



MASONBEES.CO.UK
FINDING SOLITARY BEES A HOME

QUESTION?
If there's something you're unsure about, head online and visit our FAQ!



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'Maisy B' artwork © 2020, Kat Whelan / Kat Whelan Illustrations



GUARDIAN UPGRADE KIT

WELCOME! Thank you for purchasing a Guardian Upgrade Kit! Use the Release Box included to keep your Red Mason bee cocoons safe from the elements and large garden predators during their emergence into the wild. A clear plastic tub and breathable lid are also included, which can be used to store cocoons prior to release, if required.

SITING INSTRUCTIONS

COCOON RELEASE BOX

- Position in an area that receives **direct sunlight** throughout the day. *Increases in air temperature stimulate the emergence process – selecting a warm, sunny location for your release box is really important!*
- Mount to a wall, fence, or free-standing post, or use un-mounted – simply place on a stable surface, such as a garden table wall, or bench.
- Position at relatively low height while in use, i.e. **50-100cm** above the ground. *(Bees tend to exit the release box by falling rather than flying!)*
- The holes in the front should be orientated to face **East**, in order to discourage Mason bees using the inside of the box as a nesting location.
- A nesting site/bee hotel should be installed no further than **25 metres** away from the release box – the closer, the better.

YOUR UPGRADE KIT CONTAINS:

1	Cocoon Release Box
1	Plastic Cocoon Storage Tub with Lid

ALSO INCLUDED (ARRIVING IN SPRING):

1	Stock of <i>Osmia bicornis</i> Cocoons - Red Mason bees
1	Seasoned Nesting Tube Pack

HOW TO USE YOUR RELEASE BOX

After positioning your release box according to the instructions above, place cocoons directly into the main compartment and close the lid - bees will naturally emerge over several weeks, as temperatures increase.

Once your bees have been released outdoors, check back regularly to observe their progress – and to relocate any other garden creatures that may have sought refuge inside, such as earwigs, wasps or spiders.

When the emergence process begins, and its duration, will largely depend on your location and microclimate. Bees generally begin flying earlier in the South of the than in the North, mirroring the arrival of Spring itself.

NB: Additional information on the *Osmia bicornis* release process, as well as additional guidance on how to use **Seasoned Nesting Tubes**, will be provided when cocoons are dispatched in March.

A waterproofing treatment has been applied to the exterior surfaces of this product, allowing for immediate outdoor use.

WHAT HAPPENS WHEN RED MASON BEES NEST INSIDE TUBES?

When a female Red Mason bee selects a tube for a nest, she gradually fills it with a series of individual brood cells. Each cell is separated from the next with a dividing wall which is constructed using material from the environment, such as mud or leaves. Inside each cell, she deposits a single egg and enough foraged pollen and/or nectar to sustain her offspring into adulthood. When there's no room left inside to fit any new cells, she seals up the entrance before seeking out a new nesting place, in order to begin the process again.

Once a female Mason bee has sealed the entrance of a tube, she won't return to it again – her young are left to develop, hidden from view, until they are ready to emerge as adult bees and continue the cycle.

HOW TO USE NESTING TUBES & REFILLS (LIKE A PRO)

During their development, solitary bees are defenseless and vulnerable to attack from a wide range of predators, parasites and pathogens. Although we can't eliminate these threats entirely, when used correctly, our nesting tubes can increase the level of protection against these threats for solitary bees that nest inside.

Physically moving the developing larvae to a secure location is one of the easiest and most effective methods we can use to protect the bees against predators. 24 hours after a tube has been sealed at the entrance, the inner layer can be **removed and replaced with a clean refill tube**. (Outer layers can be re-used multiple times per season!) Place occupied tubes inside a breathable container, such as a cardboard box, and store in the dark, in a dry, unheated and pest-free location, such as a garage or shed, until the Autumn.

OCCUPIED TUBES & OVERWINTER CARE

Removing occupied inner tubes and keeping them safe is just the **first** step in caring for our pollinating pals. We also recommend that any occupied tubes you collect are also **opened in the Autumn** and the cocoons inside **removed and separated from any parasites** that may also be present. Although this might sound destructive, the extraction process increases overwinter survival rates and ensures that a healthy population of Mason bees emerge completely unimpeded back into the wild the following year.

BEE GUARDIAN PROJECT - HOW TO PARTICIPATE

If your Red Mason bees nest successfully in the nesting material provided, you can participate in our cocoon-sharing #BeeGuardian Project by sending your occupied equipment back to us in Autumn. We'll remove any cocoons, clean them and screen for parasites, before storing securely for the winter period. We'll also let you know what we found inside your equipment and send a fresh stock of cocoons back to you the following Spring, along with a replacement nesting tube/refill for each we received.

Our equipment returns service opens in September and runs for a limited time only each year. Instructions for this year's service, (including what to do if the bees have left you empty-handed in your first season), are sent **directly to our Guardians via email in August**. NB: Although there is no obligation to return occupied equipment each year, only returning/responding Guardians qualify to receive new cocoons for the season ahead.

If you'd prefer to forgo the #BeeGuardian Project and care for your cocoons yourself, that's absolutely fine – and we're here to help! We've included instructions on how to open occupied tubes below, plus a QR code linking directly to one of our video guides, with more comprehensive information available on our website.

HOW TO OPEN OCCUPIED TUBES IN AUTUMN



Tubes with mud-seals: Drop inner tubes into a bowl of lukewarm water and leave to soak for at least 1-2 hours, or overnight. The glue holding the paper together will dissolve and the tubes will begin to unravel in the water. Finish unravelling by hand. Mud, parasite larvae, unused pollen and other detritus will sink to the bottom of the water and healthy cocoons will float to the surface. Discard used paper and pick out the floating cocoons with a sieve. Rinse with clean water to remove any remaining mud/detritus and transfer to a paper towel. Allow cocoons to dry thoroughly before placing into storage for the Winter months, (see below).



Tubes with other seals: If tubes are sealed with something other than mud, such as leaves or petals, using the soaking technique above may not be suitable. Fortunately, it's possible to unravel tubes *without* soaking them first – simply find the seam at one end of the tube and unpick the paper. Peel away the layers of paper, one at a time, until you reach the cocoons inside. Once extracted, store as below – there is no need to wash cocoons extracted by hand.

COCOON STORAGE - ALL SPECIES

Transfer **dry** cocoons to the clear, plastic storage container (included in Release Box pack). Keep container sealed and store in the dark, in a dry, unheated, pest-free location, e.g. garage or shed.



SCAN TO
VIEW OUR
VIDEO
GUIDE
(YOUTUBE)

