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FINDING SOLITARY BEES A HOME

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SOLITARY BEE STARTER KIT



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WELCOME Thank you for purchasing this Solitary Bee Starter Kit! Install this nesting site in a garden, allotment or green space to provide a sanctuary for a wide range of solitary bees. Keep the surrounding area well-stocked with trees/plants to encourage activity – a supply of mud can also be useful for some species!

ABOUT THE TUBES Complete nesting tubes comprise of two individual cardboard layers – a thin, single-use inner layer, (AKA: 'Tube Refill'), and a thick, re-usable outer layer. Only *complete* tubes should be provided as nesting material for bees – the use of single tube layers is **not** recommended.

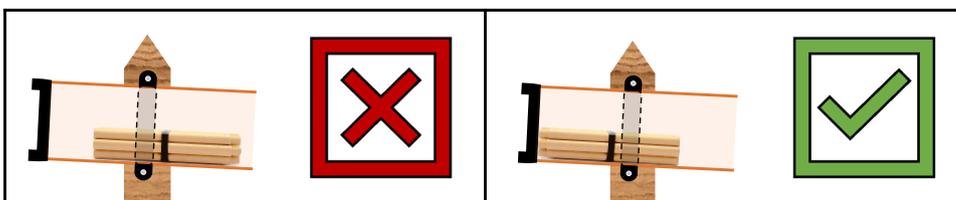
Outer	Protects inner from the elements and parasitic wasps. High durability in dry conditions – suitable for re-use multiple times within a year, for many years. Retains bee pheromones, which will increase the attractiveness of any clean refills placed inside.
Inner	Single-use, when occupied. Paper layers unravel when soaked in water, allowing for easy access to cocoons inside.

SITING INSTRUCTIONS Solitary bees can be **very** fussy when choosing a place to nest! Please read the following carefully prior to installation to ensure you and your guests both get the most out of the new accommodation.

- Secure a nesting tube holder to a wall, fence or free-standing post at a height of at least one metre using the mounting bracket and/or woodscrews provided.
 - The nesting site entrance *must* face towards **South** or **South-East**.
 - Angle entrance slightly downwards to assist with drainage
 - Ensure tubes are observable and within easy reach.
- Do **not** remove the rubber bands around the tubes before use – keep them bundled in tens. Rubber bands prevent birds from removing individual tubes.
- Place nesting tubes as deep into your tube holder as possible. The ends of all tubes should be **in contact with the wall**, to form a seal, as below:

YOUR SOLITARY BEE STARTER KIT CONTAINS:

1	Nesting Tube Holder (Original/Wooden)
2	Woodscrews
1	Mounting Bracket (Original Kit only)
30	MasonBees.co.uk Nesting Tubes
3	UV-Resistant Rubber Bands (Latex Free)
10	Nesting Tube Refills



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WHICH BEES WILL USE THE NESTING TUBES IN THE UK?



Osmia bicornis



Osmia caerulea



Osmia leiana



Megachile centuncularis



Coelioxys elongata

These 8mm-diameter nesting tubes will be occupied by species such as Red Mason bees (*Osmia bicornis*), Blue Mason bees (*Osmia caerulea*), Orange Vented Mason bees (*Osmia leiana*), Patchwork Leafcutter bees (*Megachile centuncularis*) – even cuckoo species, like Dull-Vented Sharp-tail bees (*Coelioxys elongata*).

NB: Bees are often highly regional; the range of visiting species will depend on your location / microclimate.

WHAT HAPPENS WHEN SOLITARY BEES NEST IN THE TUBES?

When a female solitary bee selects a tube, she will gradually fill it with a series of individual brood cells, starting from the deepest point and working outwards. 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 the entrance of her tube is sealed, 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.

HOW TO USE YOUR NESTING TUBES & REFILLS... LIKE A PRO!

Once sealed inside the tubes, developing larvae are defenseless and vulnerable to attack from a wide range of predators, parasites and pathogens. Although we can't eliminate these threats entirely, using nesting tubes correctly can greatly increase the level of defense against them.

Physically moving developing larvae to a secure location is one of the easiest and most effective methods available to protect the bees against predators. As soon as 24 hours after a tube has been sealed at the entrance, **the inner tube layer can be removed from the outer layer and replaced with a clean refill**, to maintain the maximum available space in the nesting site. Occupied inner layers should be moved to a dry, pest-free location, such as a garage or shed, and stored in the dark until the Autumn.

OCCUPIED TUBES & OVERWINTER CARE

Removing occupied inner tubes and keeping them safe while the bees are developing is only the **first** step in caring for your new guests! We also recommend that occupied tubes are **opened** and the cocoons inside **removed** in the Autumn. This step is a little harder work and, although it sounds destructive, it offers the bees a tremendous advantage and is incredibly worthwhile. Extracting cocoons disrupts parasite cycles and prevents the build up of pathogenic mould/fungi, which increases survival rates over the Winter months and ensures that a healthy bee population emerges unimpeded when released back into the wild.



Tubes with mud-seals: Drop inner tubes into a bowl of lukewarm water and leave to soak for at least 2-3 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 thoroughly with clean water to remove any remaining mud/detritus and transfer to a paper towel. Allow cocoons to dry before placing into storage for the Winter months, (see below).



Tubes with other seals, e.g. leaves: If tubes are sealed with something other than mud, using the above technique may not be suitable. Fortunately, it's possible to unravel our tubes *without* soaking them in water first – simply unpick the paper at one end of the tube and peel away the layers one at a time, until you reach the cocoons inside. There's usually no need to wash cocoons extracted by hand – once removed, simply store as recommended below.

COCOON STORAGE - ALL SPECIES

Transfer **dry** cocoons to a breathable container and store in the dark, in a dry, unheated, pest-free location, such as a garage or shed.



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EXTRACTION
VIDEO GUIDE
(YOUTUBE):

