BEST PRACTICE ADDITIONS
PUBLIC REALM MASTERPLAN FOR THE NORTH LOTTS & GRAND CANAL DOCK SDZ PLANNING SCHEME 2014
Dublin City Council working group

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Cover image: Perspective of the Liffey, North Lotts and Grand Canal Dock.

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77 Sir John Rogerson’s Quay, Dublin 2.
Content

Locations
1. Amsterdam - Westerdok
2. Oslo - Bispevika
3. Malmö - Västra Hamnen
4. Hamburg - Hafencity
5. Copenhagen - Christianshavn

Themes
1. Scale study
2. Lighting
3. Physically disabled
4. Stormwater management
5. Shard space
6. Underground infrastructure
7. Planting trees
Locations
North Lotts & Grand Canal Dock

From private space to public space via collective space

115x90m

Strong winds from the IJ get broken with the courtyards oriented onto the quay at the south side

Street passage that provides access to the parking garages

Sightlines towards the inner harbour front and the former Shell tower

Balconies oriented on the sun side
Sightlines on city district scale

Public space vs infrastructure

Routing
- tunnel towards boulevard
- slope towards viewing point
- bridge across inlet

Swimming area

OSLO - BISPEVIKA
MALMÖ - VÄSTRA HAMNEN (1)

Central squares that collect the rain water

Sheltered public space, one material

Buildings shield off cold winds from the sea

Principle water storage

Water square

95x50m

40x40m

45x50

20x13m water square
Open/closed environment

Water storage in squares

Entrance

Recreational facilities

Water square

Water square

Water square
Bold harbour/industrial character

Recreational area at the final end of the 'pier'

Boatland along yachts/inner harbour

Parking street
HAMBURG - HAFENCITY

Public Realm Masterplan
North Lotts & Grand Canal Dock

Elevated pedestrian network

Landmarks provide 360 degree orientation

Elevated pedestrian network due to flood risk
Harsh facade vs softer and greener courtyards

Glass facades provide connection with greenery while metal construction blocks off the road
Building blocks with gardens and roads in between

The building opens up towards the park with a glass facade. The park is openly connected to the boulevard along the Kobenhavns Havn river.
Themes
SCALE STUDY
Vehicle lighting
- street light
- historic light
- parking light

Pedestrian lighting
- boulevard light
- park light
- boardwalk light
- walk light

Special lighting
- angel light
- event light
- plaza light
- landscape accent light
- tree-mounted light
- festoon light
- bollard
- accent blue light
- 35W in grade uplight
- 12W in grade uplight

Bench lighting emphasizing terrain differences

LIGHTING /// LOS ANGELES, WILMINGTON WATERFRONT PARK

LIGHTING /// CHICAGO, RIVERWALK
PHYSICALLY DISABLED /// PRINCIPLES

Wheelchair use
- Sloped ground level and avoid stairs.
- Maximum slope for hand-propelled wheelchair ramps should be 1:12 (is similar to 4.8 degree angle; 8.3% grade).
- Maximum slope for power chairs should be 1:8 (is similar to 7.1 degree angle; 12.5% grade).
- Minimum width should be 36” / 91.44 cm (inside rails); 48” / 121.92 cm is ideal.

Vision-impaired people
- Pavement ideas: ridges, grooves, lining, edges.
- Routing by tactile warnings and sounds.
- Traffic lights with sound indications.

Routing for vision-impaired people by ridges/grooves in the pavement.
Tactile warnings protect blind persons – and all other passengers – from getting too close to the platform edge in transit stations.

Product design of a convertible wheelchair ramp, by Dornob.

Landscape design for a ground level without stairs but using slopes instead, by MAde Studio.

Stair and ramp at Robson Square in Vancouver by Arthur Erickson.
Curitiba’s bus transport is just as efficient as a metro system, but much cheaper.

Antwerp’s Velo System provides a collective bike network which let people explore the city.
Water square as a buffer
- Combination of water storage and improvement of the urban public space
- Most of the time the water square will be dry and in use as a recreational space.
- Public space forms a buffer in the stormwater runoff system.
- By storing the water locally the runoff system is relieved.

STORMWATER MANAGEMENT: WATER SQUARE BENTHEMPELIEIN, ROTTERDAM
Soft scapes for water infiltration
- Total amount of permeable surfaces like planting areas and unpaved or semi-paved streets
- Together, these spaces can form a system that retains and stores water on site.
- Sandy soil and plant roots can filter the water.

STORMWATER MANAGEMENT: INFILTRATION

1. porous asphalt: donated material, provides permeable surface aiding in storage and recharge
2. grasscrete: permeable surface with facultative vegetation provides sediment control and recharge capacity
3. concrete and asphalt: concrete at sidewalks, asphalt at roads; asphalt is more pervious than concrete and is used where current codes will allow
4. bioswales: facultative vegetation aids in phytoremediation and pollutant removal—“right plant, right place”
5. wet meadow/infiltration basin provides a 100% reduction in load discharge, velocity attenuation, exfiltration, transpiration and high-quality habitat

Rose: Acacia Robinia Foliata
Little Bluestem Schizachyrium scoparium
SHARED SPACE /// LONDON, HOLBEIN PLACE

Pedestrians are the main users

Continious material pattern

'Extended pedestrian crossing'
**Principles**

- Bundling cables and pipelines according to depth and function.
- Create a utilities corridor: electricity, telecom, internet, street lighting, etc. which goes under the sidewalk. Depth: approx. 60 cm.
- Gas and water networks go in a deeper part of the sidewalk. Depth: approx. 100 cm.
- Household sewage system connect to a central drain and sewage in the middle of the road/street. Depth: 120 cm.

Rules for tree planting
- Place them in a particularly specified planting area.
- Protect them from direct contact with hard streetscape (pavement and street furniture).
- Implement drainage pipes under the trees that are connected to the storm system.
- Protect trees during works.

PLANTING TREES /// PRINCIPLES
PLANTING TREES /// PRINCIPLES

Size category I

- **Height**: > 12m
- **Crown width**: > 10 - 15m
- **Amount of rooting space needed (hangwater)**: 60 - 80m³
- **Amount of rooting space needed (groundwater)**: 30 - 40m³
- Trees in a concreted environment need up to 2 times more ground space to be able to access the needed substrates

Size category II

- **Height**: 6 - 12m
- **Crown width**: > 7 - 10m
- **Amount of rooting space needed (hangwater)**: 30 - 40m³
- **Amount of rooting space needed (groundwater)**: 15 - 20m³

Size category III

- **Height**: < 6m
- **Crown width**: < 7m
- **Amount of rooting space needed (hangwater)**: 15 - 20m³
- **Amount of rooting space needed (groundwater)**: 7 - 10m³