Wildlife Trusts Wales
Ymddiriedolaethau Natur Cymru

Powys Cysylltiadau Gwyrdd
Green Connections Powys

Report

Feasibility study on Community / SME growing of local provenance native plants for pollinators in Powys - a Green Connections case study

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Photo by Jon Hawkins

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1. INTRODUCTION

Green Connections Powys is a collaborative Wildlife Trusts project across Powys that is working with community groups, small businesses, landowners and statutory organisations to take local action to address climate change and biodiversity loss and create a nature recovery network across the county.
Communities and individuals in Powys are becoming increasingly aware of the twin- crises of climate change and biodiversity loss and are seeking advice on how they might take action in their local area.
One thing people could do is to plant native species with local provenance and pesticide-free pollinator-friendly plants in their gardens, community spaces and smallholdings. Although wildlife-friendly plants may be for sale, it is not always clear how sustainable they are; how local the seed is, whether neonicotinoids have been used in their production, which have an adverse effect on wildlife, or if they are grown in peat free compost.
This feasibility study will investigate whether there is a market for small-scale growing of local provenance native plants for pollinators species, which are both pesticide and peat free and whether small enterprises and community groups are willing and able to meet the demand.

It is important to establish and understand the current legal status of pesticides and peat use in the UK.

According to PAN. Pesticide Action Network, UK:

"In the UK, two neonicotinoid insecticides are authorised for use: acetamiprid and thiacloprid. They are used as:

- seed treatments for cereals
- soil treatment for pot plants in the ornamental sector
- foliar sprays on apples, pears and a range of glasshouse crops
- insect sprays for plants in homes and gardens (these include BugClear Ultra and RoseClear Ultra)

Thiacloprid is being phased out due to its potential to harm human health, leaving acetamiprid as the only remaining approved neonicotinoid in the EU."

Peat
According to The Department for Environment, Food and Rural Affairs in their Press Release on the 27/08/2022:

"All sales of peat to amateur gardeners in England will be banned by 2024, the Government has announced today."

They go on to say:

"The Government has also pledged to continue to work closely with the professional horticulture sector on speeding up their transition to peat-free alternatives ahead of a ban for the professional

horticulture sector, recognising that the professional horticulture sector faces additional technical barriers that will take longer to overcome."

According to DEFRA 70% of all peat used in the horticultural sector is by amateurs. There is no date set for the commercial sector ban on its use.

2. STUDY SETTING

This feasibility study covers the whole of Powys.

3. METHODOLOGY

The study began by identifying the various interested parties.

Growers:
a) Garden Centres
b) Online sellers
c) Supermarkets
d) Local Growers and Growers under the Botanic Gardens Assurance Scheme

Customers:
f) PCC Parks and Gardens
g) Town and Community councils
h) General public

A series of questionnaires were developed for each group. Sometimes these questionnaires were completed in face -to -face discussions, which allowed the discussion to broaden out. On other occasions the questionnaire was emailed across to individuals and/or groups. A questionnaire for

the general public was presented on 'Smart survey' and sent to as many individuals and local groups across Powys as possible.

The research starts by analysing the data collected from a wide range of plant producers and sellers. The key information to be gleaned is the quantity of potential pesticides still used on plants for pollinators and the amount of peat still used in their production.

Having collected and analysed data from the professional side of horticulture the study then goes on to assess the knowledge and awareness of these issues and preferences of a wide range of consumers.

The conclusions at the end of the study will inform the market of the potential for local provenance and native pesticide and peat free plants. They may also indicate a strong market for more locally produced peat free compost.

4. THE FOUR STRANDS

Strand 1 *Identify and talk to a range of garden centres, SMEs and community enterprises across Powys to establish if locally grown native plants and pesticide-free pollinator garden plants are already grown and sold. Gauge their interest, practical considerations and understanding of local markets for these plants.*

And

Strand 2. *Establish whether enterprises are using native seed and to what extent it is local provenance. Find out whether peat-free compost is being used and if not, why not.*

The study began with researching where plants are currently sourced from in Powys, so includes garden centres, supermarkets, online sources and local producers.

Growers

a) Garden Centres. Questionnaire *(Appendix A)*
A series of visits was made to a wide range of Garden Centres with a prepared questionnaire. The questionnaire enabled focus on the required information while allowing for a broader conversation to take place and be noted as necessary.

Compilation of responses:

1. *Have you seen a rise in demand for pollinator friendly plants?*

All garden Centres have experienced a big increase in demand for Pollinator Friendly plants. One Centre felt that it was the result of the businesses doing the promoting as much as the public seeking these plants out.

2. *Have you seen a rise in interest for creating Wildflower Meadows?*

All Garden Centres have seen a rise in interest for creating Wildflower Meadows by the general public. All agreed though that the customers didn't realise exactly what was involved.

Comments included:

> "Many customers come back saying that it failed and only one or two plants came through. Growing a wildflower meadow is often far more complicated than the average gardener is ready for."
>
> "Much more consumer information is needed on how to successfully create a wildflower meadow. Is the garden suitable? Where is the right place? Many gardeners would be better simply planting pollinating plants as young plants or plugs."

3. *Do the wildflower seed mixes come from authentic wildflowers or from 'domesticated' versions?*

Some centres buy from the RHS. Some buy from Franchi seeds, an Italian company who do a range of British meadow seed. Consensus is that most of the seed will come from domesticated breeding stock and not a truly wild variety.

4. *What percentage of stock do you raise yourselves?*

The larger Garden Centres bought all their stock in. The bulk coming from the UK and some from Europe. The smaller Centres grew between 50% and 80% of their own plants.

5. *Do you use peat free compost for your seedlings and plants?*

Comments:

> "No. The seeds and young plants do not do well in peat free composts. It is difficult to keep them watered. We do use Dalefoot non-peat, which is sheep's wool, bracken and comfrey, but it is crazy expensive"
>
> "No. The seeds and young plants do not do well in the peat free composts. We use a lot of liquid seaweed to improve them. How sustainable is that?
>
> "Partly. We have reduced usage by 50%. The problem is that the peat is still cheap and other replacement products are expensive. There aren't enough peat free alternatives available."

6. *Do you know if the plants that you buy in are in peat free compost?*

Consensus was that although some might be in peat-reduced compost the bulk of all plants bought in from big wholesalers will still contain peat. Interestingly one garden centre did buy in from a smaller local producer who has managed to be completely peat and pesticide free.

7. *Are the seeds you use and the plants that you raise Neonicotinoid free?*

Again, this question does not apply to the larger garden centres who do not grow their own. Of the home growers the seed can only be guaranteed pesticide free if it has been saved by the grower from existing stock or comes from a certified organic producer. Only one of the centres interviewed

practices ‘Integrated’ pest management, that is, the use of predators such as Nematodes to control pest infestations.

Comment:

> “You do need to educate yourself in how to do it. Spraying is too easy, although quite a bit more expensive than nematodes, etc.”

The others are still using permitted sprays when necessary.

8. *Do you know if the plants that you buy in carry Neonicotinoids?*

All agreed that they probably do. Some felt that UK grown were likely to carry fewer or less pesticides, but no one checked prior to buying in.

9. *Do you sell ‘local provenance’ seed and plants? That is, seeds and plants of Welsh origin and not imported?*

General consensus was that more definition of what constituted ‘local provenance’ was needed and that no one was currently producing them on a commercial scale.

10. *If not, would you be interested in stocking local provenance seeds and plants from local producers?*

All garden centres were interested in stocking these plants and those that grow their own plants were interested in producing them too. It was agreed that there needed to be proof of demand and good marketing.

b) On-line Sellers

There are many online plant retailers offering a dazzling variety of plants. Three were interviewed: ClaireAustin, Sarah Raven and Suttons Seeds

Claire Austin's response:

WA Green Connections Feasibility Study started 12th May 2022
Questionnaire for Growers, Sarah Austin

Have you seen a rise in demand for 'bee' friendly plants?	Yes, increased year on year
Have you seen a rise in demand for wildflower meadow seed/seedlings?	Aware of increase though not an area we are involved in
Have you seen a rise in demand for plants grown in peat free compost?	Yes, more public awareness
Do you grow peat free?	Yes, have done for 20 plus years
How easy is it to find good compost that does not contain peat?	Supply and demand issues in the trade and retail sector but we have a reliable source
Do you currently grow any native Welsh wild plants for pollinators?	Some but have not focused on them
If there was a market for such plants, would you be interested in producing them?	Yes, subject to initial stock availability and customer demand proving them a profitable and viable option
Do you manage to grow chemical free?	No chemicals are used in our pot production growing
Would you like an update on the results of this feasibility study?	Yes

Additional comments:

> "In our nursery in Lincolnshire we employ an integrated pest management system, using beneficial insects and nematodes to control pests. Our bulb suppliers in Holland have confirmed to us that they do not use any of the banned chemicals within the group of nitro-substituted neonicotinoids implicated in affecting bee behaviour. We do not buy treated or coated seed and our pelleted seed does not contain any pesticides."

Sutton's Seeds Response:

> "Neonicotinoids are a class of insecticides which are toxic to invertebrates, but also have a negative impact on many other beneficial insects. In Autumn 2017, we stopped the use of all neonicotinoid pesticides at our nursery in Torquay."

c) Supermarkets
All Supermarkets stated that they work within the current Government guidelines on both the pesticide content of plants for retail and for the peat content of compost.

d) Local growers and growers under the Botanic Gardens Assurance Scheme.
(Questionnaire Appendix B, *letter to growers, Appendix C*, *questions for growers under the Botanic Garden Assurance Scheme Appendix D)*

This is probably the appropriate section to introduce the subject of labelling plants for pollinators. As will be evidenced in the survey results from the general public there is a belief among most consumers that the RHS, (Royal Horticultural Society), bee logo on plants means that the plant is not only safe but is a positive contributor to bee and pollinator health.

The RHS was questioned about the safety of their symbol, (*letter to RHS Appendix E*), and they gave this response:

> "Our 'Plants for Pollinators' logo does not guarantee that pesticides have not been used on the plants at some point, rather that they are plants which attract pollinators.
>
> You can read more about this on our Plants for Pollinators webpage. The two paragraphs which refer directly to this issue are copied below:
>
> **One of the biggest problems for pollinators is a lack of flowering plants, especially those packed with pollen and nectar, so in 2011 we launched the Perfect for Pollinators logo to encourage gardeners to grow more of them. We care passionately about our bees, hoverflies, butterflies and other pollinators and believe gardens play an important role in reversing their decline. The brand has never resulted in any profit for the RHS.**
>
> **We have been reviewing the logo after research found that some labelled plants contained traces of pesticides. While the RHS encourages responsible growing practices, it cannot, as a charity, police how hundreds of thousands of plants are grown each year within the horticultural trade. Rather than get rid of the brand altogether – which would undermine efforts to boost pollinator numbers - we are changing the name to Plants for Pollinators. This new name better reflects the significance of the logo; showing gardeners those flowering plants that are attractive to pollinators without commenting on the way in which they have been grown.**
>
> The RHS does work to reduce the use of pesticides in gardening practices and in the advice we give to gardeners, while also working with the Horticultural Trade and Government.

Our advice page on How gardeners can help our declining pollinators contains a list of organic growers who would not have used any pesticides."

The new RHS logo, below, does nothing to enlighten the general public about whether the plants they are choosing to purchase are actually dangerous or even potentially fatal for pollinators, despite being classed as suitable plants for pollinators.

The Botanical Gardens of Wales offers an Assurance Scheme for growers which also carries a bee logo:

Growers registering under this scheme commit to growing without pesticides:

"To be eligible for the scheme, plants need be grown without the use of peat or synthetic insecticides, synthetic molluscicides and synthetic fungicides. If bought-in plant material like seeds, bulbs or plug plants are used to produce assured plants, the bought-in material needs to have been organically grown. Each participating nursery has signed a declaration agreeing that only plants grown to these standards will display the Saving Pollinators logo"

The Botanic Garden Wales has recently concluded a survey of its' own. The survey went out to all growers under their assurance scheme and was designed to ascertain the success of the scheme, the market for plants that are native, pesticide and peat free and the degree of support for the scheme going forward.
The results validate the survey results done by this study. There is, indeed, huge interest among consumers in growing plants that will support pollinators, but also a lack of knowledge surrounding pesticide use. Correct labelling and information at the point of sale is vital.
(You can see the survey results in Appendix H)

All growers responding to the questionnaires have seen a rise in demand for plants for pollinators. There is almost universal agreement across all producers that far more needs to be done to raise

consumer awareness of the insecticide usage on garden plants. Particularly those that are advertised as being good for pollinators while carrying the deadly pesticides.
Not many growers are currently producing wild native plants. One grower trialled this ten years ago, but the demand wasn't there at that time. She is very happy to start production again. Another grower produces a few but hasn't focused on them as yet.

Lack of direct contact with customers does create a problem when trying to read the possible markets. Most growers sell to garden centres and online. Direct customer contact is limited to farmers markets and plant fairs.
When asked about the difficulties of growing plants that are pesticide and peat free the responses were:

"There are no difficulties really. I occasionally get either a population of a pest such as aphid that stops me selling a plant until they naturally disperse"

"We always use Melcourt but this sometimes carries Scarab Fly. We treat with predator mites and nematodes. We have sometimes found an issue around good root development so check every plant before it goes to market. When you don't use pesticides you end up with a healthy balance of pests and predators. The skill is to be able to identify plant pests and diseases and to know what to use. We get a lot of our predator supplies from dragonfly.co.uk.
More courses needed, particularly in Schools in science and biology lessons, on pesticides versus natural predators"

Seed saving among growers varies hugely with several only managing 5% while the top seed saver uses 90% of their own seed year on year. There is a very limited amount of wild native plant seed available and it must be remembered that permissions and licences for this kind of seed gathering must be in place.
When asked if there is anything that they can think of that would enhance the sale of safe local provenance native plants for pollinators there were three good responses.

1. "Local is always best. There needs to be more awareness made to the public about what is in the composts they buy and also how many times the average pot plant is sprayed before it becomes available on the garden centre shelf. I did my own research a few years ago with some of the wholesale nurseries I know and found that the average amount of different chemicals used on a perennial plant between cutting and point of sale was 7"

2. It is hard to say. I am sure that in plant fairs and online retail, pesticide use can be communicated to the plant buying public and I would love it to be more important for garden centre customers, but at the moment my feeling is that it is not. I have tried to communicate this message through talks and social media but I often feel that I am preaching to the converted. On the while garden centre customers *are not gardeners, (my italics).* They want plants that perform and often have little understanding of the industry or the issues that affect it. Some of the owners are the same. I don't think that any of my customers buy my plants rather than those of another grower because we do not use pesticides. What they are concerned about is quality, range and price.

3. EDUCATION for both growers and the public.

Customers

e) PCC Parks and Gardens

Council parks and gardens make up an impressive amount of open urban space which could provide excellent examples of wild native plant design.
“My little Welsh Garden”, “Fy ngardd fach gymraeg”, would/could be an excellent brand name.
Disappointingly a conversation with Powys County Council revealed that there was no longer any funding for plant production or acquisition and that it was now down to individual town and community councils to look after these spaces if they have the funds.

f) Town and Community Councils

There are 108 Town and Community Councils in Powys. All were contacted with a questionnaire, Appendix F.
Unfortunately, only five responded.
None of them had any budget of any size for planting in public spaces, so there is a reliance on successful funding applications for any projects undertaken. For the most part planting schemes are in line with the environmental requirements of the funders but these fit with the aspirations of the applicants as well.
Councils sourcing plants do source as locally as possible and do choose plants raised in peat free compost. There is also a greater awareness of the issues surrounding pesticide use:

“Our environmental policy is to not use these ourselves and discourage use by the County Council and allotment holders. Through wildlife talks (MWT) and information to generally encourage residents to be more environmentally friendly in their use of any weedkillers, insecticides, etc.”
However, some councils still use chemicals to manage sports pitches and roadside weeds.

All contributing councils said that they would be very happy to source locally produced, local provenance pesticide free plants for pollinators. Although there does seem to be an issue around hanging baskets, which are ever popular and for which native plant replacements may need to be suggested.

g) General public

It was decided to conduct a survey through Smart Survey, an online survey platform. However, some groups approached were less likely to use the internet than others, so a printed version was made available.

The main groups approached were:
Transition Towns
Incredible Edible
Landworkers Alliance
Social Farms and Gardens
Women’s Institutes
The Organic Growers Association

The survey results are below and show a very positive response to the possibilities of being able to source locally produced native Welsh plants for pollinators.

Smart survey Results

Safe, local plants for pollinators survey results.

Question 1.

Are you concerned about the decline in pollinator numbers. i.e., bees, moths, hover flies, etc?

191 responses from 225

Yes	185	96.86%
No	3	1.57%
Not aware of the issues	3	1.57%

Question 2

If you are a gardener, do you choose plants that are good for pollinators?

189 responses from 225

Yes	152	80.42%
No	2	1.06%
Sometimes	32	16.93%
Other	6	3.17%

Other:
1. No garden, only pots.
2. Learning about it so I can garden better.
3. Not a gardener.
4. My preference is always to choose native plants, on the assumption that they are EITHER good for native pollinators OR good as a food plant for other (not-necessarily pollinating) native fauna OR both!
5. I grow mostly food, but I am learning about growing pollinators too.
6. I try but admit I am a total amateur.

Question 3

Where do you generally source your plants from?

189 responses from 225

Garden Centres	113	59.79%
Internet	58	30.69%
Supermarkets	28	14.81%
Other	109	57.67%

Other:

1. Self-seeded ‘weeds’
2. Often from small, local growers, cuttings and seeds.
3. Local gardeners.
4. Local plant sales.
5. Local sellers.
6. Cuttings, etc, from other gardeners.
7. Collected seeds and cuttings.
8. Swaps with family.
9. Friends, neighbours, Aldi.
10. Friends.
11. Save seeds.
12. Other people’s gardens.
13. Seed, root stock, cuttings. Locally sourced as far as possible.
14. Friends, cuttings, seeds.
15. Other gardeners.
16. Friends, biosecure seed collection from native, wild local plants, community garden seed/plant swaps local to me, sometimes local garden centre.
17. Local seed and seedling swaps.
18. Grow from seed.
19. Seed catalogues.
20. Local seedling swaps or grow from seed, garden centres for bigger items.
21. Seeds and swapping with local gardeners.
22. A mixture, some internet, some local plant stalls, some taking cuttings from friends.
23. Local friends.
24. Local shops.
25. Grow my own.
26. Sometimes I take from friends’ gardens or local farmers with their permission – and where there are plentiful numbers.
27. Assorted places.
28. I grow them myself, usually from seed.
29. Divisions of herbs and perennials.
30. Seeds
31. I have a nursery & am a member of the "Plants for Pollinators" scheme.
32. Local plants
33. As much as possible, I try to buy from independent nurseries/growers or from charity plant stalls where plants have been raised locally.
34. Only native water plants.
35. Local provenance suppliers such as Real Seeds, etc.
36. Other people’s gardens or let nature take its course
37. Local gardeners, or Welsh heritage variety fruiting trees, shrubs whenever possible
38. We just let nature arrive and stay.
39. Wherever possible grow from seeds or cuttings, etc
40. Plant swaps through local permaculture group, friends, neighbours
41. I grow my plants from seed, organic where I can find them, as some plants for sale could possibly have been treated with systemic insecticides.
42. Plant and seed swaps.
43. Local small nurseries and friends.

Question 4

Do you check with your supplier that the plants are pesticide free?

187 responses from 225

Yes	50	26.74%
No	82	43.85%
Didn’t know that they could carry pesticides.	44	23.53%
Other	20	10.70%

Other:
1. Hard to discover suppliers’ actual knowledge about whether they are or are not.
2. As much as possible but I never used pesticides once they’re in my garden!
3. Where possible. Charity plant stalls don't usually have this information
4. Favour organic
5. It isn't always possible to check e.g. if it isn't on the label at a plant swap.
6. OK from organic shops/seeds/own grown
7. I usually buy seed.
8. Most commercial nurseries use pesticides, that's why i propagate my own plants.
9. I buy organic seeds
10. We don't use pesticide and grow organically so figure it won't last long.
11. Grown from seed without pesticides
12. Always try to buy organic quality, believing these will be pesticide free.

Question 5

Do you prefer to buy plants grown in peat free compost?

189 responses from 225

Yes	163	86.70%
No	10	5.32%
Other	18	9.57

Other:
1. Didn’t even think of that.
2. Don't check - but use peat free myself.
3. But not thought of checking!
4. Not easy to discover with root stock and bulbs.
5. Until recently yes but now I have found Soil association peat compost from silt.
6. Never mentioned by retailers to consumer
7. Not aware.
8. if available
9. Depends on needs of plant …

10. Well yes, but trouble is they don't grow so well.
11. I buy what I can afford.
12. We don't buy peat-based compost, but never think about it whilst buying plants really.
13. Don't always know
14. But this is rarely specified
15. I wouldn't even ask, sorry.

Question 6.

Would you prefer to buy plants grown locally?

189 responses from 225

Yes	188	99.47%
No	1	0.53%

Question 7

Would you be interested in using native Welsh pollinating plants in your garden that are peat and pesticide free?

193 responses from 225

Yes	180	95.24%
No	3	1.59%
Other	10	5.29%

Other:
1. If I were in Wales. But same for Cornwall.
2. Possibly.
3. Definitely!
4. I grow my own, but if I did buy plants, I would try to get peat and pesticide free.
5. Already do.
6. Price is always the biggest factor when buying new plants.
7. I mostly grow my own plants from seed, but I buy grafted vegetable plants. My preferred supplier no longer does small orders and v disappointed with quality of packaging of supplier used this year.
8. And also native Welsh plants that may be good native-invertebrate food plants whilst perhaps being not such great pollinators!
9. I have some already and I am 'a bit choosy' what I have in the garden. We are surrounded by wild vegetation.
10. I buy locally as I know they will grow here. I created an acre organic garden in rural empty fields.

h) Women's Institute

Outside the online survey a series of hardcopy questionnaires went out to local **Women's Institute.** *(Letter to Women's Institutes Appendix G)*

Results from eleven paper returns show the following:

Q1. Are you concerned about the decline in pollinator numbers, i.e., bees, moths, hover flies, etc?

Yes	10	90.09%
No	1	9.09%
Not aware of the issue	0	0

Q2. If you are a gardener, do you choose plants that are good for pollinators?

Yes	9	81.81%
No	0	18.18%
Sometimes	2	0
Other	0	0

Q3. Where do you generally source your plants from?

Garden Centres	11	100%
Internet	0	0
Supermarket	0	0
Other	0	0

Q 4. Do you check with your supplier that the plants are pesticide free?

Yes	3	27.27%
No	6	54.54%
Didn't know that they carried pesticides	2	18.18%
Other	0	0

Q5. Do you prefer to buy plants in peat free compost?

Yes	8	72.72%
No	2	18.18%
Other	1	9.09%

Other: We do buy peat free for planting.

Q6. Would you prefer to buy plants grown locally?

Yes	11	100%
No	0	0

Q &. Would you be interested in using native Welsh pollinating plants in your garden that are peat and pesticide free?

Yes	11	100%
No	0	0
Other	0	0

Strand 3. *Undertake a **SWOT**-type analysis of the feasibility of enterprises/community groups offering native plants to sell and opportunities within the market to sell plants.*

Strengths:

* There is a huge surge in public interest in the threats to our native pollinators and insects. This is reflected in the increased demand for pollinator plants at all levels and areas of sales.
* A Powys wide survey to identify the demand for local provenance, native pesticide and peat free plants for pollinators has shown a 99.47% 'yes' to locally produced plants that are peat and pesticide free and 95.21% said 'yes' to native Welsh plants.
* Powys has a strong base of SMEs who are keen to develop this area of the market.
* Growers in Powys can join the Botanic Garden's Assurance scheme to promote the safety of their plants

Weaknesses

* The cost of raising these plants may make them more expensive than the currently available commercially raised garden centre plants
* Individual growers may not have the time to do marketing as well
* Isolated growers may have issues getting their plants to their customers
* There has been very little raising of public awareness around the actual safety of plants indicated as being good for pollinators. This needs to be focused on.

Opportunities

* There is the possible need for a commercial coordinator to roll out the marketing of these plants and to create a unified selling platform
* There is an opportunity for local peat free compost production, along the lines of Dalefoot Composts, particularly as Wales has plenty of sheep's wool and bracken.
* Once public awareness has been raised about the actual pesticide content of plants that are indicated as 'good for pollinators' the interest and demand for safe local provenance plants for pollinators will increase

Threats

* Poor marketing
* Uncoordinated production
* Difficulty obtaining native wild seed
* Difficulty obtaining good quality peat free compost
* Insufficient knowledge of seed saving and plant propagation
* Insufficient knowledge of the legality behind plant sales and seed gathering, (plant passports and seed licences)
* Climate change may affect the success of local plants

Strand 4. *Identify and provide guidance and individual support to at least 3SME or community enterprises across Powys interested in developing an enterprise growing native species and/or pesticide free pollinator garden plants and marketing those products.*

Five SMEs have been identified as being interested in developing an enterprise growing native, pesticide free pollinating plants for parks and gardens. Some have previous experience while for others it will be a new venture. Lantra, (Land based Training), are happy to develop a course in local provenance native plant production and propagation. The necessary information on seed licences and plant passports will be made available.

The Botanical Garden Wales is offering its assurance scheme to all growers in Wales who will guarantee to grow pesticide and peat free and to produce as close to organic standards as possible. Again, the Assurance Scheme's bee logo is the only one which guarantees that the plant it is on is completely safe for pollinators, containing no pesticides.

To date the following SME growers have expressed interest in going forward with local native plant production:

Looking Glass Nursery, Doldowlod, Newbridge on Wye
Llysdinam Estate walled garden, Newbridge on Wye
Mick and Alice, Rhos Organics, Knighton
Ann Owen, Einion's garden, Ceredigion
Ash and Elm horticulture, Llanidloes

5 SUMMARY

All suppliers have seen a rise in interest in plants for pollinators and peat free growing.

The study needed to know how aware, and concerned, producers of plants are with regards to pesticide inclusion and the use of peat in compost and to what extent they informed the general public and took action to mitigate the usage of both.

Not surprisingly the supermarkets declared that they operated within Government guidelines on pesticide and peat use. This infers that the plants could well contain pesticides but that they were the currently permissive ones and the peat used was at the currently 'legal' percentage.

On-line sellers such as 'Suttons' and 'Sarah Raven' were more advanced in these areas with both of them using integrated pest management system, using beneficial insects and nematodes to control pests.

A range of garden centres were interviewed. The bigger garden centres grew very little or none of their plants for sale and were relatively unaware of the use of pesticides on the plants that they were selling. Larger garden centres also relied on staff to liaise with the public whose knowledge of horticultural production practices may be limited and therefore are unable to answer questions about the use of pesticides.

The smaller garden centres grew up to 80% of their own plants and these were mostly grown without pesticides. One garden centre in particular using nematodes and natural pest management systems. They did all mention the difficulties of raising plants in peat free compost, both from seed and as plugs.

SMEs grew the most pesticide free plants and used the least peat. Of the SMEs interviewed at least three used seed that they had saved themselves up to about 5% of total. They also grew the most plants with local provenance mainly because a lot of the plants on sale have been propagated from existing stock, either by taking cuttings, dividing or seed saving. These plants were not necessarily native Welsh though.

All producers and retailers were aware of the increased interest in and demand for plants for pollinators. They were also aware of the general public finding the use of peat becoming an issue, although currently not a very big one.
The larger retailers expressed an interest in stocking these plants providing there was evidence of the demand from consumers.
The smaller garden centres were also keen to stock these plants, again, if demand was proven, but they were also more willing to start growing them too.
SMEs were the keenest to start developing this area of the market as for them the style of raising local provenance native plants doesn't diverge from their current growing practices in any significant way.

For all growers and retailers interviewed there would need to be evidence of a strong market demand plus the availability of local seed and good peat free compost.
Raising public awareness of the quantities of pesticides still legally used on plants for general sale is a key issue. This would not only be beneficial for the pollinators who rely on these plants, but it

would give the development of a new and local horticultural strand the support that it would need from the general public.

There is also a need in the market for a good compost alternative to peat. Most growers have said that the current peat free composts do not produce strong, healthy plants and do not support good germination. The current top peat free alternative is made from Sheep's wool, Comfrey and Bracken and is produced in Penrith, Cumbria, by Dalefoot. This could be very easily replicated in Wales so should be highlighted and supported as another potential business opportunity.

The on-line, and paper, survey of consumers shows massive support for local provenance native Welsh plants for parks and gardens. As with all new enterprises there are obstacles to surmount and work to be done. These have been clarified in the SWOT analysis.

Appendix A: Questionnaire for Garden Centres

RWT Feasibility Study

Started 12th May 2022

Questionnaire for Garden Centres

Garden Centre Name	
Have you seen a rise in demand for 'Pollinator Friendly' plants?	
Have you seen a rise in interest for creating 'Wildflower' meadows?	
Do the wildflower seed mixes come from authentic wildflowers or from 'domesticated' versions?	
What percentage of stock do you raise yourselves?	
Do you use peat free compost for your seedlings and plants?	
Do you know if the plants that you buy in are in peat free compost?	
Are the seeds you use and the plants you raise Neonicotinoid free?	
Do you know if the plants that you buy in carry Neonicotinoids?	
Do you sell 'local provenance' seed and plants? That is seeds and plants of Welsh origin and not imported?	
If not, would you be interested in stocking local provenance seeds and plants from local producers?	

Appendix B: Questionnaire for Growers

WA Green Connections Feasibility Study

Started 12th May 2022

Questionnaire for Growers

Have you seen a rise in demand for 'bee' friendly plants?	
Have you seen a rise in demand for wildflower meadow seed/seedlings?	
Have you seen a rise in demand for plants grown in peat free compost?	
Do you grow peat free?	
How easy is it to find good compost that does not contain peat?	
Do you currently grow any native Welsh wild plants for pollinators?	
If there was a market for such plants, would you be interested in producing them?	
Do you manage to grow chemical free?	
Would you like an update on the results of this feasibility study?	

This project has received funding through the Welsh Government Rural Communities - Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

Appendix C: Letter to local growers

Dear Sir/Madam

I am delivering a feasibility study for the Welsh Assembly Government's Green Connections project. This is a collaborative project including Radnor, Montgomeryshire and Brecknock Wildlife Trusts.

The feasibility study aims to increase understanding about the opportunities for SME and community growing of local provenance, native plants and pesticide free garden pollinator plants.

Communities and individuals in Powys are becoming increasingly aware of the twin-crises of climate change and biodiversity loss and are seeking advice on how they might take action in their local area.

One thing that people could do is to plant native species with local provenance and pesticide -free pollinator-friendly garden plants in their gardens, community spaces and smallholdings. Although wildlife -friendly plants may be for sale, it is not always clear how truly sustainable they really are: how local the seed is, whether neonicotinoids were used in the production and therefore affect the pollinating insects, or if they are grown in peat free compost.

I am seeking to gauge the market for safe and locally produced pollinating plants, but at the same time need to ascertain how many local growers would be interested in producing such plants?

If you are a grower who would be interested in diversifying into native plants for pollinators, I would welcome you contacting me so that I can keep you informed on progress and where the potential markets are in your area.

This project has received funding through the Welsh Government Rural Communities - Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

Appendix D:

Questions for growers under the Botanic Garden Assurance scheme.

1. How aware do you think the public are of possible insecticide poisoning in pollinator plants?

2. Have you seen an increase in demand for 'safe' pollinator plants?

3. Have you seen a rise in demand for wild and native species?

4. Have you seen a rise in demand for plants raised in peat free compost?

5. How do you sell? On-line……. direct to public…….to larger garden centres…….to shops?

6. Are you wanting to expand your business further or are you at a stable work/revenue size?

7. What, if any, are the difficulties in growing plants that are pesticide and peat free?

8. What percentage of seed used do you manage to save yourself?

9. Is it easy enough to source pesticide free and possibly local provenance seed?

10. Is there anything that you can think off that would enhance the sale of 'safe' pollinator plants, i.e. greater public awareness of pesticide uses in pollinator plants, more small producers locally?

Many thanks for contribution.

This project has received funding through the Welsh Government Rural Communities - Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

Appendix E: Letter to RHS

23rd June 2020

Dear Sir/Madam

I am very keen to support all pollinators as I develop my garden and my gardening skills. When I buy plants, I always try to ensure that they are pollinator friendly so look for the RHS 'Bee Friendly' symbol.

However, I have been told that plants carrying the symbol may still be detrimental to insects and pollinators as they may have been sprayed with Neonicotinoids at some point.

Does your symbol ensure that the plants being sold are pesticide free or simply that this is a style of plant that suits bees?

Thank you in advance for your response. I'm very happy to receive it by email.

Kind regards

Appendix F: Questions for Town and Community Councils

Questionnaire for Town and Community Councils

Dear Sir/madam

I am delivering a feasibility study for the Radnor Wildlife Trust to increase understanding about opportunities for SME and community growing of local provenance, native plants and pesticide free garden/ park pollinator plants.

Communities and individuals in Powys are becoming increasingly aware of the twin crises of climate change and biodiversity loss and are seeking advice on how they might take action in their local area.

Powys County Council no longer has a budget for plants for public spaces, but town and community councils still do.

The following questions will help to inform possible future supply and demand.

Thank you in advance for your time on this and I look forward to hearing back from you.

1. Does your council have a budget for plants in public spaces?

2. Does your council prioritise plants for pollinators over basic ornamentals?

3. How locally can/does your council manage to source its plant stocks?

4. Does your council choose plants raised in peat free compost where possible?

5. How aware is your council of the use of systemic pesticides, (neonicotinoids), on pollinating plants?

6. Is your council currently able to source locally grown pesticide free plants?

7. Would your council be interested in sourcing locally produced, pollinator safe plants in the future?

This project has received funding through the Welsh Government Rural Communities - Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

Appendix E: Introduction to Smart Survey for general public.

Safe local plants for pollinators.

Dear Sir or Madam,

I am delivering a feasibility study for the Welsh Assembly Government's Green Connections project. This is a collaborative project including Radnor, Montgomeryshire and Brecknock Wildlife Trusts.
The feasibility study aims to increase understanding of the opportunities for SMEs , (*small/medium enterprises)* and community growing of local provenance, native plants for pollinators, which are pesticide and peat free.

This simple seven question survey will help me to gauge the general knowledge and understanding of pesticide use on plants and the possible demand for native and safe plants for pollinators.

Please put a tick by your answer and add any additional comments beside 'Other'. Your answers will come straight to me and will not need any personal details.
I can be contacted on dorienne@headweb.co.uk for more information.

The link below will take you to the survey:
https://www.smartsurvey.co.uk/s/OH2YH4/

Many thanks in advance.

Appendix G: Letter to Women's Institute.

Safe plants for pollinators

I am delivering a feasibility study for the Welsh Assembly Government's Green Connections project. This is a collaborative project including Radnor, Montgomeryshire and Brecknock Wildlife Trusts.

The feasibility study aims to increase understanding about the opportunities for SMEs, (*small/medium enterprises), and* community growing of local provenance, native plants and pesticide free garden pollinator plants.

Communities and individuals in Powys are becoming increasingly aware of the twin-crises of climate change and biodiversity loss and are seeking advice on how they might take action in their local area.

One thing that people could do is to plant native species with local provenance and pesticide -free pollinator-friendly garden plants in their gardens, community spaces and smallholdings. Although wildlife -friendly plants may be for sale, it is not always clear how truly sustainable they really are: how local the seed is, whether neonicotinoids were used in the production and therefore affect the pollinating insects, or if they are grown in peat free compost.

I am seeking to gauge the market for safe and locally produced pollinating plants, and the public's desire and interest in buying them.

If you are a gardener and this subject is of interest to you, could you spare a couple of minutes to complete the short, seven question survey that you can reach via the link below.

https://www.smartsurvey.co.uk/s/OH2YH4/

Thank you in advance for your time

This project has received funding through the Welsh Government Rural Communities - Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

Links

https://www.biodiversitywales.org.uk/About-the-scheme

APPENDIX H
Saving Pollinators Assurance Scheme
Nursery Survey Results
January 2022