

SUSTAINABILITY OF HOSPITAL BUILDING: APPLYING A SCREENING LCA AND LCC TO THE NEW GENERAL HOSPITAL IN MECHELEN

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ABSTRACT

The past decade has been marked by an increased interest in the way hospital buildings are designed and operated. With the urge to decrease the negative impacts of the building stock around the world, healthcare facilities are equally called upon to respond to this matter. In order to tackle the hospital building sustainability, a quantitative approach, using the life cycle thinking perspective, seems to be an appropriate method for analysing the environmental impacts of these buildings. However, due to the complexity and various medical preconditions a hospital needs to fulfil, no such method that would facilitate its sustainability assessment has yet been proposed.

An attempt has been made to gain better insight into the environmental impacts of the hospital buildings in Flanders. For this purpose, a screening Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) study has been carried out on the new general hospital Sint-Maarten in Mechelen.

The aim is to pinpoint the major obstacles for such a quantitative analysis as well as to identify the hotspots from both an environmental and economic point of view. Furthermore, the results will serve as one of the important inputs in laying the cornerstones for the development of the quantitative sustainability assessment method for hospital buildings in Flanders.