



Designing a sheep shed

by Edward Egan, Teagasc, Co. Meath. Also see video "Designing a sheep shed"

Feed space

1 One of the most common mistakes in sheep shed design is not having enough meal trough space for all ewes in the pen to feed at the same time. This mistake is often realised only when the shed is nearly finished. Work out the meal trough space needed per ewe before building the shed.

Feeding space per ewe

Type of ewe	Meal (mm)	Fodder (mm)
Large (90kg)	600	200
Medium (70kg)	500	200
Small (50kg)	400	175

Floor space

2 Floor space required per ewe depends on:
 1) Ewe weight.
 2) Shorn or unshorn. Winter shorn ewes need 20% less floor space than if unshorn.
 3) Floor type. A slatted shed can hold 10% more ewes than a bedded shed.

Floor space per housed ewe

Type of ewe	Slats m ²		Bedded m ²	
	Shorn	Unshorn	Shorn	Unshorn
Large (90kg)	1	1.2	1.1	1.4
Medium (70kg)	0.9	1.1	1.0	1.2
Small (50kg)	0.8	1.0	0.9	1.1

Floor type

3 When deciding on floor type consider:
 1) Cost. Slats increase the building cost/ewe.
 2) Bedding. Its availability in your area.
 3) Labour. Help with bedding now & in the future.
 4) Digging out. Depth of rock, water & springs.
 5) Alternative uses for sheds in your area.
 6) Fodder type. Feeding hay or long chopped silage is not ideal on slats. Sheep pull the long chop silage/hay onto the slats causing blockages.



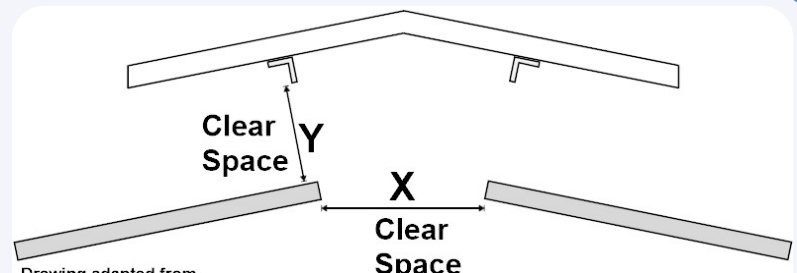
Water troughs

4 Locate water troughs 600mm above floor level (prevents ewes dunging in them) along the outside of the pen particularly in straw bedded sheds. This keeps them out of the way when bedding & cleaning out. It also reduces the risk of damage. Each trough should have its own on/off valve. Design troughs so that they are easy to clean out.



Ventilation

5 Air inlet should be directly below the eaves for the full length of each side of the house or on the lower side of a lean-to. Air outlet such as a correctly installed open roof ridge or spaced or raised sheeting will make a good outlet. The open ridge should run the full length of the roof apex. The ridge width depends on the shed width.



Drawing adapted from DAFM spec S101, 2016

Width of house	X (mm)	Y (mm)
Up to 15m	450	275
15m-24m	600	350
Over 24m	750	425

6 *Passageways*

The passageway width depends on the machinery used both now & in the future. Tractors should be able to enter from one end & exit via the opposite end. So avoid dead-end passageways & reversing. In a bedded shed the passageway floor should be 150-200mm higher than the pen floor. Design bedded sheds so a tractor can enter the group pens from both gable ends for easy cleaning out.

Recommended minimum passageway widths

Tractor/trailer or block cutters	3.05m
Feed wagons excluding troughs	4.00m

7 *Group pens*

Having ewes in groups of up to 60 per pen works fine where they are evenly matched, have the right floor space, meal & fodder trough space. Too many small groups increases the workload & also increases the cost as more penning, water troughs, exit gates & passageways are needed.



8 *Individual pens*

Have at least 1 individual pen per 10 ewes lambing. They should be 1.5m x 1.5m. They should be under the same roof as the group pens. Individual pens should be a short distance from the group pens. The route from the group pens to the individual pens should be enclosed to prevent ewes escaping. Allow easy access for machinery for cleaning out & for moving sheep to grass.



9 *Penning*

Frequently used gates should be properly hinged for easy use. Each group pen must have a properly hinged 1m wide gate. Its bottom board must open along with the gate to help encourage the ewe out of the pen. Having post in sleeves makes removing them easier when cleaning out. Alternatively pen divisions should be hinged so they can be swung out of the way without removing them when cleaning out.



10 *Work station*

The work station should be under the same roof as the group pens & beside the individual pens. It should include a sink with a draining board. There should be a ready supply of hot water from a mains fed water heater. Instant hot water is a great encouragement for keeping hands & lambing equipment clean. There should be room for a fridge, a storage area, warming boxes, infrared lamps & orphan lambs.

