

Scotland v Denmark: Healthy Buildings compared

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Summary

Natalie's project involves measuring and comparing formaldehyde levels in modular timber buildings in Scotland and Denmark to exploring whether Scotland's built environment can learn and benefit from Denmark's approach.

Background

Formaldehyde is used as an adhesive in wood panel products, as well as in a wide spectrum of consumer products. Concern about the health effects of exposure to formaldehyde emissions from materials and furniture was first raised in the 1970s as buildings became more air-tight. Within this research project formaldehyde measurements will be taken by long term sampling using an Indoor Air Quality Profile Monitor. The sensors perceive the gas, in this case formaldehyde, by augmented diffusion i.e. by low volume fan assisted capture.

Challenges

A significant challenge was locating two similar properties in Scotland and Denmark to make meaningful comparison. Financial support from CSIC enables Natalie to the gather more than one set of complete measurements in each

country and ultimately build a stronger case on how best to minimise formaldehyde emissions.

Benefits

From January 2016, formaldehyde has been classified as a Category 1B carcinogen in the UK. Improving Indoor Air Quality of our buildings is a necessity now and for future generations. Following the WHO requirements would result in healthier buildings and healthier population within Scotland.



“I have discovered that similar countries, with similar climates and cultures do not necessarily have similar concerns. If my findings show that Scottish emissions are higher than those in the similar Danish property, my hope is that the Scottish construction sector will make changes in order to provide a healthier environment for residents in future decades. In the meantime, I intend to use the Construction Scotland Innovation Centre facility to get in touch with people with the same interests.”

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