



7 SOURCES OF MOISTURE IN BASEMENTS

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There are seven main sources of moisture in basements and other below ground structures, all of which can contribute to a space being unsuitable as a habitable space, cause extensive damage to contents, and increased risks to the health and safety of the occupants.

GROUND WATER

Water that comes from within the ground/earth and includes surface water percolating through the strata as it makes its way down to the water table. Building at or near the water table can create persistent damp conditions, with careful waterproofing design and membrane selection critical in reducing risk of failure.

SURFACE WATER

Surface water is water that has not yet penetrated ground. Adequate surface drainage and profiling will reduce the volume of water that penetrates porous ground and thereby reducing the hydraulic load against a basement structure, but particularly where ingress into an internal space has occurred then this may not be acceptable as a long-term solution in itself.

RISING DAMP

Rising damp occurs when ground water 'wicks' via capillary action up through porous masonry or moisture sensitive materials that are in contact with the ground. This can occur even when when no direct contact with free-water exists, and no hydraulic load or 'head;' of pressure is present. This can be the result of a compromised damp proof course (DPC).

MOISTURE VAPOUR TRANSMISSION

Moisture vapour is water in its gaseous state, and moisture vapour transmission is the transfer of moisture vapour through a substrate, membrane or material. Waterproofing membranes will stop a droplet of water passing through, but have varying rates of moisture vapour transmission, the rate of which is a defining difference between a waterproofing membrane and 'paint'.

CONDENSATION

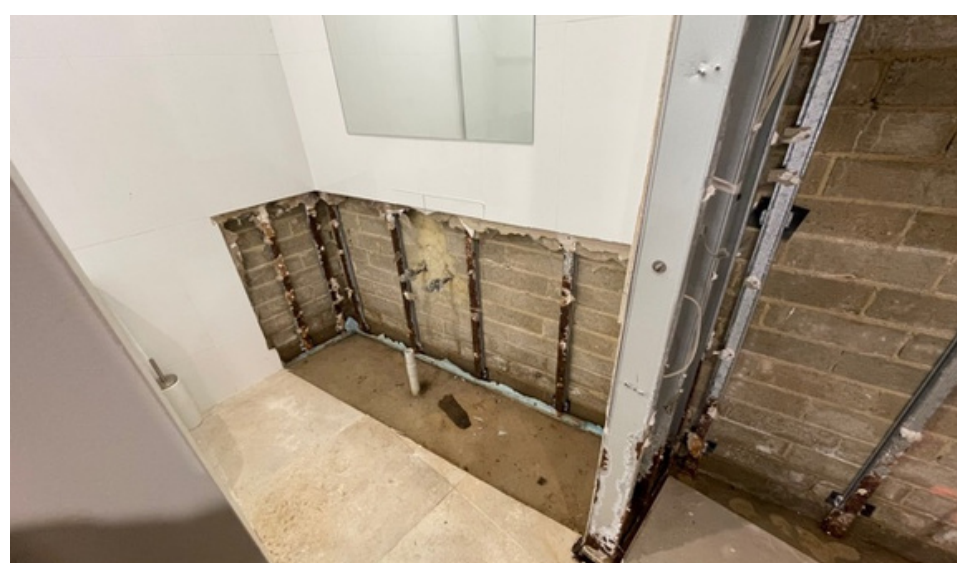
Condensation is not necessarily a source of water but the result of the conversion of moisture from its gaseous to liquid form. Atmospheric changes such as an increase in humidity and/or a drop in temperature will result in the formation of condensation on surfaces at or near the dew point, and lead to the formation of mould.

INTERSTITIAL CONDENSATION

Interstitial condensation is the formation of condensation between layers of a building or membrane, and occurs where there is differential moisture vapour transmission rates of the layers, resulting in moisture being trapped. In basements this can occur between external structural walls and internal plaster linings, which is a key focus of NCC Vol2 3.8.7.2 (b)

GENERAL OCCUPANCY

General occupancy and use of a below ground area can generate moisture which can be trapped within the space, particularly where there is inadequate ventilation or atmospheric controls. The use of unvented dryers, washing, cooking, cleaning and even perspiration, can be significant contributors to atmospheric moisture content, leading to mould and mildew.





Where to now?

Virtually every property with water leak issues will tick at least one, and typically two or more of these indicators of a basement water ingress problem. There can be multiple causes which is not always easy to identify - particularly to the untrained eye.

FOR MORE INFORMATION

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Our team of experts can provide you with an obligation free assessment of your home, along with some options for repair - giving you peace of mind.

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