
香港

High-rise living

Social housing in Hong Kong

Diplomarbeit

Zur Erlangung des akademischen Grades eines Diplom-Ingeneurs der Studienrichtung Architektur

Ines Delić 0431135

Graz University of Technology
Erzherzog Johan Univerity
Faculty of Architecture

Betreuer:
Univ.-Prof. Dipl.-Ing. Architekt Roger Riewe
Institute of Architecture Technology

Graz, Mai, 2012

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The short History of Hong Kong

Picture 1. A Neolithic settlement in Hong Kong (picture of a life sized diorama in Hong Kong´s Museum of History)

In the long range of world history, Hong Kong, as we know it today, has been existing for just a blink of an eye. However, many events took place on this land before the cold morning of 1841, when British marine soldiers arrived on the western part of Hong Kong Island, planted the Union flag and claimed the land for the British Crown.

EARLY SETTLERS

Finds discovered at approximately 100 archaeological terrains witness that people have been living in the area of Hong Kong, since the late Stone Age. It is hard to say when the land officially became an integral part of the Chinese empire, but it is certain that by the time of the Eastern Han dynasty (AD 25–220) Chinese imperial law had overlapped the region.

Han Chinese (ethnic Chinese) began inhabiting the land around the 12th century. The first of the five great clans in Hong Kong's history, whose offspring's still have political and economic influence today, were the Tang dynasty. They began settling down around *Kam Tin*[1] (tì means "field"). The Tang were displaced by the Hau dynasty, which extended itself around today's *Sheung Shui*[2], and the Pang dynasty from central Jiangsu province, which spread in the area where today *Fanling*[3] is.

After the initial three clans, came the Liu dynasty in the 15th century, and a century later the Man dynasty. The Cantonese speaking settlers called themselves *bún-day* (Punti), meaning "indigenous" or "local" – something they surely were not. They looked down on the initial inhabitants of which many traded land for sea and started living on boats. It's believed that today's fisher people, the Tanka, derived from this group.

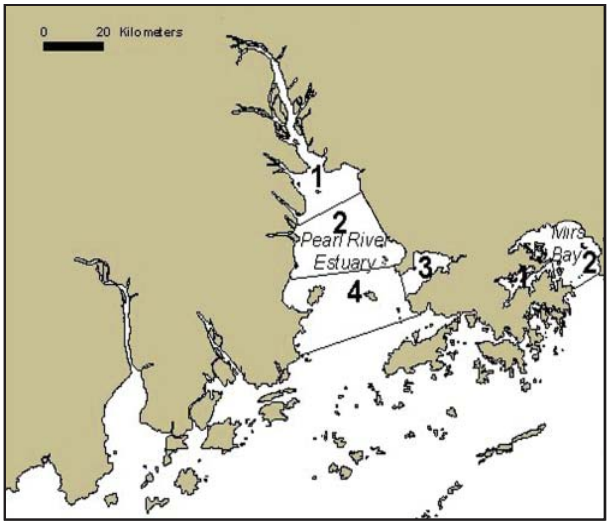
1. Kam Tin, or Kam Tin Heung, is an area in the New Territories, Hong Kong. It is north of Tai Mo Shan and east of Yuen Long. It was formerly known as Sham Tin.

2. Sheung Shui is part of the Fanling-Sheung Shui New Town in the North District of Hong Kong. Fanling is to its southeast..

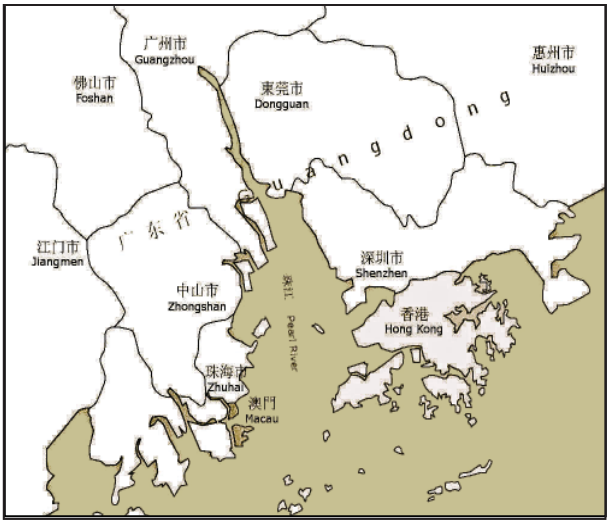
3. Fanling also known as Fan Ling or Fan Leng is an area in the New Territories of Hong Kong. It is part of the North District.

ARRIVAL OF THE "OUTER BARBARIANS"

The Pearl River estuary has been a very essential trading artery for centuries. The Pearl River is the biggest River System in south China. Her Delta is triangular shaped with Guangzhou at its northern top, Hong Kong in the south-east angle and Zhuhai in the south-west corner. In the 8th century AD Arab tradesmen entered and sacked the region. As Guangzhou is placed 2500km south of Beijing the Cantonese outlook was that "the mountains are high and the emperor is far away". This conclusion was not denied in the capital. The Ming emperors looked at their southern subjects as no less than wizards and witches. According to the emperors, their language was ambiguous and their culinary preferences disgusting. Therefore it was suitable that the Cantonese should trade with the "outer barbarians", the foreign traders.



Picture 2. Pearl River Estuary



Picture 3. Pearl River Delta

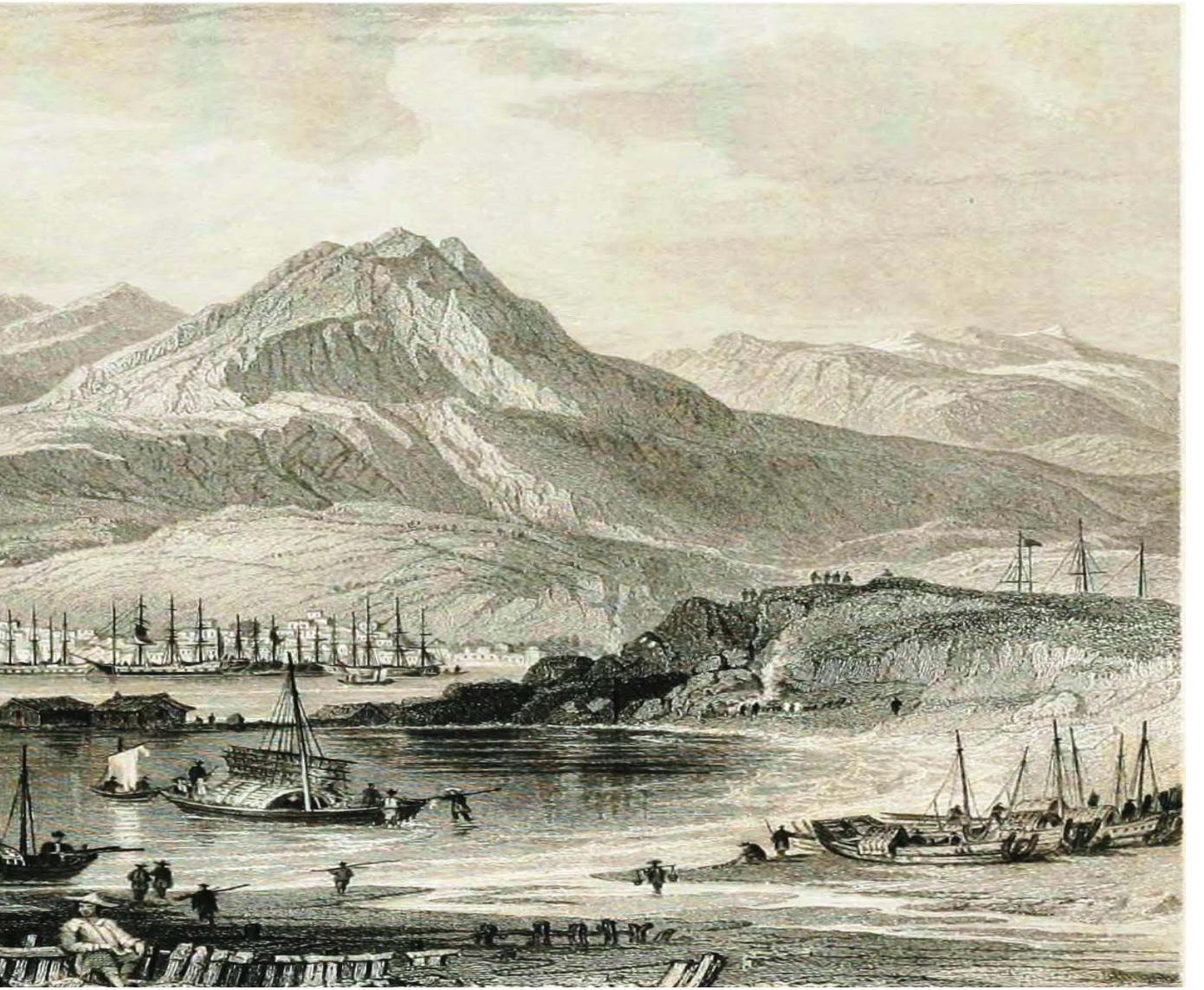
THE EUROPEANS

In the 16th century European fleets began dropping their anchors along China's south Coast. The Portuguese were among the first, driven by the prospect of profitable business.

In 1517 a flotilla sailed into the Pearl River and arrived in Guangzhou. Chinese functionaries were convinced to hand over Macao, a small piece of land on the western side of the Pearl River Delta. There, the Portuguese navigators established a trading post and agreement in 1557. Under intense pressure from Western maritime powers China approved foreign shipping into four ports. Soon Macao became the center of "hemispheric exchange of commodities". Chinese goods such as porcelain, tea, and silk found their way to Europe as a substitute for silver from Japan and the Americas.

In 1654 British ships arrived in Chinese waters and the Portuguese approved the British East India Company (EIC) to build a warehouse or "factory" there. In 1771, the EIC also opened a post in Guangzhou which was declared as the only legal Chinese port for overseas trade. The Europeans followed their example. But, only 13 *hongs* (trading companies) had the possibility to trade at one time. They placed their factories on the city periphery.

Many limitations were put on foreigners living in Guangzhou, such as only being allowed to remain there during the trading season between October and March. From April until September, during the off season, handlers would have to return to Macao. Despite all this conditions and the frequent complaining of the foreigners, the commerce bloomed and enormous profits were made. However, the trade emerged only in one way. While European barterer could not get enough silk, tea, porcelain and later opium, the Chinese were not so much interested in spices, woolens and furs brought by them. Their only fixation was on the vast magnitude of silver paid in exchange for their exotic goods.



Picture 4. View of Hong Kong Island from Kowloon (published 1843)

"FOREIGN MUD": OPIUM TRADE AND WAR

By the late 1700's the foreigner's trade deficit was conversed, after the British uncovered a commodity that the domestics did want: *Opium*.

The British merchants had a nearly endless supply of the drug from the poppy fields in India and developed the market offensively. 1773 the first shipment arrived in Guanzhou: 200 chests, each including 160 pounds of Bengal opium. Panicked to see its silver draining from the land to pay for the drug and the fast spread of addiction, Emperor Jiaqing (1760-1820) issued an edict in 1799 banning the trade of opium. The ban was easily evaded with the collusion of a never ending river of tainted Chinese officials. Clippers arriving in Guangzhou unloaded the smuggled goods onto floating stores before heading into port for inspection. Later, the contraband was bootlegged ashore.

By the 1830's China suffered from a huge outflow of silver and had around two million opium addicts in all social classes. A major economic crisis emerged.

In June 1839, Lin Zexu (1785-1850), a mandarin of great honor was appointed by emperor Daoguang to deal with the problem. First he enforced the imperial inquiry of a permanent stop to drug shipments into China. When the British declined to end the trading he sieged the hongs' factories, refused entry and cut off food supplies until the opium was surrendered and the merchants singed pledges assuring to quit the trade. After six weeks the British, under the directives of Captain Charles Elliot (1801-1875), handed out more than 20.000 chests of opium. Lin disposed of the drug by dissolving it in water and lime and flushed out to the sea.

Lord Palmerston, a foreign secretary tried to solve the new issue and trade problem. He ordered the mobilization of an expeditionary force from India to blockade Guangzhou and requested a commercial contract, which would turn trade on Britain’s side or the resignation of Chinese land where the British could settle and live free from impendence.

Meanwhile, in July 1839 a huge group of British sailors destroyed a temple and accidentally

killed a Chinese man. After the British refused to hand over the responsible ones for trial in a Chinese court, the authorities in Guangzhou ordered them off Macau.
The expeditionary force of 4000 men under Rear Admiral George Elliot, a cousin of Charles Elliot, arrived in June 1840. *The First Opium War* (1840-1842) had begun.

When the contract negotiations failed, British forces first beset Guangzhou and then left north to occupy and block a number of ports and cities along the Yangtze River and the coastline up to Shanghai. Finally, in August 1842 the War ended with the signing of Chinas first unequal treaty, *The Treaty of Nanking*. It forced China to pay compensation, open five ports (Guangzhou, Xiamen[1], Fuzhou[2], Ningbo[3] and Shanghai) to foreigners and cede Hong Kong Island to Queen Victoria.

Picture 5. Emperor Jiaqing of the Qing Dynasty

1. Xiamen, also known as Amoy is a coastal city in southeastern China.
2. Fuzhou is the capital and the largest municipality of Fujian province, People's Republic of China.
3. Ningbo is a seaport with sub-provincial administrative status. It is located on the northeastern of Zhejiang province, China, lying south of the Hangzhou Bay and facing the East China Sea to the east.

British animosity against Chinese officials within treaty ports maintained to expand in the following years. Also, the shared goals of the western powers (Britain, France and the USA) were to establish and open new ports so they would be able to expand their overseas markets. Britain claimed that the Qing authorities renegotiate the Treaty of Nanking citing their most favored nation status. They also demanded the legalization of opium trade, opening all of China´s ports to British traders and permission for a British ambassador in Beijing. The Chinese court declined the demands.

This led to *The Second Opium War* (1956-1958), which was provoked with the arrest of the Chinese crew, of a Hong Kong Ship flying the British flag. As the Chinese seized the ship the British were offended and claimed that this was an insult to the Queen and country. Britain, in alliance with France, again flexed their naval muscles and headed along Chinas coast.

The first stage of the War ended in 1958 by signing *The Treaty of Tianjin* which gave the British a lease on Kowloon Peninsula[4] and foreigner's diplomatic representation in Beijing. Despite Chinese warnings the British tried to activate the agreement by sending the first British envoy to Beijing. The armada was fired on and endured heavy losses. The Chinese had effectively reneged and hostilities resumed. In 1860 Beijing was occupied. Once again the Chinese had to capitulate and *The Convention of Peking* was signed, confessing the cession of Kowloon Peninsula and Stonecutters Island in perpetuity. Now, Britain had exhaustive control of Victoria Harbor[5]. The convention treaty also allowed the British to import opium, for an unpretentious tax, into China.

4. The Kowloon Peninsula is a peninsula that forms the southern part of the main landmass in the territory of Hong Kong. The Kowloon Peninsula and the area of New Kowloon are collectively known as Kowloon.

5. Victoria Harbor is a natural landform harbor situated between Hong Kong Island and the Kowloon Peninsula.

Picture 6. Second Opium War

Picture 7. Signing of The Treaty of Tianjin

HONG KONG'S GROWTH

By 1865 Hong Kong's population had attained a distinctly colonial profile of 122.000 inhabitants. Government buildings, a hospital, a post office, police station and jail, churches were extended over the area. Mansions began to appear over the slopes of Victoria Peak[1]. In true British style, snobbery and class divergence took hold. The upper class confined themselves near the top of Victoria Peak, while the less prosperous Europeans and wealthy Chinese alighted at the Mid-Levels[2]. The Portuguese, Armenians and Jews assembled their homes at the foot of the Peak. The majority of Chinese continued to live in the dirty slums of Western and Wan Chai[3] districts.

The British army felt it needed to protect her expanding colony and contribute water to it. When the Qing dynasty was at its lowest point the British government appealed for land extension. They were given land north beyond Kowloon Peninsula up to Shenzen River[4] and 234 enclosed islands. This land and islands, later known as the New Territories, were transferred into British hands on 1. July 1898. But this time the land was not an outright ownership, it was to be a lease for 99 years. The June Convention of Peking, as the treaty is called, gained the British a larger than expected slice of territory increasing the colonies size by 90%.

1. Victoria Peak is a mountain in Hong Kong. It is also known as Mount Austin, and locally as The Peak. The mountain is located in the western half of Hong Kong Island, with an altitude of 552 m.

2. The Mid-levels are an expensive residential area on Hong Kong Island in Hong Kong. It is located halfway up Victoria Peak, directly above Central.

3. Wan Chai is a metropolitan area situated at the western part of the Wan Chai District on the northern shore of Hong Kong Island.

4. Sham Chun River (also called Shenzhen River or Shenzhen He) serves as the natural border between Hong Kong and Mainland China, together with the Sha Tau Kok River.

At the turn of the century the population of Hong Kong has grown to 325.000 and the public works have increased to match the requirements of the inhabitants. Gas and electrical power utilities were set up, port facilities improved. Ferries, trams, the Kowloon- Guangzhou Railway and the new ultra modern High Level Tramway (later known as the Peak Tram) supplied a decent transport grid. Land reclamation was completed and the railroad line from Kowloon to the border with China was finished. By 1910 the colony became the world's third biggest port.

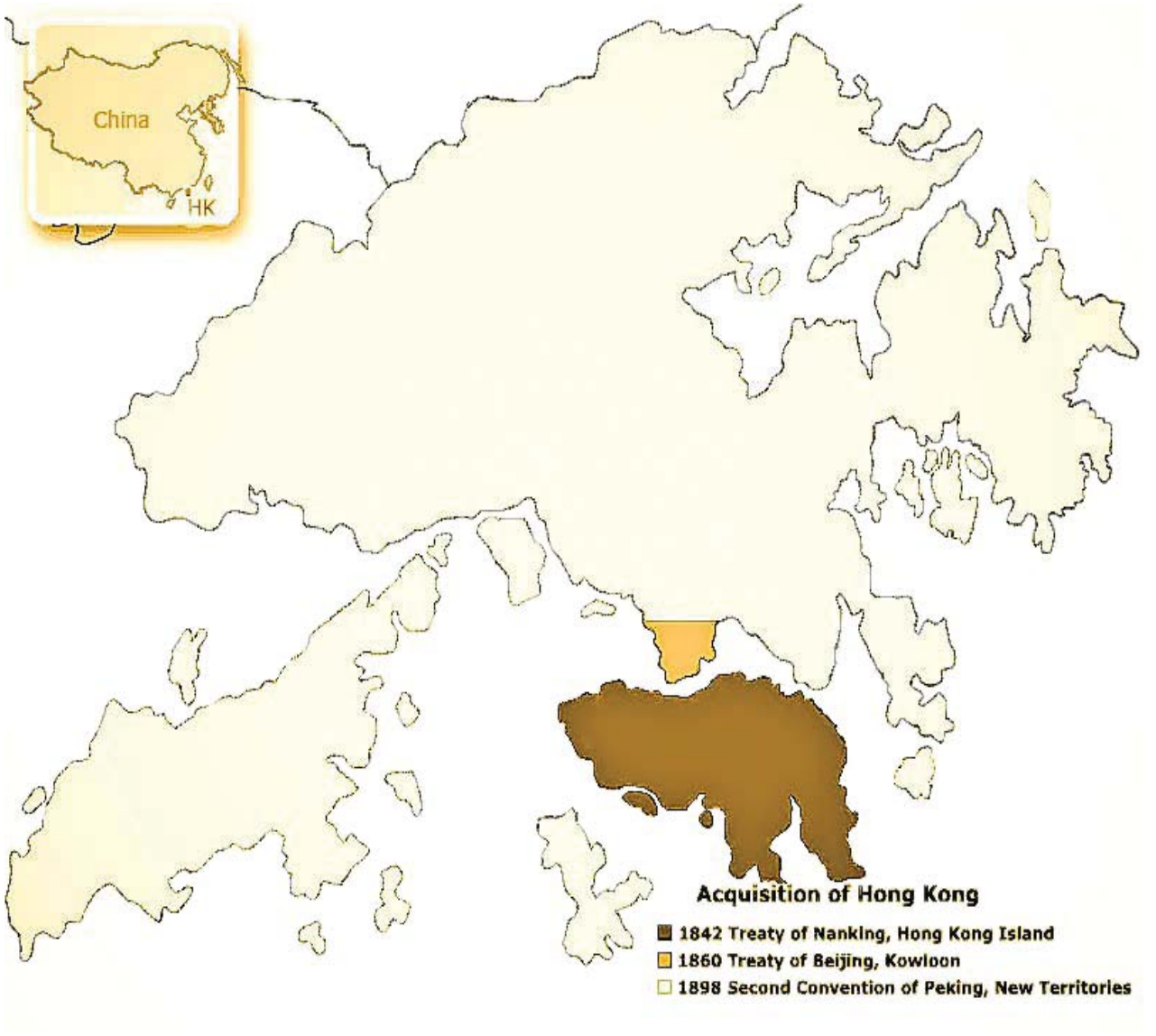
Picture 8. Hong Kong Streets 1865

The colony's community continued to become larger thanks to the immigrant's movement. People tried to flee from the Chinese Revolution in 1911, which dethroned the Qing dynasty and led to several decades of brawl, riotous warlords and dearth. The numbers of refugees that entered the colony maintained high as the civil war in China flamed, but the stream became a flood after the Japanese occupied China in 1937.

Picture 9. Queen`s Road 1900s

"Vision is perhaps our greatest strength. It has kept us alive to the power and continuity of thought through the centuries. It makes us peer into the future and lends shape to the unknown."

Li Jiachéng



Picture 10. Hong Kong colony process

JAPANESE OCCUPATION

The Japanese, who have occupied Machuria[1] since 1931, took Beijing in 1937 and Shanghai by 1938. They also controlled most of the important cities in the eastern costal region of China including Guangzhou. Refuges came in crowds from mainland China to Hong Kong, and by the outburst of World War II the population had reached 1.6 million. 500.000 of them were sleeping in the streets.

The Japanese forces invaded Hong Kong from the Chinese border on 8. December, 1941, just 8 hours after the Pearl Harbor attack. British, Canadian, and Indian divisions, helped by the Hong Kong Volunteer Defense, were faced with crushing odds and pushed back through the New Territories and Kowloon to Hong Kong Island. Officer, Lt.-Gen. Takashi Saki, who was in charge of the Japanese invasion, started a heavy aerial bombing and artillery attack on Hong Kong Island.

On 25 December 1941 (this day is in history also known as *Black Christmas*) British officials crossed the harbor and surrendered by signing a document in the Peninsula Hotel on Kowloon, which the Japanese used as headquarters.

Three hard and agonizing years of occupation followed. Most Europeans were isolated at Stanley[2] and Sham Shui Po[3]. At the same time the occupiers tortured and terrorized the local people, Hong Kong was ruled as detained land and subjected to martial law. The local currency, Hong Kong Dollar, was worthless and has been replaced by the Japanese Military Yen. Philip Snow, a prominent historian of the period said: “The Japanese cut rations for civilians to conserve food for soldiers, usually to starvation levels and deported many to famine- and disease-ridden areas of the mainland.”[4]

1. Manchuria is a historical name given to a vast geographic region in northeast Asia. Depending on the definition of its extent, Manchuria either falls entirely within People's Republic of China, or is divided between China and Russia. The region is commonly referred to as Northeast China, and historically referred as Guandong.

2. Stanley is a town and a tourist attraction in Hong Kong. It is a peninsula on the southeastern part of Hong Kong Island.

3. Sham Shui Po, or Shamshuipo, is a district of Hong Kong. It is situated in the northwestern part of the Kowloon Peninsula, north of Tai Kok Tsui and east of Cheung Sha Wan.

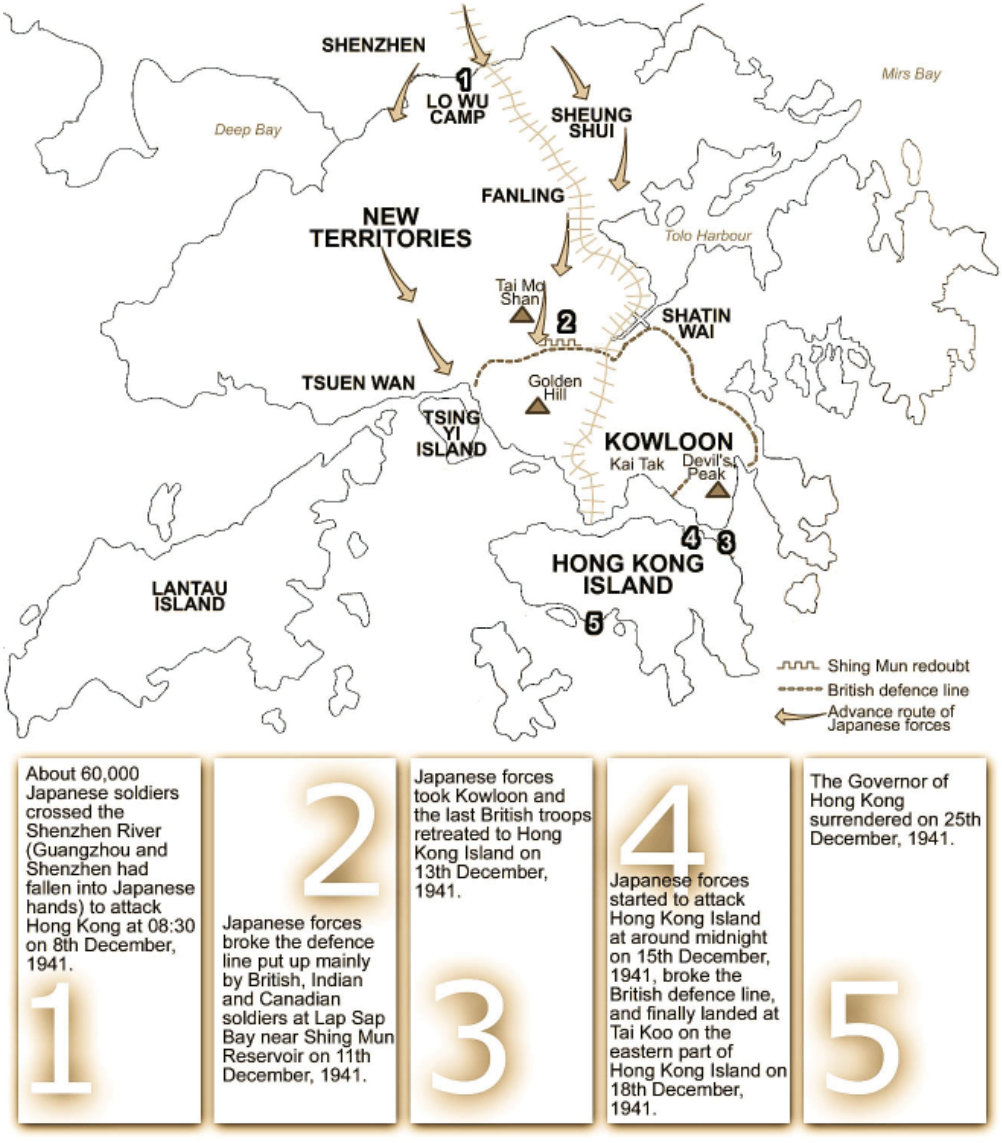
4. The Fall of Hong Kong: Britain, China and the Japanese Occupation; Philip Snow;

The island lived under a chronic threat of starvation. During 1942 the Japanese started to transfer POW's (Prisoners of war) to Japan and Korea. They worked there as slaves in coal and nickel mines, shipyards and factories, lived and died in horrifying conditions. By the end of war the Japanese managed to reduce Hong Kong's population to 600.000.

The occupation and the horror ended officially in 1945 as the USA dropped an atomic bomb on Hiroshima and Nagasaki. Meanwhile, the USSR began the invasion of Manchuria. This led to the withdrawal of Japanese troops from China and the British rule in Hong Kong was restored soon.

Picture 11. Japanese Invasion on 8th December, 1941

Picture 12. Stanley Jail in Hong Kong where POW's were held



Picture 13. Map of the Japanese lines of attack

POSTWAR GROWTH AND ECONOMIC REVOLUTION

After the Japanese left Hong Kong, the colonies future looked bright again. But, events at home and on the mainland forced the colony into a new direction.

People flooded back into the British territories with a rate of 100.000 a month and 1947 the number reached almost 1.8 million. The imminent defeat of Chiang's nationalists by Mao Tse Tung's communists caused a river of refugees crossing the border. When Mao assigned the governmental chair 1949, setting up *The Peoples Republic of China*, emigrants continued to enter especially from the former commercial center, Shanghai. The stream was stopped when the communists closed the border between China and the New Territories. Hong Kong's future as an entrepôt[1] suddenly looked questionable, when U.N. instituted a trade embargo against Communist China.

Luckily many of the new arrivals from mainland were businessmen and mercantilists with capital. Supported by a ready workforce the colony turned to manufacturing and financial services and transformed itself to one of world's greatest economic miracles. But, much of these achievements were founded on a huge alliance of cheap workers from China.

In those early years the working conditions were often inhumane: sixteen hour days, child labor, dangerous working circumstances and low compensations; were not uncommon. The aliens lingered, and some made it even out of barrenness into prosperity. The economic progress was 10% a year and, under international pressure, the governance began to establish new working standards and the conditions improved.

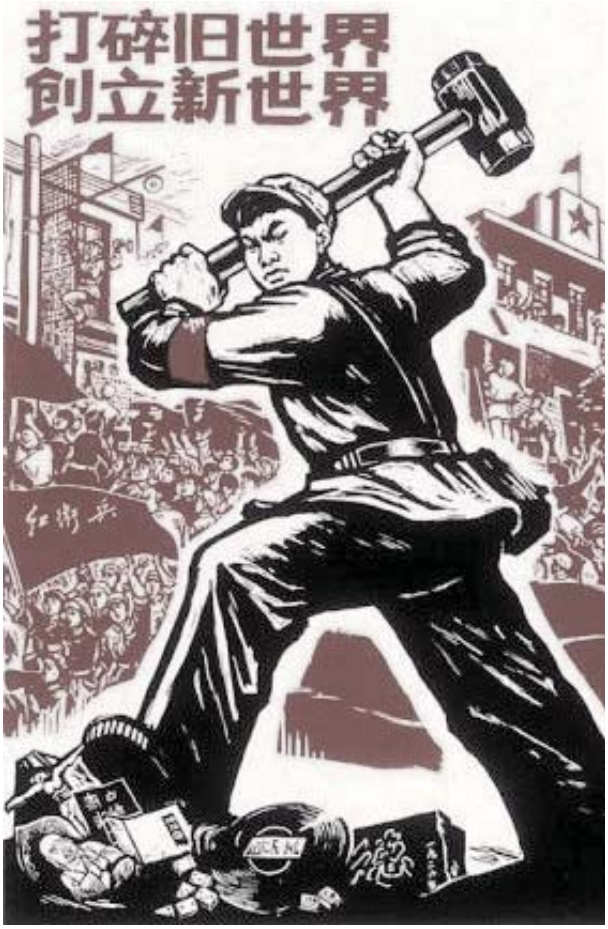
By the mid 1960's Chinas Cultural Revolution[2] started, driven by Mao. The Revolution derived the Red Guards, who spread chaos throughout the country for the next decade. Millions were put in prison, persecuted or killed, and China's historical and cultural heritage was mostly destroyed. The harassments crossed over into Hong Kong.

1. An entrepôt (from the French "warehouse") is a trading post where merchandise can be imported and exported without paying import duties, often at a profit.

2. The Cultural Revolution was a violent mass movement in the People's Republic of China that started in 1966 and officially ended with Mao Tse Tung´s death in 1976. It resulted in social, political, and economic upheaval.

When the Cultural Revolution was at its highest point, in 1967 de Red Guards were in control of China and Hong Kong's strength again started to vanish. Riots agitated the colony causing bombings, destruction and incendiaries. The Communist had just little support from Hong Kong's inhabitants, who were, by now, tired of the constant disruption to their lives.

By the late 1960's, China started to distance herself from its isolationist policies. Although the Chinese authorities continued denouncing the "unequal treaties", they understood Hong Kong's significance to the national economy. In 1971 trade sanctions were lifted, diplomatic relations restored and Hong Kong's path to exceptional economic growth and bright future resumed.



Picture 14. Chinese poster saying: "Destroy the old world; build a new world." Classic example of the Red art from the early Cultural Revolution. Worker crushes the crucifix, Buddha and classical Chinese texts with his hammer; 1966

The future may be ma
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ed country as well as
humanity of mankind.

Li Jiacheng

SOCIETY IN PROGRESS AND THE 1997 QUESTION

Enormous amounts of money in Hong Kong's chests led to a large improvement of the colonial infrastructure and quality of life. Governor Murray MacLehose was the architect. He came up with a massive public housing program. Hundreds of people were re-housed from slums to multistory buildings. The new town – Sha Tin was finished in 1973, characterizing the beginning of a massive and unprecedented public-housing design. Free and obligatory education on junior high school level covered the way to an educated and competent future labor force. Furthermore, MacLehose was responsible for creating the famous net of country parks that now days cover 40% of Hong Kong's territorial area.

Even though Hong Kong's stock market broke down in 1997 the economy boosted herself up later in the decade. At the time their cheap working force was threatened by Hong Kong's manufacturer, China started to arise from her self-made isolation. The new leader Deng Xiaoping (1904-97), who took control after Mao Tse Tung's death, introduced a new, "Open Door" policy which brought back to life Hong Kong´s role as the gateway to mainland.

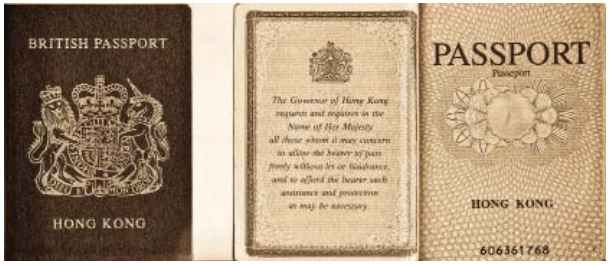
At this time economy was booming and sparkling new skyscrapers changed the Skyline of Hong Kong's Central District. By the mid 1980's Hong Kong became an international, cosmopolitan city with one goal: collect as much profit as possible until 1997, when it's former and future owner would take over again.

As the period, before the ending of the New Territories lease, shortened in the late 1970's the Chinese and British administrators met for the first time to resolve the problem of what is going to happen in and after 1997 when the Kingdom had to return the New Territories. The difficulty was that by that time almost half of Hong Kong's population lived in the New Territories and a division was indefensible. Margaret Thatcher, former British Prime Minister came to China in 1982, starting two years of difficult negotiations. At a meeting between the Prime Minister and Chairman Deng Xiaoping the following joint statement was recorded:

"*Today the leaders of both countries held far-reaching talks in a friendly atmosphere on the future of Hong Kong. Both leaders made clear their respective positions on the subject. They*

agreed to enter talks through diplomatic channels following the visit with the common aim of maintaining the stability and prosperity of Hong Kong." [1]

By 1984 the deal was sealed with the Sino-British Joint Declaration. On 1. July 1997, the day the 99 year lease of the New Territories expired, Hong Kong was returning to China. It was to become a Special Administrative Region (SAR) with high amplitude of autonomy. It could keep its own currency, remain to elect his own government, continue his judiciary and maintain its capitalist economy and its freedom for the next 50 years following the return to China. Regardless of calm and easy words from the British, Chinese and Hong Kong administration, including the citizenry, suffered from large anxiety at the attainable economic and political aftereffects of the disposal, over the following 13 years. In the tense years until the handover thousands of Hong Kong's inhabitants emigrated to the USA, Europe, Australia and Canada.



Picture 15. The British passport for BDTC (British Overseas Territories citizen) with a connection to Hong Kong

Picture 16. Wax figures of Deng Xiaoping and Baroness Margaret Thatcher, on display at Shun Hing Square Tower.

1. Sino-British Joint Declaration

THE TIANANMEN SQUARE INCIDENT AND ITS CONSEQUENCES

Dilemma turned to extreme fright after 4. June 1989, when troops of the Peoples Liberation Army destructively crushed democratic protests on Beijing's Tiananmen Square. When the student's movements broke out, an enlarging number of Hong Kong's residents were frustrated by the PRC deviating the Joint Declaration and confining the democratic exploitation after 1984. A public opinion arose that "*as long as freedom, human rights and democracy cannot be guaranteed in the PRC, they cannot be protected in Hong Kong after 1997.*" [1]

What followed were amazing events and public outflows of grief, never before seen in Hong Kong. Thousands of citizens went into the streets with black arm bands and mourning in honor of those killed in Tiananmen Square. Hope for a bright future followed the earlier achievements of the Beijing Students but, the tanks that drove into Tiananmen Square and the resulted tragedy smashed it. People were forced to confront themselves with the problem of what they were and would become after 1997. The government tried to calm down and restore confidence by introducing plans for a new shipping point and airport with an approximate price tag of over 160 billion dollars. In those years this was the world's most expensive infrastructure project. But nothing could stop the fear that was growing within the people and the thought that the Tiananmen Square incident could be repeated in Hong Kong. People with an opportunity to emigrate, fled to any country that would welcome them. This time period saw over 100.000 people leave Hong Kong.

1. A Modern History of Hong Kong; Steve Tsang

Picture 17. "Tank Man", a epic picture taken by Jeff Widner, a journalist of the Associated Press. The photograph became one of the most famous images of the 20th century. On the 5th June 1989,a day after the Tiananmen Square Massacre, an unknown rebel, with a shopping bag in his hand, stood before a column of 18 tanks, who were driving east along the Avenue of Eternal Peace, to stop them.


毋忘六四 銘承英烈志 薪火相傳 推好民主陣
紀念「六四」20周年大遊行
DEMONSTRATION TO COMMEMORATE THE 20TH ANNIVERSARY OF JUNE 4
平反六四
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JUNE
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"During times of universal deceit, telling the truth becomes a revolutionary act."

George Orwell

THE HANDOVER AND DEMOCRACY

Hong Kong's politics was never so apathetic as in the 1970's and 1980's. The lexeme "party" may have been hated by the refugees who fled from the Nationalists and Communists in the 30's and 40's but to their sons and daughters it was not a big issue. By the 1970's the first generations that were born in Hong Kong entered universities and colleges. Those people considered themselves as "Hong Kong people" and not as refugees from China.
They became politically active with a passionate and idealistic meaning, fighting for Chinese to be recognized as an official language beside English. They fought colonialism with a certain pride of their Chinese heritage and criticized the colonial government. Still, the numbers were divided between those who supported the Chinese and the Communists Party and those who were reserved and even doubted them.

Chris Patten, Hong Kong's 28th and last foreign governor came in 1992 bringing a new political agenda with him, never seen by previous governors. He tried to institute reforms in Hong Kong's politics which the British thought would be safeguards after the handover.

At that time the governmental body, the Legislative Council, was composed of appointed members elected by competent aristocrats in “functional constituencies”, and a third directly elected by universal franchise. Patten set up a new package that allowed the election of all members of the legislature and made the elections more democratic. China was outraged and saw this as a denudation of the political process set in the Basic Law. In 1995 elections were held under these reforms but China denied to accept the new Council and appointed its own provisional Legislature. This tentative body served until May 1998, when a new Legislative Council was voted for by the people of Hong Kong, by business constituencies and power brokers in Beijing.

As 1997 came closer the public meaning began to side with the businessmen: better to leave things as they were than to upset China. The SAR's first chief executive, Tung Chee Hwa (1937-) replaced Patten. In the night of 30. June 1997, millions of people around the world watched the handover celebration held in the new wing of *Hong Kong's Convention & Exhibition Centre* in Wan Chai. Chris Patten

dropped a tear, the Chinese Premiere Jiang Zemin smiled broadly and Prince Charles was to all appearances stoic.

So a century and a half of British rule in Hong Kong ended and the new chief executive reflected on the handover with these words: "*Now we are masters of our own house*." [1]

Picture 18. The Handover ceremony on 1st July 1997

Picture 19. Flags of Hong Kong and PRC

1. Hong Kong and Macau; Andrew Stone, Chung Wah Chown- and Reggie Ho

HONG KONG AFTER 1997

Tung rode a wave of popularity that followed the euphoria after the handover. But, things changed during his first five year term when the public realized that many of his political decisions were actually made in behest of China's leaders and didn't follow the interests of Hong Kong's people. Positive critics on how his government managed the Ransack of the 1997-99 Asian economic crisis returned him for a second five year term. Controversy continued in his office, most perceived in March 2003, when his government failed to contain the Severe Acute Respiratory Syndrome (SARS) epidemic. Tung's acceptance continued to vanish and after huge street protests in 2005 he was forced to step down, halfway through his second five term.

The territory's financial secretary, Donald Tsang, replaced him. Tsang was a welcomed replacement for the spiritless Tung and gained high public approval. In 2007 he was reelected with ease. For many people who desired for a truly democratic Hong Kong that was a sign of hope, that their government may one day be elected by them.

More than ten years after the handover the situation in Hong Kong is brighter thanks to its revived economy. Now, Hong Kong has a hop in its step and proud citizens, who can say that they are citizens of the SAR (Special Administrative Region) as well as subjects of China, however blurring and problematic this dual identity might sometimes appear.

The director of the Center on China's Transnational Relations at Hong Kong University of Science, David Zweig says: "*Hong Kong's in a transition period. It's experimenting with political change. Its business community is trying to seek out its future. Its demographics are in flux. It's even asking what languages it should be speaking.*" [1]

Hong Kong and China are both moving on, it's just not clear enough in which direction and whether they will run parallel, assimilate or collide.

1. Newspaper article - TIME; Zoher Abdoolcarim; 07. June, 2007

HONG KONG THEN AND NOW

The Land

Picture 20. The Boundary of Hong Kong from Space

Hong Kong is geographically an extension of China´s Guangdong province. It is placed on the tip of the province, east of the major waterway, the Pearl River Estuary, and just south of the Tropic of Cancer on a latitude very similar to Hawaii. The territory spreads over only 1098 km² but has a remarkable variety of topographical features; from arduous peaks sinking down to deep valleys intertwined with rocky convoluted coastlines and many islands.

The founding of the city probably took place only due to the historical incident of the First Opium War, since the natural environmental conditions, under conventional circumstances, probably wouldn't favor a development of a cosmopolitan city. Today's geographical outcome is surely a result of geopolitical flows. Hong Kong has achieved an important position in world trade with liberal basic framework, which limits the role of "state power" to create favorable framework for trade conditions. Moderate tax burdens on economic activities, a light democratic participation of the population and enormous public investments in infrastructure make this location viable. At the same time, Hong Kong is also an agglomeration which includes the phenomena of the Third World, such as marginal urban slums and entirely crowded downtown areas as the flip side to the sparkling world of mirrored office towers, internationally known Luxury Hotels and consumer temples.

SPATIAL DIVISION AND NATURAL CONDITIONS OF THE TERRITORY

Hong Kong has 4 Census Areas[1] which are formed of 41 Census Districts. The 5th Census Area is the "Marine", the population that lives on boats. Thereby have the Census Areas following numbers of Census Districts: Hong Kong Island 12, Kowloon 5, New Kowloon 10 and the New Territories 14.

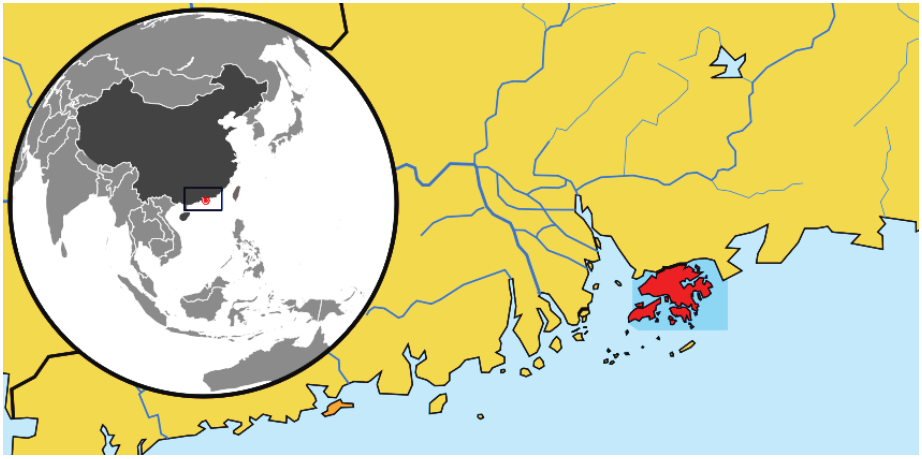
The former Crown Colony, as mentioned before, lies on the south-east border of the Pearl River Estuary (Zhu Jiang) by the South China Sea. The, by-numerous bays, fringed headland is at the narrowest point constricted by the Deep Bay (Shenzhen Wan) in the W and the Mirs Bay (Tai Pang Wan) in the E. Along the Sham Chun River runs the border of the People's Republic of China (Guangdong Province). Upstream the tong of the land are 235 Islands, of which the main one is Hong Kong Island and the biggest Lantau Island.

Volcanic Effusive and granitic intrusions as the main petrographic[2] components, NE-SW extended geological disruptions as structural lines, the influence of sea level fluctuations on a ria[3] coast and the profound weathering processes in a subtropical monsoon climate are the most important factors of Hong Kong's morphogenesis.

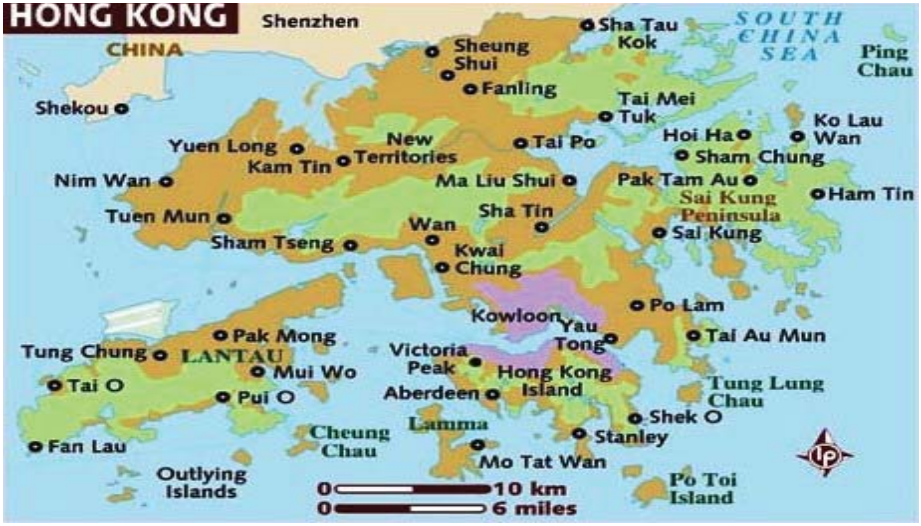
1. A census tract, census area, or census district is a geographic region defined for the purpose of taking a census. Usually these coincide with the limits of cities, towns or other administrative areas.

2. Petrography is a branch of petrology that focuses on detailed descriptions of rocks.

3. A ria or drowned river valley is a landform created when sea levels rise relative to the land, submerging a coastal river valley



Picture 21. Hong Kong location



Picture 22. Hong Kong Districts

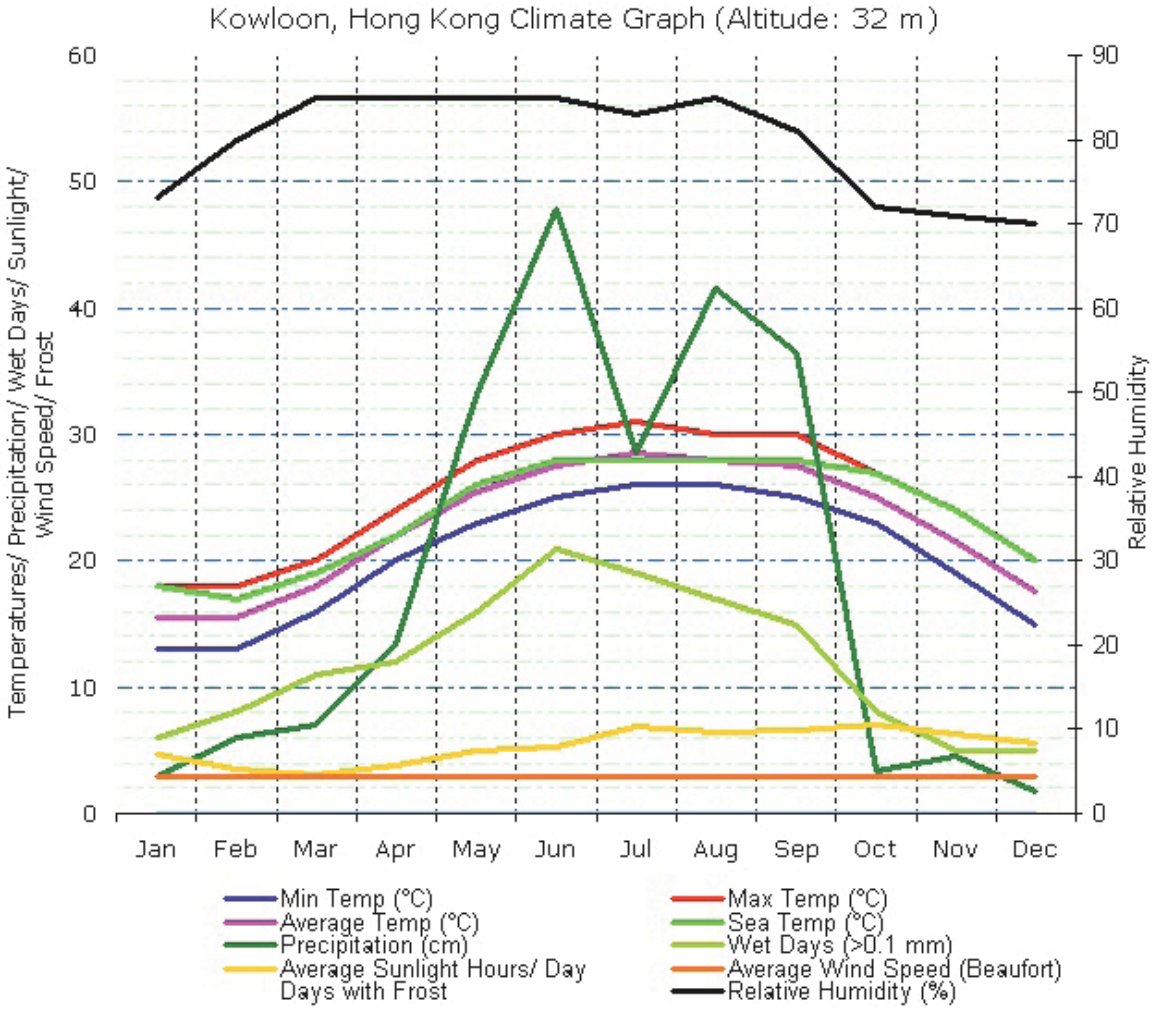
CLIMATE AND WEATHER

The southern Chinese Coast belongs, after Köppen[1], to the area of warm-temperate, dry winter climate with a summer temperature maximum over 22°C. However, this classification describes just approximately the climate characteristics. On one hand, as a result of to the S open position of the Tropic Cancer, ensue tropical influences and to the other side underlie the weather conditions to the large scale monsoon flows.

In the long-term average the seasons are quite clear, but with an unequal duration. The relatively cool and dry winter lasts from November until February. The precipitation in December reaches its monthly minimum of 25mm and also a relative humidity of 69%. The spring is, according to weather, a transitional season from March to April. The cool east winds ("*easterlies*") exchange with the warmer south streams. Fog, due to the still cool northern ocean currents and low-hanging stratus clouds, is often the result. The summer begins in May and continues until mid September. During this time, E-monsoons make regular appearances.

The trough of low pressure hits on a very warm sea surface. This is the precondition for the development of tropical storms. Of the approximately 30 annual recorded tropical cyclones about 5-6 affect the western territory of Hong Kong. Half of them reach a wind speed of a typhoon, more than 118 km/h. About 80% of the annual precipitation falls during the summer season, which in July reaches its maximum of 432mm. The relative humidity between March and August is over 80%. Because of the high summer air temperatures (maximum in July with 28.6°C) and a small daily fluctuation of about 5°C mugginess is constant. The urban climatic conditions are being intensified by the enormous population density and mixed use of buildings. Autumn, in turn, is a rather short, transitional period from September to October, where the precipitation declines.

1. The Köppen climate classification is one of the most widely used climate classification systems.



Picture 23. Hong Kong climate

LANDSCAPE SHAPING AND THE OVERALL APPEARANCE

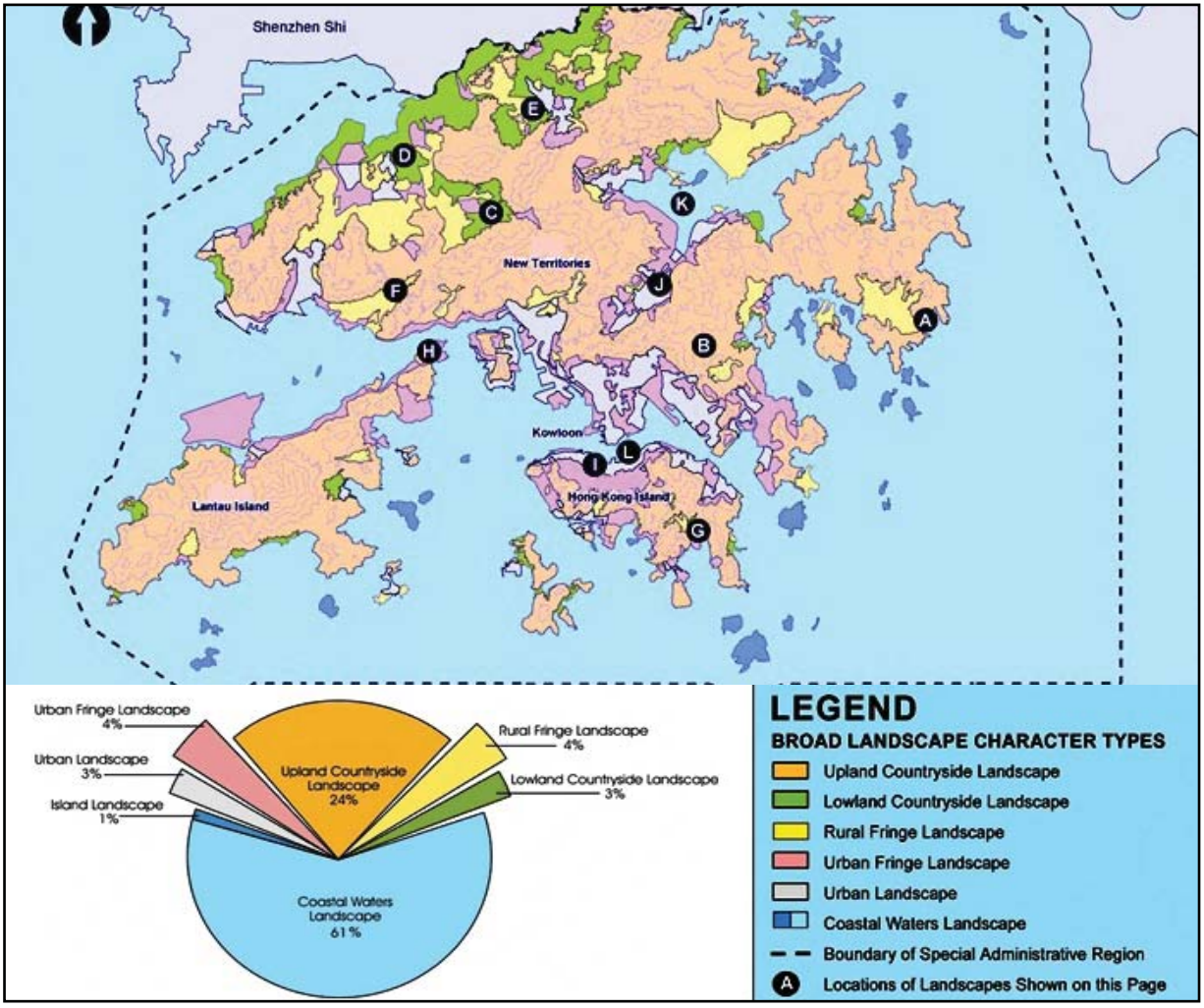
The original vegetation cover has, mostly through anthropogenic reasons, largely disappeared.

The south China coastal area still belongs to the evergreen (sub-) tropical, three-story high, monsoon forest zone. Essentially, the uncultivated mountain areas are still dominated by bush and grass land. In the last three decades, great efforts have been made to carry out afforestation programs, in order to combat the destruction of landscape. The deep structured relief and the subtropical humid climate set the conditions for a fine-branched river network, with substantial outflows notwithstanding minimal catchment areas. Despite high rainfall, the lack of water-storing rocks creates a problem for the drinking water supply.

In summary, the following types of landscape can be described as characteristic for the territory:

- The channels, bays and islands of the off shore area
- The sequence of rocky- and beach coast areas
- The marine-alluvial estuary sections
- The alluvial-colluvial valleys and basins
- The highland, mostly composed of granitic and volcanic rocks

Finally, it has to be mentioned that the anthropogenic changes in landscape in some regions, through excavation and banking on the land side and through bay filling and drawing new coastlines on the seaside, have made downright modifications of the topography. More than 800 km² of the currently 1104 km² comprising territory belongs to the Highland. The, for about 130 years, performed land reclamation projects have provided the territory with around 93 km² of new land. The sea surface belonging to the territory is 1837 km².



Picture 24. Landscape character types in Hong Kong

LANDSCAPE OUTLINE

The straits (Victoria Harbor, East Lamma Chanel, Rambler Channel, etc.), bays (Tolo Channel, Port Shelter, Deep Bay) and the central mountain ranges (Tai Mo Shan, Tai To Yan, Pat Sin Range, Ma On Shan, and Nine Dragons) allow the small-scale diversity of a very clear structure.

HONG KONG ISLAND

The approximately 80.5 km² big Island of Hong Kong is divided by a 1.2 km marine channel, Victoria Harbor, from the mainland, the Kowloon Peninsula. The northern part of the island, where the core city is placed, is dominated by a semi elliptical mountain chain that extends from *Mt. Davis* (269 m), on the western headland, over the twin peaks of *Victoria Peak* (493 m and 554 m) to *Mt. Parker* (531 m) in the east. The Happy Valley, which is reentrant into the mountain frame, divides the northern island in a western (marked by the Victoria Peak) and eastern region.

Since the founding of the colonial establishment Victoria (1841), west of Happy Valley, at the northern foot of the Victoria Peak, the city was developed with "the back to the wall." This position offered protection for settlements and harbors from the prevailing easterly winds and storms. Expansions of existing settlements were primarily carried out by successive embankments in the relatively shallow Victoria Harbor.

The city has a linear shape due to natural topography and lies on a ca. 15 km long and 200--500 m wide strip of land reclamation ground. In the course of land reclamation, most creeks were filled or leveled. The natural shoreline can be traced in the city map along the old road system *Queen´s Road - Leighton Road - King´s Road* at the foothill. The land reclamation area follows a narrow coastal strip which merges into the human designed terraces of the granite slope foot. This is concluded with the steep drop of the volcanic mountain frame.

The land reclamation areas are dominated by high density public and commercial utilizations. The terraces on the slope foot are marked by residential areas with variable density but are close to the city. *The Peak District* is an upper-class residential area with a loose crest lining, where it is permitted by the relief.

Over the basin, like Happy Valley and the saddle of Wong Nai Chung, runs a connection to the south coast, quasi the back side of the highly urban area. This area is divided into a series of bays and headlands, such as the peninsulas *Shek-O* and *Stanley*. The change of cliffs and sandy beaches creates, especially on the side away from the prevailing wind direction at the bay chain, attractive recreational areas such as the known *Repulse Bay* and on the hillsides expensive residential areas.

Thus, at this part of the south coast developed a specific form of Suburbia. Its spread is limited by the designation of protected mountain ridges, *Country Parks* (*Tai Tam*, *Shek O*) and water catchment areas (*Tai Tam Reservoirs*). The peninsula around the *Brick Hill* is home to the leisure center *Ocean Park*.

The marine ingression *Aberdeen Channel* separates the island *Apleichau*. The remaining piece of valley offered settlement niches for rural residents (Aberdeen) and the drowned valley tee (Aberdeen Harbor) anchor space for the dwellers on boats. Since the opening of the Aberdeen Tunnel to the core city the southwestern part of Hong Kong Island is subject to a city expansion boom. A prerequisite for this creates a necessity of an extensive redesign of the coastal landscape.

(Map on pages 60-61)

KOWLOON PENINSULA AND KOWLOON BAY

The Kowloon Peninsula, an undulating, from Hong Kong granite build up headland has undergone a considerable broadening by land reclamation.

The bays of the western edge *Yau Ma Tei* and *Sham Shui Po* are largely filled in and integrated into the urban development area. The greatly reduced bays on the east side, *Hung Hom Bay* and *Kowloon Bay*, are used for infrastructural and commercial utilization. The east subsequent peninsula of *Kwun Tong* approaches with its southern tip up to 500 m to Hong Kong Island (narrow of *Lei Yue Mun*).

The upcoming Hong Kong granite of the peninsula is furrowed by alluvial valleys. The impressive mountain range of the *Nine Dragons* is made of durable Cheung Chau granites and forms with the peaks *Eagles Nest* (312 m), *Lion Rock* (495 m), and *Tate's Cairn* (577 m) the northern border of Kowloon. The crest line branches to the south, culminating in *Kowloon Peak* (602 m). By regressive erosion along the material boundary, *Jordan Valley*, has been made a traffic passage between Kowloon Bay and the adjacent Junk Bay (*Clear Water Bay-Road*). The kaolin-degrading near the coast, by *Cha Kwo Ling* was closed to make room for the tunnel entrance of the Eastern Harbor Crossing. The slope foot zones of the frame were solubilised, with high expenses for slope protection, for urban expansion.

(Map on pages 62-63)

THE LAND BAY OF KWAI CHUNG AND THE ISLAND OF TSING YI

In the NW of Kowloon peninsula, separated by the foothills of the Nine Dragons, is attached the land bay of Kwai Chung. Upstream of it, divided by the *Rambler Channel*, is the island Tsing Yi. This space unit is the result of a comprehensive landscape redesign in the framework of a new town planning. This land bay, which is around 8 km², was created through ground leveling and filling of two bays (*Tsuen Wan* and *Gin Drinker's Bay*) and is a large urban growth area. Also, the natural scenery of the Tsing Yi Island is seen as a urban expansion area for the New Town Tsuen Wan and is as a heavy industry-shore location which is constantly changing.

(Map on page 64)

This part of the former crown colony is scenically the most versatile. The central mountain range with the highest peak, the *Tai Mo Shan* (957 m), forms a barrier between the bays of *Sha Tin* and *Kwai Chung* in the south and *Shek Kong* and the *Lam Tsun Valley* in the north. The bays regressive erosion has dissected the mountain land and created saddles (*Lead Mine Pass*, *Saddle of Nyan Lin* and the channel of *Tai Lam Chung*).

The uninhabited and non farmed land was put under protection as a "country park." Reforestation programs ensure the area functions as a water catchment area for some open reservoirs (*Jubilee Reservoir*, *Lower Shin Mun Reservoir*, *Ho Pui Reservoir* and *Tai Lam Chung Reservoir*).

The *Castle Peak Valley* links the now filled up (anthropogenic) Castle Peak Bay with the coastal plane on the Deep Bay and divides the inaccessible highland around the *Castle Peak* (538 m) in the west and the mountain range up to Tai Lam Chung channel in the east. The broad corridor of the Castle Peak Valley offers the possibility for expansion of the New Town *Tuen Mun* with its inter-urban axis to Y*uen Long*. The coastal plain of Yuen Long is being mostly used for fish farming. Alluvial mud zones interchange here with mangrove-like swamp strips.

The Mai Po Marshes, an animal and nature reserve near the estuary of the Sham Chun River, are known for their variegated bird world. The Sham Chun River, a short, meandering lowland river forms the border to the People's Republic of China. The river drains the valley of *Sheung Shui*.

In addition to the extensive settlements of the New Towns Sheung Shui and Fanling, this region is a main cultivation area for the urban supply of fresh vegetables. In the south, a short breakthrough section of the valley through the volcanic mountain ranges of P*ak Tai To Yan* (480 m) and *Pat Sin Range* makes the most important traffic link to the *Lam Tsuen Valley* and the *Tai Po Bay.* The Kowloon-Canton-Railway follows this path to south. In the east, the upper reaches of the *Na Tung Ho* River to the bay of *Starling Inlet* forms a corridor.

(Map on page 65)

TOLO CHANNEL AND THE BAYS OF TAI PO AND SHA TIN

Starting from the *Mirs Bay* in the northeast, the ingression of the Tolo Channel reaches about 18 km into the mainland of the New Territories. A narrow spit of land separates the secondary bay of *Plover Cove* from the Tolo Channel and forms so a natural dam for this water-saving space.

On the west sea inlet offered the alluvial estuary initial surfaces for the development of the New Town and industrial zone of *Tai Po*, which mainly is built on land reclamation new land. The south part of the *Lam Tsuen Valley* is an agriculturally cultivated area.

The south-western inlet, the *Sha Tin Cove*, a 9 km long and drowned valley was filled up for the development of the New Town *Sha Tin*. Along the channel, which discharges the *Shing Mun River*, extends itself the fast growing urban settlement. The Bay of Sha Tin is framed by the north-western mountain range of *Grassy Hill* (645 m) and the *Ma On Shan* (702 m) in the east and in the south with the traffic obstructing chain of the Nine Dragons.

(Map on page 66)

THE EASTERN NEW TERRITORIES

The small area east of the crest line Ma On Shan - Kowloon Peak has so far been only slightly detected by the enormous settlement dynamics. So, the image of a coastal landscape ingression largely remains unchanged.

A number of bays tighten the mainland which is up streamed by quite a few uninhabited islands. Only a few colluvial and alluvial flattening, near the coast, bear smaller rural settlements. The area east of *Sai Kung* is a "country park". Taking advantage of the favorable relief, land bridges were filled up in order for a water-saving space to be created (*High Island Reservoir*).

The city's attractive coastal strips, west of *Port Shelter* and on the *Junk Bay*, underlie a recently similar suburban development like the south coast of Hong Kong.

(Map on page 67)

The biggest island of the territory marks, with its western tip, the half way from Hong Kong to Macau. In the central part of it, rises a remarkable highland with the *Sunset Peak* (869 m) and the *Lantau Peak* (934 m). Both peaks are separated by a deep saddle, which is the only land way to the north, to the Bay of *Tung Chung*.

Northwest of Lantau Peak extends the *Ngong Ping plateau*, on which the *Po Lin Monastery* is placed. The few alluvial flattenings, form traditional village settlements. The beautiful bays along the coast have recently been overlapped by suburban development, such as on the *Discovery Bay*. The south coast contains an additional water reservoir.

Of the remaining 235 islands only *Peng Chau* and *Cheung Chau*, both upstream of Lantau Island and *Lamma Island*, southwest of Hong Kong, have substantial settlements.

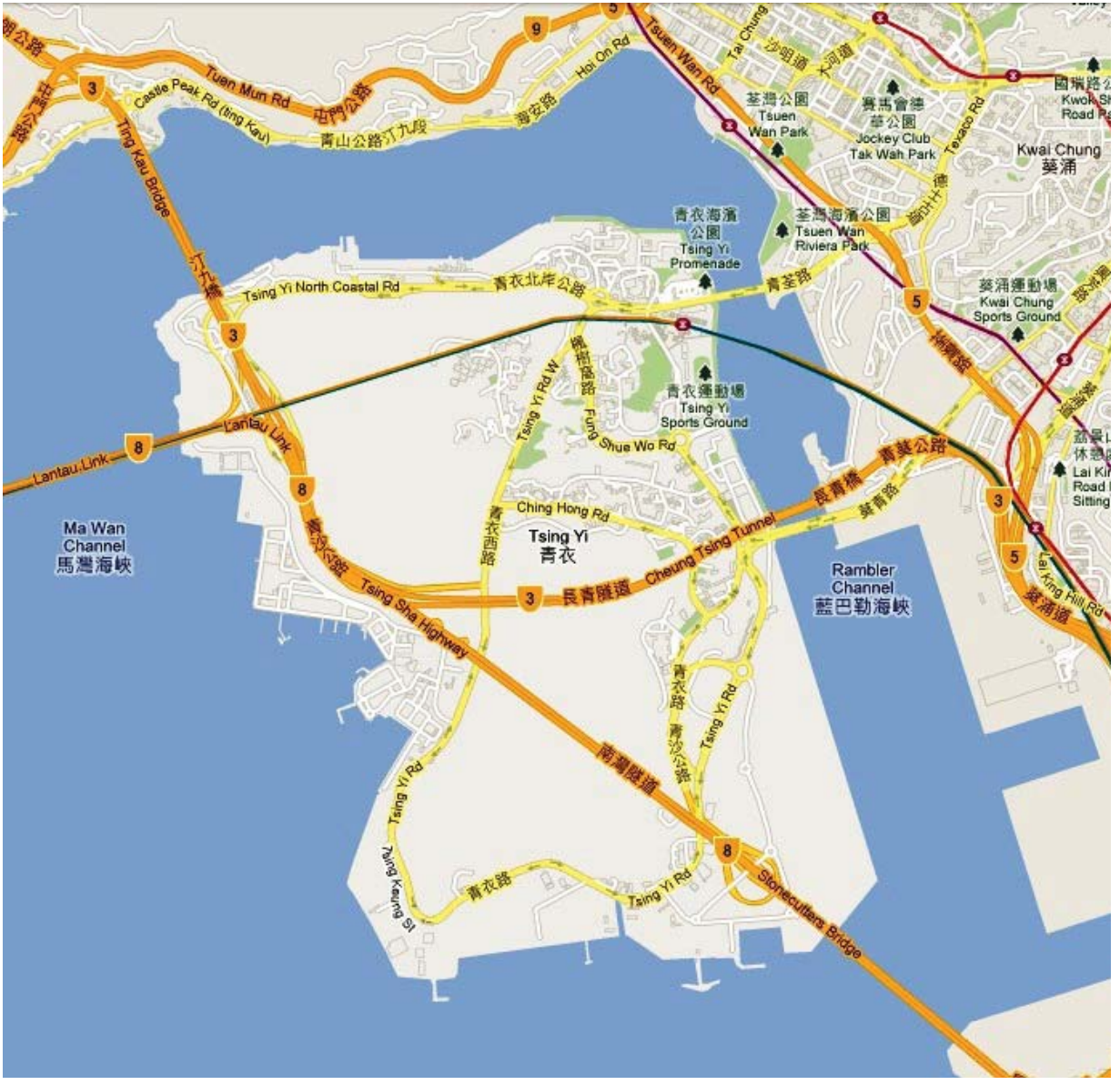
(Map on page 68)


Belcher Bay
卑路乍灣
尖沙咀
Green Island
青洲
Connaught Rd W
4
Sulphur Channel
硫磺海峽
Sheung Wan
上環
Wan Chai
灣仔
Gloucester
龍虎山
郊野公園
Lung Fu Shan Country Park
花園道
Queen's Rd E
Sandy Bay
沙灣
薄扶林
郊野公園
Pok Fu Lam Country Park
香港仔
郊野公園
Aberdeen Country Park
Peak Rd
1
香港仔隧道
Pok Fu Lam Rd
薄扶林道
Telegraphy Bay
鋼綫灣
Aberdeen Upper Reservoir
香港仔上水塘
Waterfall Bay
瀑布灣
Aberdeen Praya Rd
黃竹坑道
Aberdeen Tunnel
Aberdeen Harbour
香港仔灣
Deep Water Ba
深水灣
Ocean Park
海洋公園
Aberdeen Channel
香港仔海峽
East Lamma Channel
東博寮海峽
Tai Shue Wan
大樹灣
Ap Lei Pai
鴨脷排
Luk Chau Wan
鹿洲灣
Yung Shue Wan
榕樹灣
Luk Chau
鹿洲
Main Rd
Hung Shing Ye Beach
洪聖爺泳灘
Waterfront Rd


King's Rd
North Point
北角
Quarry Bay
鰂魚涌
Shau Kei Wan
Typhoon Shelter
筲箕灣避風塘
Lei Yue
Mun
鯉魚門
Junk Bay
將軍澳
Wan Po Rd
大坑道
Tai Hang
大坑
大潭郊野公園(鰂
魚涌擴建部份)
Tai Tam Country
Park (quarry
Bay Extension)
柴灣道
Chai Wan
柴灣
Tai Tam Rd
Siu Sai Wan
小西灣
Tai Tam
Reservoir
大潭水塘
大潭郊野公園
Tai Tam
Country Park
Repulse
Bay
淺水灣
Tai Tam
Intermediate
Reservoir
大潭中水塘
Tai Tam Tuk
Reservoir
大潭篤水塘
Tai Tam
Harbour
大潭港
Shek O Rd
Big Wave
Bay
大浪灣
石澳郊野公園
Shek O
Country Park
Tathong
Channel
藍塘海峽
Shek
O Wan
石澳灣
To Tei Wan
土地灣
Island Bay
香島灣
Chung
Hom Kok
春坎角
Chung
Hom Wan
春坎灣
Round
Island
Stanley Bay
赤柱
Stanley
赤柱
Tai Tam
Bay
大潭灣


Lai Chi Kok
荔枝角
荔枝角公園(三期)
Lai Chi Kok Park (stage iii)
8
W Kowloon Highway
青沙公路
8
昂船洲大橋
Stonecutters Island
昂船洲
5
亞洲高爾夫球會
Asia Golf Club
Yen Chow St
深水埗公園
Sham Shui Po Park
荔枝角道
西九龍走廊
南昌公園
Nam Cheong Park
3
W Kowloon Corridor
Tai Kok Tsui
大角咀
Mong Kok
旺角
Mong Kok Rd
5
New Yau Ma Tei Typhoon Shelter
新油麻地避風塘
W Kowloon Highway
Hoi Wan Rd
Shanghai St
Gascoigne Rd
Victoria Harbour
維多利亞港
Breakwater
防波堤
Jordan Rd
Ferry St
Jordan
佐敦
West Kowloon Waterfront Promenade
West Kowloon
西九龍
Western Harbour Crossing
九龍公園
Kowloon Park
Tsim Sha Tsui
尖沙咀


Kowloon Walled City Park
九龍寨城公園
Prince Edward Rd
Kwun Tong By-pass
Cheung Rd
坪石遊樂場
Ping Shek Playground
新清水灣道
順利邨遊樂場
Shun Lee Tsuen Playground
九龍仔公園
Kowloon Tsai Park
啟德機場
Kai Tak Airport
Waterloo Rd
太子道西
世運花園
Olympic Garden
Ma Tau Wai
馬頭圍
Kai Tak Tunnel
Kai Fuk Rd
啟福道
九龍灣運動場
Kowloon Bay Sports Ground
Kwun Tong Rd
觀塘道
Ngau Tau Kok
牛頭角
Kwun Tong
觀塘北
Argyle St
巴富街運動場
Perth Street Sports Ground
To Kwa Wan
土瓜灣
E Kowloon Corridor
Ma Tau Wai Rd
康寧道遊樂場
Hong Ning Road Playground
Princess Margaret Rd
高山道公園
Ko Shan Road Park
海心公園
Hoi Sam Park
Wai Yip St
Kwun Tong By-pass
和黃公園
Hutchison Park
Kwun Tong Typhoon Shelter
觀塘避風塘
加士居道
Hung Hom
紅磡
尖沙咀東部海濱花園
Tsim Sha Tsui East Promenade
海底隧道
東區走廊
渣華道遊樂場
Java Road


Tuen Mun Rd
屯門公路
Castle Peak Rd (Ting Kau)
青山公路汀九段
Ting Kau Bridge
汀九橋
Hoi On Rd
海安路
Tsuen Wan Rd
荃灣路
Tai Chung
大涌道
沙咀道
Tsuen Wan Park
荃灣公園
賽馬會德華公園
Jockey Club Tak Wah Park
Texaco Rd
Kwai Chung
葵涌
Tsing Yi Promenade
青衣海濱公園
Tsuen Wan Riviera Park
荃灣海濱公園
Tsing Yi North Coastal Rd
青衣北岸公路
青荃路
Kwai Chung Sports Ground
葵涌運動場
Tsing Yi Sports Ground
青衣運動場
Tsing Yi Rd W
青衣西路
Fung Shue Wo Rd
楓樹窩路
Lantau Link
Ma Wan Channel
馬灣海峽
Ching Hong Rd
Tsing Yi
青衣
Cheung Tsing Tunnel
長青隧道
青葵公路
葵青路
Tsing Sha Highway
青沙公路
Rambler Channel
藍巴勒海峽
Lai King Hill Rd
荔景山路
葵涌道
青衣路
Tsing Yi Rd
南灣隧道
Tsing Yi Rd
Tsing Keung St
Stonecutters Bridge


Futian
福田区
Huanggang Port
皇岗口岸
Houhaiwan (Shenzhen Bay)
后海湾(深圳湾)
Mai Po
米埔
Lok Ma Chau
落馬洲
San Tin
新田
Fanling Highway
Sheung Shui
上水
Fanling
粉嶺
Tam Mei
潭尾
San Tin Highway
香港濕地公園
Hong Kong Wetland Park
Tin Shui Wai
天水圍
Kam Tin
錦田
林村郊野公園
Lam Tsuen Country Park
Lam Tsuen
林村
Pat Heung
八鄉
Lau Fau Shan
流浮山
Yuen Long
元朗
Yuen Long Highway
Shek Kong
石崗
Kam Tin Rd
Lam Tei
藍地
Tai Tong
大棠
Fu Tei
虎地
大欖郊野公園
Tai Lam Country Park
Tai Lam
大欖
Tuen Mun
屯門
San Hui
新墟
Tai Lam Chung Reservoir
大欖涌水塘
So Kwun Wat
掃管笏
Tai Lam Tunnel
Ting Kau
汀九
Lo Wai
老圍
Lung Mun Rd
Castle Peak Bay
青山灣
Butterfly Beach
蝴蝶灣泳灘
Siu Lam
小欖
Tai Lam Chung
大欖涌
Sham Tseng
深井
Cheung Pei Shan Rd
Tsuen Wan
荃灣
Kwai Chung
葵涌
Tuen Mun Rd
Ma Wan
馬灣
To Kau Wan
Tsing Yi
青衣


Tau Kok
沙頭角
深盐路
沙头角海
Shenzhenhe
深圳河
Bihai Hotel
碧海宾馆
Crooked Harbour
吉澳海
Kat O Wan
吉澳湾
O Pui Tong
澳背塘
吉澳
Starling Inlet
沙頭角海
Tsing Chau Lek
青洲瀝
Camp Cove
白沙頭灣
船灣郊野公園
(擴建部份)
Plover Cove Country Park
(extension)
大鵬灣
Double Haven
印洲塘
Shuen Wan
船灣
Sam A Wan
三椏灣
Wong Chuk Kok Hoi
黃竹角海
Lau Shui Hang Tam
流水坑沙
船灣郊野公園
Plover Cove Country Park
North Channel
大赤門
Middle Channel
赤洲口
八仙嶺
郊野公園
Pat Sin Leng Country Park
Pat Sin Leng
八仙嶺
新田路
Plover Cove Reservoir
船灣淡水湖
西貢西郊野公園
(灣仔擴建部份)
Sai Kung West Country Park (wan Tsai Extension)
塔門
Ting Kok
汀角
汀角路
Tolo Channel
赤門海峽
Tai Po Industrial Estate
大埔工業村
Plover Cove
船灣海
South Channel
塔門口
Long Harbour
大灘海
Tolo Harbour
吐露港
9
Science Park
科學園
Ko Tong Hau
高塘口
Chek Keng Hau
赤徑口
Three Fathoms Cove
企嶺下海
Tai Po Kau
大埔滘
Tolo Highway
Sha Tin Hoi
沙田海
西貢西郊野公園
Sai Kung West Country Park
Ma Liu Shui
馬料水
大老山公路
Sai Sha Rd
Tai Wan
大灣
西貢東
郊野公園
Sai Kung East Country Park
Fo Tan
火炭
Tai Long Wan
大浪灣
Tai Po Rd (Sha Tin)
Tai Wai
大圍
2
Sai Kung
西貢
Tsam Chuk Wan
斬竹灣
Sam Nga Hau
三丫口
High Island Reservoir
萬宜水庫
大網仔路
Inner Port Shelter
西貢海
Long Ke Wan
浪茄灣
Sham Tuk Mun
深篤門
1
Sha Tin
沙田
馬鞍山
郊野公園
Ma On Shan Country Park
Hebe Haven
白沙灣
Kau Sai Chau
滘西洲
橋咀郊野公園
Kiu Tsui Country Park
Tsz Wan Shan
慈雲山


Plover Cove
船灣海
赤門海峽
Tsai Extension)
South
Channel
塔門口
Long
Harbour
大灘海
Science
Park
科學園
Ko Tong
Hau
高塘口
Chek
Keng Hau
赤徑口
Three
Fathoms Cove
企嶺下海
Sha Tin Hoi
沙田海
西貢西郊公園
Sai Kung West
Country Park
Tai Wan
大灣
西貢東
郊野公園
Sai Kung East
Country Park
Tai Long
Wan
大浪灣
Sai Sha Rd
大網仔路
Sai Kung
西貢
Sam
Nga Hau
三丫口
Tsam
Chuk Wan
斬竹灣
High Island
Reservoir
萬宜水庫
馬鞍山
郊野公園
Ma On Shan
Country Park
Inner Port
Shelter
西貢海
Sham
Tuk Mun
深篤門
Long
Ke Wan
浪茄灣
Hebe Haven
白沙灣
橋咀郊野公園
Kiu Tsui
Country Park
Kau Sai
Chau
滘西洲
Rocky
Harbour
糧船灣海
Ngau
Chi Wan
牛池灣
Port Shelter
牛尾海
吊鐘洲
Sam
Chau Mun
三洲門
Kowloon
Bay
九龍灣
Kwun
Tong North
觀塘北
Silverstrand
銀線灣
沙塘口山
Basalt
Island
火石洲
Kwun Tong
觀塘
Clear
Water Bay
清水灣
Tseung
Kwan O
將軍澳
清水灣
郊野公園
Clear Water Bay
Country Park
Junk Bay
將軍澳
Lei Yue Mun
鯉魚門
Wan Po Rd
Clear
Water Bay
清水灣
Ma Wan
馬灣


To Kau Wan
倒扣灣
Kap Shui Mun
汲水門
Ma Wan Channel
馬灣海峽
8
北大嶼山公路
North Lantau Highway
Chek Lap Kok
赤鱲角
Disneyland
迪士尼公園
Discovery Bay
大白灣
Discovery Bay
愉景灣
Nim Shue Wan
稔樹灣
Peng Chau
坪洲
Tung Chung Bay
東涌灣
Tung Chung
東涌
北大嶼山郊野公園(擴建部份)
Lantau North (extension) Country Park
Lantau Island
大嶼山
北大嶼郊野公園
Lantau North Country Park
Silver Mine Bay
銀礦灣
Mui Wo
梅窩
Hei Ling Chau
喜靈洲
Tai O
大澳
南大嶼郊野公園
Lantau South Country Park
West Lam Channel
西博寮海
Yi O
二澳
Chi Ma Wan
芝麻灣
Shek Pik Reservoir
石壁水塘
Pui O Wan
貝澳灣
Tong Fuk Beach
塘福泳灘
Mong Tung Wan
望東灣
Tai Long Wan
大浪灣
Tong Wan
東灣
Admasta Channel
北長洲海峽
Cheung Chau Wan
長洲灣
Lo Kei Wan
蘿箕灣
Cheung Chau
長洲
Fan Lau Tung Wan
分流東灣
Shek Kau Chau
石鼓洲
Soko Islands
索罟群島

City development

Picture 32. Hong Kong people "diversity"

*Although it's proved that the former crown colony had continuous settlements from the Pre-Christian centuries up to the occupation by the British, the starting shot for the unique housing development was the first colonial settlement as a fleet and trading base. The geographic factors offered no special conditions for a more dense agricultural settlement. The weathered steep relief in the inner territory and the valley- and coastal marshes allowed only few cropland areas. In some storm-protected bays were fishing villages. Before the British colonization, around 20 hamlet settlements with about 3700 inhabitants and 200 fishermen, mostly residing on boats, had been based in the area of Hong Kong Island. For the hinterland (New Territories) are 420 encampments recorded, all assigned to a central location – Sham Chun (today, the border to China). The aboriginal population was ethnically differentiated into 4 groups. The agricultural performing majority of the Cantonese descent "*Pun Tai*" (= natives), immigrated in the 11th and 12th century. The* Hakkas*, that came from middle China in the following centuries. They were supplemented by the seafaring and fishing-oriented* Tankas *and* Hoklos*.*

The historical path that China took from a weak feudal empire, the forming of the Republic (1911), the Sino - Japanese war (1937), the civil war (until 1948), the reconstruction of society in the 50's up to the Cultural Revolution (1966-1976), is reflected in the immigration and refugee bouts of which each initiated a phase of development in settlement activities. Retrospectively, the sociocultural background can also be pointed out as a developmental factor. The pursuit of harmony as an adaptation and survival strategy, the importance of family and clan that is expressed in traditionally crowded cohabits and the enterprise's spirit characterize the Chinese mentality. The British administration ensured "law and order," continuity, the access to western culture, but above all the gateway to the world market.

TAKING POSSESSION OF HONG KONG ISLAND AND VICTORIA HARBOR (1839-60)

After the First Opium war, which took place on 20. January 1841, the Union Jack was placed on the Possession Point. Captain Elliot started the settlement with the basic arrangements and quickly after that the first merchants began settling. But, Lord Palmerston called Hong Kong: "A barren Island with hardly a house upon it" [1], which the British became instead of a far-reaching trade agreement.

Already in the 1840's, there was a considerable settlement activity between the sandy Causeway Bay and the marshy Happy Valley, up to Western District. The Victoria named settlement developed along the former shore road, Queen's Road. In the area of today's Central District and in Wan Chai were the starting points for the rapidly increasing community to the west. The newly created jetties and piers were a base for warehouses and commercial establishments. In the area of Central District colonial administration and marine headquarters were established. The slopes housed the rapidly growing residential areas with terraces and uphill stair lanes, mostly inhabited by the Chinese.

In the Convention of Peking (1860), Kowloon Peninsula became controlled by the British on a permanent basis. It was located south of the Boundary Street and Stonecutter's Island. Victoria could now develop, without interruption, as a commercial center and residential area.

1. A Modern History of Hong Kong; Steve Tsang

Picture 33. An artist's rendering of what Hong Kong Island and Victoria Harbour looked like in 1840.

URBAN DEVELOPMENT AND TERRITORIAL EXPANSION (1861-1911)

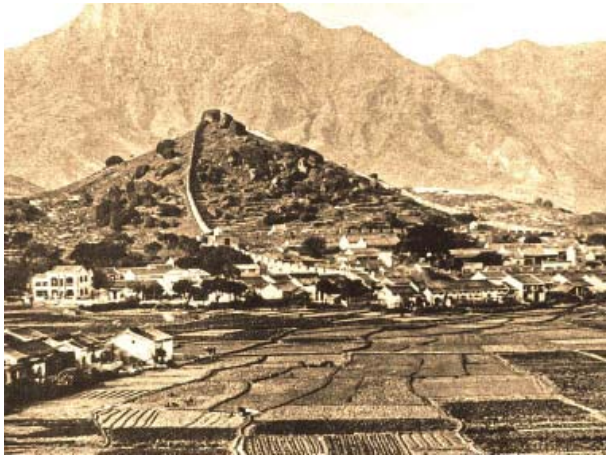
The external British influence now allowed the launching of urban projects and the development of infrastructure.

From 1851 bank straightening and filling of little bays were made, so the costal line of Victoria Harbor was extended. The urban development, with the back to the Victoria Peak, soon forced systematical seaward extension. The Central District, built mostly on land reclamation ground, connected to the newly built streets such as *Chater Road*, *Connaught Road* and *Des Voeux Road*.

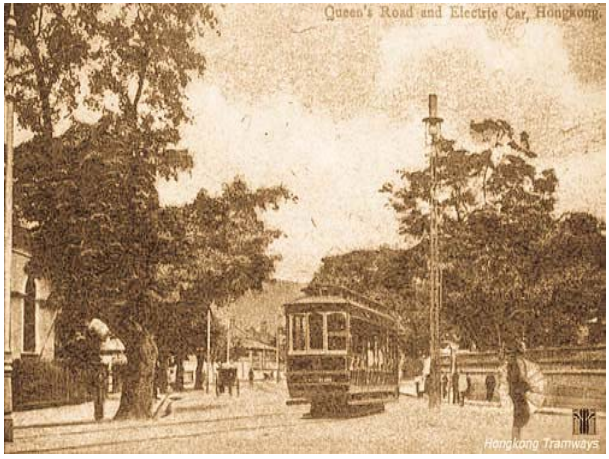
Between 1888 and 1904, 110 hectare new land was reclaimed from the sea on the north coast of Hong Kong and along the Kowloon Peninsula. The grid of the new road network stands out clearly from the alleys tangle on the original coast, along the Queen's Road. Also, the southern and western shores of the Kowloon headland were extended and the bays of *Hung Hom* and *Yau Ma Tei* filled up. The sheltered westward bay sides offered dock and port locations. Around the central military complex in *Tsim Sha Tsui*, area in-between *Hapihong Road - Nathan Road - Austin Road - Canton Road* (today Kowloon park), settlement areas were established. They extended themselves mostly to north-west (*Yau Ma Te*i, *Mong Kok*, S*ham Shui Po*).

The border along the Boundary Street was military and unable to be maintained, but the Kowloon Peninsula was an ideal deployment zone against the island of Hong Kong. Therefore, in the June Convention of Peking, the British gained the New Territories and 235 Islands. The new lease area was managed separately from the so called "urban areas." For the urban development of Kowloon offered this territorial expansion, in the following years, the possibility of a settlement expansion along the west coast to the north up to Sham Shui Po. This expansion can today be recognized in the city map by its rectangular street grid. The settlements in the alluvial valleys developed only slowly to the north east.

The first decade of the 19th century also brought infrastructure improvements. A tram opened up the town band in 1904. In 1910 the head train station on the Star Ferry Pier was opened (today the station has moved back 1 km to *Hung Hom Bay*). Also, the founding of the English University in Western District belongs to this era.



Picture 34. Kowloon in 1858



Picture 35. First Tram; Queen's Road, 1904 (Hong Kong Island)

THE GROWTH PHASE UNTIL THE JAPANESE OCCUPATION (1911-1941)

The collapse of the Manchu dynasty and the proclamation of the Republic in 1911 also meant that the British crown colony would be censored in its development. Influx of refugees caused structure changes and the influence of China over Hong Kong increased. At the end of the 1920's, immigration from China grew. Meanwhile, the available settlement space along the north coast of Hong Kong was exhausted. Slope terracing and land reclamation could not keep up with population growth.

It was decided to spread the planed urban development onto Kowloon. In 1937 the land strip between Boundary Street and the mountain range of the Nine Dragons was integrated, administratively, into the "urban area." The land reclamation projects between 1904 and 1925 brought 220 hectare new land, mostly from the filling in inner Kowloon Bay and from straightening the coastal line at *Hung Hom Bay*. The first airfield was also created in the *Kowloon Bay*. Between 1925 and 1944 another 170 hectare were reclaimed, among them the important urban connections in *Wan Chai* (Hennessey Road to Gloucester Road) and *North Point* (Kings Road to Java Road). Their structural design is characterized through stretched building block grids on, comparatively, generous parcels. On Kowloon the urban development definitely exceeded the Boundary Street. The urban district *Sham Shui Po* successively arose instead of the original bay.

The narrow block structure grid would, in the future, become one of the world's most densely populated, inner-urban residential areas.

Picture 36. 1930's Tsim Sha Tsui Star Ferry KCR Terminal

Picture 37. 1930's Nathan Road

Picture 38. Kowloon Wharves in 1935

Picture 39. Chatham Road reclamation and Holts Wharf(TST)

STRUCTURAL CHANGE AND INDUSTRIALIZATION (1946-1967)

After the Japanese occupation, the communist takeover and the downfall of the British Empire, changed the geopolitical function of Hong Kong. The former colonial trading post and naval base (basic functions) became an industrial production site and market area.

The inflow of refugees, the high fertility and the intra-urban migrations caused a rapid increase of slum neighborhoods ("*Squatter*"). The starting point for the industrialization was the naval architecture. Traditional dockyard locations were at Hung Hom Bay and Quarry Bay. The construction industry experienced a boost, as a result of public housing and infrastructure projects. Later, the industrial mass production of plastic articles and electronic devices joined the industry boost. Small workshops settled as "city commerce" in the bases of mixed use structures.

Following priorities determined the space and project planning at this time:

- The containment of squatter settlements ("*slum clearance*")and the resettlement of their residents in communal estates ("*resettlement estates*")
-The creation of housing for middle income families ("*low cost housing*")
-Providing adequate technical and social infrastructure
-The establishment of industrial and residential building land through land reclamation
-The structural renewal of old urban areas

There were a few reasons for the resettlement of the Squatter inhabitants. First, the uncontrolled growth of the Squatters at the outskirts was an obstacle to the much needed expansion of the city. Due to the topographical situation the danger of fires and landslide disasters was imminent, and a subsequent infrastructure fixture hardly possible.

After the big fire in *Shek Kip Mei*, in 1953, a *Resettlement Department* was established which was responsible for the implementation of a resettlement program, the erection of mass accommodations ("low standard resettlement blocks, *Mark I* and *Mark II*") in big building blocks and for the clearance of squatter settlements.

Even though the public housing block conditions were warehouse-like, in the first 5 years alone, a quarter million people were accommodated. The key area was 2.3 m² per person gross living area. In 1963, already half a million people lived in "resettlement estates". In 1961, a course correction in the housing policy took place which in one hand lifted the standard in the resettlement estates and in the other procured affordable residential units of average standards. Semi-public property developers were founded (*Housing Society*, *Housing Authority*) which implemented the *Low cost housing Program*.

Soon, the former resettlement estates in Kowloon were integrated into the core city. The public domestic architecture in the 50's was concentrated on New Kowloon and the emerging industry satellites *Kwun Tong* and *Tsuen Wan*. There were no large areas available on Hong Kong Island and close to the government and business center. These social mono structured settlements were undesirable anyway, even though many Squatters still stuck to living on the hills.

The drastic increase in demand for land was only to be satisfied through land reclamation projects. After the Japanese occupation, until 1967, around 5 km² of new building areas were reclaimed. For the expansion of the *Kai Tak Airport* an airstrip was filled into the Kowloon Bay. Parallel to the industrialization of the urban core and peripheral areas, the traditional agricultural and fishing industry in the New Territories declined in importance.

It was in the interest of the government, in urban areas of the New Territory, to give away centrally located sites through long-term lease contracts with building regulations. So, housing programs and infrastructure investments could be ensured. Also, the building legislation in terms of higher density and "multiple ownership" was deregulated in the mid-50's. This interaction with the structural change and population dynamics activated a settlement reforming.

Results of these changes, in the urban areas, were a vertical mixed-use of buildings and an increase of building levels. The demolition of the older, 3-4 story tenement buildings and their replacement through 10-20 story frame buildings displaced the low-income residents into squatter quarters and brought a deterioration of environmental conditions. Often, a vertical sequence of projectile uses was formed. Small industrial production plants settled at the bases of building structures, over them appeared small offices, homes, and on the flat roofs squatters ("roof top squatters"). The narrow alley rooms, between the tall buildings, were also included in this closely spacious variety of use through street merchants ("Hawkers"), street restaurants,etc. The displacement of traditional building techniques with wood and brick throughout reinforced concrete structures brought a fundamental change in the urban physiognomy.

Picture 40. Shek Kip Mei Estate, the first public housing estate in Hong Kong

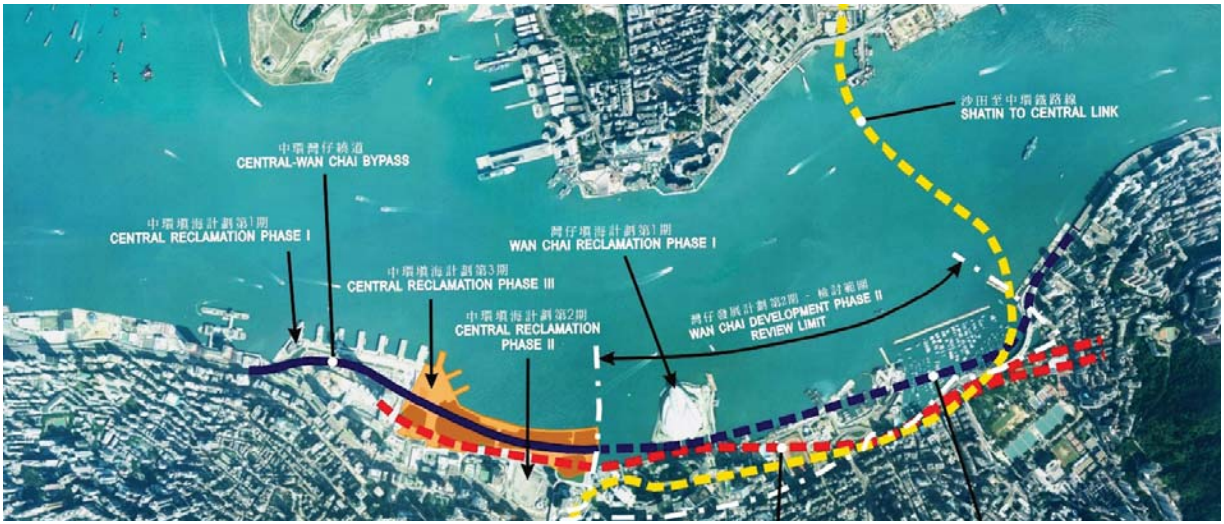
THE DEVELOPMENT TO A WORLD TRADE CENTER (1968-1984)

On the basis of the 1972 adopted *Colony Outline Plan*, the infrastructure and settlement policy was now more oriented on quality standards and spatial functional necessities. This plan proposal provided a decentralization of the housing development by linking the New Territories with the core city.

Also, a *Ten years Housing Programme* (1973-83) was introduced, which claimed an annual public housing activity of 35.000 dwelling units. So, within a decade 1.8 million people should be housed in closed apartments with minimum living conditions (water, toilet, and kitchen). Furthermore, new legal bases (*Housing Ordinance 1973*) were adopted and a new *Housing Authority* set up. The Housing Authority proposed a management of all residential building activities, the renovation of old resettlement estates (type Mark I, II) and the newly introduced *Home Ownership Scheme*.

The newly founded *New Territories Development Department* incurred the implementation of subspace and project planning. In addition to the New Towns of the 1st Generation (Tsuen Wan, Sha Tin, Tuen Mun) new "*Market Towns*" were built (*Yuen Long*, *Sheung- Shui/ Fanling* and *Tai Po*). After 1979, these towns became the New Towns of the 2nd Generation. They were complemented with "rural townships". Having in mind the high compaction value over the balanced functional disposition between areas for habitation, industrial areas, infrastructure areas as well as open areas the new zoning planes tried to avoid undesirable developments.

It was also needed to upgrade the traffic infrastructure. The communication between the two mega-cities was, at first, limited to ferries. The communication was changed for the better after finishing the *Cross Harbor Tunnel* in 1972. In 1983, the Sha Tin - Tai Po coast street opened. The street improved the north-south transversal. The building of the *Mass Transit Railway* (MTR) started in 1975.



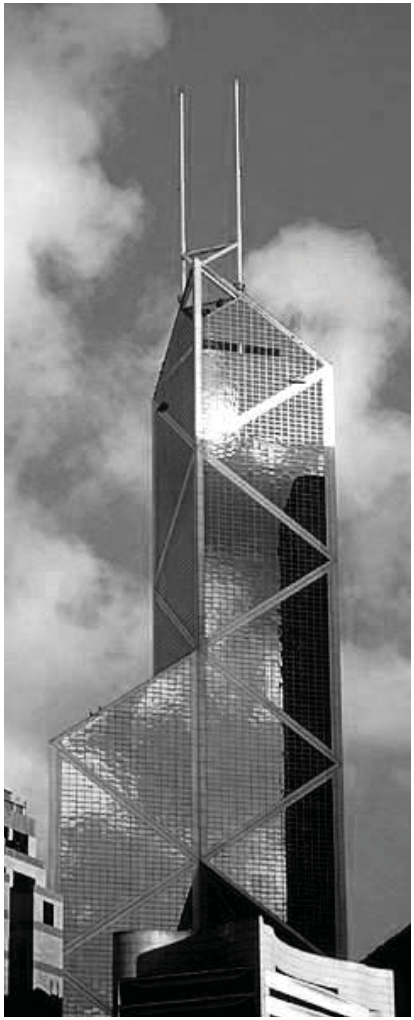
Picture 41. Hong Kong Island Land Reclamation Map

The most outstanding development in the 70's and 80's was the redesign of the interurban functional structure and a rapid renewal of the buildings structures. The building of the *Connaught Centre* near the Statue Square and Star Ferry Pier opened the office-boom in the *Central Business District* of Hong Kong Island (CBD). A 30 hectare new land strip in front of Wan Chai allowed the expansion of CBD in direction to Causway Bay. The conversion did not just affect sites near the city but also industrial costal locations. The first project, of this type, was a privately initiated arrangement. The residential building complex of Mei Foo Sun Chuen (NW-Kowloon) was built on the area of a former oil repository. In contrast to the established public housing estates the private realized ones had utilities and facilities from the start.

The 80's mostly represented the economic strength of the colony with big Bank buildings on Hong Kong Island. Nevertheless, there was also competition happening behind the scenes. Hence, the construction of the *Hong Kong-Shanghai Bank*, by Norman Foster, was followed by the *Bank of China* building. With its 320 m, the Bank of China building was at that time the tallest building in the colony. Additionally, public buildings like the S*upreme Court* and *Administrative Center of Government* were erected.

In 1979, the New Towns-Program was expanded. The Market Towns were upgraded to New Towns and broadened. With Junk Bay, an area in the east New Territories was, for the first time, designed as a New Town. As a consequence of the broadened prosperity, the *Home Ownership Scheme* was forced, but, mostly out of the high dense New Towns.

Picture 42. Hong Kong Shanghai Bank, by Norman Foster



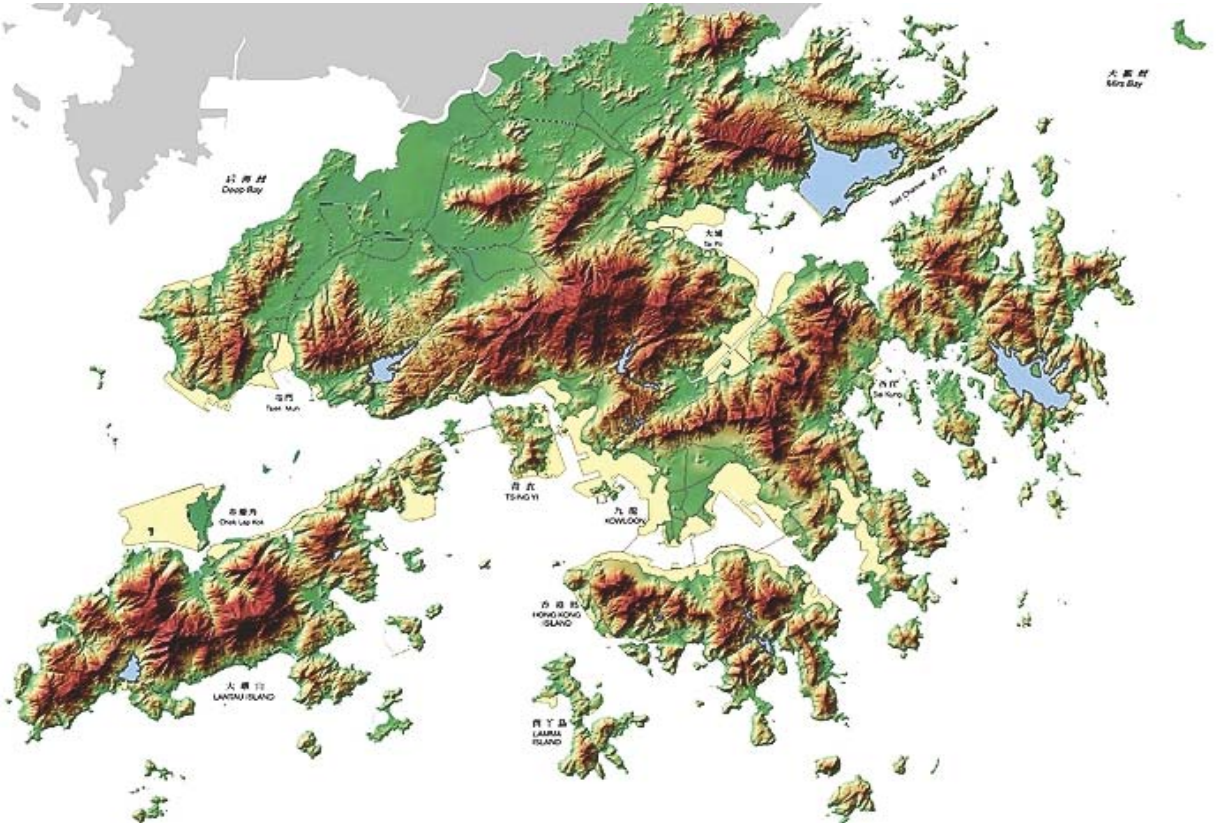
Picture 43. Bank of China building in Hong Kong, by IM Pei

THE TRANSITION FROM THE COLONIAL CITY-STATE TO CHINESE SPECIAL ADMINISTRATIVE REGION (1985-1997)

Regardless of the upcoming political status change, the administration pursued a series of advancing infrastructure projects. These included: the second tunnel connection from Kwung Tong to Hong Kong Island (*Eastern Harbor Crossing*), the expansion of the freight terminal in Hung Hom Bay, the expansion of light rail network in the north-west New Territories, the broadening of the container terminal of Kwai Chung, the finishing of some urban bypasses and relief roads, and the construction of the connection between the New Towns and the core city.

Increasingly, complaints came in about the continuing loss of historic structures. Hong Kong appears, in architectural view, very much a city without documentation of its past. Numerous cultural and historic buildings became victims of the pickaxe in the 70's and 80's, such as the old Main Terminal station (just the clock tower remained as a landmark). Since 1977, Heritage Society has attempted to rescue some present objects which widen a traditional urban identity of Hong Kong.

The urban development focus of the 90's was the new airport Chek Lap Kok on Lantau Island, thus the old airport had no possibilities to expand. A new overall traffic study and city renewal study ("Metro plan") were in progress. Beside the New Towns upgrading, the government started with the sanitation of old urban resettlement estates from the 50's and 60's and changing them for new buildings. But it is to point out that this loosening and restructuring is bound to new land reclamation projects



Picture 44. Hong Kong today, with all Reclamations (shaded in yellow)

Living conditions and settlements

Picture 45. Mong Kok, Kowloon; "Mong Kok's population density is extremely high. According to Guinness World Records, Mong Kok has the highest population density in the world (130.000 per km^2) and with a development multiple of four."

The contemplation of housing conditions in Hong Kong may be, even less than elsewhere, restricted to the analysis of the Status-Quo-Situation. The extreme spatial restrictions, a strong libertarian tenor of the administration, an enormous demographic demand pressure, the traditional Chinese frugality as the basic attitude of population, and the constant requirements of a modern reproduction area are roughly the framework conditions on which the housing policy is oriented. The former crown colony as a typical case study for extremely high density of cohabits and an inscrutable function mixture was, and still is, object of numerous scientific analyses.

Despite the dominance of public and private residential high-rise buildings, which emboss the skyline, Hong Kong owns a considerable diversity of traditional and new dwelling forms. Included are the crowded, row house-like villages with defensive walls ("Wai"), and the clan houses of the Hakka, which still, scattered and land marked, can be found in the New Territories. Furthermore, the interurban old buildings in Kowloon and on the north coast of Hong Kong; narrow 5-storey high tenement buildings that are being increasingly replaced by 10-20 storeys high "Multiple Ownership"-buildings.

In the urban expansion areas of the 50's, 60's and 70's different forms of public resettlements estates are localized. Those I am going to analyze in detail in my work. The public and private housing estates in the New Towns, erected in the 70's and 80's, show a more urban overall design and architectural differentiation. A younger movement, "suburban living" is shown in-row houses away from the core city. The Squatter areas, at the urban edges, are the areas of the city that remain as a huge problem. Also, I have to mention the boat settlements in the typhoon protected ports. Although continuously shrinking, they still belong to the unmistakable image of Hong Kong.

To understand the planning and location perspectives of the public housing program, it was necessary to provide an Understanding of the historical, geographical and social Composition of Hong Kong.

After these summaries, I will now move on to the Development of public resettlement estates and social high rise buildings.

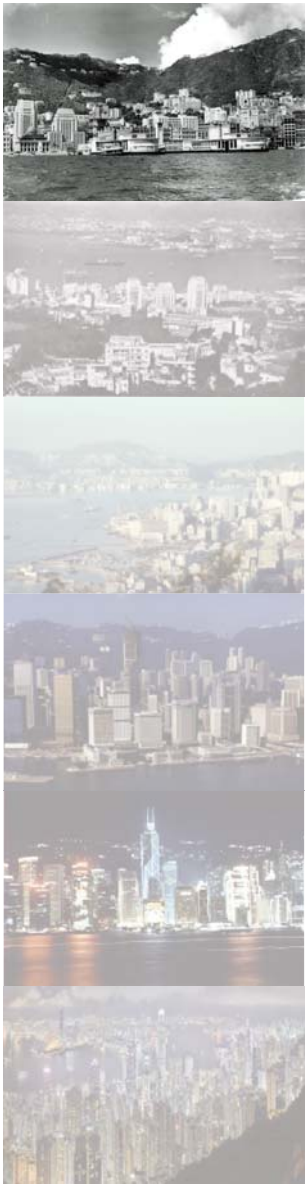
Public resettlement estates and their development

Picture 46. A housing estate in Hong Kong; picture taken by Michael Wolf - “Architecture of Density”

After the disastrous fire in the Squatter area of Shek Kip Mei, on Christmas Day 1953, 53.000 people in Hong Kong were homeless. This is perhaps the real starting point of Hong Kong´s public housing program. The public housing program is more a response to an extreme emergency than a result of a grand master plan prepared by authorities. A chain of squatter fires continued to flare and by the end of 1954, 100.000 people had been made homeless. The government had to respond immediately and deal with the serious housing circumstances. Hence, from December 1953 until today, public housing development went through a few critical phases of progressive change.

What remains very interesting is that during the six decades of progress, the steps of innovative planning and creative designs by the Housing Department were impressive. The development from an 11 m² single-space allotment with shared communal washing facilities for a family of five, in the 50‘s, to a two-room 30 m² apartment, fully equipped for a family of four in the 90‘s, is impressive in itself. When we point out how the response plans progressed to solve common problems in each period of time we get a better picture. Currently, there are 650.000 public rental flats in Hong Kong Housing Authority’s portfolio, housing approximately 2 million people. This converts to about one-third of the total population of Hong Kong.

Decades and Stages of planning



THE 50'S

The first contribution to public housing was very simple. It was a response to providing basic needs: shelter.

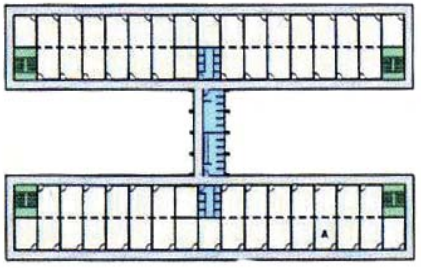
The pressure to supply tens of thousands of people with accommodation within a very short time led to the design of highly concentrated mass facilities. The basic design was a 6-storey, H-shaped building with room units placed back to back on long arms. An external corridor encircling these arms provided access. This first type of public housing buildings was called *Mark I*. The room units had no comfort. Showering facilities, latrines and running water were provided only at the cross piece of each level. This kind of back to back family units reminds of the early industrial housing in North England.

Each unit was 11.15 m² and accommodated five adults, which makes an occupancy ratio of 2.2 m² per person. This is well below the space standard for housing put up by the United Nations. On the corridor outside, in front of the door was a cooking possibility. Each building was 6 storey's high and had 60 units per floor, which makes 360 rooms in one block with an average occupancy of 1.800 adults.

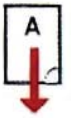
In other parts of the world a single block would make a hamlet. These early prototypes of housing in Hong Kong were designed to keep in mind the importance of the urban context. Shelter was not the only influential component. The ground floor had to be open for community use and to provide space for small shops, workshops, recreation areas and social welfare. School facilities were placed on the roof.

A variation of the basic plan was the *Mark II* building, created by enclosing the open ends of the "H" with hollow block walls, creating internal courtyards. By the end of the 50's twelve resettlement estates were developed. Eleven in Kowloon and one on Hong Kong Island, at *Chai Wan*. The largest one was *Lower Wong Tai Sin* were 29 blocks were built and 67.000 people resettled – a small town in other areas of the world. Since then the authorities are attempting to rebuild the Mark I and II Blocks, to provide units with a toilette, water supply, cooking space and a balcony. But, the strict grid of the concrete construction makes conversions difficult so many of them have to be aborted.

MARK I (Shek Kip Mei)



Nett. Area
A: 12.08 m²



one side
window

Key Color:
1. Building services (public services on the central cross piece)
2. Horizontal circulation (balcony running around)
3. Vertical circulation (staircases at corners)

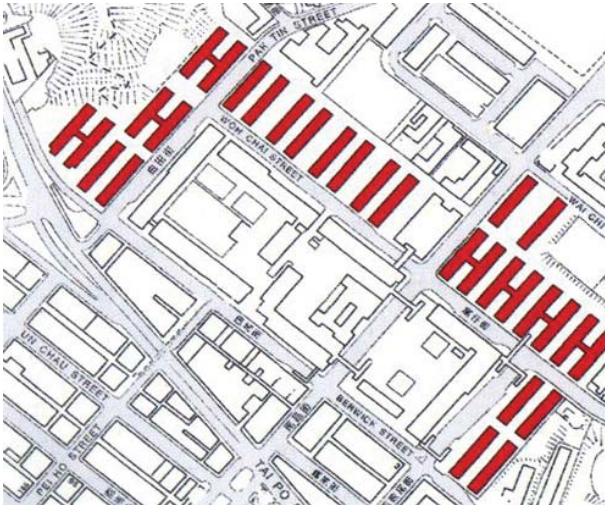
MARK II

Nett. Area
A: 12.08 m²

one side
window

Key Color:
1. Building services (public services on the central cross piece)
2. Horizontal circulation (balcony running around)
3. Vertical circulation (staircases at ends)

Shek Kip Mei Estate

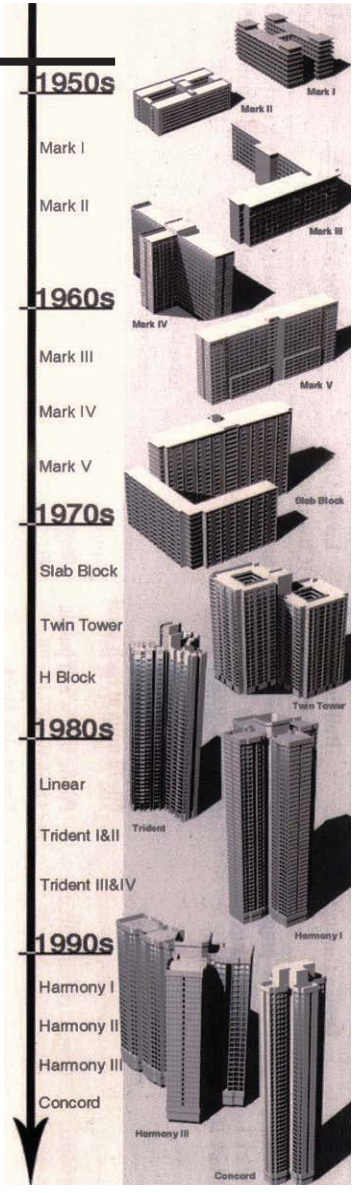


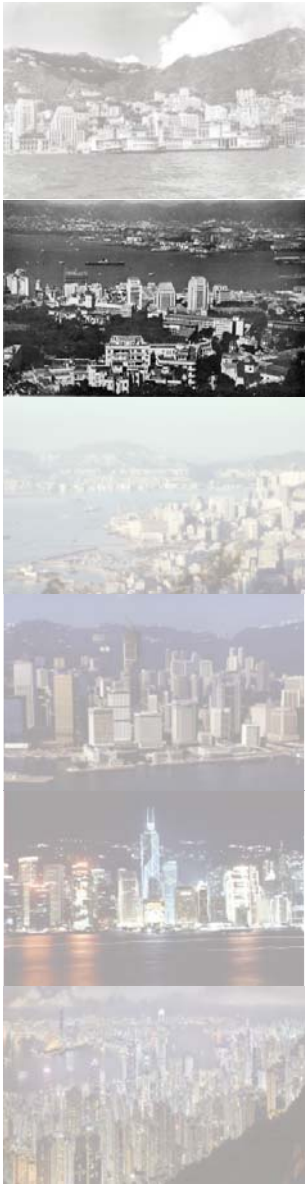
main road

Planing Concept

Key Color:
1. Housing Block
2. Road


In the 1950s


1950s
Mark I
Mark II
1960s
Mark III
Mark IV
Mark V
1970s
Slab Block
Twin Tower
H Block
1980s
Linear
Trident I&II
Trident III&IV
1990s
Harmony I
Harmony II
Harmony III
Concord
Mark I
Mark II
Mark III
Mark IV
Mark V
Slab Block
Twin Tower
Trident
Harmony I
Harmony III
Concord



THE 60'S

Having established a housing program in the 50's to provide basic shelter for homeless, the new generation of standard blocks, in the 60's, had to be researched and carefully planed to address the housing issue properly. Technically better equipped (electrical installations, water supply, balcony), but spatially similar (2.2 m² per person) *Mark III* - blocks were built and 156.000 people were resettled.

Real qualitative progresses were represented in the 1966 built, *Mark IV*, *V* and *VI* blocks. These differed from their predecessors by the number of floors (about 16) and the spatial conception (interior corridor). The sanitary facilities were integrated into the closed housing unit with balcony. The occupancy ratio per person remained 2.2 m² per person in Mark IV and V, but in the last built Mark VI space ratio increased to 3.2 m² per person. The size of the units varied between 12.7 m² and 26.9 m². With these new blocks larger utilization area was achieved.

The circle of tenants was also spread on the residents of structural collapsing buildings in the inner city – old building areas. This should've stopped the sustained growth of squatter settlements.

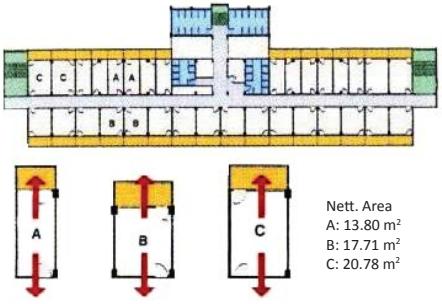
The blocks Mark IV-VI usually house between 4.000 and 6.500 people, but in some complexes up to 25.000 people. The estates of this period are *Tsz Wan Shan*, *Yau Tong* and *Sao Mau Ping*, and those were the first attempts to provide some basic planning for high-rise, high-density environments.

Most estates had good access to road networks and the public transportation system, but the situation was really satisfied after the Mass Transit Railway (MTR) was expanded to Tsuen Wan, Kwun Tong and Chai Wan. Primary schools were planed as part of each estate.

The linear form of these second generation housing blocks pushed a courtyard enclosure, so ground level recreation and other public activities could be planed. The ground floor of all standard blocks remained open and available for commercial and community use. The open space at the ground for shopping and other community facilities was one of the key factors for Hong Kong's big success in public Housing.

Another scheme worth mention is the *Temporary Housing Scheme*. Since the squatter persistence was still a big issue and many had no money to pay the rent, 41 Temporary Housing Areas were built in unused corners of land for people not immediately eligible for permanent public housing.

MARK III (Lower Ngau Tau Kok)

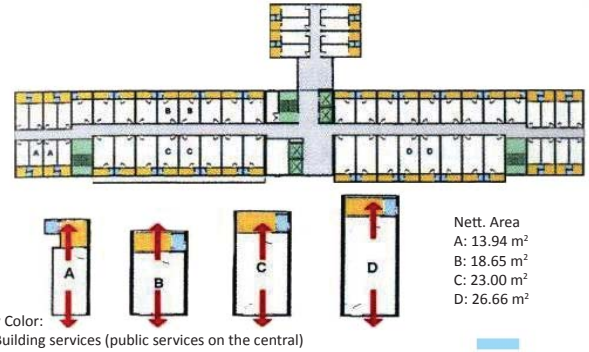


Two sides window

Nett. Area
A: 13.80 m²
B: 17.71 m²
C: 20.78 m²

Key Color:
1. Building services (public services on the central)
2. Horizontal circulation (central corridor)
3. Vertical circulation (staircases at ends)
4. Private balcony (each room has a balcony facing outside)

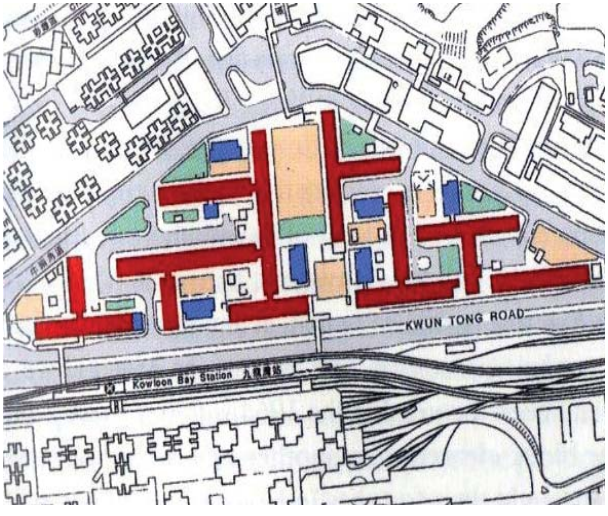
MARK V (Lower Ngau Tau Kok)

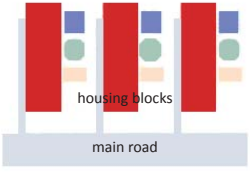


Nett. Area
A: 13.94 m²
B: 18.65 m²
C: 23.00 m²
D: 26.66 m²

Key Color:
1. Building services (public services on the central)
2. Horizontal circulation (central corridor)
3. Vertical circulation (staircases at ends)
4. Private balcony (each room has a balcony facing outside)

Lower Ngao Tau Kok Estate

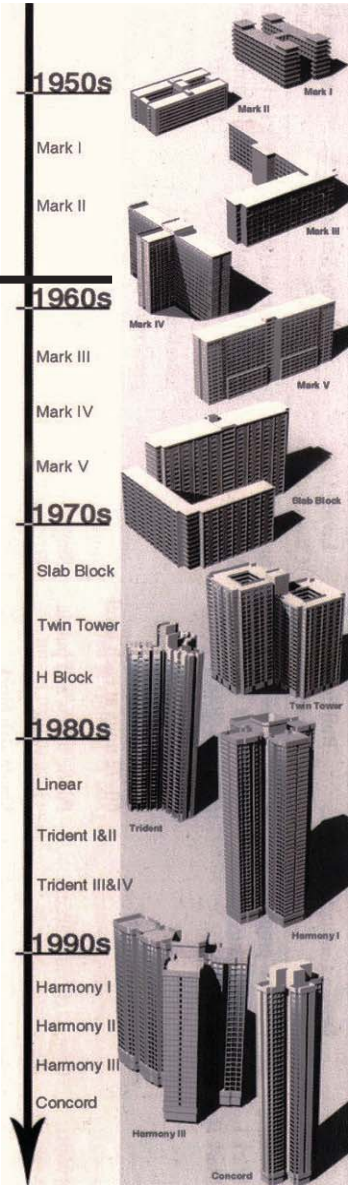




Planing Concept

Key Color:
1. Housing Block
2. Road
3. Landscape
4. Playground
5. School


In the 1960s


1950s
Mark I
Mark II
1960s
Mark III
Mark IV
Mark V
1970s
Slab Block
Twin Tower
H Block
1980s
Linear
Trident I&II
Trident III&IV
1990s
Harmony I
Harmony II
Harmony III
Concord
Mark I
Mark II
Mark III
Mark IV
Mark V
Slab Block
Twin Tower
Trident
Harmony I
Harmony III
Concord

THE 70'S

The 70's marked an important turning point in planning for public housing. In October 1972, the administration launched the biggest housing program ever, to provide appropriate living accommodations for 1.8 million citizens in ten years time ("T*en Year Housing Program*") by building 53 new public housing estates and converting 19 old housing and village estates.

At the same time, a new Housing Authority was established. Public housing became a driving force for decentralizing the urban population into the New Towns, but later more and more public housing buildings were erected in remote areas of the New Territories.

Thereby more support had to be given to transport infrastructure on a territory wide basis. The need for better planed support facilities, within large scale housing estates became evident. Facilities such as transportation interchanges, playgrounds, schools markets and parking areas were essential elements in wide-area master plans. The southern side of Hong Kong Island, the *Wah Fu Estate*, is a fine example of this type of comprehensive development during this period. The scale of the project and complexity of urban structures were extraordinary when compared to the world

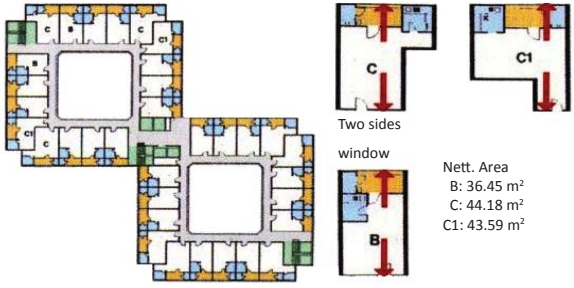
standards of that particular time. The estate should also be noted for its inventive architectural setting on a slope site, where higher Twin Towers at the back and lower Slab Blocks at the front (both standard housing blocks of the 70's), near the sea, maximize the views of the residential units.

The ultimate goal of housing policy at this time was to create "self-contained", fully equipped dwelling units with a key area of 3.3 m^2 per person, and to combine qualitative requirements with quantitative targets.

To satisfy the aspiration of the citizens to own their flats towards the end of the 1970's the Housing Authorities launched a number of schemes including the *Home Ownership Scheme* (HOS), *Public Sector Participation Scheme* (PSPS) and other loan schemes. Under these schemes, high quality flats were built and sold at a discount to eligible citizens and sitting tenants of public housing. The schemes were very helpful to families which exceeded the income limit for public housing and yet were not wealthy enough to buy their own flats.

This resulted in a greater variety of constructed forms and building configurations. Some of these HOS developments, such as *Sui Wo Court* and *Sha Tin*, were pioneers in urban composition. Groupings of high-rise residential blocks were cleverly integrated with low-rise commercial shopping and community facilities, composing an overall well planed presence.

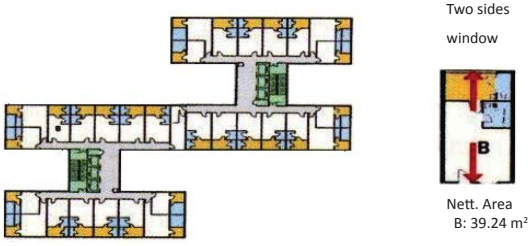
TWIN TOWER (Wah Fu)



Nett. Area
B: 36.45 m²
C: 44.18 m²
C1: 43.59 m²

Key Color:
1. Building services (private toilette and kitchen)
2. Horizontal circulation (corridors around the central light well)
3. Vertical circulation (staircases at corners and four lifts in central)
4. Private balcony (each room has a balcony facing outside)

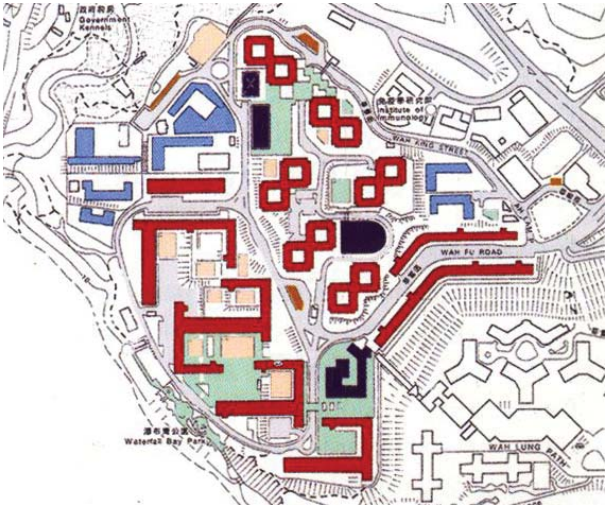
H-BLOCK (Sha Kok)

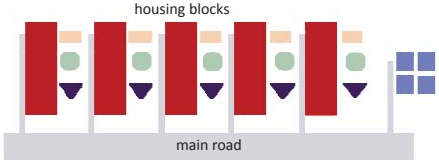


Nett. Area
B: 39.24 m²

Key Color:
1. Building services (private toilette and kitchen)
2. Horizontal circulation (central "H-shaped" corridor)
3. Vertical circulation (staircase and three lifts together form a main core)
4. Private balcony (each room has a balcony facing outside)

Wah Fu Estate

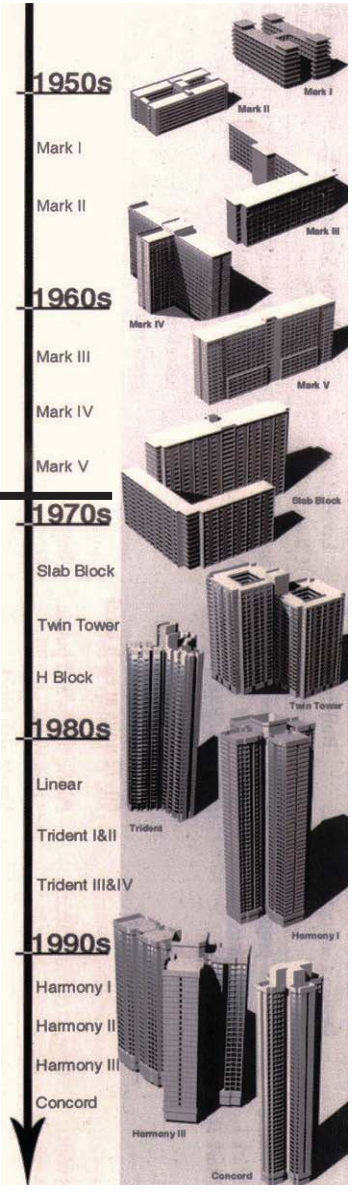




Planing Concept

Key Color:
1. Housing Block
2. Road
3. Landscape
4. Playground
5. School
6. Commercial center
7. Transportation


In the 1970s


1950s
Mark I
Mark II
1960s
Mark III
Mark IV
Mark V
1970s
Slab Block
Twin Tower
H Block
1980s
Linear
Trident I&II
Trident III&IV
1990s
Harmony I
Harmony II
Harmony III
Concord
Mark I
Mark II
Mark III
Mark IV
Mark V
Slab Block
Twin Tower
Trident
Harmony I
Harmony III
Concord

THE 80'S

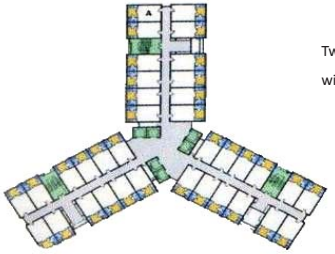
The government announced that the Ten year Housing program would be extended for another five years to 1987. Therefore, the Extended Redevelopment program, to clear sub-standard blocks built in the 60's, began. In the 80's, the single room concept of the past three decades was replaced by a multi-room residential unit. New standard tower blocks, the *Trident I*, *II*, *III* and *IV*, were designed and developed which made use of the internal corridor access. They were built primarily for the New Town housing estates. Also, among the standard blocks was the new *Linear Block* (*New Slab Block*). It was designed to replace the very popular H-shaped block of the 60's and 70's.

The Linear Blocks were mostly used for the redevelopment of the Kowloon peninsula. Natural daylight and ventilation could now attain the bedrooms, living room, bathroom and kitchen. The window size increased, allowing more direct sunlight entering the interior living space. Equipment, design and size of the residential units had already almost reached comparable standard of industrialized nations. Tenants at this time provided their own room dividing partitions and in the 90's these partition components became standard provision

for all rental flats.

In this period, a total of 220.000 flats had been built of which 180.000 were public rental flats and 23.000 were of the Home Ownership Scheme, which supplied housing for over 1 million people. At the same time, the population residing in Housing Authority estates reached 2 million.

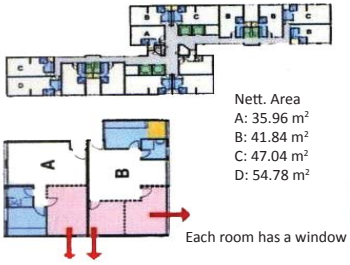
TRIDENT I (Mei Lam)



Nett. Area
A: 27.95 m²

Key Color:
1. Building services (private toilette and kitchen)
2. Horizontal circulation (three corridors connecting to the core)
3. Vertical circulation (staircases in each wing and six lifts in core)
4. Private balcony (each room has a balcony facing outside)

LINEAR BLOCK

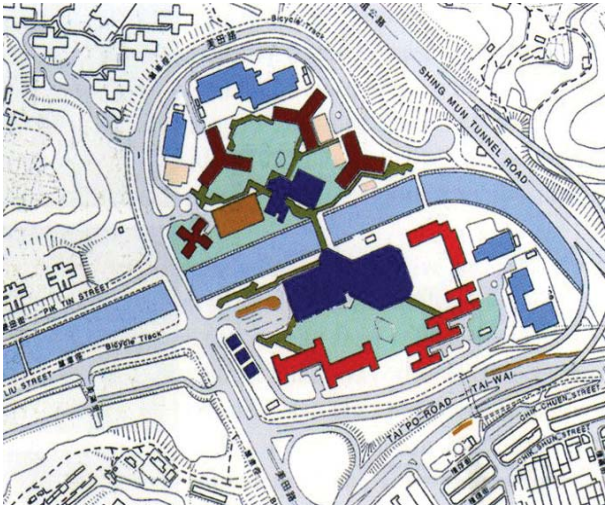


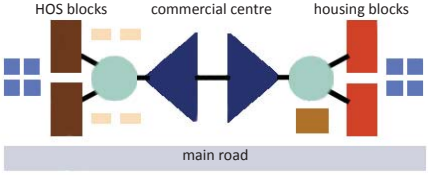
Nett. Area
A: 35.96 m²
B: 41.84 m²
C: 47.04 m²
D: 54.78 m²

Each room has a window

Key Color:
1. Building services (private toilette and kitchen)
2. Horizontal circulation (two linear corridors)
3. Vertical circulation (balcony size was reduced)
4. Private balcony (each room has a balcony facing outside)
5. Bedroom (independent bedrooms introduced to form 4-6 people room unit)

Mei Lam Estate

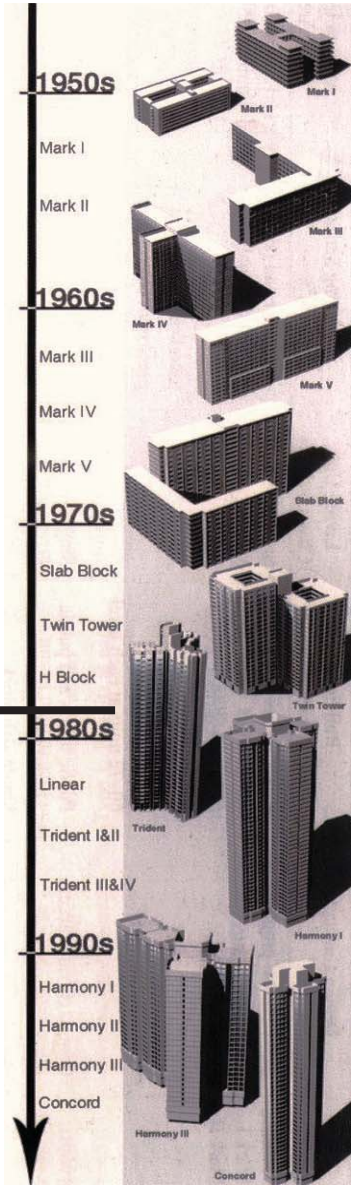




Planing Concept

Key Color:
1. Housing Block
2. Road
3. Landscape
4. Playground
5. School
6. Commercial center
7. Transportation
8. Covered walkway
9. River
10. Planned HOS


In the 1980s


1950s
Mark I
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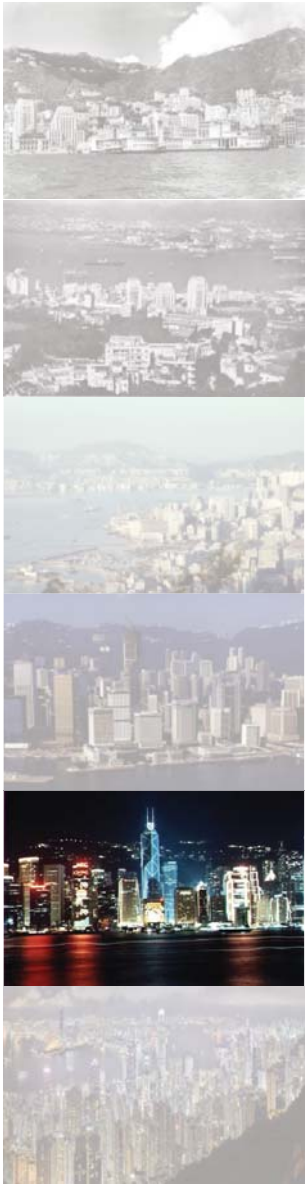


THE 90'S

The speed of construction became very important in achieving the efficient rate of buildings and developments required to satisfy the unprecedented immense public housing program in Hong Kong.

The public housing estates need about five years from planning to their completion, imposing demanding time pressure on the contractors. But, it was still necessary to ensure that the speed of construction does not affect any safety or quality standards in any circumstances.

The Hong Kong Housing Department designed in the 90's a new series of standard blocks, the *Harmony Types I*, *II*, and *III*, *New Cruciform Type* and a more recent solution- *The Concord*, to enhance the build ability of project design and to house another million people by the end of the decade.

The current design innovations also focused on new architectural science aspects such as lighting provision, natural ventilation and human comfort issues involving humidity control. It became important to create a safe and healthy living environment. Architects and engineers carried out detailed investigations to optimize construction programs leading to

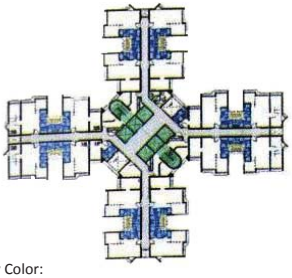
in-house standard norms and related guidelines for construction durations.

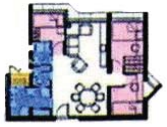
The Concord block series came out as a product of construction technology advances and public consultations. The Harmony blocks are composed only of structural walls and flat slabs eliminating so columns and down stand beams. To promote the construct ability, the block designs were made more spacious and as a standard module form. Another important factor was flexibility inside the flats while maintaining consistent standards of quality.

For the Home Ownership Scheme mostly the New Cruciform Type and the Concord types were used. The New Cruciform Type Block (NCB) has on each floor two identical wings rotated at the centre to create the cruciform shape. The building has 37 floors with 10 flats per floor, what equals 370 flats for sale. The Concord has two block types, *Concord I* and *II*, and takes advantages of new building technologies and constructions such as standard factory produced building components, as well as an efficient and simple construction progress. About 9.000 Concord block flats have been produced until the end of the 90's.

In 1997, the Chief Executive of Hong Kong Special Administrative Region announced another Ten-year Housing Plan. Under this plan, from 1997 to 2006, the Government assured to build no less than 85.000 flats per year, of which 50.000 were to be public housing flats. The plan was that by 2006 over 70% of Hong Kong inhabitants should have their own flats and the waiting time for public rental housing would be shortened to three years.

HARMONY I (Fu Tung)



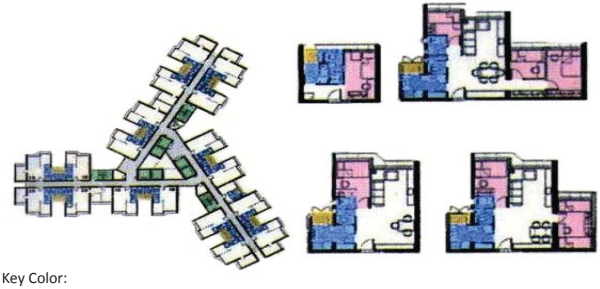


3-bedroom unit (49.07 m²)

1 person unit (16.36 m²)

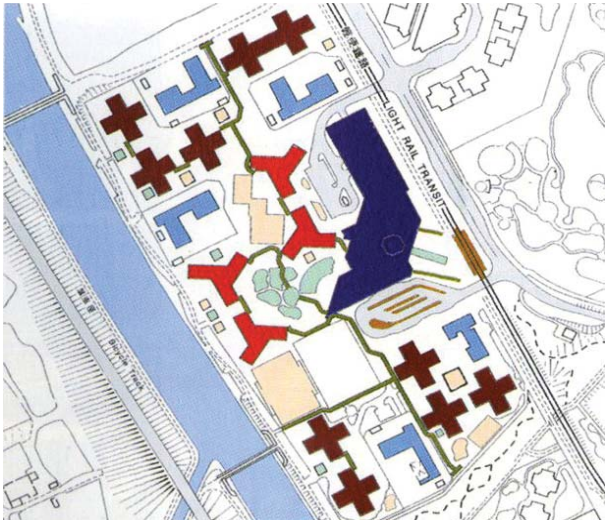
Key Color:
1. Building services (private toilette and kitchen)
2. Horizontal circulation (four linear corridors connecting to the core)
3. Vertical circulation (balcony size was reduced)
4. Private balcony (two staircases and six lifts condensed to form the core)
5. Bedroom (one-three bedrooms units and one person unit)

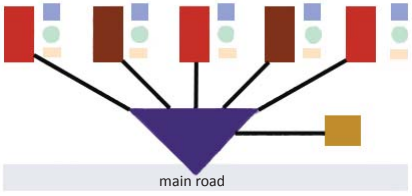
HARMONY II (Tin Shui)



Key Color:
1. Building services (private toilette and kitchen)
2. Horizontal circulation (three linear corridors connecting a triangular core)
3. Vertical circulation (staircases in each three wings and six lifts in the central with three storey height atrium)
4. Private balcony (size was minimized)
5. Bedroom (one-three bedrooms units and one person unit)

Tin Shui Estate





Planing Concept

Key Color:
1. Housing Block
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3. Landscape
4. Playground
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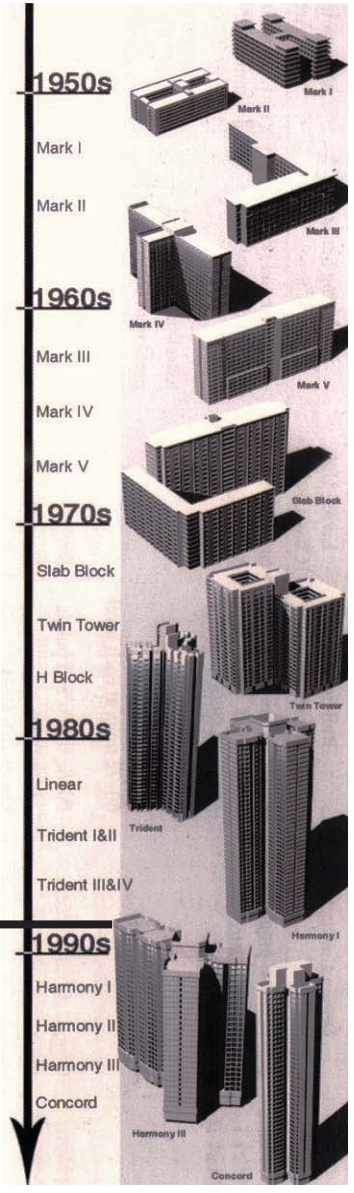
1950s
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1970s
Slab Block
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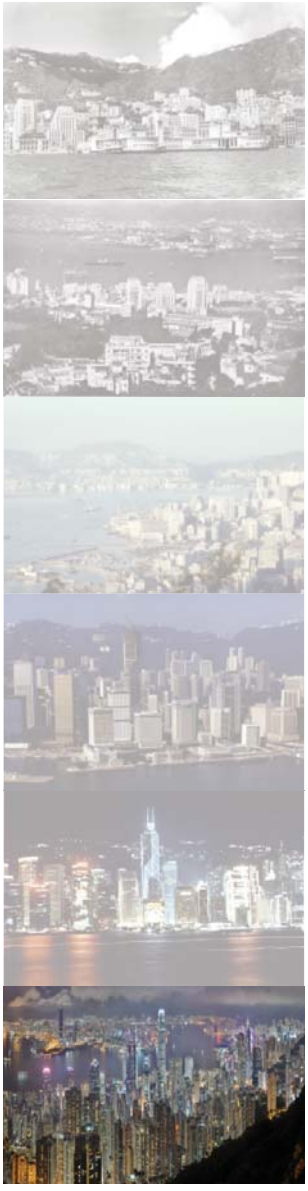
Twin Tower
Trident
Harmony I
Harmony III
Concord


In the 1990s



21ST CENTURY

The 21st century marked the thought about promoting healthy living, green environment and sustainable development. In a wake of public concern over a number of serious incidents affecting the quality of public housing in mid 2000's, the Chief Executive was commissioned on the Institutional Framework of Public Housing. In the review report the main subject underling the housing strategy still was to provide "better housing for all" and to make the best use of private sector resources so that the public resources could from now on focus efficiently on families in genuine need. The government focused more on encouraging more people to buy their own flats and construction of public housing buildings became secondary. This should provide a greater choice to consumers and allow the government to respond quickly and flexibly in housing demand.

The aim became to maintain a fair and stable environment that will enable the development of the property market. Another target was to construct smarter buildings in more cost effective ways, to ensure that they are functional and environmental friendly. Also, to reduce the development density of public housing estates so as to create a better living environment for

the residents in new estates.

However, retreating from the market did not mean that the Housing Authority retreated from the commitment to provide housing for people in need. But in the current times, the commitment has to go beyond simply providing a living space. It became necessary to help public housing tenants to turn a cell into a comfortable dwelling space, to help develop housing blocks into a community and to achieve a good living environment in public housing estates, which after all make ⅓ of Hong Kong's living space!

Conclusion

Hong Kong's public housing program has a long and remarkable history. It has played a major role in the social and economic development of the city. It went through a number of transitional stages during the main fifty years.

In the 50's and 60's it was only provided as emergency housing shelter, to resettle the fire victims and squatter residents. It served as a relief to those who were in need. As the society progressed in the 70's the housing policy changed with a view onto providing permanent housing to citizens. Old resettlement estates were converted and redeveloped and more public rental housing estates were erected. In the 80's came the aspiration of the citizens to improve their living environment, so the policy changed to provide quality housing. New kind of housing estates were built. These were self-contained, with own transport links, markets, schools, shopping centers, commercial outlets and restaurants. In many cases roads and other infrastructure were built. In the more current time, the government increased the use of the private property market, instead of building public housing.

Public housing now serves as the last resort for the lowest income group. Nevertheless, the Hong Kong Housing Authorities continue to evolve with new public housing policies and keep providing better service to their tenants as the population needs evolve.

IN

Social High-Rise living in Tai Kok Tsui

Picture 47. Tai Kok Tsui overview

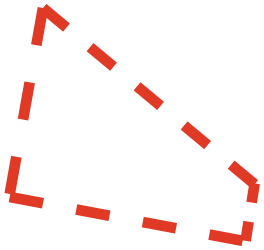
TAI KOK TSUI

In the northern hinterland of the Kowloon Peninsula, where my building site is located, stretches the extension of social housing. The housing blocks for thousands of residents frame the core city area. This part of the peninsula is the most industrialized. Heavy industrial zones are also found in the coastal parts.

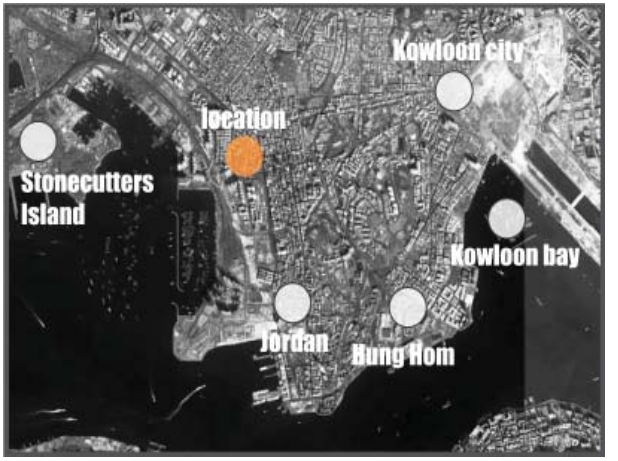
Tai Kok Tsui is an area in north-west Kowloon. Before reclamation this area was a long island of Hong Kong granite. A outstreched granite hill divided the reclamation area in the east from the dock area in the west. The *Tsui* in the name implies that the area was first a craned cape, on the west side of the peninsula. The inlet between the cape and peninsula was reclaimed from the sea from 1867-1904. In 1964 the Tai Kok Tsui Ferry Pier was built and another minor reclamation was needed. The initiation of the Airport Core Program, in the 1990's, lead to substantial reclamations as well as to a revitalization of the district. Today the mixed land use of residential and industrial areas is very present. Traditionally the area is known as overloaded by immigrants and senior citizens, but recently more and more young people decide to settle in this area.

FUK TSUN STREET
IVY STREET
BEECH STREET
PINE STREET
OAK STREET
ASH STREET
LARCH STREET
FIR STREET
檸樹街
杉樹街
埃華街
橡樹街
松樹街
The Mongkok Tai Fong Association Chan Hing Social Services Centre
Podium
110
Lim Por Yen Centre
18
Yip Kwong Industrial Building
39-41
Hing Yip Centre
37
Podium
33-35
37-45
Block A
Fuk Ming Building
Podium
Block B
Lever Building
Podium
Fuk Ming Building
26-20
28-20
Evernew Comm Centre
Yen Wing Building
Ming Tak Court
Podium
Oak House
Kin Lee Building
Kwong Wo Building
Podium

THE SITE'S BASIC DATA

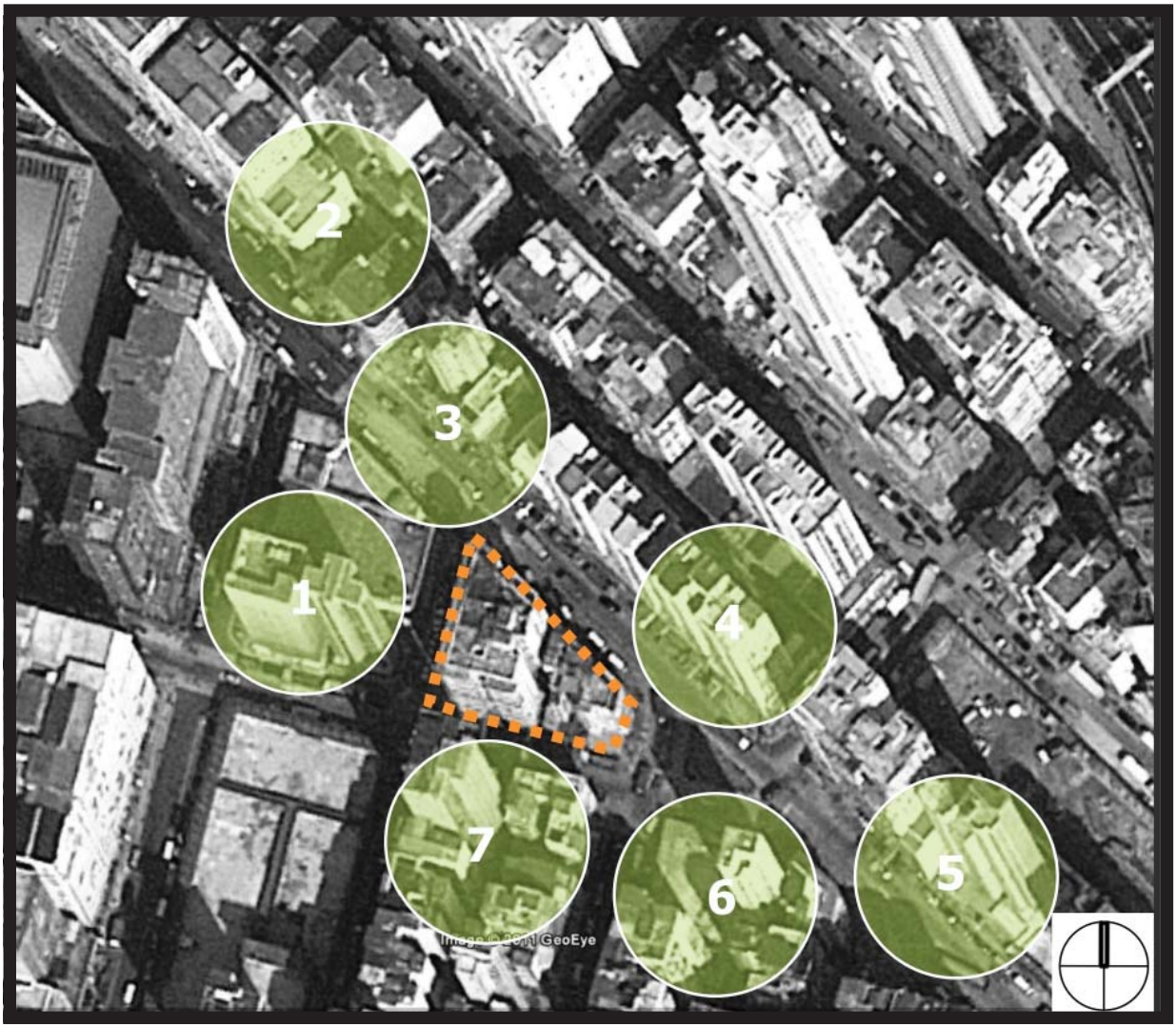


Country: China
City: Hong Kong
Area: Tai Kok Tsui; Kowloon
Site area: 602.8 m^2



My chosen site location is 602.8 m^2, and it is located on the crossroad of *Fuk Tsun Street* and *Ivy Street,* in the area of Tai Kok Tsui. The area is manly residential but is also known for its many metal and steal shops. What also can be noticed is that there is almost no green vegetation, so for my opinion it needs a "refreshment" in this domain. The site is already designated as a Residential zone, in the Mong Kok Outline Zoning Plan. In my plan it will be redeveloped as a social, residential block on top of a retail podium.

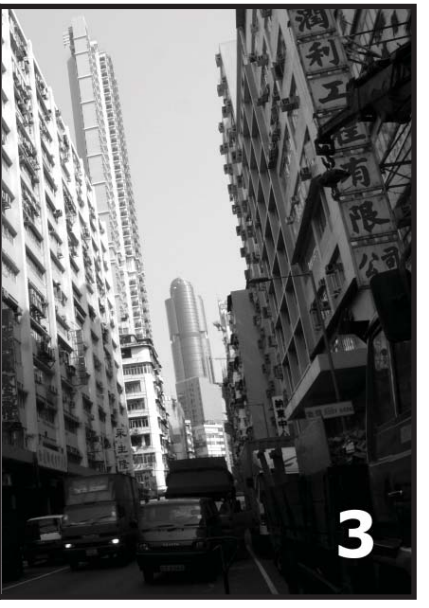
THE SITE


2
3
1
4
7
6
5
Image © 2011 GeoEye

ENIVIRONMENT


1


2

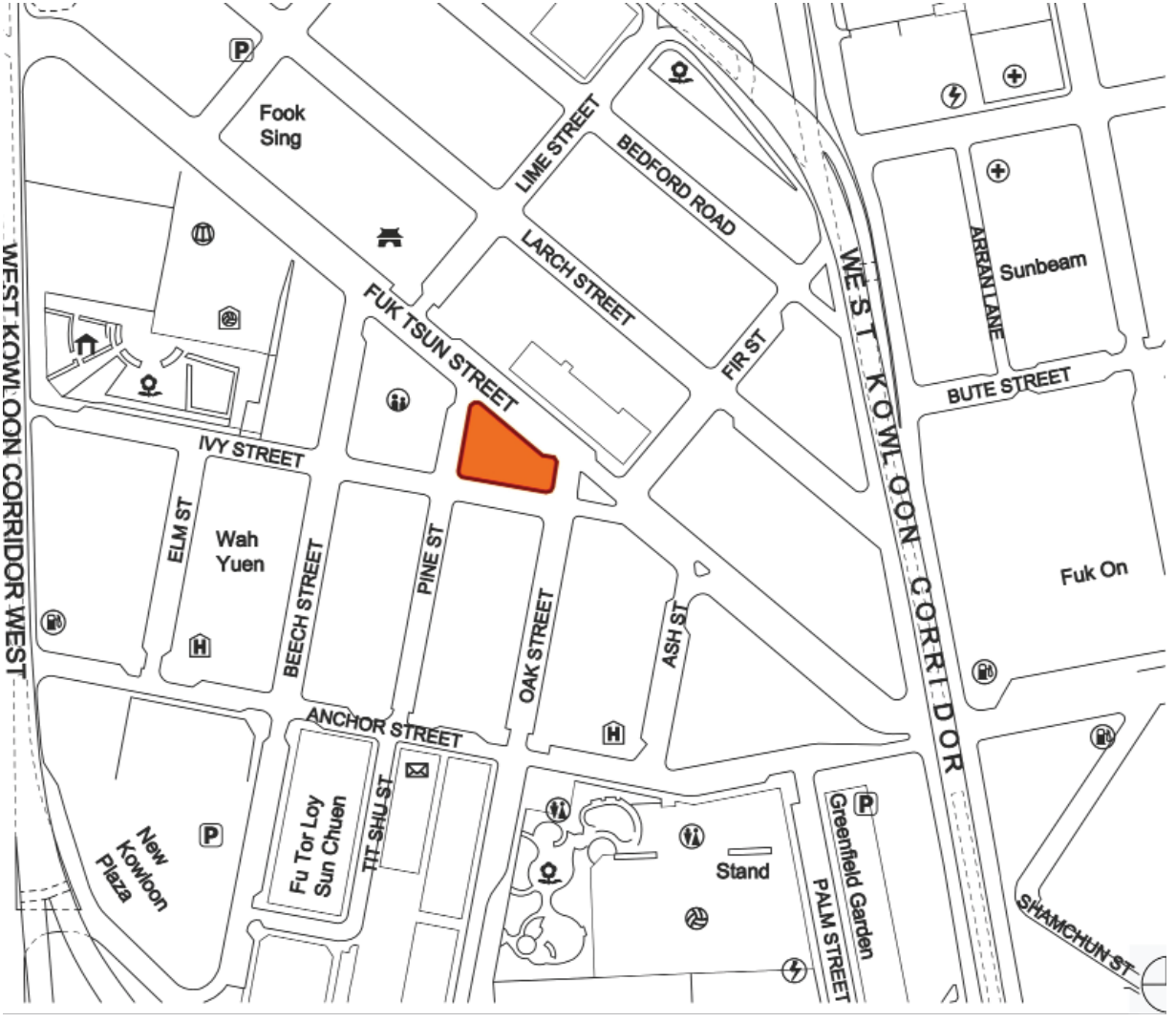

3


4


5

6

7


Fook Sing
LIME STREET
BEDFORD ROAD
LARCH STREET
FUK TSUN STREET
FIR ST
WEST KOWLOON CORRIDOR
ARRAN LANE
Sunbeam
BUTE STREET
WEST KOWLOON CORRIDOR WEST
IVY STREET
ELM ST
Wah Yuen
BEECH STREET
PINE ST
OAK STREET
ASH ST
Fuk On
ANCHOR STREET
New Kowloon Plaza
Fu Tor Loy Sun Chuen
TIT SHU ST
Stand
Greenfield Garden
PALM STREET
SHAMCHUN ST

 social services centar

 school

 park

 playground

 green surface

 lybrary

 first aid

 hospital

 parking

 gas station

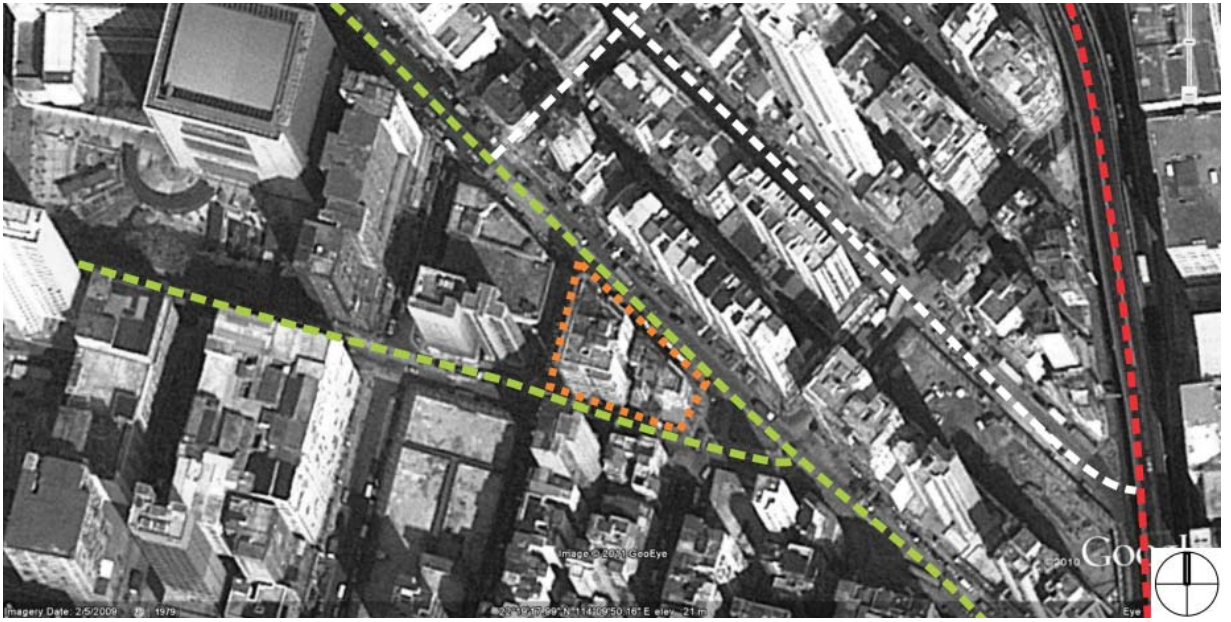
 post office

 temple

 gym

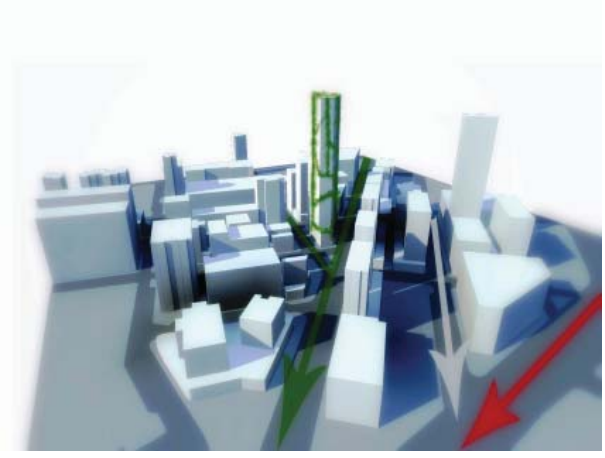
 substation

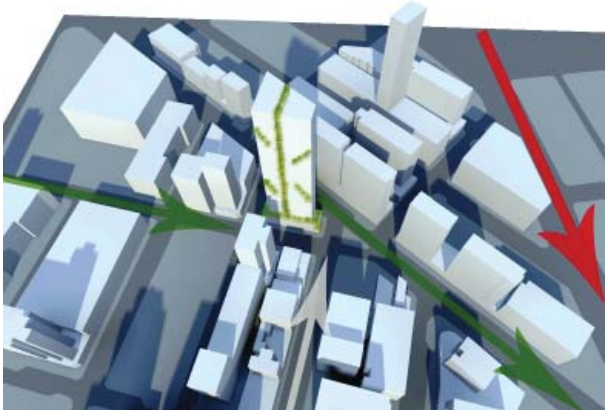
TRAFIC

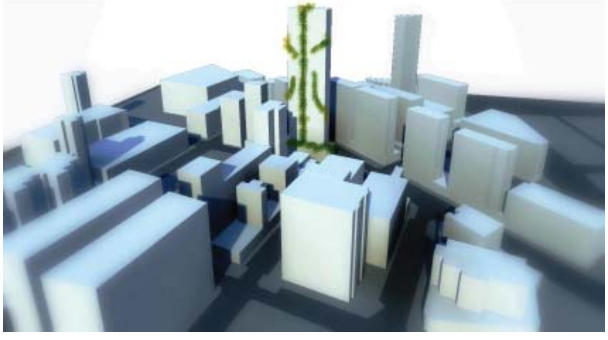


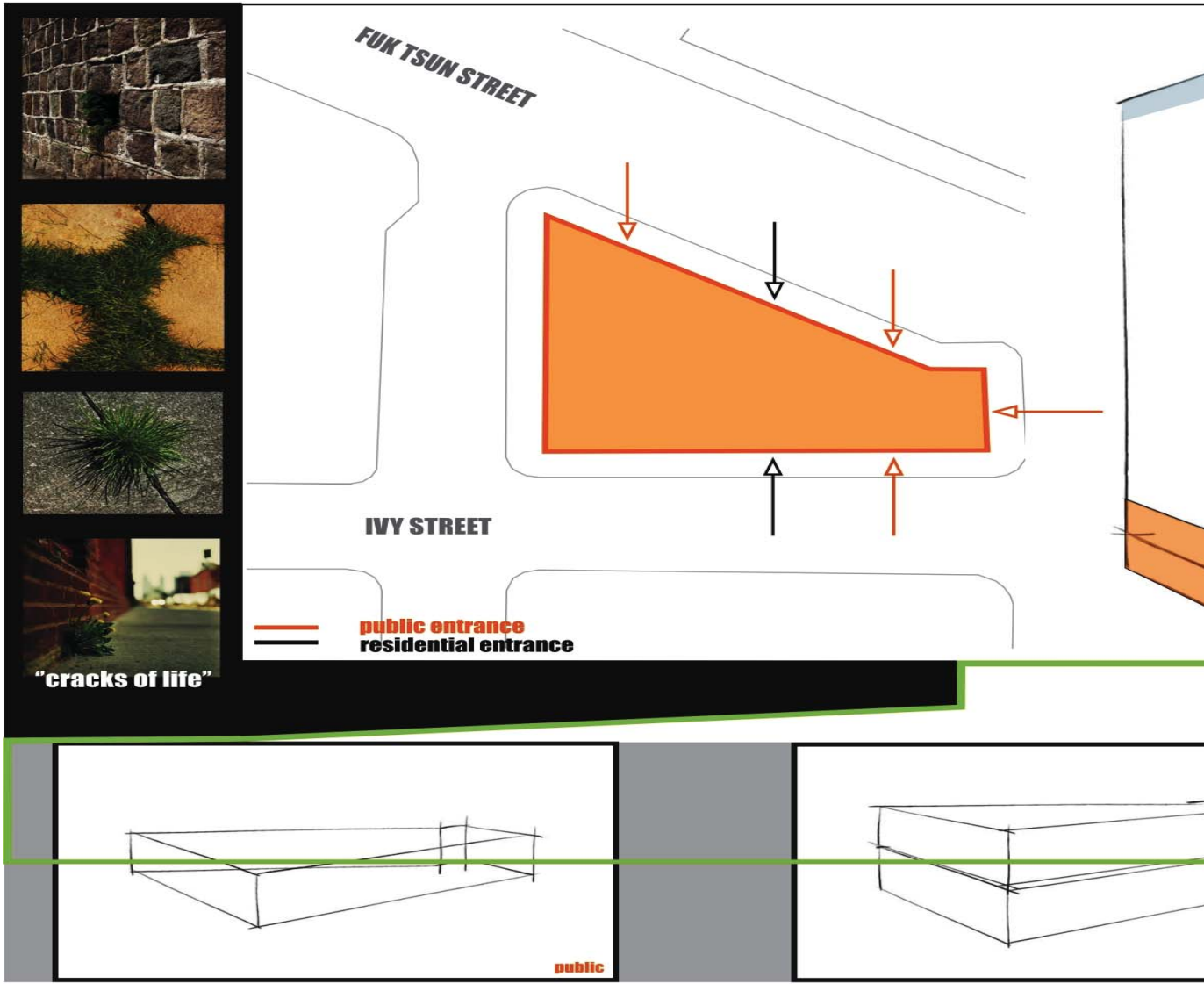
location
high frequency traffic flow
midle frequency traffic flow
low frequency traffic flow

HIGHTSTAND PROPORTIONS

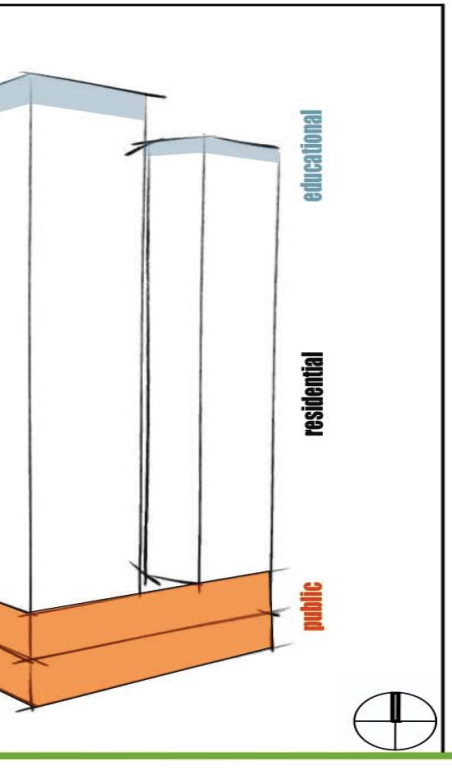


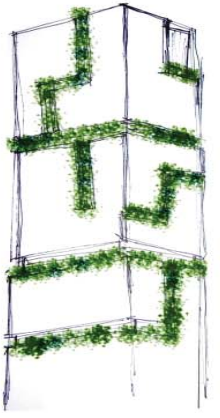


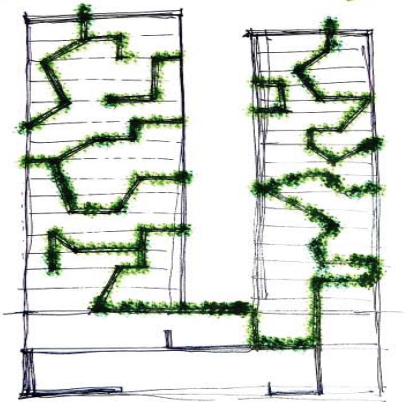


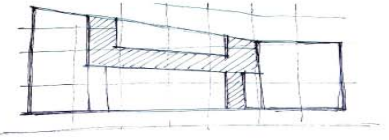

FUK TSUN STREET
IVY STREET
public entrance
residential entrance
"cracks of life"
public

IDEA

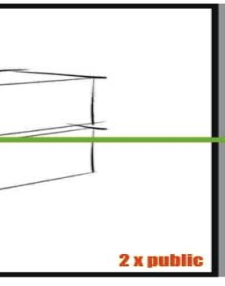


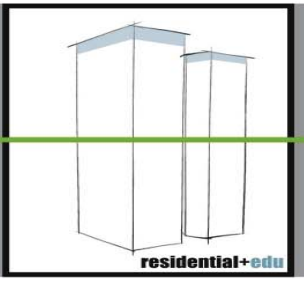


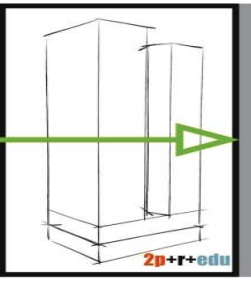




sketches







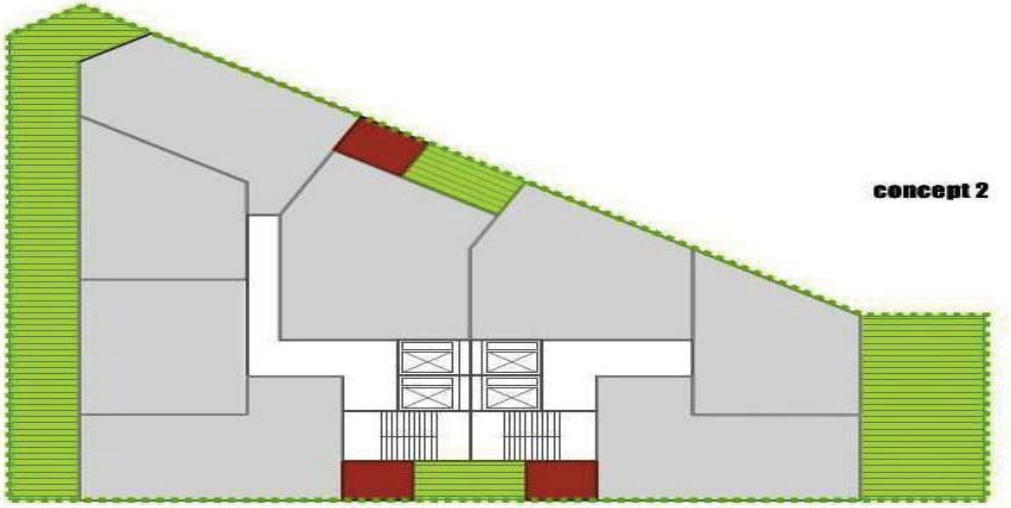
STORY NUMBER	PODIUM(m2)	FLAT AREA(m2)	EDUCATIONAL AREA(m2)
1	602.8		
2	602.8		
3-29		10.087,22	
30			387.97
TOTAL	1.205,6	10.087,22	387.97

TOTAL GBA	11.680,79 m2

apartments
comunications
podium/green roof
balcony

*average flat area P=50m2 (concept 1,2)

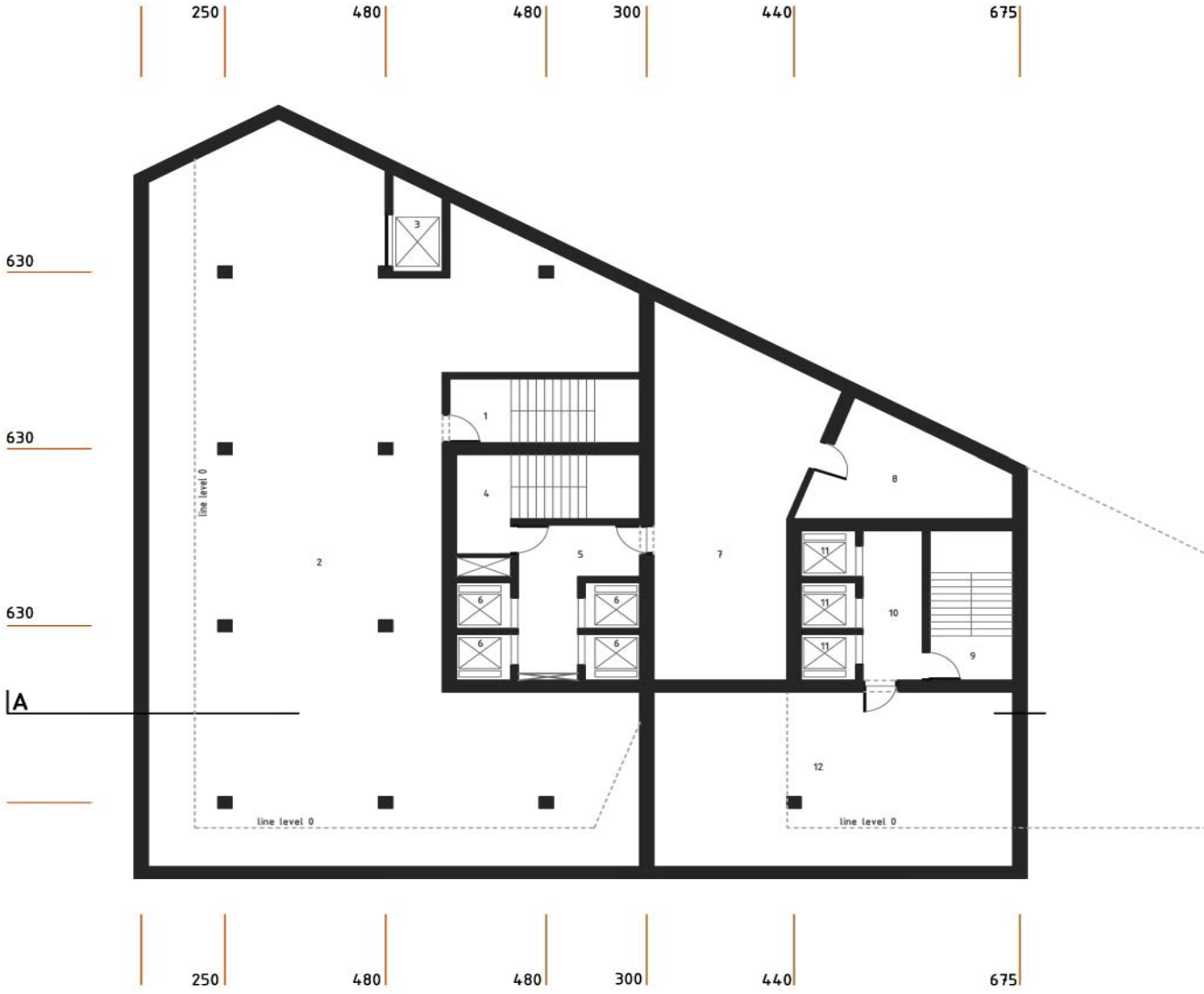
CONCEPT



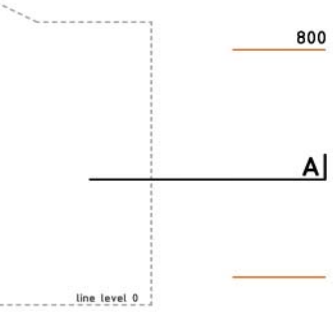
STORY NUMBER	PODIUM(m2)	FLAT AREA(m2)	EDUCATIONAL AREA(m2)
1	602.8		
2	602.8		
3-29		9.863,62	
30			379.37
TOTAL	1.205,6	9.863,62	379.37

TOTAL GBA	11.448,59 m2

HIGHRISE AREA


250
480
480
300
440
675
630
630
630
A
line level 0
line level 0
line level 0
1
2
3
4
5
6
6
6
6
7
8
9
10
11
11
11
12

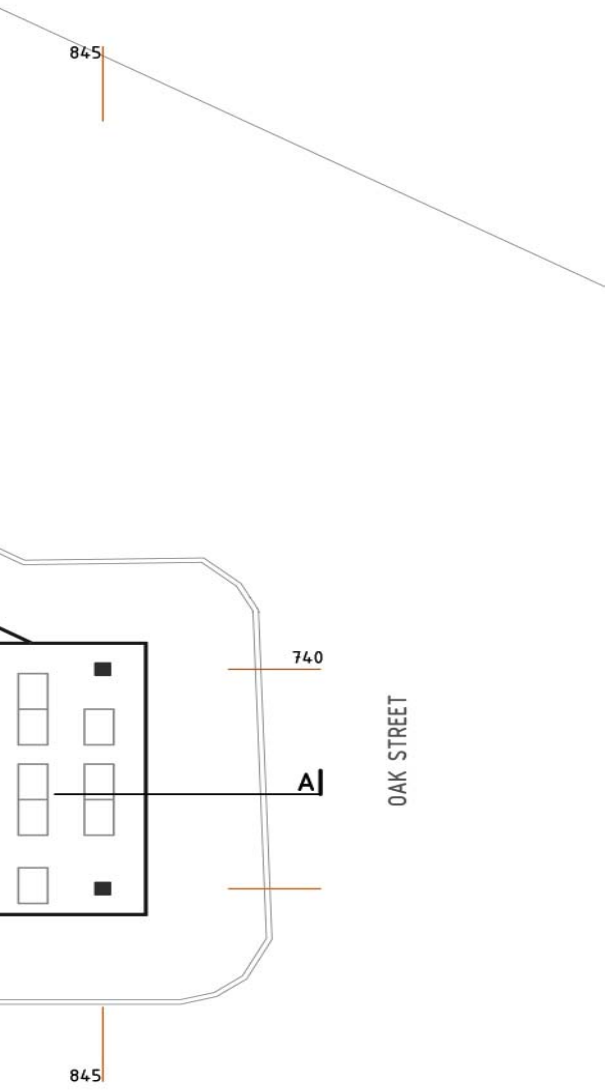
LEVEL -1



DESCRIPTION	
1. Staircase	13.11 m^2
2. Storage	280.72m^2
3. Freight elevator	4.61m^2
4. Staircase	14.71m^2
5. Hall	13.41m^2
6. Residental elevators	10.88m^2
7. Storage	54.19m^2
8. Storage	18.30m^2
9. Staircase	13.38m^2
10. Hall	9.63m^2
11. Residental elevators	8.16m^2
12. Storage	73.64m^2
TOTAL AREA LEVEL -1	514.74m^2


480
480
300
440
675
FUK TSUN STREET
service entrance
public entrance
630
630
630
PINE STREET
A
line level -1
store entrance
residental entrance
residental entrance
public entrance
line level 1
line level -1
line level -1
480
480
300
440
675
IVY STREET

LEVEL 0



DESCRIPTION	
1. Entrance	5.47m²
2. Hall	24.72m²
3. Staircase	3.05m²
4. Public elevator	2.38m²
5. Supermarket	169.48m²
6. Hall	25.17m²
7. Entrance	3.74m²
8. Hall	9.99m²
9. Staircase	14.71m²
10. Entrance	5.03m²
11. Market	105.05m²
12. WC	2.15m²
13. Storage	3.47m²
14. Store	21.07m²
15. Entrance	3.24m²
16. Hall	13.68m²
17. Hall	3.88m²
18. Staircase	13.38m²
TOTAL AREA LEVEL 0	436.17m²


480
480
300
740
675
630
630
630
A
line level 2
line level 2
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
480
480
300
740
675

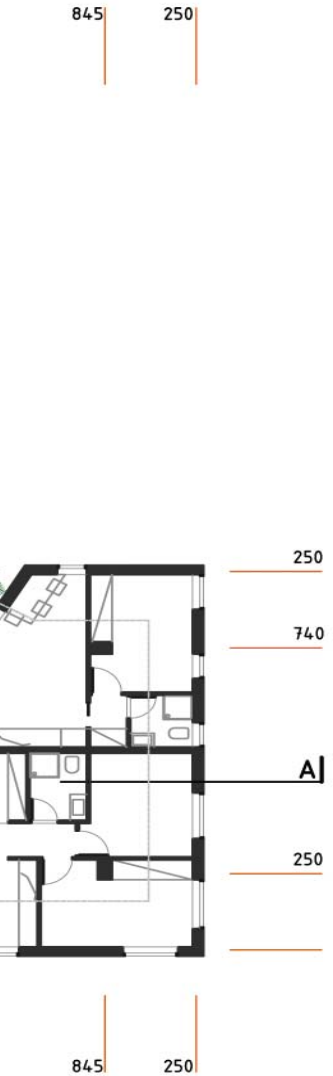
LEVEL 1

DESCRIPTION

1. Hall	30.93m²
2. Hall / Storage	26.08m²
3. Food	95.17m²
4. Small kitchen	25.06m²
5. Store	22.79m²
6. Store	33.31m²
7. Store	21.45m²
8. Cafe	97.56m²
9. Store	54.56m²
10. Staircase	12.65m²
11. Hall	105.05m²
12. Restroom handicap	4.86m²
13. Restroom ladies	3.47m²
14. Restroom man	21.07m²
15.Comunications	40.24m²
16. Staircase	13.38m²
TOTAL AREA LEVEL 1	506.97m²


250
480
480
300
440
675
630
630
630
A
250
D
E
C
B
A
1
2
3
4
5
D'
A'
C'
B'
line level 1

LEVEL 2-44

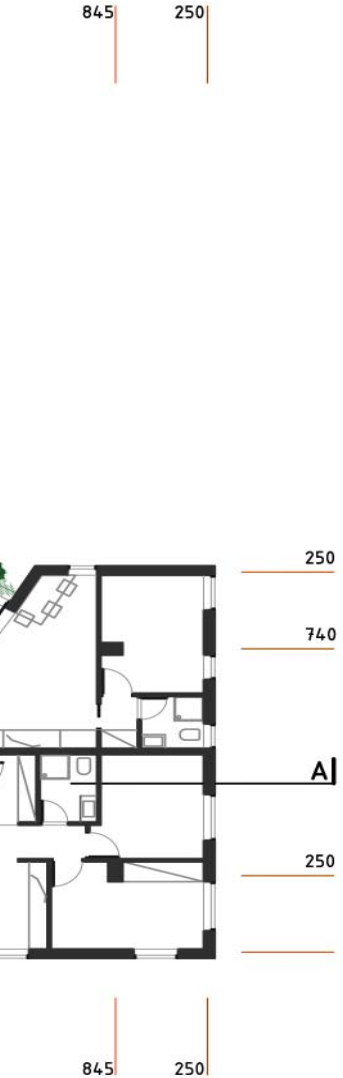


DESCRIPTION

1. Hall	36.32m²
2. Staircase	12.65m²
3. Common space	22.20m²
4. Hall	31.22m²
5. Staircase	13.38m²
Apartment A	39.74m²
Apartment B	62.86m²
Apartment C	62.39m²
Apartment D	72.31m²
Apartment E	50.80m²
Apartment A'	37.04m²
Apartment B'	52. 09m²
Apartment C'	47.44m²
Apartment D'	43.22m²
TOTAL AREA LEVEL 2-44	per floor - 583.47m²


250
480
480
300
440
675
630
630
630
A
250
line level 1
common space roof line
common space roof line
line level 1
A
B
C
D
E
A'
B'
C'
D'
1
2
3
4

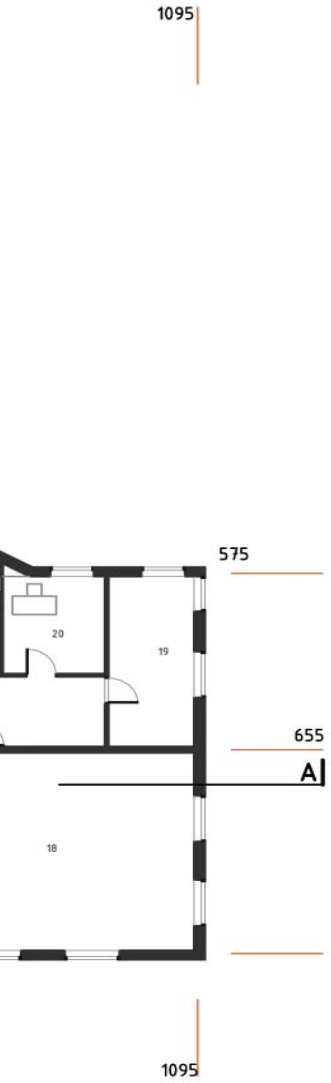
LEVEL 2-44'



DESCRIPTION	
1. Hall	36.32m²
2. Staircase	12.65m²
3. Hall	31.22m²
4. Staircase	13.38m²
Apartment A	39.74m²
Apartment B	62.86m²
Apartment C	62.39m²
Apartment D	72.31m²
Apartment E	50.80m²
Apartment A'	37.04m²
Apartment B'	52. 09m²
Apartment C'	47.44m²
Apartment D'	43.22m²
TOTAL AREA LEVEL 2-44'	per floor - 561.46m²


670
250
590
440
675
570
845
655
A
line level 1
common space roof line
common space roof line
line level 1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
21
22
23
24

LEVEL 45



DESCRIPTION

1. Hall	17.85m²
2. Staircase	12.65m²
3. Hall	31.13m²
4. Classroom	45.43m²
5. Classroom	48.43m²
6. Teachers room	28.10m²
7. Office	18.85m²
8. Hall	3.79m²
9. Restroom ladies	13.56m²
10. Restroom men	8.41m²
11. WC	5.04m²
12. Kindergarten	77.56m²
13. Classroom	32.34m²
14. Staircase	13.38m²
15. Hall	16.74m²
16. Hall	27.72m²
17. Classroom	41.36m²
18. Classroom	53.21m²
19. Teachers room	13.04m²
20. Office	8.88m²
21. Restroom ladies	7.14m²
22. Restroom men	5.30m²
23. WC	3.41m²
24. Playroom	38.43m²

TOTAL AREA LEVEL 45	571.83m²


630
B
1
2
3
4
5
6
7.
250
480

APARTMENT B

DESCRIPTION	
1. Entrance hall	4.99 m^2
2. Kitchen	5.34m^2
3. Living and dining room	21.45m^2
4. Hall	3.06m^2
5. Bathroom	4.25m^2
6. Bedroom	12.46m^2
7. Bedroom	10.19m^2
TOTAL AREA LEVEL B	61.74m^2

250

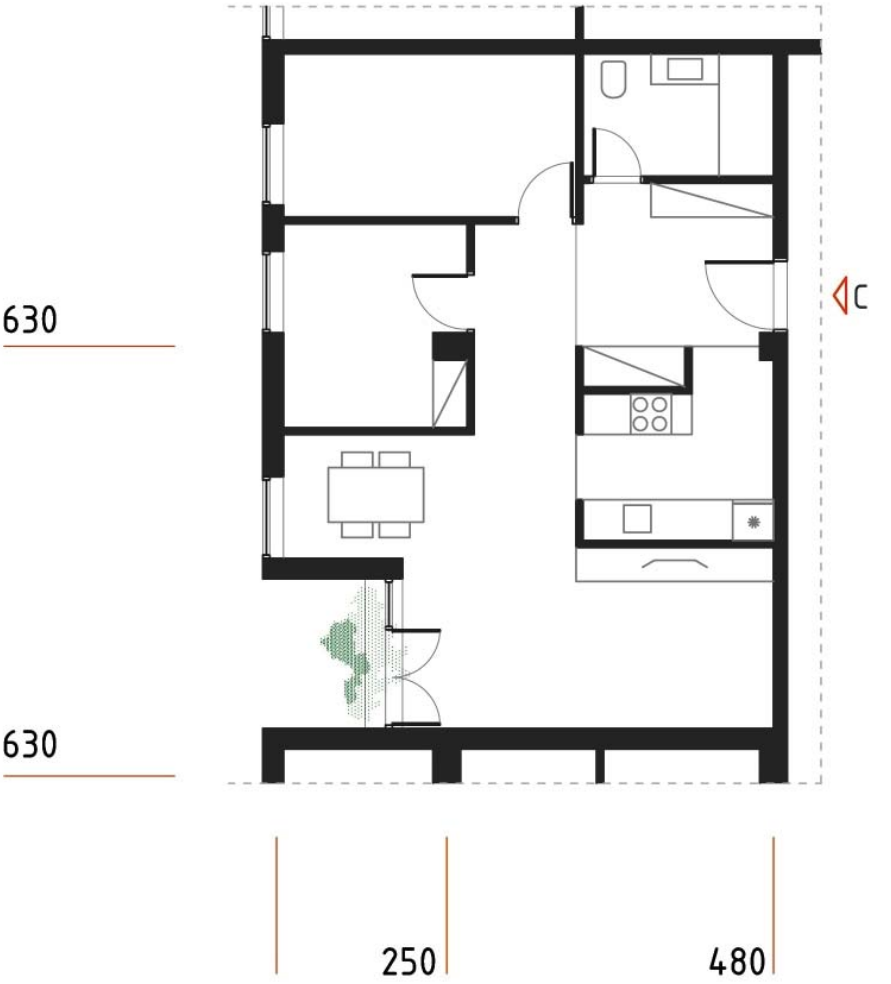
845

250

APARTMENT B'

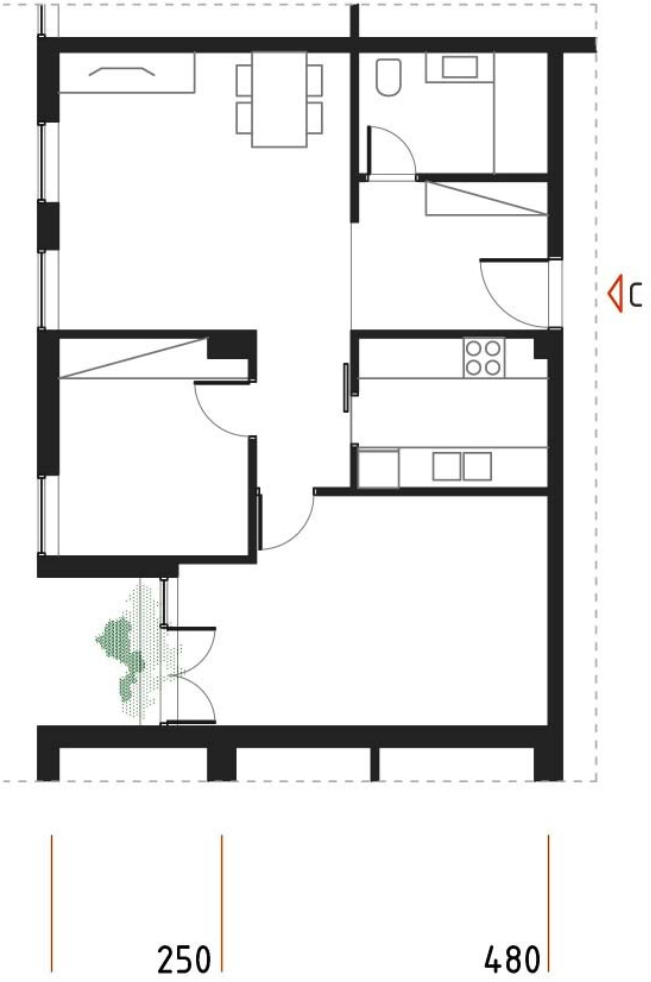
DESCRIPTION	
1. Entrance hall	4.31 m^2
2. Hall	3.58m^2
3. Kitchen	4.08m^2
4. Living and dining room	13.39m^2
5. Bathroom	3.41m^2
6. Bedroom	9.85m^2
7. Bedroom	11.57m^2
TOTAL AREA LEVEL B'	50.19m^2

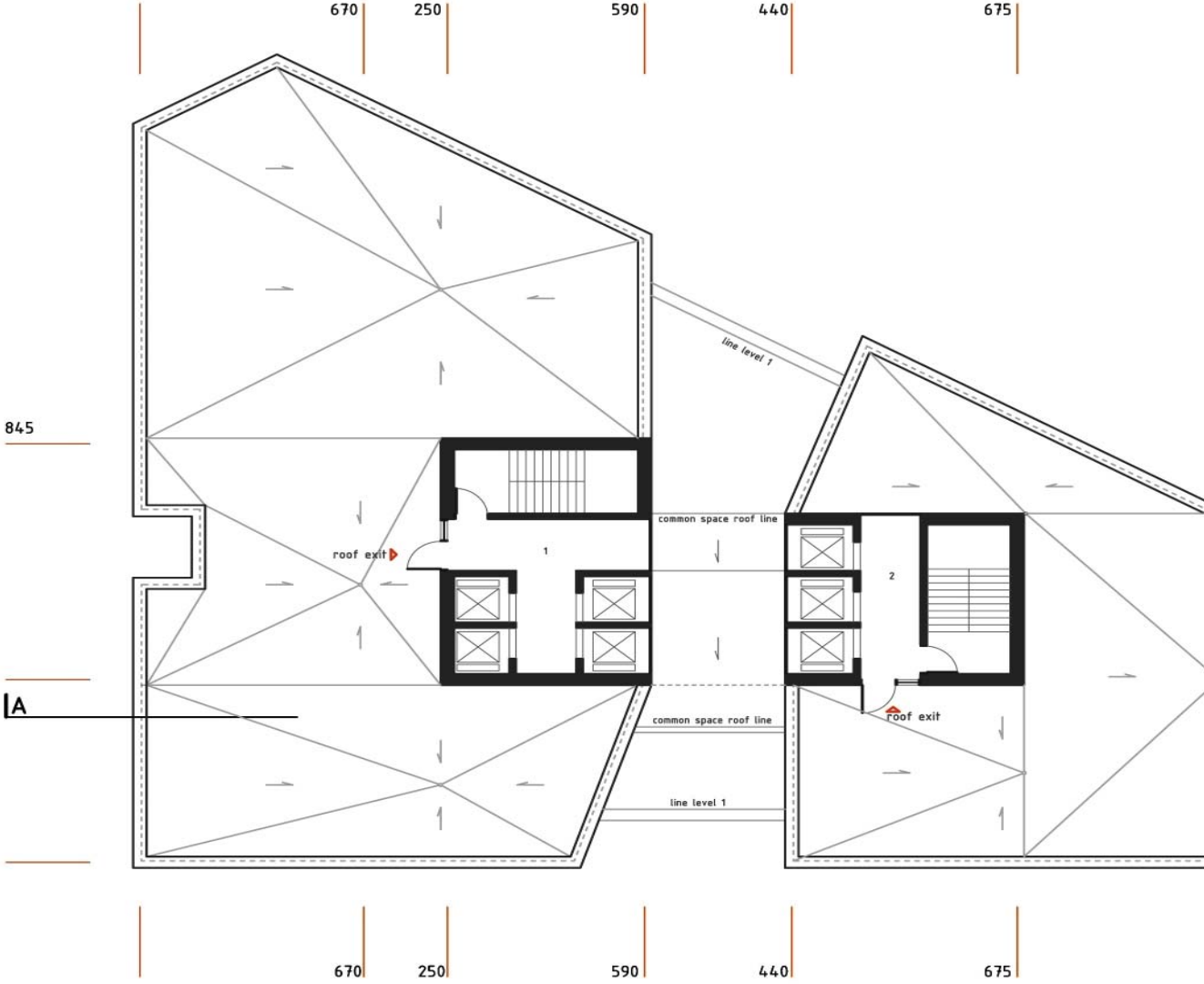
version 1



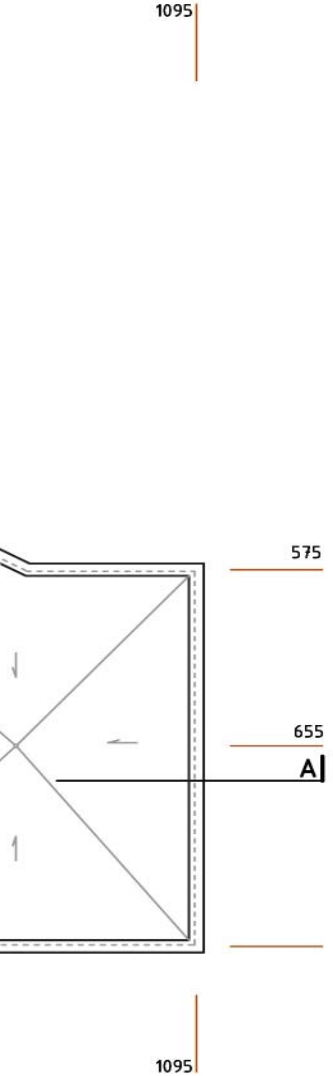
APARTMENT C (SPATIAL VARIATION)

version 2

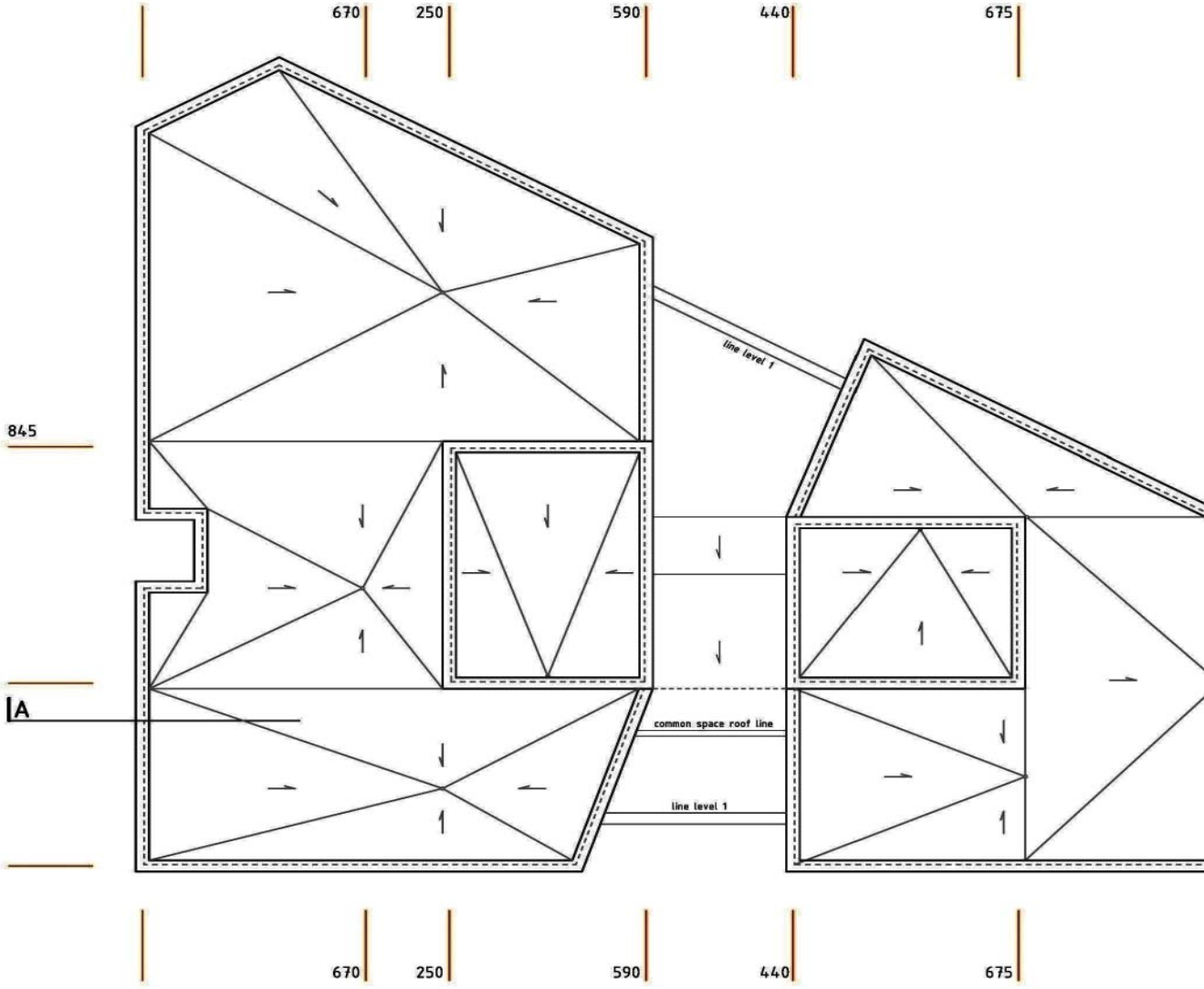



670
250
590
440
675
845
A
line level 1
common space roof line
roof exit
1
2
common space roof line
roof exit
line level 1
670
250
590
440
675

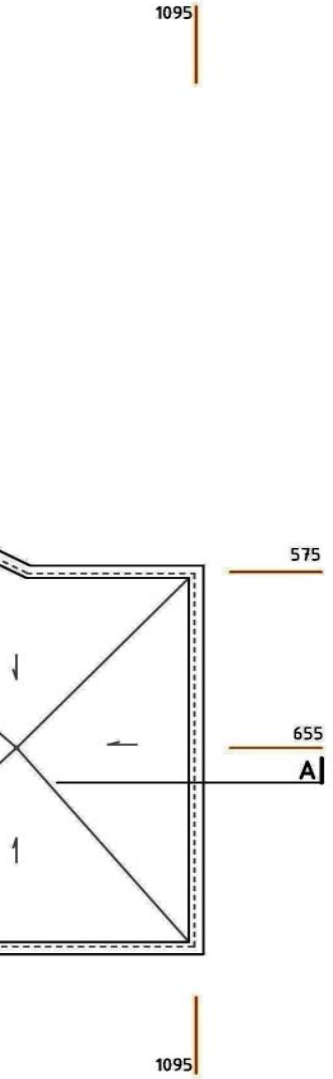
ROOF PLAN 1

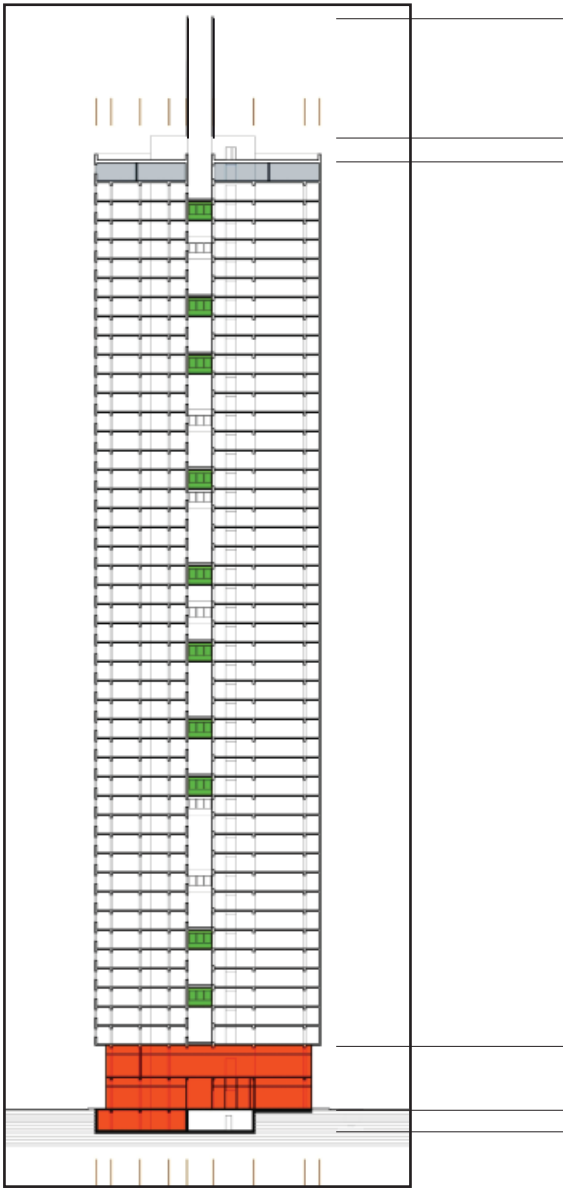


DESCRIPTION	
1. Hall	17.85 m^2
2. Hall	10.62m^2
TOTAL AREA LEVEL	50.19m^2

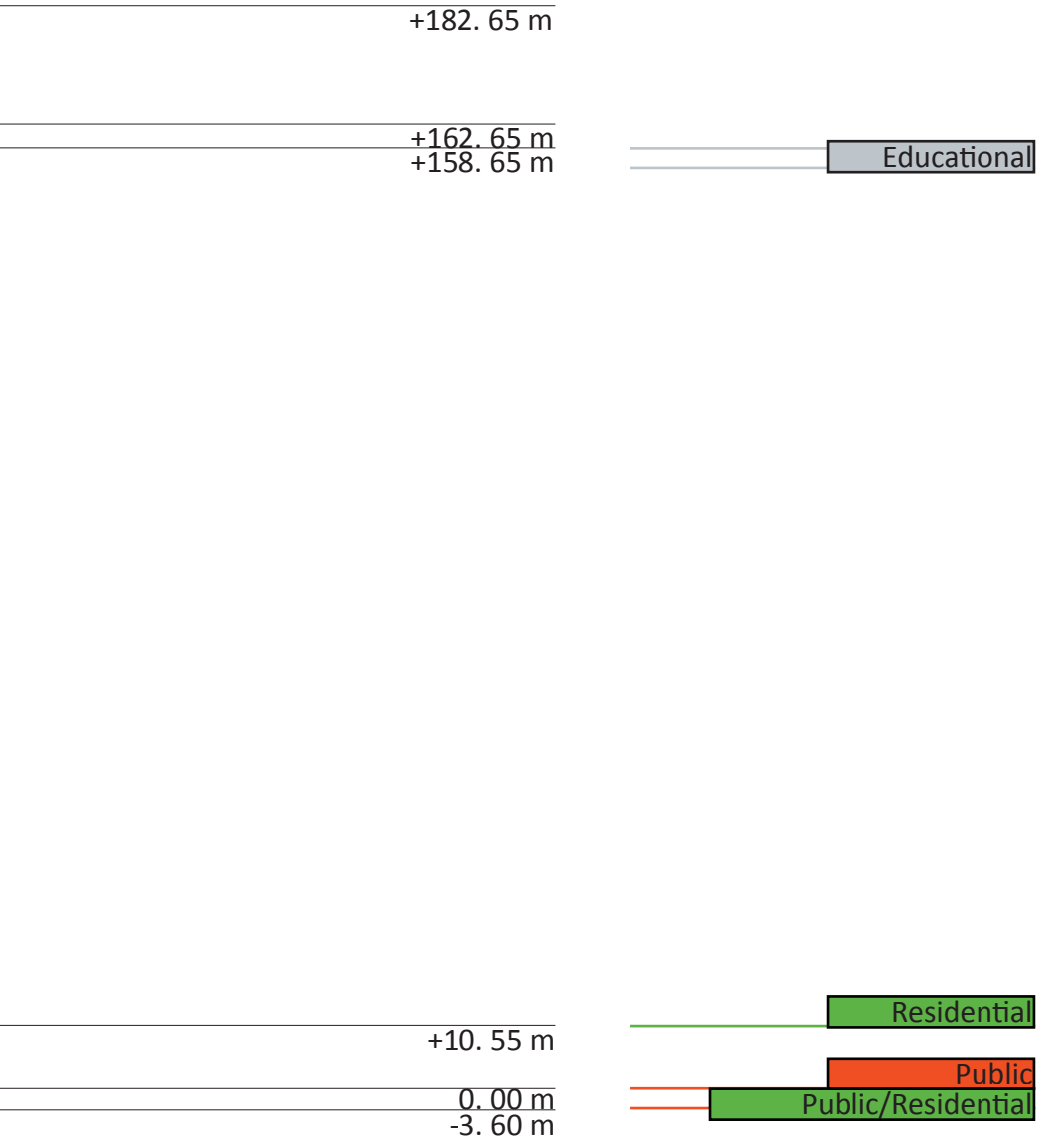

670
250
590
440
675
845
A
line level 1
common space roof line
line level 1
670
250
590
440
675

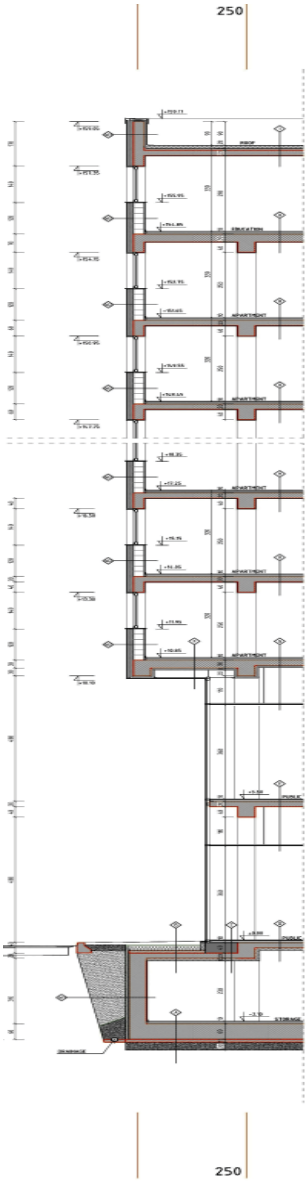
ROOF PLAN 2





SECTION A-A


+182. 65 m
+162. 65 m
+158. 65 m
Educational
Residential
+10. 55 m
Public
0. 00 m
Public/Residential
-3. 60 m



FLOORS

A	Ceramics	1.0
	Cement Screed	4.0
	PVC Foil	
	EPS	4.0
	Reinforced Concrete Slab	
	with XYPEX	60.0
	Concrete Slab	10.0
	Gravel Fill	30.0
B	Concrete Slab	8.0 - 10.0
	Geotextile Foil	0.5
	Gravel Fill	5.0
	Geotextile Foil	0.5
	XPS	15.0
	Waterproof Membrane	1.0
	Concrete Slab	10.0
	Reinforced Concrete Slab	20.0
	EPS	10.0
C	Ceramics	1.0
	Cement Screed	4.0
	EPS	4.0
	Siporex Blocks	
	Reinforced Concrete Slab	20.0
	EPS	10.0
D	Ceramics	1.0
	Cement Screed	4.0
	EPS	4.0
	Reinforced Concrete Slab	20.0
	EPS	10.0

FACADE SECTION

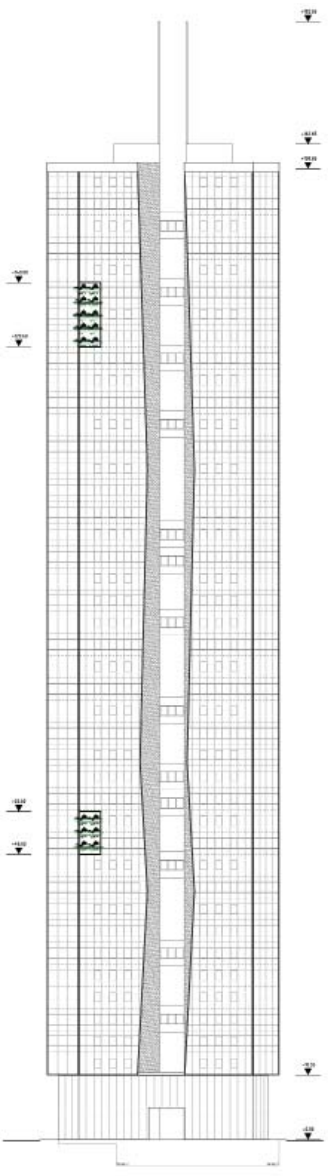
E	Ceramics	1.0
	Cement Screed	4.0
	PVC Foil	
	EPS	4.0
	Reinforced Concrete Slab	20.0
	Airspace	145.0
	Suspended Ceiling	2.0
F	Ceramics	1.0
	Cement Screed	4.0
	PVC Foil	
	EPS	4.0
	Reinforced Concrete Slab	20.0
	EPS	8.0
	STO Verotec Panels	1.2
G	Wood Flooring	2.0
	Cement Screed	4.0
	PVC Foil	
	EPS	4.0
	Reinforced Concrete Slab	20.0
	EPS	8.0
	Airspace	145.0
	Suspended Ceiling	2.0
H	Wood Flooring	2.0
	Cement Screed	4.0
	PVC Foil	
	EPS	4.0
	Reinforced Concrete Slab	20.0

WALLS

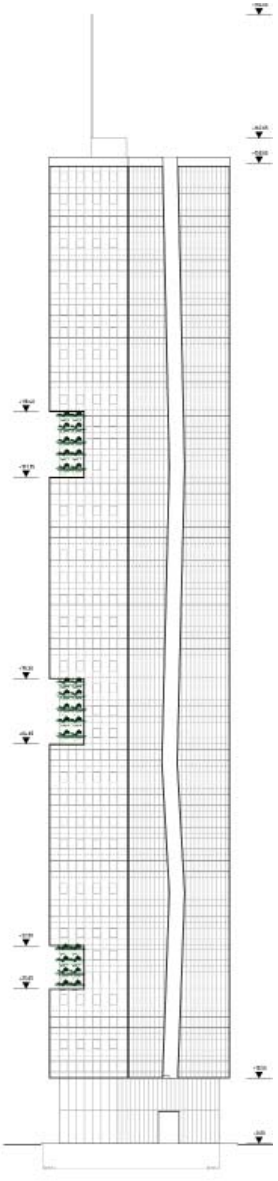
W1	Mortar	2.0
	Reinforced Concrete with XYPEX	40.0
	Waterproof Membrane	1.0
	XPS	10.0
	Geotextile Foil	0.5
	Gravel Drainage Fill	
W2	Ventilated Facade with Substructure	8.0
	XPS	8.0
	Brick Block	25.0
	Mortar	2.0
W3	Ventilated Facade with Substructure	8.0
	XPS	8.0
	Reinforced Concrete	25.0
	XPS	5.0
	PVC Roof Membrane	1.0

ROOF

I	PVC Roof Membrane	1.0
	Geotextile Foil	0.5
	XPS	10.0
	Steamproof Membrane	
	Concrete Slab	10.0
	Reinforced Concrete Slab	20.0
	Mortar	2.0

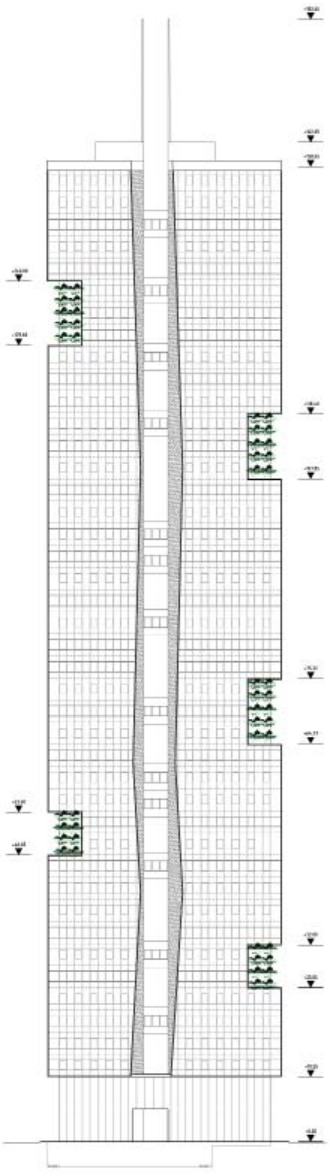


North Facade

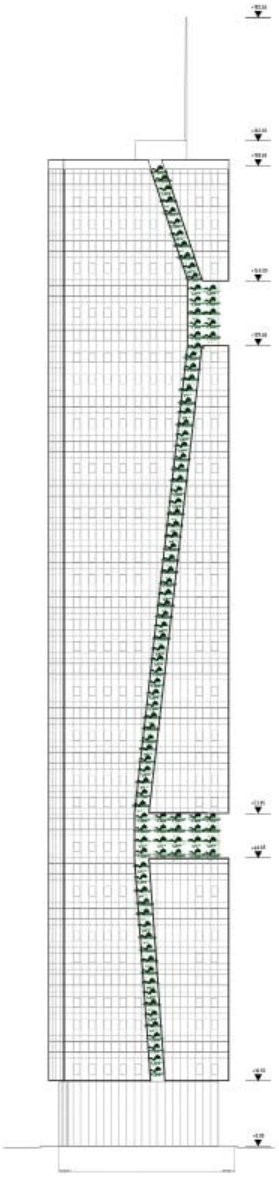


East Facade

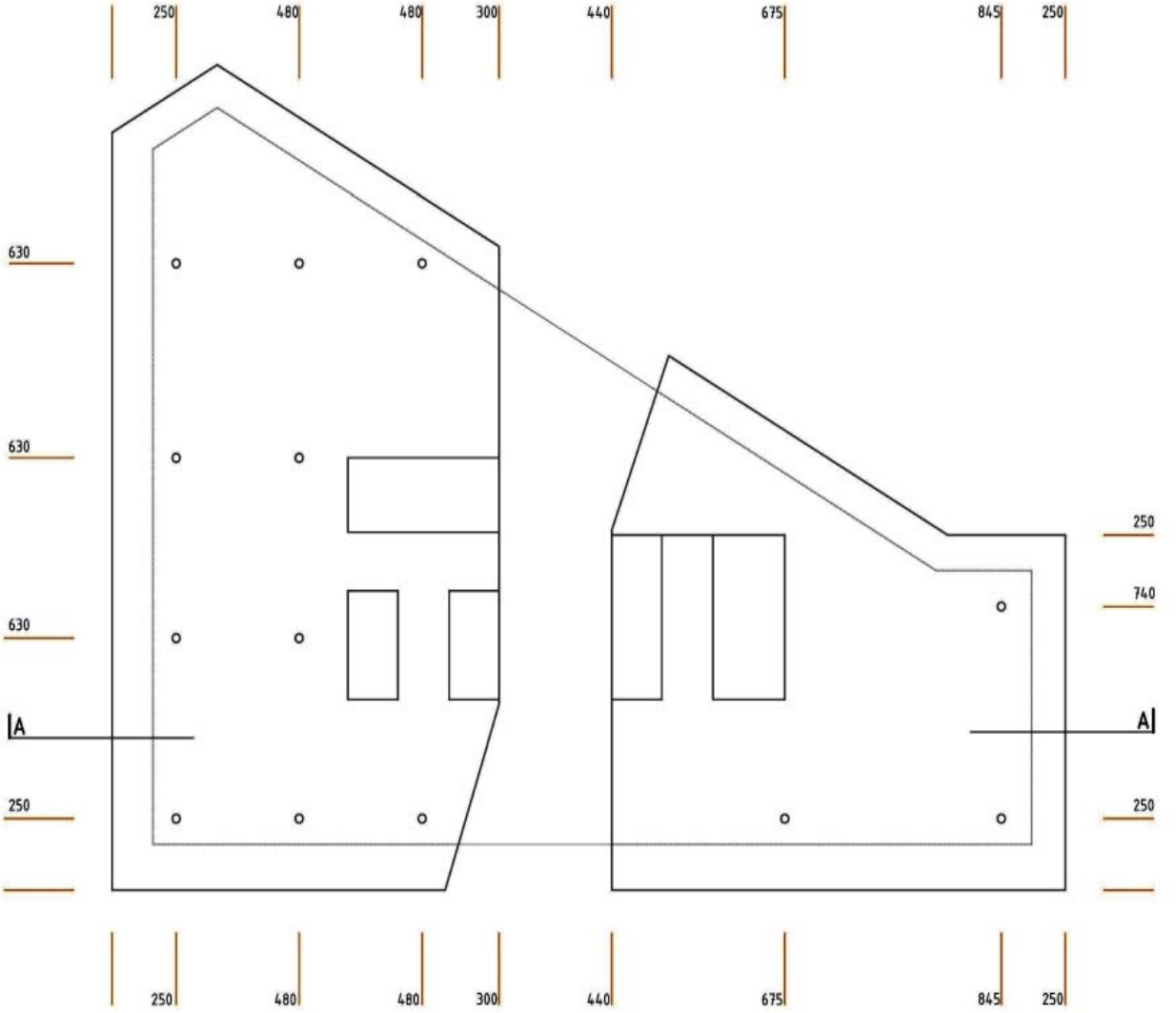
FACADES



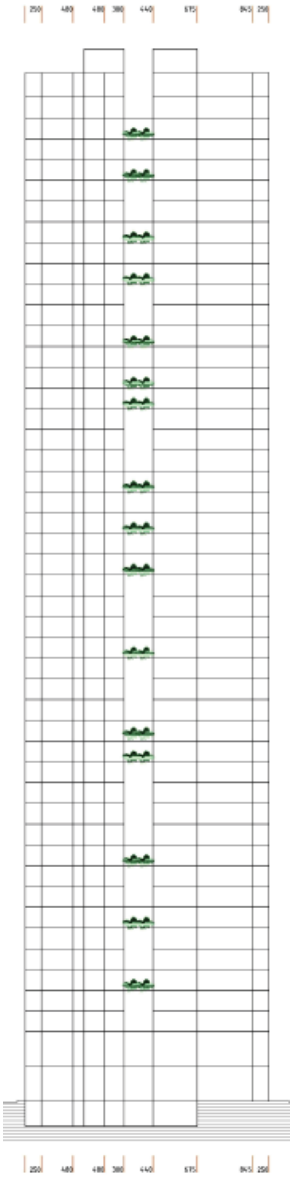
South Facade



West Facade


250
480
480
300
440
675
845
250
630
630
630
A
250
250
740
A
250
480
480
300
440
675
845
250

STRUCTURAL SYSTEM SCHEME



VISUALISATIONS

Exterior

Exterior

Interior

Interior

Appendix

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- http://nest.su.se/mnode/asia/China/pearlmirs/PMbudsrev2.htm (picture 2; page 12)
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- from page 131 all pictures and graphics are made by Ines Delic or downloaded from google maps

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