

# Sustainable Urban Development Programme

Stockholm Royal Seaport is leading the way to a sustainable future



Stockholm Royal Seaport has a fantastic location with eight kilometres of coastline directly adjacent to the Royal National City Park. The centre of Stockholm is just ten minutes away by bike. At the same time, there are several challenges to overcome in the form of soil contamination from earlier operations, for example, and noise and risks from existing operations. Stockholm Royal Seaport is one of the biggest and most complex urban development areas in Stockholm.

Stockholm Royal Seaport is being built to meet the City's growing needs – from housing, workplaces, services and public transport to preschools, green spaces, culture and sports. Stockholm Royal Seaport spans from Hjorthagen in the north to Loudden in the south. Development is largely taking place in the areas once used for gas production, port and other industrial operations. Planning began in the early 2000s and development will continue for many years, in several different phases.

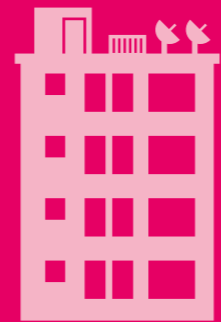


Many of Stockholm's urban development areas surround the inner city, and Stockholm Royal Seaport is the largest. Stockholm Royal Seaport has four subareas: Hjorthagen, Södra Värtahamnen, Frihamnen and Louden. These subareas hold a key position in the development of both the inner city and the region. Connecting Stockholm Royal Seaport with the rest of Stockholm to form a dense and multifaceted city will form a whole that binds the inner city and opens it to the surrounding parts of Greater Stockholm.

Royal National City Park

**236** hectares

Stockholm Royal Seaport is half the size of Södermalm and comprises the subareas Hjorthagen, Värtahamnen, Frihamnen and Louden.



**12,000**

At least 12,000 new housing units have been planned, most of them along Husarviken in Hjorthagen, and on Louden. Occupation of the Garphyttan block in Hjorthagen began in October 2012.

**35,000**

new workplaces are planned. Occupation of the Riga block in Södra Värtahamnen began in 2010.

**600,000** m<sup>2</sup>

of commercial floor space is planned.

The entire area is scheduled for completion by about **2030**

#### About this document

This governing document describes the City of Stockholm's urban planning and sustainability ambitions for Stockholm Royal Seaport. It has three main chapters.

- The first chapter describes the unique qualities that already exist in the area, as key starting points for further development.
- The next chapter summarises the five strategies for sustainable urban development that are to apply to all development of the area. Under each of these strategies, a number of urban planning principles are formulated for guidance and inspiration, plus a number of governing sustainability targets that are to underlie the requirements formulated for each specific expansion phase.
- The final chapter contains a description of the process from both an urban planning and a development perspective, and clarifies how the ambitions described in this document will be realised, and maintained in the future.

#### Delimitations

This document focuses on targets and strategies for managing the new construction and refurbishment planned for Stockholm Royal Seaport.

- The programme does not include any actions, since these are addressed in separate action programmes and regulated in zoning plans and agreements.
- Although the programme does not include any existing operations or regional infrastructure, these are important parameters and accounted for in the planning.
- The programme only includes targets and ambitions that go beyond statutory requirements.

#### Working team

This document has been prepared by the City Development Administration and the City Planning Administration in consultation with the relevant City departments and companies, assisted by the Tengbom and White architectural firms.

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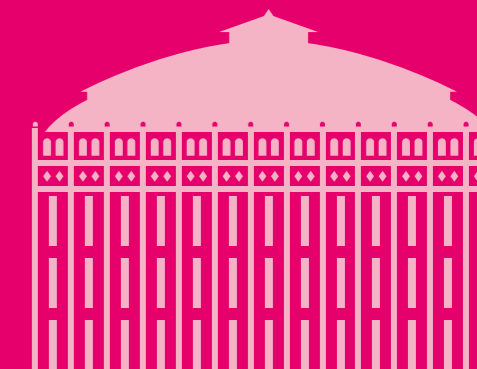
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# Vision

## Stockholm Royal Seaport is driving the development of next-generation, sustainable urban districts

A walk through Stockholm Royal Seaport affords a multitude of experiences that impart the history of the area, its contrasts and character. Here, the Seaport meets the Royal National City Park, large-scale infrastructure and culturally significant historical buildings, housing, and businesses. Creating a new city on the site's terms.

In this area, a dense and multifunctional city will provide the foundations for an inclusive urban lifestyle, prudent use of resources, and reduced climate impact. Participation, creativity and innovation are thriving in an inspiring urban environment.

In Stockholm Royal Seaport, nature is part of the urban environment. It is a source of well-being and a variety of useful services. Through thoughtful, comprehensive solutions, a robust urban district is being formed that will be able to manage the challenges of the future.

Through cooperation, Stockholm Royal Seaport is contributing to a Stockholm that is diverse, provides a rich variety of experiences, cohesive and growing.



# Introduction



This Sustainable Urban Development Programme is a policy document that contains sustainability targets and urban planning principles for Stockholm Royal Seaport brought together in five strategies. The City of Stockholm is expected to grow to a city of one million inhabitants by 2024. To create effective urban environments for the City's inhabitants long-term in a rapidly growing region requires advanced sustainability efforts. The decision of the Municipal Council in 2009 to designate Stockholm Royal Seaport as the City of Stockholm's new environmentally profiled area has provided the foundations for this urban district to become a national and international role model for sustainable urban development.

The planning of Stockholm Royal Seaport has been ongoing for many years. New knowledge is being generated and new conditions continue to arise within the project and the wider world. The points of departure for development of the area are learning from past experience, generating new knowledge, and planning and building next-generation sustainable urban districts. The aim is that Stockholm Royal Seaport will be the place of choice for testing new and innovative ways of working, methods and solutions. The results, lessons learned and working methods will then be used in the further development of Stockholm.

In 2010, a first overarching environmental and sustainability programme for Stockholm Royal Seaport was drawn up, describing ways of working, targets and actions. After six years of applying the programme, the need has clearly emerged for a revision of the sustainability targets, and to describe in a single document the points of departure that should be applied to the design of an urban environment and its buildings. In addition, social sustainability targets have been clarified and new targets have been added.

The Sustainable Urban Development Programme aims to demonstrate how Stockholm Royal Seaport can be developed on the basis of high ambitions for sustainable urban planning from a number of different perspectives. It is intended to contribute to an understanding of Stockholm Royal Seaport, and simultaneously to inspire innovative architecture, innovative solutions, sustainable lifestyles, and high-quality urban spaces.

The programme weaves together traditional urban planning issues with proactive sustainability aims. It does not claim to provide a comprehensive picture of the area's structure or land use, but constitutes a complement to plans and planning programmes for all or parts of the area. Applying the programme at various planning levels and at various stages ensures that urban planning qualities and high ambitions with regard to sustainability will permeate the entire project – from the whole down to its details. These ambitions are made concrete in two ways:

**Urban planning principles** provide guidance in the complex urban planning processes, where the aim is awareness and care from planning and design through to implementation and

management. The urban planning principles should be read with the character of each subarea in mind. Precise urban planning principles are being developed for each phase.

**Sustainability targets** define the targets for working with sustainability in Stockholm Royal Seaport for the City's administrations and companies, and for developers in the area. These targets are made concrete and clarified in the requirements for each expansion phase and are monitored throughout the entire process. The targets are intended to ensure that Stockholm Royal Seaport remains at the forefront of sustainable urban development.

The programme may eventually be reviewed in conjunction with revisions of the City's Environmental Programme.

## City of Stockholm's sustainability efforts

For a long time, Stockholm has been working with ambitious urban planning objectives. Since the early 1900s, the City has worked purposefully towards set targets and built up a well-developed infrastructure for transport, energy, water and sanitation.

Sweden's ambition to put the environment on the agenda started early and contributed to Sweden and Stockholm taking a leading role from as early as the 1970s, for example, by hosting the first UN conference on the human environment in 1972. In 1974, the term "sustainable development" was introduced into Sweden's constitution. Stockholm adopted its first Environmental Programme in 1976, which over time has also come to include overarching urban planning issues such as energy supply, transport and the provision of green spaces.

The naming of Hammarby Sjöstad as the City's first environmentally profiled area has strengthened Stockholm's position as one of the world's most sustainable cities, and contributed strongly to Stockholm being named the first European Green Capital in 2010. A further step was taken in 2015 with the establishment of the Stockholm City Sustainability Commission in order to more clearly include the social dimension of sustainability in urban development.

# Unique qualities – yesterday, today, and tomorrow

Stockholm Royal Seaport is brimming with diversity and contrast. There is variety in its urban and natural environments with their different characters and expressions, ranging from small-scale housing construction and beautiful natural surroundings to heavily developed, large-scale industrial environments for port and energy facilities. Here, old meets new, and large meets small.

Building on what already exists is an essential prerequisite for long-term urban planning, and also fundamental to creating a dynamic and attractive urban environment. This chapter describes the conditions and approach to Stockholm Royal Seaport's unique qualities. By emphasising and being inspired by these qualities, an area with its own clear identity is being created that combines the feeling of an urban village with the experience of a dynamic and inspiring place with a big wow factor!

## → Cityscape and topography

The area represents a portion of the organic archipelago landscape, where historically there was water surrounding Hjorthagsberget and in the bays at Frihamnen. Over time, the landscape has changed naturally, and also through landfilling. Today, large parts of a low-lying urban landscape created through filling and excavation, bordered by Hjorthagsberget and Gärdet, stand out as distinctive topographical elements. Modern buildings, Värtaverket's facilities and ships in the port amplify these elements. Natural variation in the area is being created out of the character and history of the urban landscape, and by utilising and enhancing the specific qualities of each subarea.

## → Proceed from Stockholm Royal Seaport's character

Existing environments and buildings provide the basis for a distinctive local identity with historical ties. These all contribute to the area's identity. The principle for this is based on the following:

**Make accessible** by creating better access to the area's unique qualities – as a whole and in all its details.

**Visualise** the qualities so that they are utilised in the cityscape. For example, buildings that are identity-generating can be given a prominent role, and the values in an area can be felt along its streets and in the visual field.

**Develop** qualities by allowing new prerequisites to impact existing environments so that distinctive features and values are highlighted and enhanced.

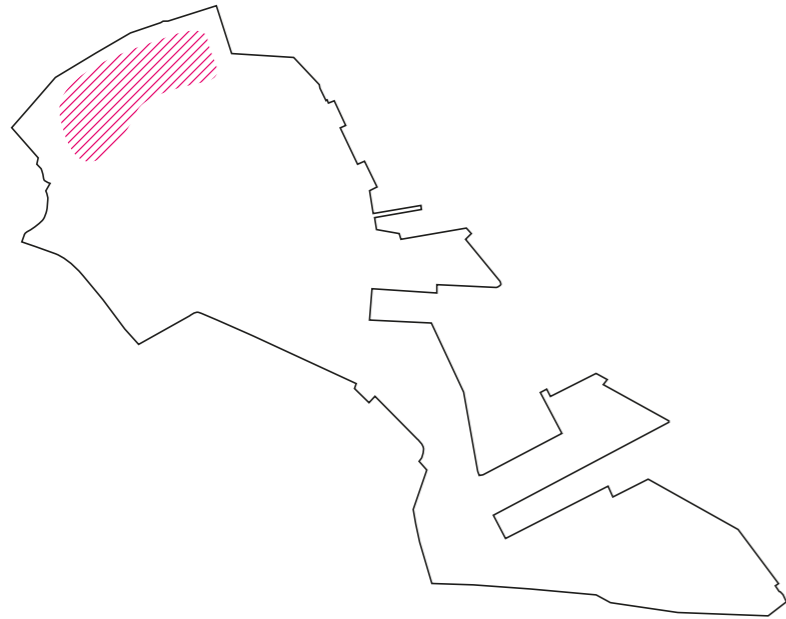
## → Create tomorrow's unique qualities

Planned urban development in Stockholm Royal Seaport represents a great opportunity to add new qualities to the area, conveying our time to future generations. New layers experienced as interesting and important in our time, and in the future, are being added to the unique qualities of the urban district as it is today, such as sustainable urban planning.

Existing buildings and environments can be given new life by acquiring new functions, but also by becoming part of a new context. A key success factor is being able to sense the history of the place and ensure the contemporary enhances how the area is experienced.



Lighting up of the gasometers.

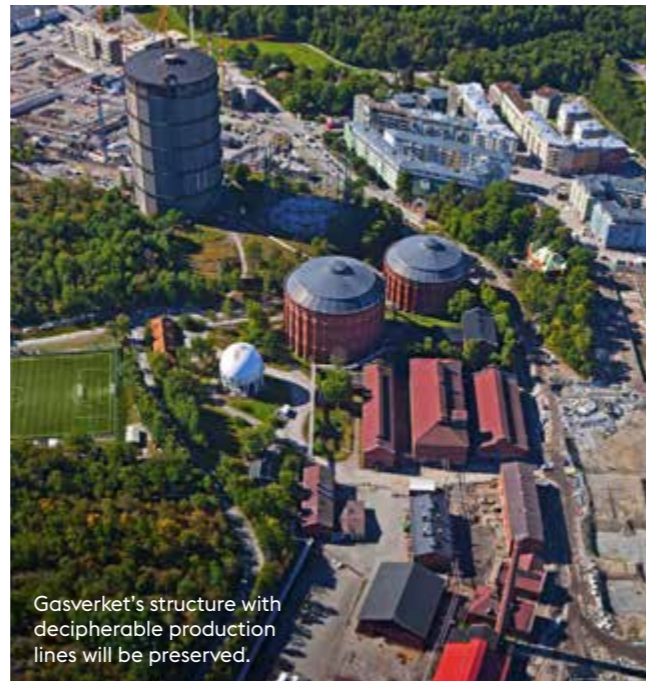


# Gasverket

Gas for the City's gas grid was once produced in the Gasverket area. The area has been closed to the public for over a hundred years. It will now be opened up and filled with new activities and new life. But its unique character is to be preserved in this development.

A significant part of the area was planned and designed by architect Ferdinand Boberg at the end of the 19th century. The gasworks production lines from different era are still decipherable, and the area has an open structure of solitary buildings with unique architecture. Brick is the dominant material in the area. Many buildings and production plants remain and the environment as a whole has significant cultural heritage values, as do individual buildings as a result of their high-quality architecture.

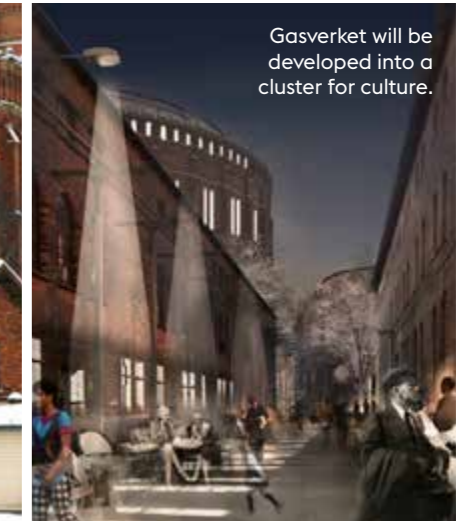
” The area will be opened up and filled with new activities and new life while preserving its unique character.



Gasverket's structure with decipherable production lines will be preserved.



” Interior qualities are to be utilised when buildings are given new functions.



Gasverket will be developed into a cluster for culture.

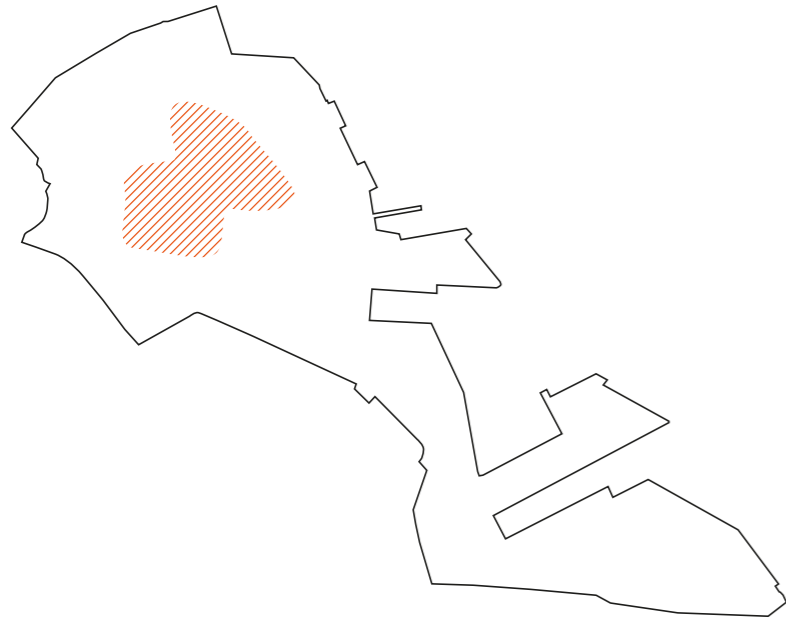


Gasometers 3 and 4

The lattice structure on Gasometer 3.

## Approach

- Gasverket will be opened up and brought to life. The area is to be welcoming to everyone so that as many people as possible can share Gasverket's unique values and history.
- Gasverket has a key role to play in the future of Hjorthagen and is instrumental in interconnecting the old and new parts of this urban district.
- Gasverket is intended to be a destination for the wider public, while offering services for the entire urban district. The area features a high proportion of public sector functions.
- The high-quality architecture of the area is to be preserved through both care with existing buildings and in modern additions. The characteristic introversion of the existing buildings is to be balanced against the possibility of bringing the buildings to life.
- Gasverket's characteristic structure, where each building connects to a square or a park and does not have any rear sides, is an important starting point for future additions.
- For adjacent blocks, Gasverket's uniqueness will be highlighted through contrast with new buildings, for example in the choice of façade material.
- Gasverket's existing buildings are to be the main event, with new, added buildings enhancing, but not dominating, Gasverket. The dominant role of the gasometers is to be maintained in relation to new settlement and important viewsheds towards these are to be preserved.
- The sustainability targets for Stockholm Royal Seaport need to be balanced against the highly significant cultural heritage values in the gasworks area.



# Hjorthagen

Hjorthagen is a residential area with buildings that were added during various periods between 1897 and 1965. The character of the area is marked by its small-scale urban development with low-rise apartment buildings and shops on the ground floor positioned along green city streets, but also by its vegetation and topography. By contrast, there are also what were for their time radically modernist white apartment buildings in Abessinien, designed by architect H. Aalberg. Hjorthagen's atmosphere as a suburb and former working-class district associated with Gasverket and the port is still decipherable.

” Hjorthagen's character is shaped by low-rise apartment buildings, a small-scale service offering around Artemisgatan and being clearly framed by Hjorthagsberget's greenery.

Hjorthagen's character is shaped by low-rise apartment buildings, a small-scale service offering around Artemisgatan and being clearly framed by Hjorthagsberget's greenery.

Hjorthagen's strong local identity associated with its small-scale service offering and public sector activities needs to be

handled in a sensitive manner because its centre of gravity will shift towards the extensive development in the gasworks area.



The library in Hjorthagen.

Image, cropped: Lennart Johansson



Abessinien, a single-family home area

Image, cropped: Lennart Johansson



Image, cropped: Lennart Johansson

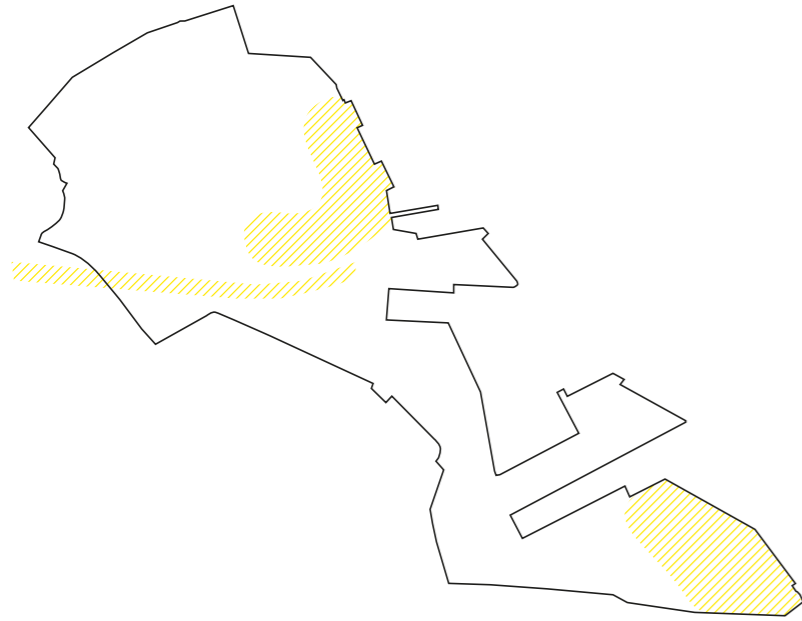
” Hjorthagsparken will be developed adjacent to the new buildings with the aim of strengthening its ties to Hjorthagen as it currently stands.

## Approach

- The small-scale nature of Hjorthagen is one of its qualities.
- Strengthen ties to the rest of the city but allow parts of Hjorthagen's boundaries to remain decipherable.
- Preserve the ring of greenery around Hjorthagsberget. New buildings that aim to tie the old Hjorthagen with the gasworks area must be on the park's terms.
- Hjorthagsparken can help to link – strengthen the social qualities.



Image, cropped: Lennart Johansson



# Industry and infrastructure

Stockholm Royal Seaport is partly characterised by large-scale industry and infrastructure, including the area between Ropsten and Värtahamnen, and in Loudden. The concrete works, chimneys and oil tanks in the area have given these places a distinct character. Some of the buildings are monumental in scale and can be seen from outlying areas of the city.

The city's critical infrastructure and supply systems are visible here, largely through their expression and scale, but also their openness and accessibility. To some extent, these objects and areas create both physical and mental barriers.

Within these areas, the traditional urban fabric has been replaced by large-scale objects, including both buildings and infrastructure. The area's functions indicate that this character is unlikely to change in the foreseeable future. In Loudden, however, it will be replaced by a new urban area.

” Stockholm Royal Seaport is partly characterised by large-scale industry and infrastructure, including the area between Ropsten and Värtahamnen, and in Loudden.



Photo, cropped: Hans Ekstrand



A venting tower for the Northern Link motorway – executed in wood in the Royal National City Park.

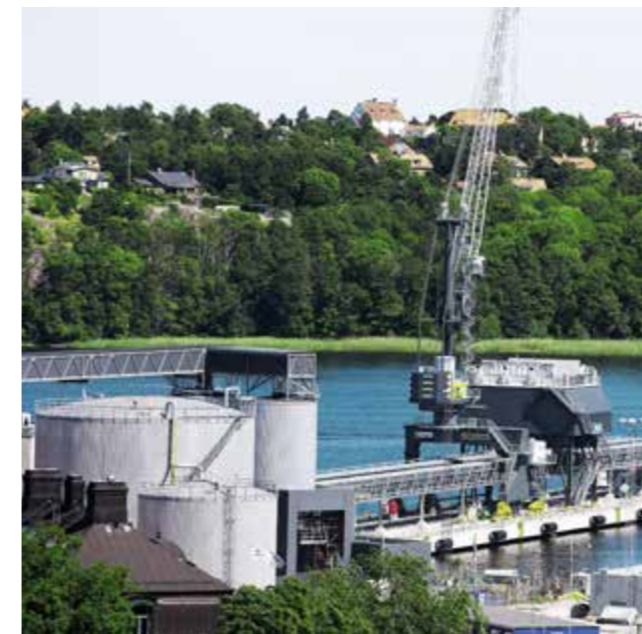
Image, cropped: Kasper Dudzik Architect & Rundquist



Hjorthagen June 2015.

Image, cropped: Lemart Johansson

” The design of individual objects plays a major role.

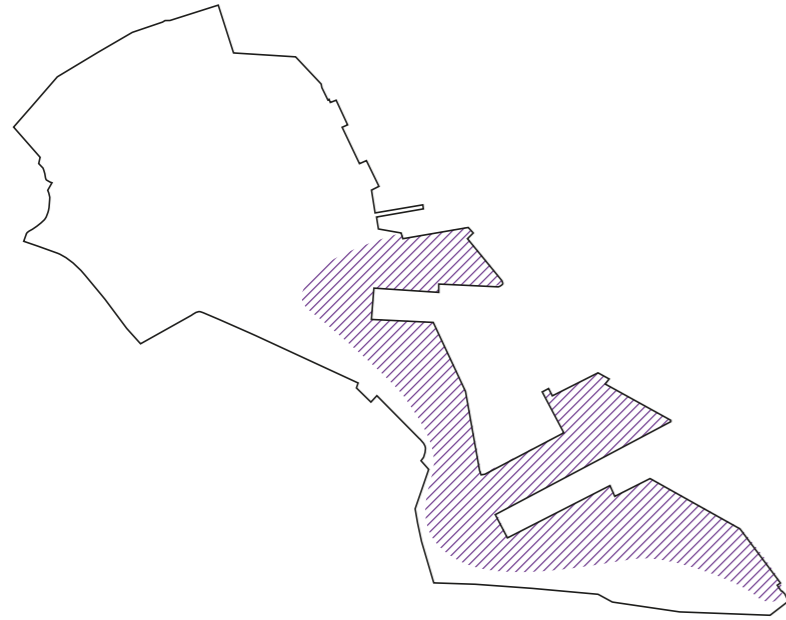


Image, cropped: Lemart Johansson

## Approach

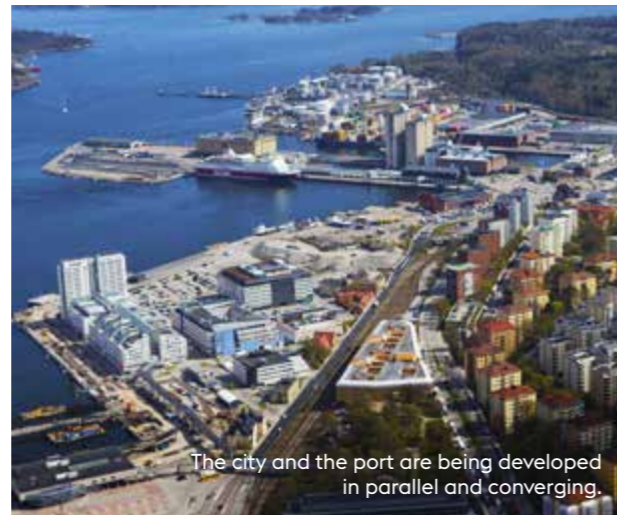
- Industrial activities in the area are regarded as vital and critical parts of the city's supply and economic sustainability.
- Both industrial areas and infrastructure are considered part of the city, and should form a coherent part of the city. The barrier effects are reduced.
- Where possible, businesses targeting the public or that are more people-intensive should be placed in the area or its border zone so as to create a safe and populated environment.
- Safe and secure, defined street spaces will be created running through Energihamnen so that people can move through and within the area on foot and by bicycle.
- New buildings can be inspired by the area's industrial character, for example the choice of material and design language, but trending towards a higher level of ambition in their design.
- The design of larger, individual objects plays a major role.





# Port and city

The port and its activities have always played an important role for Stockholm, especially from an economic perspective. The port is an important freight and logistics hub for the entire Mälaren region and plays a significant role in cruise and passenger services in the Baltic Sea. The port also plays a key role in efforts to transform the Stockholm region into a long-term sustainable region, because shipping is a sustainable mode of transport for moving large quantities of goods. The port and its activities have slowly become intertwined and integrated with the city's other functions. For example, today the Stockholm Stock Exchange, hotels and art galleries are located here: these are important for the area's identity and create contrast. The port contributes an interesting dynamic to the city where large-scale buildings, water space and docks along with stark linear elements such as wharves and piers enrich the urban environment. From time to time, port operations also generate intense flows of people. Commercial boat services, which are particularly evident in the mornings and evenings, are important for the sustainable development of both the city as a whole and its environs. Stockholm is a city on water, a port and shipping city, which has facilitated trade and meetings among other things. The Stockholm Royal Seaport has been, and continues to be, one of the main entry points to Stockholm.



The city and the port are being developed in parallel and converging.

The port has a key role to play in transitioning the Stockholm region into a long-term sustainable region.

”

The role of the port as an entrance to the city should be visualised.

Create short and welcoming thoroughfares between the ferry terminals, and to nearby public transport and the rest of the city.



Södra Värtan.

Image: Södra Värtan, City of Stockholm with AIX Arkitekter and Sureki Studios



Magasin 2 in Frihamnen.

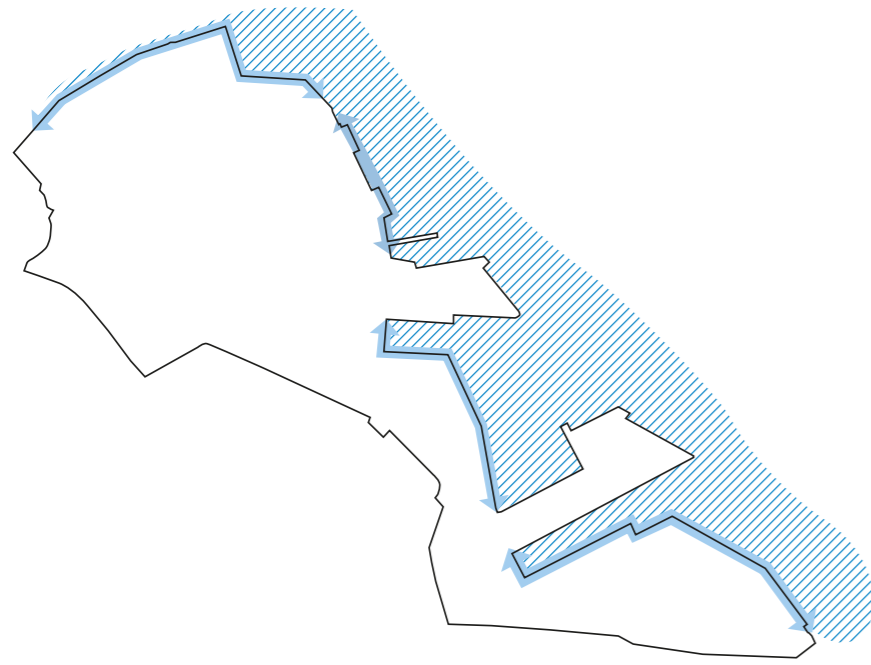


The new Värtaterminalen will become an extension of the city's public spaces via a rooftop landscape with public access.

Images: Ports of Stockholm

## Approach

- The port's connection to the city is to be enhanced by bringing the urban environment as close as possible to the port facilities.
- The conditions for the development of primarily ferry and cruise activities will be guaranteed in the district in both the short and long term. At the same time, shipping in the form of freight services from the port is one of the most energy-efficient ways to transport large volumes of goods. Its need for connecting infrastructure should be considered with regard to barrier effects and urbanity.
- The role of the port as an entrance to the city should be visualised. Create short and welcoming thoroughfares between the ferry terminals, and to nearby public transport and the rest of the city.
- Utilise the flows of people generated by the port to enhance the life of the city in general and to develop the tourism industry in the area. Create environments and places that invite tourism and provide services adjacent to the ferry terminals.
- The dynamism and variety of scale in the port should inspire the new buildings. There will be space for high-rise buildings here.
- The port operations and the cultural and industrial heritage are visualised through care in the design and choice of materials for both buildings and public spaces. The old port buildings will be given new uses, preferably with a public content.



# Water space and waterfront

Just like in the rest of Stockholm, water is ever-present in Stockholm Royal Seaport. Its proximity to water gives the area its distinctive identity and interesting dynamic. The area includes both Husarviken's small-scale identity and greenery and the large-scale, dynamic environment of the port.

Water is encountered both directly and indirectly. Wharf facilities, docks, bridges, ships and port facilities make up the front line to the waters of Lilla Värtan. Behind and through this, the original shape of the archipelago landscape is decipherable in the green heights of Gärdet and Hjorthagen. Similarly, proximity to water is apparent further into the area – sometimes in direct viewsheds and sometimes through ships and port facilities being glimpsed from a distance.

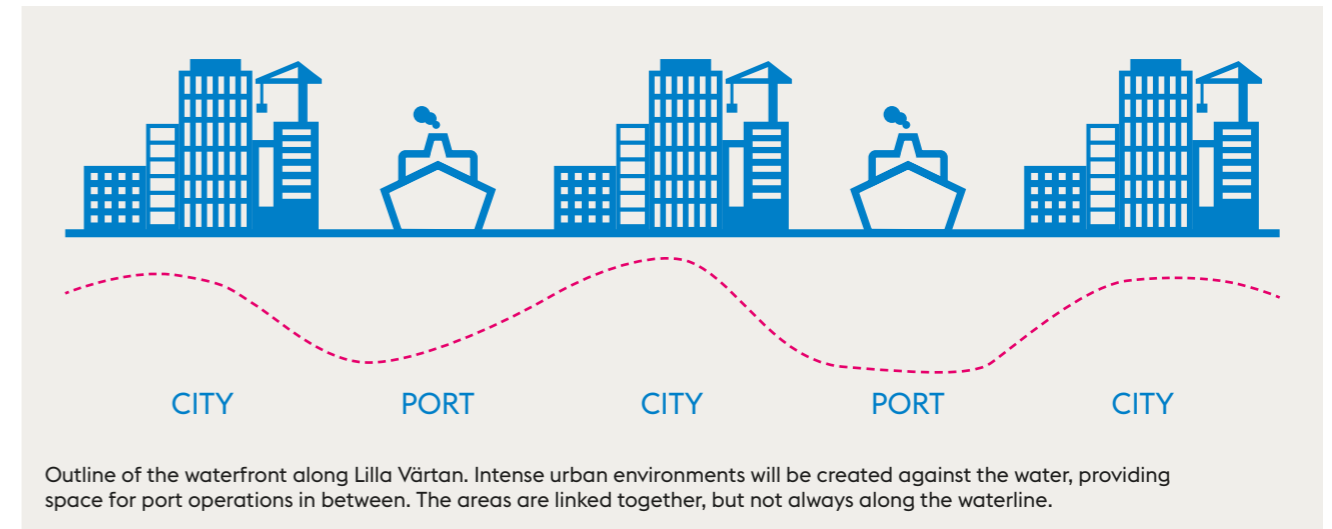
It is not just the water's visual qualities that are of value but also its recreational possibilities and ecological links. Stockholm Royal Seaport's waterfront has mainly been used for transport and business activities. With urban development in this area, its other potentials will also be utilised.

” Just like in the rest of Stockholm, water is ever-present.



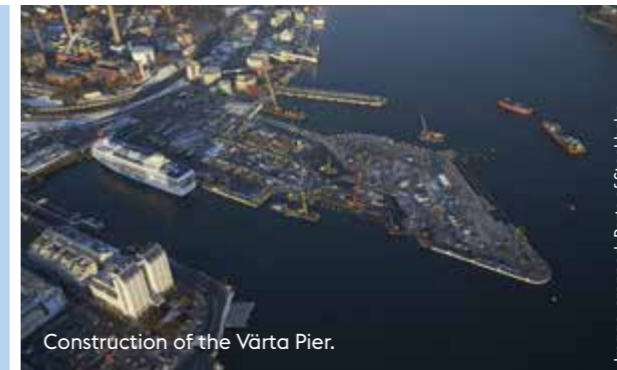
Aerial photo with Lilla Värtan and Stockholm Royal Seaport in the foreground.

Image, cropped: Ports of Stockholm



”

Develop and activate the waterfront by creating public spaces for everyone, with a rich content and careful design.



Construction of the Värta Pier.

Image, cropped: Ports of Stockholm

## Approach

→ Increase public access to the water. Create contiguous thoroughfares as far as possible. Both sight lines and physical connections are to be consciously used to enhance proximity to, and the experience of, water.

→ Develop and activate the waterfront by creating public spaces for everyone, with a rich content and careful design.

→ The water's ecological values are safeguarded in the design of the urban district.

→ Activities that utilise the water, such as swimming and bathing, berths for leisure craft, and public transport, are to be encouraged as far as possible.

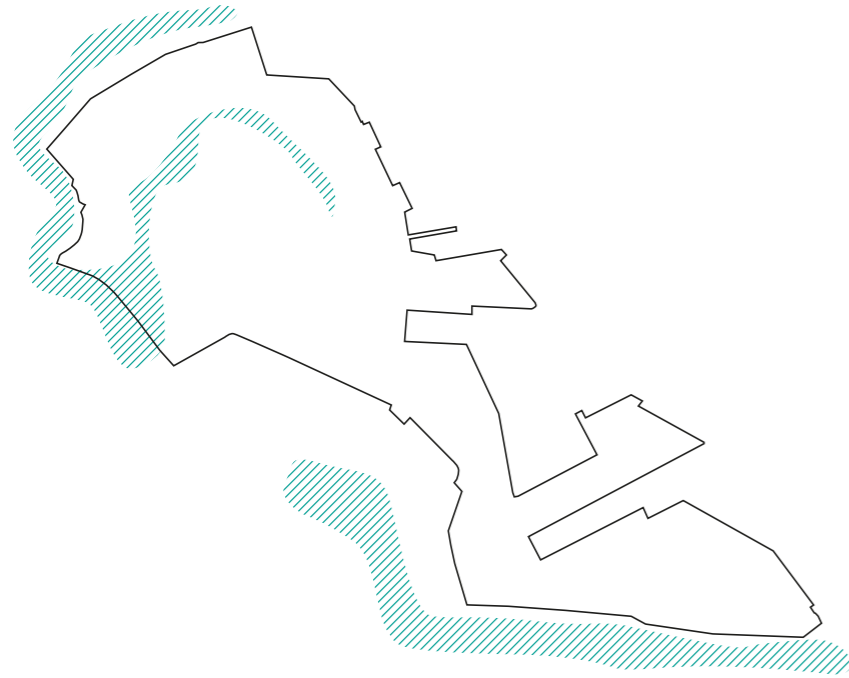
→ The extensive water spaces mean that higher buildings may be considered in suitable locations, while a lower scale should be used adjacent to Husarviken.

→ Where deemed appropriate, the waterline can be redesigned to create more connection with the water and high-quality water space.



Husarviken.

Image, cropped: The City of Stockholm via Andersson Jönsson Lanskaparkitekter



# Royal National City Park

The Royal National City Park is Stockholm's green oasis and one of the more popular recreational areas in the region. The Royal National City Park spans over 10 kms – from Ulriksdal and Sörentorp in the north to Djurgården and Fjäderholmarna in the south. The park, which hugs virtually the whole of Stockholm Royal Seaport, has significant ecological values and layers of cultural heritage that evidence its historical continuity. The

Urban development in Stockholm Royal Seaport means that a new urban frontage will be formed facing the Royal National City Park in several places.



Aerial photo of part of the Royal National City Park and Stockholm.

**The Royal National City Park has significant ecological values and layers of cultural history that evidence its historical continuity.**

park has a rich flora and fauna, with over 800 different kinds of flowering plants, more than 1,200 species of beetle and approximately 100 nesting bird species. The park's many ancient oak trees offer habitats for both insects and birds and constitute one of northern Europe's largest single oak tree stocks. These oak trees also draw attention to the park's long history of royal ownership, which has enabled the preservation of a unique cultural and historical landscape.



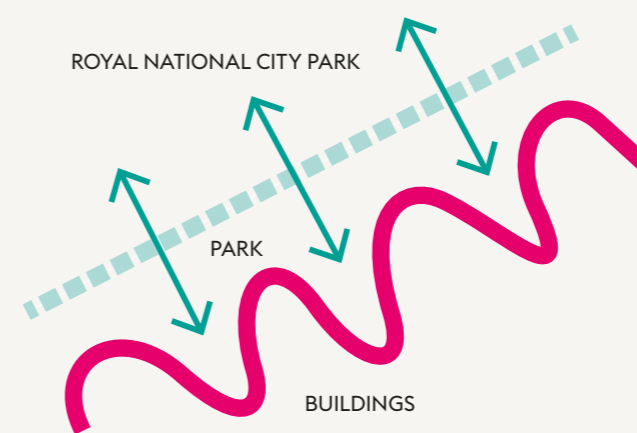
Image, cropped, iStock

**”** The design of Stockholm Royal Seaport will help to enhance the park's values.



Image, cropped, City of Stockholm with Aclio Designsystem

Stockholm Royal Seaport's northern part has been designed with relatively low-rise buildings in a muted colour scale with the aim of reducing its impact on the Royal National City Park.



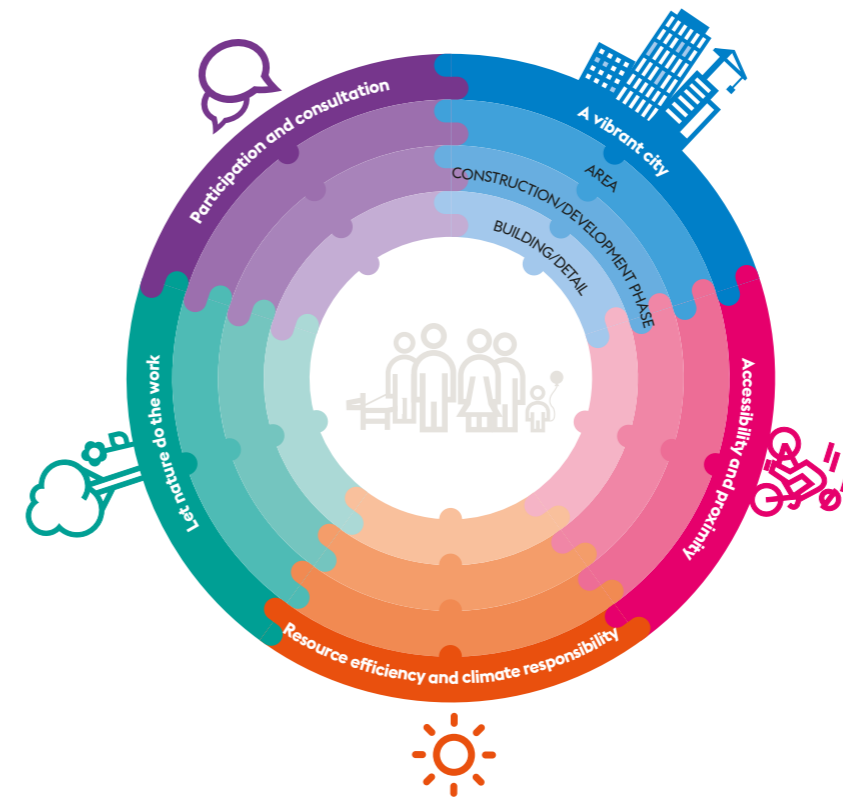
Connecting smaller parks to the Royal National City Park will enhance the park experience. The friction surfaces of the park are to be increased by creating an irregular building boundary, so that more people can experience that they are living directly next to the Royal National City Park.

## Approach

- Allow the Royal National City Park to set the tone for Stockholm Royal Seaport. The park experience can be enhanced by connecting thoroughfares and smaller parks to the Royal National City Park. The idea is that many are to feel that they live next to the park.
- The design of Stockholm Royal Seaport should help to enhance the park's values.
- The character and ecological values of the Royal National City Park can be utilised and inspire the design of parks and public spaces in the urban district.
- The Royal National City Park is a complement to, not a replacement for, park areas in the urban district.
- The meeting between park and buildings should be based on the park's terms – its values, the local environment, and the landscape in general. This may vary depending on which parts of the park are concerned.

# Five strategies for sustainable urban development

Based on the vision and the unique qualities of the area, the strategies will ensure that Stockholm Royal Seaport is developed over time in a sustainable manner. The aim is that these combined strategies will reflect the overall approach that is a prerequisite for sustainable urban development.



## The strategies in brief

The five strategies can be applied at several levels: for Stockholm Royal Seaport as a whole, for a subarea, a development phase or a single building. **Vibrant city** focuses on people through the design of an attractive and vibrant urban environment. **Accessibility and proximity** is about the dense and accessible city, and provides support for sustainable modes of transport. Flexible and robust solutions will be created in Stockholm Royal Seaport that contribute to **Resource efficiency and climate responsibility** to meet a changing future. **Let nature do the work** describes how ecosystems can be used for a rich flora and fauna, and for human health and well-being. In Stockholm Royal Seaport, **Participation and consultation** will be stimulated to create local motivation and support, but also to share knowledge and best practice.

The five strategies cover most of the aspects and dimensions that need to be addressed by the project – ecological, economic and social aspects in relation to a spatial context. The City's high ambitions for Stockholm Royal Seaport increase the demand for investment priorities. Investment is to be guided by a city-wide perspective, where a balance between different interests and business objectives is essential. Realisation of the urban development area's vision requires a gradual implementation, with consideration for the City's investment strategy. It is important that the City strives to secure high revenues from the land values created through transformation of the area, and that the project is permeated by cost awareness in relation to the City's investment expenditure and operating economy.

The five strategies are intimately linked in some respects, and an integrated application of the strategies, urban planning principles and sustainability targets could lead to synergies and added value. This approach also means that the strategies will be translated into different urban scales, and into different contexts in planning, design and implementation.

Sustainable urban development is based on a holistic and long-term approach, in terms of both planning and implementation. It refers to the establishment of a robust and general urban structure with a flexibility to adapt to future changes, both long-term and short-term. The area will be developed over a long pe-

riod of time, but actions may need to be taken temporarily or at short notice. The strategies can thus serve as guidelines, and as catalysts for change. In some cases, the strategies may oppose each other. A balance between different interests is required on a case-by-case basis.

Sustainable urban planning requires that consideration be made for a number of aspects, at several levels and from several perspectives. Application of the strategies is therefore based on three core values, or dimensions of the sustainability perspective, that complement the more thematically formulated strategies:

**People** – opportunities for work, recreation, culture and experiences, as well as social interaction in a safe and attractive urban environment.

**The city** – the urban environment (the physical phenomenon) with its buildings, activities and public spaces that, in combination, constitute both an opportunity and a limitation on meeting human needs. The city also includes the urban systems, functions and flows that make city life possible.

**Time** – to plan from the present, while simultaneously taking responsibility for both history and future generations, and thus acting with a long-term perspective.



# Vibrant city

The City of Stockholm’s motto “Our city – all day, every day” is a guiding principle for the area’s development. A vibrant city is focused on people: on human needs and wants, and from a human scale. It should therefore be open and welcome to everyone, at any stage of life. Spontaneous and unexpected encounters increase the potential for human and social development. The city’s structure lays the foundation for this development, where public spaces and the public/private interface form the core of urban life. A vibrant city has a varied content, with functions that keep it populated, safe and exciting – at all times of the day and night.



Image cropped: Midroc Property Development with White

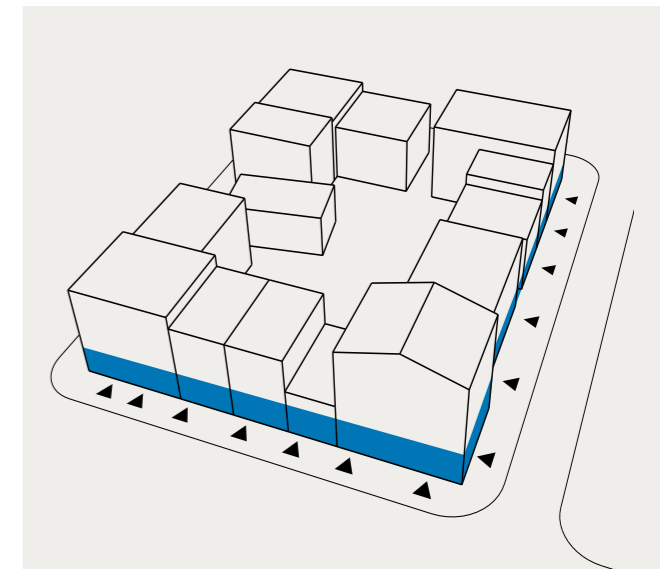
## Urban planning principles

### → Connect the city

Stockholm Royal Seaport is being planned as a natural extension of the inner city, with a robust and cohesive urban structure with no physical or social barriers. Public spaces in the form of streets, places and parks, in particular, will connect the city. This will enable features, meeting places and thoroughfares in different parts of the city to complement and strengthen each other, and make the city less vulnerable to change.

### → Flexible planning

For buildings of a public nature, multi-functionality should be the aim, to ensure optimal use of their premises. The physical planning of Stockholm Royal Seaport will be characterised by long-term robustness and flexibility. To make this possible, the area’s zoning plans should be flexible enough to accommodate a range of functions and future changes. This requires support from both property developers and the public.



Elevated ground floors and several possible entrances provide a flexible building structure, which accommodates housing as well as offices and shops.

A walkway with a strong identity links the various parts of Hjorthagen. The walkway is one of the City's art projects.



→ **Utilise natural flows**

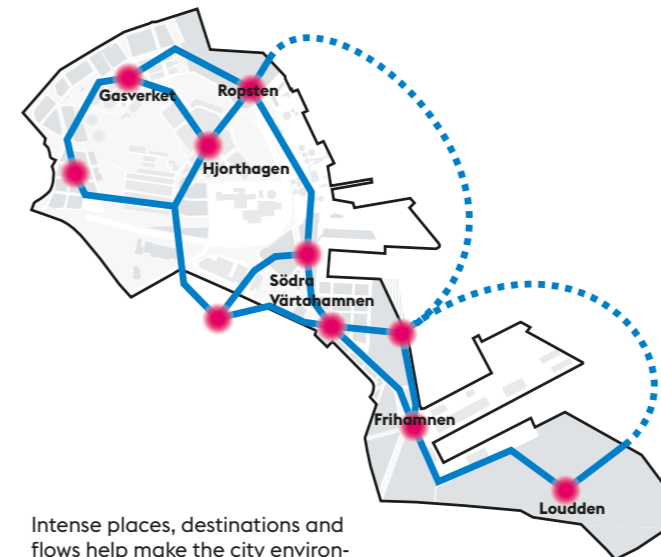
Places that are heavily used every day – schools, public transport stops, supermarkets, parks – and functions that periodically attract large crowds of people, play an important role in strengthening the city's other functions and help to create a vibrant public environment. This opportunity will be consciously accounted for in the planning, so that the location and programming of places, thoroughfares and buildings will work together to create a rich and safe urban life.

→ **Intense and lively places**

Stockholm Royal Seaport is to feature an archipelago of intense places – nodes that due to their high density, specific content or design, create lively orientation points in the area. These may look different in different places. They could be a square by the underground railway, a place beside a landmark building or a quayside promenade. Places with the greatest potential to serve as bearers of a local identity and rich street life should be identified in each subarea. Detailed strategies for strengthening these qualities will be developed as required.

→ **Special destinations**

Stockholm Royal Seaport should also be an inviting and attractive destination for people who do not live or work in the area – for both residents in other parts of the city and foreign visitors. Stockholm Royal Seaport should have places and activities devoted to culture, sport and recreation, for example, that are unique to Stockholm and can serve as magnets in an urban area.



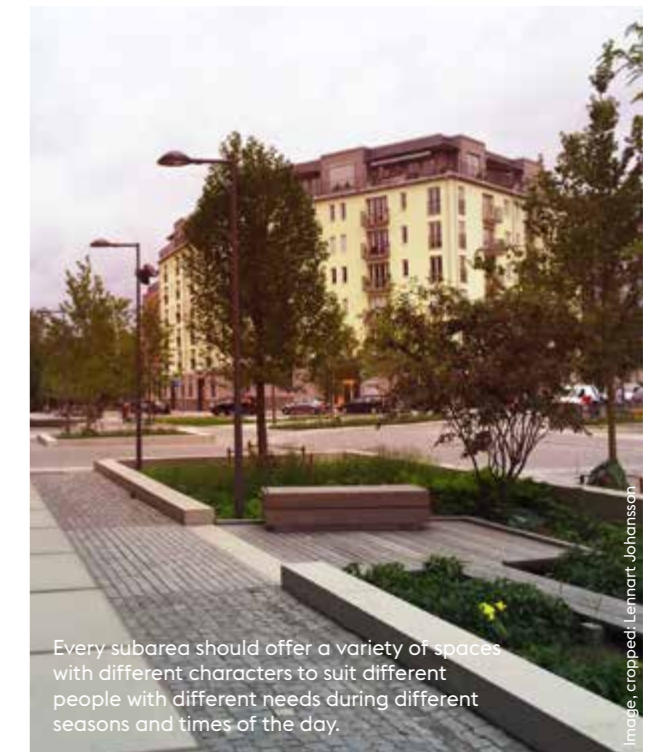
Intense places, destinations and flows help make the city environment vibrant.

→ **Public spaces for different needs, at all times of the day and night**

The area's streets, squares and places are to meet a variety of needs for everyone who lives, works or visits the area. Knowledge of the local climate, ecological relationships, destinations and thoroughfares, etc., should be used to create a fabric of functional, safe and inviting public spaces. Every subarea should offer a variety of spaces with different characters to suit different people with different needs during different seasons and times of the day. Some places may be general in nature; others more clearly programmed and targeted toward a specific function or group. This could mean that some places are designed as traditional landscaped parks, while others have open grassy areas or activity squares.

→ **Temporary or flexible usage**

Flexibility should be the goal, where places can be used differently according to the season, or temporarily for various events. For example, a square could be used as a skating rink in the winter, or bathing jetties built on the water during summer. Public spaces should be able to accommodate temporary events and activities – during both the construction period, and when the area is completed.



Every subarea should offer a variety of spaces with different characters to suit different people with different needs during different seasons and times of the day.

Image, cropped: Lennart Johansson

### → Mixed functions

A bustling area both day and night is essential for achieving a vibrant city. Housing, businesses, retail and services are to be integrated as far as possible. A mix of functions can also be generated by integrating single blocks or smaller subareas with a strong identity into the cohesive urban fabric. Typical examples are the port environment or Gasverket, which can contribute other special qualities to the area because of their distinctive features.

### → Strive for variation

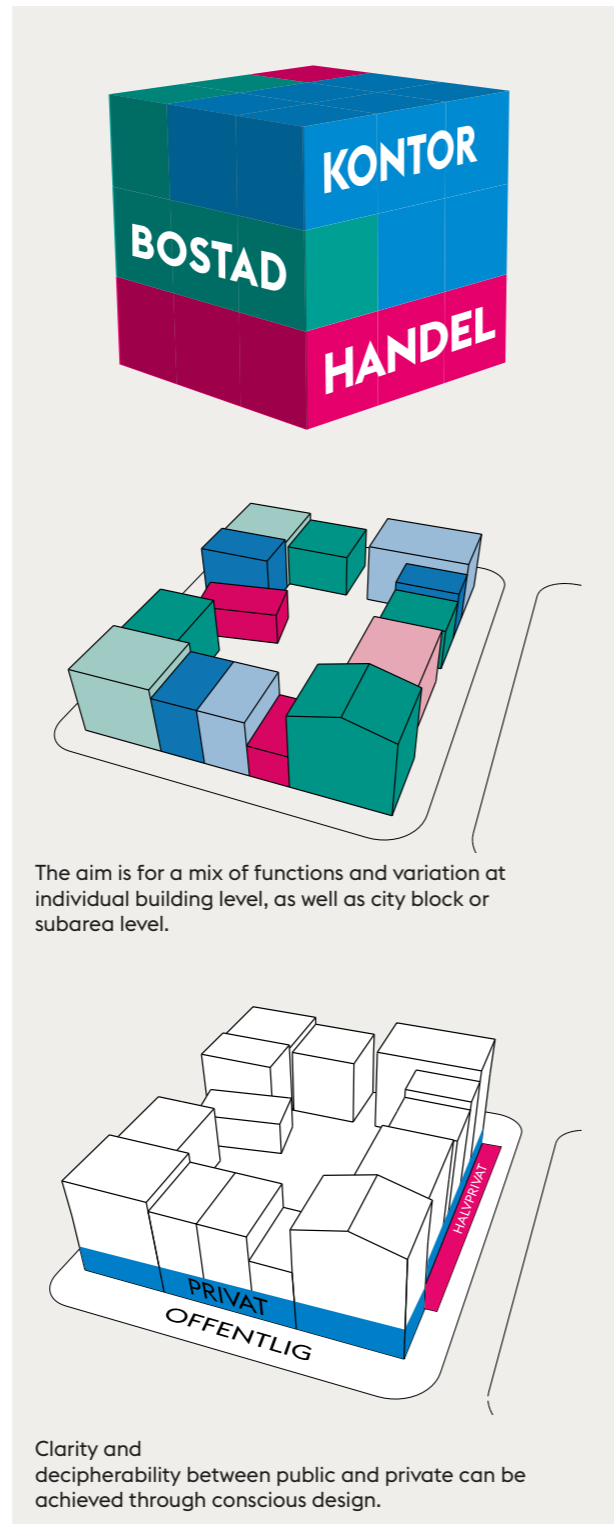
The eventual aim should be variation, and a diversity of property developers in terms of design, innovative solutions for the design and size of buildings, and in their fields of application. Each expansion phase will feature housing with different forms of tenure. In addition, different categories of housing and housing concepts will be welcome, such as student housing, aged care housing and builder cooperatives. This diversity should be allowed to influence the design of the built environment, but also be reflected to some extent in public spaces.

### → Public meets private

The urban environment should be designed with a clearly decipherable division into areas with varying degrees of public access. As a rule, entrances should face public streets and places. Courtyards should have a private or semi-private character. The transition between public and private may look different depending on the nature of the urban environment, its scale and content. In narrow streets or densely populated thoroughfares with lots of activities, the facade should represent the public/private boundary. Along streets with few or no activities on their ground floors, semi-private zones outside the entrances can provide space for personal influences that can enrich the street environment and create opportunities for spontaneous interaction.

### → A wealth of impressions – careful design

The area's buildings and places contribute to a wealth of events and impressions through their design and content. The whole, as well as the details, contribute to the perception of the city's space. The design should be based on a pedestrian perspective, that is, from eye level at a slower pace. This means that the ground floors in particular, but also other parts of the buildings, should maintain high architectural quality and fine detail. A variety of impressions requires care in the design of details, such as gates, windows, display windows, balconies and bay windows, but also meticulous attention to the site's furnishings and equipment. This is important from an operating economics perspective, but also to ensure long-term quality. The architectural features should be so distinctive that they help to attract visitors to the area.



### → Active and open ground floors

The street environment should be rich and varied, with a conscious placement of businesses and activities on the ground floors. Regardless of whether the street is dominated by housing or businesses, it should have an open character with densely placed entrances.

### → Art that enriches

The supply and access to art is highly significant for enriching the experience of public spaces. Art can be expressed in a variety of ways: integrated with buildings, through installations or traditional artworks at places and along thoroughfares, or as part of a playground, for example. The City of Stockholm allocates 1% of public investments as a contribution to this purpose.

### → Integrated solutions

Stockholm Royal Seaport is exposed to a number of external factors, such as noise disturbance, which need to be addressed in order to create good living environments. These disturbances should be reduced at source wherever possible, but may also require a specific design for each building in order to comply with the rules and guidelines. In these cases, the aim is to create good overall solutions, and the protection should be an integrated part of the architecture and design.

### → Sustainability target – Vibrant city

#### Target and sub-targets

<b>1.1</b>	<b>Create a robust and interconnected urban structure.</b>
1.1.1	Develop natural connections to surrounding urban districts.
1.1.2	Create a flexibility where appropriate in the area's zoning plans that will accommodate a range of functions and future changes.
<b>1.2</b>	<b>Contribute to the creation of a city that promotes equality.</b>
1.2.1	Stockholm Royal Seaport is to be a place for everyone to live, work or visit, regardless of gender, age, race or other individual circumstances.
1.2.2	Create a varied housing stock with different forms of tenure that can meet the needs of all stages of life such as tenant-owned and rental apartments, student housing, aged care homes and services under Sweden's Support and Service Act (LSS).
1.2.3	Participate in developing the knowledge of the City's administrations and companies concerning how the housing stock can be developed to meet the needs of a diverse society.
<b>1.3</b>	<b>Plan for a well-functioning everyday life.</b>
1.3.1	Plan for good access and proximity to public services, as well as a rich offering of cultural services for everyone, education environments that are welcoming to everyone, and indoor and outdoor sports amenities.
1.3.2	Plan for good access to private services, work places and premises for teleworking.
1.3.3	Design the public outdoor environment in a way that facilitates and stimulates movement and physical activity, as well as good access to public spaces for interaction and activity, both indoors and outdoors.
1.3.4	Create opportunities for providing services that facilitate everyday life through digitisation of the urban district.
<b>1.4</b>	<b>Create attractive and safe places at all times of the day and night.</b>
1.4.1	Plan for a mix of functions that give life and movement to selected streets and places.
1.4.2	Create destinations and activities that attract a variety of visitors to Stockholm Royal Seaport.
1.4.3	Design public places in such a way that everyone feels safe and welcome at all times of the night and day.
1.4.4	Design the ground floors of buildings to create active façades from all aspects and good access to business premises throughout the entire urban district.

Suggestions for monitoring metrics and responsibilities for each target can be found on page 52.



## Accessibility and proximity

The design of an urban district and access to services in the immediate surroundings have a major impact on the travel patterns that emerge. A dense, mixed-function and accessible city is being created in Stockholm Royal Seaport which in itself reduces the need for transport and also provides a basis for sustainable transport in the long term. A clear traffic hierarchy will be applied in the area which gives priority to pedestrians and cyclists, followed by public transport and lastly cars. In order to transport more people and more goods in a growing and sustainable city, a transition to higher capacity and more resource-efficient means of transport is needed. The structure of the area should be clear and easy to orientate oneself in, with urban spaces designed with pedestrians and cyclists in mind.



Image, cropped: Södra Värtan, City of Stockholm with AIX-Arkitekter

### Urban planning principles

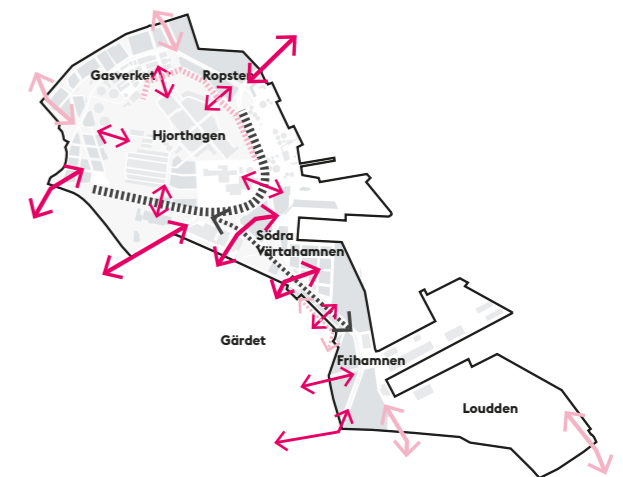
#### → Connect

Linking the area together into an interconnected urban fabric facilitates movement on foot and by bicycle. Today in part Norra länken, Lidingövägen and Värtabanan form barriers that are almost impassable and need to be overcome at strategically important places.

Areas with an industrial nature, extreme topographic conditions or large green areas may be perceived as insecure and inaccessible and thus constitute both physical and mental barriers. When no other alternative thoroughfares exist, sparsely populated thoroughfares between different areas should be activated in order to facilitate safe movement through these areas at all times of the day and night.

#### → Adapt the environment to human scale

The prioritisation of pedestrian and bicycle traffic should be reflected in urban spaces. Pedestrian walkways and cycle paths are to be given functional and generous dimensions. At the same time, the scale of the design of streets and squares is to be in proportion to their function and the surrounding buildings. The area is to be designed to be experienced at a slow pace, with a small-scale network of streets offering many connections and shortcuts through the area. Streets and thoroughfares should not only serve to move you through the area but also accommodate tourism, for example, in the form of outdoor dining. Both old and young should be able to move safely and securely through the area.

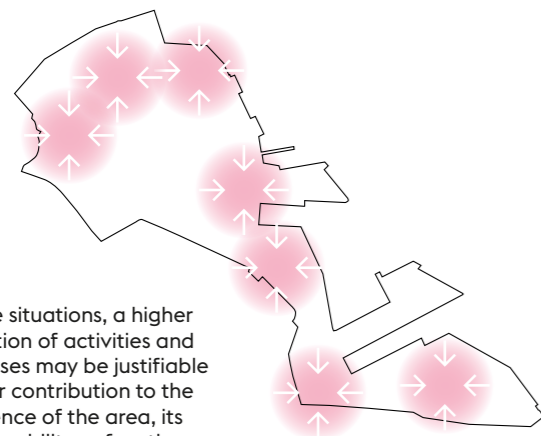


Important links within and to Stockholm Royal Seaport.

The role of roads and streets as attractive places is to be strengthened by improving pedestrian friendliness in the Walkable City.

Urban Mobility Strategy for Stockholm 2030

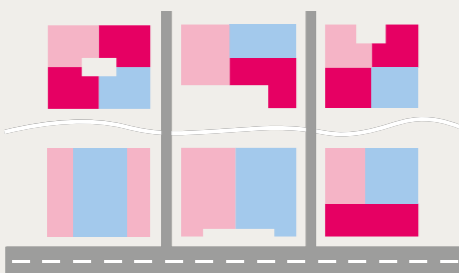
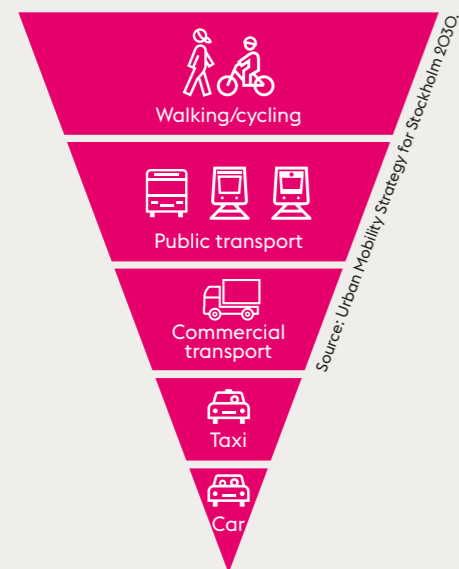




In some situations, a higher proportion of activities and businesses may be justifiable for their contribution to the experience of the area, its decipherability or function.

### Energy-efficient transport

High-capacity and energy-efficient modes of transport are prioritised.



Small-scale block structure with a clear street hierarchy.

### → Concentrate and build for high-density

Concentrate important functions such as retail, services and schools at public transport nodes or larger public places. People-intensive businesses in particular should be located at public transport nodes. This facilitates everyday life without a private car, since you can travel by public transport from your work and then in the immediate vicinity shop for food and fetch your child from pre-school before going home, for example. The general aim is a high rate of development to create a basis for local services and public transport. The highest density should be permitted close to public transport nodes or where the urban landscape can accommodate higher buildings.

### → Public transport as the backbone

High-capacity, easily accessible public transport with frequent services is a backbone in the formation of Stockholm Royal Seaport and has a decisive influence on its structure.

The public transport space is to be designed as an integral part of the city to both enhance city life and benefit from the urban environment. Stops and terminals should be functional interchange and waiting places but also offer passengers a welcoming environment, with the option of taking a break, running errands, and participating in city life. Public transport on the water will be encouraged, which also needs to be reflected in the design of stops along quays.

### → Energy-efficient transport

The means of transport for short trips and commuting are mostly walking, cycling or public transport. The area is serviced by consolidated shipments with energy-efficient eco-vehicles to reduce the number of shipments within and to the district. For example, transshipment centres like the Stockholm Royal Seaport Construction Consolidation Centre (BLC) can be used. The use of electric vehicles and other green vehicles is encouraged and rewarded by providing good access to charging posts, carpool vehicles and infrastructure for fossil-free fuels.

### → Create clear thoroughfares

Planning for the area should include a clear, decipherable and robust street structure that can accommodate future changes and diversity in modes of transport. It must be possible to discern the main thoroughfare for public transport in the cityscape. Where the spatial structure is more difficult to discern, thoroughfares with their own strong identities can emphasise important orientations in the city, such as over barriers or within the port area.

### → Services from the start

In order to establish sustainable travel patterns, it is greatly



important that public transport provides a well-functioning service from when users move into the area. The area is to be planned so that each development phase can be provisioned with preschools, supermarkets and other everyday services within walking distance at an early stage.

### → Make room for sustainable transport modes

Room for a large proportion of bicycle parking spaces is created on both private property and public spaces. Buildings, places and thoroughfares should be designed in such a way that spaces and functions for bicycles are integrated into the urban environment in a natural way. Some streets can also be virtually car-free, without compromising accessibility.

Cars are given limited space through a low number of parking spaces for residents, businesses and retail on private and public land. However, special parking places for carpools and for charging electric vehicles are to be assured in advantageous locations. In order to assure accessibility and capacity requirements, if justified, departures from the principles may be tested for certain businesses of significance for the Stockholm region.

### → Sustainability target – Accessibility and proximity

Target and sub-targets

- 2.1 Give priority to pedestrian, bicycle and public transport traffic in the planning.**
  - 2.1.1 Create good connections and short and attractive routes for pedestrians and cyclists.
  - 2.1.2 Make plenty of room for and prioritise pedestrian, bicycle and public transport traffic in the street space, and for facilities in buildings.
  - 2.1.3 Locate visitor-intense businesses close to public transport.
  - 2.1.4 Plan so that the proportion of travel by car is lower than the average in the inner city.
- 2.2 Plan for vibrant street spaces that permit flexible use.**
  - 2.2.1 Create a superior quality of visitor experience and ensure security and accessibility in all street spaces.
  - 2.2.2 Create conditions for versatile use of public spaces.
- 2.3 The infrastructure is to promote consolidated shipment and efficient, sustainable goods shipments.**
  - 2.3.1 Coordinate all construction shipments to the area via the Construction Consolidation Centre (BLC).
  - 2.3.2 Make room for and prioritise sustainable goods shipments that supply the area.
  - 2.3.3 Expand the infrastructure for charging electric vehicles in the area.

Monitoring metrics and responsibilities for each target can be found on page 53.



## Resource efficiency and climate responsibility

Like other major cities, Stockholm has an important task in demonstrating solutions for sustainable urban and building development that permits a growing population while reducing resource requirements. Stockholm Royal Seaport is a fossil-fuel-free urban district with low resource use and a high degree of closed loop systems. The built environment is to be robust over time which requires that buildings and facilities are designed with high quality. Planning and implementation of the urban district is to contribute to reducing environmental impact and to innovative environmental technologies being developed and implemented within the project. This means combining new, innovative solutions with those tried and tested in a well-considered and conscious way.



### Urban planning principles

#### → Use land efficiently

Efficient land use means not only building densely but also coordinating all the city's functions and qualities optimally. A well-designed and positioned park or the purposeful utilisation of an environment of cultural history interest are also ways to conserve available resources, as is cleaning and reusing old industrial land. Multi-functional environments based on existing values are to be the aim, with the purpose of minimising the risk of sub-optimisation among other things.

#### → Quality and longevity

Sustainable architecture means buildings of high quality in terms of their design and construction technologies. The ambition is for the buildings to be designed for a long life, with toxin-free, healthy materials that age in a beautiful way and with design qualities that make the buildings worth preserving and maintaining for a long time. The buildings are to offer a comfortable and healthy indoor environment with regard to natural light, noise levels and air quality. The architecture is to be based on local conditions – and may be timeless in order to promote existing qualities, or more spectacular where this is deemed relevant.

#### → Utilise existing values

There is an original investment of energy and resources in existing buildings. When a building is demolished to be replaced by new construction, this investment can be counted as a debit in the analysis of the project's life cycle cost. Existing environments and buildings often have intangible values. These values are to be taken into account in the planning and design of this new urban district.



Gasverket is one example of how high-quality design enables preservation and development of the buildings – for sustainable construction in the long term.

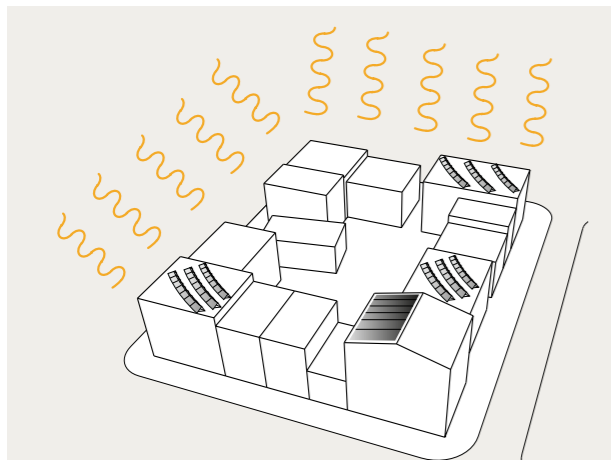
### → Energy planning

The buildings' volume, placement and design are significant for their energy use. With well-thought out design, heat from the sun can be utilised or screened off for more efficient heating and cooling. Sun exposure and heating efficiency are to be studied at an early stage of the development of the building structure. This is an aspect that must be taken into account in the design of the area and should be balanced against other interests such as the scale of city spaces, consideration for the environs, space efficiency and other residential qualities.

### → The site and building as producers

In Stockholm Royal Seaport, the potential for renewable energy such as energy from the sun will be utilised, and new solutions for this encouraged. This may impact the design of both buildings and public places. Technical devices, such as solar cells, are to be consciously included as a condition when designing the building or site. It must be possible to remove or replace technical solutions with newer technologies without affecting the building's overall design and character.

**” In Stockholm Royal Seaport, the potential for renewable energy such as energy from the sun will be utilised, and new solutions for this encouraged.**



Through the deliberate placement, orientation and design of the buildings, both good daylight conditions and energy-efficiency can be achieved. In this context, it may be warranted to use the buildings and their roofs, in particular, for solar panel/cell installations.

### → Closed loop systems

The starting point is that the generation of waste, in general, is to decrease in our communities. In Stockholm Royal Seaport, in the first instance, this will be through goods and materials being reused through collection systems that are easy to use. Curbside waste collections help to ensure that materials can be recycled and energy produced. The sewage system in Stockholm Royal Seaport has been designed to reduce the environmental impact on lakes and the sea, and to optimise the recycling of sewerage waste. Through efficient and as far as possible closed loop systems, nutrients can be returned to arable land which simultaneously reduces eutrophication of the sea.



Solar cells on the roof of the new Värtaterminalen.

### → Sustainability target – Resource efficiency and climate responsibility

#### Target and sub-targets **Ecocycles**

- 3.1 Continually reduce the amount of waste, and increase waste grades.**
  - 3.1.1 Prevent the generation of waste through increased re-use, for example.
  - 3.1.2 Reduce the amount of residual waste over time.
  - 3.1.3 Increase waste grades for different types of waste.
  - 3.1.4 Hazardous waste does not occur in residual waste.
- 3.2 Water and wastewater management is to be more energy and resource-efficient.**
  - 3.2.1 Develop knowledge among all actors about the benefits of source-separating wastewater systems through pilot projects.
  - 3.2.2 Plan for collected organic residues from wastewater being of such a quality that more can be returned to the ecosystem with optimised energy and resource efficiency.
  - 3.2.3 Capture heat from wastewater in the most efficient manner (see also 3.4.3).
- 3.3 Promote a circular construction and management process.**
  - 3.3.1 Prevent and minimise construction waste.
  - 3.3.2 Treat and recycle collected garden and park waste with optimised energy and resource efficiency.
  - 3.3.3 Build knowledge about sustainable and circular construction and management processes.

#### Target and sub-targets **Materials and indoor environment**

- 3.7 Healthy indoor environment in the design and use of buildings.**
  - 3.7.1 Design buildings equivalent to the Sweden Green Building Council's Gold rating, indoor environment.
  - 3.7.2 Plan so that hazardous chemicals do not occur in preschool and school environments.
  - 3.7.3 Increase the knowledge of all actors concerning the relationship between urban planning, energy-efficient buildings, and a good indoor environment.
- 3.8 Sustainable choices of building materials.**
  - 3.8.1 Design buildings and facilities so as to avoid and document materials and products that entail the risk of negative environmental and health impacts.
  - 3.8.2 Design buildings and facilities with materials and products that are produced in a socially sustainable manner.
- 3.9 Promote robust construction.**
  - 3.9.1 Take life cycle costs into account in the design and choice of materials used in buildings and facilities.
  - 3.9.2 Design buildings and facilities with high architectural, functional and material quality.

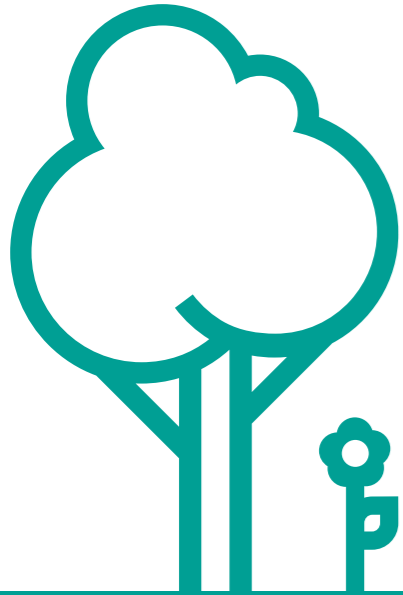
Monitoring metrics and responsibilities for each target can be found on page 54.

#### Target and sub-targets **Energy and climate**

- 3.4 Energy efficiency in buildings and facilities.**
  - 3.4.1 Minimise energy requirements in new construction and refurbishment. For new production, energy use is to be less than 50 kWh/m<sup>2</sup> A<sub>temp</sub> and year.
  - 3.4.2 Develop knowledge among all actors about more energy-efficient buildings through pilot projects.
  - 3.4.3 Recover waste energy. See 3.2.3
  - 3.4.4 Design facilities for high energy performance.
- 3.5 Stockholm Royal Seaport<sup>1</sup> is to be fossil free<sup>2</sup> by 2030.**
  - 3.5.1 Utilise local renewable energy resources efficiently.
  - 3.5.2 Plan for goods and passenger transport in Stockholm Royal Seaport being fossil free.
  - 3.5.3 Plan for energy for housing and business premises being fossil free.
  - 3.5.4 Develop knowledge concerning how Stockholm Royal Seaport can work with consumption-based greenhouse gas emissions.
  - 3.5.5 Create opportunities for measuring, monitoring, controlling and communicating resource use through digitalisation of Stockholm Royal Seaport.
- 3.6 Low climate impact from buildings and facilities from a life cycle perspective.**
  - 3.6.1 Design climate and energy-optimised buildings and facilities with at least a 100-year time perspective.
  - 3.6.2 Design buildings and facilities for resource-efficient operation.
  - 3.6.3 Design space-efficient housing and business premises.

<sup>1</sup> This target covers all energy use and resulting emissions of greenhouse gases within Stockholm Royal Seaport (Hjorthagen, Södra Värtan and Loudden) with the exception of Energihämmen, Lidingövägen, the Northern Link motorway and the Nimrod block (Fortum's power plant) and the energy use that Stockholms Hamn AB does not have actual or legal power over.

<sup>2</sup> The term "fossil free" is defined in accordance with the Stockholm – a fossil-fuel-free city 2040 strategy. The target includes greenhouse gas emissions from the heating and cooling of buildings, road shipments within Stockholm Royal Seaport regardless of the operator and all other gas and electricity consumption for households and businesses in Stockholm Royal Seaport. The target does not include greenhouse gas emissions from travel outside Stockholm Royal Seaport, the production of food or other goods or services that are consumed, but not manufactured, in Stockholm Royal Seaport, CFCs in cooling media, construction waste and nitrous oxide in the healthcare system, nor Shortlived Climate Pollutants (SLCP), with the exception of emissions of methane and nitrous oxide from the combustion of fuels.



# Let nature do the work

The water and greenery in Stockholm Royal Seaport plays an important role – socially, economically and ecologically. With careful design, the blue and green structure can serve several purposes, contribute synergies and deliver ecosystem services. It provides opportunities for recreation and aesthetic values that contribute to better health. Greenery has a proven positive impact on our ability to cope with stress and ability to concentrate. It creates a better local climate and can reduce the impact of future climate change. This can assist in strengthening ecological relationships, cleaning air and water, and helping to reduce noise. The planning of the area includes blue and green structure as an important element – from major thoroughfares to the design of individual places, buildings and courtyards.



Image: Kollagen, City of Stockholm with Asept/Mandavorks

LET NATURE DO THE WORK

## Urban planning principles

### → Multifunctional green spaces

Parks and courtyards are to be given a thoughtful and efficient design where several different functions can work together in the same surface area. As far as possible, the area's green spaces should serve a variety of recreational needs, such as exercise and relaxation. These areas are also to be part of an interwoven fabric of ecological values.

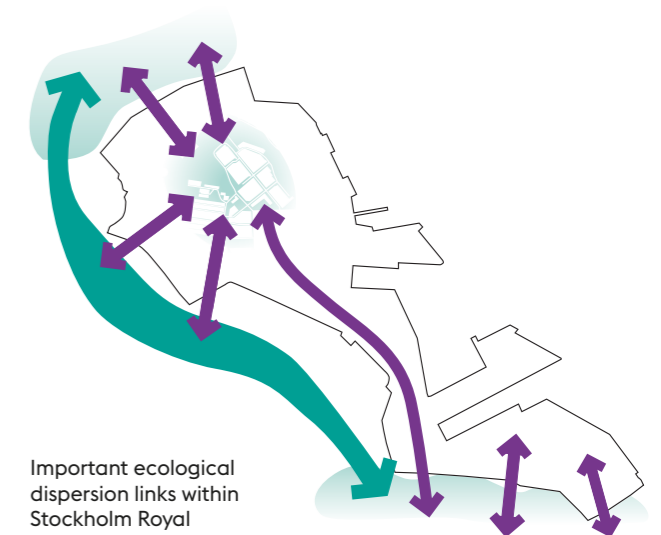
### → Greenery for pleasant outdoor environments

Trees and other vegetation should be planned in public spaces to make the urban space more comfortable during heat waves. Vegetation can help to dampen high temperatures by providing shade for example. Vegetation can also be used to improve the sound environment in the urban space. This is particularly important in high-density built environments with a high percentage of hardstand in the walls and floors of the urban space, where access to public parks and open spaces is also limited.

### → Strengthen dispersion routes and ecosystems

Through placement, scale and content, parks and other public places in the area are to assist in strengthening the dispersion links for oak-dependent species, thereby safeguarding well-

functioning ecosystems in the surrounding natural environment. Royal National City Park. Even residential courtyards are to help strengthen ecological functions in the area by offering qualitative greenery and functions that strengthen the ecological infrastructure.



Important ecological dispersion links within Stockholm Royal Seaport.



Stormwater pond by Hjorthagsparken.

Image, cropped: Lennart Johansson

### → Local storm water management

Storm water is to be managed as a resource that provides aesthetic values and serves as irrigation for greenery. Space for storm water management should be included as a prerequisite for the design of both public spaces and the actual built environment. Local management will vary depending on the site's conditions, for example, with regard to the desired character of the streets, access to greenery, topography or soil conditions. Stockholm Royal Seaport is adjacent to Lilla Värtan, which is a body of water where good water status has not been achieved. By planning and building with sustainable storm water management, the urban district will help improve the water status of Lilla Värtan by keeping pollutant levels in the storm water low. Guidelines for the management of stormwater in each subarea are being developed.

### → Resistance to increased precipitation

The city's greenery is to be used to mitigate the effects of future climate change such as increased precipitation and more torrential rain. Vegetation and soil beds will be used for infiltration and detention where possible, and storm water ponds will be sized to handle large amounts of rainfall. The built environment and public spaces should be designed and elevated so that flooding during torrential rain will not damage buildings or important functions. Higher water levels in the Baltic Sea will also place specific demands on the design and elevation of buildings.

### → Green buildings and courtyards

Blocks will be used to reinforce the green structure in the area. Vegetation on roofs and façades will be welcomed, and represent ways to satisfy the need for greenery in the area. Where applicable, the ability to integrate greenery in the architecture is to be included as a condition early in the design process. As a rule, green buildings are to be considered a complement to, not a substitute for, well-functioning green courtyards. The courtyards should therefore be planned with sufficient lighting conditions and planting depth to promote trees and other high-value vegetation. The grounds of schools and preschools should also achieve these qualities and be of a size that is reasonable for the number of people who will be spending time there.

### → Cultivate quality of life

The area is to include possibilities for gardening, and used as a means to promote health and achieve social and aesthetic qualities. This can be arranged in public spaces of a more or less permanent nature, or in private and common areas for gardening in the block, such as roof terraces, patios and balconies.

### → Sustainability target – Let nature do the work

#### Target and sub-targets

<b>4.1</b>	<b>Utilise ecosystem services to build a resilient and healthy urban environment.</b>
<b>4.1.1</b>	Design multifunctional green areas to cope with future climate change, including storm water management, to contribute to biodiversity and create good habitats.
<b>4.1.2</b>	Plan Stockholm Royal Seaport to strengthen ecological relationships in the city.
<b>4.1.3</b>	Develop water areas to strengthen and develop recreational and conservation values.
<b>4.1.4</b>	Plan for good access to parks and areas with high recreational and conservation values.
<b>4.1.5</b>	Develop ecosystem services that contribute to health and well-being, including with regard to acoustics and air quality.
<b>4.1.6</b>	Create good conditions for producing ecosystem services through gardening and returning the city's nutrients to the soil (see 3.2.2).

Monitoring metrics and responsibilities for each target can be found on page 55.



Courtyards are to help strengthen the green structure in the area.

Image, cropped: Lennart Johansson



# Participation and consultation

Stockholm Royal Seaport will grow and develop over several decades. Participation and consultation can be stimulated by providing information and knowledge, by creating ties to place and identity, through the option of participation in forums and associations, and through people being given opportunities to influence processes. An inclusive process pre-supposes commitment throughout all phases of the project in which the parties concerned participate – decision-makers, officials in the City's various administrations, property developers, contractors, and not least residents and those who work in the area. Experience generated in the area help to increase knowledge of how to build a sustainable city.



Image: Kolkajen: City of Stockholm with Adept/Mandaworks. Retouching: Blomquist

## Urban planning principles

### → Enabling sustainable choices

The technical solutions in Stockholm Royal Seaport are to be designed thoughtfully so that they are user-friendly and intuitive, which can help to increase knowledge and awareness. Enabling sustainable choices means, for example, that waste can easily be sorted where it is discarded, or that it is easy to cycle or take the bus.



### → Civil dialogue and influence

Development of the area can gain the support of local residents and those who work in the area through active dialogue, and contribute valuable knowledge to the planning process. Forms for dialogue that focus on the whole concept and early planning stages are to complement traditional forms of consultation on programmes and zoning plans. User dialogues can take place through workshops, guided tours and temporary events.

### → Provide scope for meetings and initiatives

Those who live and work in Stockholm Royal Seaport are to be given the opportunity to influence and plan themselves. There are to be places, both physical and virtual, for meetings, temporary activities and own initiatives. The structures in Stockholm Royal Seaport should facilitate personal involvement through, for example, good access to smaller premises or zones set aside for gardening.

### → Visible and invisible environmental efforts

Stockholm Royal Seaport's environmental profile as reflected in both the design and functions of the area. In some instances, there may be reason to demonstrate specific technical solutions, such as for learning or marketing purposes. The extent to which



Temporary planting boxes build involvement.

Image, cropped: Lennart Johansson

the environmental technology should be visualised and highlighted should be assessed on the basis of each project's specific circumstances. The principle should be that where it is important to visualise a function in order to assist the everyday user's understanding, the design should be durable and integrated, for example the measurement and visualisation of resource use or waste management.

### → Generate interest

The vision and ambitions for the area can be interpreted and visualised in the architecture or through temporary events. The new buildings are to highlight and reinforce the identified character of the area in order to retain and develop the area's identity and uniqueness. Details in the buildings and public spaces as well as artistic adornment could usefully be linked to and highlight the area's distinctive character, both local identities and the area's environmental profile. The site's identity can be utilised from an early stage: where a swimming pool is planned for the long-term, a temporary bathing jetty can be installed; or a pink bike path could be painted out initially where a permanent one is planned for the long-term. Temporary arrangements to visualise and market new

technologies and innovations in particular, or more spectacular activities and installations, will be welcomed. For these kinds of arrangements, which are likely to have a shorter life than the city's buildings and places, the issue of interchangeability or dismantling must be dealt with from the start.

### → Courage to try something new

Collaboration between civil society, the City, academia and the private sector in Stockholm Royal Seaport will create conditions for people, ideas and organisations to develop. Promising examples will be disseminated, contributing to a Stockholm that is diverse, rich in experiences, cohesive and growing. There should be room to test new materials and construction methods, based on the low-energy or energy-plus house concepts for example. In order to benefit best from the experience gained, it is important that any testing is done in a way that permits monitoring and feedback. Parts of what is constructed will use well-proven and sustainable technologies, while other parts will be executed in the form of well-defined development projects. Site allocation contests for a number of selected sites may be one way of identifying and testing new solutions.



Dialogue during the planning process.

Image, cropped: Lennart Johansson



Recycling centre of the future, Stockholm Royal Seaport.

Image, cropped: Lennart Johansson

## → Sustainability target – Participation and consultation

### Target and sub-targets

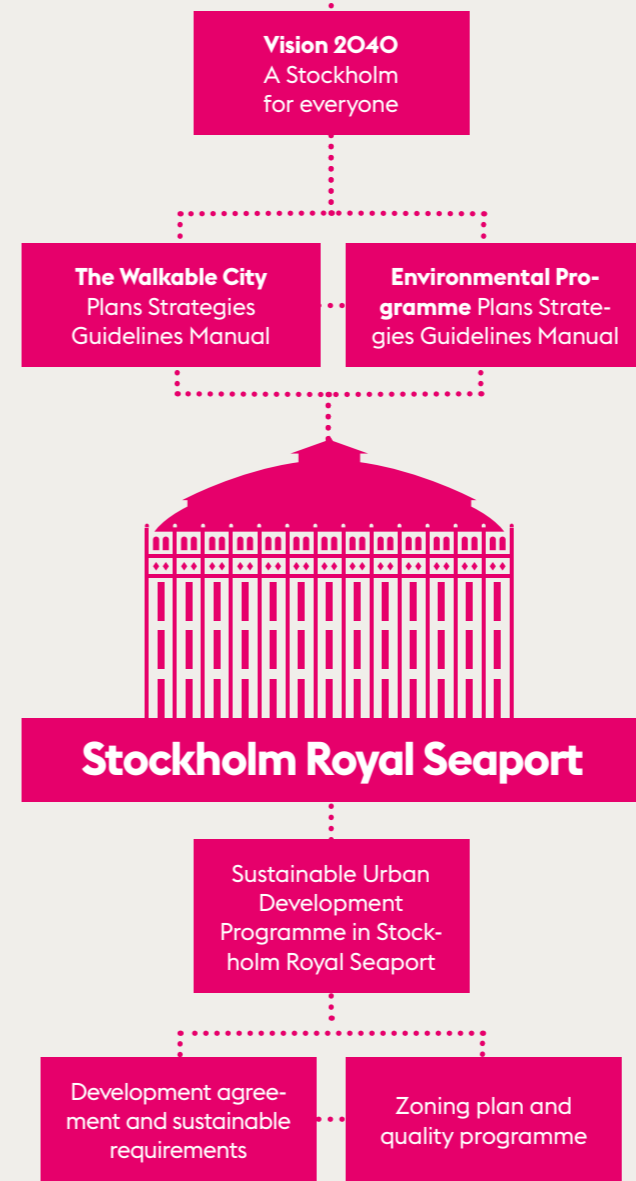
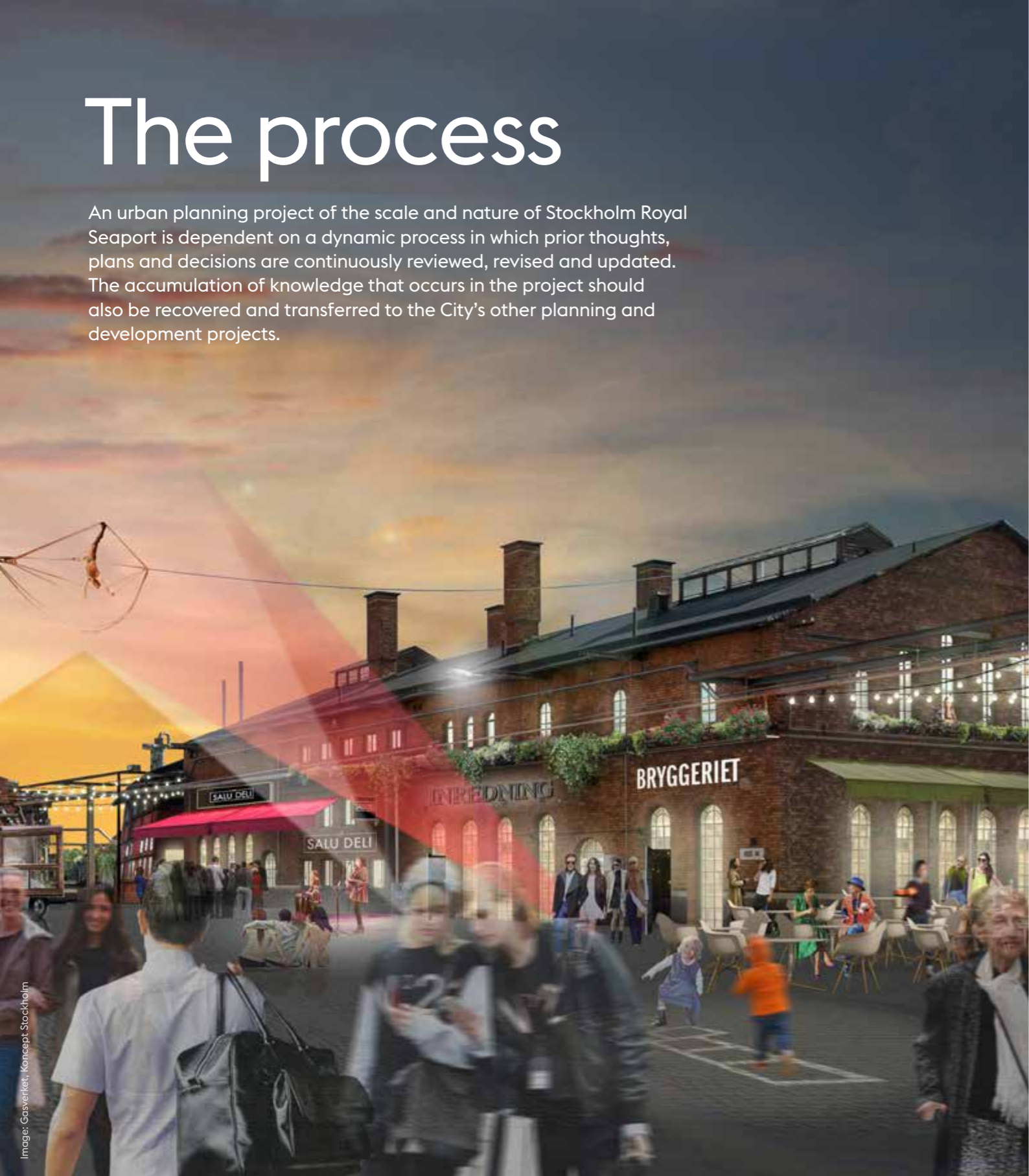
- 5.1 Stimulate active participation in the development of Stockholm Royal Seaport into a sustainable and open urban district**
  - 5.1.1 Develop the urban district through increased civil dialogue to encourage different groups to participate at an early stage.
  - 5.1.2 Stimulate public participation for long-term and sustainable management and development of the urban district.
  - 5.1.3 Encourage continuous exchange and open dialogue in order to strengthen social capital with the participation of citizens, businesses and the City.
  - 5.1.4 Carry on continuous dialogue with all actors, enabling participation and feedback on sustainability efforts.
  - 5.1.5 Account for existing businesses and their conditions for continued operation in the area.
- 5.2 Create conditions for sustainable consumption**
  - 5.2.1 Build knowledge about sustainable consumption and a circular economy.
  - 5.2.2 Create places, digital platforms and conditions for re-use and sharing.
  - 5.2.3 Stimulate businesses to provide sustainable products and services.
- 5.3 Private and public-sector companies add to the sustainable profile of the area**
  - 5.3.1 Create a diverse range of premises for a variety of meeting places and businesses.
  - 5.3.2 Support networking and collaboration to stimulate sustainable enterprise.
  - 5.3.3 Stimulate initiatives to employ people outside the labour market.
  - 5.3.4 Develop public organisations that are role models for sustainability.
- 5.4 The knowledge and experience generated by Stockholm Royal Seaport is to be shared**
  - 5.4.1 Support and promote research and development to contribute to innovation and to remain at the forefront of sustainable urban development.
  - 5.4.2 Encourage the development of sustainable solutions through skills development, networks and forums.
  - 5.4.3 Develop tools, working methods and experience to influence the City's other urban development projects.
  - 5.4.4 Share experiences through guided tours, dialogue, networks and conferences.

Monitoring metrics and responsibilities for each target can be found on page 56.

# The process

An urban planning project of the scale and nature of Stockholm Royal Seaport is dependent on a dynamic process in which prior thoughts, plans and decisions are continuously reviewed, revised and updated. The accumulation of knowledge that occurs in the project should also be recovered and transferred to the City's other planning and development projects.

Image: Gasverket, Concept Stockholm



## Diagram of the main policy documents underlying the planning and implementation of Stockholm Royal Seaport.

The City's new **Vision 2040** – A Stockholm for everyone – is to be laid down in the City's overarching strategies and programmes for Stockholm and in the City's comprehensive plan and Environmental Programme. How this will then be realised in the City's actions is described in various strategies for Stockholm, such as the Urban Mobility Strategy.

Based on Stockholm's overarching visions and targets, a vision has been formulated for the Stockholm Royal Seaport urban development project as laid down in the urban planning principles and sustainability targets in this document, Sustainable Urban Development Programme. The urban planning principles and sustainability targets are then used in the planning of different subareas and in individual zoning plans and expansion phases. The zoning plans particularise the urban planning principles further through related quality programmes, for example.

The sustainability targets guide both the City's infrastructure construction and the companies' housing construction projects. A development agreement and appendix with specific sustainability requirements and monitoring process are linked to the zoning plan. The City specifies the same types of requirements when procuring planners and contractors for implementation of the City's infrastructure projects.



→ **Application**

The urban planning principles and sustainability targets are key starting points in the urban planning and development processes and provide guidance and direction at both comprehensive and zoning levels. In order for Stockholm Royal Seaport to serve as a role model for sustainable urban development, the programme needs to be applied in all stages and by all relevant actors – from the early stages where many of the overarching decisions are made, to implementation when the ambitions are realised. See more overleaf.

→ **Organisation and responsibilities**

The City Planning Administration prepares programmes and zoning plans. This work determines the location and design of buildings, parks, infrastructure and so forth. The City Planning Administration is also responsible for building permits.

The City Development Administration coordinates and is responsible for implementing these plans by developing sites, streets and parks owned by the City. The City Development Administration enters into agreements with property developers on site allocation and development and prepares requirements based on the sustainability targets for both private property and public open space.

The process may look different for different subprojects. One example of the planning and development process and how sustainability aspects can be included in the project is illustrated below.

The project is run in close cooperation with the City Traffic Administration, the City Environment and Health Administration, the Östermalm District Administration, Stockholm vatten och avfall AB and other public utilities.

→ **Actor cooperation**

The City of Stockholm’s administrations and companies are

cooperating across a broad front in the work with Stockholm Royal Seaport, and this Sustainable Urban Development Programme has been developed and produced through comprehensive consultation within the City.

The Stockholm Royal Seaport project lies under the Urban Development Division and is staffed by the City Development Administration, the City Planning Administration, the City Traffic Administration and the City Environment and Health Administration. Östermalm District Administration and several other administrations and municipal companies are involved in the development. In addition, various forms of cooperation, forums and training initiatives are needed to stimulate dialogue and exchange with and between the City, property developers, infrastructure owners, consultants, academia and suppliers. The cooperation process needs to include best-practice sharing and a joint learning platform. Through this cooperation, the development process is stimulated and conditions for innovation are improved.

→ **Feedback**

Through dialogue and monitoring, experience gained from the project is transferred and documented as the implementation proceeds. The frequent contact with property developers entailed by monitoring results in direct impulses on how the sustainability requirements work in practice. This regularity of feedback provides significant input on how the specifications could be developed moving forward.

The Stockholm Development Administration reports the results achieved each year, by both the property developers involved and within the framework of the City’s work with planning and implementation. The sustainability report and the monitoring report are aimed at spreading these achievements and experiences both within the City and to all external stakeholders.

→ **How should the Sustainable Urban Development Programme be applied?**

**Overarching level**

Along with the urban design strategies and sustainability targets, the unique character of the area provides a direction for the urban development area as a whole. This document provides the basis for overall conclusions on the development of Stockholm Royal Seaport.



**Subareas**

For each subarea of the urban development area, an in-depth programme is prepared in which the conditions and planning focus are presented. When working on the future structure of the subareas, the City carries out parallel early design based on the Sustainable Urban Development Programme. These parallel early design highlight the area’s future possibilities and how its challenges can be managed. In this way, the City makes clear the conditions before new actors, in particular property developers, are included in the process.



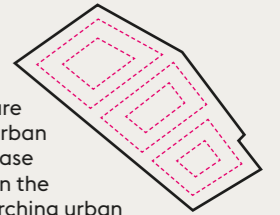
**Buildings**

In building permit applications, the urban planning principles help to ensure a quality implementation. How each property developer intends to meet the sustainability requirements is monitored continuously by the Stockholm Development Administration until the building has been in place for two years. Monitoring occurs through frequent contact with the property developers and a review of their submitted results, which also assists in developing the skills of those developers who participate in Stockholm Royal Seaport.



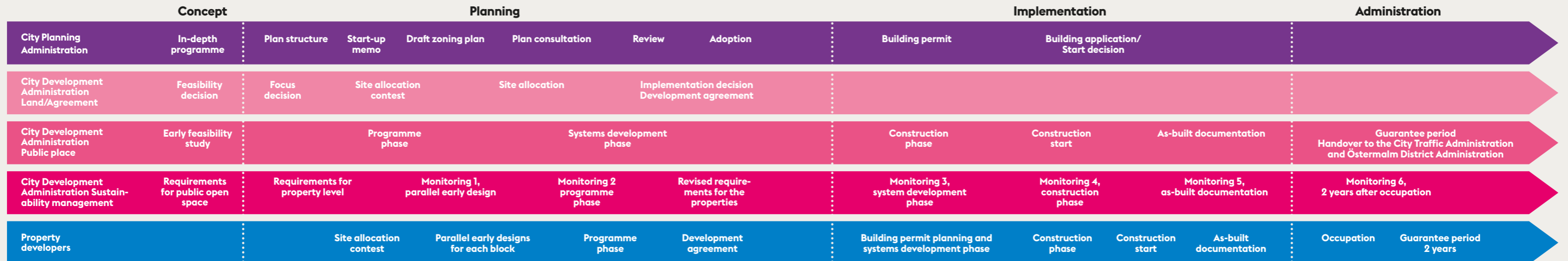
**Development phase**

A zoning plan is developed for each development phase, in which the future land use is regulated in legal terms. Urban planning principles are developed phase by phase for the zoning plan based on the area’s unique qualities and the overarching urban planning principles. Action programs specific to each phase are produced based on the overarching sustainability targets that contain more specific sustainability requirements for the property developers’ projects on private property and for the City’s infrastructure projects.



The specific urban planning principles and sustainability requirements form the basis for site allocation agreements and the subsequent process to ensure a high-quality result. This usually takes the form of parallel sketches that each individual property developer produces for their building. The purpose of these parallel sketches is to enable well-balanced decisions at an early stage on how various challenges can be managed. This process saves resources and ensures that the City’s urban planning principles and sustainability targets are applied.

The City prepares a development agreement when a zoning plan is adopted. Besides what is regulated in the zoning plan, this agreement is one of the City’s most important tools for imposing the City’s requirements and ambitions in relation to other actors. Once the zoning plan has gained legal force, it forms the basis for building permits, etc.



# Sustainability targets

	TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY
1. VIBRANT CITY	1.1	Create a robust and interconnected urban structure.	Proportion of barrier effects removed.	SBN in cooperation with ExpN is responsible for the target. ExpN with the support of SBN is responsible for monitoring target achievement.
		1.1.1 Develop natural connections to surrounding urban districts.		
	1.1.2 Create a flexibility where appropriate in the zoning plans for the area that will accommodate a range of functions and future changes.			
	1.2	Contribute to the creation of a city that promotes equality.	1.2.1 Stockholm Royal Seaport is to be a place for everyone to live, work or visit, regardless of gender, age, race or other individual circumstances.	Proportion of apartments in different forms of housing (%). Proportion of apartments with different forms of tenure (%).
1.2.2 Create a varied housing stock with different forms of tenure that can meet the needs of all stages of life such as tenant-owned and rental apartments, student housing, aged care homes and services under Sweden's Support and Service Act (LSS).				
1.2.3 Participate in developing knowledge of the City's administrations and companies concerning how the housing stock can be developed to meet the needs of a diverse society.				
1.3	Plan for a well-functioning everyday life	1.3.1 Plan for good access and proximity to public services including a rich offering of cultural services for everyone, education environments that are welcoming to everyone, and indoor and outdoor sports amenities.	Proportion experiencing a well-functioning everyday life (%). Mix of functions (%).	All divisions and boards are responsible for the target. ExpN with the support of SBN is responsible for monitoring target achievement.
		1.3.2 Plan for good access to private services, workplaces and premises for teleworking.		
		1.3.3 Design the public outdoor environment in a way that facilitates and encourages movement and physical activity as well as good access to public spaces for interaction and activity, both indoors and outdoors.		
		1.3.4 Create opportunities for providing services that facilitate everyday life through digitisation of the urban district.		
1.4	Create attractive and safe places at all times of the day and night	1.4.1 Plan for a mix of functions that give life and movement to selected streets and places.	Mix of functions (%). Proportion of businesses on ground floors along main thoroughfares.	SBN in cooperation with ExpN is responsible for the target. ExpN with the support of SBN is responsible for monitoring target achievement.
		1.4.2 Create destinations and activities that attract a variety of visitors to Stockholm Royal Seaport.		
		1.4.3 Design public places so that everyone feels safe and welcome at all times of the day and night.		
		1.4.4 Design the ground floors of buildings to create active façades from all aspects, and good access to business premises throughout the entire urban district.		

	TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY	
2. ACCESSIBILITY AND PROXIMITY	2.1	Prioritise pedestrian, bicycle and public transport traffic in the planning	Vehicle mileage, car and bicycle in % (every 3 years). Perceived attractiveness for walking, cycling, public transport in % (every 3 years). Proportion of zoning plans where directness ratio <1.25 is achieved. Proportion of visitor-intense businesses that lie within a radius of 200 metres of a main stop (%).	SBN and ExpN in cooperation with TN are responsible for the target. ExpN is responsible for monitoring achievement of the target.	
		2.1.1 Create good connections and short and attractive routes for pedestrians and cyclists.			
		2.1.2 Make plenty of room for and prioritise pedestrian, bicycle and public transport traffic in the street space, and for facilities in buildings.			
		2.1.3 Locate visitor-intense businesses close to public transport.			
	2.1.4 Plan so that the proportion of travel by car is lower than the average in the inner city.				
	2.2	Plan for vibrant street spaces that permit flexible use	2.2.1 Create a superior quality of visitor experience and ensure security and accessibility in all street spaces.	Proportion of pedestrian zones (%).	SBN and ExpN in cooperation with TN are responsible for the target. ExpN is responsible for monitoring achievement of the target.
			2.2.2 Create conditions for versatile use of public spaces.		
	2.3	The infrastructure is to promote consolidated shipment and efficient, sustainable goods shipments	2.3.1 Coordinate all construction shipments to the area via the Construction Consolidation Centre (BLC).	Consolidated shipment ratio from Construction Consolidation Centre (BLC) in %.	TN and ExpN in cooperation with the Stockholm Parking and the City's housing companies are responsible for the target. ExpN is responsible for monitoring achievement of the target.
			2.3.2 Make room for and prioritise sustainable goods shipments that supply the area.		
2.3.3 Expand the infrastructure for charging electric vehicles in the area.					

	TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY	
3. RESOURCE EFFICIENCY AND CLIMATE RESPONSIBILITY	ECOSYSTEM TARGETS				
	3.1	Continually reduce the amount of waste and increase waste grades	3.1.1 Prevent the generation of waste through increased reuse, for example.	Quantity of residual waste per capita in kg/capita. Proportion of hazardous waste in residual waste (%). Proportion of re-used waste in local recycling centre (%).	ExpN in cooperation with SVAAB is responsible for the target. ExpN with the support of SVAAB is responsible for monitoring achievement of the target.
			3.1.2 Reduce the amount of residual waste over time.		
			3.1.3 Increase waste grades for different types of waste.		
			3.1.4 Hazardous waste does not occur in residual waste.		
	3.2	Water and wastewater management is to be more energy- and resource-efficient	3.2.1 Develop knowledge among all actors about the benefits of source-separating wastewater systems through pilot projects.	Number of apartments in pilot projects.	ExpN in cooperation with SVAB is responsible for the target. ExpN is responsible for monitoring achievement of the target.
			3.2.2 Plan for collected organic residues from wastewater being of such a quality that more can be returned to the ecosystem with optimised energy and resource efficiency.		
			3.2.3 Capture heat from wastewater in the most efficient way (see also 3.4.3).		
	3.3	Promote a circular construction and management process	3.3.1 Prevent and minimise construction waste.	Quantity of construction waste, in kg/m² GFA.	ExpN in cooperation with TN and ÖsdN is responsible for the target. ExpN is responsible for monitoring achievement of the target.
			3.3.2 Treat and recycle collected garden and park waste with optimised energy and resource efficiency.		
3.3.3 Build knowledge about sustainable and circular construction and management processes.					

TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY
<b>ENERGY AND CLIMATE TARGETS</b>			
<b>3.4</b> Energy efficiency in buildings and facilities	<b>3.4.1</b> Minimise energy requirements in new construction and refurbishment. For new production, energy use is to be less than 50 kWh/m <sup>2</sup> A <sub>temp</sub> and year.	Energy performance per unit area (building), in kWh/m <sup>2</sup> A <sub>temp</sub> and year.	ExpN and TN are responsible for the target. ExpN is responsible for the coordinated monitoring of target achievement.
	<b>3.4.2</b> Develop knowledge among all actors about ever-more energy-efficient buildings through pilot projects.		
<b>3.4.3</b> Recover waste energy. See 3.2.3			
<b>3.4.4</b> Design facilities for high energy performance.			
<b>3.5</b> Stockholm Royal Seaport <sup>3</sup> is to be fossil free <sup>4</sup> by 2030	<b>3.5.1</b> Utilise local renewable energy resources efficiently.	Climate impact per unit area (building), in kg CO <sub>2</sub> e per unit of useful floor space  Total carbon dioxide equivalents in Stockholm Royal Seaport, in tonnes CO <sub>2</sub> e per year <sup>5</sup> .  Locally produced energy per unit area (building), in kWh/m <sup>2</sup> A <sub>temp</sub> and year.  Locally produced energy (facility), in kWh per year.	ExpN and TN are responsible for the target. ExpN is responsible for the coordinated monitoring of target achievement.
	<b>3.5.2</b> Plan for goods and passenger transport in Stock on Royal Seaport being fossil free.		
	<b>3.5.3</b> Plan for energy for housing and business premises being fossil free.		
	<b>3.5.4</b> Develop knowledge concerning how Stockholm Royal Seaport might work with consumption-based greenhouse gas emissions.		
	<b>3.5.5</b> Create opportunities for measuring, monitoring, controlling and communicating resource use through digitalisation of Stockholm Royal Seaport.		
<b>3.6</b> Low climate impact from buildings and facilities from a life cycle perspective	<b>3.6.1</b> Develop climate and energy-optimised buildings and facilities with at least a 100-year time perspective.	Estimated climate impact per unit area (building), in kg CO <sub>2</sub> /m <sup>2</sup> of useful floor space.  Estimated climate impact per unit area (system), in kg CO <sub>2</sub> /m <sup>2</sup> .	ExpN with the support of MHN and TN is responsible for the target. ExpN is responsible for the coordinated monitoring of target achievement.
	<b>3.6.2</b> Design buildings and facilities for resource-efficient operation.		
	<b>3.6.3</b> Design space-efficient housing and business premises.		
<b>MATERIALS AND INDOOR ENVIRONMENT TARGETS</b>			
<b>3.7</b> Healthy indoor environment in the design and use of buildings	<b>3.7.1</b> Design buildings equivalent to the Sweden Green Building Council's Gold rating, indoor environment.	Proportion of buildings that are <b>designed to achieve</b> the Sweden Green Building Council's Gold rating, indoor environment (%).  Proportion of buildings that <b>achieve</b> the Sweden Green Building Council's Gold rating, indoor environment (%).  Proportion of pre-schools/schools that have implemented all of the actions at level 3 in accordance with the City Environment and Health Administration's guide for a chemical-smart preschool.	ExpN, ÖsdN and UtbN are responsible for the target. ExpN with the support of MHN is responsible for monitoring achievement of the target.
	<b>3.7.2</b> Plan so that hazardous chemicals are not found in preschool and school environments.		
	<b>3.7.3</b> Increase the knowledge of all actors about the relationship between urban planning, energy-efficient buildings and a good indoor environment.		

3. RESOURCE EFFICIENCY AND CLIMATE RESPONSIBILITY

TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY
<b>3.8</b> Sustainable choices of building materials	<b>3.8.1</b> Design buildings and facilities so as to avoid and document materials and products that entail the risk of negative environmental and health impacts.	Proportion of <b>material deviations not approved</b> .	ExpN with the support of MHN is responsible for the target. ExpN with the support of MHN is responsible for monitoring achievement of the target.
	<b>3.8.2</b> Design buildings and facilities with materials and products that are produced in a socially sustainable way.		
<b>3.9</b> Promote robust construction	<b>3.9.1</b> Take life cycle costs into account in the design and choice of materials to be used in buildings and facilities.	Number of completed LCC.	All divisions and boards are responsible for the target. ExpN is responsible for monitoring achievement of the target.
	<b>3.9.2</b> Design buildings and facilities of high architectural, functional and material quality.		

<sup>3</sup> This target covers all energy use and resulting emissions of greenhouse gases within Stockholm Royal Seaport (Hjorthagen, Södra Värtan and Loudden) with the exception of Energihamnen, Lidingövägen, the Northern Link motorway and the Nimrod block (Fortum's power plant) and the energy use that Stockholms Hamn AB does not have actual or legal power over.

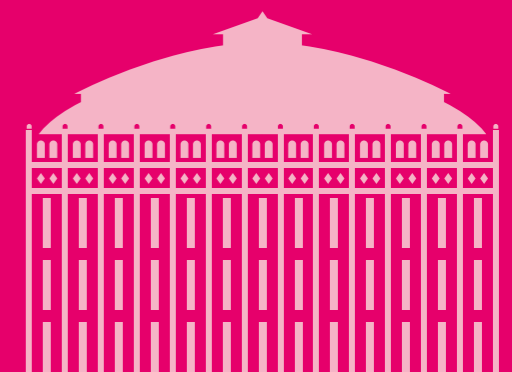
<sup>4</sup> The term "fossil free" is defined in accordance with the Stockholm – a fossil-fuel-free city 2040 strategy. The target includes greenhouse gas emissions from the heating and cooling of buildings, road shipments within Stockholm Royal Seaport regardless of the operator and all other gas and electricity consumption for households and businesses in Stockholm Royal Seaport. The target does not include greenhouse gas emissions from travel outside Stockholm Royal Seaport, the production of food or other goods or services that are consumed, but not manufactured, in Stockholm Royal Seaport, CFCs in cooling media, construction waste and nitrous oxide in the healthcare system, nor Shortlived Climate Pollutants (SLCP), with the exception of emissions of methane and nitrous oxide from the combustion of fuels.

<sup>5</sup> Greenhouse gas emissions are calculated according to the City of Stockholm's current method (the consumption method) with LCA mark-up. This means that the calculation of emissions is based on the fuel's total life cycle and also includes emissions from the production and distribution of biofuels. Greenhouse gas emissions from goods and passenger transport is calculated on the basis of flow measurements and composition of the vehicle fleet.

TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY
<b>4.1</b> Utilise ecosystem services to build a resilient and healthy urban environment	<b>4.1.1</b> Design multifunctional green areas to cope with future climate change, including storm water management, to contribute to biodiversity and create good habitats.	Proportion of buildings that comply with Stockholm Royal Seaport's Green Space Index requirements for private property (%).  Achieved Green Space Index score on public open space per subarea.  Connectivity in the landscape (every 10 years).  Proportion of apartments with access to park and natural areas within 200 metres (%).	ExpN is responsible for the target in cooperation with SBN, MHN, TN, ÖsdN, SVAB. ExpN is responsible for monitoring achievement of the target.
	<b>4.1.2</b> Plan Stockholm Royal Seaport to strengthen ecological relationships in the city.		
	<b>4.1.3</b> Develop water areas to strengthen and develop recreational and conservation values.		
	<b>4.1.4</b> Plan for good access to parks and areas with high recreational and conservation values.		
	<b>4.1.5</b> Develop ecosystem services that contribute to health and well-being, including with regard to acoustics and air quality.		
	<b>4.1.6</b> Create good conditions for producing ecosystem services through gardening and returning the city's nutrients to the soil (see 3.2.2).		

4. LET NATURE DO THE WORK

TARGET	SUB-TARGET	MONITORING METRIC	PRINCIPAL RESPONSIBILITY AND MONITORING RESPONSIBILITY
<b>5.1</b> Stimulate active participation in the development of Stockholm Royal Seaport into a sustainable and open urban district	<b>5.1.1</b> Develop the urban district through increased civil dialogue to encourage different groups to participate at an early stage.	Number of participants in civil dialogues and number of submitted proposals.	ÖsdN, ExpN, SBN, TN, the City's housing companies, FastN, IdrN, UtbN, KultN, SH AB, SVAB are responsible for the target. ExpN is responsible for monitoring achievement of the target.
	<b>5.1.2</b> Stimulate public participation for long-term, sustainable management and development of the urban district.	Number of participants at seminars.	
	<b>5.1.3</b> Encourage continuous exchange and open dialogue in order to strengthen social capital with the participation of citizens, businesses and the City.	Number of participants at introduction meetings for residents.	
	<b>5.1.4</b> Carry on continuous dialogue with all actors, enabling participation and feedback on sustainability efforts.		
<b>5.2</b> Create conditions for sustainable consumption	<b>5.1.5</b> Account for existing businesses and their conditions for continued operation in the area.		
	<b>5.2.1</b> Build knowledge about sustainable consumption and a circular economy.	Implemented R&D projects on sustainable consumption.	ÖsdN, ExpN, SBN, TN, MHN, the City's housing companies, FastN, IdrN, UtbN, KultN, SVAB are responsible for the target. ExpN is responsible for monitoring achievement of the target.
	<b>5.2.2</b> Create places, digital platforms and right conditions for re-use and sharing.		
<b>5.2.3</b> Stimulate businesses to provide sustainable products and services.			
<b>5.3</b> Private and public-sector companies add to the sustainable profile of the area	<b>5.3.1</b> Create a diverse range of premises for a variety of meeting places and businesses.	Proportion of sustainability-certified public organisations (e.g. green flag, ISO 14001). Number of jobs for people outside the labour market.	ÖsdN, ExpN, TN, the City's housing companies, FastN, IdrN, UtbN, KultN, SH AB, SVAB are responsible for the target. ExpN is responsible for monitoring achievement of the target.
	<b>5.3.2</b> Support networking and collaboration to stimulate sustainable enterprise.		
	<b>5.3.3</b> Stimulate initiatives to employ people outside the labour market.		
	<b>5.3.4</b> Develop public organisations that are role models for sustainability.		
<b>5.4</b> The knowledge and experience generated by Stockholm Royal Seaport is to be shared	<b>5.4.1</b> Support and promote research and development to contribute to innovation and to remain at the forefront of sustainable urban development.	Number of study visits.	ExpN in cooperation with SBR and other divisions and companies is responsible for the target. ExpN is responsible for monitoring achievement of the target.
	<b>5.4.2</b> Encourage the development of sustainable solutions through skills development, networks and forums.	Number of participants in skills development.	
	<b>5.4.3</b> Develop tools, working methods and experience to influence the City's other urban development projects.	Number of R&D projects.	
	<b>5.4.4</b> Share experiences through guided tours, dialogue, networks and conferences.		





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