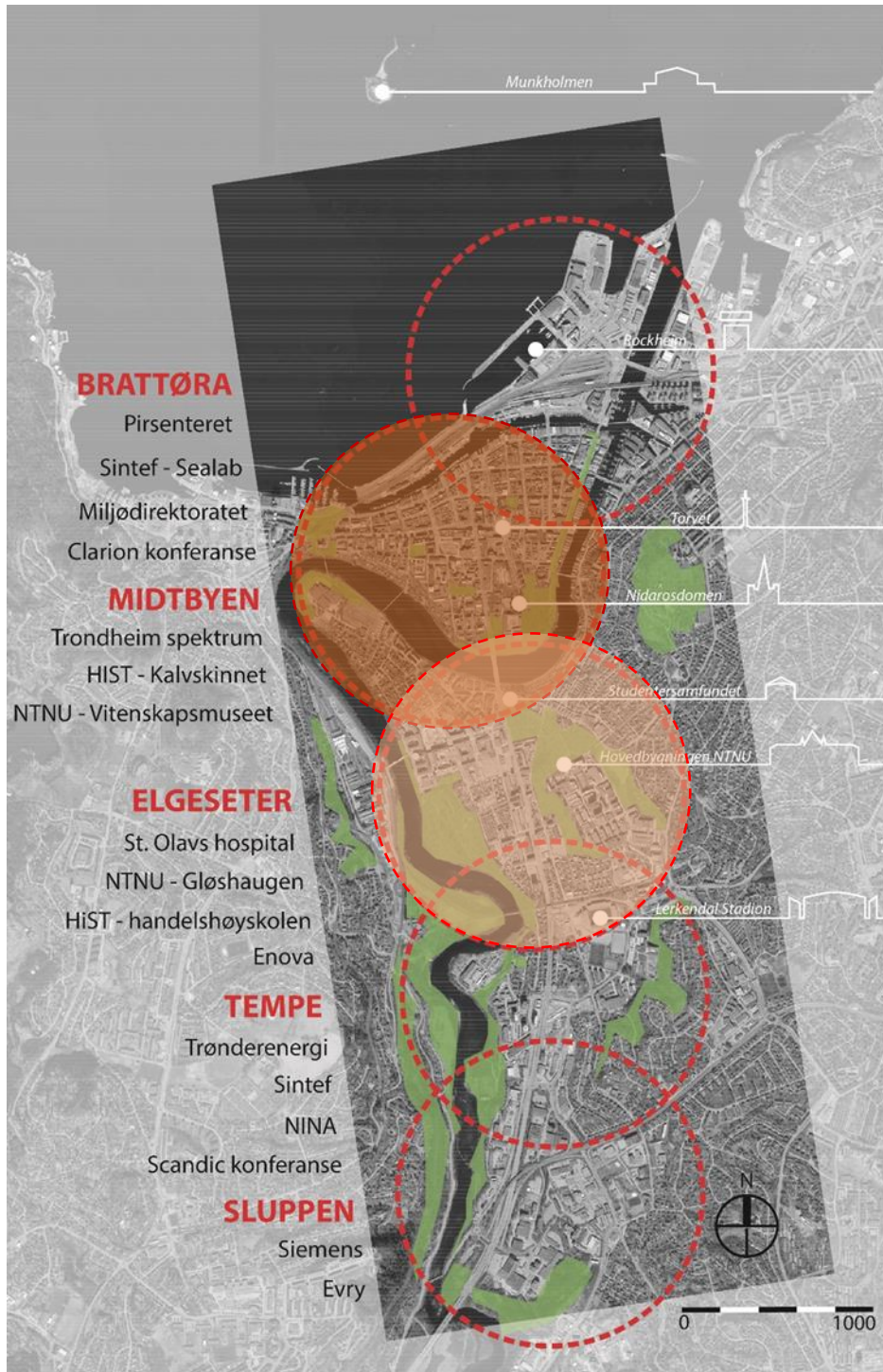


AAR 4817 Emissions as Design Drivers _Theory (7.5 pts) Vår 2017

AAR 4546 Emissions as Design Drivers _ Design (15 pts) Vår 2017



To Zero on Campus (ZENTNU)

Design a ZEN at NTNU campus

Course content

The key objective of the 2nd semester M.Sc. Sustainable Architecture parallel design and theory courses (AAR4817 + AAR4546) is to link theory and design i.e. LEARN THROUGH DOING. The aim of both courses is to enable students to develop deep knowledge and learn how to integrate life cycle analysis and cradle to cradle thinking early in the design process to achieve energy positive and potentially **net Zero Emission buildings (nZEBs) in a transformation and renovation context**. The students will learn methods to analyse the key drivers that contribute to lowering energy and embodied CO_{2eq} emissions in order to achieve the net zero emission ambitions.

Learning outcome

The key objective of the parallel Theory and Design courses (AAR4817 + AAR4546) is for the students to learn how to integrate life cycle analysis and cradle to cradle thinking in the exploration of holistic architectural concepts and strategies, essentially, to 'learn through doing'.

Learning methods and activities

Lectures and presentations; Design studio guidance; Oral project presentations and discussions with teachers, external professionals and classmates.

Recommended previous knowledge

Architectural design; Building construction; building physics.

Required previous knowledge

Completed three years basic courses in architecture, engineering or urban planning; bachelor in architecture, engineering or urban planning; or equivalent.
Semester programme is co-ordinated with AAR4546 and AAR4817

Course materials

Case studies; research articles and other literature; lecture notes; site visits.

Computer aided Modeling (Revit and/or Rhino), Emissions (Økobilanz-Ecoinvent/Epd), Excel

Sketching / project guidance, shared presentations and discussion in the studio.

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