HOW TO BUILD A BAT HOUSE

Materials

- One 4' x 4' sheet of ½" thick, untreated, outdoor grade plywood (could also be ⅝" or ¾" thick)
- Two pieces of ¾" x 1 ½" board (which is what hardware stores call a 1" x 2" board), 8' long
- 30-40 exterior grade screws, 1¾ " long
- Roughly one litre of exterior grade, non-toxic, low VOC paint or stain (the colour isn't as important as where you place the bat house)
- One tube of paintable latex caulk, either for a caulking gun or squeezable tube
- One piece of black asphalt shingle or metal for roofing (optional)
- Roofing nails or screws (optional)
- Two hooks or brackets to install the bat house

Tools

- Power drill and drill bits
- Hand saw or miter saw
- Paint brush or paint roller
- Tape measure
- Table saw (unless having wood cut at the hardware store)
- Hammer (if installing shingles)
- Caulking gun (optional)

Investment

Rough pricing total: $60 - $100

- Plywood: $20 - $25
- 1 x 2: $10 - $20
- Paint: $10-$15
- Screws: $5 - $10
- Caulking: $10 - $15
- Hooks or Brackets: $5 - $15

Time

- Assembly time if plywood already cut at hardware store: 45 to 90 minutes
- If plywood is not cut: 1 to 1.5 hours

Assembly

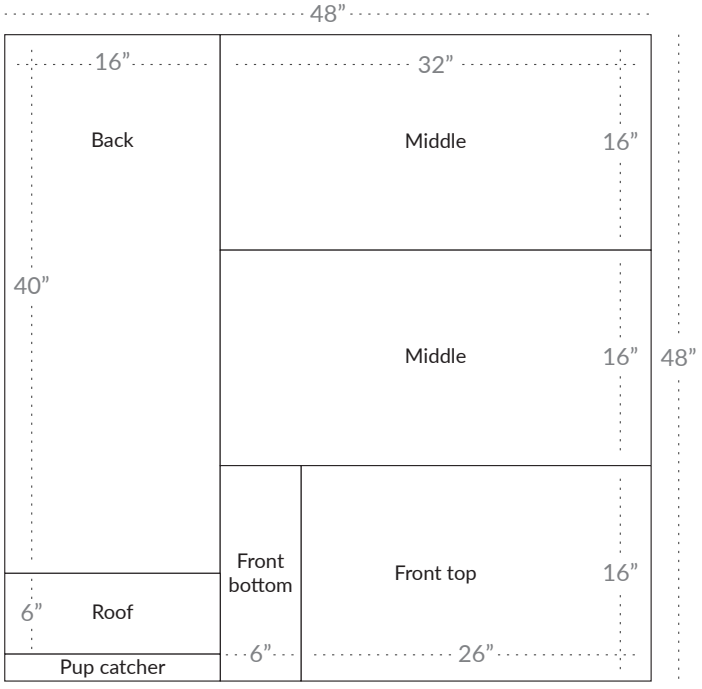
1 | Head to your local hardware store and purchase the items from the materials list.

2 | Most hardware stores provide cutting services and can cut the plywood to the dimensions in step 2.

3 | Cut the plywood based on the pattern shown to the right.

4 | Cut each 1" x 2" into 32" lengths (you will be able to get three out of each board).

5 | Roughen what will be the inside of the back and front panels and both sides of the two middle panels by using a sharp tool (such as a paint scraper, chisel or shop knife) to create grooves. Or, using a miter or table saw, cut grooves at a depth 1/32" to 1/16" , each spaced ½" apart. This will provide texture that the bats will use to hang on.



For additional information on bats: HelpTheBats.ca | info@cwf-fcf.org

CANADIAN WILDLIFE FEDERATION

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Assembly (continued)

6 | Drill two 1” holes towards the top of the two middle panels. This will provide passage holes for the bats to move between chambers.

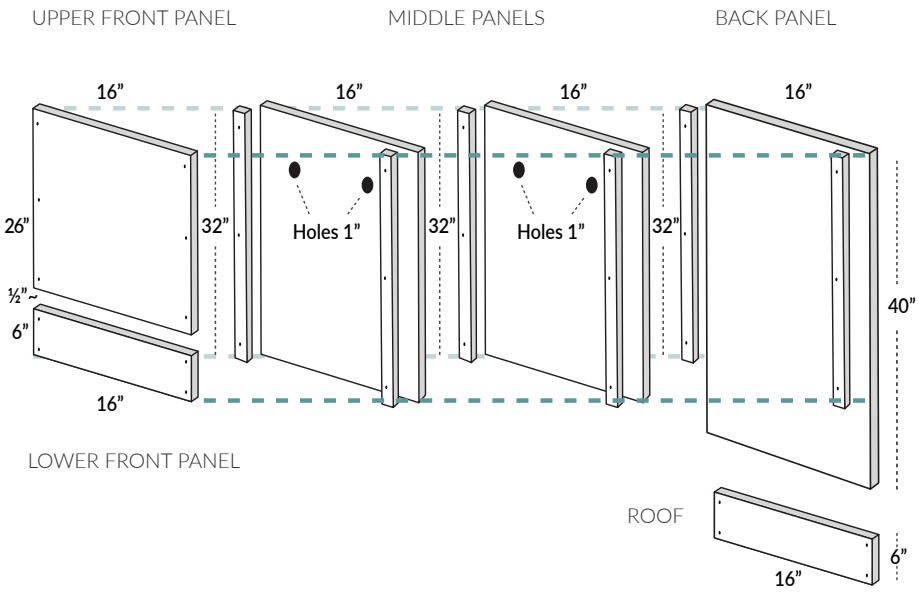
7 | Apply a bead of caulking to both sides of the wide edge of two of the pieces from step 4 and place on the left and right margins of the back panel (grooved side facing up).

8 | Lay the first middle panel on top of the two 1” x 2” from the previous step and attach with screws to go all the way through into the plywood of the back panel.

9 | Repeat step 7 with two more of the wood pieces.

10 | Lay the next middle panel on top of the two 1” x 2” pieces from the previous step and attach with screws all the way through into the plywood of the initial middle panel. Be sure to offset the screws to avoid hitting the screws from the previous step.

11 | Repeat step 7 again, with the final two wood pieces.



12 | Lay the upper front panel on top of the 1” x 2” pieces from the previous step and attach with screws to go all the way through into the plywood of the middle panel. Be sure to offset the screws to avoid hitting the screws from the previous steps.

13 | Leaving a ½” gap from the upper panel from the previous step, place the upper front panel on top of the 1” x 2” pieces from the previous step and attach with screws to go all the way through into the plywood of the middle panel. Be sure to offset the screws to avoid hitting the screws from the previous steps.

14 | Stand the bat house upright and apply caulking to the top, and then attach the roof with screws.

15 | Apply one to two coats of non-toxic paint or stain to all exterior surfaces.

16 | Cover roof with shingles using roofing nails or screws (optional).

17 | Drill four ½” holes in the sides of the back chamber to allow for extra air flow.

18 | You’ll need to put two hooks or brackets on the bat house to install it. To ensure it is solid, attach the hooks or brackets on the back near each edge, screwing through the plywood into the 1” x 2”.

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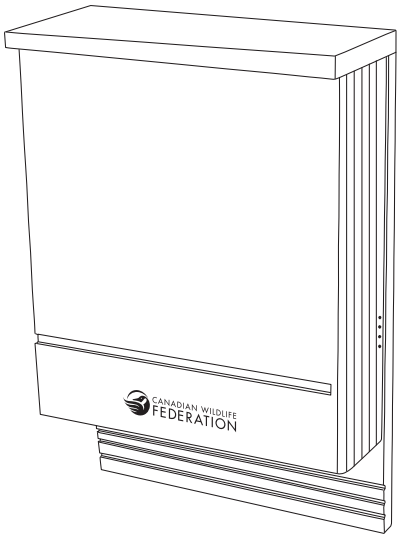

Installation Checklist:

(Check out the full guidelines at HelpTheBats.ca)

- ☐ Install multiple houses, if possible (one full-size sheet of plywood can make two bat houses!).
- ☐ Install on a building.
  - If a building is not available then a pole is the next best option.
- ☐ Install in partial sun (six to eight hrs/day).
  - If installing multiple houses, place so there is a range of sun exposures.
  - If the house is black, don't place it in full sun or make sure there is a light coloured box nearby.
- ☐ Place the house 2.75 to three metres (nine to 10 feet) above the ground.
- ☐ Install away from light sources and high vegetation.
- ☐ Leave the bat house up long term.
  - The longer a house remains up, the more likely it will be used by bats.

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CANADIAN WILDLIFE FEDERATION

HOW TO BUILD A PUP CATCHER FOR YOUR BAT HOUSE

Add a pup catcher!

If you're lucky to have your bat house occupied as a maternity roost, there will be pups present in June and July. They can sometimes fall from bat houses, especially crowded or hot ones as bats move around to cool down. Installing a pup catcher helps prevent a dangerous fall.

Materials

- Screening or mesh approximately ¼" holes (this allows bat guano to pass through)
  - » Window screen or durable plastic is ideal. Do not use thin, loose netting with larger holes as this can entangle the bats.
- Staplegun and staples or ½ " screws and washers
- Wood board, 16" x 2" (you can use the remaining bit of plywood from the bat box pattern)
- Zip ties or rope

Assembly

1 | Cut the mesh to 18" wide (or two inches wider than the bat house if not our DIY design) by 36" long.

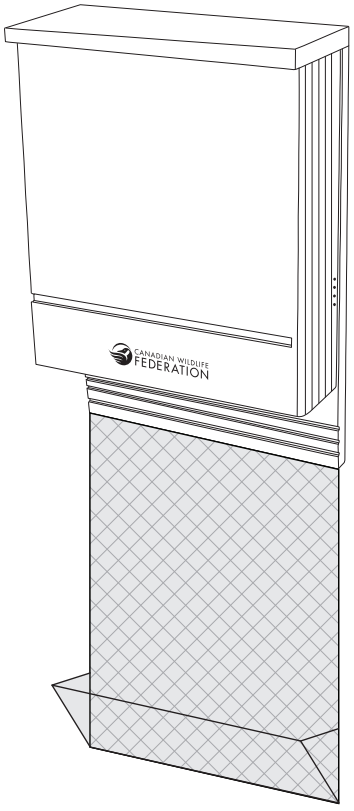
2 | Lay the mesh flat, place the piece of wood widthwise underneath the mesh 6" from the bottom and 1" from either side, then attach the mesh to the wood using staples or screws and washers. (If using mesh with smaller hole size, you can angle the piece of wood so that guano will slide to the lower side and to the ground.)

3 | Fold the bottom 6 inches up and attach the left corner, ½" inset from the edge, using rope or zip ties. Repeat with the right side of the mesh. This will create the bottom pocket and insetting the corners will help it stay open.

4 | Attach the mesh to the back of the bat house landing pad, ensuring the pocket is facing towards the front of the box, using staples or screws and washers (for the bats' safety, be sure the screws don't poke through the front of the box).

5 | When installing the bat house, screw the 2" piece of wood to the surface the bat box is attached to, ensuring the mesh is pulled tight so bats don't get entangled.

6 | If the pocket doesn't stay open well on its own, install a piece of wood or other material on each side to hold it open.



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Bat Safety concerns:

1 | If installing a pup catcher to the front of the landing pad instead of the back (ex. for an already installed bat house), use a 2" piece of wood to sandwich the mesh by screwing through the wood, mesh and into the landing pad. This prevents loose edges the bats could catch on.

2 | If using screws in any of these steps, be certain they don't poke through into the bat house or landing pad.

3 | Do not use tape, glue or silicone as these can come loose and entangle the bats

4 | Ensure the mesh is pulled tight for all attachments. Loose netting can entangle bats.

5 | Do not attach to an existing bat house if it is occupied by bats. Wait until bats have left for hibernation. Working on an occupied bat house could cause the bats to fly out, posing a risk for the installer and disturbing bats when roosting.

6 | If possible, angle the catcher out from the building/pole to create a slight slide as opposed to a straight fall.