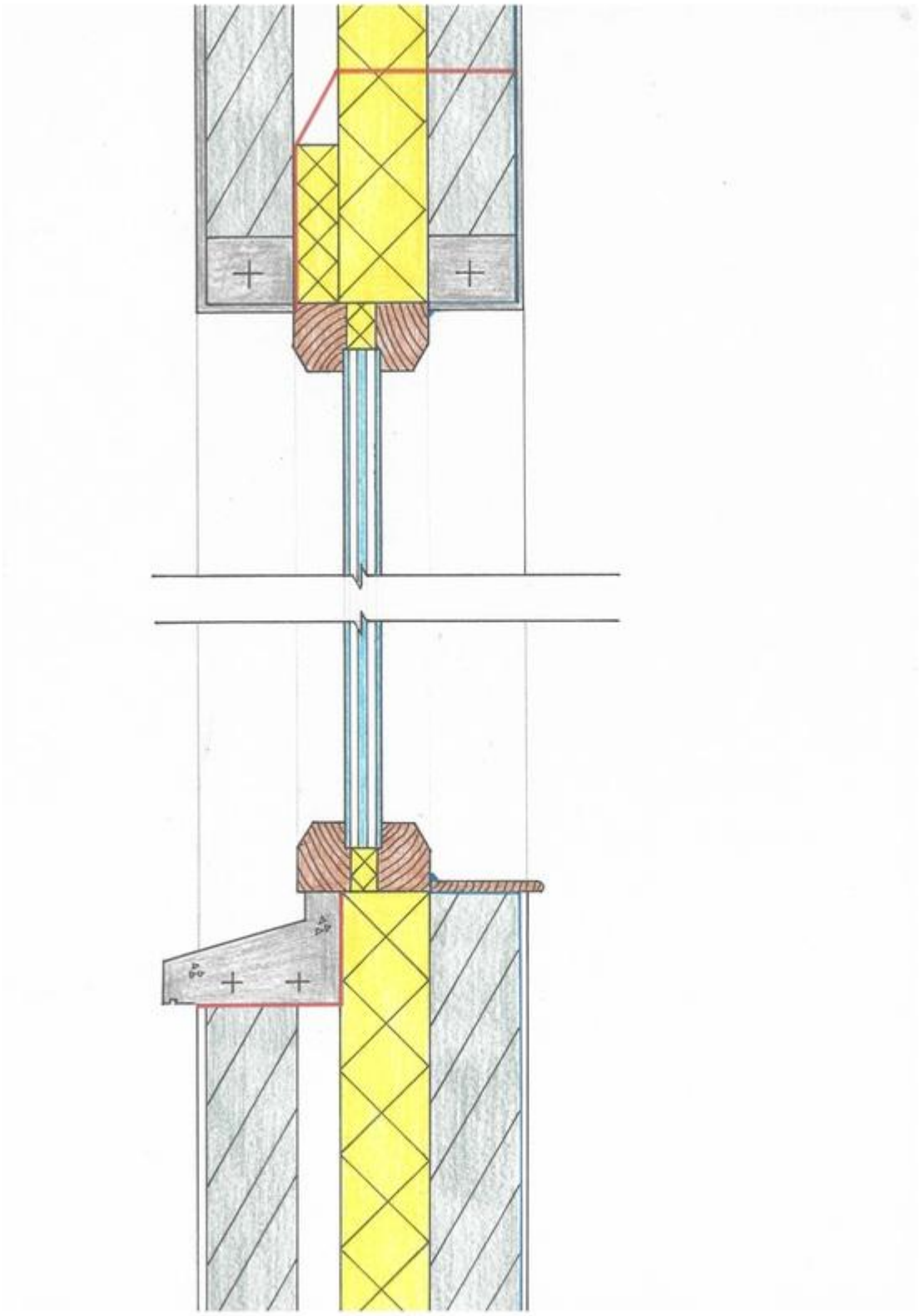
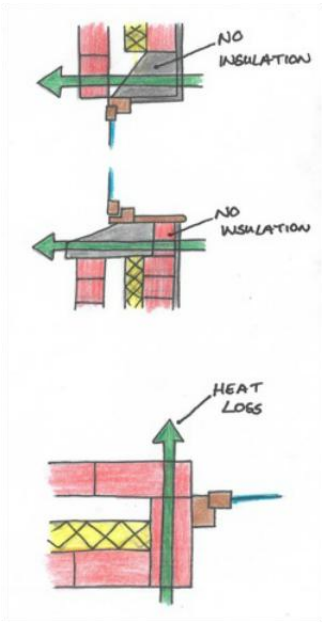
Window Head, Cill and Jamb Detail



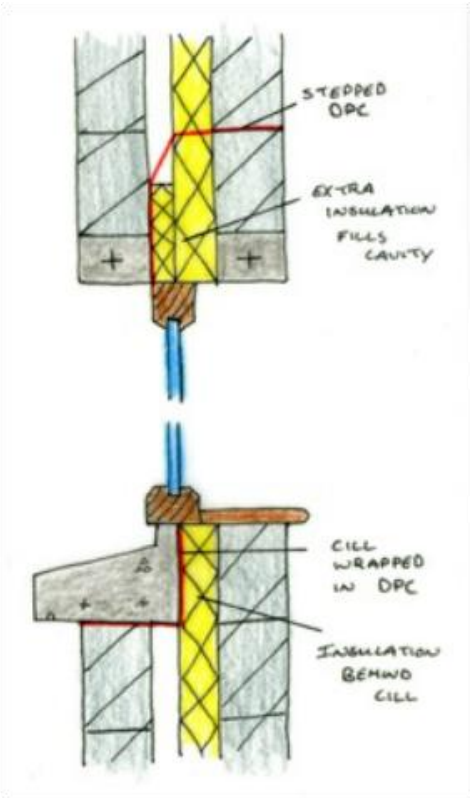
This detail shows the opening in the external wall in which a window is fitted.

This provides issues such as the load exerted from above the window and the sealing of the cavity around opes in order to prevent heat loss or cold bridging.

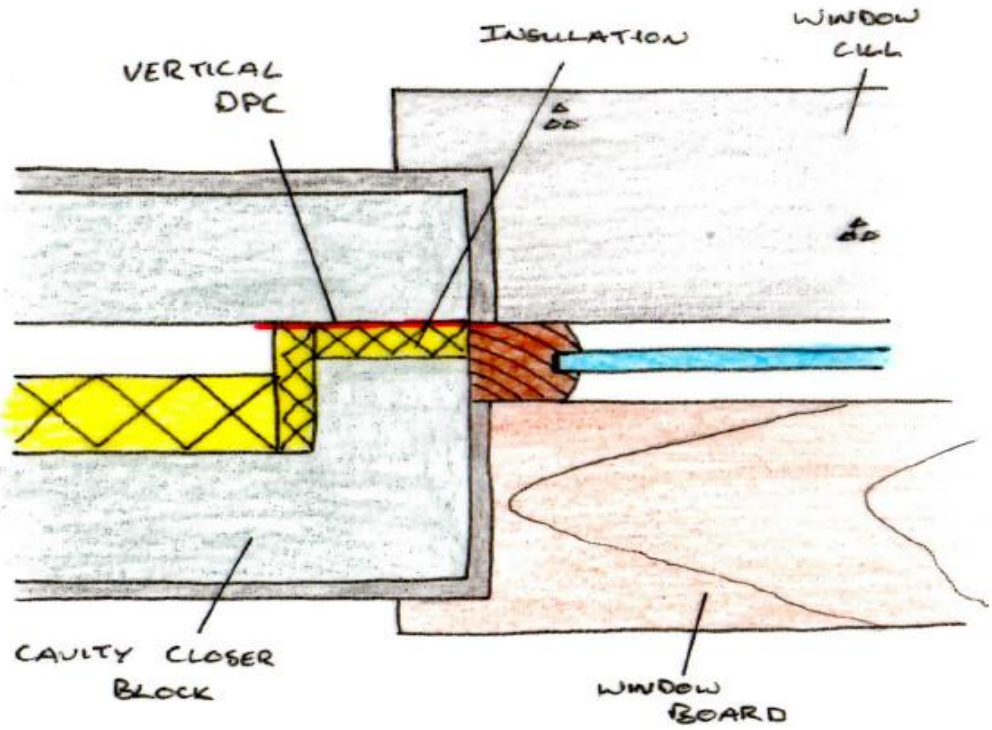
Completely closing the cavity at opes can lead to cold bridging and dampness.



To prevent this, the window head and cill must show correct installation of insulation and damp proof courses.

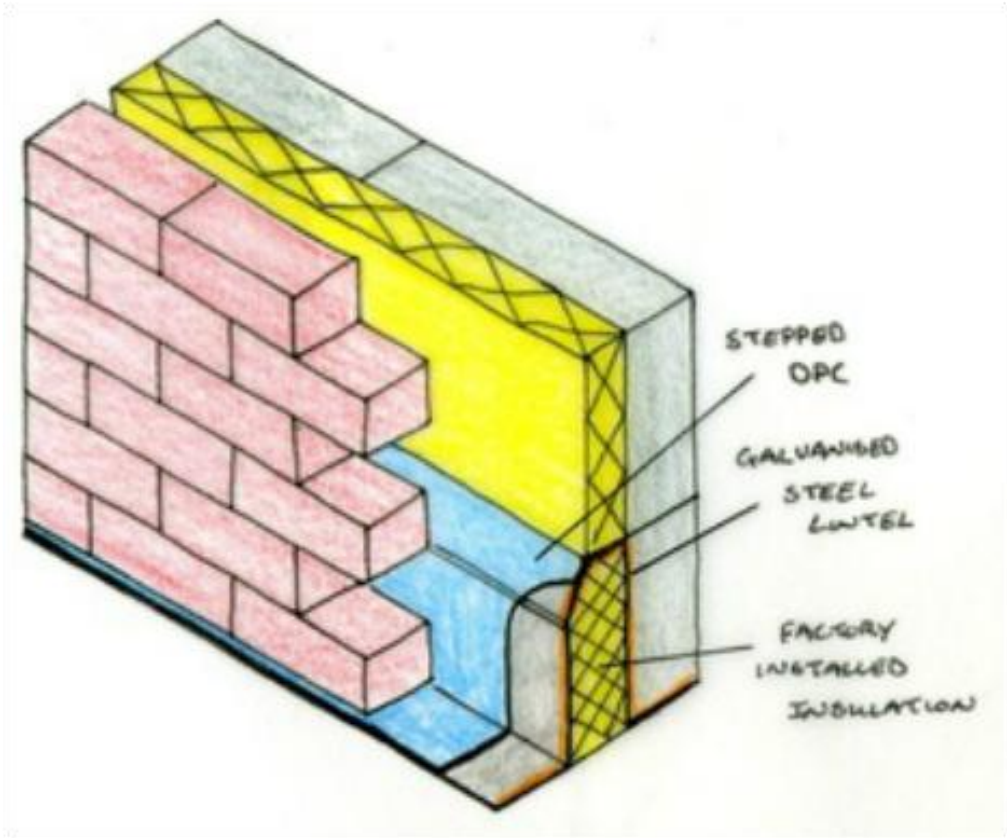


The horizontal section of the window jamb must also incorporate correct insulation and damp proof courses to prevent cold bridging.

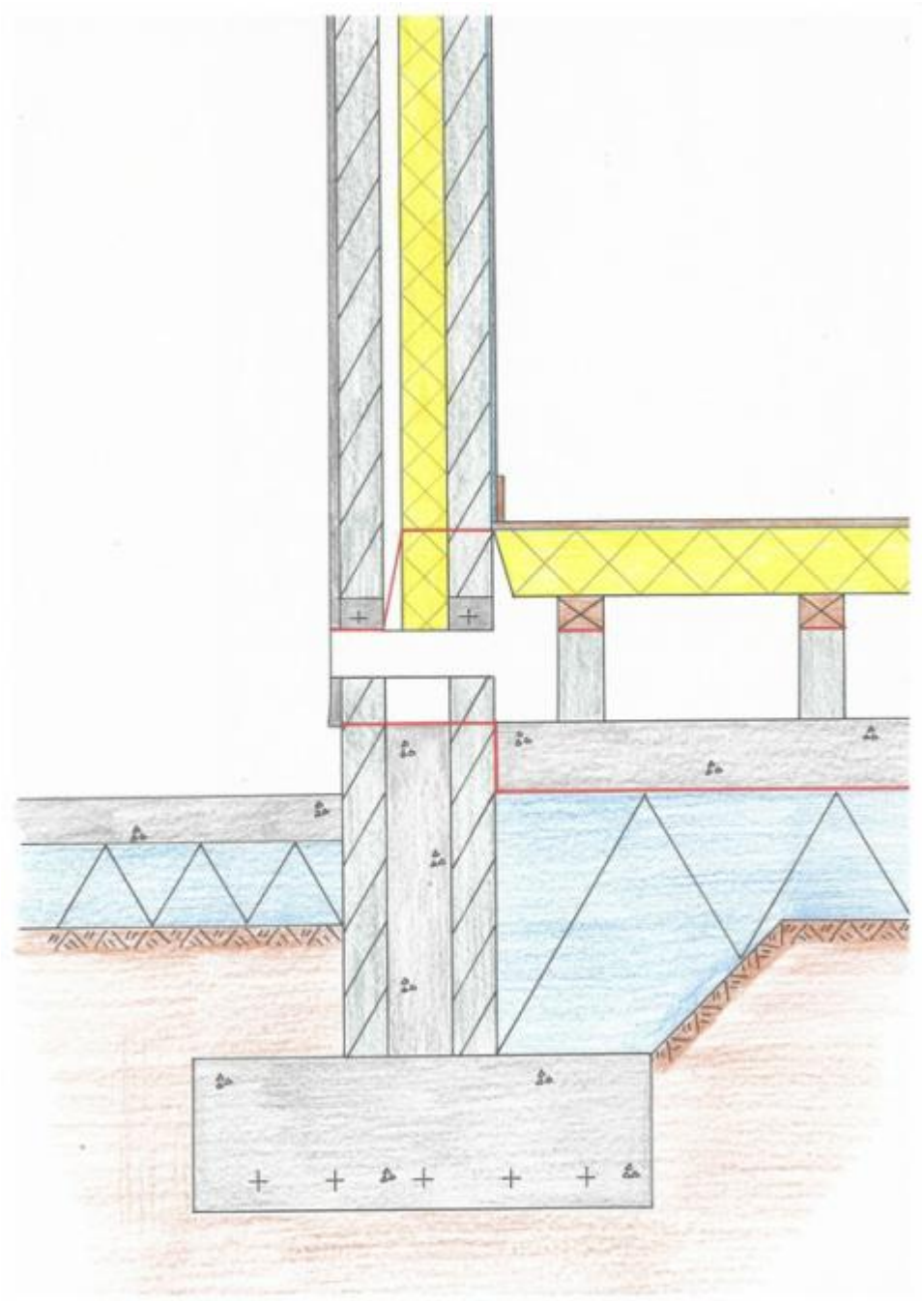


Reinforced concrete lintels are used in cavity block walls in order to transfer the loads from above to the walls on either side of the window.

In a cavity wall where brick work is used on the exterior, a galvanised steel lintel is used. These steel lintels prevent moisture travelling across the cavity, while they are also pre-insulated to prevent any thermal loss.



Suspended Timber Floor



Suspended Timber Ground Floors consist of the finished timber floorboards being attached to floor joists, which are suspended above the subfloor of the foundation.

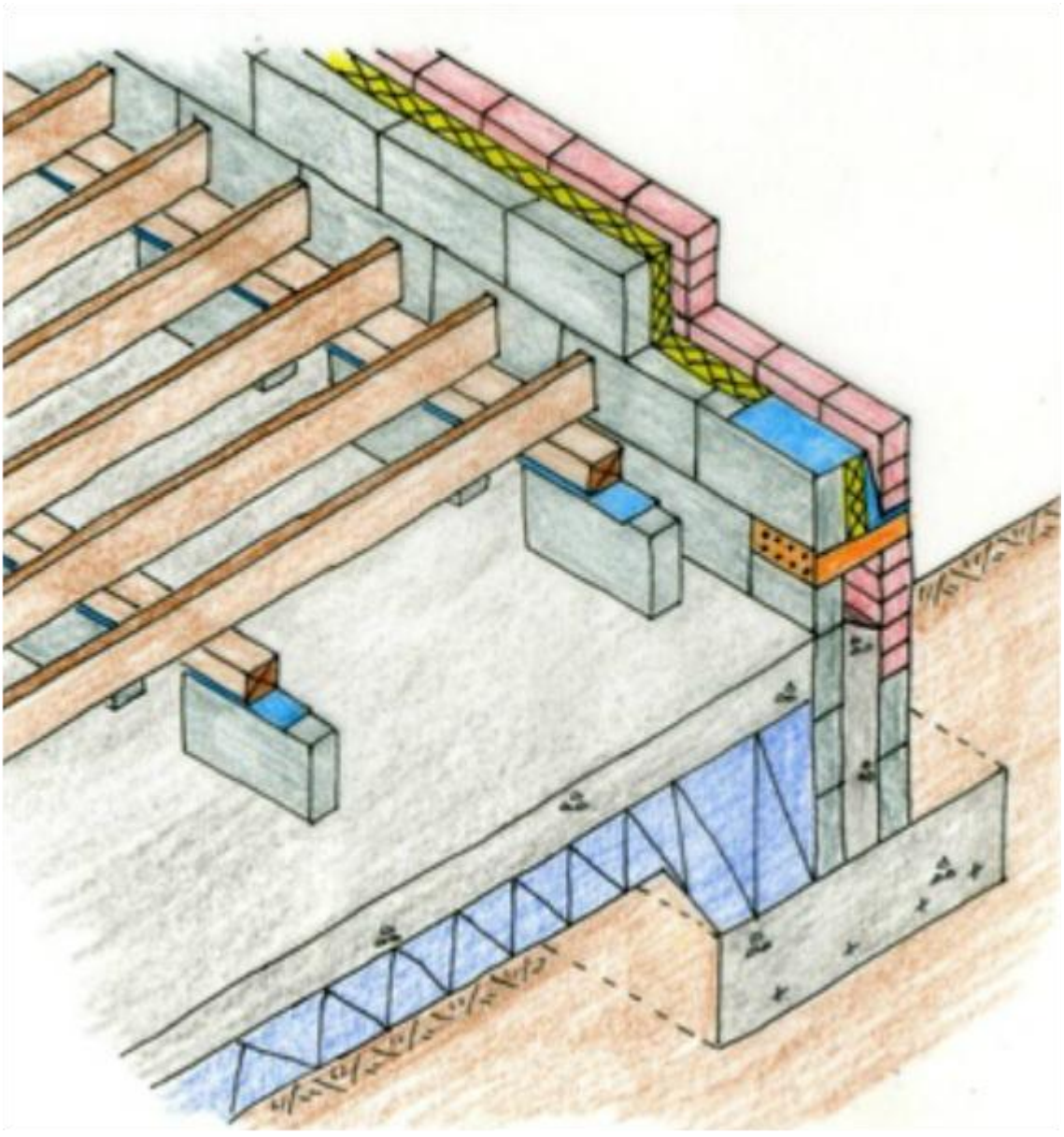
These floor joists are raised above the subfloor on small supporting walls called tassel walls (or sleeper walls).

A wallplate is then attached to the top of the tassel walls, on which the floor joists rest on.

A damp proof course separates the wall plates from the tassel walls, preventing decay from any rising moisture. Also, note the gap in the block work of the tassel walls, ensuring adequate air circulation.

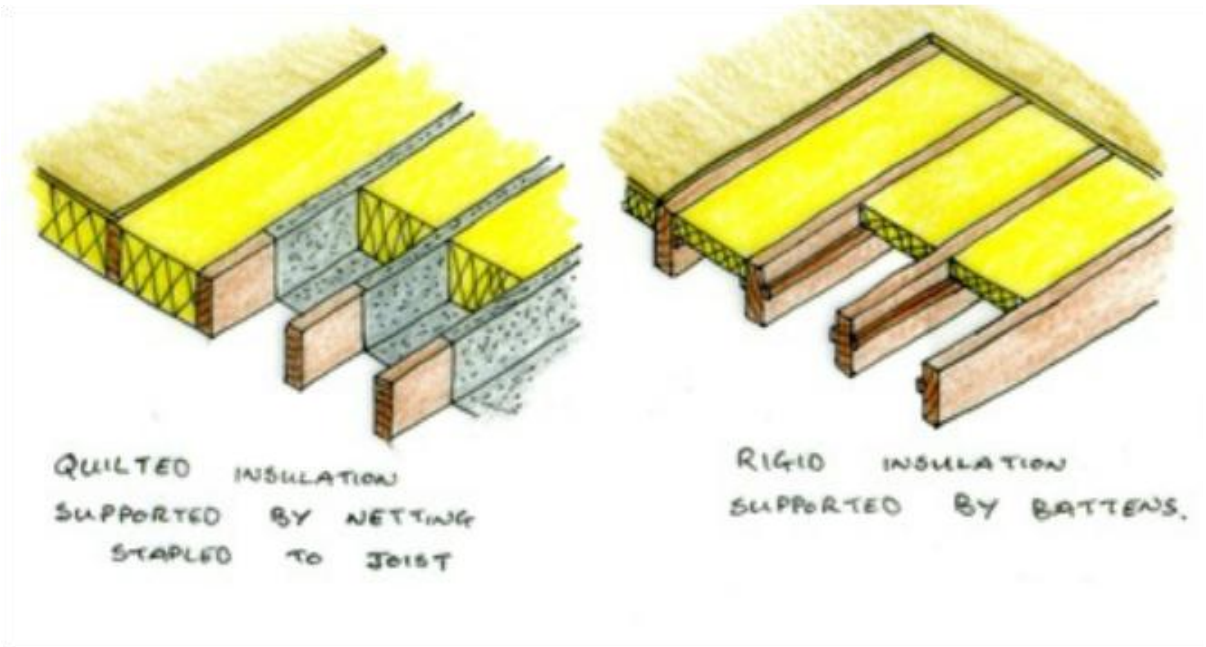
Vents are installed in the external wall to ensure that adequate ventilation is given to the timbers, ensuring the circulation of fresh air, keeping the timbers dry and preventing decay.

Note the stepped DPC, installed above the vent to prevent moisture penetration.

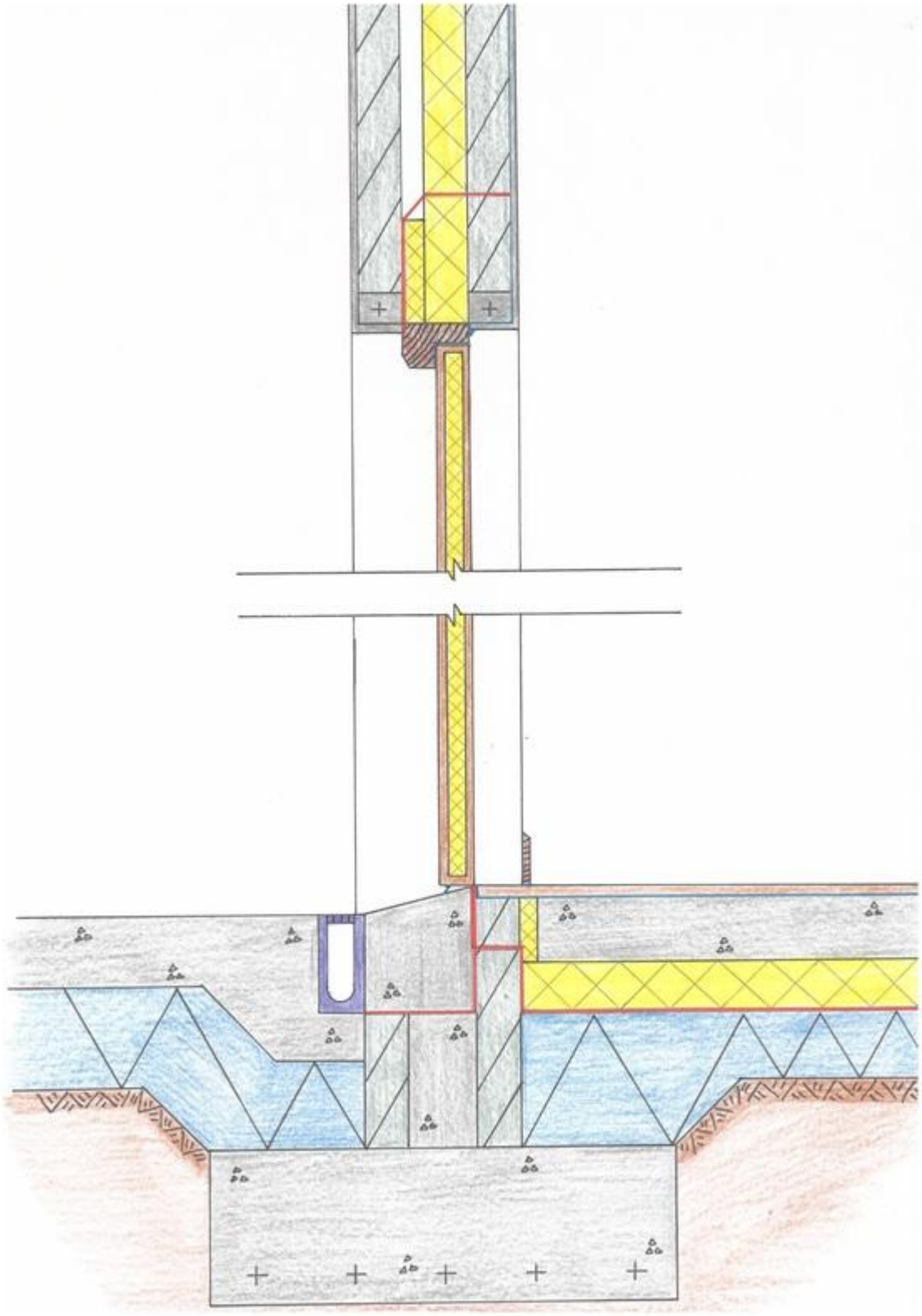


To ensure that the floor is thermally insulated, either rigid or blanket insulation is placed between the floor joists.

The quilted insulation is supported by netting stapled to the joists, while the rigid insulation can be supported on battens between the joists.



Door Threshold



The Door Threshold (where the bottom of the door meets the finished floor/cill) must ensure that it is able to resist wind-driven rain.

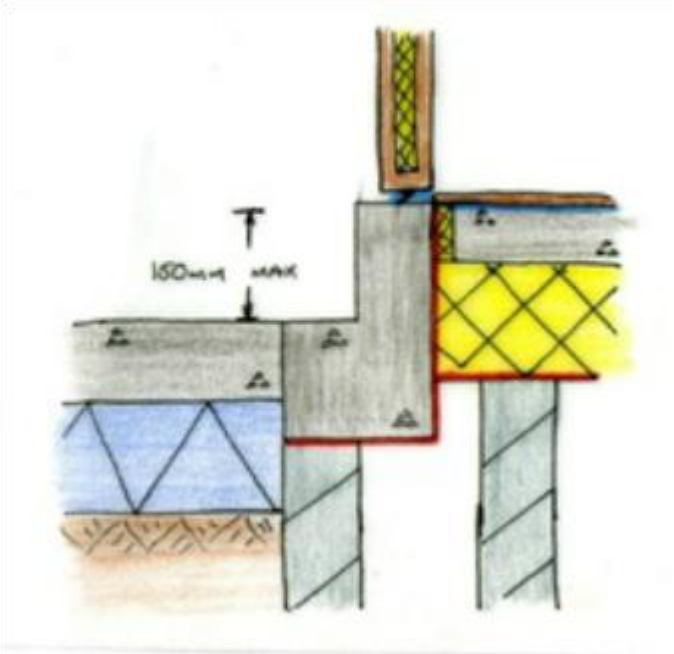
However, it is also vital that the threshold does not exceed 15mm in height, to accommodate wheelchair access and also preventing a tripping hazard.

The detail must also ensure that no water lodges in front of the door, and so a sloped cill (max 15 degrees) runs into the drainage channel, which disposes of any excess water.

The head of the door frame is rebated and incorporates an airtightness seal.

Similar to the head of a window, reinforced concrete lintels are used to ensure that the above weight is transferred to the walls around the door.

The cavity is also sealed with extra insulation, while the DPC is stepped as shown to ensure no moisture penetration.

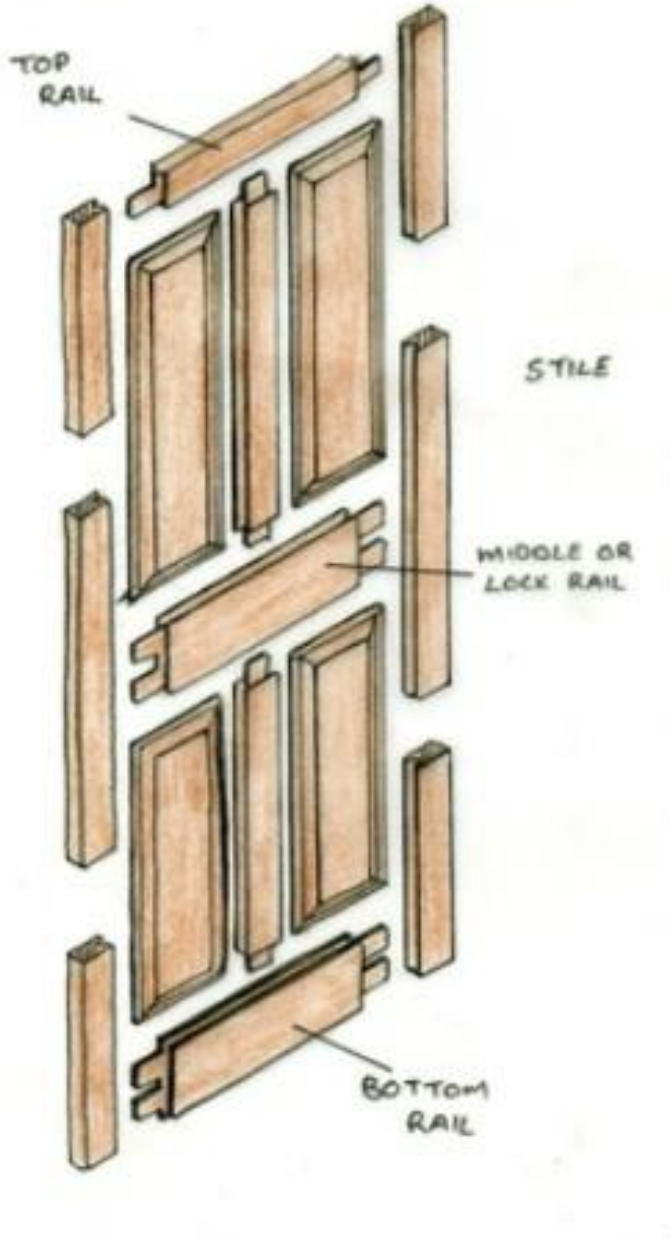


There is also a stepped alternative for the threshold detail.

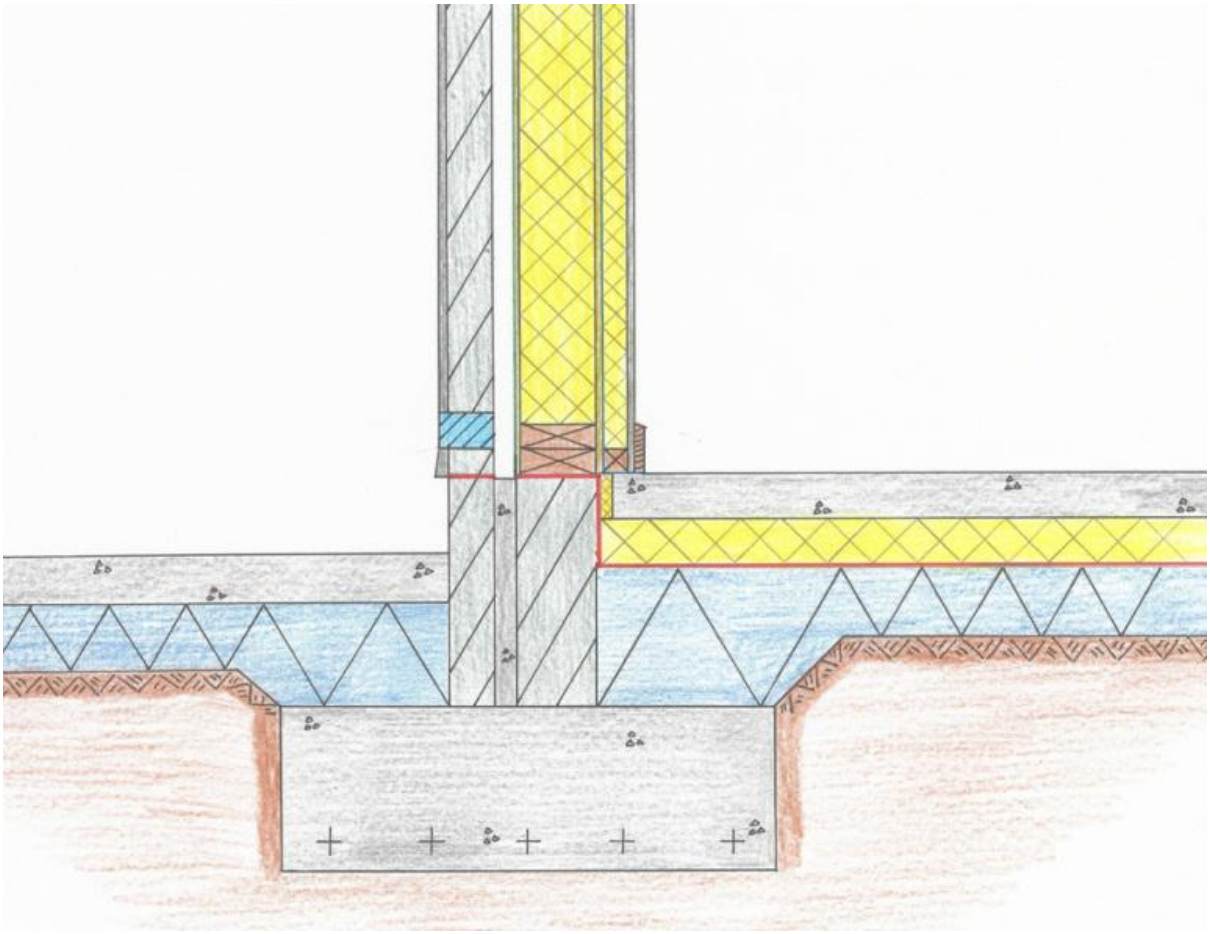
The step in front of the door must not exceed 150mm, while the need for a drainage channel is eliminated.

Timber Panelled Doors are often used as external doors.

They are constructed in hardwood, using mortice and tenon joints for strength and durability.



Timber Frame Wall Construction



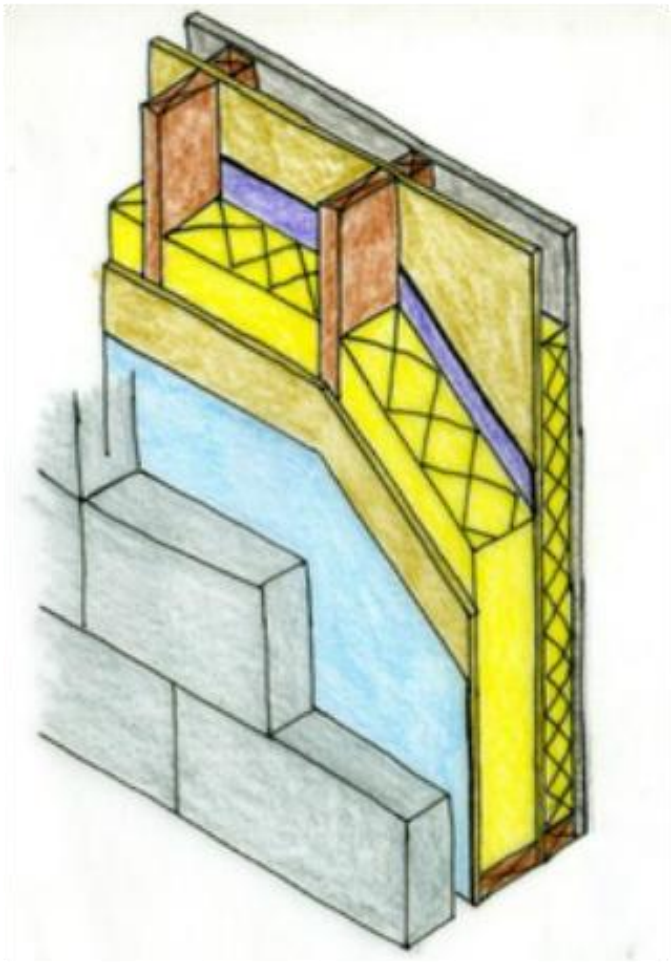
Timber Frame Construction is quite similar to concrete cavity wall construction as the outer leaf remains as masonry, a 50mm cavity is installed, with the only difference being a timber frame internal leaf.

The timber frame wall consists of timber stud framework, with insulation between each stud, which is sheeted with either Plywood or Oriented Strand Board (OSB).

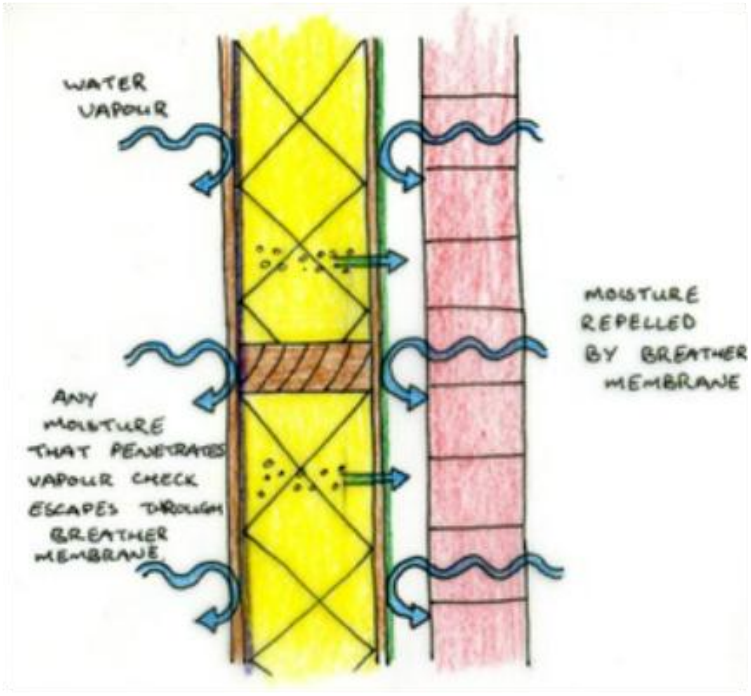
A breather membrane and vapour check/airtightness membrane can then be fixed to the plywood or OSB.

A Service Cavity is often added on the interior to provide room for the services of the house to be installed.

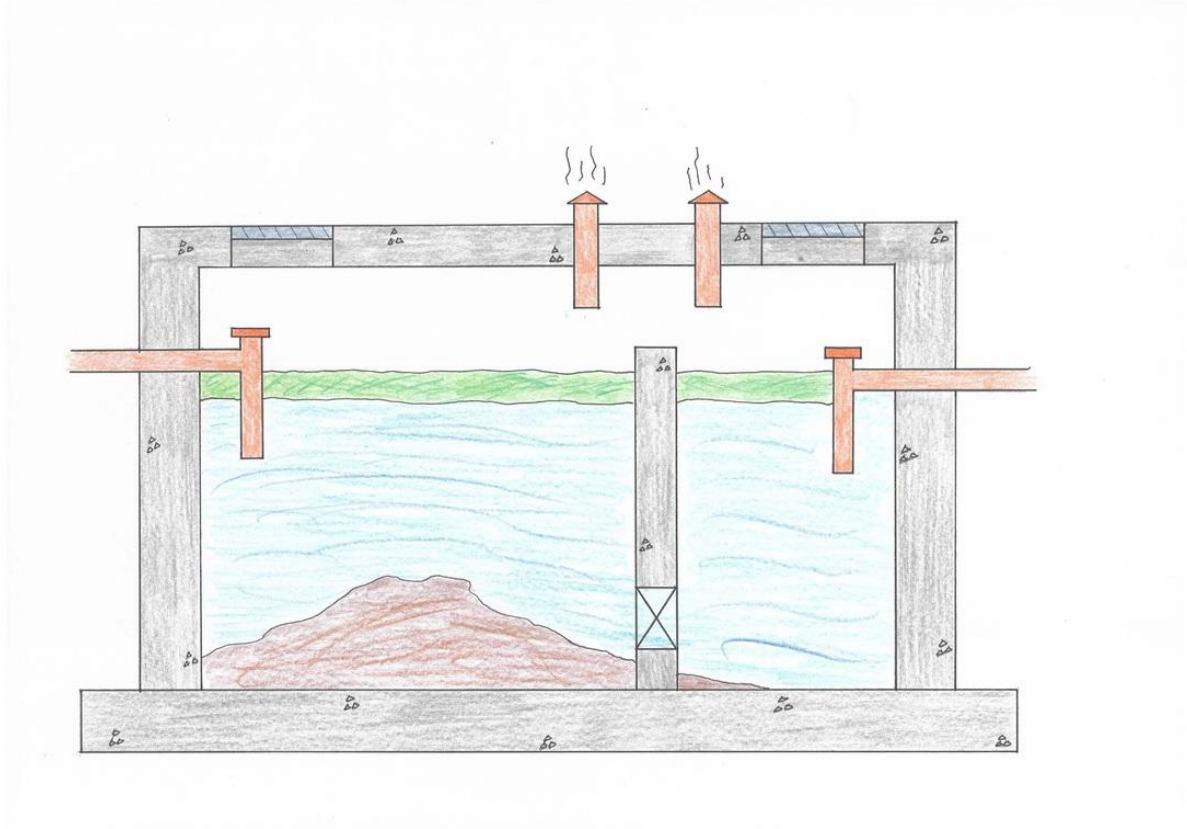
This consists of battens being attached to the plywood or OSB, again with insulation fitted between each batten, with a finishing plasterboard put in place.



The combined protection provided by the vapour barrier (internally) and the breather membrane (externally) ensures the timber inner leaf remains dry at all times.



Septic Tank



A Septic Tank is a private sewage treatment plant, which liquefies, and partially purifies sewage.

The purpose of a septic tank is to retain sewage so that it is given time to be liquefied by the action of Anaerobic Bacteria. These are micro-organisms that thrive in the absence of oxygen.

The wastewater flows from the septic tank to the distribution box.

The distribution box then disperses the flow of effluent into the percolation area. It is in the percolation area that the wastewater is then treated.

The wastewater flows through holes in the distribution pipes into a gravel underlay which then distributes it into the soil.

The septic tank must be a minimum of 7 metres from the dwelling, with the percolation area being a minimum of 10 metres from the dwelling. All piping used must be a minimum of 100mm in diameter.