

# CO-CREATING REGENERATIVE LANDSCAPES IN MUI TSZ LAM

2021-2022  
SCHOOL OF ARCHITECTURE  
THE CHINESE UNIVERSITY OF HONG KONG















# Acknowledgement

Our team would like to thank all parties that are involved in this project.

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## Introduction

Beyond the familiar hyper-dense verticality of our urbanized areas, Hong Kong still has three-quarters of its territory as the relatively undeveloped countryside. In recent years, the Government has begun advocating for holistic conservation and sustainable development of our remote countryside. This comprehensive effort covers natural environments and habitats, village settlements and their landscapes, built heritage as well as history and related cultural assets.

Mui Tsz Lam village (MTL 梅子林村) is one of the seven villages in the Hing Chun Yeuk Alliance (慶春約七村)—the ninth of Sha Tau Kok's ten Alliances (沙頭角十約). Settled over 300 years ago, its establishment actually predates its bigger neighbor Lai Chi Wo (荔枝窩), which has subsequently become the focus of the village cluster. A half-ruined unwallled hamlet with two main rows of beautiful yet abandoned terrace houses, MTL boasts an authentic Hakka “village-in-place” setting ranging from landscape topography, settlement configuration to architecture and half-buried cultural artifacts (pots, ceramics, tools) that all still exists in its fairly intact “cultural landscape”. Taking Mui Tsz Lam village as the focus, this year, our studio will consider the multiple heritages and human-environment interactions of adjacent Hakka settlements: Lai Chi Wo Kop Tong, Siu Tan. (蛤塘、鎖羅盆) as our study area. Natural, cultural, and ecological resources (constraints and opportunities) in the area will be integrated to understand how the physical landscape (e.g. vegetation, natural habitat, environmental quality etc.), socio-cultural landscape (e.g. Hakka settlements, village culture, food, migration history etc.), built landscape (e.g. village houses and structures etc.) and eco-tourism landscape (e.g. hiking, camping) are linked and integrated over time and across space.

This year's studio uses Mui Tsz Lam's eco-cultural landscape as a point of departure and employs regenerative design as the thematic drive for architectural interventions. We will co-create conservation strategies for selected village settlements and their hinterlands by engaging residents and stakeholders. Together with interdisciplinary collaboration, we will propose innovative scenarios with radical architectural interventions as catalysts to enact regenerative conservation for Mui Tsz Lam, Sha Tau Kok.



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Perspective of Mui Tsz Lam in 2021



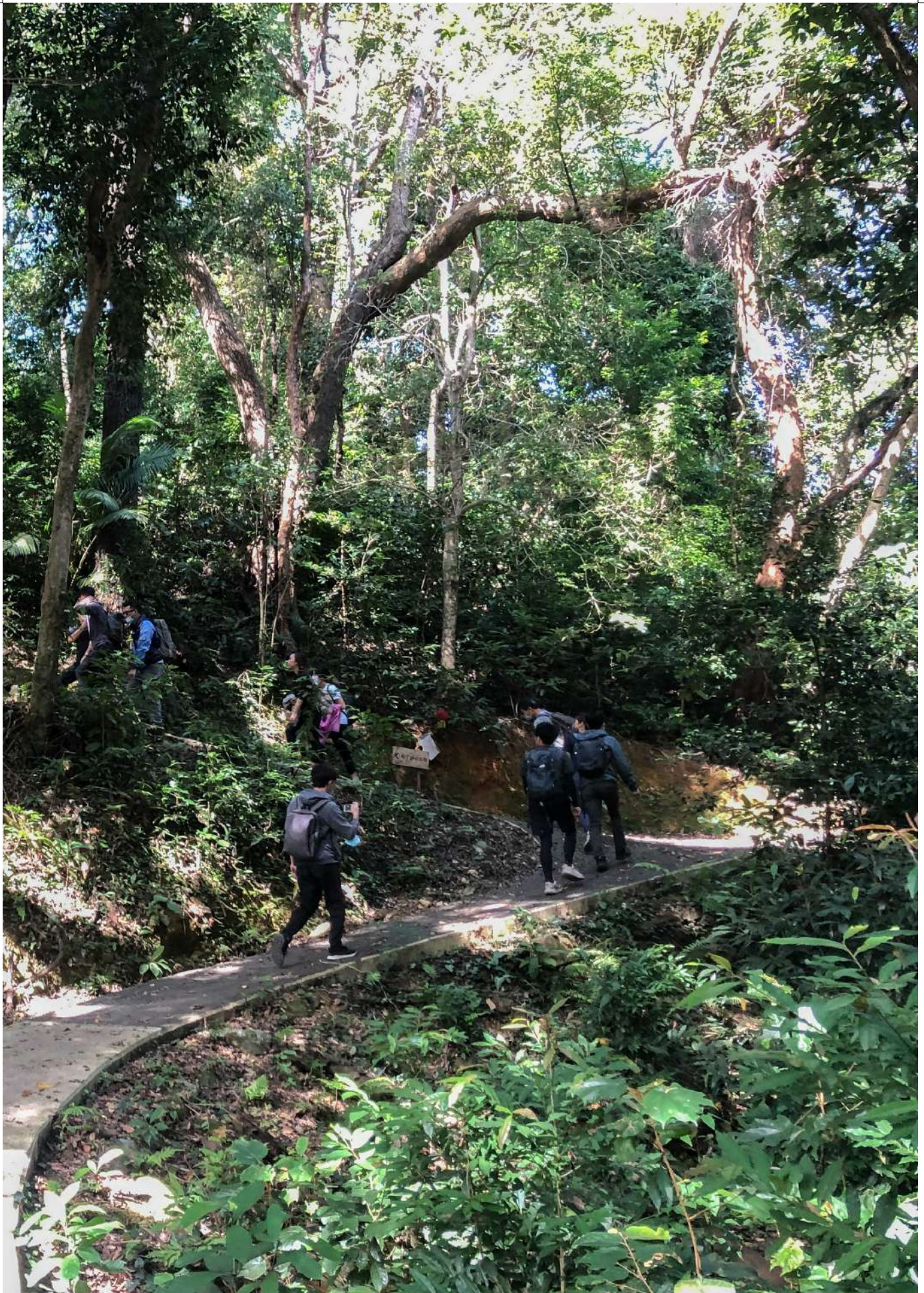




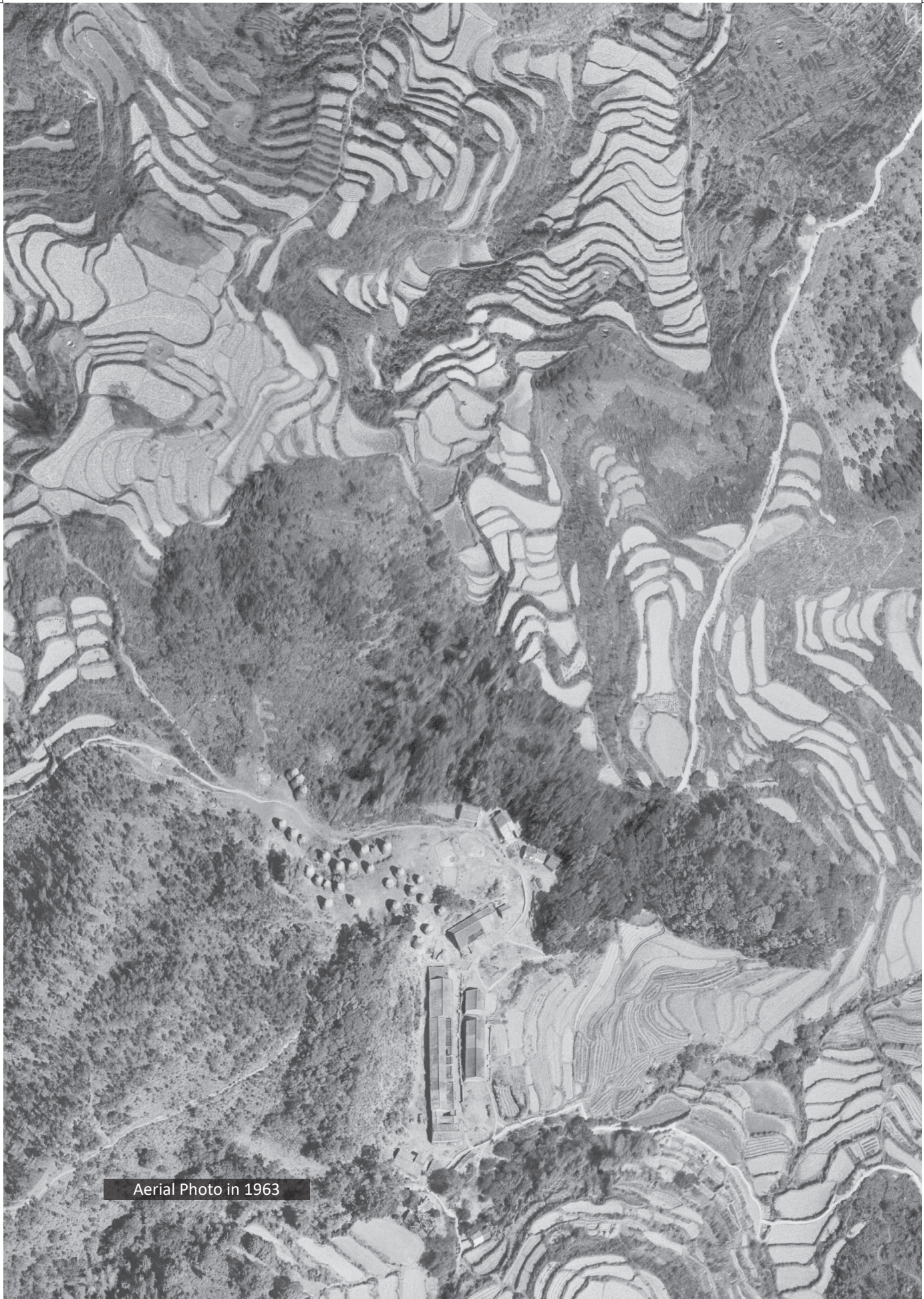


Main Entrance of Mui Tsz Lam from Lai Chi Wo









Aerial Photo in 1963



An aerial photograph of a mountainous landscape. The terrain is rugged with steep slopes. On the left side, there are extensive terraced fields, likely for rice cultivation, which appear as light-colored, stepped patterns. A winding river or stream flows through the landscape, particularly visible on the right side. The central part of the image shows a large, dark, forested area. The overall scene is a mix of natural topography and human agricultural activity.

# Chapter 1

Background of Mui Tsz Lam



## Hong Kong's Traditional Hakka Architecture and its Relationship to Hakka People



The history of “five great clans” (新界五大族), namely: the Tangs (鄧) of Yuen Long and Lung Yeuk Tau of Fanling; the Lius of Sheung Shui Heung; the Pangs of Fanling Wai; the Haus of Ho Sheung Heung and the Mans of San Tin (later including also the Tos of Tuen Mun plays a dominant role in the study of the historical development of the New Territories.)

By the end of the Southern Song (宋) dynasty, they had mostly migrated from Jiangxi to Guangdong province (1127-1644). In comparison to the migrants who arrived in the province after the repeal of the Coastal Evacuation Order (1662-1669), these major clans were earlier settlers and were considered aboriginals (Punti), whereas the latecomers were considered guest people (Hakka). In fact, in the 24th year of the Qing dynasty's Jiaqing reign (1819), 298 Punti and 194 Hakka villages were recorded in Hong Kong in the Xin'an Gazetteer. Some Hakka villages may no longer exist.

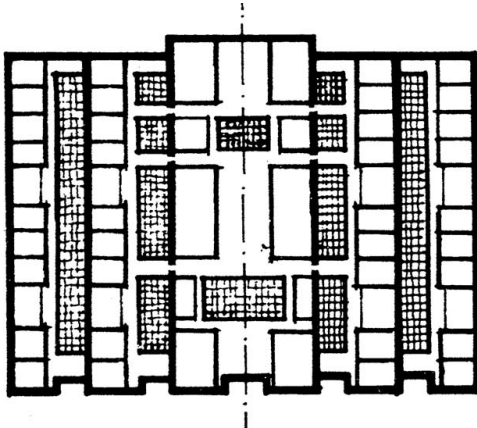


## Hakka House Form in Hong Kong and Guangdong Province

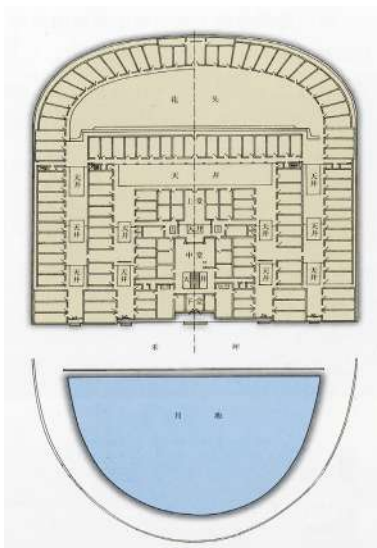
Seven types of Hakka houses which exist in both Hong Kong and Guangdong have been identified:

1. Hall-and-Row House
2. Encircling House
3. Enclosed Hamlet
4. Lock-Shaped House
5. Pole-Shaped House
6. Tower House
7. Castle-Like House

1. Hall-and-Row House



2. Encircling House



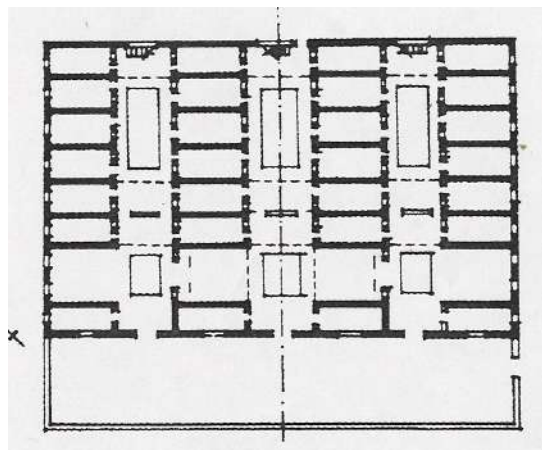
3. Enclosed Hamlet



4. Lock-Shaped House



5. Pole-Shaped House





## 6. Tower House



The traditional Chinese community of Hong Kong is studied, focus is given to the major clans, the earlier settlers in the New Territories. Their lifestyles, houses, ancestral halls, and temples appear to have exemplified traditional Chinese customs and vernacular architecture. However, many villages in the New Territories are still inhabited by the Hakka people, whose founding ancestors migrated to the territory after the Coastal Evacuation Order was repealed (1662-1669). Their historical significance in the development of Chinese society should not be underestimated.

## 7. Castle-Like House



## Mui Tsz Lam Tsang Clan Migration History

祖居村名	姓別	遷往年份	前在何處居住	開村迄今若干傳
埔尾村	李姓	一七〇五年	從馬蛟騰遷	住今九傳
橫嶺頭	李姓	清乾隆末	從馬蛟騰遷	住今七傳
大瀝村	李姓	一七五五年	從馬蛟騰遷	住今十傳
小瀝村	李姓	一六五五年	從白芒花來	住今十傳
金竹排	王姓	一七〇三年	從梅縣來	住今十傳
犁頭石	李姓	一七五五年	從馬蛟騰遷	住今九傳
亞馬芳	李姓	全上	全上	住今上
三桠村	曾姓	一六九〇年	從興寧縣來	住今十一傳
蛤塘村	范姓	清乾隆末	從龍岡來	住今八傳
梅子林	曾姓	一七五五年	從東莞青溪來	住今十一傳
牛屎湖	曾姓	一六六一年	從東莞青溪來	住今十一傳

According to the Village Representative, the Tsang Clan migrated through generations, from Shaanxi to Shandong, Fujian, and Dongguan and finally arrived in Sha Tau Kok. Where they had stayed in the final stages of migration were places where Hakka culture coexisted with Cantonese and Chaoshan culture. This explains why the two houses we study, as Hakka vernacular houses, possess hybrid elements of Cantonese and Chaoshan.



Old Days of Mui Tsz Lam



The Villager Head of Mui Tsz Lam in Old Days





Mid Term Review in October 2021

HUMAN MADE  
STARS FOR FUTURISTIC





## Chapter 2

Mui Tsz Lam Study





## **Village group**

CHEONG Kam Seng Tommy

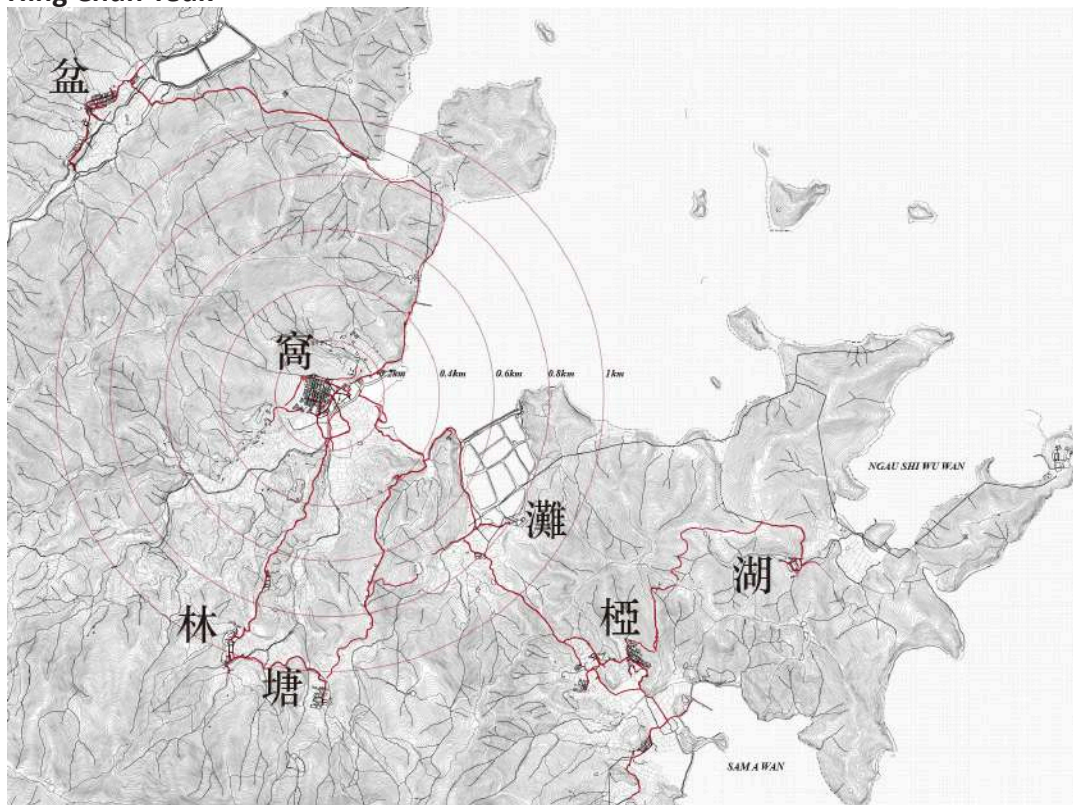
TSE Ka Hei Hayden

## Distribution of Significant Hakka Villages in Hong Kong



Hakka is the second largest clan in Hong Kong, which migrated from China around 300 years ago. Unlike the walled villages in Hong Kong, which occupied almost all flat area, Hakka villages were concentrated in the North-East, East central part of New Territories that are all mountain area.

## Hing Chun Yeuk

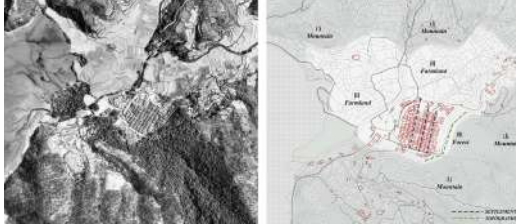


Hing Chun Yeuk has formed for more than 200 years. There are in total seven Hakka villages, which are Lai Chi Wo, Mui Tsz Lam, So Lo Pun Kop Tong, Siu Tan, Ngau Shi Wu, and Sam A. Lai Chi Wo as the most populated and largest village, many events were held when having different festivals since the advantages of the location and transportation.



## Development analysis of Hing Chun Yeuk

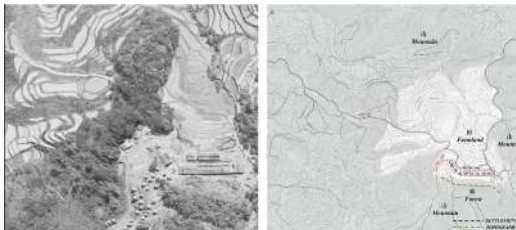
### Lai Chi Wo 荔枝窩 (1671)



Lai Chi Wo has settlements located near a river, having a population of 550 in 1957.

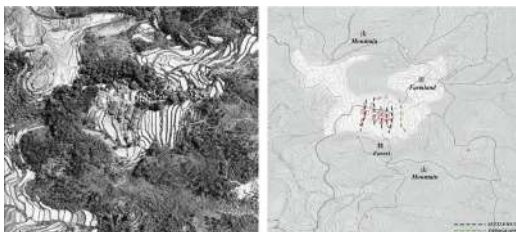
"窩" means it is surrounded by mountains and in a river valley, therefore the settlements are concentrated in a spot along the contour.

### Mui Tsz Lam 梅子林 (1661)



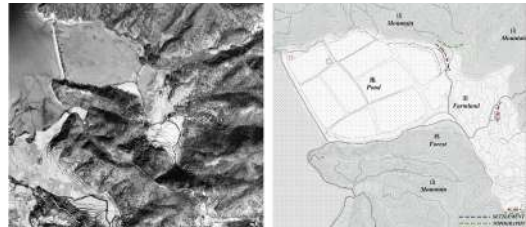
Located on a slope and surrounded by Feng Shui Woods "林", Mui Tsz Lam's settlements are placed along the paths, with a clear view towards the sea, having a population of 79 in 1957.

### Kop Tong 蛤塘 (1755)



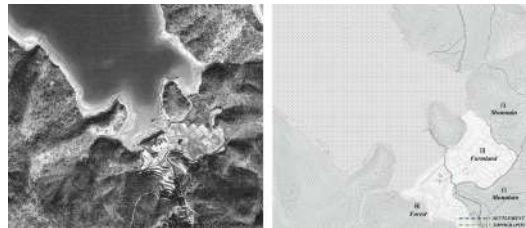
Kop Tong is located on a slope, therefore its settlements were built following the road across the slope, having a population of 96 in 1957. "塘" here means a pond with a small area.

### Siu Tan 小灘 (1661)



"灘" means a sand land near the sea. Activities related to the sea such as fishing are common at here. Less populated, its settlements lie next to the river. An embankment was also built.

### Ngau Shi Wu 牛池湖 (1661)



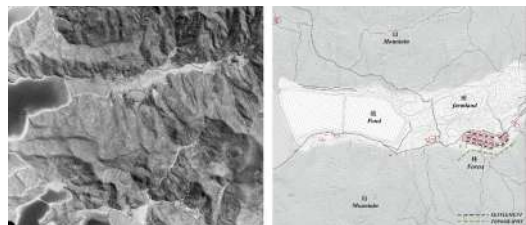
"湖" means a small pond. Ngau Shi Wu is located in pond areas on flat land, favourable for farming, having a population of 63 in 1957. Similar to Siu Tan, its settlements are placed along the paths which connect the villages.

### Sam A Tsuen 三桠村 (1690)



"桠" means forked basin. Sam A Tsuen is located on flat bays suitable for farming, having a population of 200 in 1957. Its settlements are scattered and spread out but along the paths.

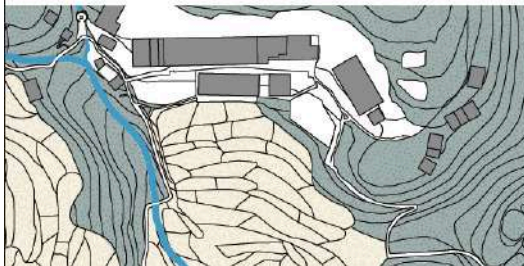
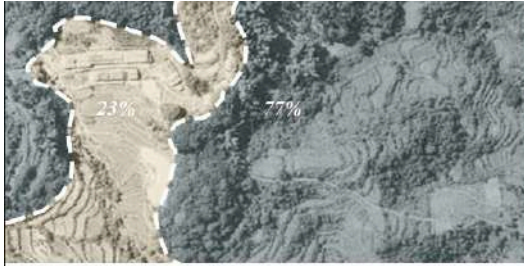
### So Lo Pun 鎖羅盆 (1755)



"盆" means river valley, a flat plains surround by mountains, thus the settlements usually concentrated together. It had a population of 181 in 1957.

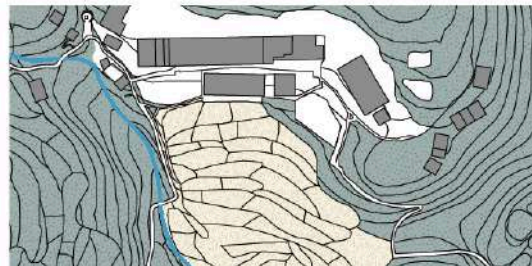
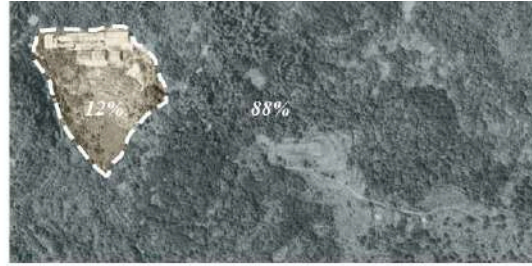
## Change of Mui Tsz Lam

**1970**



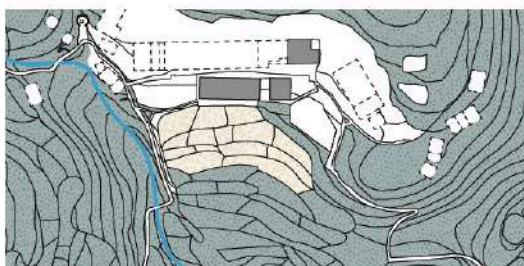
In 1970, villagers started to move out since it became difficult to live in the villages. The water source had been lost since the Plover Reservoir had been built in 1968. The freshwater was diverted to the reservoir, leading to a lack of water source for cultivating.

**1986**



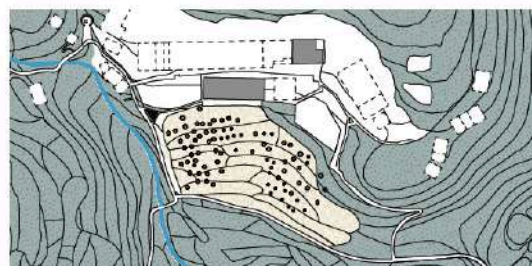
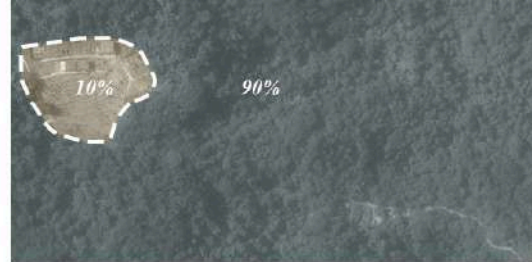
In 1986, since many villagers had moved out, buildings and farmland were not being taken care of. The area of the paddy field had reduced and nature took back. The Terraces were becoming forested mountains.

**2003**



In 2003, the lack of maintenance led to building collapse, and the area of the farmland was continuously reduced, compared to the 1986 diagrams.

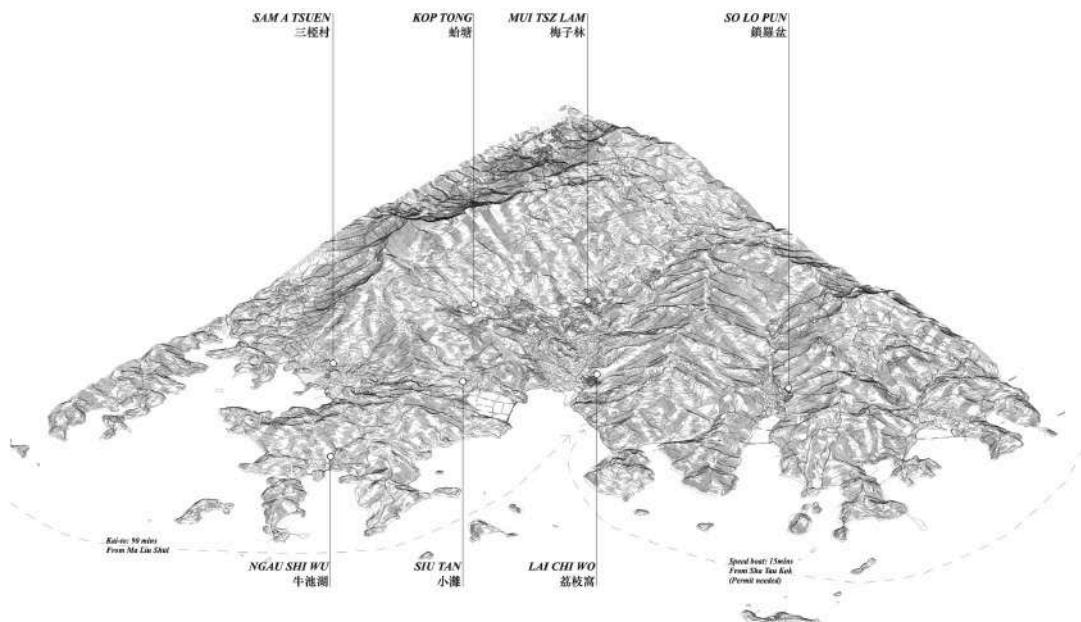
**2021**



In 2021, since the Community Revitalization Scheme was introduced, villagers came back to the village and tried to re-cultivate. The area of farmland increased with the newly planted orange trees. There are also programs and proposals to re-build the houses to attract people living in the city to enjoy the nature of Mui Tsz Lam.

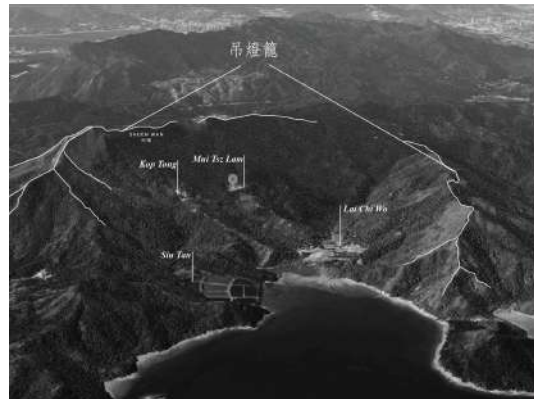


## Overview of Hing Chun Yeuk



The aerial diagram shows where Hing Chun Yeuk sitting surrounded by the mountains. Villages near the coastal area like Ngau Shi Wo, Lai Chi Wo, Sam A Tsuen and So Lo Pun, were located in a concave-shaped bay, where calmer sea waves could be seen.

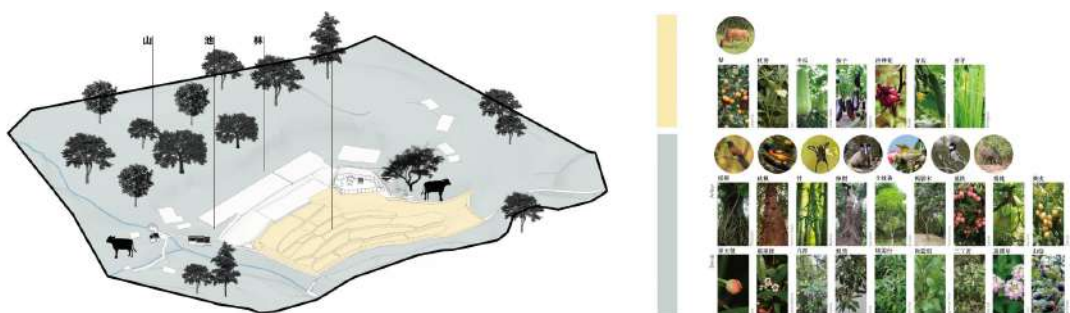
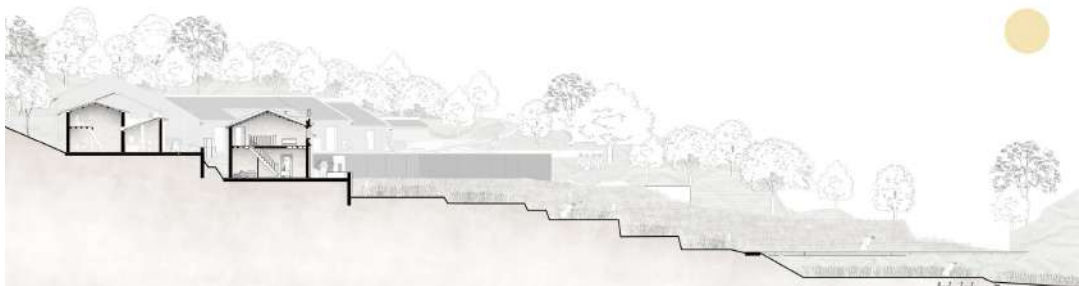
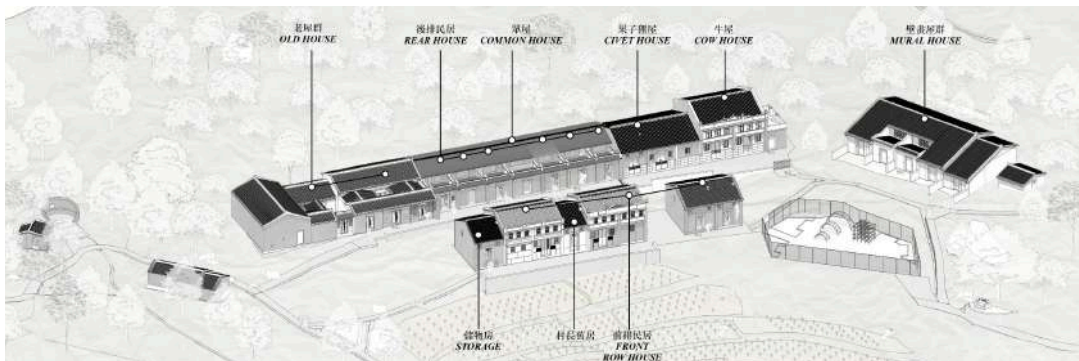
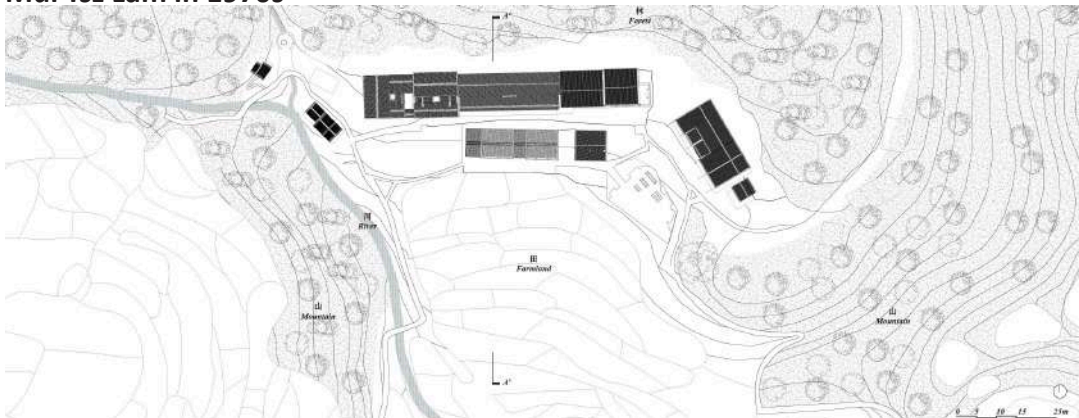
## Perspective of Tiu Tang Lung in 1960s and nowadays



The four villages, Lai Chi Wo, Mui Tsz Lam, Kop Tong, and Siu Tan were surrounded by mountains with a concave-shaped bay, where freshwater came from the mountains and then to the sea. The freshwater source allowed people to cultivate and for daily use.

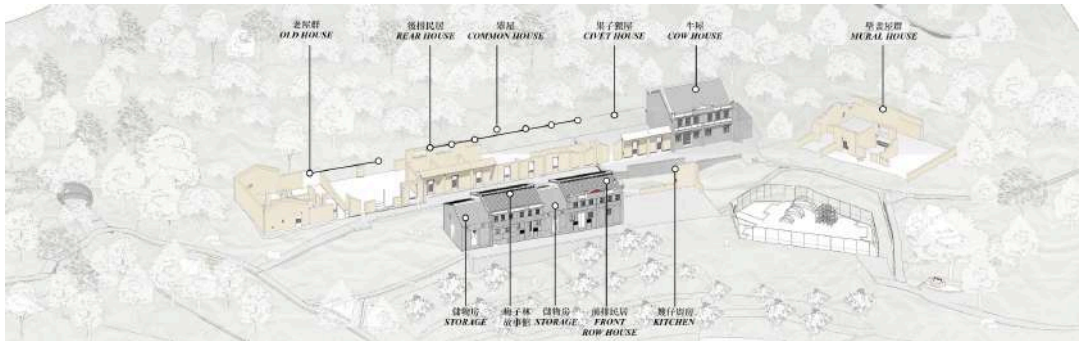
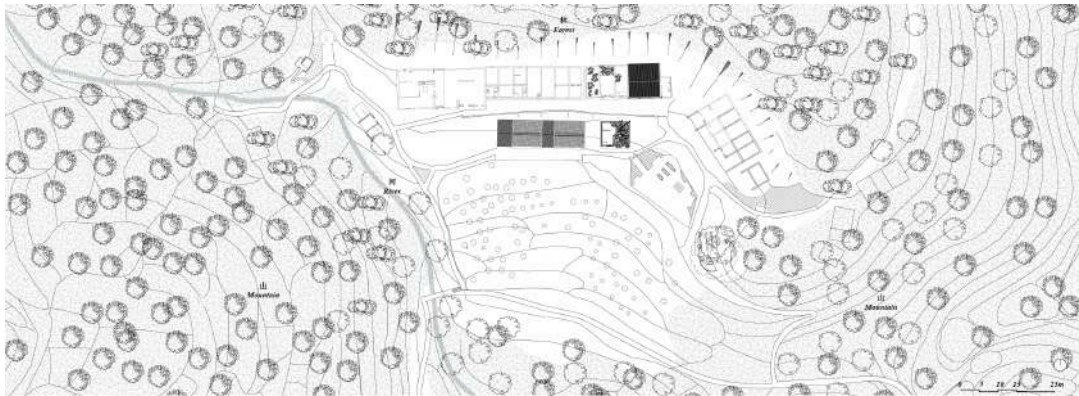


## Mui Tsz Lam in 1970s

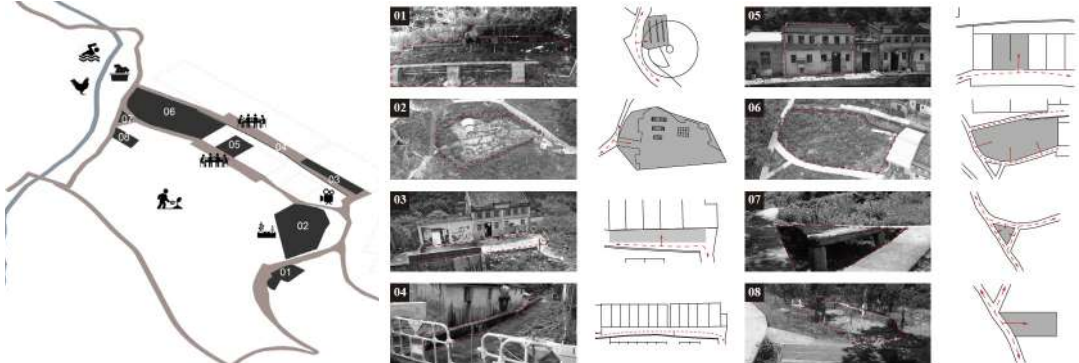


When Hakka people were looking for a place to settle, they looked at Feng Shui. They were looking not only for a secrete place but also a place with a water source, a food source that allows them to perpetuate posterity. as a result, many fruits, animals, medicinal materials, and building materials could be found around Mui Tsz Lam. and the most important thing was the potential to develop paddy fields since there were freshwater sources and lands.





## Current Views and Activities in Mui Tsz Lam







## **Old House Cluster**

LIU Yanxi Lucia

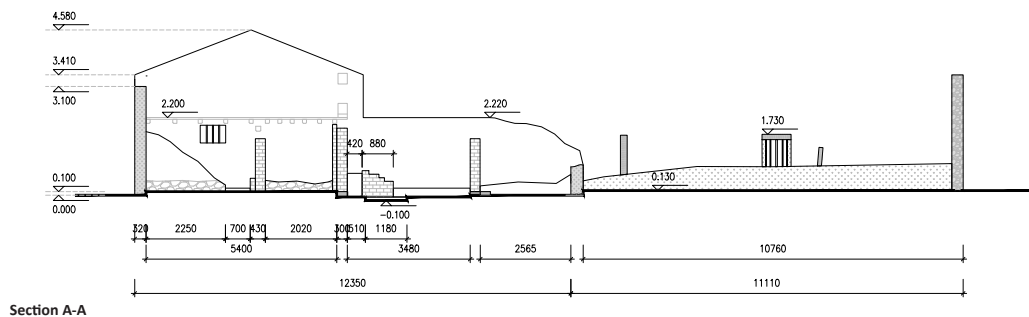
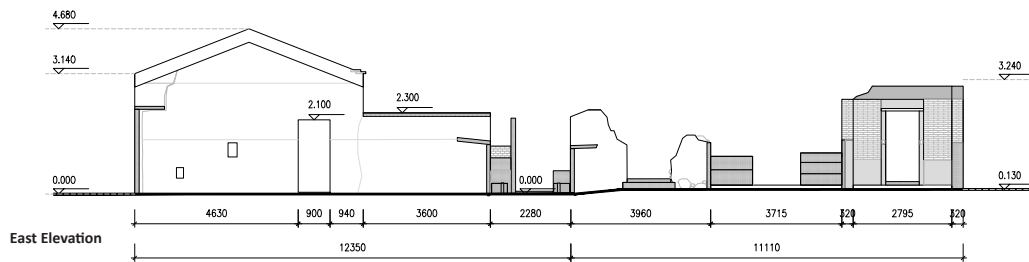
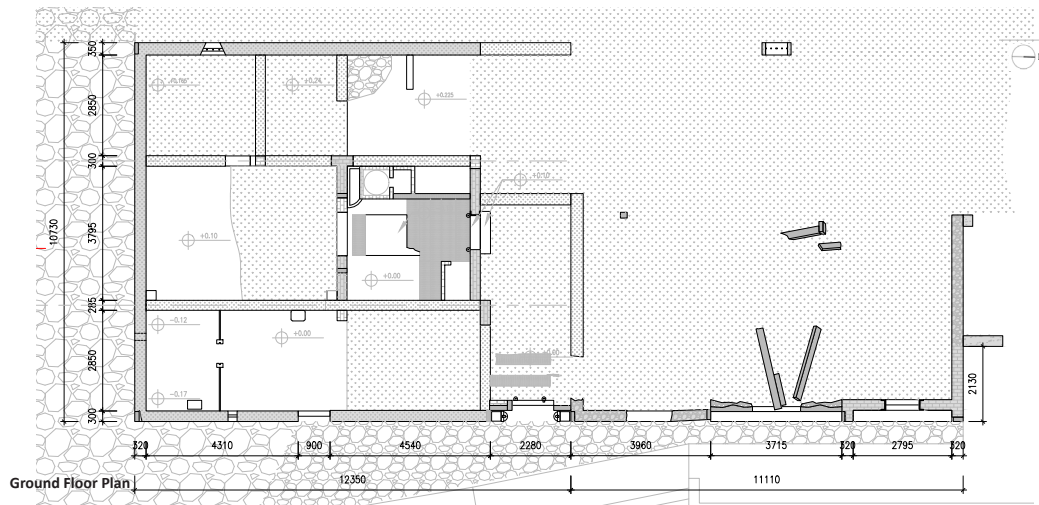
FUNG Hiu Tung Martin





## Existing Condition

Most of the roof tile and supporting beams have collapsed. Some components are buried in earth and plants. But we can see some earth and brick walls separating the space. All roof tiles have collapsed. Most of the outer walls are made of rammed earth, and part of them are bricks. We can infer the size of the front doors from the retained portion of the walls. The location of some holes visible in the wall is inferred to be wooden beams. The brick wall is fixed at an angle by some granite strips. There are standing granite stones at the collapse site, which are inferred to be door frames.





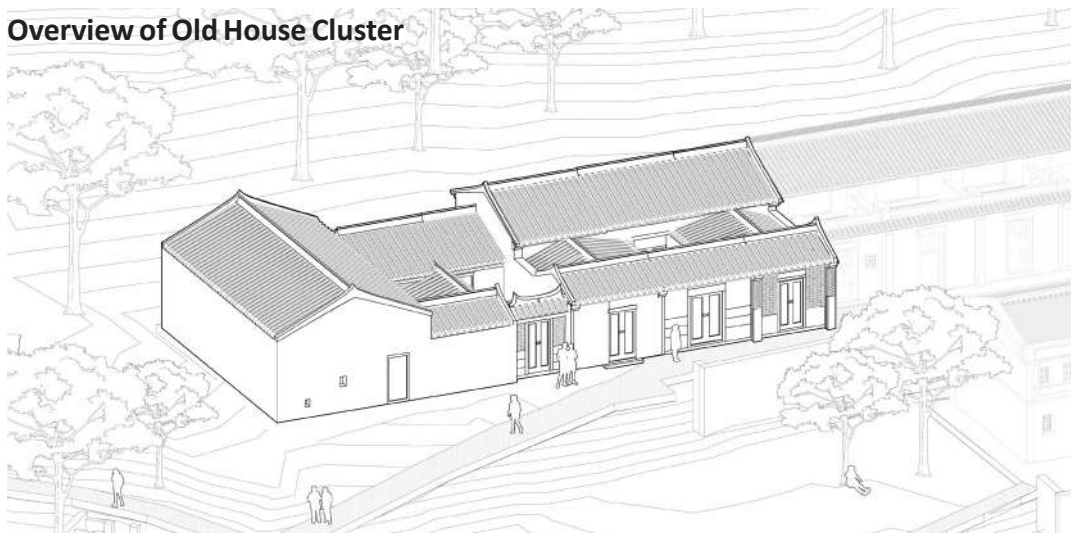
## Restoration

The form of “Old House” resembles the “Downhill Tiger” (下山虎) form commonly found in Chaoshan houses. A courtyard is surrounded by chambers of 3 hierarchy of roofs, the main hall, side chambers, and the entrance, each with eaves directing rainwater towards the courtyard. This is coined as “Four Water to the Hall” (四水歸堂) - a sign of good wealth. “The Three-Gate House” resembles another Chaoshan house form “Four Points of Gold” (四點金), as the courtyard is surrounded by the main hall, side chambers, and a long front chamber parallel to the main hall. The four gables – resembling character “金” - visible on the sides inspired the style name. Both houses were each occupied by a single household and was divided in later generations. The exterior remains of Old House was mainly of rammed earth, while that of Three-Gate House is granite, stones, and bricks.





## Overview of Old House Cluster

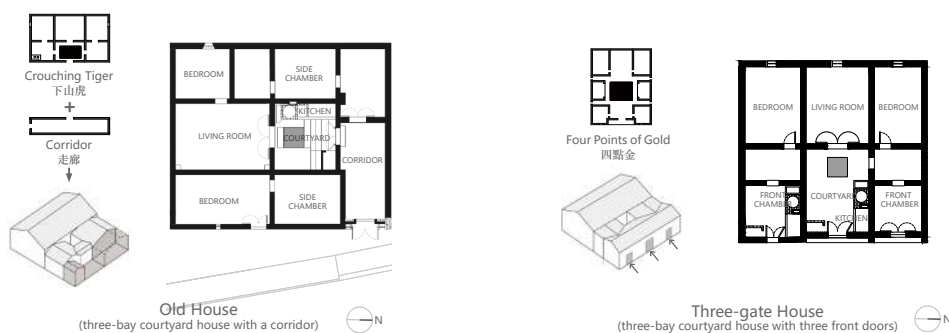


## Housing Type Comparison



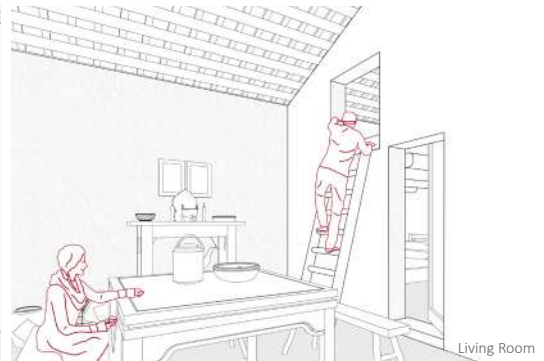
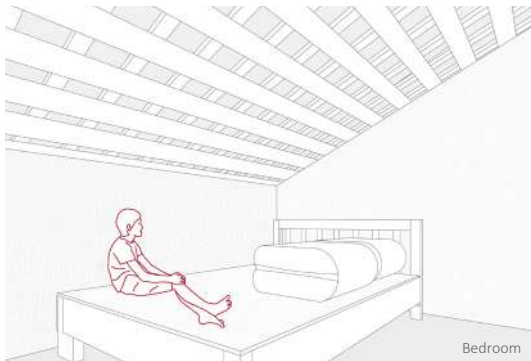
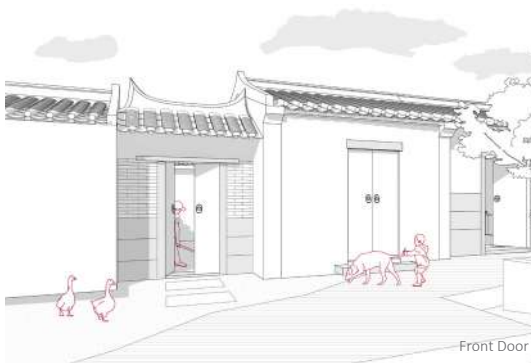
Both two main houses have courtyard in the centre, forming "Four Water to the Hall (四水歸堂)", which means two chambers on the slope of the house also to the inner courtyard, is a superstition reason that wealth flows within. Typical courtyard dwellings are very common in Southeast China, including Hong Kong. By comparison, the old house cluster, as Hakka vernacular houses, possesses hybrid elements of Cantonese and Chaoshan because of the historical migration of the Tsang Clan to MTL village.

## Old House Cluster Typology



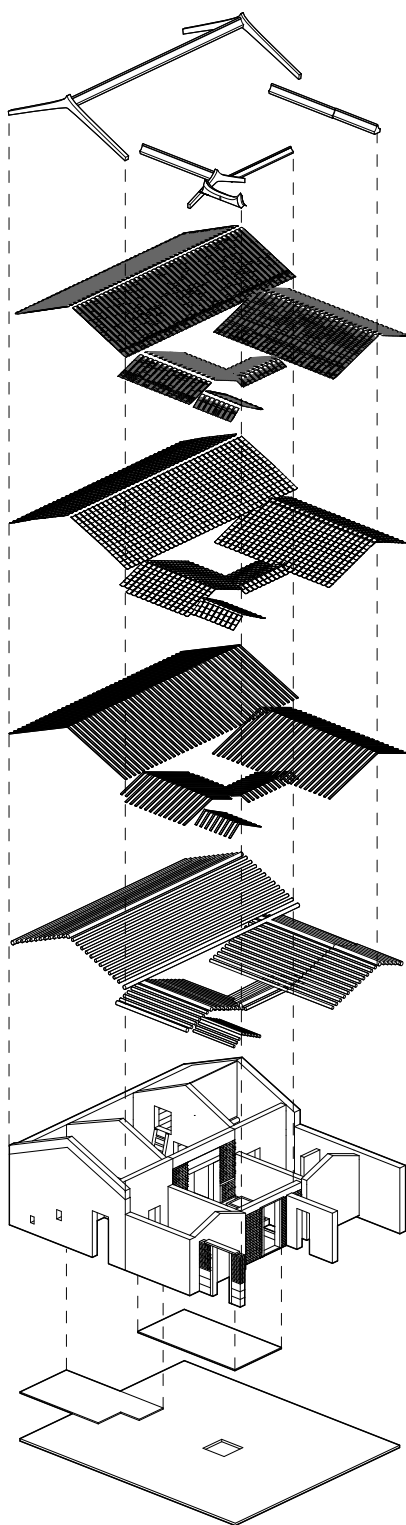
### Recreated Daily Life

● Hall ● Courtyard  
● Kitchen/Storage ● Kitchen  
● Bedroom ● Bathroom

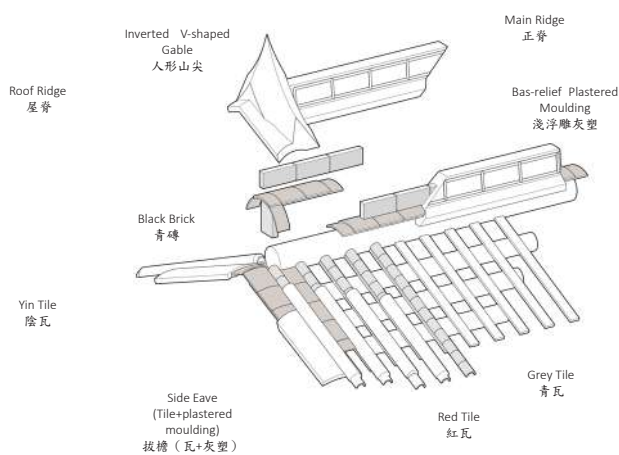




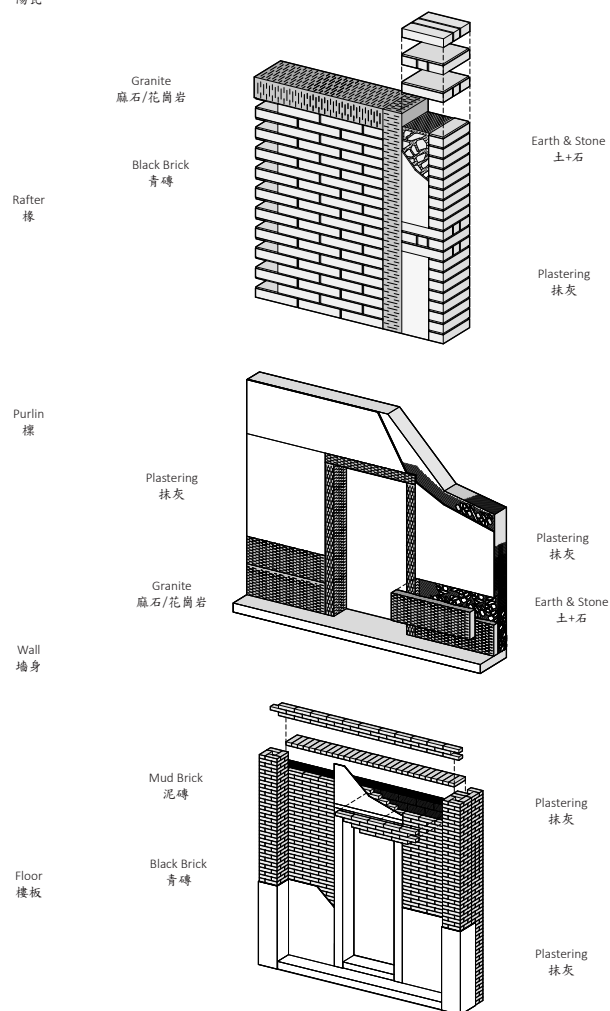
## Exploded Layers of Structure



## Roof Structure

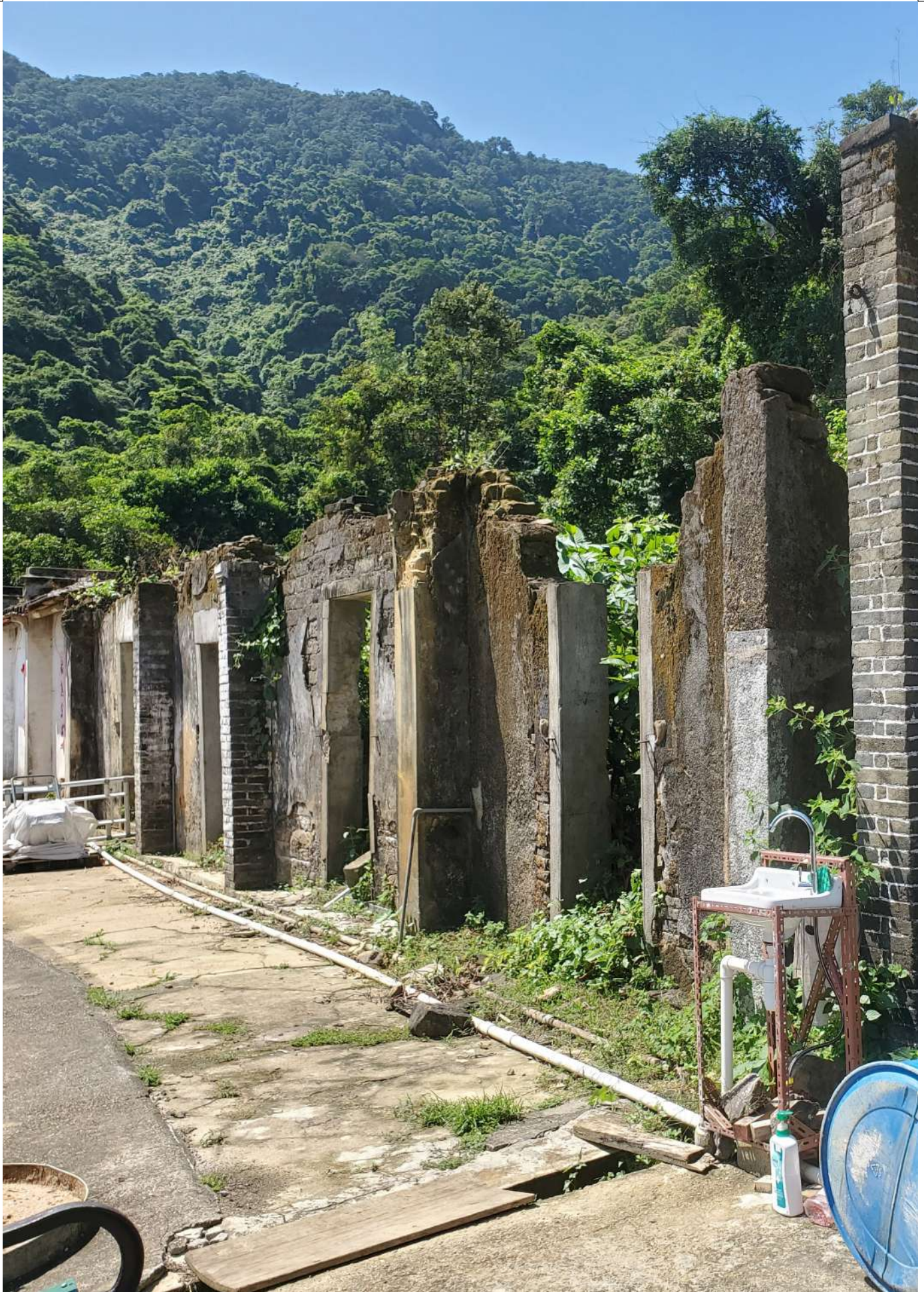


## Wall Material & Detail











# **Rear House and Commom House**

CHAU Yan Cho Enzo

CHEUNG Nga Kei Cherry





## Existing Condition

The houses form a single bay of houses in the village, normally houses are connected with ancestor hall in the middle of the terrace.

Each house has very similar layout, with a single floor front room and a 2-storey back room respectively. Similar layout but with different internal activities inside provides the rear houses a special.

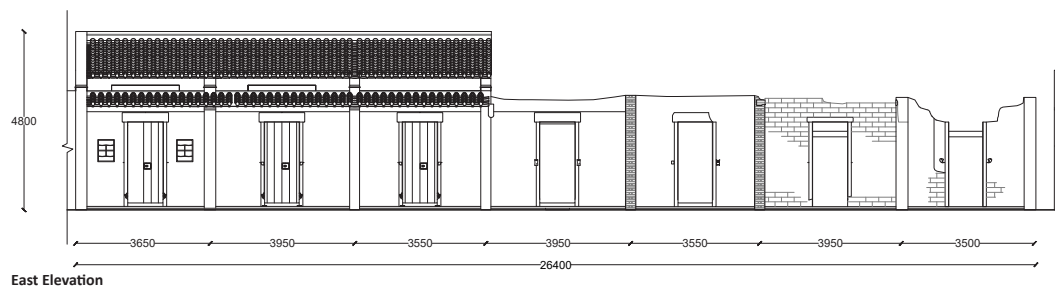
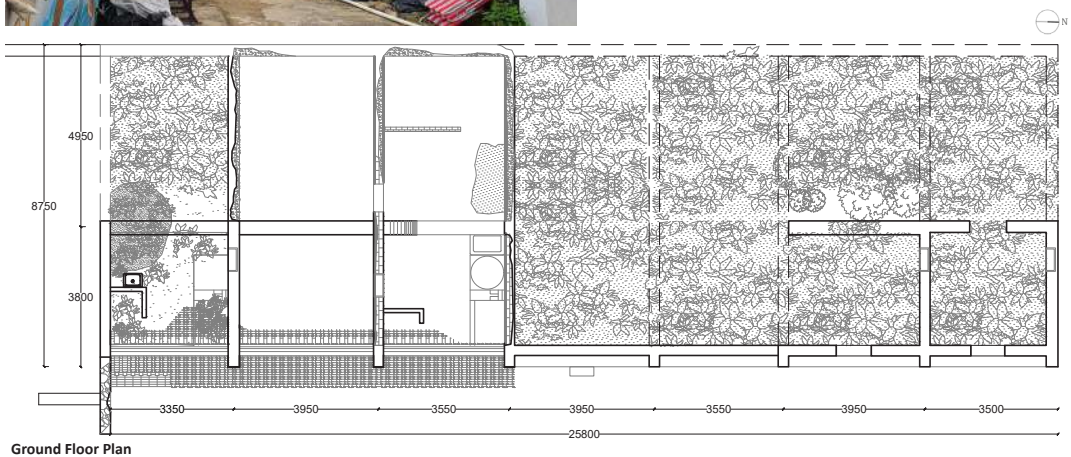


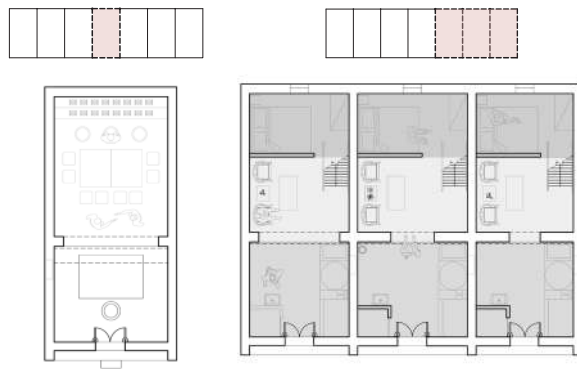
The front room is for the bathroom and kitchen, the back room normally is for the living room and bedroom. For the second floor of the house will be used for storage, but also can be used for another bedroom for big families.

Existing housing conditions are poor for comprehensive revitalization but a chance to rebuild the architecture again with the site's authenticity .



It's a chance to engage with specific parties and transfer their idea and our design objective into a more sophisticated design. This is what we do - Co-create on the site.

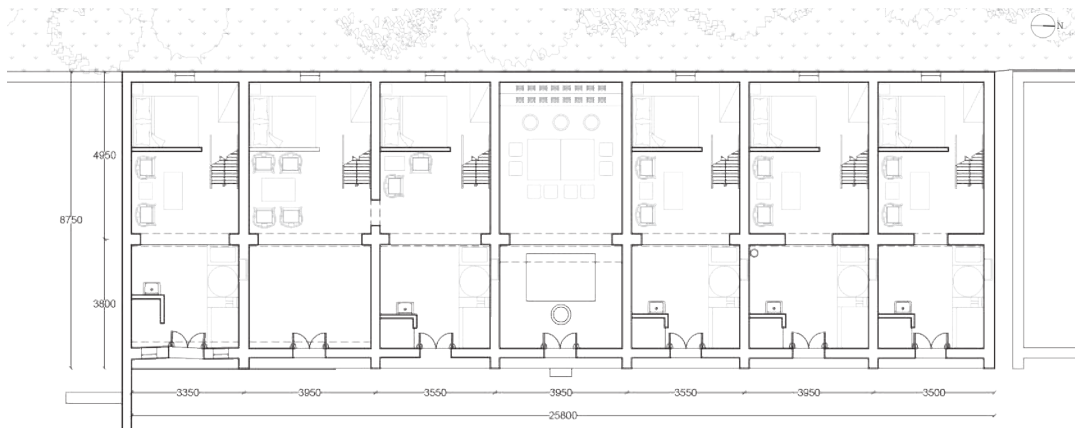




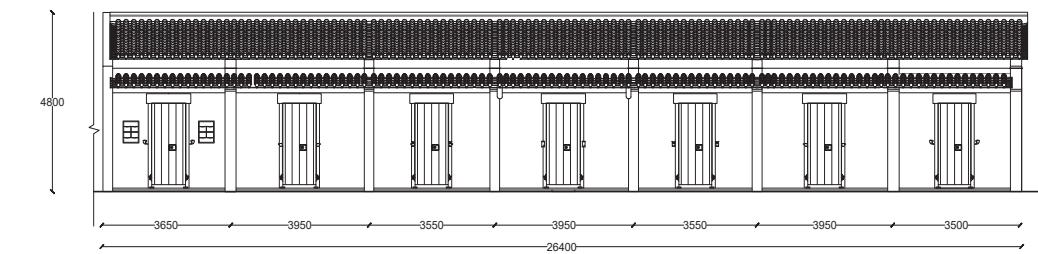
## Restoration

House 1 to 3 may have went under renovation in closer time, having walls built in partly Chinese blue bricks or stones with lime render, compared to that of house 4 to 7 built with mostly stone bricks and mud stuffing in between walls, and no extra render on the surface. This may contribute to how house 1 to 3 retained more details now.

In general, the back end (west side, towards mountain) of all 7 houses are mostly collapsed and covered in bushes. Some wood sticks are used to support one of the fragile walls. The walls remaining have mostly lost the surface render and half collapsed, exposing the stones or bricks underneath. Most of the Wood beams supporting the tiles of the roof have decayed and fallen, only few of them in house 1 still in place. However, it is possible to view holes on the wall where structural wood beams were once placed. The seven houses 's structure material area mostly the same but being built and maintenance for many times.



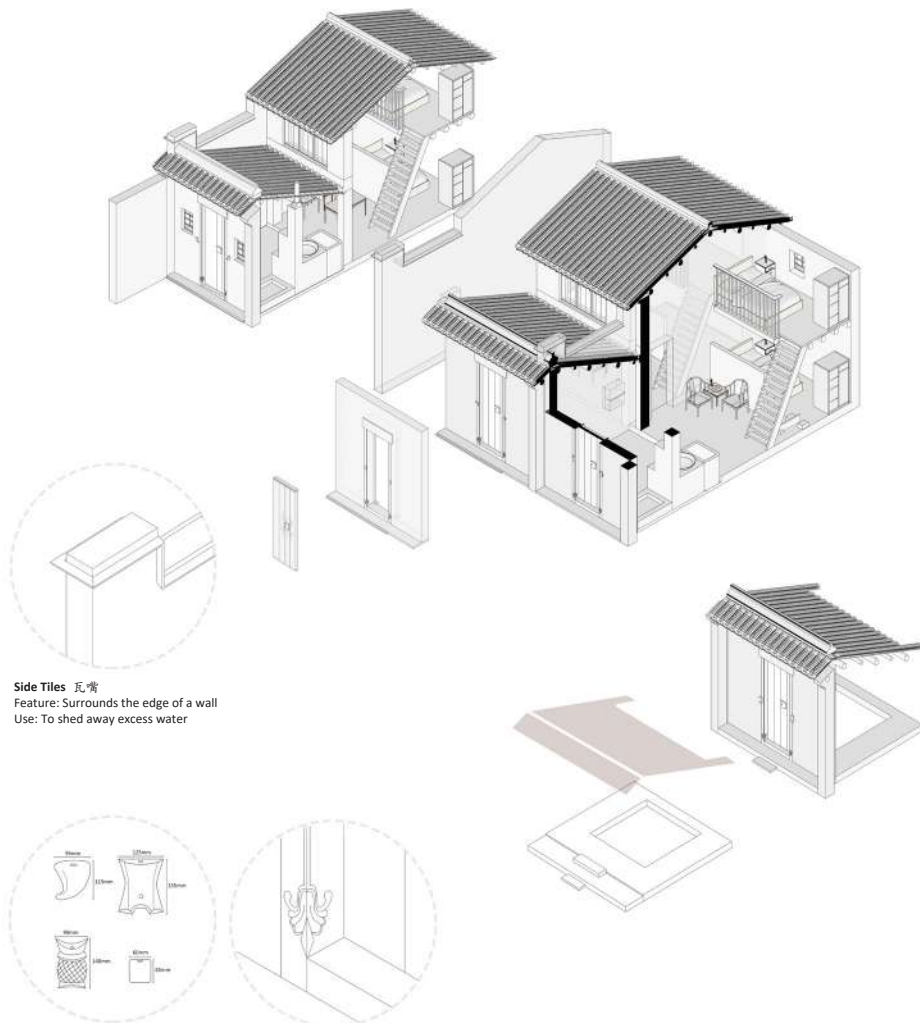
Ground Floor Plan

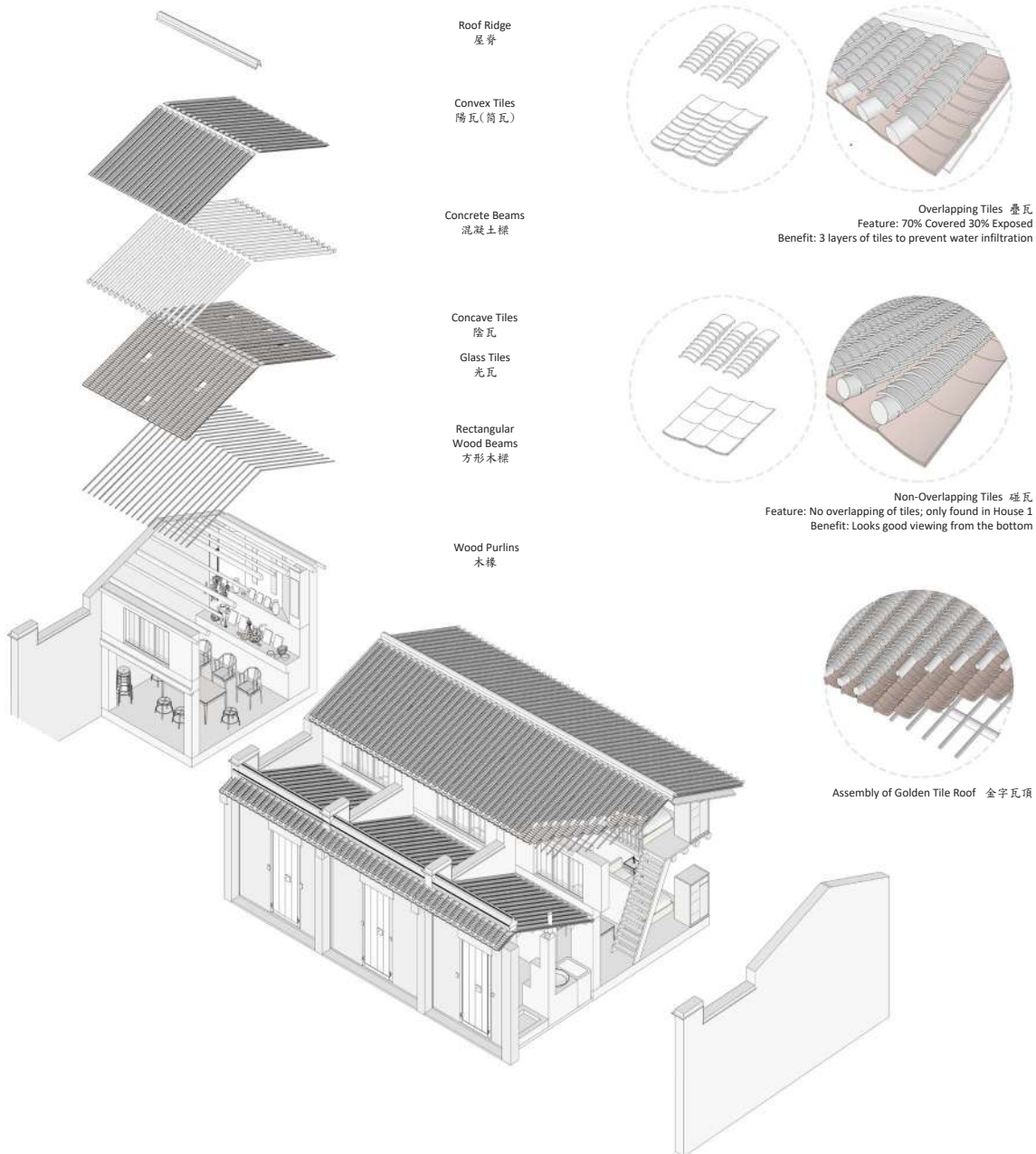


East Elevation



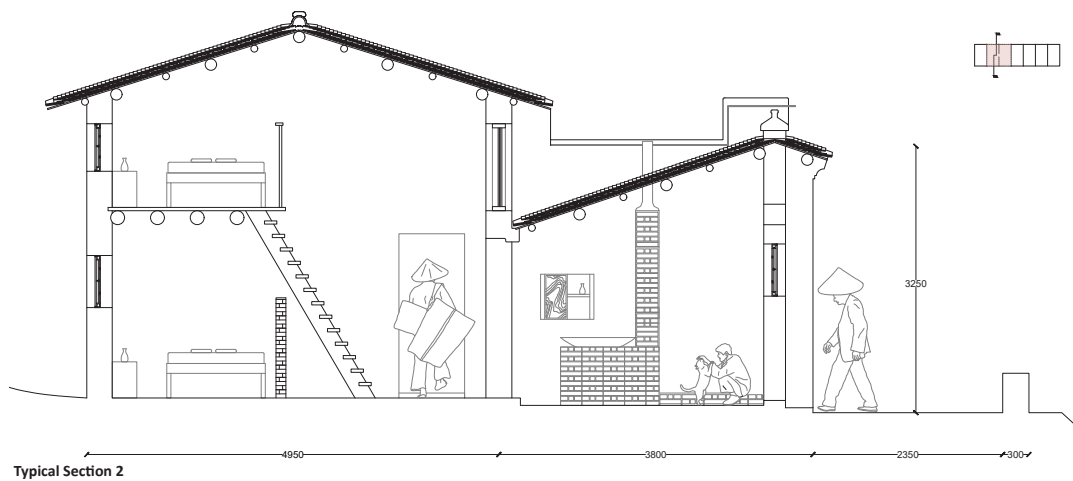
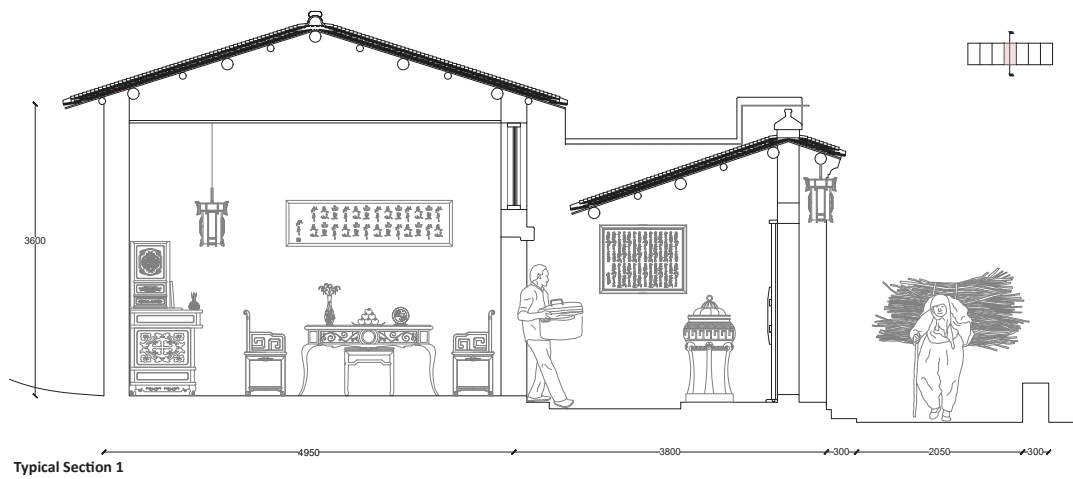
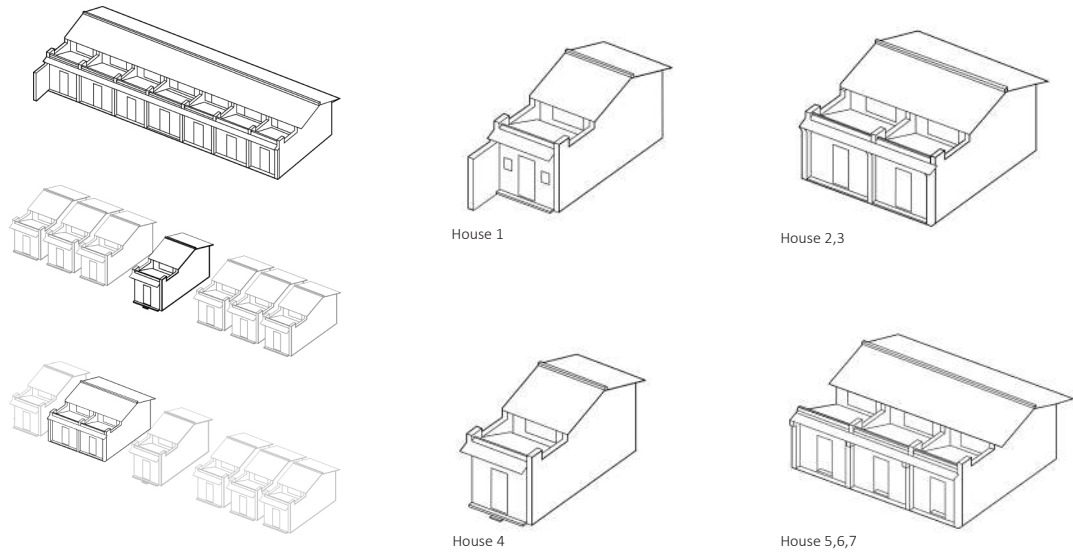
## Structure and Components







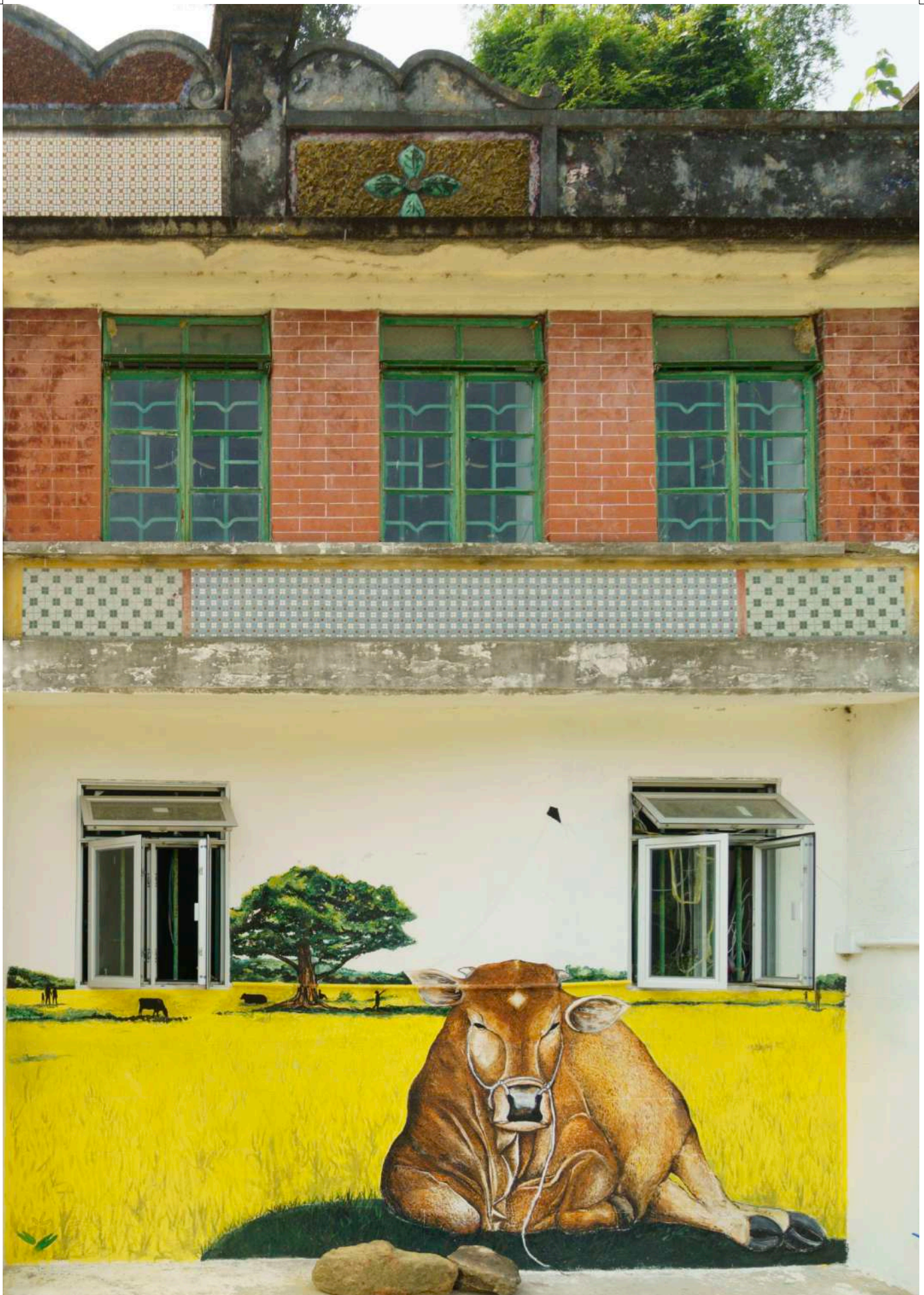
## House Typology



## MODEL PHOTOS







## **Cow House and Civet House**

LAI TingYan Nicole

TSUI HoiYing Beverly



## Existing Condition



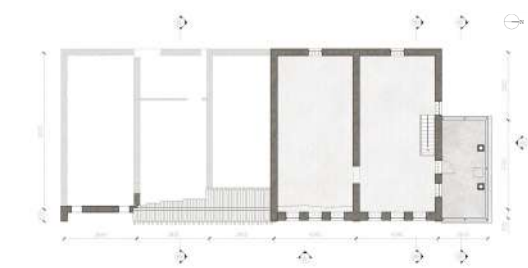
G/F of Civet House

Most of the structure has fallen except the front facade. Most of the spaces were clear out.

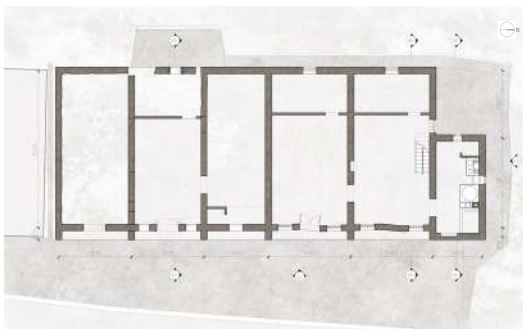


1/F of Cow House

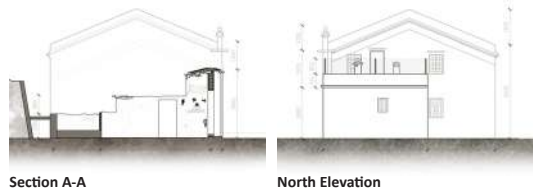
Most of the walls, windows, and roof structures are preserved. Additional metal beams were added to support the roof.



First Floor Plan



Ground Floor Plan



Section A-A

North Elevation



Section B-B



East Elevation

## Restoration

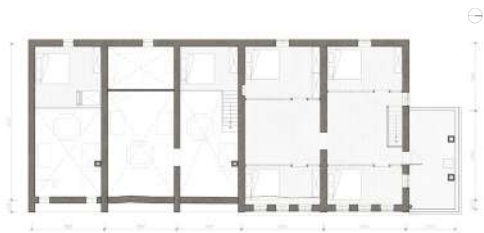
After visiting the site - Mui Tsz Lam, for a couple of times measuring site dimensions, and studying typical Hakka lifestyle and dwelling design, the Cow House and Civet House were reimagined to their restored version. As the villagers who had lived in these houses had moved away, it was not able to interview them. However, by collecting pieces of memories from other villagers, the original state of the houses could be developed approximately.



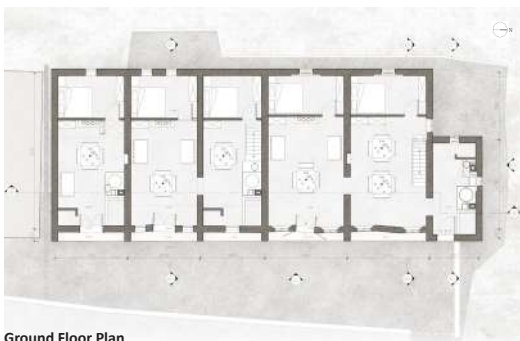
Cow House & Civet House in 1963



Cow House & Civet House in 1978



First Floor Plan



Ground Floor Plan



Section A-A

North Elevation



Section B-B

Section C-C

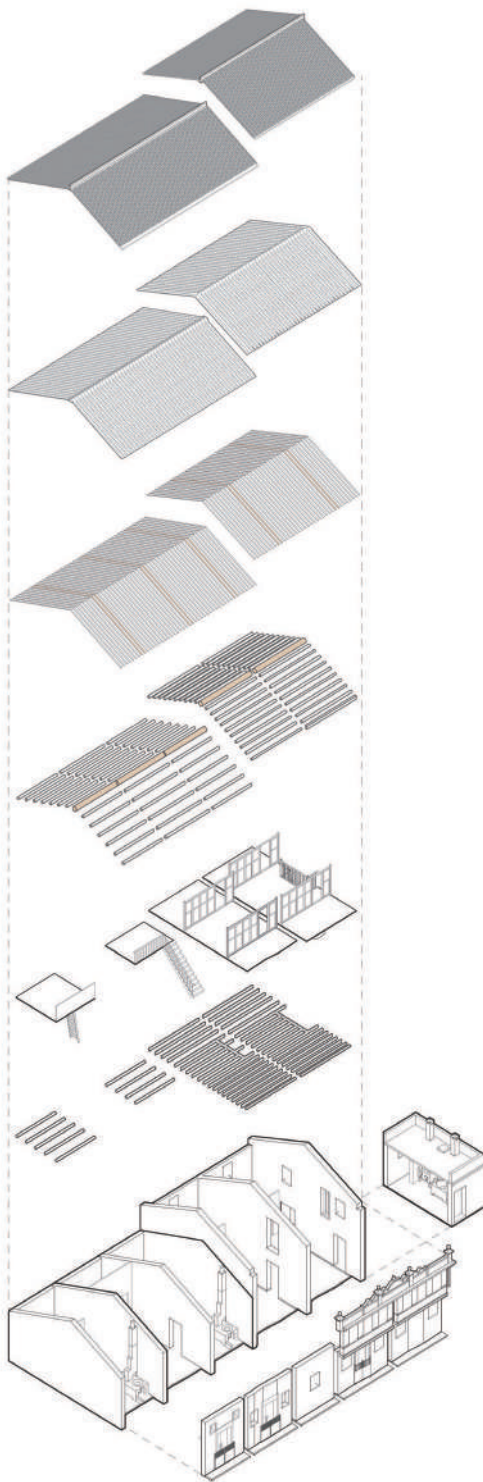
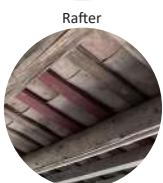


East Elevation



Structural Design and Materiality

Common Materials



**Window Openings**  
**Cow House**

Glass Tiles

Timber Window Frame

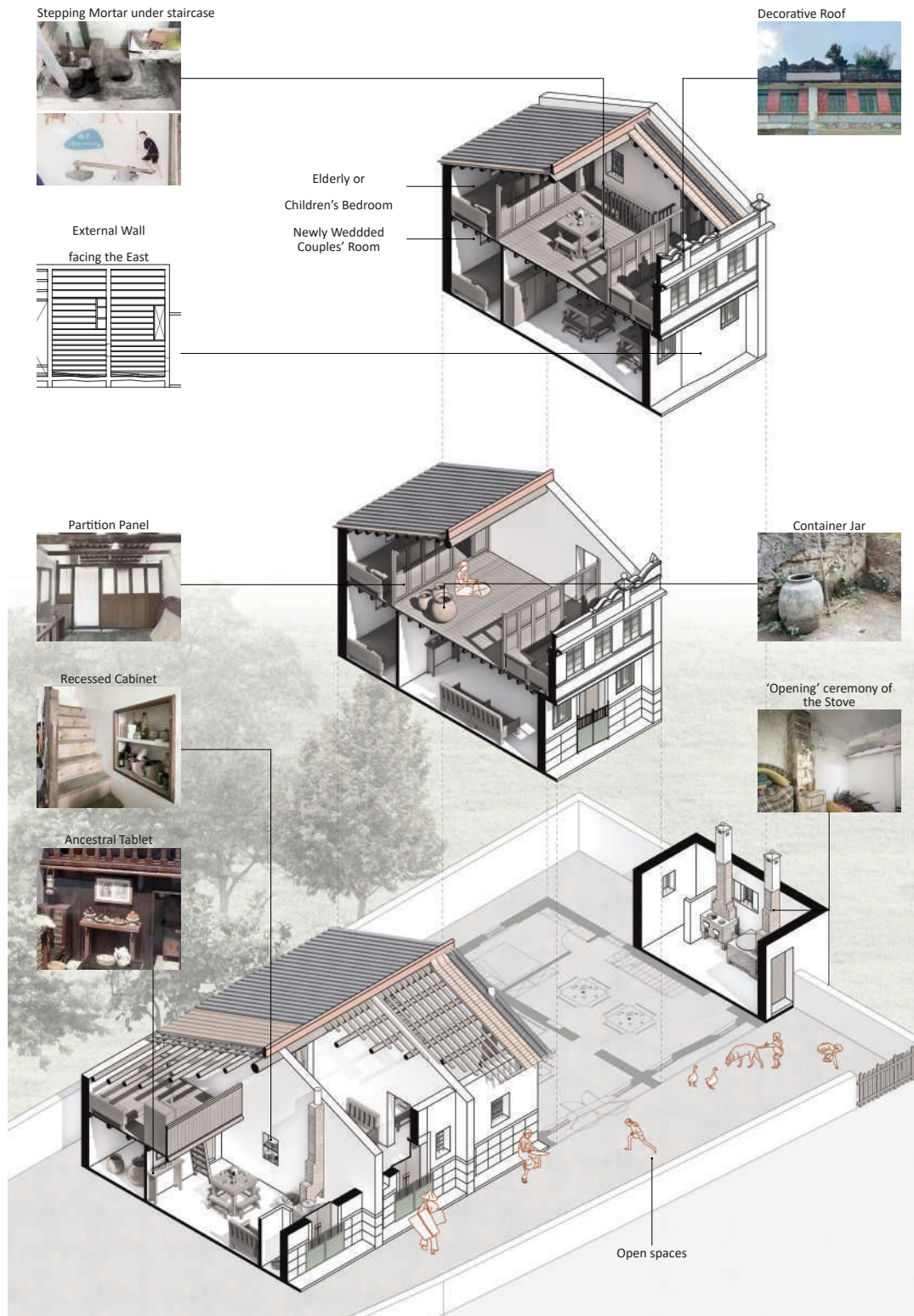
**Civet House**

Metal Window Frame, Security  
Metal Rods and Patterned Glass

Distinct Materials

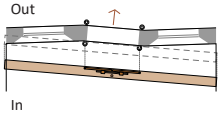
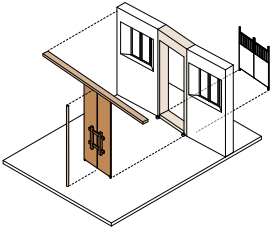
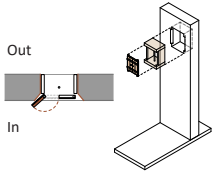
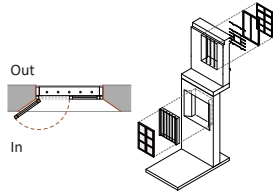
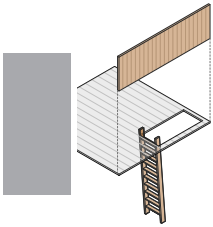
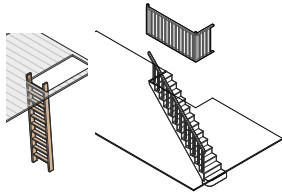
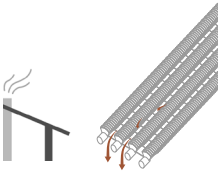
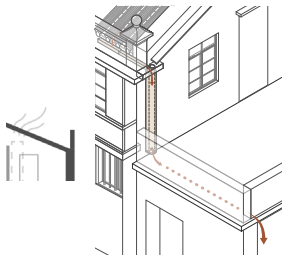


## Former Hakka Lifestyle



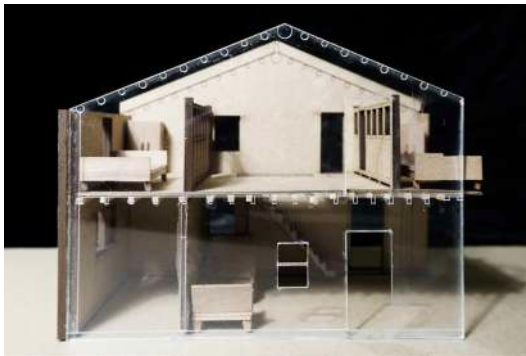
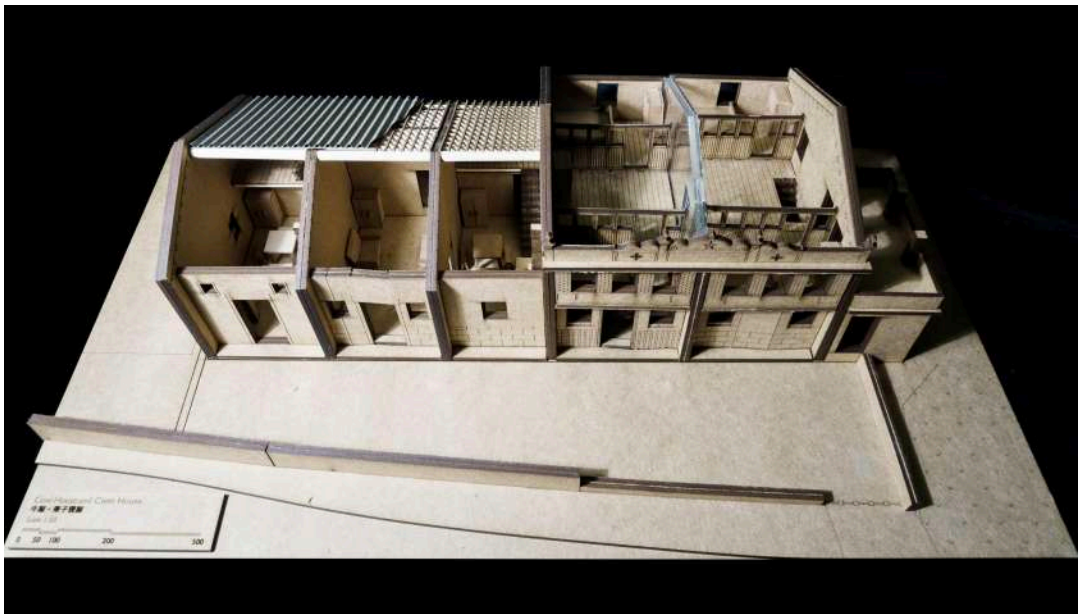


## Detail Design

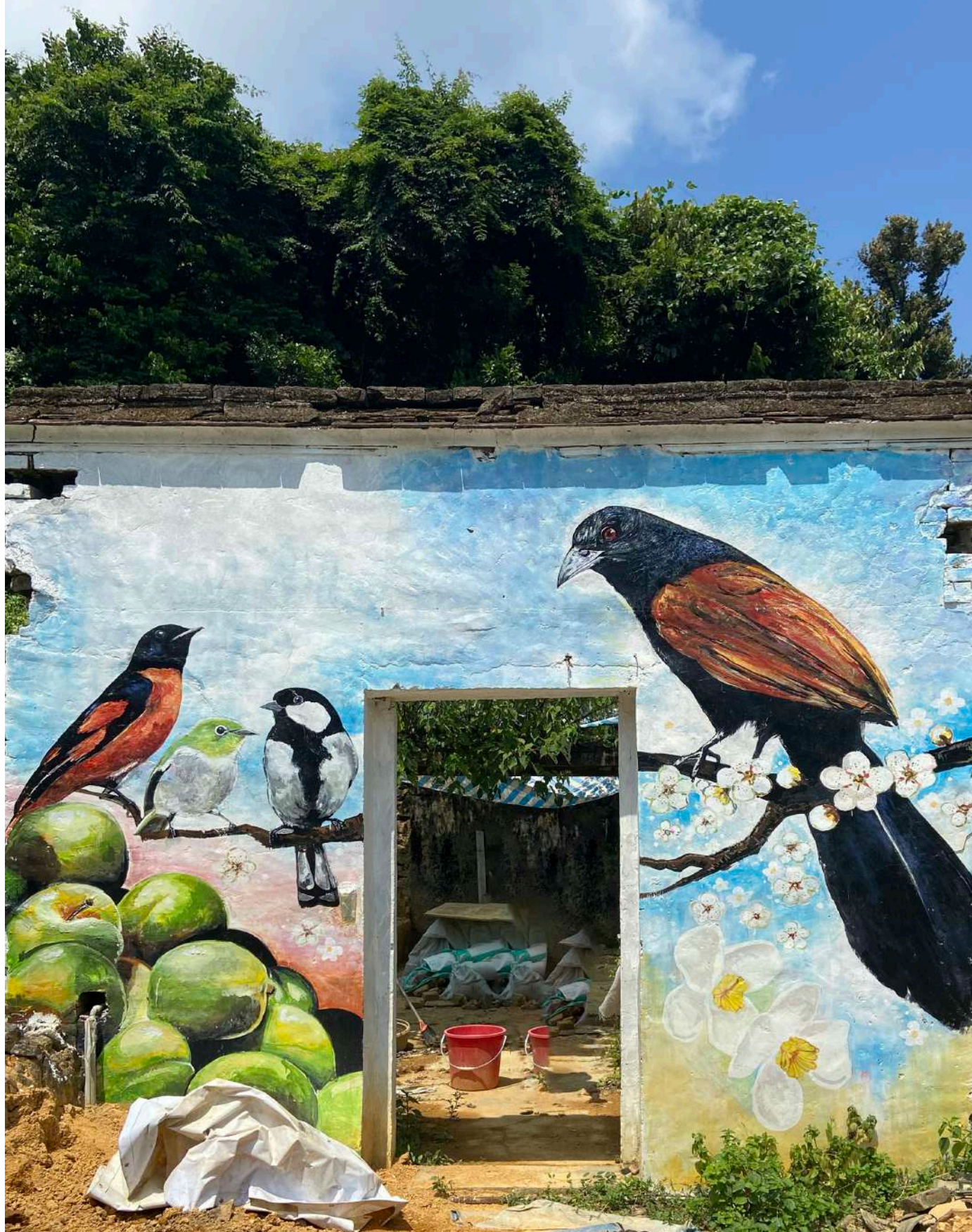
	1 Storey Single Bay Terraced Dwelling	2 Storey Double Bay Dwelling	Description
<b>Main Door</b>			The front door wall is slightly rotated by roughly 5 degrees to follow the feng shui belief that will bring good fortune to the family.
<b>Window</b>			The wall adjacent to the windows are angled in order to allow a wider opening of the window, and therefore more natural daylight and ventilation in the house.
<b>Staircase</b>			The vertical circulation in a 1-Storey 1-Bay Terraced Dwelling is much more compact due to the restrictive setting.  Its balustrade is also more opaque to provide privacy to the bedroom above.
<b>Roof</b>			The roof of 2-Storey 2-Bay Dwelling also include skylight (glass tiles) and a gutter behind the decorative wall at the top of the front elevation to guide rainwater back to the ground.

## Sectional Perspective









## **Mural House Cluster**

DENG QiWen Cherie

SO KaMan Kammy



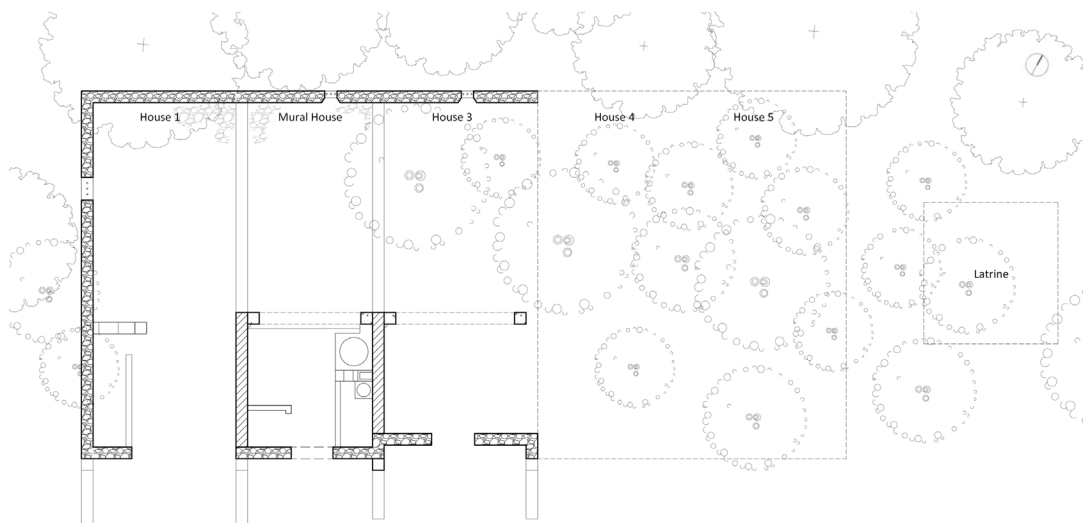


## Existing Condition

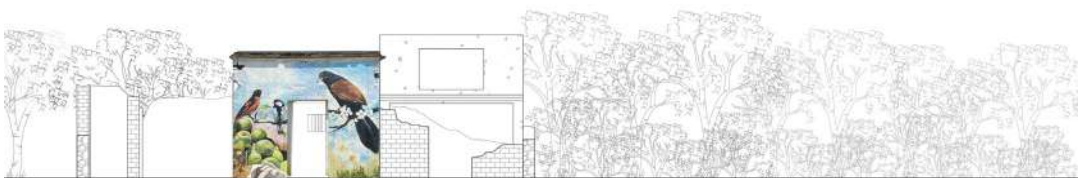
Mural house clusters, where located at the entrance of Mui Tsz Lam, are surrounded by the only two paths that can enter the village. Over the years, the dilapidated houses and several old trees sprung out of the wall are the daily scenery left to the villagers and hikers.

Without the roofs, the interior layout is exposed. Kitchen area is well persevered, traditional stove remains the appearance in 1960s which embody the history and cooking culture of the ancient Hakka village.

Although the slanted roofs are no longer existed, the sloped wall with rounded holes, echoes the form of the original building and demonstrates how the purlin structure is applied in the one-bay dwelling.



Ground Floor Plan



Southeast Elevation

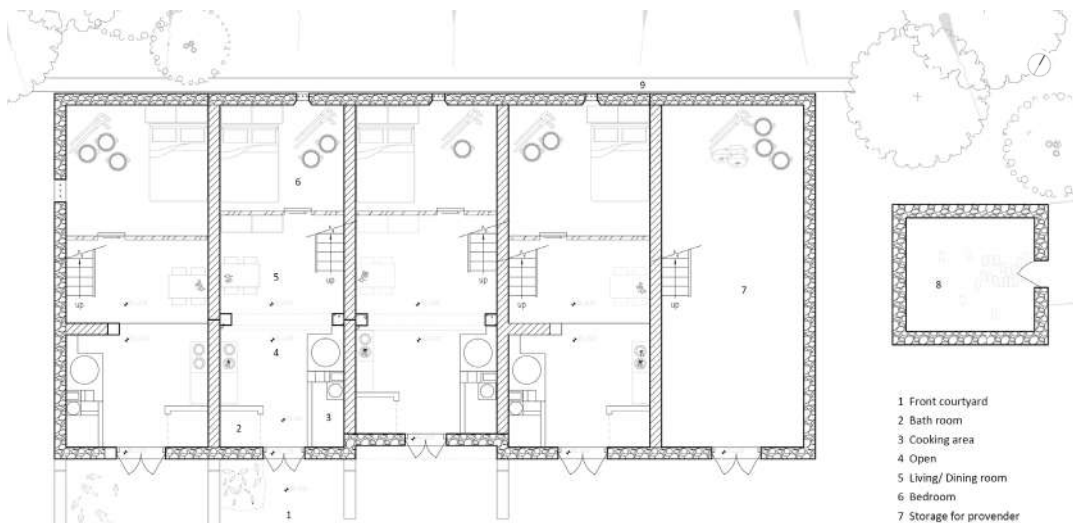


## Restoration

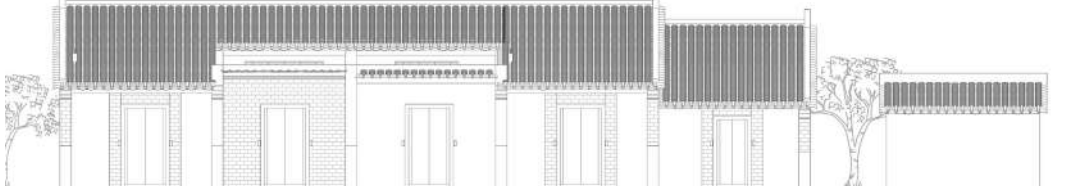
Reviewing the old photographs from the past while observing the physical evidence in the existing site, a restored mural house clusters are drawn.

A one-bay dwelling design is applied in these 5 houses for residential use and the remaining one is a latrine at the end of the clusters. The furniture layout might be difference depends on the family needs, but the front house mainly served as a kitchen and shower area while the half of the main house used as a living room. Back of the main house and 1/F is the bed room and storage for farming tools.

In the front, every house has front courtyard, half which is for livestock keeping with railing around. Sometimes, in summer night, after dinner, villagers prefer to siting in the courtyard, enjoying the shade and chatingwith neighbors.



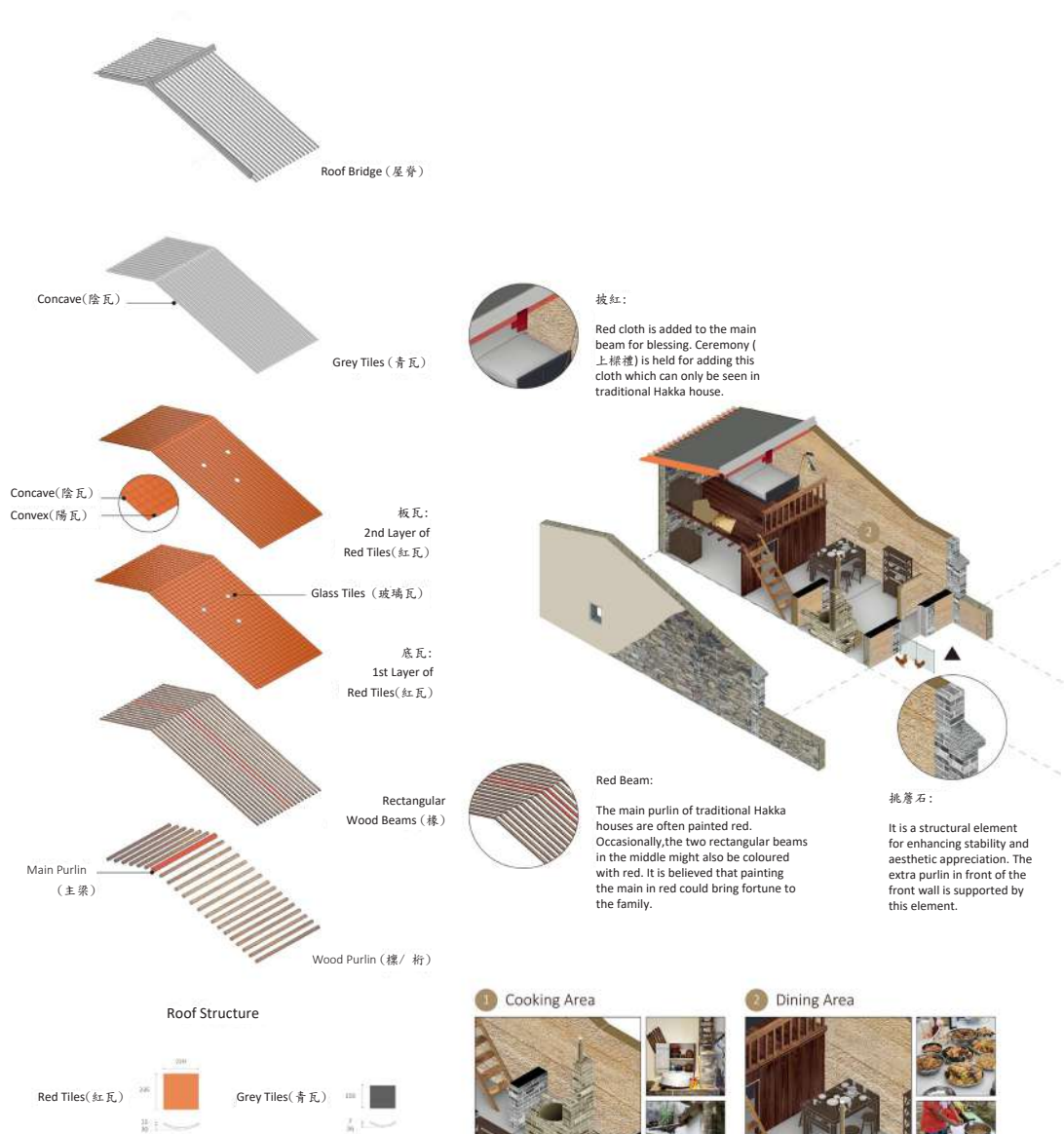
Ground Floor Plan

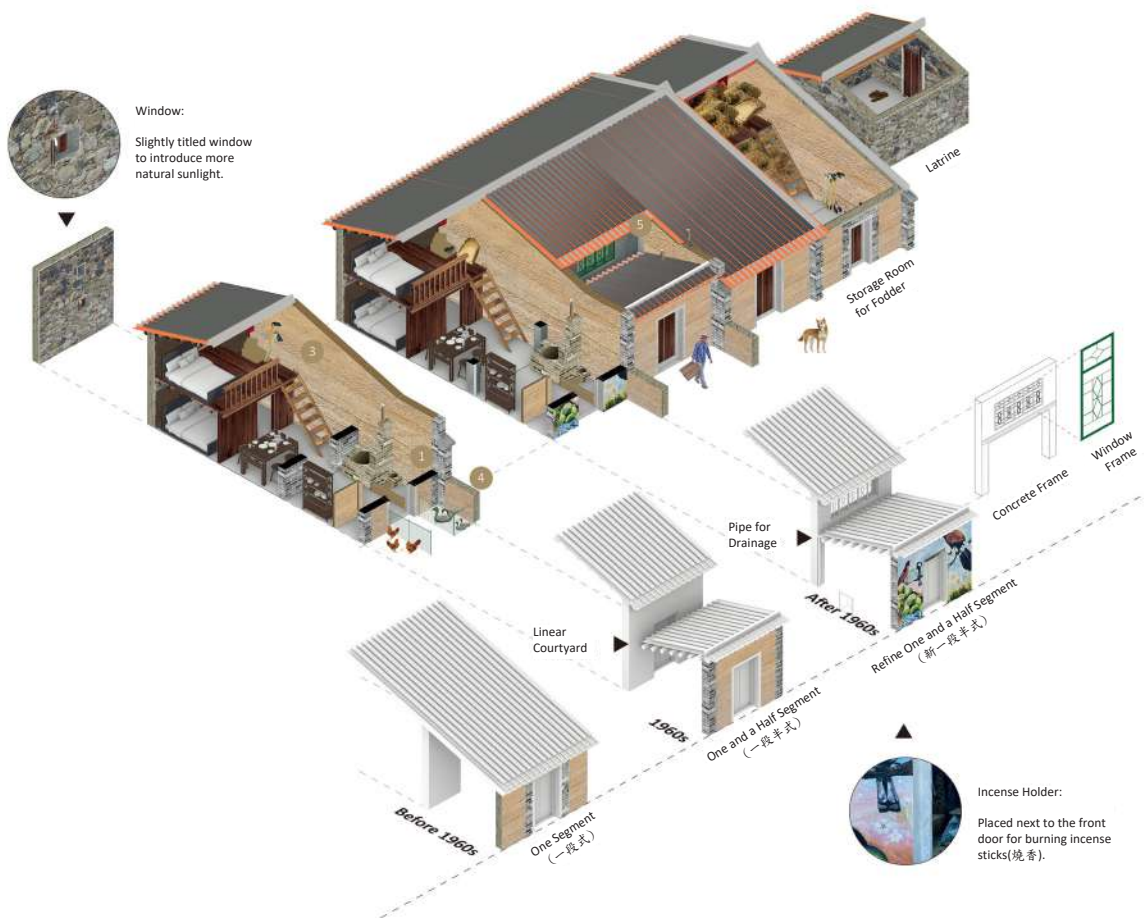


Southeast Elevation



## Evolution of Single-Bay Dwelling





3 Bedroom



4 Front Yard



5 Window



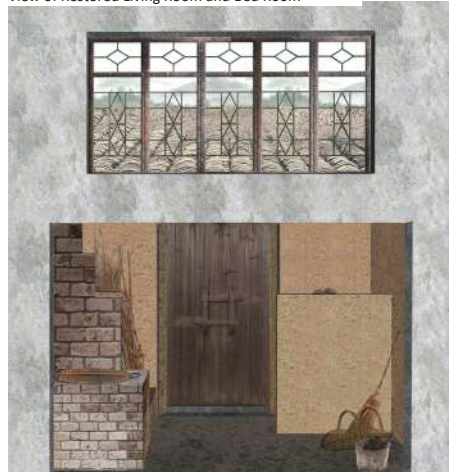




View of Restored Kitchen Area



View of Restored Living Room and Bed Room

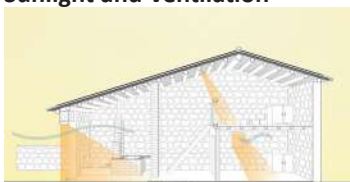


View of Looking out from Concrete Frame

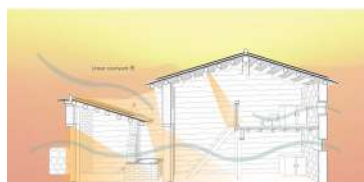


View of Restored Mural House Cluster

## Sunlight and Ventilation



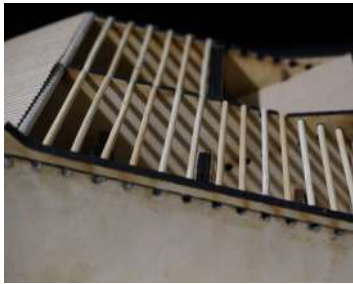
One Segment (一段式)



One and a Half Segment (一段半式)



Refined One and a Half Segment (新一段半式)







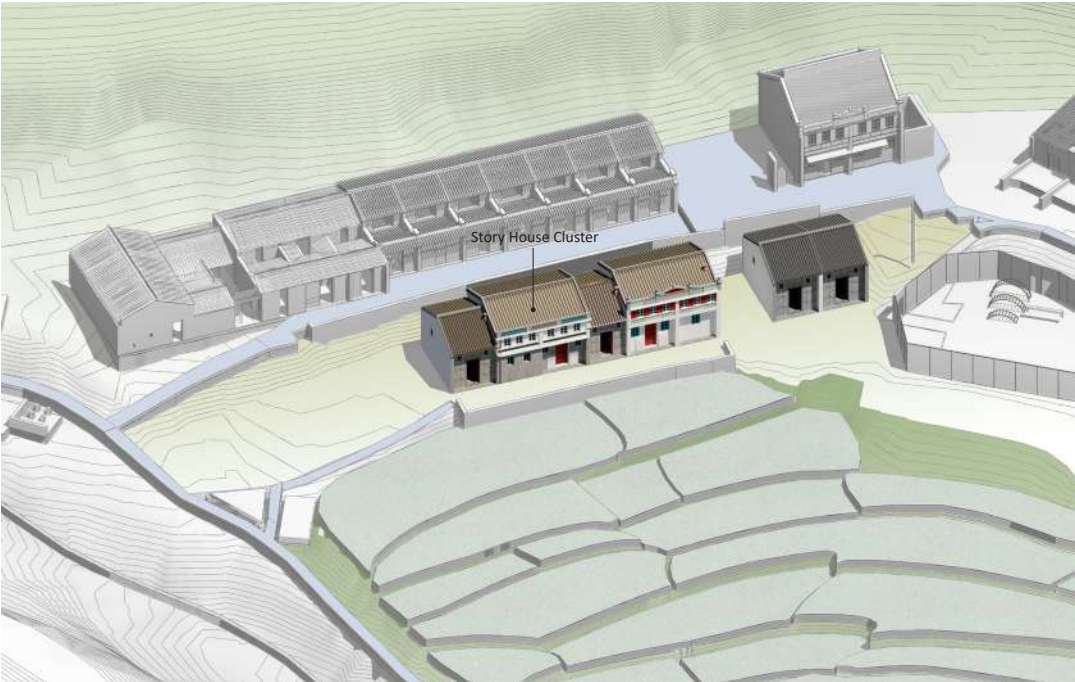
# **Story House and Terraces**

Au-Yang Ho Sum Jack

Li Tsun Hin Tommy



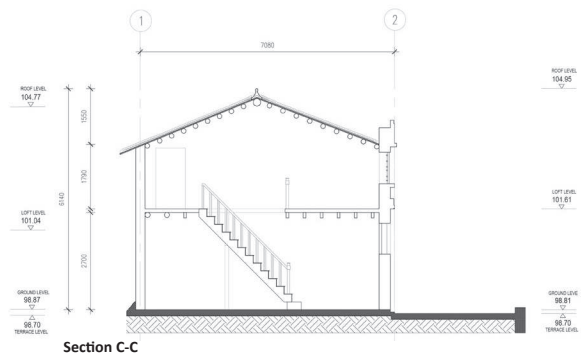
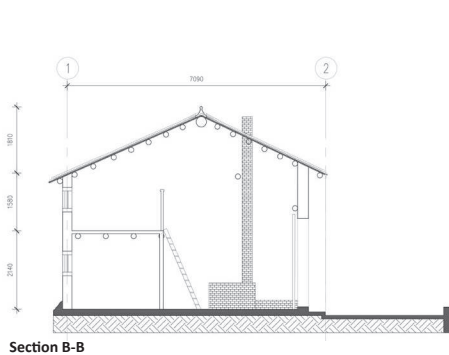
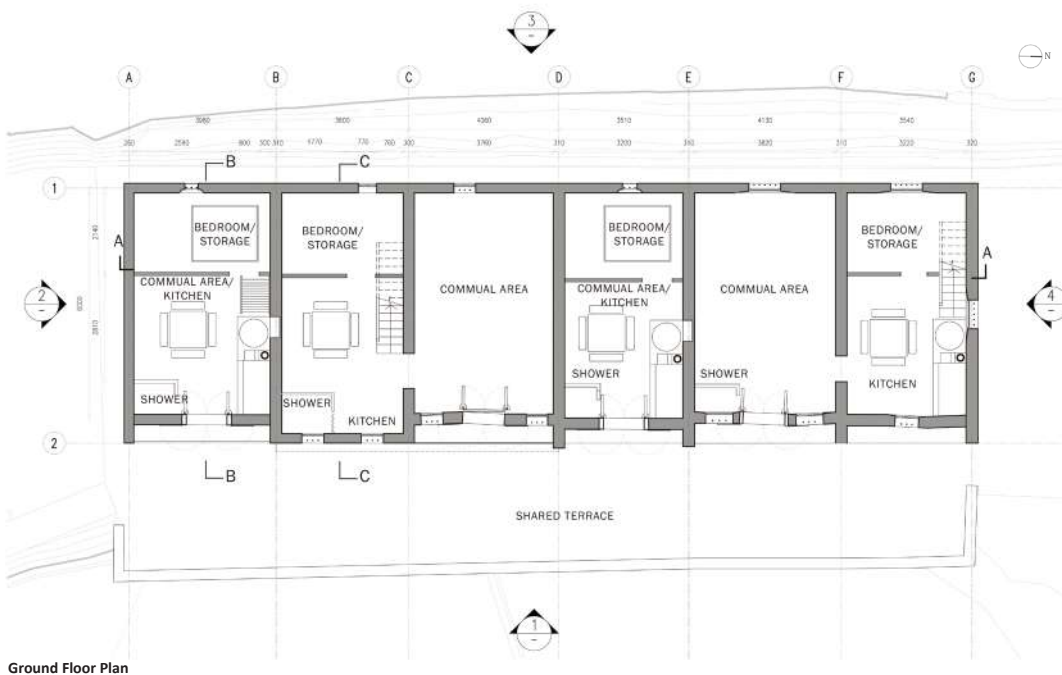
# Restoration



There are four houses in one cluster and there are two types of houses in this cluster. They are one bay house and two bays house. Bay is defined by one unit of lot and the party wall was a physical boundary lines to divide the individual space. The Hakka-style houses are placed in a 1-2-1-2 order.

## Building Typology









## Hybrid Structure

As the social value of Hakka community is lineage unity and collateral settlement, the entire family members were lived in the same cluster. So, the owners of the houses have the same family name, and they have a strong kinship.



The Front Row Houses cluster were all one bay dwelling at the start, in the 1960s. While two of the two bay dwelling expand into two storeys for extra spaces and renovated facade. It is found as a common practice back in the days, whose families built up thriving business would carry addition works to their houses as a symbol of wealth. The additional storey is constructed on the existing adobe earth wall with concrete block above, and the front facade is reinforced with a concrete frame to stabilize the extra structure.



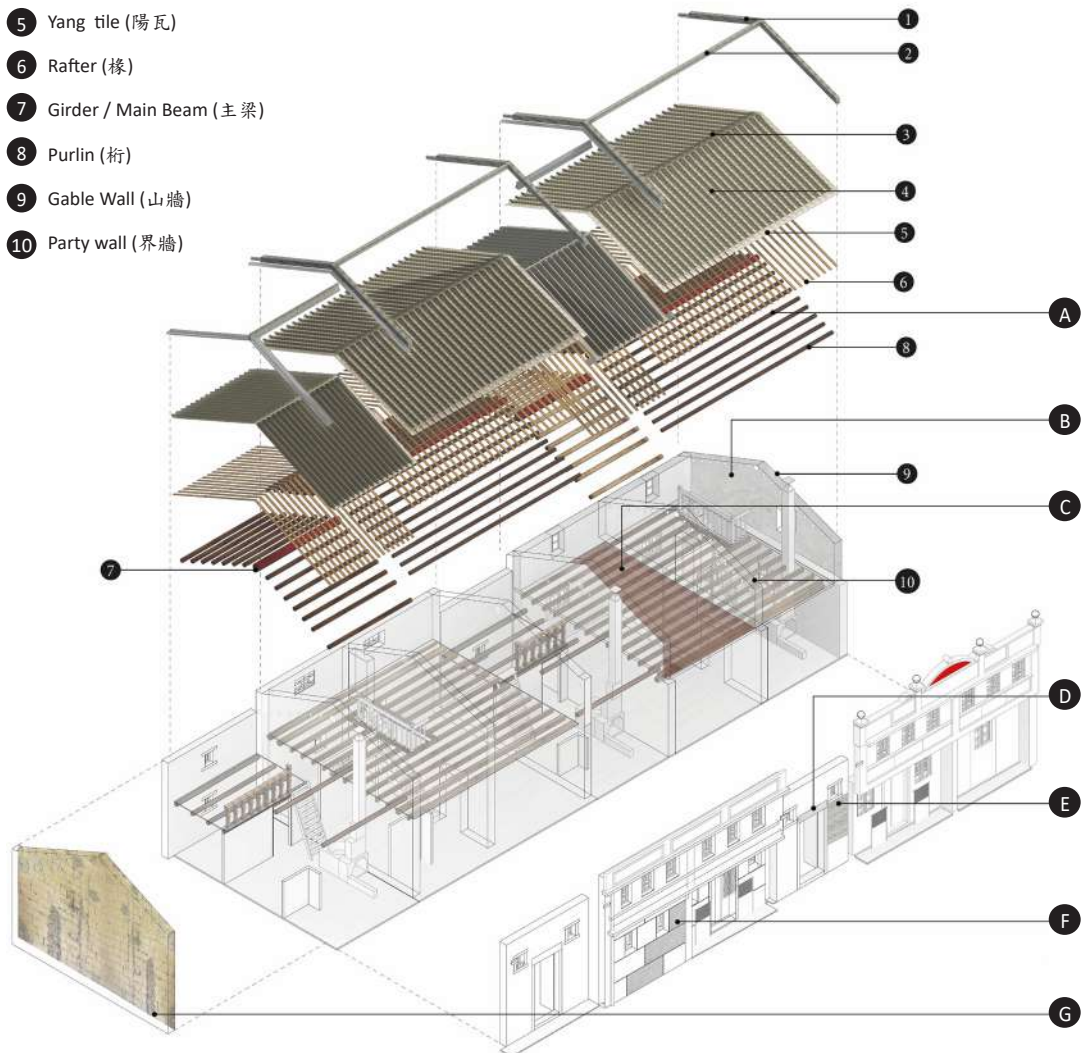
Re-imagining in 1600s



Existing Condition in 2021

## Structure

- ① Diagonal Ridge (垂脊)
- ② Spine (正脊)
- ③ Chinesestyle tile (蝴蝶瓦)
- ④ Yin tile (陰瓦)
- ⑤ Yang tile (陽瓦)
- ⑥ Rafter (椽)
- ⑦ Girder / Main Beam (主梁)
- ⑧ Purlin (桁)
- ⑨ Gable Wall (山牆)
- ⑩ Party wall (界牆)



## Materials



A. Timber Purlin



B. Concrete Rendering



C. Timber Tiles Flooring



D. Stone Lintel



E. Load Bearing Brick Wall



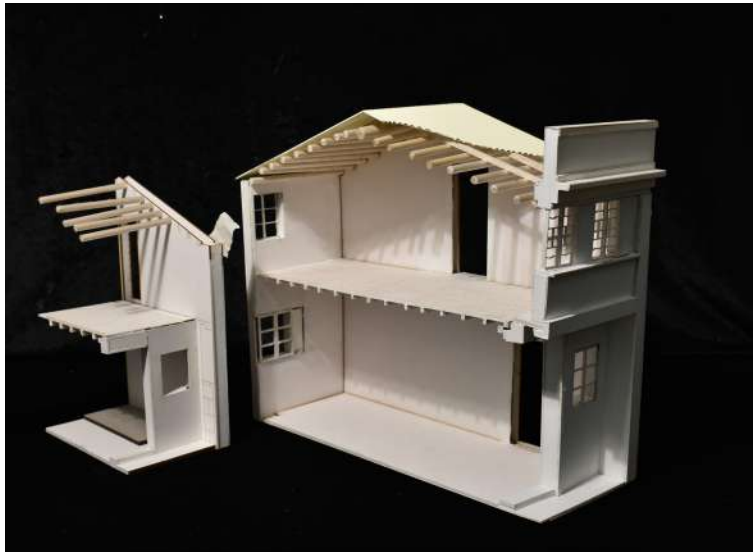
F. Terrazzo Tiles as Finishes



G. Load-Bearing Brick Wall











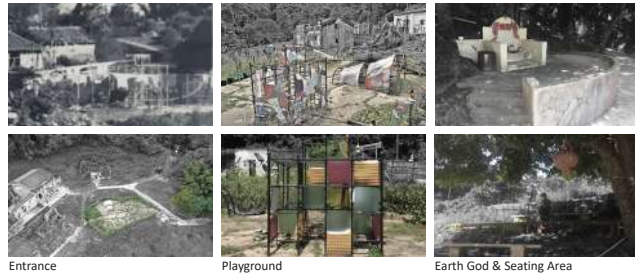
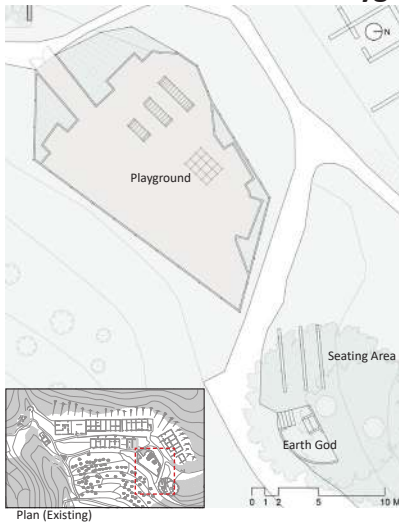
## **Auxiliary Facilities**

CHEONG Kam Seng Tommy

TSE Ka Hei Hayden



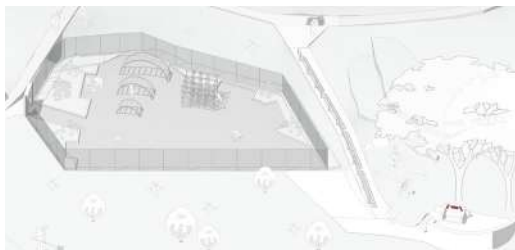
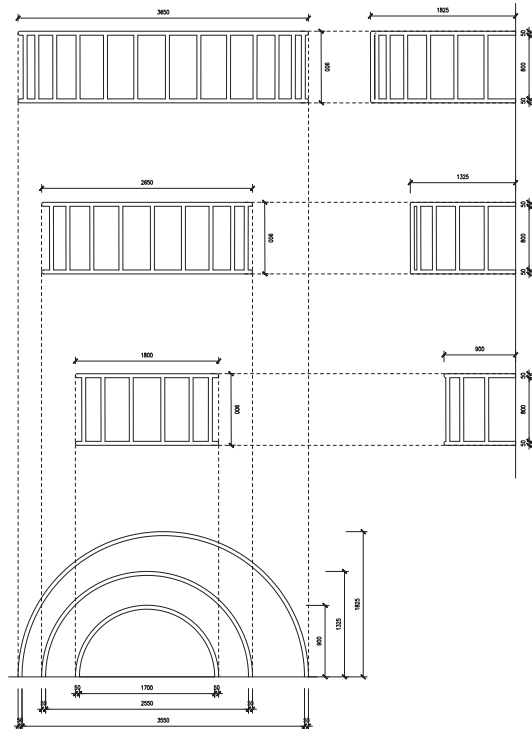
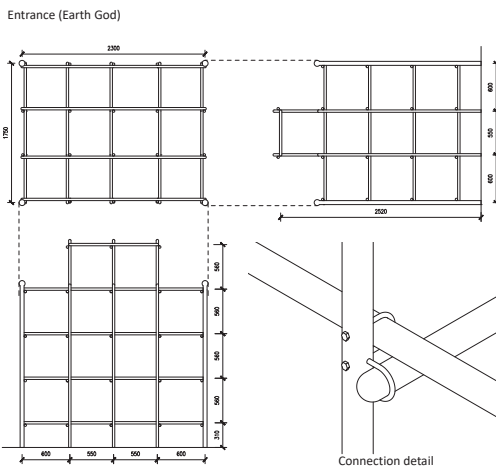
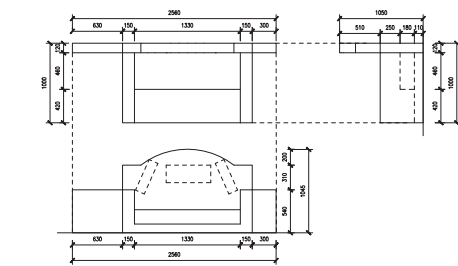
## Cluster 1: Entrance and Playground



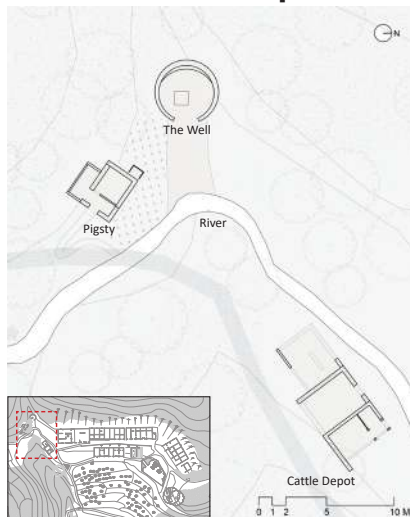
The playground is an open space near the entrance, which can act as the main gathering space in the village.

There are 2 climbing frames constructed in 1960s by the government for the children to play, they are also used to hang clothes by the villagers.

The Earth God is worshiped every traditional Chinese festival with fruits, chicken and roasted pork served on the platform.



## Cluster 2: Cattle Depot, The Well, Pigsty



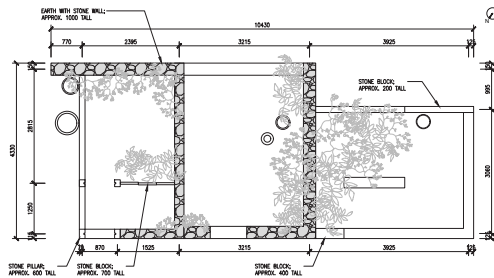
Plan (Existing)



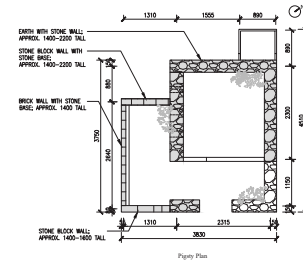
The cattle depot is divided into 3 bays, nowadays most of the structure are broken and left with only some stone walls.

The well is now abandoned, there is a sign with the words "KAAA" on it, meaning the Kadorie Agricultural Aid Association has helped to build the well.

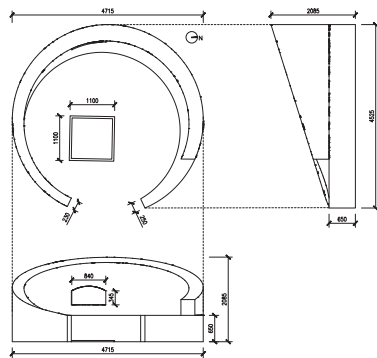
The pigsty is located at a higher level next to pedestrian road, the roof is completely destroyed and the wall is still well preserved.



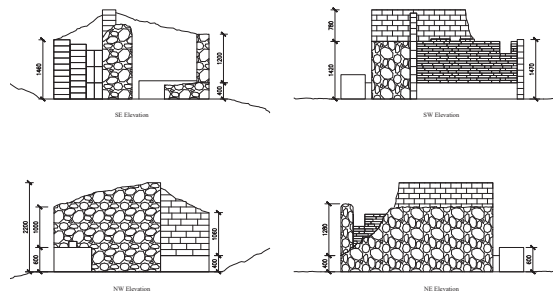
Cattle Depot (Existing)



Fifty-Five



### The Well (Existing)

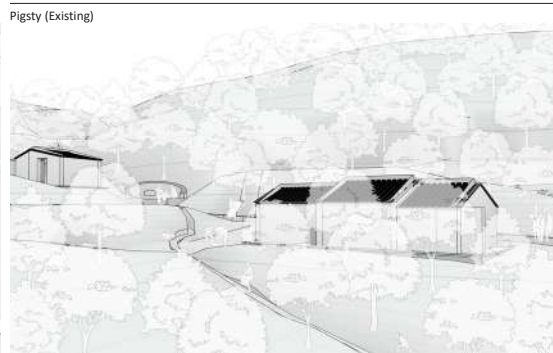


NW Elevation

NE Elevation



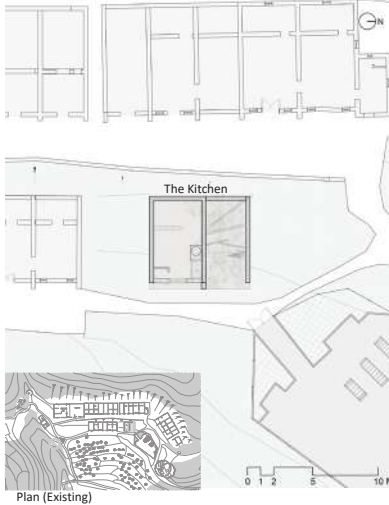
Aerial view (Restored)



Perspective view (Restored)



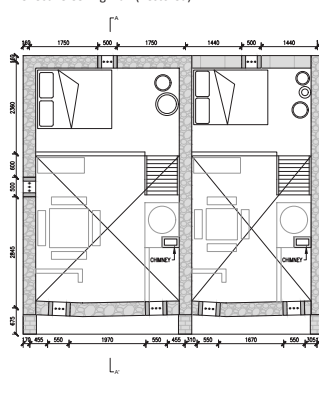
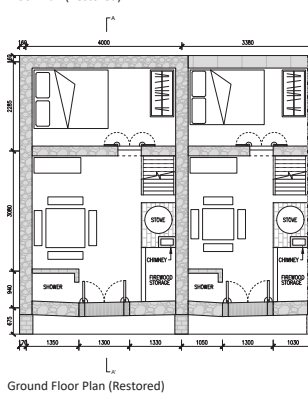
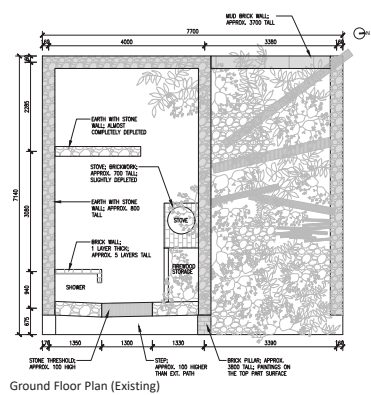
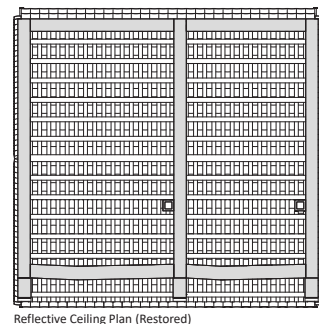
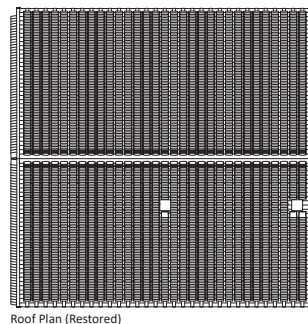
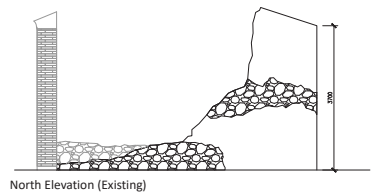
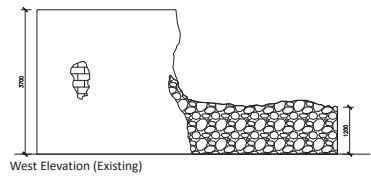
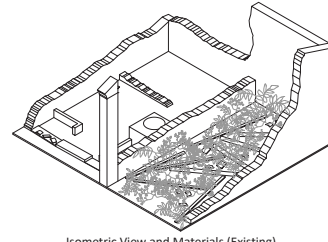
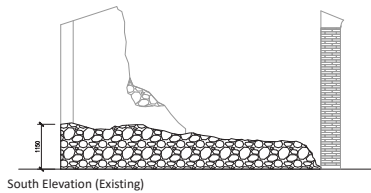
## Cluster 3: The Kitchen

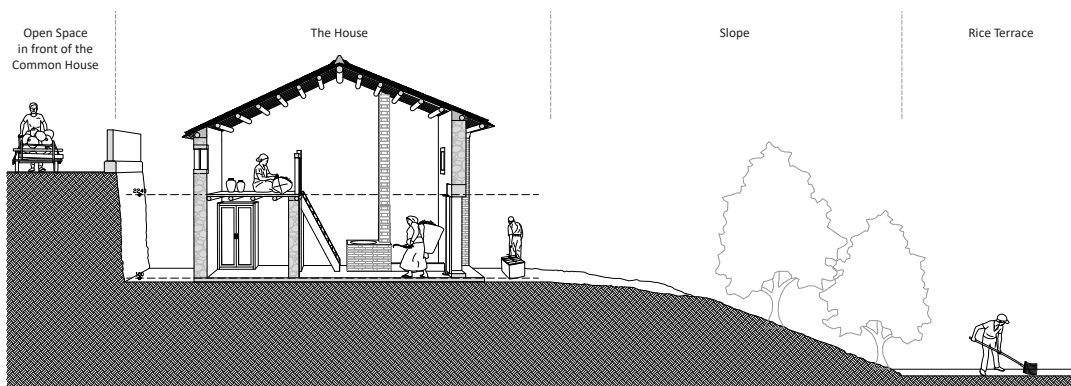


The kitchen is located very close to the entrance and the playground, originally they were the two traditional Hakka houses next to the "front row".

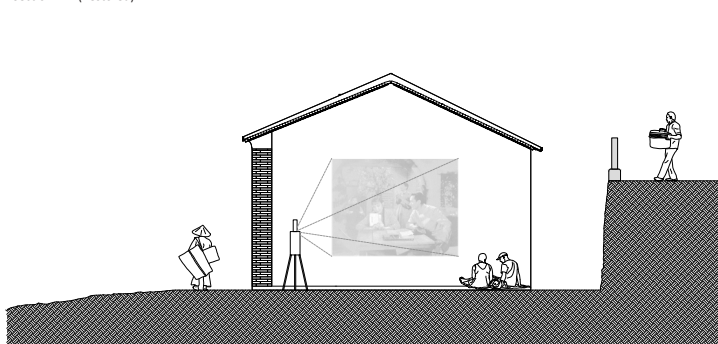
Nowadays most of the building structure are broken and only left with some stone wall and brick pillar.

We try to restore the original outlook of it, 2 houses with mezzanine floors and the distinguishing brick pillars at the front.





Section A-A (Restored)



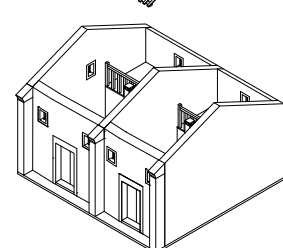
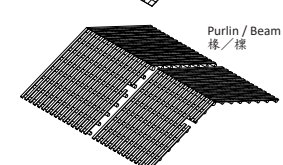
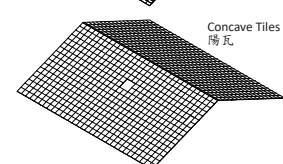
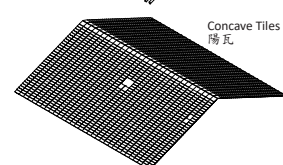
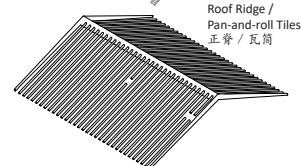
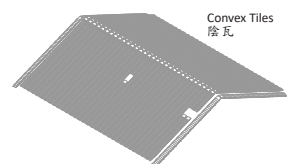
North Elevation (Restored)



East Elevation (Restored)



Aerial View (Restored)



Kitchen Structure Exploded Isometric (Restored)









## Chapter 3

### Rammed Earth Study





# **Earth Study**

A Summary of Experiments on Earth from Mui Tsz Lam





## Earth Study

Earth has always been an important construction materials in Mui Tsz Lam as well as many parts in China. They can be part of rammed earth wall, wall filling, earth blocks, mortar, etc. In this section, we demonstrate the properties of earth in general and that in Mui Tsz Lam through a series of tests. With modern technology, we are able to build a modern rammed earth wall with the proper earth-aggregate mixing formula.



2 November -  
Carazas Test

2 November -  
Grain Size Test – Wet Sieving

8-10 November -  
Grain Size Test – Dry Sieving

8-19 November -  
Compressive test

15 November -  
Rammed Wall Trial

April – May -  
On-site construction  
in Mural House

2021

2022

## Carazas Test - 2 November 2021



Earth as a construction material would have different physical properties if different water contents and forces are applied. This test made use of the earth found in CUHK campus. Earth samples with water contents namely 1) dry 2) humid 3) plastic 4) viscous were prepared.

They were then put inside 50x50x50mm moulds, with different forces applied, 1) fill-in (no force) 2) finger press 3) hand ram. It is found that the rigidity of the earth sample increases with the water content and force applied. However, after a certain point excessive water would make the earth more ductile and deformed.

1. Mix water with earth samples by hand



2. Make formwork of the earth samples



3. Apply forces to the earth samples

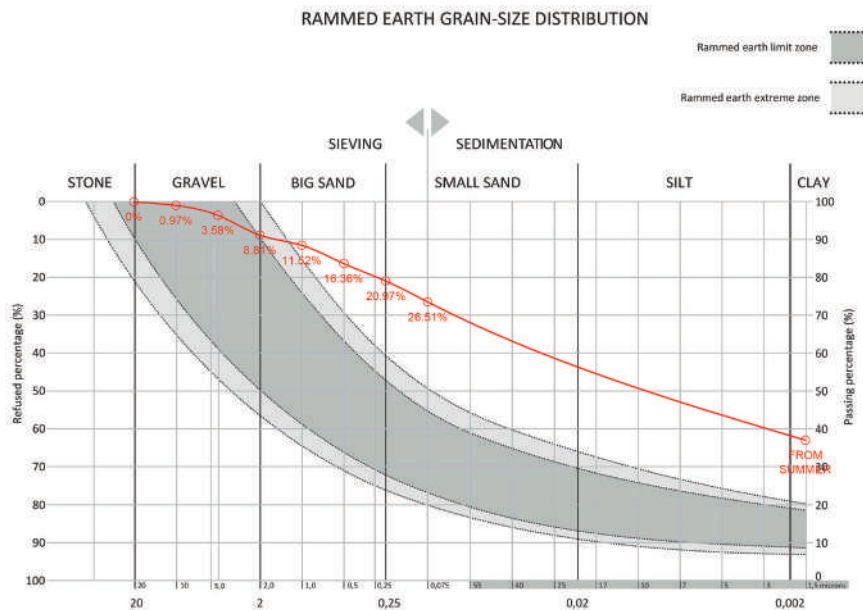


4. Pour the earth samples out for analysis





## Wet Sieving of Mural House Earth - 2 November 2021



The earth samples for this test was taken from the collapsed wall of the Mural House. The test is to determine the grain size distribution. Wet sieving is adopted in order to dissolve the clay sticking on the larger grains.

1kg of Mural House earth sample was submerged with water. The wet earth was poured into the sieves with standard hole sizes. After the sieving with help of brushes, the grains at each level were allowed to dry. They were weighed and recorded.

The percentage by weight of grains of different sizes were calculated and plotted on the graph showing the optimum grain content for rammed earth.

Earth in Mui Tsz Lam has excessive clay content and larger grains should be added to achieve optimum properties.

1. Add water to the earth samples



2. Pour wet earth samples into the sieve



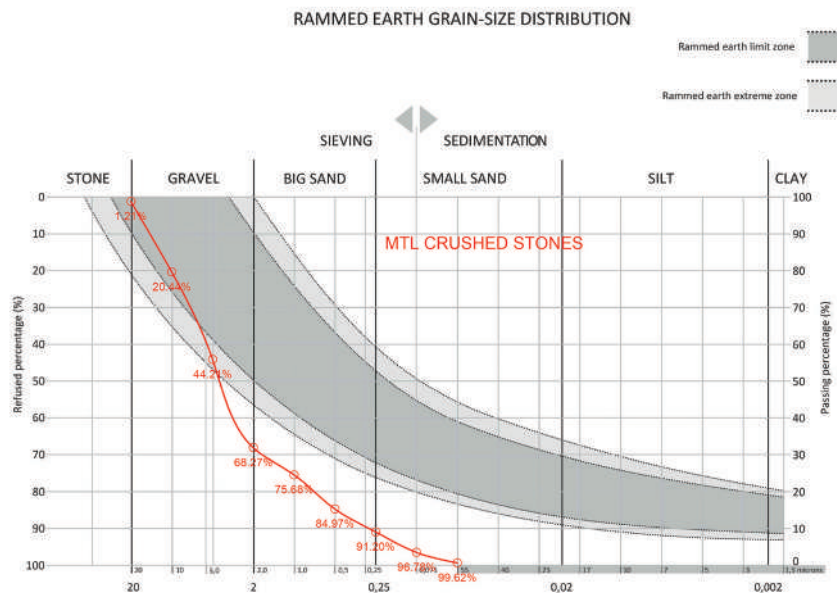
3. Assist sieving with brush



4. Dry earth samples under the sun



## Dry Sieving of MTL Crushed Stones - 8 November 2021



With the help with machine, stones collected on site from Mui Tsz Lam wer crushed into smaller aggregates with diameters of 20mm or less. They are supposed to be added into the earth to balance the abundant smaller grains so that the mixture falls into an optimum proportion of grain size that is suitable for modern rammed earth.

1kg of the crushed stone samples was sieved and weights of each size levels were recorded and plotted on the graph. Since the crushed stones does not contain clay contain, water is not required to dissolve and separate the grains.

As expected, the crushed stones show significant higher content of larger grains and are ideal to balance the MTL earth contents.

1. Crush stones by machine in Mui Tsz Lam



2. Sieve the crushed stone with different sieve sizes



3. Use brush for better sieving



4. Shake the sieve for easier sieving





## Compressive Test - 8 to 19 November 2021



By estimation, the Mui Tsz Lam earth and crushed stones are prepared in mixture of 2 different ratios, A) 1:1; B) 1:2. Each mixture weigh approx. 7 kg.

After they were set for one day, they were poured into a metal cone-shape mould of diameter 150 mm, height 300mm, at a increment of 200mm high each time. Each poured mixture were hammered into half of its original height with a electric hammer, i.e. 200mmH to 100mmH.

Two cone-shape rammed earth samples were prepared and set on to allow abundant water content to evaporate for 4 days. They were then taken to Civil and Environmental Engineering Lab in the University of Science and Technology for compression test.

Sample A yields compressive strength of 1.097 mPa, while sample B yields 1.193 mPa

1. Mixing earth samples with water



2. Pour wet earth samples into the metal cone-shaped mould



3. Compress the earth samples with electric hammer



4. Pressure Test at HKUST



## Rammed Earth Trial - 15 November 2021



The site chosen was the west wall of the Mural House. The stone base of the previous wall was remained and rearranged to allow construction on it.

Metal formwork was prepared to fit the 300mm thick original wall. The mixture of earth and crushed stones were prepared following the 1:2 ratio with a concrete mixing machine. The mixture was then poured into the formwork at a 200mm increment. Then each increment were rammed into half the original height.

1. Place formwork on stone base



2. Pour earth samples into the metal formwork



3. Align and stabilize the formwork



4. Compress the earth samples by electric hammer

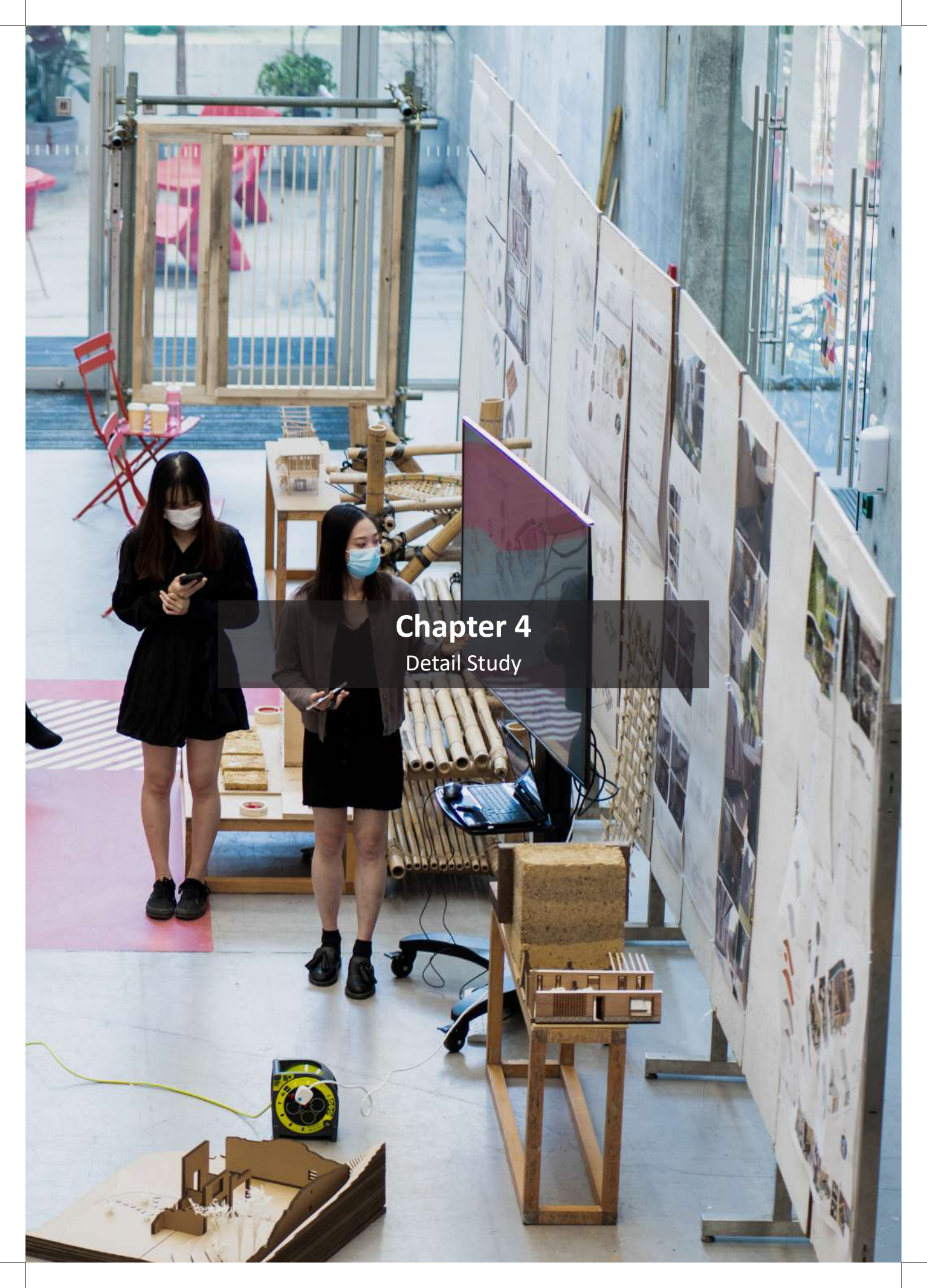






Mid Term Review in December 2021





## Chapter 4

### Detail Study



## Old House Cluster

Group 1: FUNG Hiu Tung Martin

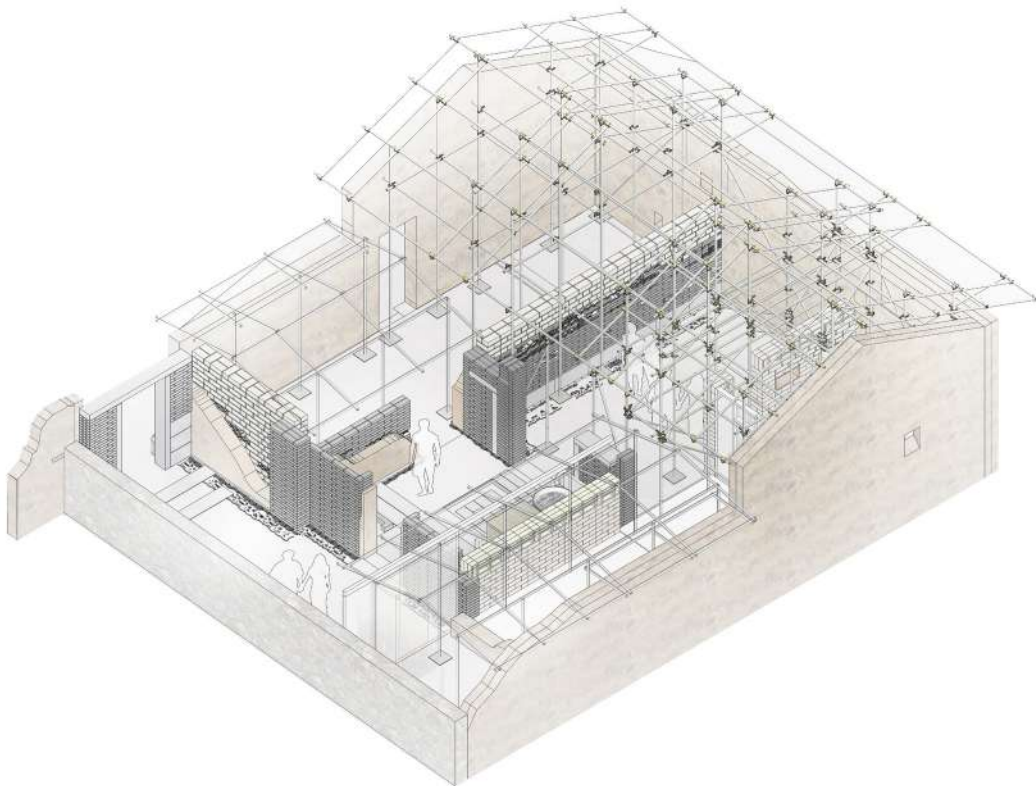
LIU Yanxi Lucia

Group 2: CHOW Yan Cho Enzo

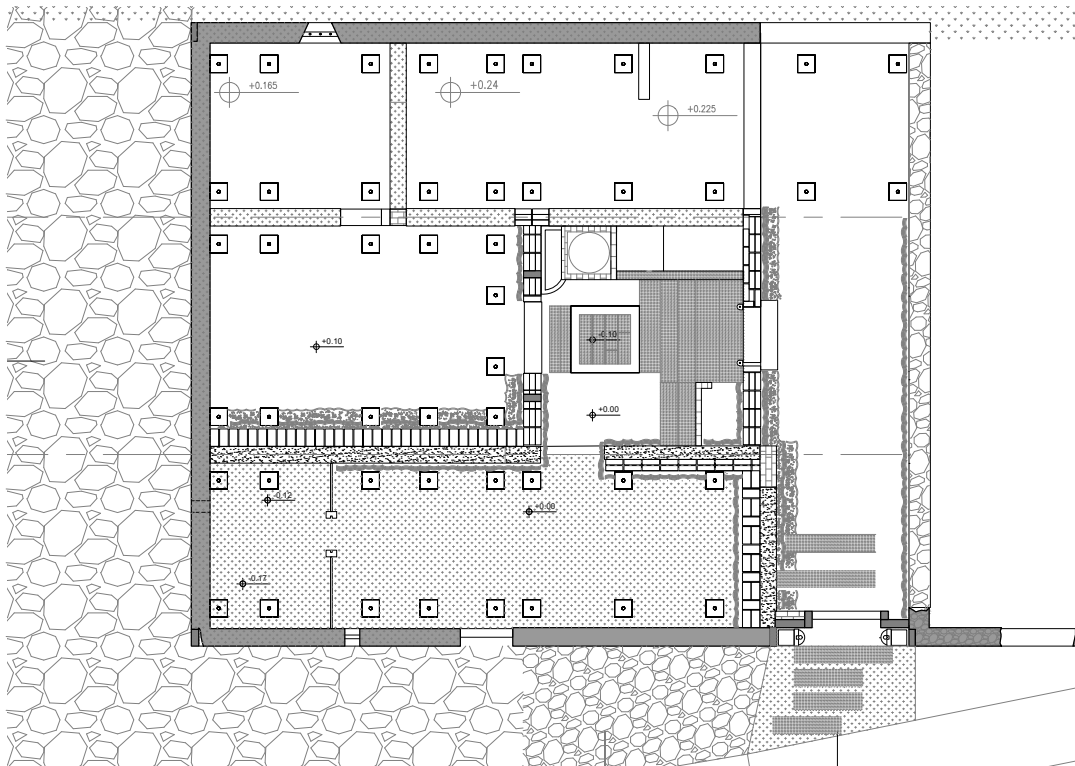
CHEUNG Nga Kei Cherry

Group 3: AU-YANG Ho Sum Jack

LI Tsun Hin Tommy



## Old House Cluster



## Project Introduction

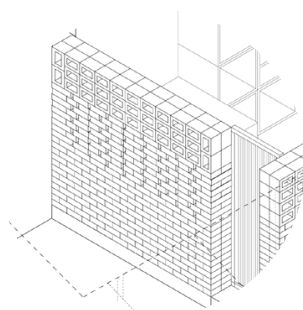
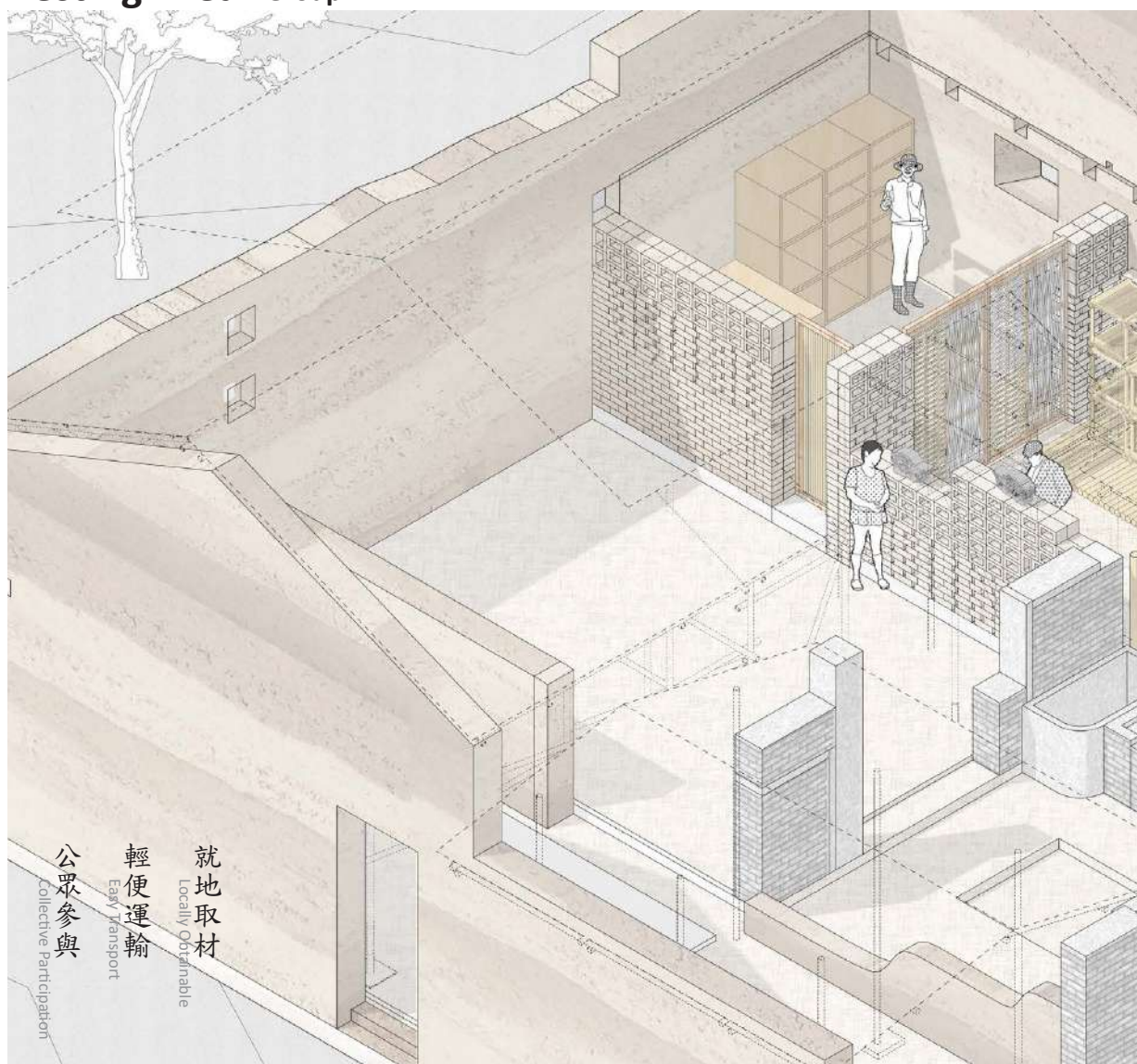
The Old House is the earliest developed site in the village. Currently, the house is only remained with the exterior wall made with rammed earth and some internal walls partially of bricks and rammed earth.

The Old House represents the history and memory of the village. It shall be provided a shelter that celebrates its historic form and can invite visitors to walk through an exhibition of it. Most of the spaces shall be remained open with the eastern bay as a place for seminar, the mid-bay as the display area and the western bay as a sitting area. The innermost chamber shall be a back-of-house - a storage space convertible to be a resting place for the staff.

Our three proposals attempts to renovate the Old House with modern technical knowledge. With help of the Hong Kong Institute of Construction, a roof re-establishing the hierarchy of “Downhill Tiger” form made use of steel formwork is proposed. The display area is a celebration of traditional construction materials of Mui Tsz Lam. The wall space are restored with bricks, tiles and earth found in the village. Furthermore, we experimented compressed earth bricks and bamboo weaving doors in designing the walls and fenestration of the back of house and the sitting area.

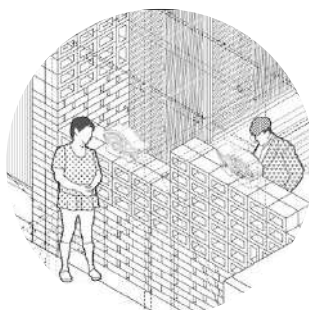


## Resting Area - Group 1



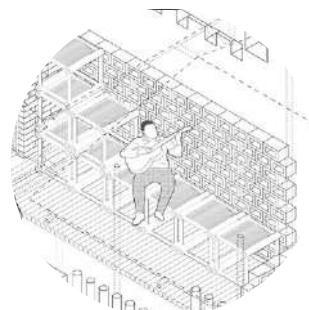
### COMPRESSED EARTH BRICK WALL

The existing ruined rammed earth wall is no longer suitable for adding materials on it, so the earth from the original wall is recycled to build a new hollow brick wall, saving the needed earth to a great extent.



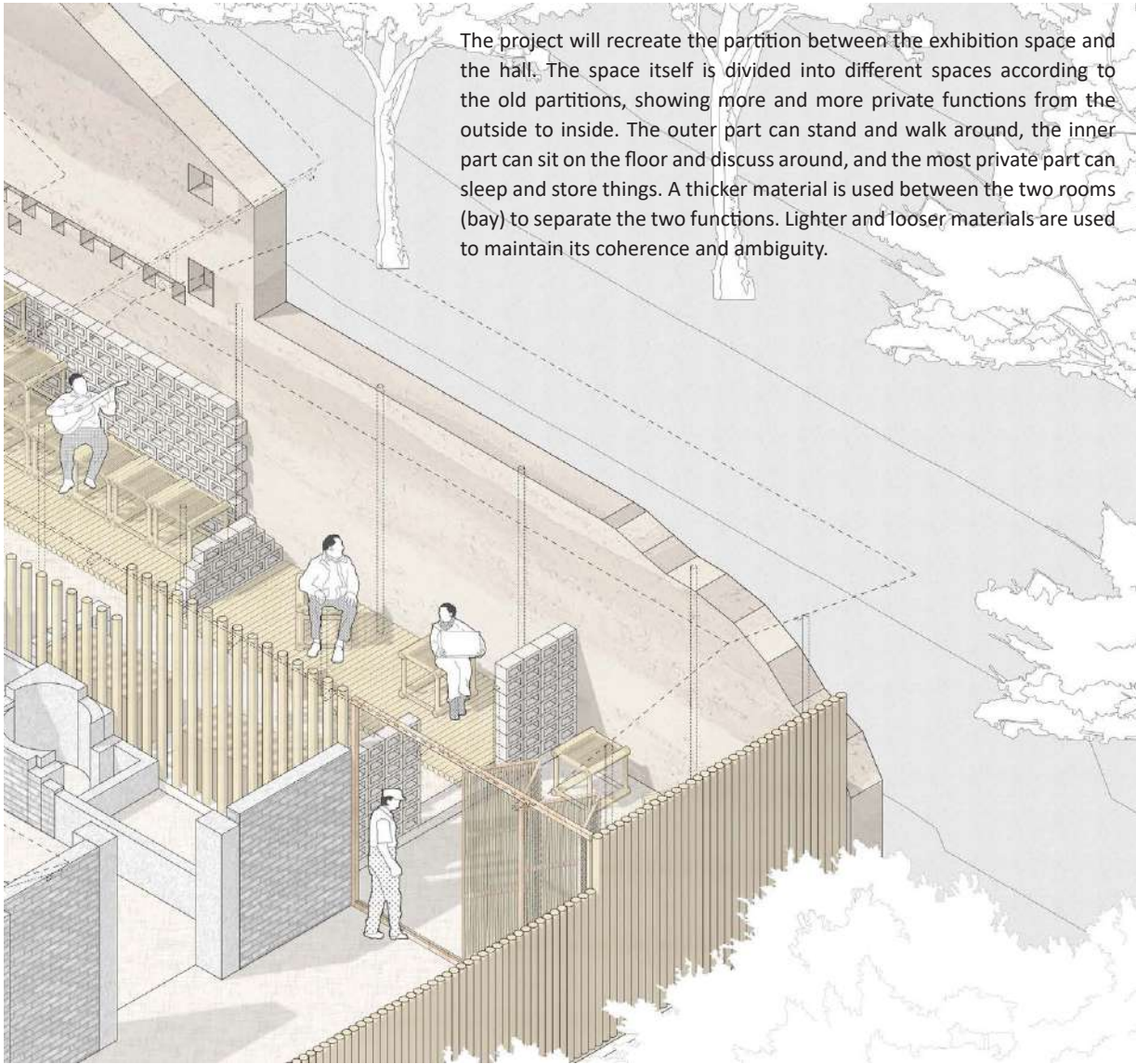
### EXHIBITION WALL

The old fragments of the old house can be exhibited on the wall. The hollow brick wall is not only used as a partition between two spaces, it can also be a space for display, and an exhibit in itself.

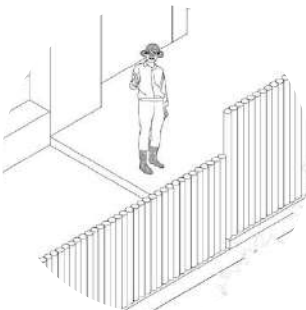


### FEATURE WALL

The feature wall can not only be an attraction for tourists to take pictures, but also protect the surface of the rammed earth wall; the wall built with hollow bricks can be changed and built into different shapes at any time.

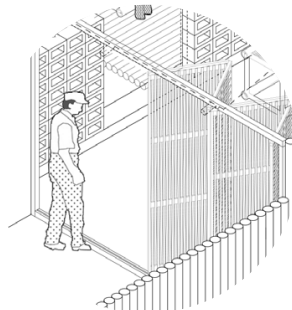


The project will recreate the partition between the exhibition space and the hall. The space itself is divided into different spaces according to the old partitions, showing more and more private functions from the outside to inside. The outer part can stand and walk around, the inner part can sit on the floor and discuss around, and the most private part can sleep and store things. A thicker material is used between the two rooms (bay) to separate the two functions. Lighter and looser materials are used to maintain its coherence and ambiguity.



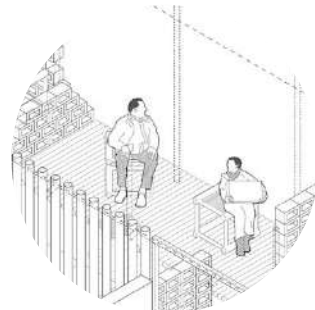
#### BAMBOO SCREEN

In order to recreate the feeling of the former corridor, a screen with a different height from the former wall will be inserted, and is a temporary structure that can be easily installed and dismantled.



#### FOLDABLE DOOR

Foldable doors allow the space to be transformed between closed and open, as one cannot enter when the door is closed, but the translucent bamboo weave maintains the visibility through.



#### MOVABLE FURNITURE

The furniture of bamboo is the traditional craft of Hakka people. The scale of the stools provides flexibility, not only to move, but also to put together into vertical storage spaces.



## Experimental Process

### Compressed Earth Block



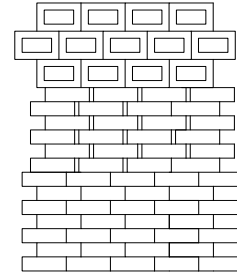
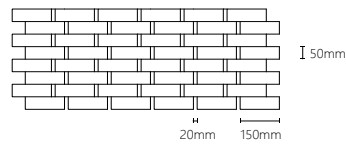
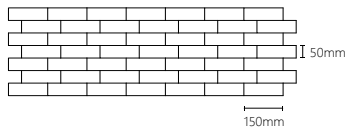
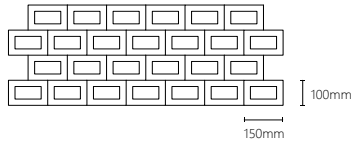
loose



compact



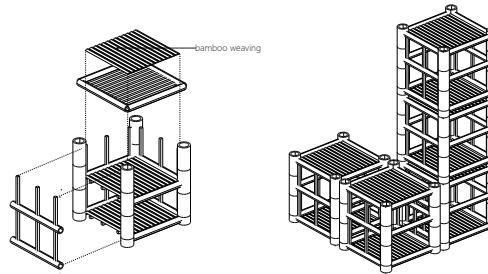
porous



#### Compressed Earth Block

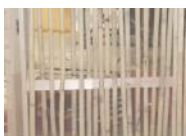
Different arrangements and combinations of hollow bricks can form different brick wall patterns. Due to the nature of rammed earth itself, the location of the load-bearing underneath needs to be vertically stressed.

### Bamboo Furniture

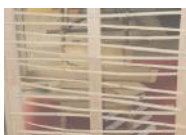


The movable furniture can be used as storage space when combined.

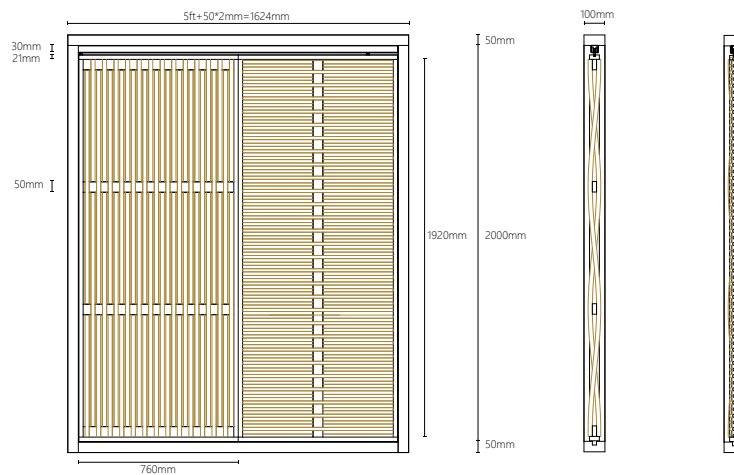
### Foldable Bamboo Door

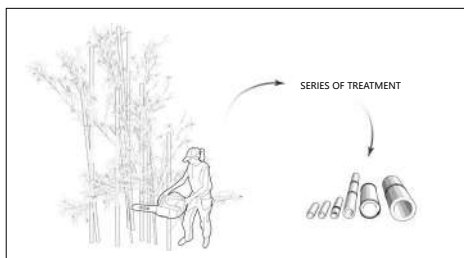


vertical weave



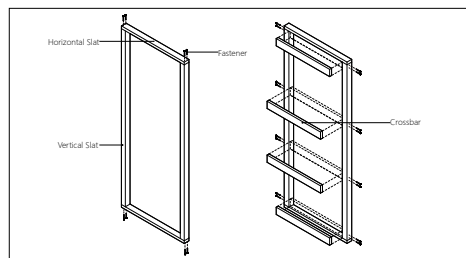
horizontal weave





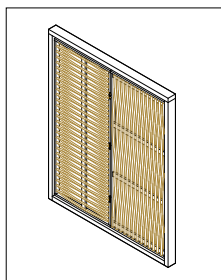
#### MATERIALS PREPARATION

For two panels of folding door, 8 nos. of 2.5-inch x 8 ft. timber, 50 no. of 'kwo-yuen' bamboo (~15mm dia.). A folding door track device is also needed. For future practice in MTL, the bamboo cut on the site can only be used after several months of treatment.



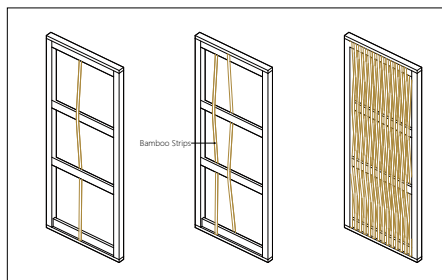
#### TIMBER FRAME PRODUCTION

The outer frame with the track device on top and a trough at bottom was constructed, to fit the door panels with 2000mmh x 755mm each. The door panels were fit with inner supporting structures.



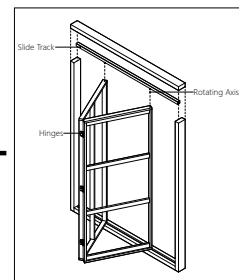
#### FINISH

The door panels were installed with hinge and fit into the tracks of the outer frame.



#### BAMBOO WEAVING

The 'kwo-yuen' bamboos were weaved inside the supporting struction of the door panel. The facing direction of the bamboos were put alternatively.



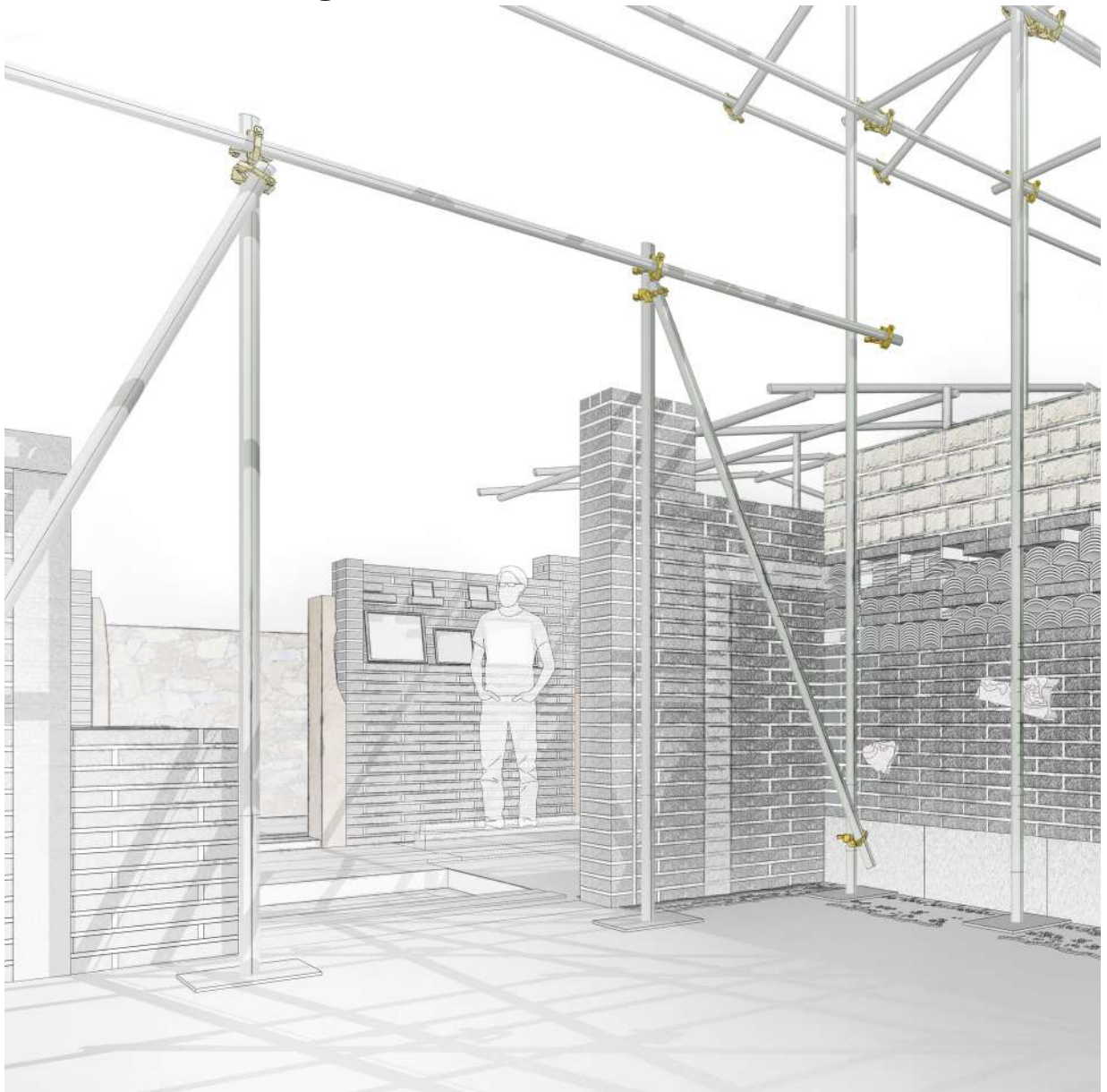
#### INSTALLATION

The door panels were installed with hinges and fit into the tracks of the outer frame.

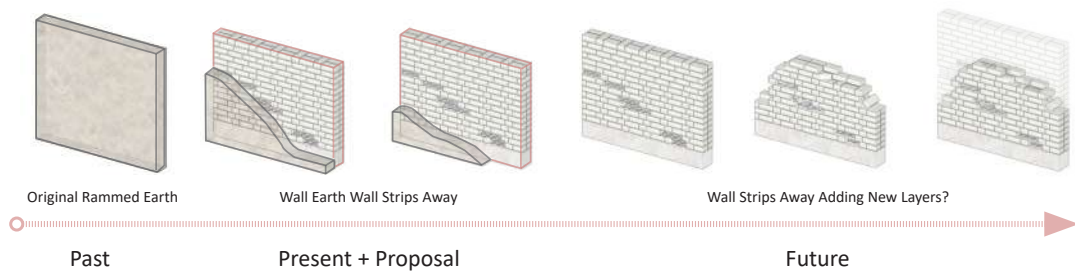


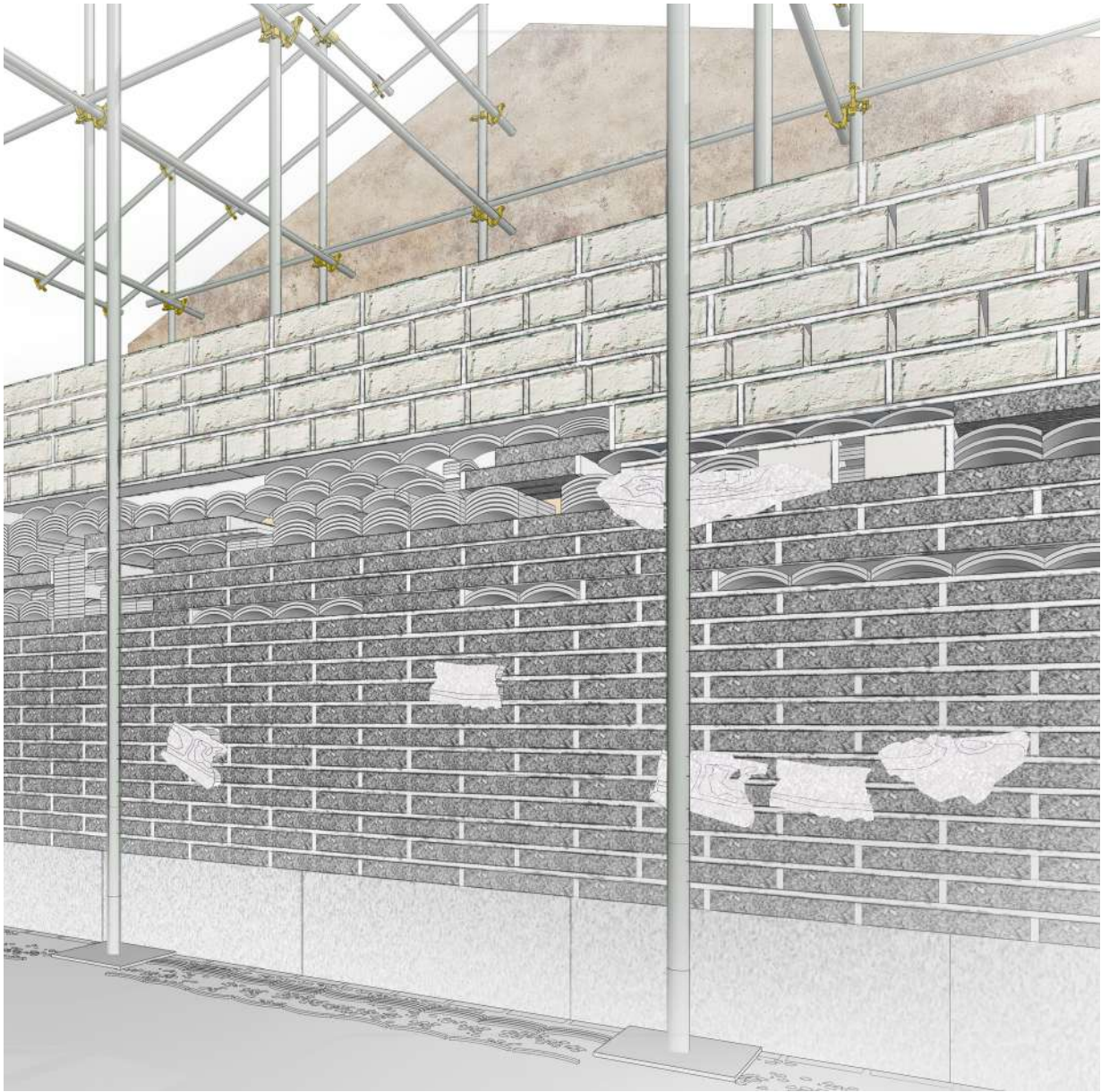


## Feature Wall Design - Group 2

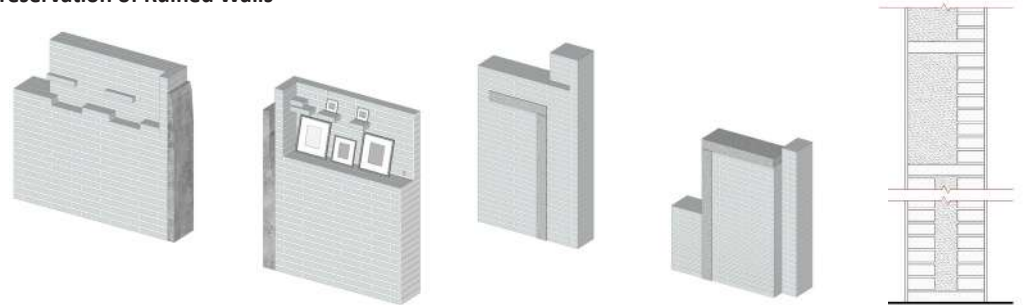


### Old House Cluster





Preservation of Ruined Walls

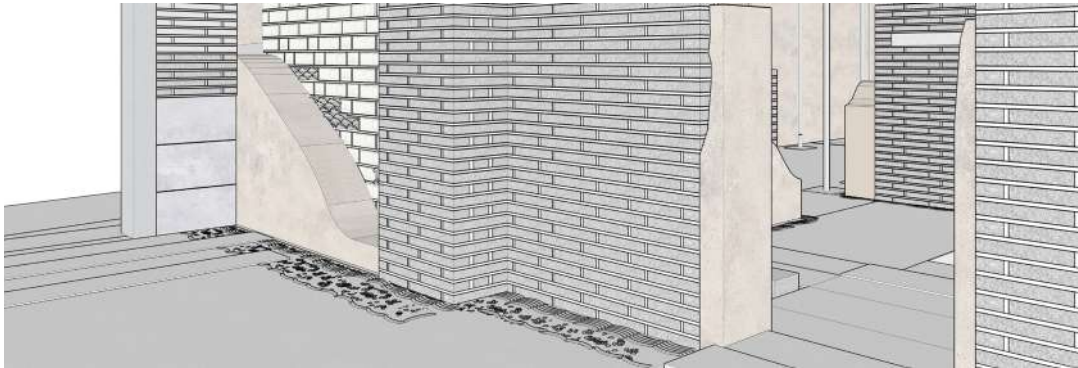


For Exhibition/Display

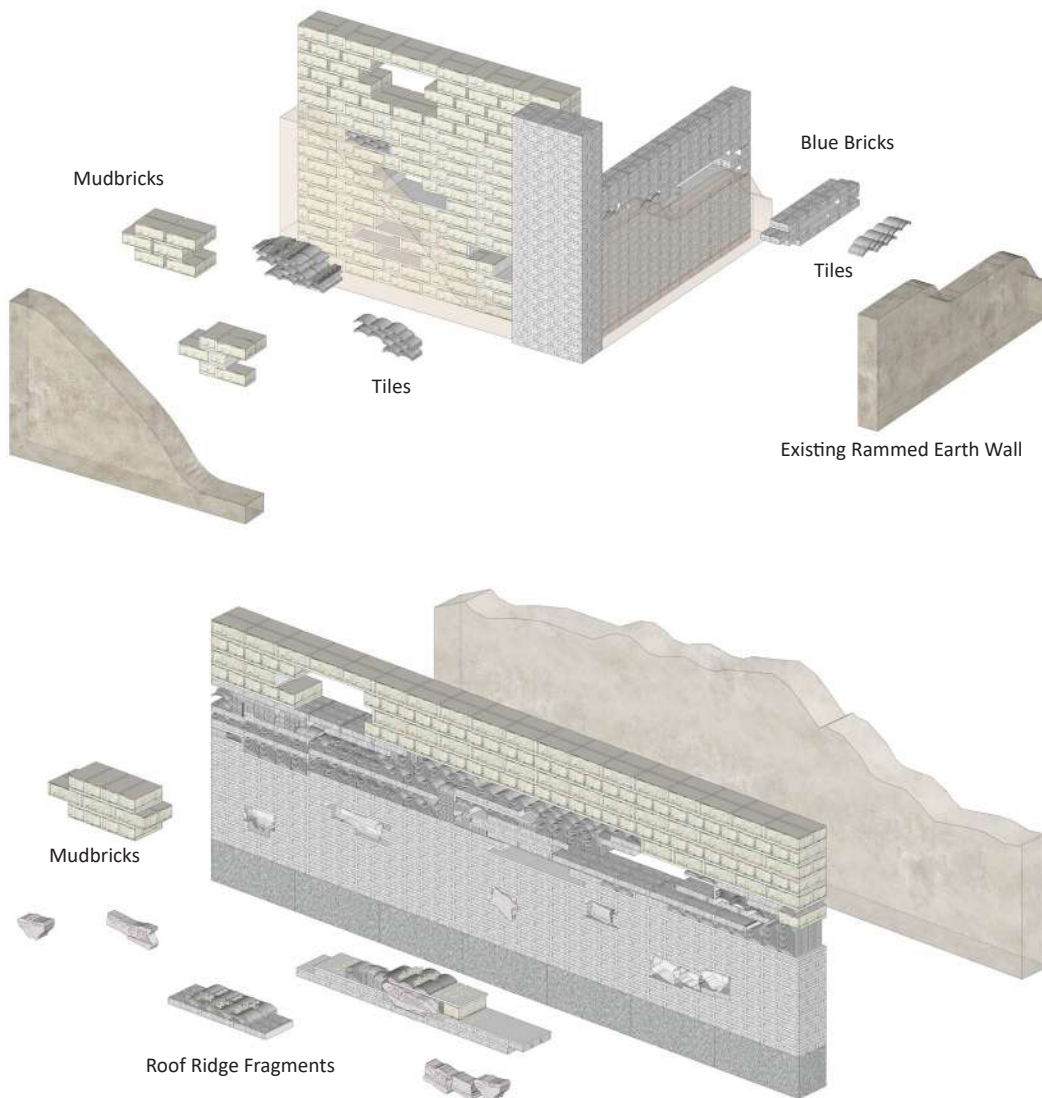
Silver Clad Gold

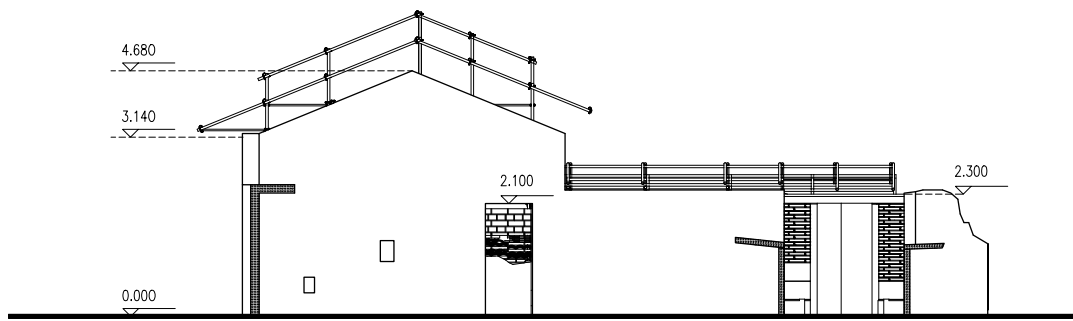


## Restoration Of Ruins

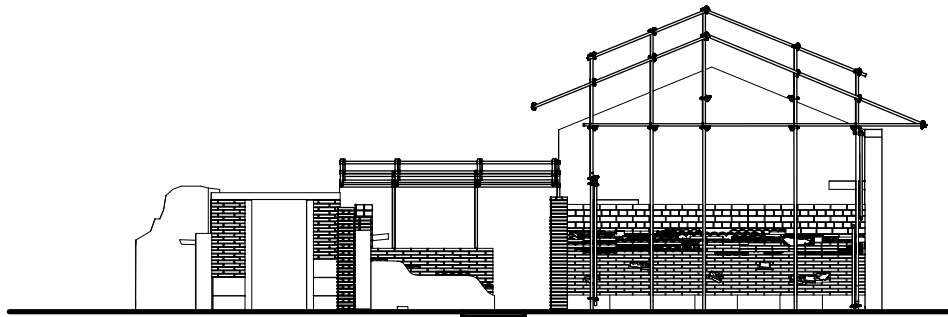


## Material Combination

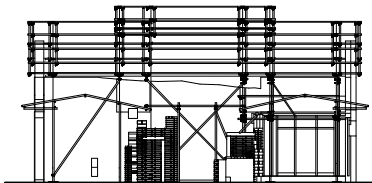




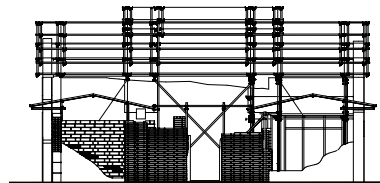
Elevation



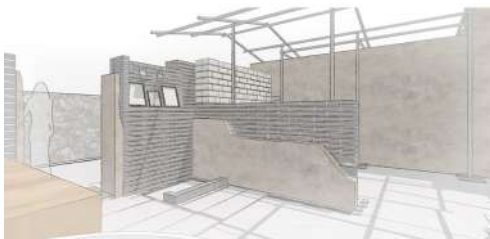
Section A-A



Section B-B



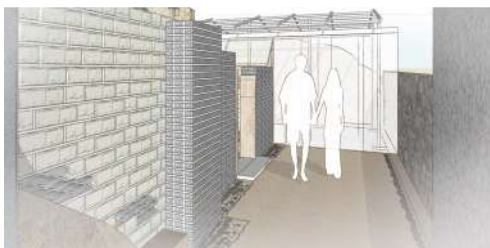
Section C-C



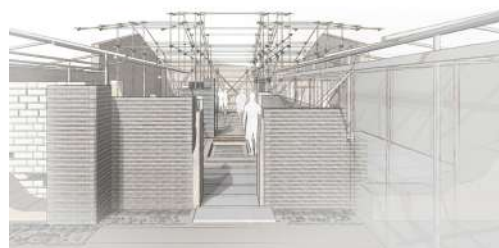
For Exhibition/Display



Viewing To Food Preparation Space



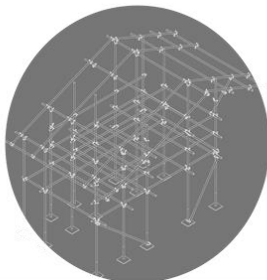
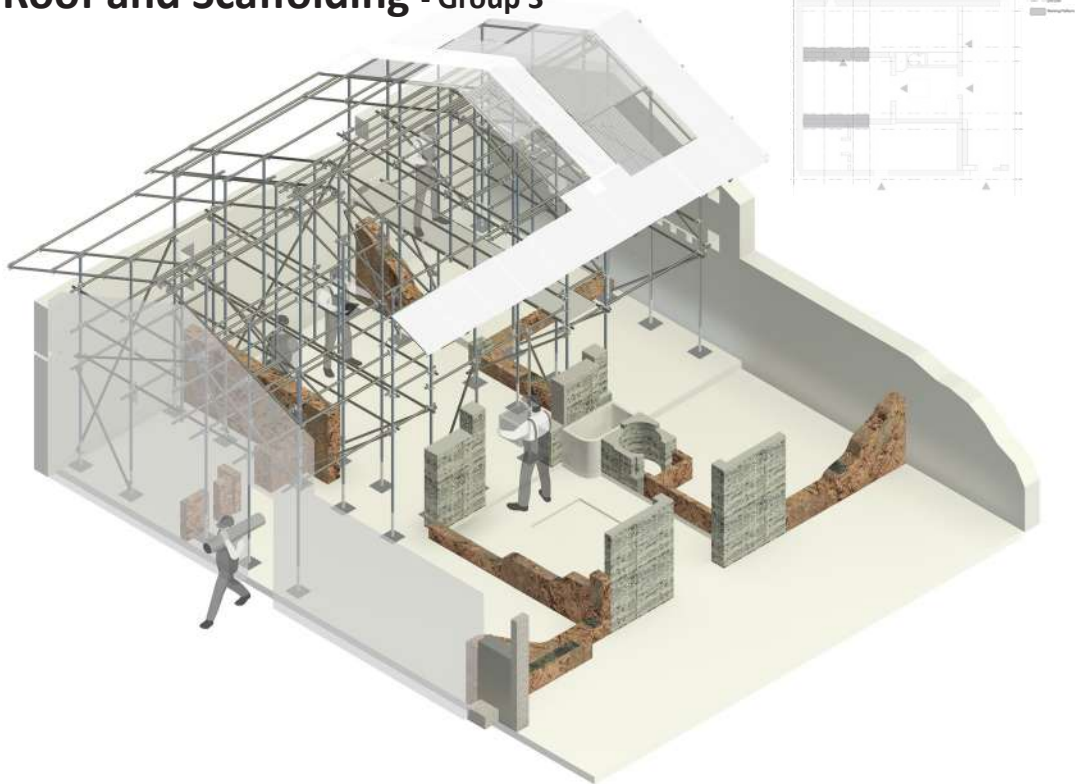
Walking Along The Corridor



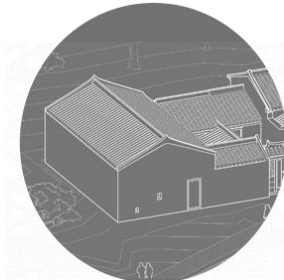
Entering Courtyard



## Roof and Scaffolding - Group 3



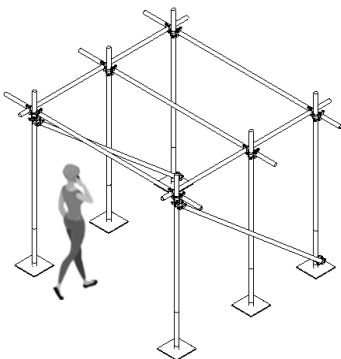
Modern technology



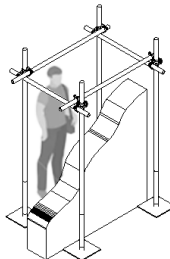
History



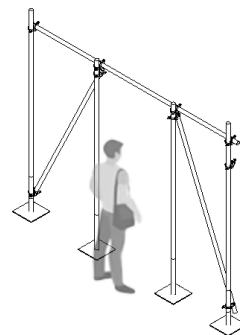
Restoring



Space for events



Protection for Rammed earth wall



Recall layout of Old House

## FORM



SINGLE LAYER ROOF



DOUBLE LAYER ROOF  
FOR VENTILATION AND  
NORTHLIGHT

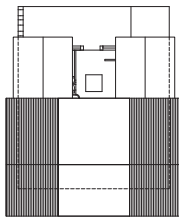


THREE PIECE ROOF FOR  
MORNING LIGHT FROM THE  
EAST AND RESEMBLE OLD  
HOUSE LAYOUT

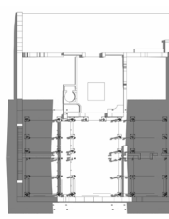


TWO PIECE ROOF FOR HIGH-  
LIGHTING DISPLAY AREA,  
MORNING LIGHT FROM THE  
EAST AND RESEMBLE OLD  
HOUSE LAYOUT

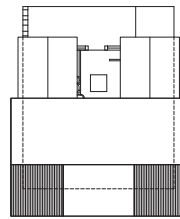
## NATURAL LIGHT



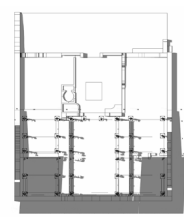
DISPLAY AREA



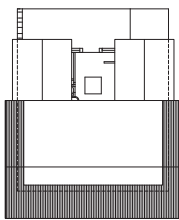
SHADE AT 1 PM (SUMMER)



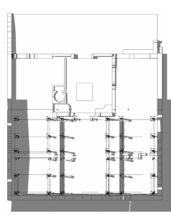
UTILIZE NORTHLIGHT



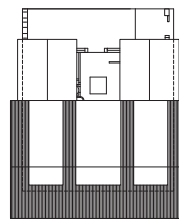
SHADE AT 1 PM (SUMMER)



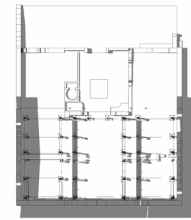
PROTECTION FOR EARTH  
STRUCTURE FROM DIRECT  
SUNLIGHT



SHADE AT 1 PM (SUMMER)

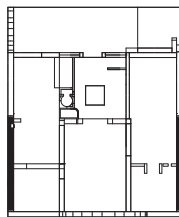


DOUBLE HEIGHT SPACES

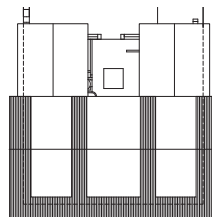


SHADE AT 1 PM (SUMMER)

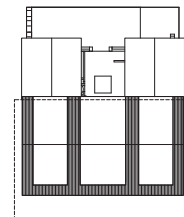
## LAYOUT



EXISTING RUNINS

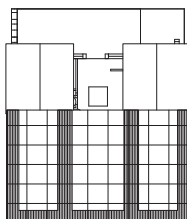


RIDGE ALIGNMENT AC-  
CORDING TO ORIGINAL  
TILE ROOF

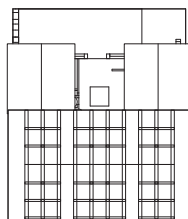


REDUCE CANTILEVER OF  
ROOF FOR BALANCED  
PROPORTION

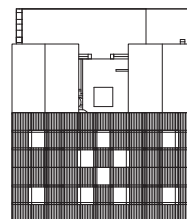
## LOGISTIC AND ARCHITECTURAL HISTORY



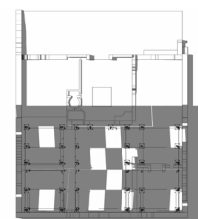
INSERTING GRID AND  
CREATE PANELS



OVERLAPPING OF PANELS  
FOR WATERPROOFING

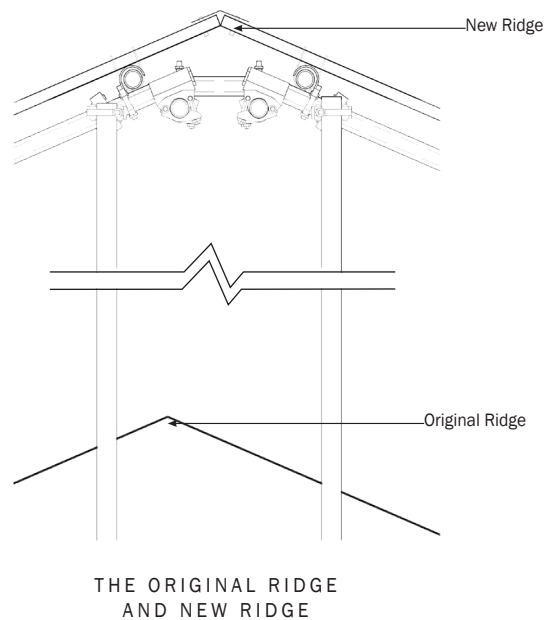
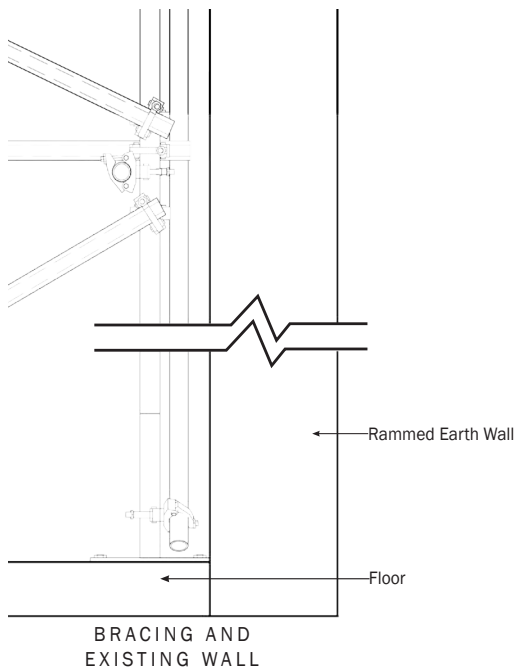


CREATING SKYLIGHT



SHADE AT 1 PM (SUMMER)







Exhibition



Overnight





## Mural House Cluster

Group 1: DENG Qi Wen Cherie

SO Ka Man Kammy

Group 2: LAI TingYan Nicole

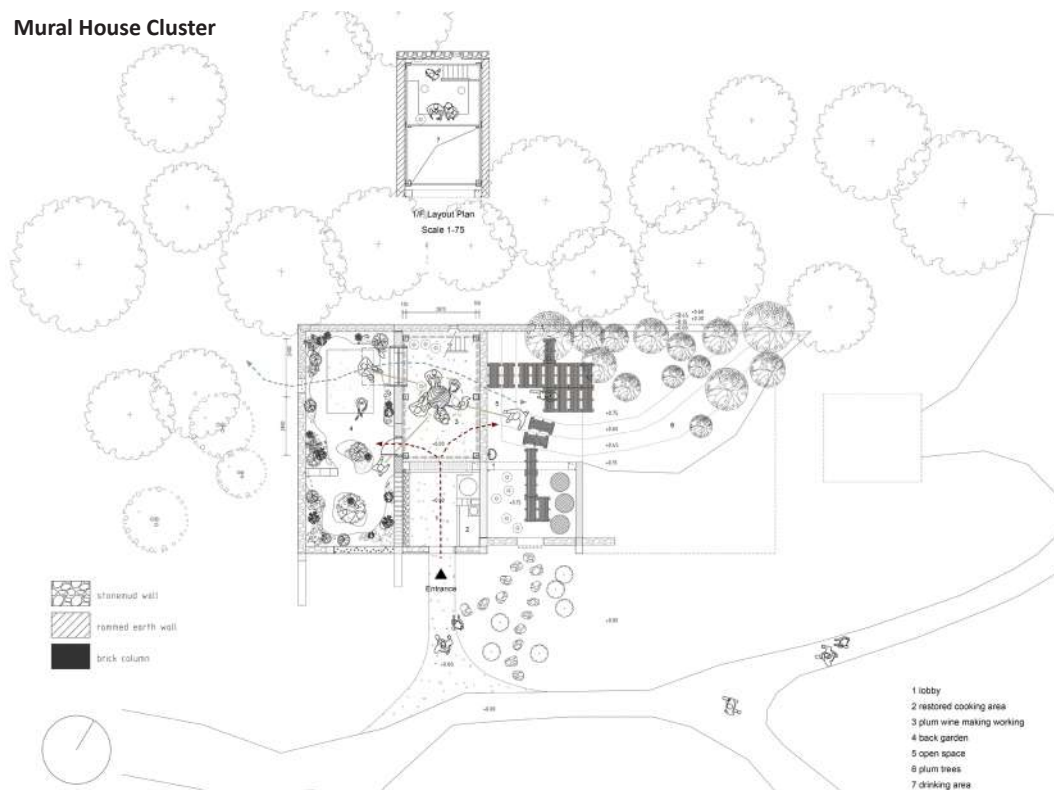
TSUI Hoi Ying Beverly

Group 3: TSE Ka Hei Hayden

CHOENG Kam Seng Tommy



## Mural House Cluster



## Plum Wine Workshop

Mui Tsz Lam is a small Hakka village, when it comes to eat, members of the village and visitors gathered in the open space in front of Cow House. Fervent villagers kindly share their meal with all the visitors and volunteers, sometimes they even open up home-made aged plum wine and tell us their childhood stories while having a drink.

Villagers are not only landowners of the place, but they are also important partners in the design. They engaged in our working process and reflected their own wills and expectations to make the project completes. After working closely with the villagers, we observed plum wine making workshop as a potential program in Mui Tsz Lam. Through number of times having meal together, both our students and locals find that drinking plum wine brings people together. Locals feel more relax and less embarrassing to share stories and experiences while having a drink.

Plum wine is a fruit wine made by soaking plums in a jar filled with sugar and distilled alcohol. As time passes, the flavors and nutrients leach out of the plums and into the alcohol. The color of the plum wine starts off as a light amber tint, gradually gets darker after years and years of pickling. It is a jar of “time capsule”, the longer the wine is stored, the richer and deeper the flavors. A change in temperature emphasizes different aspects of the taste profile. Heated plum wine brings forward a stronger aroma and deepens its richness. Chilled plum wine has a refreshing tang, heightened by a well-balanced acidity. Yet, to keep the unopened plum wine for years, the best way to protect its flavours is to keep it in a cool, dark place away from sunlight and heat sources. Hence, the project is designed to enjoy the drink in the interior and exterior for chilled and heated plum wine respectively while leaving some enclosed space for storing plum wine.



# Scaffolding Design - Group 1



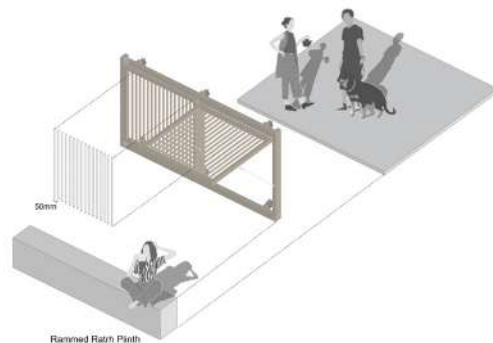
## Coeexist With the Old

Most of the walls has been obliterated over times, a structure needs to be rebuilt to outline its boundary. To coexist with the old with minimal forms of disruptions, scaffolding structure is proposed to develop an interconnected layout and ensure full access to the whole area.

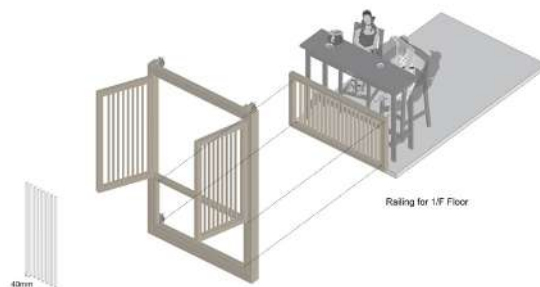
For the dilapidated mural house whose interior space is no longer available, cleaning up the broken parts effectively retain the functional ones. The project is a new two-storey structure follows the footprint of a building that once occupied the site.

Wooden louvers enveloped the scaffolding structure, allowing interactions between two spaces while bringing natural light inside the workshop. The rammed earth parapet wall is persevered as a sitting next to the mural house. With openable façade designed along the wall, it expands the workshop area to the outdoor space with a canopy.

1. Top Hung-Window 50mm Interval Louvre

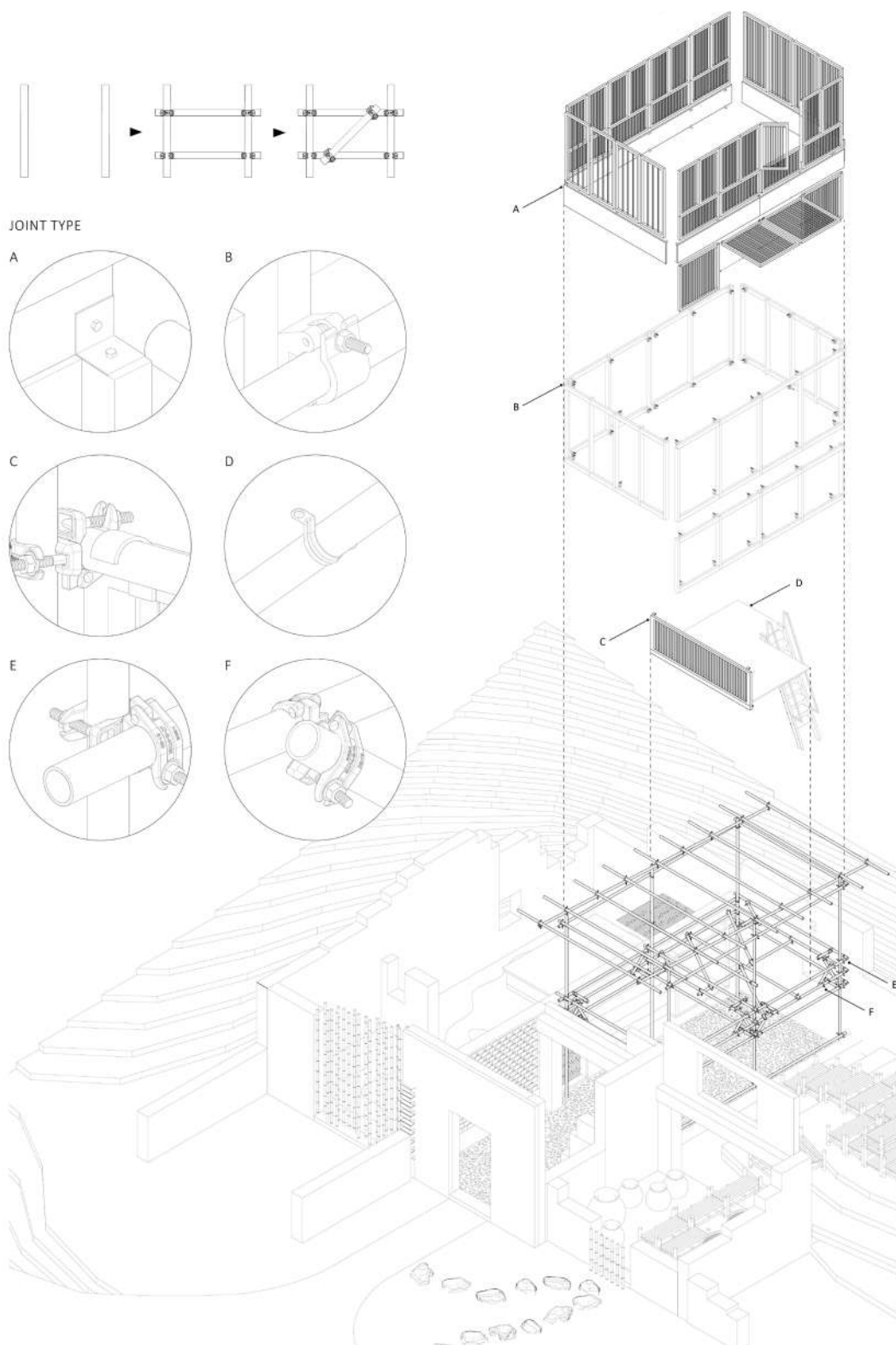
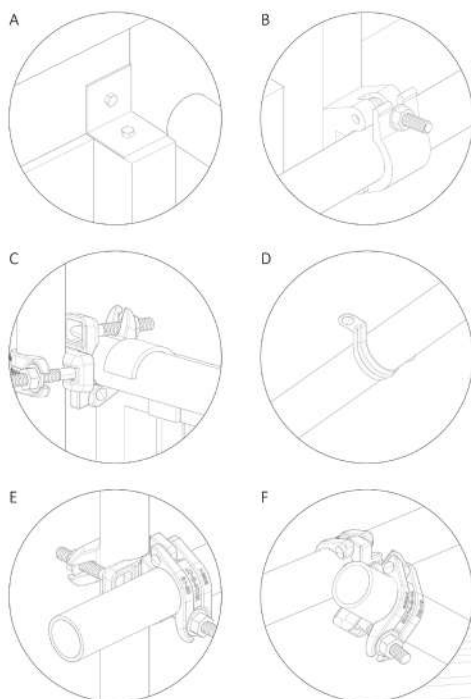


2. Casement Window 40mm Interval Louvre

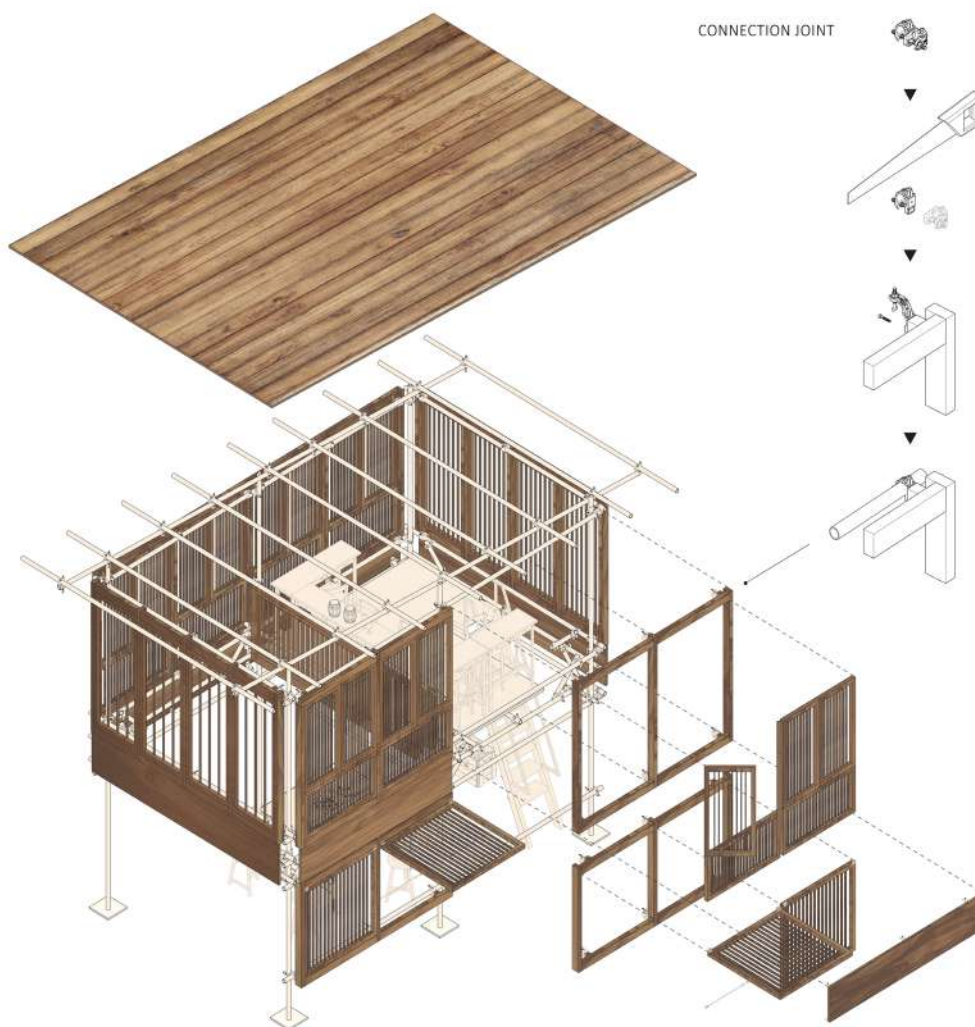




# JOINT TYPE

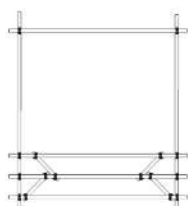




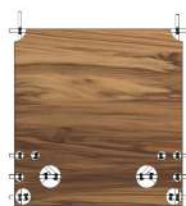


## TIMBER PANELLING SYSTEM

### EXPLORATION: CONNECTIONS



SCAFFOLD STRUCTURE



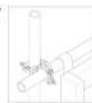
FIXED TIMBER BOARD



CONNECTED BY  
THE CLAMPS  
ON VERTICAL  
STEEL



CONNECTED BY  
THE U-SHAPE  
HOOK ON  
HORIZONTAL  
STEEL





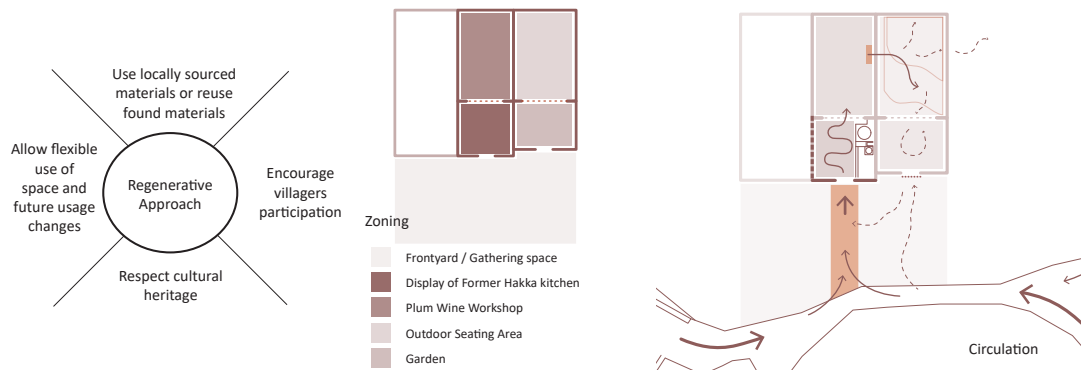


## Paving Design - Group 2



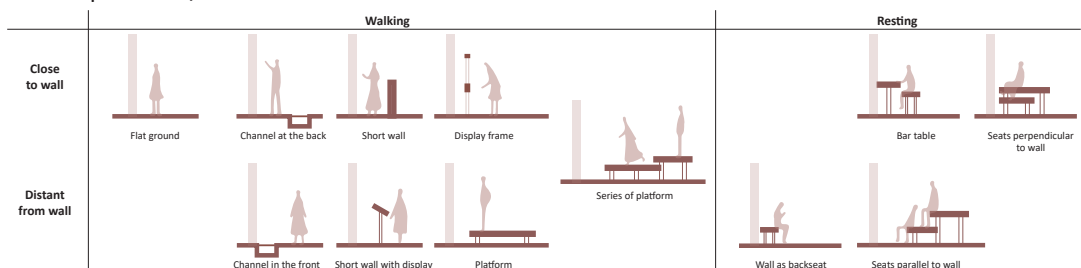
### Paving Concept Diagrams

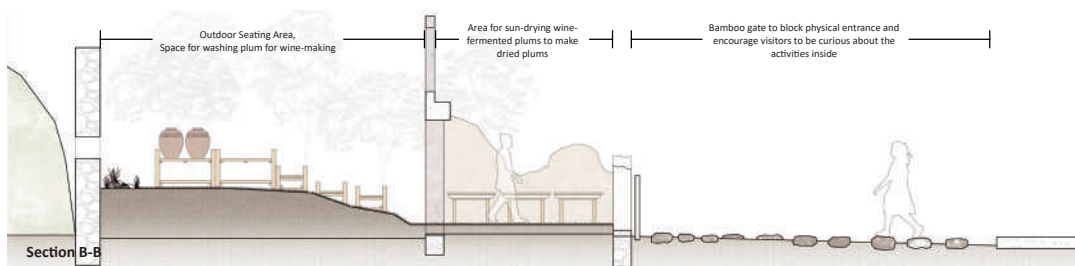
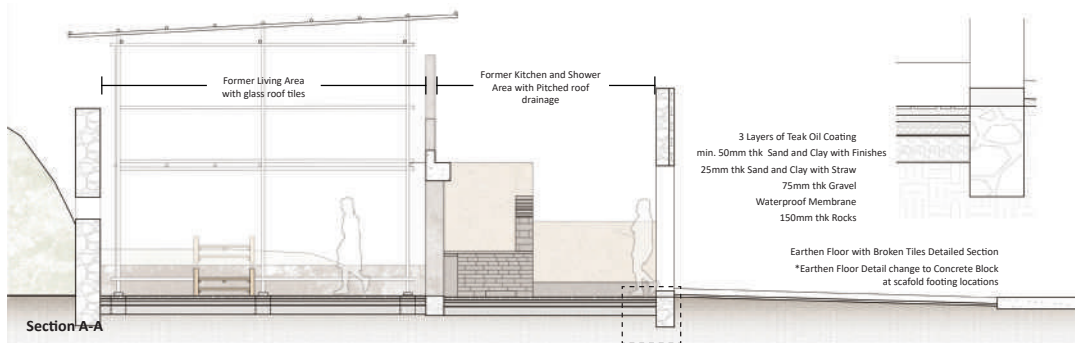
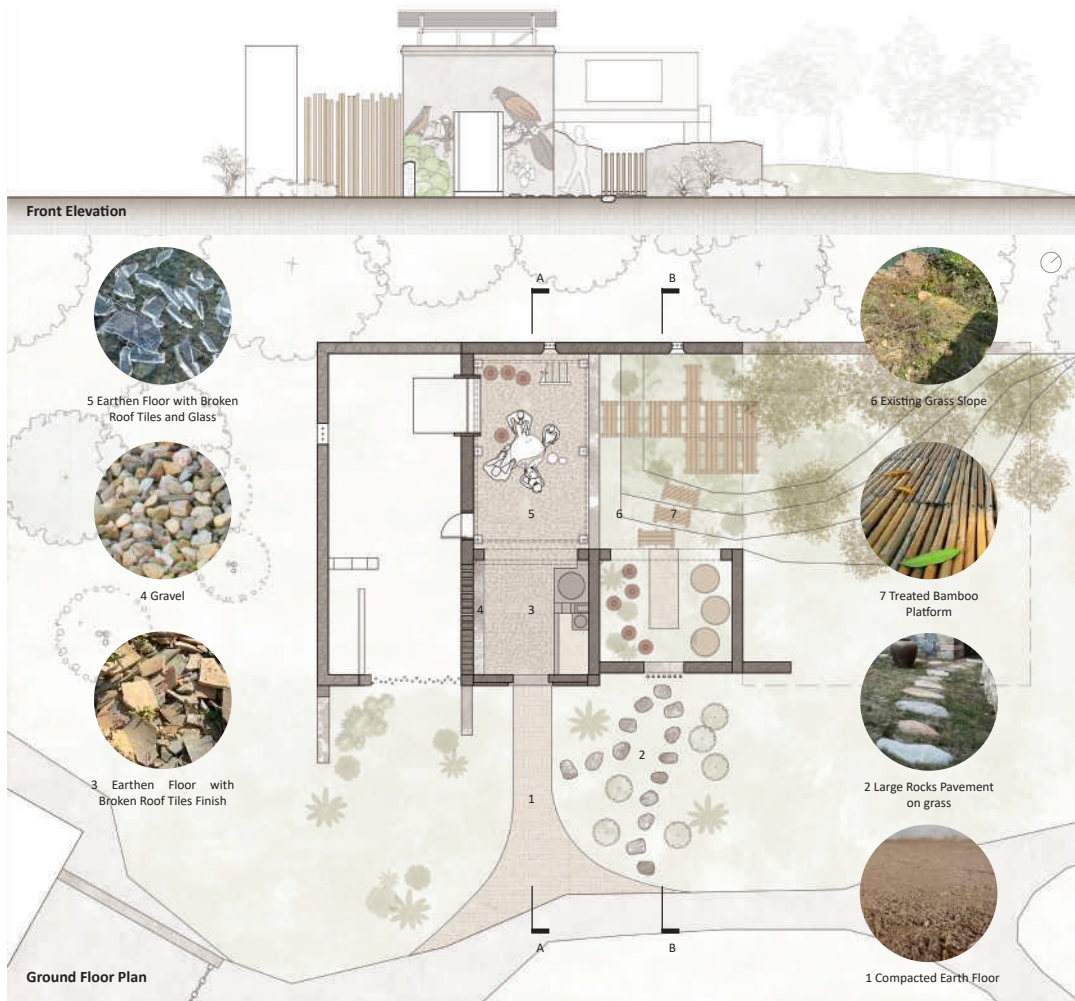
Regenerative Approach / Function / Activities



### Paving Design Exploration

User experience / Interaction with feature wall

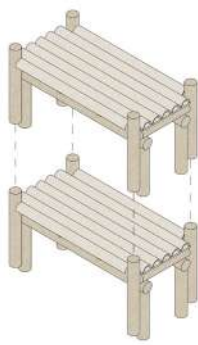




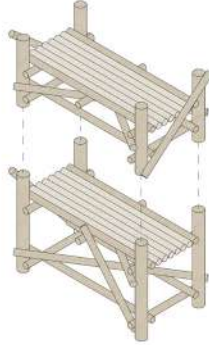


## Bamboo Platform Design Study

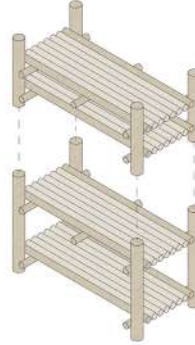
Flexibility / Modular / Functional



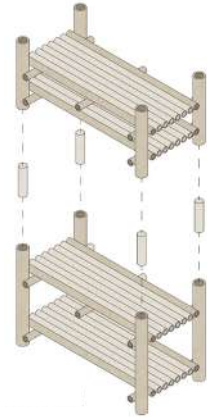
Original Design



HKIC Master Worker Proposal

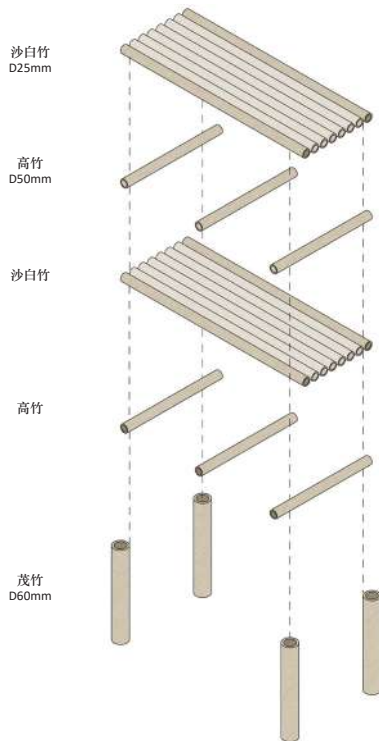


Improved Version

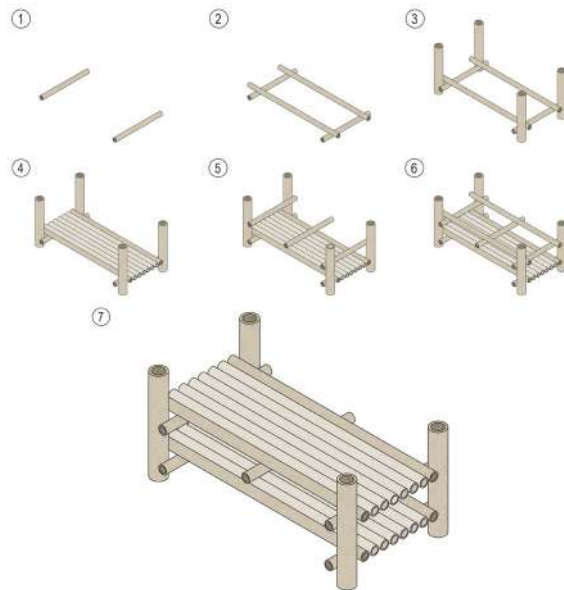


Final Design

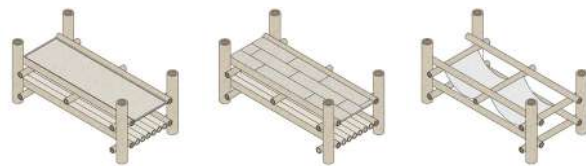
### Bench Structure



### Installation Sequence



### Top Panel Design Variation

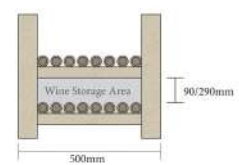
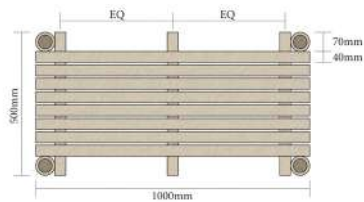


Woven Bamboo Mat

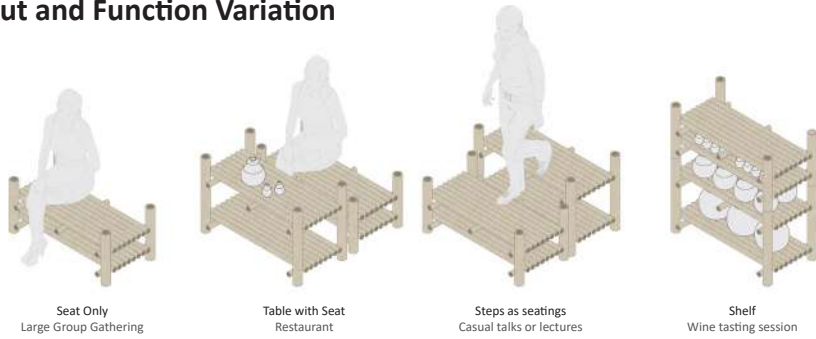
Flatten Bamboo

Fabric

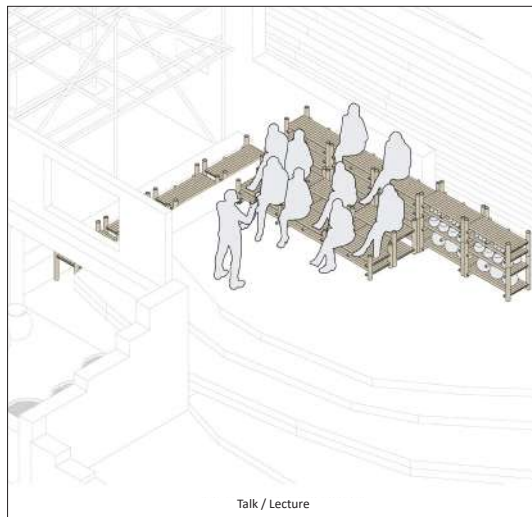
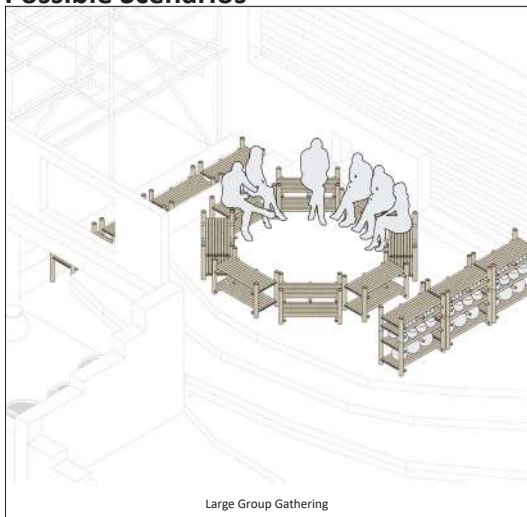
### Bench Dimensions



## Setting out and Function Variation



## Possible Scenarios





## Rammed Earth and Garden - Group 3

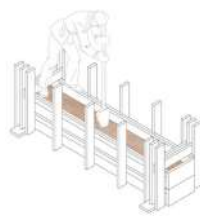


When we are standing in the site looking around, seeing how nature took over the structure, it somehow created a sense of calmness by the sound, light, and temperature.

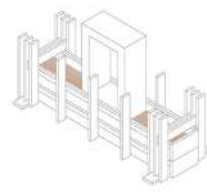
We decided to turn the ruin space into a back garden for a tea house. Shadow and Light can be created through the mud-brick wall. By placing the mud-brick wall with the lattice pattern, the view will be limited; yet, it creates a sense of curiosity for visitors to find out what is behind the wall - a hidden garden.

Windows frame can be served as another sitting area, blurring the boundary between interior workshop space and exterior garden space.

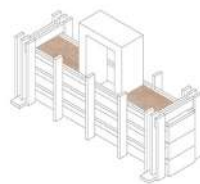
Bamboo is placed in front of the garden; yet, it serves as a fence to hide the garden. Similar to the mud-brick wall, it creates a sense of curiosity to visitors to experience the garden.



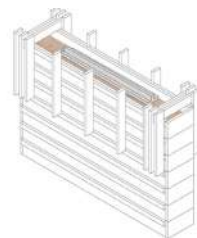
Using rammer to ram earth



Placing formwork for the opening



Ramming earth



Placing T-bar and ramming earth

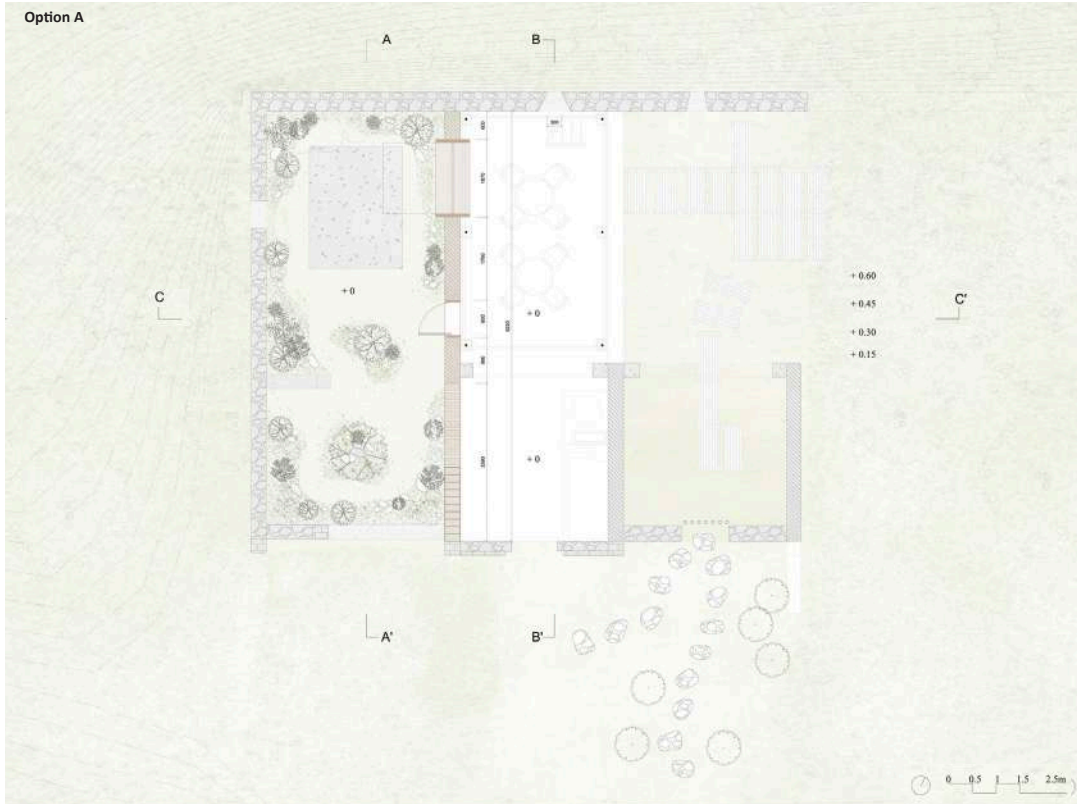


Removing framework



Removing formwork

Option A



Section A-A

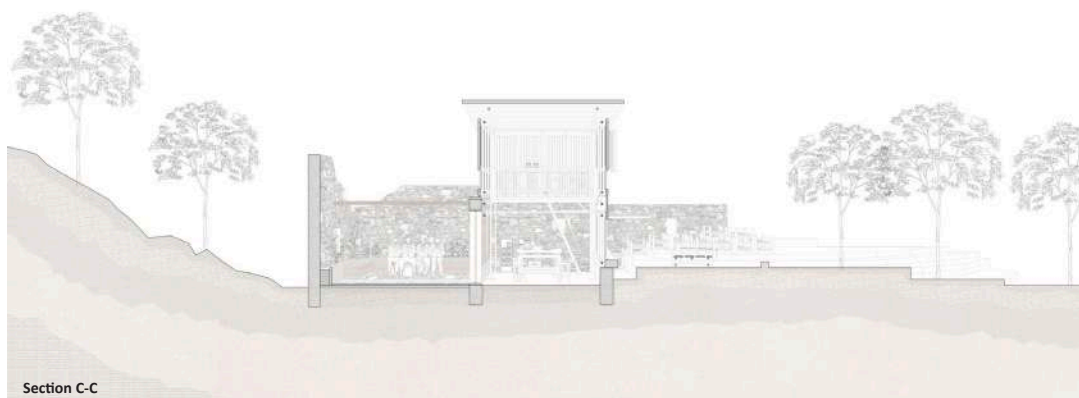
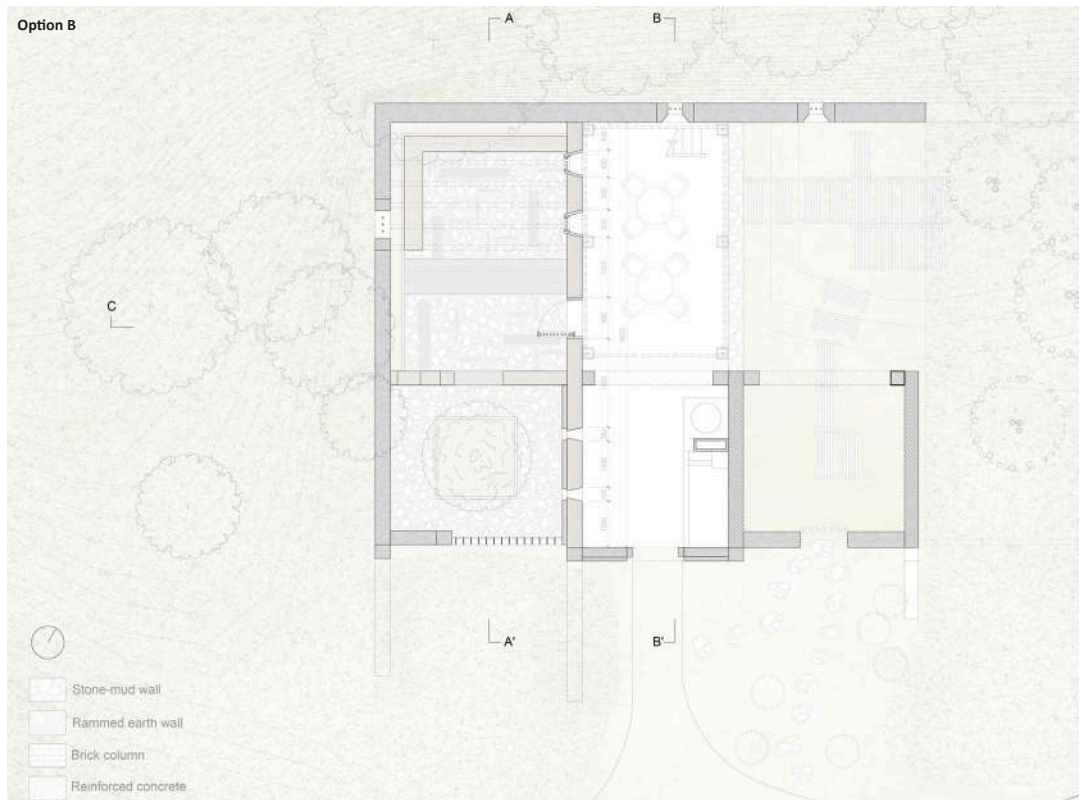


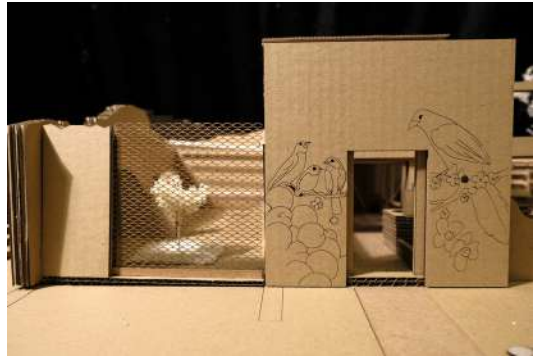
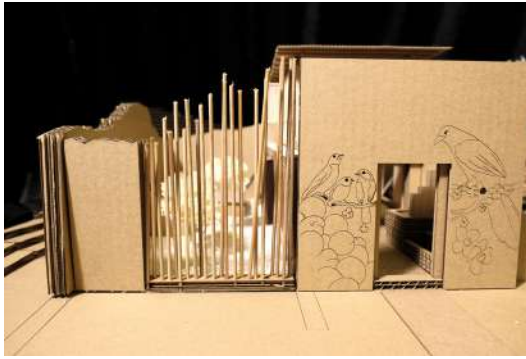
Section B-B



Section C-C





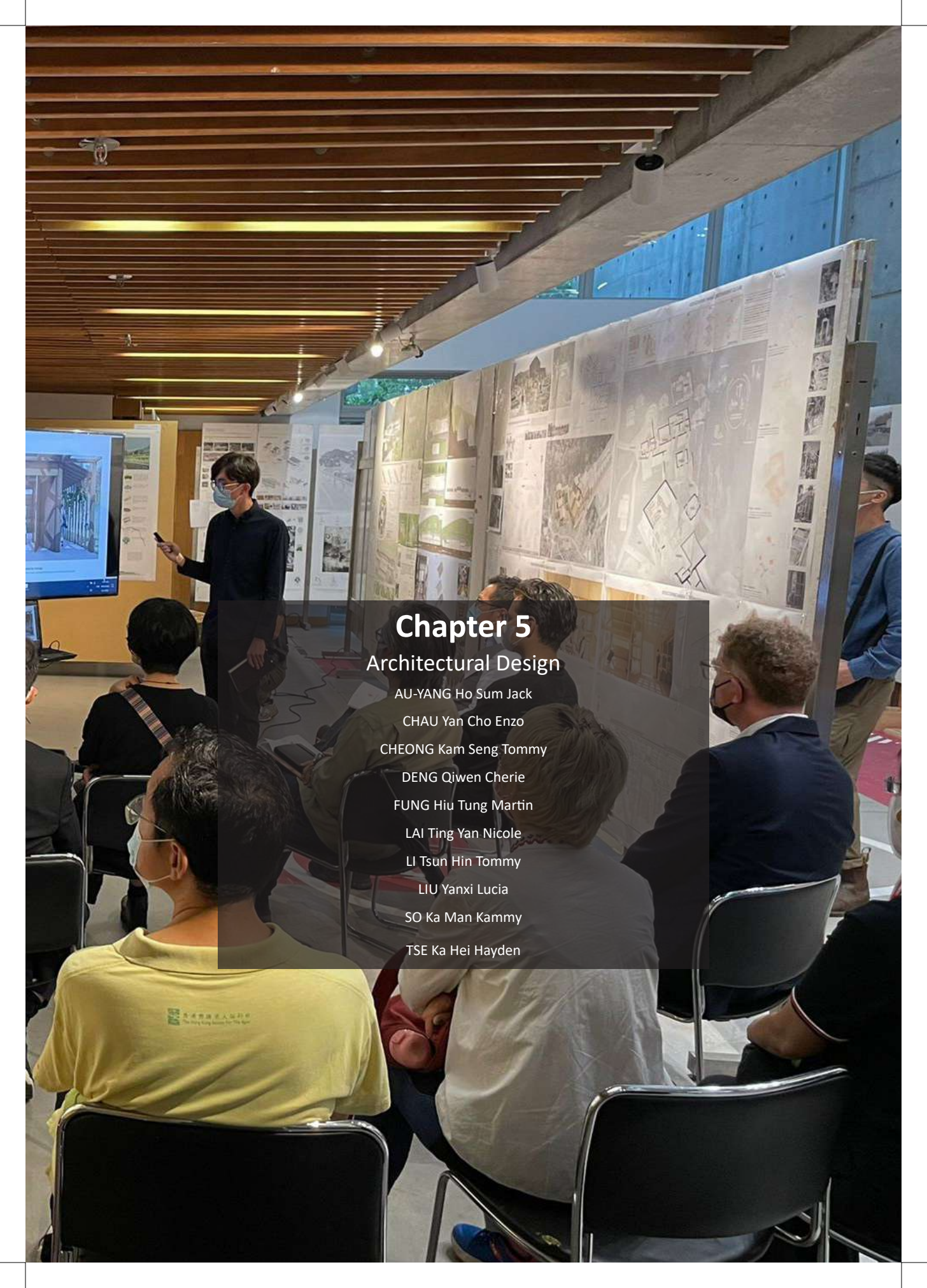






Final Review in May 2022



A photograph of a lecture hall with a presenter and an audience. The presenter, a man in a black shirt and glasses, stands on the left, holding a small device. He is facing an audience seated in rows of chairs. The room has a wooden slatted ceiling and large windows on the right. A large architectural drawing is displayed on the right wall. A semi-transparent text box is overlaid in the center of the image.

## Chapter 5

### Architectural Design

AU-YANG Ho Sum Jack

CHAU Yan Cho Enzo

CHEONG Kam Seng Tommy

DENG Qiwen Cherie

FUNG Hiu Tung Martin

LAI Ting Yan Nicole

LI Tsun Hin Tommy

LIU Yanxi Lucia

SO Ka Man Kammy

TSE Ka Hei Hayden





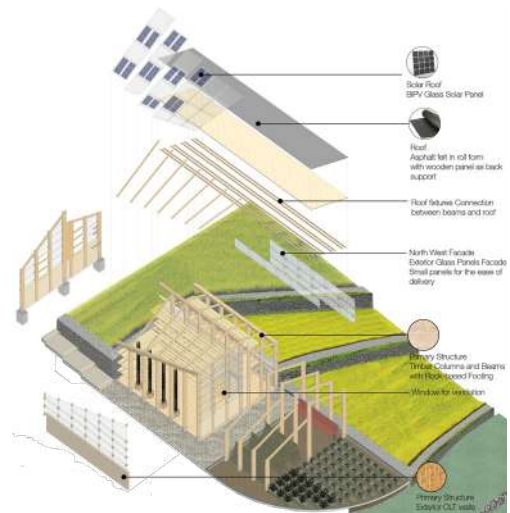
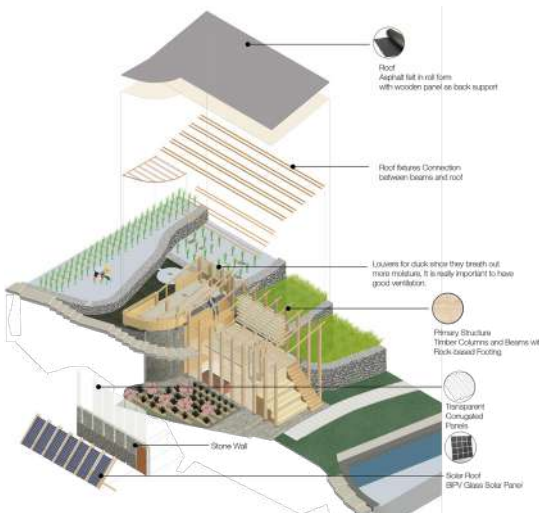
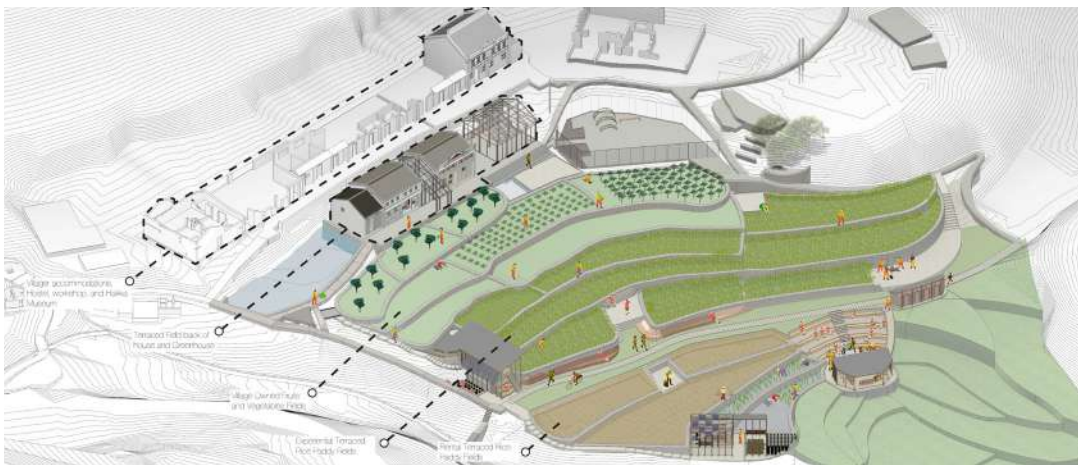
## **Experiential Recultivation of the Terraced Fields in Mui Tsz Lam**

By AU-YANG Ho Sum Jack

This is a recultivation project sought to revitalize a small scale of rice terraced field as a socio-ecological productive landscape and reflect the values of rural life for the urbanites. The villagers can utilize the existing facilities such as terraced paddy fields, irrigation system, reservoir, wells, and dam to carry out the recultivation works. It reinvents the Hakka culture in the old time and recreates a productive landscape.

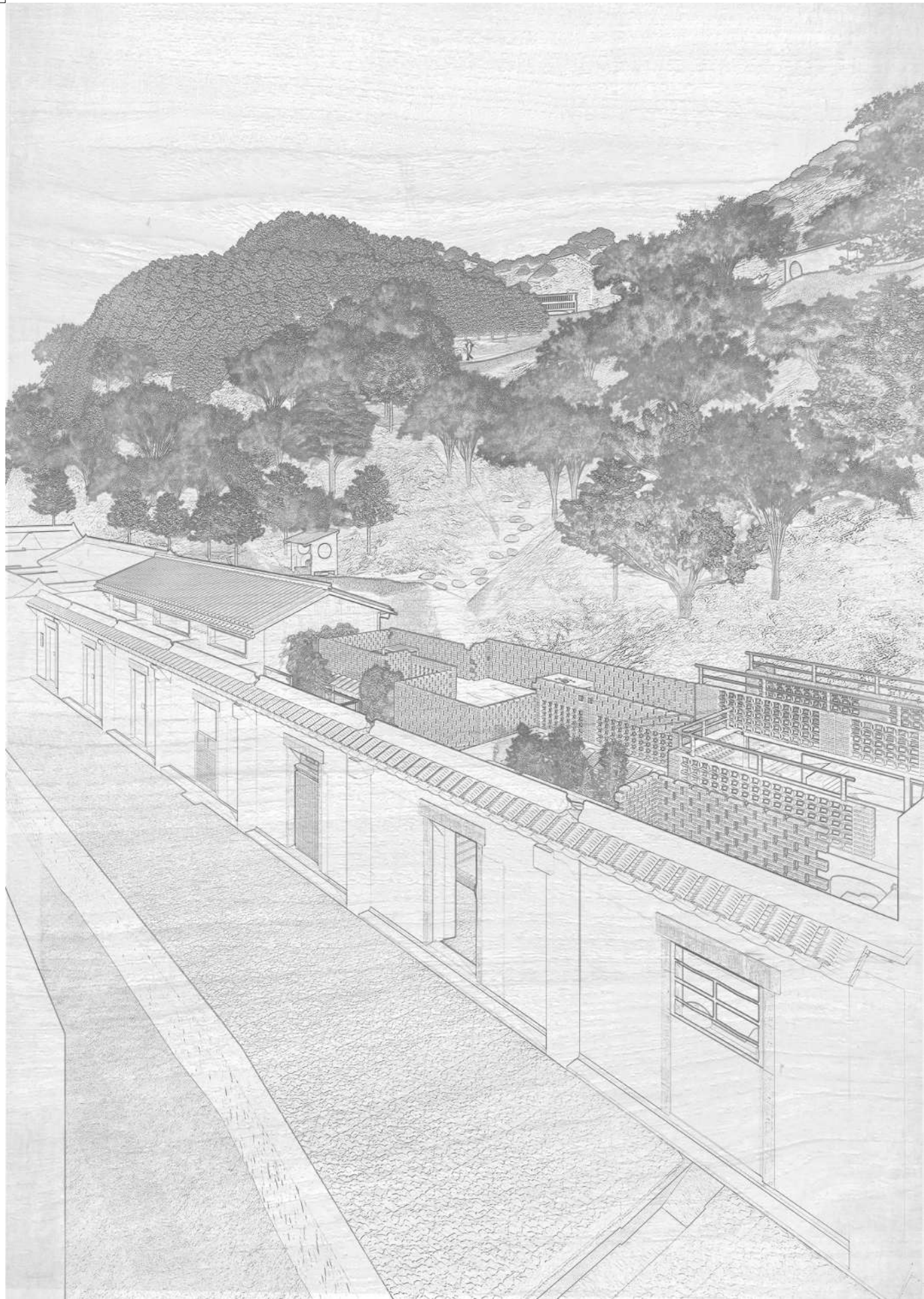
There are two paths that is introduced in Mui Tsz Lam master plan. A farming trail will connect different agriculture facilities and access each level of terraced fields. A cabin and a greenhouse facilitate agriculture activities such as germination process, storage, rice-duck model, and preservation of endangered plants. A visitor path showcases the Hakka terracing farming experience for the visitors. Different platforms allow the visitors to explore the ecosystem of terraced fields. A harvesting pavilion allows farmers, villagers, and tourists to celebrate and share their results of terrace farming. The experiential cultivation program is not only providing agriculture knowledge, but also it is an education for the urbanities to understand the value of enrichment of biological diversity and a self-sufficient life.











## Tea Meditation and Hakka Hostel

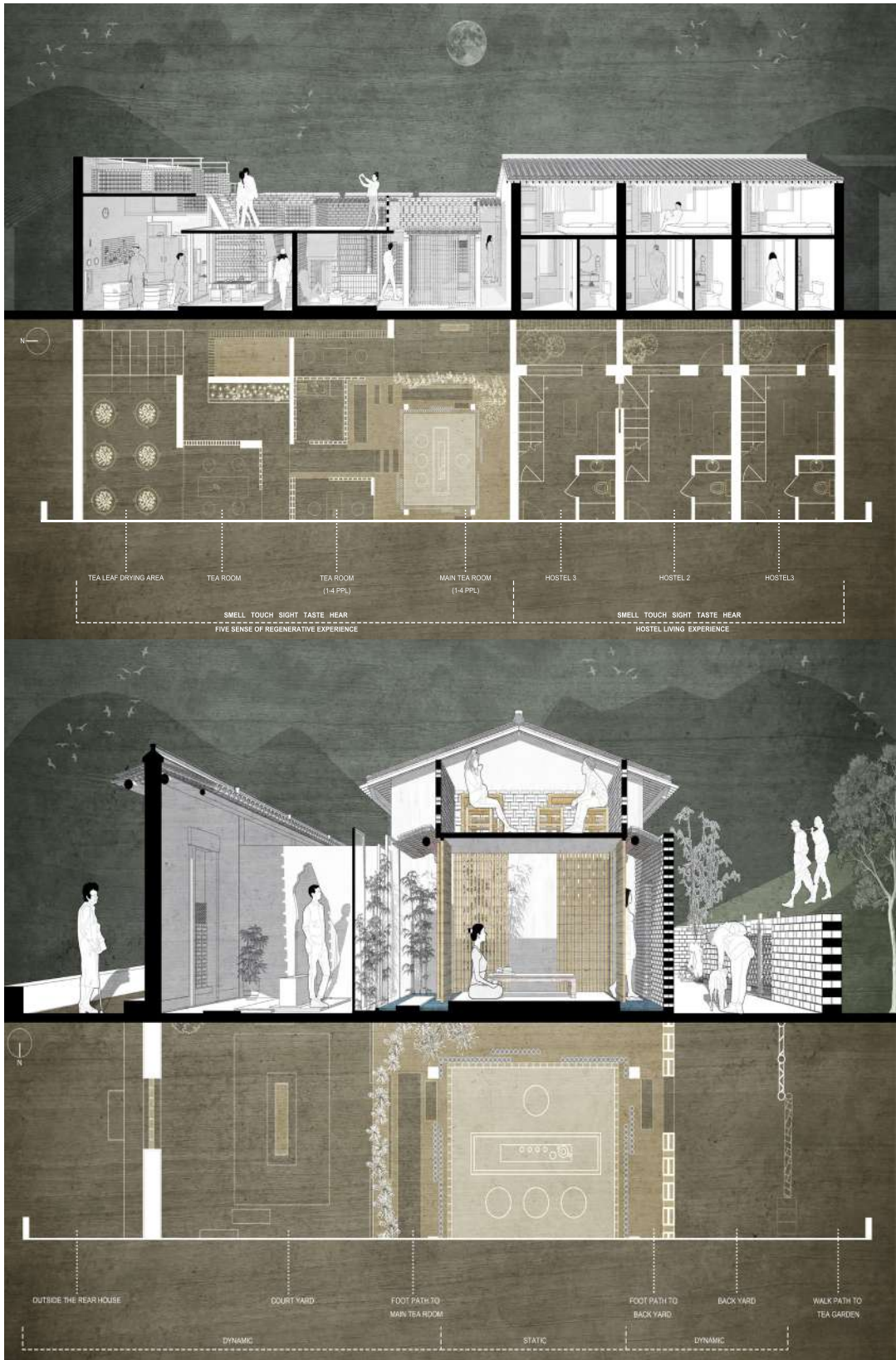
By CHAU Yan Cho Enzo

Far from the metropolis, there is a peaceful land in Lai Chi Wo and a Feng Shui Wood named Mui Tsz Lam. After comprehensive research for the case study, site context and site tectonics for the first term, the village gave me a profound impact of the role of a rural village. At the meanwhile, through literature review of “What is regenerative design” and regularly site investigation, I believe that Mui Tsz Lam is a really potential site for the regenerative mechanism connecting the people and the nature.

For the common house and the rear terrace house part, this cluster is located at the middle part of the site. The owner Mr. Hung intended to restore the rear houses to a hostel which can provide a nice accommodation for the visitors. His wife had the and the knowledge of planting tea trees and the permission of the head of village to prepare for the tea planting in the yard. Having a broad view of all the fascinating scenes from the site. This is the fact from the owners and become part of the proposed program - Tea Meditation experience.

The design approach of tea meditation and hostel will focus from the big picture to the small-scale scenario. Including the internal program and layout which can recall the history of the cluster. For the material of the design will be mainly adopting the tectonics from last term using the blue bricks, mud bricks and tiles, by using these monotonous materials for shade and shadow, developing a vibe of concise and humble atmosphere for meditation.











ARTIST RESIDENCY IN MUI TSZ LAM  
#梅林藝坊

## Radical Vernacular Architecture of Hakka Village

By LI Tsun Hin Tommy

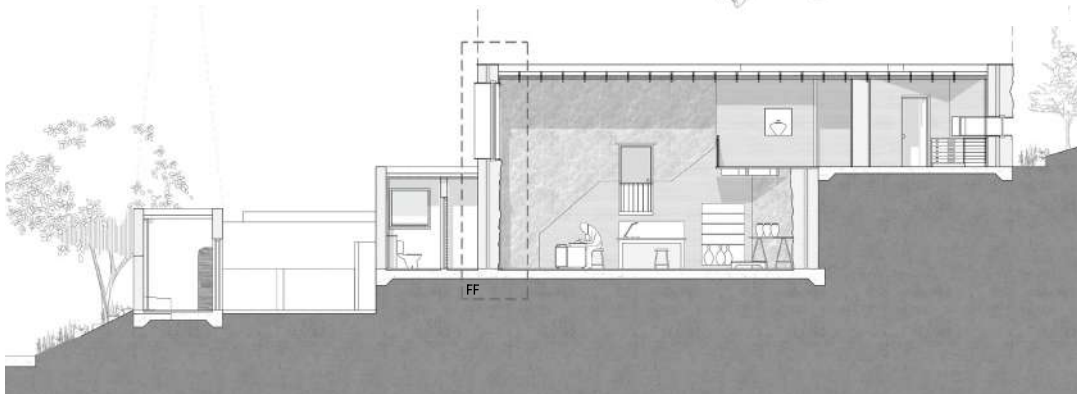
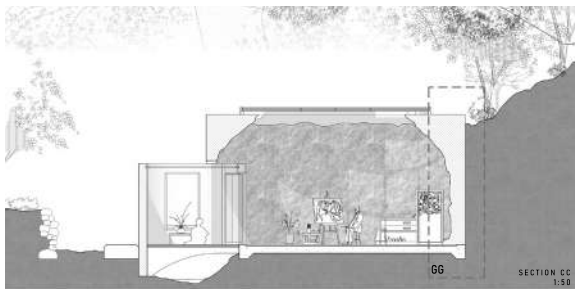
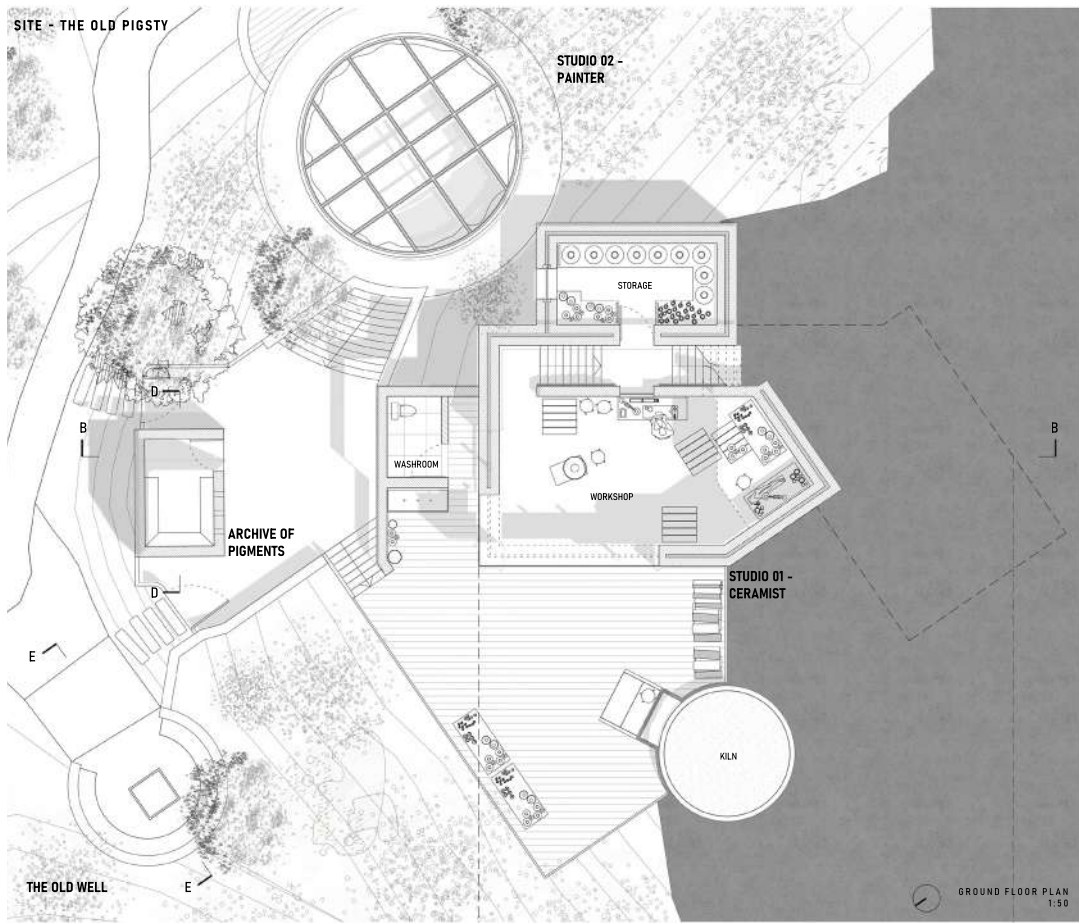
Mui Tsz Lam as one of the Hakka village in Hong Kong, it has its own remarks and characteristic. It is described as a small village that is away from the bustle and hustle and embedded in the nature. Its location brings proximity to a variety of local materials, while the logistic is challenging to architects and builders.

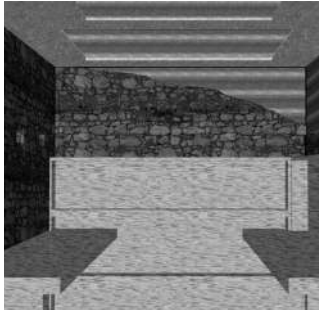
As the people built houses with rammed earth and adobe in the Hakka village back in the 19th century, could we design with the local sourced material in a radical way in the 20th, in order to tackle the challenging context in these remote villages in Hong Kong.

This project extracts a palette from the landscape to create a regenerative architecture that represents the nature and history of the place. The two sites (the Pigsty and Front Row House) with two different sets of contexts are selected to be tackled, and drive design that is respecting but also using what has been there, like the streams, trees and tradition Hakka structure.

The revitalization of the new Story House is based on the rammed earth studies conducted in the first semester. Further investigations is carried out and employ the final palette of Mui Tsz Lam via rammed earth construction as the major approach, while also exploring radical ways of creating abstract space with earth structure.



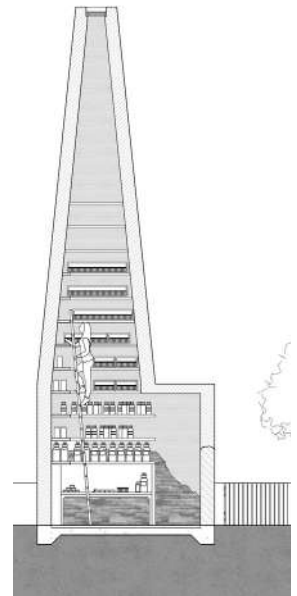




Stones in MTL



Pigment from MTL



Archive of natural pigment



Casting on the earth



# 梅酒 作坊

POETIC SPACE IN PLUM WINE WORKSHOP IN MUI TSZ LAM



## REGENERATIVE CYCLE

Plum tree cultivation  
Plum wine making process



## Poetic Space in Plum Wine Workshop

By DENG Qiwen Cherie

Hong Kong is an efficient and functional city. People living here are also leading a regular and planned life. They tend to plan before doing something and consider results so that they can foresee what happens and control the results. However, it is possible that the reason why people use such way of thinking is that the environment they stay in is controlling their thoughts to follow something discipline, which may make them feel pressured and become more rational.

But sometimes when we are staying in a non-linear/ irregular space, for example, in some rural places, we may feel relaxed and easier to release our emotions, which makes me think that how about if the environment can relief the anxiety of people's logical mindset, and encourage them to stimulate their perception and emotions?

Mui Tsz Lam is a rural place in Hong Kong. Based on the interview with some villagers, I know that in 1960s, there were lots of plum trees growing here. Every summer, villagers picked plums to sell and tried to make some secondary product for living. Plum wine is one of them. The villagers show a great interest in running a plum wine making workshop for visitors and regenerating such a traditional activity.

Based on the research, the layout of existing houses in Mui Tsz Lam follow traditional Hakka cultural discipline. Therefore, in this thesis I would like to try to investigate a method that can break up such original spatial sequence and introduce a new one to make some surprising space, which may break up the logistic chain of functional or efficient discipline in people's urban life and create a poetic plum wine making workshop in Mui Tsz Lam.



## Interview with villagers.

PLACE  
1990s: Ground Floor

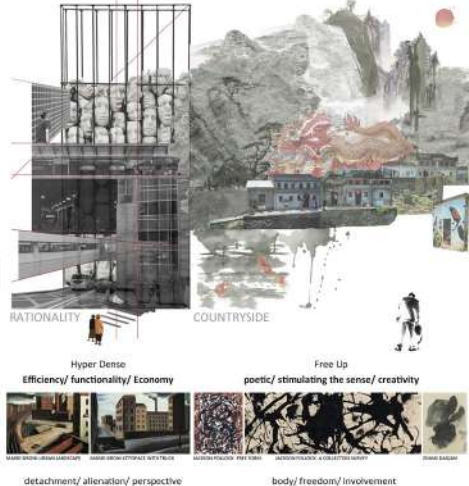
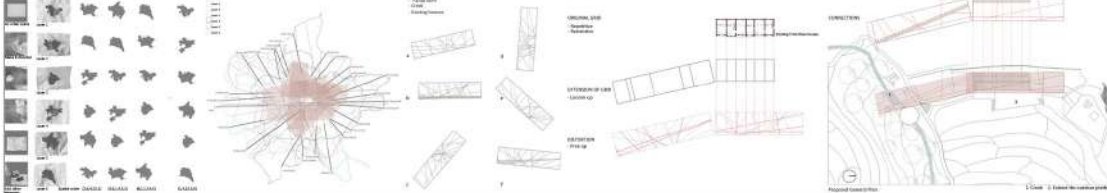
1960s General Plan

She was planting some pine seedlings in her

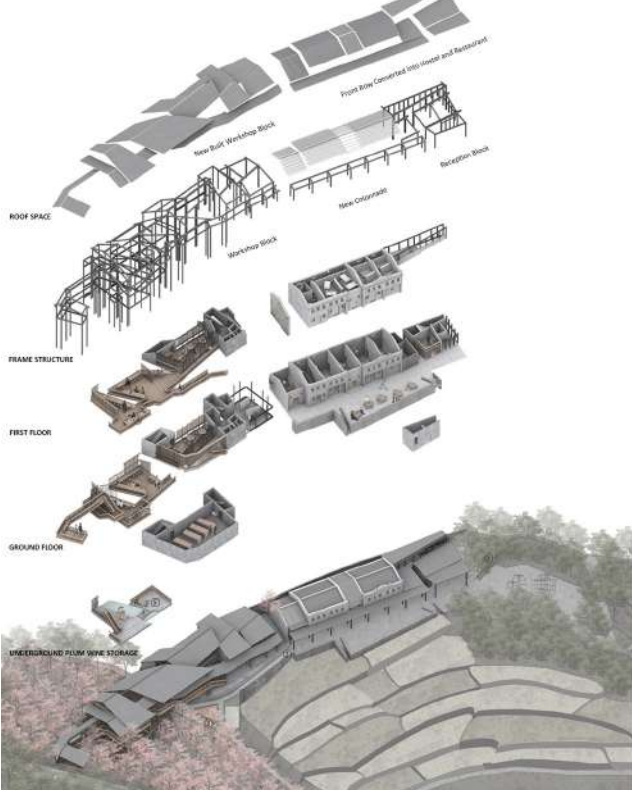
**傳聞**  
Two bottles of plum pits were found in his house

A topographic map showing a residential area with a road and a building. The map features contour lines indicating elevation, a road, and a building. The text 'in seasons when lives here' is visible at the top.

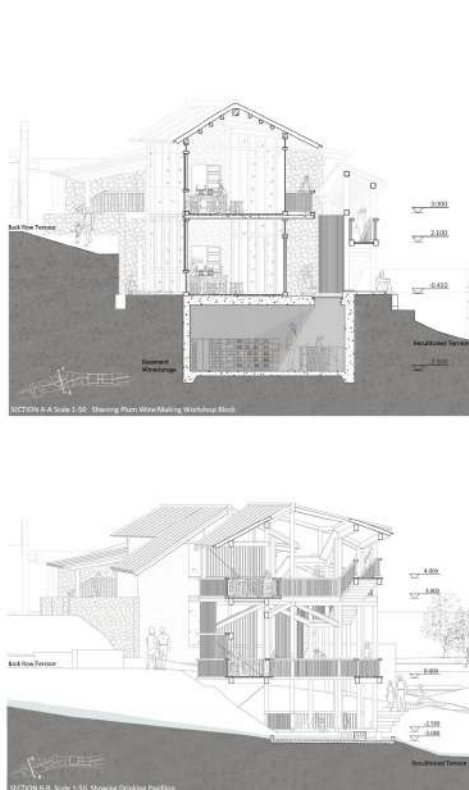
**CONFLICT OF INTEREST**  
None.

[illegible]

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Journal of Internal Medicine 255: 103–110





1 View of Building Entrance at Start of New Colonnade and Reception Block



2 View of Workshop Block Entrance along Route



3 View of village secondary entrance



4 View of First Floor of Drinking Pavilion Looking out



5 View of Ground Floor of Drinking Pavilion Showing New Steps across Creek



6 View of Drinking Pavilion Looking out





## Exploring Self-Build and Co-Build in Mui Tsz Lam: Renovating the Old House Cluster

By FUNG Hiu Tung Martin

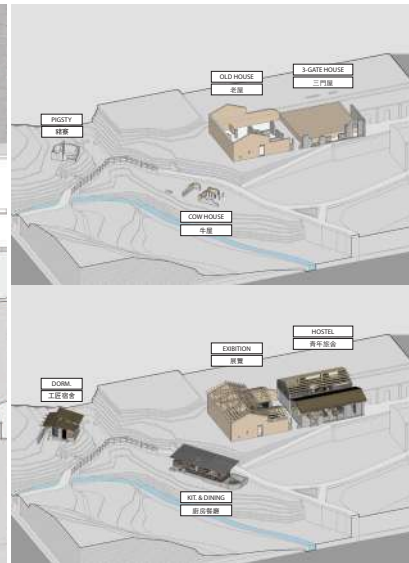
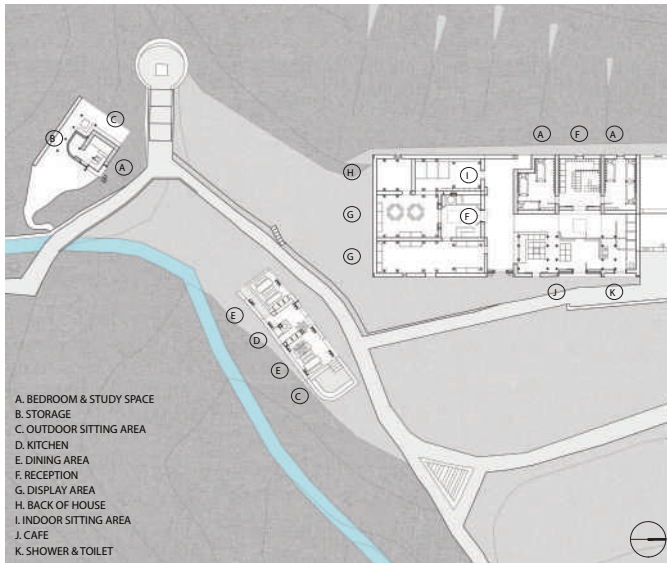
Mui Tsz Lam is a fascinating yet distant Hakka village where the conventional construction method is difficult. Most of the villagers left in the 60s and 70s, and the houses are left abandoned. Those built without concrete are mostly left in ruins. However, rebuilding them requires skilful builders and high construction costs.

Nevertheless, Mui Tsz Lam is blessed with constant supply of NGOs, volunteers and friends, thanks to the wide connection with Mr. Tsang Yuk On – the village representative. Together they have already worked out many minor building elements. As an architectural designer I feel obliged to provide a scheme to so as to make good use of this dynamic labour force.

For the past term, I have studied the architecture of the Old House Clusters, the earliest planned buildings within the village, as well as the available materials of the site, such as earth, bamboo, stones, bricks, tiles, etc. Concrete mixing shall be limited as large quantity production often requires heavy machinery. High-skilled work such as welding is also prohibited. It is recommended that the materials used shall be available on-site as much as possible and can be participated by any one without deep construction knowledge.

Four houses within the Old House Cluster along the river path were chosen to study. (1) Pigsty, (2) Cow House, (3) Old House, (4) Three-Gate House. Brick by brick, block by block, participants are expected to gain knowledge and experience in building construction. The houses are renovated from small to large one, and ultimately to renovate the Old House and neighbouring Three-Gate House which used to have the highest hierarchy of roof form known as 'Downhill Tiger' (下山虎) and 'Four Points of Gold' (四點金). They would also serve as outlet for new participants and dormitory for the veterans.

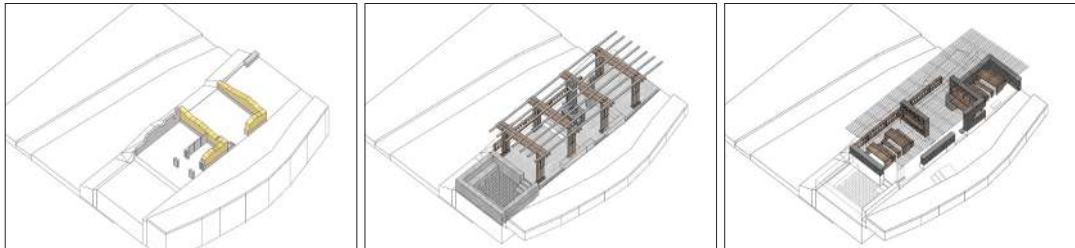




#### PIGSTY > BUILDER'S DORM. PROCESS



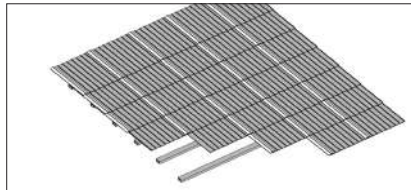
#### COW HOUSE > KITCHEN & DINING PROCESS



#### CONSTRUCTION METHODS



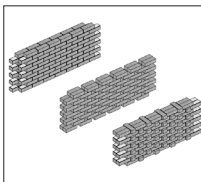
BAMBOO WEAVING ROOF



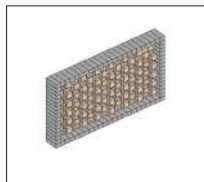
METAL PLATE ROOF



TIMBER-BAMBOO BELUSTRADE



GREY BRICKS



COMPRESSED EARTH BRICKS



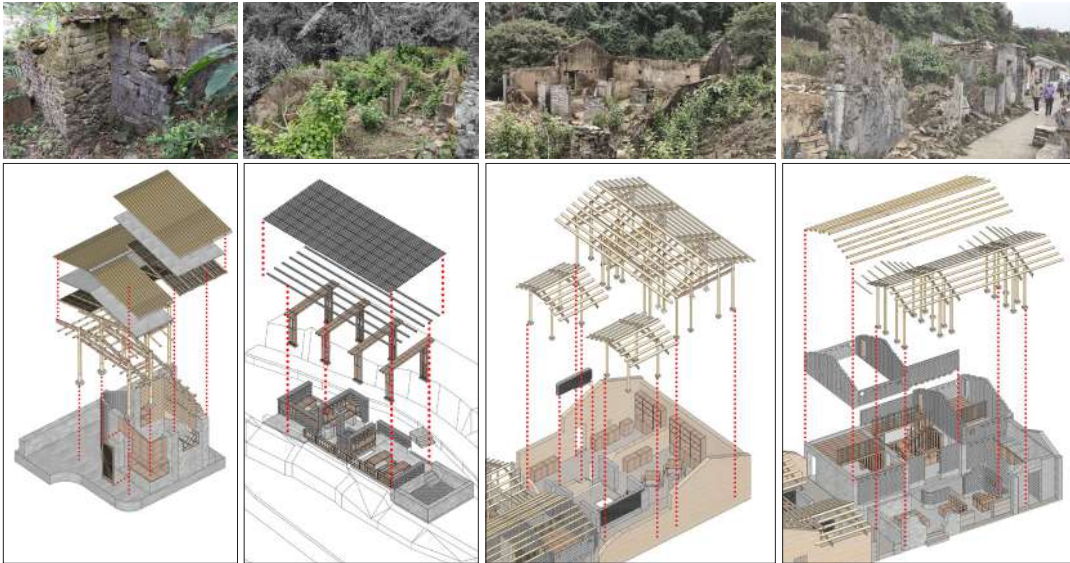
TILES ON EXISTING



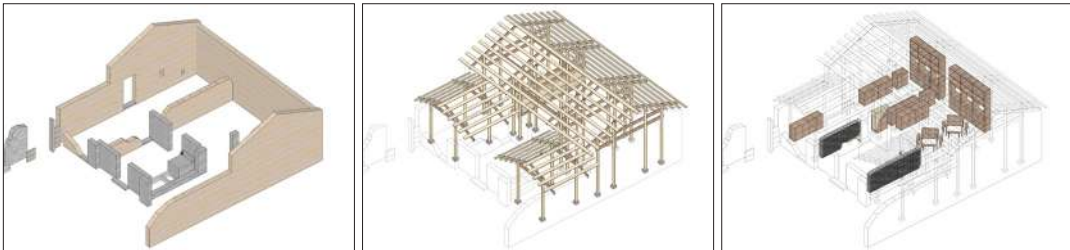
TILES FENESTRATION



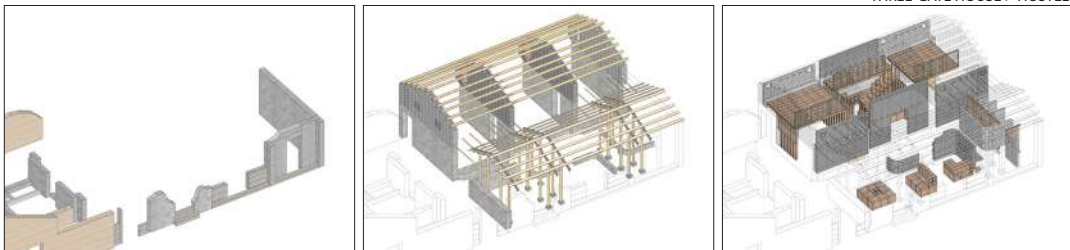
SIMPLE CONCRETE FLOORING



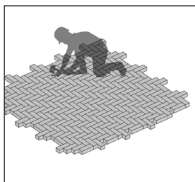
OLD HOUSE > EXHIBITION



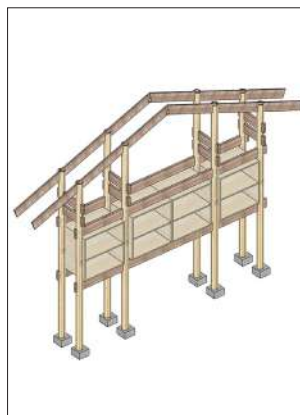
THREE-GATE HOUSE > HOSTEL



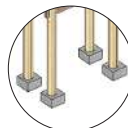
BAMBOO WEAVING DOOR



BRICK LAYING FLOORING



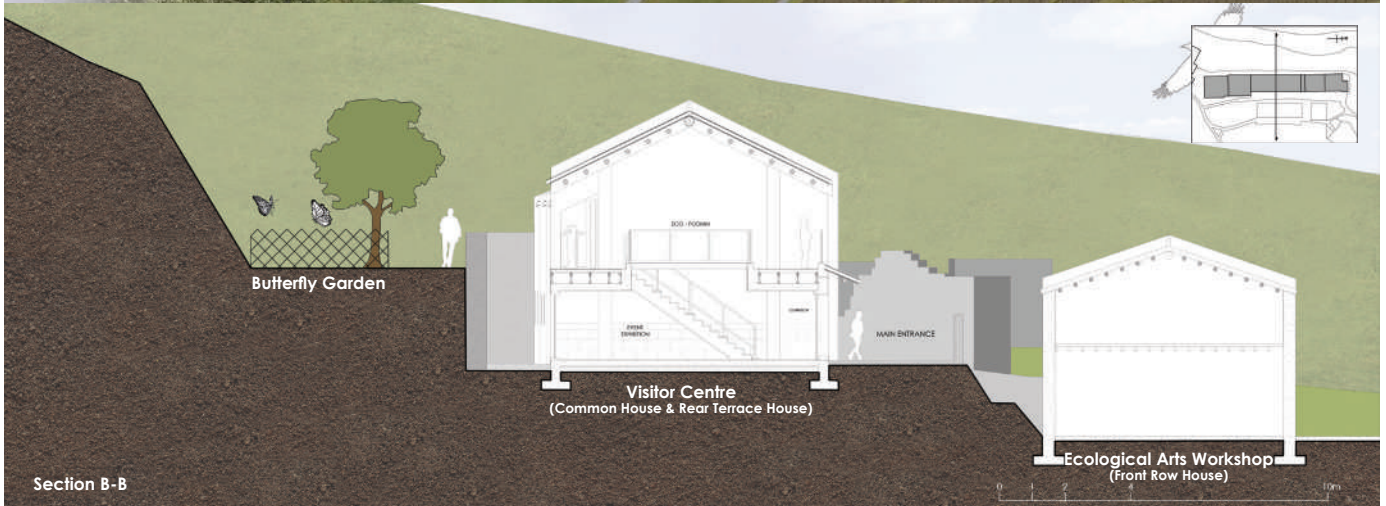
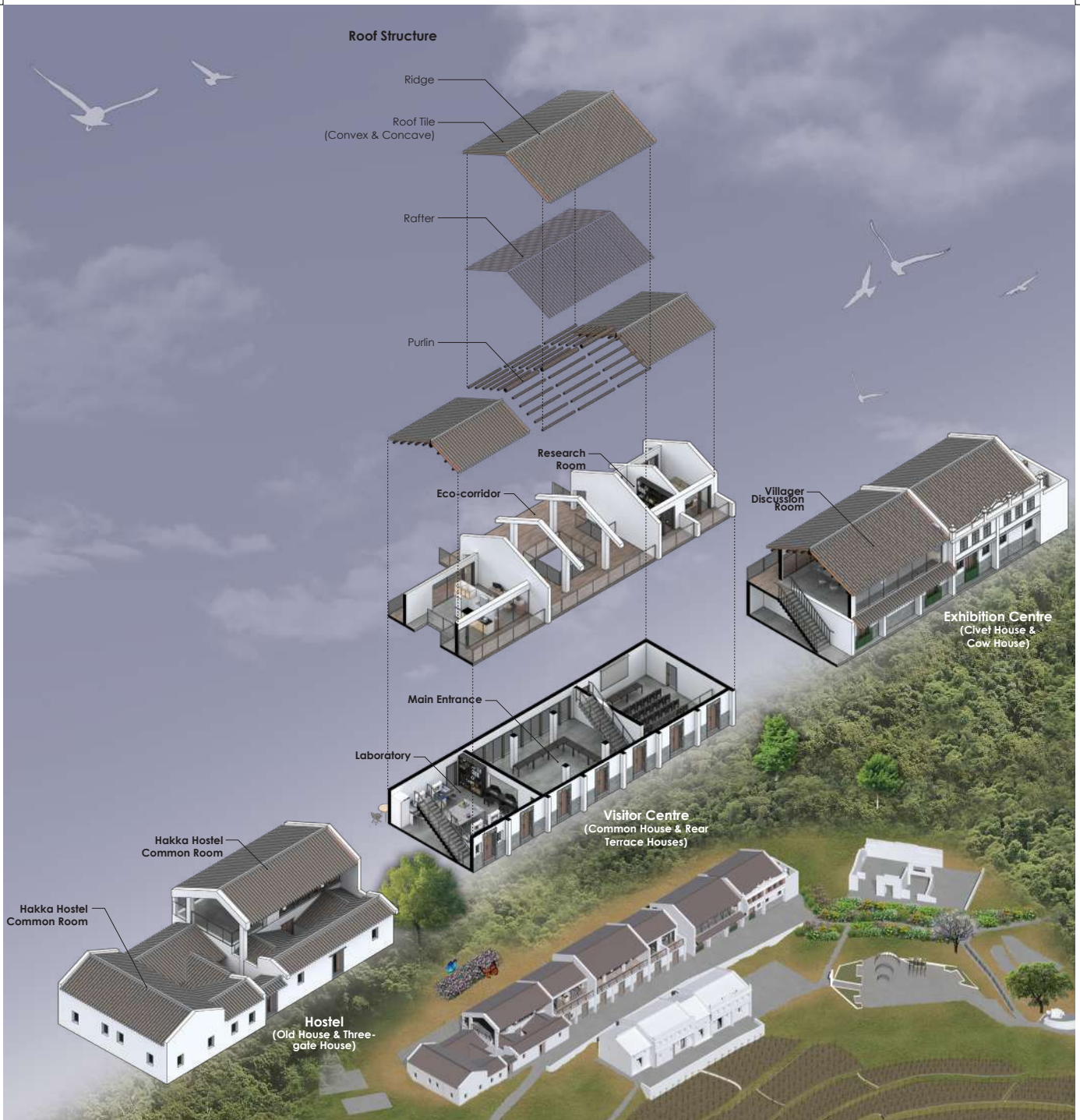
TIMBER-BAMBOO STRUCTURAL FRAME



TIMBER STRUCTURAL FRAME







## **Symbiosis with Nature: Research Workstation in Mui Tsz Lam**

By LAI Ting Yan Nicole

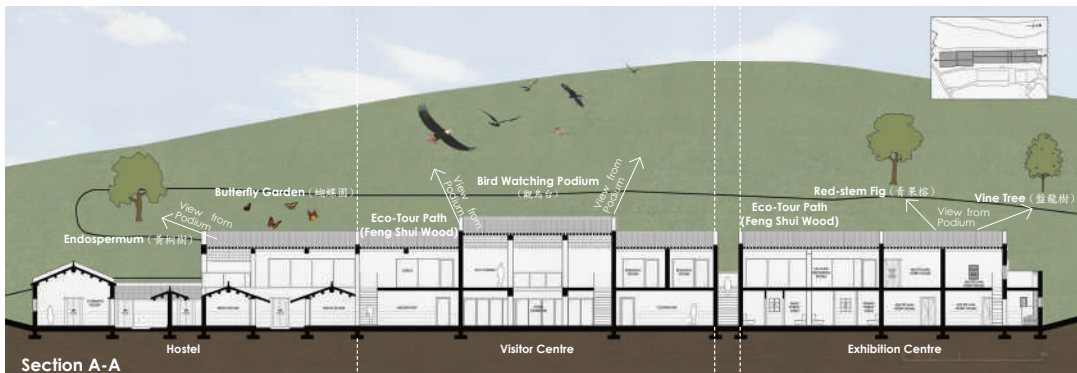
Mui Tsz Lam is an abandoned village since all the villagers moved out in 1970s. Lack of maintenance, buildings collapsed and the nature took back the farmland, becoming forested mountains. Due to the introduction of Community Revitalization Scheme in 2021, some villagers came back to the village, rebuilt some of the houses and tried to recultivate.

As the village was abandoned long times ago, how could we rebuild the houses together with the farmland to create a sustainable environment? As we all knows that construction may destroy the natural environment, how could we monitor and control the damage? The aim of the project is to use scientific research to rebuild the appropriate natural environment in Mui Tsz Lam, and control the damage caused by construction, so as to create a sustainable environment for both humans and animals to live.

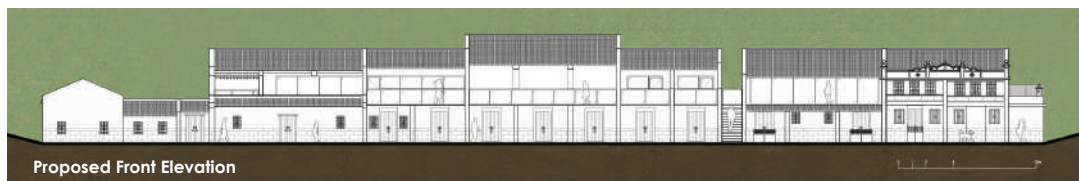
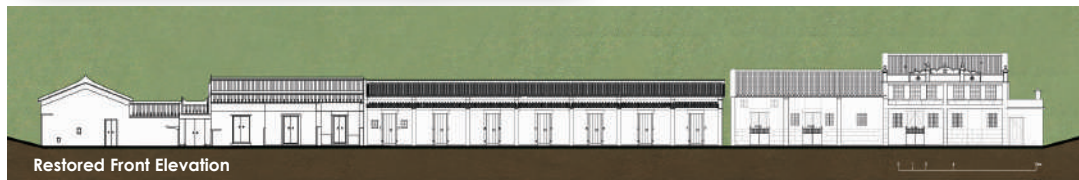
The massing and layout of the whole building cluster originate from the former Hakka House studied previously. The basic layout of the design follows the layout in the past, but some of the walls are broken down to form a more openable space for exhibition or discussion room. A longitudinal eco-corridor is designed to connect all the back houses including Old House, Three-gate House, Common Houses, Rear Terrace House, Civet House and Cow House. The eco-corridor also acts as connect to link up the front façade of the back houses to eco-tour path.

The location and provisions of functional rooms are based on villagers' aspiration and current programs. For example. OWLHK requires research workstations to study and monitor biodiversity. Since HKU aims to relocate the Story House from Front House to Cow House, the purposed design follow the principle of this relocation.













## Permaculture Design in Mui Tsz Lam

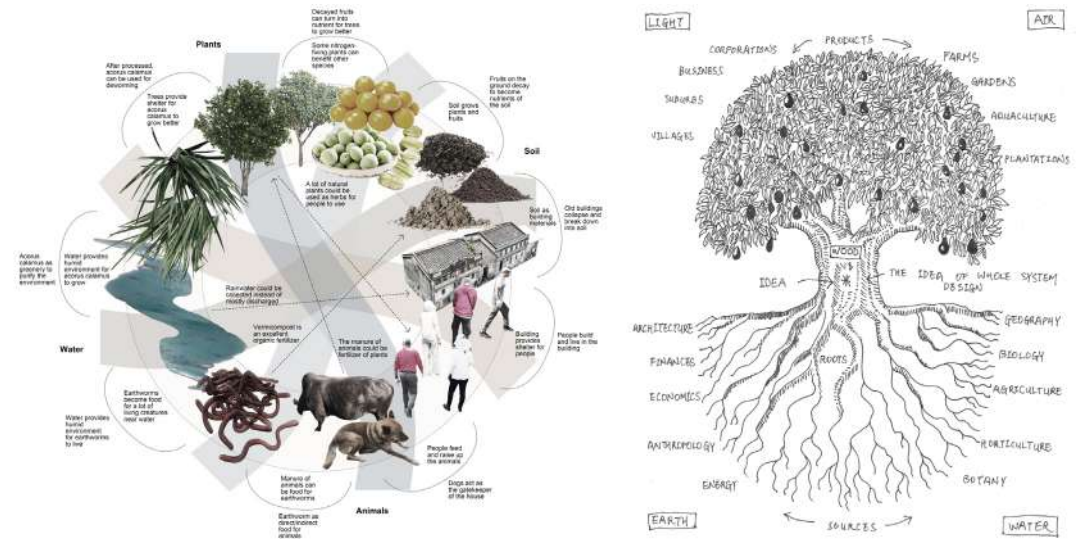
By CHEONG Kam Seng Tommy

Mui Tsz Lam Village is one of the 7 villages in the Hing Chun Yeuk Alliance situated in Sha Tau Kok. In the past, the farmland was fully grown with plums and tangerine, rice field was also grown to form a self-sufficient community. As people started to move out in 1960s, the terrace field gradually became abandoned.

In recent years, the once abandoned farmland is now undergoing revitalization project including experimental restorations to its traditional Hakka houses and farmland to conserve, revitalize and enhance the natural, cultural and landscape values of the village. Also some part of the terrace field will be used as camp site and provide different learning activities under the other Conservation Scheme. This project will look at how the people (villagers, farmers, camp site users, visitors) and buildings (old and new structures) could engage with the natural eco-systems and the landscape environment in Mui Tsz Lam.

One of the main concept to be integrated into the design is Permaculture - a design system for creating sustainable environments. The word permaculture is a contraction of permanent agriculture and also of permanent culture, it deals with the relationship we can place between plants, animals, buildings and infrastructure in the landscape. The spirit of permaculture lies in the skillful use of nature and simulating nature. First we will understand the elements of nature such as climate, soil, vegetation, animals, etc., and then apply them to the design of human life after understanding their relationship and operating rules.

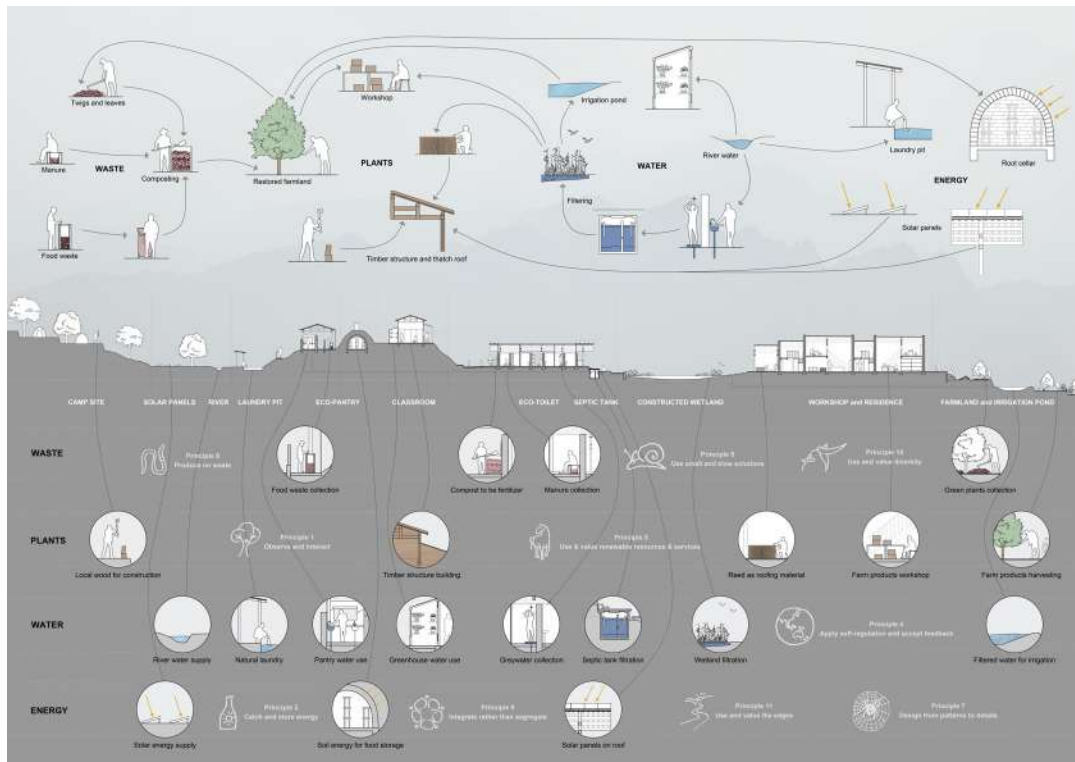




1 Permaculture is an approach to land management and settlement design that adopts the arrangements observed in the natural ecosystems, it makes use of the intrinsic characters of plants and animals integrated with the natural elements of the structure and landscape to create a self-supporting system.



2 Site plan - The word permaculture is a contraction of permanent agriculture and also permanent culture, it deals with the relationship we can place between water, plants, buildings and people in the landscape.

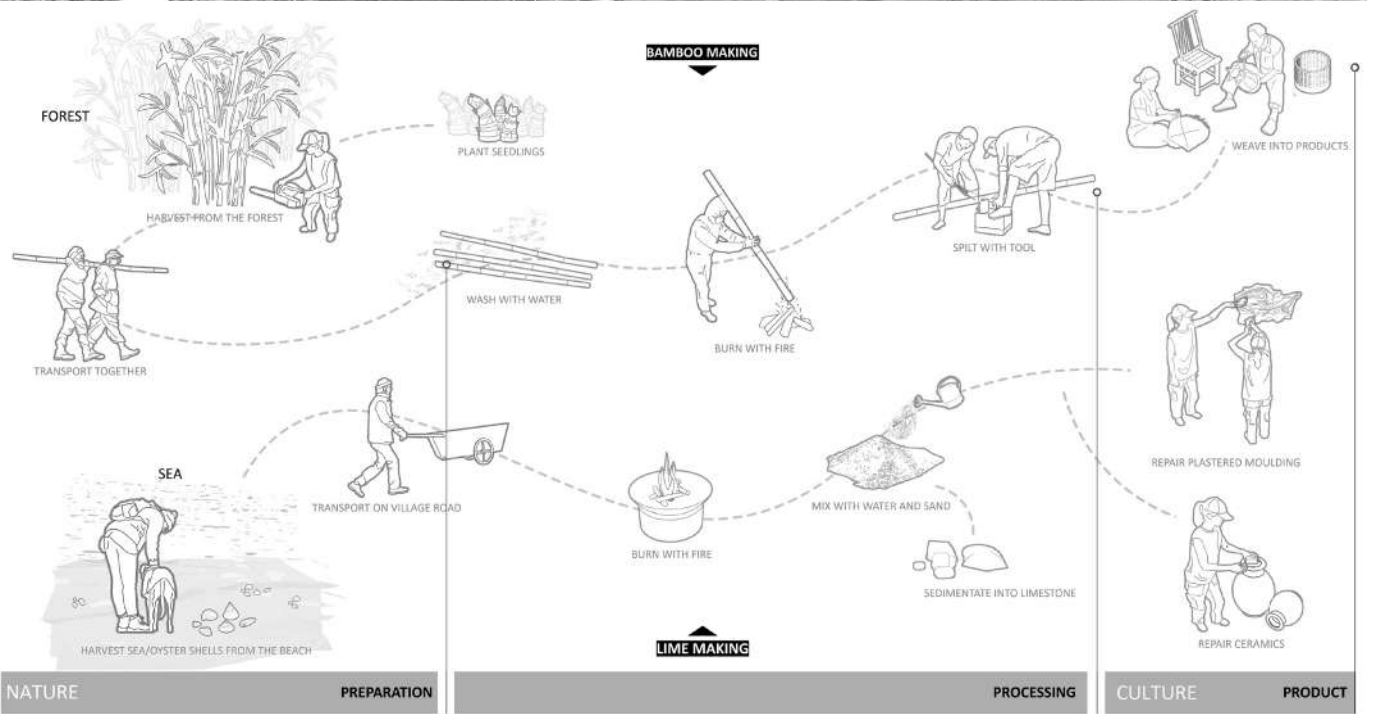


3 The resources flow diagram - Permaculture is about our relationships with, and the design and redesign of, natural resource management systems.



4 The basis of permaculture are the ethics that direct the use of the 12 design principles and ensure they are used appropriately. These principles could be applied universally to reform ourselves in the personal, social, economical and political way.





## **Rediscovering Hakka Craftsmanship Culture: Co-creation Workshop and Museum**

By LIU Yanxi Lucia

This project aims to explore the possibilities of using regenerative methodologies to rediscover the memories of Hakka culture and revive traditional craftsmanship in rural Mui Tsz Lam village, Sha Tau Kok. This village used to have Hakka characteristic architecture and humanistic culture. In the village, we can easily find many traces of crafts left in the village. For example, bamboo weaving products, delicate plastered moulding, and various kinds of ceramics. However, in recent decades the high level of urban development has made the villagers no longer want to live in the village and choose to migrate instead. The result is that many aspects of this village are in a dilapidated state: the collapse of houses, the departure of villagers, and the abandonment of farmland, accompanied by the loss of the characteristics that belonged to this village. Similarly, other villages in Hong Kong are facing these issues.

The project tries to propose a regenerative construction method for rebuilding villages: planting bamboo forests and using treated bamboo as the main building structure. Bamboo has transformed the traditional timber beam structure and is a new sustainable construction method since it is environmentally friendly and locally-resourced. The old house is the project's starting point, and this new method can be adapted to other buildings in the village, as well as other similar villages in Hong Kong.

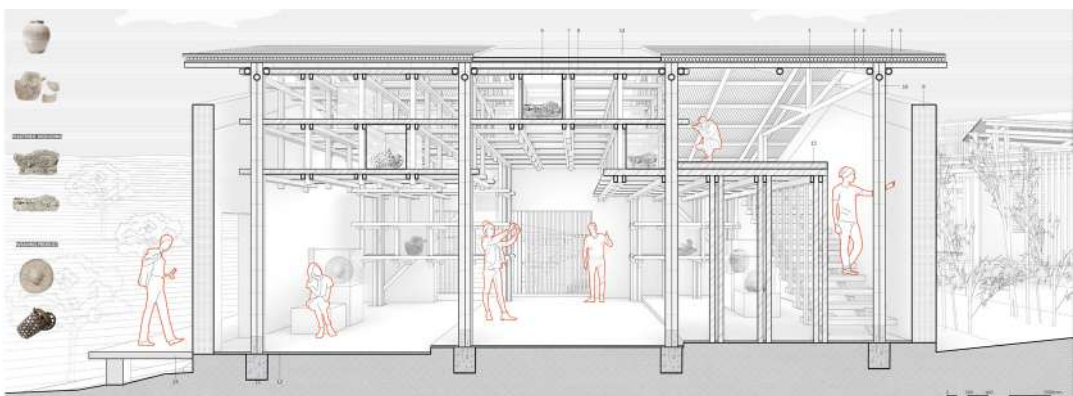
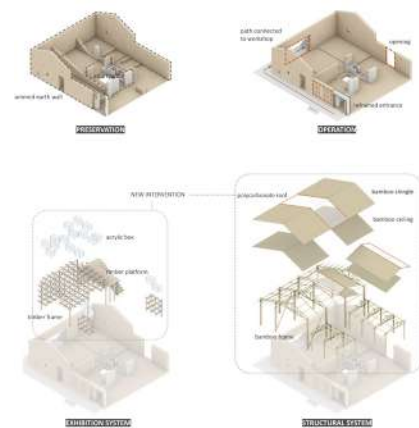
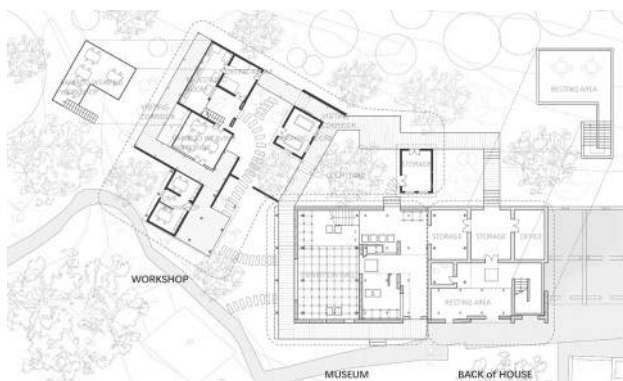
Through the co-creation of products that can convey the elements of Hakka culture and then display in the museum to promote traditional culture to other visitors. This will create a cycle to attract more people to come and know the village. This process not only provides a communication place for different people to gather in this remote village, but also enables the Hakka architectural elements and Hakka culture that have disappeared in Hong Kong to be passed down from generation to generation, finally achieving the aim of revitalization.





## EXHIBITION MUSEUM

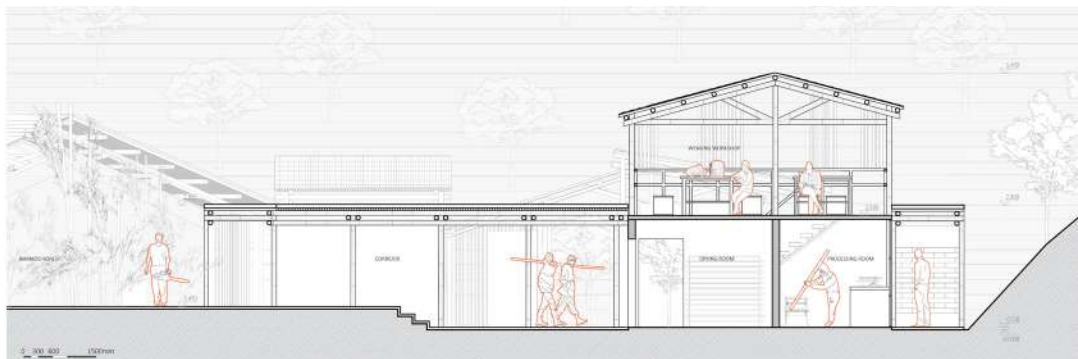
The exhibition museum is to display the cultural artefacts found in the village and the products made in the workshop by inserting new





## CO-CREATION WORKSHOP

A new workshop space transformed from the traditional space layout is built on the original site of the old school. People co-create and learn traditional culture together in experiential workshops, making bamboo weaving and restoring cultural









## **Hakka Culinary Tourism In Mui Tsz Lam: A Community And Food Oriented Space To Inherit Hakka Food Culture**

By SO Ka Man Kammy

There is a Chinese saying: 「一方水土養一方人」 meaning that each place has its own way to support their inhabitants. Hakka people live off the land, whatever grew in these fields provided the stability in food and economy, Hakka cuisine was created.

The idea of the project is derived from the Hakka food culture, to create a community and food oriented space that built from accessible local materials – bamboo, which aims to improve the congestion in kitchen and temporary dining area in Mui Tsz Lam.

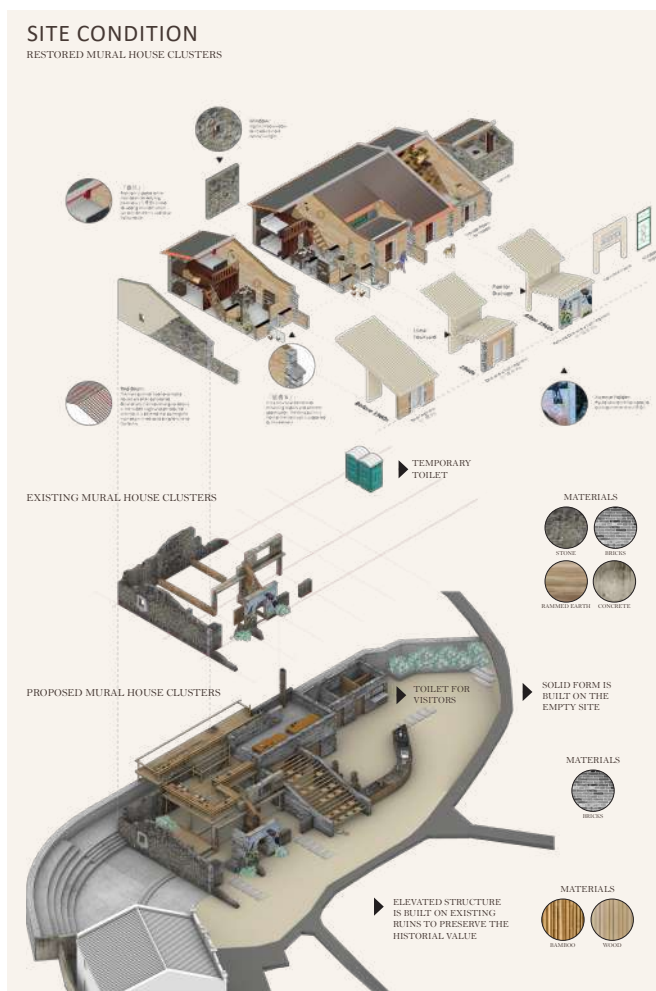
Taking advantages of wild ingredients in Mui Tsz Lam and local harvests from recultivation in Lai Chi Wo, the program of the Hakka Culinary Tourism is proposed according to the life cycle of these local foods. By growing, harvesting, storing, cooking with traditional stove, and composting firewood ash, we restart the cycle in Mui Tsz Lam. Although the majority of local villagers have either emigrated to the United Kingdom or moved out to urban areas, members of the village are encouraged to help completing each stage, allowing the structure to become a platform for cooking workshops, gathering activities and even celebrating occasions throughout the year. Villagers' and visitors' participation extends and completes the life cycle of local foods, which turning it to a symbiotic relationship.

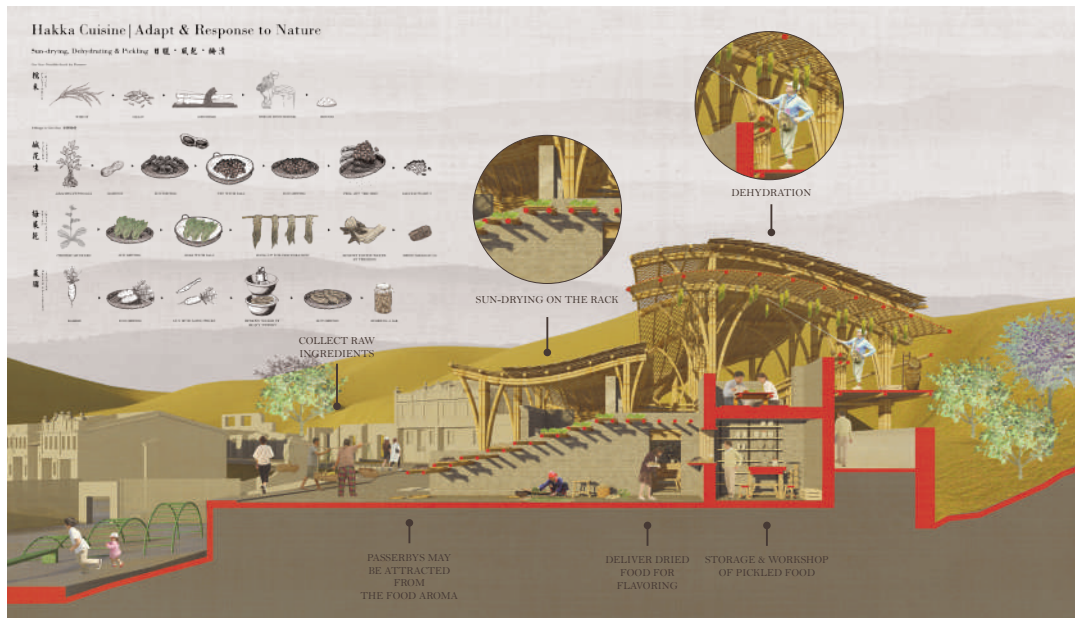
By showcasing the essence of Hakka food making process: sun-drying, dehydrating, and pickling in the culinary workshops, it attracts both villagers and visitors to store, prepare and enjoy local foods in the forgotten Hakka village. Hence, it revitalizes the ruins while inheriting the traditional Hakka food culture.





SITE PLAN | RELATIONSHIP WITH THE SURROUNDING





SECTION | HAKKA FOOD MAKING PROCESS



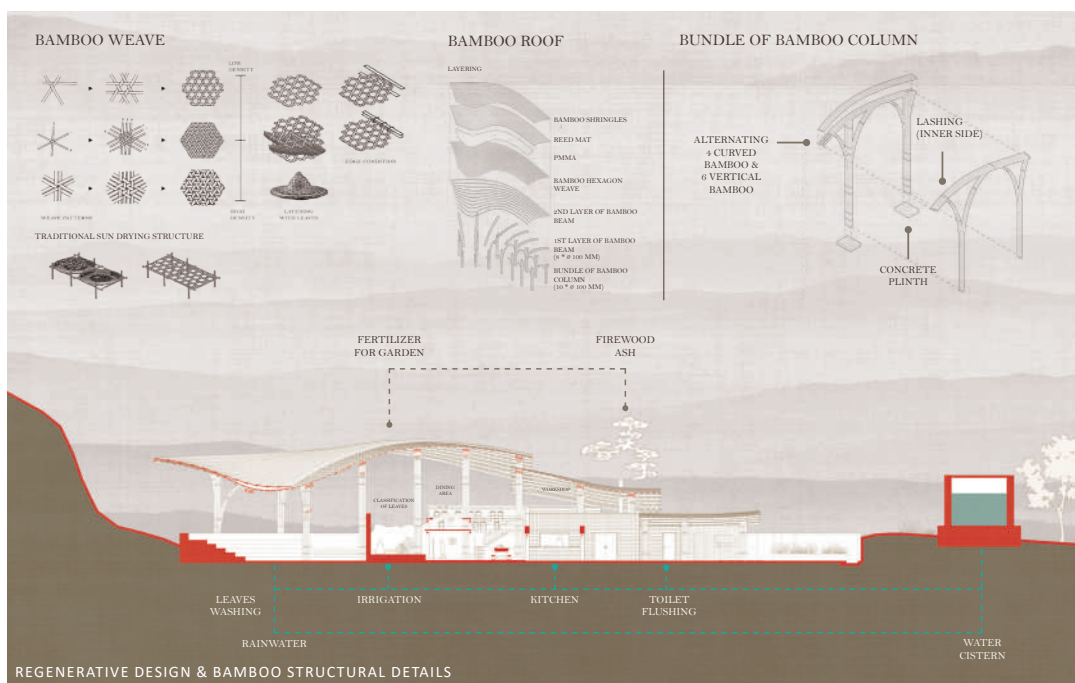
WASHING AREA



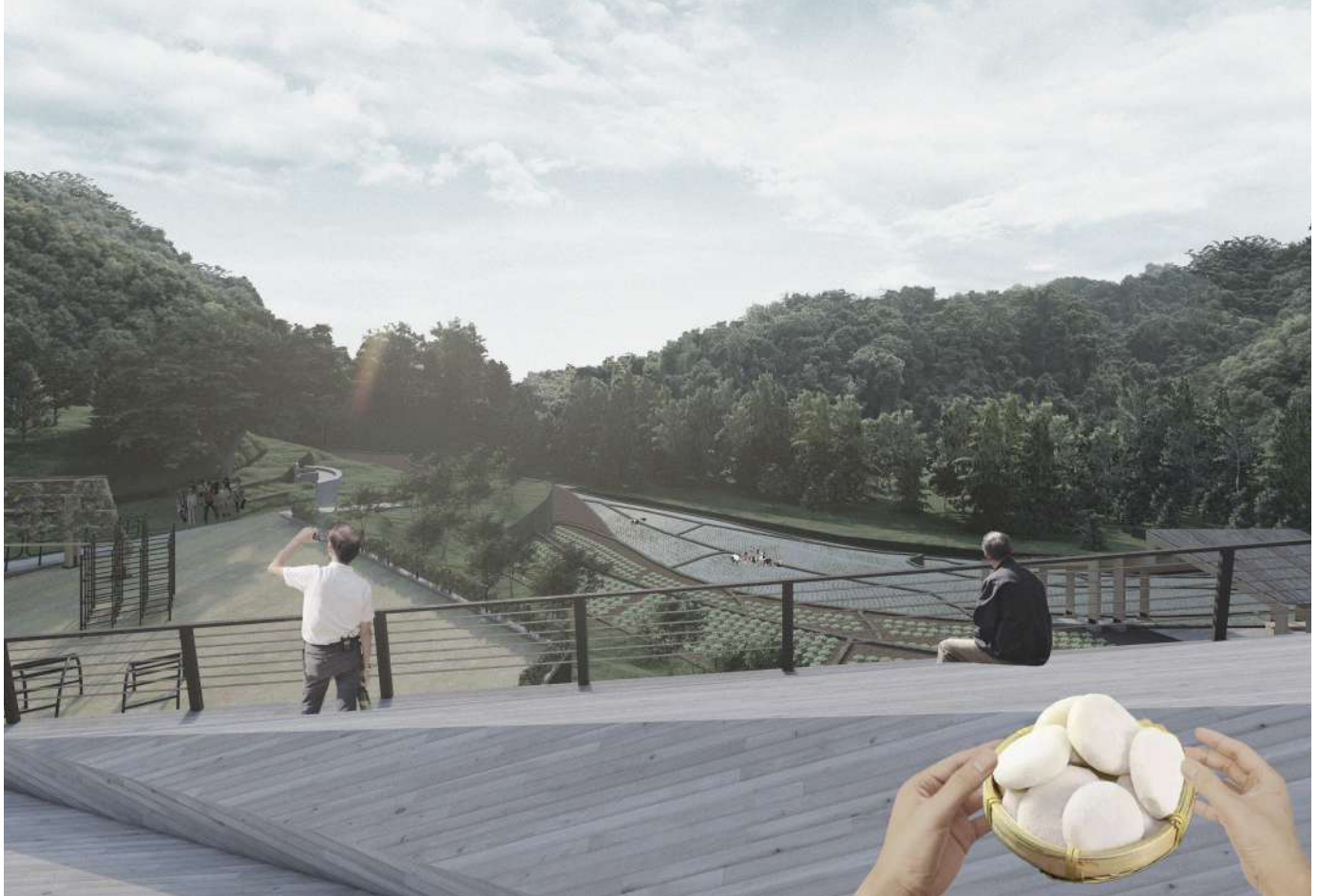
OPEN SPACE FOR OCCASIONS



OUTDOOR KITCHEN







## **Re-creating Rural Commons to Revive The Village: Communal Kitchen and Playground as New Marketplace**

By TSE Ka Hei Hayden

Many once-thriving remote Hakka villages have disappeared, depopulated, or are under threat, and while a wealth of valuable traditions and skills have become the historical rudiment that we could see in the village. No villager remained in Mui Tsz Lam, one of the seven villages in the Hing Chun Yeuk Alliance.

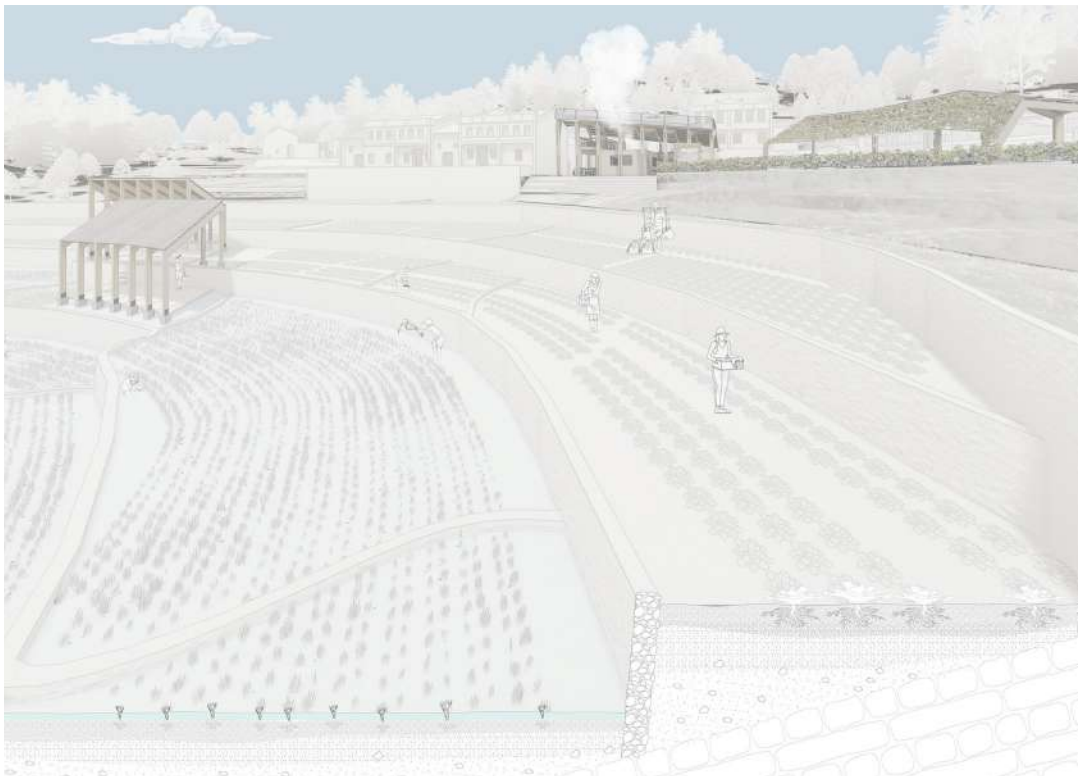
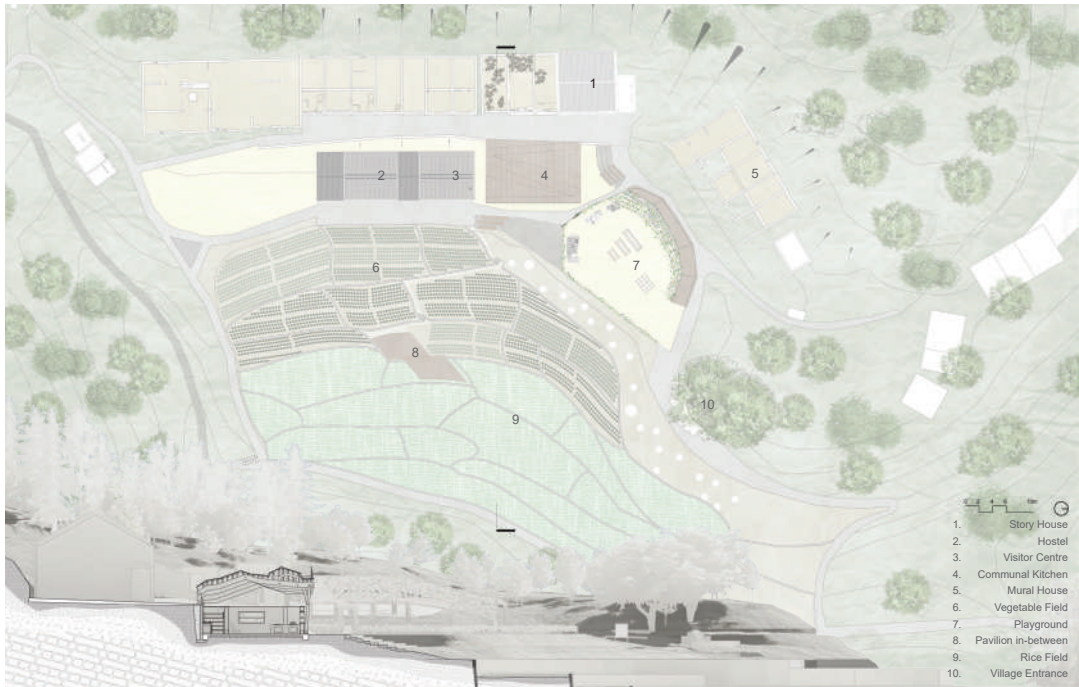
The project demonstrates how a socially-focused master plan enables people to return to Mui Tsz Lam, rejuvenate the community and secure a sustainable future, with minimum gestures to the village to have productive results.

Eating is an important event for Hakka people. They shared stories and experience to others when sitting in the same space. Considering the decline of Hakka food culture and the need of the site, a communal Kitchen provides traditional Hakka food with local ingredients to visitors and provides a workshop space to inherit the Hakka rice food culture, to educate knowledge of Hakka food culture with workshops to experience how Hakka people respected to a human-nature relationship.

The terraced field in Mui Tsz Lam is an art of nature, being changed over time and seasons. reinforcing the site's ecology by reviving parts of the rice field, creating a new eco-system, and being beneficial to the natural environment.

Throughout revitalizing farming activities and rediscovering community resources to create a new rural-urban community, the interventions and planning can achieve sustainable Mui Tsz Lam.











Reunion at National Day



## Appendix

Past Activities in Mui Tsz Lam





Discussion with Students in Annual Villager Assembly



Video Shooting by Radio Television Hong Kong





Stone Collection by Students of The Chinese University of Hong Kong



Construction Work by The Chinese University of Hong Kong















