

## How to make bee hotels for resin, leafcutter and masked bees: Wood blocks, bamboo bundles and mudbrick

Note: This text tells you how to make elements for bee hotels.  
It does not tell you how to use equipment.  
Taking the necessary safety precautions is your own responsibility.  
If uncertain about these, ask a professional carpenter.

### Drilled wood blocks, slabs and pieces of branch

#### *Choice of timber*

Use blocks and branches of untreated hardwood, such as eucalypt. Do not use pine, it is too soft and you'll end up with burrs. Branches with few cracks are preferred.\.

#### *Size of the timber*

At least 10 cm and not more than 20 cm deep; length, width and shape can vary.

#### *Diameters of the holes*

Tunnels with different diameters attract different species. So offer tunnels of various diameter between 3 – 8 mm in diameter, for example: 3 - 4 mm (40% of tunnels), 5 - 6 mm (40% of tunnels) and 7-8 mm (20% of tunnels).

#### *Length of the tunnels*

The tunnels should be at least 10 cm long and can be longer, but should have dead ends, so not drill through the block!

#### *Placement of the holes*

Mark the places for the tunnels on the face of the block, about 1.5 - 2 cm apart.

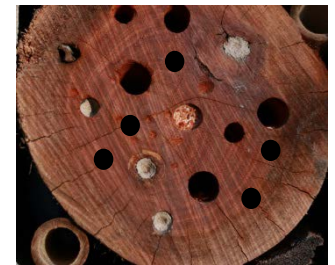
#### *Drilling*

The tunnels should be smooth inside without burrs. Preferably, tunnels should be drilled across the grain of the wood, because that reduces the number of burrs, but with branches and slabs this will often not work. Using hard wood and sharp auger bits or long metal drill bits also help to reduce burrs and make the insides smooth.

While drilling, make sure you keep the drill bit straight to avoid drilling out through the side of the block or crossing other holes. Remember: do not drill completely through the block!

#### *Finishing*

After drilling, shake all of the wood chips from the burrow. If using an auger bit you can remove the wood chips by drilling twice: The first time, place the drill into 'reverse' when removing the drill bit from the wood, then re-drill 'forward' and pull out in 'forward' to clear remaining wood chips. Repeat this process for each hole. Remove the burrs from each hole with a pair of needle-nose pliers or a file.



Burrows with burrs (left) will not be used by the bees. Using sharp drill bits ensures holes are smooth (right; Photos: Megan Halcroft)

## Bamboo/twig Bundles

### *Bamboo*

Use untreated bamboo with inner diameters of 3- 8 mm. This would be outer diameters of 0.8 – 1.5 cm.

### *Cutting*

Cut off cleanly, *at or just behind the node*, so you end up with a dead ended tube with an open stretch of least 10 cm and not more than 20 cm.

### *Cleaning*

Remove the pith from the inside with a skewer or a knitting needle. Sand the entrance with medium sanding paper to get rid of sharp edges.

Tie into a bundle of about 20-30 using zip ties or wire.



## Mudbrick for blue-banded bees

### *Small blocks*

You can make small blocks by using 12 cm deep stretches of 90 mm square PVC stormwater pipe, hexagons or earthenware pipes as casings.

### *Substrate*

Use fine loam, fine tennis court foundation or mix 7 parts of fine bricky sand with one part of red Adelaide clay. If necessary, sieve to get rid of small and large stones. Mix with water to a thick paste/heavy dough, that is just wet enough to allow to form into a sausage with your hand.

### *Filling and drying*

Set the pipe pieces with one open side facing the ground, so they can drain and dry, for example in a milk crate. Fill with the the mix, avoiding air pockets and allow to dry for some hours. Drying time is dependent on the temperature and the thickness of the paste.

### *Making the entrance holes.*

When making the holes, the mix should still be wet, but firm enough so that after withdrawing the pencil from the tunnel, it should keep its inner diameter. Use a pencil to poke holes (6-7 mm in diameter, 6- 10 cm long). Then allow to dry completely.

### *Larger blocks*

Similar strategies can be used to fill besser blocks. But be warned: These filled materials become very heavy! The use of half-sized besser blocks might be a better option.



For more information, visit:

<https://www.beesbusiness.com.au/garden.html>