

Minimum Specification for Calving Pens, Separation Pens, and Isolation Boxes

The receiving of this specification does not imply approval of a grant application. However, if written approval is issued, then this specification becomes part of the contract between the applicant and the Department of Agriculture, Fisheries and Food.

This is a minimum specification. Where the word “SHALL” is used, then that standard (at least) must be followed in grant-aided buildings. Where a procedure is “RECOMMENDED”, this is advice only on good practice.

Note that all references to other Department Specifications are to the current edition of that specification [available on the Department of Agriculture, Fisheries and Food Website (www.agriculture.gov.ie) under Farm buildings]. Similarly, references to Standards are to the current edition of the Irish, British or European Standard, as appropriate.

1 Safety

APPLICANT'S RESPONSIBILITY FOR SAFETY

Applicants are reminded that they have a duty under the Safety, Health, and Welfare at Work Act 2005 to provide a safe working environment on the farm, including farm buildings, for all people who may work on that farm. There is a further duty to ensure that any contractor, or person hired to do building work, provides and/or works in a safe environment during construction. It is the farmer's responsibility to provide a construction stage project supervisor.

SAFETY DURING CONSTRUCTION

Farmer/Applicant Responsibility: Certain construction dangers may be encountered in the course of building or conversion work. Neither the Minister or any official of the Department will be in any way liable for any damage, loss or injury to persons, animals or property in the event of any occurrence related to the development and the applicant shall fully indemnify the Minister or any official of the Minister in relation to any such damage, loss or injury howsoever occurring during the development works.

Dangers: If any or all of the work is undertaken by the applicant/farmer he/she should seek competent advice and undertake all temporary work required to ensure the stability of excavations, superstructure, stanchion foundations and wall foundations, also to divert any drains, springs or surface water away from the works, and to guard against possible wind damage, or any other foreseeable risk.

Power lines: Farm buildings shall not be constructed under or nearer than 10m to an overhead power supply. If advice is required, or if power lines need to be diverted, it

is the applicant’s responsibility to contact, in writing, the local ESB supervisor before construction commences, and then to follow the ESB conditions.

Danger to children: It is the applicant’s responsibility to prevent children from playing or spending time in the vicinity of any building work.

2 Concrete Specification

Concrete shall be to the standard set out in the Department’s specification S101 and shall be certified in the same manner.

3 General

3.1 Isolation boxes

Isolation boxes are required to isolate animals with certain contagious health problems. Ideally where possible they shall be located away from animal housing and shall not under any circumstances share common air space with any other isolation box or holding pen. Common walls between an **isolation box** and any other animal pen, building or animal compound shall be built tight to roof level. See table below for number of boxes required.

3.2 Separation pens

These are required for animals with certain less contagious health problems. Separation pens can also be used as normal calving pens. Separation pens may share common air space but must be divided by either a 2m minimum high wall or a 2m wide passageway between the pens and between any other animal enclosures. Gates or barriers may be used in separation pens where there is a passageway. See table below for number of pens required.

3.3 Calving Pens

Calving pens may be divided by barriers or gates. It is recommended that at least one calving pen should be provided for ever 15-20 cows.

Herd Size	No. of Isolation Boxes	No. of Separation Pens
Up to 15	1	-
16 - 35	1	1
36 - 50	1	2
51 - 75	2	2
76 - 100	2	3

Table 1. The table shows the minimum number of isolation boxes and separation pens to be provided.

Extra isolation boxes and separation pens for herds over 100 shall be added at one of each per 50 cows.

4 Site

The site shall be carefully chosen with a view to minimising operational and constructional problems. It shall be well separated from potential fire hazards and sheltered if possible. As a general guide, Calving Pens, Separation Pens, and Isolation

Boxes should be located not less than 50m from any waterbody. The minimum distance between Calving Pens, Separation Pens, or Isolation Boxes and a public/private water supply source, either surface or ground, shall be 60m. In vulnerable situations this distance shall be increased up to 300m.

Note: Any land drains shall be stopped at least 10m on the upstream side of a site and diverted around to re-connect with the drainage system at least 10m on the downstream side of the storage area.

5 Building

The building shall be constructed as per S101 Minimum Specifications for the Structure of Agricultural Buildings. All pen types shall be at least 3.6m x 4.0m with individual access. It is recommended that separation and calving pens shall be fitted with a suitable lifting arrangement.

5.1 Roof Structure / Cladding Materials

Roof and Side cladding materials and their installation shall conform to the current edition of S102.

5.2 Floor

Floor incorporating 1000 gauge polythene DPC shall be 125mm concrete, on 150mm well compacted hard-core blinded with sand, laid to falls of 1 in 50 to gully trap within each pen. The gully traps with water seal shall have a metal grid cover.

A raised lip shall be formed under any door, gate or barrier used in isolation pens, separation pens or calving pens to contain the effluent.

5.3 Walls / Barriers

5.3.1 Mass Concrete Walls

All external mass concrete walls shall be constructed as per the Department's specification S101.

Mass concrete walls shall have a smooth, blemish free finish and any honeycombing and tie-bar holes shall be filled with an accepted non-shrink proprietary cement mortar.

5.3.2 Block Walls

External solid block walls shall be a min. 200mm, and shall be constructed as per the Department's specification S101. All internal non-load bearing walls shall be 150mm solid concrete block or reinforced mass concrete. A layer of damp proof course shall be laid at floor level for all solid concrete block walls.

Solid concrete block walls shall be rendered internally with two coats, 12mm and 6mm respectively, with 3:1 sand cement rendering with plasticiser or ¼ part lime, to a smooth steel trowel finish. Block walls shall be rendered externally with one coat 12mm thick to a nap or smooth finish.

5.3.3 Barriers / Gates

All uprights shall be tubular steel at least 76.1mm OD x 5mm thick or hollow section steel 80 x 80 x 4mm thick. They shall be fitted in a 300mm x 300mm x 450mm concrete base at 2.3m centers with at least 4 rows of rails. All posts shall extend to a minimum of 1.4m above the ground.

All side rails, retaining bars and steel sections used in gates shall be tubular steel 48.3mm OD x 3mm thick, or hollow section steel 50mm square x 3mm thick. A minimum of four rails shall be provided equally spaced with the bottom rail 250mm off the ground.

5.4 Doors

Doors shall be at least 1.5m wide and 2m high of timber (50mm thick framed, braced and sheeted) or steel framed, box or angle iron, clad with cladding listed in the Department's specification S102. All doors shall be sliding. Steel framed and clad doors are recommended for Isolation Boxes to facilitate disinfection.

6 Ventilation

Permanent open ventilation shall be provided as a strict condition of grant aid. Opening/closing windows, or opening/closing half-doors, **shall not be included** in the required inlet/outlet areas given below.

6.1 Isolation Boxes

Air inlets shall be at least 2m above floor level and air outlets at least 1m above the inlet. Isolation boxes shall have the following ventilation requirements:

Inlet(s) 0.3m²/animal

Outlet(s) 0.3m²/animal.

Inlet area is defined as the aggregate area of all unobstructed air inlets. (i.e. if Yorkshire boarding, or other systems, are used to reduce wind speed, the area of the timber/plastic is not part of the inlet area). Permanently open half doors are a useful method of achieving inlet ventilation. Vented sheeting may be used for inlet ventilation only, in such cases a minimum of 0.3m² of vented areas of sheet shall be provided per adult animal.

6.2 Separation Pens & Calving Pens

For ventilation requirements for Separation Pens and Calving pens shall be as per the Department's specification S101.

7 Water/Food

Suitable drinking and feeding arrangements shall be provided in each pen or box. A hose point for cleaning shall also be provided.

8 Cow Tying

A tying arrangement shall be provided in each pen or box, see Figure 1.

It is recommended that a crush unit be installed in one of the separation pens. The *crush unit shall be as per the Department's specification S137*. This can assist in the treatment of animals such as administering injections or performing caesarean sections on in-calf cows and heifers. This unit shall be situated along the dividing or external wall and shall run from right to left to enable veterinary access to animals. The unit shall have removable panels or side rails.

9 Lighting and Electrical Installations

A lighting level of 100-lux shall be provided. All lighting and electrical works shall be carried out in accordance with the Department's specification S101.

10 Waste Disposal

All effluent / solid farmyard manure and soiled water shall be stored in compliance with the Nitrates Directive S.I.378. All solid farmyard manure storage facilities shall be constructed in accordance with Department of Agriculture, Fisheries & Food specification S108. All effluent tanks shall be in accordance with the Department's specifications S123 and S123Y.

10.1 Isolation Box and Separation Boxes

Effluent from isolation boxes and separation pens shall be collected separately from that of the main herd and disposed of separately onto non-grazed land. Effluent shall be stored underground either within an isolation box or separation pen, or outside of it. The storage capacity shall be 140 litre (30 gallon) per box. However, the effluent from these pens and boxes may be collected in a single tank. Tanks shall be fitted with a 450mm x 450mm medium weight galvanised steel manhole cover in accordance with the Department's specification S123.

10.2 Calving Pens

Calving pens do not require a separate effluent collection or disposal system from that of the main herd and effluent shall be directed to a suitable storage tank.

11 Disease Control

In order to prevent the possible spread of disease around the farm a permanent footbath shall be constructed outside all Isolation boxes to enable the user to disinfect their boots upon entry and exit of the box. A semi-permanent or permanent footbath of proprietary construction shall be installed outside Separation pens. It is recommended that footbaths be installed outside calving pens.

12 Certificates

The following certificates shall be given to the Department before grant-aid will be paid:

1. "Concrete" Certificate
2. Certificate of Protection of Structural Steel.
3. "Electrical" Certificate

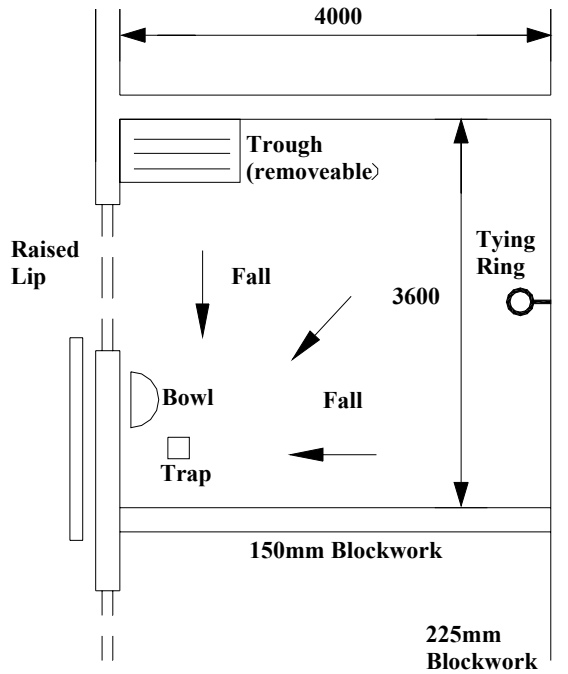


Figure 1 Typical layout of a Separation pen / Isolation box / Calving pen

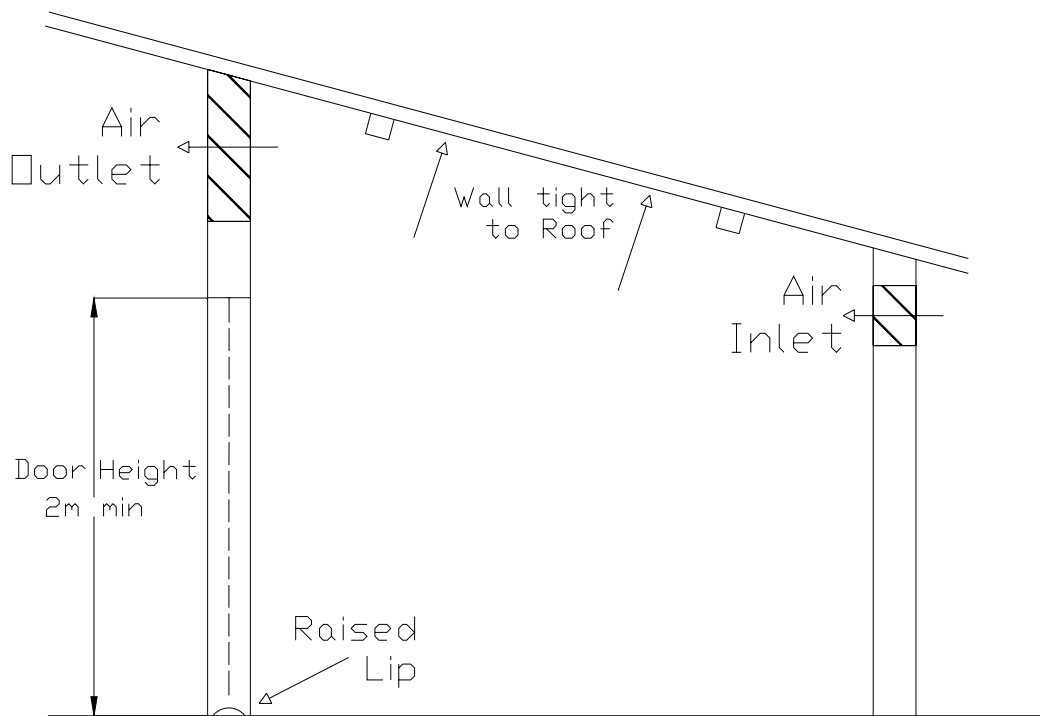


Figure 2 Typical Isolation Box: Section

Note: Other conventional types of construction are acceptable.

