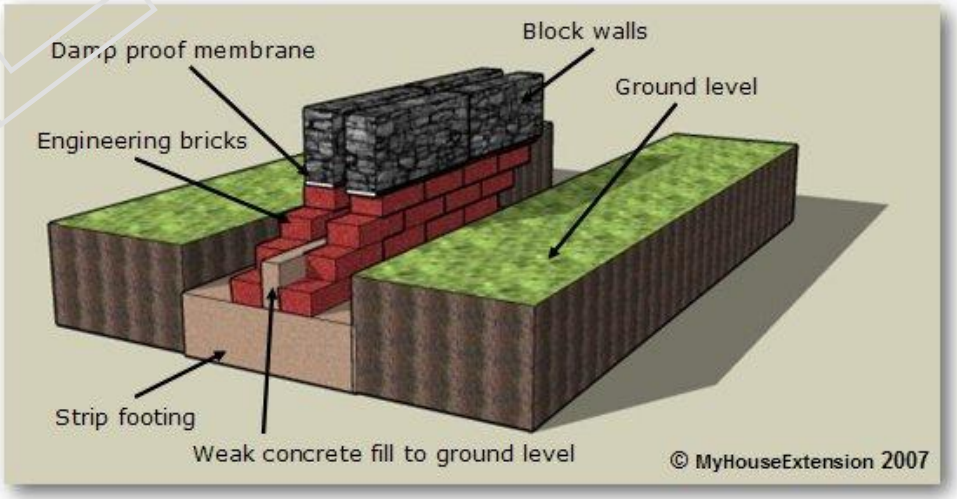
Strip Foundation Detail



What is a Strip Foundation

- A strip foundation is a strip of reinforced concrete mass which transmits the loads of the building to the ground.

- It is reinforced with traverse and longitudinal metal bars joined at intersection with soft wire

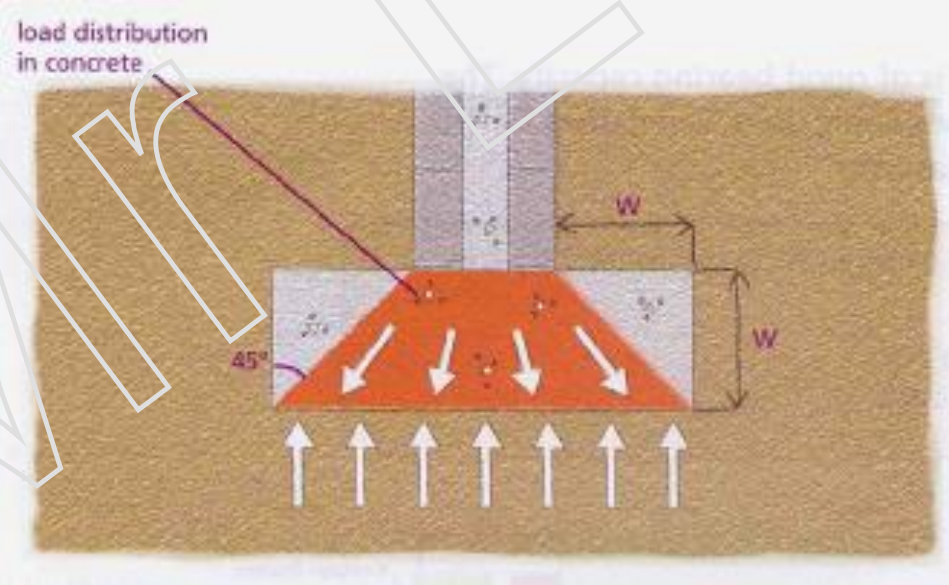
Functions of a Foundation

1. To transmit all building loads to the ground
2. To limit settlement and prevent subsidence
3. To provide a level bed on which to build
4. To anchor the structure to the ground

Rational of Strip Foundation

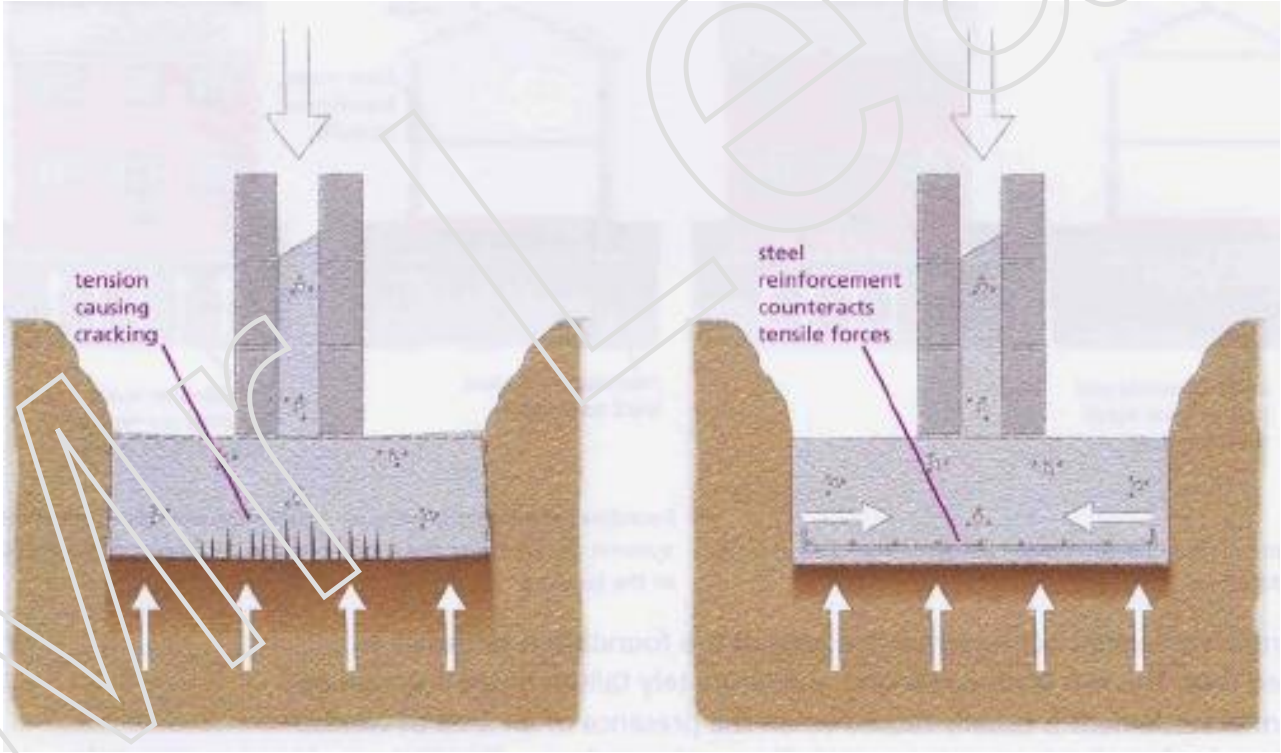
Dimensions of Foundation (3WxW)

- This is because a concrete cavity wall is W thick and in a strip foundation the load is transmitted at a 45° angle from the base of the soil to the wall
- This means that the foundation must be 3 times the width of the wall and the same thickness to distribute the load effectively



Steel Strengthening Rods

- These rods increase the foundation's tensile strength (can carry more weight)



3W below Ground Level to Bottom of Foundation

- This is to avoid the effects of frost heave
- When the ground freezes it expands, this would cause the foundation to move if there was less than the 600mm above it.

Cavity Fill

- Gives the wall more strength underneath the ground to resist the pressure from the soil and the *hardcore* acting on it and collapsing in on itself
- The top of the fill is sloped away from the house to prevent any moisture flowing in towards the inner leaf

Cavity

The cavity in a cavity wall:

- Prevents moisture from passing from the outside of the house to the inside of the house
- Acts as an insulator as the air is a natural insulator

Damp Proof Course (DPC)

- The damp proof course is placed in a course of block work to prevent moisture getting up the walls from the ground through capillary action

100mm Insulation

- Insulates the house from the cold outside air and also stops the warm air from escaping out through the walls