

Make A Nest Box

For small birds, such as Blue Tits, Coal Tits, Great Tits, Sparrows, Wrens, and if you are very lucky, Nuthatch, you can make a nest box, or win one in our competition. Put it up in late Autumn/early Winter to allow birds to get used to it and become inquisitive.

Your nest box(s) should be mounted securely, at least 3m above the ground, in a place where you are not accessing every day, and where predators, such as Squirrels and Rats cannot access. Your nest box should be located anywhere from the North West direction, heading clockwise to due East. It is important not to put your nest box where it will be subjected to full sunlight for the majority of the day.

Below are some plans and photos of a nest box that A Ride For Life has designed and constructed, below. This box has a 25mm diameter hole and protection plate, which allows Wrens, Blue Tits, Coal Tit or Marsh Tit to nest in. First come, first served!



You will need a good level of woodworking skill to make a box like this, or you can modify our instructions, below, to suit your own skills. Remember to make the box waterproof and make the roof removable, to enable you to clean the box out when birds have finished nesting in late Summer.

Tools Required

- Pencil, ruler, square and a sliding bevel will help to mark out right-angle and bevel/angled cuts
- Panel saw
- Mitre saw, with a minimum of 150mm cutting height capacity – to cut the bevel on the back, roof and front parts
- A sharp knife, chisel, or suitable saw (or if you have one, a Multi tool with a saw blade). This is used to cut the grooves in the inside of the back, sides and front piece, to act as a kind of “ladder” to help birds climb up the wood. If you use rough sawn softwood timber, this may not be necessary because the birds should be able to get their claws to grip on this type of wood. See pictures further down.
- Four 30cm clamps
- Power drill – rechargeable battery type is best
- Depending on which bird species you want to attract, you will need a 25mm, 29mm, or a 32mm diameter hole saw
- A 3.5mm, 5mm and 8mm diameter HSS drill
- A counter sinking bit
- A smoothing plane, sanding block, or electric sander
- A No.2 Pozi-drive screw driver, or attachment for your power drill (if it is battery operated) DO NOT USE A SCREWDRIER BIT IN A MAINS POWERED DRILL!!!

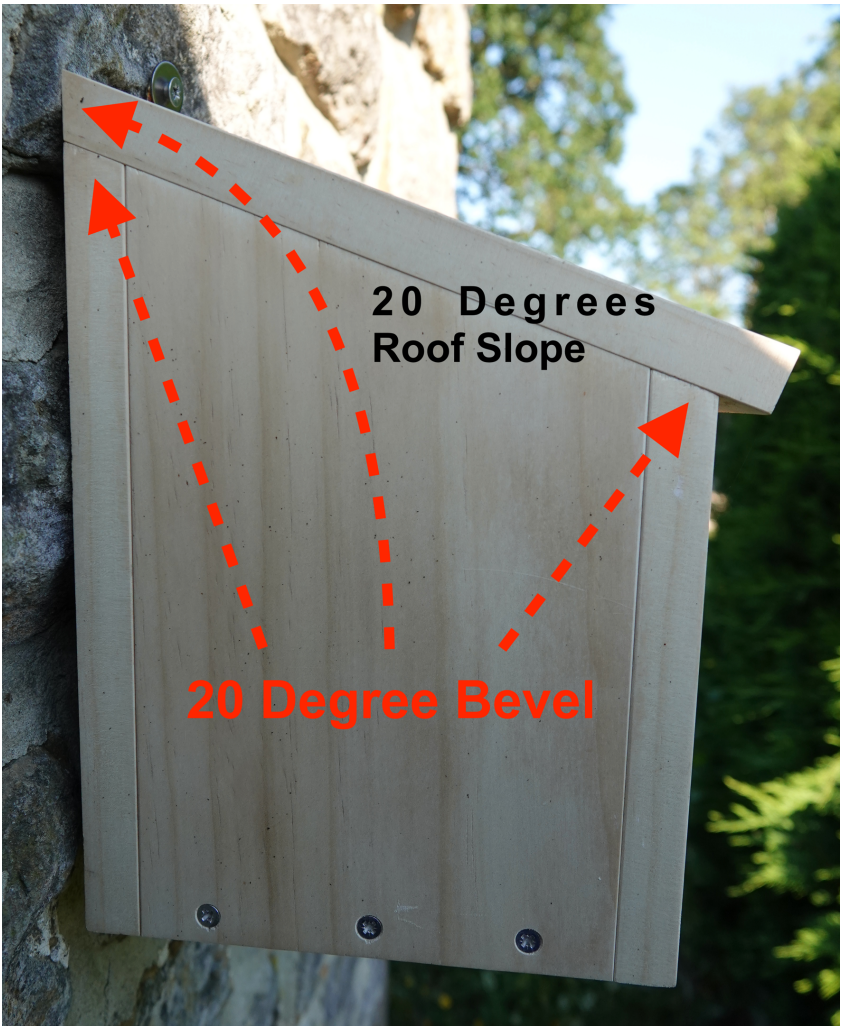
Materials Required

- We make our nest boxes out of 19mm thick Accoya timber, supplied by Ryedale Joinery www.ryedale-joinery.co.uk
- Accoya is guaranteed to last 50 years, un-treated and un-painted. DO NOT APPLY ANY TIMBER TREATMENT OR PAINT TO YOUR NESTBOX!
- Approximately 30 screws, 5 x 40, preferably stainless steel. Avoid Screwfix they break!
- A hole protection plate with 25mm or 29mm or 32mm diameter hole, depending on the bird species you are trying to attract to nest. Remember that your hole saw and hole protection plate must be the same hole diameter.
- 2 Good quality hanging eyes. The heavy duty twin screw picture frame hangers are perfect for this (see photos, below)
- Some wood shavings and if you have pet Rabbits, or Mice, some dry hay – to start the nest making process off for your new guests

Cutting

- Allowing 4mm for the saw blade to make the 5 cuts in a single timber board, you should purchase a 150mm wide x 1,220mm long planed straight edge board. It would be wise to buy a 150mm x 1,500mm long board, to give you some spare, in case you make a cutting error

- The back, front & roof pieces should be cut to leave a 20 degrees bevel at one end, as you can see in the photo below



Below is how the board should be cut (not to scale!)

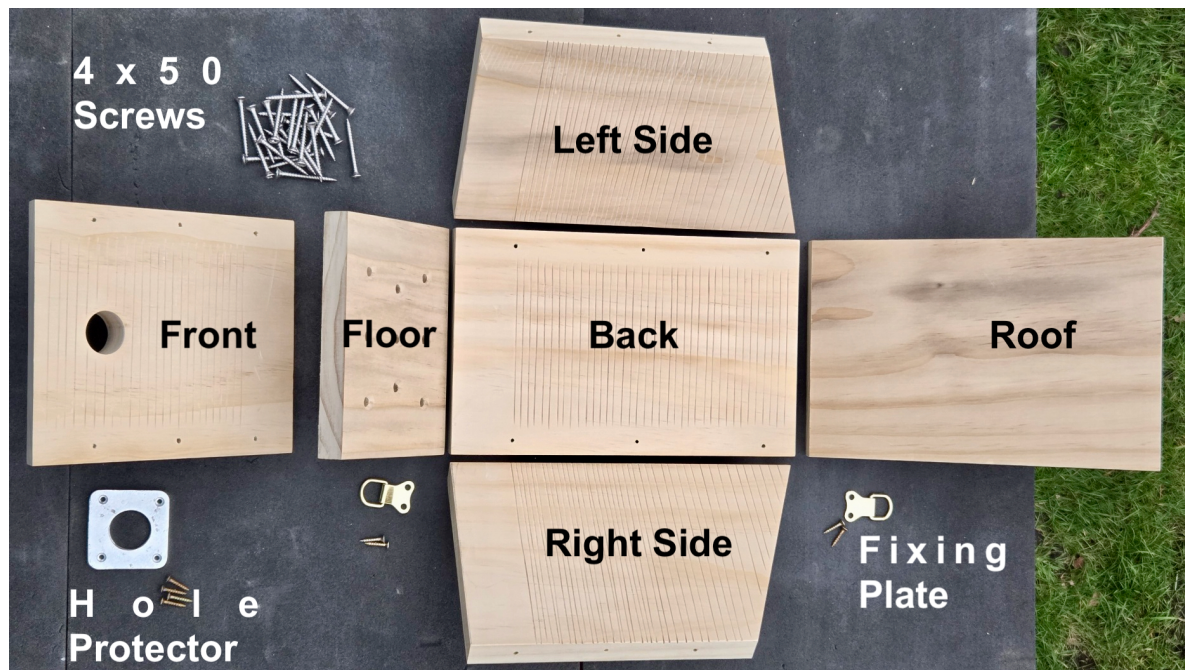
Side	Side	Back	Roof	Front	Spare	Floor
240mm	185mm	245mm	230mm	185mm		112mm
185mm	240mm	245mm	230mm	185mm	Spare	112mm

The Red cut lines are to be bevelled at 20 degrees, so that one end of the Back, Roof & Front pieces are at an angle, see photo above.

DO NOT mark out all pieces at once. If you do, the width of your saw cut can put the next and following cuts in the wrong place!

Cutting stages (working from the left to the right of the above diagramme)

Take your time and make a good job, and all the pieces of your nest box will look like this



1. With a pencil, very carefully measure, mark, and use a panel saw to cut the first side piece along the line
2. Take the side piece you have just cut, turn it around 180 degrees, and put it on top of the remaining uncut timber. Align the two sloping edges so they are flush, and also the 185mm and 240mm long edges should be flush with the sides of the uncut timber. At the bottom of the piece you have just cut, draw a line across the uncut board. If you have a square, check this line is at 90° to the edge of the board. Cut along this line. You will now have your nest box side pieces cut.
3. You are now going to cut the back piece. This is where you need the mitre saw. Put the remaining uncut timber on its edge in your mitre saw (the 150mm wide board face should be vertical, the 19mm board width should be horizontal). Set your mitre saw to make a 20 degree cut down the 150mm board. It is very important that this angle is as accurate as possible, to ensure that your nest box is weather proof. Ensure your mitre saw is going to cut a perfectly straight line, at exactly 90 degrees to the edge of the board. You are now ready to make a bevelled cut in the timber to obtain the back piece of your bird box. Don't force the mitre saw. Let it do the work, when you have cut approximately 2cm into the timber, check that the mitre saw blade is cutting straight. Continue cutting and keep checking that the mitre saw is cutting in a straight line, until you have cut the back piece out.
4. When you have cut the back piece out, stand the two sides up on your bench and offer the back piece up to the longest edge of the sides. The angle of the top of the back piece should be the same, or very close to the same as the side pieces.

5. You are now going to cut out the Roof piece. The back edge of the roof piece should be flush with the top of the back piece, at an angle. The angle is the same as the one you have just cut, so in the remaining timber, you already have cut this angle!
All you need to do is mark a square cut that is 230mm from the LONG edge of the bevel in the remaining timber board, and cut along the line.
6. Now you are going to cut the front piece. Measure 185mm from the long edge of the front piece. Follow the same process as in No.3, above to cut the bevelled edge on the top of this piece
You should now have a spare piece of timber remaining that will be cut later, for the floor piece. **DO NOT CUT THE FLOOR PIECE UNTIL THE SIDES, BACK & FRONT OF YOUR BIRD BOX HAVE BEEN ASSEMBLED!**
7. Now you need to make the entrance hole in the front piece. Mark the centre point of the hole, so that the top of the hole is 30mm below the OUTSIDE top of the front. To do this, add 30mm + half of the hole diameter that you have chosen = the hole centre point. Mark this point on the front piece. Put a waste piece of timber under front piece, so the hole saw cuts into this and then it will leave a clean cut on the inside of the front piece. With drill and a hole saw, cut the hole in the front piece, using your pencil mark to locate the hole saw pilot drill on. Take your time when using the hole saw.
8. If you are using smooth, planed timber, like Accoya, take the side pieces, front and back and mark the inside faces with a pencil cross X
Draw a line 2cm in from the edge, on the inside, and on both sides of the front and back pieces.
On these faces, you are going to score grooves to help your birds climb up their house walls. The photo below shows these score lines.
They should start around 5cm from the bottom edge of the box parts. The score lines do not need to be deep. 1mm deep is more than adequate. The score lines should be no more than 1cm apart. As explained earlier, **DO NOT** make these score lines right across the front and rear pieces of your bird box, stop them 2cm from each edge. Repeat the above for each of the side pieces, but these can be scored from edge to edge, because they sit on top of the Front & Back pieces, as shown in the following photo.
If you are using rough sawn softwood, you may not need to score the timber.



9. You are now ready to put the 2 sides, back and front of your bird box together, but without screws, to check it fits well. The side pieces fit inside the back and front pieces and they should fit flush at the corners, top and bottom. Make the assembly on a flat surface and lightly clamp the pieces together, so you can lift the assembly, without it coming apart. Tap the pieces lightly with a small hammer, to properly align them
10. You are now ready to mark out the floor. Take the remaining timber board and place it on a flat surface. Lift the clamped parts of the bird box onto the remaining timber. The width of the timber should be the same dimension as between the front and rear parts of the clamped bird box. With a fine pointed pencil, you are going to draw around the inside of the clamped bird box parts, and put a pencil line on to the remaining timber, where you can. **BEFORE YOU LIFT THE CLAMPED PARTS OF THE BIRD BOX OFF THE FLOOR PART, MAKE A MARK ON THE FLOOR AND CORRESPONDING PART OF THE BOX.** This will ensure you know which way round to fit the floor at the time of assembly. Your goal is to make the floor piece fit snugly into the sides, front and back of the box. With the lines drawn, carefully cut the floor out, just on the **OUTSIDE** of the lines you have drawn. You will now be able to dry fit the floor into the box. It should be a snug fit and remain held in place by the Front, Back & Side pieces of your nest box.
11. When you are satisfied that the floor is a snug fit, remove it and drill some 8mm diameter holes in it. These are drainage holes and we usually drill 8 or 9 holes in the floor, as you can see in the photo below. The outer holes need to be 25mm from the edge of the floor piece. This ensures that any floor fixing screws do not penetrate

the drainage holes. When the holes have been drilled, we use the countersink bit to remove the rough edges of the drilled holes.



12. With the sides, back, front and floor dry clamped, now try the top and see how it fits. If you are happy, GREAT! If you need to make some adjustments, now is the time to get the sanding block, sander, or plane out and trim the piece or pieces until they are a good fit.
13. When you are satisfied that all the parts of your bird box fit together snugly, you can begin the final assembly.

Final Assembly

14. Dry clamp the sides, back and front again and mark where to drill holes for the screws. The holes need to be 10mm in from the edge of each piece of timber. We advise not to drill closer than 25mm to the end of each piece of timber. This will prevent the timber from splitting, and it also mean that screws will not meet each other in the corners. See the photo below.



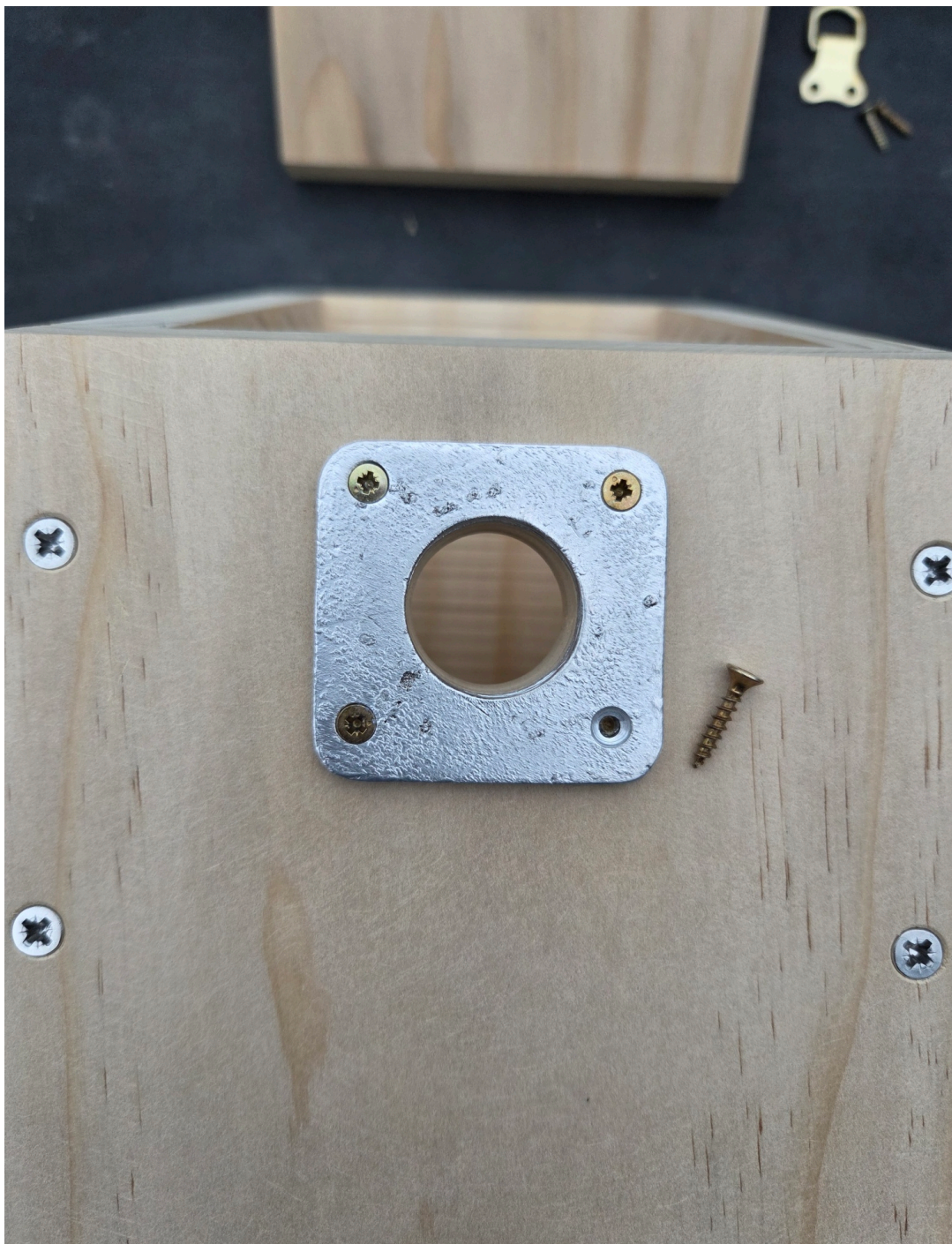
15. Use a 3.5mm diameter drill bit to make no more than 3 holes in each each piece to be joined, as seen above. Drill the holes to a depth of 35mm.
16. Counter sink the holes where the screw heads will be.
17. Fix the Front, Back and both Sides with 5mm x 40mm screws. Lightly tighten the screws at this stage and check the joints of each piece of timber are flush as the screws are tightened.



18. Check inside the next box and ensure there are no splinters or joint gaps.
19. Repeat the above process with the floor, and the roof. **Because the roof is sloping, ensure you correctly drill the holes in the front and rear of the roof, to avoid the screws from bursting out of the front and rear pieces of timber, when they are fully inserted.** See the correct position in green, below.
ONLY secure the roof lightly at this stage.



20. The screws holding the floor, sides, back and front can now be fixed firmly, using a hand screwdriver, not a power drill! THERE IS NO NEED TO USE GLUE, THE SCREWS ARE STRONG.
21. If necessary, plane or sand any protruding edges, or rough timber, on the outside of your nest box. DO NOT allow your plane or sander to touch the screw heads!!!
22. Fit the appropriate size of nest box hole protector over the hole in the front piece. Ensure this is a good fit and no lips are apparent. Use the screws supplied with the hole protector. We make our own hole protector, out of scrap aluminium plate, but purchased ones are fine too. Remember that your hole saw and hole protector plate hole diameter must be the same.



23. Find some timber that you don't need, and make a good cupped handful of shavings to put inside the box. Add a small handful of dried grass (such as pet Rabbits would eat). The shavings and dried grass are the furnishings in your visitor's new house!
24. You can now fix the roof firmly, by hand.
25. Fit one of the fixing eyes at the top and the other at the bottom of the rear piece of the box.
26. Put the box in the place you have chosen for it.
27. Stand back and congratulate yourself for a job well done!
28. Be patient, and birds will make your nest box their home, lay their eggs, hatch their chicks, and fledge them.

Well Done!

Don't forget to tell us your nest box stories, good or bad.