THE URBAN STRUCTURE OF THE FUTURE NORDHAVNEN, LIKE SUCCESSFUL CITIES EVERYWHERE, WILL BE MADE UP OF THREE PARTS.

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. We believe that the city of Copenhagen has organized its public spaces and streets in such a way that a city’s identity and success is built. In this way, the city is designed around areas that are well-organized, networks of streets and public spaces are optimally oriented to maximize diversity, vibrancy, affordability, sustainability and accessibility. We call this the "Nordhavn Concept" and this is the first measure of urban sustainability.

SECOND IS THE DESIGN OF THE PUBLIC DOMAIN. The areas set out as the public domain are the public’s primary way of life. We believe that the city of Copenhagen has organized its public spaces and streets in such a way that a city’s identity and success is built. In this way, the city is designed around areas that are well-organized, networks of streets and public spaces are optimally oriented to maximize diversity, vibrancy, affordability, sustainability and accessibility. We call this the "Nordhavn Concept" and this is the second measure of urban sustainability.

THIRD IS THE DESIGN OF PRIVATE DOMAINS. This includes the design of private buildings and spaces in the city. We believe that the city of Copenhagen has organized its private spaces and streets in such a way that a city’s identity and success is built. In this way, the city is designed around areas that are well-organized, networks of streets and public spaces are optimally oriented to maximize diversity, vibrancy, affordability, sustainability and accessibility. We call this the "Nordhavn Concept" and this is the third measure of urban sustainability.

NORDHAVNEN: THE SITUATION

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 new. Creating a new city district that is eco-friendly, vibrant, inclusive, water-oriented, diverse and private requires an urban structure made up a dense network of blocks and streets. But it must be more than that. GREAT CITIES AND CITY DISTRICTS, LIKE COPENHAGEN AND INDRE BY MUST ENABLE A DIVERSE AND VITAL PUBLIC REALM AND A PRIVATE REALM THAT ENTHUSIASTICALLY ACCOMMODATES DIFFERENCES — IN BACKGROUND, INCOME, EXPERIENCES AND TASTES.

Second is to ensure 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. We believe that by promoting a new technology like the micro-tunnel as part of the urban structure, like Copenhagen and Christianshavn create a stage for uncertainty by accommodating change and diversity within precisely formed permanent and sustainable urban structure.

NORDHAVNEN: SPATIAL CONCEPT

PRINCIPLE 1: MAKE ISLANDS. Making islands in Nordhavn is the critical move to adapt the existing port structure to an urban structure. Making islands provides an identity for Nordhavn as an urban district. We can imagine that residents will say they live on the “Islands” and visitors to the area will know Nordhavn 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 “marine island” or “central park” island or going with our friends to the “beach island” or “sea island.” Making islands satisfies the desire to have maximum advantage of WATERFRONT opportunities for views to the water, to live by the water, to play along the quay 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 Operates 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 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, bicycle, transit and automobiles promote 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 stores 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 Nordhavn, turning corner’s 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 Nordhavn, just like the traditional network and block structure of a city. By creating 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 Nordhavn, bridges serve many purposes: Bridges can have many functions other than just crossing water. We can imagine bridges across the water as public space, as green space, as playgrounds, as pedestrian plazas, as floating classrooms near a school. We can imagine MOVING BRIDGES that allow both water traffic and surface traffic to function. A bridge that rolls across the water. A bridge that floats. A easily removed bridge that lets boats pass. A bridge that can be removed to let a barge through 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 Nordhavn. 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 Hall. 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 BLOCKS. These have a standard east-west dimension of 100-120 meters, and north-south dimension of 300-350 meters, allowing different sizes 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 KNOLL BLOCKS. They can vary in dimension but are narrow enough to contain only back to back buildings or with central double-loaded corridors. ISLAND BLOCKS are located in the water. All of these blocks can contain different uses - housing, offices, gymsnasium, day care, retail shops, grocery stores, etc. BUILDINGS AND USES ARE ABSENCE OF THE BLOCK. THE BLOCK IS NOT DETERMINED BY BUILDING USE OR BUILDING DESIGN.

PRINCIPLE 5: CONNECT TO THE CITY. Connecting Copenhagen to Nordhavn is limited by the conditions on the perimeter of Osterbro. These minimal connections must made into DRAMATIC ENTRIES. Nordhavn’s connection to the city is via Nordhavnegade, a new road in the port area that should be landmarks of green, with green walls and green roofs. BUS TRANSIT follows the boulevard, connecting the intercity parking deck, and serving the main street on each island. The proposed MUSEUM ISLAND has an entrance on the southern side of the boulevard that is the eastern entrance to the boulevard. The BICYCLE BRIDGE will end at a building that incorporates bicycle parking and exits to the boulevard and from the boulevard to each island. The A4 TUNNEL RAMP will end at green parking entrances in the retail district. Making them invisible in Nordhavn. Certainly, the strongest effort must be made to connect Nordhavn to major employment and recreation areas with WATER TAXIS, WATER BUS SERVICE, and OTHER ROUTES BY WATER.
THE NORDHAVEN STRUCTURE PLAN is based on an island strategy that weaves landfill operations and the creation of an urban identity for the islands.

- PARK ISLAND is created from the existing area between Orien tenbeesle and Steilshaven and Sluikshaven. Park Street and Central Park are located over the existing sewer infrastructure. This island houses the Recycling Center, which can be expanded during the later period of the first phase and a future Metro stop.
- CANAL ISLANDS are built on new landfill, developments will be primarily residential, with moderate density, 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, with a submerged marine habitat; FROG ISLAND, containing the Battery Park, a interpretive center and other wildlife habitats; and BIKE ISLAND, with a mountain and mountain bike trails. Finally, the CRUISE TERMINAL, has its dedicated island.

The Inner Nordhaven Development Plan creates TWO ISLANDS in the latter period of the first phase: WAREHOUSE 40 ISLAND, at the end of the northen, 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, Orien tenbeesle is connected to Steilshaven by recreating a wide canal creating PARK ISLAND. The Inner Nordhaven Development Plan retains the Nordbevallen and Kornbevallen piers, RETROFITS their buildings and use, adds new MIXED-USE AND RESIDENTIAL DEVELOPMENT, introduces new STORMWATER AND STREET INFRASTRUCTURE, provides GREEN INTERCEPT PARKING DECKS, and creates a future METRO STATION.
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 maritime 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 quay. 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 places to be alone or with a friend or lover. These can include fog bridges surrounded with mist spread from nozzles that could be adapted from Peter Walker's Turner Fountain at Harvard. Green Bridges that are completely covered in vegetation, or bridges made especially for animals, birds, or nesting. Nordhavnen's Bridges 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 the Delhihausbassin from the first school to the new park that leads to the Silo Library and Nordhavnen; a Gate Bridge in Orientbassin that will allow easy pedestrian and bicycle movement across the Orientbassin while allowing sailing in the entire basin; and a Green Bridge across the new canal to the new Warehouse 40 Island.
We envision innovative ECOLOGICAL STORMWATER STRATEGIES in Norderhavn 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 Norderhavn 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 leaking 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. COMMERCIAL 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 will drain from the south to north, with cleaning occurring in the specially designed GREEN RIP RAP 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 Norderhavn will retrofit the area with BIO-REMEDICATION GARDENS, collecting water from sides and streets and channeling it to small remediation gardens, combined with small amphitheaters as teaching classrooms and with fountains that are used for aeration of the gardens.
The PROMENADES respond to the character of each island. QUAY PROMENADES are located along Northbeach, Kronløbstrædet, and Orientbeam and along the south quay of the Marine 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, decaying lawn and gardens, drainage channels and spouts, and allotment gardens. GREEN STRAND PROMENADES and BLUE PROMENADES are designed specifically for the Marine 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 shoreline. 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.
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 Catanbro, the A4 Motorway ramps, and the future Metro.

Four principal streets set out the primary urban structure of Nordhaven. CENTRAL BOULEVARD extends from Catanbro to connect Inner Nordhaven to Park Island, Commerce Island and the Marina Islands at Flåheim 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 their 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 developments on Sundhjemn Pier. It will have distinctive hedges to create green pedestrian and bike zones. 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 Nordhaven. 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 Nordhaven as possible.
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 building 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 spaces 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.
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 market or architectural preferences. This means that the block structure itself is the primary land use strategy. The second principle is that LAND USE AND 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 of the blocks and buildings. 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 as needed. Day care centers, gymsnasiums, 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 Houses.

In Phase 1, buildings maintain their current uses as required and transition to new redeveloped uses over time. New buildings on Sites 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 along Levantibadet.
The Northaven 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 strips. Among the green places are Central Park, Recreation Island, and the Green Intercostal Parking Docks. **BLUE SPACES** form a blue network and blue places. The **BLUE SPACE NETWORK** includes the lagoons, canals, harbors, boat docks, and open water, and it responds to the unique features of each island. Blue places include swimming baths, Beach Island, Camping Island, Fishing Island, and the marinas and others. **SPORTS AND RECREATION** is composed of small things and big things. Small things are scattered like conflicts along the Green Networks and Blue Networks, sometimes located within blocks, like the gymnasium 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.
Development in Nordhaven 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 Commercial 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 Lime 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 Fiskarhaven during landfill. Development will follow this 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 ongoing during the development process in Nordhaven.

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**Development Area**

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**Net Area**

- Retail Centre: 30,000 sq. m.
- Small Shops: 5,000 sq. m.