



POLISH AND NORWEGIAN CITIES  
together for climate and energy

## BRØSET, TRONDHEIM

### A NEW ECO-FRIENDLY WAY OF LIVING

**Sector:** Community energy projects

**Timeframe:** 2009 – 2020

**Location:** Trondheim, Norway

#### PROJECT BACKGROUND

Brøset, four kilometres outside Trondheim City Centre, is a former agriculture and hospital area. Its location and topography makes the area a valuable resource for urban development, in accordance with the municipality's densification policies. The city wanted a forward-looking district where an environmentally friendly lifestyle is encouraged.

#### PROJECT DESCRIPTION

A new urban district for about 4000 people (approx. 1800 dwellings) is being developed. The area will also have three kindergartens, an elementary school and a health and welfare centre. The land use plan, adopted in 2013, is based on a parallel commission, where four interdisciplinary teams presented their visions. The results from the parallel commission are among Norway's most interesting examples of how new sustainable districts can be planned and developed.

Each resident will be responsible for a maximum of three tonnes of CO<sub>2</sub> emissions per year. The average today is between eight and eleven tonnes. To ensure this, the plan makes the functions needed in daily life available without use of cars. This implies relatively high utilization in residential areas,

though with extensive public green structures. Green corridors and a central park are both important for recreation and floodwater treatment. The transport system gives priority to pedestrians, cyclists and public transport, rather than private cars. With twice as many dwellings as parking spaces, the parking coverage is about 1/3 of the current norm in Trondheim.

Planned waste system includes individual measuring and pricing, stimulating to more sorting and less waste. Local recycling and reuse workshops will be established.

Life cycle analysis regarding CO<sub>2</sub> emissions will be required for all buildings, including production of materials, construction, operation, maintenance, demolition and waste management.

Prerequisites for detailed planning imply a climate neutral district, energy consumption lower than specified in national technical regulations, and extensive use of energy from renewable sources. Sum of stationary energy use shall annually be equal to the supply from local renewable energy sources, including sun and geothermal energy.

Local storm water management will be in open systems. In addition, a high proportion of green surfaces will infiltrate and delay water from heavy rain, reducing future expected flood problems.



## PROJECT RESULTS

The area is not yet developed, but the land use plan implies:

- Passive energy standard for all new buildings, and energy performance certification standard A (dark green)
- Maximum three tonnes of CO<sub>2</sub> emissions per resident per year
- Environmentally friendly lifestyle
- Designing for pedestrians, bicyclists and public transportation
- Efficient adaption to climate change

In addition to being useful for the Brøset area and Trondheim municipality, the ideas from the four parallel commissions have inspired planners and developers all over the country.

## MORE INFORMATION

Ministry of the Environment, Cities of the Future (2009):

[www.regjeringen.no/en/topics/municipalities-and-regions/by--og-stedsutvikling/framtidensbyer/the-participating-cities-/trondheim/a-new-city-of-the-future/id548223](http://www.regjeringen.no/en/topics/municipalities-and-regions/by--og-stedsutvikling/framtidensbyer/the-participating-cities-/trondheim/a-new-city-of-the-future/id548223)

Association of Norwegian Architects:

[www.arkitektur.no/buildings-of-the-future](http://www.arkitektur.no/buildings-of-the-future)

### CONTACT INFORMATION:

Ole Ivar Folstad

Trondheim Municipality

phone: +47 95 26 37 88

e-mail: [ole-ivar.folstad@trondheim.kommune.no](mailto:ole-ivar.folstad@trondheim.kommune.no)