

Urban Food from Residual Heat

Site description two – Brunnshög



OPEN

Innovation Competition

Urban Food from Residual Heat
- DEADLINE JUNE 2, 2017

Brunshög, Northeast Lund – one of the world’s leading centres for research and innovation

Europa has chosen Lund as the site for one of the most outstanding research plants in the World, the European Spallation Source – ESS. In response, Sweden has decided to locate MAX IV, the world’s strongest electron microscope, next to the Europa site, making the two installations neighbours. The two neighbouring research facilities represent a world leading research and innovation environment, the total investment of which totals approximately the same investment made in constructing the Öresund bridge (the bridge that connects Sweden with Denmark). In response Lund municipality has decided to complement these fantastic investments with the creation of a new town, Brunshög.

Site description

Brunshög – a town under construction

The ambition with Brunshög is to increase the mutual benefit of the research facilities and the city. Brunshög is situated on the eastern side of the E22 highway. This location is already home to Sony Mobile and Mobile Heights which have huge offices with 4,500 employees. When the Brunshög development is complete, close to 40,000 people will either live or work in the area. Construction of houses in the Southern part of the area will begin in the summer of 2017 whilst houses and service facilities located in central and northern Brunshög will start to be constructed during 2018. In 2019 a newly constructed tramway will connect Brunshög with Lund city centre.

Challenge description

In Brunshög we are working with three core concepts relevant for the Open Innovation Competition:

- Minimising the climate effects through the production of sustainable energy, decreasing energy use, reusing all electrical energy used in the ESS and adapting the urban environment in order to mitigate climate change.
- Balancing out the site’s negative impact on arable land and lost food production. Productive arable land is a globally important resource therefore, compensating for the loss of crops produced through intensive food production within the urban area, is a key issue.
- Maximizing the attractiveness of the urban area and creating a stimulating environment for the inhabitants. The core goal is to make people thrive within the city environment through exhibiting commendable social values, engaging urban life and attractive social spaces and meeting points.

Brunnsög will undoubtedly receive visitors from all over the world and it is our intention to give them something to talk about when they get home. The production facility born out of this open innovation competition will be a part of the Brunnsög identity and concept. In addition, biological production units with very high efficiency can be an answer to the challenge of compensating the loss of arable land where former crop production is replaced with large amounts of fish, vegetables and other biological products.

ESS has a huge electricity demand which, through the cooling process is transformed into enormous amounts of heat of different temperature fractions. The high temperature fraction goes directly to district heating but the low temperature fraction, 25-50°C, will be utilised for other purposes such as powering the proposal developed as a result of the Open Innovation Competition.

The Swedish grocery store chain Ica is also planning to establish a new grocery store and residential area in the centre of Brunnsög which will meet the area's high sustainability targets. The grocery store's design is meant to convey a sense of being in a covered market and there are plans to connect a greenhouse to the store building. The new complex will have the grocery store placed at its centre and – together with new restaurants, a gym, health centre and several residences – will form the future central spot of the entire neighborhood, acting as a multifunctional area offering something for everyone. The whole area is strongly linked with the agriculture surroundings where you can find Sweden's best cultivation soils. Instead of disposing of the excavated soil, ICA plan to use it to create the area's new ecosystem, in both the courtyard and the greenhouse.



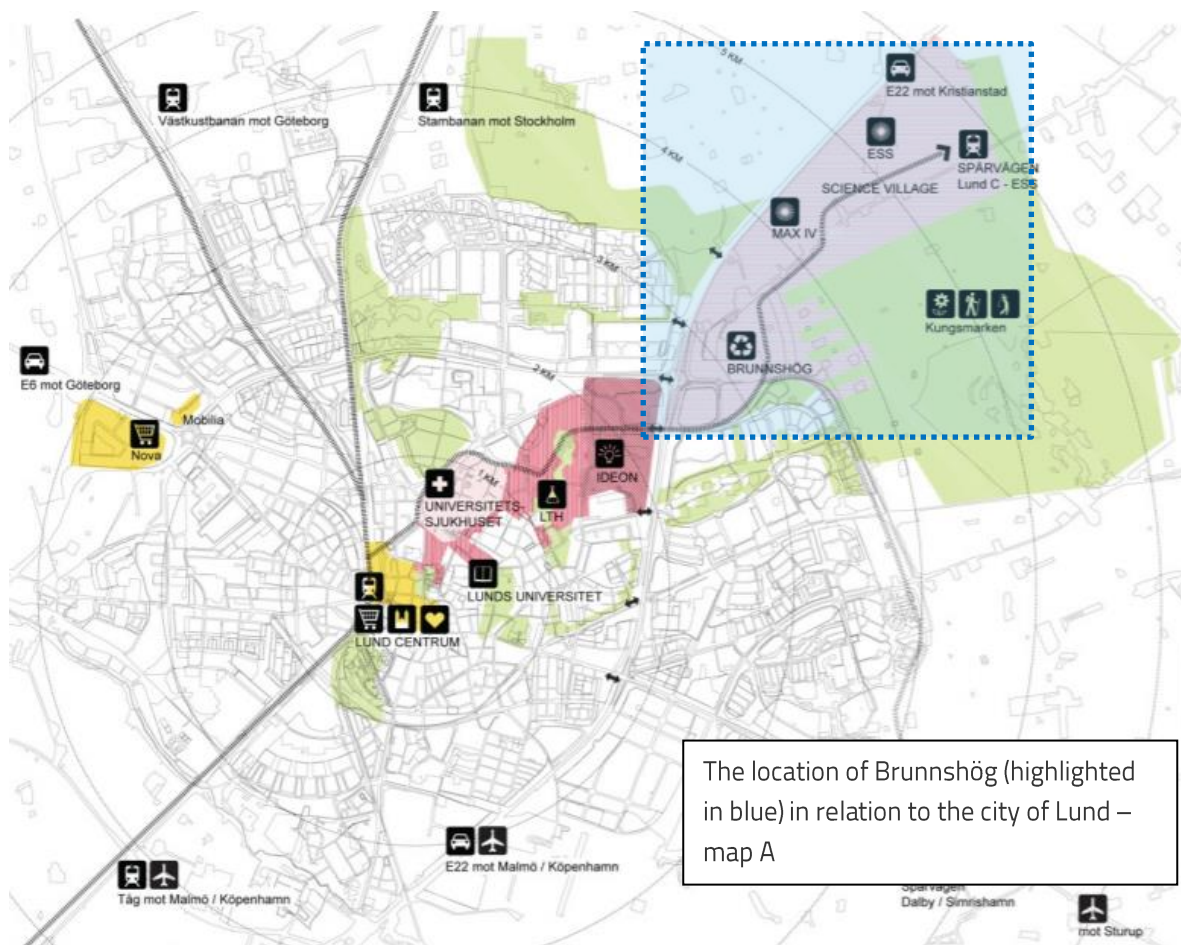
Picture 1 The Ica grocery store complex in Brunnsög will be integrated into a housing block

Specific requirements

Ecological and social sustainability are of paramount importance to this project. The building must be certified as a "gold" standard development by Sweden Green Building Council and therefore, the buildings long-term

sustainability must be ensured. The desired social sustainability achieved by the project is intended to come from close interaction between those living in the block. By providing residents with potential common interests such as the courtyard, greenhouse, the grocery store and large square situated outside the development, we believe it is possible to create a safe and attractive community for people of all ages and backgrounds.

Maps and further information



Maps of the proposed area of Brunshög



