

Capillary Action

- A.1 Install a DPC, remove anything that may bridge the DPC, the ground level must be a minimum of 150mm below a DPC.
Ensure there is a gap between the structure and boundary walls or fences.
In older building installing a DPC there are various methods are available, the student should do research in to the various methods.
- A.2 Install a damp proof membrane, (DPM) this should be a 1200g (min) visquene barrier. This is laid on top of a 'sand blinding' prior to the laying of concrete.
The visquene should be overlapped at joints 450mm-600mm, run up the wall and be lapped in to join the DPC so the edges of the concrete are protected.
- A.3 If a wall, floor or structure is suffering from 'damp' caused by capillary action, heat will reduce the 'surface tension', therefore the water has less 'drag' and the capillary action will increase.
So central heating can make the damp problem worse, this can also increase evaporation causing more damp within the structure, therefore drawing in more moisture via capillary action.
- A.4 A capillary groove is a concave dished hollow of various sizes running along the entire length of and located in, copings, pier caps, cills, frames etc.
- A.5 The concave dished hollow stops water passing. It works because water does not like to run up hill. So causes the water to stop.
Without the capillary groove water would run along the underside of the cill or coping etc to the structure then down the face.
- A.6 A capillary groove according to the BRE should be 35mm approximately from the face of a wall or structure.
- A.7 Capillary grooves are positioned in the side of a sash, frame stile, transom or mullion to stop wind blown water entering the structure. In the cill to stop water running along the underside of the cill reaching the wall face and other areas as required.
- A.8 The moisture in a wall would be tested with a damp metre.

- A.9 Moisture in a wall can make plaster 'perish' this is caused by soluble salts drawn up from the ground.
- A.10 Soluble salts drawn into a structure by capillary action can cause effloresce, (see other areas) this will destroy plaster and make mortar decay causing structural damage if not treated.
- A.11 Timber is naturally a moisture absorber, it is how the wood grew in the first place with capillary action, to draw nutriments from the ground. Wood will start to decay very quickly once the moisture level exceeds 30-40% the most common being *Coniophora cerebella*