

Surface fall of cow shed floor along length of building, 15 mm per cow, to discharge outside.

See Section 9 for drainage and farm effluent disposal.

REFERENCE

Fixed Equipment of the Farm leaflet 1—*Cowhouses*.

COW CUBICLES

SITING AND LAYOUT

Longitudinal axis preferably north/south.

Easy cow access to silage and as close to fodder stores as conditions permit.

Cubicles are generally arranged in single or double parallel rows, solid head to head or tail to tail, separated by a solid concrete or slatted floor access passage, all within an enclosed building.

TABLE 3

Cow Cubicles

<i>Length</i>	<i>Width between divisions</i>	<i>Size of stall division</i>	
		<i>Height above heelstone</i>	<i>Length</i>
<i>m</i>	<i>m</i>	<i>m</i>	To within 150 mm of fall of heelstone
2.050-2.150	1.050-1.175	1.000-1.150	

BASIC DATA

Floor area, including feeding area, 6.5-7.5 m² per cow.

Minimum width of solid passage ways behind heelstone, 2.4 m.

Minimum width of slatted passage ways, 1.8 m.

Cross passages 1.8-3.0 m wide should be provided for every 20 cubicles.

Allow 3-7 kg of sawdust, wood chippings or chopped straw bedding per cow per week.

CONSTRUCTIONAL DATA

Shell

Structural frame in suitable spans, 2.4-3.0 m eaves. See Section 8.

Floor

For bedded area hardcore, rammed earth or concrete; passage ways solid concrete, slats or prefabricated metal mesh.

Walls

225 mm brickwork or concrete blocks 1.5-2.4 m high; space above left open or clad with 100 mm sawn boards spaced with 5-20 mm gaps.

Roof

Asbestos sheets on timber purlins, portal frame or truss. Pitch 16-22½ deg. Consider need for insulation.

LIGHTING

Daylight

Translucent roof sheets, evenly distributed, $\frac{1}{8}$ of floor area for totally enclosed buildings or $\frac{3}{8}$ of floor area for open sided or ended buildings.

Artificial

Waterproof fittings, 4 watts per m² of floor area. For fluorescent lighting allow approximately one-third of this power input.

VENTILATION

Natural

Continuous open ridge.

Upper part of walls open boarded in addition to gable ends or 450 mm gap between walls and eaves.

Artificial

Not required.

INTERNAL DRAINAGE

Floor should have surface fall of 1 in 50 to discharge outside. See Section 9 for drainage and farm effluent disposal.

REFERENCE

Fixed Equipment of the Farm Leaflet 3—*Farm Dairies*.

YOUNG STOCK UP TO SIX MONTHS OLD

SITING AND LAYOUT

Calves on a dairy farm should be housed separately from the cows but close to food preparation room.

Where cows are suckled in beef rearing yards, a calf unit may form part of the housing for nurse cows.

Double range enclosed calf houses should have north/south axis. Open single range units face south.

TABLE 9

Space requirements for young stock up to six months old

Age	Area per beast in m ²
Up to 14 days	0.90-1.44
14 days up to 3 months	0.90-1.80
3-6 months	1.80-2.34

BASIC DATA

Individual pens should be capable of conversion into multiple units. Accommodation for older calves in open fronted monopitch roofed shed facing south-east not less than 6.0 m deep and 2.1 m high at open side with clad gate.

In multiple suckling yards allow 7.47 m² per cow bedded area with 0.45-0.90 m² per calf in creep.

CONSTRUCTIONAL DATA

Shell

Traditional or framed construction with brick cavity walls, with pitched roof 2.4 m to eaves for enclosed calf houses.

Floor

Insulated concrete with damp proof membrane under pens.

Walls

275 mm brick, unventilated cavity, thermal insulation 1.7 W/m² °C, rendered internally in cement and sand 1.4 m high.

Height of pen divisions 1.0–1.2 m.

Roof

Double skin insulated asbestos roof. Pitch 16–22½ deg. or false ceiling. Thermal insulation 1.1–1.4 W/m² °C.

LIGHTING

Daylight

Framed windows with a glass area of $\frac{1}{10}$ floor area for enclosed buildings.

Artificial

Waterproof fittings, 10 watts per m² of floor area. For fluorescent lighting allow approximately one-third of this power input.

VENTILATION

Natural

Bottom hung hopper windows fitted with side cheeks set near ceiling. For yards gable end ventilation with slatted boards. Outlet ventilation by ridge or shafts.

Artificial

Mechanical ventilation, *winter* 40 m³/hr, *summer* 90–180 m³/hr per kg liveweight.

WATER REQUIREMENTS

Allow 15–25 litres per day, per calf.