In the planning of Hammarby Sjöstad, uniformity was ensured by dividing the overall development area into multiple zones and selecting designers and developers responsible for each zone. Although there are residential and office zones, mixed-use functions are also used to create a lively, bustling atmosphere

Photo by Ola Ericson Source : imagebank.sweden.se

# **Hammarby Sjöstad**

— Stockholm, Sweden 1994-

Developing an advanced environmental city through the use of integrated urban development approach and recycling-based city environment system

## **Key Issue**

Hammarby Sjöstad is an advanced environmental city (or "eco-city") created by brownfield urban development of a waterfront area, situated adjacent to the Stockholm city center. Although the area was once a dilapidated industrial zone facing problems of environmental pollution, it became the site for eco-friendly sustainable urban development, initiated by the intention to serve as an Olympic Village for the Stockholm's bidding for Olympic Games. The project required comprehensive development efforts, working toward the bold environmental goal of halving environmental impact comparing to Swedish standard in the early 1990s.

### **Project Approach**

### Sustainable urban development through a recycling-based city environment system

Hammarby Sjöstad achieved sustainable urban development with low environmental impact through the introduction of a recycling-based city environment system (called the Hammarby Model), which recycles resources such as household waste and sewage discharged from households into heat and electricity. In terms of waste management, the introduction of an automated waste collection system, an advanced environmental technology, in the city's underground spaces has enabled efficient waste management through the use of underground pipelines; and beautiful, clean, garbage-free streets above ground.

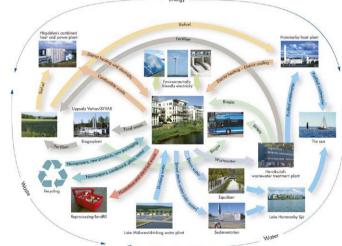


Automated Waste Collection System – Conceptual Diagram In the city's automated waste collection system, garbage inlets connected to underground spaces are installed at various locations, such as apartment buildings and residential courtyards. Sorted garbage is transferred regularly to a waste processing plant via underground pipelines by computer control. Source: City of Stockholm

#### An integrated, city-led approach to urban development

In terms of project management, a multi-disciplinary project team consisting of city planning office, traffic and real estate office (responsible for overall planning), developers and other private business operators (responsible for implementing the actual development), and other various infrastructure-related administrative agencies, was established to reduce overall environmental impact in developing the city. Smooth problem solving at each stage of the project enabled the project team to implement integrated development based on a master plan.





Hammarby Model – Conceptual Diagram

In the Hammarby Model, biogas generated by sewage sludge and garbage is recycled as household fuel. The main portion of this biogas is used as a fuel for public transportation and fuel cells. Source: City of Stockholm

#### Data

Area: 200 ha (of which 50ha are waterways)

Project implementing bodies: Stockholm Municipal Council, etc.
Planned number of housing units: 12,000 Planned population: 35,000 (including commuters) Main facilities introduced:

Transportation-related: light rail (tram) network, ferry, car pooling

Energy-related: combined heating and power plant (thermal power station)

Water supply and sewerage-related: sewerage treatment facility

Waste management-related: automated waste collection system and waste collection stations

# To the Next Phase

The city of Stockholm is currently planning to apply the experiences gained through this project in other new eco-city developments, Specifically, a new development at the Royal Seaport district (site area: 236ha, planned units: 12,000) initiated in 2008 are now underway. With its concept of non-reliance on fossil fuel and walkable city, the project seeks to introduce surplus energy housings (housings that generate more energy than it consumes) and green infrastructure that contributes to disaster prevention and urban warming countermeasure (parks, courtyards, green ways, etc.).













