

West Country Buzz: Nature Recovery Networks initiative

**Six month progress report
April 2022 – September 2022**

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Photo credit: Nick Owens



Photo credit: Paul Willis



Photo credit: Dave Watson



**Bumblebee
Conservation
Trust**



Funded by:

Banister Charitable Trust, Barbara
Whatmore Charitable Trust, George
Cadbury Charitable Trust Fund B, and
Natural England generously support
the Bumblebee Conservation Trust
project, West Country Buzz

Banister Charitable Trust, Barbara Whatmore Charitable Trust, George Cadbury Charitable Trust Fund B, and Natural England generously support the Bumblebee Conservation Trust project, West Country Buzz. The project focuses on the S41 priority species Brown-banded carder bee, Moss carder bee, and Ruderal bumblebee on the north coast of Devon. The objectives are to survey and monitor populations; to provide advice and support to raise awareness; and to provide habitat management assistance. The project is being delivered by BBCT Project Officer Jamie Buxton-Gould.

Our focus area is a 5 km strip along the North Devon coast in which we have piloted an approach for a Nature Recovery Network (NRN), targeting the aforementioned S41 priority bumblebees and benefiting a broad range of other pollinating insects. The NRN is being used to create, restore and join up pollinator habitat at a landscape scale, and integrates a wide variety of landowners, farmers, and organisations in the area.

Background

This is year five of the project, which was extended due to difficulties arising from Covid-19 and needing more time to achieve ambitious habitat creation targets. The Brown-banded carder bee (*Bombus humilis*) and the Moss carder bee (*B. muscorum*) were once found widely across Devon but alarmingly are now known from just a few sites on the North Devon coast. The Ruderal bumblebee was considered extinct in the county, last recorded in 1985 until its rediscovery in 2019, where it has only been recorded on Braunton Burrows. Bumblebee habitat is under threat from factors including degradation, fragmentation, coastal erosion and from low-uptake of Countryside Stewardship. It is essential that landowners, farmers and the general public are made aware of the plight of bumblebees, and how management decisions can impact on their survival.

Summary of achievements April – September 2022

Worker **Brown-banded carder bees** were **found at Baggy Point** (prior to 2000, they were absent from the site).

Workers were **also found at Roylands** in Croyde, new to this site. A male was **recorded at Home Farm Marsh**, which is the first record for this side of the estuary since 1999. A record was also made at Windbury Hillfort, Hartland.

A queen **Moss carder bee** was found in **Fremington**, which is the first time since 1999 that the species has been recorded this side of the estuary. It is the first sighting of the species since 2019.

BeeWalks at 2 case study sites are ongoing to gather evidence.

A Bumblebee and other insect Bioblitz took place at Braunton Burrows in August, generating records of 53 species including numerous Brown-banded carder bees. **26 people** attended.

25 landowners have received in-depth **management advice and follow-up support, across 30 sites**.

20.04 ha of pollinator habitat has been created so far this year

545.01 ha of new land has been advised on, plus ongoing advice given to 1,117.8 ha of land on existing sites (totalling 1,662.81 ha)

17 people attended a Farm Day for Pollinators in partnership with FWAG SW and National Trust

122 people attended three workshops, two field practice sessions, and two guided walks

The **project's profile has been raised** via Twitter, articles, and talks, with more scheduled for the autumn

We are continuing to work with **27 partners** across the project area to deliver the project aims.

Project objectives¹

1. Survey and monitor: establish the abundance and distribution of bumblebees, with a focus on S41 species

We have established a network of skilled volunteers and BeeWalkers (the Trust's BeeWalk national bumblebee recording scheme) in North Devon. To support them and recruit more recorders, we ran a **bumblebee identification workshop** in May, attended by **11 participants** at Braunton Countryside Centre and Braunton Burrows.



Bumblebee ID workshop on Braunton Burrows

Three field practice sessions were delivered for a total of **14 people**; one in June for the National Trust at South hole for 3 members of staff, one in July for 8 participants at Northam Burrows; and one in August for the National Trust and Dynamic Dunescapes staff (3 attendees).



Volunteers at Northam Burrows on a Beewalk

Bumblebee surveys to record both rare and common species have been carried out as part of advisory visits and in monitoring case study sites. Volunteers and landowners have joined Trust staff in these surveys. Staff have also been mentoring new BeeWalkers, helping them to gain confidence in walking their transects, thus helping to retain these volunteers. There are **10 active BeeWalks** in North Devon. Between April 2022 and the start of September, data has been submitted from all 10 active transects, yielding **375 records for 11 bumblebee species**, including all of the Big 8 widespread and abundant species (*B. terrestris*, *B. lucorum*, *B. hortorum*, *B. jonellus*, *B. lapidarius*, *B. pratorum*, *B. pascuorum*, *B. hypnorum*), as well as the cuckoo bumblebees *B. rupestris* and *B. vestalis* and the project target species *B. humilis*.

New sightings for one of the target species the Brown-banded carder bee were made at six sites.



Brown-banded carder bee records, with 2022 records in light blue

At **Baggy Point**, a worker was discovered on the northern side in August 2022. The species has been absent from the site since 2000, prior to the discovery of a male in August 2021. Two queens were also found in August 2021 at the nearby new meadow on Middleborough Hill (which received funds and advice from WCB). It is particularly good news to find workers as this is indicative of a breeding population; males can be transient and are able to disperse more widely and

¹ See Appendix for a summary of the project objectives achieved against the work plan

could have originated on Branton Burrows, as could the end-of-summer queens which may have been seeking a hibernation site. The management on Baggy Point is changing to reduce bracken and encourage flower-rich grassland through grazing. It could support more nests of this species in future as this management progresses. In late August of this year a fire destroyed 5 ha of vegetation on the southern side of Baggy point. As much of the vegetation was dense gorse and bramble scrub, it is hoped that restoration works will enhance the area through encouraging beneficial species such as knapweed, heathers and Kidney vetch, which the WCB project is advising on.



Brown-banded carder bee at Baggy Point

At **Roylands**, as a direct result of management advice given through the project in conjunction with the NT, a 9.06 ha species-rich lowland meadow priority habitat was allowed to flower. For the first time ever, in August 2022, worker Brown-banded carder bees were found here and on adjacent NT land, on two separate site visits by NT and BBCT, feeding on Common knapweed. They were not recorded on previous visits (2019 onwards) and it was thought that there was insufficient forage at that time to support the species. The presence of workers is an excellent sign of breeding success and suggests that the species could establish. Another interesting find at this site is the Red-tailed cuckoo bumblebee, *B. rupestris*, found by the NT. Although not a listed species, it has suffered serious declines and Devon records are very sparse. It was last recorded in the project area in 1967.



Brown-banded carder bee at Roylands in Croyde - a new site for the species

A further new record of a male Brown-banded carder bee on knapweed was made along the footpath running through a field in Croyde, about 220m southwest of Croyde Baptist Church (SS448390) and 0.3km northeast of Roylands.

A male Brown-banded carder bee was found at **Home Farm Marsh**, foraging on Water mint and Common knapweed. The project has worked closely with land managers at this site since 2018, and changes have been made during this time to support this and other bumblebee species. These recommendations include planting favoured forage plants such as Vipers bugloss and Kidney vetch, and advice on seed mixes for Countryside Stewardship options and their positioning to help join up habitat. **Finding this species at this site is particularly significant as it is the first sighting of the species on the south of the Estuary since 1999.** A BeeWalk was set up at the site by a volunteer trained through the project, and regularly consults with the site managers on management for bumblebees. This resulted in planting large numbers of sunflowers in 2022 for example. Following on from the Brown-banded discovery, volunteers collected and spread seeds of Common knapweed, Red clover and Red bartsia around suitable parts of the site to increase forage availability.



Brown-banded carder bee on Water mint

Saunton Golf Club is part of the Braunton Burrows SSSI dune system and is a key site for the target bumblebee species. It was surveyed for the first time throughout the duration of the project, with access provided by the golf course manager alongside their ecologist Sophie Olejnik, who organised a Bioblitz in August with Jamie Buxton-Gould and local botanist Mary Breeds. Brown-banded carder bees were recorded in numerous locations on the golf course, using Water mint and Carlina thistle to forage on. Other bumblebee species recorded on site include Common carder bees and Buff/white tailed bumblebees. A land management report was written for the site, with recommendations feeding into the new management plan and HLS scheme.

Brown-banded carder bees were also found at **Windbury Hillfort** in August 2022: a worker foraging on Common knapweed. This was discovered by NT staff who were trained through the project, and was confirmed from a photograph by BBCT's Science manager. It is a very exciting find because the population is at very low levels in the Hartland Peninsula, and was considered potentially locally extinct (the last sighting prior to this was in 2018, from sporadic records of lone individuals). The population here is especially vulnerable due to fragmented habitat and low abundance.

The Moss carder bee was observed for the first time since 2019, (where it was found at RMB Chivenor) in a garden in Fremington, on flowering Kale, in April 2022

by volunteer Steve Gunn. It was a worn and faded queen, identification confirmed by BBCT staff. This is another **significant find, as it has not been recorded in this area since 1999**. The Moss carder bee is particularly vulnerable and was absent from Braunton Burrows for another consecutive year despite extensive searches, particularly in the wet slack areas. This is alarming and suggests that the species is at risk.



Moss carder bee in Fremington

No records were made for the Ruderal bumblebee in 2022. This is a particularly difficult species to identify, and it is hoped that it is present but under-recorded. However, it is likely to be in low numbers due to a lack of habitat. BBCT training includes how to separate this species from similar species, since its discovery in the project area in 2019, and recorders are encouraged to submit photos of potential sightings.

Additionally, the rare solitary Early Colletes bee *Colletes cunicularius* was discovered on Braunton Burrows in April 2022 – a first record for Devon, with its distribution previously restricted to parts of north-west England and south-west Wales, emphasising the importance of this site for rare bee species.

Two case study sites are being monitored, Baggy Point and Braunton Burrows. Detailed bumblebee and habitat data is being collected using monthly BeeWalks and three vegetation surveys per year to record early, mid and late season forage. Data will enable examination of bumblebee responses to habitat management

and record presence of S41 species. Details of this year's findings are being collated and will be presented in the end of year report.



Brown-banded carder bee on Viper's bugloss at Branton Burrows

Over the autumn, survey data will be used to map habitat and bumblebee distribution. This landscape scale analysis will help inform us how the target species are responding to interventions and help target our work next year.

2. Advice and support: raise awareness of what pollinators need to survive and thrive, with landowners, farmers, and the general public

Since April 2022, **25 landowners across 30 sites** have been visited and given in-depth management advice (target number is 15), which often involves multiple visits to the same site, as required. This figure includes ongoing support for 16 landowners already engaged with, and 9 who were new to the project since April 2022.

Since April 2022, we have **delivered advice across 1,662.81 ha** of land to new and existing landowners (545.01 ha of which consisted of new sites and 1,117.8 ha of sites receiving ongoing advice for landowners already involved). Many of these sites receive ongoing advice and multiple visits across different years.

A Farm Day for Pollinators was held in partnership with the National Trust and FWAG SW in September with 17 attendees.

Invitations were sent to Facilitation Fund Group members and farmers and landowners that we have engaged with



Farm Day for Pollinators at Woolacombe

directly through the project. The aim is to work towards a legacy by passing on skills to land managers and professionals in the sector on habitat management for pollinators.

We have **assisted with 2022 Countryside Stewardship applications for three Farms** (Roylands, Home Farm Marsh and Broadlands), collaborating with the RPA and FWAG SW. This includes advice on which options to select, where to position them for maximum benefit to pollinators, and which seed mixes to choose, and providing evidence for the presence of S41 Priority species for the SP9 option.

In August, we held a **Bumblebee and insect Bioblitz** event at Branton Burrows, attended by **26 people** which generated 53 records of a range of insect species. Bumblebee species recorded were Brown-banded carder bee, Common carder bee, Garden, Red tailed and Buff/white tailed bumblebee. The same week, a bioblitz with the National Trust at Heddon Valley was attended by **55 people**. A **Bumblebee Safari** at Northam burrows was attended by **23 people** including families and children.



Bioblitz at Branton Burrows

Talks have been delivered to **146** people from April to September. An **online talk** was given to the NHS (**51 attendees**). A talk about local wildflowers and verges was given at Branton Countryside Centre in September, giving away 164g of annual and perennial wildflower seeds (attended by **45 people**) and another talk all about bumblebees was delivered at Quince Honey Farm in September (attended by **50 people**). Two more talks are planned for the autumn and winter.

The project's Twitter account is updated regularly, and the project features on the BBCT website. Articles are being planned, and will be written over the autumn and winter.

We continue to work with **27 partners** across the project area, including FWAG SW, Devon Wildlife Trust, National Trust, Natural England, North Devon AONB, North Devon Biosphere, Devon Local Nature Partnership, South West Water, South West Lakes Trust, and local wildlife groups.

3. Habitat management: increase the area of suitable habitat and habitat connectivity around existing populations of target species

Since April 2022, we have worked with landowners to **create 20.04 ha of habitat**, with at least a further 5 ha planned for autumn. Work implemented in this reporting period or planned over the autumn includes:

- Seed harvesting from Branton Burrows, RMB Chivenor and Saunton golf course to be oversown at Woolacombe with NT (*in progress*, at least 1.83ha over autumn)
- Oversowing species-poor grassland with local seed to increase diversity at West Bursdon farm (1.3ha)
- Orchard planted and wildflower seed sown at Longlands (0.126 ha)
- Bumblebee-friendly planting at Barnstaple Imperial Gardens (0.04 ha)
- Meadow creation at Park Community school (0.1 ha)
- Plug planting at Slade reservoir (0.0002 ha)
- Planted up a large raised bed and donated bumblebee forage plants at Babbages allotments (0.0006 ha)
- Seed collection and sowing at Home Farm Marsh (0.1ha)
- Planting wildflower plugs and sowing seed alongside green hay at Kenwith Valley LNR (0.4ha)
- Green haying on species-poor fields in Georgeham (17.5 ha)
- New flower-rich margins on arable fields at Home Farm Marsh (0.6 ha)



Green hay spreading at Middle Spreacombe

The overall project target for habitat creation is 160 ha, with the aim to increase the area and connectivity of suitable habitat. As well as advising on 1,795.01 ha to date, **87.52 ha of new habitat has been created since the start of the project** (14.12 in year 1, 27.4 in year 2, 10.01 in year 3, 15.95 in year 4, and 20.04 in year 5 so far). It is too early to predict the final total, although it is possible

that we may fall short of the target. This in part reflects the staff resources and timescale required to find and build relationships (which in itself is an important finding of the project), access to adequate capital funds to bring about large-scale land management changes, and the broader challenge of different land use pressures.



New herb bed for bumblebees at Babbages Allotment

Nature Recovery Networks: a summary

West Country Buzz was tasked with exploring approaches towards the development of a Nature Recovery Network in North Devon, by working at a landscape scale to aid pollinator recovery. Outlined below are findings from the project to date.

1. Landscape scale working

Pollinators move through the landscape to search for food, mates, and nesting and hibernation sites, meaning that a landscape scale and collaborative approach is essential. We identified a project area covering a 5km wide strip along the North Devon coast as this holds Devon's last remaining populations of three nationally declining S41 bumblebee species and covers their potential dispersal range. We set up an NRN here to create resources for pollinators.

This year, we recorded worker Brown-banded carder bees outside of Braunton Burrows (which is the main stronghold for the species in Devon). This builds upon results from 2021 where we recorded males

and new queen Brown-banded carder bees in Croyde and Baggy Point; and a male at Woolacombe in 2019. These sites, which have received improved management through the project, are not only within the dispersal capabilities of this species but are showing signs that they can support the species to re-colonise.

Our landscape scale working integrates landowners and organisations across the area, and includes different habitat types and land uses such as farmland, holiday parks, golf courses, churchyards, and the South West coastal path. We have established good, collaborative relationships with 27 partner organisations and voluntary groups to achieve the project aims.

Pollination is a key ecosystem service. Bumblebee habitat created through the project - through supporting delivery of AES options, voluntary measures, and supplying seed - contributes to broader ecosystem restoration by providing a wide suite of pollinating insects with forage, nesting sites, and hibernation sites. Creating more habitat and joining it up increases resilience to pressures such as inbreeding depression caused by habitat fragmentation.

2. Evidence and planning

Stage one involved landscape scale work across the whole project area to record the distribution of the target bumblebees. Habitat was assessed at this broad scale for suitability for these species, and to identify areas for improvement, using aerial photograph interpretation, Phase One surveys and detailed botanical surveys.

Stage two has involved working at a finer scale for habitat creation and restoration in areas with recent records of target species (post-2000). A local scale approach is essential for providing the amount of ongoing support farmers need to implement management changes, to keep momentum going, to join up habitat in a strategic way, and for finding achievable management plans.

BBCT's Short-haired bumblebee project was used as a model. Here, rare bumblebees are

returning to their former range through an approach of working with clusters of farmers to create habitat, and radiating out from these key areas to achieve landscape scale connectivity and species recovery.

3. Delivery

Prior to the project, Devon was under-recorded for bumblebees and few people had the necessary identification skills. Only two BeeWalks were registered in the area. Multiple targeted bumblebee surveys have since taken place across North Devon as a result of the project and an Atlas to Devon bumblebees was produced in 2019. We have provided free training through workshops and field practice sessions, and events such as bumblebee blitzes, guided walks, talks and wildflower planting. We have also provided free equipment to BeeWalkers.

Our results indicate that this intervention has been effective. Subsequent to this engagement, 20 new BeeWalks were set up so far (exceeding the original project target of six), and new recorders have taken part in surveys with project staff and independently.

BBCT is being represented by volunteers at talks and events. The National Trust has adopted BeeWalks at five sites; and are now including bumblebees as target species in their management plans. After receiving training through the project, rangers and volunteers have new records for the Brown-banded carder bee and are implementing habitat management changes to help support this species as a result.

Following on from successful seed harvesting operations over the past two years, the project has collaborated with and enabled the National Trust's Grassland Project to collect seed from species-rich sites to enhance their sites in Woolacombe. Throughout summer, **5 seed harvesting days** were held (1 at RMB Chivenor, 3 at Branton Burrows and 1 at Saunton Golf Club) targeting seeds from a range of key bumblebee-friendly plants, including Viper's bugloss, Red clover, Common bird's-foot trefoil, Yellow rattle and Carline thistle.



Seed harvesting on RMB Chivenor

Using flagship bumblebee species to create resilient pollinator networks inspires people to get involved and helps create a strong message to capture interest. This method has opened up many opportunities such as permission to survey, implementing habitat changes, and inspiring people to volunteer and record bumblebees.

Providing free, impartial support for farmers in existing AESs, and free basic resources for habitat creation such as seed and compost has also helped to garner interest and support for the project's aims.

There are direct benefits to agriculture due to the West Country Buzz project. Since April 2022, we have run a farm day to share knowledge on managing habitats for pollinators. **In-depth management advice and follow-up support has been given to 25 landowners across 30 sites** during this period, with approximately **1,662.81 hectares of land advised on this year** (545.01 ha on new sites, and 1.117.8 ha on land previously engaged with since the project began in 2018). In addition to this, **87.52 ha of new pollinator habitat has been created since the start of the project.** The additional forage for pollinators should lead to increased pollinator populations over time, which will help crop pollination; and improve pasture quality, translating to healthier and more productive livestock. Rotational grazing has been implemented, which helps provide forage throughout the season, supporting later

flying insects such as the target bumblebee species and boosting biodiversity.

3.1 Challenges in delivery

The extent of **habitat fragmentation** in North Devon presents a major challenge, and requires a long-term approach. This fragmentation is partly due to degradation of coastal grassland through lack of scrub management and nutrient run-off; and due to intensive farming often almost to the cliff edge. This leaves very little space for wildlife.

There is **low AES uptake** among landowners, which is a major barrier to achieving landscape-scale habitat connectivity for pollinators. Feedback has been that the payment for grassland options is too low to make it financially viable.

Suitable AES options for pastoral farms are lacking to support these declining bumblebee species, in particular by providing late season forage. For option GS2 (permanent grasslands with very low inputs), for example, this could be achieved by offering a supplement for a late hay cut; and/or leaving a block or strip of flower-rich pasture uncut until September, the location of which is rotated annually to prevent grassland becoming rank or a build-up of weeds. Paying for **capital costs for setting up rotational grazing** would be extremely valuable to encourage good management of flower-rich grassland. This approach yields great benefits to pollinators and the grassland itself.

Landowners are put off by the **low payments for grassland options**. Recognition of the value in monetary terms of for example GS4 (legume-rich swards) and GS2 compared with arable options (such as SW1, AB1 and AB8), which all receive considerably higher payments, is urgently needed. These habitats are fundamentally important to the survival of these bees and other pollinators in the south west.

4. Concluding remarks

The results of our Nature Recovery Network pilot project indicate the importance of local interventions, and upskilling individuals; as well as the necessity of support for small scale activities and 1 to 1 advisory work. A long-enough scale project is also necessary – it is not until year 5 of the project that we have started to see the species respond to habitat changes.

Continued input is needed from an advisor for technical advice, and for keeping enthusiasm and motivation going.

Initial findings indicate that a bottom-up approach works. As clusters of farmers and enthusiasts have become established, we have been able to start spreading our efforts out from these core areas to include more landowners. This is facilitating joined-up habitat creation at gradually bigger and bigger scales, which is essential in allowing pollinators to recover to their former ranges. Landowner engagement work and habitat creation and restoration takes a long time – to establish networks and build trust, and for ongoing advice and support. To tackle landscape scale habitat restoration requires long-term investment.

2022 was warm, with England experiencing the joint hottest and 6th driest summer on record and the UK having the 4th warmest summer on record (<https://bit.ly/3Cz7yTN>). Locally, the provisional data from Chivenor weather station shows the mean summer temperature (June/July/August) as 17.6°C, although some summers have been warmer, with the summers of 1995 and 2018 both 17.8°C (<https://bit.ly/3EjFPrK>).

Late flying species, such as the target bumblebees, are particularly vulnerable to the effects of sustained warm weather in the early summer since many of their food plants had already gone to seed by the end of the season. However, in some parts of the project area, Common knapweed was proving to be a good drought-resistant plant in mid-August, providing essential floral resources and attracting an abundance of pollinators. In wetter areas, Water mint (e.g.

in damp slacks of Braunton Burrows) was also providing vital forage throughout August and September, reinforcing the importance of wetland habitats in the landscape for supporting pollinators and many other species during drought conditions.



Deep-rooted knapweed flowering well in the 2022 drought compared to parched grasslands in the background

Appendix

Below is a summary of progress against the delivery profile for April 2022 to March 2023.

RAG status are shown as follows – Red: not started, Amber (yellow): in progress, Green: completed.

Objective	Outcome	Output	Actions for BBCT / NE & staff responsible for delivery and reporting	Date for completion of output	Payment milestone £ and date
1. Survey and monitor the abundance and distribution of bumblebees, with a focus on S41 species	An increase in bumblebee records and trained recorders in Devon	Gather evidence on bumblebee distribution and abundance in North Devon, with a focus on Brown-banded carder bee and Moss carder bee, and the Ruderal bumblebee. Identify opportunities for habitat and species connectivity.	Produce a map of bumblebee records to demonstrate abundance of records and distribution of recording effort 1 beginners/intermediate identification session 2 field practice sessions 1 bioblitz 2 case study sites – ongoing monitoring Support Braunton Parish Council and North Devon AONB to monitor road verges under new management 22 BeeWalk transects, both new and existing, continuing to submit data for long-term monitoring Continue to add to baseline of distribution data for the Ruderal bumblebee, Brown-banded and Moss carder bees to monitor their recovery	March 2023 May 2022 (11 participants) 3 delivered, May, June, July (14 people) 1 safari (23 people) 2 delivered, Aug 2022 (81 people) March 2023 March 2023 March 2023 March 2023	NE payment of £30,000 to be in two instalments. First instalment paid by 31 st October 2022 on receipt of interim report. Second report to be completed by the end of March 2023. Payment on receipt of final report.

Objective	Outcome	Output	Actions for BBCT / NE & staff responsible for delivery and reporting	Date for completion of output	Payment milestone £ and date
2. Advice and support, raising awareness of what pollinators need to survive and thrive, with landowners, farmers and the public	Raise awareness and identify actions needed. Engage with landowners and local communities to deliver outcomes for habitats and species	Greater uptake of positive measures and a joined-up, integrated approach Focused training / events and practical 1-to-1 land management advice	Ongoing support and land management advice (including site visits) for 15 landowners and farmers Develop a strategy for a species recovery plan by beginning a knowledge review, identifying partners and starting a threat analysis Encourage formation of a Farmer Cluster group 1 farm day with guest speakers, to provide land management training to key partners, landowners and farmers to upskill and provide confidence in decision making for bumblebees. 1 event for the public on wildflower habitat and road verge management with planting advice Write 1 article for farmers and landowners, and post project updates on BBCT website/social media 4 real-life or virtual talks via Zoom Communicate with and work in partnership with local NGOs and other parties in the project area, and try to embed bumblebees into work plans	March 2023 March 2023 March 2023 Sept 2022 (17 attendees) Sept 2022 (45 people) March 2023 March 2023 (3 complete, 146 people) March 2023	
3. Habitat management, increasing the area of suitable	High quality and targeted habitat management	Landscape scale habitat creation and connectivity, and species recovery	Focus on working with current landowners rather than actively seeking new contacts, but continue to engage with new landowners who approach the project, to create suitable habitat in the project area	March 2023	

Objective	Outcome	Output	Actions for BBCT / NE & staff responsible for delivery and reporting	Date for completion of output	Payment milestone £ and date
habitat and connectivity around existing populations of target species, using an integrated, landscape scale approach	for pollinators and broader ecosystem restoration		<p>Map pollinator habitat and review ways to join up habitat and where to target efforts</p> <p>Create habitat for bumblebees and wild pollinators through ongoing advice, promoting Countryside Stewardship, voluntary measures, work party days and providing seed</p> <p>Work towards overall project habitat target (160 ha created / restored / under improved management by project end).</p> <p>1 green haying and 1 seed harvesting event</p>	<p>March 2023</p> <p>March 2023</p> <p>March 2023</p> <p>July, Aug and Sept (5 seed harvesting days and 1 green haying event)</p>	
Review project	Review approaches to targeted landscape scale delivery and Nature Recovery Network	Project review	<p>Review Nature Recovery Network pilot</p> <p>Record number of landowners given 1-to-1 advice, number of repeat visits, ha's of land advised upon, and ha's of land that positive measures for wild pollinators have been achieved on (including ongoing management of existing Countryside Stewardship agreements, new Countryside Stewardship agreements, and voluntary measures)</p> <p>Analyse case study sites data</p> <p>Measure consolidation of habitat and connectivity through mapping habitat improved or created across the landscape</p> <p>Landowner evaluation questionnaire</p>	<p>March 2023</p> <p>March 2023</p> <p>March 2023</p> <p>March 2023</p> <p>March 2023</p> <p>March 2023</p>	

Objective	Outcome	Output	Actions for BBCT / NE & staff responsible for delivery and reporting	Date for completion of output	Payment milestone £ and date
			Review project's success through evaluation of survey and monitoring data, including presence of S41 species in new sites		
Report on progress made	Effective flow of communication	Progress reports	Regular communications and internal updates to BBCT, and to Bees Needs Short progress update Interim progress report End of year report	March 2023 June 2022 Sept 2022 March 2023	