

Sheep Handling Facilities

SUMMARY

- **Understanding the behaviour of sheep is essential for planning and designing a sheep handling facility as well as incorporating aspects of animal and human welfare and environmental impacts**
- **Basic dimensions have been summarised to provide a guide to the overall area required for a sheep handling facility**
- **Several components of sheep handling facilities have been described to give design options as individual handling facilities requirements will be different on each farm**

Introduction

There has been a move in the sheep industry towards using lightweight, mobile sheep pens and transporting them around the farm. However, as practical as these are, there is still a requirement for fixed handling pens at the main steading.

Basic principles are used to plan and design a sheep handling facility. Standard dimensions provide the information needed to ascertain site location and size while sheep behaviour is a key issue that can determine the practicality of a handling system.

Sheep Behaviour

Although the use of a handling facility is often for activities that benefit sheep health, handling is a stressful situation. Stress can be limited by designing a system that takes account of the way sheep behave.

Sheep behaviour is not greatly different to that of other farm livestock.

They:

- Like to follow one another,
- Prefer to move uphill,
- Move quickly towards light and other sheep,
- Move better around slight curves,
- Dislike obstructions such as shadows, people, noises, and smells,
- Require good secure footing.

In simple terms a sheep handling facility must enable sheep to be gathered, held, treated in batches or individually, then held again in groups prior to release. For all of this to happen, it is very useful when designing a handling facility to make use of natural behaviour as this will minimise stress for both sheep and handler.

Planning and Design

The siting of handling facilities must be thought of carefully in relation to the unit on which they are to be constructed. Handling facilities should be central to the sheep grazing areas or located in relation to sheep movements and gathering routines. Other factors that may determine the location of the facilities include:

- a free draining site,
- near to a water supply,
- preferably not exposed,
- proximity to a farm road.

The above factors refer to the choice of site. However, when considering the design of a new handling facility, further steps would include assessing the activities that will be carried out (shearing, crutching, dipping, drenching, footbathing and so on). Each farming unit has different requirements and decision factors, therefore the ideal handling facility for one may not be ideal for the other.

In order to assess the area of the complete facility, it is assumed that the collecting pens and the side pens have to hold all the ewes and lambs that will be handled in a day. The approximate area of land required for the handling facility is calculated by multiplying the total number of ewes to be handled in one day by 1.3m².

The system should be simple and pens not too large. The pens should be in a sequence which allows controlled and organised movement through the facility, allowing all tasks to be done with the minimum amount of stress to handler and sheep. The handling facilities will have a main core where the majority of the work is carried out and sheep can be organised around this core between the different gathering and side pens. In general, square pens should be avoided while longer, narrower pens provide better control of the sheep. A simple roof over the working pens and shedding race will improve the operating environment for the shepherds.

Gathering Pen

The gathering pen is the first pen that the sheep will encounter and after they are held in this area, they will move forward through the core of the facility. The pen should hold all the sheep to be handled in one day and access should be provided by a 3m gate sited at one or two corners of the pen.

Shedding Race

The prime function of the shedding race is to split a single line of sheep into allocated groups. It is important that the race is positioned correctly so that the rest of the system can work smoothly.

There may be 1-3 shedding gates and this will stipulate the length of the race.

The shedding race should have solid sides with a continuous clear gap between the bottom of the sides and the floor to aid drainage.

The entrance of the shedder will incorporate a forcing funnel that will gently guide the sheep into the confinements of the race without meeting right-angled barriers and corners, resulting in blockages. A gate at the end of the race should not be solid as this will hinder sheep flow.

It should be considered that a weigh machine could be incorporated into the shedding race to allow different sheep to be drawn off into groups prior to further handling.

Side Pens

The side pens hold sorted and shedded groups of sheep prior to further handling. The total area of the side pens will ideally equal the area of the gathering pen. A minimum of 3 side pens is a normal requirement.

Drawing Pen

A drawing pen is used to connect the side pens to where the sheep will be handled in either the working pen or the dipper. This pen should ideally be the same size as the largest side pen in order to move entire shedded groups as a single batch.

Catching/Working Pen

This circular pen gives the handler the opportunity to ‘force’ sheep into the dipper. The pen alters in size due to the rotating, centrally pivoted gates, which allows different groups to be worked with at the same time. The sides of this pen are generally solid and smooth to improve the flow of sheep into the dosing race.

Dosing Race

This pen will confine small groups of sheep in order to treat them individually. This can be a narrow race or indeed wider whereby the handler can either stand on the outside of the race or work in with the sheep. Non-return gates can be incorporated at the entrance to the race and the gate at the exit should be sparred to allow the sheep to see through it. The sides are generally solid. Removable top side rails and access from either side of the race is beneficial, allowing a better working environment for the handler.

Dipper

Mobile dippers are now much more common. There may however be a requirement for a static dipper to be incorporated in the main handling pens. This dipper must be constructed with particular attention to both sheep and human safety, while also considering minimising labour and stress.

Farm staff must be aware of the total capacity of the dipper and a complete risk assessment should be carried out. Knowledge of treatments and chemicals is also essential to know how long to immerse the sheep in the dip. A measuring facility should be incorporated into the dipper to assess topping up levels. A child-proof cover is essential to render the dipper safe when not in use.

Draining Pens

Draining pens are an important feature of any sheep handling facility and are crucial for the prevention of pollution. Following dipping, a full sheep fleece may carry up to 35 litres of dip on emergence from the dipper. In order to save as much fluid as possible the draining pen floor should be concreted and slope towards a filtered channel that will drain the fluid back into the dipper. Draining pens should be large enough to hold the sheep for at least ten minutes following emergence from the dipper. Normally 2 pens would be side by side in order to allow this. A dripping pen should be capable of holding 25-30 sheep but this is dictated by the dipping rate.



Sheep being dipped and entering the dripping pen that has been suitably sloped to allow liquid to run off back into the dipper.



Photo courtesy of Raymond Crerar

A Sheep Handling System showing all the features mentioned previously.

Conclusion

All of the above aspects should be incorporated in a sheep handling pen and the dimension guidelines will provide key information for planning and designing the facility. Particular recognition to sheep behaviour and overall welfare is vital at the design stage. Human and

environmental aspects should also have a role in the planning process. Following the basic principles outlined above will provide benefits in the long term from improved welfare and labour saving and will prove an asset to the business.

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Brief description of the components in a sheep handling facility and the space allowances

Facility	Function	Space allowance for sheep (m ²)
Gathering/collecting pen	To hold the largest group to be handled	0.65m ² per ewe/lamb Hardcore surface
Forcing funnel	To guide groups of sheep to fill the race	30° angle of approach 2.4m closing gate behind
Shedding race	To hold animals in single file in order to shed them off into side pens in a controlled manner	Minimum run from forcing funnel – 3.0m Ideal length: 4.5-6m V-shaped section: top 610mm wide, bottom 305mm wide, height 920mm Parallel sides: width 460mm, height 910mm Shedding gates: 900mm wide Textured concrete surface
Side pens	To hold separated groups of sheep	Combined area of side pens should equal the area of the gathering pen Minimum number of pens: 3 0.45m ² per animal Exit gates – 2.4m Hardcore surface
Drawing passage	To transfer sheep from side or holding pens to the working pen or dipper	Width: 1.8-2.4m Area should equal size of largest side pen Textured concrete surface
Catching/working pen	Circular pen with revolving gates – often associated with the forcing funnel	0.35m ² /head Radius: 1.5-2.6m Wall height: 1.1m Two revolving gates on centre post Exit gate to working areas and entry gate from drawing passage Textured concrete surface
Footbath	Plastic trays incorporated into the dosing race	Length: 6.0m Width: 360mm at groundlevel Height of race: 920mm Depth of bath: 150-200mm
Dipper	Bath to hold water and chemicals for treating sheep	Capacity: 2.25 litres (0.5 gal) per head minimum
Dosing race	To contain sheep for carrying out dosing.	One man: width 760mm Two men: width 1290mm Length: 7-10m Texture concrete surface
Drip/draining pens	To hold sheep after the dipper.	Sloped toward the dipper (1:30) 0.5m ² /ewe Maximum sheep/pen: 25-30 Shedding gate on entry from dipper Ribbed concrete surface