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SHAM SHUI PO

Improving the quality of urban life in an area whose potential is not fully developed by adding a new layer to the existing urban fabric.

GREEN UP: SHAM SHUI PO

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Abstract

Sham Shui Po district in the city of Hong Kong is envisioned in the future to be more than just a crowded shopping area with small claustrophobic apartments. The decayed typology with its dense population should be part of a broader urban scale, that focuses on the quality of public space, determined for the human scale, the pedestrian. We will be looking at how crowded streets of this dynamic, but very grey neighbourhood can be transformed into a much greener and more pleasant environment, both for the visitor and its local population.

Preface

This project has been developed in the 10th semester Thesis in Urban Design at Aalborg University. The project is focused at developing a green corridor in the densely build typology of Sham Shui Po, Hong Kong.

The repport consists of four main chapters:

- 1. Presentation
- 2. Learning Process
- 3. Analysis Process
- 4. Appendix

The presentation at the start of the repport reveals the visual illustration of the plan site, the scenery presentation and elevation drawings. Together they give the reader an image of the final design outcome of the project. In the learning process, the reader gets an insight into how the final design was forged illustrating different steps taken in this process. The different aspects of design are developed on the basis of the theoretical and analysis studies. Analysis consists of mapping of the city of Hong Kong, with the emphasis on the district of Sham Shui Po. The group has produced diagram illustrations and mapping, while images have been taken from the internet.

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Introduction

The physical form of our cities; the buildings, roads, squares and parks in between, is a result of a process that starts far before an architect's vision drawn on a paper. Urban planning is a political, economical and social issue, that concernes with the use of land and design of urban environment where people live, work, trade and spend their free time with other inhabitants and visitors. Urban planning and design is necessary, today more than ever before, because of the rapid growth of our cities to ensure a functional living and dwelling spaces and transportation system. The policy of urban design and planning needs to find a balance between sustainable economic growth and urban life quality. Many cities around the world, that have experienced rapid growth in the 20th century, have not managed to outbalance these two, as they often emphasized the economical growth, and underestimated the need for a qualified urban environment, such as green areas, pedestrian zones or bicycle paths. In light of this, many cities are now undertaking an urban renewal, by improving existing cities that are suffering as a result of industrialization process.

Reflecting upon city growth and urban development in the last 100 years, Hong

Kong is in many aspects an interesting city for study. Hong Kong is an international hub, with a very recognizable urban typology, that is characterized by tall skyscrapers densely built on a narrow piece of area, mostly landfilled, concentrating around Victoria's Harbor. Being one of the most densely populated cities in the world, its typological growth has developed much in the vertical direction, because of the natural typology that surrounds the city, and the fast economical growth that created the need for living and working space. The most densely populated district in Hong Kong, Sham Shui Po, is in many ways representative for the city as a whole. The small apartments, often just a room, occupied by large working families testify to Hong Kong's quantity over quality policy, which is based on the economical benefits of the real estate owners. These claustrophobic apartments and the decayed neighborhoods as a whole with grey facades give a perception of not the most pleasant environment to live in. However Sham Shui Po is not all bad news; not at all. It is a very dynamic neighborhood with a lot of activity happening on the streets, where the motorized vehicles dominate the often-shared space. The bustling business shops in streets like Apliu, occupy even the space out on the street, creating a packed street environment that is constantly on the move. The value of Sham Shui Po can not be underestimated, as the area is very attractive, not at least for new potential investments. New capital investments in terms of shopping malls that are being built here and there, show that the area is on the planning table for further development.

However this development seem to be of capital character, that probably does not in any way include the improvement of the quality of the urban life on the street. The question is how to improve the quality of this urban space? The study of Sham Shui Po has shown that the area has potentials in terms of developing public space with the ordinary pedestrian; inhabitant or the visitor alike, put in focus. In the coming pages, the development of green public spaces for dwellers and inhabitants of the area are presented through visualizations and diagrams. The design parameters working with the existing typology will be stated in this process.

Vision

Sham Shui Po, in contrast to its present decayed typology, is envisioned as a green corridor with new surfaces appearing on its existing buildings and available spaces on the street level. In this sense the green band that runs through the bustling streets and building surfaces of the neighborhood is to be part of a broader urban context of the city, that connects to some of the surrounding parks. The green band should not only be considered a green lush area where people can escape to from their small apartments or pause from the fast movement of the streets, but also an opportunity to introduce urban farming and gardening. The green band should connect important spots and routs in Sham Shui Po with its surroundings, creating a new frame and perspective for the site. In this sense the band is supposed to create a perception of a more greener and pleasant urban fabric to stay and move around in. The green corridor should stage scenery of a typology turning its concrete jungle into green landscape, with useful surfaces for dwelling and cultivating. Since these green surfaces, developed at the street level, the facades and rooftops of the buildings, are positioned at different heights, they will be accessible in accordance to their positioning. The general idea is that as many people as possible should find them useful. On top of the buildings, the green areas can be used for social gatherings for people living in the very small and enclosed housing units, as well as for gardening and cultivating vegetables. While the surfaces developed down by the street level are accessible for everyone, and are useful platforms for all the inhabitants, shoppers and tourists alike to take a break as they are going from one shop to another in search of interesting products to buy. The green band consisting of different platforms, facades and rooftops has the purpose of outlining an already dynamic streetscape with a green frame that should highlight better urban quality environment.



PRESEN

Elevated Public Urban Interventions

Scenery

in it is





Closer look at the most central design parts of the siteplan.

Activity Space

Urban Park

Bridge Park

Facade - 1:500, A-A

Bridge Park

Scenery 3

Reflection

The idea with this project was to change the urban fabric of Sham Shui Po, from a decayed grey environment into a greener space that should improve the quality and amount of public space for inhabitants and visitors of the area. In that sense the concept was to improve the quality of a space whose potential was not fully developed. The challenge was to work with the existing typology that was densely built and at the same time with a design parameter that defined that more volume should not be added on street ground. Designing in vertical direction provided many possibilities that should be dealt with through a detailed study of the typology. Already from the start of the project, the concept of developing elevated surfaces as public spaces was much in focus of the design. The idea of developing public spaces with the emphasis on

green surfaces in dense city scape gave birth to the idea of working with vertical development. It has been interesting, and to some extend challenging to find a location where different ideas could be implemented on the existing typology. Since the footprint of building blocks in Sham Shui Po is repetitive, and all the grey facades not really distinguish from each other, the envision was to create a different expression on selective building facades in order to create a recognizable continuous pattern. The three main focus points in the design, which all are positioned right above the street level, and thereby are the most accessible of all the areas, are envisioned to be hotspots where different kind of activities can take place. Having in mind the culture of using public spaces in Hong Kong, such as social and cultural gathering, protesting, trading, playing, eating, these platforms are positioned in highly frequent pedestrian zones. The elevated platforms, one for active programs, the other one for a more relaxed dwelling (the park) that even cuts through an existing building and plays with the indoor/outdoor relations, are both addition to a very busy shopping street below. The third (the bridge park) has the function of connecting two shopping zones that are separated by a traffic road. Besides connecting the zones, the bridge provides the dwellers a park area that with its glass walls is sheltering the pedestrians from the noise from below. At the same time, the bridge platform offers a view down on the streets in four directions, making it a possible observation deck.

LEARNING

G PROCESS

Density

Writing a text on the subject " density" requires first at all to specify the term and to unfold the various possibilities it includes regarding architecture and urban design. Density is at first a physical expression and defines the " quantity of mass per unite volume of a substance" (www.oxforddictionaries.com) and can be seen a tool that helps to describe the properties of a material and allows us to understand the relations of the specific properties of the material to each other. It is for that reason good parameter for analytical studies. (Roskamm; 2012) This instrument to understand the correlations between different subjects is used in architecture and in urban design and is as well subject of various books and essays. In the following I'll try to explore the term of density through the help of some essays written for the Architectural Magazine GAM 09 from Technical University Graz. The articles have the term density as theme in common but illustrate the diversity of the concept in urban design and architecture. As mentioned before the concept of density is a powerful tool in urban design studies and there it is as well used

in connection with population development studies. Nikolai Roskamm defines the concept of population density in his article " The concept of density" published 2012in the Architectural Magazine GAM in the following way: "Population density is defined as the relationship between a number of people and a unit of area (in relation to a concrete location)" (Roskamm; 2012: 133)

Another theoretical construct is the expression "building density " and it describes the correlation between an "area available for use and total land area of the lot "(Roskamm; 2012: 138)

Both theoretical concepts can express positive and negative urban aspects. A high population density can result in social and spatial problematic but on the other side it is a positive source for a "cultural and economic progress "(Roskamm; 2012: 135) and guarantees a vibrant city where social and cultural exchange is happening.

(Roskamm; 2012)

The discrepancy between the positive and negative facet of population density is a topic in the article from Hans Gangoly -Dense Cities: Architecture for Living Closer Together written 2012.

Gangoly points out in his article "Dense Cities: Architecture for Living Closer Together" t that the increasing development of the world's population leads to life within the various cities:

"Since the year 2007 more than half of the world's population has been living in cities, ad by the year 2050 this number will have risen to upward of 70 percent." (Gangoly; 2012: 4)

This population growth within the cities leads as well to new urban design concepts that allows the cities to change to an urban agglomeration that "has been revamped that experiences adaption to modified social needs and altered occupant-related structures, and that is densified in a the process in ways that make sense" (Gangoly; 2012: 4)

In this context the concepts of population density and building density are again useful to achieve this fine balance between dense but not crowded. As Hans Gangoly underlines in his article :

"Therefore the issue of spatial conditions in a densified city must be associated with urban design approaches that defines forms which makes us want to move closer together" (Gangoly; 2012: 4) The negative side of density – "crowding" –is furthermore subject of the article "When Does Density Lead to Crowding? An Empirical Study on the Perception and Judgment of Building Density" written by Martin Brucks.

In his article Brucks define the term "crowding" as a subjective experience of confinement as a result of discrepancy between available and desired space" (Brucks; 2012: 155)

Examples for this phenomenon can be noticed in cities like Tokyo, New York or Hong Kong where a high population density and building density contravenes with the existing available space.

In what kind of intensity "crowding" is experienced by people depends on various factors. Brucks refers at this juncture to a book from Robert Gifford, called ", Environmental Psychology . Principles and Practice" (Brucks; 2012) and mentions three "influencing categories" (Brucks; 2012: 158).

These are "physical factors, social factors,

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and personal factors. Among the physical factors citied are various influencing factors, such as- next to the quantity of available space- qualitative spatial factors ("arrangement of space") as well as other physical factors like temperature and noise." (Martin Brucks; 2012: 158)

To minimize the effect of crowding urban design tries to implement the element of public spaces in the urban scape as they influence the way city dwellers perceive and even accept high density and situations of crowding.

Exploring this concept further was as well the topic of a study of Klaus Atzwanger and Katrin Schaeffer et al., "Wohlbefinden und Kooperation im öffentlichen Raum: Eine humanethologische Feldstudie", Report Psychologie 23, no. 5-6 (1998).

The study came to the following result that the perception of density and the experience of crowing are reduced through the positioning of open spaces within the city scape as they widen up the existing street view through the opening gaps inbetween the tight and enclosed building lines. Another cognizance of the study is that not only the existence of public space helps to "lower perceived density" (Brucks; 2012: 162) but that also the accessibility of these spaces should be possible as this is minimizing the experience of crowding self.

(Brucks; 2012: 162) Both outcomes of the study show that "the existence of evasion and escape options does influence the perception of crowding within urbandevelopment situations." (Brucks; 2012: 162)

High urban density has however not only negative side effects. Positive aspects of a vibrant urban life within the city are short connections between the various facilities like food markets, medical services but also the different entertainment possibilities f.ex. cinema or theater, and through the compactness these facilities are reachable for various people - and as Vittorio Magnago Lampugnani writes in his article "The Architecture of Urban Density": "But urban density offers the chance for better life not only to people coming from outside: those who tend to be excluded by modern society- especially the elderly likewise find protection and comfort in it "(Lampugnani; 2012: 58 - 59)

Furthermore allows this compresses in addition to create experiences and as higher the density is as more experiences are created. Therefore it can be stated that "cities are public facilities for the production of individual experiences "(Lampugnani; 2012: 61)

The before mentioned spatial compactness of the various facilities can often be found in the city cores which are sometimes also from historical character and there as well can be seen the impact of public spaces upon the surrounding and the life of the local residents.

Vittorio Magnago Lampugnani writes in regards to this following:

"Living is pleasant t there, usually in generous and quiet spaces with a view of architecturally attractive surroundings It is precisely this system of public spaces, this "labyrinth" to use Haussmann's term, which turns out to be perhaps the most important element of the historic city center. And through its tightly woven, labyrinthine structure it provides not only direct links to a city's various districts, but also countless opportunities for planned and unplanned encounters along the way, and thus for interpersonal communication. This makes the "old town" a communication hub."(Lampugnani; 2012 :56 - 57)

To recognize this potential of these areas as a communication hub that creates various encounters for interpersonal communication is also an interesting factor which we want to explore deeper in our Thesis project and which we try to create through architectural interventions. These architectural interventions should have different characters to create this allude natural occurrence of interpolar encounters and can reach from open public spaces to vertical greenery and even green roof tops. All these interventions would engage the communication and in addition they would add an aesthetical visual layer on the existing city scape of the Thesis project site Sham Shui Po.

The awareness on the on the significant influence of population and building density upon the day to day life of cities dwellers and how public spaces within the existing cityscape can be improve and even reduce the density factor and the occurrence of crowding allows us to work with a helpul background foundation for the further development of our project within the cityscape of Sham Shui Po in Hong Kong.

Open Public Spaces

Open public spaces are per definition areas that are owned either by a government, an organisation or private owner and are for public use. They are accessible for recreation and staying or trespassing, and are often green areas within an urban space. They are defined to be places that are outside of buildings. However in specific cases, such as in the city of Hong Kong, open public spaces can be enclosed spaces and/or paths that are accessible for public use. The Ramblas in Barcelona has become a reference point as one of the ideal spots for public spaces. (see image right) The Ramblas is "an integral part of urban identity" of Barcelona. Generally speaking, open public spaces have a specific importance in urban areas. "Since the late 1980s, the public space has been a subject of intense interest. It is the key to urban renewal strategies all over the world. The approach to parks and squares in Barcelona and Paris forms the inspiration for designers and administrators..." (Hajer, Reijndorp, 2001)

Value of Urban Open Space

Public spaces for dwelling, socializing, playing, cultural manifestation and trading have always been important for development of cities. Public squares, parks, arcades and pathways have always forged the character of the urban environment, and as such they are central to an urban society. They have always provided people space and opportunity to communicate with each other, to share ideas. As such they have always been epicentres of further growth of settlements. While these open spaces are predominantly public, their surroundings are mostly private. The interconnectivity between the private and public realms makes the environment active and is a model for a sustainable maintenance of these spaces. As such, Philladelphia's Rittenhouse Square is a good example of a public space that has had a decisive impact on it's surrounding, but also an good example of how it's surrounding have had an impact on itself. (see image right) "While the park itself is public, the surrounding private buildings

contribute to its vitality and keep it active at all times. And in turn, the park's presence has raised the value of those private properties. The success of the place lies in the dynamic interplay of the public and private realms." (Huffman (in press)) Residential buildings, offices, cafes, restaurants and hotels make the park centre of a very active neighbourhood, as the space is used by different users at different times of the day and year, whether it is café visitors or people from the office buildings. But the crucial user group are the residents of the area. Today Rittenhouse Square is a success urban open-space story as it extends both to the public and private sector. The residents are directly involved in maintaining the landscape by ones a year planting the flowers and greenery. As the square is centrally located in the city, besides being visited by people who sit around in the park and relax, it is also a in between spot when people have lunch breaks or are on their way to the theatre or other cultural events.

Framing Of Public Spaces

In order for public spaces not to become "wasteland", Robert F. Gatje, architect and author of the book; "Great Public Squares: An Architects Selection" suggests that utility, integrity and delight should be used as criteria for judging the quality of an open public space. "Gatje uses the term "Integrity" to assess the quality of the "walls" of an outdoor room and the sense of enclosure they contribute. A square with too many openings in its walls has "leaks", and doesn't provide a feeling of embrace. Another element of "Integrity" is how well the buildings comprising the walls "join hands to become the outer surface of the space they enclose." The author is keenly aware of the role surrounding architecture plays in defining the character of open space." (Labine (in press))

To explain the idea of integrity in open public spaces Gatje compares two public spaces of same size but different composition; Time Square in New York and Piazza di Spagna in Rome. He points out that several traffic streets run throught the area and by that "pierce the walls" of the site. The dense traffic at the Times Square robs the site of enclosure that a good public space should have. (see image upper right) On the other hand Piazza di Spagna is a pedestrian area without traffic, and when being at the site, the visitor senses the enclosure by the surrounding buildings. (see right image below) To the sense of enclosure contributes "a consistent harmony of dimension, proportion and material that make up a whole."

Vertical Greenery

As result of fast growth in cities and population, the pollution and energy consumption in the 20th and 21st century, architects and city planners have put much emphasis on more sustainable building and city planning for future urban environments. As a remarkable example is the Masdar City in Abu Dhabi, United Arab Emirates, that is envisioned to be the first zero-carbon, zero-waste ecology and will be a car free city. There is a lot of highlighting on energy conservation, eco friendly buildings and transportation that should take advantage of the geographical location and use solar power. Sustainable ideas are being implemented in every arena of life. That marks the importance and seriousness of the current environmental scenario. The awareness has gone a long way. Architects, city planners, politicians and various activists all over the world have been working with green buildings with sophisticated infrastructure at par with conventional buildings at a cost effective rate. These buildings range from conserving energy through usage of solar power to assembling the entire building using natural/ecological products.

This level of awareness in the recent history of architecture and city planning is not only reflected on the environmental consciousness but also the capture of the aesthetics in their green designing. Unlike architects of the past generation, the current and future generations have a greater challenge to meet in the ever-growing cities.

However this subject of green cities cannot only be dealt with by constructing new cities from scratch like the Masdar City project. Already existing cities that are densely populated are in need of "re-design" in this respect. The lack of green spaces in some of the dense concrete neighborhoods of Hong Kong, Tokyo or Berlin do affect the quality of public space there at the site. But the existing typologies of the dense cities provide several possibilities of making more greener and qualified public spaces.

In fact urban greenery can be a crucial part of urban identity. We cannot imagine for example New York without Central Park, as it is central to the city's typology. Seen through a sustainable perspective, urban greenery is what makes people accept denser ways of settlement than rather living in suburbia areas. Only by introducing green elements on the typology and its architecture, people can have a healthy urban environment. As our cities have grown vertically, and where there is shortage of unoccupied land, vertical greenery that includes green rooftops, green gardens, living walls and green facades is the most effective. As many of our cities are polluted and have a bigger temperature than outside cities, green facades and rooftops are effective solutions for these problematic. Vertical greenery contributes to the creation of microclimate within the buildings it covers, filters water from the rooftops and creates habitat and biodiversity in the cityscape. Elevating the greenery on the buildings gives it better chance for getting the much-needed sunlight.

"Urban green parks have recreational as well as environmental significance and are valued as relaxation and refuge spaces within the city. However, large parks have the sustainability disadvantage of breaking connectivity between different urban functions and therefore increase car usage." (Samiei, n.d.)

Urban Players

In cities there are various different interest groups when public space is concerned. A public space in an urban environment can be of great importance for visitors and tourists as well as it can have for private, local residents. However the space does play a different role for the two grouping. Various groups use public space, which can be divided into two categories, namely public and semi public, differently. And often the border between semi-public and public is blurred and practically non-existing. For economic, social and infrastructural reasons the semi-public spaces, but often private spaces too are opened up and connected to the open public spaces.

A fascinating observation from Dharavi neighbourhood slums in Mumbai show how private space is almost non-existing as the housing dwellings are open and accessible for other people beside the housing residents. Even more catching example is the elevated paths in Hong Kong that connect various shopping malls with hotels, airports and other transportation spots. In this network of paths and dwelling areas, all sorts of people, no matter social status blend with each other. They are all, even some of them privately owned, public spaces. Connecting the private and public spaces impacts the cultural dynamics of a society. It gives designers and planers opportunity to come up with solution at spots that would add a surprising element in the typological landscape. It is this bridging between public and private that is catching.

"The new public domain does not only appear at the usual places in the city, but often develops in and around the in-between spaces in the archipelago of homogenous and specialized islands, in surroundings that belong to different social, economic and cultural landscapes. These places often have the character of 'liminal spaces': they are border crossings, places where the different worlds of the inhabitants of the urban field touch each other." (Hajer, Reijndorp, 2001) In that sense These spots can be spaces that have significance for locals and visitors, a meeting point for different groups of people.

Design Parameters

The design parameters for the development of the project have been determined as a response to some of the missing of Sham Shui Po:

-Improving quality and amount of public space.

-Adaptation to the dense typology.

-Solutions that will give something back to the community in terms of involvement/participation.

-Adding minimum occupancy on the ground in terms of footprint.

-Provide green areas for relaxation, cultivation and gardening.

TYPOLOGY

The city of Hong Kong is one of the densest cities in the world. Because of the sparse space, the city grew vertically, resulting in one of the tallest skylines. Because of the lack of free space on ground, buildings are positioned close to each other, often extending up on the hills around the city center and harbor. (see images below)

CONTEXTUAL RELATIONS The aim is to include the surrounding content of the neighborhood and create an combined experience from the streets of Sham Shui Po to the green areas.

FUTURE FLOW

In respect to the contextual relations and the study of dwelling areas at Sham Shui Po, an outline of the future flow can be forged. The Future flow is to connect the busy shopping streets with the green zones.

DWELLING AREAS Dwelling areas include streets like Apliu Street, Pei Ho Street, Ki Lung Street and Fuk Wa Street.

CONCEPTUAL FORM

Conceptual form has been developed through the study of the typological character. At site, the simple square shape is represented in different scales; the squared geometry of the buildings, footprints of the building blocks, windows on the facades, shop signs hanging on the walls, the seemingly straight lines in the composition of the streets (which often are parallel with each other). A pattern of square shape is repeated over and over again. To break this repeat, and to create a perceptual connection with the green spaces and the natural context of the design, the idea of a circle and more organic lines was made.



Urban space can be perceived as a stage that allows city dwellers to experience planned and as well unplanned interpersonal encounters. For urban designers and architects this idea of staging can be an inspirational source creating new urban design projects. The nature of these projects is to support the occurrence of these encounters and even to increase them and this can be achieved in different ways. Some projects are focusing on a cultural aspect like art installations or performative events and they can be permanent or temporary integrated in the existing urban surrounding. But this urban design projects can as well focus on the day to day life of the residents and the improvement of everyday life within the

city's walls. The impact of these projects can be realized by how well they are accepted by the people and furthermore integrated in the inhabitants' life. The realization of such projects is in general implemented by the municipality with the goal for example to brand the city or an area or to improve the quality of urban life within an area which is for example facing the problematic of urban decay. Example for an area like mentioned before is Sham Shui Po. The day to day life of the residents is defined through the busy and dense streets on the ground level and neglected buildings and compressed living conditions above ground level, leaving no space for recreation. As space in this area is a precious, positioning and

characters of possible open public spaces has to be carefully considered. Regarding the positioning are the use of rooftops in a dense district like Sham Shui Po one possibility to create public spaces but also the use of the building facades and elevations is an interesting option. The characters of such places should be balanced with the surroundings and the needs of the inhabitants. They can be of an active character like playgrounds or climbing gardens while a park like architectural implementation is more of a passive nature and allows the city dwellers to pause for a moment before they follow their day to day business again.

Designing Vertical Public Spaces

The future cities are faced with an increasing of population and by that also building growth. According to various estimates some 70 per cent of the world population will live in urban areas by 2050. This growth has already created infrastructural, economic and social problems in many of the fast evolving cities. We have seen that as the cities grew, neighbourhoods and districts were developed, taking huge amounts of land and thereby creating bigger distances in between often-segregated neighbourhoods. The segregation system increased during the industrialisation where the development was much relied on the new possibilities transportation offered. The increasing demand for land combined with the fact that in many of the rapidly growing cities, there is a lack of public space, made the cities develop public spaces in vertical direction. (see diagram next page) Hong Kong as one of the most dense cities in the world has gone far in developing this concept in its

urban fabric.

At least in a pedestrian's point of view, it is not an exaggeration to say, that the city of Hong Kong is a vertical city without ground. Professor Jonathan Solomon (from Hong Kong's University of Architecture) has referred to the vertical growth of the city's typology as a manifestation of model for public spaces of future dense development of cities. It is a city built on a steep typology where much of the area is built on landfill, where traffic infrastructure dominates the little ground space there is. The relation to ground as to use of public outdoor space in many aspects for pedestrians has become irrelevant.

"Urbanism in Hong Kong is a result of a combination of top-down planning and bottom-up solutions, a unique collaboration between pragmatic thinking and comprehensive master planning, played out in three-dimensional space. Footbridge networks throughout the city that grew piecemeal, built by different parties at different times to serve different immediate needs, eventually formed an extensive network and became a prevailing development model for the city's large-scale urban projects... Hong Kong enhances three-dimensional connectivity to such a degree that it eliminates reference to the ground altogether.

Hong Kong is a city without ground..." (Frampton, Solomon, Wong, 2012) The typological and economical development of the city has created a system of elevated spaces and paths that give pedestrians possibility to move around and dwell above the traffic. In this sense the movement does not only happen on the horizontal direction, the street level, but extends vertically in an elevated grid including volumes and spaces in buildings of economic significance.





POTENTIAL ACTIVITY ZONES

Potential activity zones are positioned at the spots where there is available ground for devel opment. Off course this spot should be connected with the program happening at the street itself.









HIGHLIGHTNING THE FOCUS SPOTS Highlighting some of the spots that are connected through the green corridor.



FORMING THE GREEN BAND

The green band, which is a corridor stretching through Sham Shui Po and connecting the central shooping streets of the neighbourhood with the surrounding recreation areas, is based on the idea of including various streets and sites into a broader typological context.

CHARACTERIZING THE EXPRESSION OF THE SPACE

The elevated platforms above the street level should be covered with plantation to bring the greenery closer to the asphalt streets that are in lack of green environment. The facades should in the same way have a green covering that will bring a whole new look to the streetscape. On the rooftops, horizontal surfaces provide possibilities of various landscaping, gardening and even urban farming.





IDEA CATALOG



ELEVATED SPACES, FACADES, ROOFTOPS

Sub Conclusion Learning Process

Our idea is that in the future compact cities, vertical and elevated spaces should be developed offering public programs that are intended for a wider group of users. The elevated public spaces should be of flexible character and be able to adapt to changing physical, economic, social and cultural norms over time and needs of the site they are built at. These spaces will of course have to reflect the local urban composition in terms of the need for use of the space and materials. We are no strangers to the concept of building structures with several floors elevated upon each other. However these structures have predominantly been of private, or semi-private enclosed char-

acter. In our concept we have envisioned these spaces to contain programs such as; public parks, areas for agriculture, market places, squares, playgrounds, relaxation areas, ice skating etc.. They should be open platforms. Hong Kong's history of use of shared public spaces is a perfect place for development of such an idea. The dense typology of the city, and the city's vertical growth is an already implemented concept in the city. The dense urban fabric of concrete structures is in need of green pockets in between for a better urban quality of life. Building elevated structures above the street level, and upon existing buildings, seems so natural for the city of Hong Kong.

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Development Of Cities

The rapid growth of cities in the 20th and 21st century has among contemporary architects and urban planners given birth to a new concept of how cities should develop in the future. As an result of the fast development of the cities, the industrialization, economic rule of building policies, the rely on the mobility has together created a set of independently regulated functions within cities, resulting in segregated parts of the city often ignoring the need for quality public space, including green areas. These cities have witnessed continues growth in horizontal direction consuming more and more land. As urban areas became more compressed and empty space were often more difficult to find, adding to this the importance of location

for many developments, cities started to grow vertically. Apartments, hotels, offices, restaurants, shopping malls, parking lots and other accommodations were built in stacked structures that were called skyscrapers. However all these contents in these vertical buildings were within the private or semi-private category.

The public spaces within cities such as streets, paths, plazas, squares, parks, public arenas, stages and infrastructure could be programs within a new concept of vertical/elevated urbanization (a vertical street). These elements can be joint in to a public whole. This vision of "vertical/ elevated streetscape" can provide various different programs at one spot, offered above the street level, closer to a site that is in lack of such public spaces.

The city of the future is a multi-layered hybrid reliant on strong infrastructure. Cities must be built in a way that allows for flexibility in the adaptation to changing cultural, social and physical norms over time. With the development of cities as grids of individual skyscrapers, there is little room to evolve, which begs for a new city design plan to accommodate the needs of the future.

The structure can adapt to the local circumstances and material, accommodate various programs and can evolve over time according to the needs. (see diagram right)



Hong Kong

Hong Kong's is positioned at the south coast of China, facing towards the east, west and south the South China Sea and from the north it is restricted by mountains which are these days used as country parks and nature reserves. Through this typological situation only 25 % of the area are developed and cropped to the unique cityscape which is well known. (www.wikipedia.com)

The city of Hong Kong is build up of four parts which are Kowloon and the New Territories – lying in on the mainland in the North – and Hong Kong Islands and the Outlying Islands in the south – surrounded by the sea. (Globe Media, Guide Hong Kong, 2009, p. 2). Both Kowloon and Hong Kong Island are the central business areas, offering architectural highlights like the Bank of Hong or the Hong Kong and Shanghai Banking Corporation – HSBC Building but as well a dense net of various entertainment and leisure facilities. All the different areas are fully connected with each other through various public transportation infrastructures reaching from Underground lines to elevated pedestrian path systems. . (World Travels, 2009; p. 3)

As before mentioned are through the surrounded typology only 25% of Hong Kong's region developed which makes these areas to an important and valuable space. These leaded to an economic focused development in the real estate market with the result that it was more lucrative for the municipality to invest and sell construction land for luxurious residential high-rise apartments and business towers than to support the public housing programs. The outcome of this progress were bizarre high monthly rents approximating HK\$ 85 per square foot which force bigger parts of Kong Kong's population in inhuman living conditions which are stifling hot small cage like rooms without electricity, gas and hot water supply (Shaoul,2011)

Jean Shaoul was describing these living conditions in the following way:

"Many people live in small apartments subdivided into three or four units, while others live in illegal makeshift huts on tenement roofs without sanitation. It is not unusual for people to live in caged bunk beds, although these were supposedly banned some years ago." (Shaoul,2011)



Hong Kong has green spaces like any other city in the world. However they are very limited, and are missing in some parts of the city. Most of the recreational areas are up in the hills, outside the jungle of concrete skyscrapers. Typology of Hong Kong is characterised by the growth in vertical direction. The natural landscape surrounding the city has limited the city's horisontal growth.



As illustrated on the mapping, the different city districts are densely populated, with the highest population concentration around Yau Tsim Mang, Sham Shui Po and Kowloon City





Contextual Relations

The idea with the green corridor stretching through Sham Shui Po, even though defined with borders on the design drawings, is envisioned to stretch further out in the urban fabric, evolving at rooftops and facades. The general concept for the project is to create (visually and often physically) a strong green connection between some of the most central and busiest streets of the district with some already existing green areas in the area. The neighborhood of Sham Shui Po is rich in its shopping offer, where Apliu Street is one of the most known streets for electronic sales. Next to it is the Pei Ho Street, which is also known for its shops, and is a huge tourist attraction. Besides shopping, the community also offers many smaller restaurants on the streets, where visitors can taste various traditional dishes. Several green areas that are located outside this bustling shopping streets, that are surrounded by grey buildings of various heights, are valuable to Sham Shui Po. Therefor the greenery could be dragged inside the concrete typology, and make a clear extension to the dynamic streets. Since the housing units are disconnected from these valuable outdoor spaces, it would be in many ways practical for the inhabitants if the green surfaces were dragged closer to their homes, by adding greenery on rooftops and facades. In relation to the street level, several hotspots can be designed with the idea of designing some platform characterized by a more relaxing atmosphere, where people can sit and relax, or where children can play, right above the busy streets. These hotspots could contribute to the social aspect, as they would be a good opportunity where people could meet and use the space for various activities.

Elevated Path System

Hong Kong is unique in many different ways. The elevated path system that makes up an entire network throughout the city is one of the architectural and urban uniqueness. It is a system of paths and platforms, public and private that have a significant importance for the economic, social and cultural life of the city. In different aspects, the elevated paths are very practical in the busy metropolis. The study of Hong Kong's elevated paths and platforms is made through online research; observation of images, drawings and a specific book called "Cities Without Ground; A Hong Kong Guidebook" written by Adam Frampton, Jonathan D Solomon and Clara Wong. The first path was build in 1960s as a connection between a hotel and a shopping mall. The idea was realised because of obvious economical reasons, and inspired other investors to do the same thing with

their own hotels, shopping centres and office buildings. Later on the government saw the benefits in elevating the pedestrian flow above the traffic road, connecting transportation hubs with other important spots in the city. The flow of people is not disturbed in any way by the cars, which dominate the street level, and in much of the city have pushed the pedestrians of the street. The subway system is also taken into consideration, and connected to the flow happening above the street. In this way a network was gradually build, creating a circulation of pedestrians through the paths and buildings. But besides a circulation network, these elevated paths and platforms are also used by people to gather around; sit, eat, protest, perform and trade. It has simple become a public ground for different groups of people in Hong Kong. These spaces are used as plazas and squares

are being used in cities in the West. Any activity happening on a regular street in a big city, you can expect it to happen on this network. The network reaches out and connects with the urban fabric of the city, which makes it very dynamic, and often overcrowded. This network consists of private developments, some government developed parts, with some parts of this network going down on the street level, some including train stations, corporate lobbies, hotels and malls. As a connection all these different areas make up a civic open public space that can and are used for all sorts of different activities. "This proliferation of activity proves that public space does not require stable ground. Hong Kong demonstrates the viability and even robustness of public spaces that do not resemble a street or a square..." (Frampton, Solomon, Wong; 2012)



Sham Shui Po

Sham Shui Po is situated in the northwestern area of Kowloon and was built in the process of land reclamation. This is again recognizable in its name self meaning "Deep Water Pier". In the history of Hong Kong's city development was Sham Shui Po one of the earliest developed regions and a business focus point as the city's industrial and transportation hub. These days the district contains mostly of residential buildings. Still do some of the old industry buildings exist, mainly located around the Cheung Sha Wan Street. Furthermore is Sham Shui Po as well facing serious urban decay problematic in form of old and neglected residential buildings. Another side of Sham Shui Po are the various street markets which are frequently

visited by locals and tourists likewise as they offer a mixture of different goods vary from electronics to food and clothes. (see diagram next page, right buttom) Concentrated are these street markets within the Ki Lung Street and Ap Liu Street. (www.wikipedia.com)

The diversity between the busy activity on the street level and the decay just a few meters higher up through the neglected buildings self makes this area interesting and forms the wish to create an urban design project that could help to improve this district.

The diagrams on the next page illustrate different areas/programs of Sham Shui Po.



Green Areas



Metro Lines



Streets



Street Markets/Shops/Shopping Malls

Phenomological: The Story Behind The Site

Coming to Hong Kong, one of the biggest cities in the world, and an international trading and cultural hub, at first glimpse one is amazed by the busy harbour and the tall skyscrapers added to the beautiful natural landscape in the background. However in searching for the essence of the old Hong Kong, and the dynamic street culture Hong Kong is known for you go to Sham Shui Po. This dynamic street culture with busy markets and shops, where trade dominates still exists there. The traffic has still not pushed the pedestrian away from the street level as it has in much of the rest of the city. Sham Shui Po is the densest neighbourhood in Hong Kong, and at the same time the poorest one. As you wander through the bustling streets of this area, you can't help but notice the decay on the buildings. The facades are grey, and make up a good contrast to the shining facades of the business

towers that dominate the harbour front. These grey, compressed building have a sympathetic appearance, however the living conditions within them, with very small and claustrophobic housing units without balconies, inhabited by large families are far from sympathetic. Walking through Apliu Street, which is famous for selling of electronics, you tourists as much as locals in a compressed frenzy trying to make a good deal in one of the hundreds of shops lined up on the sides of the street. All this is happening in day hours. But the even more exiting experience is happening after 8 pm, when these shops close, and are replaced by a crowd of unofficial/illegal street sellers arrive with all sorts of objects that people did not wanted to own any more. This trade reflects the social and economic situation of people living here. But not

only them, as poor workers from other

parts of Hong Kong come at this time in hope of selling some of their products. All the products are sold at incredible cheap prices.

As you are conversing with one of the sellers at Apliu Street, you sense both a positive stance toward a bright tomorrow, but also a certain sense of uncertainty as he explains how Sham Shui Po could loose its street market culture in the future because of the big malls opening in the area. With a careful smile on his face, the seller explains how commerce is moving indoor, into the air-conditioned shops. Sham Shui Po could well be one of the last strongholds of street life in Hong Kong. As you continue down the street through the crowd, you cannot imagine it without this bustling crowd and its cheerful sellers. The shops, but also crowded housing units above create.



Hong Kong's Municipality Vision

In a dense city like Hong Kong land is extreme valuable and the demands on the existing land are very high. However it has as well be acknowledged by Hong Kong's municipality that the population has a basic need for recreational zones that fulfill the wish for activities "which are essential to the mental and physical well-being of the individual and the community as a whole" and in addition are these green spaces a "visual relief" (Planning Department - Hong Kong, 2007: 1.1.1). These areas are a vitally component in the urban land scape and "particularly important in a high density, high-rise built-environment like Hong Kong" (Planning Department – Hong Kong, 2007: 1.1.1)

Strategy:

The strategy to achieve the goal of more public spaces within Hong Kong is accomplished by the Hong Kong Public Space Initiative – HKPSI with the following two focus point:

- Raising Hong Kong people's awareness of public spaces and their benefits through providing information and a platform for ideas exchange
- Advancing education on public spaces through contributing to academic studies (Hong Kong Public Space Initiative, http://www.hkpsi.org)

HKPSI Vision:

"With a series of carefully planned programs, we aim to enhance the community's understanding of public space, and therefore encourage better use of this valuable asset. Believing public space can enhance the city's sustainability through bonding populations, fulfilling recreational needs and encouraging social interactions, HKPSI aspires to make Hong Kong a better living city for residents as well as an attractive destination for tourists and expatriates." (Hong Kong Public Space Initiative, http://www.hkpsi.org) High Line in New York is an elevated park corridor running through Manhattan area. It is built on a former railway track as a greenway with predominantly green surfaces with sitting areas, but also paths that people are using for walking and running. High Line has been a very successful story because it is a project that extends out to the broader urban context of New York. The redesign of the former railway track has sparked even redevel-

High Line - New York

opment of some surrounding real estates in the area, as the site has become more attractive for dwellers. Besides being a recreational area for people to escape the bustling streets of Manhattan, the High Line park provides a different view on the city and its urban fabric. The line in its completion is some 2,3 km long and provides different views on everything happening below, including the view on the Hudson River. (see upper image)

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Central Park - New York

Central park in New York is one of the most visited ones in the world. It enjoys a landmark status, and the city of New York cannot be imagined without it. What makes it special is that it is surrounded and framed in by the city, the tall skyscrapers that make it a green pocket within a jungle of concrete, steel and glass structures, that add to the un-parallel atmosphere no matter what time of the day or year we find ourselves at the site. The buildings that line up to the borders of Central make up a façade for this urban park, reminding the visitor of being in a city, jet still far away from the stressful atmosphere of the streets of New York. (see lower image)

Subconclusion

Reflecting on the analysis of the city of Hong Kong, several aspects of this process have drawn the attention. Although at first when observing the nature of Hong Kong's typology, one who is from abroad can partly conclude that the city is often complex and full of contrasts. On the one hand it is an international hub that is growing fast, on the other hand its high real estate prises have forced many people to live in small inhumane apartments.

Hong Kong is growing fast, and its development has turned in the vertical direction because of the little ground space available. The infrastructure that had to follow the economical growth has in many parts of the city pushed the pedestrian from the street level. Much of the pedestrian flow in the central part of the city is happening above and below the street level. Because of the compressed nature of the city's typology, this concept seem to work well for the inhabitants of this metropolis, and they use these spaces, especially the elevated paths and platforms for all sort of activities. Hong Kong seems to have adapted the idea of elevated (vertical) urbanisation, as a solution for many problems of fast urban growth.

Concept

Based on the analysis of the typology of Hong Kong, with specific focus on Sham Shui Po, a concept draft has been developed that focuses on;

-improving the quality of urban life in an area whose potential is not fully developed by adding a new layer to the existing urban fabric.

In the conceptual draft focus will be especially put on designing urban public and semi-public spaces with green character, that will include recreational, agricultural and aesthetic aspects.

Conclusion

The purpose with this thesis project was to study a highly compressed typology with a dense population, and try to implement design ideas for creating outdoor public spaces in areas that are in the lack of available space to build on the ground. The biggest challenge in this aim was to find a suitable setting, a typology where this concept can be implemented. The design had to fit in physical scale and program to the reality of the site. In this respect the physical proportions had to work together with the surrounding buildings and the programs happening down on the street, but also take into consideration what should happen below the platforms them selves. The design of the structures elevated above the streets had to implement the social composition of the respective streets below. In the design process of the elevated platforms, the notion of a traditional park, or square had to be twisted, and develop an idea that to some extend owns its inspiration to the High Line project in New York. Hong Kong, as a city that for several decades has worked with the concept of elevated paths and platforms, was considered as a perfect setting for this project. The expressions of the green facades, the platforms and rooftops covered with plantations are intended to break the grey monotony of the Sham Shui Po area, who's buildings are decayed and in this sense would benefit from a redesign of this character. As the title of the thesis project "Green Up: Sham Shui Po" states, the concept focuses on creating new green environments layered upon an all ready dynamic urban fabric. The addition of the green surfaces is intended to bring down the pace in the bustling neighbourhood, and give its users spaces where they can relax, garden/cultivate or conduct in other activity of social character.

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APPBE

PREFACE

The appendix is an addition to the project report. It illustrates various creative thoughts, and some of the details from brainstorming during the design process. Some of the ideas are not included in the final result, while others are reflected in the final solution. All of them are important to be highlighted as they, more or less, contribute to the overall design. The appendix contains both hand sketches and 3D models of facade surfaces in the end.

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3D design suggestions for vertical greenery structures implemented on existing facades.



