Western Harbour-
A new Sustainable Citydistrict in Malmö

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Western Harbour

Malmö, Sweden
The Comprehensive Plan
Attractive and Sustainable City
Visionary work in 1995 focused on two major future scenarios:

- A University
- More diversified housing
Congress, Concert and Hotel
Media Evolution City ska bli ett världsunikt centrum för innovation och utveckling av media. Beräknas stå klart: våren 2012
Structural plan
Steps toward sustainable living

1. Ecovillages

2. Demonstration projects – Millennium Village, our Bo01

3. Third generation – mainstream

4. And what’s next? Vision
Demonstration project Bo01-first phase in the development of a national example of urban sustainability
The demonstration project

- 22 hectares of land
- 1247 apartments
- Approximately 2254 inhabitants
- Mixed development
Pedestrians, boating and bikes have priority
Basic human needs of enjoyment, comfort, surprises and quality of life…
Variety of forms, colours, shapes and moods
Five stories or less…
Diversity…
Water and foliage... for biodiversity and people
Public space for all – no gated community
Parks, sea and green roofs...
Stad för mångfald och möten
AV KLAS THAM

Den byggda miljön skall erbjuda ordning, reda och användbarhet. Den skall vara begripelig.


Boplatsen Bo01 utgör första etappen i Västra Hamnens omvandling till en ny, komplett stadsdel för boende, arbete, studier och service. Stadsdelens skall ha den “stadsöverskätta innerstadsens” karaktär enligt Malmö Stads översiktsplan för området. Ambitionsnivån ligger mycket högt – det självklara målet är en underbar stadsdel att vara i.

Tv:
Illustrationsplan som representerar den mångfald av byggnader som var planerad. Varje färg representerar en byggnad.

Th:
Illustrationsplan till den preliminära detaljplanen.

Tv:
Plan, eftersom 2000.

Th:
Den slutgiltiga illustrationsplanen till detaljplanen.

Tv:
Tidig skiss av Klara Tham.

Th:
Malmö stads översiktsplan, se också sid 12-13
Lots of small projects

- 20 developers
- Over 30 different architectural firms
Ecological sustainability

- Energy system
- Waste system
- The green parts
- Mobility management
- Cleaning the soil
- Environmentally adapted building process
Energy – 100 % locally produced renewables
Energy production

- **Electricity** from a wind power (and photovoltaics minor prod., 180 sq metres)
- **Heat** from solar collectors and a heat pump (aquifer and sea water)
- **Cooling** from heat pump and aquifer
- (Bio gas – minor prod.)
Heating and cooling

Wind turbine  Solar collectors  Photovoltaics cells

Heat recovery  District heating/cooling  Aquifer Heat pump
Office building Jungmannen - lowest energy consumption in Sweden

- BBR 104
- 78 -25%
- 45 -56%

Requirements Swedish National Board of Housing, Building and Planning

- Requirements “Green building” 25% lower than BBR
- Energy consumption Jungmannen
The Eco-Cycle City

- Biological waste is separated
- Food waste disposers
- Underground tank
- Vacuum collection vehicle
- Biogas digester
- Convenient collecting system for reuse of paper, glass, cardboard...
Biodiversity and Local Stormwater Management

- Green area factor – 50% of the plot green
- Biodiversity
- Storm water in open channels and ponds
Environmental Transport System

- Mobility management information and persuasion
- Bicycling and public transportation – 2 buslines, 6 minutes
- Motor vehicles traffic is restricted
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Third generation – mainstream!

- The creative dialogue – a new process for planning
- 600 apartments
- 60 % affordable rentals
- 13 developers
- Building process completed 2008
The Swedish Government's Environmental Advisory Council initiated "The Creative Dialogue" to sustain voluntary commitments within the construction and real estate sector which leads to decreased environmental charge.

The dialogue was started in 1999. The commitments were signed in 2003.
The Creative Dialogue – subproject 1

- Not a method – an approach!
The Mission of the Creative Dialogue:

- Large amounts of rental apartments
- Sustainability – ecological, economic, social
- From extraordinary to ordinary
- Social and economic sustainability in focus
- Ecological sustainability as mainstream!
The Challenge

- Many developers – many desires
- Unaccustomed to the way of working
The Process

- Mutual agreement between developers and the city of Malmö
- The process and the cooperation more important than the actual agreement
- Seminaries, study visits, discussions
- Workshops and education
- Checklist for follow up in connection to construction consultation and finishing meetings
- Follow up with the help of IVL/master students
Ecological sustainability

High environmental ambitions – experiences from Bo01

Program for ecological development as a base, special focus on:

- **Effective use of energy**
  - 120 kWh/sqm/year temp

- **Moisture proof construction**
  - moisture responsible, cooperation with moisture center

- **Biological quality**
  - green points

- **Material**
  - construct with BASTA

- **Sorting close to property**
Social sustainability

- Meeting places – public spaces
- Mixed city planning
- Social service
- Adaptation of housing gives the possibility for prolonged residency
- Safety and security
- Various mixed tenures
Economic sustainability

- Reasonable rents (receives govermental funds) – about 1300 kr/sqm/year
- Low maintenance costs and life-span
- Attractivity
What’s new?

- From extraordinary to ordinary
- Process beats contracts, collaboration before negotiating
- Social and economic aspects are in focus
- Sustainability goes mainstream
What’s the same?

- The emphasis on human needs and attractivity
- Green area factor – biodiversity
- The small projects and diversity
What’s prioritized?

- Energy efficient buildings
- Non-toxic materials
- Waterproofed building process
- Accessibility
- Safety
- Affordables
Evaluation - negative

- Duration of meetings
- Difficult management with many developers
- Unclear responsibility of the public space
- Some questions to dominating
Evaluation - positive

- Lively and creative discussions with developers
- Nice cooperative climate
- Easier building permit process
- Creative cooperation
- Development of competence
- School of developers
- Normal duration
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Mainstream and demonstration project!

- "Bo02" – agreement startingpoint - standard

- Every project shall have it’s own sustainable profile
Bo03, Fullriggaren

Increased sustainable efforts - 75% Low energy houses, 25% passive houses
Sustainable Fullriggaren

- Solar panels
- Solar cells
- Urban wind power
- Green walls
- Natural ventilation
- Wooden carcassing
- Separate system for waste disposal
- Car Pool
- Energy calculation for all buildings (sustainable coordinator)
Environmental certification
Case: Varvstaden and Masthusen
Varvsstaden
1 500 Apartments
Workplaces for 5,000
The common goal is that Varvsstaden should be an attractive area with a clear identity in sustainable and innovative urban development.

Valuebased planning in Varvsstaden
What’s next? Visions..
Vision!

- Pursue the ambition to build attractive, exciting and surprising public space
- Attract visitors – a concert hall?
- Less posh – wilder
- Neutral carbon dioxide
- Less cars – more people
- More mixed use – integrated approach and space
- New demonstration project Bo03
Success factors

- New regional context – The Öresund Region
- Strong political leadership
- Visionary work 1995
- Economic dynamic period
- Political stable period
- Monitoring the problems
WMU, Urbana hängslen
Media Evolution City
Utbildnings- och administrationslokaler för MAH
Utbildnings- och kommersiella lokaler, bostäder, kultur, m m.
Vision – stadsförnyelse
Beijerskajen, Universitetsholmen