

The Chute

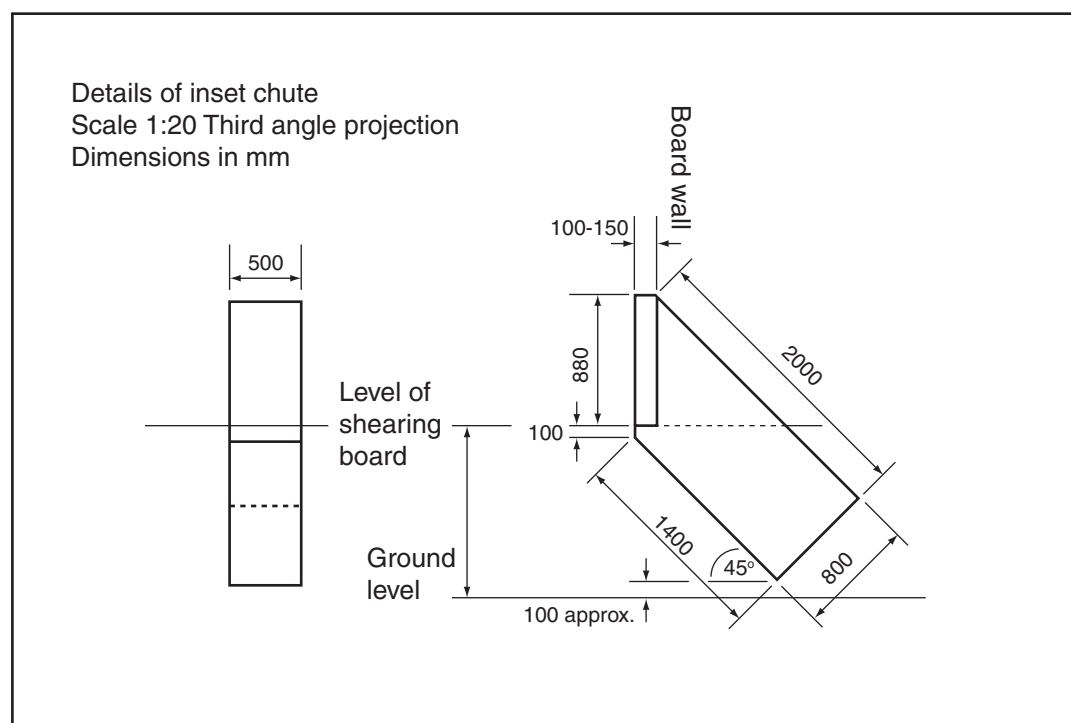
The sheep exit or “let go chute” needs to be designed, built and maintained so that the shearer simply lets the sheep go when shearing or crutching is completed. A properly located and dimensioned same level exit achieves this most easily. The key to designing this sheep exit is that the sheep should want to exit or have no physical option to exiting. i.e. nothing to push hooves and/or head against.

When building chutes, a couple of useful design elements are:

- Set the edge of the chute entrance back into the shearing board about 150 mm. to a depth of about 150mm. This will reduce the energy requirement to dispatch the sheep. When the shearer takes the last few blows the front legs of the shorn sheep are over this edge and in contact with the inclined surface of the chute. This helps in despatching the sheep;
- It will also help to minimize the amount of wool going down the chute; and
- Sometimes chutes can lead to a draught of air which originates from under the shed and moves up the chute causing discomfort for the shearer, especially in cold weather. Or it can assist in cooling the area in warmer weather. This can be easily controlled by fitting a curtain of appropriate material in the chute at a distance to not impede the release of the sheep, but accessible by the shearer to either raise or lower the material quickly.

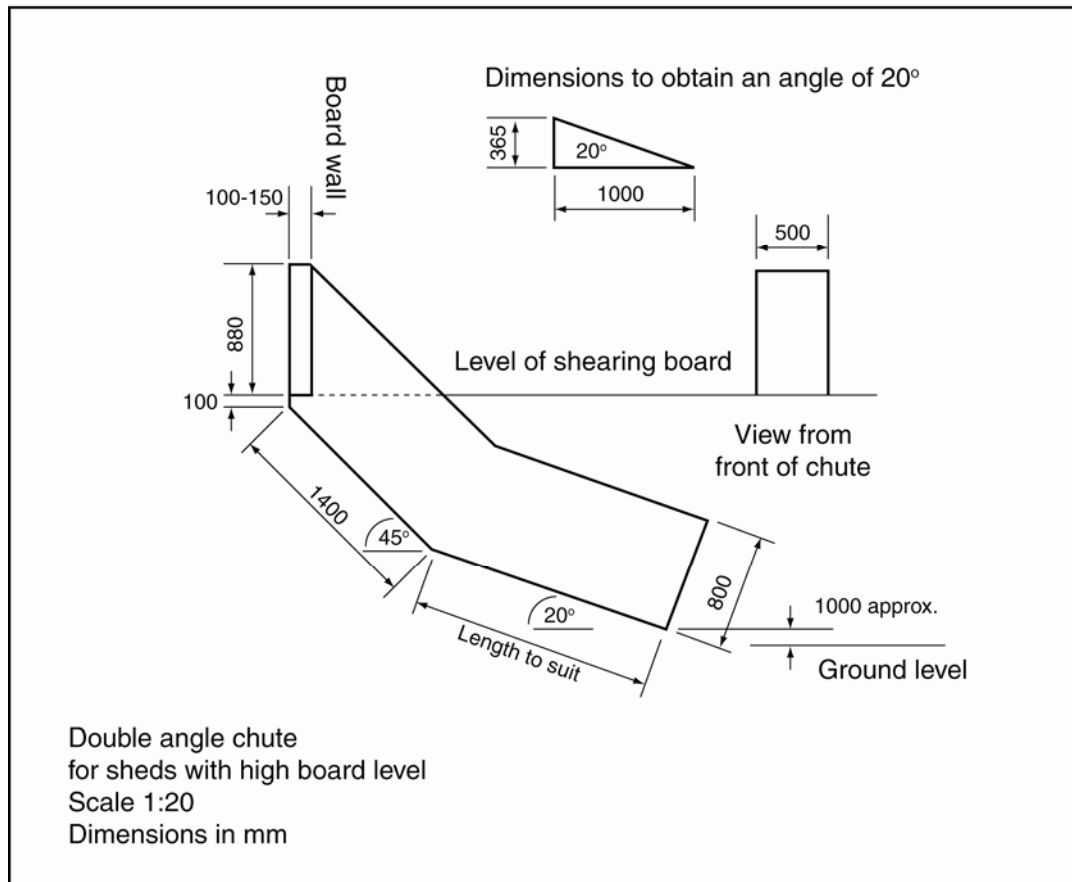
Designs and dimensions from Conroy and Hanrahan:

Figure 30. A sliding chute with a single incline.



Source: Conroy & Hanrahan

Figure 31. A sliding chute with a double incline.



The shearing catching pen, board and sheep exit from the board are critical OH&S and financial risk areas for the shearing industry.

An example listing of risks associated with the let go area from the Victorian Workcover document is below:

6.5 Let-go area

Hazard or risk	Risk control
Obstructions to the smooth exit of sheep following shearing or crutching place significant strain on the shearer, and increase the risk of back injury.	The sheep should have an unobstructed exit from the shearing board that requires the least effort from the shearers. Where chutes are used their entrance should be extended onto the floor of the shearing board by some 100–150 mm, with the front edge 100 mm lower than the floor, for easy release of sheep. Ensure that barriers such as wooden strips at the opening of let-go chutes/doorways are removed. To prevent wool going into the let go area flexible plastic strips or strips of bristles can be fixed at the opening. These save the wool but don't obstruct the movement of the sheep. The chute/doorway should be located directly in front of the sheep at the completion of shearing. Ensure that chutes/doorways are large enough to allow for easy handling of large-framed sheep. Ensure that dogs are kept away from exit points on let-go areas to reduce baulking of sheep.
Let-go chutes/doorways in areas that funnel prevailing cold winds can increase muscle fatigue.	If modifying or designing the let-go area consider placement of chutes/doorways in positions that limit drafts and glare. Placement of clear plastic strips at the mouth of chutes will reduce the wind blowing through.

Source: © Victorian Workcover Authority

The Authority also lists some design aspects to minimise OH&S issues:

Number three

Release chutes

Traditional design

Sheep often balk at entering a release chute or gate. When this happens any obstruction will serve as a foothold. This will mean that the shearer has to work very hard and struggle to push the sheep out the chute or gate.

How big is the problem?

A good gate or chute requires no effort – the sheep just walk away or slide down. To find out how much force is needed when a shearer needs to push the sheep past an obstruction, a chute was built with a small obstruction that the sheep could use as a foothold.

Experienced shearers pushed sheep out the chute while the forces were measured.

Results

The results show that the shearer has to do a lot more than just push the sheep toward the chute. They must control a struggling animal. This means they must push and pull in all directions.

When struggling with the sheep many joints in the body are placed at risk.

For example the forces in the back were estimated to be about 25% greater than the recognised limits.

The risk of a back injury is even greater because the shearer has been stooped over for several minutes.

Recommended release

The best release is one where no effort is needed by the shearer.

Chutes or level releases can be made easy to use by:

1. Making sure there are no obstructions (like wood nailed across the entry to the chute) that could be a foothold for the sheep.
2. Making the chute large enough (about 600 mm wide by 850 mm high).
3. Making the near side of the chute about 150–250 mm from the downtube.
4. Cutting the chute about 150mm into the shearing board.

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Some useful productivity measurements in relation to the let go process are listed below:

- Release time (last blow on sheep to whole of sheep exited off shearing board); and
- Perceived exertion to release a sheep.