It is best to have the hog in one length but in the longer boats a joint might be necessary.

Put bitumastic in joint

44 x 143

8

70 100

Countersink 12

Bolts 10 x 100

10 mm piece added

GUIDE FOR DRILLING
Two persons checking by sight the direction of the drill bit before starting the drill
1. Clamp a 16 mm plank to the frames near the chine. Mark bevel on the frames and transom. Remove the plank and cut the bevel.

2. Clamp the plank back in place to check that it is in contact with the frames on the whole surface.

3. Cut off the bevel at the stem gradually until the line on the forward side is reached. Adjust again the bevel on the forward frame.

4. Repeat this process at the sheer.

5. Draw a line between the bevel cuts and plane the complete bevel.
1. Saw and plane two chines.  
   Cut off a piece of 100 mm length.
2. Buttjoin a plank 15 x 143 to cover the length of the boat.  
   Check that the edge of the plank is straight. See detail below.
3. Clamp the plank at the transom and the forward frame.

4. Adjust the plank up or down so that the corner of the block meets the edge of the transom. Use a small ruler to mark on the frame.

5. Adjust the plank on the forward frame.

6. Corner of block level with frame

7. Notch into stem knee.

Buttblock 20 x 170 x 180  
Nails 4x 50 bent over

Alternative glued scarf (Page 55)
1. If the chine batten is not long enough it has to be joined either by bolting as shown or scarfed and glued as for plywood construction. Place the joint so that it will not collide with the main or intermediate frames.

2. Start bolting the chine at the bow and bend both sides working towards the transom. If the batten is hard to bend, try wrapping it with rags and pour boiling water over it.
1. To reduce the twist in the planking forward, the planks are placed at an angle to the keel. Too large an angle will increase the span of the plank and weaken the bottom. The angle is given by the pattern.

2. On the hog and stern draw two lines at variable distance = A to the centerline.

3. Using a straightedge placed at the correct angle to the hog, make notches in the hog and the chine at intervals. Connect the notches with a line and plane down to the line.
1. Clamp the sheerplank so that it follows approximately the marks on the main frames. Check that 4 planks will reach up to the bevel line on the chine.

2. Bolt intermediate frames as shown with equal spacing between the main frames. Notice that they are square to the chine without bevel. There might be a slight bevel at sheer plank. Nail the sheer plank to the frames.

3. Continue planking up to the chine.

4. Bevel the sideplank at the chine. Notice the change to butt forward.

Forward the bottom planking change from overlapping the side planking to butting against it.

Same cutout for all frames

Caulking bevel

Round off corners

Nailing to chine

Intermediate frame

Main frame

Head countersunk forward 6 frames

Adjust bevel if required before fixing.

8 x 80

4 x 50

16 x 143

14
1. Clamp a batten 20 x 44 halfway between the chine and the hog where the bottom is widest. Keep it about halfway on frames forward and aft, but avoid hard side bends. Mark position on frames and remove it.

2. Mark the depth of the cutout in the frame by placing a straight batten from hog to chine in the correct planking angle to the hog. Use an offcut of the bottom batten 44 x 44 except the two forward frames where the batten is made from two layers of 20 x 44, total height = 40.

3. Cut deadwood and keel. Mark the bevel for the bottom planking and plane it off before bolting to the hog.

Keel
5.2 m boat 44 x 68
6.3 m boat 44 x 68
7.4 m boat 44 x 68
8.5 m boat 68 x 68

Same thickness as bottom planking = 20

Pattern for planking angle

Offcut from bottom batten 44 x 44 midship and aft, 40 x 44 on the forward two frames. Hold up against batten and frame at the position already marked on the frame. Mark with pencil. Do the same on the other side of the frame.
1. Bolt deadwood and keel to hog after bevelling for the planking.

2. Nail bottom battens to the frames and the transom with nails 5 x 100. Use two layers of 20 each forward. Join the battens by scarfing and glue or with a bolted buttjoint.

3. Cut waterways as shown and round off the edges of the batten on the inside.

4. Apply bitumastic compound and a strip of nylon flyscreen on the hog, transom, chine and stem.

5. Start planking at the transom with a plank 193 wide, and at the correct angle to the hog. Continue with planking 20 x 143.
1. Clean sawdust out of the planking seams with a small brush.
2. Use a caulking iron or a caulking wheel to press the cotton hard into the planking seams. This work is very important to achieve a watertight boat.
3. The best cotton for caulking is the twisted type that often comes like a rope with several strands which must be separated to fit into the seam.
4. Follow the procedure shown for caulking, painting and applying mastic in the seam.
5. Nail on the rubbing strip (wormshoe) on the keel and the protection strips on the stem as shown.

A. Press the cotton hard into the seam with the caulking iron or caulking wheel.
B. Brush thinned paint in seams over the waterline. Use black-varnish below.
C. Fill the seam with mastic. Below waterline: Black-varnish + chalk putty.
Fix a plank with top edge 80 below chine corner. Check that it is horizontal with a spirit level. The string rests on top of this plank.

Move the string in and out on the planks so that it touches various places from forward to aft on the boat. Mark off. With a flexible batten connect the points and scribe with a hacksaw blade a clear line on the planking.

Fix a plank with the lower edge at the waterline mark at the stem. Brace it level. The string rests on the lower edge of this plank.
1. Remove the boat from the building jig, but keep the cross braces until the rail is complete.
2. Clamp on the outside rail batten and nail the sheerplank to it.
3. Bolt the deckbeam to the forward frame and notch for the centerplank into the stem and the deckbeam.
4. Clamp on the inside sheerbatten and nail it to the frames.
5. Bevel for the covering board.
6. Saw the covering board to shape and nail in place.
1. Install a shelf under the foredeck before nailing the foredeck in place.
2. Cut engine well beam and clamp it to the forward side of the aft intermediate beam. Cut the cleats, remove the beam and nail the cleats in place. Bolt the beam to the frame.
3. Nail the bottom of the engine well then the sides and finally the deck which also serves as a seat for the operator.

MAKE ENGINE WELL WATERTIGHT

Planking extend 20 to avoid end splitting when nailing. Round off.

Drainhole 25

SECTION OF ENGINE WELL LOOKING FORWARD

Correct height determined in position
1. The simplest and cheapest is to have no floorboards except in the bow because of the deep V-bottom.
2. The next option is to have floorboards between the bottom battens.
3. The most expensive solution is to have floorboards level with the top of the bottom frames, creating a flush floor.
4. After painting, fit buoyancy blocks as shown under the covering board in the centre two compartments and under the aft deck. The thwart forward is for crew seats and for fitting a mast.

**FLOORBOARDS BETWEEN BOTTOM BATTENS**

- 35 x 44
- 20 x 93
- Gap = 10
- between planks

**FLOORBOARDS FORWARD ARE REQUIRED**

- 44 x 44 sits on top of bottom batten

**BUOYANCY**

- Buoyancy block 65 x 170 x 240 between frames
- 16 x 145 removable
- 2 nails hold block

**FLOORBOARDS LEVEL WITH TOP OF FRAMES**

- 15 x 68 x 300 notched to half depth of beam

Floorboards divided at centerline