

## Introduction

This Technical Note concerns the use of vapour control layers and breather membranes in built-up elements of curtain walling and rainscreen cladding. Vapour control layers are provided where required to control the migration of water vapour in to elements of construction vulnerable to condensation. The function of breather membranes is to provide a barrier against water penetration whilst allowing migration of water vapour through the membrane to the outside of the building. The use of such layers and membranes will depend upon the anticipated performance of the element concerned. Means of assessing the risk of condensation is given in the 'Standard for specifying and assessing condensation risk', CWCT.

Walls have to be constructed to provide water penetration resistance so that:

- No water reaches the inner face of the wall.
- No water reaches parts of the wall where it might cause degradation of the wall or adversely affect any aspect of its performance.

A wall has to be constructed to limit the moisture content within the wall to acceptable levels. No condensation should be allowed to form or collect in any voids or interstices where such water may have a deleterious effect on the materials or on the wall's performance.

Water within a wall may cause damage by:

- Corrosion of components
- Saturation and impairment of insulation
- Mould growth

This Note deals with the appropriate use of vapour control layers and breather membranes within walls. It describes materials, condensation risk assessment and references relevant standards. A terminology is also provided.

## Water penetration resistance

Resistance to water penetration may be achieved by different means depending on the type of construction. In drained and ventilated systems, any water passing through the outer water barrier drains in to a rebate or cavity and then out via drainage slots. Such systems are generally designed to prevent rainwater coming in to contact with materials that are intolerant of water.

Walls such as ventilated rainscreen walls are constructed with open joints in the rainscreen. Some water may pass the rainscreen and enter the cavity behind. Water in a wall cavity may come into contact with the rear face of the cavity (the insulation or backing wall).

A breather membrane should be provided unless it can be established that: