



Nordhavnen – a city district at the water

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Abstract

The CPH City and Port Development is a general partnership, owned by the City of Copenhagen and the State. It was founded in 2007 as the Port of Copenhagen and the Orestad Development Corporation merged together.

The task of the Corporation is to develop the areas owned by the Corporation into urban districts and to be responsible for the port activities in the Port of Copenhagen. The areas include Orestad – a newtown close to the airport - and huge areas in the harbour that are no longer required for port operations. The management of the maritime operation is handled by Copenhagen Malmö Port. Copenhagen Malmö Port is a partnership with the port of the Swedish city of Malmö. The aim is to create an effective Danish-Swedish port for the Oresund Region. A population of 3.5 million Danes and Swedes resides here within a radius of 100 km, and this creates new commercial possibilities in transport and logistics.

Danish architects and engineers Cobe, Sleth Modernism, Polyform and Ramboll are advisors on the development on Nordhavnen (size: approx. 200 hectares; time frame: the new district will be developed over the next forty to fifty years). When fully developed, the site will feature buildings with a total floor area of up to four million square meters, providing living space for 40,000 inhabitants and workspace for another 40,000 people. In May 2008, an open international ideas competition for Nordhavnen was launched and concluded in March 2009. Since then a number of public meetings, open house events and exhibitions have been arranged to involve local residents.

There are three phases: the first one focuses on the inner Nordhavn, expected building start in 2011 and 2012.

Key Words: City and Port Development, Copenhagen Malmö Port, Nordhavnen, international ideas competition

Report

1. Nordhavnen – a city district at the water

Nordhavnen is probably the most extensive and ambitious metropolis development project in Scandinavia in the years to come. The Øresund coast on the doorstep means direct access to the water in the new Nordhavnen. The Copenhageners will be able to visit, live and work in an area closely connected to the water, until now partly reserved for commercial harbour activities. The dense city district will offer a variety of recreational urban spaces and public functions. In the future, Nordhavnen will accommodate 40,000 residents, and 40,000 persons will work here.

Figure 1. Rendering of Nordhaven project area



Nordhavnen will be a city of islets and canals, thus directly connected to the water. Mixed functions and small building plots add the human perspective to the vast area. Nordhavnen has a strong focus on green mobility with priority for bicycles, pedestrians and public transport. As an urban development project Nordhavnen is in the lead in the endeavours to address the climate changes as well as improving life quality and welfare in the city. The vision for Nordhavnen is the sustainable urban quarter of the future in Copenhagen – not just in regard to environmental responsibility, but also as to generating wealth and social diversity.

Danish architects and engineers Cobe, Sleth Modernism, Polyform and Ramboll are advisors on the development on Nordhavnen.

2. The regeneration of an urban-port waterfront

Transformation of the city is a complex learning process during which different players reassess and redefine their interests and their understanding of the market and the city, and find new ways to interact. The transformation of the Copenhagen Harbour area is a prime example of such a learning process with changing approaches.

Copenhagen Harbour got its river-like shape when the new neighborhood of Christianshavn was built in the 17th and 18th centuries, and by means of large fillings that were carried out during the industrialisation in the late 19th century and early 20th century.

Figure 2-3-4-5. Some industrial areas and specialised zone of the Copenhagen Harbour



Early industrialisation along the harbour front and the development of a modern industrial harbour resulted in an elongated, specialised zone, located between the civil city and the water. It was only along a couple of the old canals that daily city life came into actual contact with the waterfront.

Industry and specialised harbour functions gradually vanished from the harbour area during the 1970's. However, it was only in the mid 1980's that city planners, politicians and the general public began to realise the harbour's vast potential for a renewal of the city in line with the post-industrial agenda.

The transformation of the Copenhagen Harbour has been going on since then and now time has come to Nordhavnen, the most northern part of the harbour.

Copenhagen is a city that is rapidly changing: it is growing and becoming increasingly diverse and dynamic. The development of Copenhagen is crucial to the development of the entire region. The great challenge in the coming years will be to handle this growth with care and insight.

Enterprises would like to move to Copenhagen to be closer to the city and its residents: ten thousand new jobs were created in the city in 2006 alone. By 2025, the number of inhabitants in Copenhagen will have grown by more than 50.000. Copenhagen is often designated one of the best cities in the world to live in, a city in which growth and welfare go hand in hand. However, Copenhagen faces several challenges.

The development of the Nordhavnen site is a key element in the development of Copenhagen in general. The new Nordhavnen city district is intended to provide an answer to these challenges. This is where the visions for Copenhagen should unfold in real life.

3. The history of Nordhavnen

Nordhavnen was constructed on reclaimed land. Its history reflects the changing needs for space and transport and different building styles of a century. The first part of Nordhavnen dates back to the 1880s. About half of the area is currently used for harbour-related activities, whereas the rest is unused. The Port of Copenhagen is the largest cruise ship harbour in northern Europe. Last year 300 ships visited Copenhagen, bringing more than 600.000 tourists to the city.

Nordhavnen bears clear evidence of its origins as an industrial harbour with various small- and large-scale harbour environments. The area's structure is simple and rational, which is reflected in the traffic structure, the plots and the buildings, all of which are basically laid out and organised in a right-angled grid. This is a highly distinctive feature that helps give the area its special character.

Figure 6. Nordhavnen today: high silos mixed with warehouses and industrial buildings



4. Room for cruiseships and containers

More than 300 cruiseships visit Copenhagen every summer. Today most of them call at Inner Nordhavn. To develop Inner Nordhavn we have to move the cruiseships.

A new quay to provide increased capacity for the cruise ships calling at Copenhagen will be established at the east coast of Nordhavnen

Where the new city meets the cruise terminal the plan is to have a huge recreational area – with meadows, breakwaters, swamp forests etc. An area where you can fish and where you can find other kinds of fauna and flora. A place where you can go exploring.

In that way we combine the city and the cruise ship terminal and at the same time create the necessary distance of approximately 600 meters as most of the ships at the new quay will stay in Copenhagen overnight and thus have noise impact on adjacent areas.

According to international safety rules, the area must be fenced off. As the season is reduced to the 5 months in summer time and as the guests either stay on the ship or go to the city no major building facilities are required for the terminal function, with the exception of some light structures - “tents” - for safety checks of baggage and passengers and a passenger waiting area.

Experiences from Copenhagen show that cruise ships attract many people. Therefore public areas where visitors will be able to experience the spatial atmosphere created by the presence of the large vessels are planned.

Figure 7. The container terminal located in Inner Nordhavn



During season it will be possible for guests to follow the activities around the ships and to have a view to the sea from both ends of the quay. Off season tents and the fences disappear so the area will be totally open and can be used by skaters, walkers and fishing people.

The container terminal and the car terminal are located in Inner Nordhavn too. Analyses have Indicated that the noise level will restricts the possibility of an optimal redevelopment of Inner Nordhavn. The intention is to relocate the terminals in Outer Nordhavn too in order to keep them in Copenhagen.

5. The identity of Nordhavnen

The harbour features several distinctive traces of culture, which is a strong starting point for the conversion of Nordhavnen from an industrial area into a city district.

The current buildings at the site are representative of the idiom of harbours: high silos mixed with warehouses and industrial build-ings. Among these buildings are rationally designed metal and concrete structures such as cranes, chutes, transport rails and covering structures. The largest industry still active in Nordhavnen is the container harbour, whose tall cranes can be seen from much of Copenhagen.

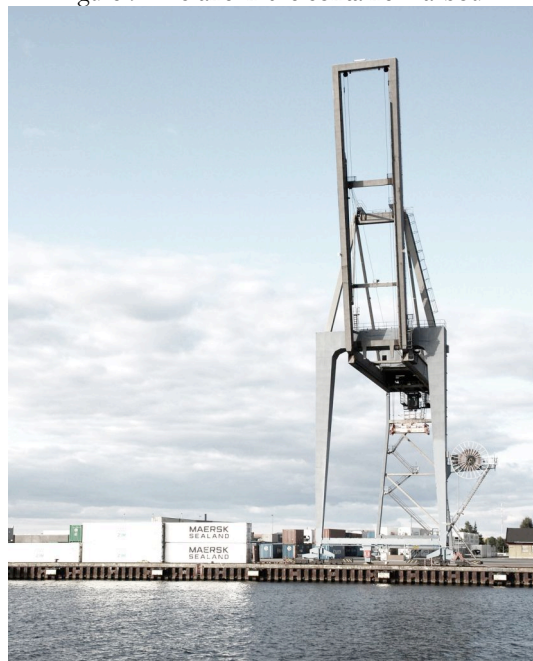
Figure 8. One of the buildings that characterize the area's industrial port



The new building zones interpret the logic of the harbour and create coherence between the original Nordhavnen site and the new city district. The location of new building zones is specifically based on the current structure and division into plots of the harbour area. This means that new buildings can be developed without conflicting with existing buildings and activities.

The natural environment in Nordhavnen is wild, self-grown and characterised by vast open expanses of grass, shrub and clusters of trees. Nordhavnen is the habitat of a varied wildlife, including migratory birds and amphibians. The development of the new green structure in Nordhavnen is based on a thorough mapping of the natural and landscape qualities of the area.

Figure 9. A crane in the container harbour



6. The development strategy

The main structural concept in the Nordhavnen scheme is to cut through the harbour space with intersecting canals and basins, thus dividing the area into a number of small islets. Such a layout respects and interprets Nordhavnen's past, in which reclaimed land areas created an easily recognisable, rational structure. Copenhagen's new city district will thus be surrounded and intersected by water surfaces, which will give the Nordhavnen district a distinctive character and subdivide it into local districts.

Figure 10-11. Satellite view of the coastal area, before and after the project



The islets act as identity-creating units that are easy to take in and ensure closeness to water everywhere, just as they offer varied spatial experiences because of different canal widths. The islets also interact with each other through connections across basins, and they share green waterfront spaces.

'The five-minute city' is a reference to the time it takes to walk four hundred metres, and the concept is to promote sustainable modes of transport in Nordhavnen. The ambition is, as a minimum, to live up to the objective of the City of Copenhagen of obtaining the following distribution: at least one-third of all traffic in the area should be cyclists, at least one-third should be public transport, and car traffic should account for no more than one-third. In Nordhavnen, it should be easier to walk, cycle or use public transport than to travel by car. That is why the area is consistently laid out on the basis of the five-minute-city principle. Short distances from housing and workplaces to public transport, bicycle paths, green areas, public institutions and commercial facilities are characteristic of the entire district.

Figure 12. Islet's connections



The green loop is the highly unifying and identity-creating element in Nordhavnen and a key element in the five-minute-city strategy. The loop has multiple purposes and works on several scales. As a figure, the loop connects the various neighbourhoods in Nordhavnen with each other and with the rest of Copenhagen.

The green loop contains the public transport systems at Nordhavnen: an elevated Metro line or some other high-class type of public transport. In addition, there will be a ‘super bicycle path’ in the green loop that will enable cyclists to get to their destinations quickly and efficiently. Up to two-thirds of all people going in or out of the city district in the future will move along the green loop; the rest will cross the loop on their way through Nordhavnen.

‘The Loop’ has the effect of rendering the sustainable types of traffic visible in the public room

The main internal road net will connect to the future Nordhavnsvej, which will stimulate travellers to and from the area to choose this route instead of the local roads.

‘Shared space’ areas and green bicycle routes together form a close grid of possibilities for cyclists – which makes it attractive to take the bike.

Nordhavnen is a green and blue city district. With its basins, canals and coastlines, Nordhavnen has water as its nearest neighbour. There is always a green area just around the corner: from local pocket parks, promenades and green urban spaces to open coastal expanses, beaches and large scenic areas.

Figure 13. Nordhaven, a blue and green city



Canals and basins create different spatial experiences and provide a setting for a multitude of activities. Direct contact with water is important, especially in areas facing south. Access to the water will be provided by stairs, low promenades, beaches, piers, etc. The water spaces will be integrated with adjacent facilities on land, and this will unfold the special qualities of a city at the waterside.

The green structure in Nordhaven is laid out as an uninterrupted belt that is interwoven with the blue structure. There are smooth transitions between the different types of natural landscapes, and special places and new opportunities for special experiences are created. The individual islets will feature local pocket parks, playgrounds and small green areas. The green loop is an integral part of this green structure, which ensures that Nordhaven will feel like a green city district to the people moving about in it.

The closeness of natural landscapes is conducive to a rich, varied and active outdoor life for Nordhaven's residents and visitors. Canals and basins will be used for sailing and other water sports, and the green areas offer a wealth of opportunities for physical exercise.

7. It starts with Inner Nordhavn

The development of Nordhavnen starts in the most southern area, closest to the City Center, the neighborhood Østerbro and the Nordhavn Station - part of the public transport system.

Inner Nordhavn consists of free city quarters - Aarhusgadekvarteret, Sundmolen and Trælastholmen - each featuring its own characteristics. Inner Nordhavn will turn out very urban with shops, urban squares and public promenades. Inner Nordhavn will provide living space for 5,000 inhabitants and workspace for another 5,000 people. The three city quarters will be developed one by one starting with Aarhusgadekvarteret (the Aarhusgade City Quarter).

8. Aarhusgadekvarteret

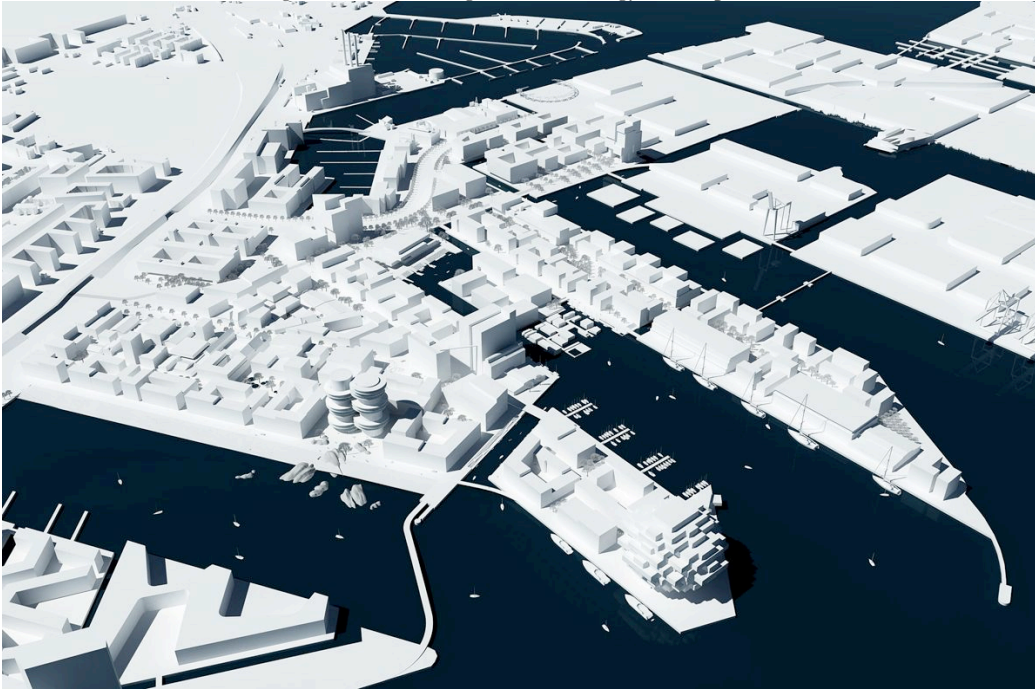
Figure 14. Plan for Aarhusgade



Nordhavnen meets Copenhagen in the Aarhusgadekvarteret. The Nordbassinet stretch to Østerbro from one direction and Aarhusgade cuts through Østerbro and the street Aarhusgade in the other direction ending up at the central urban space.

Aarhusgade will contain a concentration of shops and restaurants, and will together with a "harbour bath" by the promenade Sandkaj, a marina and a water sports area have a unifying function.

Figure 15. Renderings of the strategy development



A sequence of varied urban spaces will combine Sandkaj and the central urban space with the other city quarters in Inner Nordhavn and will help make urban life better.

The current buildings are representative of the idiom of the harbour. High silos mixed with warehouses and a special local environment with narrow streets and irregular open spaces. The building structure will create coherence between the original Nordhavnen site and the new city district

.Most of the new buildings are built in 3 - 6 storeys following the skyline of Copenhagen. In the historical part of the city the uniform building height is interrupted by spires and domes, whereas in Inner Nordhavn the height is interrupted by sculptural monoliths. The new buildings will consider key architectural features such as the heaviness of façades and red and light colors.

Figure 16-17. Renderings of the project proposal

