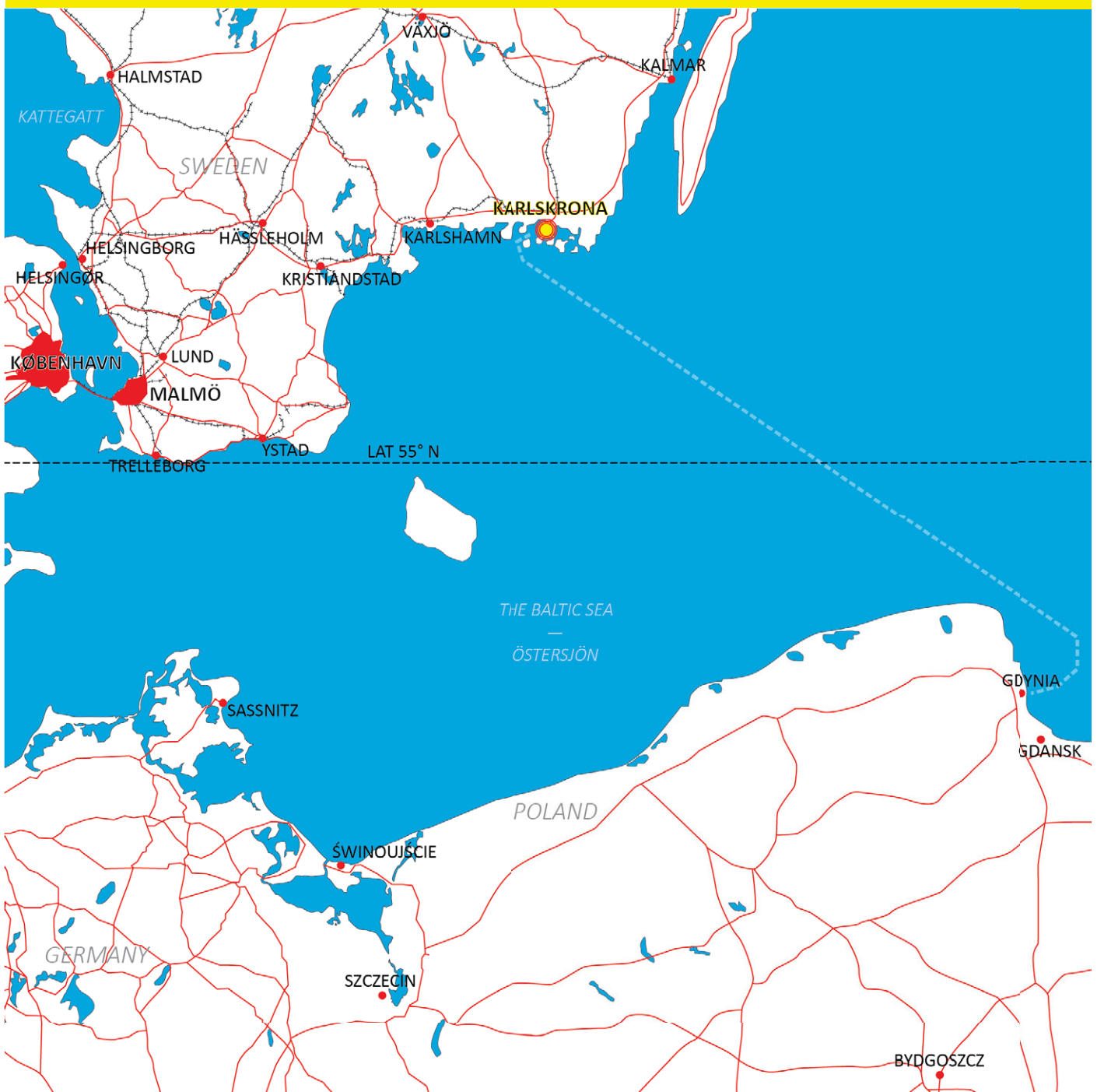


EUROPAN 14

KARLSKRONA, SWEDEN

Productive Cities



EUROPAN 14

KARLSKRONA, SWEDEN

Productive Cities





DEAR COMPETITOR

Karlskrona would like to invite you to put your mark on one of the most important sites in the city today.

Located on the main access route to the city, the site will be passed by virtually every visitor arriving at the city centre. The site is mostly a brownfield, an interruption in the urban fabric. Proposals should connect the site to its surrounding structures and thereby connect them with each other as well. Most importantly, the relationship between urban spaces, buildings and the sea needs to be clearly articulated and designed.

Help us build a new entrance to the city, reclaim our shoreline and heal the urban fabric at Hattholmen and Muddret.

This document contains information about the municipality and links to additional data sources. For questions about the brief or the rules please use the interactive forum on the [european-europe](http://european-europe.eu) website.

Please read the synthetic site file (available on www.european-europe.eu) together with this complete site file.

Good luck!

GENERAL INFORMATION

Site representative

Ola Swärdh / Sandra Högberg,
Municipality of Karlskrona

Actor(s) involved

Municipality of Karlskrona

Team representative

architect, urban planner or landscaper

Expected Skills with regard to the site's Issues and Characteristics

Architectural, urban and landscape skills.

Communication

Anonymous publication –online and in an exhibition– after the 1st jury round.

Communication after the competition:

Public price ceremony

Catalogue of results - digital publication

Publication on the web site of Sveriges Arkitekter

Jury – 1st Evaluation

with the participation of the site representatives.

Jury – Prize Selection

Ranked Selection: with Winner
(€12,000), Runner-up (€6,000) and
Special Mention (no reward)

Extra compensation for expenses (€1,000)
for Winner and Runner-up for participation
in price ceremony and Forum.

Post-competition intermediate Procedure

Meeting to present the rewarded teams to the site representative(s), followed by a discussion.

The ambition of the municipality is to select one of the winning teams for an implementation process. Detailed time schedule according to the full site program.

TABLE OF CONTENTS

1	1. THE CITY AND THE REGION	p.5
1.1	Population Trends	p.7
1.2	Economic Development	p.8
1.3	Climate	p.9
2	THE STRATEGIC SITE	p.11
3	THE PROJECT SITE	p.11
3.1	Current and future context	p.11
3.2	Urban plan	p.12
3.3	Density	p.12
3.4	Building heights	p.12
4	THE ASSIGNMENT	p.14
4.2	Productive Cities	p.14
5	Program	p.15
6	GENERAL PLANNING INFORMATION	p.16
6.1	Traffic and access, traffic noise	p.16
6.2	Parking standards	p.17
6.3	Public transport	p.17
6.4	Land ownership	p.18
7	MATERIAL TO BE SUBMITTED	p.18
7.1	Commission after competition	p.18
	RULES OF THE EUROPAN 14	p.19
	THE JURY MEMBERS	p.23
	Appendices, data bases and further information	p.24

Appendix A - Traffic noise and planning

Appendix B - BBR19 Accessibility



Suecia antiqua et hodierna: Urbs et Portus Carlskrona Septentrionem versus, De la Vallée, Christopher Johan / Dahlbergh, Erik Impression of Karlskrona (Trossö) from the north.

1. THE CITY AND THE REGION

The region around Karlskrona has been settled, at least since the late Stone Age; evidence of likely earlier settlement has been erased by consecutive ice ages. An early mention of Blekinge province can be found in the travel accounts of Wulfstan of Hedeby, who wrote in the 9th century AD.

Blekinge is bordered by Baltic Sea to the south and east and the provinces of Skåne to the west, Småland to the north. A contested border region between the emerging Swedish and Danish kingdoms during the Middle Ages, Blekinge was incorporated in the Swedish realm following the Treaty of Roskilde in 1658. In 1680, Karlskrona was founded in order to project Swedish naval power toward Denmark and the European continent; the city was established and is still used as the home port of the Swedish navy. In addition to its geopolitically advantageous location the site was also a natural, easily defended harbour that was free of ice most of the year. Furthermore, the inner islands of the archipelago were easily defended from naval attack due to the shallow sounds in between the outer islands. These sounds were made impassable by under-water walls except for a narrow passage between the islands of Tjurkö and Aspö where two outer forts (on Kungsholmen and Drottningsskär) and bastions were built to protect this inlet.

The historical city was planned and built on the island of Trossö, with the naval base on its southern end. The smaller islands surrounding Trossö have been linked to Trossö with bridges or reclaimed land throughout the city's history. The first bridge connecting Trossö to Vämö and the mainland was built in 1682.

Because of this history, Karlskrona is in many ways the city in the sea, a rather unique settlement structure in a Swedish context. Due to its faithfully implemented and well preserved 17th century baroque city plan as

well as it being a built manifestation of the geopolitical realities of an historical epoch, the city became classified as a UNESCO World Heritage Site in 1998.



Stortorget, Trefaldighetskyrkan, Statue of Karl XI, Rådhuset

KARLSKRONA UNESCO WORLD HERITAGE SITE - JUSTIFICATION FOR INSCRIPTION

Criterion (ii): Karlskrona is an exceptionally well preserved example of a European planned naval town, which incorporates elements derived from earlier establishments in other countries and which was in its turn to serve as the model for subsequent towns with similar functions.

Criterion (iv): Naval bases played an important role in the centuries during which naval power was a determining factor in European Realpolitik, and Karlskrona is the best preserved and most complete of those that survive.

Read more at: <http://whc.unesco.org/en/list/871>

1.1 Population trends

The original inhabitants of Karlskrona were settled in the city after the Swedish conquest of the southern provinces of the Scandinavian Peninsula, and initial founding of the city. At its founding the population was about 10 000 which is true for Trossö today as well.

Karlskrona had a population of about 64,000 at the start of the 1950s, this decreased to about 60,000 at the beginning of the 1970s. A population low point was reached in the mid 1980s and since then, there's been a more or less steady increase in population. The increase in the early 1990s was due to refugees arriving from the wars in the Balkans and the subsequent decrease can be explained by some of these moving away fairly quickly.

Earlier population increase has been driven mainly by external circumstances while later population growth has been driven by a restructuring the local business and higher education.

Karlskrona has had a population increase of about four thousand during the last decade. The mean number of births has been 720 children per year during this period; the corresponding number of deaths has been 675. The rest of the increase has consequently been due to a net immigration of 355 per year. The net emigration of 2012 should be seen as anomaly that explains the low mean immigration in relation to the population increase during the period. 2015 on the other hand saw a record breaking annual population increase *Figure 2*.

Projections for future population size and demographics can be found in *Figure 2*. In terms of size the population is expected to increase from 65,380 in 2015/16 to about 71,800 in 2025. About half of this increase is expected to be located to the central parts of Karlskrona of which the Project site is a part of.

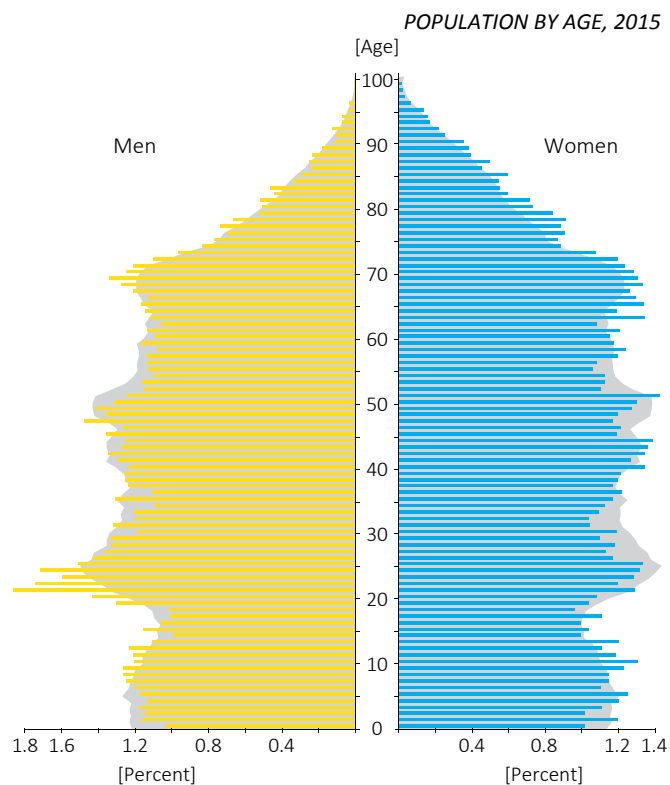
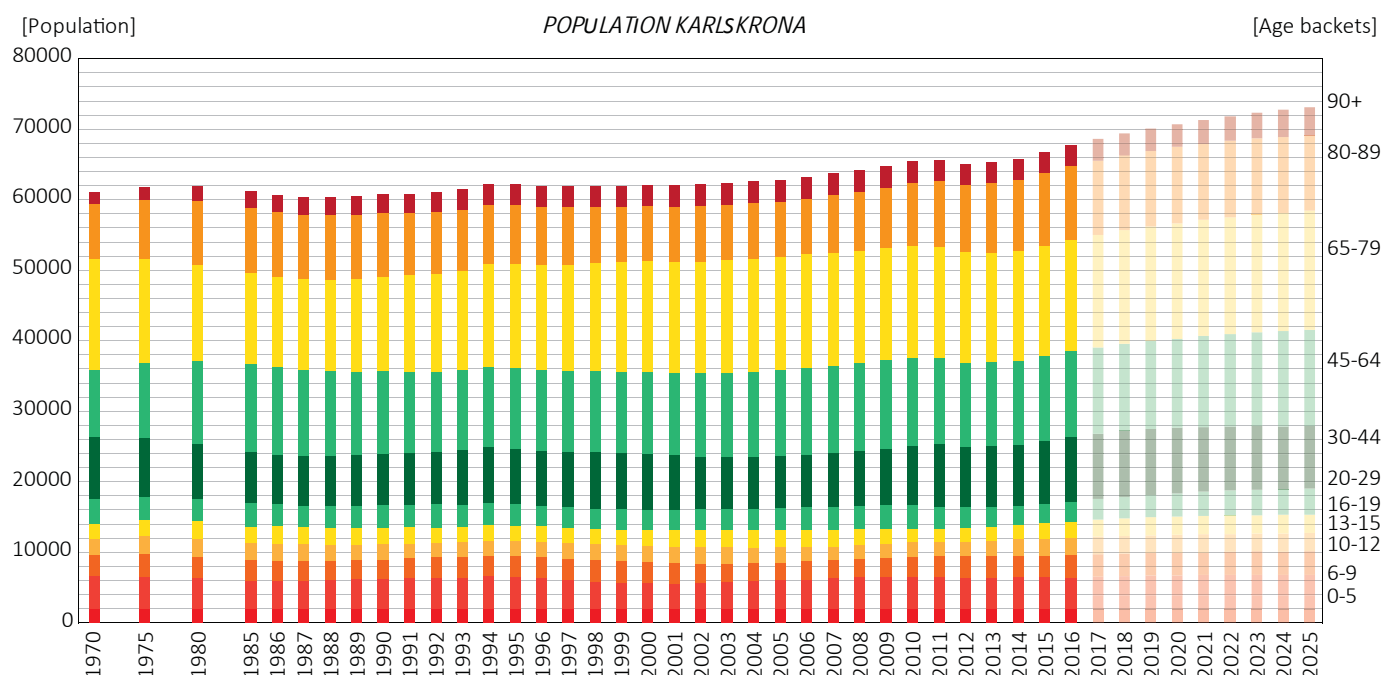


Figure 1, Population by age in 2015

Figure 2, Population of Karlskrona 1970-2016, Projections to 2025





Telenor. Photo: Matz Arnström



Blekinge Tekniska Högskola. Photo: Matz Arnström;

1.2 Economic Development

Today, the municipality itself, the naval base, the county hospital and Blekinge Institute of Technology are all among the largest employers in the municipality. Large private employers are Ericsson AB, Saab Kockums, ABB and Telenor.

Like in most modern cities, the Higher education and related businesses are seen as important for future economic development and resilience. Karlskrona is strong in several highly qualified sectors including ICT, Maritime Technology and E-Health. A new “Blue Science Park” gathers research and product development in close proximity to one another. The economy of Karlskrona is diverse and many companies have both national and global reach.

The municipal strategy for future business will focus on five key areas. These are *urban design, marketing &*

services, infrastructure, skills and an increased focus on national and international contacts are the main focus.

The Blekinge Institute of technology offers courses and degrees in computer science, software engineering, telecommunications, mechanical engineering, spatial planning and nursing. This is reflected in the employment sector with Ericsson as the largest private employer and Telenor and ABB also present in the Municipality.

Regional infrastructure has been improved recently with trains now departing for Copenhagen and Kastrup airport every hour. The railroad to Emmaboda has also been upgraded shortening the travel time to Stockholm and Gothenburg considerably

EMPLOYMENT AND EMPLOYED, 2014 - TOTAL (DAY POPULATION)

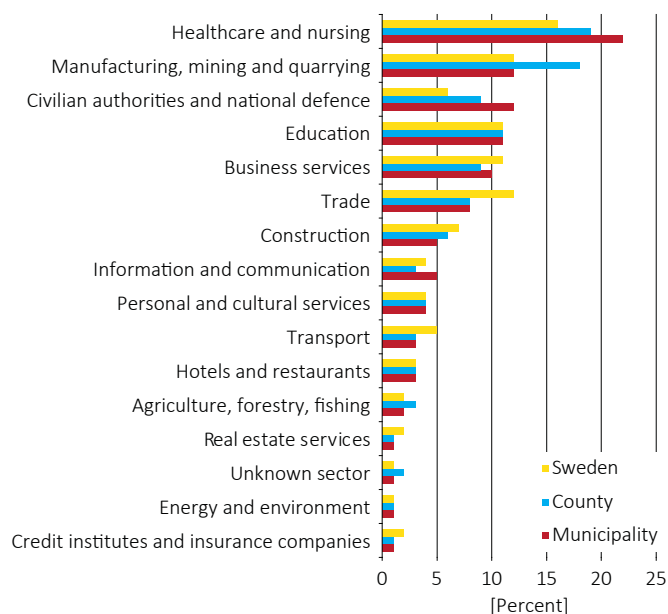


Figure 3, Employment and employed

NEW DWELLINGS BUILT

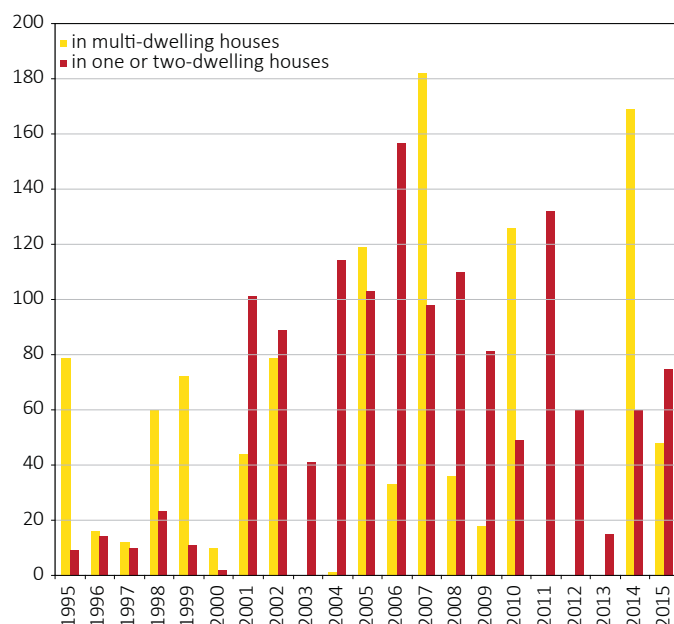


Figure 4, New Dwellings

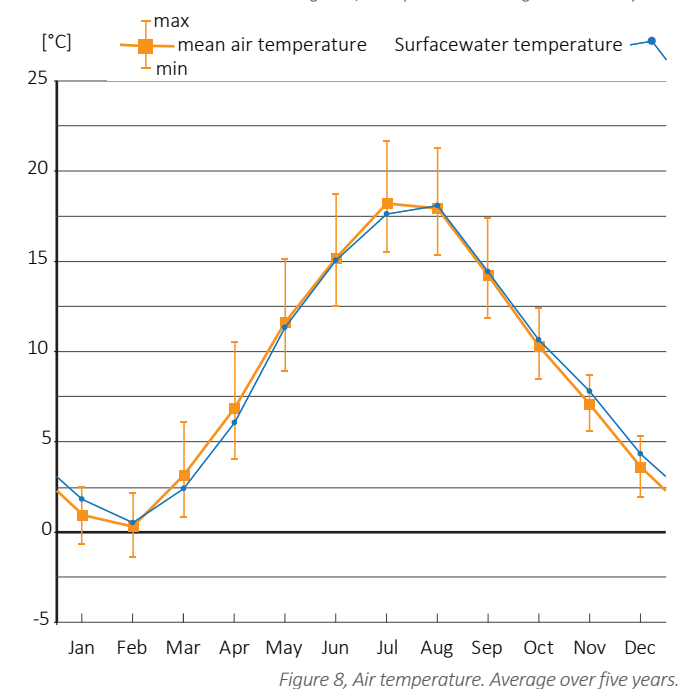
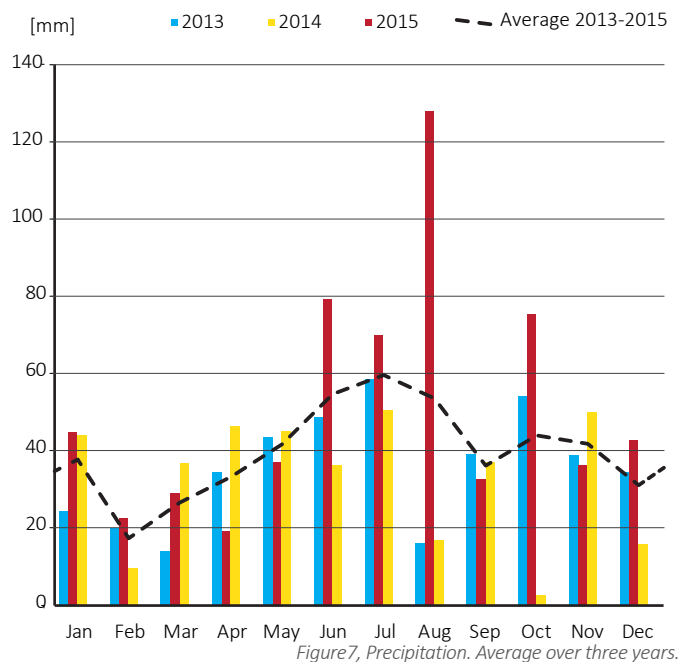
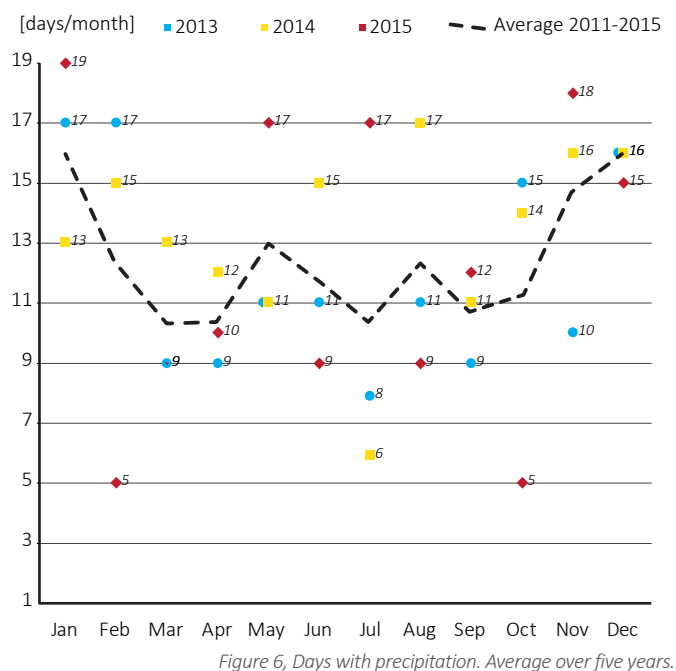
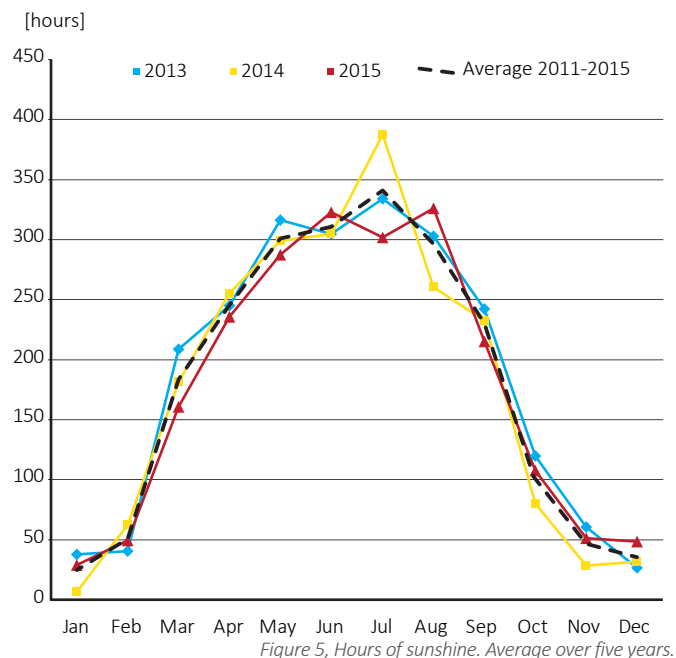
1.3 Climate

The climate in Karlskrona is coastal with small variations in temperature, regular and fairly strong winds and about 600mm of precipitation every year. The monthly mean temperature varies within a span of 18°. The surface water temperature more or less tracks the mean temperature, although with an expected time lags. There is precipitation 10–16 days every month and about 2150 hours of sunshine over the course of a year.

The average temperatures in Blekinge are expected to rise 2°C–4°C in the future. Due to this, there will be an increase of precipitation on the order of 15–20% in 2100. This would mean about 700mm every year. Rainfall will increase during the winter months and decrease during the summer and there will be heavy rainfalls and extreme weather events will become more frequent. An increase in temperature will also likely lead to stronger winds.



Brändaholm





View from Bryggareberget f-b: Rooftops of Tyska Bryggaregården, Stumholmen, Godnatts fästningstorn, Kungsholms Fort

As compared with southern Europe the solar elevation angle is lower in general and especially low during the winter month. Consequently, the direction and time of sunrise vary widely over the year with sunrise at 04:10 and sunset at 21:48 at the summer solstice and sunset and sunrise 08:29 and 15:22 respectively at the winter solstice.

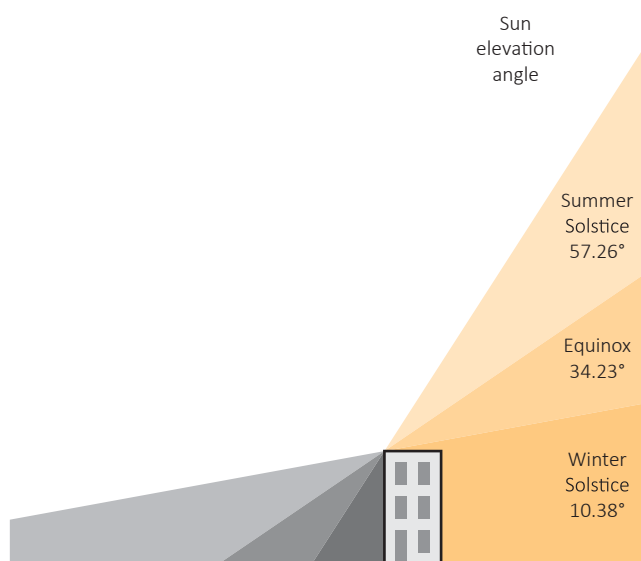


Figure 9, Sun elevation angle

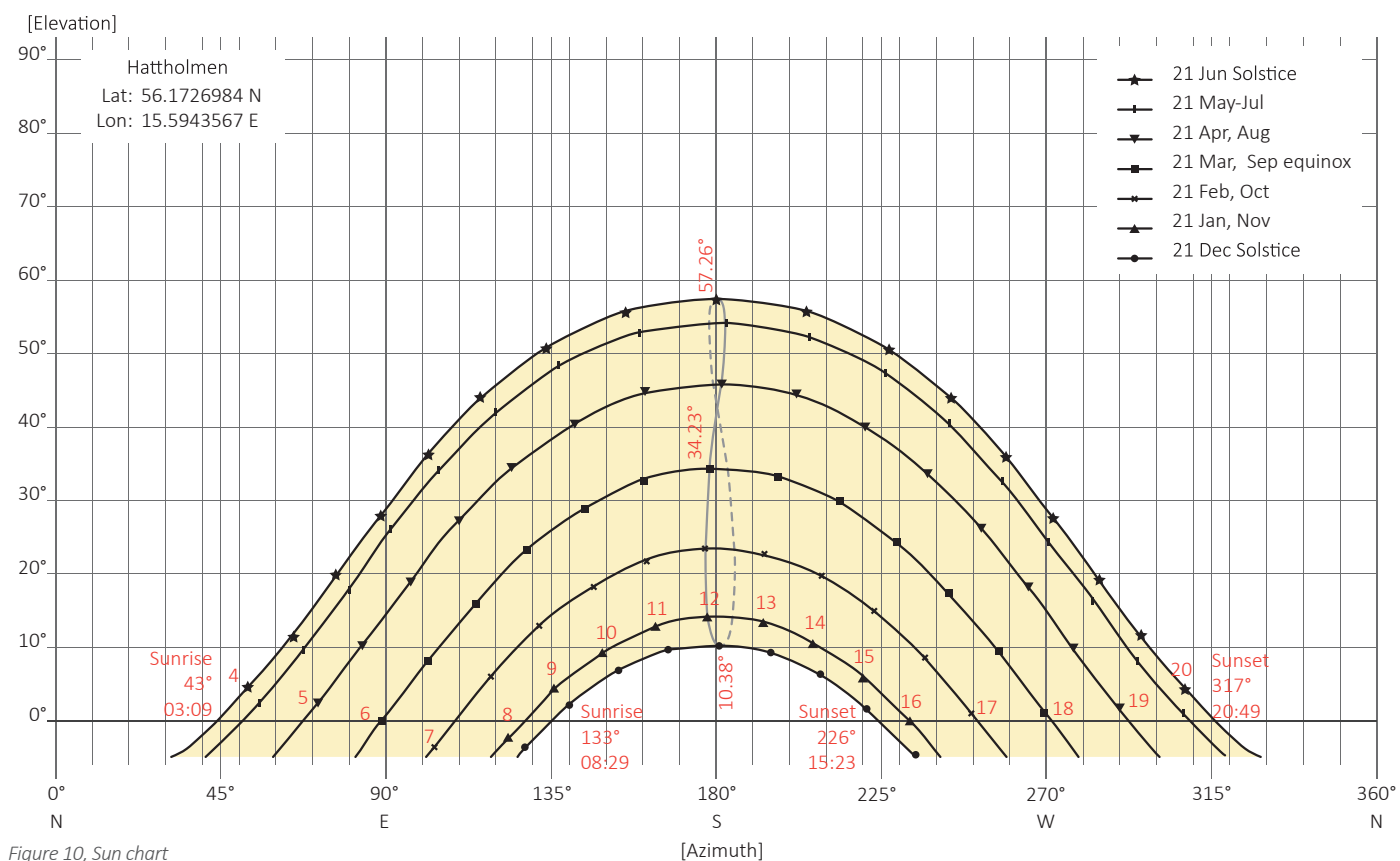


Figure 10, Sun chart



- Strategic site
- Project site
- Planned new underpass
- ↔ Planned new pedestrian/bicycle connection
- - - Possible new pedestrian/bicycle connection
- - - Kungsgatan (Main North-South Axis)
- |||| Stretch of Österleden to be remodeled.
- Housing
- Samfund
- Industry
- Complementary building
- Activity-building (e.g. restaurant)
- Public building
- Other building
- Canopy/Carport/Loading bay etc.

- a Planned underpass: Muddret-Tullparken
- b Possible viaduct: Muddret-Pantarholmen
- c Bridge envisioned
- d Possible new connection
- e On-/Offramps to be removed

- 1 Filling station
- 2 Small auto-shop/mechanic
- 3 & 4 Home improvement / Building materials
- 5-7 Boating shop and storage
- 8 Car dealerships
- 9 Däckcentrum (Tire center)
- 10 Tullskolan (School)
- 11 Blå port, Various small businesses
- 12 Vämöskolan (school)
- 13 Various businesses, Taxi
- 14 Scenic lookout point
- 15 Tyska bryggaregården (the) German Brewers Estate
- 16 Östra kruthuset

- (A) Hattholmen Hat-islet
- (B) Muddret The Dredge
- (C) Bryggareberget Brewer's mountain
- (D) Blå Port Blue Gate
- (E) Tullparken (the) Toll Park
- (F) Pantarholmen Toll-payer's islet
- (G) Pottholmen Potters islet
- (H) Resecentrum Travel interchange
- (I) Hoglands Park Hogland's Park
- (J) Skeppsbrokajen Ship's quay
- (K) Mjölnareholmen Millers islet
- (L) Handelshamnen (Historic) Trade port
- (M) Stadsmarinan City Marina



Foreground: Strategic and Project. Background: Historical Karlskrona on Trossö

2 THE STRATEGIC SITE

The majority of the strategic site consists of brown field land and an industrial estate bisected by the main access road and railway tracks to the traditional city of Karlskrona (on Trossö). To the north of the strategic site are Blå port, Bryggareberget and Tyska bryggaregården. Blå port are old military Barracks now converted for housing and various public functions. Bryggareberget is a green preserve. There's a look-out point on the top of the hill, a restaurant and a telecommunications mast. Tyska bryggaregården contains what used to be the old German Brewery. These buildings now house office space and a conference center as well as some dwellings. To the west of the strategic site and railroad tracks is the neighbourhood called Pantarholmen; a park and a school called Tullparken and Tullskolan respectively. The dense urban character of Pantarholmen has more in common with the traditional city on Trossö than later developments further north. The city plan from 1877 shows plans for an ambitious expansion further north, including the project- and strategic sites.

Two detailed development plans for Pottholmen, the area around the train station, closest to the city, are in different legal stages. The first stage, which covers the area to the west of the railway tracks, has been approved. Among other things the plans for this site include a closed block structure, a train/buss interchange, small parks, a pier to the west and a remodelling of Österleden (the dual carriage way) into a city street.

The project site is called Hattholmen and is situated to the south of the road and railway tracks. In between the railway tracks and the access road is an industrial estate, referred to as Muddret. This site is to be redeveloped at a later stage. There are permitting and land-ownership issues preventing a quick transformation. A proposal on Hattholmen should include a schematic design of the future structure at Muddret.

The transformation of the dual carriage-way will be continued through Hattholmen and Muddret to Blåportsgatan. There are also plans for bicycle and footpath underpass below the railway tracks between Muddret and Tullparken/Pantarholmen. These changes will help in reconnecting these new neighbourhoods to the rest of the city. A proposal should be concerned with healing and connecting to the surrounding urban fabric.

3 THE PROJECT SITE

The Project Site is referred to as Hattholmen. Previously an oil harbour built partly on reclaimed land it is now free for development. In terms of centrality, the site is ideally located, but in terms of views and orientation it is not a top-tier location in the local context. Because of this, Karlskrona would like the contestants to find innovative ways for how to make Hattholmen more attractive.

Karlskrona would like to emphasize its distinctive characteristic of the city in the sea. Contestants are encouraged to interpret and express this in their proposals.

3.1 Current and future context

There is also the matter of Hattholmen lying at the northern and only land access to the city centre. As a consequence, a re-imagined Hattholmen will be part of a new entrance to the city.

At the moment, the Project site is cut off from neighbouring areas. Physical barriers as well as a likely unfamiliarity with the site means that in the minds of most of the population of Karlskrona, Hattholmen is a blank slate. The fact that its previous use as an oil harbour has now been erased will likely add to this lack of identity.



View from of Karlskrona from Bryggareberget. Foreground: Project site with the, now demolished, oil harbour.

There are exceptions to this of course. To the north of the site are a look-out point and restaurant, the old brewery and a petrol station. These likely give parts of the population an onlooker's relationship to the site. On the south end of the site, a boat has been moored and converted to student housing. These students travel through the area frequently and are likely the people most familiar with the site.

The coming conversion of Österleden and various bicycle and pedestrian connections will make the site more accessible. In the longer term, a later redevelopment of Muddret should integrate Hattholmen in the extended city fabric of Trossö/Pottholmen/Pantarholmen.

3.2 Urban plan

There are several detailed development plans for the project site. These will be repealed and new plans created when a new use for the site has been decided. The European 14 competition will be a major part of the basis for this coming work.

The status of the detailed development plans for Muddret is more unclear due to more complicated land ownership, so any redevelopment here will have to be slow and incremental.

3.3 Density

The density is implicitly regulated by maximum building heights, the programmed uses and reasonable land use. Karlskrona envisions an expansion of the city from Trossö to Hattholmen rather than a suburban structure. It is up to the contestants to suggest how this is to be realised.

3.4 Building heights

On both the Project- and Strategic sites the general building height should be between four and six stories. On Trossö, the maximum building height is capped at the elevation of the highest church tower, this is Fredrikskyrkan at +50,8 meters (RH 2000*) but on Hattholmen singular exceptions can be made.

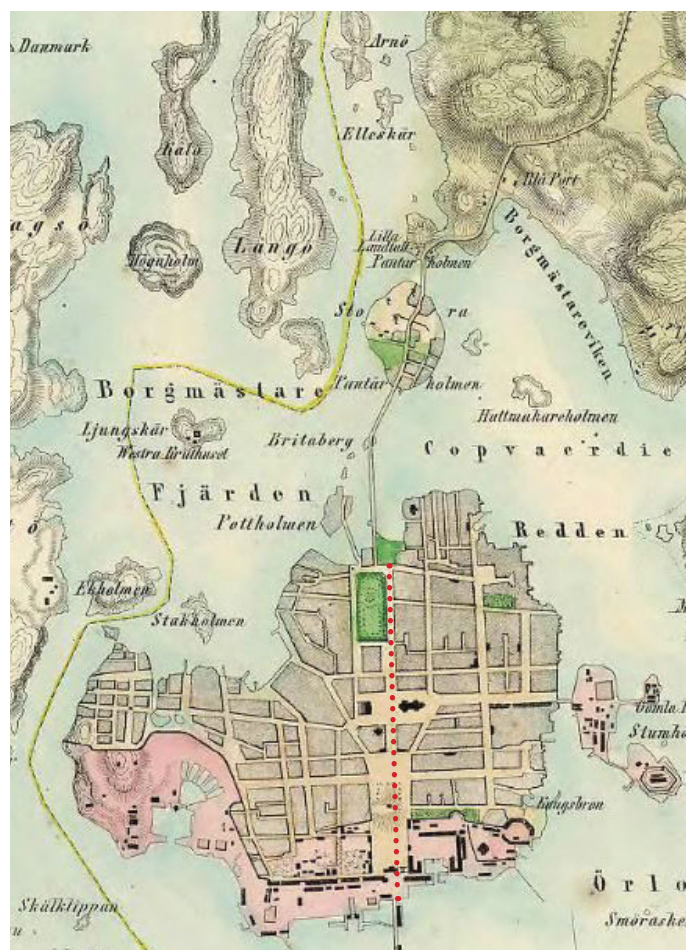
Following page:

Note the north-south axis of Kungsgatan, from Amiralitetstorget, past the Bell Tower in Amiralitetsparken, Trefaldighetskyrkan, Stora Torget and ending at Hoglands Park and the modern Travel Centre. The axis marked with dotted red line.

In some options discussed for a remodelled Österleden, the new road is seen as an extension of this main axis.



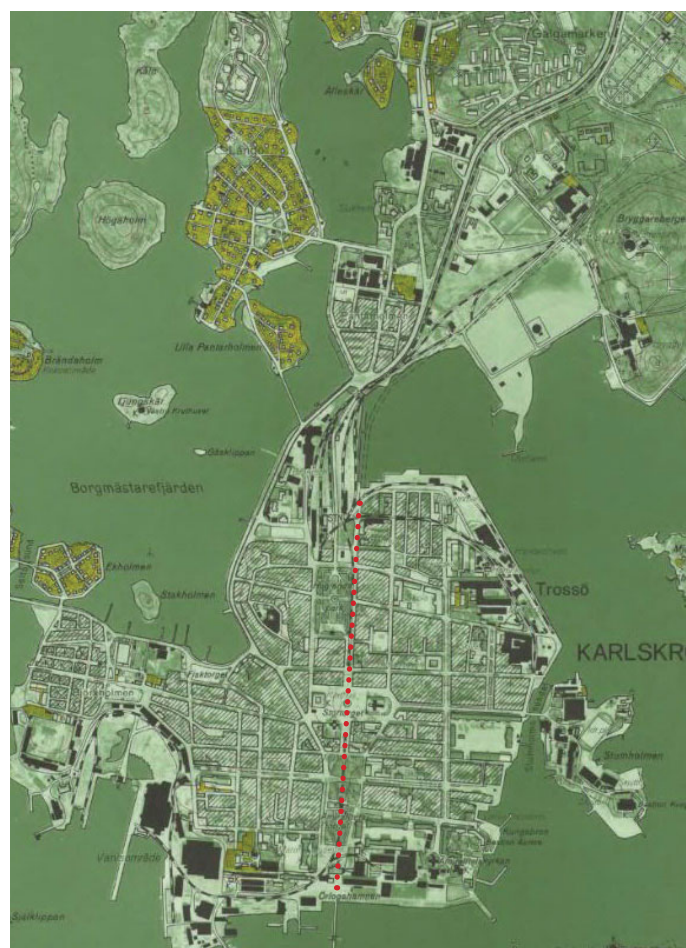
Werning Atlas, 1813



1855



Regulation plan, 1877



Economic map, 1969



Borgmästarekajen from Björkholmskajen

4 THE ASSIGNMENT

A BETTER ENTRANCE

The historical city was planned on a central north-south axis. At the south end of this was axis was the formal entrance to the city; the northern access simply a supply route. The arrival of the railroad emphasized this function even more, yet this approach to Karlskrona has gradually become the main access route for most visitors to Trossö. The project site is located right at this new entrance. The section of Österleden closest to the city rebuilt as a four lane city street with space for pedestrians and bicyclists. This means that the design of the street itself as well as the urban structure at Hattholmen and Muddret will be mediating the transition from high speed travel to arrival in the city.

A NEW SHORELINE

What makes Karlskrona unique in a Swedish context is its urban morphology as the city in the sea, rather than “on” or “by” the sea. The arrival of the railroad meant some part of this connection to the sea was lost and post-war, car centred planning and industrial paradigms effectively broke this connection on much of the northern facing parts of the (old) city. Land reclaimed along the previous shoreline and between islets was used to house modern infrastructure and industry.

These lost shorelines should now be adapted to the demands of inhabitants and an evolving economy. Adapting and redefining the—now artificial—shorelines can include adding new land or excavation. Canals are also

a possibility. Contestants should propose designs for the relationship between future buildings and the shoreline and the material design of the shoreline itself—quay, stairs, beach etc. Recreating, reinterpreting “living in the sea” in this new context is the task of the coming decades.

HEALING THE URBAN FABRIC

A future Hattholmen and Muddret will be fairly cut off from its surroundings unless some obstacles are overcome. A proposal should reconnect Hattholmen and Muddret with Trossö, Pottholmen, Pantarholmen etc. both in terms of communication and urban continuity.

Contestants are asked to focus on the themes described above but are expected to deal with issues common to all professional urban planning, that is: street-widths/ sections, draining, flooding, noise levels, sea level rise etc.

4.2 Productive cities

Modern cities compete, in part, in terms of quality of living space. Utilising water to make land more “productive” in this sense could be a metaphorical approach to this year’s theme. Contestants are invited to interpret the theme in the described context but these will need to be very convincing as traditional production is not envisioned for the site.



The city marina. Project and Strategic site

5 PROGRAM

The program for the project site in terms of usage is as follows

REQUIRED



Housing: 1 000 units at Hattholmen and at least another 1 000 at Muddret. These are to be a mix of larger and smaller units. The smaller units should be suitable for students, the elderly and new immigrants. The larger units can be larger apartments linked houses etc. House boats for single or multiple family housing can also be considered and building on the breakwaters that do/will surrounding existing and future marinas is also an option.



Preschools for the future population at appropriate locations.



Bottom floors on corners and along main streets should be designed for commercial use.



A new marina with basins to the east and south of the project site. Moorings for a total of about 1 000 boats. At present, the city marina has a capacity of about 300.



Facilities for water sports. But no boat storage on land. In order to facilitate water sports, the design of the quay is very important. This should be well illustrated in proposals. A conventional board-walk is not what's envisioned

OPTIONAL



A hotel that that can stand out from the rest of the proposal.



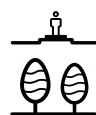
A skateboard park.



New piers, breakwaters etc.

PROJECT SITE AND STRATEGIC SITE

Integrating Hattholmen in the urban fabric implies that new connections will need to be made with its surroundings. A new movable bridge to Trossö (Skeppsbrokajen) for pedestrians and cyclists and the meeting with and section of a remodelled Österleden are integral to this being successful. A location for this bridge should be included in the future proposal.



Public spaces and green structures should be of a high quality. When designing these spaces both the project site, the strategic site and areas surrounding these should be considered.



A school for 450 pupils, preschool and years 1-9, at Muddret which is within the Strategic site but not on the Project site.

All this is to be resolved and combined in the framework described above [4. The Assignment].

6. GENERAL PLANNING INFORMATION

A limit of 3 meters above current sea level has been set for lowest finished floor level. This conforms to national standards that try to take rising sea levels and flooding into consideration. However, exceptions to this rule can be made for certain functions, see *Figure 12*. In these cases floors can have lower levels. City streets can be placed at 2.7m and storm drains and basins can have an even lower level of 2.5m.

6.1 Traffic and access, traffic noise

With the transformation of Österleden into a city street, it is likely that there will be an improved access point to Hattholmen and well as Muddret along the stretch past these areas. Due to the large amount of traffic on Österleden, the design of the access point will need careful design consideration. This, especially in regard to pedestrians, bicyclists and possible left turning vehicles. The roundabout proposed in the comprehensive plan from 2010 has been deemed unworkable and junctions with traffic signals has been suggested as the best option going forward. A green strip with pedestrian and bicycle paths, between Österleden and the water, has been proposed and, as mentioned previously, a new bridge for pedestrian and bicycle use, connecting Hattholmen to Handelshamnen/Skeppsbrokajen. Various bicycle and pedestrian connections to Pantarholmen and Tullparken, across the railway tracks are also likely to be made in the future. A secondary car access route to the competition site is Saltsjöbadsvägen. However, this route is part of a wider bicycle access route from the northern parts of Karlskrona to Trossö.

Traffic on the transformed Österleden will be the main source of traffic noise at the site. Noise from trains is likely

also a concern at Hattholmen. Österleden had a traffic load of 31,000 vehicles per day in 2010. This is expected to increase to 38,000 in 2030. Österleden will [likely] be used by several buss-lines and will still be the main access route for heavier vehicles to Trossö. This will raise peak levels which is relevant to certain aspects of Swedish noise regulation. These conditions combined with considerations for safety clearance due to hazardous cargo transported on Österleden has lead to certain Guidelines for use along this street. For Hattholmen and Muddret, this means that no structures

Figure 11, Dimensions and functions of a remodeled Österleden.

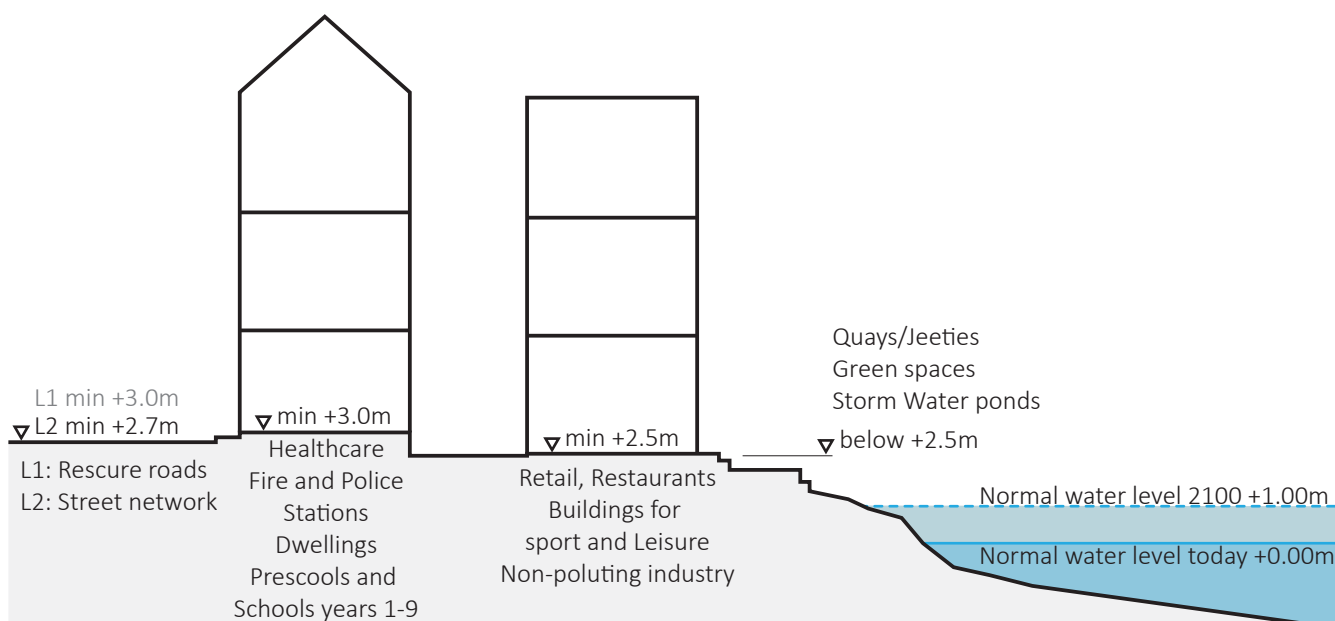
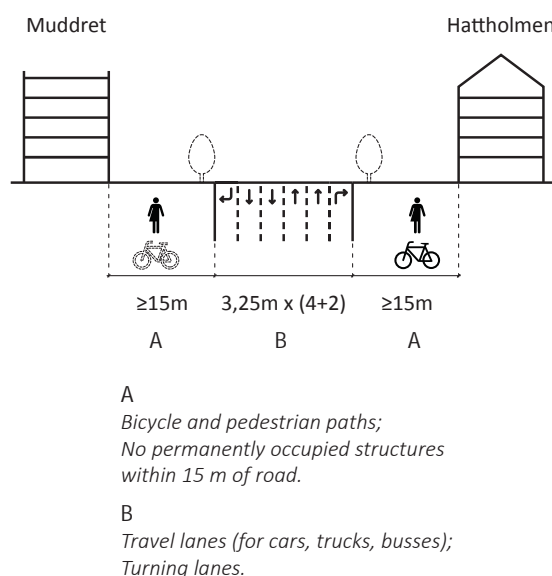


Figure 12, Minimum floor levels and expected normal water levels. All levels in RH2000

can be built closer than 15 meters to Österleden. For more specialised information regarding noise levels see appendix A.

6.2 Parking standards

As part of a wider work in making the city more sustainable, the municipality wants to discourage car use and encourage bicycle use as well as the use of public transport. European 14 proposals at Hattholmen are to follow preliminary parking standards that will likely be in effect when the area is to be developed. The standards are preliminary and consequently subject to change.

In central Karlskrona, the bicycle should be seen as the primary mode of transport, consequently bicycle parking should be attractive and useful. Bicycle parking in connection with dwellings should be sheltered from the elements and provide for safe storage of owners' bicycles.

Carsharing, good access to public transport allow for reductions of car parking spaces.

Parking can be placed in common parking garages. These can be placed underground or be the subject for innovation.

6.3 Public transport

As part of the reworking of neighbouring Pottholmen, the central hub of public and regional transportation will be rationalized. The buss terminal will be moved from Kungsplan to Blekingegatan, closer to the train station reducing transfer times. Bus lines on Trossö have been rerouted recently into a circular pattern with smaller vehicles but departing more frequently. A strategy for making the main island more accessible for bicycling was also part of this transformation.

Ferries to the larger outer islands of Aspö and Sturkö depart fairly frequently from various locations at Trossö. And there are also less frequent departures to smaller islands.

There will be at least one stop by the site on Österleden and possibly a bus route through Hattholmen as



More transit info can be found at: www.blekingetrafiken.se

Parking required per 1000m² BTA*

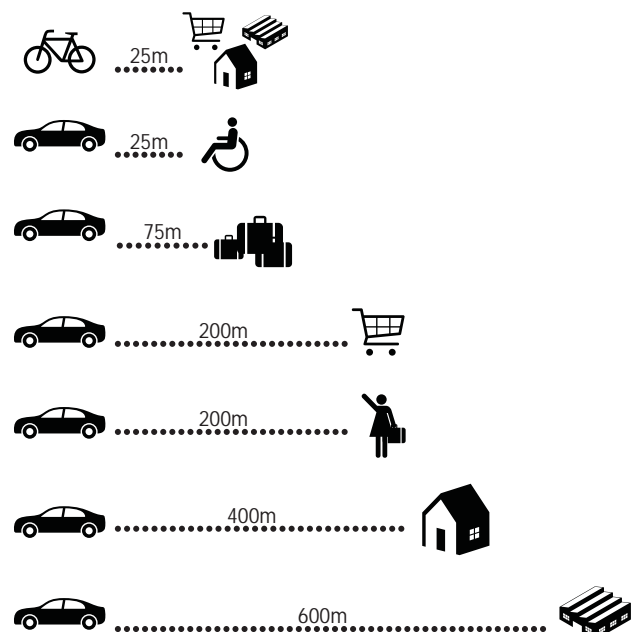
	Bicycles	Cars	
Apartment buildings	30	5	
Detached housing	30	1	per house. 0.9 in common parking lot.
Offices	20	5	(min)
Daily retail	35	2+15	(visitors+employees)
Infrequent retail	15	2+15	(visitors+employees)
Restaurants	30		
Hotels	15	1+25	(visitors+employees)
Smaller Hotels		1+15	(if 5-10 employees and 25 visitors per 1000m ² BTA)
Preschools	35	2+10	(visitors+employees)
Schools years, 1-9	40	3	
Schools years, 10-12	45	4	
Nursing homes for the elderly	10	2	

*BTA Bruttoarea: [eng]gross floor area i.e. the sum of footprint of each floor (including external walls)

Reduction in the number of car parking spaces if:

	Good public transport	Carsharing
Housing	10%	20%
Other uses*	20%	20%

*Offices, industry, retail, hotels, schools etc.



well. The walking and bicycling distance to the local/regional node is about one km and various jetties where local ferries dock is within walking distance.

6.4 Land ownership

The project site is owned by the municipality in its entirety while all the lots at Muddret are privately owned. Lots are shown in the dxf included in the complete site folder. A table with relevant information is also shown in that file.

7. MATERIAL TO BE SUBMITTED

Hattholmen should be the focus of the presentation. Here, more detailed studies of volumes and sections of streets and shoreline should be presented. Schemes for land use, urban- and building typologies, characteristic urban spaces should be illustrated and described.

In order to resolve the larger context, contestants are also asked to propose a schematic design for streets, building volumes and public buildings and spaces that include both Muddret and Hattholmen. This should be shown in a plan with a scale of 1:2000 with limits given in the dxf-file included in the competition materials.

A photo montage of the proposal in [one of the] attached aerial photos should also be presented. This image should illustrate building volumes and urban structure.

A part from this, teams are free to present their proposal in any way they want in space available on the A1 boards.

7.1 Commission after competition

Depending on the submitted proposals, one or several of the winning team(s) will be invited for continued urban studies and further development of plan program and in collaboration with the municipality of Karlskrona.

RULES OF THE EUROPAN 14

DISCLAIMER: Since rules are still subject to change as of the publication of this document, please see the complete and up to date rules for European 14 on the *European Europe* website: www.european-europe.eu/en/session/european-14/rules

The most relevant sections from “EUROPAN 14 - RULES OF THE EUROPAN 14 COMPETITION” have been included below with clarifications regarding the Swedish context (gray text boxes).

1. ENTRY CONDITIONS

1.1. Entrants

European 14 is open to any team consisting of one architect in partnership or not with one or more professionals of the same or other disciplines of the urban-architectural field (architects, urban planners, landscapers, engineers, artists...)

Every team member, whatever his/her profession, must be under the age of 40 years old on the closing date for submission of entries.

1.2. Composition of the Teams

There is no limit to the number of participants per team. Multidisciplinarity is strongly recommended with regards to the sites issues.

A registered team can modify its composition on the European website until the closing date for submissions. No further change shall be accepted after this date.

Each team member (associate and collaborator) shall be registered as such on the European website before the closing date for submissions.

One team can submit a project on different sites and one person can be part of different teams provided that that the projects are not submitted in the same country.

Associates

Associates are considered to be authors of the project and are credited as such in all national and European publications and exhibitions. They are young professionals with a university degree recognised by the Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications, in any of the relevant disciplines and regardless of nationality. The compulsory requirement is to hold such a degree.

Membership in a European professional body is optional, except for associates without a European degree.

Contributors

Teams may include additional members, called contributors. Contributors may be qualified or not but none of them shall be considered as an author of the project. Just like the associates, the contributors must be under the age of 40 years old on the closing date for submission of entries.

Team Representative

Each team names one Team Representative among the associates. The Team Representative is the sole contact with the national and European secretariats during the whole competition. Furthermore, every communication shall be done with one email address, which shall remain the same during the whole competition.

The Team Representative must be an architect or must have the

architect status under the laws of a European country. In specific cases and when mentioned on the site definition (see Synthetic Site File), the Team Representative can be an architecture, urban or landscape professional (architect, landscaper, urban planner, architect-engineer). In this case the team shall necessarily include at least one architect among the associates.

1.3. Non-Eligibility

No competition organizer and/or member of their families are eligible to take part in the competition on a site where he/she is involved. Still, he/she can participate on another site in which he/she is not involved.

Are considered as organizers: members of the European structures; employees and contractors working for partners with sites proposed in the current session, members of technical

The tendency in Sweden is that the sites are getting bigger and bigger, and also that the main task is more about planning strategies (and not house design) European Sweden therefore encourages the formation of interdisciplinary teams. The team representative can be an architecture, urban or landscape professional (architect, landscaper or urban planner). The team shall necessarily

committees; observers; jury members and their employees.

2. REGISTRATION

Registration is done through the European website (www.european-europe.eu) and implies the acceptance of the competition rules.

In compliance with French Act #78-17 of Jan. 6th, 1978, on Information Technology, Data Files and Civil Liberties the protection of personal data communicated during registration is guaranteed.

2.1. European 14 Website

The European website for the fourteenth session of the competition is available online from the opening date of the competition, at the following url: www.european-europe.eu

It includes: the complete European rules for the European 14 competition; the session topic; the synthetic and complete site files grouped geographically or by themes; the juries compositions; and an organisational chart of all the European structures.

The website also offers the possibility to register to the competition and submit the complete proposals.

2.2. Team Registration

Registration to the competition is done through the European website (Registration section) and implies the payment of a €150 fee. There shall be no refund of the registration fee.

This fee includes one Complete Site Folder and the printing –necessary for the evaluation– of the panels on a rigid support by the national secretariats.

Payment is automatically confirmed on the website. The team can then access its personal area and the digital entry area and download the Complete Site Folder for the selected site.

An additional Complete Site Folders cost €50 per site.

4. SUBMISSION OF ENTRIES

4.1. Digital Submission

Digital submission is compulsory. It includes the 3 A1 panels, documents proving the eligibility of the team members and documents for the communication of the project.

The complete submissions shall be submitted **by midnight (Paris time) on June 30th, 2017**, on the European website (Entry section).

Failure to comply with the hereunder-mentioned requirements on board presentation may result in the disqualification of the team.

The number of entries per site is available on the European website on the [European map of the sites](#) (column on the right).

4.2. Anonymity and Compulsory Content

The site name and the project title must be displayed on every document.

A specific code is automatically attributed to each project upon upload. The teams do not know this code, through which the jury members take note of the project. The teams' identities are revealed via an automatic link between the code and the team on the online projects database.

4.3. Language

The panels shall be either written in English or bilingual (English + the site language).

4.4. Items to Submit

Submissions include documents divided as follows:

- 3 vertical A1 project panels;
- Documents proving the eligibility of the team members;
- Documents for communication (3 images + a short text)

A1 Panels

CONTENT:

The 3 panels must:

- explain the urban ideas developed in the project with regards to the site issues and the thematic orientations of the session;
- develop the project as a whole, highlighting the architecture of the project, and particularly the relationship between the new developments and the site's existing context, including three-dimensional representations of the project;
- develop the method foreseen for the implementation process.

All graphic and descriptive documents must have a graphic scale.

TECHNICAL SPECIFICATIONS:

- PDF format
- Vertical A1 (L 594 mm x H 841 mm)
- Maximum 20 Mb
- One box (L 60 mm x H 40 mm) is left blank in the upper left corner for the automatic insertion of the code; the name of the city appears next to it
- Panels numbered from 1 to 3 in the upper right corner
- The team is free to decide on the positioning of the proposal title

The Jury for the Swedish sites will not consider any submitted documents in addition to the 3 A1 panels. More detailed descriptions of proposals in an A3 format will not be read and are not required as part of a proposal.

Documents to prove the eligibility of the team members

Documents for the disclosure of names and verification of the validity of the proposals shall be uploaded as PDF's on the European website.

Personal information include:

1. **For the team:** the TEAM FORM and the DECLARATION OF AUTHOR- AND PARTNERSHIP AND OF ACCEPTANCE OF THE COMPETITION RULES available online on the team's personal area; to be filled out and signed;

2. **For each team member:**

- A copy of an ID DOCUMENT with a picture, providing evidence that they are under the age of 40 at the closing date for submission of entries (see calendar.)
- A copy of their European DEGREE as an architectural, urban or landscape professional (architect, landscaper, urban planner...) or proof of such a status under the law of a European country.

No other document than the ones above-listed is necessary.

Attention: The personal documents must be uploaded individually for each team member. Only team members that correctly registered and submitted their eligibility documents separately shall be considered within the team final composition.

The upload of one sole document with all the required information (copies of the ID's and degrees) will not be accepted.

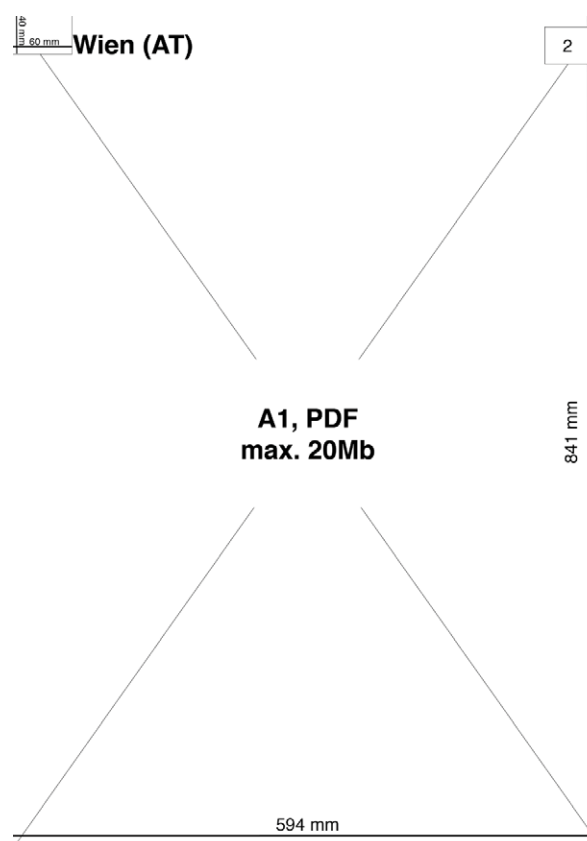
Documents for communication

Each project must be summered up as follows:

- One short text of 2,500 signs (spaces included, to be typed in during submission) developing the project ideas;
- 3 separate PDF images that symbolize the project (max. 1Mb per image).

4.5. Control of the Submissions

Each team can check the upload of their projects on their online personal area. They can also –if needed– modify these documents until the deadline for submissions.



A period of 7 days is left open after the deadline for submissions (see [Calendar](#)) for the European secretariat to control the upload of each submission sent before the expiry of the deadline, as well as to correct the potential problems that might have appeared during the upload of the documents.

5. RESULTS AND PRIZES

5.1. Results

All the results for European 13 are available online from December 4th, 2015, on the [European website](#) (Results section).

5.2. Winners

Winners receive a reward of the equivalent of €12,000 (all taxes included) in the currency of the site's country (at the exchange rate on the date of the announcement of the results). The organizers undertake to abide by the decisions of the national juries and to pay the reward within 90 days of the announcement of the results.

5.3. Runners-Up

Runners-up receive a reward of the equivalent of €6,000 (all taxes included) in the currency of site's country (at the exchange rate on the date of the announcement of the results). The organizers undertake to abide by the decisions of the national juries and to pay the reward within 90 days of the announcement of the results.

5.4. Special Mentions

A Special Mention can be awarded to a project considered innovative although not completely adapted to the site. The authors of such proposals do not receive a reward.

In addition to the prize money offered to winners and runners-up, European Sweden offers a travel grant of €500 (all taxes included) to for winning teams so that these can attend the prize ceremony and initial meeting with site representatives.

7. RIGHTS AND OBLIGATIONS

7.1. Ownership

All material submitted to the organizers becomes their property, including reproduction rights. The intellectual property rights remain the exclusive property of their author(s).

7.2. Exhibition and Publication Rights

Moratorium on Publication

Teams may not publish the documents submitted to the competition or disclose their names by using their project for any communication before the official announcement of the results. Any such publication may result in the disqualification of the team.

Publications

The organisers reserve the right to publish all the projects submitted to them after the official announcement of results. Projects are exhibited or published under the names of their authors.

7.3. Disputes

The Council of the European Association, which is empowered to arbitrate, shall hear any dispute.

8. LIST OF EUROPAN 13 COMPETITIONS

The [Contact](#) section of the European website shows the detailed national competition conditions country by country (number of sites and prizes, conditions of construction rights, etc.) as well as the details of the national and European structures, with the names of the people working for them.

The [Jury](#) section of the European website lists the members of the national juries.

JURY PROCEDURES - HOW DOES IT WORK?

The jury's decisions are final in compliance with the European rules. Before beginning to work the jury receives recommendations from the European Association. The jury meets in 2 separate sessions at different times:

First session

At the beginning of this session, the jury appoints one of its members as chairman and agrees on its working method. Sites representatives can be integrated to this jury level and, in some countries, may participate to the selection of the shortlisted projects.

The jury then studies the projects that do not comply with the rules and decide whether or not to disqualify them.

It later on assesses the projects on their conceptual content and the degree of innovation according to the European 14 topic and shortlists 10 to 20% maximum of the submitted projects.

Second session

During the second round, the jury examines –on its own and independently– the shortlisted projects and points out the winners, runners-up and special mentions. The jury could assess the projects on basis of: the relationship between concept and site; the relevance to the questions raised by the topic and in particular to the issues of sustainable development and adaptability; the relevance of their programme to the general brief for their specific site; the potential for integration into a complex urban process; the innovative nature of the proposed public spaces; the consideration given to the connection between different functions; the architectural and technical qualities.

The jury finally writes a report giving the reasons for the choice made in relation to the requirements of the competition and the concerned sites.

Each country budget includes the equivalent of a Winner's and a Runner-Up's prize per site. Still, each entry is judged on its sole merits and the winning teams are not chosen on basis of an equal distribution between sites – the jury can therefore distribute prizes among entries up to its will or decide not to award all the prizes. In this case, the reasons shall be made public.

The jury may single out projects for Special Mention. These projects are recognised by the jury as presenting innovative ideas or insights, yet not sufficiently suitable for the site. The authors of such projects do not receive any reward.

If disqualified after validation of participation a prize-winning project may be replaced by another project if the quality is satisfactory.

JURY PROCEDURES IN SWEDEN

The Jury work in European Sweden is characterized by certain particular procedures. Site representatives are welcome to both jury sessions. This is essential for the processes following the competition. However, the site representatives only retain the right to vote (two votes) during the first jury session.

DISCLOSURE OF NAMES

The projects assessed by the experts and juries are anonymous.

Once the decision of results is taken, the jury reveals the names of the winners, runners-up and special mentions. This operation is done through the European database, which automatically links the codes of the projects and composition of teams.

ANNOUNCEMENT OF RESULTS

After disclosure of the names of the winning teams and following any adjustments to rankings that may prove necessary, the national secretariats ratify the decisions and disclose the names of all the participants.

The European secretariat publishes the complete list of results online on December 4th, 2017

PUBLICATION OF PROPOSALS

European Sweden may publish the proposals anonymously both in physical exhibitions and on the web during the evaluation time, but only after the first jury meeting.

THE JURY MEMBERS

Anders Olausson

(chairman of jury), Architect
Senior lead architect at
Wingårdhs architects

**Sabine Müller**, Architect

and urban designer
Principal, SMAQ Architektur
und Stadt, Berlin
Professor in urbanism
at The Oslo School of
Architecture and Design

Henrietta Palmer, Architect

Professor at Chalmers
University of Technology
Mistra Urban Futures

**Iñaki Carnicero**, Architect

Principal at Inaqui
Carnicero Architects

Sam Jacob, Architect

Professor of Architecture
at UIC in Chicago
Director, Sam Jacob Studio Ltd

**Sabina Richter**,

Landscape Architect
Co-founder of 02 Landskap

Fredrik Drotte, Architect

Head of City Development
in Upplands Väsby

**Substitutes****Tinna Harling**, Architect

City planner at the
municipality of Tjörn

Karl Zetterholm, Architect

Winner E13 in Nacka

MORE DATA / INFORMATION:

There is a lot of open data available online. Some data is only available in Swedish and other in English as well. Most databases are navigable by non Swedish speakers through the graphical user interface alone.

NATIONAL DATABASES:

SCB (Swedish equivalent to Eurostat, very comprehensive)
(swe/eng)

[SCB.se](http://scb.se)

[Mapping and graph tool](#)

Hitta.se

[Maps with e.g. social and property information](#)

Lantmäteriet (Swedish equivalent of
e.g. The UK Ordnance Survey)

[Open map service](#)

[Open data \(GIS\)](#)

[Historical maps - Explore online \(Buy high resolution digital files or prints\)](#)

Naturvårdsverket (Swedish Environmental Protection Agency)
[Map of areas with special environmental status/protection.](#)

SGU (The Geological Survey of Sweden)
[Map showing geological data.](#)

SMHI (Swedish Meteorological and Hydrological Institute)
[Climate and weather data presented on maps.](#)
[Data catalog](#)

Resrobot
[Nation wide travel planner.](#)

Suecia antiqua et Hodierna
[Collection of Engravings compiled in the 17th century. Now scanned and published online.](#)

LOCAL DATABASES:

[Web GIS of Bleking County. Lots of useful data mapped on as separate layers.](#)

CALENDAR

Please follow the European web page
<http://europan-europe.eu>

RULES OF THE EUROPAN 14 COMPETITION

Please follow the European web page
<http://europan-europe.eu>

UPDATES OF MATERIAL & QUESTIONS

Please check regularly the online platform for questions and answers, and uploaded material.

SITE VISIT

The site is open to the public and can be visited at any time but a guided site visit is planned.

Date: April 14, 2017

Time: To be announced

Meeting point: To be announced

Registration: please register name(s) to info@europan.se by April 8 at the latest.

Please follow the European and National web page for changes.

<http://europan-europe.eu>

<http://www.europan.se>

EUROPAN SWEDEN
C/O Unit Arkitektur AB
Första Långgatan 12B
SE-41303, Göteborg
Sweden

www.europan.se
info@europan.se
Tel. +46 31 60 41 60

Appendix A - Traffic noise and planning

Traffic Noise

If noise generated from traffic exceeds 55 dBA for residential housing a set of rules must be employed. This is generally called “Silent side planning” in swedish context. If noise levels exceed 55 dBA, then this is mentioned in the brief.

Planning with noise levels exceeding 55 dBA

New residential buildings are allowed on condition that it is possible to arrange a quiet side for every flat / housing unit.

Within every flat, at least half of the rooms (living room and bedroom) must face the silent side and also have a window to this side.

Also, one balcony / terrass / out-door-area-at-ground-level must face the silent side.

Example:

For a 3-room flat , at least 2 of the rooms (eg one bedroom + living room) must face the silent side.

This means that no apartment can locate all rooms towards streets exceeding 55 dBA.

Thus all new residential buildings have to be designed in order to protect and screen one side (for example in a garden or courtyard) from the street noise.

General practice show that it is difficult to obtain a silent side using the typology of the tower block, with more than 3 flats / floor.

A quiet side is defined as maximum 45 dBA.

APPENDIX B – BBR 19 Accessibility

The following pages are chapter 3 from the Swedish building regulations. BBR 19.

3 Accessibility, dwelling design, room height, and utility rooms

3:1 Accessibility and usability for people with impaired mobility or orientation capacity

This section contains the mandatory provisions and general recommendations for Chapter 8, Articles 1, 4 and 9 of PBL and Chapter 3, Articles 4 and 18 of PBF. Section 3:5 also contains mandatory provisions and general recommendations for Chapter 8 Article 7 of PBL and Chapter 3 Article 23 of PBF.

3:11 General

3:111 Definitions and terms

When the terms "accessible" and "usable" or "accessibility" and "usability" are used in this section, they mean "accessibility and usability for people with impaired mobility or orientation capacity".

General recommendation

Examples of impaired mobility are impaired movement of the upper limbs, torso and legs and poor balance. People with impaired mobility may need to use a wheelchair, walking frame or cane.

Examples of impaired orientation capacity are impaired vision, hearing or cognitive ability (mental retardation, brain damage).

3:112 Design dimensions for wheelchairs

Where it states in the statute that sites, buildings or parts of buildings shall be accessible and usable, the dimensions for electrically-driven wheelchairs for limited outdoor use (small outdoor wheelchairs) shall be adequately sized with room for manoeuvring. However, the dimensions for manual or small electrically-driven wheelchairs for indoor use (indoor wheelchairs) may be calculated according to individual dwellings.

General recommendation

The calculated turning dimensions that are appropriate for assessing accessibility and usability for a smaller outdoor wheelchair is a circle with a diameter of 1.50 m and for an indoor wheelchair a circle with a diameter of 1.30 m.

3:12 Accessibility and usability on sites

3:121 Scope of application

General recommendation

Chapter 8, Article 9 of PBL states that the rules apply to a vacant site that is to be built on if it is not unreasonable in view of the terrain and general conditions.

3:122 Accessible and usable walkways, lay-bys and parking spaces, etc.

There shall be at least one accessible and usable walkway between the accessible entrances to buildings and

- supplementary housing facilities in other buildings,
- parking spaces,
- lay-bys for cars,
- open spaces, and
- public footpaths adjacent to the site.

Accessible and usable walkways shall where possible be designed without level differences. Where a level difference is unavoidable, this shall be evened out using ramps.

Accessible and usable walkways shall

- be easy to follow,
- be distinguishable from furnished areas, and
- be used as a coherent, tactile and visual guide path.

General recommendation

Examples of open spaces are playgrounds, playing fields and common outdoor areas.

An accessible and usable walkway should

- be as horizontal as possible,
- not slope more than 1:50 laterally,
- have a clear width of 1.5 m, or at least 1.0 m and then have turning zones no more than 10 m apart,
- for openings in fences, hedges and the like, have a minimum clear width of 0.90 m,
- be free from obstacles, and
- be levelled out with a 0.9 to 1.0 m wide ramp to 0-level if there are differences in level at the transition between different types of walking surfaces and locations.

Natural guiding surfaces such as grass edges, walls, fences, curbs and façades can be supplemented by artificial guiding surfaces to form a coherent guide path.

Fixed seating with back and arm rests in connection to accessible and usable walkways and entrances will improve accessibility and usability for people with impaired mobility.

Mandatory provisions for contrast and markings on sites are contained in Section 3:1223, and rules on accessible and usable entrances are contained in Section 3:132.

A lay-by for cars shall be available and a parking space for the disabled shall be established within 25 m walking distance from an accessible and usable entrance to public buildings, workplaces and residential buildings. The surfacing of lay-bys of this kind and parking spaces shall be compact, level and slip resistant.

General recommendation

The longitudinal and lateral slope for lay-bys and parking spaces for the disabled should not exceed 1:50.

3:1221 Walking surfaces on sites

Walking surfaces shall be designed to ensure people with impaired mobility or orientation capacity can get around and ensure that wheelchair users can move around without help.

The surfacing of walkways shall be compact, even and slip resistant.

General recommendation

Walking surfaces can, for example, be on walkways, in playgrounds and ramps and in staircases.

Concrete paving flags, plain stone slabs, compact and smooth gravel surfaces and asphalt are all examples of suitable surface materials.

Rules on contrast and warning signs on walking surfaces are contained in Section 3:1223 and Section 8:91.

3:1222 Ramps on sites

Ramps shall be able to be used by people with impaired mobility. The maximum slope shall be no more than 1:12.

General recommendation

Ramps should be supplemented by stairs whenever possible.

For people with impaired mobility it may be difficult to cope with several ramps in a row with a total height of more than 1.0 m.

A ramp should

- have at least a 2 m long landing,
- have a height difference of up to 0.5 m between landings,
- have a clear width of 1.3 m,
- be free from obstacles, and
- have run-off protection at least 40 mm high if there are level

differences in relation to the surroundings.

A ramp must not slope by more than 1:12 in order to minimise the risk of someone overbalancing. A ramp will be safer to use if it does not slope more than 1:20.

Provisions for stairs and handrails are contained in Section 8:91.

3:1223 Contrasts and markings on sites

Parking spaces, lay-bys for cars and open spaces, as well as walking surfaces, stairs, ramps and artificial guide paths and control devices shall easy to identify.

General recommendation

Contrast to the surroundings can be achieved by using different materials and brightness.

Artificial guide paths can be composed of materials with different structures and brightness that are recessed into the surfacing, such as clearly perceptible slabs in a smooth surface.

A lightness contrast of at least 0.40 NCS (Natural Color System) between the contrast marks and the surrounding area can significantly enhance the ability of the visually impaired to perceive the marking.

Rules for contrast marking of stairs are contained in Section 8:91.

3:1224 Lighting for orientation on sites

Lighting along the accessible and usable walkways and at parking spaces, lay-bys for cars and open spaces, shall be designed to ensure that people with impaired mobility or orientation capacity can find their way around.

General recommendation

For accessible and usable walkways, the surface area should be sufficiently and evenly illuminated. Permanent lighting should not give off glare.

3:1225 Orientation signs on sites

Orientation signs shall be accessible and usable.

General recommendation

Orientation signs should be easily understood and easy to read, have a light contrast and be positioned at a suitable height to ensure that they can be

read/heard by both wheelchair users and standing people with impaired vision. They should be placed where you expect them to be, and that allows you to be right beside them.

The text size should be selected according to reading distance and the surface should not generate reflections. Signs should be supplemented with letters in raised relief and in some cases with Braille and spoken information along with clear, easily understood and easy to recognise picture symbols.

3:13 Accessible and usable entrances to buildings

3:131 Scope of application

General recommendation

Chapter 8, Article 6 of PBL states that the rules do not apply to work premises if it is unjustified due to the nature of the occupancy that the premises are designed for, or for a single-family house if it is unreasonable to meet the requirements when taking the terrain into consideration.

3:132 General

The main entrances to public buildings, work premises and residential buildings shall be located and designed to ensure they are accessible and usable. Other entrances to public buildings, work premises and residential buildings shall also be accessible and usable if they need to meet the requirements for accessibility and usability. Accessible entrances shall be easy to identify.

For single-family houses, accessibility to the building is satisfied if it is possible to subsequently arrange a ramp to the entrance on the site using simple measures.

General recommendation

In addition to the main entrance, other entrances might need to be made accessible and usable, for instance in situations where the terrain or location of supplementary housing facilities would make the distance be too long, see also Section 3:23.

In order for an entrance to be easy to identify, it should be contrast marked and well lit, see Sections 3:1223 and 3:1224. Orientation signs should be designed in accordance with Section 3:1225.

Rules on ramps are contained in Section 3:1422.

3:14 Accessibility and usability in buildings

3:141 Scope of application

General recommendation

Chapter 8 Article 6 of PBL states that the rules do not apply to work premises if it is unjustified due to the nature of the occupancy that the premises are designed for.

3:142 Entrances and circulation spaces

Entrances and circulation spaces shall be accessible and usable by people with impaired mobility or orientation capacity and where possible, be designed without any level differences. Entrances and circulation spaces shall have enough room to manoeuvre a wheelchair and be designed to ensure that people who use wheelchairs can move around without needing help.

Where different levels cannot be avoided in the circulation spaces, the differences shall be evened out with ramps, lifts or other lifting devices and staircases.

It shall be possible to carry a person on a stretcher from individual dwellings.

General recommendation

A circulation space should

- have a clear width of 1.30 m, although this does not apply to stairs
- where there are limited obstructions such as columns, have a clear width of at least 0.80 m, and
- in public buildings, be separated from furnished areas with, for example, lighting or different materials.

An appropriate size for the entrance and circulation spaces in dwellings are included in SS 91 42 21 (normal level).

Rules about when transport by stretcher needs to be possible by lift are in Section 3:144.

Rules for the safe transport by stretcher are contained in Section 8:232.

3:1421 Walking surfaces in buildings

Walking surfaces in the entrance and circulation spaces shall be firm and smooth.

General recommendation

Rules for designing accessible and usable walking surfaces and guide paths for people with impaired orientation capacity are included in 3:1423–3:1425.

Rules for protection against slipping are contained in Section 8:22.

Rules for protection against falling down stairs are contained in Section 8:232.

3:1422 Ramps in buildings

Ramps shall be able to be used by people with impaired mobility. The maximum slope shall be no more than 1:12.

General recommendation

A ramp should

- have at least a 2 m long landing,
- have a height difference of up to 0.5 m between landings,
- have a total height difference of at most 1.0 m,
- have a clear width of 1.3 m,
- be free from obstacles, and
- have a minimum of 40 mm run-off protection.

A ramp must not slope by more than 1:12 in order to minimise the risk of someone overbalancing. A ramp will be safer to use if it does not slope more than 1:20.

Rules on lifts are contained in Section 3:144.

Provisions for stairs, balustrades and handrails are contained in Section 8:232.

3:1423 Contrasts and markings in buildings

Important destinations in buildings and walkways, stairs and ramps, as well as control devices shall be easy to identify and find even for people with impaired orientation capacity.

General recommendation

Examples of important destinations in buildings are entrance doors and lift doors, and, in public buildings, reception counters, toilet doors, doors in and to escape routes, and information points.

In public buildings there should be logical guide paths that guide you between selected destinations. In open spaces in, for example, station buildings (terminals), reception areas and foyers, there should be a coherent, tactile and visual guide path in place. Guide paths in the floor can be arranged with different materials and with a lightness contrast.

Contrast to the surroundings can be achieved by using different materials and brightness. A lightness contrast of at least 0.40 NCS (Natural Color System) between the contrast marks and the surrounding area can significantly enhance the ability of the visually impaired to perceive the marking.

A logical colour scheme facilitates the orientation of people with mental retardation or other orientation difficulties.

Rules for contrast marking of stairs are contained in Section 8:232.

Rules for protection against impacts and crushing are contained in Section 8:3.

3:1424 Lighting for orientation in buildings

The lighting of entrances and circulation spaces shall be designed to ensure people with impaired mobility or orientation capacity are able to navigate.

General recommendation

Floors in circulation spaces should be adequately and evenly illuminated.

The light source should be shielded and the contrast in brightness between adjacent spaces, and between the outside and inside should not be too great.

Rules for lighting conditions are contained in Section 6:32.

Rules for lighting and glare to protect against falls are contained in Section 8:21.

3:1425 Orientation signs on buildings

Orientation signs shall be accessible and usable.

General recommendation

Orientation signs should be easily understood and easy to read, have a light contrast and be positioned at a suitable height to ensure that they can be read/heard by both wheelchair users and standing people with impaired vision. They should be placed where you expect them to be, and that allows you to be right beside them.

The text size should be selected according to reading distance and the surface should not generate reflections. Signs should be supplemented with letters in raised relief and in some cases with Braille and spoken information along with clear, easily understood and easy to recognise picture symbols.

Electronic signage should be designed to ensure people with impaired orientation capacity are able to perceive and understand it.

3:143 Doors and gates

Accessible and usable doors and gates shall be designed to ensure they can be easily opened by people with impaired mobility, allow passage by wheelchair and ensure that there is sufficient space for opening and closing the door or gate from a wheelchair. Other openings in the passageways shall also be designed to allow passage by wheelchair. Handles, control devices and locks shall be located and designed to ensure they can be used both by people with impaired mobility and people with impaired orientation capacity.

Revolving doors shall be supplemented with a door that can be used by people with impaired mobility or orientation capacity.

General recommendation

The clear passage dimension should be at least 0.80 m, when the door is opened at 90°, for

- entrance doors,
- lift doors,
- corridor doors that are positioned perpendicular to the corridor's longitudinal direction,
- openings in passageways,
- doors to sanitary rooms in public buildings that are to be usable for people with impaired mobility,
- doors to places of assembly, and
- doors to supplementary housing facilities.

Rules on widths for escape routes are contained in Section 5:334.

The Swedish Work Environment Authority issues rules on doors in work premises.

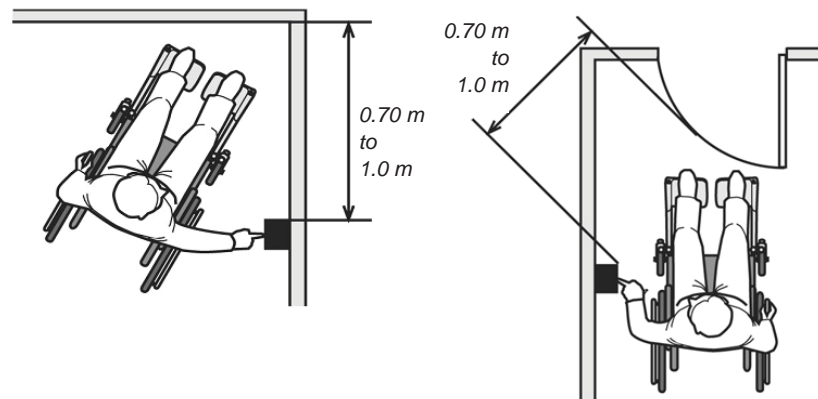
For doors in dwellings, there are suitable passage dimensions and appropriate dimensions for service areas in SS 91 42 21 (normal level).

Doors that shall be accessible and useful should be fitted with automatic door openers if they have door closers or are heavy.

For doors with automatic door openers, it is important to indicate the space where the door opens, or to fit the doors with security sensors or the like.

Control devices for door openers should be placed with their centre 0.80 m from the floor or ground and at least 0.70 m, but preferably 1.0 m from the corner or the front edge of the door leaf in the most adverse position.

Figure 3:143 *Placement of control devices for door openers*



Control devices should also be able to be handled by people with reduced strength or reduced grip or precision capability.

Rules on the appropriate design of thresholds are contained in Section 8:22.

Examples of how the doors can be designed in respects other than those that have been addressed in this general recommendation can be found in Handisam's *Riv hindren – Riktlinjer för tillgänglighet*. (*Break the Barriers – Guidelines for accessibility*.)

3:144 Lifts and other lifting devices

When lifts or other lifting devices are required to make dwellings, workplaces and public buildings accessible and usable, at least one of them shall accommodate a person using a wheelchair and a helper. A lift or other lifting device of this type shall also be designed to ensure that people with impaired mobility or orientation capacity are able to use it unaided.

Lifts and other lifting devices shall be designed to ensure that people with impaired mobility or orientation capacity can see when the car has stopped at a landing for entering and leaving.

Transport by stretcher in a lift shall be possible in residential buildings with more than four storeys.

An additional passenger lift shall be installed in buildings with more than ten storeys. (BFS 2011:26).

General recommendation

The lifts and other lifting devices that are to be accessible and usable are regulated in Chapter 3, Articles 4 and 18 of PBF.

Lifts complying with the requirements are included in SS-EN 81-70.

Type 2 (1.1 x 1.4 m) and 3 (2.0 x 1.4 m) in SS-EN 81-70 meet the requirements for accessible and usable spaces in lifts. SS-EN 81-70 also includes appropriate control and signal devices, where Annex G should be used for lifts in public buildings.

Additional requirements for lifts used to transport people with impaired mobility or orientation capacity are contained in Boverket's provisions and general recommendations for lifts and other motorised devices (BFS 2011:12), H, Annex 5:1, Sections 1.2 and 1.6.1.

Lifts complying with space requirements for accommodating a stretcher are contained in SS 763520 (1.1 x 2.1 m).

There are also harmonized standards for platform lifts, SS-EN 81-40 and SS-EN 81-41.

3:145 Accessibility and usability in public buildings

Where there are toilets for the public, at least one toilet shall be accessible and usable.

General recommendation

In public buildings that have more than one storey with toilets for the public, at least one toilet on each such storey should be accessible and usable.

The accessible and usable toilet should have

- minimum dimensions 2.2 x 2.2 m,
- properly designed and installed fittings and equipment;
- contrast markings, and
- security alarm. (BFS 2011:26).

Restricted sections of cinemas, theatres, sports facilities and other similar large places of assembly do not need to be fully accessible and usable for people with impaired mobility. However, podiums and stages shall always be accessible and usable.

General recommendation

Permanent locations for people who use wheelchairs should be integrated with other locations and provide the same opportunity to see and hear as other spectators.

Places of assembly and reception areas shall be equipped with induction loops, infra-red systems or any other technical solution to ensure they are accessible and usable by people with impaired hearing.

General recommendation

Examples of places of assembly are auditoriums, theatres, churches and large conference rooms that can accommodate at least 50 people.

3:146 Accessibility and usability in individual dwellings on a single storey

Rooms, balconies, terraces and patios shall be accessible to and usable by people with impaired mobility. For terraces that supplement accessible and usable and well positioned balconies, accessibility and usability are ensured if it is possible to subsequently install a ramp in a simple way.

At least one sanitary room shall be accessible and usable for people with impaired mobility and be designed to ensure there is adequate room for a helper. It shall also be possible to install a separate shower area if this has not been catered for from the start.

The door to the main entrance and at least one door to each room (including room for cooking and a sanitary room), balcony, terrace and patio shall allow passage by wheelchair. There shall be enough room to open and close doors from a wheelchair.

General recommendation

Design dimensions that are appropriate to accessibility and usability of rooms are contained in SS 91 42 21 (normal level).

Room for helper and separate shower can be arranged by removing a bathtub, for example.

Rules on the appropriate design of thresholds are contained in Section 8:22.

3:147 Accessibility and usability in individual dwellings on multiple storeys

The requirements in Section 3:146 shall be met for the entire ground storey.

General recommendation

Rules on the design of dwellings on multiple storeys are contained in Section 3:221.

3:148 Accessible and usable supplementary housing facilities

Storage spaces in Section 3:23, mailboxes, laundry rooms, waste storage areas, waste chutes and other supplementary housing facilities shall be accessible and usable.

3:2 The design of dwellings

This section contains mandatory provisions and general recommendations pursuant to Chapter 3, Articles 1 and 17 of PBF. Section 3:5 also contains mandatory provisions and general recommendations for Chapter 8 Article 7 of PBL. (BFS 2011:26).

3:21 General

3:211 Definitions

Cooking:

Food preparation, cooking and food storage

3:22 General on the design of dwellings

Dwellings shall be sized, laid out, fitted out and equipped, with consideration taken to their long-term use.

The dwelling shall include

- at least one room with fittings and equipment for personal hygiene,
- room or a separable part of the room for everyday social contact,
- room or a separable part of the room for sleep and rest;
- room or a separable part of the room with fittings and equipment for cooking,
- area for dining in or near the room with fittings and equipment for cooking,
- space for home working,
- space near the entrance with space for outdoor clothes etc.,
- space for washing and drying laundry in machines if there is no communal laundry room, and
- space and fittings for storage.

A separable part of the room shall have windows facing the open. A separable part of a room shall be designed in such a way that, with its function retained, it can be separated by walls from the rest of the room.

General recommendation

A balcony, patio or a similar space should be provided adjacent to the dwelling.

The design dimensions that are suitable for the design of the dwellings are contained in SS 91 42 21 (normal level).

Rules for supplementary housing facilities are contained in Section 3:23.

Rules on waste storage areas in dwellings are contained in Section 3:4.

Rules for ventilation and daylight are contained in Sections 6:2 and 6:3.

3:221 Dwellings on multiple storeys

In dwellings with multiple storeys the entrance storey shall at least accommodate

- a sanitary room according to Section 3:146,
- separable space for a bed (alcove),
- facilities for cooking
- dining space,
- place for sofa suite and armchairs,
- entrance area,
- space for storage, and
- area for washing and drying laundry in machines if there is no communal laundry room.(BFS 2011:26).

General recommendation

Rules for accessibility and usability in individual dwellings on multiple storeys are contained in Section 3:147. (BFS 2011:26).

3:222 Dwellings larger than 55 m²

Dwellings with a residential area (BOA)⁶ greater than 55 m² shall be designed to suit the number of people for which they are intended. However, they shall always have room for a double bed in at least one room or a separable part of a room for sleep and rest.

⁶ BOA = Residential area. Definition in Svensk Standard SS 02 10 53

3:223 Dwellings not larger than 55 m²

Dwellings with a BOA of not larger than 55 m² shall be designed in accordance with their size. However, in these dwellings it is sufficient that either the room for sleep and rest, or the room with fittings and equipment for cooking is separable. They do not need to have space for a double bed.

General recommendation

SS 91 42 21 includes design dimensions and interior lengths for cooking that are suitable for homes with a BOA of not larger than 55 m² and 40 m² respectively.

3:224 Dwellings for a group of residents

For a group of residents, the individual dwelling rooms with fittings and equipment for cooking and for everyday social contact and space for meals are partially grouped into communal spaces.

The communal spaces shall be large enough and adequately equipped to ensure they can fully compensate for the limitations in the individual dwellings.

Section 3:224 does not apply to dwellings for people with disabilities specified in Article 9 Point 9 of the Act (1993:387) for Support and Service for people with Certain Functional Impairments, LSS, and Chapter 5, Article 7 of the Social Services Act (2001:453), SoL.

General recommendation

For special forms of dwelling for the elderly and dwellings for students and youths, see Sections 3:225–3:226.

3:225 Special forms of dwelling for the elderly

For a small group of residents, in special forms of dwelling for the elderly, the regulations in the first and second paragraphs of Section 3:224 apply. The communal spaces shall lie adjacent to the individual dwelling.

Group dwellings intended for senile people, do not need to be equipped with fittings and equipment for cooking in the individual dwelling. In such cases, however, provision shall be made for the necessary installations for this purpose.

General recommendation

The term special forms of dwelling for the elderly refers to dwellings in accordance with Chapter 5, Article 5, second paragraph of the Social Services Act (2001:453), SoL.

Special forms of dwelling for the elderly are often also workplaces. Arbetsmiljöverket issues rules on workplace design.

3:226 Forms of dwelling for students and young people

In individual dwellings for students or young people with a BOA of not larger than 35 m², the room for everyday social contact, the room for sleep and rest, or the room with fittings and equipment for cooking do not need to be separable.

If dwellings for students have separable parts of rooms for cooking, the separable parts do not need to have windows facing the open.

For a group of students or young people, the individual dwelling with fittings and equipment for cooking and for everyday social contact and space for meals, or parts thereof, may be grouped into communal spaces.

In cases where the room with fittings and equipment for cooking is shared, no more than 12 dwellings may share it.

The communal spaces shall be large enough and adequately equipped to ensure they provide reasonable compensation for the limitations in the individual dwelling.

General recommendation

The interior length for cooking that is suitable for dwellings for only one student is contained in SS 91 42 21.

Rules on requirements for ventilation and daylight are contained in Sections 6:2 and 6:3.

3:23 Supplementary housing facilities

In the vicinity of dwellings there shall be a common laundry room with the option of washing and drying by machine, if there is no room to wash and dry by machine in the individual dwelling (see Section 3:22).

In the dwelling or in its vicinity there shall be a lockable space for storage of seasonal equipment and the like.

In the vicinity of the dwelling, there shall be a room for the storage of prams, bicycles, outdoor wheelchairs, walking frames and the like, as well as space for post boxes.

General recommendation

Storage space and common laundry rooms should be within 25 m walking distance from an entrance of this type as referred to in Section 3:132.

SS 91 42 21 contains suitable dimensions for storage.

Rules for accessible and usable supplementary housing facilities are contained in Section 3:148.

Rules on waste storage areas are contained in Section 3:4.

3:3 Room height

This Section contains mandatory provisions and general recommendations pursuant to Chapter 3, Article 9 of PBF. Section 3:5 also contains mandatory provisions and general recommendations for Chapter 8 Article 7 of PBL.

3:31 General

The height of rooms in buildings shall be sufficient to avoid problems to human health.

General recommendation

Rules for ventilation are contained in Section 6:25.

Rules on clear height are contained in Section 8:34.

3:311 Rooms intended for accommodation other than on temporary basis

3:3111 Dwellings

The room height of dwellings shall be not less than 2.40 m. In one or two family houses, however, the room height in attics, semi-basements and basements must be no lower than 2.30 m. In restricted sections of rooms, these room heights may be lower. In sections of the room where standing height is needed, the room height must not be less than 2.10 m under horizontal sections of roofs or 1.90 m under sloping roofs.

General recommendation

Examples of rooms or separable parts of rooms intended for the accommodation of people other than occasionally are contained in Section 1:6.

3:3112 Public premises

The ceiling height in public premises shall be at least 2.70 m. In rooms designed for a small number of people, this room height may be lower. However, the room height must not be less than 2.40 m.

General recommendation

Examples of rooms designed for a small number of people are rooms with space for 16 people at the most.

3:3113 Work premises

The room height of workrooms shall be not less than 2.40 m. In restricted sections of rooms, these room heights may be lower. In sections of the room where standing height is needed, the room height must not be less than 2.10 m under horizontal sections of roofs or 1.90 m under sloping roofs.

In educational premises and other premises intended for a large number of people, the room height shall be not less than 2.70 m.

General recommendation

Arbetsmiljöverket also issues rules on room heights in work premises.

3:312 Rooms intended for accommodation on a temporary basis

In rooms or separable parts of rooms in dwellings and public premises for people to accommodate on a temporary basis, the room height shall be not less than 2.10 m.

General recommendation

Section 1:6 contains examples of rooms or separable parts of rooms intended for the accommodation of people on a temporary basis.

Arbetsmiljöverket issues rules on ceiling heights in work premises.

3:4 Utility rooms

This section contains mandatory provisions and general recommendations for Chapter 8, Article 4 first paragraph 9 and Article 9 of PBL and Chapter 3, Articles 9 and 10 of PBF. Section 3:5 also contains regulations and general recommendations to Chapter 8, 7 § PBL. (BFS 2011:26).

3:41 General

3:411 Definitions

Utility rooms:

Rooms used primarily for the operation and maintenance of buildings, such as rooms for fans, cleaning equipment, lift machines, waste storage areas, substations and boiler rooms.

Waste handling installations:

Fixed facilities for management of waste, such as vacuum systems and mechanically **handled skips** (recessed or placed on the surface).

3:42 Layout of utility rooms

Utility rooms shall be located and designed to ensure that the risk for accidents during usage, inspection and maintenance of the rooms and their installations are limited. Utility rooms and their installations shall also be located and designed to limit any risk to hygiene or health of users or neighbours is limited.

In the room there shall be adequate space for materials and equipment and for operation and maintenance work.

General recommendation

In utility rooms, there should be lighting and electrical outlets, and where appropriate waterproof flooring, hot water installation, floor gulley with evaporation protection, emergency lighting and permanent devices for handling of heavy installations.

If there is any risk of personal injuries, utility rooms should be lockable.

Doors to fan rooms should be hung to ensure they can be opened in the event of any excess pressure, i.e. at excess pressure in to the room and the under-pressure out from the room.

Rules for water and drainage installations are contained in Section 6:6.

Rules on areas requiring waterproof or water-repellent layers are contained in Section 6:533.

Rules on the design of lift areas and lift installations are also included in Boverket's mandatory provisions and general recommendations on lifts and other motorised devices (BFS 2011:12), H.

Rules on the design of utility rooms are also issued by Arbetsmiljöverket

Examples of how the utility rooms can be designed are included in the HVAC installer's guidelines *Rätt arbetsmiljö för montörer och driftpersonal*

Rules for manual handling and ergonomics are issued by Arbetsmiljöverket.

3:421 Access routes to utility rooms

Utility rooms shall be located and designed in such a way that limits the risk of accidents is limited when accessing and transporting. Access routes shall be designed with sufficient room for the transportation of large and heavy parts and equipment. Access routes via a residential unit may only occur to installations intended for the particular residence only.

General recommendation

Access to utility rooms via ladders, external staircases and over roofs should be avoided.

Rules on access routes to roofs are contained in Section 8:2421.

Arbetsmiljöverket also issues regulations on transport routes and manual handling.

3:422 Waste storage areas and waste facilities

In, or adjacent to a building, there shall be spaces or facilities for the handling of waste that can be used by all users of the building. For single-family houses separate waste containers may be used. The rooms shall be designed and dimensioned to ensure they facilitate the recycling of waste, in addition to what is specified in Section 3:42.

General recommendation

Household waste, such as food waste, that for reasons of hygiene needs to be taken out frequently, should be as close to the dwelling as possible. The distance between the building's entrances and rooms and facilities for waste should not exceed 50 m for multi-dwelling blocks.

Section 3:1 states that waste storage areas and waste facilities shall be accessible and usable.

Rules on the design of utility rooms are also issued by the Swedish Work Environment Authority.

Rules for manual handling and load ergonomics are issued by the Swedish Work Environment Authority.

Rooms or facilities for waste management shall be adapted according to

- pick-up frequency and amount of waste,
- the type and composition of waste,
- the need for cleaning,
- the need to be used in a way that ensures the risk of accidents is limited, and
- local rules for waste disposal on how the waste is sorted, stored and picked

up.

General recommendation

For larger quantities of food waste, such as waste from supermarkets, there should be a refrigerated waste room, if, from a hygienic point of view, this cannot be arranged in any other way.

The refuse chute should have a circular cross section and a larger internal diameter than the largest lateral dimension of the waste inlet opening. An inlet opening with a cross section larger than 0.3 m should be fitted with a safety device. The pipe inside the inlet should be designed to ensure the waste does not jam.

Rules for local waste disposal are contained in the municipal sanitation regulations.

Bulky waste shall be disposed of separately.

It shall be possible for waste inlets and pneumatic tube conveyors to be locked from the associated collection spaces.

Rooms or facilities for the handling of waste must not be placed

- to ensure the transport of refuse must take place through spaces where people are present other than occasionally or where food is stored, and
- to ensure food waste has to be transported through circulation spaces adjacent to rooms where people are present other than occasionally, or where food is stored.

3:423 Waste disposal in dwellings

In dwellings there shall be space for waste separation at source.

3:5 Requirements for accessibility, dwelling design, ceiling height, and utility rooms for alterations of buildings

This section contains, in addition to what is specified in Sections 3:1, 3:2, 3:3 and 3:4, provisions and general recommendations to Chapter 8, Article 7 of PBL. (BFS 2011:26).

3:51 Accessibility and usability for people with impaired mobility or orientation capacity (

3:511 Accessibility and usability in buildings

Buildings shall, following alteration, comply with the accessibility and usability requirements in Section 3:1. The requirements may be satisfied in a way other than that specified where the corresponding level of accessibility and usability is still achieved.

However, deviations from the level may be made if there are exceptional circumstances relating to the scope of the alteration and the building's conditions. Rules on this are contained in this section and in Section 1:22.

Rules on requirements for alterations of lifts are contained in Section 3:513. (*BFS 2011:26*).

General recommendation

That one of the requirements in Section 3:1 cannot be met in full cannot be taken as a way of waiving other requirements in Section 3:1.

The entrances to multi-dwelling blocks, work premises and facilities to which the general public has access that have different levels inside the main entrance door, a ramp, lift or other lifting device should be installed. A precondition is that there is enough space and that the installation is performed to ensure the building's cultural values can be retained.

Level differences between sanitary rooms and the area outside the door should be evened out. The floor level for sanitary rooms should not be raised if this compromises accessibility and usability. Where floors in sanitary rooms need to be raised locally to slope towards the floor gulley, you may deviate from the requirement for accessibility and usability if there are exceptional circumstances.

Important destinations in buildings such as walkways, stairs and ramps, as well as control devices should be easy to identify and navigate for people with impaired orientation capacity. This may involve contrast marking, for example.

Doors that shall be accessible and usable, and that do not meet the requirements in Section 3:143, should be made wider if there are no exceptional circumstances to deviate from this requirement.

If a public building has one or more toilets for the general public, at least one toilet should be accessible and usable.

Places of assembly and reception areas should be fitted with induction loops, infra-red systems or another technical solution to ensure they are accessible and usable by people with impaired hearing.

Sanitary rooms in dwellings should be made as accessible and usable as possible. If it is not possible to move the walls, you should at least place the toilet, sink, shower and bathtub in relation to each other as specified in Annex A in SS 91 42 21 (normal level).

Waste storage areas should be accessible and usable.

Exceptional circumstances to deviate from this could, for example, be that

- the measure could lead to an alteration of a particularly historic building in accordance with Chapter 8, Article 13 of PBL,
- the floor needs to be raised locally in a sanitary room to ensure a slope to the floor gulley, and
- there is no room to widen the doors in dwellings.

Additional rules on accessibility and usability are contained in Boverket's provisions and general recommendations on the removal of easily remedied obstacles, to which and in premises where the public has access and in public places (*BFS 2011:13*), HIN. (*BFS 2011:26*).

3:512 Accessible and usable entrances to buildings

Differences in level to the main entrances shall be bridged if there are exceptional circumstances to deviate.

However, for single-family houses, the requirement for accessibility and usability is satisfied if it is possible to subsequently arrange a ramp for the entrance to the site in a simple way. (*BFS 2011:26*).

General recommendation

Differences in level at the main entrances can be bridged, for example, with ground build-up, ramps, lifts or other lifting devices.

Exceptional circumstances to deviate from this could, for example, be that

- soil conditions do not permit this, for example, because the site cannot accommodate a ramp, lift or other lifting device,
- the measure could lead to an alteration of a particularly historic building in accordance with Chapter 8, Article 13 of PBL,
- accessibility and usability, despite the measures, still cannot be improved, for example, if there is a difference immediately inside the entrance that cannot be bridged,
- a building already has an equivalent accessible and usable entrance, and
- the measure could reduce accessibility in general, for example, if a ramp to an entrance obstructs accessibility to and usability of a pavement. (*BFS 2011:26*).

3:513 Accessible and usable lift or other lifting device

For substantial alterations to multi-dwelling blocks with more than two storeys, work premises and public buildings shall have an accessible and usable lift or other lifting device installed, if there is none. Where there is a housing or main part of a housing in the attic, the attic is equivalent to a storey. Deviations from this provision may only be made if there are exceptional circumstances for doing so. (*BFS 2011:26*).

General recommendation

Extensive alterations to multi-dwelling blocks may involve major work in stairways, major changes to floor layouts or significant changes to the building's frame.

One way of satisfying the requirement for lifts may be to install a lift in an extension adjacent to the stairwell.

When an attic is converted into new dwellings in multi-dwelling blocks with more than two floors, a lift or other lifting device should be installed if there is none. If there is a lift, you must assess in each case if the lift needs to be run up to the new dwellings.

Exceptional circumstances to deviate from this could, for example, be that

- the measure leads to a particularly valuable building as specified in Chapter 8, Article 13 of PBL being altered,
- it is not possible to produce adequate space for both the lift and safe evacuation via the stairway and space for carrying stretchers down the stairs if the lift does not accommodate a stretcher,
- a lift installation in itself would entail changes to the building frame, in addition to the alterations needed for the actual lift installation, and
- essential living qualities would be lost, such as the essential qualities of living contained in Section 1:2231.

Requirements for the design of accessible and usable lifts and other lifting devices are contained in Section 3:144 and in Boverket's provisions and recommendations on lifts and other motorised devices (BFS 2011:12) Chapter 2. (BFS 2011:26).

3:514 Accessibility and usability on sites

General recommendation

Chapter 8, Article 11 of PBL states that when alterations are made to a building that require planning permission or that requires notification to the authorities, the site shall be organised to ensure it meets the requirements in Article 9 to the extent that is reasonable considering the cost of the work and the special characteristics of the site.

To be more usable, the following should be ensured on the site

- level differences at the transition between different types of walking surfaces and locations, such as at pedestrian crossings, should be evened out to 0-level with a 0.9 to 1.0 m wide surface that has an incline of no more than 1:12,
- the surfacing on the walking surfaces should normally be firm, smooth and non-slip,
- parking spaces, lay-bys for cars, open spaces, walkways, stairs and ramps have markings and contrasts in relation to their surroundings, and
- the requirement levels for sites specified in Section 3:12 are otherwise pursued. (BFS 2011:26).

3:52 The design of dwellings

Dwellings shall be designed, utilised, fitted out and equipped, with consideration taken to their long-term use. The requirement levels specified in Section 3:2 shall be pursued. Rules for alterations of buildings are also given in Section 1:22. (BFS 2011:26).

General recommendation

When all or parts of buildings gain a new function, higher requirements should normally be met compared to when retaining the existing function.

For example, when attics, offices, schools or health care facilities are converted into dwellings, the requirements in Section 3:2 should be applied. The same applies when dwellings in Sections 3:224–3:226 or other special dwellings are converted into regular dwellings. If the alteration is made to a historically valuable building so that it has a new function, however, there may be greater reason to deviate from the requirements.

Floor plans and interiors in existing dwellings should not be altered simply because they do not fully meet all the requirements for construction of new housing, unless they apply to the availability and usability of the sanitary rooms, see Section 3:511 eighth paragraph in the general recommendation. (BFS 2011:26).

3: 53 Ceiling height

Ceilings in buildings shall be sufficiently high to avoid problems to human health. Rules for alterations of buildings are also given in Section 1:22. (BFS 2011:26).

General recommendation

The ceiling height of existing dwellings can usually be accepted even if it is lower than the ceiling heights specified in Section 3:3, and should be retained if it is higher.

For example, when attics, offices, schools and health care facilities are converted into dwellings, the ceiling heights in Section 3:3 should be applied.

Rules on clear height are contained in Section 8:34.
The Swedish Work Environment Authority issues rules on ceiling heights in work premises. (*BFS 2011:26*).

3:54 Waste storage areas and waste facilities

In, or adjacent to a building, there shall be spaces or facilities for the handling of waste that can be used by all users of the building. The corresponding requirement levels specified in Sections 3:422–3:423 shall be pursued. (*BFS 2011:26*).

General recommendation

Household waste, such as food waste, that for reasons of hygiene needs to be taken out frequently, should be as close to the dwelling as possible. The distance between the building's entrances and rooms and facilities for waste should not exceed 50 m for multi-dwelling blocks.

Requirements for accessibility and usability are contained in Section 3:51.

Rules for local waste disposal are contained in the municipal sanitation regulations.

Rules on the design of utility rooms are also issued by Arbetsmiljöverket.

Rules for manual handling and load ergonomics are issued by Arbetsmiljöverket. (*BFS 2011:26*).