Western Harbour, Sweden

**DESCRIPTION**
Western Harbour is a modern city-front development on former brownfield land. The development was planned as a stand-alone community in close proximity to goods and services. It has its own energy system with 100% locally produced renewable energy, proving that a zero CO₂ vision is possible. The first phase was built in 2001 and demonstrates several integrated solutions for sustainability. The strong architectural focus of the development is highlighted by the spiralling skyscraper ‘turning torso’, which is Sweden’s highest residential building.

**DISCUSSION**
Malmo is Sweden’s third largest city and is located in the south of the country. It was historically an industrial city that saw its population decline in the 70s and 80s in line with an economic downturn. It experienced a renaissance in the 1990s thanks to the vision and leadership of its then mayor, who transformed the city into an eco-centre.

On-site stormwater is all managed above ground, which promotes the connection of people with water and its impacts. The development has a strong focus on community with a number of public places, including aqua spots, becoming popular recreational gathering points. It is pedestrian friendly, with minimal access for cars. Private outdoor spaces also have low or no fencing which promotes communication between neighbours.

The development has a strong sustainability focus with a number of energy initiatives to enable the 600 lot housing site to use 100% locally produced renewable energy. Initiatives include roof top solar panels, wind turbines and the use of waste and food scraps to produce energy. Individual metering of each household also enables residents to see and manage their energy use which promotes conservation.

The development implemented a number of sub-projects, as part of the overall project, including the development of an international section called the ‘European Village’, where countries from around Europe were invited to develop a house which represented their origin. For the most part, this was a success, although it posed some challenges due to different regulations from their respective countries.

**PROJECT INFORMATION**

**Drivers**
The city hosted a housing expo, showcasing energy efficient housing and energy neutral developments.

A desire to transform a previously unused piece of industrial area into an attractive, energy neutral, residential development.

**Costs**
The total costs for this project are unknown as each developer carried their own costs.

**Funding source**
It was primarily developer funded with assistance from the municipal housing company.

**Delivery time frame**
Regeneration of the Western Harbour area was highlighted through the B001 housing expo in 2001. This was the first stage of regeneration to be completed. The last development in the Western Harbour will not be finished until 2030.

**Communication**
Marketing the city of Malmo as an ‘eco-centre’ attracts many study tours every year. The success and learnings from the project have been widely communicated with key stakeholders including the local university, sustainability groups and residents, providing information about the unique energy and water systems.

**Ongoing monitoring**
Energy use is continuing to be monitored and used to inform residents of their energy use. Maintenance is carried out by council and a body corporate for the development.
CHALLENGES
1. Delivering on low energy targets.
2. Providing a village atmosphere through the creation of community places and limiting vehicle access.
3. Marrying energy targets, initially modelled in the housing, with residents’ energy usage behaviours.
4. Building a multi-country section within the development to showcase international eco-homes and achieving Swedish standards and regulations for its construction.

OPPORTUNITIES
1. Use of central waste management.
2. Integrating and promoting energy efficiency with architecture.
3. Creating a community atmosphere within a high density development.
4. Implementation of a public transport system at the commencement of development.
5. Use of food waste and rubbish for generation of electricity and heating.
6. Building a demonstration project to showcase international eco-homes in the city’s housing expo.

Western Harbour development is a great example of how a high level vision can be transformed into tangible outcomes on the ground. There are a number of opportunities in Australia for energy focussed development, and this project is a great example of having an energy self-sufficient site while still maintaining a modern architectural appeal.

There are many examples in Australia of high density water front development where the main water body (such as a river or bay) is the focus; however Western Harbour illustrates the connection with water in a much more integrated sense. Having a strong focus between water and community was a highlight of the development with much of the community open spaces and meeting places focussed around water and integrated throughout the development along with the larger surrounding harbour.

AUSTRALIAN CONTEXT
Over the past 20 years Malmo has transformed itself into an eco-centre and is no longer the industrial city it was once founded upon. A major factor in the successful transformation of the city has been the long term and consistent vision by the city’s local Government. Much of the success on the ground has been through the high level of involvement with the community when redevelopment occurs.

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ABOVE: Stormwater is highly visible and well integrated throughout the Western Harbour development providing residents with landscape architectural features, play elements and “meeting points”.

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