



Department  
for Environment  
Food & Rural Affairs

[www.gov.uk/defra](http://www.gov.uk/defra)

# National Pollinator Strategy: Implementation Plan



November 2015



© Crown copyright 2015

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v.3. To view this licence visit [www.nationalarchives.gov.uk/doc/open-government-licence/version/3/](http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/) or email [PSI@nationalarchives.gsi.gov.uk](mailto:PSI@nationalarchives.gsi.gov.uk)

This publication is available at [www.gov.uk/government/publications](http://www.gov.uk/government/publications)

Any enquiries regarding this publication should be sent to us at:

Defra

Nature Improvement Programme

Temple Quay House

2 The Square

Temple Quay

Bristol

BS1 6EB

[pollinatorstrategy@defra.gsi.gov.uk](mailto:pollinatorstrategy@defra.gsi.gov.uk)

## Contents

Introduction .....	1
Supporting pollinators .....	1
A summary of progress.....	1
Increasing understanding and action .....	1
Large-scale land owners.....	2
Integrating Bees' Needs advice .....	2
Knowledge sharing .....	2
Working with farmers .....	2
Evidence actions .....	3
Delivery of the actions .....	3
Looking to the future .....	4
PASG members.....	4
Table 1: National Pollinator Strategy Implementation Plan for policy actions .....	5
Table 2: National Pollinator Strategy implementation plan for evidence actions.....	20

# Introduction

The National Pollinator Strategy (NPS) was launched in November 2014. It is a statement of collaborative action and cooperation between Government and other organisations to protect the future of pollinators.

This Implementation Plan sets out how we will deliver the actions in the Strategy and monitor their impacts. The key themes from the Strategy form the basis of the Plan. Under 5 key themes, there are 23 policy and 11 evidence actions. This Plan will be of interest to pollinator specialists, conservation practitioners, Non-Governmental Organisations (NGOs), policy makers and academics, amongst others.

We are very grateful to our partners on the Pollinator Advisory Steering Group, who have helped develop this Implementation Plan, and without whom delivery of many of the actions would not be possible.

## Supporting pollinators

The actions in this Plan come under five key themes:

- Supporting pollinators on farmland;
- Supporting pollinators across towns, cities and the countryside;
- Enhancing the response to pest and disease risks;
- Raising awareness of what pollinators need to survive and thrive; and
- Improving evidence on the status of pollinators and the service they provide.

Loss of habitat was identified as a likely main cause of pollinator declines. Thus key actions focus on expanding food, shelter and nest sites. Our call to action, [Bees' Needs: Food and a Home](#), gives practical and simple steps to help provide pollinators with food and shelter.

## A summary of progress

Many of the policy and evidence actions are well underway. They have been prioritised in consultation with the Steering Group. Below is a narrative on progress so far, with the tables 1 and 2 providing more detail.

### Increasing understanding and action

Many NPS actions concern increasing understanding of the simple things that all land owners and managers can do to help pollinators. A [Bees' Needs website](#) has been set up, hosted by the Wildlife Trusts, to provide further information and encourage people to take action to provide pollinators with food and shelter. The website includes information sheets on creating habitats for pollinators on farms, in transport corridors, on industrial sites, in

gardens and in woodlands. There are also case studies about a range of places and projects to help pollinators, and news updates.

The first Pollinator Awareness Week was held from 13<sup>th</sup> – 19<sup>th</sup> July 2015 and featured a series of activities by Defra and our partners to raise awareness of Bees' Needs and the simple things everyone can do to support pollinators. To celebrate the excellent efforts of a range of land managers in supporting pollinators there was also the first Champion of Champions Award ceremony. We intend to make the week an annual event.

Defra also hosted two events at the international Milan Expo in July 2015 to raise understanding of the innovative work the UK is doing to support pollinators, and to encourage international collaboration. More information about these events, and others organised by our partners, is available on our [Bees Needs](#) website.

## **Large-scale land owners**

We are working with a number of large-scale land managers to agree actions to support pollinators, and have received support from the Church of England, Highways England, Network Rail and the National Trust amongst others. Retailers, DIY outlets and garden centres have been encouraged to promote pollinator friendly displays in April and the autumn, which are key times for planting.

## **Integrating Bees' Needs advice**

Defra has collaborated with Keep Britain Tidy to introduce the first Pollinator (Bees' Needs) award for the Green Flag Award scheme, and worked with Department for Communities and Local Government (DCLG) to include information on pollinators in their planning guidance under 'Biodiversity, ecosystems and green infrastructure.'

## **Knowledge sharing**

Sharing knowledge between scientists, conservation practitioners, developers, land owners, managers, users and NGOs is important. Defra is working with Cambridge and Bristol Universities to organise knowledge exchange events.

## **Working with farmers**

The new Wild Pollinator and Farm Wildlife package was included in the Countryside Stewardship Scheme launched in July 2015. Natural England is promoting the package to farmers and the farming advisory community. For farmers outside the Countryside Stewardship Scheme, the Campaign for the Farmed Environment (CFE) is running a programme of pollinator events on farms and has developed online resources, guidance, training and a social media campaign centred on pollinators.

## Evidence actions

A project involving multiple partners was commissioned in the summer of 2014 with the aim of designing and testing a National Pollinator and Pollination Monitoring Framework. The project has already identified a range of potential monitoring methods that could be implemented by citizen-scientists and professionals and piloting of the methods has been undertaken at a range of sites in England, Wales and Scotland. During 2015, a plan is being developed to implement the results from the project and put in place a framework for monitoring pollinators and pollination services for the future.

Defra is funding a project to enhance the understanding of the social and cultural values of pollinators. This aims to improve the way in which these (non-monetary) values are taken into account in policy development, decision-making and evaluation.

Defra has partnered with the Natural Environment Research Council (NERC) to fund a taxonomy research fellow and studentship to develop new rapid methods of species identification, such as DNA sequencing. This work will utilise specimens collected as part of the Insect Pollinators Initiative to help develop the methods; the specimens will be archived at the Natural History Museum. If successful, these new analytical techniques could be applied to samples collected under a national pollinator monitoring framework.

Defra has been working with external partners to progress our understanding of volunteer motivations, the value of pollination services for crops and wild plants and improving the quality and relevance of data coming from existing monitoring schemes.

Work is also progressing on determining the effects of neonicotinoids on wild and managed pollinators in field conditions through industry and research council funding, and on assessing the impacts of restrictions on neonicotinoids on farmers' decisions on cropping and pesticide use. The industry field trials are part of a pan-European study to inform the European Commission's review of the science following its restrictions on the use of three of these pesticides on crops visited by pollinators. In a separate study, Defra is assessing the levels of neonicotinoids in pollen and nectar of field margin and hedgerow flowers favoured by bumblebees that are found alongside treated crops.

## Delivery of the actions

The Pollinator Advisory Steering Group (PASG) guide and deliver actions under the Plan. PASG members will in turn work with their supporters and partners, creating a wide network delivering benefits for pollinators across the country. As we progress, and new evidence comes to light, the Plan will evolve to use new knowledge from the evaluation of activity undertaken to inform actions. Defra is working on the manifesto commitment to develop a 25 Year Environment Plan, and Defra will make sure that this recognises the importance of pollinators, and takes into account the objectives of the National Pollinator Strategy.

# Looking to the future

We are at the start of an exciting 10 year plan for pollinators and the progress to date demonstrates the commitment by government and non-government organisations alike to make a real difference and provide a brighter future for our pollinators across England.

## **PASG members**

Defra, Natural England, Bee Farmers' Association, British Beekeepers' Association, Buglife, Bumblebee Conservation Trust, Campaign for the Farmed Environment, Country Land and Business Association, Friends of the Earth, National Farmers' Union, National Federation of Women's Institutes, , National Trust, Pesticide Action Network UK, Plantlife, Royal Horticultural Society, Soil Association, Waitrose, The Wildlife Trusts. Academic partners include the University of Cambridge, University of Bristol and the Centre for Ecology & Hydrology.

# Table 1: National Pollinator Strategy Implementation Plan for policy actions

Lead/others	Progress To Date	Next Steps / Moving Forward
<b>1) Promote the Bees' Needs simple actions to all land managers through diverse communication channels</b>		
<b>Defra, and the Pollinator Advisory Steering Group (PASG)</b>	<ol style="list-style-type: none"> <li>1. Bees' Needs website (<a href="http://www.beesneeds.org.uk">www.beesneeds.org.uk</a>) was set up in July 2014, hosted by the Wildlife Trusts. The site includes the Bees' Needs call to action, 5 simple actions, an animation, case studies and tailored guidance sheets. This is the core material to support the Bees' Needs campaign.</li> <li>2. The PASG Communications sub-group was set up in September 2015. The role of the group is to work collaboratively to agree and deliver communications as part of the NPS. The group will share information about their organisations' communications activities, such as events, social media campaigns and publications.</li> <li>3. Defra has developed a 'master list' of stakeholder and Government events of pollinator activities and campaigns.</li> <li>4. In July 2015, Defra and PASG members held the first Pollinator Awareness Week, a week of activities, events, and social media to increase understanding of pollinator needs and encourage everyone to take action to support pollinators.</li> </ol>	<ol style="list-style-type: none"> <li>1. Defra and PASG members will work together to continue social media campaign and communications action, reporting to the PASG Communications Working Group.</li> <li>2. Stakeholders will develop communications opportunities which underpin the communications plan (e.g. promotion of seasonal tips, pollinator-themed events, apps for logging actions on a map/photo records using GPS/GIS, logos, posters and signage to show sites with pollinator-friendly planting).</li> </ol>
<b>2) Develop and promote web-based detailed Bees' Needs advice for land managers</b>		
<b>Fera, Natural England (NE), Defra,</b>	<ol style="list-style-type: none"> <li>1. Defra has commissioned Fera to produce an urban environment focused information sheet.</li> <li>2. Fera and Defra have agreed to publish three additional info sheets in</li> </ol>	<ol style="list-style-type: none"> <li>1. Publish urban environment info sheet by Autumn 2015. Additional info sheets produced in late 2015/early 2016.</li> </ol>



Lead/others	Progress To Date	Next Steps / Moving Forward
scientists, PASG	<p>2015/2016: orchards; horticultural field crops; and sports grounds.</p> <p>3. The Campaign for the Farmed Environment (CFE) has produced two leaflets promoting positive management for pollinators on farmland. The general advice leaflet has been widely promoted to farmers <a href="http://www.cfeonline.org.uk/cfe_leaflet_pollinators_web/">http://www.cfeonline.org.uk/cfe_leaflet_pollinators_web/</a>. A hedgerow management leaflet was produced in partnership with Hedgelink at the request of Defra and NE <a href="http://www.cfeonline.org.uk/managinghedges_online/">http://www.cfeonline.org.uk/managinghedges_online/</a>.</p> <p>4. The CFE has developed a pollinator web page that provides an online portal delivering a range of information on pollinator friendly farm management.</p> <p><a href="http://www.cfeonline.org.uk/campaign-themes/pollinators/">http://www.cfeonline.org.uk/campaign-themes/pollinators/</a></p>	<p>2. All new info sheets to be posted on <a href="http://www.beesneeds.org.uk">www.beesneeds.org.uk</a>.</p> <p>3. Defra will review and expand the advice by consulting with PASG members.</p>
<p><b>3) Members of the public to consider growing a range of plants to provide pollen and nectar sources for pollinators</b></p>		
<p><b>Members of the public</b></p> <p>Defra and members of PASG to play a key role in engaging with the</p>	<p>1. As part of the Communications Plan, the general public/gardeners have been selected as one of the five audiences to focus on in 2015/2016. The other audiences are: farmers, major landowners, local authorities and developers.</p> <p>2. Schools and other community groups included as nominee categories for Champion of Champions Award.</p> <p>3. Promote NPS principles to professional and amateur gardeners: Presence at the Royal Horticultural Society Tatton Park show assisted by</p>	<p>1. PASG members to continue promoting pollinators' essential needs and the Bees' Needs call to action to members of the public.</p>

Lead/others	Progress To Date	Next Steps / Moving Forward
public	<p>Cheshire Wildlife Trust, July 2015.</p> <p>4. Urban Buzz is working with local communities to create urban habitat for pollinators across England and Wales supported by Buglife. As of Oct 2015, funding secured and 8 cities signed up to creating 800 sites.</p> <p>5. Polli:Nation will transform part of school grounds for pollinators, and the pupils will engage with a programme of learning. Over 900 schools have signed up and from January (2016) 260 of these will be supported directly by Learning through Landscapes and the Polli:Nation partners.</p> <p>6. The Bumblebee Conservation Trust currently has over 500 bumblebee champions across the UK. These volunteers have delivered 192 bumblebee talks, 44 guided walks and 249 event exhibits, to raise understanding about the plight of bumblebees and the importance of growing a range of bumblebee friendly plants and flowers.</p> <p>7. Making a Buzz for the Coast is exploring ways to engage local communities living along 300 miles of the Kent coast in ways to help and protect pollinators.</p>	<p>4. Urban Buzz - Aim is to have 8 flagship cities that have created 800 buzzing hotspots, resulting in 200 hectares and 800 key volunteers and 4,800 people engaged in creation and 80,000 through wider engagement by 2018.</p> <p>5. Polli:Nation - By the end of the project (September 2018), the aim is to have 5,000 OPAL surveys undertaken by schools and community groups. This is expected to involve 1,500 different schools or groups.</p> <p>6. By 2019 the Bumblebee Conservation Trust aims to have 2,000 active volunteers across the UK and will engage with 300 community groups, to continue raising awareness about the plight of bumblebees and the importance of creating pollinator friendly habitat. 40 BeeWalk transects established; 55 skilled volunteers; 15,000 people engaged through 225 events; a roadshow visiting 18 communities; 450 volunteers involved contributing 16,000 hours.</p> <p>7. Making a Buzz for the Coast: By 2019 625ha of good quality habitat for bumblebees and other pollinators will have been created: 8km of roadside verges created and / or restored; 400 landowners engaged; one conference delivered to disseminate learning;</p>
<b>4) Improve knowledge sharing of pollinators' needs between scientists, conservation practitioners and NGOs.</b>		
Defra, NE, scientists	1. Defra met with the University of Cambridge and the University of Bristol to map current activities and identify gaps. A knowledge exchange event will	1. A knowledge exchange event for scientists, conservation practitioners and NGOs will be held in late

Lead/others	Progress To Date	Next Steps / Moving Forward
and NGOs	<p>be organised in late 2015/early 2016, following further results from the Insect Pollinators Initiative.</p> <p>2. Defra organised and chaired a conference on pollinators at the world trade fair, Milan Expo in July 2015.</p> <p>3. Since the beginning of 2013, the Bumblebee Conservation Trust has trained more than 1,100 people in bumblebee identification and surveying, including 350+ in 2015. Around 1,500 individuals have submitted records to the two recording schemes BeeWalk and BeeWatch, generating 30,000 biological records over two years.</p>	<p>2015/early 2016.</p> <p>3. Bumblebee Conservation Trust - Work on identification training will be on-going, with the aim of growing BeeWalk records to 60,000 and BeeWatch to 45,000 records by 2019, which will help build data on long-term trends.</p>
<p><b>5) Promote opportunities for farmers to support pollinators through new Common Agricultural Policy (CAP) measures and voluntary actions.</b></p>		
<p>5.1 Defra, NE, Campaign for the Farmed Environment (CFE), National Farmers Union (NFU), supply trade and NGOs</p> <p>5.2 Defra,</p>	<p>1. The PASG were introduced to the Wild Pollinator and Farm Wildlife bundle in the Countryside Stewardship (CS) agri-environment scheme by NE in Dec 2014. A follow-up webinar for wider stakeholders (including PASG members), led by NE, was held in April 2015. NE has received additional funding for promotion of Wild Pollinator and Farm Wildlife package in places where it can achieve the greatest benefit.</p> <p>2. Web-based application for the Wild Pollinator bundle is being developed.</p> <p>3. 2013 to August 2015, the Bumblebee Conservation Trust have engaged with nearly 2,000 farmers and land managers, carried out over 100 site visits to individual farmers and attended 18 agricultural shows to raise understanding of pollinator needs.</p> <p>4. Countryside Stewardship launched in July 2015.</p> <p>5. A Countryside Stewardship scoring system has been developed and the Pollinator and Farm Wildlife package gives extra weighting to</p>	<p>1. NE is establishing partnerships with Non-Governmental Organisation's and industry organisations to provide advice to farmers on the Wild Pollinator and Farm Wildlife.</p> <p>3. The Bumblebee Conservation Trust are committed to help create and/or restore 2,500 hectares of habitat for bumblebees in the next four years, by offering advice and guidance to farmers and landowners and through the projects they deliver. See also Making a Buzz for the Coast above.</p>

Lead/others	Progress To Date	Next Steps / Moving Forward
<p>NE, CFE, agronomists, NGOs, supermarket supply chains, farming reps</p>	<p>applications. Extra points will be given to applicants taking up the Wild Pollinator and Farm Wildlife bundle.</p> <p>6. NE is developing a coordinated plan to support and encourage farmers to deliver the package through CS. The plan will also ensure existing Environmental Stewardship agreements continue to enhance delivery of the right management for wild pollinators on priority habitats and wider countryside biodiversity outcomes.</p> <p>7. In the summer of 2014 CFE ran a series of 37 events which were attended by 729 farmers and 191 farm advisers. These events focused on establishment and management of pollen &amp; nectar mixes under greening. In the spring of 2015 CFE ran a series of 26 events, attended by over 500 farmers and advisers where the focus was on management of hedges and field margins to benefit pollinators.</p> <p>8. Many of the events were run in partnership with industry organisations, companies and wildlife organisations, including: British Bee Keepers Association, Bumble Bee Conservation Trust, Kings Game Cover and Conservation Crops, Syngenta, Wildlife Farming Company, Buglife, Cornfield Flowers Project, Natural England, Short-Haired Bumblebee Project, The Voluntary Initiative, Farming Advice Service, DLF Trifolium and Cotswolds Seeds. A full report on the CFE Pollinator events can be found on their website.</p> <p>9. CFE has worked with industry partners to provide a discounted pollen and nectar flower seed offer for farmers to help them deliver for pollinators on land not in agri-environment schemes. In 2014 the scheme provided enough seed for 443 ha of annual flowers. In 2015 the initiative offered seed for 450 ha of a spring-sown flower mix, 350 ha of an autumn-sown mix, and 200 ha of a field margin mix providing pollen</p>	<p>9. The CFE partnership will continue to promote enhancement of Ecological Focus Areas and enhanced hedgerow management for those outside of Countryside Stewardship.</p> <p>CFE will continue to work with industry partners to grow the existing pollen and nectar flower seed offer.</p>

Lead/others	Progress To Date	Next Steps / Moving Forward
	<p>and nectar.</p> <p>10. CFE has run a series of events, attended by 1273 ELS agreement holders whose agreements close during 2015. A key message at these events was to retain areas of land managed for pollinators.</p> <p>11. Under CFE, farmers have been delivering voluntary measures on the ground that benefits pollinators since 2010. In 2014/15 a variety of CFE environmental measures benefitting pollinators were recorded, including over 3,500 ha of pollen and nectar mix, 3,300 ha of wildflower mix and 1,690 ha of flower-rich temporary grass.</p>	<p>CFE are running a series of events for those ELS agreement holders whose agreements close during 2015. A key message at these events will be to retain areas of land managed for pollinators.</p> <p>Between January-March 2016 the CFE will be delivering a series of events on margin management and retaining environmental measures after agri-environment agreements expire. For arable farmers messages will be around enhancing margins and hedges for pollinators and on-farm wildlife, protecting water quality and delivering integrated pest management. Livestock messages will cover implementing fertiliser free permanent pasture, enhancing hedges for pollinators, pond management and managing nutrients and manure on farm.</p> <p>Relevant partner projects: Buglife's B-lines</p>
<p><b>6) Secure commitment from providers of advice to farmers to draw on Bees' Needs advice</b></p>		
<p>Defra, NE, CFE, agronomists, NGOs</p>	<p>1. NE is developing plans to promote the Wild Pollinator and Farm Wildlife package to the farming advisory community. Further information on this was provided at the stakeholder webinar.</p> <p>2. The CFE has developed an Online Training module aimed at farm advisers, which tests their wider knowledge of pollinator friendly farm management practices. It is registered with BASIS and those who successfully complete the training module are awarded BASIS CPD points – so the training counts towards nationally recognised qualifications. So far this training has been completed by 147 farm advisers.</p>	<p>1. CFE will continue to actively encourage all partners to promote their Pollinator Online Training Module.</p>

Lead/others	Progress To Date	Next Steps / Moving Forward
<b>7) Develop and implement a programme of pollinator events on farms.</b>		
CFE (funding confirmed to end of 2015)	<ol style="list-style-type: none"> <li>1. CFE funding confirmed to end of March 2016.</li> <li>2. CFE is continuing the programme of pollinator events on farms which started in 2014.</li> <li>3. CFE has developed an on-going social media campaign around pollinators. A link to the Game and Wildlife Conservation Trust's pollinator advice is easily accessible on the CFE website.</li> <li>4. During 2014/2015, CFE have run a series of events across the country encouraging farmers to enhance areas of land being managed as follow land under the requirements of CAP greening. The CFE has run over 70 on-farm events / training days for farmers and advisers, providing information on managing farms to help support pollinators. These events have involved around 1500 farmers, growers and advisers.</li> </ol>	<ol style="list-style-type: none"> <li>1. CFE to continue to host programme of on-farm pollinator events in line with Bees' Needs (tailored advice for farmers and woodland managers).</li> <li>2. CFE to follow up at three sites per Regional Coordination Team selected at random to check what is being done differently as a result of the farm pollinator events.</li> <li>3. Bumblebee Conservation Trust will continue to work with CFE and others to raise awareness about pollinators as part of its core conservation activity, resourced through national projects such as Making A Buzz for the Coast and Pastural Pollinators.</li> </ol>
<b>8) Review and update guidance on Integrated Pest Management (IPM).</b>		
<b>Health and Safety Executive (HSE),</b> Defra, Linking	<ol style="list-style-type: none"> <li>1. Integrated Pest Management will be reflected in the Code of Practice for Pesticide Users, which HSE is currently updating.</li> <li>2. Voluntary Initiative launched the Integrated Pest Management Plan in 2014 to support IPM use.</li> </ol>	<ol style="list-style-type: none"> <li>1. Defra will provide partners with evidence and advice to inform their leaflets and guidance.</li> </ol>

Lead/others	Progress To Date	Next Steps / Moving Forward
Environment and Farming (LEAF), Voluntary Initiative (VI), Agriculture and Horticulture Development Board (AHDB), CFE	3. CFE alongside the Voluntary Initiative has developed a crop protection leaflet for arable and livestock farmers that highlight best practice and responsible use of pesticides incorporating IPM principles. It highlights these issues particularly in the context of protecting pollinators.	
<b>9) Voluntary Initiative (VI) to (a) revise guidance on insecticide best practice and (b) work with National Register of Sprayer Operators on training courses.</b>		
<b>Voluntary Initiative (VI)</b> , National Register of Sprayer Operators	<p>1. Voluntary Initiative has published a new guidance document, <a href="#">‘Insecticides: best practice advice for farmers and operators’</a> (May 2015). It includes Bee Safety Advice and mentions pollinators more generally.</p> <p>2. The Voluntary Initiative website has a specific pollinator page to highlight the Call to Action: <a href="http://www.voluntaryinitiative.org.uk/en/wildlife/pollinators">http://www.voluntaryinitiative.org.uk/en/wildlife/pollinators</a></p> <p>3. Operator training includes IPM references in line with Sustainable Use Directive.</p>	1. Completed.
<b>10) Share IPM practices with farmers and growers including on-farm demonstrations and farm walks.</b>		
Defra,	1. HSE ensures that relevant guidance prepared on behalf of, or by,	1. Defra will develop the work plan with organisations

Lead/others	Progress To Date	Next Steps / Moving Forward
<b>Health and Safety Executive (HSE),</b> Campaign for the Farmed Environment (CFE), Linking Environment And Farming (LEAF), Agriculture and Horticulture Development Board (AHDB) , VI and NGOs	Government reflects IPM.  2. Voluntary Initiative scheme manages new Integrated Pest Management plans, developed by the NFU, to promote and record IPM practices. The plans are for farmers, growers and spray operators to complete, and they encourage economically and environmentally sustainable management of pests, weeds and disease using a range of cultural, chemical, physical and biological controls. Launched in April 2014, the new plans are already used by 9,400 farmers and cover around 2.6 million hectares of farmland in the UK.	listed on action in light of new guidance being produced by end 2015.
<b>11) Keep under active review on-going research on IPM to identify practical advice to support pollinators and promote to farmers/growers.</b>		
<b>Defra, HSE, LEAF</b> (Linking Environment and Farming), AHDB, VI	1. HSE is keeping a watching brief, which links to action 8: Review and update guidance on Integrated Pest Management (IPM).  2. Natural Environment Research Council's Centre for Ecology & Hydrology has designed and is implementing a large-scale field experiment to quantify the impact on honeybees of two commercial neonicotinoids seed treatments in commercially grown crops of oilseed rape. More information here:	1. HSE will alert Defra to emerging or completed research with relevant findings on pollinators. Defra will link across to partners so new information can be included in their advice /plans.  Partners to advise Defra of new publications, data etc.  Defra to seek views of PASG members on research



Lead/others	Progress To Date	Next Steps / Moving Forward
(Voluntary Initiative), scientists and NGOs	<a href="#">Research project.</a>	developments, such as research in France by Agrovista showing different ways of managing pests.
<b>12) Secure commitment from large-scale land managers to follow Bees' Needs advice.</b>		
Defra, NE, land managers, businesses	<p>1. The Defra Minister has written to retailers, DIY outlets and garden centres to encourage them to have pollinator friendly displays in April and autumn.</p> <p>2. 'B-Lines': a landscape scale partnership programme led by Buglife creating a network of flower-rich pathways across countryside, towns and cities, linking together the best existing wildlife areas to benefit pollinators, across the UK. As of August 2015, B-lines have been identified across the north west and north east of England, as well as East Anglia, London, Kent and Sussex, and areas of the South West. Over 100 ha of habitat has been restored and created and over 100 schools engaged.</p> <p>3. Defra led a Cross-Whitehall Sustainable Development Forum to promote pollinators to other government departments (10 March 2015). This led to the Department for Work &amp; Pensions (DWP) taking action on their office estates:</p> <ul style="list-style-type: none"> <li>• Ashdown House, Hastings - an area of roughly 25m x 10m was seeded March 15, to add to an area that had been planted previously.</li> <li>• Peel Park, Blackpool – site has sown wild flower seeds between the bottom car parks, in addition to completing one complete bug hotel with surrounding area seeded, and second bug hotel in the making. Bees are sheltering in one of the nest boxes. The activities at this site are a</li> </ul>	<p>1. Defra will continue seeking out additional specific commitments from other major land managers, and make contacts through 'Major Landowner Group' and via 'Amenity Forum' (HSE).</p> <p>2. 'B-Lines' - 4 more projects planned for 2015 with a target of restoring and creating 1000ha of wildflower-rich habitat by end 2017.</p> <p>3. Ashdown House, Hastings - the site is going to turn the remaining bed the courtyard into a wild flower area, in early October 2015.</p> <p>Chatham is planning to plant daffodils and wild flower seed in early October 2015, the ground has been cleared and will be rotovated last week of September.</p>

Lead/others	Progress To Date	Next Steps / Moving Forward
	<p>collaborative effort. Peel Park has a group keen to embrace nature who have driven the activities with support from the Facilities Manager and Landscaper.</p> <ul style="list-style-type: none"> <li>• DWP also has wildflower planting at Flowers Hill, Bristol and Gabalfa, Cardiff.</li> <li>• ‘B-Lines’: a landscape scale partnership programme led by Buglife creating a network of flower-rich pathways across countryside, towns and cities, linking together the best existing wildlife areas to benefit pollinators, across the UK. As of August 2015, B-lines have been identified across the north of England, as well as East Anglia, London, Kent and Sussex, and areas of the south west. Over 100 ha of habitat has been restored.</li> </ul> <p>4. Defra gave a speech at a parks seminar led by the Association for Public Service Excellence (APSE) to promote pollinators to local authorities across the UK in October 2015.</p>	
<b>13) Disseminate Bees’ Needs to brownfield site managers.</b>		
<b>CIRIA and Buglife</b>	1. Defra colleagues are working with Construction Industry Research and Information Association (CIRIA) and Buglife to agree information to share with brownfield site managers.	1. CIRIA/Buglife will report on progress to PASG
<b>14) Publish policy and practice note on urban pollinators (part of Insect Pollinators Initiative).</b>		
<b>Insect Pollinators Initiative</b>	1. IPI produced a policy and practice note, ‘Managing urban areas for insect pollinators’ in October 2015. The lead authors were from the University of Bristol with co-authors at Universities of Leeds, Reading, Newcastle and	

Lead/others	Progress To Date	Next Steps / Moving Forward
<b>Programme Mgt Group</b>	Edinburgh.	
<b>15) Secure awareness of, and integrate Bees' Needs advice into Planning Guidance and local biodiversity initiatives (e.g., Green Infrastructure Partnership, Green Flag Awards, biodiversity off-setting).</b>		
Defra, DCLG, TCPA, KBT, local authorities and NE	<ol style="list-style-type: none"> <li>1. Keep Britain Tidy have awarded their Pollinators (Bees' Needs) award as part of the Green Flag Awards scheme (July 2015).</li> <li>2. Defra is working with DCLG to ensure that pollinator updates will be included in next updates.</li> </ol>	<ol style="list-style-type: none"> <li>1. Relevant partner projects: Buglife's Urban Buzz</li> <li>2. DCLG has included updates on pollinators in their planning guidance under 'Biodiversity, ecosystems and green infrastructure.'</li> </ol>
<b>16) Workshops on managing urban pollinators for a wide range of land owners and managers such as local authorities, developers, planners, Local Nature Partnerships.</b>		
Defra, scientists, CIRIA, TCPA, ALGE and NGOs	<ol style="list-style-type: none"> <li>1. Workshops on managing urban pollinators will begin in late 2015/2016, following further results from IPI research. <ul style="list-style-type: none"> <li>• Workshops/webinars are being developed for farming advisors on the Wild Pollinator and Farm Wildlife package, to be held in summer 2015.</li> <li>• Partners in Bristol have been developing a city-wide approach to pollinator conservation. This includes implementation of a Greater Bristol Pollinator Strategy. Partners are: University of Bristol, Avon Wildlife Trust, Bristol City Council, South Gloucestershire Council, Bristol Friends of the Earth, University of the West of England and Buglife.</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Deliver up to 4 webinars or workshops across England by end 2017.</li> </ol> <p>Defra to develop plans and programmes with those listed, including Buglife, BBCT, Friends of the Earth, Plantlife and LNPs.</p> <p>Programme ideas include sharing case studies, local data on status, advice, amenity use of pesticides and IPM.</p> <p>Relevant partner projects:</p> <p>Buglife's Urban Buzz project will define and disseminate best practice for pollinators in urban areas, working with 8 cities with a wide of experts and case studies for dissemination. Also the Bumblebee Conservation Trust's</p>

Lead/others	Progress To Date	Next Steps / Moving Forward
		<p>Making a Buzz.</p> <p>Partners in Bristol will be producing a case study on our activities.</p>
<b>17) Promote plants for pollinators as part of (Building Research Establishment Environmental Assessment Method) BREEAM's sustainable building certification</b>		
<b>BREEAM</b>	1. Defra colleagues are in communication with BREEAM.	1.BREEAM will report on progress to PASG.
<b>18) Annual Bees' Needs Champions award ceremony to celebrate excellent best practice by a wide range of land owners and managers.</b>		
<b>Defra, NGOs</b>	<p>1. Keep Britain Tidy managed nominees for the Champion of Champions Award. Five nominee categories were agreed: schools, community groups, local authorities, farmers and development/construction companies and nominees were put forward by Keep Britain Tidy, CIRIA and Conservation Grade</p> <p>2. The first Champions of Champions Award ceremony was held in July 2015, coinciding with Pollinator Awareness Week.</p>	1.The Champion of Champions Award ceremony will be an annual event.
<b>19) Develop pesticide guidance for amenity use</b>		
<b>HSE, Defra</b>	1. Defra and HSE are working in collaboration, and industry Amenity Forum has developed a range of pesticide guidance notes and increased emphasis on the use of integrated approaches.	1.HSE is leading and working with the 'Amenity Forum'. HSE will report on progress for One Year Progress Report.
<b>20) Develop quality standard to ensure availability of high quality native origin seeds for wildflower planting schemes.</b>		
<b>Kew's Native Seed Hub and</b>	1. Kew has agreed a Quality Assurance mark with Thompson and Morgan. The Quality Assurance mark is also being applied to seed sourced for Kew's own initiative, Grow Wild.	1.Linked to Action 4 (raise awareness of seed quality with practitioners).

Lead/others	Progress To Date	Next Steps / Moving Forward
<b>Millennium Seed Bank</b>		
<b>21) (Continue to) improve beekeepers' management of pest and disease risks of honey bees through the Healthy Bees Plan.</b>		
Defra, NBU, beekeeping associations	1. A €6 million EU research project, SMARTBEEES, was recently awarded to improve our understanding of honeybees' resistance to Varroa and the associated viruses. This research will be carried out across 11 European countries and will support the breeding of honeybees with resistance to these key pests and diseases. Defra are contributing to the funding for this project, which in the UK is being carried out by Fera and the University of Aberdeen.	1. Insect Pollinator Initiative policy and practice notes for officials and beekeepers under development, expected in 2015/16.
<b>22) Implement revised policies to control pest and disease risks of honey bees.</b>		
NBU, Defra, beekeeping associations	<ol style="list-style-type: none"> <li>1. Surveillance network for bee diseases.</li> <li>2. Progress is being steered and monitored by Bee Health colleagues in Defra and Animal and Plant Health Agency (APHA).</li> <li>3. As from 1 Jan 2015 only native bumble species can be imported into England unless under a special licence from NE.</li> <li>4. Bee Inspectors have completed contingency exercises for the exotic bee pests – Asian hornet and small hive beetle – during 2014/15. Inspectors have also visited countries where these pests are endemic to learn more about the practical control of these pests. The lessons learned will be used in the development of future policy and practice guidance.</li> </ol>	<ol style="list-style-type: none"> <li>1. APHA to report progress to PASG.</li> <li>2. A research project to 'stress test' surveillance strategies (including the beekeepers sentinel apiary network) for exotic pests is to be completed by the end of 2015. The lessons learned will be used in the development of future policy and practice guidance.</li> </ol>
<b>23) Monitor and keep under active review evidence of disease risks from commercially used bumble bees and take actions as required</b>		
Defra	1. This is monitored on an on-going basis by Bee Health, Defra and National	1. Defra will continue monitor the impact of the new

Lead/others	Progress To Date	Next Steps / Moving Forward
	<p>Bee Unit.</p> <p>2. From 1 January 2015, growers requiring commercially produced bumblebees to boost pollination must use commercially produced bees of the native subspecies, <i>Bombus terrestris audax</i>. The licensing agency, NE, could however issue an emergency class licence which will permit growers and researchers to release non-native bumblebees if they can demonstrate that have been unable to obtain native hives in sufficient quantities and at the appropriate times to ensure crop pollination.</p>	<p>restrictions on the trade.</p> <p>2. The Bumblebee Conservation Trust will continue to focus on this as a key policy issue over the next year and is involved in research with the University of Sussex.</p>

## Table 2: National Pollinator Strategy implementation plan for evidence actions

No.	Evidence Action	Lead/others	Progress To Date	Next Steps / Moving Forward
(1)	Develop and field-test a new monitoring framework that can be implemented by professionals and volunteers.	Defra/Scottish Government, Welsh Government, statutory nature conservation bodies, Centre for Ecology and Hydrology (CEH), Leeds University, Reading University & Open University & entomology experts (Hymettus) & volunteers from recording schemes & societies (Bees Wasps and Ants Recording Society; Hoverfly Recording Scheme; Bumblebee Conservation Trust; Butterfly Conservation and British Trust for Ornithology).	<p>Major partnership project commissioned to address a key evidence gap: the development of a National Pollinator and Pollination Monitoring Framework. The monitoring will provide an essential evidence base for assessing change in the future.</p> <p>The project has already identified a range of potential monitoring methods that could be implemented by citizen scientists and professionals across the UK. The monitoring approaches have been piloted at a range of sites in England, Wales and Scotland. They include comparisons of voluntary versus professional surveyors, different ways of collecting samples and frequency of sampling. Both crop and non-crop habitats are being studied.</p>	Final report expected at end of January 2016. Emerging results will inform implementation plan (see evidence action on implementing a new monitoring framework).

No.	Evidence Action	Lead/others	Progress To Date	Next Steps / Moving Forward
(2)	Implement new monitoring scheme(s).	Defra/Devolved Administrations, Joint Nature Conservation Committee (JNCC), National Biodiversity Network.	Implementing a new monitoring framework will be dependent on the results emerging from the development and field-testing of the national framework. It will require coordinated action by a range of individuals and organisation across the volunteer, statutory, research and private sectors. The framework is likely to build on existing monitoring activity in both the voluntary and research sectors. More detailed plans will be drawn up as the Defra-funded research provides a clearer picture of monitoring requirements.	An implementation group will be established by early 2016. Terms of Reference for the group are being finalised.
(3)	(continue to) Improve standards of data collection, management and analysis in volunteer recording schemes.	Defra/ to be confirmed	A full specification has been drafted and agreed.	It is proposed to progress this project as part of the evidence action on implementing a new monitoring framework.



No.	Evidence Action	Lead/others	Progress To Date	Next Steps / Moving Forward
(4)	Expand pool of taxonomic expertise and capability for identifying insect pollinators.	Defra, Natural History Museum (NHM) and Natural Environment Research Council.	Placements for post-doctoral fellowship and Collaborative Awards in Science and Engineering (CASE) studentship finalised. Main objectives are to identify DNA sequences including bar coding for the rapid identification of pollinator species collected by future monitoring schemes. Specimens from the Insect Pollinators Initiative (IPI) will be stored at the Natural History Museum (NHM). Bar codes will be cross-referenced with DNA from existing insect collections at NHM.	Funding currently planned to end by June 2016. This work should produce techniques for the rapid identification of species in mixed species samples collected through monitoring.
(5)	Improve understanding of motivations of volunteer recorders to aid recruitment of additional volunteers into new monitoring framework for pollinators.	Defra framework/ volunteer recording schemes.	Progressed as part of national monitoring framework evidence action. Feedback questionnaires have been completed by recorders involved with pilot surveys included under the national monitoring framework.	-
(6)	Support long-term storage of insect specimens from research projects in anticipation of improved identification technology.	Defra and other funders of the Insect Pollinators Initiative, Natural History Museum.	Underway. Linked to evidence action on expanding the pool of taxonomic expertise	-

No.	Evidence Action	Lead/others	Progress To Date	Next Steps / Moving Forward
(7)	Feasibility study on conducting primary research on relationship between pollinators and pollination services in the crop production.	Defra	Working to progress with partners.	-
(8)	Scoping study to consider benefits of research on ecology of pollinator/wild plant interactions.	Defra	Further consideration required in the light of recent publications.	-
(9)	Study to develop a framework for assessing the indirect benefits and socio-cultural value of pollinators to the public.	Defra/Simon Christmas Ltd.	Project commissioned with Simon Christmas Ltd. It aims to enhance understanding of the social and cultural values of pollinators and improve the way in which these values are taken into account in policy development, decision-making and evaluation. Steering group meetings held, interviewee organisations agreed and scope finalised.	Project due to be completed in March 2016.
(10)	Determine the effects of neonicotinoids on wild and managed pollinators in field conditions	Pesticide manufacturers/ Centre for Ecology and Hydrology (CEH).	Large-scale field trial commissioned with CEH by Bayer CropScience and Syngenta. Other laboratory and field studies carried out by industry in response to EU regulatory requirements. Further academic studies continue to be published.	The first results from the CEH study will be available in Autumn 2015. The final results will be available in Spring 2016. The intention is to seek peer-reviewed publication of the results at the same time as publication of the final report.

No.	Evidence Action	Lead/others	Progress To Date	Next Steps / Moving Forward
(11)	(continue to) Assess the impacts of restrictions on neonicotinoids on farmers' decisions on cropping and pesticide use.	Defra	Surveys of pesticide choices and cropping have been undertaken. Further work is in hand.	Data will be available towards the end of 2015.