

# How to make bee hotels

For resin, leafcutter and masked bees

## 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 timber

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

### Diameter of the holes

Tunnels with different diameters attract different species. Offer tunnels of various diameters, between 3–8mm. For example 3–4mm 40% of tunnels, 5–6mm 40% of tunnels and 7–8mm 20% of tunnels.

### Length of tunnels

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

### Placement of holes

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

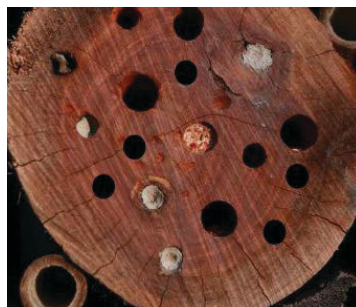
### Drilling

The tunnels should be smooth inside without burrs. Preferably, tunnels should be drilled across the grain of the wood as this reduces the number of burrs, however this will often not work with branches and slabs. Using hardwood and sharp auger bits or long metal drill bits will help 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 the process for each hole. Remove the burrs from each hole with a pair of needle-nose pliers or a file.



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

## Bamboo or twig bundles

### Bamboo

Use untreated bamboo with an inner diameter of 3–8mm, outer diameter of 0.8–1.5cm.

### Cutting

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

### Cleaning

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

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



## Mud brick for blue-banded bees

### Small blocks

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

### Substrate

Use fine loam, fine tennis court foundation or mix 7 parts fine brick sand with one part 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 mix, avoiding air pockets and allow to dry for several hours. Drying time is dependent on the temperature and the thickness of the paste.



### Making 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 (6–7mm diameter, 6–10cm long). Allow to dry completely.

### Larger blocks

Similar strategies can be used to fill bigger blocks but be warned, these filled materials become very heavy. The use of half-sized bigger blocks might be a better option.

