

## Sustainable buildings and energy efficiency

### Västra Hamnen, Malmö

#### **The project**

Västra Hamnen, the regenerated brownfield site, is now home to a densely populated mixed-use neighbourhood of 600 apartments with integrated commercial activities. It is located on a 30-hectare site and is intended as an international flagship of dense urban development. Public funds were used for land reclamation, environmental improvements, infrastructure and green transport. The private sector developers funded the housing and commercial development. Västra Hamnen is also home to the Turning Torso (Figure C.18), the mixed-use high-rise tower designed by Santiago Calatrava.

#### **Sustainability features**

Its ecology is enhanced by designing in green space, planting, 'green roofs', and fast growing trees for harvesting and use as biofuel. 100% of the energy used in the district is from renewable sources, including wind power and photovoltaics, biogas from processed waste and sewage, heat pumps and solar collectors – there is

zero importation of energy. Rainwater runoff is controlled, collected and processed centrally. The sewage system is designed to extract nutrients and heavy metals for re-use, while significant amounts of organic waste is transformed into biogas. The streets are car-free with limited parking (one space per dwelling) and a shared pool of electric cars. Priority on streets is given to pedestrians, cyclists (Figures C.19 and C.20) and gas-fuelled buses. To help residents achieve a more sustainable lifestyle there are good communications, in particular a neighbourhood broadband network giving environmental advice, bus times, and monitoring energy and water use.

#### **References and links**

City of Malmö (2002) *Västra Hamnen The Bo01-area: A City for People and the Environment*.

Retrieved from the World Wide Web on 27th July 2004. [http://www.ekostaden.com/pdf/vhfolder\\_malmostad\\_0308\\_eng.pdf](http://www.ekostaden.com/pdf/vhfolder_malmostad_0308_eng.pdf)

City of Malmö (2002) *Bo01 – An Ecological City of Tomorrow in the Western Harbour, Malmö*. Retrieved from the World Wide Web on 27th July 2004.

[http://www.ekostaden.com/information/ekostaden\\_tpl\\_01.aspx?pageID=93&parentID=176&sectionID=4&level=4&introID=146](http://www.ekostaden.com/information/ekostaden_tpl_01.aspx?pageID=93&parentID=176&sectionID=4&level=4&introID=146)

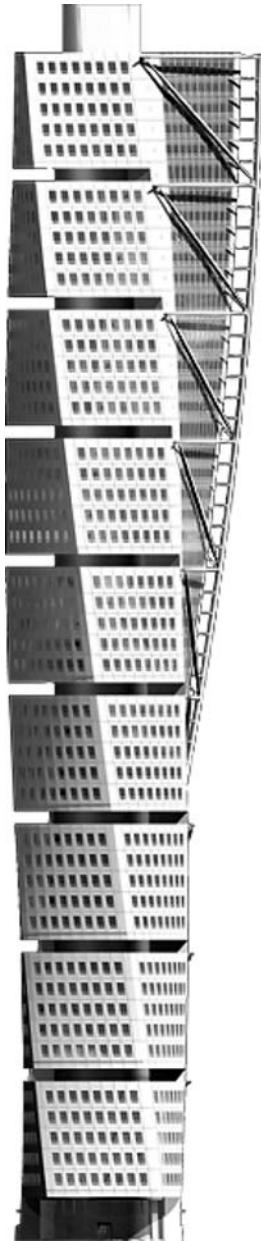


Figure C.18  
High rise is not necessarily unsustainable – the Turning Torso.  
(Source: [http://www.turningtorso.com/e\\_fakta.asp](http://www.turningtorso.com/e_fakta.asp))



Figure C.19  
Modern and sustainable design making use of car-free streets.  
(Source: Nicholas Low.)



Figure C.20  
Ecological care of the new environment. (Source: Nicholas Low.)