

Living Sustainably in the Eco-villages of Sweden: A closer look at the Eco-city of Hammarby Sjöstad By Lindsey Gradeen ('13)

In June of 2013, I travelled to Sweden to learn more about the development of rural, suburban, and urban eco-villages across the country. I chose to visit Sweden because the eco-village movement is said to have begun in Sweden in the 1980's through the development of cooperative housing formed around environmental principles. Eco-villages are defined as intentional residential areas that are most often developed in a grassroots manner with the goal of being socially conscious while upholding environmental principles.

My travels brought me to three different eco-villages on the rural to urban scale. This included Hammarby Sjöstad in Stockholm, Understenholgen in a suburban neighbourhood of Stockholm, and Hästekasen Ecovillage in a rural area north of Goteborg on the West coast of Sweden. For the purpose of this article I will further discuss the urban eco-city of Hammarby Sjöstad.

Hammarby Sjöstad

From the 1880's until the 1920's the site of the current Hammarby Sjöstad was home to the city's first public park which included allotment gardens and open air public spaces which were enjoyed by many residents. During the 1920's the ownership of the land changed resulting in the area being extensively used for warehouses and light industry. The land ownership changed hands multiple times, resulting in a constant threat of demolition. Therefore, the buildings were made to be temporary, resulting in a "Shanty Town" resemblance which remained until 1998 (Fig. 1). The concept of Hammarby Sjöstad was envisioned in the 1980's when the goal was to revitalize this area. However, it wasn't until the 1990's when Sweden placed a bid to host the 2004 Olympic Games that the idea of building the world's first eco-friendly Olympic village at the site became a reality. Sweden did not win the bid, but went forward and began to build Hammarby Sjöstad which was started in 2000 with a projected completion date of 2017 (Fig. 2).



Figure 1. From the 1920's-1998. Hammarby Sjostad was an industrial area that had a "Shanty Town" resemblance.



Figure 2. Present day Hammarby Sjostad. A world renowned brown-field re-development.

Hammarby Sjöstad encompasses 200 hectares of land, with 40 hectares featuring water bodies. The development plan of this area calls for a total of 10,800 apartments and 290,000 square meters of office, light industry, and retail use creating a live/work/play environment. Hammarby Sjöstad is also a dense re-development with approximately 115 apartments per hectare which equates to 270 people per hectare. The re-development of the area is also considered to be a collaborative effort as it involves the

expertise of 29 different development and architectural firms, as well as financial contributions from public (€0.5 billion) and private (€3 billion) donors. In 2010 there was a recorded 17,000 people residing in Hammarby Sjöstad. It is project that by 2017 the development will be completed and there will be an estimated 24,000-30,000 people living within the eco-city. A 2009 survey revealed that 52% of residents used public transportation, 21% used a private vehicle as their main source of transportation while 27% were pedestrians or cyclists. While visiting the area I was able to easily use the public transportation system to get to and from as well as within the development. The area was also a very pedestrian and bike-friendly development which contained separate lanes for biking and walking as well as many pedestrian-only areas.

Upon visiting Hammarby Sjöstad, I arranged a meeting with two board members of the organization HS2020, a citizen lead initiative which pushes forward innovation and sustainability within the eco-city. The HS2020 members introduced me further to the Hammarby Model (Fig. 3), which is the model that regulates development and re-development within the area. The Hammarby Model addresses aspects of living using environmental principles which includes how the eco city will address waste, sewage, water, recycling and transportation. The model was built with the goal of achieving a 50% reduction in environmental impact compared to a normal district built in the same decade.

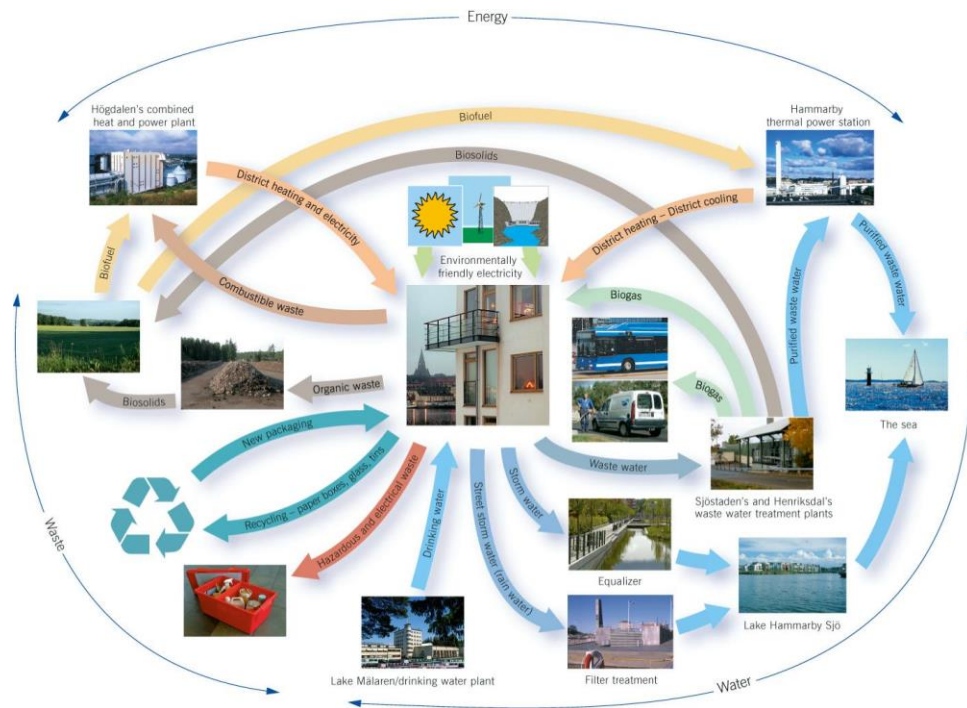


Figure 3. Everybody who lives in Hammarby Sjöstad is a part of an eco-cycle known as the Hammarby Model.

During my visit to the area, I was able to see some aspects of the Hammarby Model first-hand. This included: the use of green roofs to absorb rainwater; the use of a vacuum system for waste collection; rainwater and storm-water runoff system which filters water before it is brought into Hammarby Lake; and a wastewater treatment plant which produces biogas which is then used as fuel to heat residential buildings and to run a percentage of the local buses. Other environmentally sustainable features include: the extensive use of solar panels, a thorough recycling and organic waste collection system, nearby outdoor recreational trails, the integration of social spaces, and the development of a dense and walkable community (Fig. 4). Overall, the eco-city development contained many features of sustainable

living and provided me with a comprehensive understanding of how a brownfield re-development can incorporate many environmentally sound features.



Figure 4. Environmental features of Hammarby Sjöstad.

I would like to thank the School of Urban and Regional Planning for providing students with the opportunity to travel to new and innovative environments to expand our understanding of planning principles and designs.

For more information on the three Ecovillages I visited please visit:

<http://www.hammarbysjostad.se/>

http://www.habiter-autrement.org/04_co-housing/05_coh.htm

<http://www.hastekasen.se/>