



Significant savings

Recycling rainwater saves approximately 3000 m³ of clean drinking water each year - the equivalent of the annual water usage of around 85 people for cleaning, showering and toilet flushing purposes etc.

The total energy savings generated by using groundwater cooling equates to approximately 430 tonnes of CO₂ per year, which corresponds to the energy consumption of 100 detached homes.

By simply replacing the lighting in front of the lifts with LED lighting, the building's CO₂ emissions are reduced by seven tonnes annually.

RAMBOLL

RAMBOLL HEAD OFFICE, COPENHAGEN

HOLISTIC AND SUSTAINABLE BUILDING DESIGN

RAMBOLL

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Holistic and sustainable building design

Climate and sustainability are high on the global agenda. In the building industry, these considerations are also important to public and private sector organisations seeking to contribute actively and positively to local communities, the well-being of employees or residents, as well as the global climate challenge. But what does the term 'sustainability' actually mean in relation to the building industry and why is Ramboll Head Office a holistic and sustainable building?

No building is an island

Ramboll defines sustainability as encompassing four areas: economy, environment, social, and climate. We base this definition on the idea that no building is an island, but rather part of a wider context. In practice, this means that buildings with many users should, as far as possible, be placed in areas with optimal access to public transport and collective energy infrastructure should be used rather than less efficient and more expensive individual systems. By taking full advantage of these external systems, buildings can be optimised in relation

to their climatic, environmental, social and economic attributes.

For these reasons, we bring together multiple disciplines and approaches from the very moment that a building is conceived.

Tailor-made buildings

At Ramboll, we are keenly aware of the close connection between sustainable solutions and building design. Consequently, when we advise on sustainable building construction, we seek to define sustainability requirements in line with customer needs and expectations as early as possible in the process.

Ramboll's head office

The same principles apply when developing our own buildings. For our new headquarters, it was important that the end result was a holistic and sustainable building. The architectural expression of the building and the infrastructure within the surrounding area were key considerations in our assessment of possible sustainability measures. Ramboll certifies the sustainability of buildings and we also assessed Ramboll head office.

Follow-up after moving in

The operators of Ramboll's head office work continuously with our sustainability specialists to reduce energy consumption and optimise the indoor environment.

10 INITIATIVES THAT MAKE RAMBOLL'S HEAD OFFICE A HOLISTIC AND SUSTAINABLE BUILDING

1 Ramboll Head Office is well integrated into the greater Copenhagen transport network. Situated close to the Metro, trains and airport, our Head Office uses and contributes to Ørestad's intelligent infrastructure design.

2 We are connected to Copenhagen's district heating system – instead of incorporating a stand-alone heating system that uses, for example, heat pumps.

3 The building has an effective facade that shields against the sun during summer and retains heat in winter. The exterior solar screens adjust according to the height of the sun.

4 The atrium is designed so that the space contributes to the ventilation of the entire building and helps to reduce energy consumption – in both summer and winter. We use groundwater cooling in conjunction with very efficient cooling equipment that uses natural refrigerants (ammonia).

5 Effective and intelligent lighting and ventilation ensure that electric light only comes on when required, and a comfortable indoor climate adjusts according to outdoor temperature and solar radiation levels.

6 The building is designed to harvest and store rainwater in a 150m³ tank so that it can be reused for flushing toilets.

7 The total energy consumption of the day to day running of the building is reduced by, for example, incorporating energy saving systems into every workstation that automatically switch off the standby power for the computer screen, table lamp and mobile phone charger when a user's laptop is removed.

8 We have prioritised aesthetic and functional qualities that make the building an attractive and pleasant work environment.

9 Well-being and diversity are prioritised by optimising the indoor climate and providing resting, prayer and fitness facilities.

10 By having a public café and offering guided tours of the building, we welcome and encourage the outside world to visit our head office.

Facts

Developer: SEB Pension

Consultant: Ramboll

Architect: DISSING + WEITLING

Contractor: Pihl

Size: 40,000 m²

Building completed: Summer 2010

Employees: 1,600

Price: DKK 25,000/m²

By thinking holistically, we have created a head office where building sustainability has been maximised in relation to the investment – benefiting the owner, tenants and society as a whole.

Ramboll provides consultancy services on sustainable solutions for new buildings and on the refurbishment or certification of buildings.

Learn more about the advantages of building sustainably at WWW.RAMBOLL.COM