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THE EFFECTS OF WATER AND MOISTURE ON WOOD FLOORING

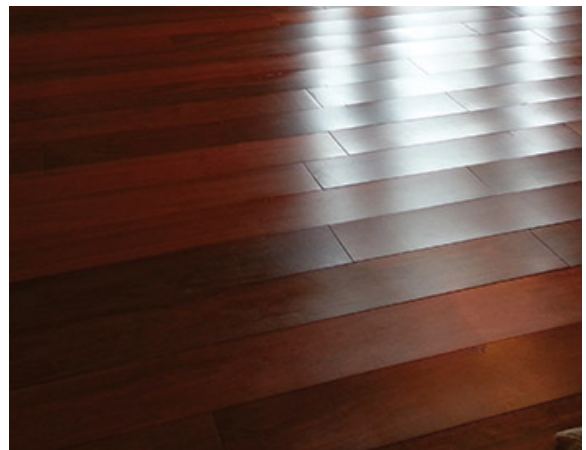
What is “Cupping” and why does it happen to wood floors?

The science of water and wood should be understood by all especially everyone involved in specifying and installing wood floors.

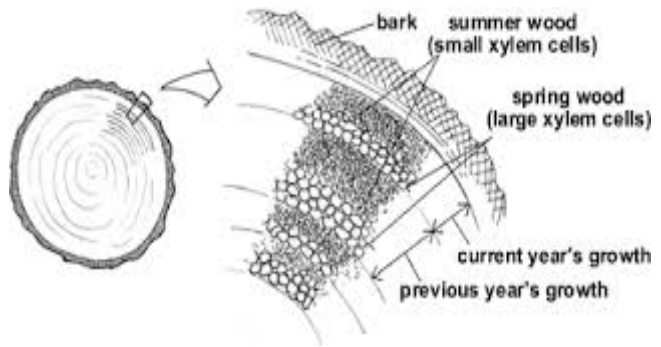
Wood flooring has become the normal standard now for house and apartments in the UK and there is still a lack of experience on the effect of moisture and environmental conditions. Tower blocks are especially vulnerable to dramatic changes in the environment that the flooring is subjected to and this can have a dramatic impact on any timber floor.

You can see the structure of wood floors here where the fibres of any species of wood will expand and contract depending on the relative humidity. See the link below for more details: [inforhttps://www.thesolidwoodflooringcompany.com/technical-woodflooring-library/The_Structure_of_Wood.pdf](https://www.thesolidwoodflooringcompany.com/technical-woodflooring-library/The_Structure_of_Wood.pdf)

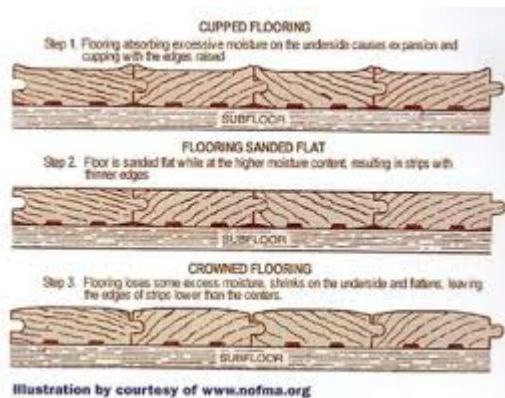
Cupping and “Crowning” of wood floors happens because the inner rings have a denser cellular structure than the outer ones and can be seen by the way a board is cut in the image below left. This means that the outer part of each board will absorb more moisture and expand more than the centre of the board meaning the edges of the floor board stick up like the image below on the left. “C” below shows crowning.



The cell structure can be seen in the image below on the right where the younger the growth in the rings the more moisture it will absorb compared to heart wood or older growth rings.



The image below shows the difference between the old heart wood (darker colour) and the younger part which will absorb more moisture and therefore expand and contract more than the middle. As most flooring is now cross cut cupping will occur especially on solid oak wood flooring.



In the USA wood floors have always been used and their experience means they have a lot more information on the issues surrounding the installation of timber both in floors and structural cross laminated wood.

The link below will a lot of additional information on all aspects of wood floors and the effects of moisture and relative humidity.

<http://www.hardwoodfloorsmag.com/installation/understand-the-science-of-water-and-wood-floors.html>

Please call 01666 504015 for more help and also Technical advice.