



**AN ROINN TALMHAÍOCHTA, BIA AGUS MARA
DEPARTMENT OF AGRICULTURE, FOOD AND THE MARINE**

Minimum Specification for the Housing of Organic Animals

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, Food and the Marine.

This is a minimum specification. Where the word “SHALL” is used, then that standard (at least) must be followed in a grant-aided building. 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, Food and the Marine Website (www.agriculture.gov.ie) under Schemes / Farm buildings]. Similarly, references to Standards are to the current edition of the Irish, British or European Standard, as appropriate.

NOTE: This is a specification for the construction of new animal housing for organic farming, and for the conversion of existing farm buildings for organic housing.

This specification must be read in conjunction with the Department of Agriculture, Food and the Marine minimum specifications S.101 “Structure of Agricultural Buildings”, S.123 “Bovine Livestock units and reinforced tanks”, and where applicable, with Specifications S.124 (Calves), S.146 (sheep), S.150 (poultry) and S.160 (Bulls).

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1. SAFETY

1.1 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. Applicants are advised of the need to acquaint themselves with the provisions of the Safety, Health and Welfare at Work Act 2005 and the regulations made hereunder, in particular the Safety Health and Welfare at Work (Construction) Regulations 2013. General guides to this Act and regulations, prepared by the Health and Safety Authority, are available at www.hsa.ie.

1.2 Safety during Construction

Farmer/Applicant Responsibility: Please note that neither the Minister nor any official of the Department shall 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. Farmer/Applicant's are reminded that under the Safety Health and Welfare at Work (Construction) Regulations 2013 and under Section 17 of the Safety, Health and Welfare at Work Act 2005 that they have significant responsibilities in relation to any construction works that they are planning or undertaking. It is the farmer/applicant's responsibility to appoint, in writing, a competent Project Supervisor for the Design Process (PSDP) before design work starts, and to appoint, in writing, a competent Project Supervisor for the Construction Stage (PSCS) before construction begins.

Dangers: Where the applicant/farmer is undertaking any part of the above work, it is his/her responsibility to seek competent advice and to undertake all temporary work required to ensure the stability of excavations, superstructure, stanchion foundations, wall foundations, to guard against possible wind damage and to avoid any other foreseeable risk. It is also his/her responsibility to ensure that any drains, springs or surface water are diverted away from the works.

Power lines: Due to the complex criteria involved, where buildings are proposed within 35 metres of the centre of any overhead power line, the landowner shall contact ESB Networks in advance to ascertain the specific minimum building clearance requirement. It is a requirement on landowners under The Electricity Supply Acts to notify ESB Networks, at least, two months before commencement of any construction works near overhead lines. As a guide, table 1 below set out the usual minimum clearance distances required, however, ESB Networks shall be contacted and their advice followed for any structure within 35m of the centre line of an overhead power line. ESB will provide landowners with written confirmation of the required clearances. Landowners can contact ESB through phone numbers provided on their electricity bills.

Where building work is undertaken near power lines there is also a safety issue regarding Machinery, Tipper Trucks and Elevators operating without proper safety measures in place. When landowners contact ESB they will be provided with relevant safety literature.



Table 1: In general the following clearances apply to various voltage levels.

Voltage	Clearance
Low Voltage	0.5 to 3 Metres
Medium Voltage	3 to 6 Metres
38KV Lines	10 to 17 Metres
110kv Lines	23 Metres
220KV Lines	30 Metres
400KV Lines	35 Metres

Note:

- ESB overhead lines consist of lines at various voltage levels and require specific safety clearances from buildings depending on voltage level and construction type.
- Clearances are specific to the line voltage, building height, location in line span and ground levels.

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

Roof work: When working on any roof, it is essential to assume that the roof is fragile, unless confirmed otherwise by a competent person.

The HSA Code of Practice for Safety in Roofwork shall be consulted prior to any work being undertaken on a roof. All advice in the code of practice shall be followed.

The HSA code of practice gives recommendations and practical guidance on how to work safely on roofs, including the safe maintenance of roof mounted plant and services, and how to design and plan for safe working. It offers guidance on the design and construction of roofs on new buildings and the maintenance, cleaning and demolition of existing roofs. All work at height poses a risk and a risk assessment should be carried out to assess those risks and put appropriate controls in place.

1.3 Safety Notices

A safety notice shall be securely fixed beside every new agitation point in partially or fully slatted sheep houses. The notice should be as close to the agitation point as possible. A typical agitation point safety notice is shown in Figure 1 below. The sign shall be not less than 490mm wide by 410mm high, and shall be printed on an aluminium alloy board.

1.4 Toxic Gases and Agitation

Harmful gases are generated in slurry stores and these have been responsible for both human and animal deaths. Good ventilation in slatted buildings is always important, and is vital during agitation or emptying of the tanks. Where silage effluent has been added to the slurry there can be a danger of more concentrated gases. Therefore:

1. Tanks shall always be agitated and/or emptied from the external agitation points, and never from openings within the house.
2. Agitation shall take place on windy days.
3. All animals shall be removed from the house before agitation commences. It is recommended that animal holding pens are installed close to the house to facilitate this removal.



4. All doors, and any feed-flaps, shall be fully opened before agitation/emptying begins and kept open until completion of tank emptying.
5. No person shall enter the house during agitation or emptying.
6. When agitating slurry always work upwind of the tank.
7. Some poisonous slurry gases are heavier than air. No person should climb down into an emptied or part-emptied tank without breathing apparatus. Such apparatus requires full training before it can be used.
8. Always keep the tank openings secure.
9. If possible avoid agitating alone. Always ensure that someone knows that agitation is being undertaken and the expected completion time.

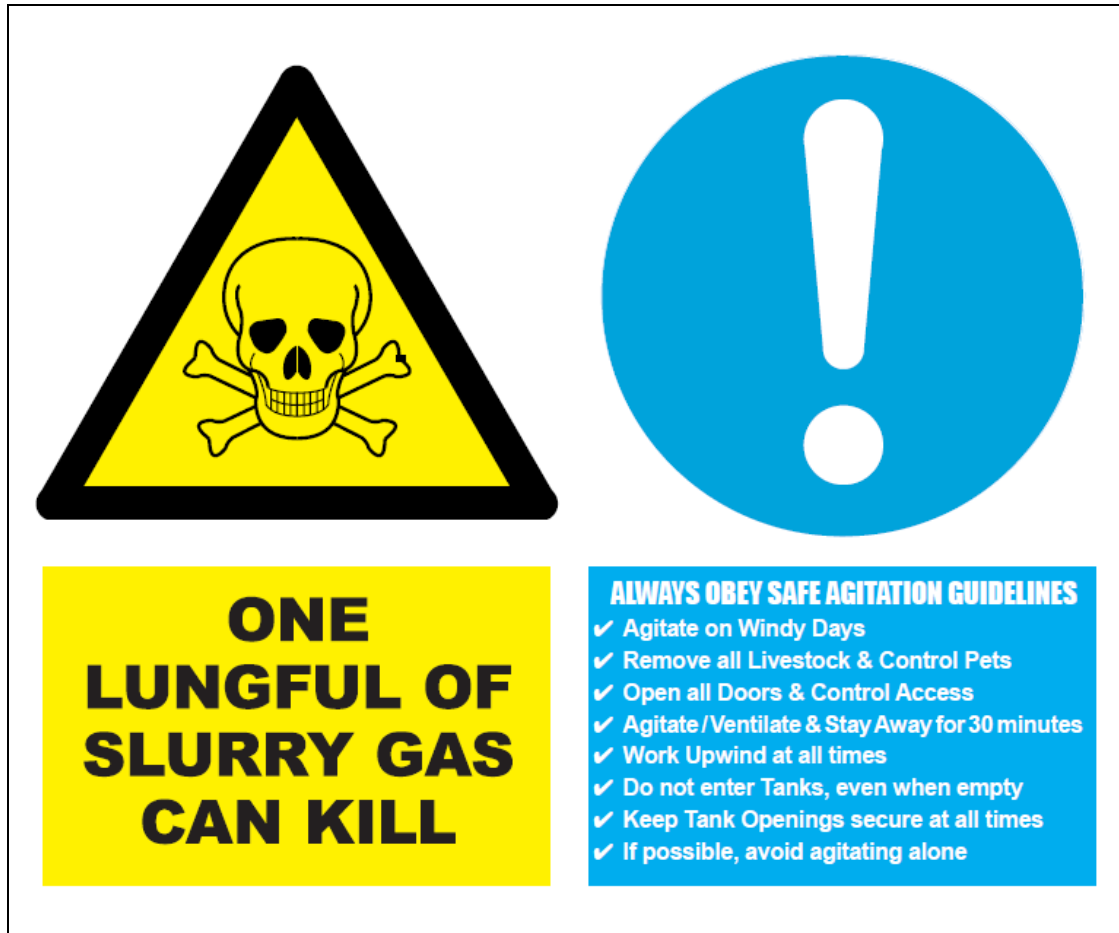


Figure 1: Typical agitation point safety notice.

1.5 Maintenance

All farm buildings require regular maintenance to ensure the health and safety of personnel and animals. After each winter-season buildings should be thoroughly washed and cleaned out. Fittings such as slats, electrical fittings, drinking arrangements, etc., should be periodically checked, and all defective items replaced.



2. CONCRETE SPECIFICATION

This relates to the use of concrete for all organic animal structures.

2.1 Certificates

Concrete shall be produced in a plant audited to I.S. EN 206-1: 2002 by a certified body accepted by The Department of Agriculture, Food and the Marine (e.g. N.S.A.I., B.S.I., Q.S.R.M.C). It shall not be produced on site.

A numbered certificate, signed and stamped, shall be required for all concrete delivered to site. The certificate, the "Concrete Manufacturers' Specification Certificate", is produced in triplicate. **The top certificate, printed on light blue paper, shall be retained by the applicant** and given to and retained by the local AES Office of the Department of Agriculture for inspection upon completion of the works. In addition, a copy of the concrete manufacturer's EN206 Certification Certificate shall be supplied to the Department along with the Concrete Manufacturers' Specification Certificate.

2.2 Curing of Concrete

Concrete produced and supplied is fit for purpose ONLY IF proper curing procedures are adhered to and the structure is not put into service until an adequate curing time (usually a minimum of 28 days) has elapsed. The curing regime shall take account of best practice appropriate to the concrete binder composition and prevailing climatic conditions at time of placing.

All concrete shall be cured by keeping it thoroughly moist for at least seven days. Wetted floor slabs and tank walls shall be protected by polythene sheeting, kept securely in place. Alternatively proprietary curing agents may be used in accordance with manufacturer's instructions. When frost is a danger, straw bales shall be placed over the polythene on slabs. Concrete shall be at least 28 days old before being subjected to full load, or to silage or silage effluent.

For further information on curing, see the website of the Irish Concrete Society.

2.3 Concrete for Silage Effluent

For **purpose-built** silage effluent tanks and channels, concrete shall be purchased on the basis of a characteristic 28 day cube crushing strength of 45N/mm^2 (strength class C35/45). Minimum cement content shall be 360 kg/m^3 . The maximum water to cement ratio will be 0.5. The specified slump class shall be S2 or S3. Maximum aggregate size shall be 20mm.

The concrete shall be ordered using the appended form for 'S.100 Mix A' or by requesting '45N concrete with 360kg cement minimum, 0.50 water cement ratio maximum, and slump class S2 or S3, certified to IS EN 206, for use to Specification S.100'.

If the Concrete Supplier requires further information the following shall be quoted to them:

- The concrete is to be to I.S. EN 206-1:2002: Strength Class: C33/45, 360 kg cement, maximum water cement ratio of 0.50, Exposure classes: XA3, XC4 (25 year life), Slump class: S2 or S3, maximum aggregate size 20mm.



2.4 Concrete

For all other purposes including slurry tanks to which silage effluent may be directed, concrete shall be purchased on the basis of a characteristic 28 day cube crushing strength of 37N/mm^2 (strength class C30/37). Minimum cement content shall be 310 kg/m^3 . The maximum water to cement ratio will be 0.55. The specified slump class shall be S2 or S3. The maximum aggregate size shall be 20mm.

The concrete shall be ordered using the appended form for ‘S.100 Mix B’ or by requesting ‘37N concrete with 310kg cement minimum, 0.55 water cement ratio maximum, and slump class S2 or S3, certified to IS EN 206, for use to Specification S.100’.

In the case of exposed yard slabs where freeze/thaw action is a concern, ‘S.100 Mix B’ shall be used with 3.5% minimum air entrainment. Alternatively ‘S.100 Mix A’ may be used.

Note: Where silage effluent is allowed into a slurry tank the effluent shall discharge via a pipe at least 300mm from the inner face of the tank wall.

2.5 Compaction of Concrete

All concrete shall be compacted by either vibrating screed or poker vibrator depending upon the position of the concrete. Poor compaction leads to entrapped air, which will weaken the concrete and may cause premature failure. All concrete can be easily placed and compacted when using a vibrating screed or poker vibrator which helps ensure the concrete achieves its full strength.

2.6 Fibres

Polypropylene fibres may be incorporated into the concrete mix to improve the properties of concrete. Only fibres which have been tested and approved by National or European approval authorities may be used. The use of fibres helps to reduce plastic cracking and improve surface durability but they are not a substitute for structural reinforcement. Fibres shall be used in strict compliance with manufacturer’s instructions and shall only be added at the concrete manufacturing plant. The concrete certificate (Clause 3.1), shall clearly show the amount and type of fibre added. The mix design, compacting, and curing of fibre concrete is the same as concrete without fibre.

2.7 Self-Compacting Concrete

Self-compacting concrete (SCC) may be used in vertical elements only. SCC must comply with all requirements of this specification, except for the slump class which must meet slump flow class SF2. SCC shall be produced by a manufacturer with experience in producing SCC and should be placed by a contractor with experience using SCC.

If it is proposed to use SCC, additional guidance shall be sought by the contractor undertaking the works. Particular care must be taken in the use of fully sealed formwork, designed to withstand the higher hydrostatic pressure exerted by SCC. Guidance can be obtained from the Irish Concrete Society website (www.concrete.ie).



2.8 Materials

Cement and other materials used in the production of concrete shall be in accordance with Department of Agriculture, Food and the Marine specification S.100.

Plasticisers and other admixtures shall be to EN 934. All admixtures shall be used in strict accordance with manufacturer's instructions, and shall be added only by the concrete-mix manufacturer.

2.9 Tests

The Department reserves the right to require that concrete should be tested in accordance with EN 12390 and EN 12504.

2.10 Concrete Workmanship.

It is strongly recommended that contractors employed to undertake concrete works on farm structures have completed and passed the "Concrete Ticket" or similar course. This course provides guidance on the correct handling, finishing and curing of concrete on site. It also provides essential information on the properties of concrete and the requirements for ordering and delivery of readymixed concrete.

3. ELECTRICAL INSTALLATION

This relates to the electrical installation requirements for all organic animal structures.

Wiring and fittings shall be installed, and all work shall be carried out in with the **National Rules for Electrical Installations, I.S. 10101 (formerly ET 101)**, and specifically Chapter 7, Section 705 - Electrical Installations for Agricultural and Horticultural premises.. An ETCI completion certificate shall be required, signed by the Electrical Contractor(s) or a person duly authorised to act on his/her behalf to certify that the electrical installation has been constructed and/or has been tested according to the National rules of Electrical Installations and has been found to be satisfactory. An associate certificate, specifically for agricultural work, the "Supplementary Agricultural Certification Form" shall also be signed by the Electrical Contractors or authorised persons and the number of the main ETCI completion Certificate clearly marked on it. If no valid numbered ETCI Certificate is available for the completed installation, then the Electrical Contractor shall complete a new numbered ETCI Certificate indicating that the new installation has been tested for safety and compliance, and note that number on the Supplementary Form. The signed printed "Supplementary Agricultural Certification Form" together with a copy of the ETCI Completion Certificate shall be given to the Department before grant-aid can be finally certified.

4. PRINCIPLES OF HOUSING WITHIN THE ORGANIC SYSTEM

The ideal animal house in the organic system is a loose house with a solid floor throughout. A constantly renewed straw layer (or a layer of other permitted litter), is applied which builds up over the housing season to produce the farmyard manure required for land fertilisation. This system is preferred for all classes of animals. The space requirements for animals are normally much greater than in conventional housing, so a single feed on the longer side of a loose house usually provides adequate space at the feed face.



This ideal system however is difficult to incorporate into existing animal housing, especially cow cubicle houses, or slatted houses for beef cattle. It is also a labour-intensive system, so that some producers choose to incorporate scraped feeding-passages, for example, or certain types of cow cubicle, well-bedded with straw or litter.

The EU Council Regulations [2018/848](#) and [2020/464](#) on Organic Farming define the mandatory criteria for organic housing. Under [these](#) Regulations, at least 50% of the minimum internal floor area required for the animals must be of solid floor construction, and covered with [ample](#) straw or litter. The remainder of the floor is permitted to be of slatted construction, or of scraped non-strawed passages, or a combination of both. It is recommended, however, that the proportion of any such scraped or slatted areas be kept to the minimum feasible within the chosen system, or within the constraints of conversion.

5. MINIMUM SPACE ALLOWANCES

The stocking density in buildings shall provide for the comfort, the well being and the species-specific needs of the animals which, in particular, shall depend on the species, the breed and the age of the animals. It shall also take account of the behavioural needs of the animals, which depend in particular on the size of the group and the animals' sex. The density shall ensure the animals' welfare by providing them with sufficient space to stand naturally, lie down easily, turn round, groom themselves, assume all natural postures and make all natural movements such as stretching and wing flapping.

Appendix [2](#) of this specification defines all the **mandatory minimum spaces** that shall be provided for each category and weight of animal. Where there is adequate existing housing, it is recommended that the solid floor area of a combined solid floor/slatted house, or a converted cubicle house, be increased above the minimum area specified.

A minimum of 50% of the minimum internal floor area required for the animals shall be of solid floor construction, and covered with straw or litter.

Placing a screed of concrete over existing slats is not a permitted way to reduce the existing slatted area. If it is necessary to reduce the existing slatted area, the existing slats shall be removed and replaced with solid slabs. The procedures set out in S.123S shall be followed for the replacement of slats with slabs. All new slabs shall be included on the Accepted Slat List of the Department of Agriculture, Food and the Marine.

An outdoor exercise area, separate from the pasture, is normally required in the organic system, but where animals have full access to summer pastures, as in Ireland, these outdoor areas are not mandatory, except for breeding bulls (see clause 11). However, if it is feasible to provide such areas, they are recommended. [The outdoor area recommended per animal is given in Appendix 2.](#)

6. GENERAL DESIGN OF BUILDINGS

Proper design of tanks and buildings depends on stocking density; feed-face length; storage period; the management plan for landspreading of slurry and effluents; the chosen systems of agitation and emptying; and the economics of construction. All these decisions should be taken before construction starts.

The housing shall be provided with a comfortable, clean and dry laying/rest area of sufficient size, consisting of a solid construction which is not slatted. Ample dry bedding strewn with litter material shall be provided in the rest area. The litter shall comprise straw or other suitable natural material.



The general superstructure of the building shall be constructed to the current edition of **Specification S101: Minimum Specification for the Structure of Agricultural Buildings**. All external walls shall meet the requirements set out in S.101.

The use of a **Simple Steel Frame Structure** as specified in S.101, is the strongly recommended option for cattle housing. Houses may also be built to the other designs given in S101. If trusses are being installed, they require a high standard of protection and ongoing maintenance in the aggressive livestock environment. If other structural designs not specified in S101 are used, then a full set of design drawings and full structural calculations shall be prepared by a chartered engineer, and given to this Department for prior approval before the start of construction.

All slurry tanks shall be constructed in accordance with the relevant specification of the Department of Agriculture, Food and the Marine. In particular, all mass concrete tanks shall be constructed in accordance with specification S.123: Minimum specification for bovine livestock units and reinforced tanks.

6.1 Ventilation of buildings

Insulation, heating and ventilation of the building shall ensure that air circulation, dust level, temperature, relative air humidity and gas concentration, are kept within limits which are not harmful to the animals. The building shall permit plentiful natural ventilation and light to enter.

Permanent open ventilation shall be provided for all cattle, sheep and horse housing, as **specified in Specification S101**, as a strict condition of grant-aid, in order to protect animal health and the working life of the structure. Full ventilation shall also be provided in any conversion or extension of existing buildings. For pig and poultry housing, the use of forced ventilation is permitted.

Spaced sheeting for the roof is strongly recommended, and shall be installed as per S101.

6.2 Concrete Floors

All solid floors (not slatted or of grid construction) shall be a minimum 125mm concrete laid smooth with a non-slip finish. Concrete shall comply with Clause 2 above. A minimum 150mm hard-core base shall be laid, compacted with vibrating or heavy roller, and topped with fine sand. All floors shall incorporate 1000 gauge polythene DPC membrane with 600mm overlaps laid on the sand under concrete. The polythene membrane shall be taken up along walls to meet DPC where this has been installed. At least 50% of the minimum indoor surface area as specified in Appendix 2 shall be solid, that is, not of slatted or of grid construction.

In cases where fill is purchased for use under concrete, it shall be certified to EN 13242:2013 and meet the requirements of Annex E of S.R. 21: 2015. This material shall also be used as the top 300mm of any backfill around stanchion foundations.

6.3 Feed Barrier

Provision shall be made at the feed barrier for the rising floor level due to the accumulation of FYM over the housing season. A scraped-floor (or slatted area) behind the barrier prevents the problem, but a fully straw-bedded floor may need to be installed about 300 mm below feed stand level. Alternatively an adjustable barrier may be installed, with an adjustable short barrier below.



6.4 Components

Clause 3 (Components) of Specification S123 shall be followed for the following requirements: Drinking Arrangements, Slats, Pen Dividers, Feed barriers, Access to pens, Protection and fixing of Pen Divisions and Fittings.

6.5 Doors

All doors or sheeted gates wider than 1.2m shall be sliding. Doors to central passages, where fitted, shall also be sliding. The sliding gear shall be fitted and erected as per manufacturers instructions for the size and weight of door fitted. A sliding door should preferably incorporate a hinged type outward-opening single personnel door with a minimum head-height of 2.2m above ground level. Cladding materials for doors shall conform, at least, to the standards specified in S102. Steel roller doors are also permitted.

6.6 Artificial Lighting

Artificial lighting shall be provided in all houses. The following lux levels are the minimum for each type of house:-

50 lux:	Hay barns; Produce Stores.
50 lux:	All livestock Houses.
100 lux:	Isolation Units; Calving boxes.
200 lux:	Dairies; Milking Premises.

All artificial lighting shall be provided by energy efficient lighting systems (i.e.: LED lights). Lighting shall be provided so as to minimize the potential for casting of shadows. Lights shall be dispersed over the animal areas to give an even light level across the house. The use of spot lights is not permitted. Lights shall be installed in each bay and at no greater than 6 m spacing within a bay. As the output of LED lights varies between manufacturers, the lighting installer shall certify that the required lux level is achieved.

7. HOUSING FOR DAIRY COWS.

A variety of arrangements may be used, though a combination of a traditional loose house divided either side of a tractor-accessible feed passage is simple and effective. Suitable non-sheeted gates or sliding doors shall be provided, preferably at each gable end of the house to allow for FYM removal. Unsheeted gates shall open outwards, and any internal gates between pens shall have the bottom rail set between 600 mm and 900 mm above floor level to allow for the build-up of FYM. Care shall be taken when designing animal housing to ensure that draughts are kept to a minimum.

7.1 Loose Housing

Loose houses shall normally incorporate an easy-feed passage with barriers. If a self-feed design is chosen it is strongly recommended that all feeding areas be covered to minimise requirements for soiled water storage.

Loose houses with full bedding shall be designed with floors sloped at least 1 in 40 (it is recommended that the floor be sloped at 1 in 30) so that all liquid seepage is drained at source to an appropriate store. Where bedded floors are installed beside slatted tanks, a barrier (timber or concrete kerb) may be placed to prevent ingress of bedding material into tanks. A system of removal of the liquid effluent shall be provided in every loose house. A channel 75mm x 75mm shall be provided across every opening and the effluent



collected and diverted to a suitable holding tank. The channel shall be provided 600mm outside of the opening so as to collect any effluent seepage. The channel shall be constructed as specified in clause 2.11 of S.123.

7.2 Organic Cubicle Houses

Cow cubicle systems are not recommended for organic cow housing, but they are permitted. It is strongly recommended that slats should not be installed. Instead, a system of solid floor passages with optional scrapers on the feeding stand may be installed, with tanks placed outside the building. The design of the cubicle, and passage arrangement should allow for the frequent renewal of straw or litter on the cubicle beds, and for the removal of the FYM.

In all organic cubicle house arrangements, one extra spare cubicle space shall be provided for cow numbers up to ten; two extra for numbers up to twenty; etc.

In order to ensure a stress-free environment for dairy cows in houses with double or multiple rows of cubicles, the following shall be incorporated in the layout design of any new or converted buildings:-

- At least two routes to the feed-face.
- No dead end passages.
- Cross-over points between rows shall be a minimum of 3.0m (2 cubicles) wide, or 3.6m (3 cubicles) wide if a drinker is positioned at the point.

In all cubicle houses there shall be a minimum 3.5m standing area at the feedface, and at least 2 drinkers, and preferably four, per 50 cubicle unit. It is recommended that where the heel of the cubicle bed faces the feed face that the standing area be at least 4m wide.

Scraped passages behind cubicle beds shall be at least 2.4m wide. Channels to which slurry is scraped shall have slatted or gridded covers with max. 40mm slots, or alternatively be positioned to prevent any animal access. Mechanical scrapers shall be installed to manufacturer's specifications.

Solid-floor cubicle houses shall normally incorporate an easy-feed passage with barriers. If a self-feed design is chosen it is strongly recommended that all feeding areas be covered to minimise requirements for soiled water storage.

For smaller cubicle units (no more than 4 cubicles on any side of each passage) where the cubicle beds run perpendicular to the feed passage the requirement for crossover points and no dead end passages is relaxed to a strong recommendation.

Cubicles are a less favoured option for suckler herds. Existing cubicle housing may be adapted by the provision of creep area and an easy feed arrangement. Where calves are present with cows, provision shall be made to ensure easy escape for calves from cubicles to avoid risk of injury.

Where calves are with cows, a suitable creep area must be provided either at the end of the house, at the head of the cubicles, or in an adjoining house.

7.2.1 Cubicle Divisions

All cubicle dividers shall be of a cantilever type construction. Cubicle Divisions shall be of galvanised tubular steel, not less than 43mm O.D. and 3.2 mm thick or other suitable proprietary construction. They shall extend from the head wall to not more than 225 mm in from the kerb edge: The top rail shall be at least 1.1m from the floor. An adjustable



neck rail shall be installed at between 1.70m and 1.80m from the heel of the cubicle bed. The neck rail shall be secured on top of the top rail of the cubicle. The neck rail shall be at a height of between 1.15m and 1.25m. (See figure 2 for layout sketch.) A brisket board is also strongly recommended and is mandatory for cubicle beds longer than 2.35m. Within the above limits, a range of cubicle designs is accepted.

Proprietary cantilever plastic cubicle dividers are also permitted. The outside diameter shall be in keeping with steel cubicle dividers. The length and height of the dividers shall meet the requirements for steel cubicle dividers.

Internal headwalls between cubicles and a feed passage shall be at least 100mm thick, and be supported by stub stanchions spaced at no greater than 4.8m intervals.

Within the above limits, a range of cubicle designs is accepted.

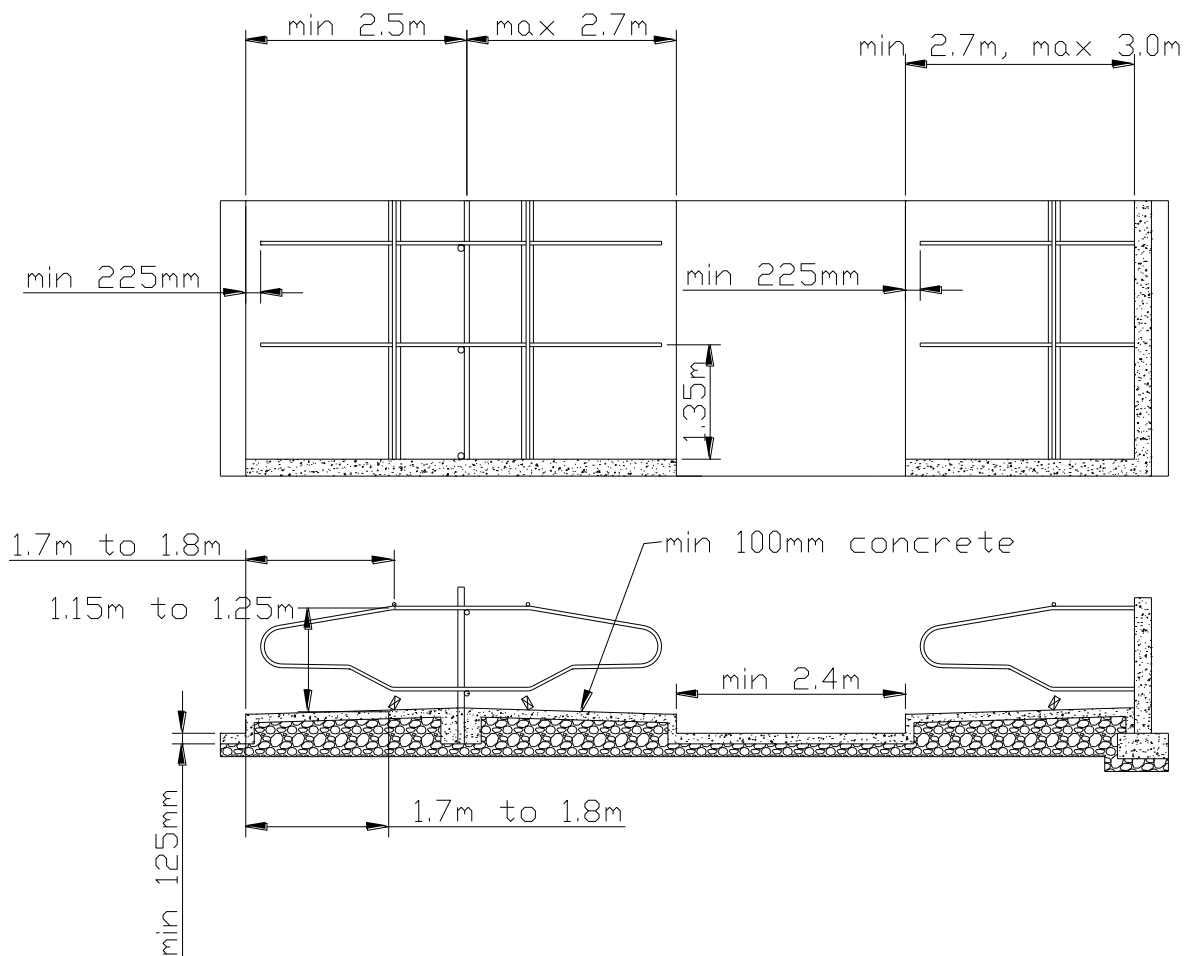


Figure 2: Minimum and maximum dimensions for cubicle bed and divider layout.

7.2.2 Cubicle bed dimensions

For organic dairy cows, beds shall be at least 2.5m long when head to head and shall be at least 2.7m long when up against a wall and they shall not exceed 2.7m long and 3.0m long respectively. The distance between cubicle divisions shall be at least 1.2m centre to centre, and not more than 1.25m except when along side a wall when the width shall be increased to 1.35m. A brisket board shall be placed between 1.70m and 1.80m from the heel of the cubicle bed. (See figure 2 for layout sketch.)



7.2.3 Construction of Cubicle Beds

Solid Ground: These shall consist of 100mm concrete on 150mm well compacted hardcore. The finish shall be uniform, non-slip, capable of easy cleansing with a fall of at least 75mm from head to heel kerb. The heel kerb shall be at least 100mm wide and the bed height at this point shall be a minimum 200mm over a solid passage and a minimum 175mm over a slatted passage.

Suspended Cubicle Beds: These shall be supported at a maximum of 3.2m centres. The walls under the slab shall be raised level with the top of the slats. Reinforcement shall be placed in position having clear bottom cover of 50mm. Where meshes overlap the cross wire on one shall overlap a cross wire on the other. Suitable meshes are shown in Table 2. If it is desired to support cubicle beds at greater intervals than 3.2m, then the reinforcement shall be as for a suspended central passage as per S.123.

Well-supported leak-proof shuttering shall be provided to the underside of the slab area during construction.

Table 2

Mesh Reference	Pitch of Wires (mm)		Size of Wires (mm)		Weight
A.142	200	200	6	6	2.22
B.196	100	200	5	7	3.05

Alternatively 10mm H.Y. bars may be used at 150mm centres with similar bars at 300mm centres as transverse steel.

Precast Cubicle Beds: As an alternative to suspended cubicle beds and standard cubicle beds, precast cubicle beds with cast-in cubicle divisions are recommended.

Precast cubicle beds may be placed on slats under the following conditions only:

- The concrete slabs making up the cubicle beds shall be not more than 2.4m x 2.4m or 4.8m x 1.2m (2 No. cubicle beds).
- The slats under the precast cubicle beds shall be heavy duty.

All precast cubicle beds shall be CE marked and produced in a plant certified by a Notified body (e.g. NSAI or equivalent), to produce “Precast concrete products – Linear structural elements” to I.S. EN 13225:2013. Precast cubicle beds shall be designed to withstand the same loadings as standard slats. All precast cubicle beds shall be listed on the Accepted Slat List of the Department of Agriculture, Food and the Marine.

Cubicle Beds Extending Over Standard Slats: Cast in-situ cubicle beds shall not extend more than 225mm over standard slats, and where they do the cubicle beds shall be designed and constructed such that slats can be replaced without damaging the cubicle beds. There shall be at least a 25mm clear space between the upper side of the slats and the under side of the cubicle beds. The cubicle beds shall be suitable reinforced.

The construction of cast in-situ cubicle beds on slats is not permitted under any circumstances. Cubicle beds on slats, makes slat-replacement extremely difficult and expensive.

Walls at end of line of slats. Where mass concrete or block walls are constructed at the end of a line of cubicle beds, then these walls shall not be built on cubicle beds over slats. Where necessary a removable barrier shall be constructed along the end of a row of slats. The barrier may be either solid or open frame.



7.3 Conversion of Existing Houses

(a) Existing loose houses, haybarns, stores, covered silos, etc. maybe suitable for conversion to an organic loose house system. Care must be taken to ensure (i) a proper feeding face; (ii) doors and/or gates to allow easy FYM removal; (iii) the introduction or improvement of the ventilation to the standards outlined in Clause B2 of S.101.

(b) Existing scraped-floor or cubicle cow houses can be converted for organic housing. Most such houses already have a minimum 6m² overall space per cow, and close to 3m² of lying space on the cubicles. Allowing extra cubicle spaces and creating some extra lying space will allow the mandatory requirements to be met. Existing cubicles shall meet all the requirements of clause 7.2 above or shall be upgraded to meet the requirements.

(c) All floors in converted houses shall be free of cracking and shall be of mass concrete. Any floors that are not of concrete or are cracked shall have a new floor laid in full accordance with clause 6.2 above.

8. SUCKLER HOUSING

8.1 New Housing

For new suckler housing specification S123 shall be followed. Calf-creeps shall be solid-floored throughout. Slats for cow accommodation shall only be used along the feed-face and should extend back no further than is necessary. Where required, a scraped-floor at the feed face is permitted. It is important to ensure that there is adequate solid floor area for the cows where slats are used at the feed-face.

8.2 Conversion of Existing Houses

Standards for new houses shall be followed where possible. Slatted areas for cows shall be extended by the addition of a solid floor area so as to provide at least 50% of the minimum floor area as solid floor area. Cubicle systems shall be converted as in clause 7.3 above. It is important to ensure that the total minimum and solid floor areas are achieved for both the cows and calves when converting existing houses to organic production.

Placing a screed of concrete over existing slats is not a permitted way to reduce the existing slatted area. If it is necessary to reduce the existing slatted area, the existing slats shall be removed and replaced with solid slabs. The procedures set out in S.123S shall be followed for the replacement of slats with slabs. All new slabs shall be included on the Accepted Slat List of the Department of Agriculture, Food and the Marine.

9. HOUSING FOR BEEF CATTLE

Because of the greatly increased space requirements, the only economic housing system for organic beef cattle is a simple straw-bedded solid-floor arrangement. A stand of slats at the feed face, or a scraped-floor stand, is permitted, but it is recommended that such floors not extend more than 3.2m behind the feed barrier, for new houses.

9.1 Conversion of Existing Houses

(a) Existing solid-floor accommodation can be easily converted in the same manner as for cows (clause 7.3 (a) & (c) above).



(b) The conversion of existing beef slatted houses can only be accomplished by extending an existing house with a solid floor area so as to provide at least 50% of the minimum floor area as solid floor area. Where the space allows, the house is best extended by removing the rear wall, and providing a new solid-floored lean-to house of required size at the back.

An alternative arrangement (for houses less than 14.4m long) is to extend an existing slatted house at one end by the provision of new solid floor accommodation of the required size. In all such cases the agitation point(s) for the tank(s) shall remain outside of the house and animal areas. In all such arrangements, unobstructed movement shall be allowed between the slatted and the new solid floor area. Because of the reduced numbers of animals permitted in the house, the existing feed barrier will be adequate in most cases.

Placing a screed of concrete over existing slats is not a permitted way to reduce the existing slatted area. If it is necessary to reduce the existing slatted area, the existing slats shall be removed and replaced with solid slabs. The procedures set out in S.123S shall be followed for the replacement of slats with slabs. All new slabs shall be included on the Accepted Slat List of the Department of Agriculture, Food and the Marine.

It should be remembered that at least 50% of the area given in Appendix 2 is required to be of solid (i.e.: not slatted) construction.

10. CALF HOUSING

Calves shall not be housed in individual pens after the age of one week. All calves shall be group housed.

10.1 New Housing

New calf houses shall be constructed in accordance with S.124: Minimum specification for calf housing, subject to the following limitations:

- All floors shall be solid (i.e. not slatted).
- All calves shall be group penned.
- It is recommended that barriers between pens should be doubled to prevent cross infection, and placed a minimum of 400mm apart.

10.2 Conversion of Existing Houses

It is very strongly recommended that only existing solid-floor houses be converted for calf housing. Slats should either be removed, or the slatted area be restricted to the minimum feasible. Placing a screed of concrete over existing slats is not permitted.

Standards for new calf housing shall be followed as far as is possible. Ventilation as set out in S.124 is mandatory.

11. BREEDING BULLS

All housing for organic breeding bulls, for when they are not running with cows, shall be constructed in full compliance with specification S.160. All safety features shall be fully incorporated into any layout for bull housing. Floors in all bull pens shall be solid throughout. When housed, breeding bulls shall have access to either pasturage or an open-air exercise area of a minimum of 30m². When housed alone, it is recommended bulls are in sight of other animals.



When bulls are running with cows (e.g. for breeding purposes) the open-air area may be provided by housing facilities which include at least one open side (this can include housing with an A shaped roof which has an open passage).

12. SHEEP HOUSING

For sheep housing specification S146 shall be followed. Sheep housing shall be on solid floor type housing, and no more than 50% of the animal area shall be slatted.

A minimum of 1.5m² per head shall be provided in all sheep houses, with a minimum of 50cm trough space per in-lamb ewe.

Placing a screed of concrete over existing slats is not a permitted way to reduce the existing slatted area. If it is necessary to reduce the existing slatted area, the existing slats shall be removed and replaced with solid slabs. The procedures set out in S.123S shall be followed for the replacement of slats with slabs. All new slabs shall be included on the Accepted Slat List of the Department of Agriculture, Food and the Marine.

13. POULTRY HOUSING

All organic poultry housing shall be free range. The general superstructure of the building shall be constructed to the current edition of **Specification S101: Minimum Specification for the Structure of Agricultural Buildings**. All external walls shall meet the requirements set out in S.101.

13.1 Fixed and Mobile Organic Layer housing

Both mobile and fixed housing for organic layers shall be constructed in accordance with the requirements for free range hens as set out in specification S.150: Minimum Specification for Laying Hen Houses, subject to the following variations:

Stocking density shall not exceed six (6) laying hens per 1m² of useable area. The minimum height over the useable part of the house shall be not less than 45cm (0.45m). In addition a minimum of 4 m² per hen shall be provided as external space, provided that the limit of 170kg of N/ha/year is not exceeded. **For the determination of the stocking density within a building, any veranda area shall not be included in the building area for the calculation of the stocking density, unless it is constructed to the same standard as the main part of the house and birds have access to it 24 hours per day. No more than 3,000 laying hens shall be allowed in a single compartment of a poultry house. Compartments shall be separated by solid partitions or semi-closed partitions or nets or meshes for laying hens. The partition shall ensure a complete physical separation from the floor to the roof of the building of each compartment of the poultry house.**

There shall be, at least 4 linear metres of pop hole per 100m² of useable house area to provide access for hens to the outside area. **Birds shall be able to access pop-holes without any obstacle. Where pop-holes are raised, a ramp the full width of the pop-hole shall be provided wherever the pop-hole is located. Where a veranda is provided pop-holes from the indoor house to the veranda shall have a combined length of at least 2 m per 100 m² of the usable area of the minimum surface of the indoor area of the poultry house and pop-holes from the veranda to the open air area shall have a combined length of at least 4 m per 100m² of the usable area of the minimum indoor surface of the poultry house.**



At least **one nest** for every seven hens shall be provided, alternatively, if group nests are used a minimum of 120 cm² per hen shall be provided. It is recommended that the minimum common nest size shall be 28 cm x 30 cm deep with a minimum roof height of 30 cm, which is suitable for seven hens.

Adequate Perches that do not have any sharp edges shall be provided in all **organic** systems. At least 18 cm (0.18 m) in length of perch shall be provided for every hen in the organic system. The horizontal distance between perches shall be at least 30 cm (0.30 m) and the distance between a perch and a wall shall be at least 20 cm (0.20 m). The perches shall not be mounted over the littered area of the house.

The insulation, ventilation and lighting of organic layer housing shall be as per clauses 13.4, 13.5 and 13.6 of this specification.

All mobile poultry houses are required to be fitted with an impermeable (leak proof) floor to prevent run-off or seepage either directly or indirectly into groundwater or surface water. All mobile houses should be moved regularly during the production cycle in order to ensure the availability of vegetation to the birds and at least between each batch of poultry.

13.2 Fixed and Mobile Organic Broiler housing

The general superstructure of the building shall be constructed to the current edition of **Specification S101: Minimum Specification for the Structure of Agricultural Buildings**. All external walls shall meet the requirements set out in S.101.

The floor, walls, superstructure shall all be in accordance with Department of Agriculture, Food and the Marine specification S.150: Minimum Specification for Laying Hen Houses.

Stocking density must not exceed 21 kg liveweight /m². In addition a minimum of 4 m² per chicken shall be provided as external space, provided that the limit of 170kg of N/ha/year is not exceeded. For other poultry the maximum stocking densities are set out in Appendix 2. Only in the case of mobile houses not exceeding 150m² floor space, the maximum stocking density may be increased to 30 kg liveweight /m². For the determination of the stocking density within a building, any veranda area shall not be included in the building area for the calculation of the stocking density. The total usable surface area for any fattening poultry (broilers) in poultry houses of any production unit shall not exceed 1,600 m² and no more than 4,800 broiler chickens shall be allowed in a single compartment of a poultry house. Compartments shall be separated by solid partitions or semi-closed partitions or nets or meshes for broiler chickens, pullets and brother roosters. For other fattening poultry, the partitions shall be solid. All partitions shall ensure a complete physical separation from the floor to the roof of the building of each compartment of the poultry house.

There shall be, at least 4 linear metres of pop hole per 100 m² of house area to provide access for hens to the outside area. Birds shall be able to access pop-holes without any obstacle. Where pop-holes are raised, a ramp the full width of the pop-hole shall be provided wherever the pop-hole is located. Where a veranda is provided pop-holes from the indoor house to the veranda shall have a combined length of at least 2 m per 100 m² of the usable area of the minimum surface of the indoor area of the poultry house and pop-holes from the veranda to the open air area shall have a combined length of at least 4 m per 100m² of the usable area of the minimum indoor surface of the poultry house.



Adequate Perches or raised sitting levels that do not have any sharp edges shall be provided in all organic systems. Any combination of at least 5 cm (0.05 m) in length of perch or minimum 25 cm² raised sitting level/broiler chicken shall be provided for every bird in the organic system. The horizontal distance between perches shall be at least 30 cm (0.30 m) and the distance between a perch and a wall shall be at least 20 cm (0.20 m). The perches shall not be mounted over the littered area of the house. For other poultry the required perches are set out in Appendix 2.

All feeding and watering equipment shall be designed, constructed and placed so that contamination of food and water and the harmful effects of competition between birds are minimised. All broilers shall have equal access to drinking and feeding facilities.

Feeder space of at least 10 cm per chicken with linear feeders or at least 4 cm per chicken with circular feeders shall be provided in every organic system. The feed trough shall be between 8-10cm (0.08-0.1m) in width and have a depth of between 6-7cm (0.06-0.07m).

Water shall be provided by either of the following:

- 1) continuous drinking troughs providing at least 2.5 cm per chicken or
- 2) circular troughs providing at least 1 cm per chicken or
- 3) one nipple drinker or cup for every ten chickens with at least two nipple drinkers or cups are within reach of each chicken.

Please note: - all birds shall have permanent access to a suitable fresh water supply or be able to satisfy its fluid intake needs by other means.

All water pipes shall be manufactured in compliance with IS EN 12201 and be a minimum of PE40. These will either be fully blue or have a blue longitudinal strip.

A Water meter or suitable accurate water measurement system shall be installed to measure consumption of water.

Building materials used for the construction of accommodation, with which a chicken may come into contact, shall not be harmful to the birds and shall be capable of being thoroughly cleaned and disinfected.

All parts of buildings, equipment, machinery or other utensils that may come into contact with chickens shall be capable of being thoroughly cleansed and disinfected.

The entire floor area of every house shall be as specified in either **clause 6.3.1** **Error! Reference source not found.** or 6.3.2 of specification S.150, **subject to a maximum slatted area of 1/3 of the total useable floor area. All mobile poultry houses are required to be fitted with an impermeable (leak proof) floor to prevent run-off or seepage either directly or indirectly into groundwater or surface water.**

Accommodation and fittings shall be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to the laying hens.

The building shall be designed so that the sound level is minimised and any constant or sudden noises on the premises avoided.

Ventilation fans, feeding machinery and other equipment shall be constructed, located, operated and maintained in a manner that causes the least possible noise.

Insulation and ventilation control shall be provided to ensure that the temperature is capable of being maintained at a thermally comfortable temperature of between 18°C and



28°C. In less densely stocked houses heating facilities may be required. Straw bedded houses shall be designed to be thermally comfortable at all times.

Essential Management: All automated or mechanical equipment essential for the health and welfare of the birds must be inspected daily (e.g: ventilation, water supply, feed supply, etc.). Where defects are discovered, these must be rectified immediately, or if this is impossible, appropriate steps must be taken to ensure the health and welfare of the birds.

Droppings must be removed as often as necessary and dead chickens must be removed when found or, at a minimum, once a day.

The insulation, ventilation and lighting of organic layer housing shall be as per clauses 13.4, 13.5 and 13.6 of this specification.

All mobile broiler houses should be moved regularly during the production cycle in order to ensure the availability of vegetation to the birds and at least between each batch of poultry.

13.3 Concrete outside pop-holes for organic poultry houses.

A concrete apron shall be constructed outside each pop-hole for **fixed** organic poultry housing. The concrete strip shall extend between 1 metre and 1.5 metres from the house, and shall be at least the full width of the pop-hole. The concrete shall slope away from the house to prevent water accumulating. The surface of the concrete shall be no more than 900mm below the bottom of the pop-hole.

The concrete apron shall be of at least 125mm thick mass concrete on at least 150mm hardcore. The concrete shall be laid smooth with a non-slip finish. A minimum of 150mm thick hard-core base shall be laid, compacted with vibrating or heavy roller, and topped with fine sand. All floors shall incorporate 1000 gauge polythene DPC membrane with 600mm overlaps laid on the sand under the concrete. The polythene membrane shall be taken up along walls to meet DPC where this has been installed.

In cases where fill is purchased for use under concrete, it shall be certified to EN 13242:2013 and meet the requirements of Annex E of S.R. 21: 2015. This material shall also be used as the top 300mm of any backfill around stanchion foundations.

13.4 Insulation of **fixed and mobile** Organic Poultry Housing

13.4.1 Roof Insulation

The roof insulation for organic laying housing shall have a U-Value of **equal to or better** than 0.3 W/m²/°C and for organic broiler housing and organic broiler breeders the roof insulation shall have a U-Value of **equal to or better** than 0.2 W/m²/°C. The lower the U-Value the better the insulating properties.

The level of roof insulation achieved shall be certified by the installer, providing supporting information for the insulation level achieved.

Insulating boards shall be tongue and grooved, or have tapered edges on all sides to prevent vapour transmission. Roofs shall be constructed to prevent rodent access to insulation material.



13.4.2 Wall Insulation

The insulation in the walls of organic laying housing shall have a U-Value of **equal to or better** than $0.4 \text{ W/m}^2/\text{°C}$ and for organic broiler housing and organic broiler breeders the wall insulation shall have a U-Value of **equal to or better** than $0.3 \text{ W/m}^2/\text{°C}$. The lower the U-Value the better the insulating properties.

The level of wall insulation achieved shall be certified by the installer, providing supporting information for the insulation level achieved.

All walls shall be finished internally so that the birds, insect or rodents cannot damage the insulation. The materials used shall not be harmful to the poultry and shall be capable of being thoroughly cleaned and disinfected.

Proprietary internal and external wall panels with integral insulation may be used provided that they are designed for at least a 20 year working life. These wall panels shall have a stainless steel skin, or other suitable material that is both chemically resistant and strong enough not to be damaged by poultry, for any area that may be in contact with birds, and be so protected as to prevent rodent damage. The insulation shall at least meet the requirements as set out above.

13.4.3 Insulated Doors

Doors for organic layer housing shall have a U-Value of **equal to or better** than $0.4 \text{ W/m}^2/\text{°C}$ and for organic broiler housing and organic broiler breeders the door insulation shall have a U-Value of **equal to or better** than $0.3 \text{ W/m}^2/\text{°C}$. The lower the U-Value the better the insulating properties.

The level of door insulation shall be certified by the installer, providing supporting information for the insulation level achieved.

The minimum number of doors necessary for the satisfactory working of the house shall be fitted. Doors shall be ledged, braced, and sheeted, or of other suitable construction, and fitted in rebated frames. **All external doors wider than 1.2m shall be sliding.** Cladding materials for doors shall conform, at least, to the standards specified in S102. No point within the building shall be more than a 45m walking route from an external door.

All external woodwork shall be given at least two coats of lead-free paint.

13.5 Ventilation of **fixed and mobile Poultry Structures**

Ventilation shall ensure that air circulation, dust level, temperature, relative humidity, and gas concentrations are kept within limits not harmful to the birds. In addition the ventilation systems for broiler housing shall be designed so that the concentration of ammonia (NH_3) does not exceed 20 ppm and the concentration of carbon dioxide (CO_2) does not exceed 3000 ppm measured at the level of the chickens' heads. Further the ventilation system shall be designed to ensure that the average relative humidity measured inside the house during any 48 hours period does not exceed 70% when the outside temperature is below 10°C .

Ventilation shall be mechanical; natural; or automatically controlled natural ventilation (ACNV).

The ventilation rate shall be capable of being reduced to such a level so as not to chill the birds at any time, while still maintaining sufficient air changes.



When designing the ventilation system, care shall be taken to ensure that there are no ‘dead-air pockets’ within the building.

When **mechanical ventilation** systems (including ACNV) are used, appropriate emergency back-up systems shall be installed in case of failure. Mechanical ventilation systems shall also be alarmed in case of failure. The alarm shall have a power supply independent of mains electricity. The alarm system shall be tested once a month and maintained in proper working order. An electric generator shall be installed where mechanically controlled ventilation is used, in case of mains electricity failure.

In free range laying hen housing forced ventilation systems should be able to expel at least 5.6m³air/bird/hour and for broiler housing 3.0m³air/kg live-weight of bird/hour.

Table 2. Maximum Ventilation Rates (m³/hr/1,000 birds)

Liveweight (kg)	Laying Birds (1,000)	Broiler Birds (1,000)
2	9,000	
2.5	10,800	
3	12,250	9,000

(1m³/hr=0.588ft³/min)

Air-inlets shall be automatic or hand-regulated box-type that divert air towards the ceiling, and fitted with a control shutter. Inlets shall not be more than 1.5m from the end of the bird area or more than 4m apart; depth of inlet shall be between 75mm and 550mm; distance from ceilings shall be at least 150mm. Where natural ventilation only is used, the total area of inlets shall be twice the area of chimney or other type of outlet with fan extraction, inlets shall be sized appropriate to fan capacity.

Note: If other air-inlet systems are to be used, full details of the system shall be supplied to the Department of Agriculture, Food and the Marine for approval prior to the start of construction.

Air-outlets shall be designed to one of the following:

1. By extractor fans, with speed and thermostatic control, and with overload safety device. Fans shall be of sufficient power to operate against strong winds and rated to give adequate air changes for the house when fully stocked. Fans may be fixed in a wall opening, or in a duct, or flue (chimney) leading out through the roof to finish 450mm above the ridge. The duct or flue may be constructed of timber, PVC, fibre-reinforced board or other suitable material.
2. By natural ventilation either by controlled openings at high level, or along the ridge, or by flue or duct constructed as outlined above and fitted with a butterfly valve manually operated to control the rate of airflow. The top of the flue shall be at least 1.8m above the inlet and covered to prevent rain ingress. The flue may be constructed of timber, PVC, fibre-reinforced board or other suitable material, insulated with 50mm of expanded polystyrene, or equivalent and protected by a vapor barrier. In a mono-pitch house, ventilation may be by a pivoted front vent, manually operated.



13.6 Lighting of Poultry Houses

Natural light may be supplemented by artificial means to provide a maximum of 16 hours light per day, with a continuous nocturnal rest period without artificial light of at least eight hours. All houses shall be designed to allow plentiful light to enter.

13.6.1 Lighting of **fixed and mobile** Organic Broiler Houses

All broiler houses (free-range and barn) shall have lighting with an intensity of at least 20 lux during the lighting period, measured at birds-eye level and illuminating at least 80% of the usable area.

Within seven days of chickens being placed in a building until three days before the anticipated time of slaughter, lighting must follow a 24 hour rhythm, with one period of darkness of at least 8 hours, excluding dimming periods.

- A **time-switch** shall be installed, with a recording device to indicate the number of hours that the lights are on, to ensure that the lighting requirements are achieved.
- Lights should be positioned so as to prevent the formation of ‘dark corners’. Light intensity must be provided in such a way that it is uniform at bird level to encourage even distribution of hens throughout the house and must be capable of being dimmed.
- Lights must be provided in such a way that they are easily cleaned and that dirt is not allowed to build up on them.
- Lighting shall be provided to coincide with natural day-light.
- Adequate lighting (fixed or portable) shall be available to enable the stockperson to thoroughly inspect the birds at all times.
- Additional portable lighting of 100 lux shall be provided to enable close inspection of sick birds.

Lighting shall be provided by energy efficient (LED, etc) lighting once the above criteria are met. As the output of LED lights varies between manufacturers, a light survey shall be undertaken once the lights are installed to ensure that the minimum required lighting levels have been achieved. The survey shall be carried out by the light installer of the lighting system and all light measurement points shall be indicated.

13.6.2 Lighting of **fixed and mobile** Organic Laying Hen Houses

Sufficient lighting levels shall be provided in all buildings to allow all hens to see one another and be seen clearly, to investigate their surroundings visually and to show normal levels of activity. Where there is natural light, light apertures must be arranged in such a way that light is distributed evenly within the accommodation.

After the first days of conditioning, the lighting regime shall be such as to prevent health and behavioral problems. Accordingly it must follow a 24-hour rhythm and include an adequate uninterrupted period of darkness **of at least 8 hours**, so that the hens may rest and to avoid problems such as immunodepression and ocular anomalies. A period of twilight of sufficient duration ought to be provided when the light is dimmed so that the hens may settle down without disturbance or injury.

- Lighting shall be provided to coincide with natural day-light.



- A **time-switch** shall be installed, with a recording device to indicate the number of hours that the lights are on, to ensure that the lighting requirements are achieved.
- Lights should be positioned so as to prevent the formation of ‘dark corners’. Light intensity must be provided in such a way that it is uniform at bird level to encourage even distribution of hens throughout the house and must be capable of being dimmed.
- Adequate lighting (fixed or portable) shall be available to enable the stockperson to thoroughly inspect the birds at all times.
- Lights must be provided in such a way that they are easily cleaned and that dirt is not allowed to build up on them.
- Additional portable lighting of 100 lux shall be provided to enable close inspection of sick birds.

Lighting shall be provided by energy efficient (LED, etc) lighting once the above criteria are met. As the output of LED lights varies between manufacturers, a light survey shall be undertaken once the lights are installed to ensure that the minimum required lighting levels have been achieved. The survey shall be carried out by the light installer of the lighting system and all light measurement points shall be indicated.

13.7 Alternative Poultry Housing

Where alternative designs of poultry house are desired to be used, these must meet the requirements for the birds and shall require approval of the Department of Agriculture, Food and the Marine before the commencement of construction.

13.8 Requirements of Outdoor Areas for all Organic Poultry

Open air areas for poultry should be attractive to the birds and shall be fully accessible to all birds.

For poultry houses subdivided into separate compartments in order to house multiple flocks, the open air areas corresponding to each single compartment shall be separated in order to ensure that contact with other flocks is restricted and that birds from different flocks cannot mix.

Open air areas for poultry should be mainly covered with vegetation composed of a diverse range of plants.

Open air areas should provide to the birds a sufficient number of protective facilities or shelters or shrubs or trees distributed throughout the entire open air areas in order to ensure that the birds are using the whole open air area in a balanced way.

The vegetation on the open air area should be maintained regularly to reduce the potential for nutrient surpluses.

The open air areas shall not extend beyond the radius of 150 m from the nearest exit/entry pop-hole of the poultry house. However, an extension of up to 350 m from the nearest pop-hole of the building is permissible provided that a sufficient number of shelters from inclement weather and predators are evenly distributed throughout the whole open air area with at least four shelters per hectare. For geese, the open air area shall allow the birds to satisfy their needs to eat grass.



13.9 Fencing of Poultry Runs

All fencing of free range poultry runs shall be completed in accordance with Department of Agriculture, Food and the Marine specification S.148.

14. PIG HOUSING

Under the TAMS II organic scheme only pig kennels/pig arks may be grant-aided at present.

Such pig kennels shall be of proprietary manufacture and shall be constructed of materials not harmful to pigs and shall be capable of being thoroughly cleaned and disinfected. All edges shall be rounded and smooth to prevent pigs from injuring themselves. Pig kennels shall be design so as to minimise draughts and prevent ingress of rainwater. Where cladding materials are used for the construction of pig kennels they shall be listed on Department of Agriculture, Food and the Marine specification S.102 (i.e. they shall be stamped and grant approved).

The pig kennels shall be sized in accordance with the requirements of Appendix 2. Each pig shall have access to a clean lying area that is physically and thermally comfortable, adequately drained and that is of sufficient area to allow each pig to lie down at the same time.

The chosen feed system shall allow all sows and gilts to obtain sufficient food and water, even when competitors for food are present. All pigs shall be fed at least once a day.

14.1 Fencing of Pig Runs

All fencing of pig runs shall be completed in accordance with Department of Agriculture, Food and the Marine specification S.148.

Appendix 1: Date of clause revisions and additions

All changes from the previous version are highlighted in red.

Version: May 2020 (published 29th May 2020)

New Clauses: 2.10, 13.8, Appendix 1

Clauses modified: 1.1, 1.2, 3, 4, 5, 6.1, 6.2, 6.6, 9.1, 13, 13.1, 13.2, 13.3, 13.4, 13.4.1, 1.34.2, 13.4.3, 13.5, 13.6, 13.6.1, 13.6.2, Appendix A renumbered to Appendix 2, Appendix 2



Appendix 2: Minimum areas for organic livestock

Animals	Minimum Indoors Areas (net area available to animals)		Outdoors area (exercise area, excluding pasturage)
	Live Weight Minimum (kg)	m ² /head	m ² /head
Calves; Beef Cattle;	Up to 100kg	1.5	1.1
Bull Beef; Suckler	Up to 200kg	2.5	1.9
Cows	Up to 350kg	4.0	3
	Over 350kg	5.0 with a minimum of 1m ² /100kg	3.7 with a minimum of 0.75m ² /100kg
Dairy Cows		6.0	4.5
Breeding Bulls		10m ²	30
Sheep and goats		1.5 sheep / goat	2.5
		0.35 lamb / kid	0.5

Animals	Minimum Indoors Areas (net area available to animals)		Outdoor area
	Live Weight Minimum (kg)	m ² /head	m ² /head
Farrowing sows with piglets until weaning		7.5 sow	2.5
Piglets	up to 35kg	0.6	0.4
Fattening pigs (Weaners, rearing pigs, gilts, rearing boars)	Up to 50kg	0.8	0.6
	Up to 85kg	1.1	0.8
	Up to 110kg	1.3	1.0
	More than 110kg	1.5	1.2
Female brood pigs and dry pregnant sows		2.5 female	1.9
Male brood pigs (Boars)		6 male If pens are used for natural service: 10m ² /boar	8.0



Poultry	Indoors area (net area available to animals)			Outdoors area (m² of area available in rotation/head)
	No animals/m ²	cm perch/ animal	nest	
Laying hens (for both egg production and production of hatching eggs for both laying hens and broilers)	6 with maximum of 3,000 birds per compartment.	18	7 laying hens per nest or in case of common nest 120cm ² / female bird	4, provided that the limit of 170kg of N/ha/year is not exceeded
Broilers (in fixed housing)	21 kg liveweight /m ² with maximum of 4,800 birds per compartment.	Any combination of perches or raised sitting levels or both providing minimum 5 cm perch/bird, or minimum 25 cm ² raised sitting level/bird.		4 broilers Limit of 170 kg N/ha/year shall not be exceeded
Broilers in mobile housing	21 kg liveweight /m ² , however, 30 kg liveweight /m ² is allowed provided the surface of the ground floor of the mobile house does not exceed 150 m ² .	Any combination of perches or raised sitting levels or both providing minimum 5 cm perch/bird, or minimum 25 cm ² raised sitting level/bird.		2.5, provided that the limit of 170 kg of N/ha/year is not exceeded.
Pullets and brother Roosters	21 kg liveweight/m ² with maximum of 10,000 birds per compartment.	Any combination of perches or raised sitting levels or both providing minimum 10 cm perch/bird or minimum 100 cm ² raised sitting level/bird.		1 Limit of 170 kg N/ha/year shall not be exceeded



Poultry	Indoors area (net area available to animals)			Outdoors area (m² of area available in rotation/head)
	No animals/m ²	cm perch/ animal	nest	
Turkeys	21 kg liveweight/m ² with maximum of 2,500 birds per compartment.	Any combination of perches or raised sitting levels or both providing minimum 10 cm perch/bird or minimum 100 cm ² raised sitting level/bird		10 Limit of 170 kg N/ha/year shall not be exceeded
Guinea fowls	21 kg liveweight/m ² with maximum of 5,200 birds per compartment.	Any combination of perches or raised sitting levels or both providing minimum 5 cm perch/bird or minimum 25 cm ² raised sitting level/bird		4 Limit of 170 kg N/ha/year shall not be exceeded
Geese	21 kg liveweight/m ² with maximum of 2,500 birds per compartment.			15 Limit of 170 kg N/ha/year shall not be exceeded
Ducks	21 kg liveweight/m ² with maximum of 3,200 birds per compartment.			4.5 Limit of 170 kg N/ha/year shall not be exceeded