



LEONORA EBERHARDT

PhD defence

QUALIFYING CIRCULAR ECONOMY
IN BUILDING DESIGN PRACTICE:
DEVELOPING LIFE CYCLE
ASSESSMENT DESIGN CONCEPTS
THAT SUPPORT IMPLEMENTATION
OF CIRCULAR ECONOMY IN THE
BUILDING SECTOR

5 MARCH 2021
at 9:00-13:00

Due to the Covid-19 situation, the PhD
defence will be carried out via Zoom



DEPARTMENT OF THE BUILT ENVIRONMENT
AALBORG UNIVERSITY

PHD DEFENCE BY LEONORA EBERHARDT

Qualifying Circular Economy in Building Design Practice:

Developing Life Cycle Assessment Design Concepts That Support Implementation Of Circular Economy In The Building Sector

TIME

Friday 5 March 2021, 9:00 – approx.13:00

HOW TO PARTICIPATE

Due to the Covid-19 situation, the PhD defence will be carried out via Zoom. Please send an email to Linda V. Andersen no later than 3 March 2021 and you will get an invite for the event and, if requested, a copy of the thesis.

SUMMARY OF THE THESIS

Transitioning building activities to a circular economy is important to reduce the built environment's pressure on the natural environment. However, environmental design and decision-making tools to support implementation of circular economy in the building sector are lacking.

As life cycle assessment is an accepted method for assessing environmental impacts in the building sector the research assesses how life cycle assessment can support the implementation of circular economy in the building sector. The research provides an overview of state-of-the-art circular economy design and construction strategies. It further presents environmental impact profiles of contemporary, prevalent Danish building types and different CE design and construction strategies.

Furthermore, the appropriateness of the current life cycle assessment practice is critically evaluated for stimulating circular economy in the building sector. An existing life cycle assessment approach is further developed to closer align it with the circular economy concept. Finally, the research provides environmental design guidelines for designing CE building components.

ASSESSMENT COMMITTEE

- Senior Researcher Jesper Ole Jensen, Dept. of the Built Environment , Aalborg University (chairman)
- Prof. Holger Wallbaum, Architecture and Civil Engineering, Building Technology, Sustainable Building Chalmers University of Technology
- Senior specialist/Adjunct Prof. Matti Kuittinen, Ministry of the Environment/Dept. of Architecture, Aalto University

PHD SUPERVISORS

- Supervisor, Senior Researcher Harpa Birgisdottir, Dept. of the Built Environment, Aalborg University
- Co-supervisor, Prof. Morten Birkved, University of Southern Denmark

MODERATOR

- Assoc. Prof. Tine Steen Larsen, Dept. of the Built Environment, Aalborg University

PROGRAM

09:00: Welcome by Moderator

09:05: Lecture and presentation by PhD student (45 min)

09:50: Break

During the break, participants can email questions to the moderator, Tine S. Larsen. If such are received, the questioner puts them forward after the assessment committee has finalized their question and answer round

10:00: The assessment committee is asking questions to the work

12:00: End of defence. The assessment committee enters another "room", evaluates and writes the final assessment

12:30 (approx.): The assessment committee rejoins the "Defence room" and announces its decision

13:00: End of Event