

## **Revision of the Danish Building Research Institute's (SBI) moisture instructions**

Moisture is by far the number one cause of damage in buildings. Moisture can lead to a lot of problems, ranging from disintegration of materials and structures, swelling in wooden floors, to mould, which can cause health problems.

For many years, SBI has prepared instructions about how to design building components, e.g., exterior walls and roofs, to avoid the risk of damage due to moisture. When revising the current instructions, a number of new topics will be introduced and some of the current topics will be expanded. The subject-matter is expected to be split into three or four minor instructions.

A new key element is that the instructions will be expanded to cover solutions and suggestions for how to implement them during design and execution of buildings. Thus, focus will be on what to consider in relation to design and choice of material to achieve buildings that are moisture-tight and resilient. The instructions will also touch upon how to reduce the risk of moisture absorption by materials and building components through fabrication, transport and storage on site. Finally, instructions will explain how to integrate materials to achieve good, solid solutions.

The instructions will provide a more thorough introduction to building components than the current instructions, and will include new, relevant topics such as metal and glass exterior walls, floors and other moisture problems inside buildings. The instructions will also treat issues that may arise as a result of climate change, e.g., how to reduce the risk of flooding as a result of cloudbursts. To the extent possible, examples of integration of building components will be shown, e.g., exterior wall and roof, and ground slab and exterior wall. Often, most problems occur at integration details.

In recent years, building renovation (including maintenance, modernisation and retrofitting of insulation) has become extensive, and much damage has been caused by moisture not always being considered during renovation projects. Lack of consideration of moisture aspects may cause problems with a structure that used to work correctly: For instance, incorrect insulation of an old crawl space may lead to mould problems. The revised instructions will prioritise explaining principles for renovation solutions and will show solutions for structures that are typical for their time.

The instructions will be richly illustrated by figures of the shown solutions.

The instructions are expected to be finalised by the end of 2021 or the beginning of 2022.