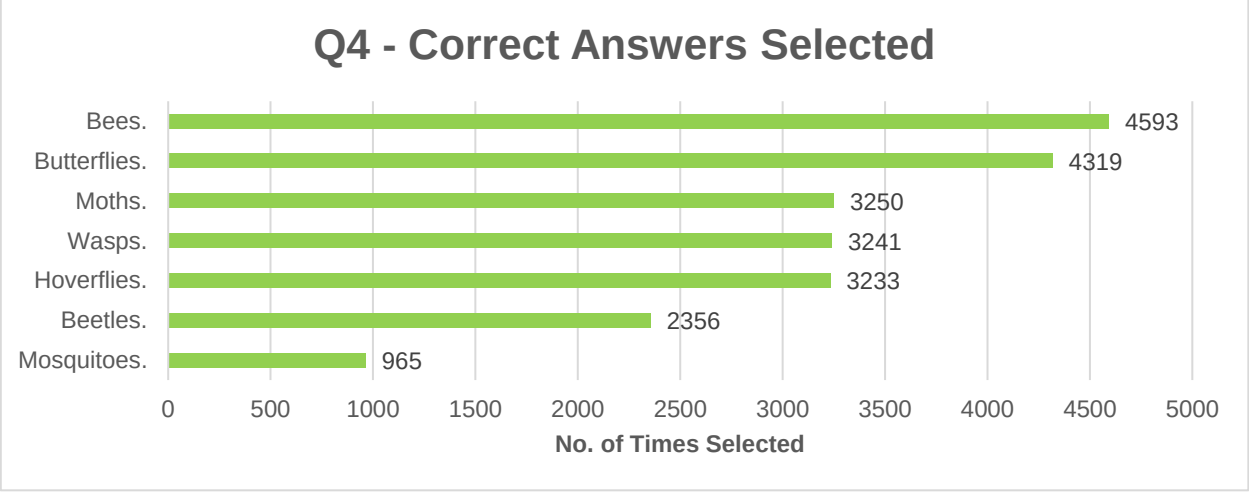


Figure 10: The number of times each correct answer was selected by participants

98.67% of participants selected bees, and bees (not distinguishing bumblebee, solitary bee or honeybee) are the most well-known and best represented pollinators. At the opposite end of the scale, only 20.73% of participants recognised mosquitos as pollinators. The role of some mosquito species as pollinators is generally not widely reported, with the public reputation of mosquitoes as being biting insects that feed on host animals probably more commonly known. This is a possible subject that could be developed through future awareness-raising posts and blogs on the Kent's Plan Bee Facebook page and webpage.

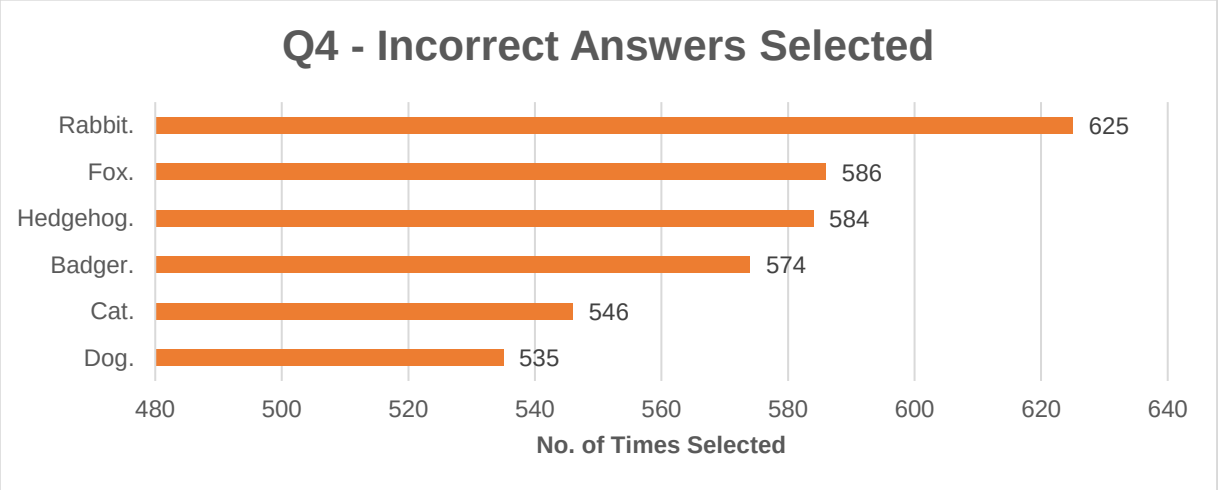


Figure 10: The number of times each incorrect answer was selected by participants

On average, 12.35% of participants selected an incorrect answer. Of these "Rabbit" was the most popular. As the only herbivore on the list, the connection between rabbits and plants may have confused some respondents, or perhaps participants thought this might be a trick question. More awareness-raising could help improve understanding of the difference between pollinators and other British wildlife.

Q5) Pollinator risks and reasons to their declining numbers

Respondents were asked to select all the risks and reasons that pollinator numbers are declining from the list below.

Table 6: The issues split into correct and incorrect understandings of pollinator decline

Issues (Correct)	**Not Issues (Incorrect)**
Habitat loss	Pollinators are not facing any issues
Changes in land use	I still see plenty of insects
Disease	
Pesticides	
Climate change	
Lack of food for all life stages	
Lack of shelter	
Lack of connection between habitats	

Of 4655 people, 4591 people (98.63%) had only correct answers from the Issues column, 60 people (1.29%) had both correct and incorrect answers from both columns, and only 2 people (0.04%) had only incorrect answers.

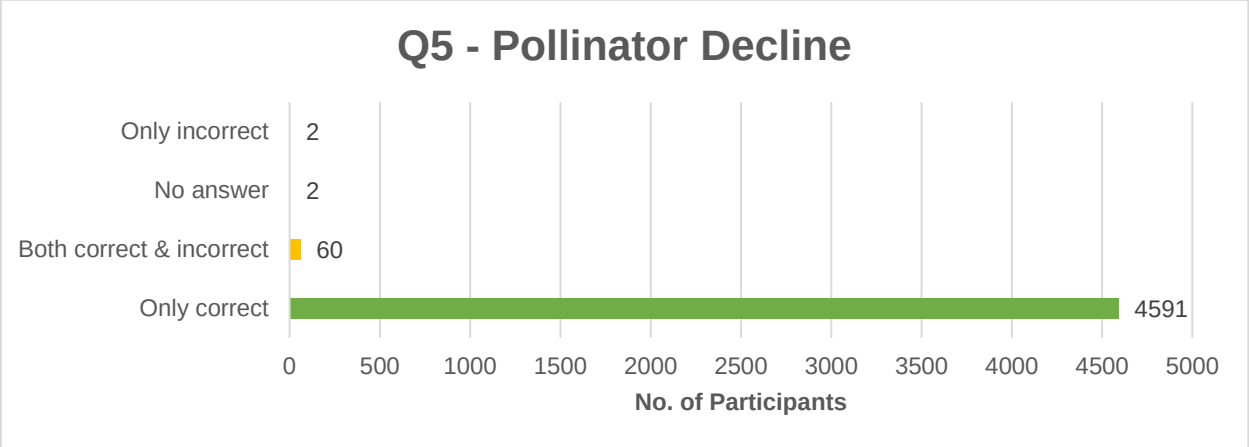


Figure 11: The number of participants who selected correct, incorrect or a mix of both statements

Whilst it appears that an overwhelming majority of respondents are aware of possible causes of pollinator decline, it may be that there was a bias in the question towards the issues of decline, because too few options were provided to the contrary. Despite this, the very small number of responses that said pollinators were not facing decline and/or that they still see plenty of insects suggests that there is a high level of awareness regarding pollinator decline. The results of the understood causes of decline show areas where we may focus on raising awareness and the roles individuals can take in addressing these.

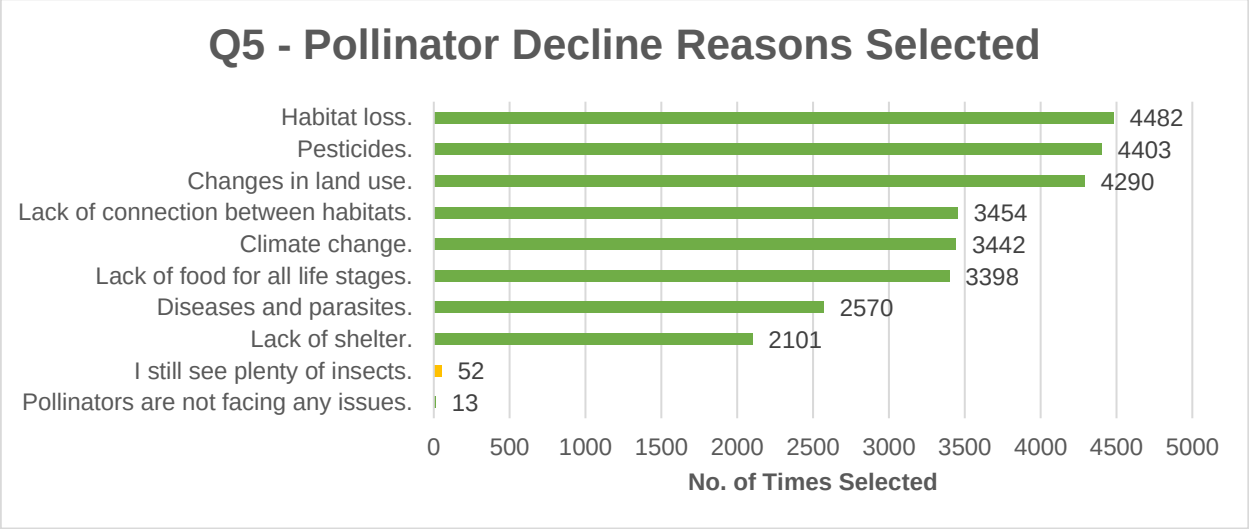


Figure 12: The number of times each statement was selected

Q6) Consequences of pollinator decline

Participants were then asked what the consequences of pollinator decline would be, providing options to select from the list below.

Table 7: The issues split into correct and incorrect understandings of consequences

Consequences (Correct)	**No Consequences (Incorrect)**
Loss of diversity	Nothing will change
Not enough pollinators to pollinate crops leading to food supply issues and shortages	It will not affect me
Increased food prices	
No seeds for the future	
Collapse of food chains	
Loss of animals and plants that depend on these insects for food and pollination	

Of 4655 people, 4639 people (99.66%) answered with only correct answers from the Consequences column, 10 people (0.21%) answered with answers from both columns, and 4 people (0.09%) answered incorrect only.

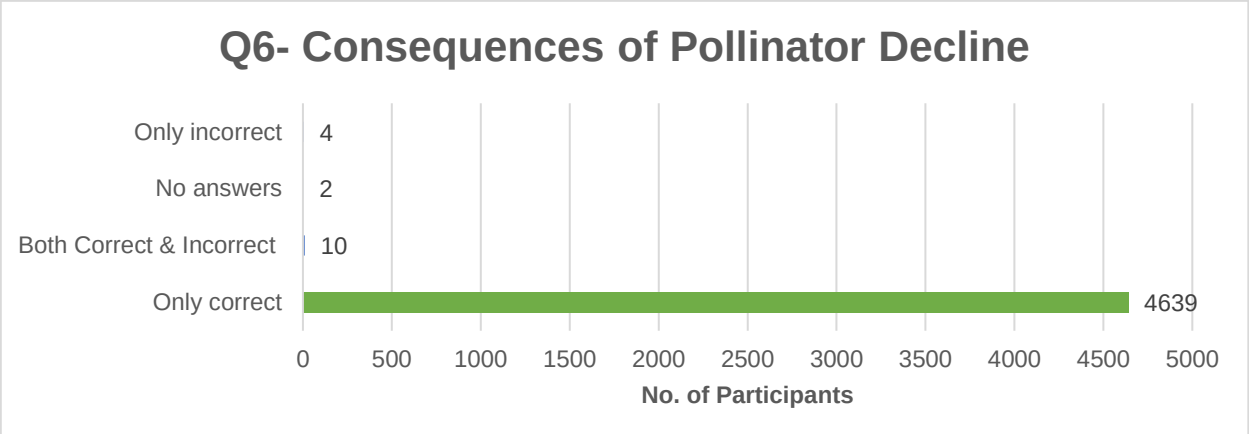


Figure 13: The number of participants who selected correct, incorrect or a mix of both statements

The response to this question is strongly affirmative, with an emphatically correct response to the consequences of pollinator decline. The impact of pollinator decline is widely reported in national and local media, and this response demonstrates that our survey participants are very aware of this impact, even if some of the respondents are less knowledgeable of the specific details of pollination and the pollinators involved. The emphatic response may have also been generated because there may have been a bias in the question towards the consequences of decline, because too few options were provided to the contrary.

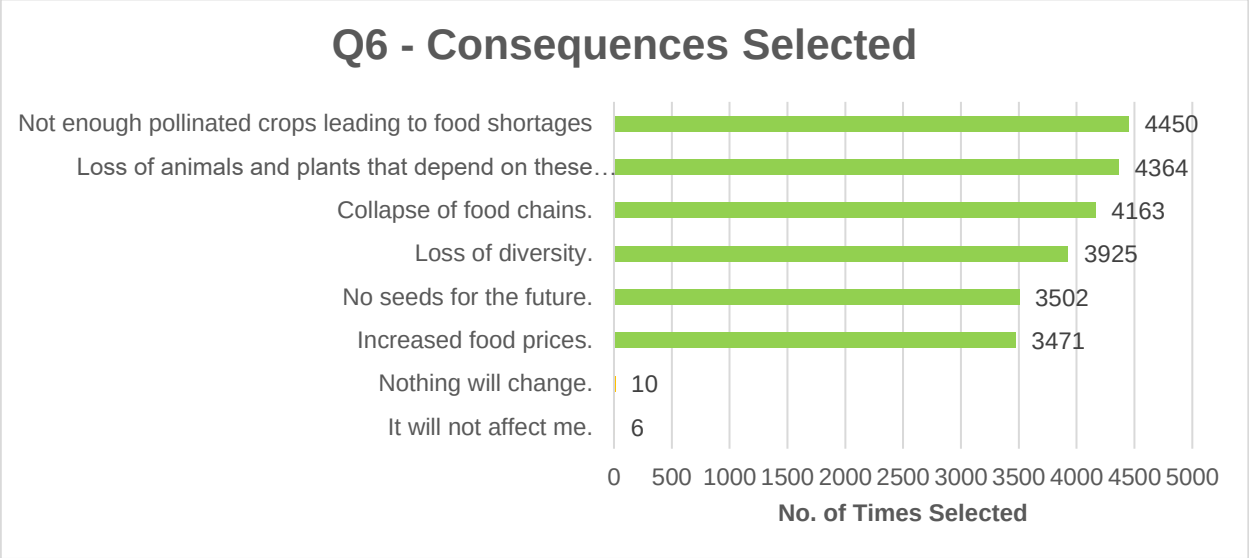


Figure 14: The number of times each statement was selected

95.60% of participants recognise that without pollinators to pollinate crops, it will lead to food supply shortages. Perhaps surprisingly though, 20% of these people do not associate that with increased food prices.

A very small number of participants said that “nothing will change” or “it would not affect them”, suggesting that the vast majority of participants are aware that the loss of pollinators will have consequences for the human population.

Q7) Wildflower Recognition

The public were asked to select which flower species they recognised from a selection of pictures and named wild plants provided.

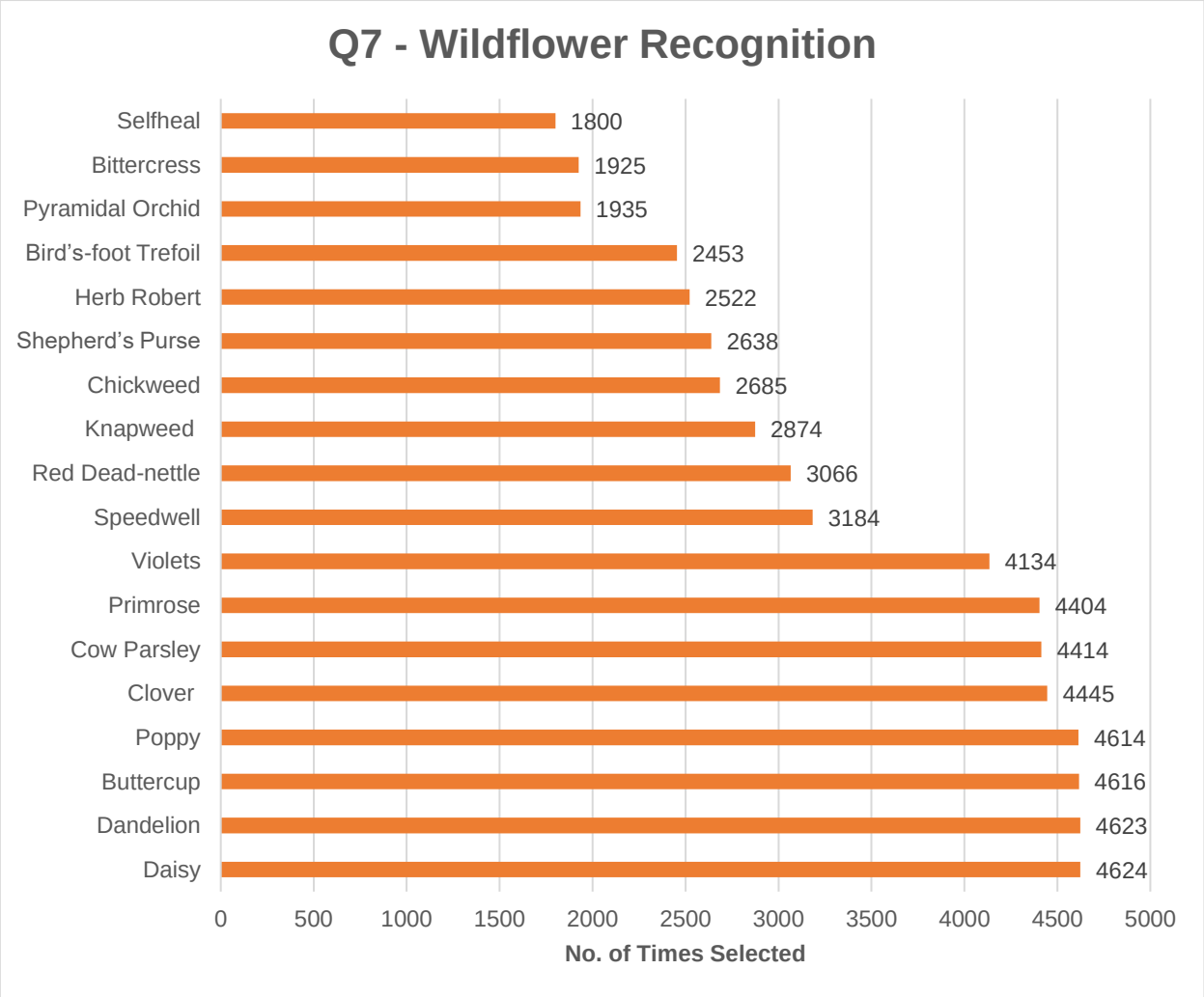


Figure 15: The number of times each flower was selected

The most recognised flowers were Daisies, Dandelions, Buttercups and Poppies. These are well-known, widespread, opportunistic, and characteristic flowers that are in most lawns or widely found in urban and rural grasslands and settings.

Under 50% of participants recognised Selfheal or Bittercress. These plants are some of our most common urban flowers, often being found growing out of pavements or in lawns and along the edges of grass patches. Both plants are important for pollinators; the deep structured flowers of Selfheal are a favourite of pollinators with long tongues, such as bees, and despite their smaller flowers, Bittercress has the ability to flower all year round, providing nectar for pollinators early or later in the year.

It is regrettable to see that no one knew about some of our most common flowers in the UK and is potentially an effect of a phenomenon called “Plant Blindness”. This is a human tendency to ignore the plants and greenery around us, particularly in an urban setting especially because the plant has a discreet or non-showy flower. Further information about less-obvious flowering plants, and wind-pollinated pollinator food plants could be a topic for future communications.

Q8) Image preference – short, long, or intermediate grass length

Participants were asked to select a preference of the choice of 3 images: Short, regularly cut grass, intermediate with mown paths, or a long, uncut meadow.

Figure 16: The three images presented to participants to choose their preference from, short, long and intermediate length grass

Of 4655 people, 1854 (39.83%) preferred the long, uncut meadow, 2720 (58.43%) preferred the intermediate length, and 81 (1.74%) preferred the short, regularly cut grass.

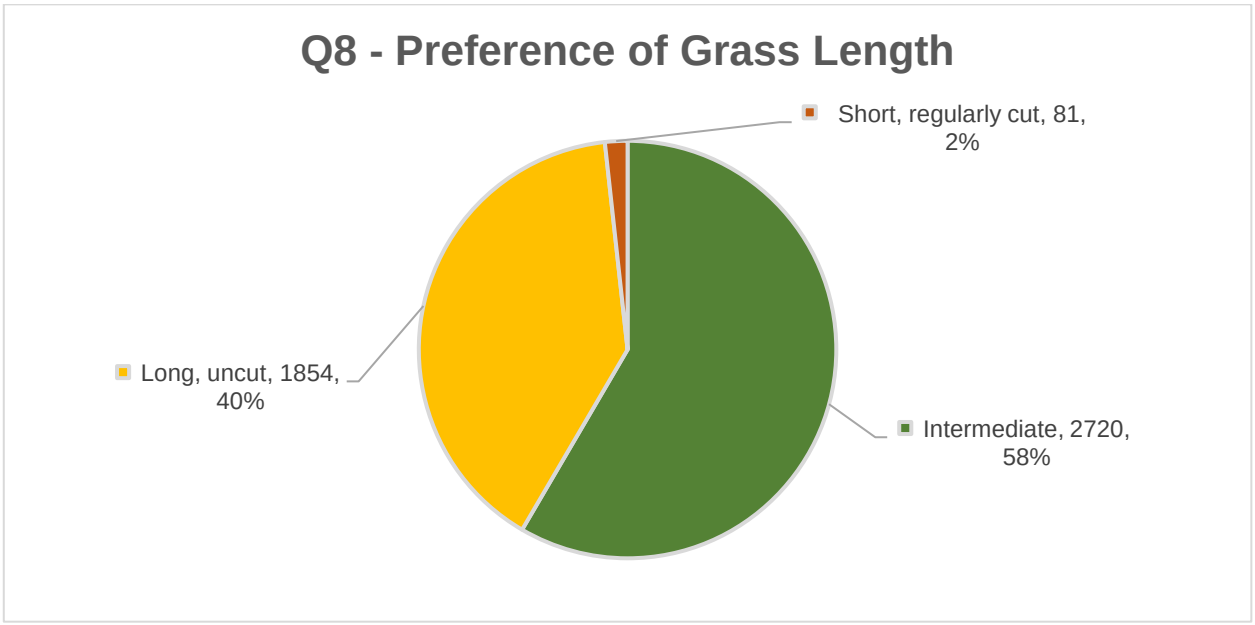


Figure 17: The proportion of votes by participants for Short, Long, or Intermediate grass length

Overwhelmingly, the respondents preferred longer grass as opposed to short, regularly cut grass. However, a preference for management of longer grass was demonstrated by a greater number of respondents preferring an intermediate length with mown paths. This suggests that the public, whilst recognising the need to support plant growth and pollinators, also want to see some element of active management for verges and paths, allowing access for people and tidier edges.

Q9) Which is better for pollinators, regularly cut or uncut?

From the short and long grass images from the previous question, we asked the participants which of the habitats was better for pollinators.

Of 4655 people, 4619 (99.23%) said that longer, uncut verges were better for pollinators, 36 (0.77%) people said that short, regularly cut verges were better for pollinators. This is a significant response, and demonstrates an overall, general understanding of the value of longer grassland to support pollinators and wildlife.

Q10) How often should a verge be cut?

Participants were asked to select one response to the question 'How often a verge should be cut (outside of safety reasons)?' from the following options: Never/ once a year/ twice a year/four times a year (once each season)/6 times a year/ Other.

Table 8: The number of times each yearly cut preference was selected and the proportion of the 4655 participants who chose that preference

Number of cuts per year	Number of Times Selected	% Of Participants
Never	755	16.22%
Once a Year	1550	33.30%
Twice a Year	1519	32.63%
4 Times a Year	603	12.95%
6 Times a Year	62	1.33%
Other	166	3.57%
Grand Total	**4655**	**100%**

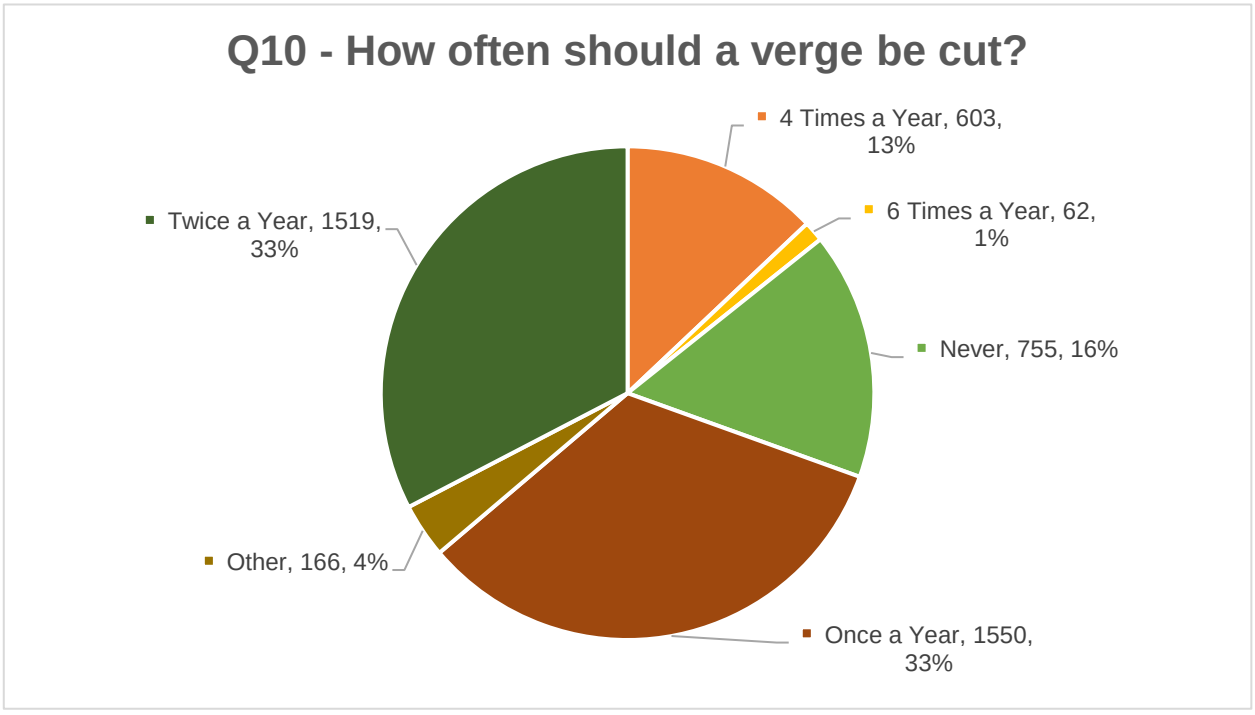


Figure 18: The proportion of yearly cut preferences selected by the participants

From people's initial reaction to this question, there is quite a range of answers. It is interesting that two thirds (66%) of the participants are equally split between once and twice a year. It shows that most people are aware that some form of grassland management is required, but clearly there are complexities in the reasons behind the responses and the range of options that were selected. Notably the more intensive cutting/management options of 4 or 6 times a year, and the options least sensitive to the needs of pollinators, were the least favoured.

Q11) Change of view on verge management?

Once the participants had completed Q10 on the number of times a verge should be cut, the following information was provided, taken from a national report produced from research and best practice across the country, "Managing grassland road verges: A Best Practice Guide"[5], Plantlife, 2019

"*In Plantlife's road verge management handbook, they recommend twice a year, once after winter to remove the winter growth, and then again in the autumn once the flowers have completed their lifecycle and set seed. Never cutting would let big weeds like brambles and nettles take over, smothering and shading out smaller flowers. On the other hand, cutting too often leads to flowers not being able to complete their lifecycle and eventually disappearing from a verge as there are no seeds.*"

Q10 was then asked again to see if people had changed their minds based on the information presented to them.

Table 9: The number of times each yearly cut preference was selected after presented with the verge management information, and the proportion of participants who chose that preference

Number of cuts per year	Number of Times Selected	% Of People
Never	107	2.30%
Once a Year	314	6.75%
Twice a Year	3960	85.07%
4 Times a Year	148	3.18%
6 Times a Year	44	0.95%
other	82	1.76%
Grand Total	**4655**	**100%**

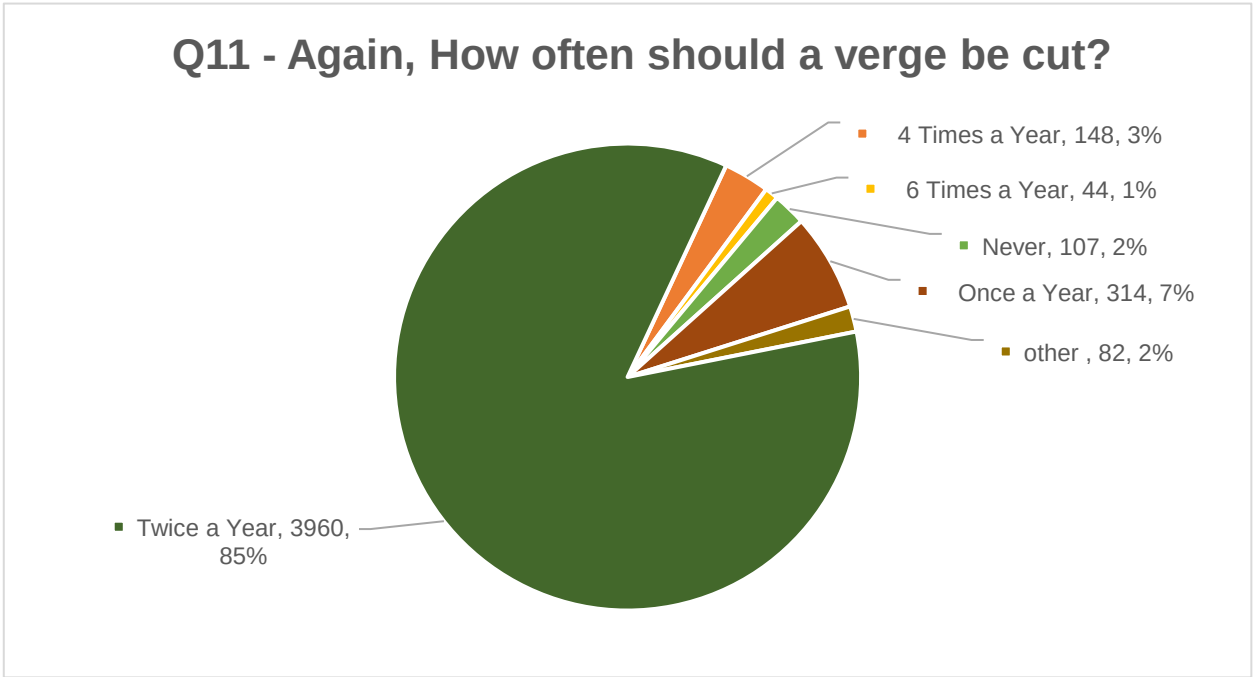


Figure 19: The proportion of yearly cut preferences selected by the participants after presented with the verge management information

Having been provided this additional and reliable information, most respondents changed their answer to ‘Twice a Year’. The biggest shift in response was from the cohort that previously had selected ‘Once a Year’ (previously the biggest category) switching to ‘Twice a Year’. Responses to all other categories declined accordingly, whilst responses to ‘Twice a Year’ significantly increased, indicating a strong change in opinion. However, the final response is not 100% in favour of ‘Twice a Year’, indicating that 15% of respondents chose not to change their views. What this does suggest is that clear and simple information as to why certain management regimes are necessary/appropriate should be sufficient to bring support for a maintenance change and demonstrates the importance of accompanying any changes of approach with well-designed information campaign.

Q12) Where would people like to see wild verges?

Participants were asked where they would like to see wild verges: Urban Environments only, Rural Environments only, Both Environments and Neither.

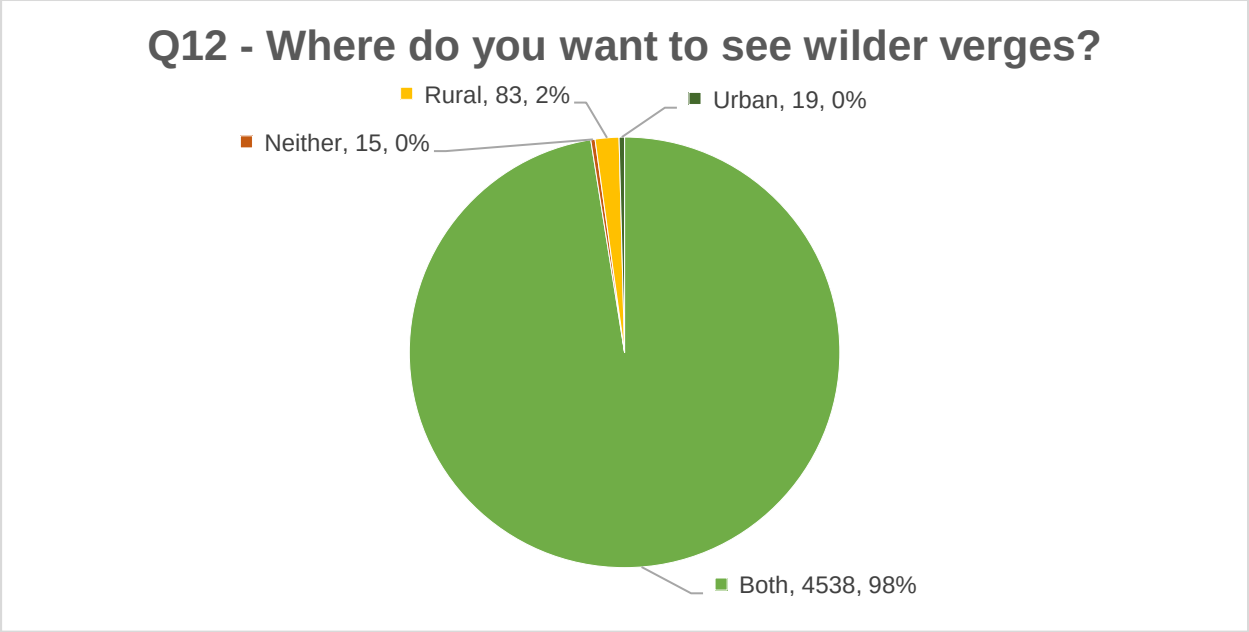


Figure 20: The proportion of votes by participants for where they wish to see wilder verges

Overwhelmingly, people want to see wilder verges in both urban and rural settings.

Q13) Explanations for their choice

Participants then selected their reasons why they had selected their preferred environments in Question 12 from the following list, presented as a randomised selection:

Table 10: Range of reasons participants could select from

Positive Ideas	**Negative Ideas**
We need more green, wild spaces everywhere	Nature belongs in the countryside, not towns
We need to support our pollinators wherever they are	It is too dangerous to have nature in an urban environment
We need to connect people to nature	It will just be ruined by people and vehicles

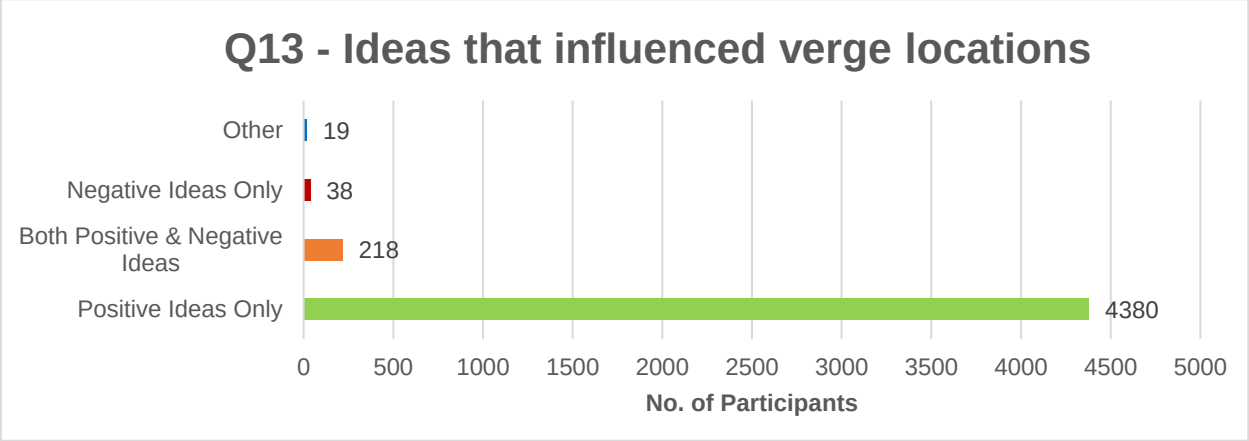


Figure 21: The number of participants who selected positive, negative or a mix of both statements

As so many people answered with Both Environments in the previous question, it is little wonder then that most answers selected were from the positive column. However, the numbers are not an exact match (4538 answered Both Environments but only 4380 people selected positive only answers).

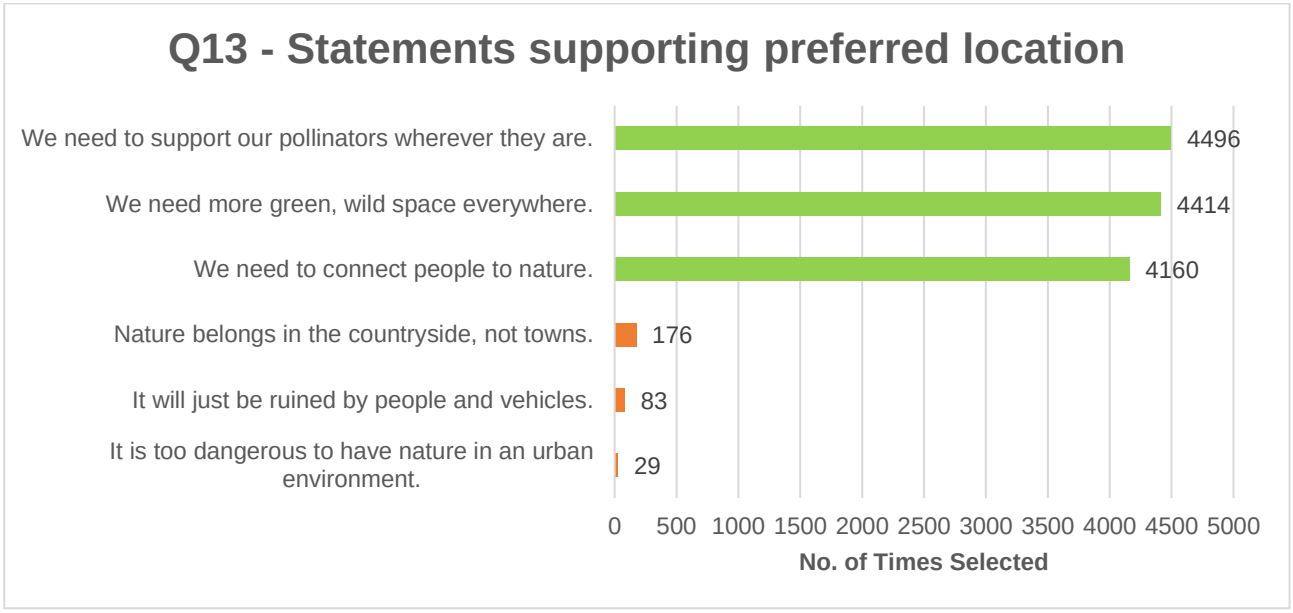
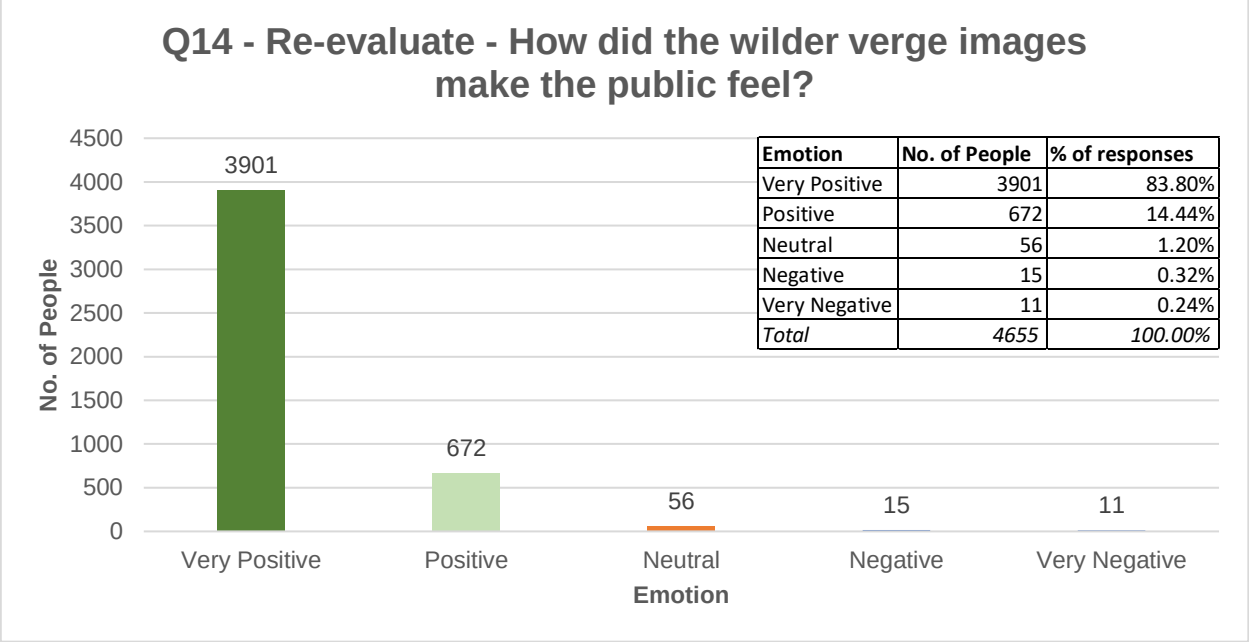


Figure 22: The number of times all statements were selected. Positive statements are in green, negative in orange.

96.58% of participants selected the “need to support pollinators” option, closely followed by needing “more green, wild spaces” at 94.82%. It shows that the participants highly value pollinators and green spaces and would actively seek more support and green spaces to be instated.

Q14) Re-evaluating: Image association with positive or negative emotions

Participants were asked again how the images presented in the first question now make them feel given the information that has been presented to them.



Emotion	No. of People	% of responses
Very Positive	3901	83.80%
Positive	672	14.44%
Neutral	56	1.20%
Negative	15	0.32%
Very Negative	11	0.24%
Total	*4655*	*100.00%*

Figure 23: The range of emotions selected by participants

The overwhelming majority again is very positive (3901 out of 4655 responses, 83.8%). (Positive overall 4573/98.24% of responses).

The answers from the first response to this question (Q1) and this question (Q14) were compared.

Table 11: Comparison of responses from Q1 and this question (Q14)

Row Labels	Sum of First Response (Q1)	Sum of Second response(Q14)	Sum of Difference	Sum of % Change
Very Positive	3794	3901	107	2.299%
Positive	763	672	-91	-1.955%
Neutral	72	56	-16	-0.344%
Negative	17	15	-2	-0.043%
Very Negative	9	11	2	0.043%
Total	**4655**	**4655**	**0**	**0.000%**

There was an increase in responses for very positive (an addition of 107 votes, 2.3% of the total responders changed their answer), with a reduction to the other categories, except very negative, which gained 2 more responses.

It would suggest that the information presented in the perception survey has influenced the thinking of many people to feeling very positive about wilder verges.

Q15) Re-evaluating: Wilder Verge Image word association

The public were asked again to give reasons for their selection from the same list in the second question.

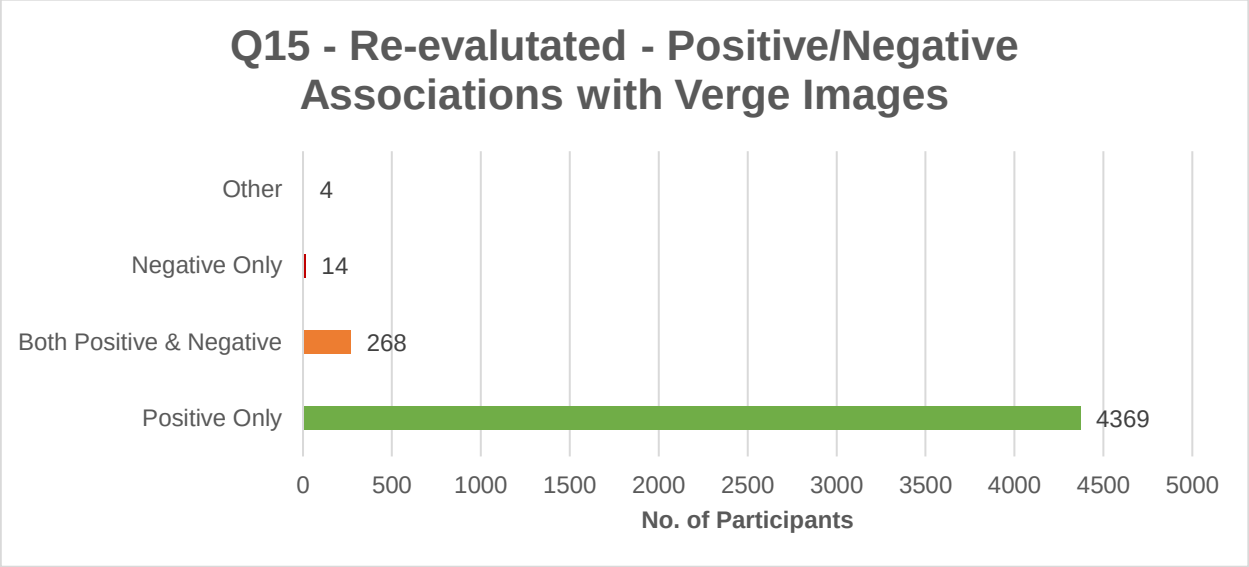


Figure 24: The number of participants that chose positive, negative or a mixture of associations

Positive associations only were unsurprisingly the majority response with 4369 out of 4655 people (93.86%) choosing positive associations with the images of wilder verges.

These were compared with the answers to the second question (Q2).

Table 12: Comparison of responses from Q2 and this question (Q15)

Summary	Sum of First Response (Q1)	Sum of Second response(Q14)	Sum of Difference	Sum of % Change
Positive Only	4324	4369	45	0.967%
Both Positive & Negative	301	268	-33	-0.709%
Negative Only	30	14	-16	-0.344%
Other	0	4	4	0.086%
Total	**4655**	**4655**	**0**	**0.000%**

There was a slight increase in positive-only associations (an increase of 45 responses – 0.967%). This relates to the increase seen from the previous question. As with Q2, the increase in positivity for the image does not match up with the associations. It could be that people have mixed views and whilst they recognise the positive attributes of wilder verges, they can also still perceive that some negative issues could be involved.

Positive Associations

Table 13: Comparison of positive associations from Q2 and this question (Q15)

Positive Associations	Q2	Q15	Difference	% Change
Money saving	1378	1872	494	35.85%
Cost effective	1625	2267	642	39.51%
Happiness	3125	3865	740	23.68%
Wildlife corridor	3789	4308	519	13.70%
Beautiful	3848	4229	381	9.90%
Natural	3939	4243	304	7.72%
Bee food	4018	4421	403	10.03%
Wildlife haven	4249	4456	207	4.87%
Total number of positive associations	**25971**	**29661**	**3690**	**14.21%**

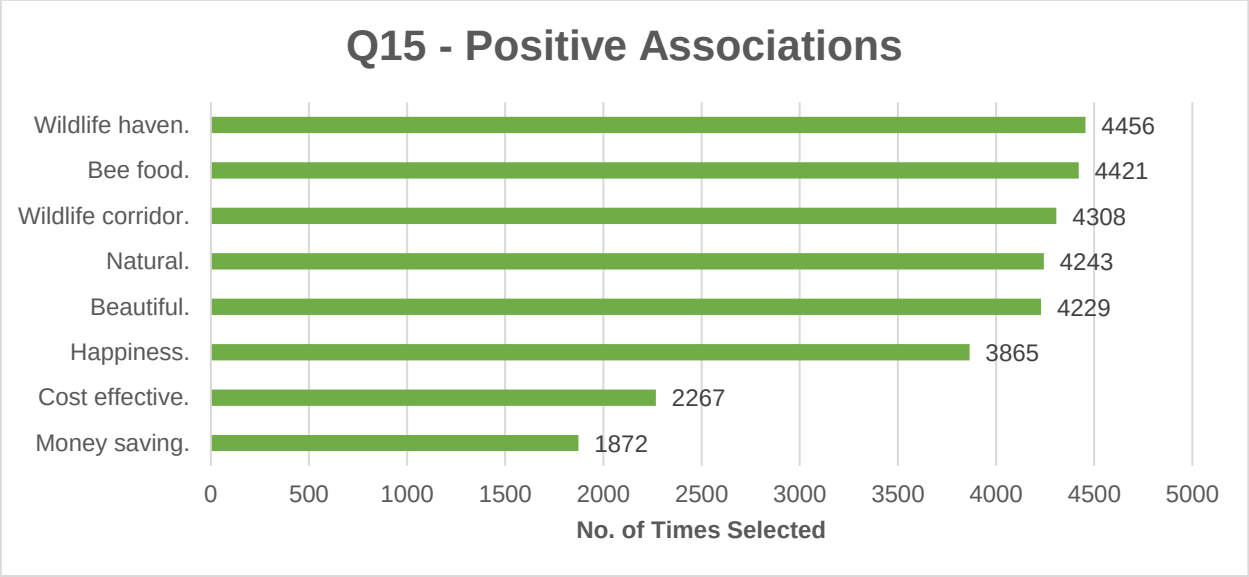


Figure 25: The number of times each positive association was selected

The results demonstrate an overall increase in the number of positive associations, with an increase in support for each individual positive association.

The two categories that gained the greatest increase in support are those of financial benefit, although no stronger case had been made for this factor in the previous questions. The associations with greater benefit for pollinators, wildlife corridors and the general association with happiness also showed a clear increase in support. It is possible that the views of participants have shifted, from just supporting the wildlife and wellbeing arguments originally, to additionally supporting the added benefit of economic value also in the case that is being made.

Negative Associations

Table 14: Comparison of negative associations from Q2 and this question (Q15)

Negative Associations	Q2	Q15	Difference	% Change
Anger	4	5	1	25.00%
Ugly	5	8	3	60.00%
Waste of money	7	8	1	14.29%
Unsafe	24	20	-4	-16.67%
Neglected	51	34	-17	-33.33%
Messy	68	67	-1	-1.47%
Litter	87	83	-4	-4.60%
Weeds	100	147	47	47.00%
Restricted view	124	78	-46	-37.10%
Total number of negative associations	**470**	**450**	**-20**	**-4.26%**

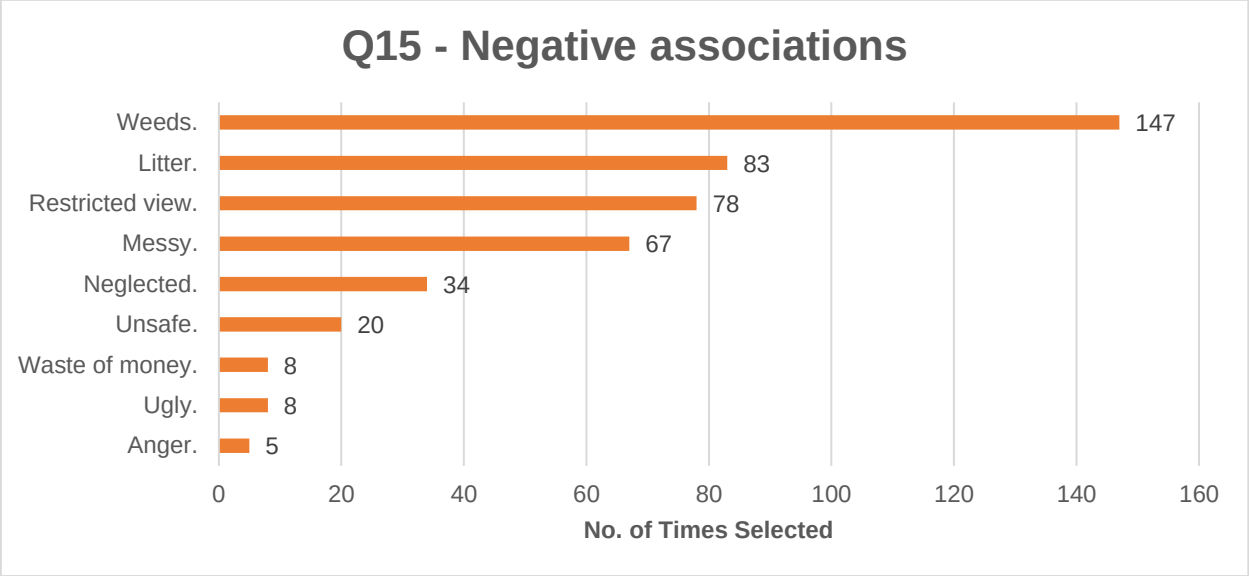


Figure 26: The number of times each negative association was selected

Overall, the results for support of negative associations have decreased by a small factor. Interestingly, of the minority of respondents who selected negative associations, some factors have shown a small increase in support particularly the association with weeds, ugliness, and waste of money. It is difficult to provide an explanation for this, but perhaps the length of the survey and strength of the argument made in the survey influenced a small number of people's views in the opposite direction. The results show a large decrease in "Restricted View" and "Neglected", both of which were addressed in the survey.

Optional Questions

1. Age Range

We asked the participants to give their age.

Table 15: The percentages of age ranges submitted by participants

Age Range	No. Of Participants	% Of Participants
Under 16	12	0.258%
16-19	17	0.365%
20-24	79	1.697%
25-34	514	11.042%
35-44	988	21.224%
45-54	1091	23.437%
55-64	1139	24.468%
65-74	628	13.491%
Over 75	132	2.836%
Prefer not to say/Blank	55	1.182%
Total	**4655**	**100.000%**

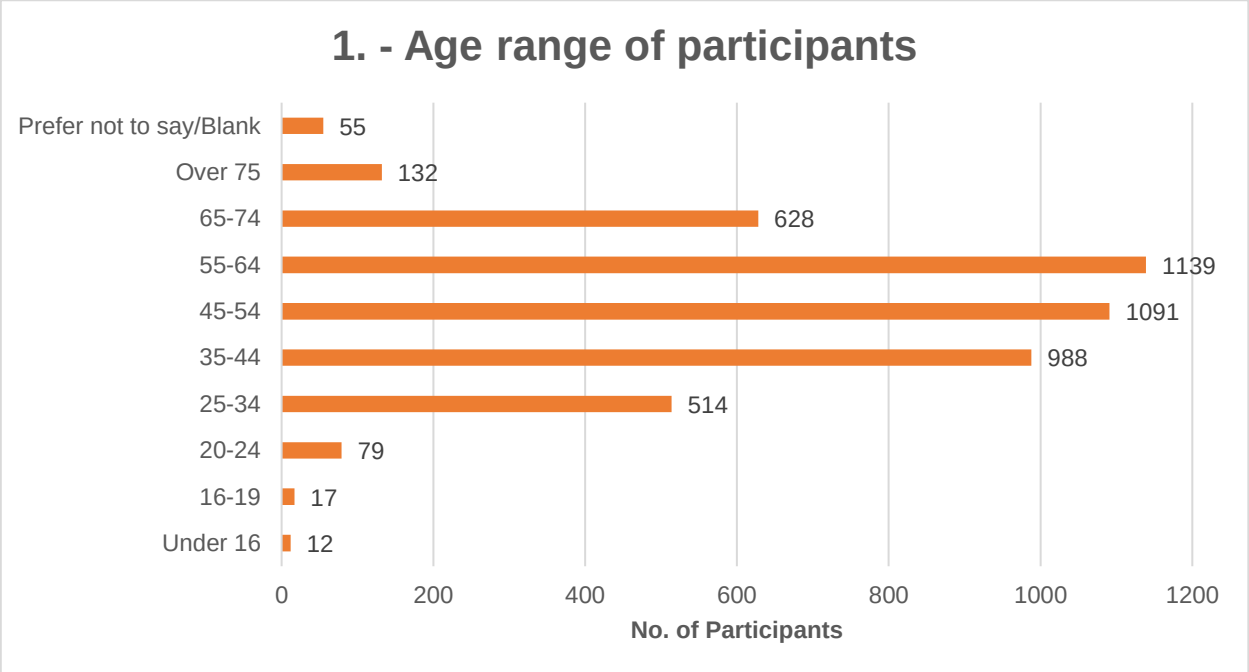


Figure 27: The age ranges of participants

The highest age group was 55-64 years old, making up just under one quarter of all participants. The spread of age ranges of participants demonstrate that the majority are of working age, with fewest responses from the below 25 age range and above 74 years old. The length of the survey and the online publicity and access to the survey may have influenced these results.

2. Survey link source

Participants were asked how they discovered the link to the Perception Survey on the internet.

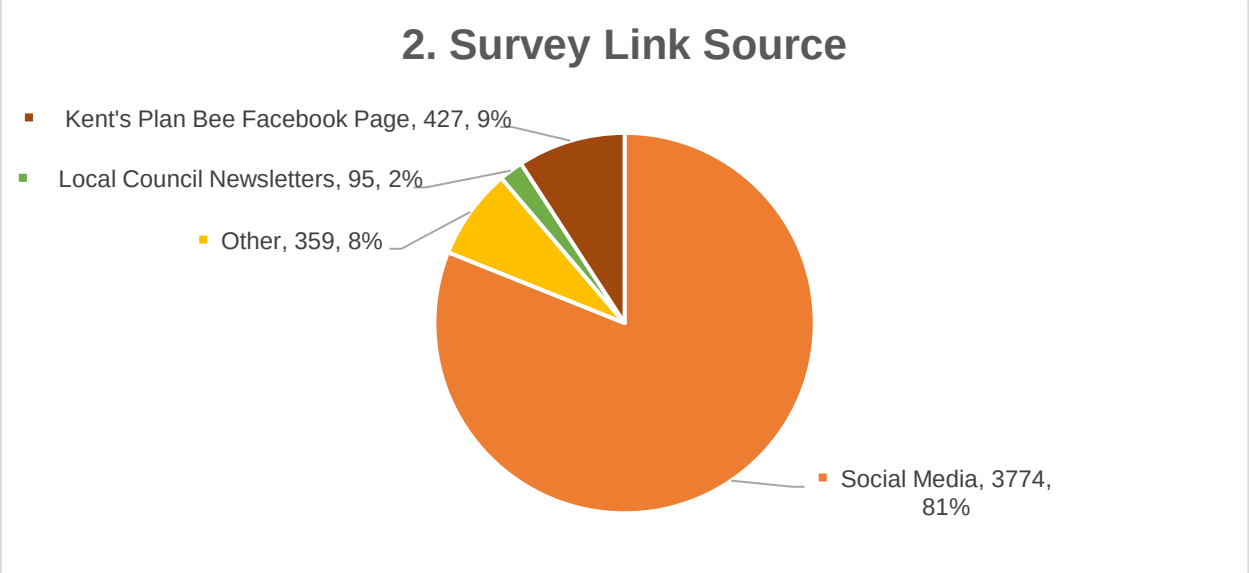


Figure 28: The proportion of link sources

Most people found the link to the survey through social media (3774/4655 responses, 81%). 9% specified that they found it through the newly launched Kent's Plan Bee Facebook page. 8% said that they found the link through other means. Should a future Perception Survey be carried out, these data would be useful to explore for future planning, to see where else people found the link to the survey.

3. Prior Knowledge of Kent's Plan Bee

Participants were asked if they knew about Kent's Plan Bee Pollinator Action Plan prior to the perception survey. This question was optional so 19 people did not answer this compared to the rest of the survey.

Table 16: The percentage of participants with prior knowledge of Kent's Plan Bee

Answer	No. of Participants	%
No	3891	83.93%
Yes	745	16.07%
Total	**4636**	**100.00%**

16% of the public knew of the Action Plan, which is a small but fair response given that it had not been widely publicised prior to the Perception Survey. Now that we have the Kent's Plan Bee Facebook page with connections to other social media sites and other means, there should be greater reach to the Kent public.

4. Average time to complete the Survey

The time taken to complete the survey was analysed. These results showed that the average time to complete all 19 questions was 13.5 minutes.

The lowest average time to complete the survey was 7 minutes for 16–19-year-olds.

The highest average time to complete: 33 minutes for under 16s (followed by 25–34-year-olds at 23 minutes).

Whilst our target audience were primarily all adults, it is possible that the survey was overly-long especially for under 16s, and this may have excluded this age range from participation.

If a future Perception Survey is undertaken, the preferred average time of completion should be 10 minutes. This needs to be a consideration in future survey design.

5. Additional Information: Geographic location of Respondents

One supplementary piece of information extracted from the postcodes of responses is shown in **Appendix 1. Figure 1 Distribution of respondents**. The map is interesting because it shows the spread of respondents to the perception survey across the county, correlating to an extent with some of the larger concentrations of population. This information could be used in planning of future communications and for further perception surveys, to try to capture a wider audience based on geographic and demographic spread, targeting people in those areas in Kent that are less represented in this current survey. This includes greater targeting in the Medway Unitary area, which is also underrepresented because the means of promoting this current survey was more focused on KCC-covered county areas.

6. Database of Interested People

At the end the perception survey, email addresses submitted by people who wanted to be informed about events such as the Kent's Plan Bee annual reviews and summits. As a result of the survey, where just over half of the participants submitted their emails, it was recognised that this was an opportunity to directly contact a larger proportion of pollinator-aware people on a monthly basis with specific news. Plan Bee monthly newsletters are now sent out and since the completion of the Perception survey, many more people have signed up, rising to 2214 recipients of the online newsletter each month at the time of writing.

Conclusions

Successes

This is the first Public Perception of Pollinators survey to be undertaken in Kent and we are not aware of anything similar being done elsewhere in the country. The intentions of the survey have been achieved and there have been notable successes with the overall design, methodology and results of the survey, as summarised below.

Aim 1 of the Survey: Gauge the public's current understanding of what pollinators are, their needs and issues

The total number of responses to the online questionnaire has greatly exceeded any expectations that had been set during the preparation of the survey. At the outset, it was hoped that several hundred responses would be received, which would have been an acceptable sample size. At the final tally, 4655 completed responses were received, which have generated a much greater sample size than expected, providing a large response-base to many of the questions, which provides a strong evidence-base that can be used to inform future service delivery decisions that relate to grass management and pollinators.

The responses indicate a general understanding of pollination and a knowledge of some of the animal groups that are pollinators. Likewise, there appears to be a strong appreciation of the causes of pollinator decline and the consequences of such declines. The responses received illustrate some areas that would benefit from further clarification or would be worthy of future awareness-raising via social media. These are discussed below.

Aim 2 of the Survey: Determine how people feel about public green spaces (roadside verges, park edges, grassy open spaces) being managed specifically for pollinators and being cut less frequently to manage grassland habitats for biodiversity.

The views of participants, and their feelings towards different grassland management options, were explored through word association questions. The results generated strong responses demonstrating that a large majority of the survey participants felt positive or very positive towards managing flower-rich grassland habitats in public spaces for pollinators. Image-preference questions were used to explore participants' preference for 3 options of grassland management in public spaces and the largest group preferred the option for an intermediate length of grass, that is cut less frequently but with managed paths and edges. A smaller but significant group also selected longer, uncut grass. Overall, respondents have shown a clear preference for less frequently cut grassland that benefits pollinators.

On provision of further information from Plantlife's 2019 report[5] on road verge management, the recommended practice of a twice-yearly cut was supported by the majority of the respondents.

It was clearly shown that wilder verge management should occur in both rural and urban settings, with a clear indication that respondents wish to support grassland management for pollinators and more provision of wild spaces generally.

A final re-examination of the image and word associations demonstrated that there was a further shift towards more positive associations of the flower-rich grassland images, and

positive words and phrases associated with these images. About 10% of respondents retained their views that expressed negative associations with the images, with some insignificant shifts in these perceptions. The overwhelming support of respondents was positively in favour of grassland management for pollinators and wild spaces.

Aim 3 of the Survey: Make recommendations on future engagement to inform the public on pollinators and how managing green spaces for pollinators can be beneficial to both pollinators and people.

The survey has provided invaluable information which can inform future engagement and communications plans for Kent's Plan Bee, including:

- A continued explanation of the process of pollination and its overall economic, social, environmental, and cultural importance in Kent and beyond.
- Providing more focus on key wild plant species that are notable or important for pollinators.
- Continued focus on key pollinating groups, especially unfamiliar groups such as beetles and mosquitos.
- Further focus on specific advice and engagement on the benefits of two-cut management for wilder verges, grasslands, and mosaic approaches to management.
- Consideration of new methods and media to reach audiences that do not normally engage with wildlife, nature conservation and biodiversity stories.

The survey results have also suggested that even when there isn't widespread public understanding of grassland management best practice, when given the information and reasoning behind the practice, it would be reasonable to expect a willingness to accept a change in the cutting regime in order to benefit biodiversity and pollinators. The survey results also demonstrate the importance of accompanying any regime change with a public information campaign; providing simple details of why the changes are being made will help to ensure these changes are understood and supported by Kent's residents.

Challenges

A number of issues and challenges were encountered in the process of designing, running and analysing the survey. These are set out below.

1. It is possible that the number of questions, and possibly the content and design of several of the questions, may have made the questionnaire too long to engage or retain the interest of some potential respondents to complete, particularly younger people below the age of 16.

2. In questions 2. and 3, an element of bias or confusion may have been introduced caused by the design of the questions. In order to achieve less potential bias, a greater degree of balance between positive and negative options could be provided if further questionnaires are carried out in the future. The possible use of more open-text responses could be used more fully. Equally, clearer checkbox answers need to be provided specifically in relation to the question of pollinators.

3. Online accessibility may have been an issue for those people who face barriers to, or without access to the internet, although it is envisaged this may have been a small part of the overall potential cohort. The decision to run an online questionnaire was made for resource and time reasons. Latest data for UK internet access show that in 95% of UK adults (16- 74 age group) are recent users of the internet as opposed to 47% of over 75 age group. This age group may have been underrepresented in the participants sample for this reason[3]. (Office of National Statistics, 2019). This should be a consideration for future surveys.

4. Should similar questionnaires be conducted in the future, some thought will need to be given to how to reach wider audiences, to be able to provide broader views. It is possible that the large majority of the respondents were self-selectively drawn from groups of people already sympathetic to, engaged with, interested or active in the themes of conservation, pollination and biodiversity. The management of public spaces, road verges and green space generally, is a subject that wide groups of people - residents and visitors alike, will have views on. As delivery of Kent's Plan Bee proceeds, a balance of views and opinions, as well as means of measuring outcomes and the impact of the Pollinator Action Plan needs to be continually assessed and reported.

Recommendations and Next Steps

Several key points have emerged from the findings and conclusions of this Perception Survey, and they can feed into further actions that shape and influence the ongoing delivery and review of the Kent's Plan Bee Pollinator Action Plan.

1. Disseminate this report widely through internet sites and social media sites including Kent's Plan Bee webpage and Facebook page, Explore Kent, and Kent Green Action; to all respondents to the survey; to partners and interested bodies in Kent and more widely.
2. Plan an ongoing Communication programme that generates stories and messages that develop key themes that have emerged from the findings of this report. New methods and media may need to be considered to reach audiences that do not normally engage with wildlife, nature conservation and biodiversity. Stories could include:

    - Explanations of pollination, with a range of examples and expanding on its overall economic, social, environmental, and cultural importance in Kent and beyond. *These can focus on key land-use activities such as fruit farming, traditional clover leys and hay meadows; on the importance of pollinators to nature-based solutions to soil management and flood control; historic cultural and social links such as early pollinator studies undertaken in Kent etc.*

[3] https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2019

- Further focus on specific advice and engagement on the benefits of management for pollinators including two-cut management for wilder verges and mosaic approaches to management.
- Where widespread changes to grassland management is planned, ensure this is accompanied by communications that includes details of why the change is being made, the benefits it will bring and addressing some of the public concerns about wilder verges that the survey has identified, including driver-visibility and road safety, litter, and tidiness of verges. *Stories can be written about specific sites and their management requirements for pollinators; before and after stories when changes in management or site restoration are undertaken etc.*
- Continued focus on the biology, life-history and identification of key pollinating groups and species, especially fewer familiar groups such as beetles and mosquitos.
- Providing more focus on identifying and understanding key wild plant species that are notable or important for pollinators.

3. Should follow-up or future perception surveys be considered or undertaken, these need to build on the success and findings of this survey, including: The format, design and content of such questionnaires should include questions that are clear and comprehensive, quickly and easily completed; include open-text responses to questions of views and feelings; consideration be given to reaching audiences who may not use internet, and reaching new groups of people who have not engaged with this survey for reasons of geography, background and interests or prior engagement in the subject.

On the basis of the above, Kent County Council will be taking the next steps:

- Make the results of the survey available in a short and easy to digest summary, which includes the key messages from the survey and what we will do next in light of these results.
- Review our social media campaign plans to ensure it picks up on all the areas of knowledge and understanding identified as needing attention by the survey; and consider what else we could do outside of our social media work to address this.
- Within our communications work, look to address some of the misconceptions and concerns relating to wilder verges.
- Use the evidence which suggests public support for wilder verges and green space management to facilitate a move towards more widespread adoption of this practice within our own estate and verge management; and share with district partners and others.
- Work with Highways, as required, on public engagement work (and potentially additional surveys/consultations) in support of introducing further wilder verges throughout the county.

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Kent County Council, Explore Kent, and Kent Green Action for promoting the survey on their social media.

Appendix 1

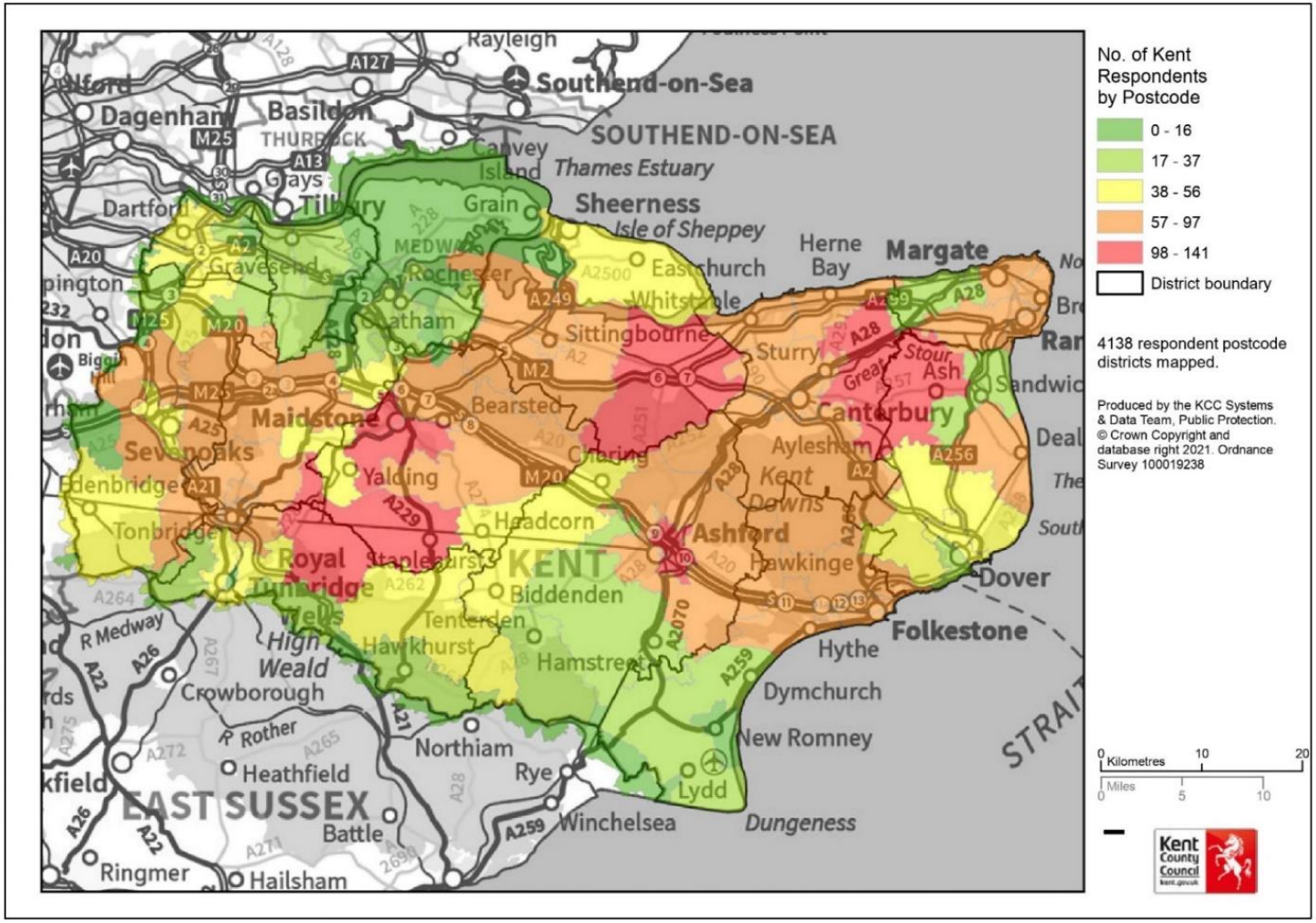

Figure 1: Distribution of respondents across Kent