



Heritage Impact Assessment on  
Chai Wan Factory Estate  
at No. 2 Kut Shing Street, Chai Wan, Hong Kong

April 2013



香港房屋委員會  
Hong Kong Housing Authority

# HERITAGE IMPACT ASSESSMENT ON CHAI WAN FACTORY ESTATE

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# INTRODUCTION

## 1.1 Background

Chai Wan Factory Estate (CWFE) is a historic site with cultural significance, and is the only surviving example of the first batch of factory estate built by the Resettlement Department in 1959. The local community, District Council Members and Legislative Council Members have requested the Government to preserve and revitalize the existing CWFE building. CWFE was accorded as Grade 2 Historic Building by Antiquities Advisory Board on 20th February 2013.

Having considered the local aspiration to preserve CWFE and the need to increase the supply of public rental housing (PRH), the PRH conversion scheme of CWFE has been developed and announced by the Chief Executive on 30 August 2012.

In view of the above, Hong Kong Housing Authority has commissioned the Centre for Architectural Heritage Research, the Chinese University of Hong Kong to conduct a HIA on CWFE. The aim of this HIA report is to assess the impacts on the historic fabrics of CWFE arising from the implementation of the proposed project so that adverse impacts could be avoided or minimized with appropriate mitigation measures. The report is divided into three parts:

- Part I: Understand the significance
- Part II: Develop conservation guidelines
- Part III: Assess the impact on the heritage

## 1.2 Site particulars

Address	2 Kut Shing Street, Chai Wan
Historic designation	Grade 2
Completion year	1959
Original use	Industrial use
Current use	Vacant
Zoning	Comprehensive Development Area ("CDA")
No. of storey	6 storeys
Building footprint	Approximately 40.2m x 84.3m
Site area	Approximately 0.34 hectare

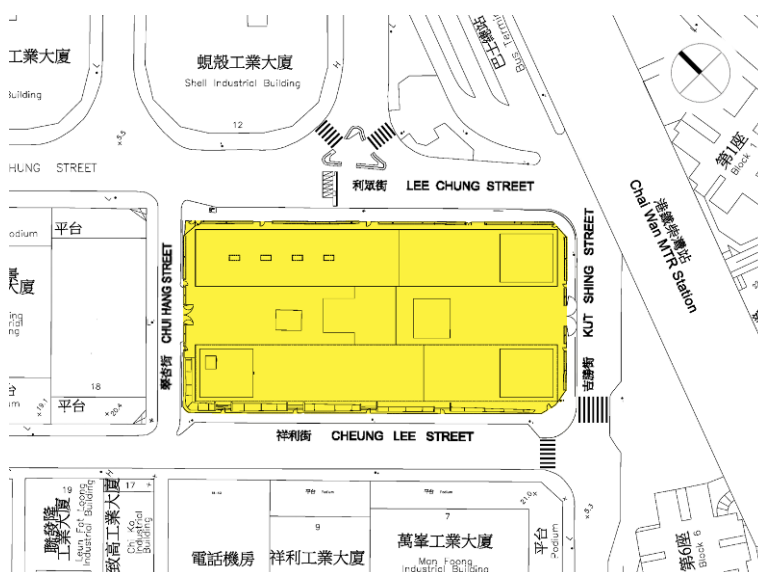


Fig. 1. Site map of the Chai Wan Factory Estate.  
(Courtesy of the Survey and Mapping Office, Lands Department, Hong Kong SAR Government, survey sheet no.: 11-SE-19A (partial).)



Fig. 2. External view of CWFE.

## 1.3 Methodology

### 1.3.1 Part I – baseline study

The conservation process adopted for part I generally follows the Burra Charter Process<sup>1</sup> and James Kerr's model of Conservation Plan,<sup>2</sup> which will be mainly divided into two major stages:

#### 1. Understand the Place

Research, analysis, survey, and investigation, collectively known as conservation-based research and analysis is carried out to understand the significance of the building and its landscape, thus inform decisions about repair, alteration, use and management.<sup>3</sup> The context and the essence of CWFE will be understood through a multi-disciplinary research, which helps to determine its cultural significance and establish the Statement of Significance.

#### 2. Develop Conservation Guidelines

Base on the Statement of Significance and other factors, such as the physical condition, statutory requirements or any other external requirements, requirements for the retention of significance, and client's requirements or feasible uses, to further develop conservation guidelines. This mainly includes the determination of the accepted level of intervention to the Character Defining Elements, and establishment of the conservation approach, followed by preparing detailed guidelines to the conservation of the Character Defining Elements and providing recommendations for treatments of architectural features, including the salvaged relics on site.

### 1.3.2 Part II – heritage impact assessment

The heritage impact assessment study generally follows the Heritage Impact Assessment Guidelines prepared by the Antiquities and Monuments Office<sup>4</sup>, James Kerr's Heritage impact statement as introduced in his model of Conservation Plan<sup>5</sup>, and Heritage Impact Statements – Guidelines prepared by the Australian Heritage Council.<sup>6</sup>

The baseline study mentioned above provides a general guide to the retention of the heritage values. The proposal to convert the historic place to compatible uses will be examined by studying its impact on the assessed significance of the place relating to the conservation policies established. Affected parts and areas of the place will be identified, together with any statutory and non-statutory requirements. Direct and indirect impacts and the visual impacts on the built heritage and surrounding landscape and context will be clearly stated. The extent and the ways in which heritage values of the place are affected by the proposal will be evaluated, with the identified heritage impacts classified into different levels. Mitigation measures will be recommended for acceptance, conditional acceptance on modification, or rejection of the proposal. This

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<sup>1</sup> Australia ICOMOS, *The Burra Charter*, 1999, p. 10.

<sup>2</sup> Kerr, J.S. *Conservation Plan*. National Trust of Australia (NSW), 7<sup>th</sup> edition, 2013. Retrieved on 9 April 2013 under Australia ICOMOS, website: <http://australia.icomos.org/publications/the-conservation-plan/>

<sup>3</sup> Kate Clark, *Informed Conservation: Understanding Historic Buildings and Their Landscapes for Conservation*, London, English Heritage, 2001, p.9.

<sup>4</sup> Development Bureau, *Technical Circular (Works) No. 6/2009 – Heritage Impact Assessment Mechanism for Capital Works Projects*, 2009.

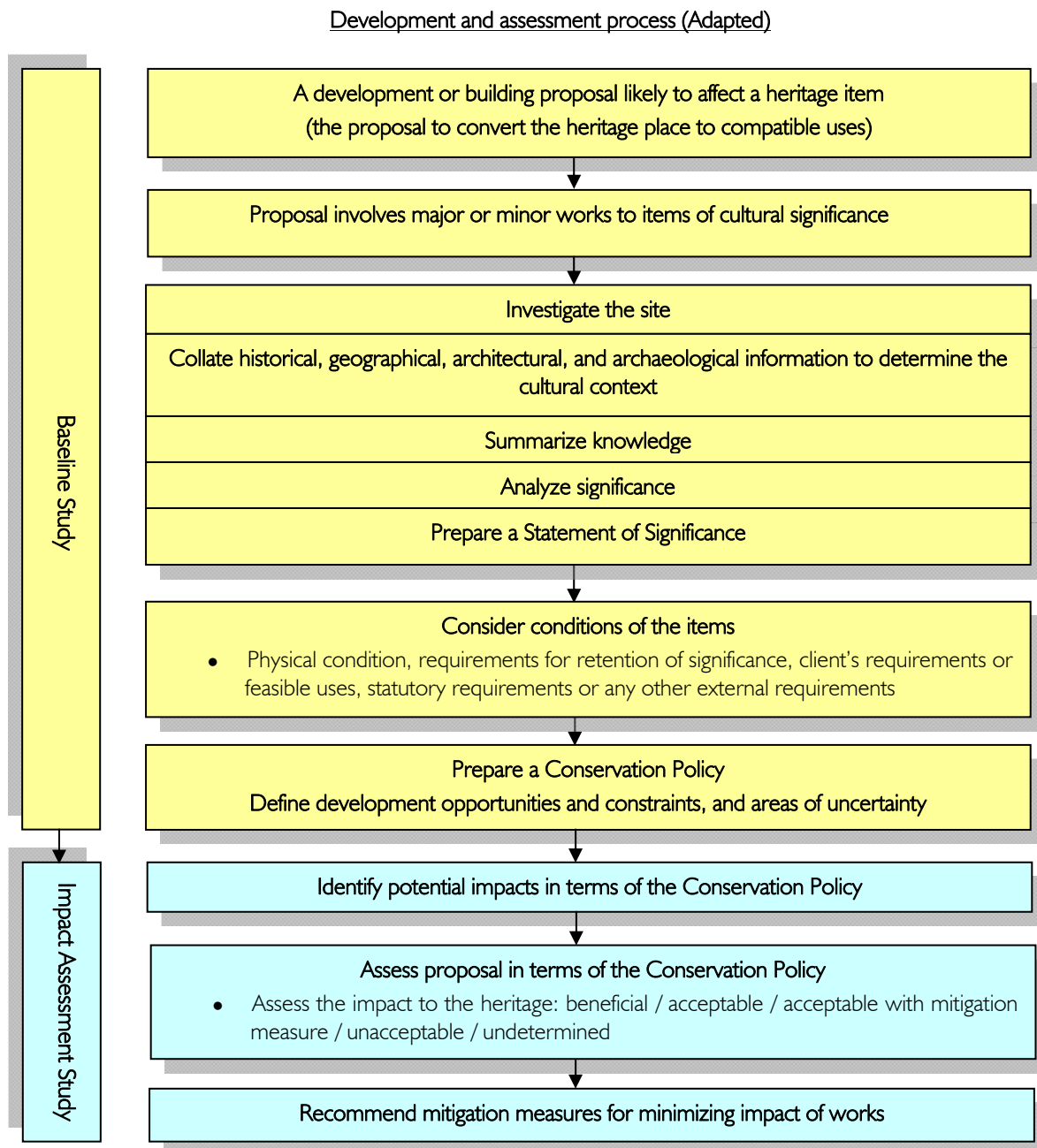
<sup>5</sup> Kerr, J.S. *Conservation Plan*. National Trust of Australia (NSW), 6<sup>th</sup> edition, 2004, pp. 42-43 and pp. 62-63.

<sup>6</sup> See *Heritage Information Series: Heritage Impact Statements Guidelines*. Retrieved on 4 March 2013 under Heritage Council (Victoria), website: [http://www.dpcd.vic.gov.au/\\_\\_data/assets/word\\_doc/0004/61789/Heritage\\_Impact\\_Statement.doc](http://www.dpcd.vic.gov.au/__data/assets/word_doc/0004/61789/Heritage_Impact_Statement.doc). See also *Statements of Heritage Impact*. Retrieved on 4 March 2013 under Heritage Council (NSW), website: <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf>.

includes recommendation of mitigation actions to reduce the adverse impact of the proposal on the significance of the historic place and help to improve the design in the design process.

### 1.3.3 Development proves of the Heritage Impact Assessment

The process is adapted from Development and Building Approval Flow Chart, in the guideline of Statements of Heritage Impact prepared by the Heritage Council of New South Wales.<sup>7</sup>



<sup>7</sup> *Statements of Heritage Impact*. Retrieved on 4 March 2013 under Heritage Council (NSW), website: <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf>.

# 2

## SITE AND CONTEXT

### 2.1 Historic place

#### 2.1.1 Early Settlement of Chai Wan

Chai Wan is situated in the Eastern district of Hong Kong Island. Today's Eastern district encompasses the area east of Causeway Bay, including the Victoria Park, North Point, Quarry Bay, Shau Kei Wan, Chai Wan, and Siu Sai Wan.<sup>8</sup> (Error! Reference source not found.)

The flat inland bay and sheltering hills, coupled with a stable source of fresh water made the area favourable for agricultural activities. Fishing and agricultural was carried out in Chai Wan since the Ming Dynasty (1368-1644).<sup>9</sup> Fishing boats would also take shelter and refill stocks at the inland bay of Chai Wan.<sup>10</sup> (Fig. 4 - Fig. 5)

Newcomers started to populate the Chai Wan area as the Qing Government began to reverse the Evacuation Order in the 8th year of Kangxi era (1669).<sup>11</sup> New settlers in the area included the Laws 羅氏 from Pak Heung, Yuen Long 元朗八鄉, Shings 成氏 from Man Gong Uk, Sai Kung 西貢孟公屋, Luks 陸氏 from Tam Shui, Wai Yeung 惠陽淡水, and later on, the Nams 藍氏 and Yaus 邱氏.<sup>12</sup> They built the Law Uk 羅屋, Shing Uk 成屋, Luk Uk 陸屋, and Nam Uk 藍屋 in the area, each of these small villages were named by the clan's surname. (Fig. 6 - Fig. 7)

Apart from agriculture and farming, these villagers relied their living on ceramics industry 灰窯業. The proximity to the sea allows villagers to extract shells and corals undersea as raw materials for making ceramics, the fuels would have been provided by the abundant firewood logs from the surrounding hills.<sup>13</sup> The area was believed to be lush in forestation which would have supplied a large amount of firewood logs, and was therefore given the name Chai Wan 柴灣, literally Firewood bay.<sup>14</sup>

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<sup>8</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 2.

<sup>9</sup> Lu Kow-choy 饒玖才, *Xianggang de diming yu difang lishi*- 香港的地名與地方歷史 [Place Names and local history of Hong Kong]. Hong Kong: Cosmos Books, 2011, p. 134.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*

<sup>12</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.

<sup>13</sup> *Ibid.*

<sup>14</sup> Lu Kow-choy 饒玖才, *Xianggang de diming yu difang lishi*- 香港的地名與地方歷史 [Place Names and local history of Hong Kong]. Hong Kong: Cosmos Books, 2011, p. 135.





Fig. 3. Location of Chai Wan.  
(Survey and Mapping Office, Lands Department, series HM50CL, Sheet 2, 12th Edition, 2005.partial)).



Fig. 4. Chai Wan Bay sheltered by surrounding hills, c. 1930.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 9.)



Fig. 5. Flat inland bay and sheltering hills in Chai Wan, 1946-47.  
 (from Hedda Morrison, *Hedda Morrison's Hong Kong: Photographs & Impressions 1946-1947*, Hong Kong, Hongkong Conservation Photography Foundation: Hong Kong University Press, 2005, p. 101.)



Fig. 6. Law Uk, 2013.





Fig. 7. Property Contract issued to the Law Uk Owner by the Qing Government in 1767.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 82.)

### 2.1.2 Chai Wan in the Colonial era

Chai Wan is on the eastern end of the Eastern District. Geographically it is fronted by the sea on the North, and surrounded by Mount Collinson, Mount Parker and Pottinger Peak on the other three sides. (Fig. 3) Chai Wan was also marked as Sai Wan 西灣 in early colonial records.<sup>15</sup> In 1845, Lieutenant T.B. Collinson marked Chai Wan as 'Sywan' while conducting the first full survey of Hong Kong. The area adjacent to Chai Wan, now known as Siu Sai Wan 小西灣 was marked as 'Little Sywan Bay.'<sup>16</sup> (Fig. 8) This was probably due to a misunderstanding in the Cantonese pronunciation; the spelling was corrected in the Hong Kong Government Gazette in 1841, noting Chai Wan 柴灣 as the proper name for the area.

Various clans moved into Chai Wan since 1669, however Chai Wan remained to be a small village in terms of population size. According to the Hong Kong Government Gazette in 1841, the population in the area was only 300.<sup>17</sup> Most of the people relied on fishing and farming for a living, some also worked in ceramics industry.<sup>18</sup> Along the inland bay also lived a lot of fishermen families that lived on boats.<sup>19</sup>

<sup>15</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.

<sup>16</sup> Lu Kow-choy 饒玖才, *Xianggang de diming yu difang lishi*- 香港的地名與地方歷史 [Place Names and local history of Hong Kong]. Hong Kong: Cosmos Books, 2011, p. 135.

<sup>17</sup> See *Population, Hong Kong Blue Books, 1845(2009)*. Retrieved on July 12, 2011, from Hong Kong History and Society under Chinese Studies Major Area, The Chinese University of Hong Kong, Web Site: [http://hkhiso.itsc.cuhk.edu.hk/history/sites/hkhiso.itsc.cuhk.edu.hk/history/files/Population\\_watermark.pdf](http://hkhiso.itsc.cuhk.edu.hk/history/sites/hkhiso.itsc.cuhk.edu.hk/history/files/Population_watermark.pdf).

<sup>18</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.

<sup>19</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.

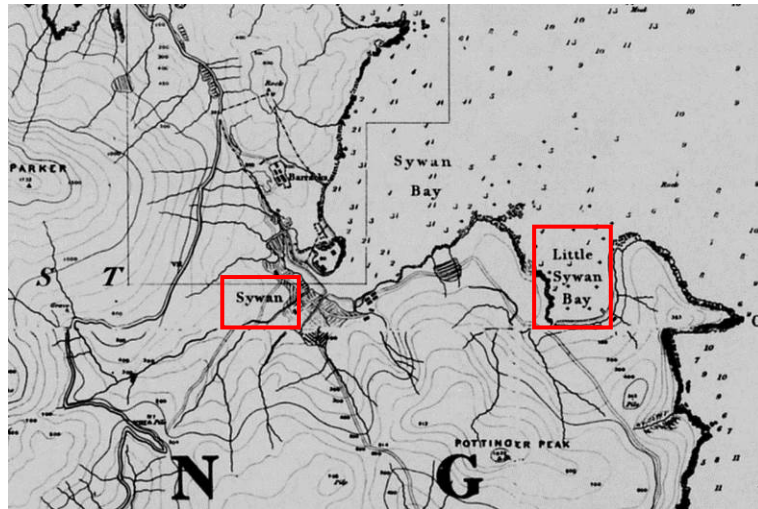


Fig. 8. The Ordnance Map of Hong Kong, 1845.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government,  
ref. no.: HE-4(partial))

### 2.1.2.1 Military Installations

Lei Yue Mun Harbour occupies an important nodal point on the eastern approach of Victoria Harbour - the waterway that surrounds the City of Victoria. In 1843, the British military built barracks in the hills near Scout Hill 童軍山<sup>20</sup>, known as the Sai Wan Barracks, the camp was however hit by severe epidemics and deadly fever which the British armies were especially prone to as they were not adapted to the subtropical climate of Hong Kong. The high death rate forced the British military to abandon the site.<sup>21</sup> (Fig. 9)

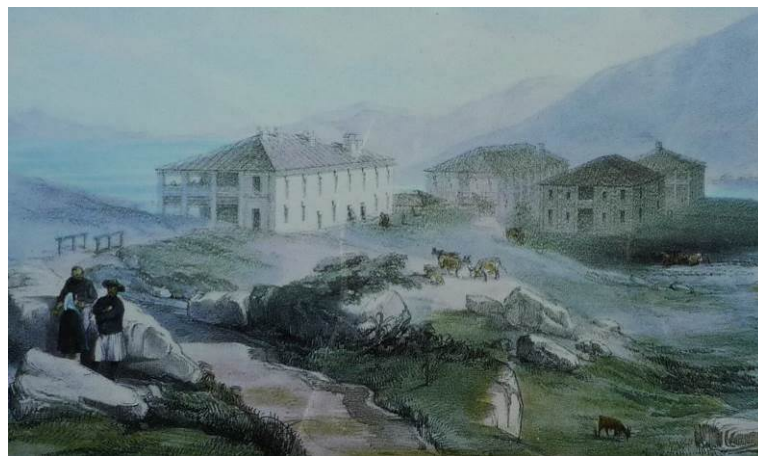


Fig. 9. Sai Wan Barracks, c. 1846.  
(from Law Uk Museum.)

### Lei Yue Mun Fort

The British army returned to the area later in late 19th century, British colonies were in possible threat from French and Russian attacks, which pressed for stronger military defense in all British colonies. The British army chose to build their site on higher land this time. The Military site on the Lei Yue Mun Headland was designed

<sup>20</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.

<sup>21</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.

by the Royal Engineers, and constructed in 1885,<sup>22</sup> it includes eighteen casemates which functioned as barrack rooms, magazines, shell store and coal store.<sup>23</sup> These structures were largely sheltered and concealed by earth at the time, and the construction completed in around 1887.

The redoubt was the core of the fortifications; the open courtyard in the center of the redoubt was used as assembly purposes. Ditches were built within the hills on the North, South and West sides, soldiers could access the inside of the fort through underground tunnels. The fort was equipped with two six inches breech loading disappearing guns.<sup>24</sup> Numerous batteries including the Central, West, Reverse and Pass batteries were constructed on the hill, all guns could be fired at various ranges, covering the whole Lei Yue Mun Channel.<sup>25</sup>

The Central Battery was completed in March, 1887, the gun can reach a distance of 3,600 metres and fire gun powder weighing up to 29 kilogram. The Brennan Torpedo station was constructed between 1892 and 1894, situated on the shoreline of the Lei Yue Mun Headland. The most up-to-date mechanical components were installed at the station.<sup>26</sup>

#### Sai Wan Fort

In 1895, the British Military built a square shaped fort on the peak of Sai Wan Hill 柴灣山. In 1898, two six inches guns were installed, and were given the name Sai Wan Redoubt and Battery. In 1920, two 3 inches guns were installed in front of the fort.<sup>27</sup>

#### Lei Yue Mun Barracks

Since 1843, the British Military had invested into the security of the Lei Yue Mun Channel by building forts and guns on both sides of the channel. The soldiers on duty at these forts and batteries lived between the guns and small huts in the beginning, but Lei Yue Mun became a larger military base of the East gradually, the needs to accommodate the soldiers is becoming inadequate. The decision to build barracks on the relatively flat plateau of Lei Yue Mun was made. (Fig. 10)

More than ten barracks were built; each differs in size, ranging from single level to three levels tall. Leisure area and exercising field were also built alongside. The construction year could be traced on some of the barracks, which indicated the years as 1909, 1935, 1936 and 1939. Other barracks without record of construction were believed to be built in the early twentieth century, and some were possibly senior official's dormitory.<sup>28</sup>

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<sup>22</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 72.

<sup>23</sup> Hong Kong Museum of Coastal Defence, under 'History' (2012), retrieved on 16/01/2013. Website: <http://www.lcsd.gov.hk/ce/Museum/Coastal/en/index.php>.

<sup>24</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 72.

<sup>25</sup> Hong Kong Museum of Coastal Defence, under 'History' (2012), retrieved on 16/01/2013. Website: <http://www.lcsd.gov.hk/ce/Museum/Coastal/en/index.php>

<sup>26</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 73.

<sup>27</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 74.

<sup>28</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 76.

### Pak Sha Wan Battery

The Pak Sha Wan Battery was completed with four guns in 1903, located on the east of the Lei Yue Mun Battery.<sup>29</sup>

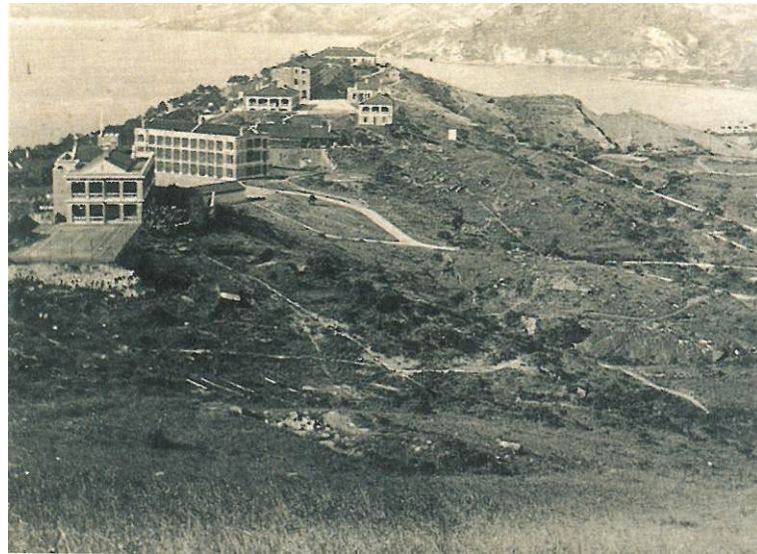


Fig. 10. Lei Yue Mun Barracks, c. 1915.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 77.)

### 2.1.2.2 Chai Wan Campsite

Scouts activity started in 1911 in Hong Kong, but was not registered with the British Boy Scouts Association until 1914, since then it became part of the International Boy Scouts Association. In 1925, the Hong Kong Branch purchased its own permanent campsite in Chai Wan, where Chai Wan Park is located today. The 64,000 square meters land cost \$16,000.<sup>30</sup> The sheltered inland bay and the small hill were ideal for the Boy Scouts that emphasizes on nature exploration. With the help of the British army, paths were paved and camps were built, the camp was officially opened in 1929. The small hill in the area was commonly known as the Scouts Hill in the neighborhood of Chai Wan Factory Estate. (Fig. 11 - Fig. 13)

<sup>29</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 78.

<sup>30</sup> . See *History of HK Scouting*, Scout Association of Hong Kong. Retrieved 29th November, 2012. Website: <http://www.scout.org.hk/en/history/hohks/00002505.html>.



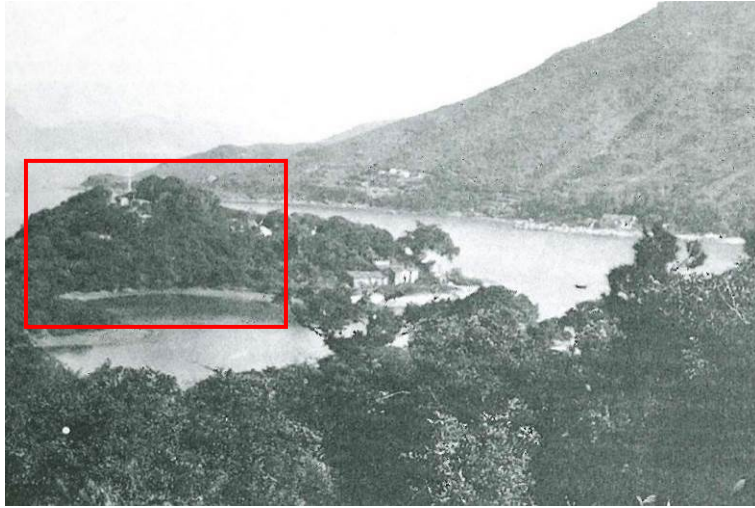


Fig. 11. Chai Wan Campsite, 1930.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 89.)



Fig. 12. Campfire Site at the Chai Wan Boy Scouts Campsite.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 88.)



Fig. 13. Scouts at the Campfire.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 88.)

### 2.1.2.3 Cemeteries

On the southern slope of Chai Wan around Mount Collinson, is a string of cemeteries, including Cape Collinson Chinese Permanent Cemetery, Holy Cross Roman Catholic Cemetery, Sai Wan War Cemetery, Cape Collinson Muslim Cemetery, and the Cape Collinson Buddhist Cemetery, and crematorium.

Among them, the Sai Wan War Cemetery 西灣國殤紀念墳場 was unveiled in 1946 (Fig. 14), for the Commonwealth and Allied Forces who sacrificed for the Battle of Hong Kong during the Second World War. 1578 soldiers were buried in the cemetery, apart from those 2071 soldiers with unknown identity.

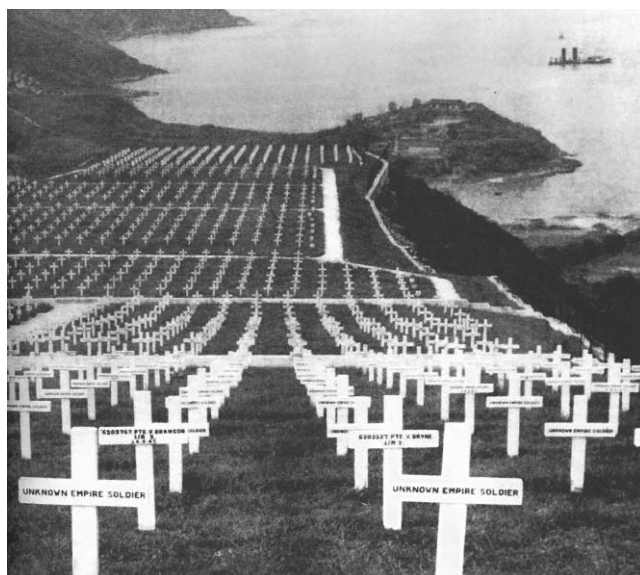


Fig. 14. Sai Wan War Cemetery.  
(from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K), 2008, p.187.)

## 2.1.3 Development and urbanization of Chai Wan since 1952

### 2.1.3.1 Historical Background of the Industrial Growth and Factory Estates

Development and urbanization of Chai Wan had not started until 1952, when the government decided to designate the area for resettling the homeless or those living in dangerous environment. Alongside resettlement estates, factory estates were also built. Both types of architecture in the area embodied the story of an important phase in Hong Kong.

#### Development of an Industrial Giant

When the Second World War in Asia ended in 1945, the once flourishing city was found in shambles, its population dwindled to 600,000 and those remained were left in hunger and in rags.<sup>31</sup> At the time, the colonial government faced problems in every front, among them were housing, economy, education and public health. The city's entrepot status was not conveniently restored; fortunately, Hong Kong was in mercy of factors that had facilitated the city's transformation into a labour intensive industrial giant. Since 1946, the situation in China had turned increasingly disturbed; the civil war consequentially disrupted daily life of the people in China. Millions of people migrated to Hong Kong for food and security. They brought with them knowledge and experience that contributed to the city's economic development.

Apart from the change in national condition within mainland China, China's intervention in the Korean War which led to the imposing of trade ban on China by the United Nations, also further contributed to pushing Hong Kong into pursuing an industrial path in the decades to come.

Shanghai used to be the centre of manufacture and trade before 1949, its position is far superior to Hong Kong, and was developing at a significantly faster pace.<sup>32</sup> Among these industries, cotton and textiles were the leading industries in Shanghai, the city was known for the vast amount of textile merchants and experienced workers. However, China's re-development as subsequent to the Second World War was faced with enormous difficulties, especially when it was in the shadow of inefficient administration and severe corruption.<sup>33</sup> These difficulties stimulated merchants to search for alternative. Many merchants shipped their textile spins and machines to Hong Kong for storage. As the Communist armies reached near Shanghai, many of these entrepreneurs and workers had already escaped to Hong Kong together with their tools. As they reached Hong Kong, they resorted to the obvious – restoring their expertise which marked the origin of Hong Kong's garments and textiles industry.

The success of Hong Kong's industrialisation was due to a synthesis of factors. Garments and textile industry is one that requires intensive and low cost labouring in order to compete with overseas market. The mass amount of mainland Chinese refugee seeking new home in Hong Kong had conveniently provided such labour supply, favouring Hong Kong's position and putting the city in comparative advantage.

Since the 1950s, textiles, garments, shoes, plastics and metal industries were enthusiastically taken up by the industries. These manufactories gradually developed into the economic pillar of Hong Kong at the time. In 1976, 770,000 people worked within the manufacturing sector, which represented more than 40% of the working population.<sup>34</sup> (Fig. 16 - Fig. 17)

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<sup>31</sup> Nigel Cameron, *An Illustrated History of Hong Kong*, Hong Kong. Oxford University Press, 1991. p. 265.

<sup>32</sup> Wang Gengwu 王廣武, *Xianggangshi xinbian* 香港史新編 [Hong Kong History: New Perspective]. Joint Publishing (H.K), 1997, p. 375.

<sup>33</sup> *Ibid.*

<sup>34</sup> Nigel Cameron, *An Illustrated History of Hong Kong*, Hong Kong. Oxford University Press, 1991. p. 395.

In 1953, Hong Kong has entered a period of rapid industrial growth, which could be reflected in the GDP. According to Szczepanik, E.'s estimation, the growth between 1951-52 and 1954-55 was 13.9%.<sup>35</sup>

According to the International Standard Industrial Category (ISIC), the industrial produce manufactured in Hong Kong in 1947 included: Food Manufacturing (ISIC 20), Beverages (ISIC 21), Tobacco (ISIC 22), Textile (ISIC 23), Shoes, and garments (ISIC 24), Wood and Soft Wood Products (ISIC 25), Furniture (ISIC 26), Paper (ISIC 27), Publishing and Printing (ISIC 28), Shoes and Leather (ISIC 29), Plastic (ISIC 30), Chemical Products and Industrial use chemicals (ISIC 31), Oil and Coal products (ISIC 32), Non-metallic products (ISIC 32), Basic Steel (ISIC 34), Metallic Products (ISIC 35), Non-electronic appliances (ISIC 36), Electronic appliances and accessories (ISIC 37), Transportation appliances (ISIC 38), and Other manufacture (ISIC 39).<sup>36</sup> This reflects that many industries were already operating in Hong Kong in 1947, among them, some industries are larger, (as reflected by the number of people employed), such as the production of Vegetable Oil and Soya Sauce (724 workers), Bread and Biscuits (578 workers), Tobacco and Cigars (573 workers), Cotton (4048 workers), Knitting (4839 workers), clothing and garments (1157 workers), Printing (1952 workers), Matches (985 workers), Glass and Glass produces (521 workers), Torches (1431 workers), electronic repairs (967 workers), battery (581 workers), Ship production and repair (14484 workers) and buttons (524 workers).<sup>37</sup>



Fig. 15. The rapidly developing industries in Hong Kong.  
(from Kevin Sinclair and Andrew Rutherford, *Post Impressions: 100 years of the South China Morning Post*, South China Morning Post Publishers Ltd., 2003. p. 114.)

<sup>35</sup> Wang Gengwu 王廣武, *Xianggangshi xinbian* 香港史新編 [Hong Kong History: New Perspective]. Joint Publishing (H.K), 1997, p. 377.

<sup>36</sup> Wang Gengwu 王廣武, *Xianggangshi xinbian* 香港史新編 [Hong Kong History: New Perspective]. Joint Publishing (H.K), 1997, p. 383.

<sup>37</sup> *Ibid.*



Fig. 16 Manufacturing was the biggest economic sector in Hong Kong in the 1960s and 1970s.  
(from Ko Tim Keung 高添強, *Xianggang jinxi* 香港今昔 [Hong Kong Then and Now],  
Hong Kong, Joint Publishing (Hong Kong) Company Limited, 2005, p.153.)

#### Rapidly increasing population and housing problems

The increase in population and the damage of houses over the war pressed acutely on the city's housing provision at the time.<sup>38</sup> Hillsides sprouted hastily built huts. Improvised structure grew on rooftops. (Fig. 17 - Fig. 18) These illegally built squatter houses often resulted in fire hazards and were prone to accidents during typhoon. The sanitation was poor or simply non-existent, restless sleepers could be seen on every stairway or pavements huddling to cardboard or old corrugated iron of some sort for shelter.

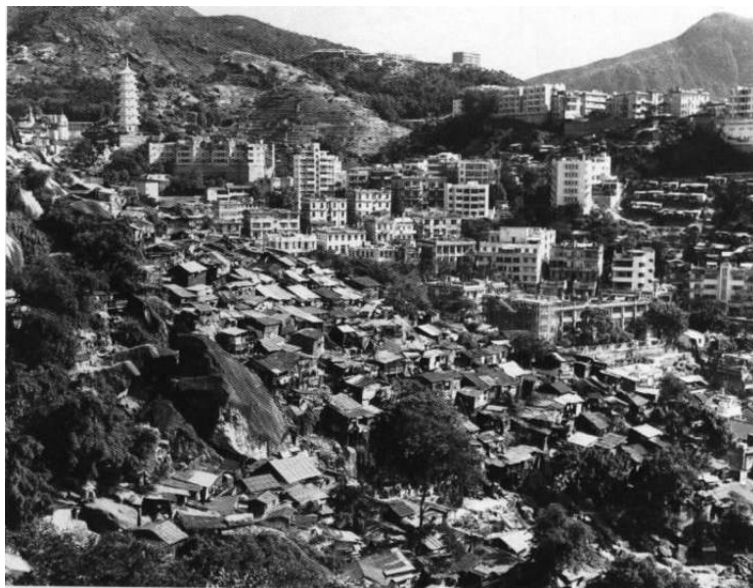


Fig. 17. Mixture of different types of residents within the same area in Tai Hang.  
(from Chung Po Yin, *Shangcheng gushi - Tongluowan bainian bianqian* 商城故事 - 銅鑼灣  
百年變遷 [The story of commercial city – A century change of Causeway Bay], Chung Hwa  
Book Co., 2009, pp. 148-149.)

<sup>38</sup> Cameron Nigel, *An illustrated History of Hong Kong*, Hong Kong Oxford University Press, 1991, p.272





Fig. 18. Squatter Houses on the hills were built with simple materials, 1960s.  
(from Pryor, E. G. *Housing in Hong Kong*, Hong Kong; New York, Oxford University Press, 1973, image 14.)

Not surprisingly, the inevitable happened on Christmas Day in 1953, the sprawling shanty town at Shek Kip Mei caught fire and turned into one of the most disastrous fire disasters in Hong Kong history making 50,000 people homeless in a night. (Fig. 19 - Fig. 20) The fire disaster had pushed the government to bring imminent solution to the situation. An answer was pressed for to bring shelter to thousands of homeless within a short period of time. At the time, a courageous, bold and prompt response made by the government was the massive rehousing programme<sup>39</sup>, which has lasting influence in the Hong Kong housing history up till today.

Although it was mentioned earlier that the city was sprawling in an unprecedented speed, but the housing situation in Hong Kong at the time was beyond common imagination. Providing mass housing for the city was not a new issue in the history of Hong Kong, but the tricky issue had always been briefly nibbled on but never truly tackled through the black years of bubonic plagues and fire in the 19th century Central and Sheung Wan. Population increased by 500,000 between 1937 and 1940, and had resulted in a more crowded and increase in squatting in the city. But the situation had elevated into a new level after the Second World War. At this point of history, the city had to find accommodation space to house an annual population increase of up to 120,000. These people lived in small sized cubicles on two- or even three-tier bunk beds. The new blocks developed by the government to rehouse the homeless were only a little better than the older settlements in terms of the area available for the tenants.

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<sup>39</sup> Cameron Nigel, *An illustrated History of Hong Kong*, Hong Kong Oxford University Press, 1991, p.283





Fig. 19. Shek Kip Mei Fire, 1953.  
(from Fong Kwok Wing 方國榮, Chen Chik 陳迹, *Home of Yesterday*, Hong Kong, Joint Publishing (Hong Kong) Company Limited, 1993, p. 68.)



Fig. 20. Shek Kip Mei Fire.  
(from Fong Kwok Wing 方國榮, Chen Chik 陳迹, *Home of Yesterday*, Hong Kong, Joint Publishing (Hong Kong) Company Limited, 1993, p. 13.)



Fig. 21. Victims revisiting their now flattened home after the Shek Kip Mei Fire, c.1953.  
(from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K.), 2008, p.187.)

### 2.1.3.2 Resettlement Estate as a solution

In response to the Shek Kip Mei Fire, an emergency committee recommended the Government to set up a fund for the construction of multi-storey resettlement estates to provide accommodation for the victims. Resettlement Department was set up to coordinate the efforts in 1954. Within the same year, eight Mark I blocks were built at the Shek Kip Mei Site, to rehouse the victims from the fire. (Fig. 22)

These houses aimed to provide only essential facilities, so that it could be built to house as many people as possible within the shortest period of time. Chai Wan Resettlement Estate, later known as Chai Wan Tsuen 柴灣邨 was built under this social circumstance, completed between 1957 and 1966. The first three major clusters to be built in the community were the Chai Wan Resettlement Estate (27 blocks of public housings), the Chai Wan Factory Estate and a row of stone houses (also known as the Chai Wan Cottage Resettlement Area).<sup>40</sup> (Fig. 23 - Fig. 25)



Fig. 22. Shek Kip Mei Resettlement Estates, c. 1960s.  
(from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K), 2008, p. 236.)



Fig. 23. Streets between the stone houses in the resettlement district of Chai Wan, c. 1960.  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 8.)

<sup>40</sup> Public Records Office, *Chai Wan Cottage Resettlement Area - Proposed, 01.12.1959, Reference No. RD 4/1/308.*





Fig. 24. The stone houses that were to provide temporary accommodation for the homeless, c. 1978.

(View of Chai Wan Cottage Area, Multimedia Information System under Hong Kong Public Libraries, Leisure Cultural Services Department, Web Site:  
[http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/firm-mod\\_srch.html](http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/firm-mod_srch.html).)

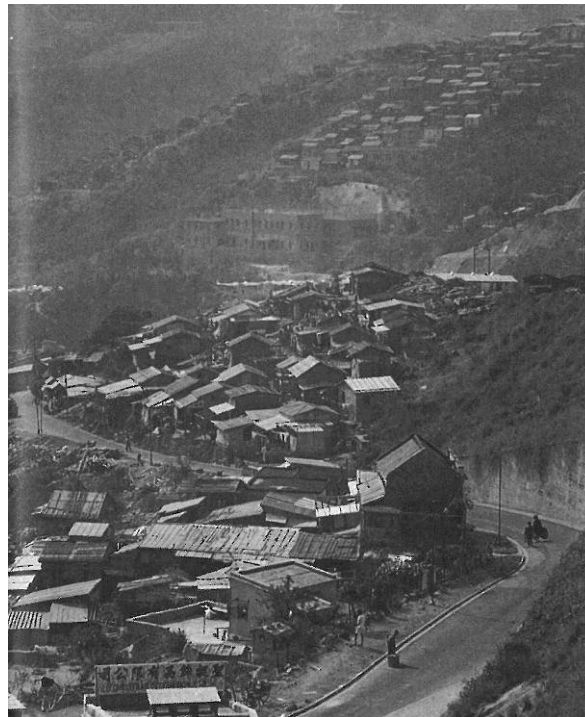


Fig. 25 Area around Chai Wan Factory Estate was still densely built with stone cottages and squatter houses on the hill.

(from Ko Tim Keung 高添強, *Xianggang jinxi* 香港今昔 [Hong Kong Then and Now], Hong Kong, Joint Publishing (Hong Kong) Company Limited, 2005, p. 147.)

According to a letter proposed to the Director of Public Works on 30th December, 1954, early government drafts had already shown the government's intention to develop resettlement housing and resettlement industry in Chai Wan.<sup>41</sup> The whole scheme was regarded as a resettlement project, but decision was yet to be reached on whether as to the industry and housing on site were to be permanent or temporary. A document dated from 8th July, 1955, titled Future Development in Chai Wan area further

<sup>41</sup> Public Record Office, *Hong Wah Village at Chai Wan-Resettlement Area D, 12.06.1951-21.01.1972*, File No. HKRS337-4-248A, p. 35-1.

suggested that the resettlement housing estate should be coupled with an industrial area.<sup>42</sup> This piece of land composed both of private agricultural lands, and military land lots owned by the War Department. It was recorded in 1957 that War Development surrendered previous war lots W.D. Lot No. 8 Lyemun with a monetary compensation.<sup>43</sup> Plans to build the resettlement district were finally carried out in 1957.

The Resettlement Estate in Chai Wan is similar to the scheme in Shek Kip Mei, the mass housing project composed of multiple blocks of low cost, multi-floor housings built within the shortest period of time to satisfy the mass housing demand.

Before the Housing Authority was established in the 1970s, the Resettlement Department was responsible for the construction of public housing between 1954 and 1975. The blocks built between these two decades were of six different typologies, namely Mark I, Mark II, Mark III, Mark IV, Mark V, and Mark VI, chronologically. The different types differ in size, height and layout, depending on the construction time.

Blocks 17, 18, 20 and 22 at Chai Wan Resettlement Estate were Mark I blocks. These blocks could be identified by its letter 'H' (and occasionally 'I') shape. Access to the flat is through a corridor, and flats are layout as back to back. Ventilation was made possible by opening a high level window on the rear of the flat. These flats were not equipped with electricity or running water. These utilities had to be accessed from the cross bar of the 'H' blocks where latrines and bathrooms were shared. Most Mark I blocks composes of flats of 11.15 square metres, which were designed to accommodate five adults, this leave each adults with only an average of 2.23 square metres. 146 Mark I blocks were built around Hong Kong within a decade from 1954.<sup>44</sup>

Blocks 16, 19, 21, 23 - 27 in Chai Wan were Mark II blocks. Block II blocks look different from Mark I blocks, and features a relatively more generous average flat size. Each 28.8 square metres flat were equipped with their own kitchen and water taps. A courtyard is enclosed by the blocks. (Fig. 26 -Fig. 29)

Block 1 to 12 was Mark III, while Blocks 13 to 15 was built as Mark IV estates. Mark IV estates were significantly taller in height, and were constructed with private lavatories and balcony on each flat.

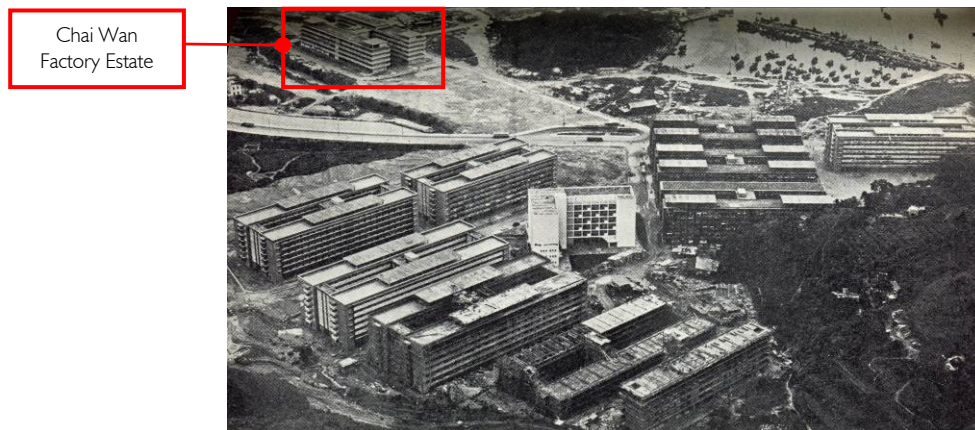


Fig. 26. Chai Wan Resettlement Estate and Chai Wan Factory Estate, 1960-61.  
(from Director of Public Works, *Annual Departmental Report 1960-61*, Hong Kong, Hong Kong Government Press, 1961.)

<sup>42</sup> Public Record Office, *Hong Wah Village at Chai Wan-Resettlement Area D, 12.06.1951-21.01.1972*, File No. HKRS337-4-248A, p. 35.

<sup>43</sup> Public Record Office, *Hong Wah Village at Chai Wan-Resettlement Area D, 12.06.1951-21.01.1972*, File No. HKRS337-4-248A, p. 37.

<sup>44</sup> Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu 香港走過的道路*, Joint Publishing (H.K), 2008, p. 191.



Fig. 27. The blocks of Resettlement District in Chai Wan, H-Shaped Mark I blocks can be seen at the back, and Mark II blocks with inner courtyards are closer to the bottom of the picture, 1964.

(from General View of Chai Wan Resettlement Estate, Multimedia Information System under Hong Kong Public Libraries, Leisure Cultural Services Department, Web Site: [http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/frm-bas\\_srch.html](http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/frm-bas_srch.html).)



Fig. 28. Older type Resettlement estates in the Chai Wan Estate, the houses were not equipped within the flat, it was common to cook in the shared corridor, c.1976.  
(from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K), 2008, p. 269.)







Fig. 30. A small-scale factory, c.1963.  
(from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K), 2008, p. 204.)



Fig. 31. Small Scale Factories with child labours assisting in piecing together plastic flowers.  
from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K), 2008, p. 205.)

## 2.1.4 The context of Chai Wan Factory Estate

### 2.1.4.1 Construction of the Chai Wan Factory Estate (1959)

Bounded by Kut Shing Street, Lee Chung Street, Cheung Lee Street and Chui Hang Street, the Chai Wan Factory Estate was built on the old site of the Shing Uk 成屋 and Nam Uk 藍屋 in Chai Wan.<sup>46</sup> It was the second Factory Estate built in Hong Kong, subsequent to the Cheung Sha Wan Factory Estate to accommodate the small-scaled factories in squatter areas that were to be cleared by the government. The Chai Wan Factory Estate was built as a part of the Chai Wan resettlement district development.<sup>47</sup> (Fig. 32 - Fig. 34)

<sup>46</sup> Iu Kow-choy 饒致才, *Xianggang de diming yu difang lishi*- 香港的地名與地方歷史 [Place Names and local history of Hong Kong]. Hong Kong: Cosmos Books, 2011, p. 136.

<sup>47</sup> Director of Public Works, *Annual Departmental Report 1957 – 58*, Hong Kong, Hong Kong Government Press, 1958, p. 13.



Fig. 32. Chai Wan Factory Estate, 1976.  
(from Law Uk Museum.)



Fig. 33. Chai Wan Factory Estate, 1976.  
(from Law Uk Museum.)



Fig. 34. Chai Wan Factory Estate in survey map of 1961.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government,  
ref. no.: 215-NW-9, 215-NW-10, 215-NW-13 & 215-NW-14 (partial))



#### 2.1.4.2 Industries accommodated by the Chai Wan Factory Estate

Prior to the completion of the Chai Wan Factory Estate, the Public Works Department had already embarked on the allocation plans of the estate flats. It was proposed that the small factories and workshops that were located on lands due for resumption, to be relocated to the multi-storey factory estate in Chai Wan. The industrialists concerned were those at Tai Kok Tsui, Kowloon.<sup>48</sup>

A list of industries from the clearance area was recommended to resettle into the newly constructed multi storey factory in Chai Wan, these industries included<sup>49</sup>:

- Wood box manufacture
- Torch manufacture
- Oil manufacture
- Paper box manufacture
- Blacksmiths
- Mirror maker
- Metal Workshop
- Furniture workshop
- Timber store
- Steep furniture workshops
- Venetian blind workshop
- Metal workshop
- Bead workshop
- Shoe factory
- Foundry
- Building material stores
- Laundry and Dry cleaning
- Salt store
- Storage
- Firewood vendors
- Timber yard
- Glass jar store
- Coal egg maker
- Wood store
- Scrap store
- Motor repairs
- Coat store
- Oil store
- Godown
- Fuel store
- Sand brick maker
- Contractors yard
- Car repairs

Little record could be accessed regarding the industries housed in the Chai Wan Factory Estate over the few decade times, but it is believed that the factory estate had been actively in use with little variation

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<sup>48</sup> Public Records Office, *Multi-Storey Resettlement Factory at Chai Wan, Hong Kong Island - Proposed, 30.04.1957 - 24.08.1960*, Reference No. HKRS156-I-5863.

<sup>49</sup> Public Records Office, *Industries on Permit Areas of a type suitable for accommodation in a Resettlement Factory – Appendix 'A' and 'B', 01/03, 1958*, Reference No. HKRS156-I-5863.

between the years 1950s to 1990s. According to an annual circulation compiled by the Chai Wan Area Kai-Fong Welfare Advancement ASSS Association (Hong Kong) Limited, some of the flats operating in the Chai Wan Factory Estate between 1989 and 1990 included<sup>50</sup>:

Name	Room Number	Product and Services
Pak Tak Company 百達公司	5/434-5/436	Nylon Webbing
Hing Yip Carving and Moulding Factory 興業彫刻製模廠	2/148	Mould making and engraving
Lee Cheung Mechanic Factory 李祥機器廠	1/52-62-63	Plastic moulds, mechanic works, post-production processing, injection and moulding.
Hung Cheong Plastic Factory 鴻昌塑膠原料廠	1/13	Plastic raw materials
Yau Shing Wooden Manufacturing Factory 有成木器製造廠	4/371-372	Wood manufacturing
Hong Kong Car Battery and Air Conditioning Repairs 香江汽車電池電器冷氣	1/51	Maintenance
On Chuen Metal Factory 安全五金製品廠	2/138	Metal manufacture
New Jade Interior Construction Company 新翠設計裝修工程公司	1/39	Interior renovation

<sup>50</sup> Chai Wan Area Kai-Fong Welfare Advancement Association (Hong Kong) Limited, *Chaiwanqu jiefang fulhui tekan* 柴灣街坊福利會特刊 [Chai Wan Area Kai-Fong Welfare Association Brochure], 1989-1990.

### 2.1.5 Chai Wan as a new community

With the development of a newly built and densely populated resettlement area, other facilities were built to cater the growing population.

#### 2.1.5.1 Schools

##### Meng Tak Catholic School 香港柴灣明德小學

Meng Tak Catholic School was founded at Cheung Man Road 祥民道 in 1952, as the Maryknoll Meng Tak Primary School by the Maryknoll Sisters. The school was built of granite on the exterior, and had the aim to provide education to the wandering young children in the squatter houses which did not had a chance to go to school. (Fig. 35)

In 1975, the management of the school was transferred to Catholic Diocese of Hong Kong, and the school was subsequently renamed as Meng Tak Catholic School. (Fig. 44)



Fig. 35. Meng Tak Catholic School  
(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 47.)

##### Chai Wan Primary School 柴灣官立小學

On 7th February, 1959, a new primary school was proposed for the area, this would eventually become the Chai Wan Primary School which was located within the Stage II development of the Chai Wan Resettlement Estate Development, containing 30 classrooms. (Fig. 36 - Fig. 37) The school can be seen on a map from the 1963, in the heart of the resettlement estates area. (Fig. 44)

The school has changed name and management numerous times; the building that is still standing today was inhabited by HKRSS Chai Wan Secondary School and The Endeavourers Fung Sui Cheung Memorial Primary School (1971 – 2000), and currently by Salvation Army Centaline Charity Fund School, since 2008.

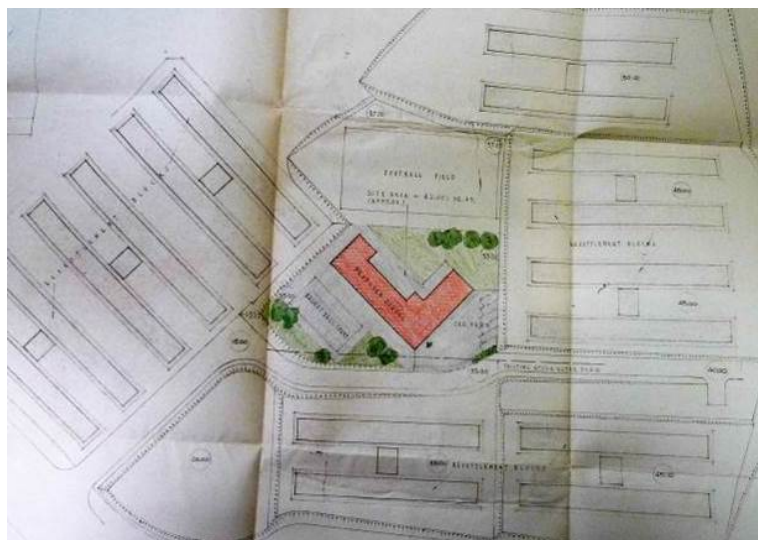


Fig. 36 Site Plan of the proposed Chai Wan Primary School, 1959.  
 (Public Records Office, *Chai Wan Government School – Proposed Construction of – 08.01.1959-30.08.1968*, Reference File HKRS 156-1-6783.)



Fig. 37 Chai Wan Primary School around 1962.  
 (Public Records Office, *Chai Wan Government Primary School, June 1962*, Reference No. Photograph 02-04-079.)

### Precious Blood Secondary School 寶血女子中學

The Precious Blood Secondary School was founded in 1954 in Chai Wan. Its original campus was on Hennessey Road in Wanchai, founded by the Sisters of the Precious Blood for the many students without schooling opportunities after the Second World War ended in 1945. In 1996, a new school building completed construction on the same site in Chai Wan. (Fig. 44)

### 2.1.5.2 Transportation

#### Chai Wan Ferry Pier

The population significantly increased in the 1960s in Chai Wan, simultaneously, at the opposite side of the harbour, Kwun Tong was also flourishing as an industrial area of considerable scale. A ferry company therefore tried to operate a ferry line between Kwun Tong and Chai Wai, it was later cancelled in 1986 as there were not enough passengers.<sup>51</sup>

In early 1980s, the Eastern districts of Hong Kong Island often suffered from traffic congestion, the Hong Kong and Yaumatei Ferry Co. thus built the Chai Wan Pier on the newly reclaimed land in Chai Wan at the junction between Sheung Ping Street and Sheung On Street. (Fig. 38) The Chai Wan Ferry Pier connected the area with Central and Kwun Tong. The pier was closed down in 1986 when the Mass Transit Railway completed construction.<sup>52</sup> (Fig. 44)



Fig. 38. Chai Wan Ferry Pier in the 1970s.

(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 124.)

#### Mass Transit Railway

Plans to construct the Mass Transit Railway could be dated back to the 1960s, to share the burden of the growing pressure on road traffic and the increasingly developing economy of Hong Kong. The construction of the first section initiated in November 1975, and the northern section was ready for operation in 1979. This line begins at Shek Kip Mei Station and ends at Kwun Tong Station. The route between Shek Kip Mei Station to Tsim Sha Tsui Station next opened in December 1979. The Island line started construction in 1981, and the line serving between Admiralty Station and Chai Wan Station opened in 1985.

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<sup>51</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 124

<sup>52</sup> *Ibid.*



### 2.1.5.3 Religious groups

#### Chai Wan Tin Hau Temple 柴灣天后廟

There were already people, Shing clan and Luk clan moving into Chai Wan back in the early 18th century. Among them, Shing Uk Village and Luk Uk Village had built their own Tin Hau Temple respectively. With the numerous phases of redevelopment in Chai Wan, these two temples had moved around, but could still be found within the district, the two Tin Hau Temples are Lok Kang Po Tin Hau Temple 樂耕埔天后廟 (Fig. 39) and Wan Tsui Road Tin Hau Temple 環翠道天后廟 (Fig. 39) respectively.

Lok Kang Po Tin Hau Temple 樂耕埔天后廟 was made piece by piece with stones by the local farmers and fishermen in the beginning. It was located in the Resettlement Area of Chai Wan, today it is located next to the hills of Wan Tsui Estate. The temple was cleared by the government in 1964, and the worshippers had to search for another site for reconstruction of a new temple. This new temple was finally completed at the current site in 1967.<sup>53</sup>

Wan Tsui Road Tin Hau Temple 環翠道天后廟 was the largest Tin Hau Temple in Chai Wan when it was still a small village. It was constructed next to the Scout Campsite, with a history that exceeds a century. After relocating for a couple of times, the Tin Hau Temple finally settled at Wan Tsui Road.



Fig. 39. Lok Kang Po Tin Hau Temple 樂耕埔天后廟 (left) Wan Tsui Road Tin Hau Temple 環翠道天后廟 (right).

(from Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 98.)

#### Star of the Sea Parish

The origin of the Star of the Sea Parish could be traced back to 1952, in the first section of the Resettlement cottages. The first Chinese pastor of the Parish Lau Man Sau 劉文修 was the first local to serve Chai Wan. The first sector of the Resettlement cottages is located near the Scouts Hill below Chong Gene Hang College. Due to the proximity to the sea, many residents lived on fishing. The pastor and the father lived in the temporary 'Black House' 黑屋子 which would have also served as a church at the time. On 13th July, 1952, seven people including the father and Pastor Lau started the former Star of the Sea Parish. Father Man led the first mass at the 'Black House' on the first section of the resettlement cottage area. (Fig. 44)

The Church building has finally completed construction in late-1952, (Fig. 40) at the slope of Section 3 of the Resettlement Cottage Area. The building was built of dark granite at the base. The Parish gradually developed and developed work in the area, sisters of the Parish worked on poverty relief, coordinated work in the Maryknoll Sisters' Primary School, Women's Club, Choir and Youth Club.

<sup>53</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 99.

In 1957, the Parish had undergone the first major renovation and expanded in space. In 1968, the squatter houses around the Parish were cleared, and the building required maintenance, the pitched roof was converted into a flat roof.

The Parish also worked on providing stone cottage houses for the homeless people in the city. These houses built by the Parish were colloquially known as the 'GO' Stone houses. At that time, there were not any buses that connects Chai Wan, as a solution, the father of the parish invited a doctor to provide health care services to the residents in the Parish Church building. This lasted until a Clinic was set up in Chai Wan.



Fig. 40 Star of the Sea Parish, c.1952.  
(from Star of the Sea Parish, retrieved on 16/01/2013. Website: <http://star.catholic.org.hk/>.)

#### Chai Wan Yuen Dou Taoist Monastery 柴灣玄都仙觀

The origin of the Monastery could be traced back to 1951<sup>54</sup>. A group of Chiuchow people lived on the hills around Shek Tong Tsui in Sheung Wan, and worshipped Taishang Laojun 太上老君 [The Grand Supreme Elderly Lord] in a cave on the hills. In the following year, the government cleared their squatter houses in Sheung Wan, and relocated them to the fourth section of the Resettlement Cottage Area in Chai Wan. These Chiu Chow people brought the statue of Taishang Laojun 太上老君 [The Grand Supreme Elderly Lord] along and housed it in a small structure.<sup>55</sup> The resettlement cottage area was scheduled for reconstruction in 1967, the altar was destroyed. These local worshippers fought for the re-establishment of a new Monastery and had successfully got a piece of land from the government in 1970 to construct the current monastery. It was completed in 1978 and had gone through large scale maintenance in 1989. (Fig. 41)

Since 1952, the residents of the Chai Wan Resettlement Cottage Area would organize Yu Nan Pan Hui 盂蘭盆會 [Feast of All Souls] during every July of the Lunar Calendar. The Feasts were held in the monastery after it was built, and would last for three days and three nights.

<sup>54</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 100.

<sup>55</sup> *Ibid.*



Fig. 41. Chai Wan Yuen Dou Taoist Monastery.  
(From Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 101.)

#### Chai Wan Dai Shing Gu Temple 柴灣大聖古廟

Chai Wan Dai Shing Temple was built by Chai Wan Wai Chau Hoi Luk Fung Welfare Association Limited. In the early 1960s, the worshippers built a Dai Shing Temple near Block 19 in Chai Wan, but with the demolishing of the resettlement blocks, the temple was forced to move to the current site in 1973.<sup>56</sup> (Fig. 42)



Fig. 42. Chai Wan Dai Shing Gu Temple.  
(From Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 100.)

#### 2.1.5.4 Chai Wan Clinic

Old documents show that a clinic existed in the Chai Wan Resettlement Cottage Area. On a map from 1960, the clinic was marked as 柴灣徙置區西區贈診所 [Chai Wan Resettlement Cottage Area Western Clinic].

<sup>56</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 101.





Today the Association continues to serve the community in issues related to the elderly, medical, poverty relief, education, scholarship application for under-privileged children and consultation work.



Fig. 44 Map of Chai Wan with the facilities constructed in the 1960s.  
(*Hong Kong Past Yearbook*, Hong Kong, Overseas Chinese Daily News, 1963.)



### 2.1.5.6 Reclamation

Early reclamation work between 1950s and 1970s in Chai Wan provided a total of 103.59 acres of land.<sup>59</sup> The Chai Wan Factory Estate was originally separated from the sea by a typhoon shelter and the Chai Wan Scouts Camp, the reclamation work closed off the deep inner bay, and moved the typhoon shelter outwards. (Fig. 45) The area eventually became the site for the mass transit railway, industrial buildings and Yue Wan Estate.

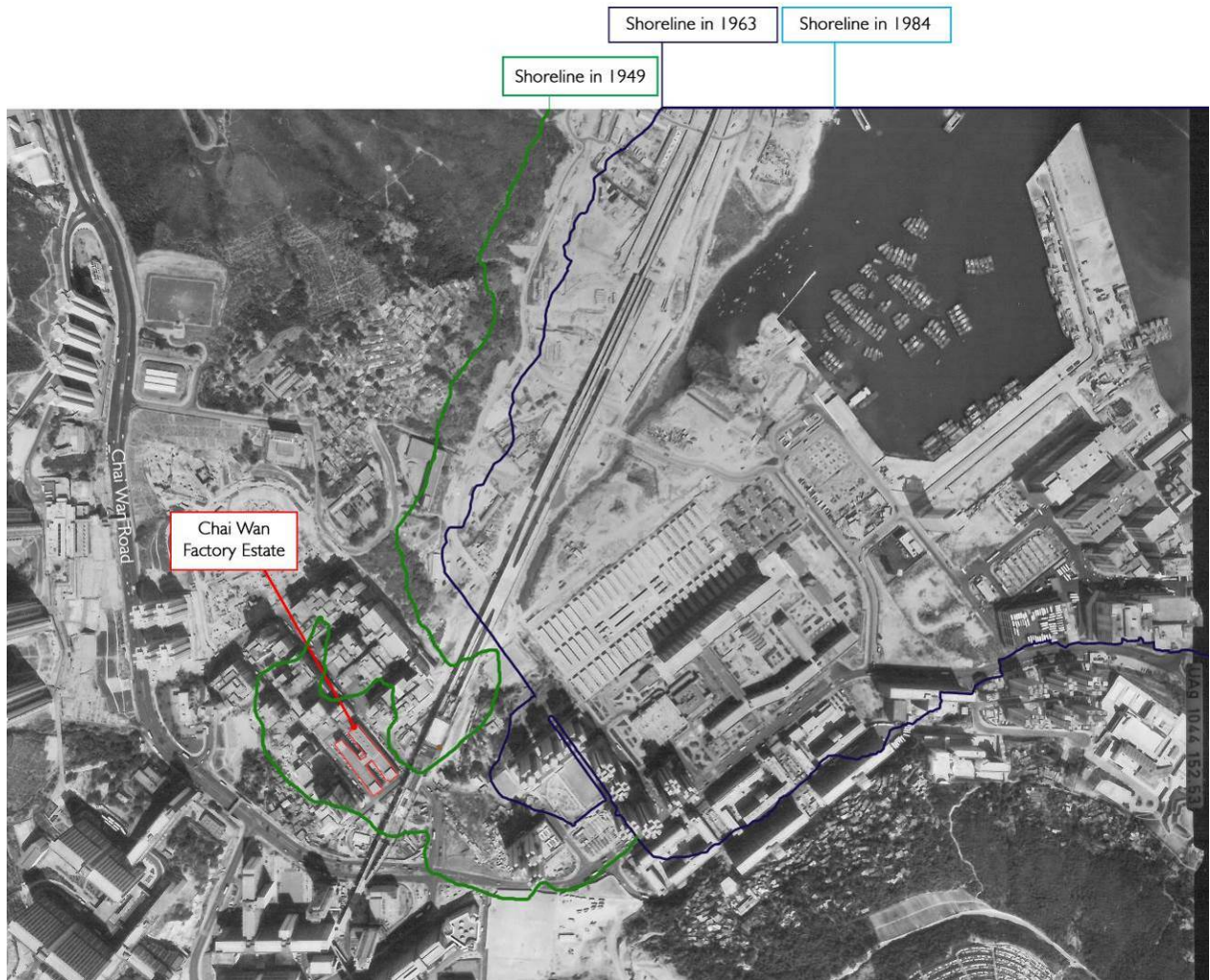


Fig. 45 Aerial photo taken in 1984 showing the shoreline changes from 1949.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government,  
ref. no.: 1984 (partial))



<sup>59</sup> Luke S.K. Wong, *Housing in Hong Kong, A Multi-Disciplinary Study*, Heinemann Educational Books (Asia) Ltd, 1978, p.79.


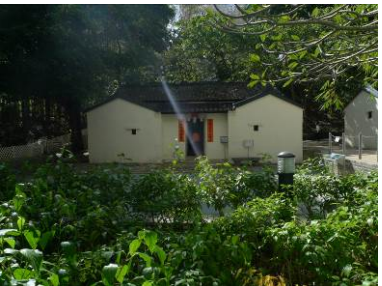
### 2.1.5.7 Reconstruction of Resettlement Buildings

The demolition of the twenty-seven blocks of old Chai Wan Resettlement Estates commenced in 1975. The area was reconstructed into mainly public housings developed by the Hong Kong Housing Authority, some were developed jointly by the Housing Authority and Private Developers as Private Sector Participation Scheme (PSPS) and some built under the Home Ownership Scheme.

Name	Type	Year of Completion	Blocks
Wan Tsui Estate 環翠邨	Public Rental House	1979-1999	11
Yan Tsui Court 茵翠苑	Home Ownership Scheme	1983	2
Lok Hin Terrace 樂軒臺	Private Sector Participation Scheme	1995	5
Yuet Tsui Court 悅翠苑	Home Ownership Scheme	1999	1
Chai Wan Estate 柴灣邨	Public Rental House	2010	2

### 2.1.6 Graded Historic buildings in the context

Old Lei Yue Mun Barracks, Block 25, 10, 18, 30, 20, 21, 31, 7, 32, 17, 33, 34, 3, 5, Lei Yue Mun		
	Construction Year	1884 – 1936
	Nos. of Storeys	2-3
	Existing Condition	Remained (Grades 1 & 2)
	Description	<p>Old Lei Yue Mun Barracks contains of three parts – the main barracks, the upper fort and the lower fort that is on the headland. The barracks in the central area functioned primarily as offices and married quarters for the British Army.</p> <p>The site has now become the Lei Yue Mun Park and Holiday Village. The buildings were built in Colonial Classical Revival style, with open colonnaded and balustrade verandahs.</p>
Cape Collinson Muslim Cemetery, Mosque, Cape Collinson Road, Chai Wan, H.K.		
	Construction Year	1963
	Existing Condition	Remained (Grade 3)
	Description	<p>The history of Muslims in Hong Kong could be traced back to the early colonial era, when the Muslims worked in Hong Kong as soldiers, merchants and seamen.</p> <p>The Muslim Cemetery on Cape Collinson could be accessed through a flight of steps, and a Mosque is built within the site area by Mr. A.M. Wahab, an architect in the Public Works Department.</p> <p>The Cape Collinson Muslim Cemetery is the second Muslim Cemetery in Hong Kong Island.</p>

Salesian Mission House, Main Building & Villa , No. 18 Chai Wan Road, H.K.		
	Construction Year	1932 – 1939 (Main Building) 1923 – 1927 (Villa)
	Existing Condition	Remained (Grade 3)
	Description	The Salesian Society of Hong Kong was founded in 1859. The Main building and Villa were built in a Neo-Classical style, with deep verandahs and arched colonnades.
Law Uk		
	Construction Year	Qing Dynasty (1644-1912)
	Existing Condition	Remained (Declared monument)
	Description	Law Uk is a middle sized house of around 120 square metres in size. The layout is around a core living area, where the ancestral hall is located; on the side are two wings with attic. The house is symmetrical with an obvious central axis. Attics are used as storage or sleeping space for young children. Little openings are built for security reasons. Access for light and air ventilation relies mainly on the central courtyard.



## 2.1.7 Aerial photos

1961

From the aerial photographs of 1961, the Chai Wan Factory Estate had already completed construction and is found located adjacent to the Chai Wan Campsite. The Campsite is right next to the protected harbour and typhoon shelter already completed from reclamation before 1961. Along the two sides of Chai Wan Road were mixtures of both squatter houses and Resettlement Cottage areas constructed by the Resettlement Department. At this period of time, only six blocks of the Resettlement Estate and the Chai Wan Primary School had completed construction.





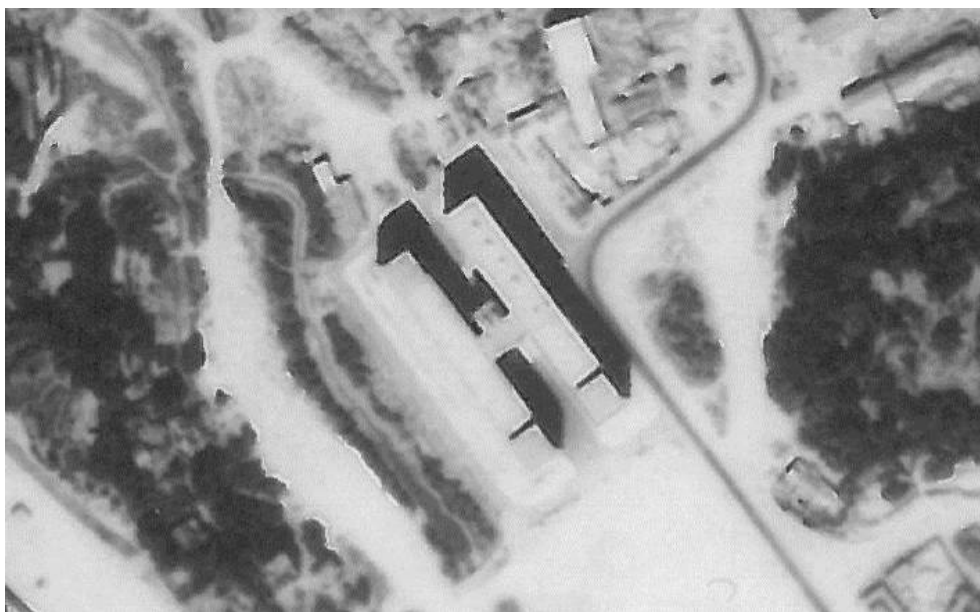


Fig. 46. Aerial photo taken in January, 1961 in the location of Chai Wan Factory Estate and its surroundings.

(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: F43/81A/RAF/600 (partial))

1963

In the aerial photo from 1963, the area continues to be a mixture of resettlement cottage houses, squatter houses. Along with the six blocks of resettlement housing estates that were built earlier, another five blocks completed construction within the same site. The two schools in the area are also clearly seen. Along the sea is a cluster of small scale industrial workshops, including timber yards, coal store and furniture workshop etc. Reclamation had also commenced on the inner bay of the area that would eventually form a large portion of land in the area.





Fig. 47. Aerial photo taken in 1963 showing the location of Chai Wan Factory Estate and its surroundings.

(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: 1963\_7327 (partial))



1972

The aerial photo from 1972 shows the completion of the second phase of the Chai Wan Resettlement Housing Estates that were located close to the sea along the old typhoon shelter. With the completion of many new blocks of public estate, the area was still crowded with resettlement cottages and squatter houses; the housing situation has been relieved but clearly not solved yet. The streets around Chai Wan Factory Estate had continued to be an industrial area, apart from the previous small scale single storey workshops, new industrial buildings are built in that area. The reclamation work progressed on in the bay.





Fig. 48. Aerial photo taken in 1972 showing the location of Chai Wan Factory Estate and its surroundings.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: 1972\_1849 (partial))



1984

In 1984, the reclamation in Chai Wan has already completed, on the newly reclaimed land is the mass transit railway that connects the Chai Wan MTR Station that would open in 1986, new public estates were also constructed to replace the demolished old Resettlement Estates. Along the shore are new industrial factories and a Godown, which would have catered the growing industrial development in Hong Kong in the past decades. The resettlement cottages and the squatter houses were already cleared, and replaced by various types of new residential blocks. The Chinese permanent cemetery had also grown considerably in size.

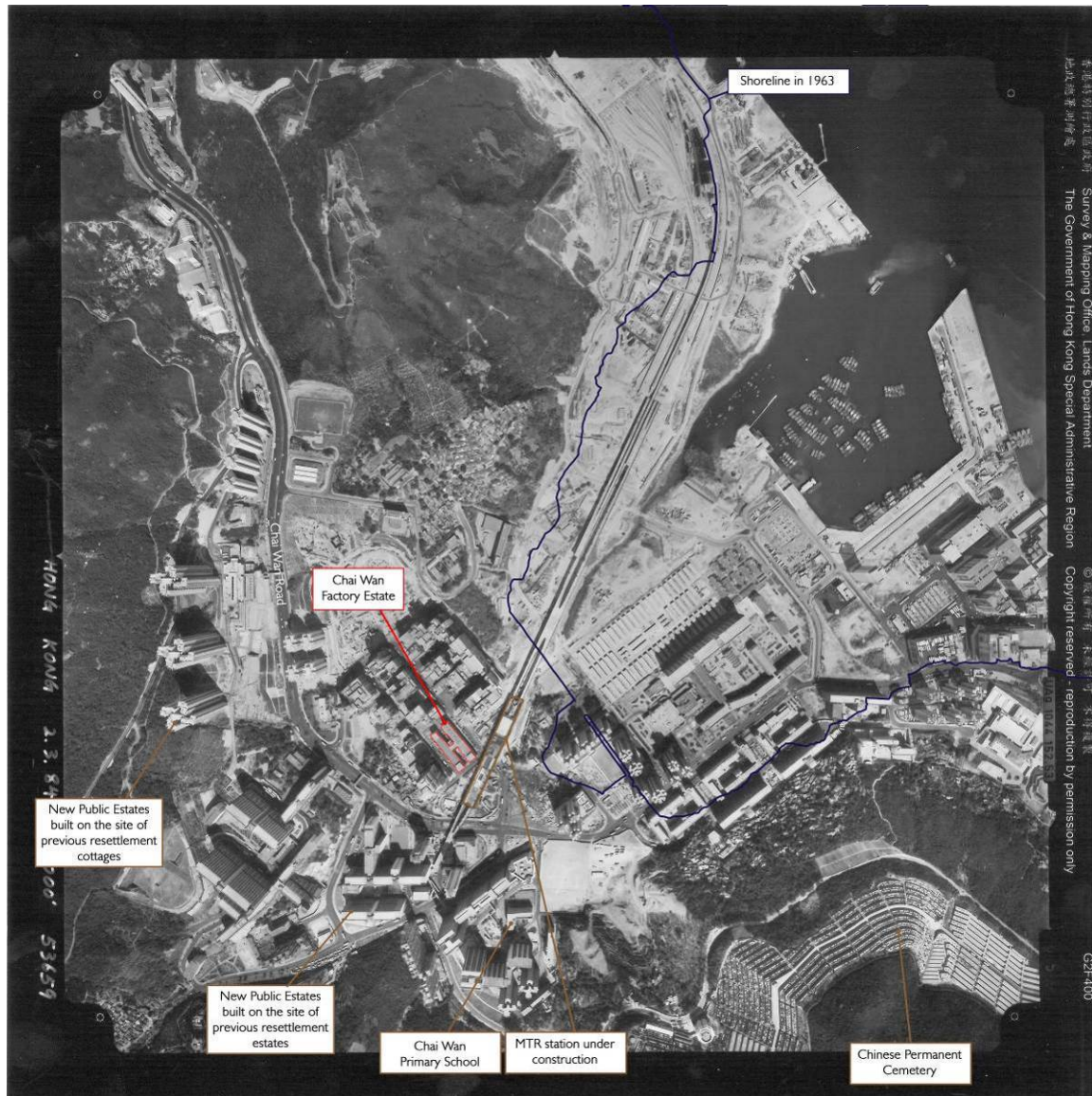






Fig. 49. Aerial photo taken in 1984 showing the location of Chai Wan Factory Estate and its surroundings.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: 1984\_53659 (partial))

1992

The aerial photo from 1992 shows that the area is more developed with new blocks of high rise residential buildings built on the hill side where the resettlement cottages used to stand between Chai Wan Road and Tytam Road, and also in the hills where the squatters used to be located on the hills behind the Chai Wan Factory Estate. With the establishment of the new Chai Wan Mass Transit Railway Station, the Chai Wan Factory Estate becomes one of the buildings in the closest proximity to the station.

The typhoon shelter is moved further away as it was seen in the 1984 aerial photo, and the reclaimed area is fully built with residential buildings in the heart, and industrial buildings around the shore.





Fig. 50. Aerial photo taken in 1992 showing the location of Chai Wan Factory Estate and its surroundings.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: 1984\_A30979 (partial))



2003

On the aerial photo from 2003, the area is well built into many blocks of residential buildings, on sites previously occupied by resettlement housing estates, resettlement cottages and squatter houses. These residential buildings are mainly developed by the Housing Authority under different schemes; among them were also some private residential building as well. Many of these buildings were built to around twenty or thirty storeys. The areas that were previously occupied by temporary houses are now re-developed into the Chai Wan Park. A significant amount of industrial buildings are still found in the area, mainly clustered around the MTR station and by the sea.







Fig. 51. Aerial photo taken in 2003 showing the location of Chai Wan Factory Estate and its surroundings.  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: CW47633 (partial))

# 3

## BUILDING

### 3.1 Architectural evolution

#### 3.1.1 Chai Wan Factory Estate (1959 – 2012)

The site formation and piling for the Chai Wan Factory Estate was completed in December, 1957. On a Public Works Department report from December 1959, it was documented that the Factory has completed construction at the time. The Factory Estate was built an H-shaped block (Fig. 52), with a bridging wing in the centre that connects the two wings. The Estate was built on the site of the demolished Shing Uk Villages 成屋 and Nam Uk Villages 藍屋.

The two wings were designed for 378 standard units, however, the building was completed with only floor slab and columns, industrialists that were to move in would have constructed their own partitioning walls. Some industrialists rented more than one unit, and would therefore have partitioned the units differently, such as occupying two back to back flats, with no partitions in the middle between the two units.

On a typical floor of the factory estate, units were arranged back to back surrounded by an external corridor. Each standard unit were 18 square metres in size. The rooms were not equipped with latrines.

Communal latrines and bathroom are located in the bridging part of the H-shape of each floor. There were four flights of staircases on the four corners of the estate for vertical access, and two ramps (Fig. 53) are constructed in the middle of each wing. No lifts were installed.

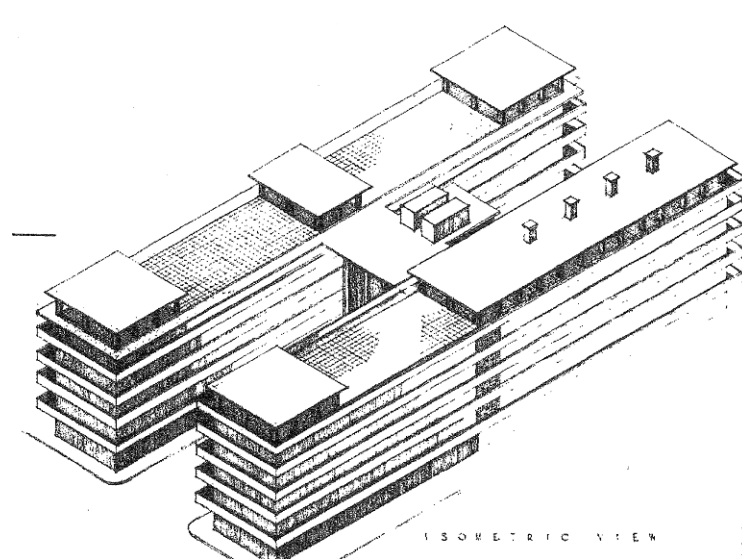


Fig. 52. The isometric view created by the Public Works Department in 1959.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

On the roof level, there were water tanks, the Guard's office and a canteen. (Fig. 55) While there were no significant changes in the layout of the building throughout the years, there were some small additions made in the previous decades.

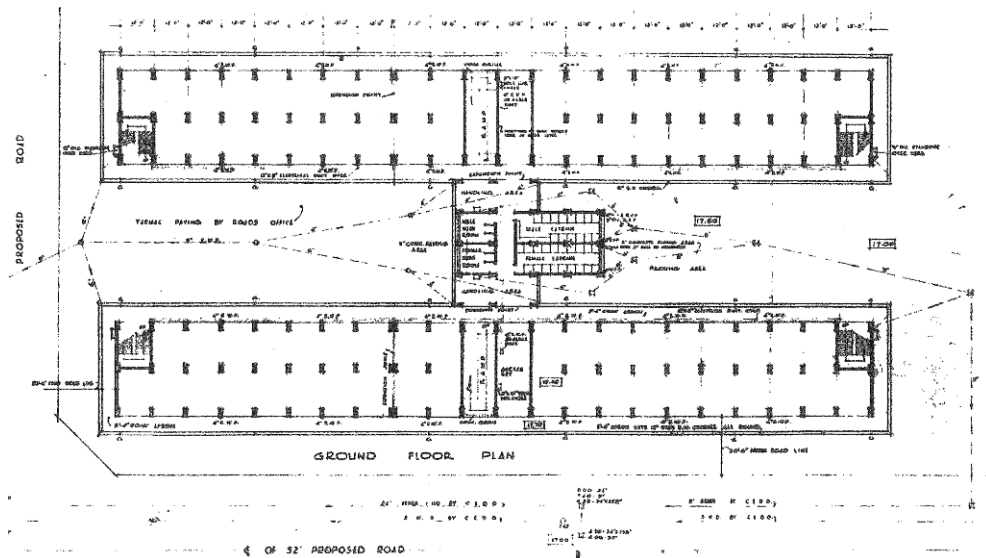


Fig. 53. Ground floor plan of the factory estate.  
(Courtesy of Housing Authority Chai Wan Resettlement Estate – Hong Kong, A/6760.)

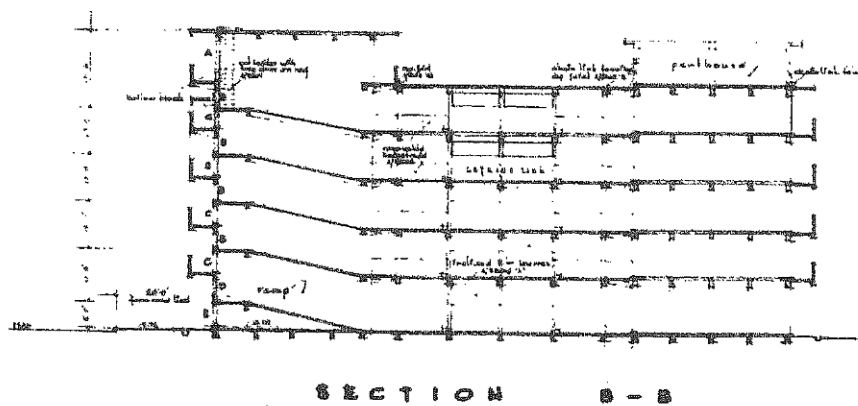


Fig. 54. Section showing the ramp constructed for the transportation of bulk materials in the industrial building.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

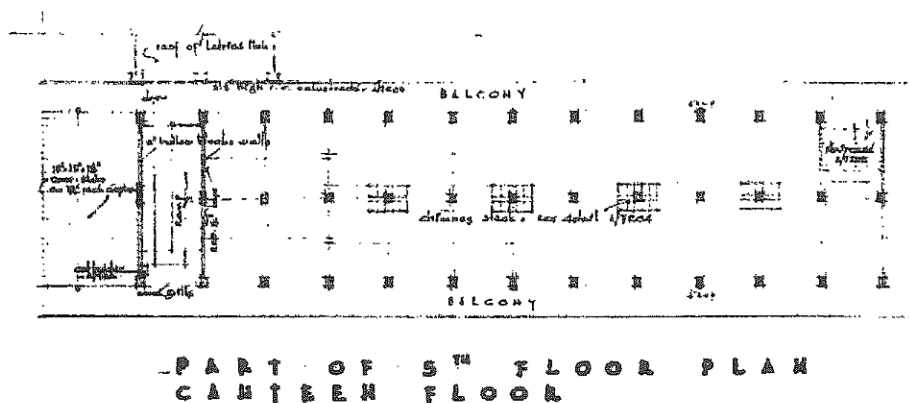


Fig. 55. Canteen located on the roof level.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

According to aerial photos from 1972 (Fig. 56), both the water tank and transformer room were not constructed yet. The Transformer Room can be seen in the aerial photo from 1980 (Fig. 57), overtaking the space that was originally used as loading bay.

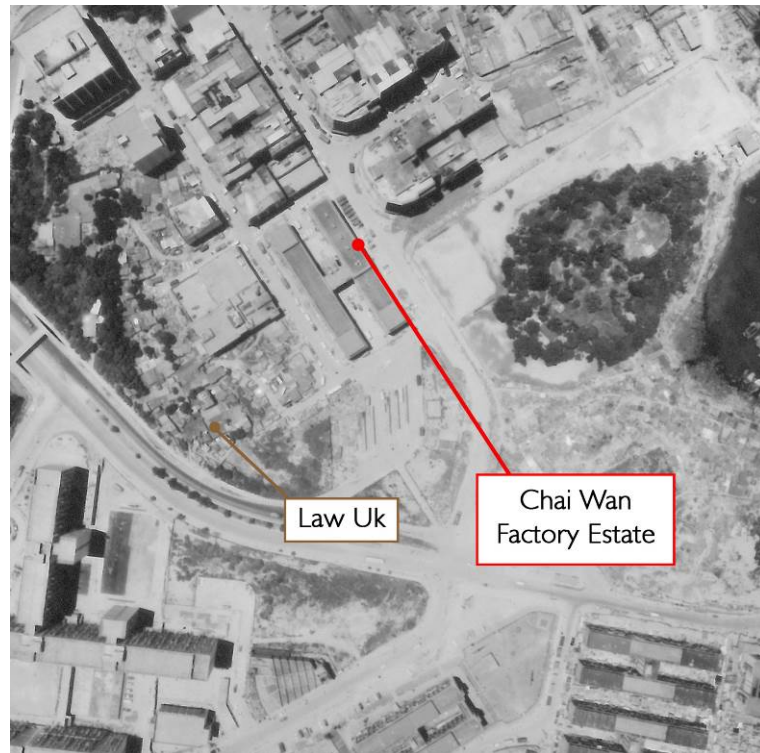


Fig. 56. Aerial photo taken in 1972 (partial).  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: 1972\_1849 (partial))



Fig. 57. Aerial photo taken in 1980 (partial).  
(Courtesy of Survey and Mapping Office, Lands Department, Hong Kong SAR Government, ref. no.: 1980\_34817 (partial))



Another later addition was a fence wall that runs around the circumference of the factory estate. The exact date when the fence was added is unknown, but aerial photos from 1980 shows that it was not built yet, cars would have still parked close to the factory estate during that time. (Fig. 58)



Fig. 58. The fence wall that runs around the exterior of the building.

## 3.2 Architectural description

### 3.2.1 Site Setting

Chai Wan Factory Estate is located on the flat land adjacent to the sheltered bay of Chai Wan. The Factory Estate is bounded by Kut Shing Street, Lee Chung Street, Cheung Lee Street and Chui Hang Street, the Chai Wan. (Fig. 59)

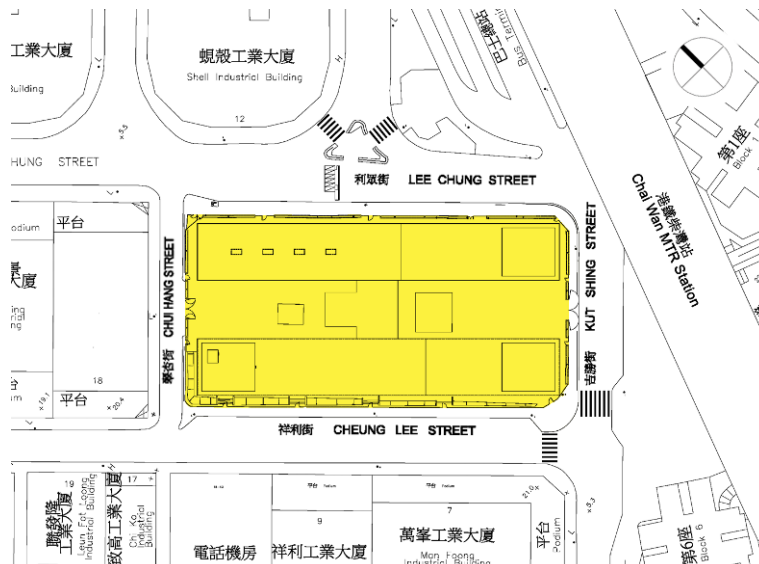


Fig. 59. Location plan of the Chai Wan Factory Estate.

(Courtesy of the Survey and Mapping Office, Lands Department, Hong Kong SAR Government, survey sheet no.: 11-SE-19A (partial).)

### 3.2.2 Architectural Layout

Chai Wan Factory Estate was constructed in June 1959, coordinated by Resettlement Department, and designed by the Public Works Department architects. The Resettlement Department had constructed 25 resettlement districts around the city; these buildings were built in 7 different type. Factory Estates were all in the form of the letter 'H' (Mark I) or the letter 'I' (Mark 5), composing of five to seven storeys. The 'H' shaped (Mark I) factory estates closely resembled the 'H' shaped (Mark I) resettlement estates.<sup>60</sup> (Fig. 60)

The six storey building, built in H-shape, housed 378 flats, each with a standard size of 18 square metres. (Fig. 61) Flats were located on all floors including the ground level. According to the original plan produced in April 1959, the fifth floor was marked as 'canteen floor.' (Fig. 55) Refer to Appendix I for the existing floor plans on Chai Wan Factory Estate.

The factory building demonstrated regularity rather than axial symmetry. The clean, functional and cubic form of the building displayed clear domination of functional purposes. (Fig. 62) The complex was built completely with unornamented concrete and punctuated by necessary glazing on the front elevation, proscribing arbitrary applied decoration.



Fig. 60. Chai Wan Resettlement Estate, 1963.  
(from *An Aerial View of Chai Wan Resettlement Estate*, Multimedia Information System under Hong Kong Public Libraries, Leisure Cultural Services Department, Web Site: [http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/fm-bas\\_srch.html](http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/fm-bas_srch.html).)

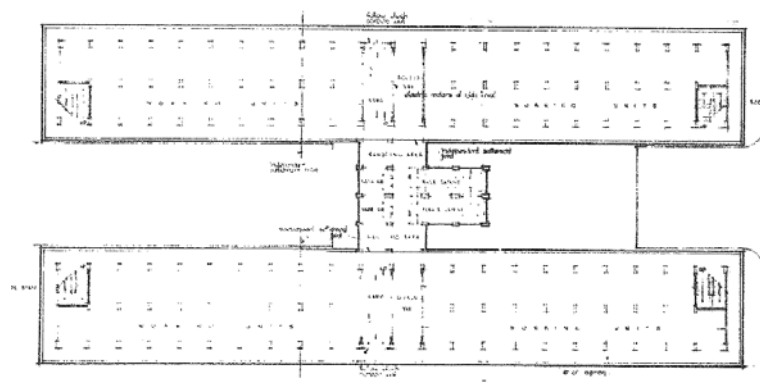


Fig. 61. Ground floor plan revealing the H-shape of the factory estate's layout.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

<sup>60</sup> See *Memories of Home – 50 Years of Public Housing in Hong Kong*, Hong Kong Museum of Heritage. Retrieved 29th November, 2012. Website: [http://www.heritagemuseum.gov.hk/downloads/materials/Public\\_Housing-E.pdf](http://www.heritagemuseum.gov.hk/downloads/materials/Public_Housing-E.pdf).



Fig. 62. The building design was dominated by functional purposes.

The estate could be accessed from the different streets bounding the building, and the ground floor shops utilized the shop fronts facing the streets for business. (Fig. 63) Vehicles could drive into the areas enclosed by the H-shaped wings to unload goods. (Fig. 64) The H-shape created two enclosed courtyards between the arms of the H-shape. (Fig. 65)

The words 「柴灣工廠邨大廈」 are painted on the exterior wall of the building, allowing pedestrians to identify the building from a distant. (Fig. 66 - Fig. 68)



Fig. 63. Units on the ground floor with shop fronts facing the streets.





Fig. 64. Parking space that could still be used as parking and unloading goods.



Fig. 65. Courtyard enclosed by the two arms of the H-shape.



Fig. 66. The words 「柴灣工廠邨大廈」 painted on the wall of the rooftop pavilion of the exterior wall of the building.





Fig. 67. The words 「柴灣工廠邨大廈」 painted on the exterior wall of the building, as viewed from Lee Chung Street.



Fig. 68. The words 「柴灣工廠邨大廈」 painted on the exterior wall of the building, as viewed from Cheung Lee Street.

Chai Wan Factory Estate was built with reinforced concrete. (Fig. 69 - Fig. 70) The minimal construction requirement, allowed the construction to be done without skilled labours, and to be finished within a period of only seven to eight weeks.<sup>61</sup> The priority at the time was low construction cost and time efficiency. Previous studies had pointed out that such resettlement construction was 'directed by military engineers', as hinted by the name designation 'Mark 1', 'Mark 2' that resembled the naming of tanks and bombers'.<sup>62</sup>

<sup>61</sup> *Ibid.*

<sup>62</sup> Miles Glendinning, 'Wah Fu Estate, Hong Kong' (2011) Hong Kong Housing Department architecture division (project architect, Donald P H Liao) 1965-70', Website: <http://www.c20society.org.uk>.



Fig. 69 Column, beam and slab construction.

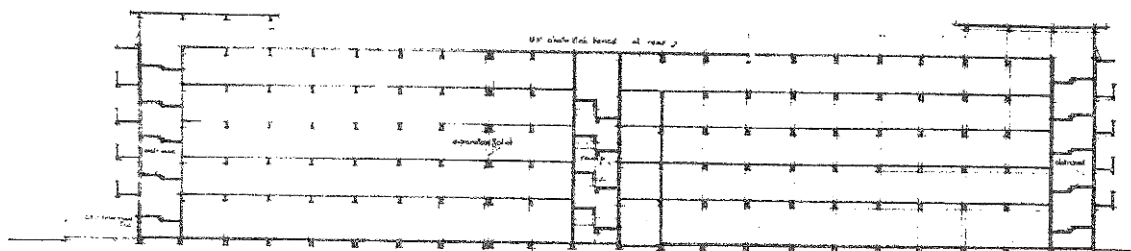


Fig. 70. Column, beam and slab construction reflected from the section.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

The Mark I resettlement estates had long arms and flats that were situated back to back. Each long arm of the H-shape is divided into equal bays by means of reinforced concrete bearing walls. Reinforced concrete floor slabs span between the cross walls, with the stairwells on the end as the only exception. According to early documentation of Mark I Resettlement Estate construction, all concrete block walling is built fair face. The balcony fronts, end walls of each block and exterior walls of the latrine blocks are finished externally with cement paint.<sup>63</sup>

Individual washrooms and toilets were not equipped within the flat. In 'H'-shaped Mark I estates, public flush latrines and washrooms were equipped in the block bridging the two wings.<sup>64</sup> Only the bridging cross bar of the 'H' shape block had running water, this was also the case in Chai Wan Factory Estate, where there are separate male latrines and female latrines on the cross-bridge of the 'H' shape on each floor. Opposite from the latrines were male washrooms and female washrooms. (Fig. 71)

The building is surrounded by a set of balcony that functioned as public circulation. (Fig. 72) The Mark I factory and housing estates were not equipped with lifts, and Chai Wan Factory Estate relied on internal ramps (Fig. 73) and staircases (Fig. 75) up till today. There are four set of staircases, one on each corner of the building. Apart from the staircases, two sets of ramps were constructed, one on each arm of the 'H' shape, flanking from the middle cross bridge. The ramps allowed bulk materials to access the building, which

<sup>63</sup> *The Hong Kong and Far East Builder*, Vol. 11 No. 5, Hong Kong, Hong Kong Builder, p. 64.

<sup>64</sup> See 'Historical Background of Shek Kip Mei Estate' (2009) under History of Estates, Hong Kong Housing Authority. Retrieved 29th November, 2012. Website: <http://www.housingauthority.gov.hk/hdw/en/aboutus/events/community/heritage/about.html>.

marks Chai Wan Factory Estate unique from resettlement housing estates. (Fig. 73) There are paint notices on each floor at the ramp core indicating the floor loading capacity, reflecting the structural concern for the industrial operation of the factory building. (Fig. 74)



Fig. 71. Communal Washroom located at the centre of the building.



Fig. 72. Galleries around the building that function as public circulation.



Fig. 73. The ramp that provides vertical access for bulky items.



Fig. 74. Paint notice at the ramp core on loading capacity.





Fig. 75. Each corner of the factory estate is built with a set of staircases.

Remarkably different from resettlement housing estates was the existence of a set of four chimney stacks that extend through the third, fourth and fifth floor in the factory, facilitating industrial airflow. The four chimneys are located only on one half of one arm of the H-shaped factory estate. (Fig. 76) It only serves flats on the third floor and fourth floor on the particular corner of the building. (Fig. 77)

The chimney stacks extend through the fifth floor canteen and re-emerge on the roof of the canteen pavilion. The chimney stacks as seen from the top is constructed with bricks (Fig. 78), painted in white and topped with a slab of concrete preventing unwanted items to fall into the flues. There are four flue openings (Fig. 79) on each chimney stacks, and four square-shaped openings on each of the wide sides of the chimney stacks. (Fig. 80)

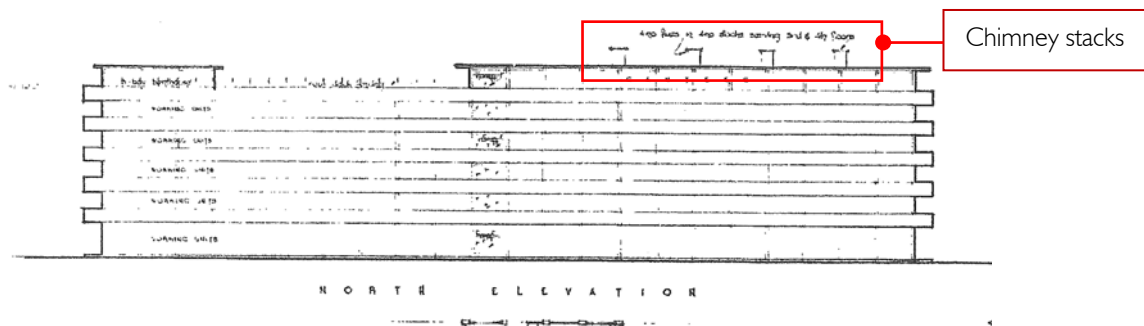


Fig. 76. Four chimneys are visible on the top of the building.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

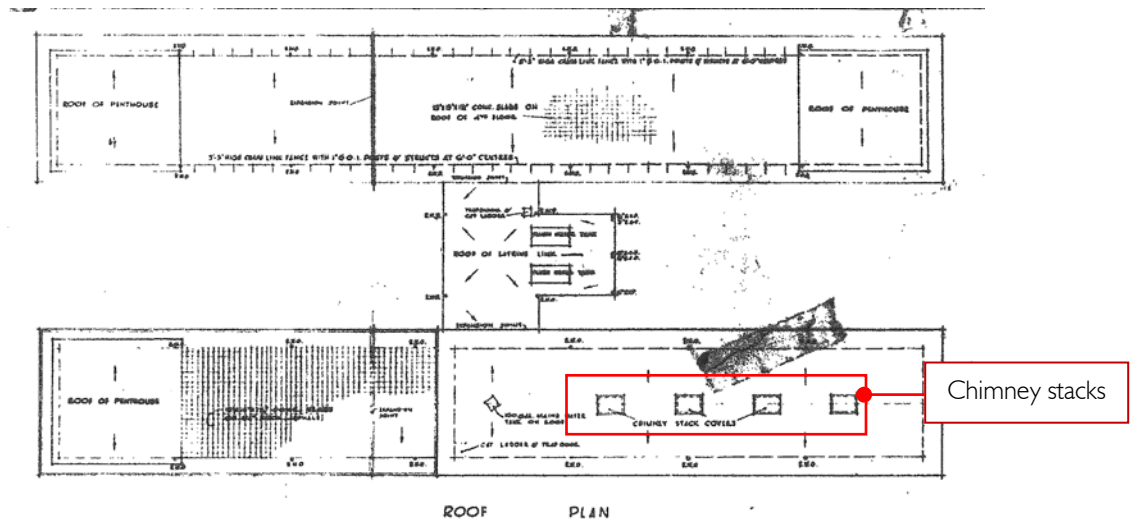


Fig. 77. Chimney stacks are only found on one end of one arm of the factory estate.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)



Fig. 78. The chimneys are constructed by brick.

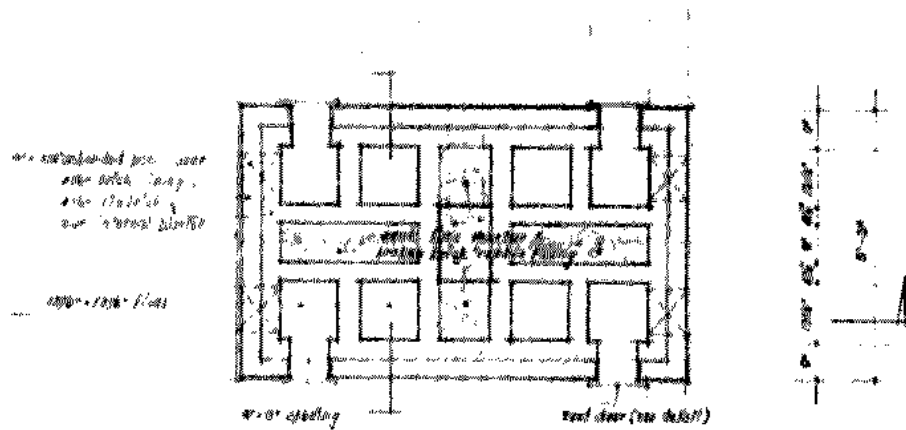


Fig. 79. Fourth floor plan of the chimney.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/7204.)



Fig. 80. The chimney stack closest to the MTR Station, located on the roof of the canteen pavilion of the Chai Wan Resettlement Estate.

The ventilation openings can be seen in certain flats on the third and fourth floor. The two flues in the middle of each chimney stacks are longer and continue down to the third floor. The two flues on the outer side of each chimney stacks are shorter and continue down to the fourth floor flats. (Fig. 81 - Fig. 82)

As seen from the interior, the ventilation openings are square in shape, located around 1.5 metres away from the floor of a flat, at the location of the middle row of columns between the two back-to-back flats. A metal door is present to close the ventilation opening. (Fig. 83 - Fig. 84)

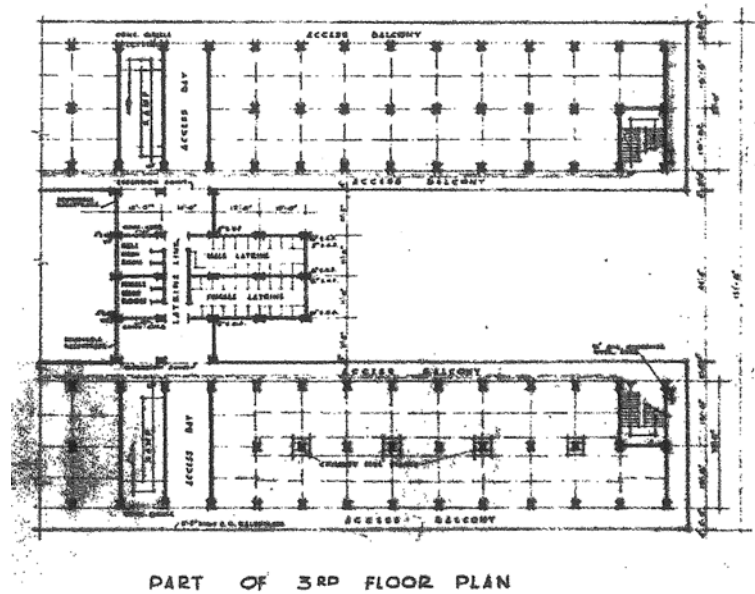


Fig. 81. Ventilation openings that serves the third floor flats.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/6760.)

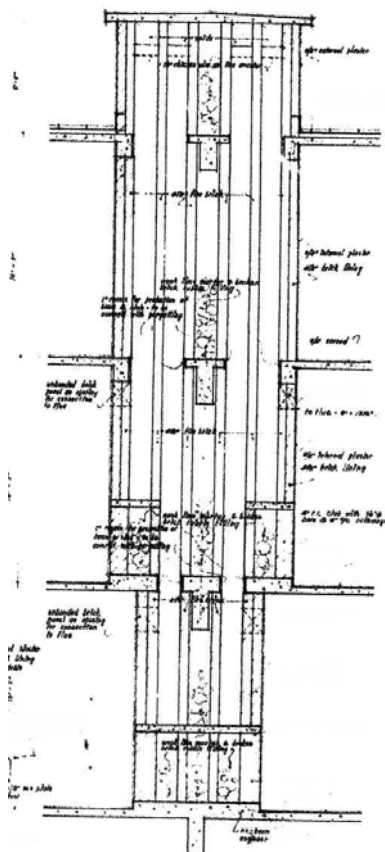


Fig. 82. Roof Level plan of the chimneys.  
(Courtesy of Housing Authority, Chai Wan Resettlement Estate – Hong Kong, A/7204.)





Fig. 83. Ventilation opening at a flat on the third floor.



Fig. 84. Ventilation openings on the fourth floor at two connected flats.

### 3.2.3 Architectural Typology – Types of public housing (1954-1975)

In response to the rapidly growing refugees and the reoccurring hazards which threatened their lives, the Hong Kong government commenced the building of public housing estates in the 1950s. The goal was clear, to accommodate as many people in the most cost-and time-efficient manner. The buildings designed and constructed during the earliest attempt could be classified into four different types – Mark I, II, III, IV, spanning over a decade between 1954 and 1965. Further improvements were made in the subsequent decade, with the invention of Mark V and Mark VI types. Chai Wan Factory Estate belongs to Mark I, the earliest type of the evolution. With the establishment of the Housing Authority, many of these earliest built blocks were redeveloped into newer and taller buildings.

#### Mark I & Mark II (1954 – 1961)

LIST OF ESTATES		NO. OF BLOCKS
Chai Wan	柴灣邨	5
Lower Shek Kip Mei	石硤尾下邨	4

Tai Hang Tung	大坑東邨	11
Lei Cheng Uk	李鄭屋邨	19
Hung Hom	紅磡邨	3
Lok Fu	樂富邨	19
Lower Wong Tai Sin	黃大仙邨	29
Jordan Valley	佐敦谷邨	16
Kwun Tong	觀塘邨	23
Tung Tau	東頭邨	21
Wang Tau Hom	橫頭磡邨	25
Tai Wo Hau	大窩口邨	17

### Mark I (1954 – 1959)

The first multi-storey resettlement estate blocks were completed in September 1954 in Shek Kip Mei. The functional demands resulted in an 'H-shaped' layout plan (Fig. 85), with flats lined out back to back along the long arms, and communal latrines and washroom located on the bridging piece in the centre. Vertical access is constructed on the four corners of the building. Each flat is 11.15 square metres<sup>65</sup>; the flats are accessed from the balcony that runs around the long arm of the H-block. Each of these flats accommodated five to six people on average, and buildings are usually six to seven storeys tall.

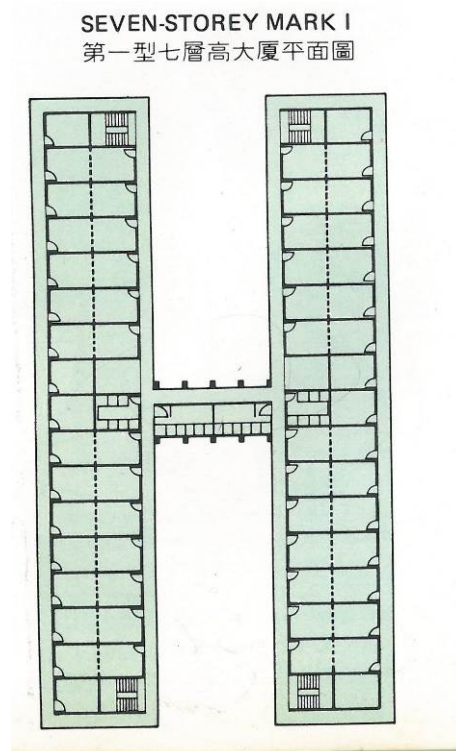


Fig. 85. Plan of typical Mark I resettlement estates, seven storey in height.  
(from Hong Kong Housing Authority, *The First Two Million*, p. 46.)

<sup>65</sup> Hong Kong Housing Authority, *The First Two Million*, Hong Kong, Government Printer, 1981.

Mark II (1959 – 1961)

New public estate blocks were constructed between 1959 and 1961, these blocks were largely similar to Mark I Blocks, but had incorporated two more crossings on the layout, which created a courtyard in the centres of the block. This layout links the two open eyes of the H, which created a pan resembling the Chinese word ‘日’, this allowed the building to provide an extra 24 flats with individual balconies and four spacious shops on the ground floor.(Fig. 86)

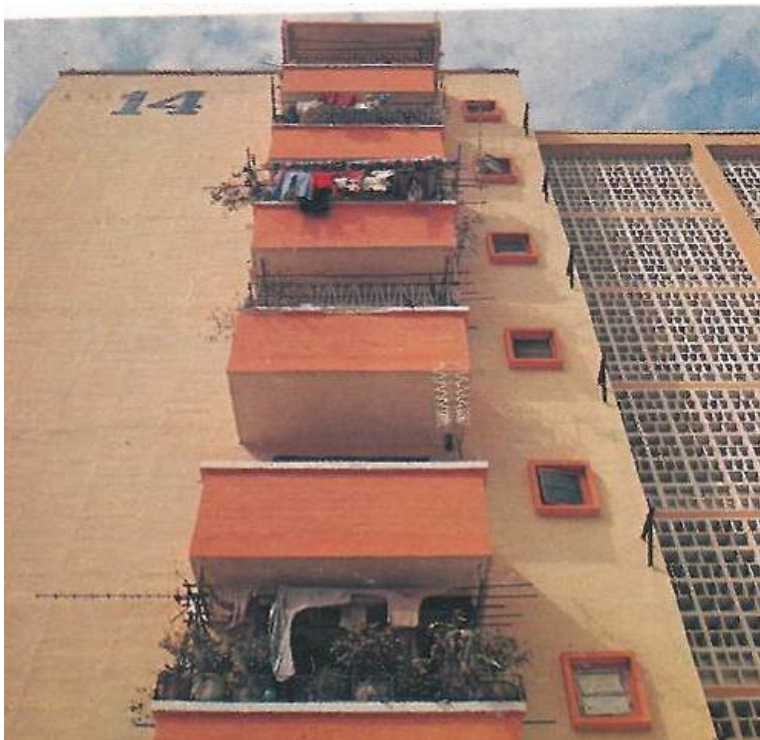


Fig. 86. Appearance of a Mark II Resettlement Estate.  
(from Hong Kong Housing Authority, The First Two Million, p. 46.)

Mark III & Mark IV (1962-65)

In 1962, a new type known as Mark III replaced the H-shaped design. Access into individual flats is no longer from the exterior corridor, instead, it is reversed, and an access corridor is located in the middle that links flats on both sides. Each flats in turn gained their own individual balcony.

The first three types of resettlement estates were not equipped with individual latrines and ablution facilities and lifts. These were not introduced until 1963, with the introduction of Mark IV. The basic construction and layout of Mark IV estates were not largely different from the Mark III design, the main difference lies on the building height. (Fig. 87) The Mark IV buildings are sixteen storeys tall instead of eight, lifts stops on every third floor, and an individual toilet with fresh water supply is equipped in each flat. (Fig. 88)

LIST OF ESTATES		NO. OF BLOCKS
Chai Wan	柴灣邨	15
Tin Wan	田灣	15
Shek Pai Wan	石排灣邨	7
Tung Tau	東頭邨	2
Sau Mau Ping	秀茂坪邨	17
Tsz Wan Shan	慈雲山邨	58

Yau Tong	油塘邨	18
Lam Tim	藍田邨	13
Ngau Tau Kok	牛頭角下邨	4
Lower Pak Tin	白田下邨	3
Kwai Chung	葵涌邨	1
Tai Wo Hau	大窩口邨	42
Yuen Long	元朗邨	5
Shek Lei	石籬邨	7

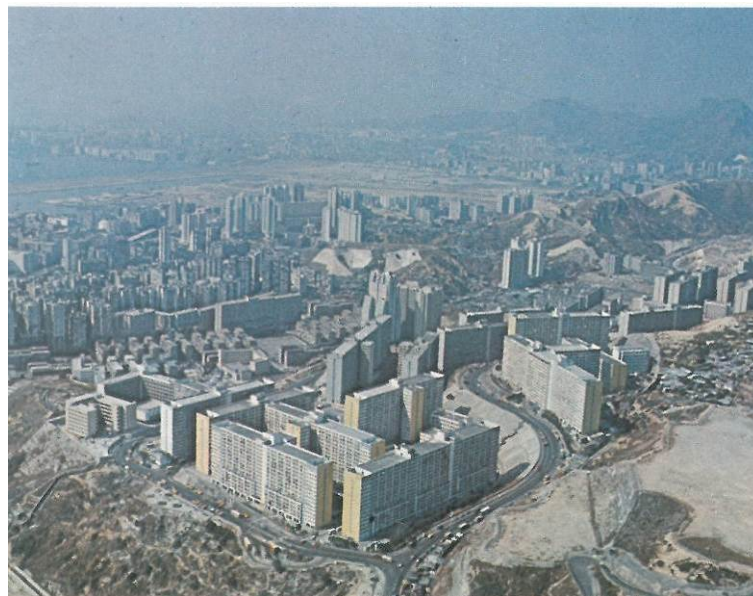


Fig. 87. Sau Mau Ping Estate.  
(from Hong Kong Housing Authority, *The First Two Million*, p. 47.)



Fig. 88. It became possible to do laundry within the Mark IV estates' flats at Tsz Wan Shan.  
(from Hong Kong Housing Authority, *The First Two Million*, p. 47.)



## Mark V (1966 – 1969)

In the new estate blocks built in 1966, some modification was made based on the Mark IV design. (Fig. 89) The column and beam building method was abandoned, but the building looks largely similar to Mark IV building design. The Mark V flats were designed with a living space of 2.23 square metres per person, these flats housed five to seven people on average. (Fig. 90)

LIST OF ESTATES		NO. OF BLOCKS
Hing Wah	柴灣邨	3
Sau Mau Ping	秀茂坪邨	23
Tsz Wan Shan	慈雲山邨	4
Ngau Tau Kok	牛頭角下邨	10
Shek Lei	石籬邨	8

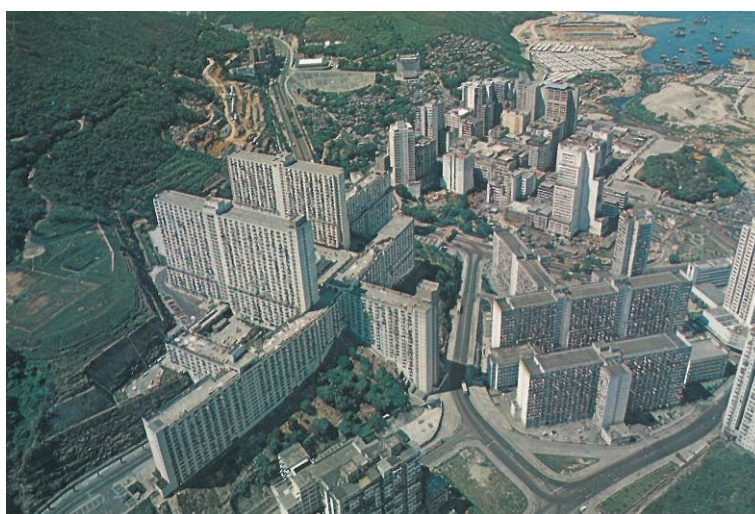


Fig. 89. Hing Wah Terrace is an example of Mark V Domestic Block.  
(from Hong Kong Housing Authority, *The First Two Million*, p. 48)



Fig. 90. Interior of a Mark V flat, with the balcony in the flat clearly visible in the picture.  
(from Hong Kong Housing Authority, The First Two Million, p. 48)

#### Mark VI (1969 – 75)

Mark V public estates resembles the previous types in appearance, but one of the most significant change is an increase in living space, to 3.25square metres per person – a fifty per cent increase as compared to the past. These flats accommodated five to nine people on average at the time. The use of load-bearing wall structure made the extra space possible. (Fig. 91 - Fig. 92)

LIST OF ESTATES		NO. OF BLOCKS
Sau Mau Ping	秀茂坪邨	4
Tsz Wan Shan	慈雲山邨	1
Yau Tong	油塘邨	5
Lam Tin	藍田邨	10
San Fat	新發邨	4



Fig. 91. Interior of a Mark VI flat in Sau Mau Ping.  
(from Hong Kong Housing Authority, The First Two Million, p. 49)



Fig. 92. Lam Tin Estate.  
(from Hong Kong Housing Authority, The First Two Million, p. 49)



### 3.2.4 Architectural Style – modern style

The Chai Wan Factory Estate can be identified with modern style characteristics which are marked by its simple and clean appearance with a more utilitarian stress in design of space and form. The style emerged in the early 1950s, an era marked with rapid increase in population which demanded for more living spaces created within a short time frame. Efficiency in construction becomes one of the main emphases in design. To cope with this, the design of the building aimed at meeting the minimum requirement and standard which resulted in a simple and functional design. These buildings are usually built in reinforced concrete with flat roof and little ornamentations.

The 1950s marked a period of raising Hong Kong and Chinese local architects. Popular names in Hong Kong included Robert Fan 范文照 (1873 – 1979), Luke Him Sau 陸謙受 (1904- 1992), Su Gin Dji 徐敬直 (1906-unknown), and architectural firm such as Kwan, Chu and Yang 基泰工程司. Most government invested buildings were built by the Public Works Department, and features modern style too. These includes the Hung Hom Police Station (1950) (Fig. 93), Bridges Street Market (1953) (Fig. 94), Mei Ho House (1954), new block at the Yau Ma Tei Police Station (1957) and the City Hall (1963).



Fig. 93. Hung Hom Police Station built in 1950.  
(from Kevin Sinclair, *Asia's Finest: an Illustrated Account of the Royal Hong Kong Police*, Hong Kong, Unicorn, 1983, p.160.)

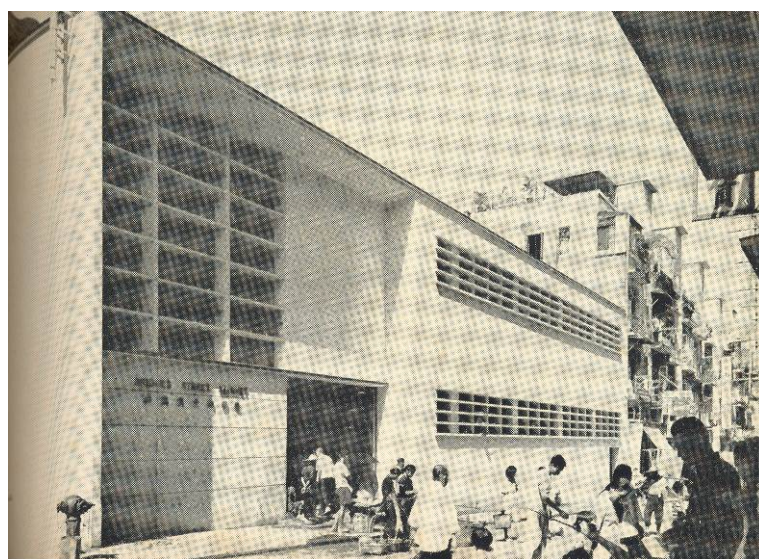


Fig. 94. Bridges Street Market, c.1953-1954.  
(Director of Public Works, *Annual Departmental Report 1953-1954*, Hong Kong, Hong Kong Government Press, 1954.)



### 3.2.4.1 Simple and Functional Design

The Chai Wan Factory Estate was built largely in cubic form with a bridging component in the middle. The interior planning was based on functional concern and aimed at providing the minimal living environment to accommodate the large homeless population at the time. Straight lines tended to dominate the design as opposed to curves in order to be cost effective. (Fig. 95 - Fig. 97)



Fig. 95. Part elevation of the Chai Wan Resettlement Estate facing Kut Shing Street.



Fig. 96. The planning with units arranged along a main circulation corridor is largely similar to the resettlement housing built in the 1950s.  
(right: from Fong Kwok Wing 方國榮, Chen Chik 陳迹, *Home of Yesterday*, Hong Kong, Joint Publishing (Hong Kong) Company Limited, 1993, p. 13.)



Fig. 97. Main circulation corridor at the factory estate (left) and the resettlement housing (right).  
(right: from Fong Kwok Wing 方國榮, Chen Chik 陳迹, *Home of Yesterday*, Hong Kong, Joint Publishing (Hong Kong) Company Limited, 1993, p. 54.)

### 3.2.4.2 Minimum decoration

In the modern style building, the only decoration to the building is usually restricted to the composition of different elements, such as the geometric expression of the windows and doors opening and the staircase balustrades. However, the resettlement estates are of an extreme case of function-domination due to its particular demand to efficiently home the mass population in need, all details of the factory estate is built plainly. When the units were handed over to the owners, the owners had to build their own partition walls and doors between the columns and floor slabs, which were the only components provided. (Fig. 98 - Fig. 99)



Fig. 98. Original canteen on the roof level with only minimal components.



Fig. 99. Access ramp with window openings to provide ventilation.

### 3.3 Other examples of Factory Estates in Hong Kong

Between 1957 and 1973, eight factory estates were built. The earliest lot of factory estates closely resembles the Mark I style resettlement estates that were built with a layout of H and I shapes.

With the establishment of the Hong Kong Housing Authority in 1st April, 1973, the eight factory estates became under the Authority's management. Between 1973 and 1984, factory estates were built in nine different locations by the Housing Authority. Some of these estates were as tall as 26 stories, radically different from the previous factory estates that were with maximum of seven storeys tall. The design also varied according to the site. Demand for factory buildings decreased gradually, and the Housing Authority ceased building factory estates, many were demolished to make way for other developments.

#### 3.3.1 Cheung Sha Wan Factory Estate 長沙灣工廠大廈 (demolished)

The six blocks of Cheung Sha Wan Factory Estate were completed in October, 1957 (Block 1), August, 1960 (Block 1A), November, 1960 (Block 2), September, 1961 (Block 3), July, 1965 (Block 4 and 5). (Fig. 100) It was the first factory estate constructed by the Public Works Department. These I-shaped and H-shaped factory blocks closely resembled the housing estates externally. A ramp is built internally to access each floors, so that the bulk materials can be transported to the factory flats. Within the building, only the basic slab and reinforced concrete column was built, the building had no partitioning walls. Tenants would have to partition their space upon renting.

Block 1 was demolished in 1990 due to structural problems. Other blocks were demolished in 2006. The site is now built into two primary schools, and the public housing compound – Un Chau Estate.



Fig. 100. Factory Estate at Cheung Sha Wan, c.1966  
(from Public Records Office)

### 3.3.2 Jordan Valley Factory Estate 佐敦谷工廠大廈 (demolished)

The Jordan Valley Factory Estate was completed in December, 1959. (Fig. 101) The Factory Estate was built together with the resettlement housing estates. The five storey tall factory estate was also modeled on Mark I housing estates designed with external corridors that functioned as public access and flats that are situated back to back. However, the typical H-shape was shortened due to site restrictions, which resulted in a 4-shaped layout. The bridging part at the center was public latrines and bathrooms. The building accommodated 188 flats.

In early 1983, the government had decided to develop the Ngau Tau Kok area, and had demolished the west wing of the Jordan Valley Factory Estate. The site has become the Ngau Tau Kok Bus Terminus now. The rest of the building was demolished in 2005, and it is now the Choi Ha Road Sitting Out Area.



Fig. 101. Jordan Valley Factory Estate, 2003.  
(from Jordan Valley Factory Estate, Multimedia Information System under Hong Kong Public Libraries, Leisure Cultural Services Department, Web Site:  
[http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/frm-bas\\_srch.html](http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/frm-bas_srch.html).)

### 3.3.3 Tai Wo Hau Factory Estate 大窩口工廠大廈 (demolished)

The three blocks of Tai Wo Hau Factory Estate were built in November 1961, November 1962 and April 1966 respectively. The blocks were of four storeys, five storeys and seven storeys tall. All of the blocks were not equipped with lifts. Each flat were sized 18 square metres or 24 square metres.

The Hong Kong Government had passed the plans to develop Tsuen Wan into a new town accommodating 1,000,000 populations in late 1950s. Reclamations were carried out along the Tsuen Wan and Kwai Chung shorelines and new public housings were constructed. Investors in manufacturing industries were encouraged to move into the area, and the area was gradually populated by container terminals, docks and oil depots.<sup>66</sup> With the completion of the Mass Transit Railway, industries in the area further flourished.

In March 2005, the Housing Authority decided to demolish the blocks due to the increasing vacancy and high maintenance cost. The plan to demolish the blocks received rejections from the tenants, and the Authority delayed the plan twice, the blocks were finally closed in May, 2007 as the last tenant moved out.

<sup>66</sup> Kwok Siu Tong 郭少棠, *Dongqu fengwuzhi: jiti jiyi shequqing* 東區風物志: 集體記憶社區情 [A Guide to The Antiquities of Hong Kong Eastern District: Collective Memory in the Community], p. 202.





Fig. 102. Tai Wo Hau Resettlement Estate, c. 1962.  
(from Lau Yun Woo, Ko Tim Keung, *Xianggang zouguo de daolu* 香港走過的道路, Joint Publishing (H.K.), 2008, p. 202.)



Fig. 103. Tai Wo Hau Factory Estate.  
(from Tai Wo Hau Factory Estate, Multimedia Information System under Hong Kong Public Libraries, Leisure Cultural Services Department, Web Site:  
[http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/firm-bas\\_srch.html](http://hkclweb.hkpl.gov.hk/hkclr2/internet/cht/html/firm-bas_srch.html).)

### 3.3.4 San Po Kong Factory Estate 新蒲崗工廠大廈 (demolished)

The new runway at the Kai Tak Airport came into use on 1st September, 1958. The expansion of the airport stimulated the development of the San Po Kong Industrial area. With the opening up of a new section of Prince Edward Road, a new area around San Po Kong became the San Po Kong Industrial Area, and the government had also decided to build the San Po Kong Factory Estate. The design was modelled on Mark I style resettlement estate design, with an 'I shaped' layout, with 2004 flats altogether. The blocks had no lifts.

The six blocks were built in December 1962 (Block 1 & 2), March 1963 (Block 3 & 4) and June 1965 (Block 5 & 6). The factory estate was resumed by the government in February, 2006 and demolished.

### 3.3.5 Kwun Tong Factory Estate 觀塘工廠大廈 (demolished)

The first and the second block of the Kwun Tong Factory Estate, each seven storeys tall, were completed in March 1966. These blocks were also not equipped with lifts, there were altogether 817 flats, each measuring 24 square metres in size. The Housing Authority decided to demolish the blocks in March, 2005.



Fig. 104. Kwun Tong Factory Estate, 2002.

### 3.3.6 Yuen Long Factory Estate 元朗工廠大廈 (demolished)

The Yuen Long Factory Estate was designed as a Mark II, single block Factory Estate, completed construction in 1966, and was transferred under the management of the Housing Authority in 1973. The Authority decided to demolish the building in 1995.

### 3.3.7 Kwai Chung Factory Estate 葵涌工廠大廈 (demolished)

Kwai Chung Factory Estate consisted of four blocks, which were built between 1966 and 1973. The factory estate was located directly adjacent to the Kwai Chung Estate. The Housing Authority announced to demolish this complex in 2001, and the site is now rebuilt into public housings.

### 3.3.8 Summary

From the above examples of other factory estates built by the Public Works Department in Hong Kong, it is observed that the early design of Cheung Sha Wan Factory Estate and Chai Wan Factory Estate has set a prototypical form for the government developed factory estates that were built later between the 1960s and 1970s. All the cases are of modern design with a similar simple and functional form, primarily an H-shaped layout or I-shaped layout with external galleries for public access, and of multi-storey in height, very similar to the design of the resettlement housings. The low-cost and multi-storey design provided a solution for the rapidly developing city.

# 4

## STATEMENT OF SIGNIFICANCE

The assessment of the cultural significance of a historic site is to identify and assess the attributes which make a place of value to the people and the society. According to the Burra Charter, cultural significance means “aesthetic, historic, scientific or social value for past, present or future generations” (see Appendix II for International standards on values of a historic place and Appendix III for assessing the significance).

### 4.1 Historic place

Chai Wan Factory Estate (CWFE) is located at 2 Kut Shing Street in Chai Wan. The district was originally a small rural village in terms of population size, which was chosen as a military site for barracks and forts during the colonial period. After the Second World War, there was an influx of Chinese refugees to Hong Kong pressing acutely on the city’s housing provision, where illegally built squatter houses emerged at the time. The Government began to build resettlement housings for the homeless or those living in dangerous environment. The Chai Wan Resettlement District was established in Chai Wan by the Resettlement Department in 1959, where CWFE was built along with the resettlement housings to accommodate the factories cleared from the squatter areas by the Government.

CWFE was the second Factory Estate built in Hong Kong, which was built as an H-shaped Mark I Resettlement Estate model. This was the first model in the resettlement estate history, which was greatly adopted in other factory estates built in the same period.

It was a reinforced concrete building with a column, beam and slab structure, where the priority was low construction cost and time efficiency. Flats are arranged side by side, back to back along the two wings accessible by a corridor along the periphery of each floor. Communal latrines and bathrooms are located at the bridging part of the H-shape on each floor. Four flights of staircases are found at the four corners for vertical access. A ramp is present on each wing on each floor to facilitate the transportation of industrial materials and goods to each floor. CWFE was built purely on functional concern with a Modern style, features a simple and clean appearance with a utilitarian emphasis in the design of space and form.

Throughout the years, CWFE was occupied by a great variety of industrialists which resulted in a great variety of unit elevation design and interior partitioning. It was vacant since 2012.

### 4.2 Heritage values

The construction of Chai Wan Factory Estate reflected the historic background of Hong Kong at the time of a population boom due to the influx of Chinese refugees to Hong Kong after the Second World War. Meanwhile, CWFE was also built at a time when industrial development was prospering in Hong Kong. It is the only surviving example built in the first model of Factory Estate in Hong Kong, which is a rare physical evidence for interpreting the industrialization of Chai Wan since the 1950s.

CWFE is a good example of H-shaped Mark I Resettlement Factory Estate, with its significant H-shape building form. It is also a typical example of a modern style building with its simple and functional design approach, which is reflected from the utilitarian spatial configuration. Despite the interventions on the interior partitioning and unit elevation design through the years, all the architectural features essentially reflecting the character of the building are still intact and of high authenticity. The H-shaped Mark I Resettlement Factory Estate building model demonstrated through CWFE marks a milestone in the overall housing and factory building development in Hong Kong.

## 4.3 Character Defining Elements

### 4.3.1 Selection criteria

*Character-defining elements* means the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the heritage value of a historic place, and which must be retained in order to preserve its heritage value.<sup>68</sup> The selection of the Character Defining Elements is based on the cultural significance of the CWFE derived from the previous chapter, which includes contextual significance, historic significance, architectural and aesthetic significance, and social significance.

### 4.3.2 Level of significance

It is important to define the significance of each Character Defining Element. A level of significance is designated for each CDE with the following parameters.

#### High significance

High significance defines spaces or features that are of high cultural significance, which could be amongst the best examples (or the only surviving example) of an important category, or are of very major cultural significance. Significant alteration, deterioration, or demolition would diminish the cultural significance of the historic place. Intervention to the CDEs of high significance should be kept to a minimum.

#### Medium significance

Medium significance defines spaces or features that are of medium cultural significance, which are major contributors to the overall significance of the historic place, or could be good example of an important category. Maintenance and conservation are a priority to the CDEs of medium significance, with alteration possible which will not diminish the cultural significance of the historic place.

#### Low significance

Low significance defines spaces or features that are of low cultural significance, which are minor contributors to the overall significance. Major alteration is possible and may not affect the cultural significance of the historic place.


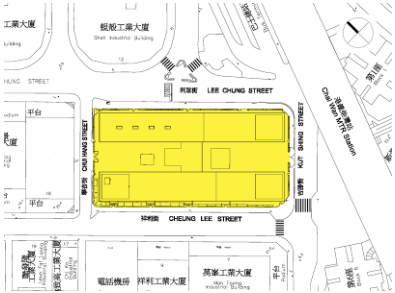
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<sup>68</sup> Definition extracted from *Standards and Guidelines for the Conservation of Historic Places in Canada*, Parks Canada, 2003.


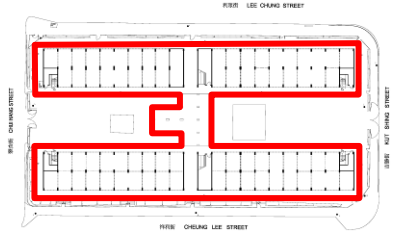

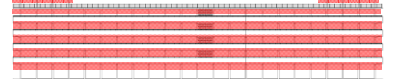

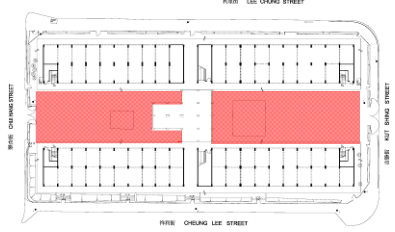



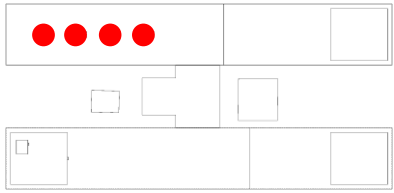

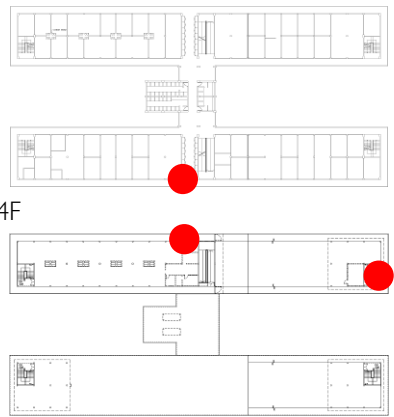
## 4.4 List of Character Defining Elements

### 4.4.1 Setting and context


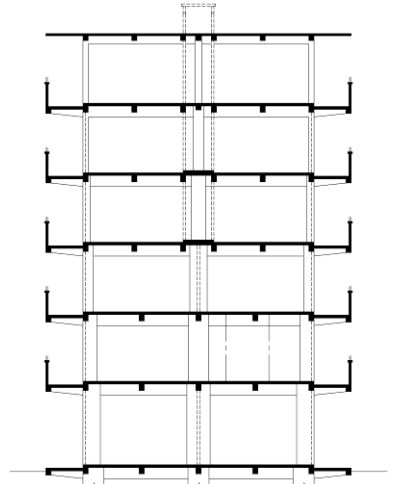

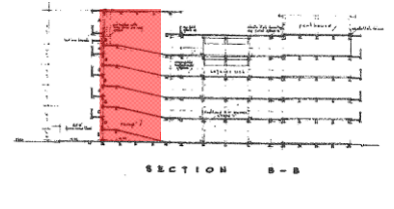
No.	CDE of CWFE	Significance	Photo	Location plan
S-1	The site and its relationship with urban fabric	<p><b>High</b></p> <p>The site of CWFE is physical evidence which marks the area once designated as a resettlement area known as Chai Wan Resettlement District.</p> <p>Since the 1970s, other industrial buildings were built around Chai Wan Resettlement District, forming a small industrial area in Chai Wan.</p>		

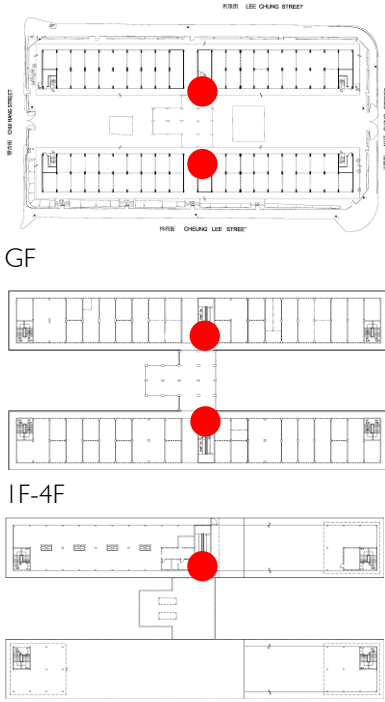
### 4.4.2 Exterior

No.	CDE of CWFE	Significance	Photo	Location plan
E-1	H-shape building form	<p><b>High</b></p> <p>Last surviving example of the H-shaped Mark I Resettlement Factory Estate model.</p>		
E-2	Strong horizontal lines formed by the balconies and slabs	<p><b>High</b></p> <p>Prominent feature contributing to the original configuration of the H-shaped Mark I Resettlement Factory Estate model.</p>		
E-3	Courtyards	<p><b>Medium</b></p> <p>Major contributor to the original spatial configuration of the H-shaped Mark I Resettlement Factory Estate model.</p>		

No.	CDE of CWFE	Significance	Photo	Location plan
E-4	Chimney stacks	Medium Major contributor to the original industrial operation of the factory building.		 RF
E-5	Paint characters 「柴灣工廠邨大廈」	Medium The paint characters show the name reflecting the original identity of the factory building.		 4F 5F

#### 4.4.3 Interior

No.	CDE of CWFE	Significance	Photo	Location plan
I-1	Column, beam and slab construction	High Prominent feature contributing to the original structural configuration of the H-shaped Mark I Resettlement Factory Estate model, which was intended to be a minimal construction to achieve low construction cost and time efficiency.		
I-2	Ramps with concrete grilles	High Prominent feature contributing to the original industrial operation of the factory building.		 SECTION B-B

I-3	Paint notice at the ramp core on loading capacity	<p><b>Medium</b></p> <p>Feature reflecting the structural concern for the industrial operation of the factory building.</p>	<p>此層之許可負荷量一般為每平方米 <b>225</b> 千克 如獲房委會特別批准則許可之最高負荷量為每平方米 <b>225</b> 千克</p>  <p>GF</p> <p>IF-4F</p> <p>5F</p>
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# 5

## CONSERVATION PRINCIPLES

### 5.1 Conservation Standard and Internal charters

The establishment and implementation of this conservation management plan will generally follow the standards of the following international charters and their conservation principles:

1. **Venice Charter (1964)** (International Charter for the Conservation and Restoration of Monuments and Sites) – the most fundamental principles and international standards for conservation and restoration of heritage buildings and sites adopted by UNESCO (United Nations of Education, Science & Cultural Organization) & ICOMOS (International Council of Monuments and Sites).
2. **Burra Charter (1999)** (The Australia ICOMOS Charter for Places of Cultural Significance) – a worldwide recognized standard of establishment and implementation of conservation, and provides guidance for the concept and definition of cultural significance.
3. **China Principles (2002)** (Principles for the Conservation of Heritage Sites in China) – a document that covers general conservation principles, a management planning process and intervention guidelines, which is developed based on Burra Charter developed based on local condition of China.

#### 5.1.1 Defining of terms

This section defines the conservation terms that are used in the conservation principles. These terms are defined under the international charters and standards and will be consistently in this way in the report.

##### General

Definitions are referring to Article 1 “Definition” of the Burra Charter 1999 and others sources as specified:

##### 1.1

Places mean site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

##### 1.2

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

##### 1.3

Fabric means all the physical material of the place including components, fixtures, contents and objects.

##### 1.4

Conservation means all the processes of looking after a place so as to retain its cultural significance.



### 1.11

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

### 1.12

Setting means the area around a place, which may include the visual catchment.

Character-defining elements means the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the heritage value of a historic place, and which must be retained in order to preserve its heritage value. (Definition extracted from Standards and Guidelines for the Conservation of Historic Places in Canada published by Parks Canada, 2003.

Authenticity means heritage resource that is materially original or genuine as it was constructed and as it has aged and weathered in time. (Definition extracted from the Management Guidelines for World Cultural Heritage Sites, by Bernard m. Feiden and Jukka Jokilehto, ICCROM 1998, p.17.)

## Level of intervention

Definitions referring to Article 1 - "Definition" of the Burra Charter 1999, the Australia ICOMOS Charter for Places of Cultural Significance, and other sources as specified. The conservation process is defined as below:

Conservation process	Definition
"Preserve"	means maintaining the fabric of a place in its existing state and retarding deterioration. <sup>69</sup> (Article 1.6)
"Restore"	means returning the existing fabric of a place to a known earlier state by removing accretions or reassembling existing components without introduction of new material. (Article 1.7)
"Repair"	shall include cleaning, re-fixing of loose elements in their original positions and local repair that does not include replacement.
"Replace"	shall include replacement of deteriorated elements/components by salvaged or new original sound materials.
"Adaptation"	means modifying a place to suite the existing use or a proposed use. (Article 1.9)
"Rehabilitation"	means the action or process of making possible a continuing or compatible contemporary use for a historic place, or of an individual component, through repair, alterations and/or additions, while protecting its heritage value. <sup>70</sup>
"Reconstruct"	means returning the place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric. (Article 1.8).
"Maintain"	means the continuous protective care of the fabric and the setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction. (Article 1.5)
"Interpretation"	means all the ways of presenting the cultural significance of a place. (Article 1.17)

<sup>69</sup> Definition extracted from Article 1 "Definition" of the Burra Charter 1999, *The Australia ICOMOS Charter for Places of Cultural Significance, Australia*, The Australia ICOMOS, 2000.

<sup>70</sup> *Standards and Guidelines for the Conservation of Historic Places in Canada*, Canada, Parks Canada, 2003.

## 5.2 Applying the Burra Charter and International Conservation process

In the following, the conservation principles regarding conservation processes and conservation practice are extracted from the Burra Charter and making reference to Standards and Guidelines for the Conservation of Historic Places in Canada, prepared by Parks Canada. These become the conservation principle for developing the guidelines and specific treatment for each character defining element.

### Burra Charter

#### Article 14 Conservation processes

*Conservation* may, according to circumstances, include the processes of: retention or reintroduction of a use; retention of associations and meanings, maintenance, preservation, restoration, reconstruction, adaptation and interpretation; and will commonly include a combination of more than one of these.

#### Article 16 Maintenance

*Maintenance* is fundamental to conservation and should be undertaken where fabric is of cultural significance and its maintenance is necessary to retain that cultural significance.

#### Article 17 Preservation

*Preservation* is appropriate where the existing fabric or its condition constitutes evidence of cultural significance, or where insufficient evidence is available to allow other conservation processes to be carried out.

#### Article 19 Restoration

*Restoration* is appropriate only if there is sufficient evidence of an earlier state of the fabric.

#### Article 20 Reconstruction

20.1 *Reconstruction* is appropriate only where a place is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the fabric. In rare cases, reconstruction may also be appropriate as part of a use or practice that retains the cultural significance of the place.

20.1 *Reconstruction* should be identifiable on close inspection or through additional interpretation.

#### Article 21 Adaptation

21.1 *Adaptation* is acceptable only where the adaptation has minimal impact on the cultural significance of the place.

21.2 *Adaptation* should involve minimal change to significant fabric, achieved only after considering alternatives.

#### Article 22 New Work

22.1 *New Work* such as additions to the place may be acceptable where it does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation.

22.1 *New Work* should be readily identifiable as such.

#### Article 27 Managing Change

27.1 Existing fabric, use, associations and meanings should be adequately recorded before any changes are made to the place.

## Concept of Change

**Change may be necessary to retain cultural significance**, but is undesirable where it reduces cultural significance. The amount of change to a place should be guided by the cultural significance of the place and its appropriate interpretation. (Burra Charter Article 15)

Conservation is the process of **managing change** to a significant place in its setting in ways that will **best sustain its heritage values**, while recognizing opportunities to reveal or reinforce those values for present and future generations. (English Heritage: Conservation Principles 2008 - Principle 4.2)

Considered change offers the potential to **enhance and add value to places**, as well as generating the need to protect their established heritage values. (English Heritage: Conservation Principles 2008- Terms & Concepts, Clause 25)

Sustaining the value of the historic environment as a whole depends also on creating in the present the heritage of the future, through **changes that enhance and enrich the values of places**. (English Heritage: Conservation Principles 2008- Managing change to significant places, Clause 96).

Owners and managers of significant places should not be discouraged from **adding further layers of potential future interest and value**, provided that recognised heritage values are not eroded or compromised in the process (English Heritage: Conservation Principles 2008- Managing change to significant places, Clause 86).

### 5.2.1 Conserve Heritage Value

- Conserve the heritage value of the historic place, and respect its changes over time which represents a particular period of time. Thus, it is not necessary to return to the original period of the building or the site when it was first erected. Only remove or replace the physical fabric which was substantially altered resulting in the overall integrity of the buildings and the character defining elements that contribute to its heritage value are affected.
- If necessary, protect, preserve or stabilize the historic place and the building fabric in place, until any subsequent intervention is undertaken.
- Restore any deformed, collapsed, or misplaced components while later additions which were considered of no significance or intrusive should be removed.

### 5.2.2 Authenticity

- Respect the original character or architectural style of the building fabric and retain its traditional building materials or construction system as much as possible.
- Recognize each historic place as a physical record of its time, place and use.
- Do not create a false sense of historical development by adding elements from other historic places by combining features of the same property that never co-existed.

### 5.2.3 Minimum Intervention

- Keep any treatment or intervention to the building fabric to the minimum and respect the heritage value when undertaking an intervention.
- Use the gentlest means possible for any intervention.
- Make any intervention physically and visually compatible and identifiable upon close inspection and document any intervention for future reference.

- All proposed intervention (proposed new uses, alterations and addition works) will not compromise the significance of the heritage place, but enhancing or adding value into it.

#### **5.2.4 Reversibility**

- Make any intervention, including alteration and new addition, to the significant building fabric reversible without causing any damage to the existing structure when such intervention is to be removed in future.

#### **5.2.5 Repair rather than Replace**

- Repair rather than replace character-defining elements.
- Only when such elements are too severely deteriorated to repair, and with sufficient physical evidence, replace them with new elements that match the forms, materials and detailing of the same elements.
- Where there is no sufficient evidence, make the form, material and detailing of the new elements compatible with the character of the historic place.

#### **5.2.6 Integrating Old and New**

- Any proposed new works and alterations to the heritage building should be sympathetic to the heritage place in terms of its compatible proportion, form, design and materials and imitation will be avoided. Make the new works physically and visually compatible with and distinguishable from the original fabric of the historic place.

#### **5.2.7 Reversible Additions**

- Create any new addition or related new construction so that the essential form and integrity of the historic place or its building fabrics will not be impaired if the new work is removed in the future.

#### **5.2.8 Manage the change**

- Allow changes to the heritage place in a way that guided by the cultural significance of it, and allow its interpretation. This desirable change should help to enhance and enrich the value of the place by its imposed changes which can add more layers of future interest and value.



# 6

## CONSERVATION GUIDELINES

### 6.1 Conservation goals

1. To response to the local community's strong aspiration to preserve CWFE
2. To manifest the cultural significance of CWFE through proper interpretation that helps the public and future users to understand the cultural significance of CWFE
3. To revitalize CWFE into public rental housing flats



### 6.2 Opportunities and constraints



After assessing the cultural significance, it is observed that the essence of CWFE is the building of H-shape Mark I Resettlement Estate model in Hong Kong. CWFE is a milestone in the development of Resettlement Estate in Hong Kong which is the only surviving example as a factory estate nowadays. The prominent H-shape building form and the building configuration of functional design approach reflected most of the characters at large.



As a factory building, it was built originally with the column, beam and slab structure with an open plan which enabled the industrialists to construct their own partitioning walls based on the structural grid. The factory building built purely for functional purpose does not process any ornate decoration, where its characters are mainly reflected in the building structural and spatial configuration, and localized facilities for operational purpose such as the ramps and chimney stacks. All these allow a great flexibility in the spatial planning of the future design. On the other hand, the great loading capacity originally designed for a factory building also allows a greater variety of different usage in the future.

Undoubtedly, it is most ideal to preserve CWFE in its totality. However, to implement this approach alone would depend very much on the conditions of the existing fabrics, their ability to satisfy the latest structural and statutory requirements, and the long term sustainable development. If there will be a change of use, the new design also need to fulfill current statutory requirements. Meanwhile, there is a need to strike a balance between the preservation of the building and the adaptive re-use of the building. Therefore, a more feasible conservation approach should be considered which allows the sustainable development and a continuous practical usability of CWFE.



## 6.3 Conservation guidelines to Character-defining elements

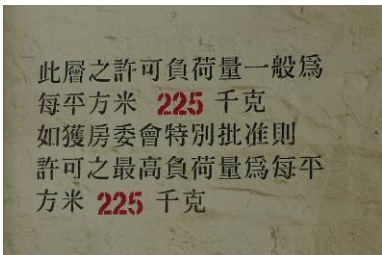
A Exterior			
Key Elements		Conservation guidelines and proposed treatments	Justifications
A-01	<b>Setting and context</b> (CDE nos. S-I) 	i. Retain the overall setting of the site, including: <ul style="list-style-type: none"> <li>the existing demarcation of the land lot by the four streets</li> <li>the independent setting of the existing building to be kept visible</li> </ul>	i. The overall setting determined the form and the external appearance of the factory building. ii. The site location marks the area once designated as Chai Wan Resettlement District which contributes to the historic significance of CWFE.
A-02	<b>H-shape building form</b> (CDE no. E-I) 	i. Maintain the H-shape building form so that it could be generally visible. ii. Any new addition on the existing structure at the roof level should be recessed from the existing building elevations as far as possible, visual impact of the new addition subject to further study. The new structure should be distinguishable from the existing building whose original mass and proportion remains obvious.	i. The H-shape building form is the prominent feature contributing to the H-shaped Mark I Resettlement Factory Estate model, which was a typical model greatly adopted in other factory estates built in the same period. CWFE is the only surviving factory estate built in this model. ii. Keeping the H-shaped building form and original building massing can help to present the last surviving earliest factory estate model in Hong Kong.

A Exterior (Cont'd)			
Key Elements		Conservation guidelines and proposed treatments	Justifications
A-03	<p><b>Strong horizontal lines formed by the balconies and slabs</b> (CDE no. E-2)</p> 	<ul style="list-style-type: none"> <li>i. Preserve the original elevation design including the horizontality and continuity formed by the balconies and slabs, and the solid and void composition formed by the parapets and the balconies.</li> <li>ii. New addition to the balconies are allowed, which should not excessively disfigure the building elevation so that the original elevation design is still readable.</li> </ul>	<ul style="list-style-type: none"> <li>i. The elevation of CWFE adequately presents the characters of the Modern style with a functional approach. The balconies running around the building elevation is also an essential character in the design of the H-shaped Mark I Resettlement Factory Estate model.</li> <li>ii. If there will be a change of use in the future, the new design could involve new provisions to meet the current statutory requirements. Any intervention to the elevation should respect the essences of the original elevation design.</li> </ul>
A-04	<p><b>Courtyards</b> (CDE no. E-3)</p> 	<ul style="list-style-type: none"> <li>i. Preserve the general outline of the courtyards on each side of the H-shape each as a single volume. Addition to the courtyards is allowed, in such a manner that the general outline of the courtyards is still readable.</li> </ul>	<ul style="list-style-type: none"> <li>i. The spatial quality of the courtyards adequately presents the character of the H-shaped Mark I Resettlement Factory Estate model.</li> </ul>

A Exterior (Cont'd)			
Key Elements		Conservation guidelines and proposed treatments	Justifications
A-05	Chimney stacks (CDE no. E-4) 	<ul style="list-style-type: none"> <li>i. Preserve the form and configuration of the chimney stacks at its original disposition.</li> <li>ii. Retain the flue openings of the chimney stacks. If blockage of the chimney flues is needed for better maintenance purpose in the future, the blockage should be carried out in a manner that the openings could still be visible.</li> </ul>	<ul style="list-style-type: none"> <li>i. The presence of the chimney stacks could present that industrial activities requiring better ventilation were once carried out on the third and fourth floors in the factory.</li> <li>ii. If the interior space will be re-designed for adaptive reuse purpose in the future, it is not necessary to retain the smoke shaft inside the units as the chimney stacks are more readily visible to the future users and public for the interpretation of the ventilation system.</li> </ul>
A-06	Paint characters 「柴灣工廠邨大廈」 (CDE no. E-5) 	<ul style="list-style-type: none"> <li>i. Preserve at least one set of the paint characters on the external walls at its original disposition.</li> <li>ii. Do not cover the painted characters in such a way that will hinder public appreciation.</li> <li>iii. Applying new paint on the existing paint characters is allowed as a means to preserve and make good the characters for public appreciation.</li> </ul>	<ul style="list-style-type: none"> <li>i. The paint characters mark the name of the building, which reflects its original identity.</li> </ul>



B Interior			
Key Elements		Conservation guidelines and proposed treatments	Justifications
B-01	<p>Column, beam and slab construction (CDE no. I-1)</p> 	<ul style="list-style-type: none"> <li>i. Retain the column, beam and slab structural system and the general basic structural grid to be generally readable.</li> <li>ii. Future alterations and additions should be distinguishable from the original structure. For example, new partition walls shall be added at the middle of the existing columns and beams in a way such that the columns and beams are still generally readable.</li> <li>iii. Any structural element which needs to be strengthened should be visually integrated harmoniously to yet distinguishable from the original.</li> <li>iv. For any structural element which needs to be reconstructed, they should be in line with the original appearance as far as practicable.</li> </ul>	<ul style="list-style-type: none"> <li>i. The column, beam and slab system adequately presents the structural character of the H-shaped Mark I Resettlement Factory Estate model.</li> <li>ii. If the interior space will be re-designed for adaptive reuse purpose, the new design could involve intervention to the original structural system in order to fulfil the latest statutory requirements. Any intervention to the structural system should respect the original slab, column and beam structural system and the general basic structural grid</li> </ul>
B-02	<p>Ramp core (CDE no. I-2, I-3)</p> 	<ul style="list-style-type: none"> <li>i. Preserve the ramp cores each comprised a ramp, concrete grille, and paint notice on loading capacity on each floor.</li> <li>ii. Retain the original spatial setting of the ramp, including the original ceiling height, natural light in-take through the concrete grilles, and the visual connection between different floors through the hollow newel.</li> <li>iii. Do not cover up the concrete grilles in such a way that will hinder public appreciation. If the concrete grilles are required to be enclosed for fulfilling the latest statutory requirement, glass enclosure shall be applied without hindering public appreciation. Any sub-frame shall follow the existing alignment of the concrete grilles as far as practicable such that the concrete grilles are still readable</li> <li>iv. Do not cover up the paint notice in such a way that will hinder public appreciation.</li> </ul>	<ul style="list-style-type: none"> <li>i. The ramp system adequately presents the original industrial operation of the factory building and is one of the essential characters of the H-shaped Mark I Resettlement Factory Estate model.</li> </ul>

		<ul style="list-style-type: none"> <li>v. Applying new paint on the existing paint notice is allowed as a means to preserve and make good the characters for public appreciation.</li> <li>vi. Interpretation for the paint notice, for instance, a small plaque with explanation for the purpose of the paint notice shall be considered in order to avoid confusion to the future user.</li> </ul>	
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# 7

## HERITAGE IMPACT ASSESSMENT

### 7.1 Objective

Hong Kong Housing Authority is to propose a scheme to convert CWFE into about 180 public rental housing flats. Remaining space after meeting the public rental housing need could be considered for heritage interpretation purpose, community and or retail facilities.

This chapter aims to evaluate the proposed works for converting the historic place into public rental housing, identify any potential impact that would adversely affect the character-defining elements as identified in the baseline study, and suggest mitigation measures to reduce the impact as necessary.

### 7.2 Proposed Development and Works

#### 7.2.1 User's requirement<sup>71</sup>

##### 7.2.1.1 Major development parameters

1. Convert the industrial building for public rental housing.
2. Not to exceed the original building height of the building at main roof level.
3. Not to exceed maximum site coverage of 70%.

##### 7.2.1.2 Planning requirements

1. Any new construction, additions or exterior alterations should blend in and harmonize with the existing building in terms of scale, proportion and materials.
2. Create a local focal point by providing communal area at ground level.
3. Provide open space of not less than 1 m<sup>2</sup> local open space per resident of the development.
4. Landscape planting at ground level and on flat roofs should be provided to soften the building mass. Planting along the edges should be applied to the building. A minimum coverage of 20% of the site for greening should be adopted, including a target of 10% of the site at ground level, while the remainder can be at ground, rooftop or vertical greening.
5. Provide car parking, loading and unloading up to the satisfaction of the Commissioner for Transport.

##### 7.2.1.3 Other technical requirements

1. CWFE is the last "H" type factory building in Hong Kong. The physical form of the building should be preserved as far as possible.

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<sup>71</sup> This section is extracted from the planning brief for Conversion of Chai Wan Factory Estate for Public Rental Housing Development.

2. To ensure that the existing sewerage system have sufficient capacity for the proposed development. All the proposed sewerage upgrading works shall be implemented to current Government standards.
3. Structural investigation and condition assessment to be carried out to verify the structural condition of the existing elements. Necessary upgrading or strengthening works will be carried out to ensure the durability of the building and to current statutory requirements. If preservation is found infeasible due to existing condition of the structure, recasting or re-construction could be sought as the last resort.

### **7.2.2 Proposed works**

1. Convert the existing factory units into public rental housing flats each provided with toilets and kitchen.
2. Provide light well to the PRH flats.
3. Demolish existing staircases at the inner corner of the wings facing courtyards, and construct new staircases at the outer corner of the wings facing Lee Chung Street and Cheung Lee Street.
4. Demolish the existing bridging link and construct a new bridge link shifted two grids from the original disposition.
5. Demolish existing water tank and transformer room on the ground floor at courtyards.
6. Construct new transformer room and switch room on the ground floor at courtyard.
7. Provide green area on ground floor and roof terrace.
8. Removal of existing chimney stacks.
9. Add steps to existing ramps to meet means of escape standard.
10. Provide new lifts to each floor for universal access.
11. New building services installation.



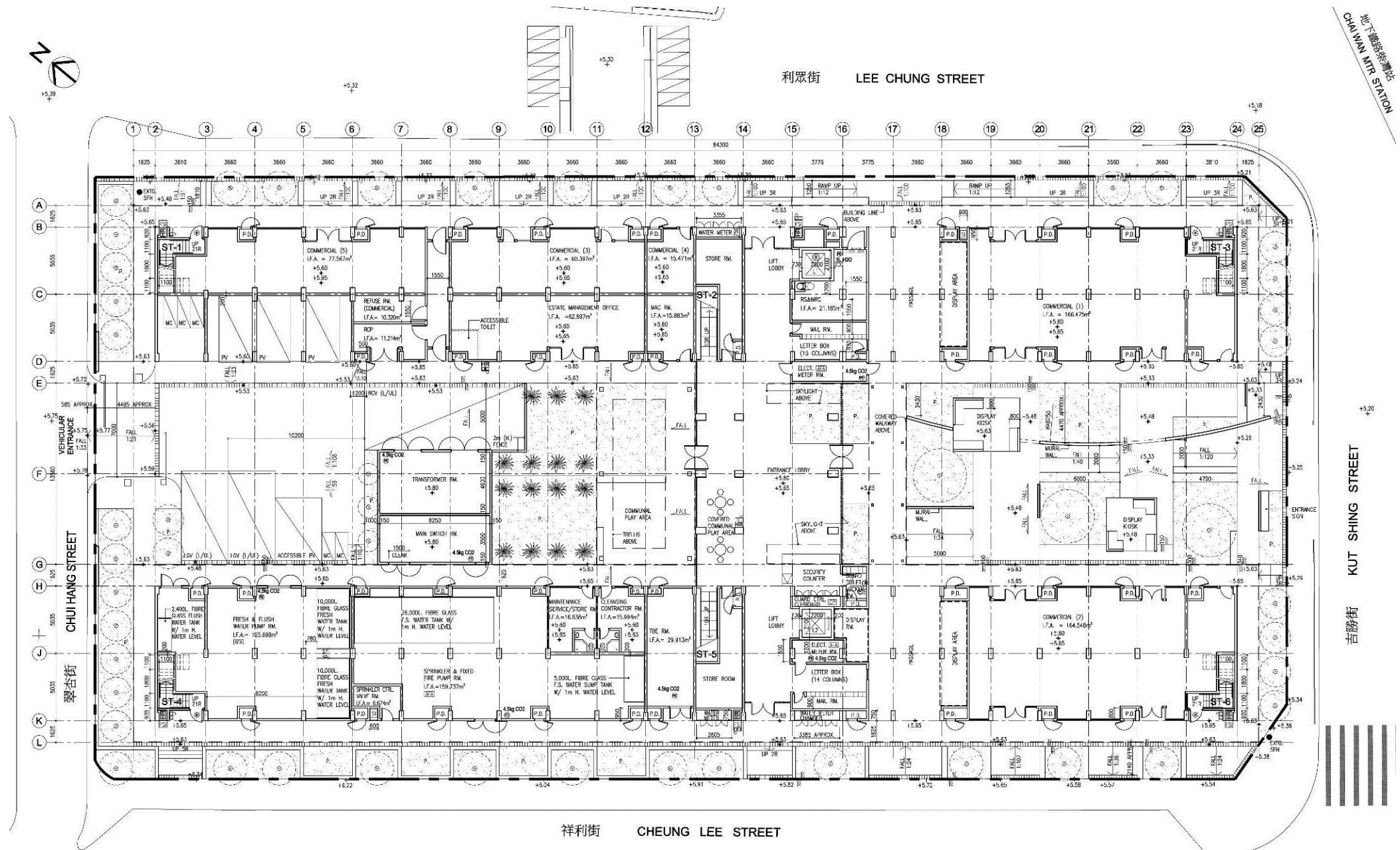


Fig. 105. Proposed ground floor plan.

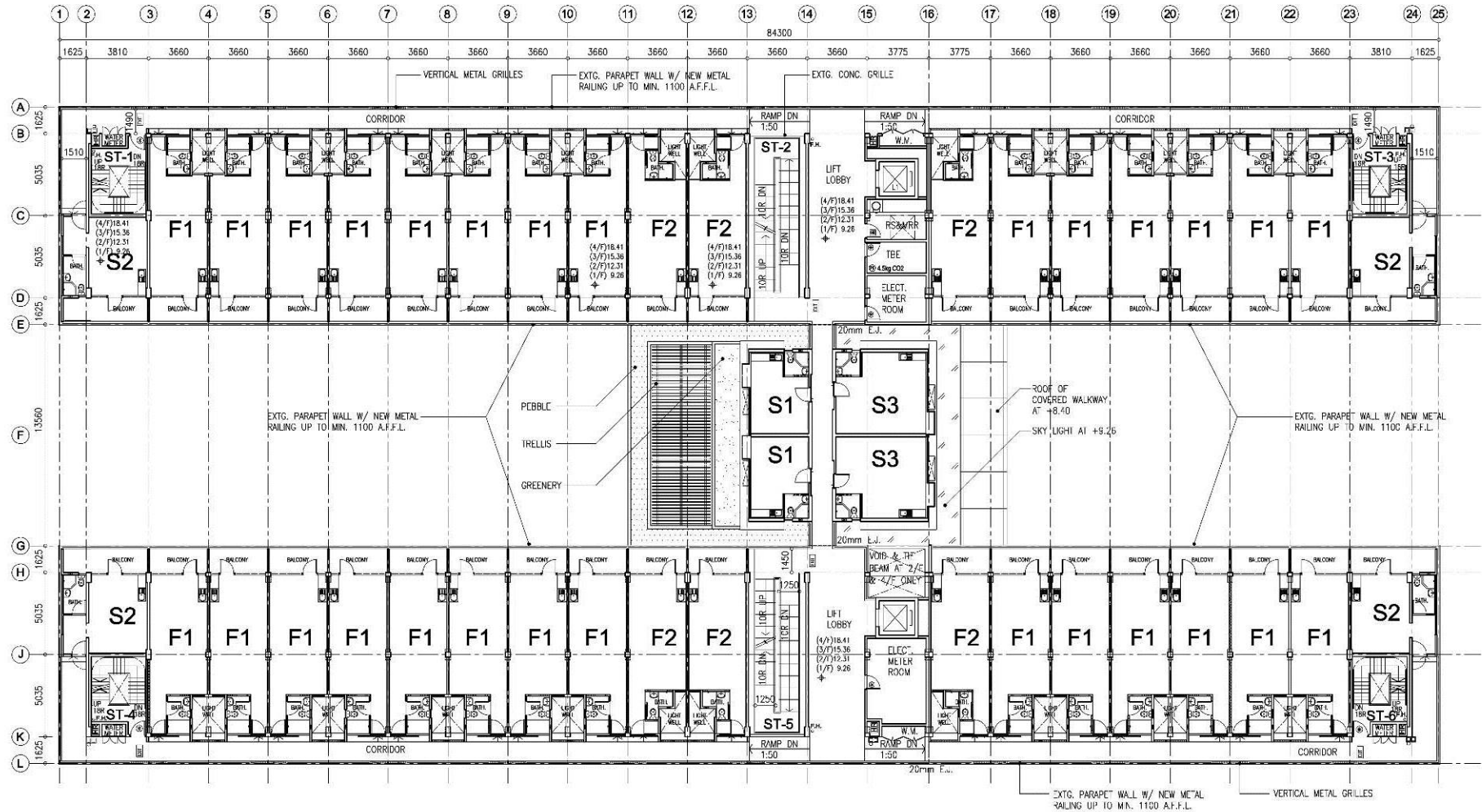


Fig. 106. Proposed first to fourth floor plan.

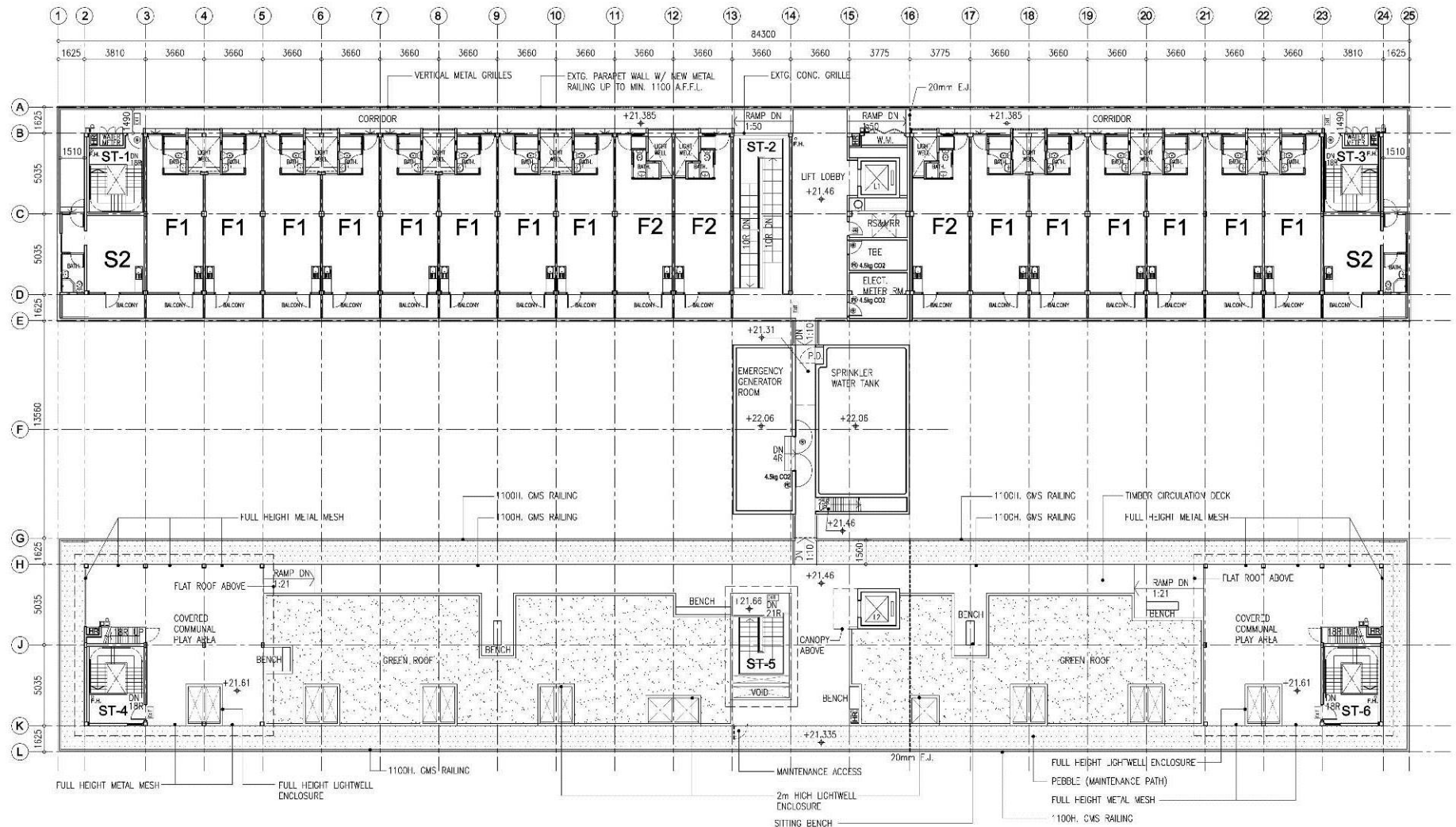


Fig. 107. Proposed fifth floor plan.

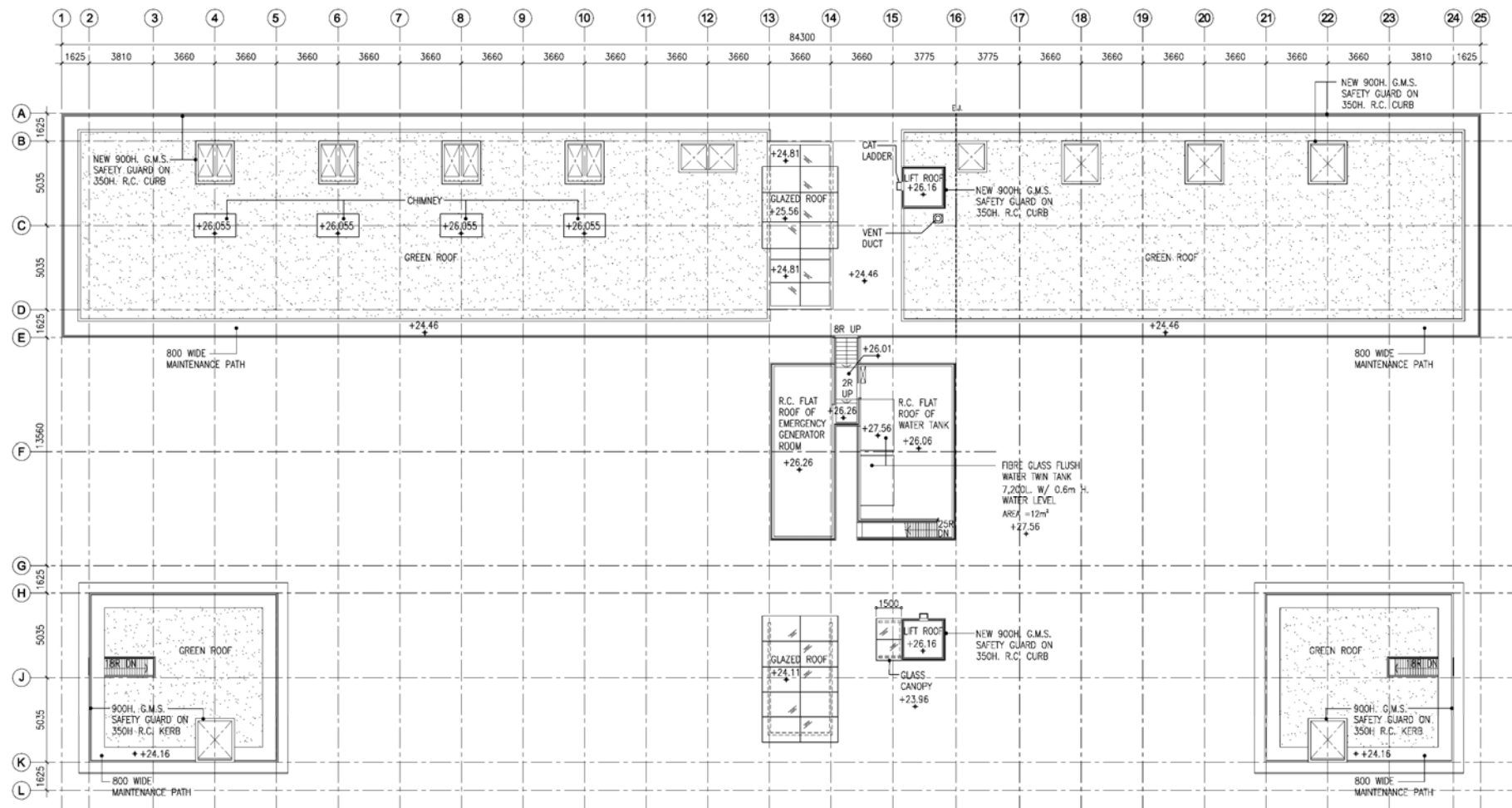


Fig. 108. Proposed roof plan.





Fig. 109. Artistic impression of the proposed design viewing from Kut Shing Street.



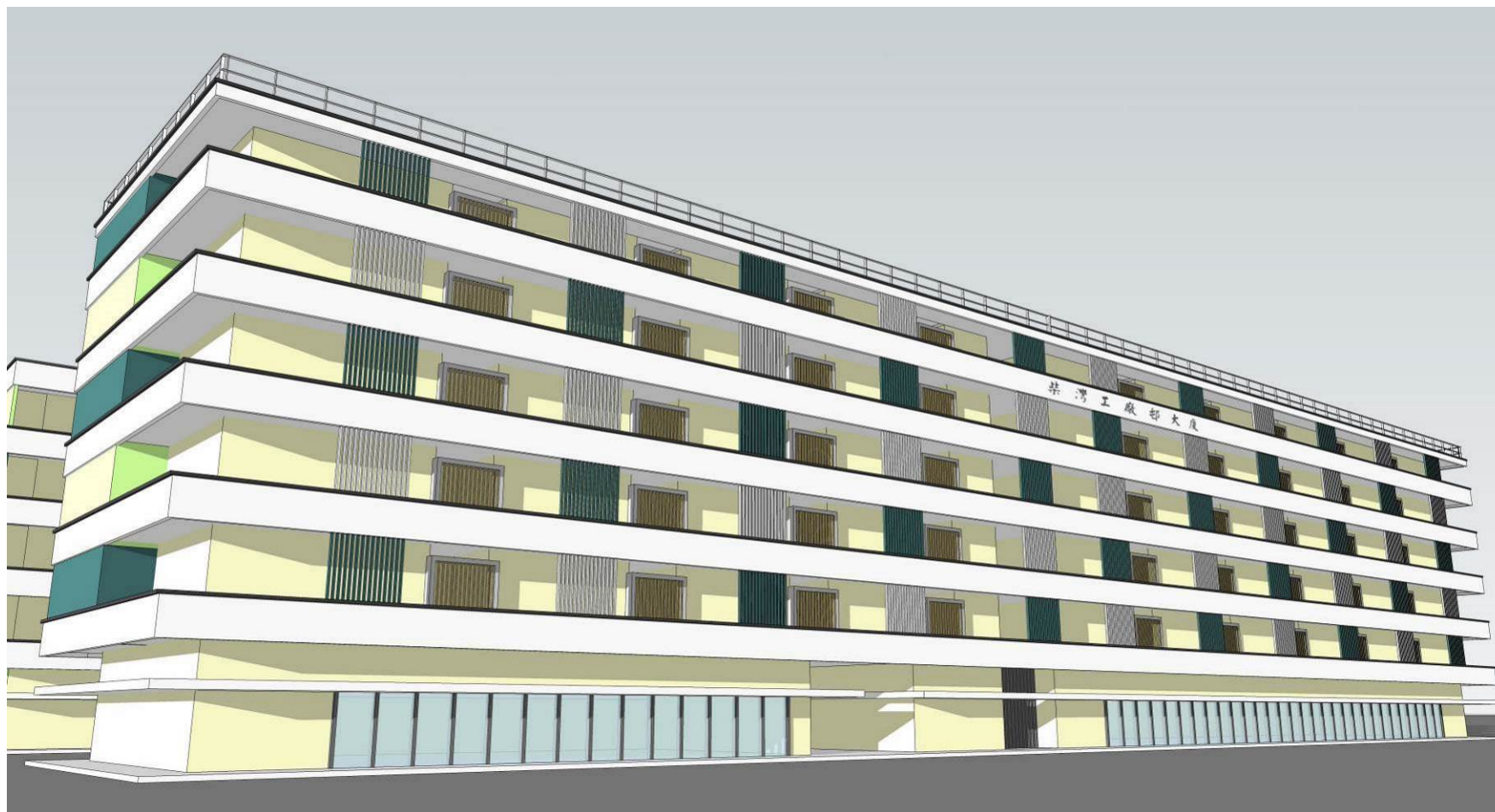


Fig. I 10. Artistic impression of the proposed design viewing from Lee Chung Street.



Fig. 111. Artistic impression of the proposed addition of steps at the existing ramp on the top floor.

## 7.3 Impact Assessment and Mitigation Measures

The evaluation of heritage impact assessment in the proposal is classified into five levels of impact based on the type and extent of the effects concluded in the Heritage impact Assessment<sup>72</sup>:

1. Beneficial impact - the impact is beneficial if the proposal will enhance the preservation of the heritage site;
2. Acceptable impact - the assessment indicates that there will be no significant effects on the heritage site;
3. Acceptable impact with mitigation measures - there will be some adverse effects, but these can be eliminated, reduced or offset to a larger extent by specific measures;
4. Unacceptable impact - the adverse effects are considered to be too excessive and are unable to mitigate practically;
5. Undetermined impact - the significant adverse effects are likely, but the extent to which they may occur or may be mitigated cannot be determined from the study. Further detailed study will be required for the specific effects in question.

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<sup>72</sup> Antiquities and Monuments Office, *Guidelines for Heritage Impact Assessment*, June 2010.

A General				
Item	Proposed Works and Reasons for changes	Fabric affected	Impact Assessment	Mitigation measures
A-01	Convert the existing factory units into public rental housing flats each provided with toilets and kitchen to preserve and adaptive re-use CWFE and to increase the supply of PRH	Strong horizontal lines formed by the balconies and slabs, column, beam and slab construction	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>Photographic and cartographic survey shall be carried out before the commencement of works.</li> <li>Interpretation strategy shall be properly formulated and present the historic development and changes of the building to enhance and reinforce the understanding of the cultural significance of the historic place.</li> <li>The conversion shall retain the original structural system of the column, beam and slab structure.</li> <li>Structural survey should be carried out to investigate the condition of the existing structures. Repair and upgrading works shall be carried out wherever necessary to ensure the structural stability and durability of the building.</li> <li>Any new addition to the elevation shall be done in the manner such that the essence of the original elevation design, including the horizontality and continuity formed by the balconies and slabs, and the solid and void composition formed by the parapets and the balconies are still readable.</li> <li>Any new addition to the elevation shall be readily distinguishable but compatible with the existing building fabric.</li> </ul>
A-02	Add screens along the external corridors at intervals facing Lee Chung Street and Cheung Lee Street to provide privacy to the tenants. Add partitions along the internal corridors facing courtyards to provide private balcony for each PRH flat	Strong horizontal lines formed by the balconies and slabs	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>Any new addition to the elevation shall be done in the manner such that the essence of the original elevation design, including the horizontality and continuity formed by the balconies and slabs, and the solid and void composition formed by the parapets and the balconies are still readable.</li> <li>Any new addition to the elevation shall be recessed from the existing parapet walls, and shall be readily distinguishable but compatible with the existing building fabric.</li> </ul>

A-03	Provide light well to the PRH flats to enhance greater natural light intake and decrease in demand for artificial lighting	Column, beam and slab construction	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>Structural survey should be carried out to investigate the condition of existing structures. The creation of new floor openings shall not affect the structural stability of the building and shall minimize the disturbance to the historic fabrics as far as practicable.</li> <li>The light well enclosures on the roof shall be readily distinguishable but compatible with the existing building fabric.</li> </ul>
A-04	Demolish existing staircases at the inner corner of the wings facing courtyards, and construct new staircases at the outer corner of the wings facing Lee Chung Street and Cheung Lee Street to fulfill the requirements in Hong Kong Planning Standard and Guidelines and Noise Control Ordinance	Column, beam and slab construction, paint characters	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>Structural survey should be carried out to investigate the condition of existing structures. Any changes to the structure shall not affect the structural stability of the building and shall minimize the disturbance to the historic fabrics as far as practicable.</li> <li>Existing paint characters on the exterior of the stair core on the top floor will be removed due to the demolition. Preserve at least one set of the paint characters in-situ on the external walls facing Lee Chung Street or Cheung Lee Street for interpretation.</li> </ul>
A-05	Demolish the existing bridging link at grid line 12-14 due to the structural deterioration of the existing bridging link. Construct a new bridging link at grid line 13-16 to accommodate PRH flats and circulation between the new lobbies formed at the two wings, with the change in position due to the restriction by the possible locations for the new lifts at the two wings according to the existing pile caps locations, and the existing location of the ramp	H-shape building form	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>Structural survey should be carried out to investigate the condition of existing structures.</li> <li>The new bridging link shall be structurally independent without affecting the structural stability of the existing building.</li> <li>The new bridging link shall not exceed the original building height at main roof level. The form and massing of the new bridging link shall also respect the original design to maintain the H-shape building form.</li> <li>Finishes of the new bridging link shall be readily distinguishable but compatible with the existing building fabric.</li> </ul>
A-06	Demolish existing water tank and transformer room on ground floor at courtyards as those are later-added structures	Courtyards	Beneficial impact	<ul style="list-style-type: none"> <li>Such improvement work is considered beneficial as the original setting of the courtyards could be revealed.</li> </ul>



A-07	Construct new transformer room and switch room on the ground floor at courtyard for adaptive reuse	Courtyards	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>▪ The location of the new structures shall be limited to the courtyard facing Chui Hang Street only.</li> <li>▪ The appearance of these new structures shall be designed in a manner such that they will not impose visual impact to the historic building, while the general outline of the courtyard is still readable.</li> </ul>
A-08	Provide green area on ground floor and roof terrace to fulfill the basic requirement of the planning brief and guiding principles on Green Coverage for Public Housing Developments	Courtyards	Beneficial impact	<ul style="list-style-type: none"> <li>▪ Such improvement work is considered beneficial as an enhancement for public enjoyment, which were previously used as loading / unloading area at the courtyards or not accessible to the user on the roof.</li> <li>▪ The green area at the courtyards shall be designed in a manner such that the general outline of the courtyards is still readable.</li> <li>▪ The green area shall be designed in a manner such that it could provide a pleasant space to appreciate the historic building.</li> </ul>
A-09	Retain existing chimney stacks in-situ with temporary support due to the re-cast of roof slab for ensuring structural safety. Reinstate after the re-cast of roof slab. In case of poor structural condition of the existing chimney stacks, dismantle the chimney stacks and salvage temporarily, and restore back to their original position subject to further investigation	Chimney stacks	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>▪ Photographic and cartographic survey shall be carried out to document the existing chimney stacks before the commencement of works.</li> <li>▪ In case of poor structural condition of the existing chimney stacks, photographic survey shall be carried out to document the existing brickworks of the chimney stacks after the removal of existing finishes. The chimney stacks shall be reinstated at their original position according to the original construction and appearance. Re-use salvaged bricks of the chimney stacks as far as practicable.</li> </ul>

A-10	Add steps to existing ramps to form a means of escape. Introduce an elevated skylight onto the roof of each ramp core to enhance natural light and ventilation in-take	Ramps with concrete grilles	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>▪ The addition of new fixtures of the steps shall have a minimum intervention to the existing building fabric.</li> <li>▪ The new steps shall be added in a manner such that the original setting of the ramp is still readable.</li> <li>▪ The material and finishes of the new addition shall be readily distinguishable but compatible with the existing building fabric.</li> <li>▪ The addition of new steps shall be reversible.</li> <li>▪ The current proposal does not involve enclosure of the concrete grilles, subject to further approval. If the concrete grilles are required to be enclosed for fulfilling the latest statutory requirement, glass enclosure shall be applied without hindering public appreciation. Any sub-frame shall follow the existing alignment of the concrete grilles as far as practicable such that the concrete grilles are still readable.</li> </ul>
A-11	Provide new lifts on each floor for universal access	Column, beam and slab construction	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>▪ Structural survey should be carried out to investigate the condition of existing structures. Any changes to the structure shall not affect the structural stability of the building and shall minimize the disturbance to the historic fabrics as far as practicable.</li> </ul>
A-12	New building services installation for adaptive reuse	Column, beam and slab construction, courtyards	Acceptable impact with mitigation measures	<ul style="list-style-type: none"> <li>▪ Any building services to be newly provided at the interior on the ground floor of the two wings shall not alter the original column, beam and slab structure.</li> <li>▪ Any new additions at the courtyard should not impose visual impact to the building, while the general outline of the courtyards is still readable. The new additions shall be limited to the courtyard facing Chui Hang Street.</li> <li>▪ Any new additions on the roof shall be accommodated on the new bridging link as far as practicable.</li> <li>▪ New building services shall be well organized and grouped together when entering the building, and make use of existing wall openings as far as practicable.</li> <li>▪ The new additions shall be readily distinguishable but compatible with the existing building fabric.</li> </ul>

## 7.4 Interpretation

The cultural significance of the Site is not readily apparent, and should be explained by interpretation. The interpretation shall enhance the understanding and enjoyment, and be culturally appropriate.<sup>73</sup> There are two kinds of interpretation: 1) a combination of the treatment to the historic fabric and the activities to be carried out in the future; and 2) the use of introduced explanatory material.<sup>74</sup>

The first kind of interpretation involves conservation approach for the physical fabric such as restoration, repair and maintenance. It also concerns with what are the compatible uses and what kind of activities is appropriate which could facilitate the public to understand the place.

The second kind of interpretation can be in a form of a document, an annotated map, a presentation<sup>75</sup>, or other educational and promotional materials, or in a form of heritage interpretation display. Interpretation presented in whatever media, usually involves a process telling people what is special about the historic place and encouraging them to look after it for the benefit of everyone.<sup>76</sup>

### 7.4.1 Ground floor interpretation area

The ground floor interpretation area is a good media to present the salvaged artifacts of the CWFE. With the aids of other historic photos, drawings, documentations and illustrations, it is able to provide an opportunity for the public to have a glimpse of the original use of this site, and understand the cultural significance through reading its physical settings and appreciating the salvaged artifacts.

### 7.4.2 Main themes

It is recommended to formulate an interpretation strategy, which is an important and helpful tool to define the content to be presented for the historic place. It would outline the themes, objectives, topics and storylines to be interpreted; presentation and methods of delivery; and potential audience (the visitors and users). The presentation of the cultural significance of the historic place shall be included in the interpretation strategy. The interpretation shall not solely focus on the history of the building itself, but shall also include the surrounding context of Chai Wan, and in particularly the development of resettlement housing of Hong Kong.

The following are suggested themes and content that could be further investigated and explored in the interpretation strategy. They can be in the form of physical display in the proposed display area, or any other creative presentation method:

- The housing problems in Hong Kong – particularly during the time of a population boom due to the influx of Chinese refugees to Hong Kong after WWII
- The development of Resettlement Estate – the establishment of the different models of Resettlement Estates and their relative design
- The evolution of Chai Wan – from a rural village to a mixture of residential and industrial area

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<sup>73</sup> Extracted from Article 25 – Interpretation under section of “Conservation process” of *the Burra Charter 1999, The Australia ICOMOS Charter for Places of Cultural Significance, Australia*, The Australia ICOMOS, 2000.

<sup>74</sup> Extracted from Article 1.17 – Interpretation of “Definition” of *the Burra Charter 1999, The Australia ICOMOS Charter for Places of Cultural Significance, Australia*, The Australia ICOMOS, 2000.

<sup>75</sup> *Local Interpretation Plans – a tool kit to help communities explore local heritage*. Retrieved on 3 January 2011, from Herian, Website: [www.herian.org/1098.dld.,https://8305509064924389499-a-gka-org-uk-ssites.googlegroups.com/a/gka.org.uk/herian/Home/ToolkitFinalBILINGUAL.pdf?attachauth=ANoY7cpMCVSftPlRiRMvgI72WvTvtITEYSR3sDbwwiIDkWG17e0c-CCIWpfp0vU3M5ZPKTGwqlAwlai6QFhmRf9S7rKNy5g3flnqU1WxmpXGU2Q2ZlpMMaA-77IMOE8NIFqLZDTw7jjj9d4S7Th4e8GTDbmnl7MWLMan-EZd4E7TVw1VkdX7DhOeuer2qvfe7brALuyelzek2i0hEkFIHGsrRLDXUQ%3D%3D&attredirects=0](http://www.herian.org/1098.dld.,https://8305509064924389499-a-gka-org-uk-ssites.googlegroups.com/a/gka.org.uk/herian/Home/ToolkitFinalBILINGUAL.pdf?attachauth=ANoY7cpMCVSftPlRiRMvgI72WvTvtITEYSR3sDbwwiIDkWG17e0c-CCIWpfp0vU3M5ZPKTGwqlAwlai6QFhmRf9S7rKNy5g3flnqU1WxmpXGU2Q2ZlpMMaA-77IMOE8NIFqLZDTw7jjj9d4S7Th4e8GTDbmnl7MWLMan-EZd4E7TVw1VkdX7DhOeuer2qvfe7brALuyelzek2i0hEkFIHGsrRLDXUQ%3D%3D&attredirects=0)

<sup>76</sup> *Ibid.*

- The industrial development in Hong Kong
- Promotion of the cultural characteristic of the district – linking with other cultural heritages in the surrounding context
- The architectural significance of CWFE – the architectural design being the first model of the Resettlement Estate
- The life and industrial activities of CWFE – including the collection of the salvaged artifacts and oral history
- The importance of heritage conservation – the conservation process of CWFE, difficulties encountered and solutions to them

The conceptual framework of the interpretation is proposed as follows:

Location	Interpretation	Presentation
<ul style="list-style-type: none"> <li>▪ Mural wall</li> <li>▪ Display areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Illustrates the evolution of Chai Wan and the surviving cultural heritages nowadays</li> <li>▪ illustrates the history and development of Resettlement Estate</li> <li>▪ illustrates the housing problems after WWII in Hong Kong</li> <li>▪ illustrates the industrial development in Hong Kong</li> <li>▪ displays the artifacts salvaged from the CWFE to showcases life in the factory building in the old days</li> <li>▪ illustrates the cultural significance of CWFE</li> <li>▪ illustrates the importance of heritage conservation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inscriptions</li> <li>▪ Display of old photos</li> <li>▪ Interpretative panels</li> <li>▪ Display of artifacts</li> </ul>

# 8

## MANAGEMENT

### 8.1 Overall Management Principles

Continuous good management of the changes and regular maintenance of the historic fabrics is fundamental to retain the cultural significance of a historic place and is essential to keep the historic fabrics in good condition. Maintenance is an important conservation process, especially after the completion of the renovation and conversion works. It is vital to remember the two underlying principles of good heritage conservation practice and maintenance – **minimal intervention and reversibility**. Future management and maintenance works shall be governed by the Burra Charter's principles<sup>77</sup> for managing changes:

- Changing as much as necessary but as little as possible;
- Changes to a place should not distort the physical or other evidence it provides, not to be based on conjecture.
- Traditional techniques and materials are preferred for conserving significant fabrics. In some circumstances, modern techniques and materials offering substantial conservation benefits may be appropriate.

### 8.2 Overall Management Policy

1. CWFE shall not be managed as a monument, but as a functional heritage place.
2. The management of the changes of CWFE shall be guided by its cultural significance and appropriate interpretation. Any changes, new uses and alteration shall be carried out in a way not compromising the cultural significance of the place.
3. CWFE is accorded as a Graded 2 historic building. Any proposed works which may compromise the cultural significance of the building and its environment shall be assessed by conservation specialists and consultation shall be made to the Antiquities and Monuments Office.

### 8.3 Maintenance management plan

Once the conservation and adaptation work is completed on a historic site, on-going maintenance is necessary to keep the building in good order. Maintenance is an essential part of the conservation and presentation process.

Repairs required as part of on-going maintenance should be undertaken to match the materials, colour or texture of the existing, and must be blended in with the existing fabric. Maintenance work should be governed by the Burra Charter principle of “**Do as much as necessary and as little as possible**”.

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<sup>77</sup> Article 2-4, *The Burra Charter*, 1999.



A maintenance schedule should be developed which generally includes:

- Regular inspection to check the degree of deterioration of all character-defining elements
- Regular inspection of the condition of the building structure
- Regular inspection of internal and external finishes and fittings
- Regular monitoring of site drainage and plumbing system

If there will be new works or change of use to the building, the maintenance management plan will need to be reviewed by building management professionals, conservation specialists and professionals with thorough understanding of managing a heritage site to ensure the execution of a proper maintenance programme.

## 8.4 Maintenance manual

Having sought advice from conservation specialists, the building management agent shall prepare an operation and maintenance manual and guideline or relevant documents to provide guidance for the frontline staff and individual tenant to use the historic building, which clearly defines the maintenance and responsibility of different areas within the historic building. Such manual and guideline shall clearly define the works which are not allowed in order to retain the cultural significance of the historic building.

The manual and guideline shall list out clearly all the character-defining elements identified in this report which are not allowed to be altered or changed. Intervention to elements with no heritage value is not considered to be heritage management activity, provided that the proposed works would not affect the integrity of the historic building. The conservation guidelines recommended in this report shall also be incorporated to provide clear guidance. The manual and guideline shall be easily understandable, with photos and location clearly indicated.

The manual shall be made known to the frontline building management and site operational staff, technicians and workmen who are responsible for carrying out or supervising the routine maintenance or regular repair works. Briefing session or training workshop should be arranged for all frontline staff to ensure their full understanding of the essential details and requirements when carrying out their duties in looking after the historic building.

If there will be new works or change of use to the building, the manual and guidelines will need to be reviewed by building management professionals with advice from conservation specialist.

## 8.5 Future development

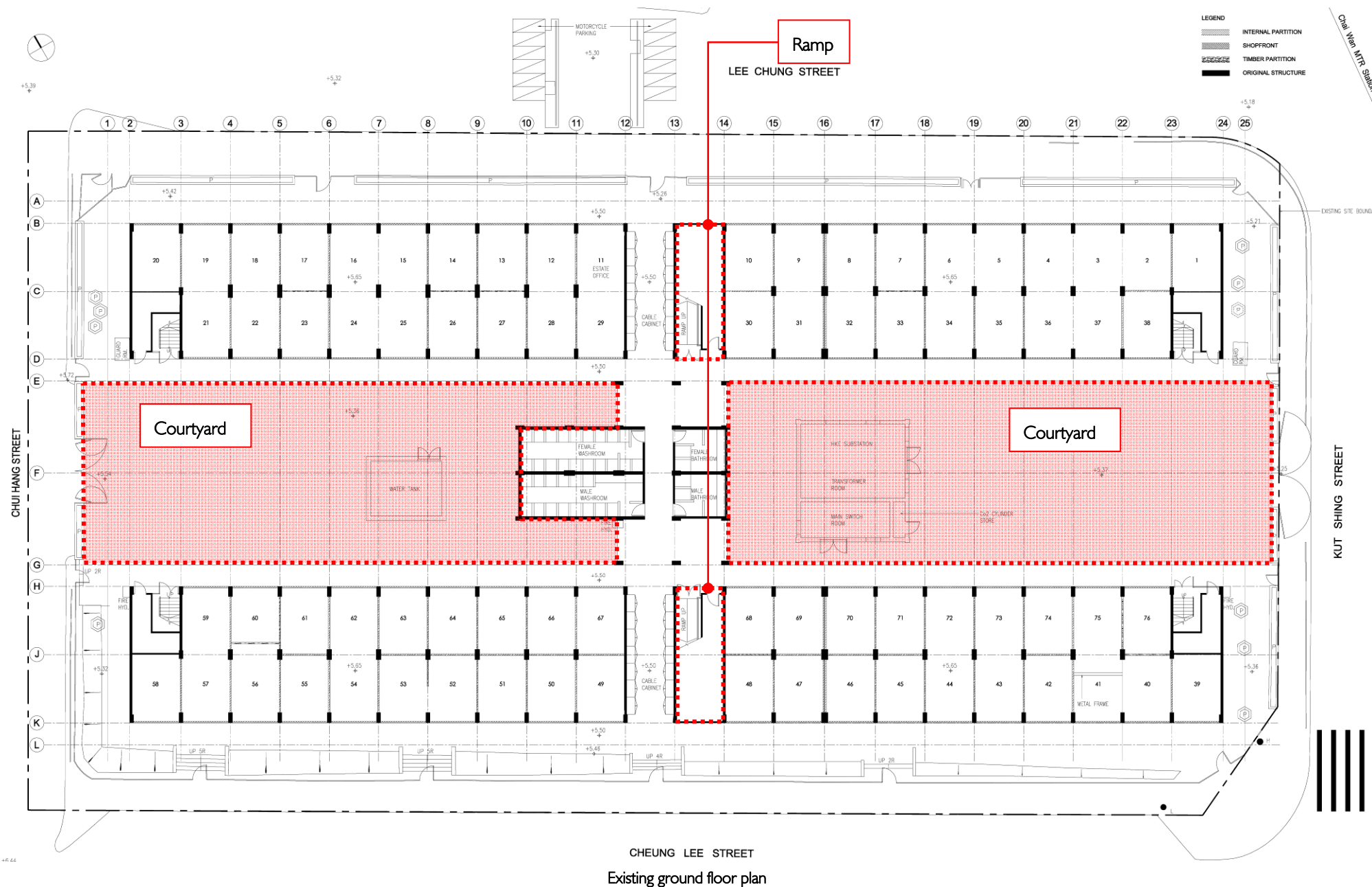
For any future development to the historic building including renovation, alteration and addition works, is intended, prior consultation and consent should be sought from the Antiquities and Monuments Office. The proposed works should be in line with the conservation guidelines recommended in this report and to be designed by qualified conservation specialist such as a Conservation Architect or a Heritage Consultant.

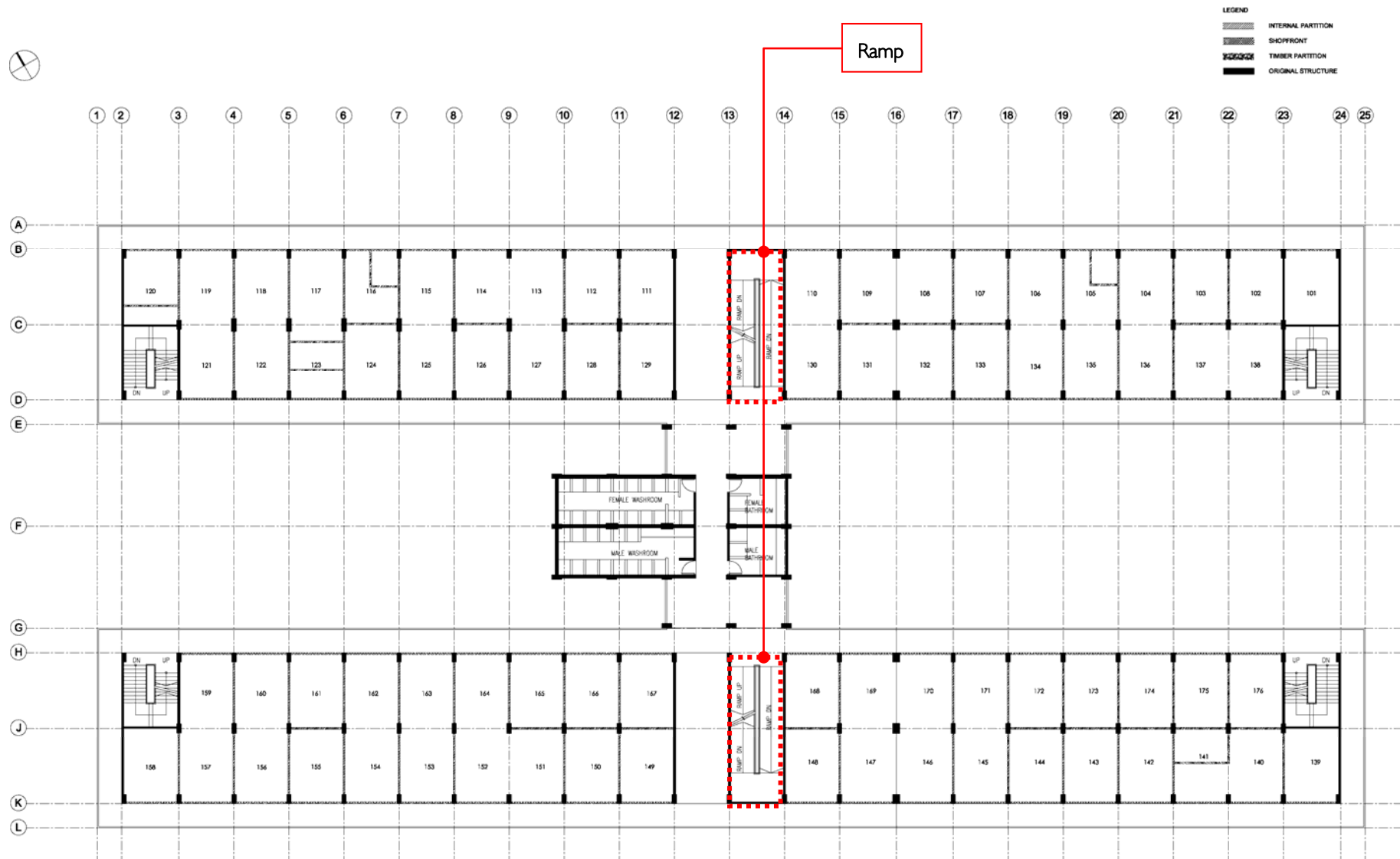
## 8.6 Documentation

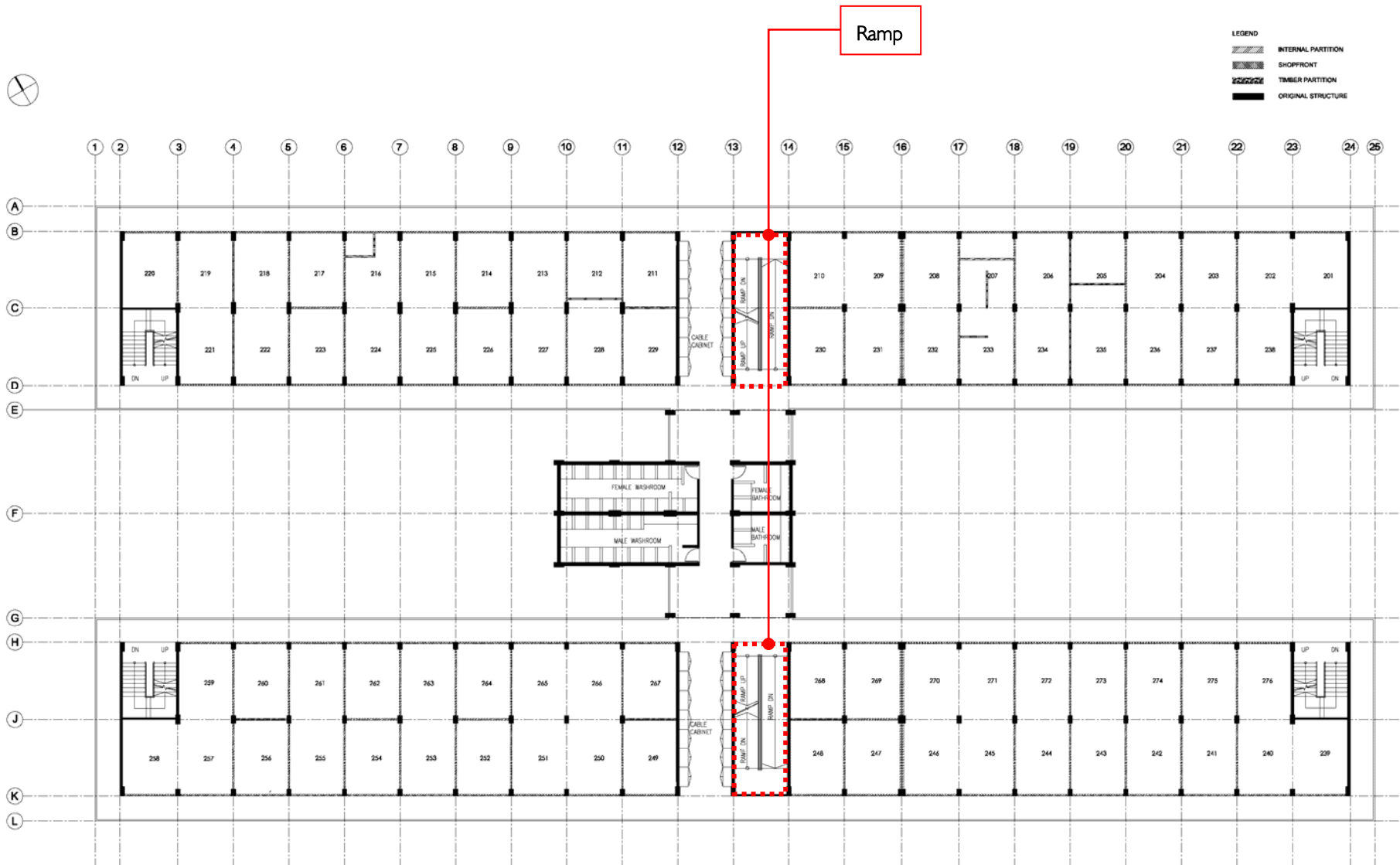
All kinds of works carried out in the historic buildings including renovation, alteration, addition and routine repair works shall be well-documented. Such documentation is important to establish a clear conservation history of the historic building and its environment as essential references for up keeping and monitoring the changes.

## APPENDIX I

### Existing floor plans



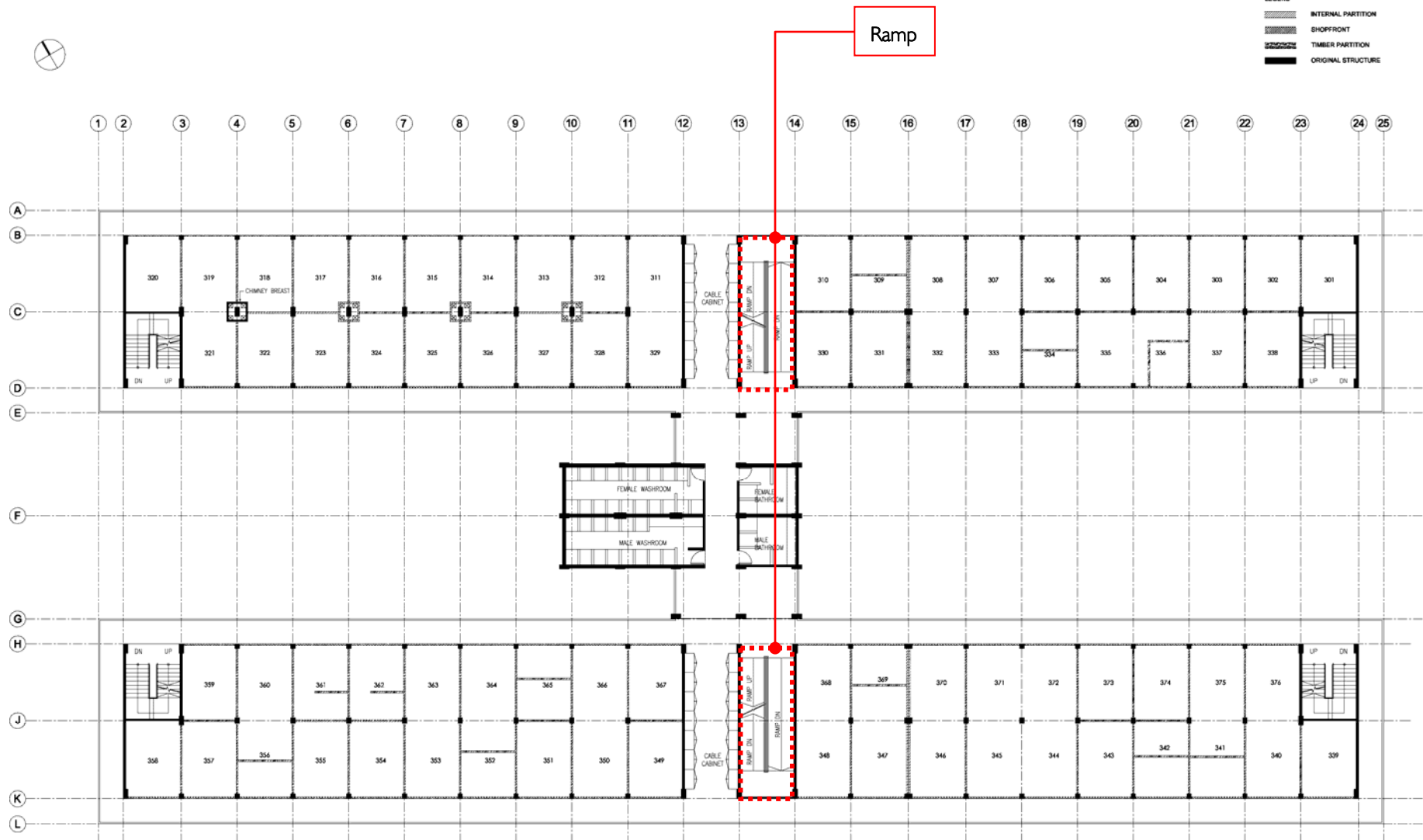




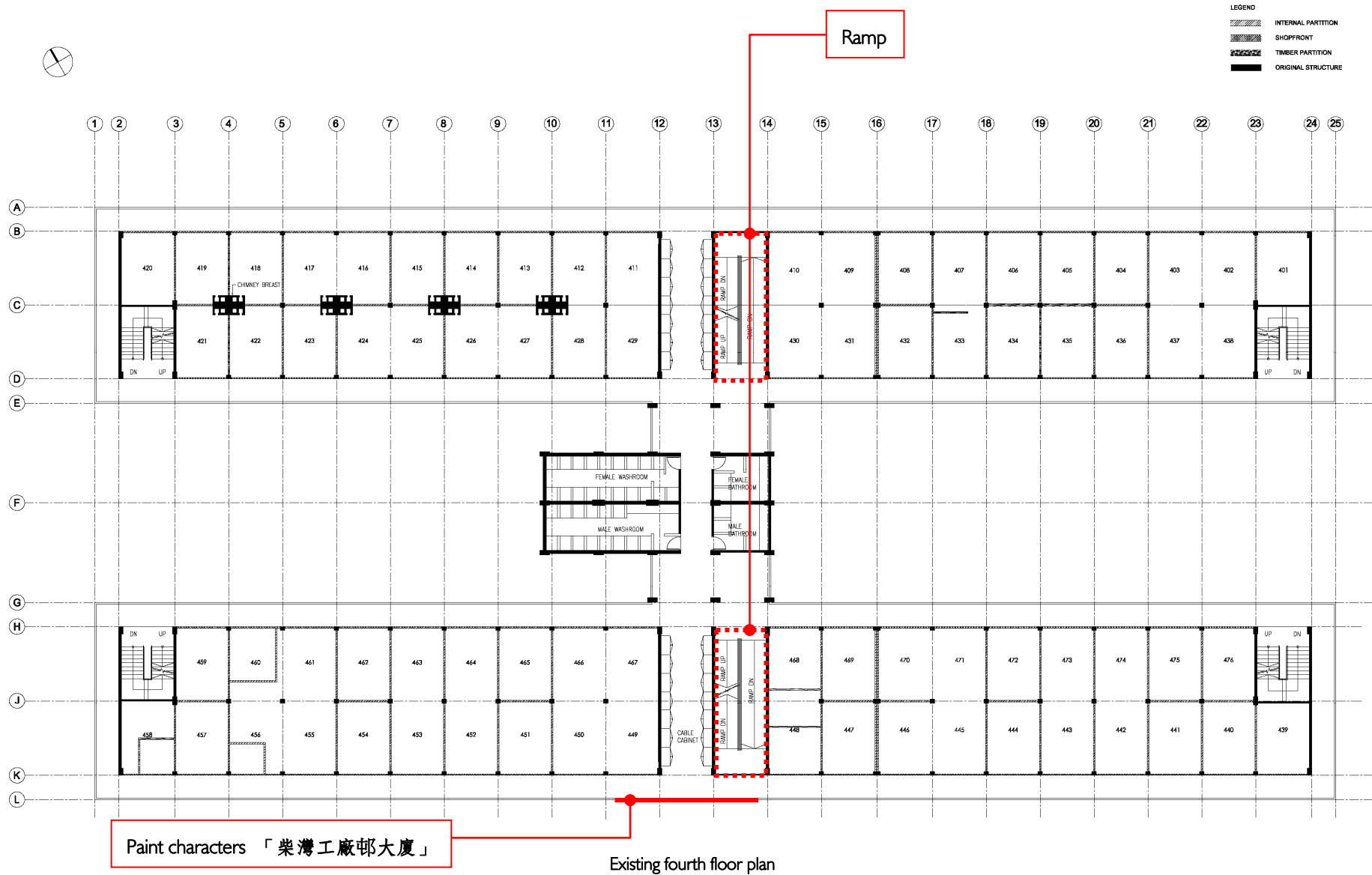
Existing second floor plan



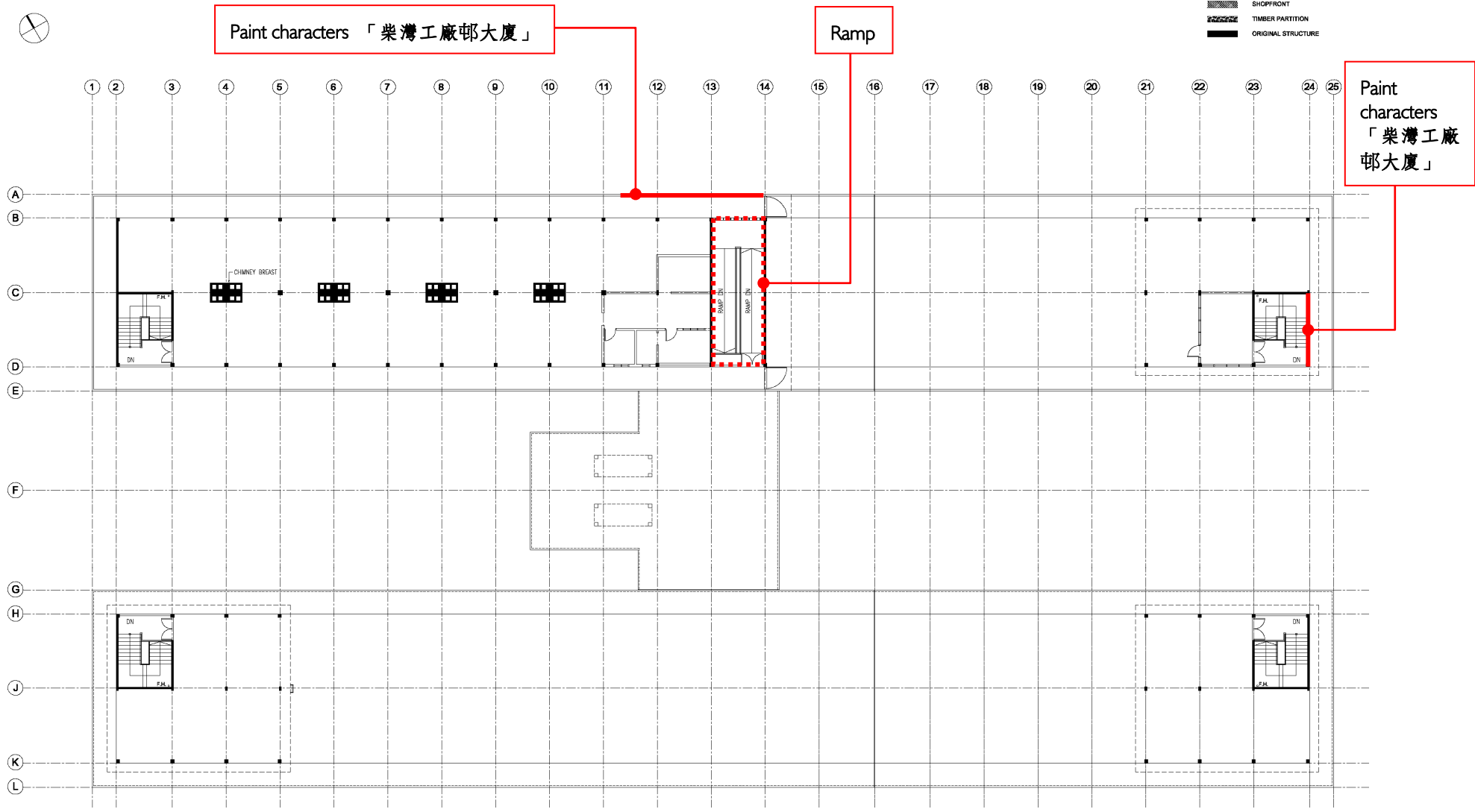
- LEGEND
- INTERNAL PARTITION
  - SHOPFRONT
  - TIMBER PARTITION
  - ORIGINAL STRUCTURE



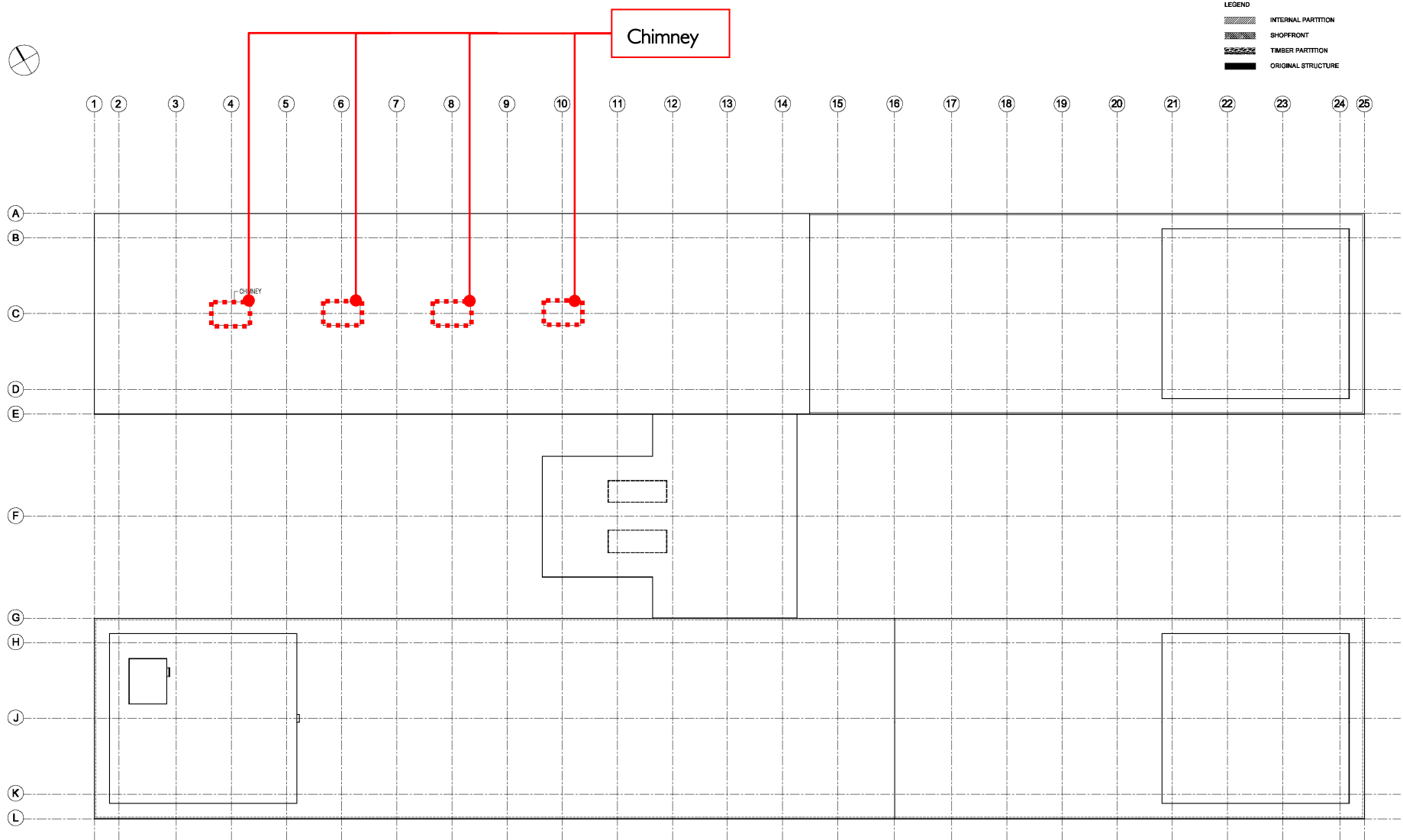
Existing third floor plan



- LEGEND
- INTERNAL PARTITION
  - SHOPFRONT
  - TIMBER PARTITION
  - ORIGINAL STRUCTURE



Existing fifth floor plan



Existing roof plan

## APPENDIX II

### International standards on values of a historic place

Burra Charter, 1999

<b>Aesthetic value</b>	Consideration of the form, scale, colour, texture and material of fabric; the smells and sounds associated with the place and its use
<b>Historic value</b>	The place has influenced, or has been influenced by, an historic figure, event, phase or activity; The place is associated with an important event
<b>Scientific value</b>	Depend on the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information
<b>Social value</b>	Embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group

China Principles, 2002

<b>Historical value</b>	<ul style="list-style-type: none"> <li>▪ Important reasons led to its construction, and the site authentically reflects this historical reality.</li> <li>▪ Significant events occurred at the site or important figures were active there, and its historic setting accurately reflects these events or the activities of these people.</li> <li>▪ The site illustrates the material production, lifestyle, thought, customs and traditions or social practices of a particular historical period.</li> <li>▪ The existence of the site can prove, correct, or supplement facts documented in historical records.</li> <li>▪ The historic remains contain unique or extremely rare period or type elements, or are representative of a type of site.</li> <li>▪ Stages of a site's transformations over time are capable of being revealed.</li> </ul>
<b>Artistic value</b>	<ul style="list-style-type: none"> <li>▪ Architectural arts, including spatial composition, building style, decoration, and aesthetic form.</li> <li>▪ Landscape arts, including cultural, urban, and garden landscapes of famous scenic locations, as well as particular vistas comprising a landscape of ruins.</li> <li>▪ Associated sculptural and decorative arts, including carvings, statues and fixed ornamentation, frescoes, and furnishings.</li> <li>▪ Immovable sculptural artistic works that are unique in period, type, subject, appearance, or artisan skills.</li> <li>▪ The creative process and means of expression of the above-mentioned arts.</li> </ul>
<b>Scientific values</b>	<ul style="list-style-type: none"> <li>▪ Plan and design, including the selection and layout of a site, protection of the ecology, response to threats of disaster, and architectural form and structural design.</li> <li>▪ Construction, materials, and techniques and the level of scientific and technological achievement they represented for their time, or their importance as a link in the development of science and technology.</li> <li>▪ A facility or place where scientific experiments, production, or transportation, and so on, occurred.</li> <li>▪ A place where important scientific and technological information is recorded or preserved.</li> </ul>



## APPENDIX III

### Accessing significance

There is no criterion under current Hong Kong heritage legislation to determine the cultural significance of built heritage. The assessment of the cultural significance of the CWFE will be based on the international standards with consideration to the local situations. The assessment criteria adopted in the following section stems from the concept and principles listed as follows:

- James Semple Kerr's Conservation plan – a guide to the preparation of conservation plans for places of European Cultural Significance;
- Burra Charter, 1999, the Australia's ICOMOS Charter for Places of Cultural Significance – a worldwide recognized standard for establishment and implementation of conservation, and provides guidance for the concept and definition of cultural significance;
- Principles for the Conservation of Heritage Sites in China 2004 – often refers as the China Principles, a document that covers general conservation principles, a management planning process and intervention guidelines.

### Level of significance

After assessing relevant aspects of significance of the above primary criteria, the following comparative criteria will be further considered to help understand the level of significance of the place: the representativeness, rarity; the intactness and integrity<sup>78</sup>, and the authenticity. The representativeness indicates if it represents particular category or historical theme; the rarity represents if it is unusual or particular fine example; the intactness, integrity and authenticity reflects the condition of it if it has experienced extensive alteration during the long history.

After assessing the cultural significance of the heritage place, a Statement of Significance will be established, which consists of three components to summarize the significance of the historic place. The three components are: 1) historic place (a description of the place); 2) heritage values; and 3) character defining elements. The character-defining elements means the materials, forms, location, spatial configuration, uses and cultural associations or meanings that contribute to the heritage values of a historic place, and which must be retained in order to preserve its heritage value.<sup>79</sup>

### Criteria for assessing the cultural significance of the CWFE

The following criteria is adapted from the international examples as discussed above or other sources as specified, and will be used to establish the cultural significance of the CWFE.

#### Contextual significance

- Important in defining, maintaining or supporting the character of an area;
- Is physically, functionally, visually or historically linked to its surroundings;
- As a landmark;<sup>80</sup>

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<sup>78</sup> Kerr, J, S., *Conservation Plan*, National Trust of Australia (NSW), 6th edition, 2004, p. 16.

<sup>79</sup> *Standards and Guidelines for the Conservation of Historic Places in Canada*, Parks Canada, 2003, p. 2.

<sup>80</sup> Ontario Regulation 9/06 under Ontario Heritage Act made on 7 December 2005. Retrieved on November 13 2008, from e-Laws of Canada government, website: [http://www.elaws.gov.on.ca/html/source/regs/English/2006/elaws\\_src\\_regs\\_r06009\\_e.htm](http://www.elaws.gov.on.ca/html/source/regs/English/2006/elaws_src_regs_r06009_e.htm).

#### Historic significance

- Associate with the social development of Hong Kong;
- Associate with a important phase, events, theme, person, activities, organization or institution that is significant to Hong Kong, or associate with the daily life of the general community in Hong Kong;

#### Architectural and aesthetic significance

- The design and style represents example of an architectural style, building typology, use of the building
- Represents example of craftsmanship/workmanship, and construction techniques;

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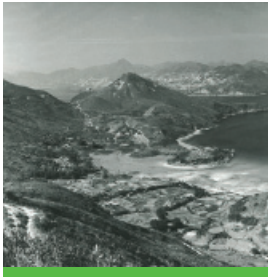
# Historical Timeline



Chai Wan Factory Estate  
Chai Wan  
Hong Kong and Mainland

## The late 17th century - early 18th century

Newcomers, including Laws, Shings, Luks, Nams and Yaus started to populate the Chai Wan area. The villagers mainly relied their living on agriculture, farming and ceramics industry.



## 1841

A flag raising ceremony, which marked the official British takeover of Hong Kong Island, was conducted by the British Navy in Possession Point, a small hill at the present-day Hollywood Road Park in Sheung Wan..



## 1841

The population in Chai Wan was only 300.

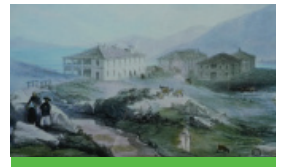
## 1843

The Colonial Government gazetted the name of the new possession as "the Colony of Hongkong" and the name of the city as "Victoria".



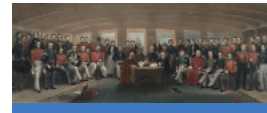
## 1843

Sai Wan Barracks was built in the hills near Scout Hill. The barracks was abandon due to the high death rate.



## 1842

The Treaty of Nanking was signed between the United Kingdom and the Qing Dynasty on 29 August 1841. Hong Kong Island was ceded to the British.



1650

1850

## 1841-50

The colonial government chose the present-day Central as the political centre, while the area between Central and Wan Chai was designated for military use. The area at present-day Sheung Wan was occupied by Chinese. Wanchai and Causeway Bay were developed as residential and commercial area by foreign merchant.



## 1845

Lieutenant T.B. Collinson marked Chai Wan as Sywan while conducting the first full survey of Hong Kong.





## 1851-64

Taiping Rebellion. A large number of Chinese flooded into Hong Kong to escape from the warfare.



## 1884-1936

Lei Yue Mun Barracks was built.



## 1895-1920

Sai Wan Fort was built on the peak of Sai Wan Hill.



## 1903

Pak Sha Wan Battery was completed with four guns on the east of Lei Yue Mun Fort.



1850

## 1860

The Kowloon Peninsula was ceded to Britain.



## 1885-1887

Lei Yue Mun Fort was built to reinforce military defense of Hong Kong Island.



## 1898

The New Territories were leased to Britain.



1904

## 1916-28

Warload Era.



## 1941-1945

Japanese Occupation of Hong Kong.



## 1952

Meng Tak Catholic School was founded at Cheung Man Road 祥民道.



## 1952

The Church building of the Star of the Sea Parish was established at the slope of Section 3 of the Resettlement Cottage Area.



## 1957-1966

Chai Wan Resettlement District 柴灣徙置區, later known as Chai Wan Tsuen 柴灣邨 was built.



## 1929

The first permanent campsite for Hong Kong Scouts was opened in Chai Wan where the Chaiwan Public Park is now situated



## 1946

Sai Wan War Cemetery was established.



## 1950s

Reclamation work was carried out between Law Uk and Scout Hill.



1905

1959

## 1923-1939

The Salesian Society of Hong Kong built its Mission House at Chai Wan Road.



## 1947 - 49

A large influx of migrants from the mainland arrived in Hong Kong as a result of the Chinese Civil War.



## Early 1950s

Hong Kong has entered a period of rapid industrial growth.

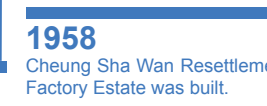


## 1954

Chai Wan Area Kai-Fong Welfare Advancement Association was established by the residents of the resettlement area.

## 1954

Precious Blood Secondary School was established in Chai Wan.



## 1958

Cheung Sha Wan Resettlement Factory Estate was built.



## 1959

Chai Wan Factory Estate was built on the old site of the Shing Uk 咸屋 and Nam Uk 藍屋.



## 1959

Chai Wan Primary School was founded in Chai Wan Resettlement Estate.



## 1911

The fall of Qing Dynasty.



## 1973

Dai Shing Gu Temple 大聖古廟 was built in San Ha Street.



## 1975

The demolition of the twenty-seven blocks of old Chai Wan Resettlement Estate commenced. The area was reconstructed into public housings.



## 1978

Yuen Dou Taoist Monastery 玄都仙觀 was built in San Ha Street.



## Early 1980s

Chai Wan Pier was built by the Hong Kong and Yaumati Ferry Co. on the newly reclaimed land at the junction between Sheung Ping Street and Sheung On Street in Chai Wan.



## 1985

The Mass Transit Railway service was started between Admiralty Station and Chai Wan Station.



1960

2013

## 1960

A clinic was marked as 柴灣徙置區西區贈診所 [Chai Wan Resettlement Cottage Area Western Clinic] on the map of 1960.



## 1960s-1986

A ferry service was provided between Kwun Tong and Chai Wai.

## 1963

Cape Collinson Muslim Cemetery was established.



## 1997

The handover of Hong Kong from Britain to China took place on 1 July.



## 2012

Chai Wan Factory Estate was vacant.

