Written evidence submitted by Rebecca Pow MP (INS0049)

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Rt Hon Greg Clark MP
Chair,
Science, Innovation and Technology Committee

13 December 2023

Dear Greg,

FOLLOW UP POINTS FROM SIT COMMITTEE ON INSECT DECLINE

How Government is working with CIEEM on developing entomology skills

Through the Green Jobs Delivery Group, government, employers and skills providers are working together to understand and take joint action on skills and employment issues relating to delivery of government's climate and environment ambitions. The Green Jobs Delivery Group was established in May 2022 following commitment in the Net Zero Strategy for a central forum for industry and government to take action on green jobs and skills. It is supported by a number of sector-specific Task and Finish Groups, including the Nature Task and Finish Group which is chaired by the Chartered Institute of Ecologists and Environmental Managers (CIEEM). These Task and Finish Groups have collated evidence on skills and workforce issues and are now working with government to agree actions. These actions will constitute the Green Jobs Plan, due for publication in early 2024.

In the new year, CIEEM, supported by IfATE (the Institute of Apprenticeships and Technical Education, a DfE ALB), will bring together employers to explore the opportunities for developing non-degree entry routes into ecological roles to address identified workforce and skills challenges.

The role of soil health in tackling the declines in invertebrates needed for ecosystem services

Invertebrates, like worms, play a key role in maintaining ecosystem nutrient recycling, enhancing plant growth and secondary seed disposal. For example, they recycle dead plants and organisms back into the soil, adding to its overall health.

The Environmental Improvement Plan (EIP) sets out a target to bring at least 40% of England's agricultural soil into sustainable management through our farming schemes by 2028, increasing this to 60% by 2030. The Environmental land management (ELM) scheme pays farmers for actions that protect and improve soil health under the Sustainable Farming Incentive scheme (SFI). For example, using herbal leys and grass-legume mixtures or cover crops.

National Soil Monitoring is currently underway through the Natural Capital Ecosystem Assessment Programme (£140m over 3 years). This will enable us to gather data to build a robust national baseline of soil health in England to evaluate changes and identify improvements to soil health, including soil biota, and better understand how to manage our land to reduce and protect our communities.

A forecast of the impact on insect populations of the recent 'Restoring our natural environment' policy paper

We announced a package of new measures on 29 November to help restore our natural environment and connect people with nature. These interventions are not targeted specifically at insects, but, as insects make up to 90% of all species of animals on the planet and can be found in almost every habitat (Facts and figures - Royal Entomological Society (royensoc.co.uk)), these measures will support the restoration, creation and connectivity of habitat for insects.

The 34 projects selected for Landscape Recovery Round Two will collectively restore more than 35,000 hectares of peatland, sustainably manage more than 20,000 hectares of woodland, including some temperate rainforest, create over 7,000 hectares of new woodland and benefit more than 160 protected sites (SSSIs). This builds on the success of the first 22 Landscape Recovery projects which are already underway, aiming to restore more than 600 km of rivers and targeting the conservation of more than 260 flagship species.

Projects from Round 1 and Round 2 aim to support a range of flagship insect species. These species include many Section 41 priority species such as the marsh fritillary and pearl-bordered fritillary butterflies, the ruderal bumble bee and red shanked carder bee and beetles such as the zircon reed beetle. These are just a few examples of the hundreds of insects species that will benefit from the wider ecosystem restoration planned by landscape recovery projects.

We also published a plan to recover England's temperate rainforests, a globally rare and important habitat that supports rare insect species such as the chequered skipper butterfly. The plan also contains proposals to create two new community forests in Tees Valley and Derbyshire and a competition for a second National Forest - inspired by the existing National Forest in the Midlands which has seen a strong increase in species abundance, including an 148% increase in butterflies between the 2000s and 2010s (Biodiversity Report - Executive Summary 2022 (nationalforest.org)).

Despite being only one quarter of land cover, Protected Landscapes (National Landscapes and National Parks) are home to nearly half of all priority habitats in England, including many of our most important sites for nature. We are starting the search for a new National Park and providing an additional £10 million of funding to existing Protected Landscapes to help them deliver more for people and nature. A boost to nature in these special places is a boost for our soil and insect health. Protected Landscapes already have a range of projects to support their insect populations, including through our Farming in Protected Landscapes (FiPL) programme. For example:

- in Kelling Heath (Norfolk Coast) we have funded work to extend habitat to benefit the silver studded blue butterfly and other biodiversity.
- in Dorset National Landscape we are working with Butterfly Conservation to run identification and survey training for volunteers to support the Duke of Burgundy butterfly
- in North Wessex Downs National Landscape, FiPL is funding a pollinators project with 20 farmers from the Pewsey Downs Famer Group to provide a landscape rich in pollinators and other invertebrates. This includes work to engages the local community.

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In the first two years of FiPL, we have created ~2,900 hectares of habitats for biodiversity and improved around ~69,000 hectares, created or restored 262 ponds and better managed around 2,600ha of wetland. The restoration and creation of these habitats will have a positive impact on our insect populations.

The government is delivering a number of policies to increase access to nature. By increasing access to nature, we aim to improve people's knowledge of and care for the environment, thus increasing pro-environmental behaviours. In increasing access, we always consider the impact on the environment and take steps to protect sensitive sites and species. We also promote responsible behaviour through the refreshed Countryside Code.

We are also dedicating £2.5 million of funding to connect more children with nature and boost children's understanding of their environment.

Information on the work the department is doing related to insects beyond pollinators (outside of the bee unit)

We are taking a holistic package of measures to recover England's biodiversity, including insect species. This includes:

- Funding the creation and restoration of core habitats important for insects like wildflower meadows, through our £25 million pound Species Survival Fund and funding woodland and peatland restoration through our £750 million Nature for Climate Fund.
- Supporting the recovery of threatened insect species through our £14.5 million Species Recovery Programme Capital Grant Scheme. Current projects include creating flight corridors and increasing food plants for the pearl bordered fritillary butterfly, woodland enhancement for the grizzled skipper butterfly and the reintroduction of one of our rarest grasshoppers, the large marsh grasshopper, to its preferred bog and fen habitat.
- Delivering new environmental land management schemes that will offer choice of support for more regenerative approaches to farming, and the creation or restoration of habitats will support insect populations.
- Promoting and incentivising integrated pest management to maximise the use of non-chemical control techniques and minimise the use of chemical pesticides.
- Leading delivery of a prioritised programme of SSSI improvement to improve the condition of our SSSIs and to enable sites to fully contribute to species targets.
- Supporting landscape-scale action to improve and better connect habitat, through delivery of the Nature Recovery Network (NRN) and our 30by30 commitment. This includes investing in Landscape Recovery Projects through our Landscape Recovery Scheme and the launch of Nature Recovery Projects across England.

Details of and the current status of extinction risk and species abundances and the interim targets in order to achieve the environmental targets (biodiversity) of halting declines by 2030 and reversing them by 2042 and reducing extinction risk by 2042. In both cases related to insect species including those not included in the Red list.

Species abundance

We have set legal targets to halt the decline in species abundance by 2030 and then reverse the decline by 2042. We will measure progress towards these targets using a composite indicator of species abundance, which tracks changes in the relative abundance of widespread and priority species. The current version of the indicator includes 1195 species across a range of species groups for which we have sufficiently robust data from long-term monitoring schemes. In terms of insects, the indicator includes 11 bumblebee species, 55 butterflies, and 452 moths and utilises data from third-party monitoring schemes including the Rothamsted Insect Survey, UK Butterfly Monitoring Scheme, and BeeWalks.

The indicator to measure progress towards this target is currently in development. There are existing Defra statistics for the abundance of butterflies and priority moth species and although these are different to the target indicator they are based on similar data and provide useful information on abundance trends.

The 2022 butterfly statistics for England and the UK were published on Tuesday 24th October. In 2022, overall, it was an average year for butterflies in the UK and England, with roughly equal numbers of species increasing and decreasing in abundance over the last 5 years. In the UK, the long-term trend for habitat specialist butterflies has declined significantly since 1976, whereas the long-term trend for butterflies of the wider countryside has remained stable (Butterflies in England: species of the wider countryside on farmland and in woodland).

Priority moth and butterfly species have experienced strong declines in England – in 2021, the index of relative abundance of priority moth species had declined to 13% of its value in 1970, and that of priority butterfly species had declined to 31% of its value in 1976 (4a Status of priority species: relative abundance).

Species extinction

We have set a legal target to improve the red list index for England for species extinction risk by 2042. This will be measured using a new England-level Red List Index (RLI), which assesses the risk of species extinction in England (based on GB data). The baseline England-level RLI was published in 2022 and contains data for 8259 taxa, including 62 butterflies and 3937 other invertebrates. Groups such as bees and moths are not included in the baseline RLI as their Red List data does not yet have formal approval. This approval is needed to ensure the reliability of the RLI – Red List data requires endorsement by one of the Statutory Nature Conservation Bodies and must undergo additional checks to be approved for use (e.g. to ensure the data are complete and appropriate methodologies are used).

The baseline RLI was published in 2022. In the baseline index, butterflies were one of the groups assessed as having the highest extinction risk (alongside birds, and ‘amphibians and reptiles’), and 41% of butterfly taxa were classed as threatened. In contrast, hoverflies were the group with the lowest extinction risk, and 3% of hoverfly taxa were classed as threatened. Caution is needed when making comparisons between taxonomic groups, as data availability and other differences between groups can impact Red List classifications (Outcome Indicator Framework for England's 25 Year Environment Plan: D5 Conservation status of our native species, 2022 - NERR124).

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As noted above, insect taxa such as moths and bees could not be included in the baseline RLI as they lack approved Red List data. Moths and bees will both be included in the abundance target indicator – the abundance indicator will include 11 bumblebee species and 452 moths.

The indicator will be completely updated every 10 years, with the next update in 2032, every 5 years half the taxa in the indicator will have been reassessed leading to a partial update in 2027.

Habitats

We have set a legal target to restore or create over 500,000 hectares of a range of wildlife-rich habitat outside protected sites by 2042. We have also set an interim target to restore or create 140,000 hectares of wildlife-rich habitats outside protected sites by 2028.

The target includes creation and restoration actions on all habitats of principal importance listed under section 41 of the Natural Environment and Rural Communities (NERC) Act, as well as those set out in the Statutory Instrument (SI) for the Environmental Targets Regulations 2023, Schedule 1. As set out in the SI, data will need to be collected on the extent, type and location of habitat. Many of the habitats that will contribute to this target are important for insect populations for example scrub, woodlands, grasslands and freshwaters e.g. rivers. These actions will support species both included and not in the species target indicators.

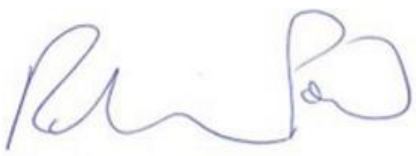
Currently the indicator for this target is in development and so there is no progress update to provide on habitat creation or restoration at this time.

Protected Sites

We have set interim targets for - by 31 January 2028 - all SSSIs to have an up-to-date condition assessment and 50% of SSSIs to have actions on track to achieve favourable condition.

As of November 2023, just under 19% of SSSIs/features had an up-to-date condition assessment and around 12% of SSSIs/features have actions on track to achieve favourable condition. Around 700 SSSIs have invertebrates (which includes insects) in their citations. Over 50% of the invertebrates on these sites are in favourable or unfavourable recovering condition (Designated Sites View (naturalengland.org.uk)).

Yours sincerely,



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