How to build a Chicken Coop

Disclaimer

Contents.

Page one: Introduction - Materials list

Use the following plans and information as a guide only.

These plans and information are for the most part general and should you use them it would be advisable to do a bit of your own research and where necessary make changes to suit the local environment. The best type of information and knowledge obtainable is local knowledge. Check with your local council to see what may or may not be required from their point of view including any animal welfare obligations.

A chicken coop is a place of shelter and a safe retreat for chickens and a place where the hens can lay their eggs. A chicken coop is accompanied by a run which is the chickens outside area and the scope of the run can vary greatly depending on local conditions, the type of predators, wild or domestic, that might be lurking around seeking a free chicken meal and anything else that could be a threat to the well being of the chicken. This will also determine whether the chicken can be free ranging or confined to a fenced or fully enclosed type holding pen.

This chicken coop should comfortably house at least eight chickens and generously allows for.....

- 0.4sq m (4.5 sq ft) of space per chicken
- 3 nests shared between 8 chickens
- 225 mm (9") of perch length for chicken

The design also allows for.....
A bit of a storage area, Chicken (hatchway) entrance hole, ample ventilation, ample light, and a door that opens inwards and is big enough to enable easy access and ability to clean out the coop.

The floor is designed to take "deep litter" which is at least a 75mm (3") covering of wood shavings or similar.

NOTE: There is no design or allowance for any feeder system or water container or supply system. Although some people make their own, most people find it easier to purchase a feeder system /water container from the appropriate store.

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Page two: Materials list

Excludes hardware and any feeder or water supply materials.

Stock Size/ Material	Used For	Amount
100x100 (4x4) Suitable for exterior use	Skids	2 pieces at 1800mm (72")
100x50 (2x4) Suitable for exterior use	Floor Joists and boundary joists	11 lineal metres (36 lineal ft)
100x100 (4x4)	Corner studs	4 pieces at 1800mm (72")
100x50 (2x4)	All framing walls and roof	45 lineal metres (150 lineal ft)
75x50 (2x3)	Perch and perch support	2.5 lineal metres (8 lineal ft)
50x50 (2x2)	Nesting perch	1 lineal metre (40")
1200mm x 2400mm (4'x8') plywood sheets 18mm (3/4") thick suitable for exterior use	Flooring, wall cladding and parts of nesting boxes	7 sheets
100x25 (1x4) suitable for exterior use	Cladding battens, door stop and part of nesting boxes	36 lineal metres (120 lineal ft)
300x25 (1x12) suitable for exterior use	Part of nesting boxes	2.6 lineal metres (9 lineal ft)
150x25 (1x6) suitable for exterior use	Roofing boards and litter board	(200 lineal ft) 59 lineal metres
Tar paper, breather type building paper or similar roofing underlay.	Under roofing boards	7.5 sq metres (40 sq ft)
You will also need an assortment of hardware including nails, hinges, door latches, door bolts, window catches, Perspex/Plexiglas or similar clear acrylic sheet for use as window panes, galvanized flashings for openings where required as well as for roof ridge cap, and mesh/wire cloth/chicken wire for any permanent openings or air vents.		

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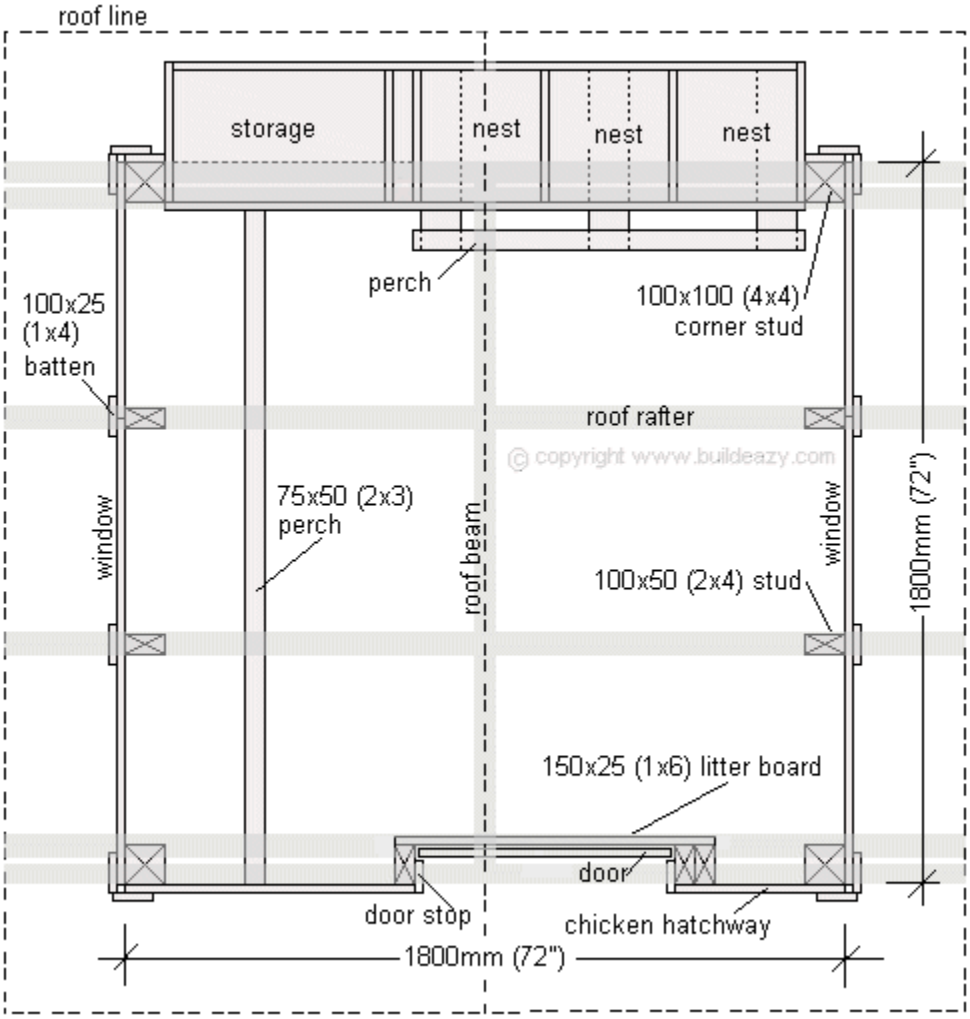
Page three: Plan - looking down view

This is the flat plan, which is from a bird's-eye-view, or looking down view.
This plan shows the placement of the studs, roof beam and roof rafters and also the position of any doors or window and the nesting boxes and perches.
The corner studs are all of 100x100 (4x4) stock and all the intermediate studs are of 100x50 (2x4) stock. All the roof framing, which comprises of the roof beam and the roof rafters are also of 100x50 (2x4) stock. The rafters and beam are the gray shadow lines on the plan. The dashed line around the perimeter of the plan is the roofline. That is the area that will be covered with the roofing boards.

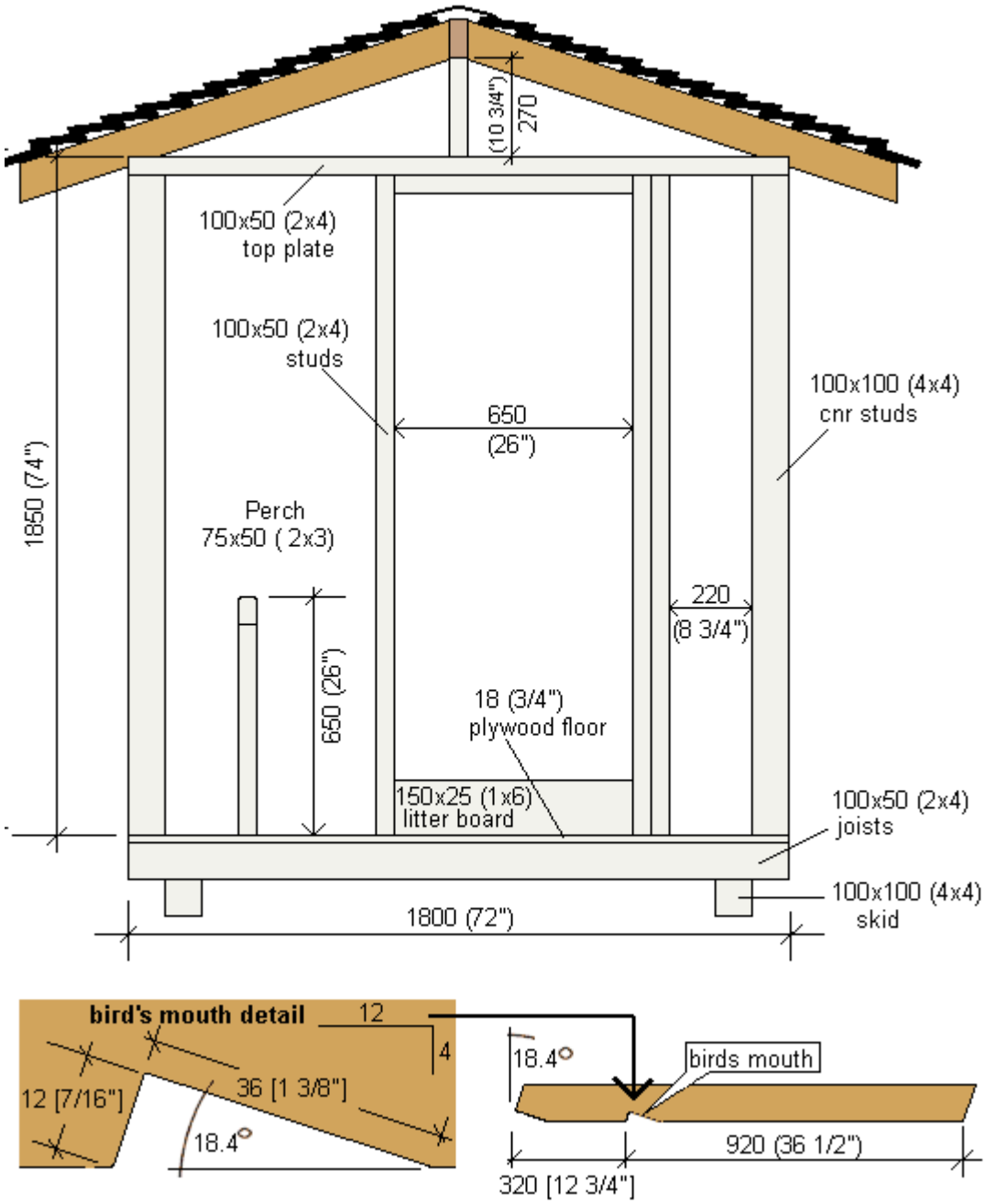


Page four: Plan - Front elevation

This is the front elevation plan. This plan gives a perspective of the frame viewed from the front. This plan also gives the width and height of the chicken house, the angle and shape of the roof and an idea of construction from the ground to the apex.

The skids (which is what the chicken house sits on) are of 100x100 (4x4) stock and the joists are of 100x50 (2x4) stock. Both skids and floor joists need to be of lumber suitable for outside use. The floor, 18mm (3/4") plywood is fixed to the floor joists and then the rest of the frame is built on that. The chicken house frame (wall and roof) is all of 100x50 (2x4) stock except for the corner studs which are 100x100 (4x4). This plan also gives detail of the roof rafters and pattern for cutting out the bird's mouth.

The bird's mouth is the "cut out" piece of the rafter that sits on the top plate.



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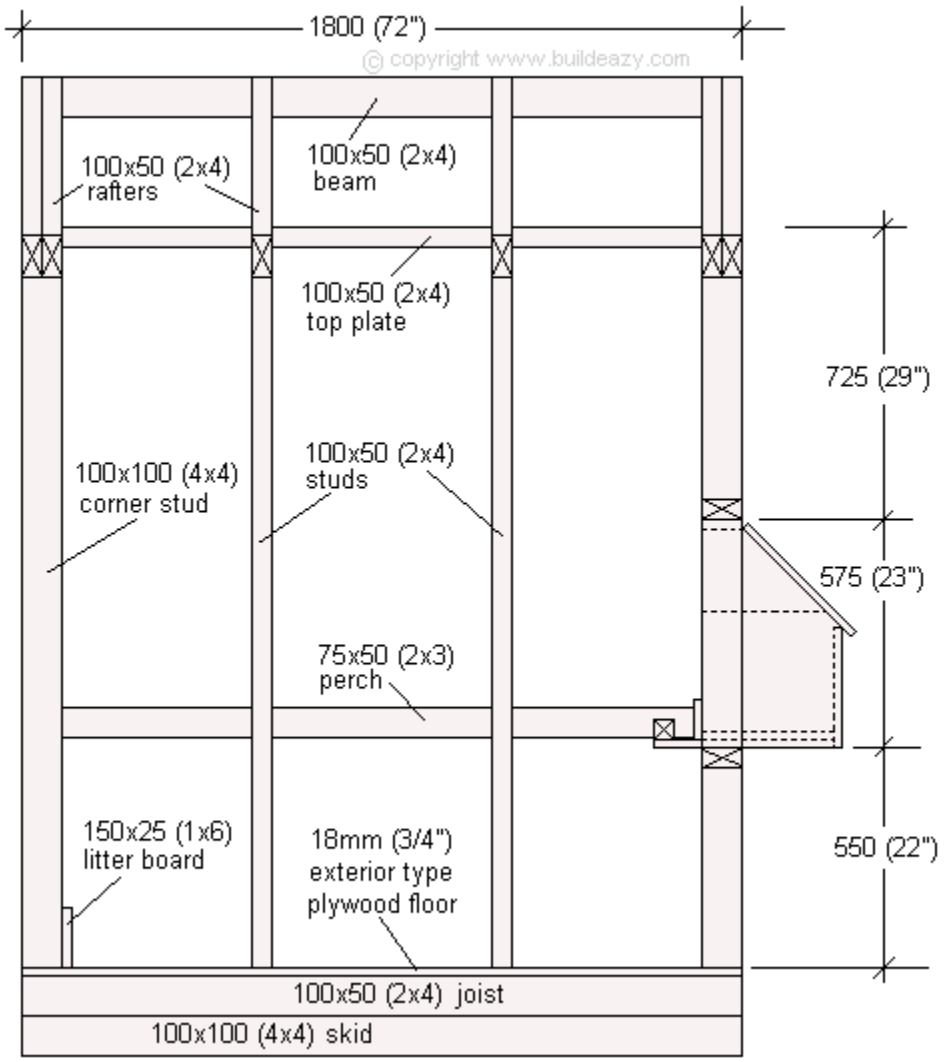
Page five: Plan - Side elevation

This is the side elevation plan. This plan gives a perspective of the frame viewed from the side. This plan also gives the length and height of the chicken house and also shows the placement of the studs and roof rafters. This plan also shows the height of the 75x50 (2x3) perch and the nesting boxes.



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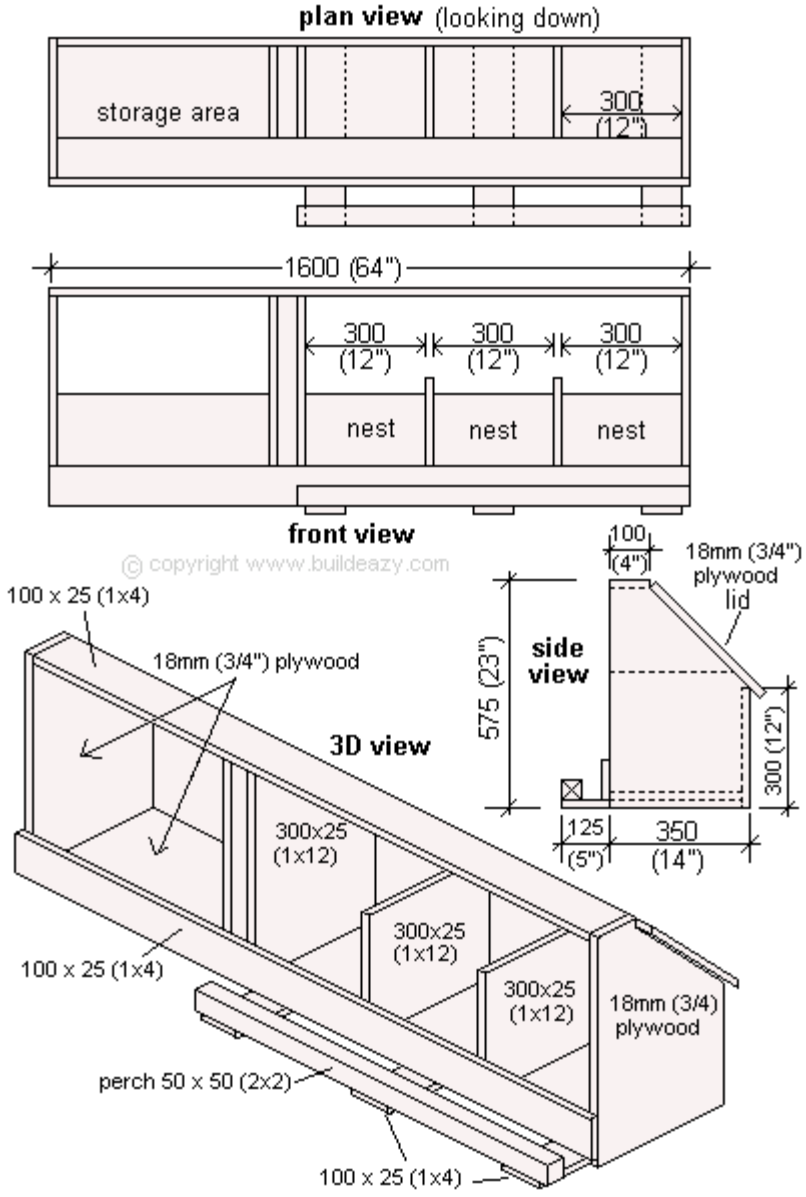
Page six: Plan - The nest

These are plans for the nesting boxes and storage area.
The front and the internal partitions in the nesting boxes / storage area combination are of 300x25 (1x12) stock. The sides, the bottom, the nesting boxes lid and storage area door are 18mm (3/4") plywood. (The storage area door is not shown in this plan).
There is a gap or cavity between the internal partitions separating the nesting boxes from the storage area. This allows for two separate exterior lids, one above the nesting boxes and one above the storage area.

Make the lids larger than the area they are to cover, so they overhang at the sides and at the bottom. They can then be hinged to the 100x25 (1x4) piece of wood that runs along the top of the unit.



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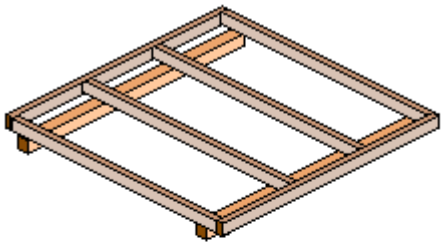
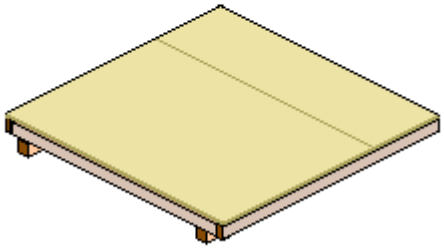
Page seven: Instructions step 1 - 2

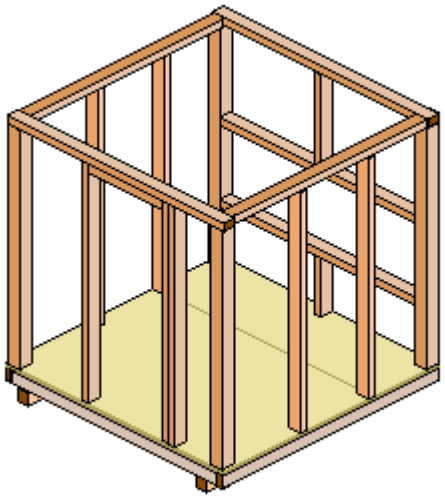




Step one. The floor
Place the 100x100 (4x4) skids level and parallel on firm ground. See front elevation plan for placement.
On level ground, make up the Floor Frame comprising of two 100x50 (2x4) end joists, two 100x50 (2x4) intermediate joists evenly spaced and two 100x50 (2x4) boundary joists. The end result should be a square 1800x1800 (72" x 72").
Place the square floor frame on top of the skids and fasten in place.

Cover the floor with 18mm (3/4") plywood, nailing a maximum of 200mm (8") apart on all joists. Any join should be over a joist.

All the wood used in the floor structure should be suitable for exterior use.



Step two. The frame
Make up the wall frames as in the drawing. The dimensions and stud placements can be seen in the Plan-looking down view and the height of the horizontal nest support members in the rear wall can be seen in the side elevation plan.
The four corner studs are of 100x100 (4x4) stock the rest of the frame is 100x50 (2x4) stock. In this particular case there is no bottom plate. The studs are nailed directly to the floor. This will make the floor easier to clean out.

The positioning of the studs either side of the door can be altered if need be to suit a different size or style of door, should you happen to have one.

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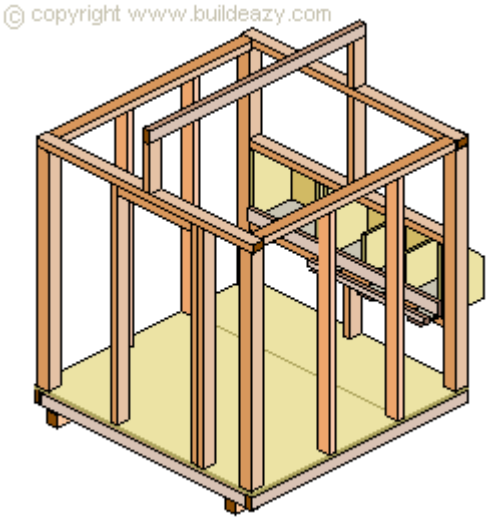
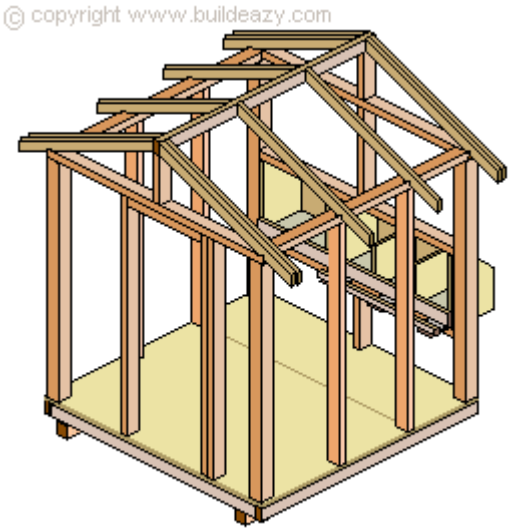
Page eight: Instructions step 3 - 4



Step three. The nests and the roof beam
Make the nesting boxes/storage area combination up as shown in the nest plan .
The storage area door is not shown in the plan. It can be added later.

Insert the nesting boxes/storage area combination between the two pieces of 100x50 (2x4) horizontal members in the rear wall, and fix in place.

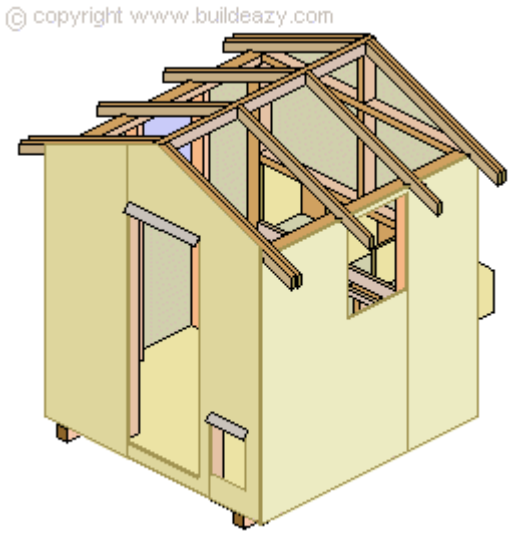
Next fix two 100x50 (2x4) uprights to middle of the top of the front and rear wall frames. The two 270mm (10 3/4") long uprights are the roof beam supports.
Fasten the 100x50 (2x4) roof beam to the top of the two roof beam supports.



Step four. The roof frame
Cut the roof rafters from 100x50 (2x4) stock to the dimensions as shown in the Front elevation plan. There will be 12 altogether, six each side of the roof.
Fix the rafters to the beam. The placement of the rafters is shown in the Looking down view plan.

There is a double rafter at each end of the roof.
This is so the inside top of both front and rear walls can be lined. Thus eliminating any high ledges that could be detrimental to the chickens.

Page nine: Instructions step 5 - 6

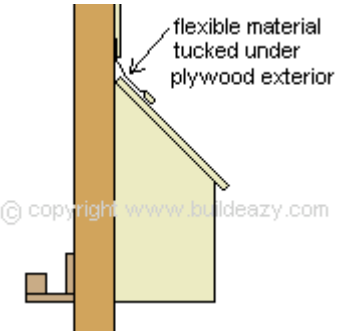


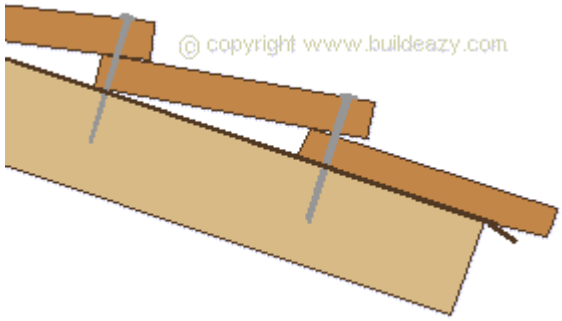
Step five. The wall cladding
Fix the 18mm (3/4") exterior type plywood to the frame making sure that all joins are over a stud.

Make the bottom of the chicken hatchway opening at least 75m (3") above the floor level to stop any litter falling out.

Insert galvanized flashing at the top of the doorway, the chicken hatchway and above the nesting boxes lid.
The flashing should tuck under the plywood cladding by about 50mm (2") at the top of each opening and angle out, also about 50mm (2"). The flashing is to deflect the rain or any dripping. The windows will not need any flashing, as they are tucked up under the eaves of the roof.

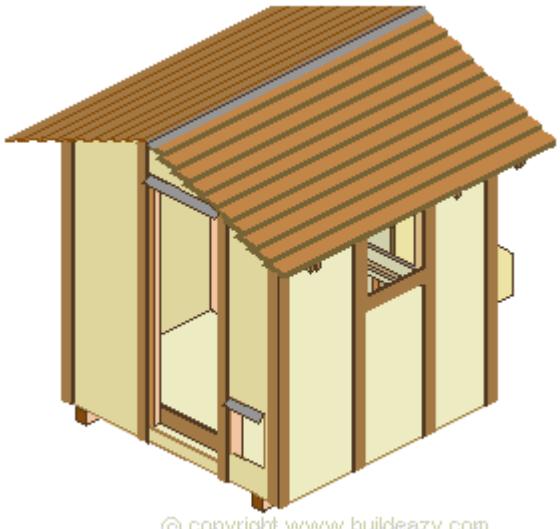
Before fixing the plywood cladding above the nesting boxes, run a flexible waterproof type of material under the plywood and over the top of the lid. This is to water proof the hinged area of the lid, yet still allow the lid to be lifted. Even heavy duty water proof canvas will do the trick, although the end of the canvas would need to be wrapped around and fixed to a strip of wood or similar that will act as a weight and stop the canvas from blowing up.





Step six. The roof and the battens
Lay tar paper, heavy breather type building paper or similar roofing underlay over top of the rafters ensuring it is taut and waterproof prior to putting on the roofing boards.

Nail the 150x25x2400 (1x6 x 8ft) roofing boards to the rafters with 75mm (3") galvanized flathead nails. Start at the bottom of the rafter and then work your way up, overlapping each board by at least 25mm (1"). Nail through both boards where they overlap and ensure the overhang at each end of the chicken house is equal.



Apply a galvanized flashing (ridge capping) at the apex of the roof overlapping at least 100mm (4") each side of the roof.

Fix the 100x25 (1x4) Battens over the plywood cladding at each join, each stud, at the corners and sides of every door and window. Preferably, the battens should have a groove each side of the join to stop water being drawn up by capillary action.

Screw the 150x25 (1x6) litter board to the inside of the studs at each side of the door opening. The litter board is just to stop the litter from falling out. When the chicken house needs a clean out, the litter board can be removed.

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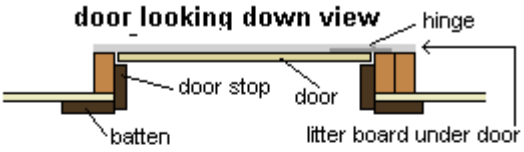
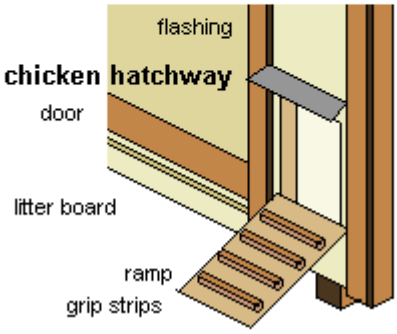
Page ten: Instructions step 7 - 8

Step seven. Front door, storage door, hatchway, and windows.
A basic door can be made from 18mm (3/4") exterior plywood. A hole can be cut out for a window and covered with a piece of Perspex/Plexiglas or similar clear acrylic sheet about 50mm (2") bigger than the hole all the way around. The acrylic sheet can be fixed to the door with screws. Drill the screw holes in the sheet first and apply a bead of clear waterproof sealant around the edge of the acrylic sheet before screwing in place.

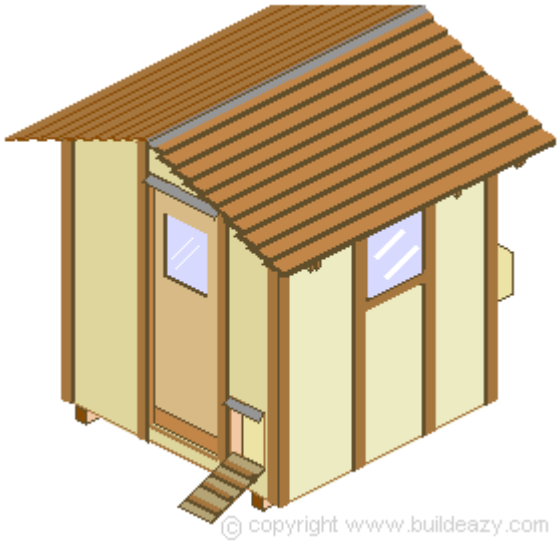


Fitting the door.
The door should have at least 6mm (1/4") gap each side and the bottom should be slightly above the top of the litter board. Once the door is hinged in place (to open in), add the door stops (see diagram)

The windows in the walls can be made in the same way as the door window was made.



Make the chicken hatchway door so that it is hinged at the bottom and can be opened down to form a ramp. Make the door bigger than the hole, and so when the door is closed, it will fit between the battens on the side and tuck neatly under the flashing at the top. You will need to add some type of pad bolt or latch to keep the hatchway door closed.



Step eight. Perch, mesh, ventilation
Add the perch as shown in the front elevation plan and the side elevation plan. The perch can be supported by a 100x50 (2x4) prop at one end and fixed to the lower part of the storage box at the other end with a joist hanger or similar type fixing bracket.

Ventilation. At the top of the side wall, there will be a gap between the top of the wall cladding and the underside of the roofing boards. This gap can be covered with a suitable mesh or purpose made vents. They can be fit between the rafters and be fixed to the top of the plywood exterior cladding.

A bit of paint, and it's finished. Different climatic conditions and environments could require different variations. For example, in hotter climates the chicken house may need to be insulated and have windows that can be opened, in colder climates the chicken house may need to be insulated and have shutters that can cover any ventilation areas.

As stated at the beginning, The best type of information and knowledge obtainable is local knowledge.