

## CASE STUDY

# HAMMARBY SJÖSTAD, SWEDEN



The Hammarby Sjöstad area was originally intended to be an Olympic village for Stockholm's application to the 2004 summer Olympics. Instead, Hammarby Sjöstad is now the result of a long process of converting a brownfield area into a sustainable waterfront residential neighborhood. Until the initiation of the Hammarby Sjöstad in 1998, the area was previously dominated by small-scale industries in a shanty town with temporary corrugated iron buildings. The soil was heavily polluted from previous use and had to be cleaned before any construction could start.

Today 25,000 people are living in the 11,000 apartments in Hammarby Sjöstad. The final build out is scheduled for 2017 and will then house roughly 26,000 people. The sustainability profile of Hammarby Sjöstad has a strong focus on environmentally sensitive solutions.

Sustainable public transportation is offered with electric trains, biogas powered buses and commuter boats. Biking, walking and car-pooling are also supported means. Residents are offered recycling stations and food waste collection for biogas production. All apartments are connected to the district heating system and the household waste supplies fuel for the district heating plant. In 900 of the apartments biogas stoves have been installed. Some apartments also have solar hot water. The sewage from all apartments is cleaned and used to produce biogas used locally.

## STRATEGIC PARTNERS

Local government, local public transportation agency, private developers and consultants, national transportation agency and Stockholm business region

## FINANCING

The project was funded through local government (around \$700 million, including local investment programs) and private investments (around \$4.4 billion).

## BARRIERS TO IMPLEMENTATION

### FINANCIAL

In the beginning, private developers were hesitant to modify their standard procedures in order to meet the project's environmental requirements, due to higher cost. A small, but important grant in the form of a local investment program from the Swedish Environmental Protection Agency made it possible for developers to meet the environmental goals.

### LIFESTYLE

Since Hammarby Sjöstad was a new residential area, it wasn't residential groups that pushed for sustainable development, but rather the city itself. One of the biggest barriers was how to get prospective residents to comply with the planners' environmental goals and the related behavioral changes. A local information center serving the community has been one way to communicate the ideas of sustainable living.

### SOCIAL

Since the area was formerly occupied by people on the outskirts of society, some criticism arose regarding displacing socially vulnerable groups.



## LESSONS LEARNED

Hammarby Sjöstad is now an upper-middle-class, family-oriented neighborhood dominated by residents in their 30s to 40s with young children. Around two-thirds of the apartments are privately owned, and around one-third are rental apartments.

## **INTEGRATED PLANNING**

Integrating the environmental program into the planning process and ensuring the inclusion of all stakeholders was a key component in getting technical solutions in place. The planning process also provided new platforms for discussing local environmental goals.

## **INTEGRATION**

Using a systems perspective helped Hammarby Sjöstad achieve its environmental goals by linking district heating, sewage treatment, biogas production, and waste management into an integrated system. (It should be noted that this approach is used by most of the neighborhoods in the Stockholm metropolitan area).

## **LACK OF MONITORING OR FOLLOW-UP**

There has been no systematic gathering of data to measure the results of the environmental program. It is neither stated how the environmental goals for the project should be evaluated, nor who is responsible for monitoring each goal. The background and motivation behind the environmental goals was also lacking. The City of Stockholm's intentions were also unclear, since agreements with private contractors and developers did not state that those parties had to comply with the environmental goals.

## **ENVIRONMENTAL GOALS ADAPTED TOO LATE**

The environmental focus for the area came late in the planning process, leading to conflicts over some of the goals identified for the project. The implementation of the project was also complicated by those goals. This issue could have been avoided if the environmental focus for area had been applied in an earlier stage of the planning process.

## **MOBILITY**

With a goal that 80 percent of the travel by people living and working in the area should be done by public transportation, bike, or walking, investments in a high-capacity public transportation system consisting of trams, biogas-fueled buses, and boat buses have been critical.

## **PARKING LOTS**

Hammarby Sjöstad was initially designed to have very few parking lots, but opinions from prospective residents forced planners to increase the number of parking lots. This has caused the area to become more auto-dominated than initially planned.

## **INFORMATION CENTER**

The information center "GlashusEtt" offers education about the project and hosts national and international groups interested in sustainability. The center is considered as an important part of the project since it promotes Swedish sustainability solutions internationally.

## REFERENCES

- Pandis, S., and N. Brandt. 2009. Utvärdering av Hammarby Sjöstads miljöprofilering - vilka erfarenheter ska tas med till nya stadsutvecklingsprojekt i Stockholm. Swedish Royal Institute of Technology, Department of Industrial Ecology.