



HONG KONG | SURFACE

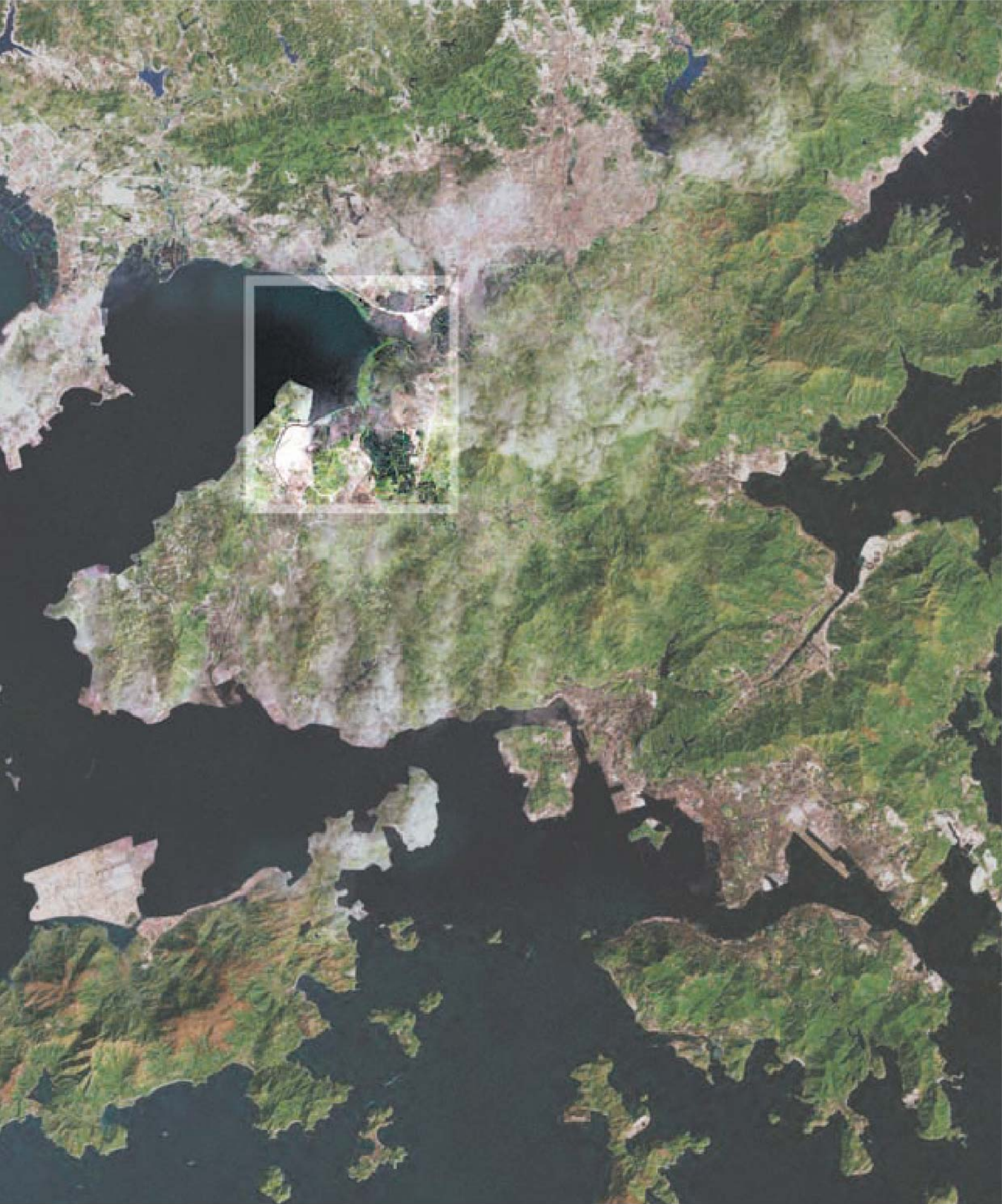
DEEP BAY AREA

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Hong Kong | Surface
Deep Bay Area

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RESEARCH AREA

In aerial photos the region of the Deep Bay in the northwestern part of Hong Kong shows an exceptional surface.

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At a closer look, this surface turns out to be fishponds. Due to the shortage of land, the density of the population and the advanced economy it is surprising to find such a big cultivated area inside the territory of Hong Kong.

In our fieldwork studies, we went to the Deep Bay Area and explored the fishponds and other uses we found nearby. It was of special interest, which forces operate in the region and what is the meaning of the place now.

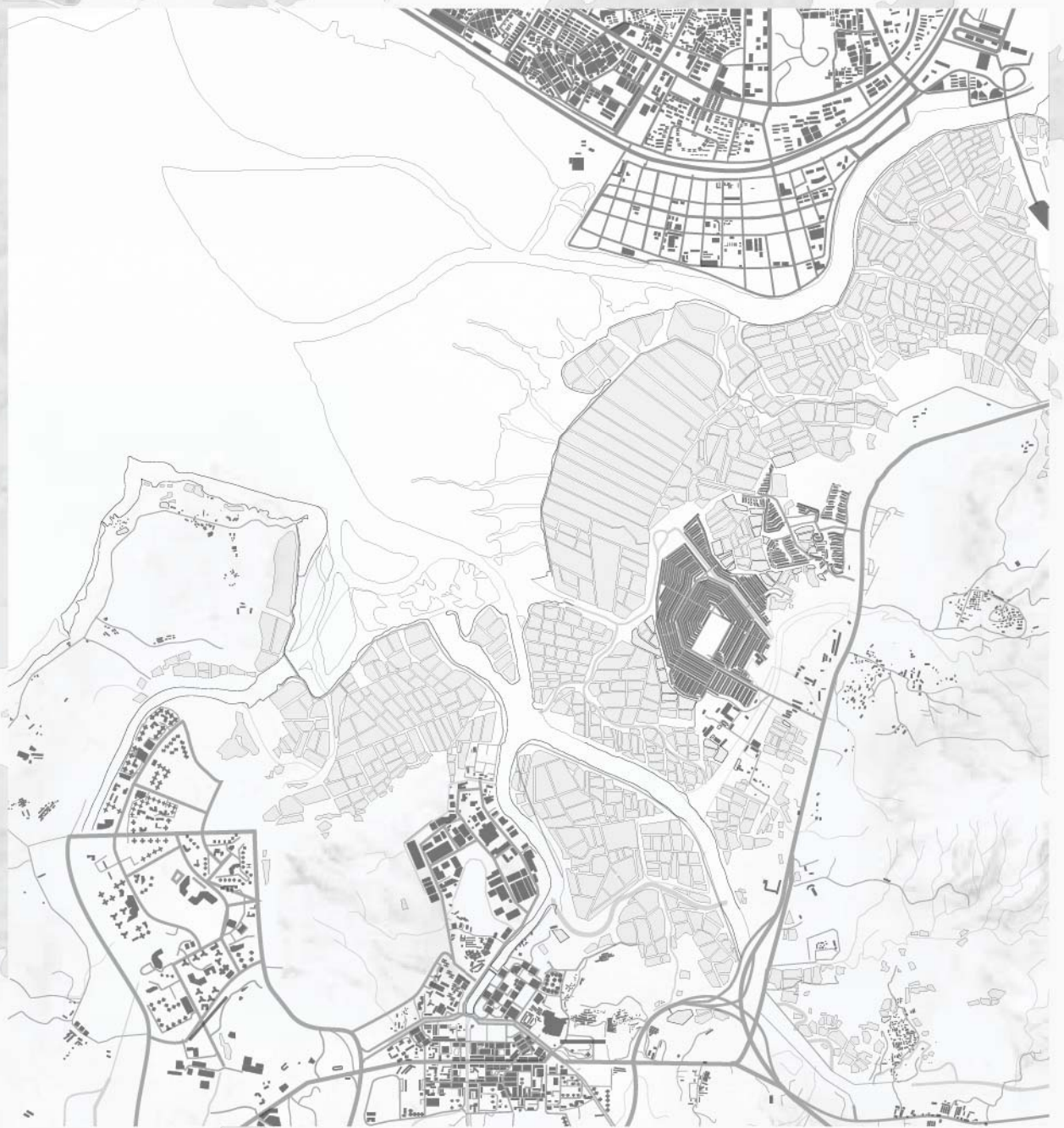


ZOOM INTO RESEARCH AREA

We confine ourselves to doing the research in an artificial rectangle.

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LANDUSES

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- hills
- cultivated land
- Gai Wai
- fishponds
- drainage
- mangroves
- industry area
- housing area
- open storage area
- flower markets

The formative surface of the area are the fishponds. They are surrounded by very heterogeneous landuses.



Shenzhen, China

Reserve Park

Mudland

Mangroves

Drainage

OVERVIEW

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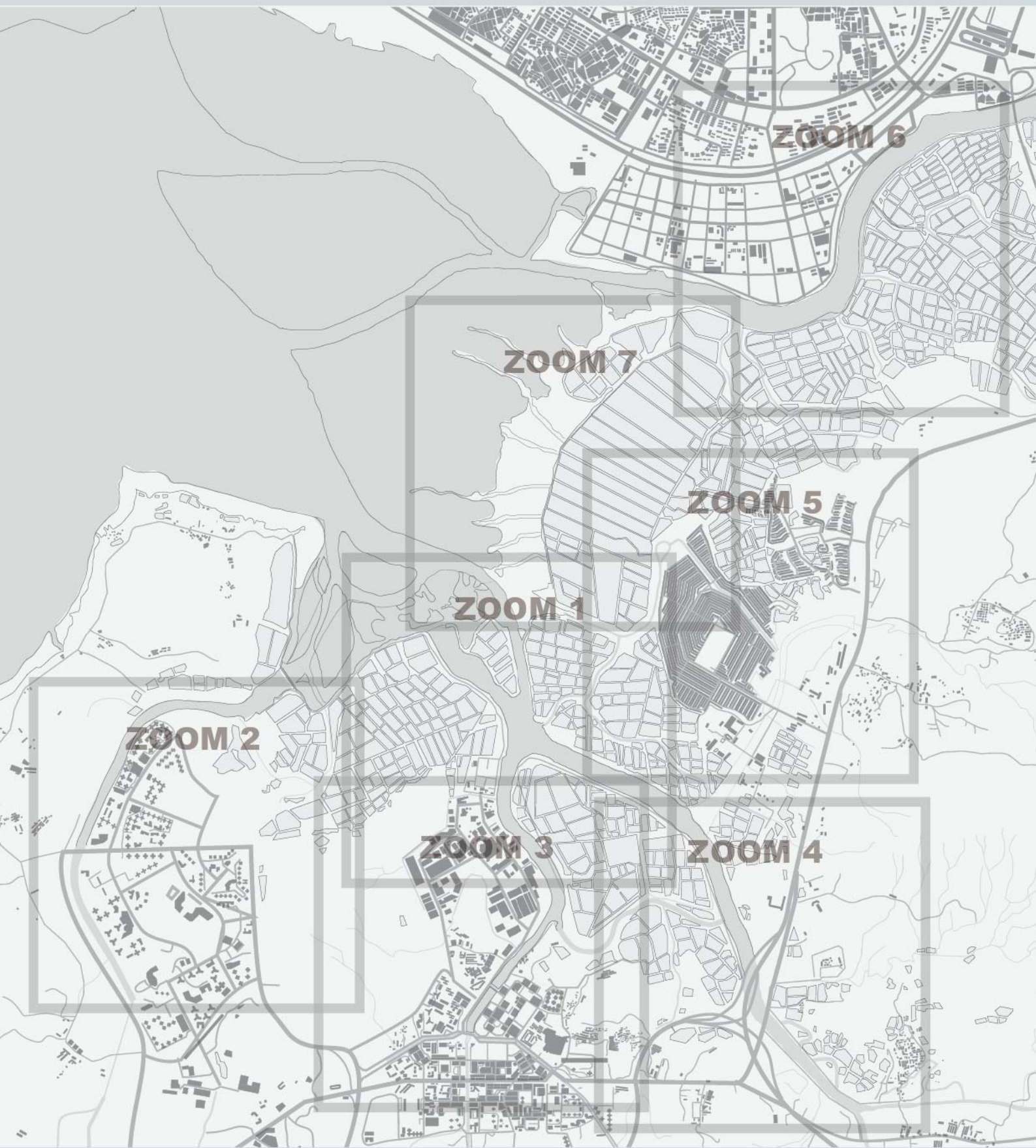
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Palm Springs Fairview Park

Fishponds

Wetland Park



SCANNING THE SURFACE

In this rectangle, we scanned 7 rectangular pieces of the surface in order to get a clear impression of the whole area. And we observe especially the transition between the fishponds and the close-by landuses.

In Zoom 1 the surface basically consists of fishponds and drainage canals. In the north it faces to Mai Po Nature Reserve Park. In the south it touches already the Yeung Long Industry Area. We focus on the traditional fishponds culture.



ZOOM 1

- hills
- cultivated land
- Gai Wai
- fishponds
- drainage
- mangroves
- industry area
- housing area









POND FISH CULTURE

The family has two fishponds. Either of them produces about 5000kg fish every year. In the container biscuits are kept as feedstock for the fish. In the pond there is a net where the fish is fed.



Ten years ago the family got 10 HK\$ for one pound of fish. Now they get only 3 HK\$ per pound because of the price competition with Mainland China. The girl has just graduated from school and is now looking for a job in the city. Due to the low income, she doesn't want to be fisherman like her parents.

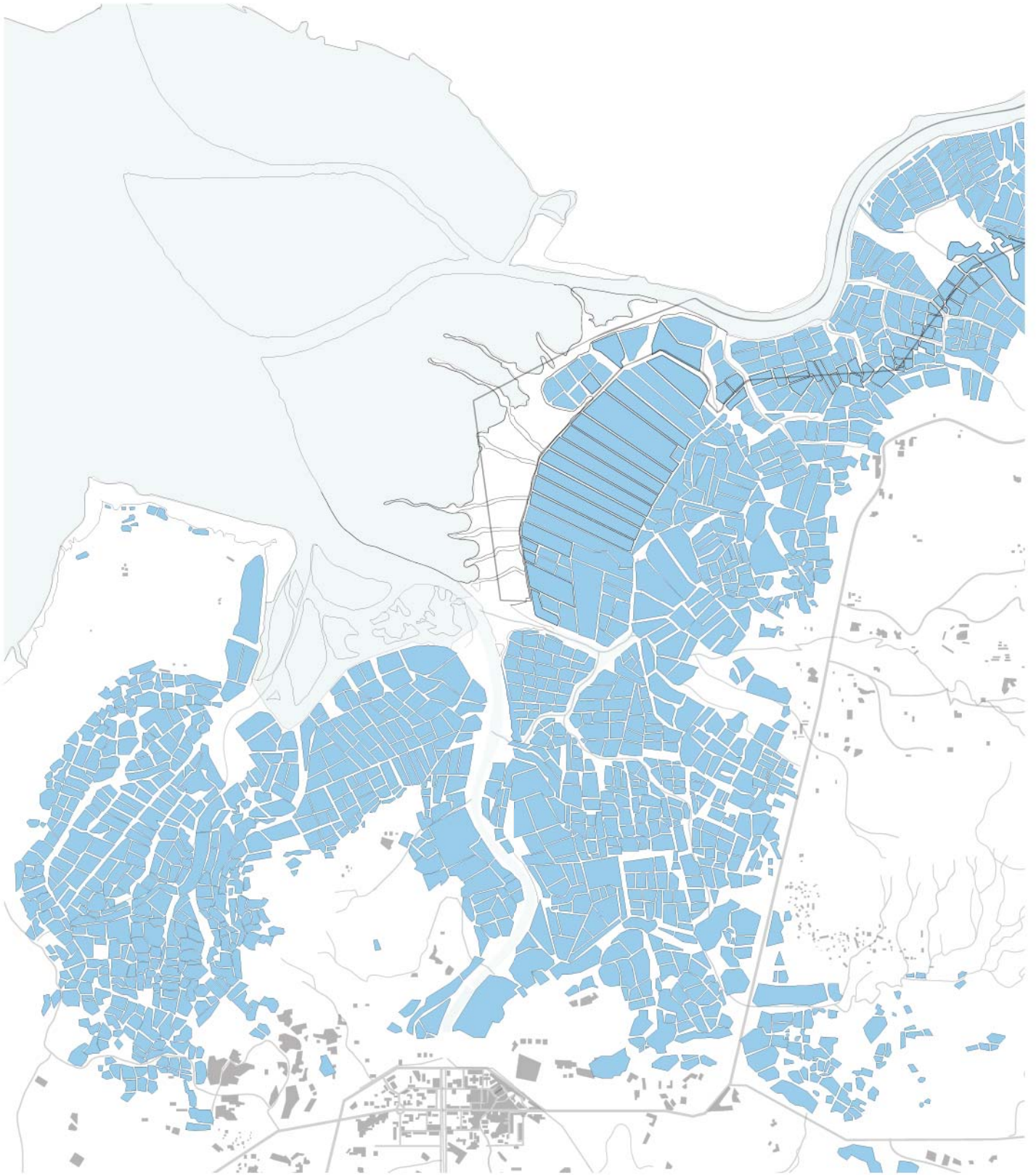


The pond fish culture industry is centred in the north-west New Territories. Fish ponds are either freshwater or brackish. In 2003, the ponds, covering an area of approximately 1 030 ha, produced 2 110 tonnes of freshwater fish amounting to \$35 million. The majority of the fry and fingerlings are imported from the Mainland and Taiwan. Traditionally, fry are stocked in early spring and most fish species reach marketable size in eight to twelve months.



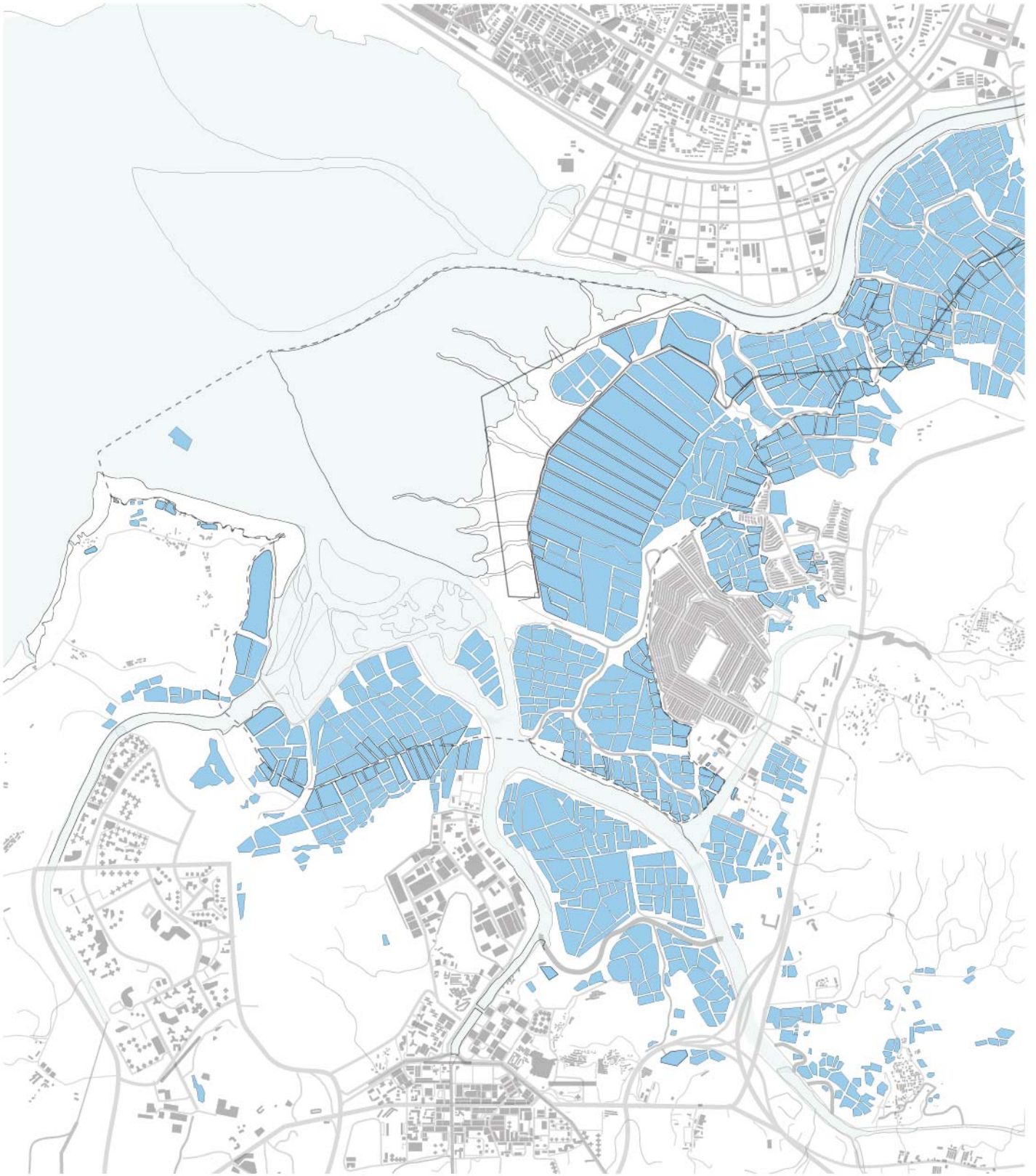
The fishpond Study 1997 confirmed the importance of the fishponds for the wetland ecosystem. Since that time, the Town Planning Ordinance of Hongkong takes high attention on keeping the remaining fishponds.

1976



DECREASE OF FISHPONDS

2003



Since the 1970s a lot of fishponds had to make way for new housing and industrial projects as well as for new infrastructures like roads and drainage canals.



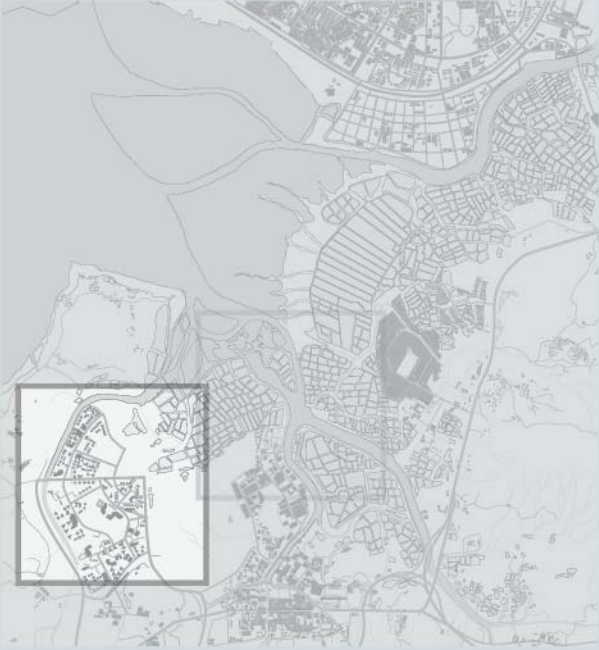
pos.1 The drainage canal runs through the fishpond area.

pos 2 Fence of the industrie zone



pos3 High density developments (Yuen Long Industrial Area) in the background of a fishpond.
pos4 Fishpond at the edge of the low-rise development Fairview Park (right side).

In Zoom 2 area the large new town Tin Shui Wai is being built since 1987. At the foot of the highrise buildings the Wetland Park is under construction.



ZOOM 2

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Ramsar site

- hills
- cultivated land
- fishponds
- drainage
- housing area

Pos.2

Pos.4

Pos.1

Wetland Park

Pos.3

Tin Shui Wai

Yeung Long Indu. Area



TIN SHUI WAI

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Tin Shui Wai began to develop in 1987 now 270.000 people live here



Photo from www.kamching.com



1976

In 1976 about 430 hectares of land was fishponds.



2003

In 1990 the reclamation of fishponds land was finished. By now, the overall population of Tin Shui Wai is already 245`000 (2003) and will be about 305`000 in 2011.





天水圍體育館及游泳池
TSAI SHUI WAI SPORTS CENTRE AND SWIMMING POOL



WETLAND PARK

The Wetland Park, a constructed Wetland, serves as a buffer between Tin Shui Wai and the Mai Po Nature Reserve.

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Model of the Wetland Park.



Pos.1 Drainage runs between the fishponds.

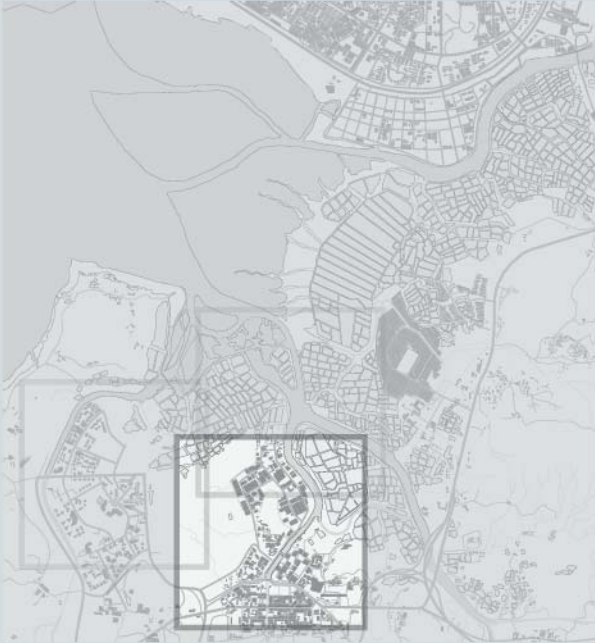
Pos.2 Low rising houses before the fishponds.



Pos.3 Street runs besides fishponds.

Pos.4 Vacant space in the north of Tin Shui Wai.

In Zoom 3 area we focus on Yeung Long New Town, which was amazingly urbanized during 1970s, and Yeung Long Industry Area, which is one of the 3 remaining industry areas in Hong Kong.



ZOOM 3

Mai Po Nature Reserve Park

Ranunculus

- hills
- cultivated land
- fishponds
- drainage
- industry area
- housing area

Wetland Park

Yeung Long Indu. Area

Yeung Long

Pos.1

Pos.2

Pos.3

Pos.4

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YEUNG LONG

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New town with 550,000 Inhabitants.



YEUNG LONG INDUSTRY AREA

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The farmers and fishers are overrolled by the huge developments for housing and industry.

Yeung Long Industry Area was built in 1980s. Now this 67 hectares is one of the only three industry areas in Hong Kong.



Pos.1 governmental treeplantation area beside fishponds.

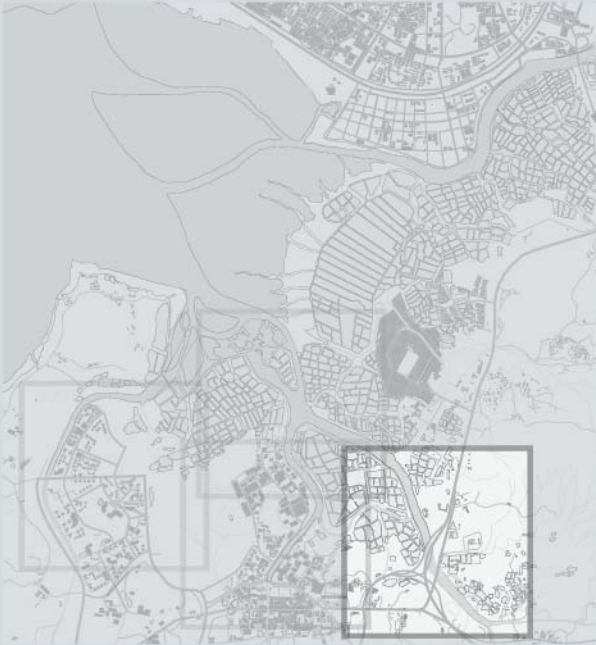
Pos.2 Waste facilities beside the waterfront .



Pos.3 The drainage canal protects the settlements from the water in the rainy season.

Pos.4 Farmhouses surrounded by highrise buildings.

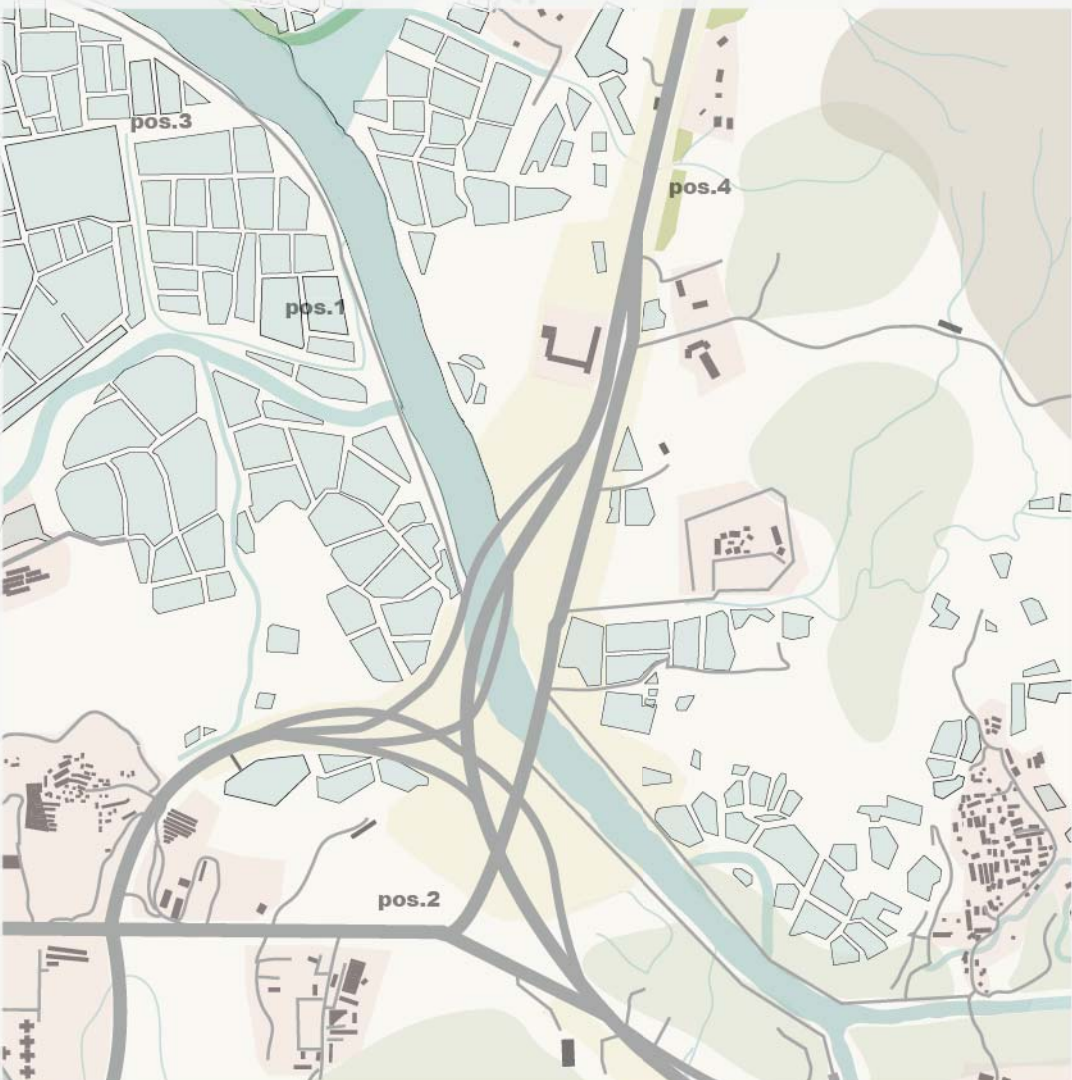
Zoom 4 area consists of many different types of surfaces: fishponds, highways and roads, drainage canals, storage areas, cultivated lands, etc. We focus on the storage areas and drainage infrastructure.



ZOOM 4

Fairview
Park

- open storage area
- flower markets
- Gai Wai
- hills
- cultivated land
- fishponds
- drainage
- housing area









OPEN STORAGE



Hongkong planning department is heavily aware of the negative impact of the open storage uses, especially along the roadside. This storages are partly unauthorized developments which can be forced out. Only the authorized developments are allowed to stay, as long as they do not change their capacity.



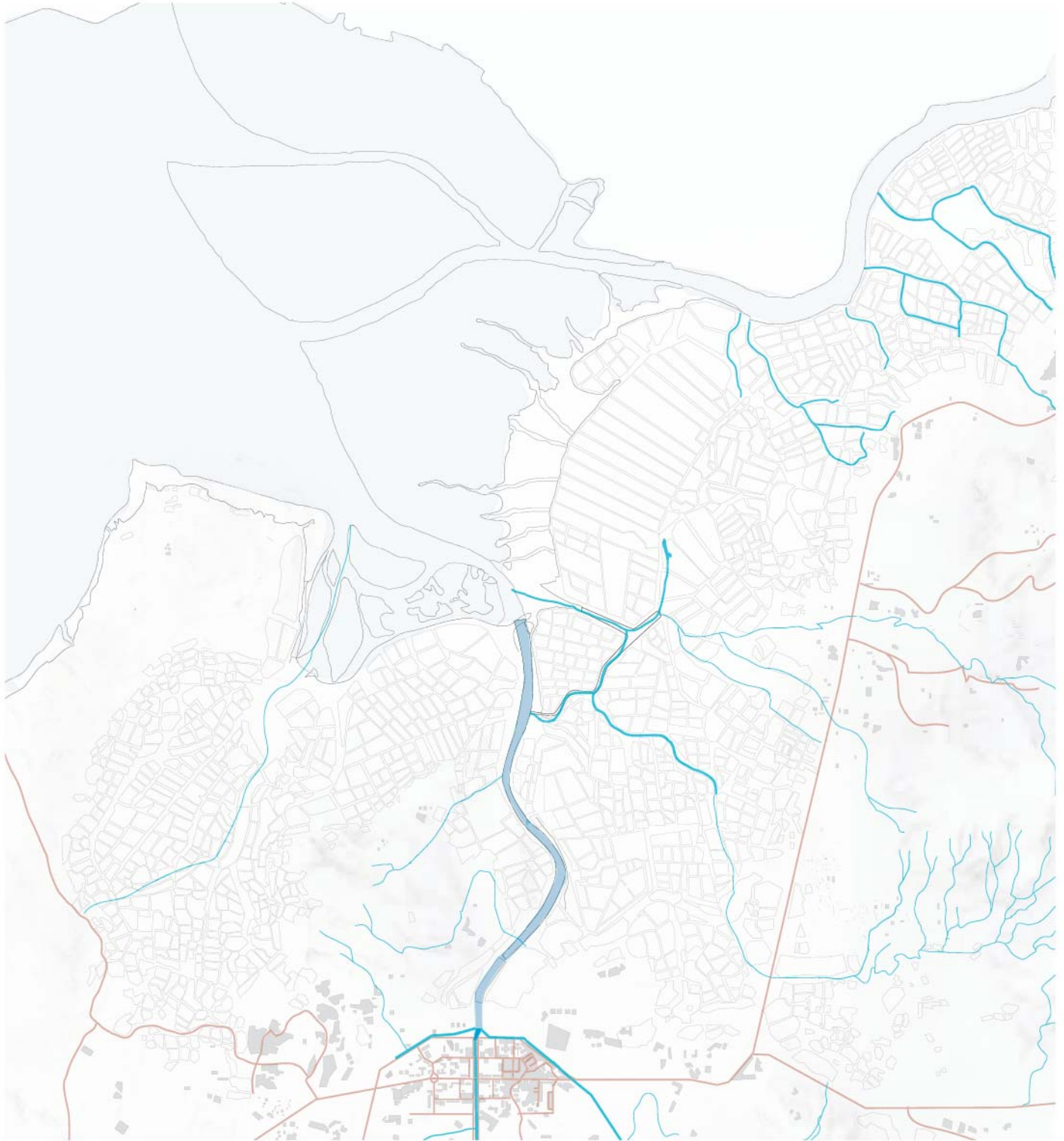
DRAINAGE PROJECT

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In order to prevent floods, the government implement flood protection works in and around the villages. A whole network of drainage canals and pumping stations were constructed. The work on the second stage of the drainage network is now in progress.

1976



DRAINAGE AND ROADS

Almost the whole infrastructure of the area was built since the 1970s.

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2003



The heavy rains made it necessary to construct big canals through the wetland.

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pos.1 Lotusflowers planted in fishpond

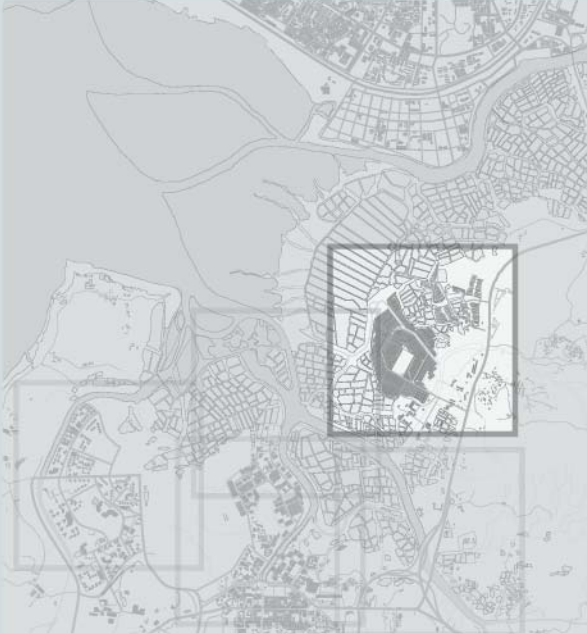
pos.2 Advertisement for the lotus farm.



pos.3 Vacant space. People use the space for flying model airplanes.

pos.4 Flowermarket on the roadside.

In the area of Zoom 5 there are two large low-rise housing areas -Fairview Park (1980s) and Palm Spring Park (1990s)- situated inbetween fishponds. Nearby we found some stables, open storage, large drainage projects, cultivated land...



ZOOM 5

Mai Po Nature Reserve Park



- flower markets
- Gai Wai
- hills
- cultivated land
- Gai Wai
- fishponds
- drainage
- mangroves
- stables
- housing area



PALM SPRING PARK

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FAIRVIEW PARK



“Facing the competition with Mainland China and little governmental help, the life goes harder”



The farmland reduced in the last decades. Today farming makes only 0,1% of the GDP.

Ten years ago cows supplied the closed-by dairy factory with milk. Today they import the milk from Shenzhen.



pos.1 drainage construction works.

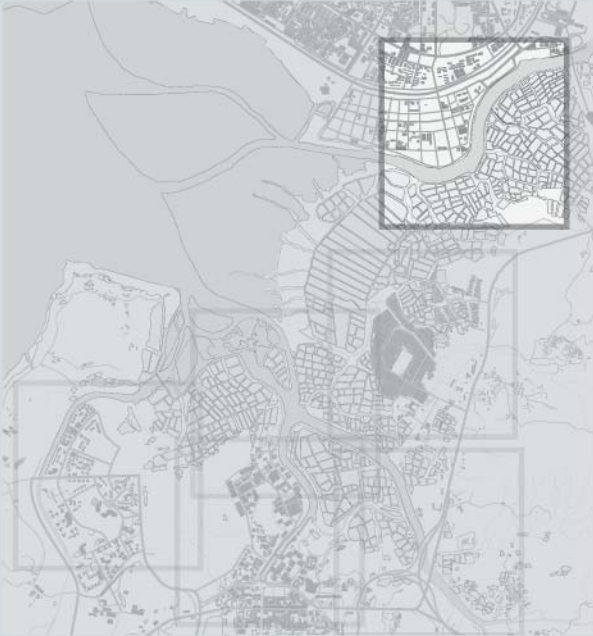
pos.2 horseriding for leisurement.



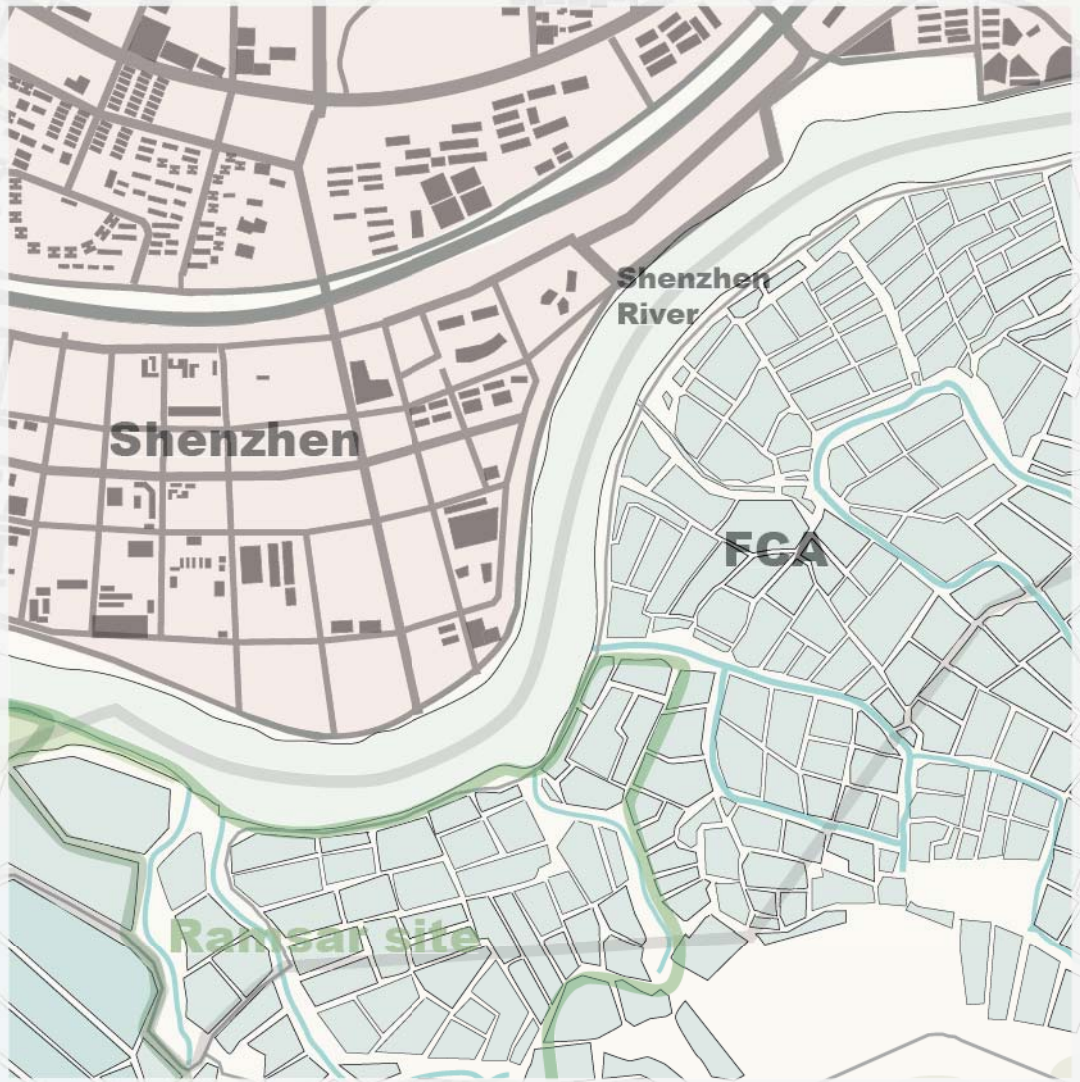
pos.3 Metal workshop beside fishponds.

pos.4 A lot of the undeveloped spaces are occupied with open storage.

In parts Zoom 6 area is in the Frontier Closed Area (FCA). To the north we can see the skyscrapers of Shenzhen. The main part of the surface at the Hong Kong side are fishponds. We focus on the Shenzhen city and the FCA.



ZOOM 6



Shenzhen
River

Shenzhen

FCA

Ransai site

-  housing area
-  fishponds
-  Gai Wai

Mai Po Water
Reservoir Park



FCA

A policeman is guarding the Frontier Closed Area (FCA).

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Shenzhen is so nearby.







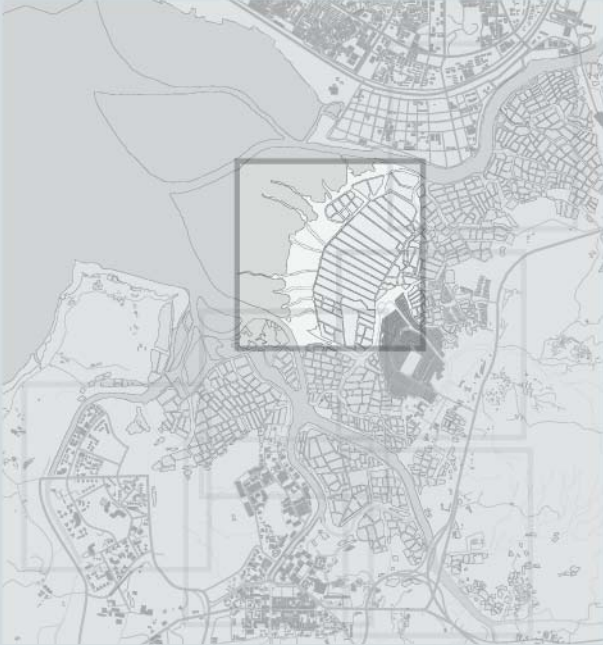
SHENZHEN

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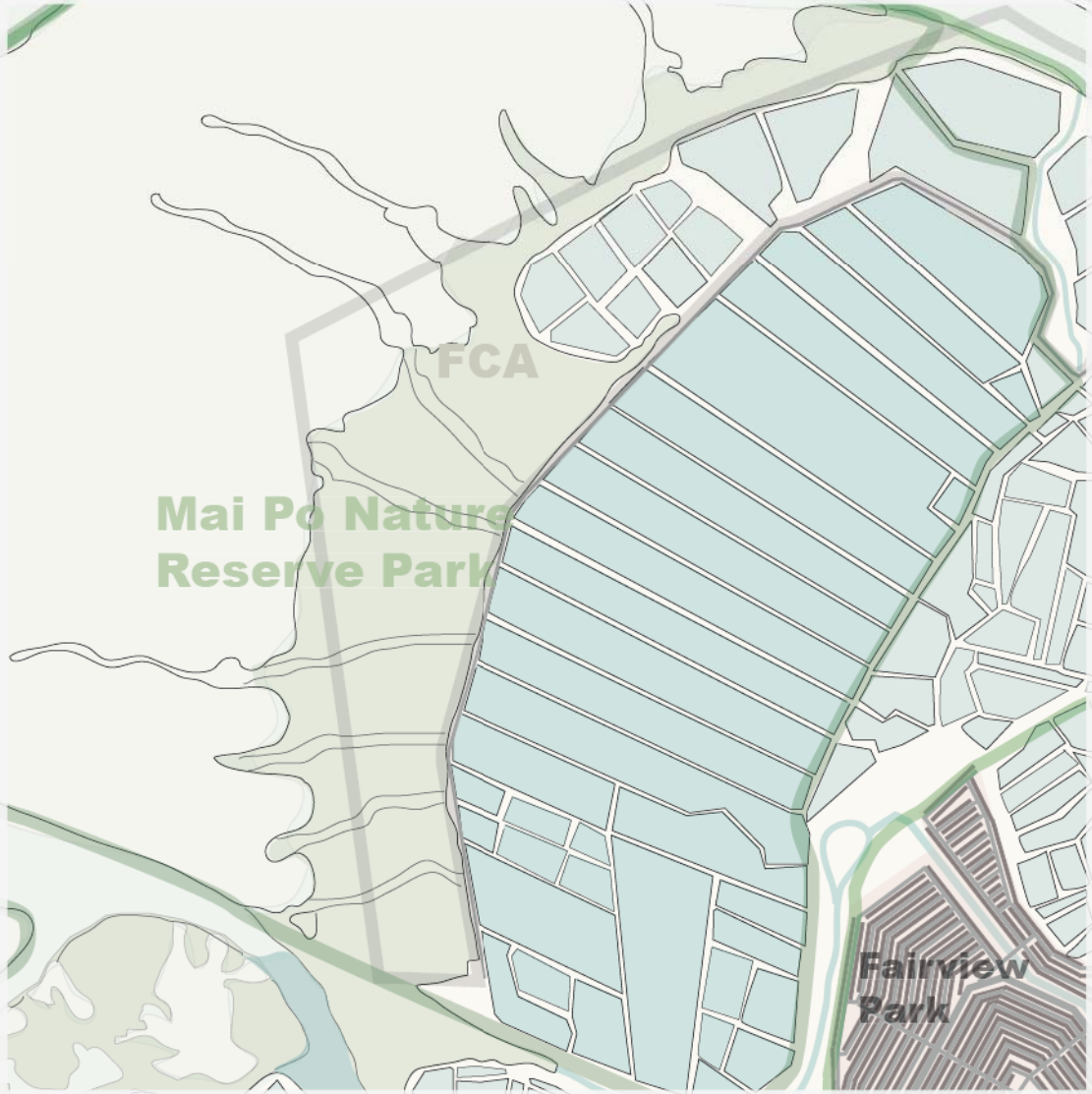
During the last 25 years the population in Shenzhen city has increased from 310,000(1979) to over 5 million(2003). The GDP of Shen Zhen increased in a average speed of 28% every year in the past 20 years. The high buildings at the bordersied to Hongkong are the best picture of his rapid developepment. The Import from Shen Zhen has alreay caused a huge economical pressure to Hong Kong, especially in agriculture and industry.

The area of zoom 7 is located in Mai Po Reserve Park with its mangroves, the mudland and the shrimpponds (Gai Wai). To the southeast we can see the Fair-view Park and to the north there is already mainland China, Shenzhen.



ZOOM 7

- mudland
- Gai Wai
- fishponds
- drainage
- mangroves
- housing area





MAI PO NATURE RESERVE

With the WWF the park is also an area for education of the wetland ecosystem. Since 1996, the Mai Po Area is a Nature Reserve Park, maintained by WWF.

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Gai Wais are salt water ponds for rising shrimps. They have a long tradition in Hongkong, but disappeared in the last decades because of economical reasons. In the nature reserve they are still kept as a cultural heritage and as a example of the sustainable use of the wetland areas.



The wetland is the place where land meets water. It is a unique and very sensitive ecosystem. In general, wetlands include areas of lowland, floodplains with water that is fresh, brackish or salt. In the Mai Po Nature Reserve, only 4,000 visitors are allowed to enter each year.



The borderfence of the FCA goes through the Mai Po Nature Reserve Park.

FCA

The still existing mangroves in Honkong were protected a long time not on purpose, but by accident in the Frontier Closed Area (FCA).

Mai Po Natural Reserve Park

In 1995 the Mai Po Nature Reserve Park was founded. Here the remaining Mangroves, mudland and Gai Wais are strictly conserved. Only 4,000 visitors each year are allowed to enter.

Ramsar Area

In 1971 an intergovernmental treaty was signed in the Iranian city of Ramsar, in order to conserve the wetlands in the world.

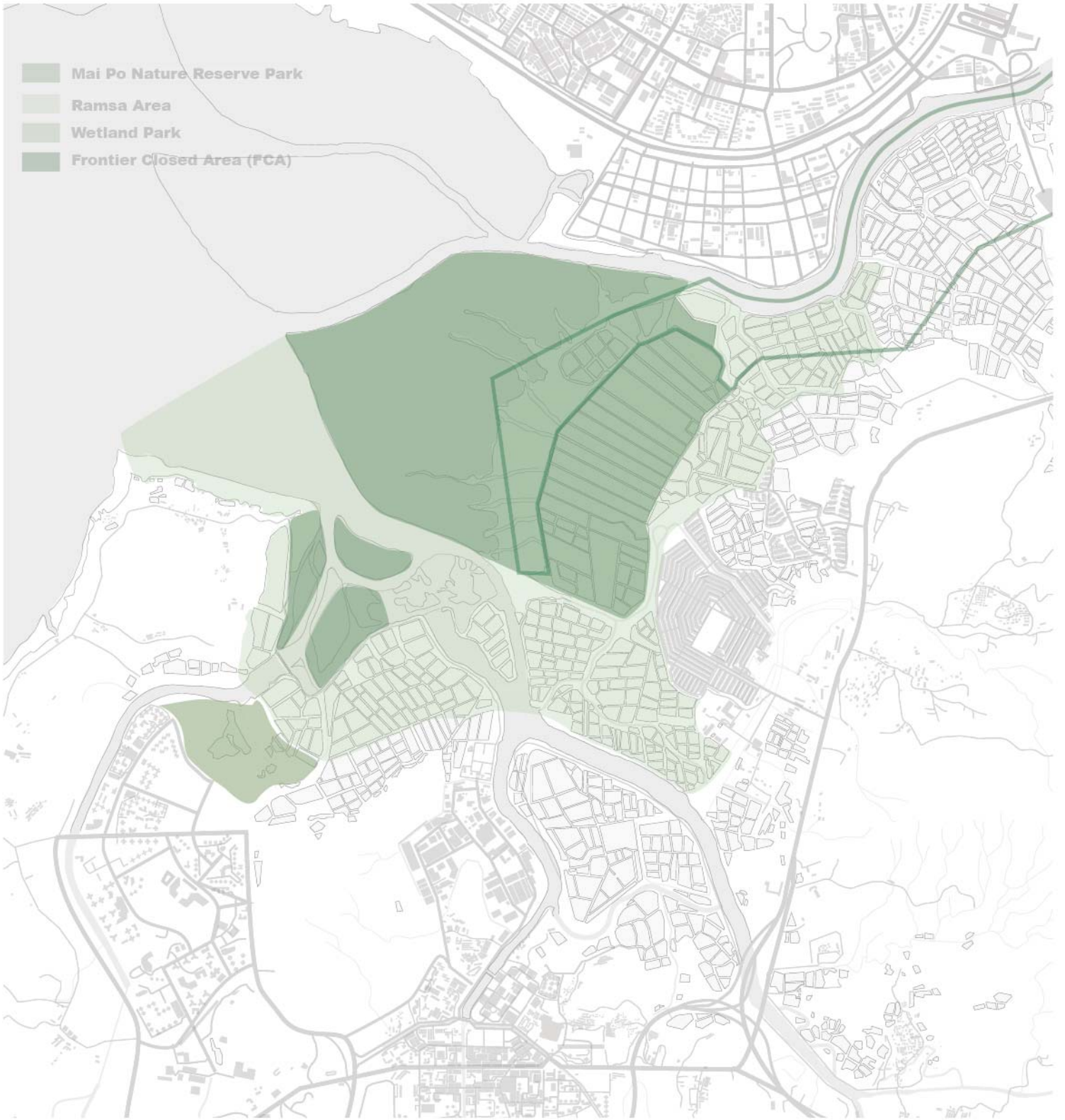
Since 1995, the Mai Po Inner Deep Bay Ramsar Site was listed as one of the 7 Ramsar site in China. It covers some 1,500 hectares of wetlands, consists of mangroves, Gei Wai(Inter-tidal shrimp pond) and fishponds along the coast. It serves also as a education spot.

Deep Bay Area is a major stopover point of Asia`s migration routes for birds.

Wetland Park

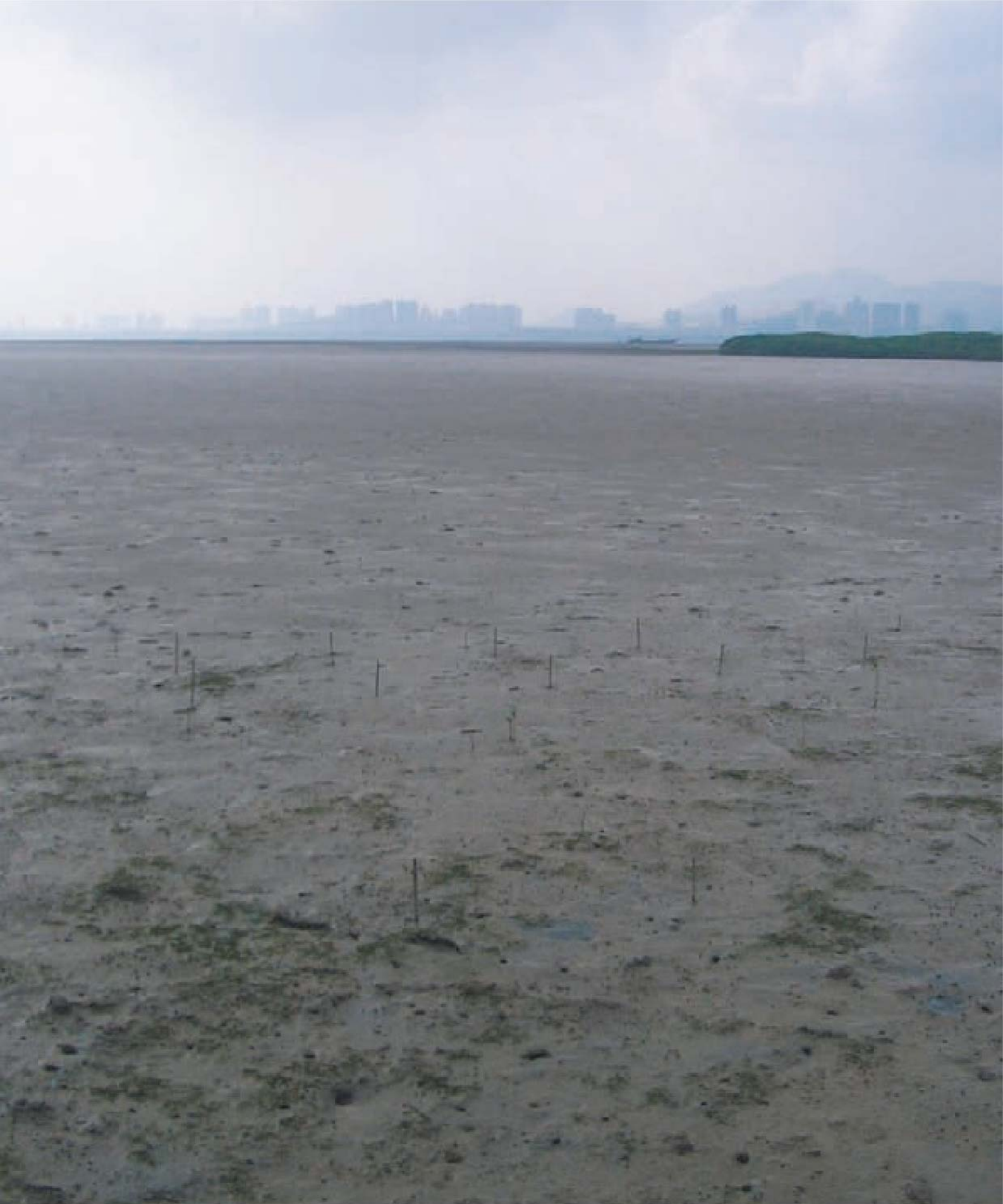
The Wetland Park is a reconstructed idealised Wetland for education and plaesure. Meanwhile it serves as a buffer zone between housing area and Mai Po Nature Reserve Park.

PROTECTED AREAS





View over the mangroves. In the background the skyline of Shenzhen rises.



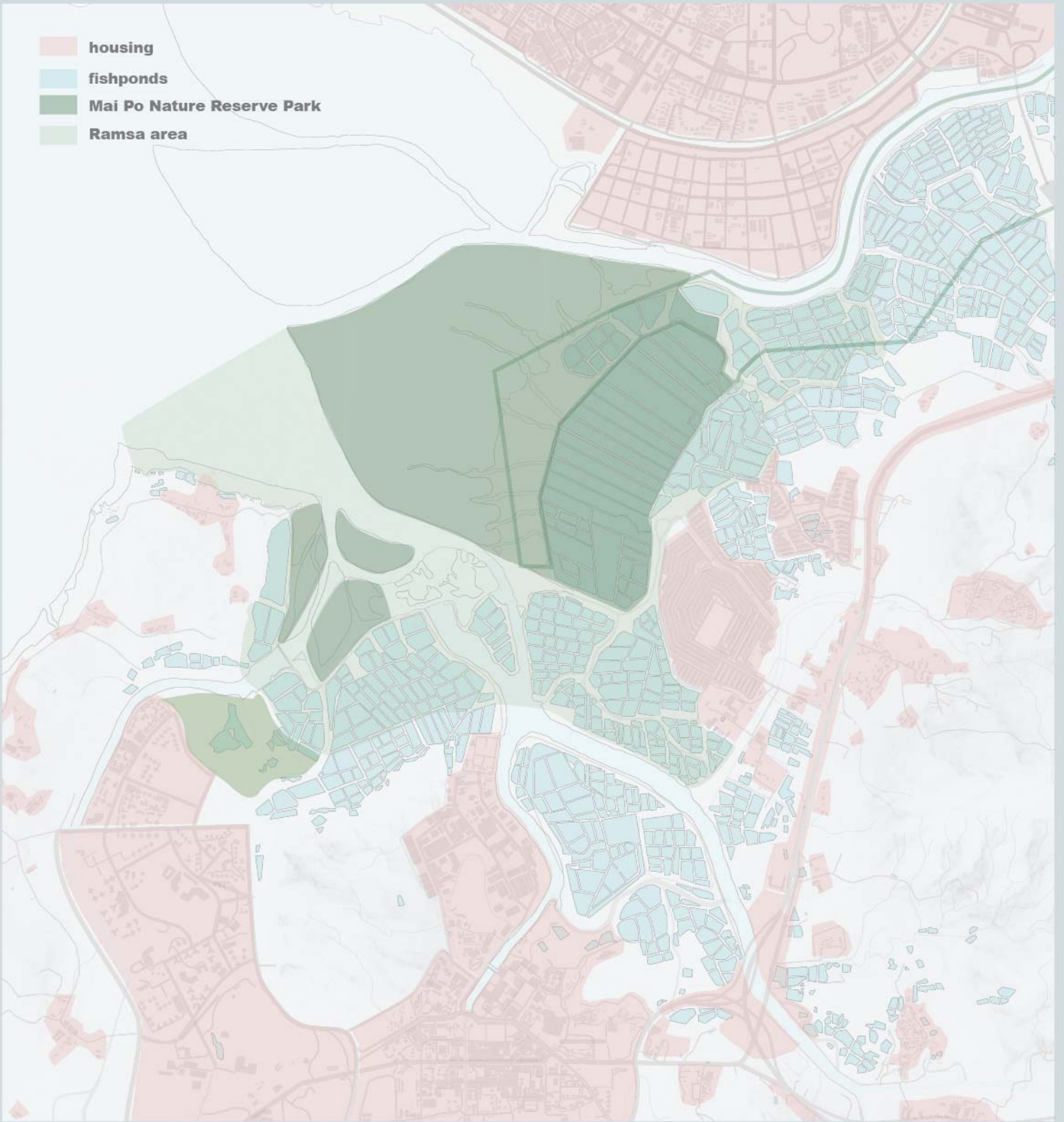
The mudland behind mangroves.

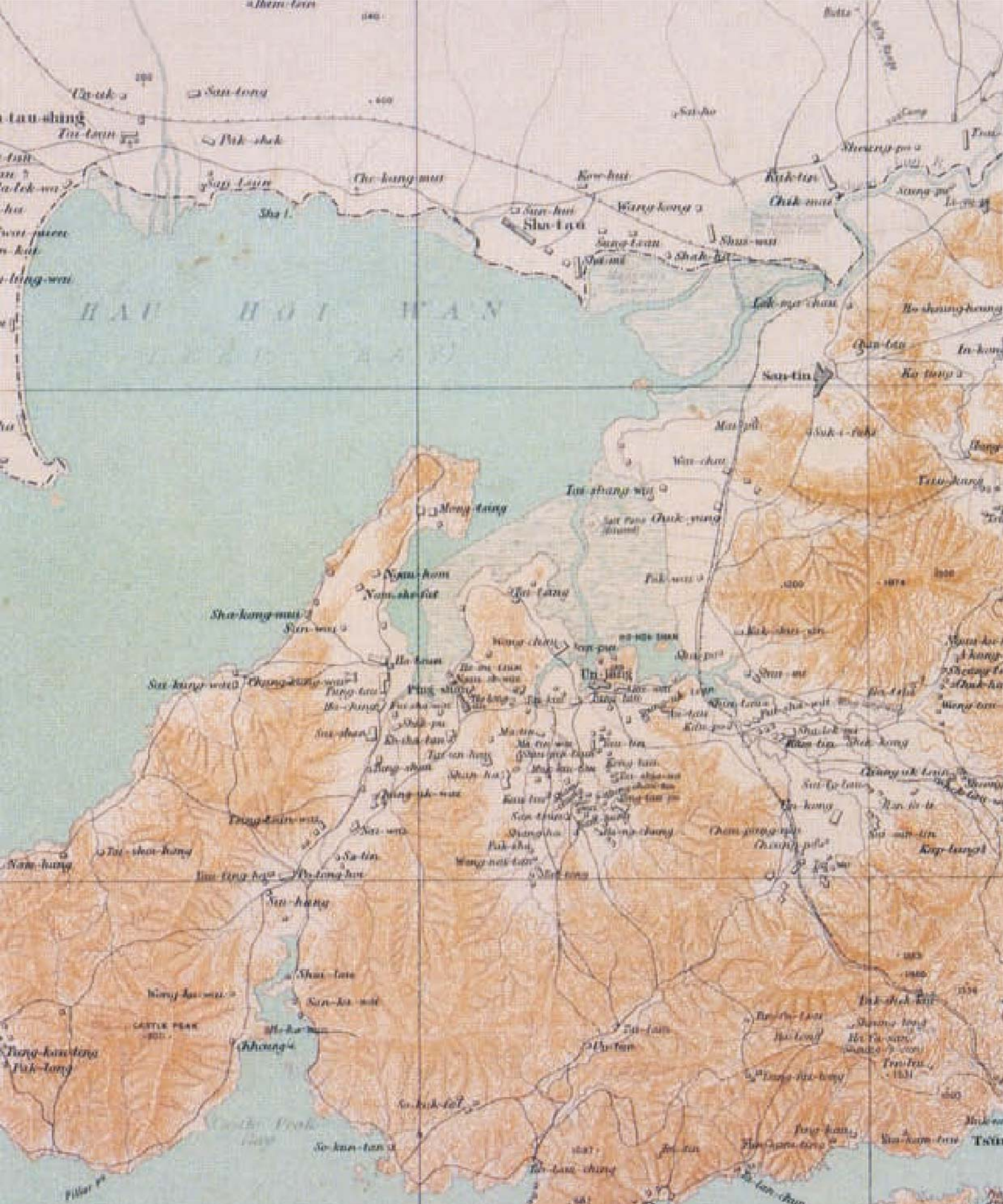




Urbanisation provoked the protection of the environment in Deep Bay Area. The economical force and the protection force affect each other and lead to a balance. The result of our research shows that meaning of the cultivated land has already changed. It is no more a zone for food production, but a park for nature conserve, wetland education and leisuement.

CONCLUSION





In history the surface of Deep Bay Area changed several times drastically. In the 19 century it was transformed from marschland into rise fields and after the second world war more and more converted into fishponds. The economical reason has played the most important role.



Now this usage of fish farming has reached again the status of not being economically efficient enough. But this time the land changes just at the borders with the new housing and industrie developments. The main change is the meaning of the land to its surrounding and in the context of Hongkong. The agricultural land becomes an urban park.



Volunteers spend their holidays helping with the work in Mai Po Nature Reserve Park.



The area becomes a beautiful garden for the surrounded housing estates.





Litterature and internet links:

Agriculture, Fisheries and Cobervation Department
www.afcd.gov.hk

Drainage Service Department
www.dsd.gov.hk

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Planning Department
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Territory Development Department
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Special thanks to the farmers and fishers we interviewed. Their names have to stay anonymous.

