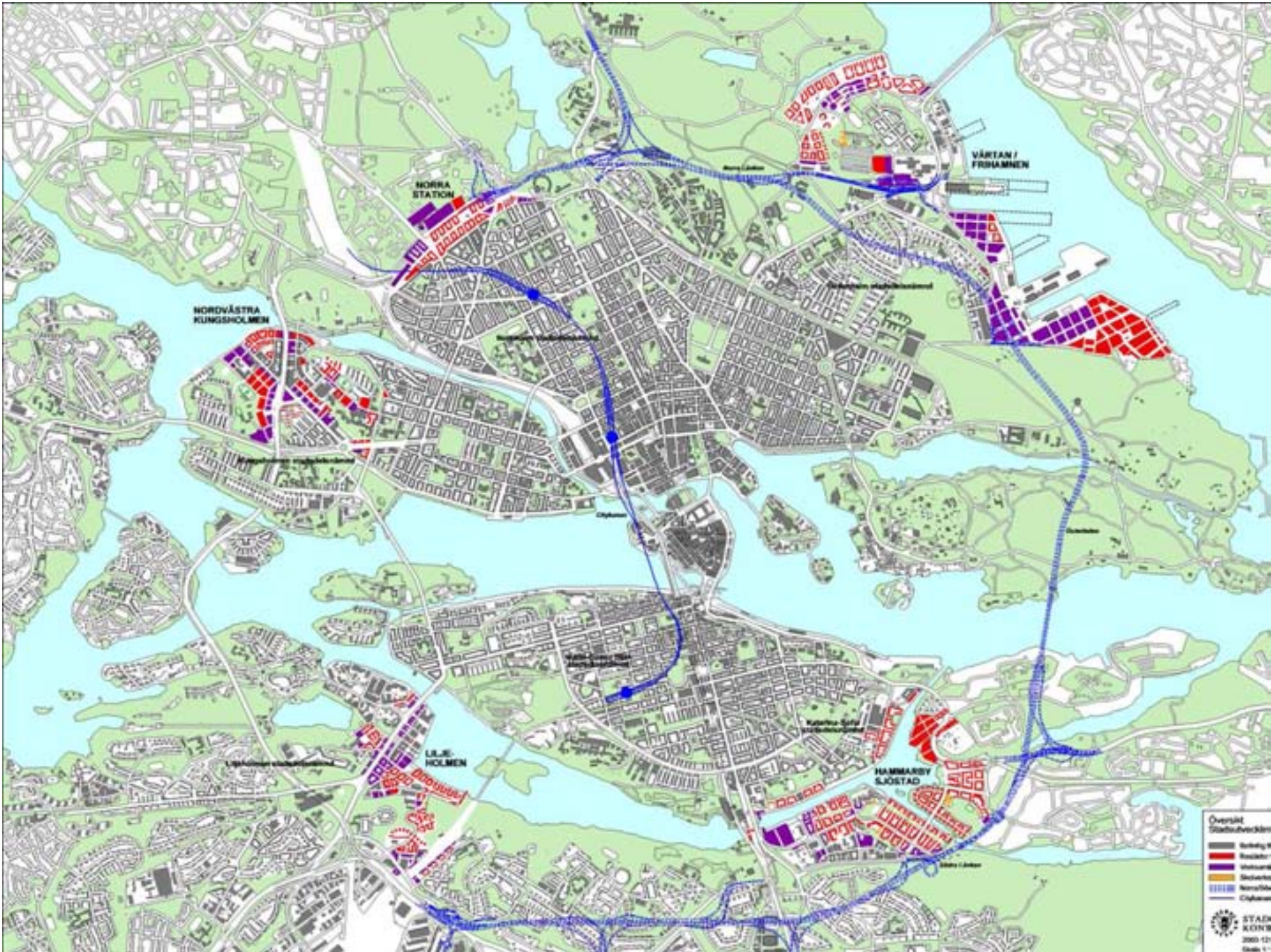


Hammarby Sjöstad

2007



Lars Fränne
Hammarby Sjöstad
Project director



Översikt
Stadsutveckling

- Sjukvård
- Rese- och
- Vård
- Skolor
- Nerebo
- City

STADEN
KÖPEN
2000-12
Skala 1:1



Ventilation tower



Södra Länken
Major traffic road and
tunnel at Hammarby
Sjöstad

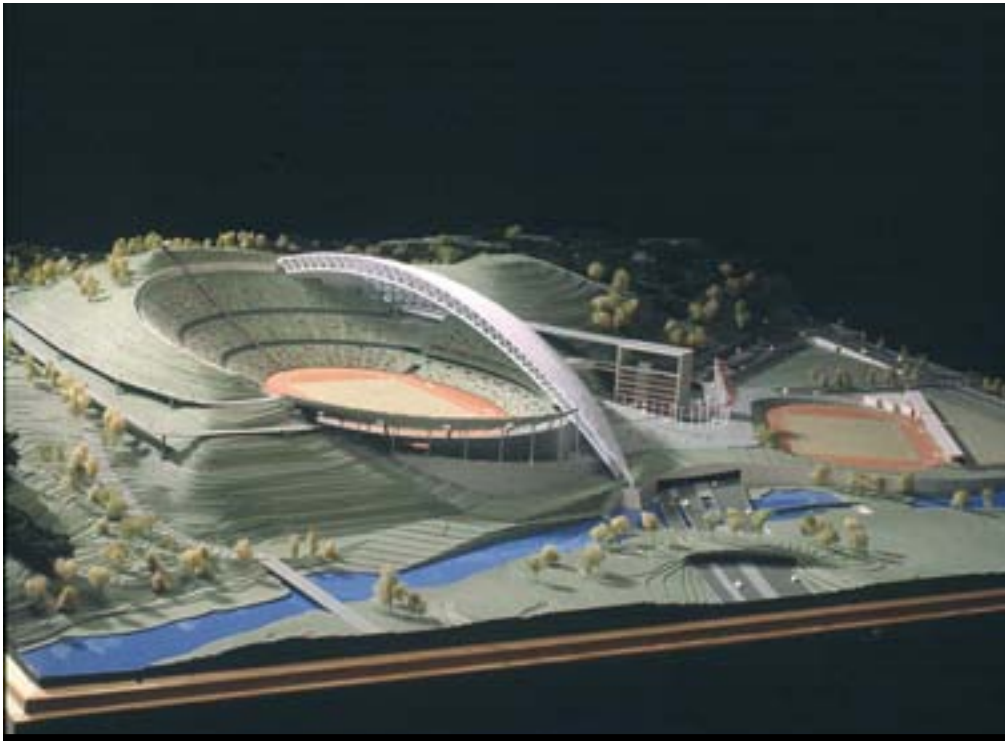


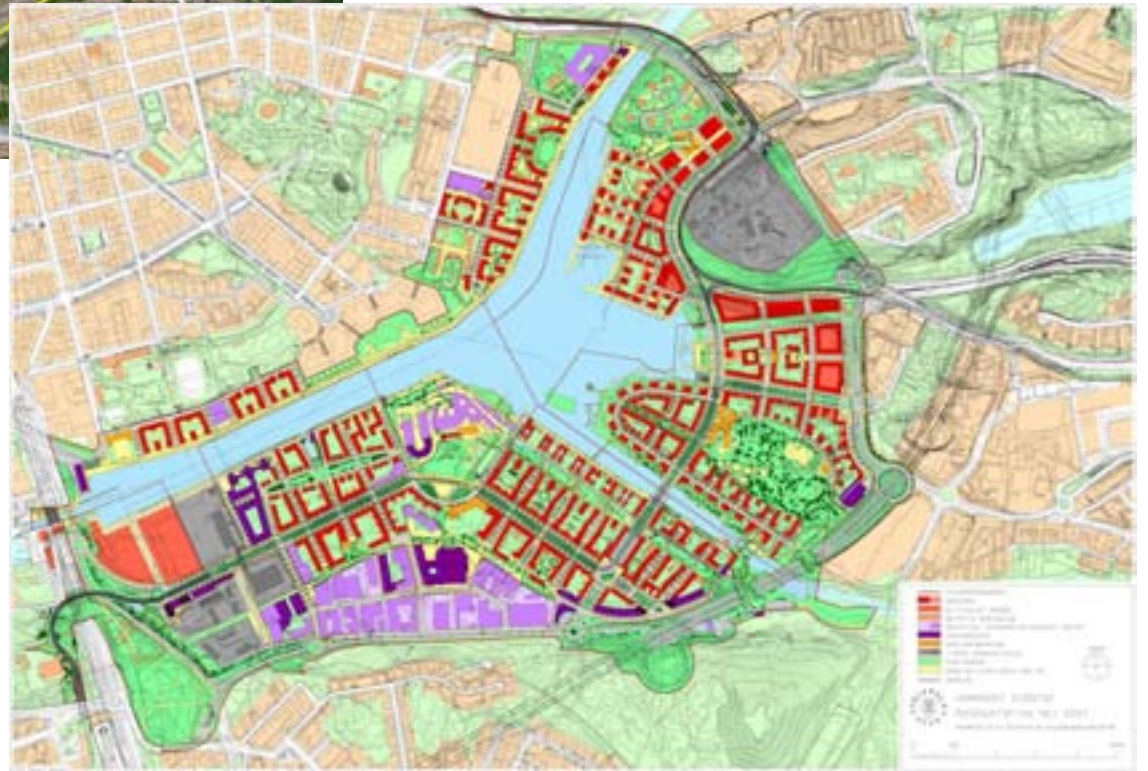
Hammarby Sjöstad, Stockholm, Sweden

Location and background to the project

Greater Stockholm Area about	1.500.000	inhabitants
City of Stockholm	750.000	
Inner City- central part	250.000	
Hammarby Sjöstad completed	25.000	

- * Hammarby Sjöstad is an extension of the Inner City – the free passengerferry connects the north side on Södermalm with the south side which otherwise would be like a suburb**
- * Former mainly harbour and low-intensity industrial and commercial area**
- * Five other similar areas are under way or planned in Stockholm: NW Kungsholmen, Norra Djurgårdsstaden–Hjorthagen , Årstadal, Norra Station
All except the last are on the sea / former harbour areas**
- * Vision of Hammarby Sjöstad started about 10-15 years before it really started 1997
Important start signal which united different parties was Stockholm running för Olympic Games 2004. We lost but the project went on !**







Content and general description of the project

Mainly a housing project with 11.000 flats but also offices and other commercial buildings – existing 200.000 m2 and another 100.000 m2 planned

1.500	completed 1993- 1998 (North side)
5.000	completed 2000- 2007 (South side)
1.500	now under construction
1.000	planned , starting 2008
2.000	to be planned

- * Production rate now is 900 flats a year – half of it condominiums and half for rent.**
- * Rents 150-165 Euros per m2 and year in average.
Ex. ”3 rooms and kitchen” 80 m2 1.000 Euro per month.
The total costs for condos are slightly higher**
- * Some projects with 10- 15 % lower rents**
- * Today very high demand for both condos and rental flats**
- * There is also several restaurants, cafes, small shops etc. in total almost 100 localities**

- * **Hammarby Sjöstad has now , after some initial problems, a very good reputation as an attractive part of the Inner city of Stockholm.**
The public appreciate both the exterior design and the flats but also the diversity and the high standard of the public spaces as parks, water canals, streets etc.
Also the art is much appreciated .
- **The total area is 200 ha, 40 ha is water.**
The city of Stockholm owns most of the land – in some parts the city had to do expensive relocations. The city plan, design, build and finance all infrastructure.
- * **The total cost for public works including soil cleaning and relocations is in average 40.000 Euro per flat and sales and future lease income is 35.000.**
- * **Hammarby Sjöstad is divided in 75 different projects with different developers and architects to make a small scale profile but it is also coordinated through Quality programs for different parts of the area. In total there are 25 developers and 25 architects active in the project.**
- * **Total volume of the whole project is 3500 Million Euro.**





1998



2003







Environmental and sustainability issues

Land Use

- *Brownfields turned into attractive housing areas**
- *Close to the city centre**
- *Close to the sea and recreation areas**
- *New parks and green areas**

Soil decontamination

- *Soil testing to find out which areas is contaminated**
- *Sorting out contaminated soil in situ to be transported to approved waste areas. Clean rest products used for road building etc.**
- *Specific limit values for different kinds of contamination**

Transportation –

main purpose to minimize the need and the use of cars

- *New fast tramway line**
- *Free passenger ferry to Södermalm**
- *Attractive cycling and walking paths**
- *Improved bus communications**
- *Modern car sharing system – car pool**
- *Logistics centre for building materials and storage**





Energy

- * **Energy-effective house construction**
- * **District heating using renewable fuels**
- * **Heat pumps on return and sewage water within the area**
- * **Solar cells and fuel cells– experimental projects**
- * **Biogas for car fuelling in the area**
- * **Biogas for stoves in some projects**
- * **Individual measuring of energy in some projects**
- * **Energy recovery from waste**

Water and drainage

- * **Advanced local sewage treatment plant for developing new technique**
- * **Biogas produced from sludge**
- * **Drainage water from houses, streets etc. treated locally and separately reduced-flow water equipments**
- * **Individual measuring of water consumption in some flats**

Waste and recycling

- * **Sorted waste in several fractions – in the kitchen**
- * **Mobile Vacuum system for transportation of the two major fractions of waste in some areas**
- * **Terminal Vacuum system with compressor for 3 fractions in 2 areas of 2-3.000 flats– up to 2 km transport**
- * **The vacuum system reduces local transport essentially**



DECONTAMINATION AND CLEARANCE. The Sjöstad area previously housed craftsmen's workshops and small industries, which left behind a great deal of pollution. The City of Stockholm's Environment and Health Administration has thoroughly cleared and decontaminated the area to meet the requirements for not posing a health and environmental hazard.



CONSTRUCTION MATERIALS. Environmental considerations apply to all materials used, both the visible materials in the facade and on the ground as well as the materials used inside – the building's shell, the insulation and the equipment. Only sustainable, local and/or eco-friendly products are used.



NON-DOMESTIC STORM WATER, or non-domestic storm water, or non-domestic storm water and rain collected instead of draining into the sewer pipes on the water treatment plant.



WATER. The rain water from the roof is collected, purified in a single solar cell module covering one square metre, provides central 180 kWh/year, which is equivalent to the household energy need for three square metres of heating.



SOLAR CELLS. The light energy of the sun is harvested and transformed into electrical energy in solar cells. The energy from a single solar cell module covering one square metre provides central 180 kWh/year, which is equivalent to the household energy need for three square metres of heating.



STORED WATER DRAINAGE. The rain water from big houses and garages is led into open drains to be absorbed. The water runs into a series of basins, it evaporates and then out into the lake. By depositing storm water as possible locally, the pressure on the treatment plant is decreased.



GLASSHUSES. Specially environmental information came disseminated knowledge via study trips, exhibitions and dissemination of new environmental technology, including fuel cells and the building's double-glazed facade. Gloshuset also plays a key role as a test site for various projects as part of its cooperation with the City of Stockholm's 'Technical visit' projects.

THE BEST ENVIRONMENTAL SOLUTIONS IN STOCKHOLM

Hammarby Sjöstad is an exciting new district on the waterfront in the centre of Stockholm. The district will offer 9,500 apartments for some 22,000 residents.

From day one, the City has imposed tough environmental requirements on buildings, infrastructural solutions and the traffic environment. Integrated planning, innovative solutions and new technologies have been necessary to attain these goals.



SOLAR PANELS. There are 10 solar panels on the roof from the rain water panels in the photo can save half of the building's annual hot water needs.



for panels on many of the roofs and use it to heat hot water. The panels sufficient energy to meet with requirements.



VEGETATION. The main forests, the carefully preserved oak forest, the green surfaces and all the other trees that have been planted help to collect rain water locally instead of it draining into the sewage system and putting extra pressure on the water treatment plant. The vegetation also absorbs dust and provides a contribution to the district's urban landscape.



WATER TREATMENT PLANT. Hammarby Sjöstad has its own water treatment plant that was built to treat raw water from the lake and local raw sewage for purifying water directly being cleaned there. Once the installation, a new water treatment plant may be covering up with more water from the whole of Hammarby.



VACUUM SYSTEM FOR SOLID WASTE AND REFUSE SORTING. Longer items of refuse are removed by vacuum suction from the waste disposal entry through underground pipes to a large central refuse depot. Garbage trucks then pick up the containers with their different containers reducing carbon footprint and handling the environment.



GREEN ROOFS. Roofs covered in growing or water plants are not just an attractive detail. The plants also absorb rain water that would otherwise drain into the sewers, adding to the pressure on the water treatment plant.



ECODUCTS. Two wide bridges have been covered with vegetation and a stone or concrete. Here reserves, as well as services in Hammarby Sjöstad.



over the busy Södra Lånkegränd and provide both a bit more Sjöstad and the entire city.



COMMUNICATIONS. It is densely populated where communication leads to a major environmental impact. Hammarby Sjöstad offers attractive, energy-saving alternatives to private cars, such as the new tram or 'Tramby', buses, ferry traffic, car pools and bicycle lanes and cycle paths.



BIOGAS. Biogas is produced in the water treatment plant from the digestion of organic waste sludge. The waste from a single household produces sufficient biogas for the gas cooker. Most of the biogas is currently used on Hammarby Sjöstad and houses.

Examples of technical solutions

Environmental Load Profile for building, lot, and city district

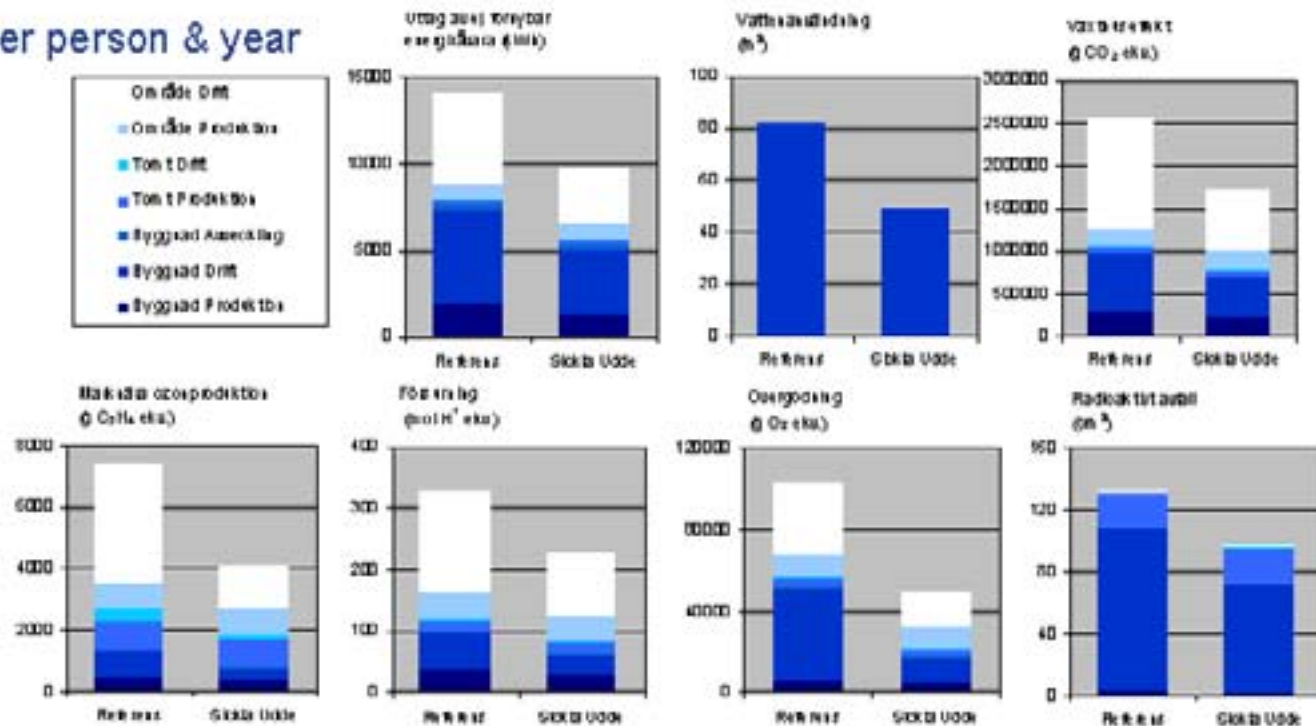
- The major reduction of environmental load stems from the buildings and the city district.

Eutrophication -50 % Photochemical ozone creation -45 %

Clean water use -40 % Radioactive waste -27 %

Global warming potential, Acidification and extraction of non-renewable energy carriers -30 %

ELP per person & year





4.2 Design guidelines

- architectural coordination
- colour schemes
- material qualities
- parks and streets
- lightening etc
- public art




Kvalitetsprogram för gestaltning av

SICKLA KAJ

DP 1997-01274-54 och DP 1999-08726-54





Project conclusions for Hammarby Sjöstad:

- *vision* for urban design and architecture
- *organization* for integrated planning, development and implementation
- urban planning *management*
- *environmental* program

HAMMARBY SJÖSTAD handlar om:

- *visioner* för stadsbyggande och arkitektur
- en *organisation* för integrerad planering och genomförande
- en *process* för planering och genomförande
- ett *miljöprogram* för hållbart stadsbyggande



HELA DENNA BILAGA ÄR FINANSIÖRS FRÅN VILLATIDNINGEN I SAMARBETE MED HAMMARBY SJÖSTAD

Hammarby Sjöstad nu & i framtiden

Man blir glad
av att bo här

Byggkranarna
är tillbaka

En pärla mitt
i Stockholm