

Malmö, Sweden

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The City of Parks



Ribersborg Beach with views of the Turning Torso. This 2km long beach is located within walking distance of downtown Malmö. The Turning Torso was designed by architect Santiago Calatrava and is becoming the new symbol for the city. Source: Frederik Tellerup © Malmö Turism

Map of Sweden
Source: <http://www.cia.gov/cia/publications/factbook/geos/sw.html>

Malmö has historically been known as The City of Parks because of a number of key anchor parks that date back to the early 1900's. The city has also taken advantage of its location on the sea with a number of public beaches in close proximity to the city center. The system of canals within the historic city provide additional recreational opportunities.

Despite the city's reputation for open space, Malmö has fallen behind other major Swedish cities in terms of green space within the city. The city currently has 33 m² per inhabitant of green space while Sweden's other large cities have an average of 100 m² per inhabitant. Few new open spaces were added during the industrial age of the city. The area surrounding the city has remained primarily privately owned agricultural land.

Entering the 21st Century, the city has begun the transition from an industrial city to a city of information and knowledge. Malmö is at the center of a densely populated region and is beginning to feel the pressure to expand and grow. This development pressure has put the city in a unique position to guide its growth in a sustainable direction.

With leadership from the Swedish government, Malmö has been working towards re-inventing itself as an ecologically sustainable city. Through a number of key policies, including Malmö's Local Agenda 21, Malmö's Environmental Programme, and A Green Plan for Malmö, the City of Malmö has set the stage to not only improve the green space in the city, but the overall quality of life.



The green and blue elements in Malmö must be given greater prominence. Elegant turn-of-the-century parks have given rise to the epithet of Malmö as "the city of parks", but today these no longer suffice for the inhabitants' needs for outdoor and recreational areas. (Malmö's Comprehensive Plan 2000)

City Statistics

City Population: 269,142

City Area: 38,548 acres

Density Level: 7.0 inhabitants/acre

Park Acreage: 4,626

Park acreage per 1000 residents: 17.1

Governing bodies: City Council, Streets and Parks Department, Leisure, Recreation, and Sport Department, the Environment Department, the City Planning Office

Context

Malmö is Sweden's third largest city and the commercial centre of southern Sweden. In the 1970's, a recession in shipbuilding caused economic decline in the city, leaving abandoned industrial and docklands along the coast to the north of the city. Now, however, there are signs of economic revival, and many of these sites are in the process of redevelopment.

Malmö receives guidance and financial support from the strong Swedish national government. Many policy objectives are started at the federal level and the city is expected to implement those policies through local policies, plans, and regulations.

The City of Malmö is governed by a 61 person City Council elected directly by the citizens of the city. The City Council then elects an executive committee consisting of a chairman, first vice-chairman, and second vice-chairman. The Council makes both practical and visionary decisions for the city and passes these directives down to the city government's committees and departments to implement the policies. The city departments that relate to green space include the Streets and Parks Department, the Leisure, Recreation, and Sport Department, the Environment Department, and the City Planning Office.

The city has diverse ecosystems varying from coastal areas, wetlands, woodlands and grasslands. Some distinct biotopes include: the alder swamp, the beech woodland, the oak woodland, and the marine zone.



The Øresund Region

Malmö has become increasingly important in the Øresund Region. The Øresund Region refers to the land bordering the Øresund Sea on both the Swedish and Danish sides. The Øresund Bridge was built in 2000, connecting Copenhagen and Malmö. Malmö has become a gateway city and has attracted business because of this connection to Denmark.

The Øresund Bridge Source: Frederik Tellerup © Malmö Turism

Map of the Øresund Region Source: <http://www.visitoresund.info/composite-399.htm>

Major Components

Anchors

Malmö has a number of parks that act as anchors for the larger open space system, including: Kungsparken, Slottsparken, Slottsträdgården, Pildammsparken, and Folkets Park. Water recreation and beaches are also an important part of the anchors, including Ribersborg Beach and Ribbens Kallbadhus.

Civic

Malmö, like many European cities, is known for its civic spaces, squares, and plazas. Some of the more famous plazas include: Stortorget, Lilla Torg, and Gustav Adolf's Torg.

Residential Courtyards

Many housing developments have courtyards that provide community open space for the residents. An increased effort to involve residents in the design and maintenance of these sites has created better used spaces that residents have ownership over. Depending on the needs of the residents, these courtyards may provide passive green space or space for active recreation such as playgrounds. In new residential developments, the Green Area Factor requirements, which will be discussed later in the report, create ecologically beneficial open space in courtyards.

New Parks

Three new parks were created associated with the new Western Harbor development. Each park was designed with a specific focus on ecological sustainability. Ankarparken, The Daniaparken, and Sundspromenaden each connect people to the water in this newly developed neighborhood. Sundspromenaden is a 220-meter-long esplanade along the seashore.

Connective corridors

Malmö has an extensive network of bike trails. The Green Plan for Malmö calls for improvements in the green network of the city. The proposal includes a total of 16 new green corridors. Many of the proposed corridors extend existing corridors into the countryside to develop connections to water courses, ponds, and other habitats. The proposed green network can be seen below.



A proposed green network from A Green Plan for Malmö 2003.



Folkets Park

Source: Malmö Turism



Slottsträdgården

Source: Frederik Tellerup © Malmö Turism



Ribersborg Beach

Source: Jan-Erik Andersson © Malmö Turism



Stortorget

Source: Frederik Tellerup © Malmö Turism



Sundspromenaden

Source: Frederik Tellerup © Malmö Turism

We must pass on to the next generation a Sweden where the major environmental problems have been solved. (Ministry of Sustainable Development. Swedish National Government)

The Swedish Parliament has adopted fifteen objectives relating to the quality of Sweden's environment to be achieved by the year 2020. The fifteen national environmental objectives are:

1. Reduced Climate Impact
2. Clean Air
3. Natural Acidification Only
4. A Non-Toxic Environment
5. A Protective Ozone Layer
6. A Safe Radiation Environment
7. Zero Eutrophication
8. Flourishing Lakes and Streams
9. Good-Quality Groundwater
10. A Balanced Marine Environment
11. Thriving Wetlands
12. Sustainable Forests
13. A Varied Agricultural Landscape
14. A Magnificent Mountain Landscape
15. A Good Built Environment

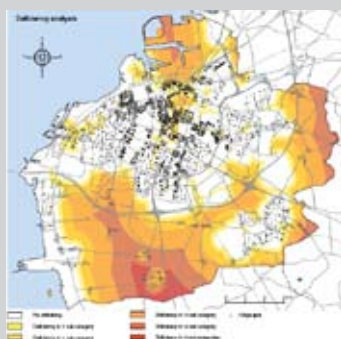
A Sustainable Policy Agenda

The strong leadership of the Swedish Government guides much of Malmö's policy related to open space and sustainability. In order to speed the transformation to a sustainable society, the Swedish Government allocated SEK 7.2 billion for the period of 1998-2003 for grants to local investment programs. Malmö has benefited from a number of these grants for specific projects.

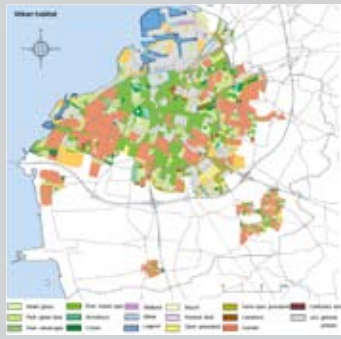
Malmö's Local Agenda 21 states the long-term sustainable development objectives of the city. The policy is a response to the Global Agenda 21 adopted at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro. LA 21 is based in the City Department of Environmental and Public Health Protection. Malmö's LA 21 efforts in the year 2000 enjoyed a financing of about 4 million Swedish Kr.

One of the ways the Local Agenda 21 is being implemented is through the Environmental Programme for the City of Malmö 2003-2008. This document is a platform for environmentally sustainable development and contains concrete environmental objectives for the city and an action programme. The plan has 58 environmental objectives categorized into fourteen general topics. These topics range from reduced climate impact to thriving wetlands and healthy forests. The fourteen topics were taken from the objectives created by the Swedish Parliament and Government as part of a national environmental program. The objectives set forth in this program will be incorporated into all of Malmö's city departments. The planning process for this document involved experts from municipal departments, local urban district committees, citizen groups, and private companies.

Deficiency Analysis from Green Plan for Malmö



Urban Audit from Green Plan for Malmö



Local Agenda 21, the Environmental Programme, as well as the City of Malmö's Comprehensive Plan of 2000 helped to shape the Green Plan for Malmö 2003. Realizing the importance of green space for the future of Malmö, the City created this plan to ensure that it provided green space for future generations. This Plan is a long term strategy that focuses on formulating targets and guidelines for green space in the city from a recreational and biological perspective. It lays out an implementation plan that acts as technical support to the City's Comprehensive Plan 2000 regarding green spaces.

The Parks and Streets Department, the Planning Department, the Leisure Department and the Estates Department were all involved in creating the plan. The plan analyzes the range of recreational environments in the city and sets guidelines for access to parks, natural areas, and recreational areas of different sizes including greenery, neighborhood parks, district parks, city parks, and larger natural and recreation areas. Areas deficient in access to these categories were identified in the Deficiency Analysis on the left. An urban audit was completed which identifies green, permeable areas and nongreen areas within the city. This map can be seen on the bottom left.

The basic framework created by the Green Plan includes a green network, improved recreational opportunities, green corridors in the countryside, and a greener city. The goal of the plan is to have an increase of green space per inhabitant from 33m² to 48m² in the urban area and increase the area of accessible green space in the countryside from 2% to 33%.

Ekostaden - The Eco-City

The combination of Malmö's focus on sustainability with the pressure to develop has led to two extremely innovative development projects. In 1998, the City of Malmö was allocated SEK 147 million in local investment program grants from the Swedish government for different projects. Augustenborg, the largest project, consisted of the redevelopment of an existing housing project. Western Harbor consisted of redevelopment of an industrial shipyard into a new housing project.

Augustenborg

Augustenborg was a social housing project built in the 1940's that experienced neglect and economic decline. The city has been working with residents, students, and workers in this area to create a truly sustainable neighborhood. There has been a focus on ecological, economic, and social sustainability. The project has used innovative stormwater techniques to manage the flooding that often occurred in the area. This area is leading the way in green roof technology and is host to the Augustenborg Botanical Roof Garden.

Western Harbor

The development at Western Harbor began with the European Housing Exposition Bo01 - The City of Tomorrow. The focus of this development was on sustainability. The city provided renewable energy sources, waste recovery, IT, ecological features and green transport. This was funded through a local investment program grant. Biological diversity is a key component to all of the open spaces in the site. Innovative stormwater management techniques and green roofs are used in this development as well.

Green Area Factor

Perhaps one of the most innovative strategies used in new developments in Malmö, such as Augustenborg and Western Harbor, is the minimum standard requirement for green area factors. Green Area Factor, sometimes called Biotope Area Factor (BAF) is a tool that can be used to measure the ecologically effective land area of a development. The ecologically effective area is defined as the area of a development that is somehow contributing to ecosystem function through stormwater drainage or habitat. Surfaces such as grass, gravel, vegetation, and green roofs are given a score rating based on how much they contribute to ecosystem function. For example, a surface of concrete or asphalt would get a score of 0.0 while a green roof would get a score of 0.7 and a surface covered with vegetation would get the highest score of 1.0. This rating is then multiplied by the total area that feature covers of the development. Adding up all of these scores gives you the ecologically effective area. This ecologically effective area is then divided by the total area of the development to give you a final green area score. The City of Malmo sets minimum standards for what this score has to be. The developer then has the freedom to implement any number of green features to reach the score. Images to the right show courtyards with vegetation and gravel paving that contributed to the minimum green area score.

Example:

Surface Type and Area	Green Area Factor	Points
115 m ² covered by vegetation	1.0	115
85 m ² mosaic paving	0.3	25.5
Total		140.5

If the total area of the development was 479 m², then score would be calculated:
 $=140.5/479 = 0.3$. The total Green Area Factor score is 0.3



Retention Pond -Augustenborg
 Source: Steve McConnell, i-sustain.com



Playground - Augustenborg
 Source: Don Carlson, i-sustain.com



Green Roofs - Augustenborg
 Source: Jim Mueller, i-sustain.com



Residential Courtyards displaying use of Green Area Factor in Western Harbor
 Source: Dara O'Byrne



Stormwater management in Western Harbor creates a water feature in a central courtyard.
 Source: Dara O'Byrne



Stormwater management and green space in Western Harbor
 Source: Dara O'Byrne

"A "green points" and "green space factor" inspired by the Berlin city codes requires developers to provide for onplot vegetation such as planted roofs and surface watercourses." Chris Hancock from *Toward a Sustainable City*.



Sunflower with Turning Torso in background
Source: Frederik Tellerup © Malmö Turism

Lessons Learned

Strong national and local environmental policies are shaping the future of Malmö. With a clear focus on sustainability, the city has been able to reinvent itself as an eco-city, or ekostaden. The city has been able to use the growth and development pressure it is experiencing to its advantage to create sustainable developments. These projects have become international leading examples of ecological adaptation of dense urban development. Requiring developers to provide specified ecologically effective areas in new developments has significantly increased the green space in these developments. The green area factor method gives developers flexibility in how to achieve the minimum requirements, thus providing opportunity for innovation.

Malmö has chosen to embrace new development as a way to display the city's environmental agenda, instead of viewing development as a threat to green space. Seattle can learn a great deal from this case study. Working with developers to improve the ecosystem functions of private development would be extremely beneficial for Seattle. This would allow the city to continue to densify while maintaining important green space. This, in coordination with a visionary green space plan such as The Green Plan for Malmö, could lead to a more green and sustainable Seattle.

Resources

A sustainable city – ecological transformation in Malmö. www.ekostaden.com

Bo01 – An ecological City of Tomorrow in the City in the Western Harbour, Malmö. www.ekostaden.com

Bo01 – The Green City of Tomorrow. www.ekostaden.com

City of Malmö website: www.malmo.se/

Environmental Programme for the City of Malmö 2003–2008. The Environment Department

Gormsen, Dagmar. Creating a livable city: The value of green space development From policy to action: Green space in new and existing housing in Malmö. June 2004.

Green Plan for Malmö 2003. City of Malmö, Sweden.

Hancock, Chris. Towards a Sustainable City. Urban Ecology – City of Tomorrow, Bo01-area in Malmö, Sweden.

Helphand, Kenneth. Housing the Future: A Swedish housing exposition aims to marry sustainability and urban form. <http://www.asla.org/nonmembers/lam/lamarticles02/march02/malmo.html>

Innovative solutions to the design, management and maintenance of urban greenspace. Bo01 - City of Tomorrow - Malmö, Sweden. www.map21ltd.com/scan-green/bo01.htm

Innovative solutions to the design, management and maintenance of urban greenspace. Holma, Malmö, Sweden. www.map21ltd.com/scan-green/holma.htm



Turning Torso
Source: Oskar Falck © Malmö Turism

The City of Parks



View of Øresund Bridge from Western Harbor Sundspromenaden.

Source: Frederik Tellerup © Malmö Turism

Malmö: Local Agenda 21 Environmental Program and Action Plan: www.eaue.de/wiunwd/192.htm

Solutions at a Glance: Green Space Factors Provide Options. International Sustainable Solutions. www.i-sustain.com

Swedish Government Environmental Policy Objectives. <http://www.sweden.gov.se/sb/d/5400/a/43485>

Västra Hamnen The Bo01-area. A city for people and the environment. From industrial site to a new sustainable city district.

Visit Øresund website. <http://www.visitoresund.info/composite-399.htm>



Ribersborg Beach

Source: Malmö Turism © Alexander Brandel

One of Malmö's many canals
Source: Malmö Turism © Jan-Erik Andersson

