The ‘Beekeeping Naturally’ Kenyan Top Bar Hive

I have kept bees for years in a range of different Hives and for absolute simplicity of management and bee-welfare, I have come to the conclusion that the Kenyan Top Bar Hive is the best for me & the bee organism!

Since I found the Kenyan Top Bar Hive I have been experimenting with various designs and dimensions. Through trial and error, I found the best hive for Australian conditions & for my needs, is a hybridisation of two Kenyan Top Bar designs: a combination of Les Crowder’s hive dimensions and Phil Chandler’s management techniques. Chandler’s use of 2 follower boards and centre entrances as apposed to Les Crowder’s management of using no follower boards and end entrances.

The bulk of the timber I use to build my hives is sustainably harvested Cyprus Pine (‘Macrocarpa’ timber, cut down from the sides of the road). Although grown in Australia it is not the native Australian Cyprus Pine. The timber has proven to be very stable and durable in the harsh Australian sun. The hive body boards are approx. 26mm thick offering ample insulation. Standard pine off the shelf is 19mm thick. I feel that 19mm timber is too thin for good insulation over winter & summer but many people in Australia are building hives with this timber.

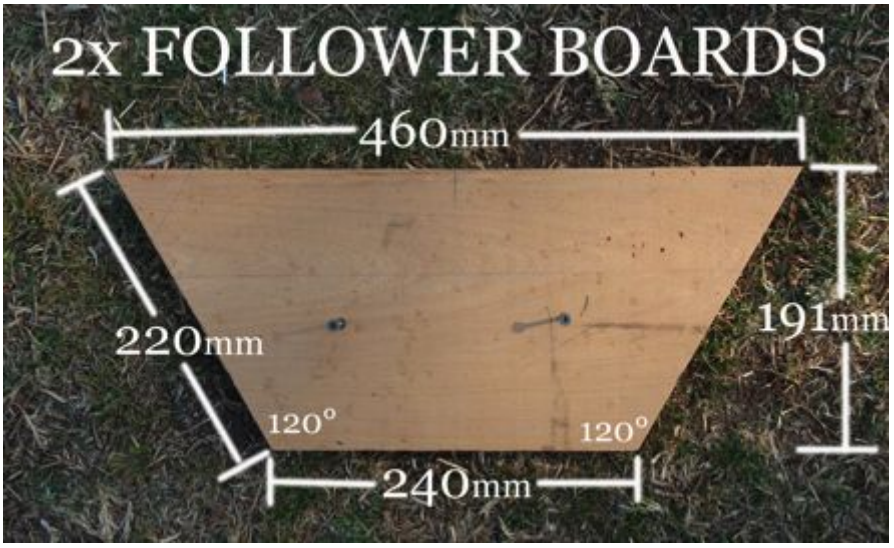
As it is difficult to source timber around the 26mm thickness, I have milled plenty and sell timber packs with all the timber you need to build your own Top Bar Beehive.

It is possible to use thicker timber if you like, ultimately it is up to you to decide what thickness of timber you wish to use.

When constructing the hive avoid using glue, as bees are very sensitive creatures. Instead, fix everything with screws.

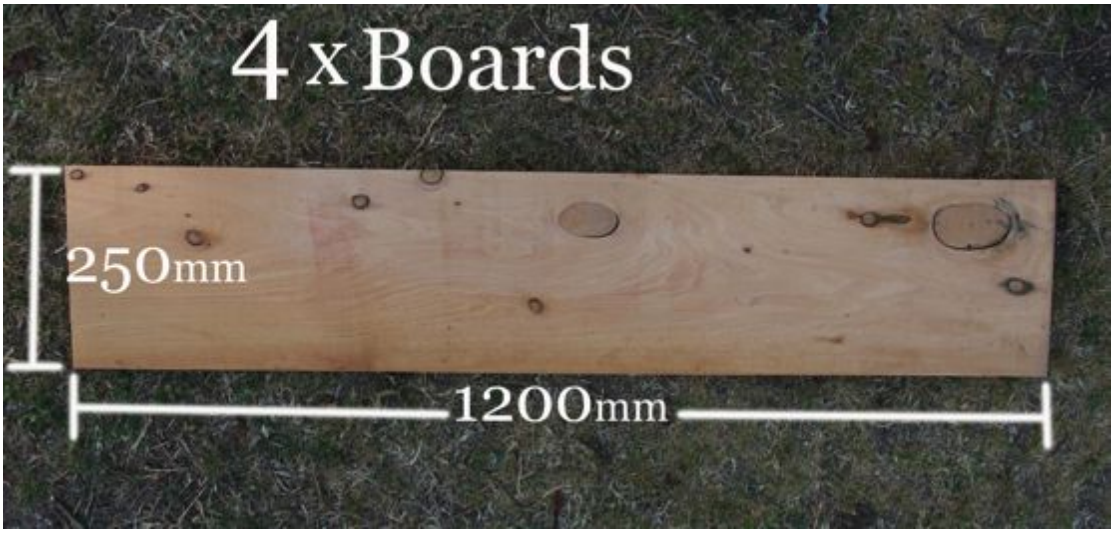
Cut the follower Boards

The first thing to do is cut 2 identical follower boards, the shape of these follower boards will provide the internal shape of the hive.

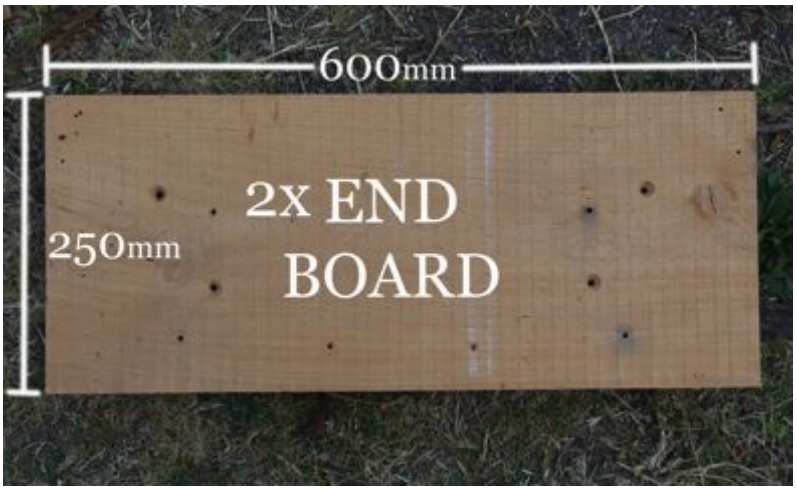


Cut the Timber for the Hive Body

Cut the timber for Side, End and Bottom Boards. You will need 4 planks that are all 250mm wide by 1200mm long (we use 26mm thick)



2 for the Side Boards, 1 for the Bottom Board and 1 for the End Board (which are cut in half to make 2 end boards 600mm long) see photo below:



Note: If you are in hotter climates for example north of Brisbane we recommend you build a mesh floor to allow for easier ventilation.

You will need four solid legs. 100mm x 50mm hardwood is good but make use of whatever you can find that will suit the purpose. We cut ours to 800mm long but depending on how tall you are, you may wish to adjust this length.

Cutting the angle on the bottom board

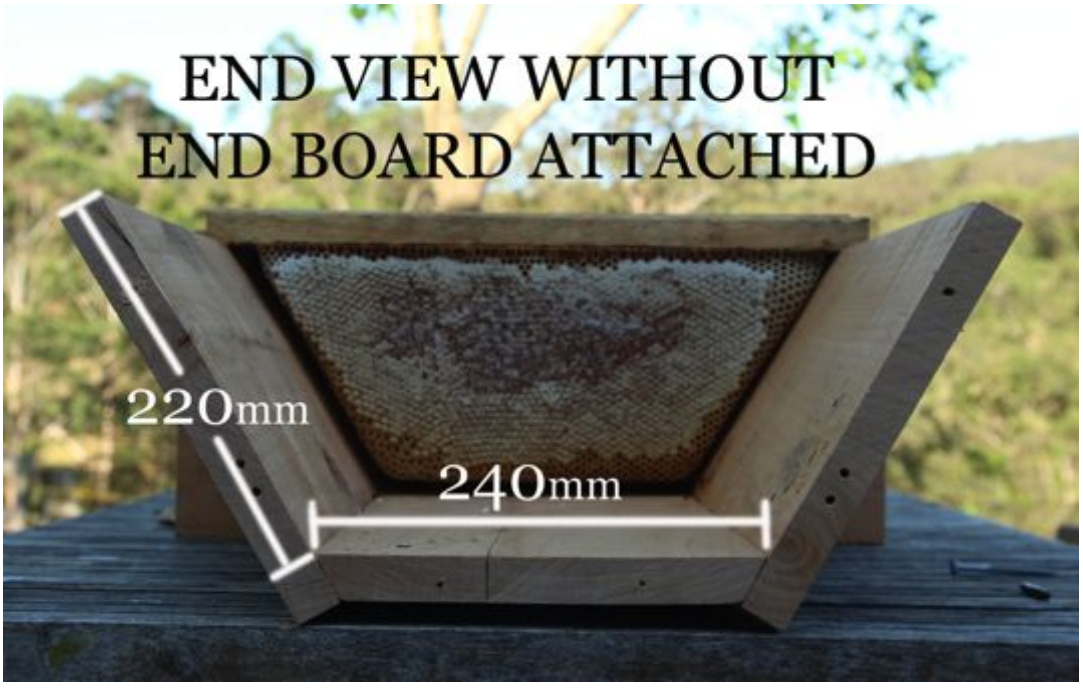
Refer to photo below.

You will need to cut two angles along the long edges of the bottom board. When the side boards are fixed it needs to create a 120 degree angle between the bottom board and the side boards.

If using a circular saw, by setting the angle on the saw at 30° it will leave a 60° angle on the bottom board. Set up a guide for the saw and cut the bottom board, leaving a 60° angle along the entire length on both sides.

Building the Hive Body

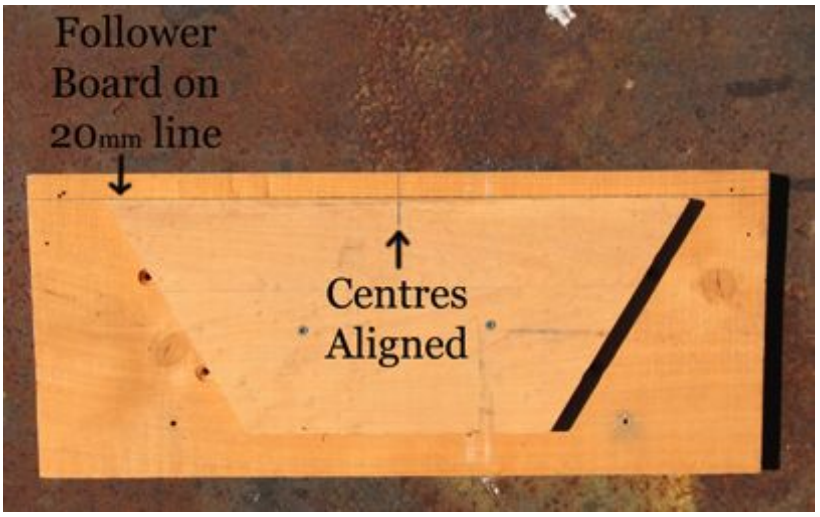
Note: The Follower Boards will be used as a template to build around (internal dimensions need to be that of the follower boards)



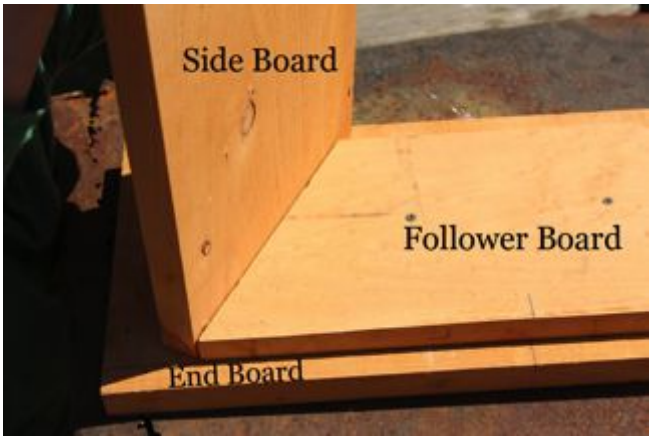
Mark each follower board, one with an 'L' and one with an 'R'. These correspond to the left and right sides of the hive. Also, measure & mark the centre of the long edge of each follower board.

Set up the follower boards as Hive Body Templates by screwing the Follower Boards to the inside of the End Boards: On the inside of each end board, measure and mark a line 20mm from the top of the end board. Measure and mark the centre of this line.

Align the long edge of the follower board with the 20mm line on the end board. To centre the follower board align centre mark of the follower board with the centre mark on the end board. With some temporary screws fix the follower board to the End Board so that it cannot move.



Pre-drill & screw both End Boards to both Side Boards so that they are firm against the edges of the follower board.



Remove the Follower Boards and then drop in the Bottom Board. If the bottom board doesn't drop in easily you can back off the screws on the end board a little.

Re-fix the Follower Boards to the inside of the End boards to make sure you have the correct internal shape before fixing the Bottom Board. Fix the bottom board through both end boards and both sideboards.

Fixing the Legs

Fix the legs to the end boards. The position of the legs can be important depending on the style of roof you wish to build.

The simplest way to build a roof is using corrugated iron, if you decide to build this style of roof the position of the legs in not critical.

We prefer to build a pitched roof using weatherboards that is both more aesthetically pleasing and shields the hive more effectively from heat. To view the plans for building this style of roof (and attaching the legs) click the link below:

Roof Construction Instructions

Drill the entrance holes:

The entrance holes of the hive are 3 x 25mm holes drilled at the bottom & centre of one side board. The holes should be about 20mm apart, this can be achieved by positioning the centre of the holes 45mm apart. Also, position the centre of the hole 10mm from the bottom board on the inside of the hive. Holes should be drilled flush with the floor of the hive.

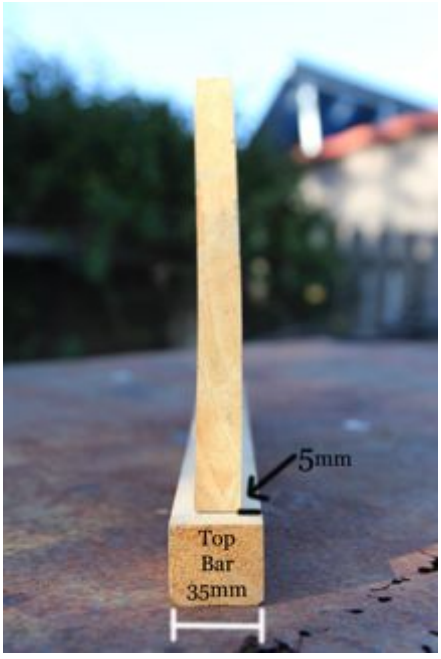
You can use champagne corks to close holes when needed.

Building the Top Bars & Follower Boards

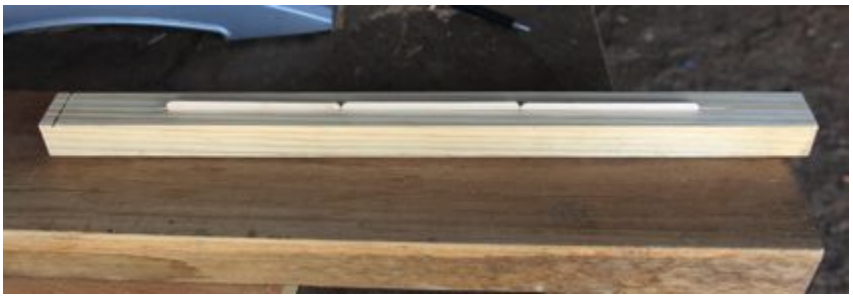
Ripping top bars:

Build 31 top bars (35mm wide x 500mm long). If you buy one 6 metre length of 35mm x 90mm untreated pine timber studs, you can cut it into 500mm lengths and rip each length into 3 top bars. You will get enough top bars for one hive from one 6metre length.

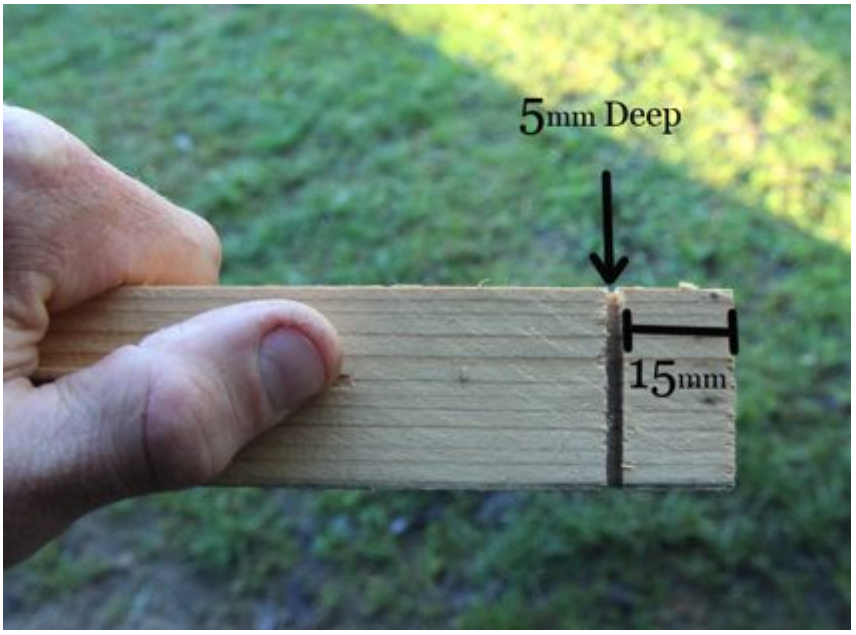
Attach each follower board to a top bar, 5mm from one edge of the Top Bar. This 5mm gap will act as a bee-space between the follower board and the comb on the outer most edge.



Rip a small channel down the centre of the remaining 29 top bars, about 5mm deep and long enough that 3 icy pole sticks can sit in the groove:



Cut another groove about 5mm deep across the underside of top bar, 15mm from one end. See below photo.



This groove 'locks' the top bars into place on the side board. This ensures that you will always be able to replace your Top Bars in exactly the same position they were before you removed them, making life much easier for you and the bees!

Waxing Top Bars

Caution: Wax is very flammable, take great care when heating wax, it is best to do this outside.

Using a small pot you never want to use for cooking again, heat a small amount of beeswax using a water bath until it melts (put the pot of wax inside another larger pot with water, like a bain-marie). Take your icy pole sticks and one by one dip them in the wax and lay them on edge in the centre groove of the Top Bars. Each top bar will take 3 icy pole sticks. Try and keep the run of icy pole sticks as close to centre as possible.

Protecting the hive

Paint the outside of the hive with a natural, non-toxic wood protective oil. We suggest a brand called 'Organ Oil'

http://www.organoil.com.au/gardenfurnoil/index.html

Only oil the outside of the hive and do not oil the hive entrance holes or Top Bars. Do not oil inside the hive where the bees will live. It is best to give your hive a coat of oil every winter when the Bees are least active to protect the timber of the hive.

Good luck and happy bee caring adventures!

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