1850

1900

2050

2100

2200

Country / City	Italy, Venice
University / School	Università Iuav di Venezia
Academic year	2th year of master
Title of the project	Against the flood. A new landscape for Brooklyn Waterfront
Authors	Gabriele Folador, Edoardo Sartorato

TECHNICAL DOSSIER

Title of the project	Against the flood. A new landscape for Brooklyn Waterfront
Authors	Gabriele Folador, Edoardo Sartorato
Title of the course	Master degree in Architecture (Final Dissertation)
Academic year	2018/2019
Teaching Staff	Prof. Luigi Latini, Prof. Aldo Aymonino
Department/Section/Program of belonging	Department of Architecture and Arts/ Landscape and Urban Design Studio
University/School	Università Iuav di Venezia

Overheating of the planet has triggered a process of change in ecosystems; In our case these phenomena materialize with rising sea levels. In the case of New York, the current conditions of hydrogeological risk are linked, both to the geological, morphological and hydrographic characteristics of the territory, and to the strong increase, starting from the 1811 plan, of the urbanized areas. These transformations have exposed the urban fabric to exceptional effects (hurricanes and storm surges) that already occur today and will increase in a future scenario. The Waterfront of Sunset Park, where our project is concentrated, to date, looks like a vast mineral surface for the most part abandoned. Over time the surface is disintegrating. Little by little, nature is recovering these spaces, making them its own again as in the beginning of the coast of Sunset Park. In the planning phase, we plan to further accelerate this disintegration process by intervening directly on the mineral surface. The grid will again be used as a trace to generate the cretto that will be dug in the waterfront, the water will creep into the cracks in the ground. The wave motion over time will redefine the edges creating a natural bale character profile.

For further information
Máster d'Arquitectura del Paisatge -DUOT - UPC

T: + 34 93 401 64 11 / +34 93 552 0842
Contact via email at: biennal.paisatge@upc.edu

Máster d'Arquitectura del Paisatge -DUOT - UPC
ETSAB- Escola Tècnica Superior
d'Arquitectura de Barcelona
Avenida Diagonal, 649 piso 5
08028 Barcelona-Spain

CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

Barcelona September 2020

SCHOOL PRIZE

HYSTORICAL MAP

Identification of the Emerged Lands, new project areas

Comparing the historical maps with the contemporary ones, what is highlighted are the lands that the city has stolen to the water, for the most part they are industrial and port areas built just above sea level.

Hystorical map 1860

State of fact

Netto storico

EVOLUTION | INVOLUTION OF THE COAST LINE

Evolution of the waterfront Lower Manhattan

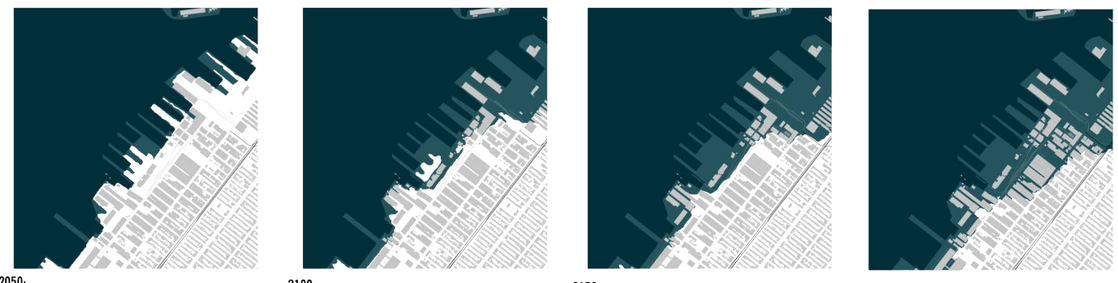
1650 *1800* *1965* *2009*

Involution of waterfront di Sunset Park

1650 *1800* *1965* *2009*

Sea level rise, future scenarios

Graphical elaborations taken from NOAA data.



2050:

Daily tide excursion + 2,50 m

Sea level rise compared to 2019 + 1,00 m

2100:

Daily tide excursion + 3,00 m

Sea level rise compared to 2019 + 1,50 m

2150:

Daily tide excursion + 4,00 m

Sea level rise compared to 2019 + 2,50 m

2200:

Daily tide excursion + 5,50 m

Sea level rise compared to 2019 + 3,50 m

THE IMPOSITION OF THE GRID

Images and historical reference of New York

The city with its grid imposed on the territory and its orography spreads to the water redefining its edges and relationships with the ground. It arose and spread exponentially in marshy and hilly terrains, imposing themselves on them with its own generating force, redefining their altimetries.

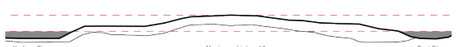
New York had more than 570 hills, 60 miles of streams, over 20 ponds and 300 springs.
Sandy beaches stretched from the tip of Manhattan to 42nd Street on the bank of the Hudson River. And beyond the shore there was a dynamic tidal estuary, with complex currents, fragments, sedimentary due to the influence of the Hudson River.

This scenario is only a memory compared to the current landscape that has seen the homologation of the orography of the land in view of the building densification that finds its genesis on the island of Manhattan until it came to establish itself in the barenic areas of Long Island.
This system, undoubtedly functional with respect to urban planning terms, will however put its building fabric in crisis in view of the rising sea level and the intensification of storms.

The extreme dynamism of adaptation of the city, linked to its expansion, sees a sharp slowdown due to the economic recession up to the stabilization of the current fabric that continues to change within its margins, leaving the problem unsolved of the warenfront.

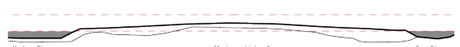
1820

1860



1770

What emerges from the historical engravings of Thomas Davies is the hilly and wooded character of the territory with mainly rural settlements that they adapt to the terrain of the terrain. The territorial section represented is traced along the 14th road.

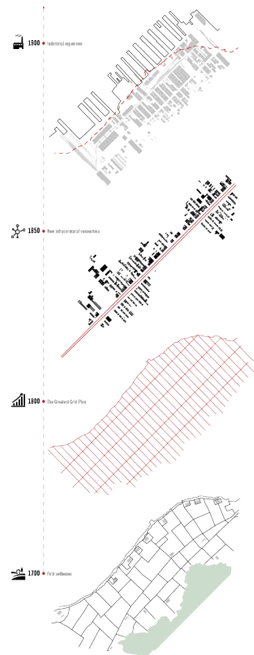


1875

The engraving by Parson & Atwater instead shows the expansion of the city of New York during the industrial period, following the propagation of the great grid and orography approval. The section along the same road in relation to the first must precisely this altimetric variation.

THE EVOLUTION OF THE URBAN

Stratigraphy of the urban



PROJECT PROPOSALS FOR THE NEW YORK WATERFRONT

Identification of areas of interest in the general plan.

Identification of the c

PROJECTS PRESENTED AT MoMA (5+1)

1_OYSTER-TECTURE, *SCAPE/Studio; Red Hook.*

2_THE BIG U, *BIG , Manhattan.*

4_WATER PROVING GROUND, *Lot Architects.*

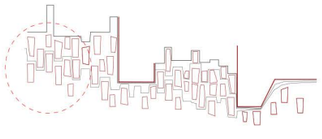
5_WORKING WATERLINE, *Matthew Baird; Jersey City.*

6_DESIGN WITH THE FLOOD, *Falacor Sartorato,Sunset Park.*

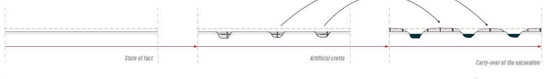
2050 Edge disintegration:

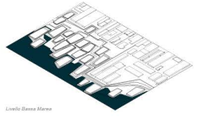
Cracking of the mineral surface of the waterfront

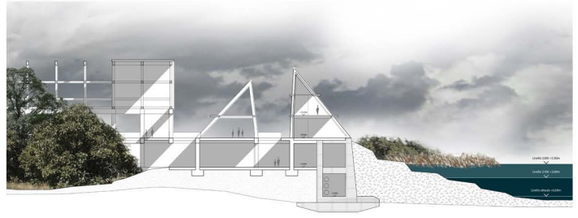
The Sunset Park Waterfront, to date, looks like a huge mineral surface for most abandoned. In the beginning these large areas were used for the storage of industrial containers that arrived with ships.
Today many of these large open spaces are used for parking while others, abandoned, are leave yourself to nature which is gradually regaining it. Over time the surface stays disrupting, extensive cracks furrow the surface layer and allow woody species to filter through herbaceous plants that accelerate this process. Gradually nature is recovering these spaces making them his own again as in the beginning of the coast of Sunset Park.
In the planning phase, we plan to further accelerate this disintegration process intervening directly on the mineral surface.
The grid will again be used as a trace to generate the crotts that will be dug in the waterfront, the water will creep into the cracks in the ground. The wave motion with time will redefine it edges creating a natural lake character profile.
Through this operation of crushing and stripping of the mineral soil, the now is defined edge that in addition to conferring resilience characteristics with respect to storm surges also acts as a new colonizable soil for plant and animal species, referring to the original landscape of the Brooklyn coast.



Disintegration process





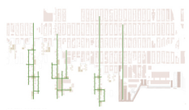


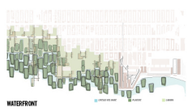
Scenario 2200 | Vista aerea scala 1:4000

Scenario 2200 | Vista aerea scala 1:500

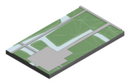

PROJECT

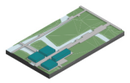

URBAN

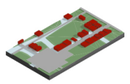

GREEN CORRIDOR

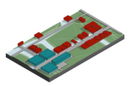

WATERFRONT

Scenario 2200 | Tavi di progetto


BUILDING STRUCTURES ON BARENA


COMMERCIAL


RESIDENTIAL


PROJECT