

NORDHAVEN

INTERNATIONAL URBAN DESIGN COMPETITION
COPENHAGEN, DENMARK

2013

GEORGIA TECH COMPETITION DESIGN TEAM

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NORDHAVEN PORT - SITE OF THE COMPETITION LOOKING TOWARD COPENHAGEN CENTER



COMPETITION SITE LOOKING NORTHEAST



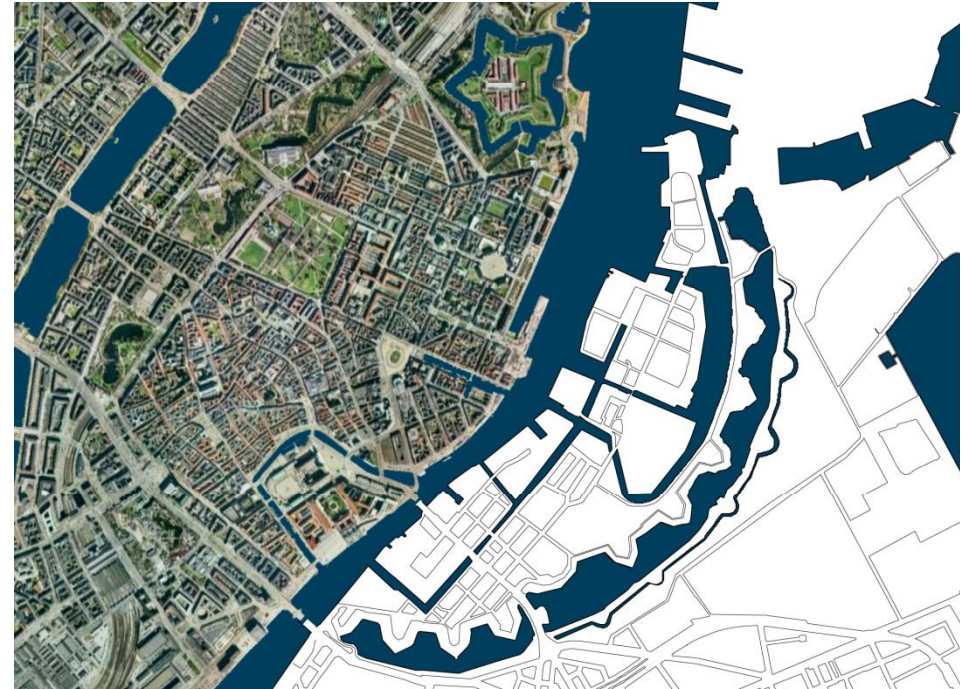
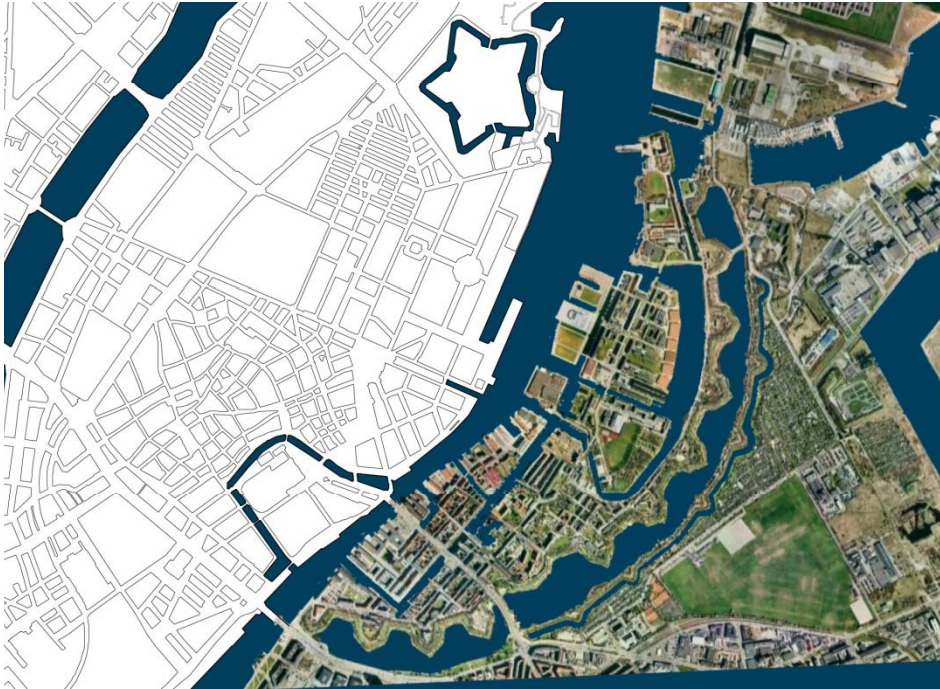
COMPETITION SITE EXISTING SITUATION

THE URBAN STRUCTURE OF NORDHAVEN

FIRST IS THE SUBDIVISION OF TERRITORY INTO PUBLIC AND PRIVATE DOMAINS. The subdivision of land is the most permanent part of the city. These are the lots, blocks and streets that have formed the framework of all great cities, **THIS IS THE FIRST AND MOST IMPORTANT ACT OF URBAN DESIGN.** Whether in Copenhagen, Barcelona, or Atlanta, how territory is organized creates the template upon which a city's identity and success is built. Simple arrangements of lots, blocks and streets adapt to change for generations and centuries. **HOW TERRITORY IS ORGANIZED IS ALSO THE FIRST MEASURE OF URBAN SUSTAINABILITY.**

SECOND IS THE DESIGN OF THE PUBLIC DOMAIN. The areas set out as the public domain are the "rights of way" of the city. These give rights of access to public spaces and private places. It includes design of streets and paths, promenades, bridges, public spaces, and public buildings. **THE DESIGN OF THESE "RIGHTS OF WAY" IS THE SECOND ACT OF URBAN DESIGN.** The public domain, once established, changes slowly and only with great effort. Design of the public domain must respect its permanence – it must be a part of the tissue of everyday life for generations. **THIS IS THE SECOND MEASURE OF URBAN SUSTAINABILITY.**

THIRD IS THE DESIGN OF PRIVATE DOMAINS. This includes the design of private buildings and landscapes, whether owned privately, managed cooperatively, or operated for tenancy, on most of the lots and blocks of the urban structure. These buildings and landscapes occupy the majority of urban land and contain many and diverse uses – housing and restaurants, offices and bars, retail shops and industry. **GUIDING THE DESIGN OF THESE PRIVATE DOMAINS – TO INSURE DIVERSITY, VIBRANCY, AND AFFORDABILITY – IS THE THIRD ACT OF URBAN DESIGN AND THE THIRD MEASURE OF SUSTAINABILITY.**



STAGING FOR UNCERTAINTY IS THE PRIMARY CHALLENGE FOR NORDHAVNEN'S FUTURE DEVELOPMENT.

First is to convert its port and harbor structure – territory organized for precise functions of shipping, warehousing, transport that are now obsolete – to sustainable and permanent urban structure able to adapt to the vicissitudes of people, activities, economies, and private buildings and landscapes. Creating a new city district that is eco-friendly, vibrant, inclusive, water oriented, dynamic and sustainably mobile requires an urban structure made up a dense network of blocks and streets. But it must be more than that. **GREAT CITIES AND DISTRICTS, LIKE COPENHAGEN AND INDRE BY MUST ENABLE A DIVERSE AND VITAL PUBLIC REALM AND A PRIVATE REALM THAT ENTHUSIASTICALLY ACCOMMODATES DIFFERENCE – IN BACKGROUND, INCOME, EXPERIENCES AND TASTES.**

Second is to insure that this new urban structure responds to critical development constraints, including the location of required future facilities, the timing of public investments, and the quantities of future development. But it must be more than that, too. The urban structure must bring those constraints into a sustainable framework and also adapt to inevitable changes – in location, time and quantity – as well as new technologies and Copenhagen's future urban culture. **GREAT CITIES AND CITY DISTRICTS, LIKE COPENHAGEN AND CHRISTIANSHAVN CREATE A STAGE FOR UNCERTAINTY BY ACCOMMODATING CHANGE AND DIVERSITY WITHIN PRECISELY FORMED PERMANENT AND SUSTAINABLE URBAN STRUCTURE.**

SPATIAL CONCEPT

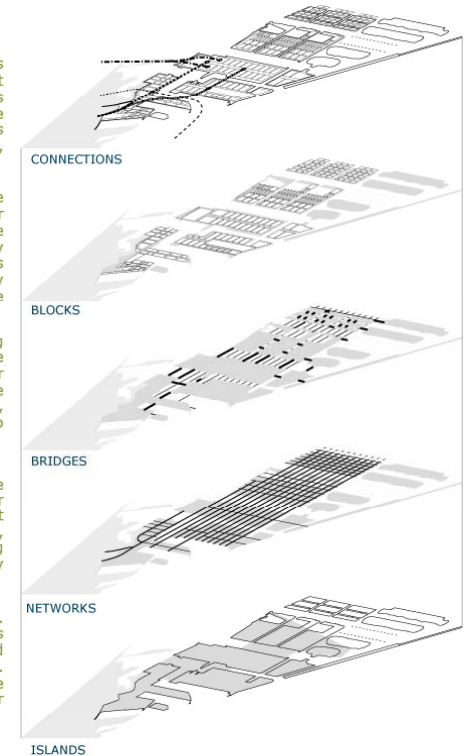
PRINCIPLE 1: MAKE ISLANDS. Making islands in Nordhavnen is the critical move to adapt the existing port structure to an urban structure. Making islands provides an **IDENTITY** for Nordhavnen as an urban district. We can imagine that residents will say they live on the "islands" and visitors and tourists will know Nordhavnen by its colloquial name of "the islands". Making islands also makes it possible to create an urban **CHARACTER** for each island. We can imagine living on "marina island" or "central park" island or going with our friends to "the beach island" or "bike island." Making islands satisfies the desire to take maximum advantage of **WATERFRONTS** with opportunities for views to the water, to live by the water, to play along the quays and gardens and boardwalks, to access the water to swim and fish and boat. Making islands provides opportunities for designing **ECOLOGICAL STRATEGIES** for unique and sustainable stormwater management, establishing wildlife habitats for green frogs, birds and fish, and engaging residents in the everyday life of natural processes. Making islands also provides a **STRATEGY FOR LANDFILL OPERATIONS** for unique living opportunities, landfill recreation, and "landfill nature." Even more than in Christianshavn, making islands can create the urban identity of a district and contribute to sustainable development.

PRINCIPLE 2: CREATE NETWORKS. Creating networks – a structure of small blocks connected by public rights of way – creates the primary urban structure of public and private domains. The dense network of public promenades, paths and streets provide **ACCESS** to every block and future building. This is the traditional structure of Copenhagen and all great cities. These overlapping networks for pedestrians, bicycles, transit and automobiles produce **CONNECTIVITY** – giving residents and visitors many different ways to travel from one place to another, block to block and island to island. We imagine residents traveling on different paths to the local store for groceries, to the swimming pool, or to a friend's apartment. These networks bring different people into face to face contact as they go to different places at different times, and they enable a **VITAL AND DIVERSE PUBLIC REALM**, where friends, neighbors and strangers meet. We imagine moving through Nordhavnen, turning corners often, meeting new people, discovering new shops, new views across the water and different opportunities for day to day living. This urban structure of networks and blocks creates the necessary **STAGING FOR UNCERTAINTY** that is necessary for the future development of Nordhavnen, just like the traditional network and block structure of Indre By created a stage for the growth and change of Copenhagen.

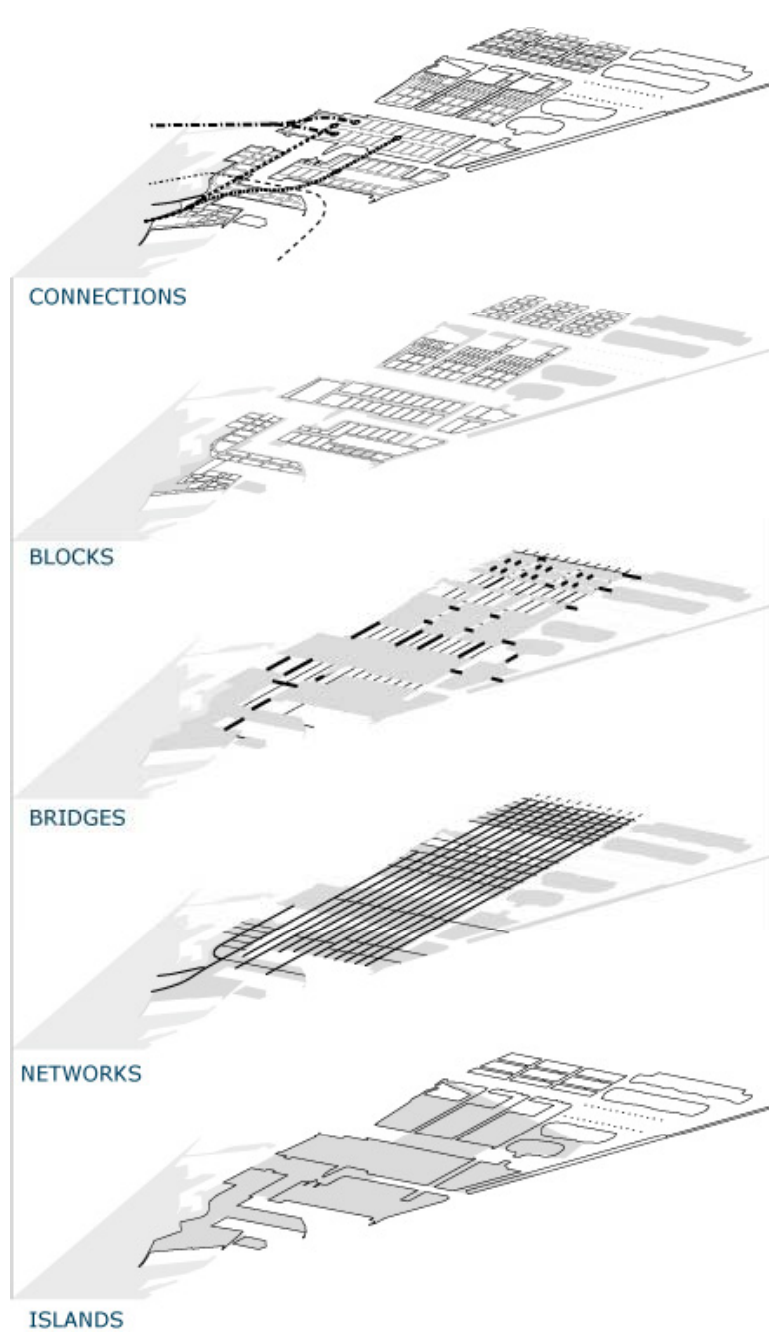
PRINCIPLE 3: BUILD BRIDGES. Building bridges expands the network of promenades, paths and streets across the water, to the water and on the water. Bridges are common parts of cities, including Copenhagen, but most are just utilitarian ways to cross the water. In Nordhavnen, bridges serve many purposes. Bridges can have many functions other than just crossing water. We can imagine bridges as public art, but they would be more than just public art. **BRIDGES CAN HAVE MULTIPLE FUNCTIONS AND DO SOMETHING.** We can imagine bridges with swimming pools attached to them. Or diving platforms. Or floating classrooms near a school. We can imagine **MOVING BRIDGES** that allow both water traffic and surface traffic to function. A bridge that unrolls across the water. A bridge that floats. A easily opened gate-bridge that lets boats pass. A bridge that rolls from place to place along a quay. We can imagine **BEING BRIDGES** that attract people just to come and be themselves, look out over the water, meet a lover, get lost in the fog, or catch the scent of vegetation on the green bridge. **BRIDGES IN NORDHAVNEN ARE PUBLIC ART**, where utilitarian bridges are elevated to the level of art, but also play a vital role in the **EVERYDAY PUBLIC LIFE** of residents and visitors.

PRINCIPLE 4: DESIGN BLOCKS. The blocks – woven together by the networks of promenades, paths and streets – create the fabric of future Nordhavnen. Enabling the district to accommodate future changes. Some blocks are in unique settings and are reserved for public buildings, each to have its unique architectural form, like the Opera House or the new City Play House. Most blocks are for private buildings, but any may be used for future public needs. The blocks have dimensions that are common in Copenhagen. The largest blocks are **PERIMETER BLOCK**. These have a standard east-west dimension of xxxm but have variable dimensions north and south, allowing different size buildings and uses. These perimeter blocks have courtyards with a variety of forms and uses: common gardens, private gardens, car-park orchards, recreation space, etc. The smaller blocks are **SKINNEY BLOCKS**. They can vary in dimension but are narrow enough to contain only back to back buildings or building with central double loaded corridors. **ISLAND BLOCKS** are unique conditions for building on, over and in the water. All of these blocks can contain different uses – housing, offices, gymnasiums, day care, retail shops, grocery stores, etc. **BUILDINGS AND USES ARE ABSORBED BY THE BLOCK. THE BLOCK IS NOT DETERMINED BY BUILDING USE OR BUILDING DESIGN.**

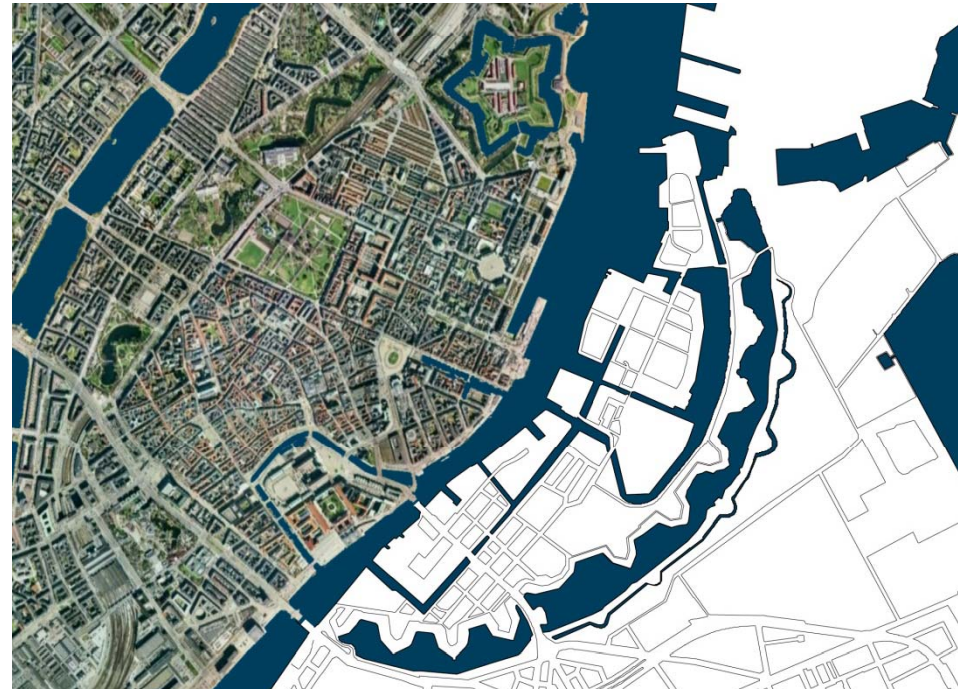
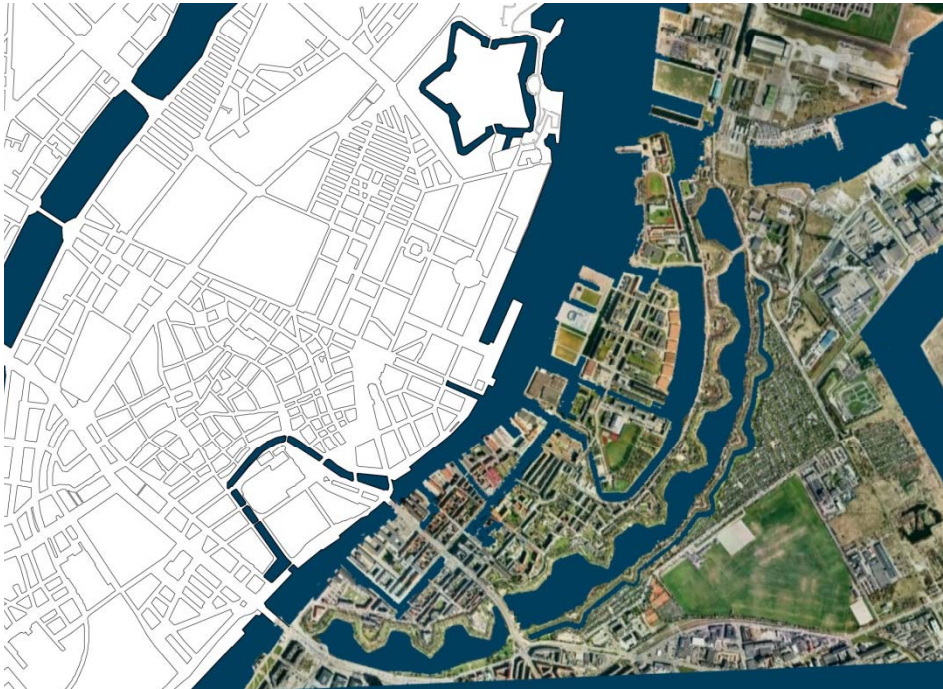
PRINCIPLE 5: CONNECT TO THE CITY. Connecting Copenhagen to Nordhavnen is limited by the conditions on the periphery of Ostebro. These minimal connections must be made into **DRAMATIC ENTRIES**. The major street from Ostebro, allowing automobile and bus access, is designed as a **BOULEVARD** and has intercept parking decks at the entry point to each island. These intercept parking decks should be landmarks of green, with green walls and green roofs. **BUS TRANSIT** follows the boulevard, connecting the intercept parking decks, and serving the main street on each island. The proposed **METRO** may take two routes: one is along the boulevard right of way and should perhaps be a light rail transit; the other would require a tunnel and would have stations on each of the major islands. The **BICYCLE BRIDGE** will end at a building that incorporates bicycle parking and exits to the boulevard and to bike paths connecting to the boulevard and from the boulevard to each island. The **A4 TUNNEL RAMPS** will end at green parking intercepts in the retail district, making them invisible to in Nordhavnen. Certainly, the strongest effort must be made to connect Nordhavnen to major employment and recreation areas with **WATER TAXIS, WATER BUS SERVICE, AND OTHER ROUTES BY WATER.**



SPATIAL CONCEPT



NORDHAVEN: THE SITUATION



DEVELOPMENT PLAN





ISLANDS

THE NORDHAVNEN STRUCTURE PLAN is based on an island strategy that weaves landfill operations and the creation of an urban identity for the district.

- » **PARK ISLAND** is created from the existing pier between Orientbassiniet and Skudehavnen and Skudelobet. Park Street and Central Park are located over the existing sewer infrastructure. This island houses the **RECYCLING CENTER**, which can begin operations during the later period of the first phase and a future **METRO** stop.
- » **COMMERCE ISLAND** is created from the existing land between Skudehavnen and Faergehavn Nord. It is organized around Commerce Street. This island contains the **ARENA**, a future **METRO** stop, the **A4 MOTORWAY RAMPS** internal to **INTERCEPT GREEN PARKING DECKS** and direct connections to the future **CRUISE TERMINAL**.
- » **MARINA ISLANDS** preserve the existing Fiskerihavnen and adds two additional islands with similar marinas, which are built partly on existing land and partly on new landfill. These small islands include **RESIDENTIAL AND LIVE-WORK DEVELOPMENTS** in addition to **SMALL CABINS** for workshops for marine craftspeople, small retail shops and casual bars and restaurants.
- » **CANAL ISLANDS** are built on new landfill. Developments will be primarily residential, with moderate densities, allowing the design of multifamily **CANAL HOUSES** lining narrow "blue" streets. At the northern edge are the **ISLAND BLOCKS**, higher density housing blocks built into the water and having direct access to boat docks below.

In addition, four additional landfill islands are dedicated for recreation and wildlife management. These include **CAMPING ISLAND** on the northern edge; **BEACH ISLAND**; **FISH ISLAND**, a submerged marine habitat; **FROG ISLAND**, containing the protected green frog habitat and other wildlife habitats; and **BIKE ISLAND**, with a mountain and mountain bike trails. Finally, the **CRUISE TERMINAL** has its dedicated island.

The Inner Nordhavnen Development Plan creates **TWO ISLANDS** in the latter period of the first phase. **WAREHOUSE 40 ISLAND**, at the end of Redmolen, is separated from the pier with a canal to highlight the building's importance as a major art center, with artist studios, performance spaces, etc. Also, Orientbassiniet is connected to Skudehaven by excavating a wide canal creating **PARK ISLAND**. The Inner Nordhavnen Development Plan retains the Nordbassiniet and Kronlobsbassiniet piers, **RETROFITS** their buildings and uses, adds new **MIXED USE AND RESIDENTIAL DEVELOPMENT**, introduces new **STORMWATER AND STREET INFRASTRUCTURE**, provides **GREEN INTERCEPT PARKING DECKS**, and locates a future **METRO STATION**.



STRATEGY: MAKING THE ISLANDS



BRIDGES



ROLLING BRIDGE, LONDON

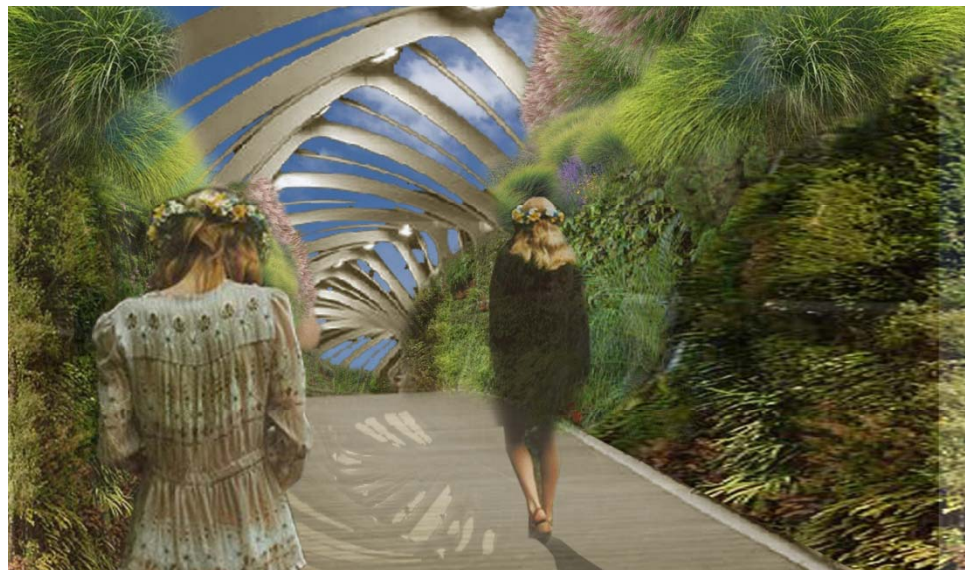
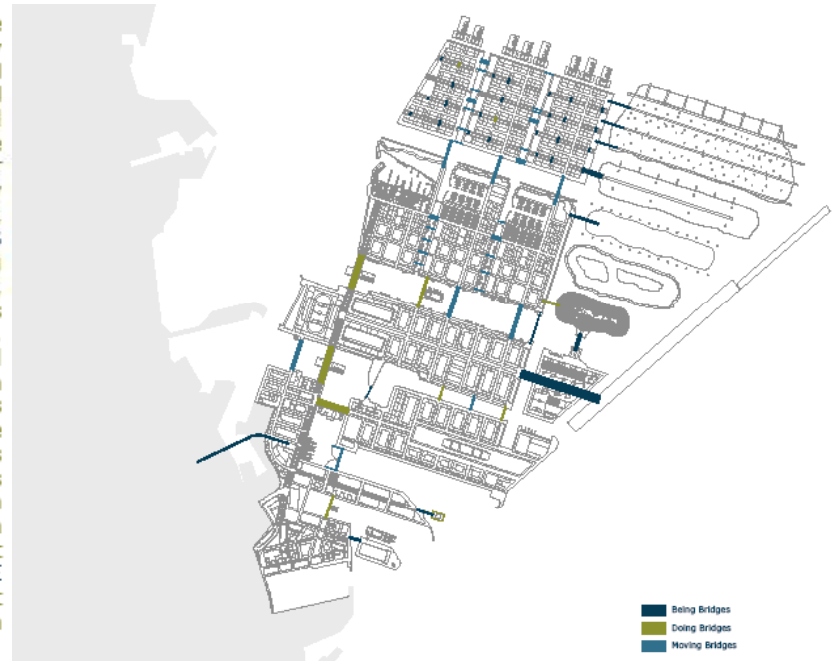
BRIDGES are the most visible infrastructure for the Nordhavnen Structure Plan. Their design is critically important. There are three types. **MOVING BRIDGES** will be necessary in many locations to allow large and small marine traffic. Small moving bridges will be hand operated by the boat pilot, like small bridges over canals in The Netherlands or like the rolling bridge in London. Larger moving bridges will be mechanically operated as necessary and will be in the form of water gates, rotating arch bridges, or bridges that move up and down the facing quays. **DOING**

BRIDGES have specific functions attached to them instead of just being ways to cross water. Doing bridges can include fishing bridges, amphitheater bridges, diving bridges, swimming bridges, floating classrooms, and performance bridges with floating stages. **BEING BRIDGES** are places just to be in or on. They are special experiences and place to be alone or with a friend or lover. These can include fog bridges surrounded with mist sprayed from nozzles that could be adapted from Peter Walkers' Tanner Fountain at Harvard, green bridges that are completely covered in vegetation, or bridges made especially for sleeping, dreaming, or kissing. Nordhavnen's bridges

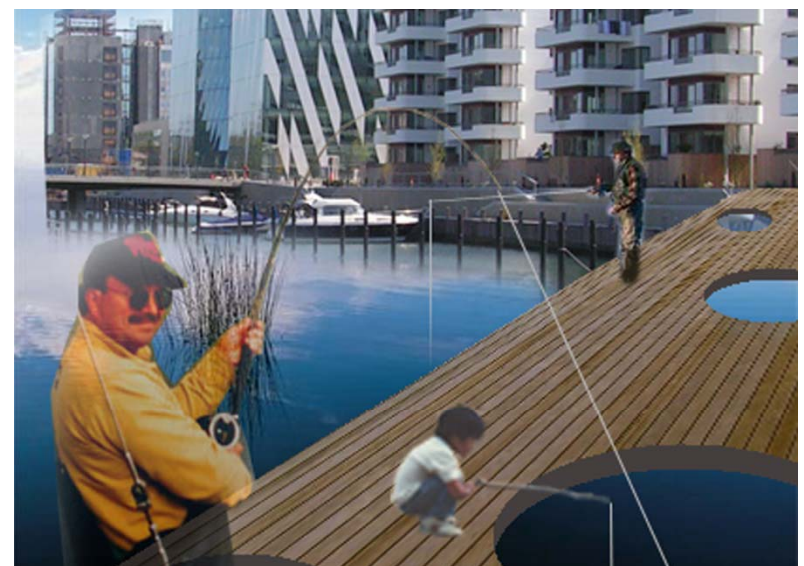


AMSTERDAM

are **INFRASTRUCTURAL PUBLIC ART**, like a contemporary vision of the Amsterdam School bridges in Amsterdam or like the famous lifeguard stands in Miami Beach. We imagine them to be so extraordinary that tourist guides will list Nordhavnen's bridges as important places to visit. The Inner Nordhavnen Development Plan requires three bridges: **A CLASSROOM BRIDGE** with a basketball court on top, connecting across Kronlobsbassinnet from the first school to the new park that leads to the Silo Library and Nordbassinnet; a **GATE BRIDGE** in Orientbassinnet that will allow easy pedestrian and bicycle movement across the Orientbassinnet while allowing sailing in the entire bassinnet; and a **GREEN BRIDGE** across the new canal to the new Warehouse 40 Island.

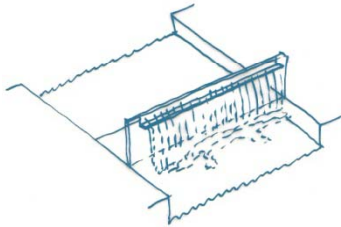


GREEN BRIDGE

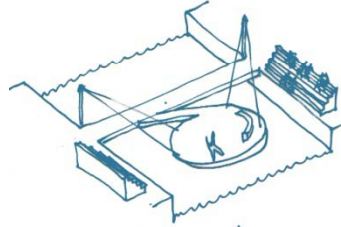


FISHING BRIDGE

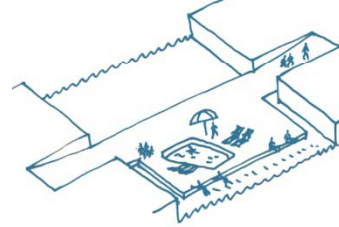
BRIDGES



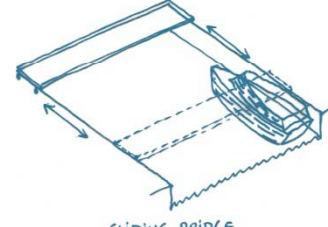
WATERFALL BRIDGE



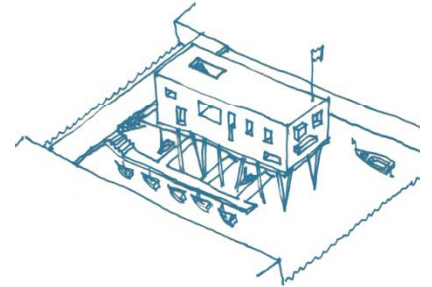
STAGE/THEATER BRIDGE



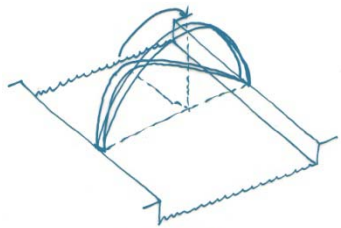
BEACH/SWIMMING BRIDGE



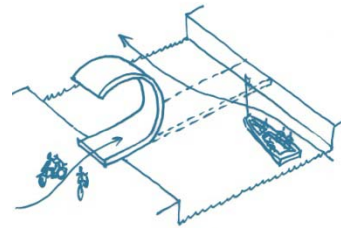
SLIDING BRIDGE



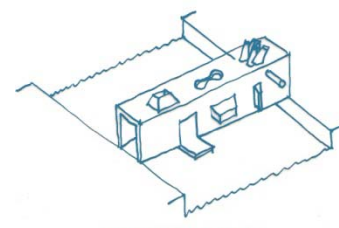
BUILDING BRIDGE



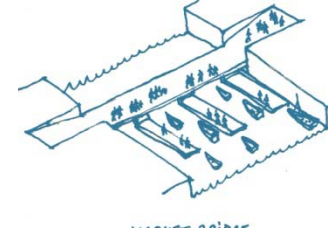
ROTATED BRIDGE



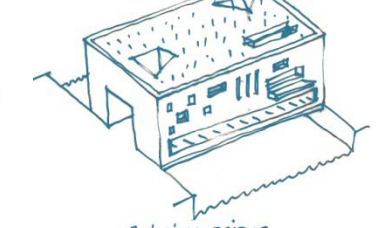
ROLLING BRIDGE



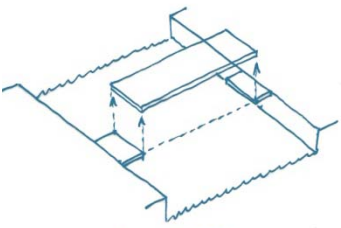
PEEPHOLE BRIDGE



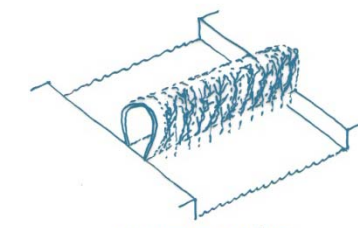
MARKET BRIDGE



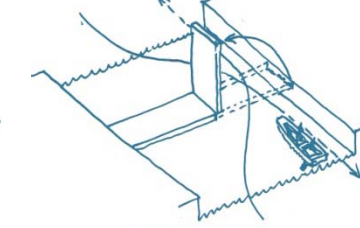
BUILDING BRIDGE



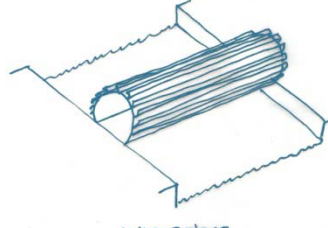
LIFTED BRIDGE



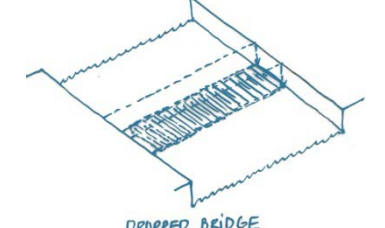
GREEN COVERED BRIDGE



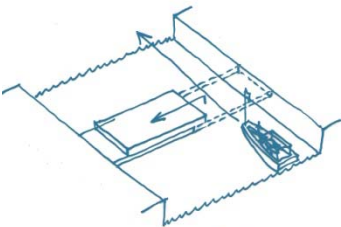
FOLDABLE BRIDGE



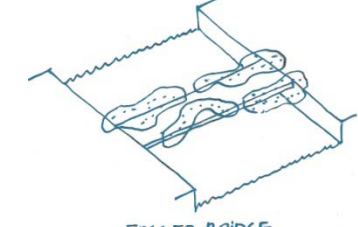
WIND BRIDGE



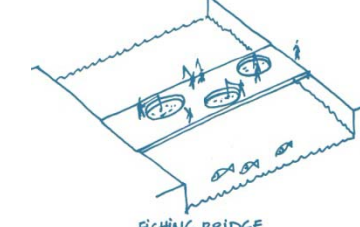
DROPPED BRIDGE



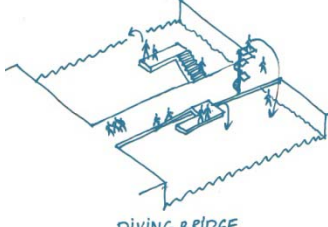
FOLDABLE BRIDGE



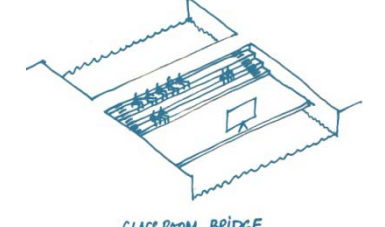
FOGGED BRIDGE



FISHING BRIDGE



DIVING BRIDGE



CLASSROOM BRIDGE



STORMWATER



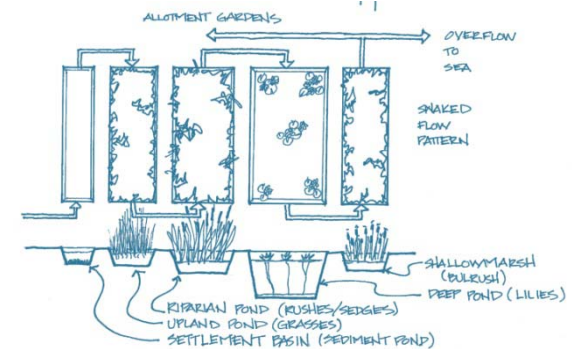
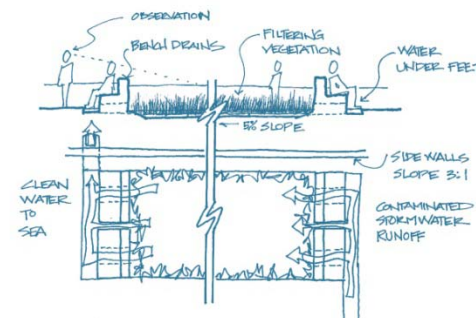
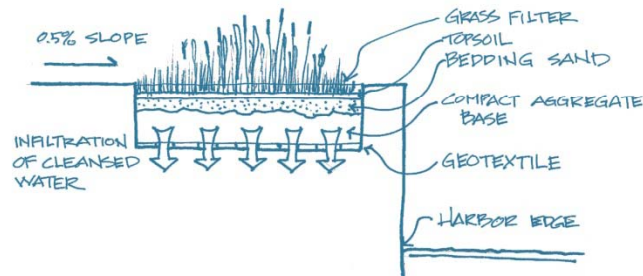
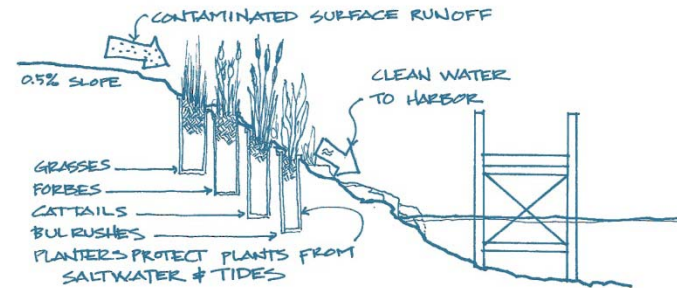
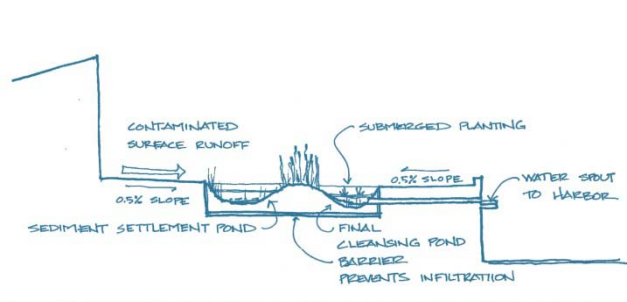
AMSTERDAM



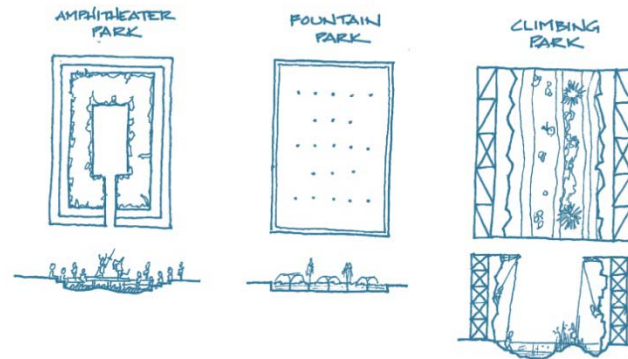
We envision innovative **ECOLOGICAL STORMWATER STRATEGIES** in Nordhavnen that will make stormwater treatments visible parts of the public space and engage residents and visitors with the importance of clean water. Stormwater infrastructure can be beautiful and educational, avoiding conventional practices of invisible pipes and underground cisterns. The Nordhavnen Structure Plan reinforces each island's identity with unique stormwater design strategies.

PARK ISLAND will use Central Park itself as a **WATER FILTRATION AND CLEANSING SPACE**, combined with recreation and leisure activities. To protect the surrounding water in the port, all water on the island will drain to Central Park and be cleaned over large vegetation ponds, which will be under-sealed to avoid leaching existing contaminants into the bay. Clean water from Central Park will then be distributed to the island's allotment gardens before finally being channeled to the bay. **COMMERCE ISLAND** will employ **STORMWATER FLOW**, from high ground to the quays, but it will be cleaned in small **CLEANSING LAWNS** along the promenade before being channeled into the bay. The **MARINA ISLANDS** drain from the south to north, with cleansing occurring in the specially designed **GREEN RIP RAP** edge before flowing into the Marina. Stormwater in the **CANAL ISLANDS** is cleaned in **INFILTRATION BANDS** along the canals.

The Phase 1 Development Plan for Inner Nordhavnen will retrofit the area with **BIO-REMEDIATION GARDENS**, collecting water from sites and streets and channeling it to small remediation gardens with appropriate vegetation. These will be visible, part of the public green space, and can be combined with small amphitheatres as teaching classrooms and with fountains that are used for aeration of the gardens.



STORMWATER

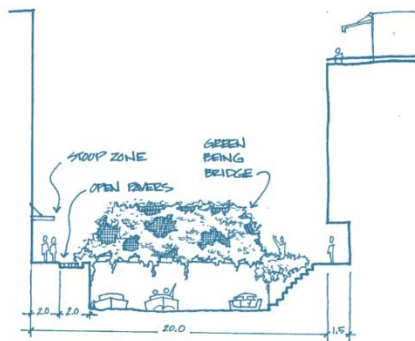
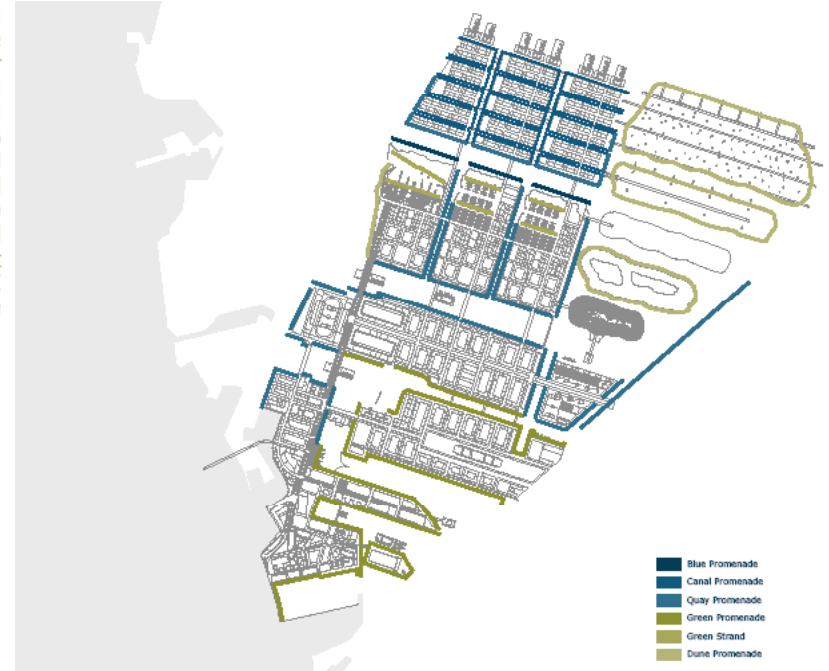


CLIMBING PARK

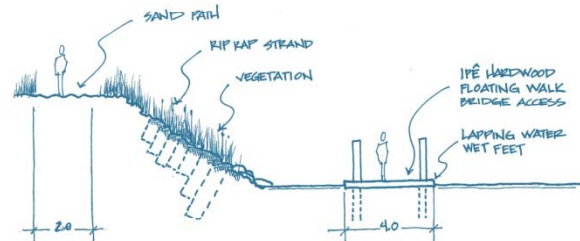


PROMENADES

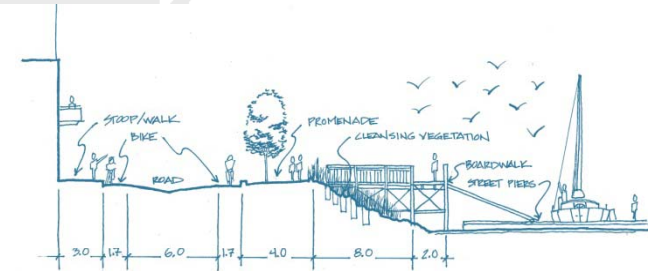
The **PROMENADES** respond to the character of each island. **QUAY PROMENADES** are located along Nordbassin, Kronlobbassin and Orientbassin and the south quays of the Marina Islands. These follow Copenhagen standard practices but are embellished by their adjacency to the stormwater strategies. When one is walking or biking along the quay promenades, he or she is also engaged in the landscape of stormwater management – bio-remediation gardens, cleansing lawns and gardens, drainage channels and spouts, and allotment gardens. **GREEN STRAND PROMENADES** and **BLUE PROMENADES** are designed specifically for the Marina Islands with boardwalks, tiered filter gardens, floating docks, and other features. **DUNE PROMENADES** are intended for coastal conditions as in a beach or remote island shorelines. These ensure that the beach or coastline is preserved and can be enjoyed. **CANAL PROMENADES** are along the canals to the North and work with the **BEING BRIDGES** and **CANAL STREETS** to create a complex strategy of movement of people, water, and small watercraft. **GREEN PROMENADES** are along the edges of **COMMERCE ISLAND**. These specifically work with the stormwater management strategy to filter the surface runoff.



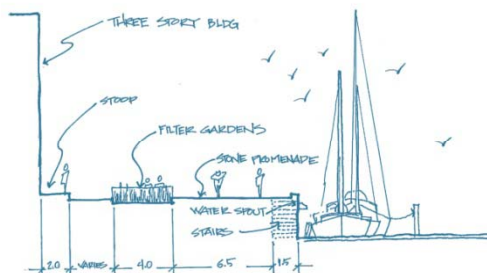
CANAL PROMENADE



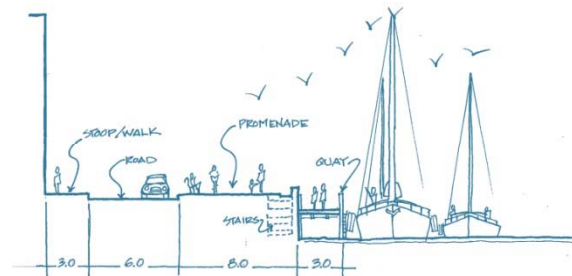
BLUE PROMENADE



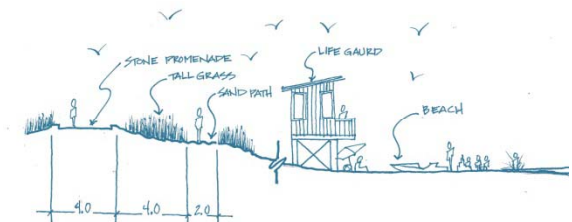
GREEN STRAND PROMENADE



GREEN PROMENADE

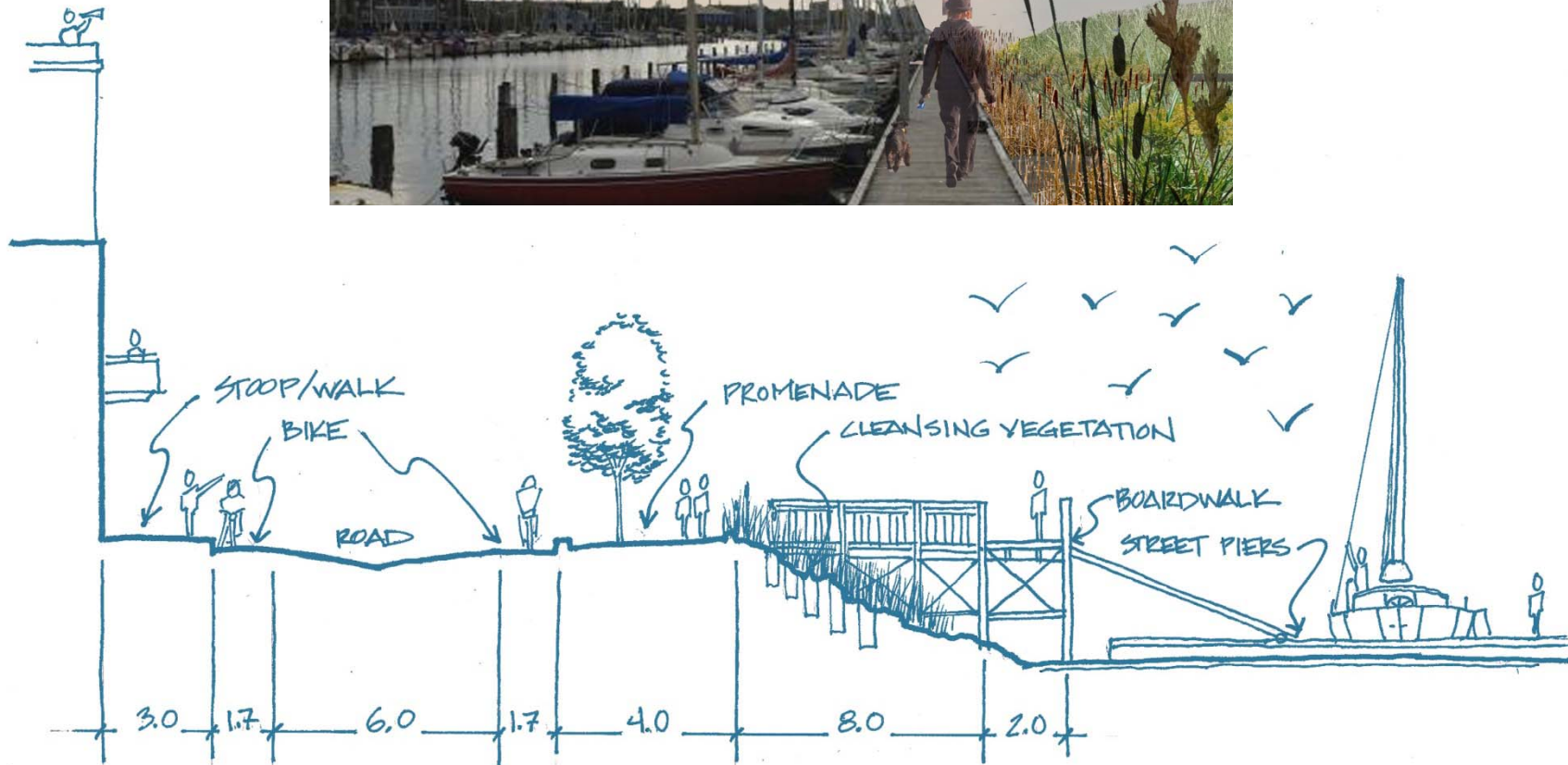


QUAY PROMENADE



DUNE PROMENADE

PROMENADES



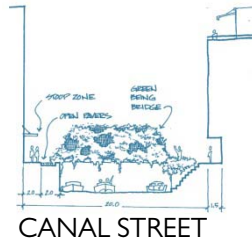
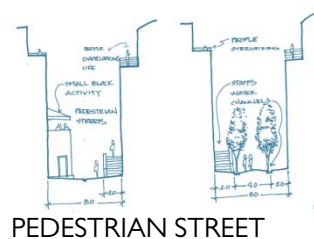
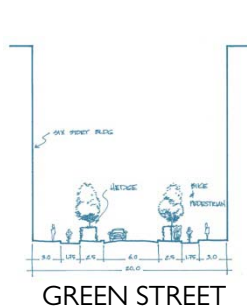
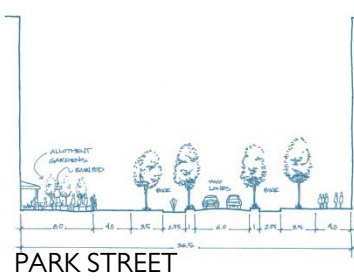
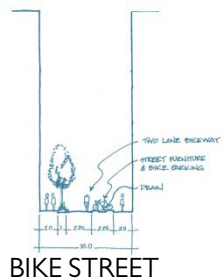
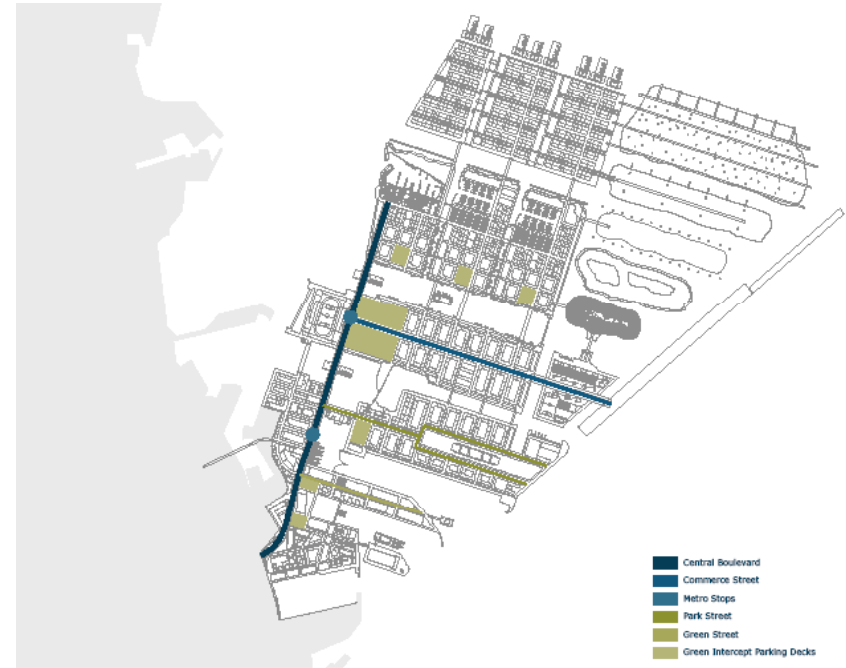
GREEN STRAND PROMENADE

STREETS AND TRANSPORT

THE NORDHAVNEN STRUCTURE PLAN sets out a DENSE NETWORK OF STREETS AND PATHS, weaving buildings, green space, promenades and water. This network of streets also frames the locations of the main external transport connections: the bike bridge to Osterbro, the A4 Motorway ramps, and the future Metro.

Four principal streets set out the primary urban structure of Nordhavn. **CENTRAL BOULEVARD** extends from Osterbro to connect Inner Nordhavn to Park Island, Commerce Island and the Marina Islands at Fiskerihavnen where it reduces in scale. The automobile traffic on this boulevard is intercepted by **GREEN INTERCEPT PARKING DECKS** at key locations at Green Street, Park Street, Commerce Street, and on the Marina Islands. These Green Decks are highly visible due to green roofs as well as green walls, and they include bicycle parking in the decks with separate ramps exiting at the ground level. The boulevard also serves as the primary bus corridor. Central Boulevard is the preferred route of the future Metro or light rail line. **GREEN STREET** is the primary first phase street. It is retrofitted to serve existing and new development on Sundmolen Pier. It will have distinctive hedges to create green pedestrian and bike zone. **PARK STREET** begins at Central Boulevard, crosses a bridge over a new canal and extends to Central Park, both of which are located over the existing sewer infrastructure. The street is lined with allotment gardens. Park Street also provides access to the Recycling Center, which is to be an important public building. **COMMERCE STREET** begins at Central Boulevard with large buildings. These are mixed use buildings contain retail, offices, the parking decks, bicycle parking, and enclose the A4 Ramps in the middle of the block. Commerce Street continues as the primary shopping district for Nordhavn. We envision a busy pedestrian, bicycle and bus transit street connecting from Central Boulevard across a recreation island across another bridge to the Cruise Terminal.

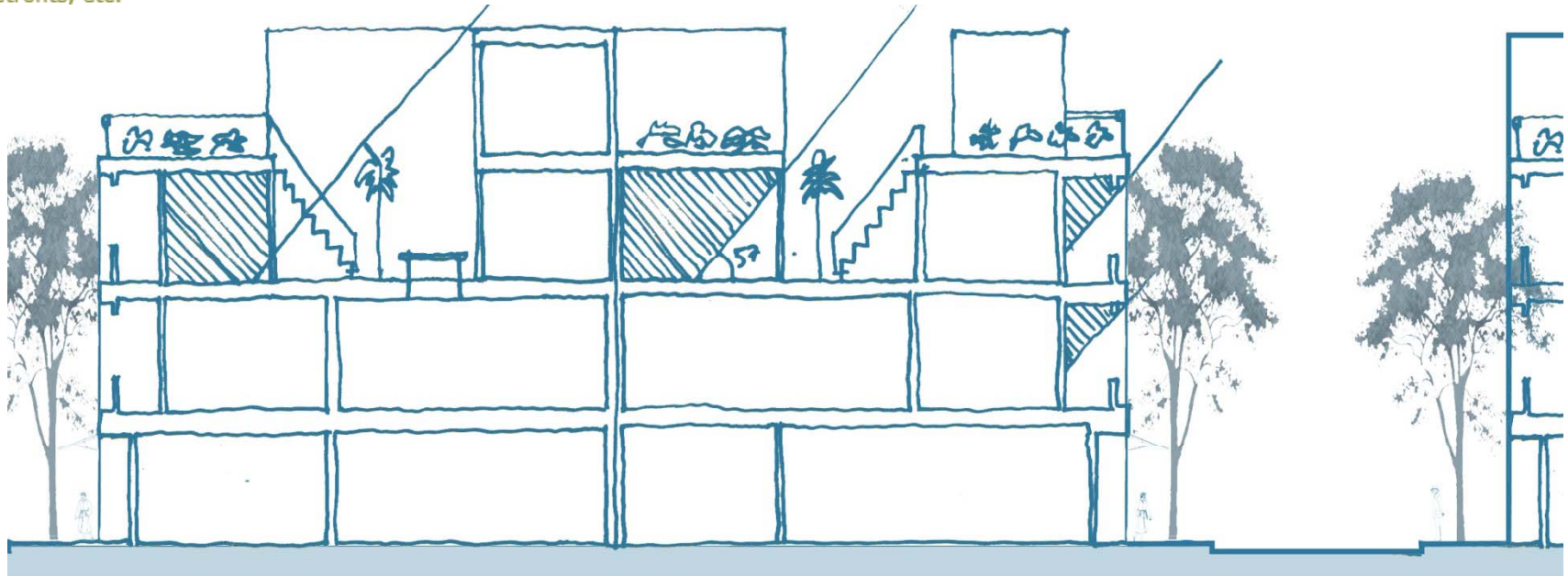
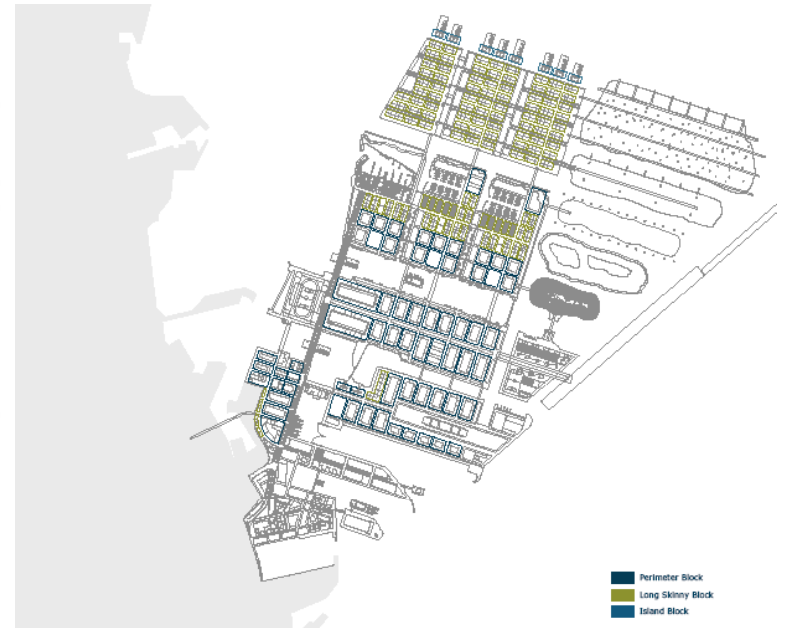
These primary streets are complimented by the **DENSE NETWORK OF SMALL STREETS AND PATHS** for pedestrians only, for pedestrians and bicycles, and for pedestrians, bicycles and automobiles. These follow standard dimensions but are embellished with the maximum landscape potentials to green as much of Nordhavn as possible.



BLOCKS

The blocks of Nordhavnen are structured by the continuous north-south network regulating boundary lines and the variable east-west regulating network boundary lines, which adjust to the dimensions of each island. This network produces four block types: **PERIMETER BLOCKS** are the primary type with dimensions that are similar to standard blocks of historic Copenhagen. The Perimeter Blocks can accommodate residential buildings, mixed uses, single buildings for schools or cultural facilities, or they can be unbuilt and be designed for parks and recreation. Uncertain programs and future development can be easily contained within these blocks – this is a lesson from older cities across the world. The standard building type is the single loaded corridor building, although other buildings arrangements are possible. There are three key regulations for the Perimeter Blocks. First, no buildings, except for schools or public buildings should occupy the whole block – building in increments is always better than building in big chunks. Second, the building height and arrangements must respect sun angles for daylighting – taller buildings belong on bigger blocks and wider streets, smaller buildings on smaller blocks and narrow streets. Third, courtyard spaces should be common space for the residents and be designed with bicycle parking, automobile parking, recreation space, and gardening. **SKINNY BLOCKS** occur incidentally in the southern portion of Nordhavnen, but they become more standard block types on the Canal Islands where densities are lower. These blocks are especially suited for back to back housing units or mixed use buildings with live-work spaces or offices. **ISLAND BLOCKS** are small and provide only enough ground area for access to the building and public boat docks, with the buildings above. These are unique to special waterfront locations.

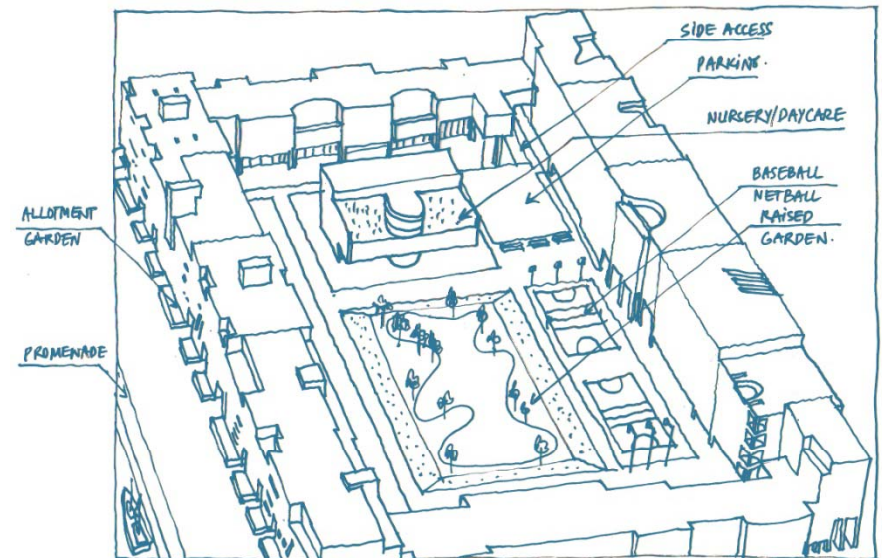
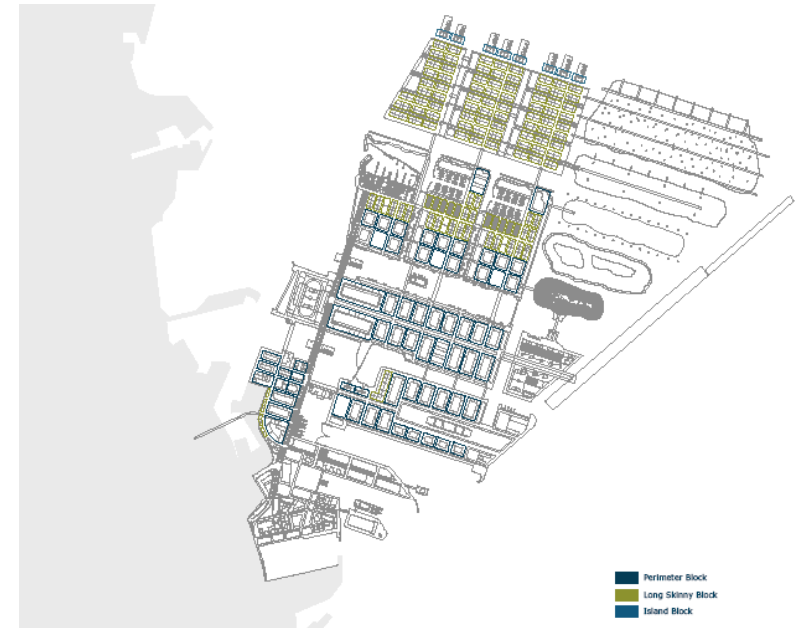
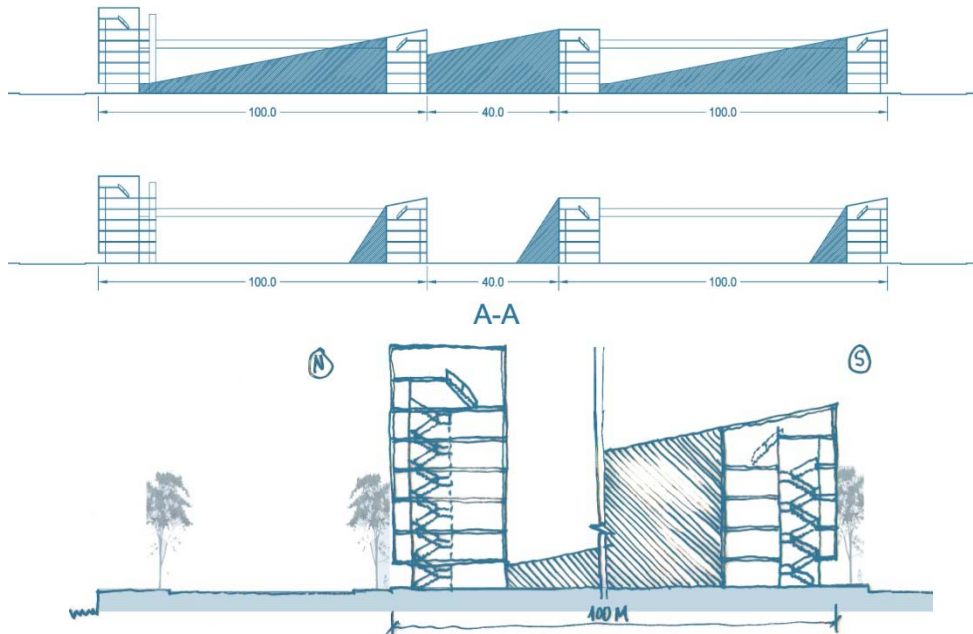
The Development Plan retrofits a block structure to Sites 1 and 2 in order to provide street and path access to existing and new buildings. This is a preliminary scheme and must be examined closely regarding property ownerships, existing infrastructure, feasibility studies for existing building retrofits, etc.



BACK TO BACK HOUSING TYPE



BLOCKS



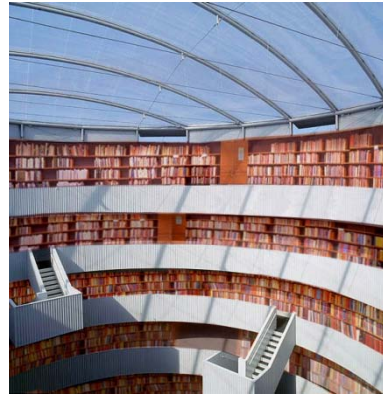
PERIMETER BLOCKS

LAND USE AND INSTITUTIONS

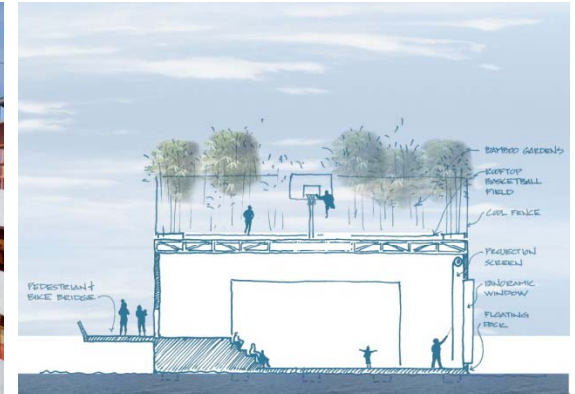
The Network and Block structure of the Nordhavn Structure Plan, organized as a "stage for uncertainty," allows land use quantities and locations to change over time following Copenhagen's growth, the changes in the global economy and in local preferences and urban tastes. Both the Structure Plan and the Development Plan set out general land use policies, strategies and quantities to guide initial decisions.

The overarching principle is that **LAND USES AND BUILDINGS CONFORM TO THE BLOCK**; the block does not conform to the fluctuations of short term real estate markets or architectural preferences. This means that the block structure itself is the primary land use strategy. The second principle is that **LAND USE AND BUILDING DECISIONS FOLLOW CRITICAL TRANSPORT LOCATIONS**; transport does not follow land use. This means that a primary land use strategy is to locate future Metro or light rail stops, the A4 Motorway Ramps and the landing of the bicycle bridge in advance and be the guides for general land use decisions. The third principle is **MIXED USE, NOT SINGLE USE BLOCKS AND BUILDINGS**. This means that housing, live-work, office, and retail can and should exist within the same blocks and buildings when needed. Day care centers, gymnasiums, and small shops can be located on the ground floors of buildings. The exception are blocks occupied by schools and major cultural facilities, like theaters or museums that benefit from unique building design and continue the architectural and urban expression of the Opera House and the Play House.

In Phase I, buildings maintain their current uses as required and transition to new retrofitted uses over time. New buildings on Site 1 and 2 are mostly residential and live work to achieve a critical mass of a permanent population as early as possible. We anticipate approximately xxx square meters of residential space on Site 1 and 2 in Phase 1 and an additional xxx square meters of residential space in Phase 1 along Levantkaj.



CONVERTED SILO



FLOATING CLASSROOM



PARK STRUCTURE

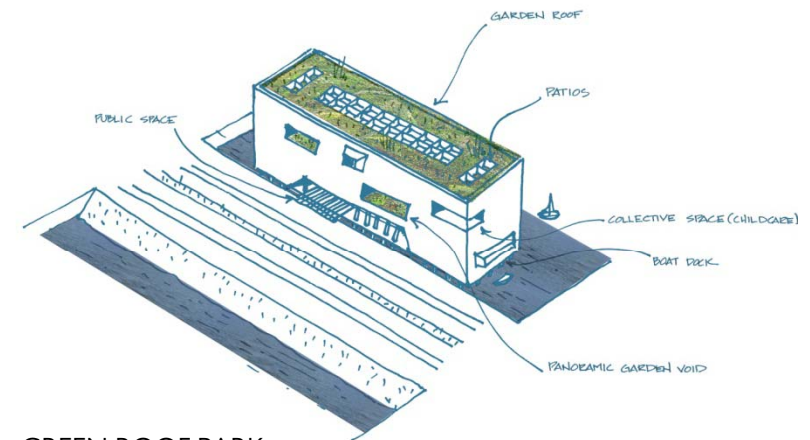


The Nordhavnen Park Structure has three features. **GREEN SPACES** form a green network and green places. The **GREEN SPACE NETWORK** includes all paths, sidewalks, streets, promenades, bridges, and the unique features of each island like the allotment gardens, boardwalks, and green strands. Among the green places are Central Park, Recreation Island, and the Green Intercept Parking Decks. **BLUE SPACES** form a blue network and blue places. The **BLUE SPACE NETWORK** includes the bassinets, canals, harbors, boat docks, and open water, and it respond to the unique features of each island. Blue places include swimming baths, Beach Island, Camping Island, Fishing Island, the marinas and others. **SPORTS AND RECREATION** is composed of

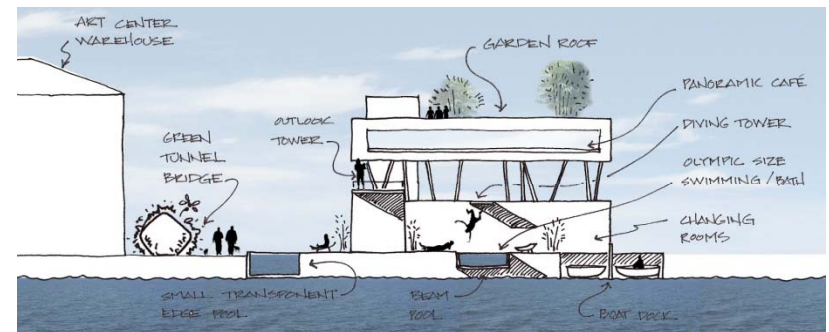
small things and big things. Small things are scattered like confetti along the Green Networks and Blue Networks, sometimes located within blocks, like the gymnasia and sometimes in the green and blue spaces like the skate parks, climbing walls, etc. Big things have their own locations, including the Arena, the Mountain Bike Island, the Camping Island, etc.



WADING BRIDGE



GREEN ROOF PARK



SWIMMING POOL BRIDGE



PHASING AND LANDFILL OPERATIONS

Development in Nordhavnen must follow landfill operations carefully to avoid conflicts with new residents and businesses. The proposed island-making strategy provides a **FRAMEWORK FOR STAGING FUTURE LANDFILL AND PHASING** future development.

- The **FIRST STAGE OF LANDFILL** commences during the **FIRST PHASE OF DEVELOPMENT**, with landfill beginning with the cruise terminal. This first stage landfill will continue through the first two development phases and the completion of Park Island. Landfill trucking will occur on Central Boulevard and along the future right of way of Commerce Street.
- The **SECOND STAGE OF LANDFILL** can commence during the **SECOND PHASE OF DEVELOPMENT**, with landfill trucking continuing from the Cruise Terminal landfill to also fill the Bike Island and Frog Island. This will allow development of the green frog habitat in advance of development operations in their current location.
- The **THIRD STAGE OF LANDFILL** begins on the eastern Marina Island and the eastern Canal Island, while Commerce Island is being developed in **PHASE THREE**. This landfill stage will also complete Fish Island, Beach Island and Camping Island.
- The **FOURTH STAGE OF LANDFILL** will continue to complete the Marina Islands and Canal Islands. This will occur from east to west to avoid disruptions to Fiskerihavnen during landfill. Development will follow the landfill operations.

Landfill operations are complex undertakings and must be carefully planned in coordination with development decisions and plans for the Cruise Terminal. These plans must be on-going during the development process in Nordhavnen.

TOTAL DEVELOPMENT AREA		
PHASE		
5		800 000 m ²
4		875 000 m ²
3		780 000 m ²
2		350 000 m ²
1		980 000 m ²
TOTAL		3 785 000 m ²
RETAIL AREA		
	RETAIL CENTER	50 000 m ²
	SMALL SHOPS	10 000 m ²

