

Historic Building Appraisal

Steps of Pound Lane

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The Chinese community, mainly comprising the newcomers from the mainland, was first established on the northern part of Hong Kong Island along the coast in the early 1840s, with settlements concentrated in the Upper, Middle and Lower Bazaars. The main business centre near the coast was called Lower Bazaar (下市場), within which the main street was today's Jervois Street (蘇杭街) in Sheung Wan. The Upper Bazaar (上市場) was located on the hillside at the back of the Lower Bazaar, and was generally referred to as Taipingshan (太平山). The main streets of the Upper Bazaar were approximately where the present-day Lower and Upper Lascar Rows (上摩囉街) (下摩囉街) are situated. The Middle Bazaar (中市場) was an area including today's Peel (卑利街), Graham (嘉咸街), Gutzlaff (吉士笠街), Cochrane (閣麟街), Gage (結志街) and Gough Streets (歌賦街) in Central. At the foot of this area were some marine lots.

The Middle Bazaar was located very close to the areas inhabited by Europeans. In view of the cultural differences between the Chinese and European communities and the undesirable hygienic condition of the Chinese tenements, the government carried out a segregation policy and relocated the Chinese residents of the Middle Bazaar to the Taipingshan area crossed by Lower Lascar Row (下摩囉街), Hollywood Road (荷里活道) and Taipingshan Street (now known as Tai Ping Shan Street) (太平山街). By September 1844, all the old structures in the Middle Bazaar had been removed. Subsequently, all the places to the east of Aberdeen Street (鴨巴甸街) were inhabited by Europeans. This situation prolonged until the rise of wealthy Chinese merchants in the 1860s.

In 1857, the City of Victoria was composed of seven districts, among which was the Taipingshan district, and by 1911, it had been developed to ten.¹ According to government records, it was lawful for the Governor in Council from time to time to alter the boundary of any district. For the sake of clarity, in 1911, the boundaries of the ten districts of the City of Victoria were set out in a map under the Regulation of Chinese Ordinance. Accordingly, "District No. 4 Taipingshan" was bounded by the then Queen's Road (today's Queen's Road

¹ According to the government records of 1857, the seven districts were Sei Ying Poon, Sheong Wan, Tai Ping Shan, Choong Wan, Ha Wan, Wong Nei Choong and Soo Koan Poo. By 1911, three more districts, namely the Kennedy Town, Shektongtsui and Wan Chai districts, had been established.

Central, 皇后大道中) and Gough Street (歌賦街) to the north, the Mid-levels beyond Conduit Road (干德道) to the south, Aberdeen Street (鴨巴甸街) and Seymour Road (西摩道) to the east and Po Yan Street (普慶街) to the west. The flight of steps of Pound Lane (磅巷) is situated in the Taipingshan district.

According to the records available, Pound Lane is believed to have existed by 1863, as the name “Pound Lane” was first identifiable from a map of the year 1863 and later 1867.² By 1887, Pound Lane only ended at its intersection with Rutter Street at that time according to a contemporary map. It was extended to Hospital Road between 1892 and 1897.³ By then the lane had reached its final length as we see today, with its lower and upper ends respectively intersected by Hollywood Road near Possession Street (水坑口街) and Hospital Road (醫院道) near No. 4 Hospital Road (Grade 2). Along the way, Pound Lane is also intersected, from the lower to upper sections, by Tai Ping Shan Street (or Taipingshan Street in the old days, 太平山街), Po Yee Street (普義街), Po Hing Fong (普慶坊) and Rutter Street (律打街). However, the lowest section between Hollywood Road and Tai Ping Shan Street only provided vehicular access and thus was not built with steps. According to a map between 1894 and 1895, the flight of steps started at the junction of the lane and Taipingshan Street (or Tai Ping Shan Street now) where the present Pound Lane Public Toilet and Bathhouse (磅巷公廁及浴室, first built in 1904 and rebuilt in 1961) is situated.

It was believed, according to an old newspaper of 1933, that the English name of “Pound Lane” derived from the existence of a Government pound, or place where strayed cattle and so forth, or animals due for quarantine or confiscation, were kept. Regarding the name “磅巷” in Chinese, it is said that the English pronunciation of “pound” sounds similar to the pronunciation of “磅” in Cantonese, while “巷” is lane in Chinese.

Apart from the Government pound, it is also noteworthy that animals such as pigs, cows and goats were raised in the buildings at Pound Lane and its vicinity. “Cattle”, “cowkeeper”, “goatherd”, etc. can be identified from the rates records between 1865 and 1885, for instance. Those animals were

² No gazette record is available from government records.

³ The plot of land bounded by Rutter Street and Hospital Road was vacant, according to a map of 1887. It was not until 1892 that the first land lease for development of the site (Inland Lot No. 1221) was made. Two rows of building had been constructed by 1897, according to a map that year. The site is known as Wing Wa Terrace (榮華臺) at present.

accommodated in shops, dwelling houses or shop-cum-dwelling houses. In April 1874, the Colonial Surgeon completed a report on the insanitary condition of the town of Victoria. It was observed that pigs were universally kept in the houses all over the town. In houses including those at Pound Lane and its vicinity, pigs were kept in kitchens, gullies at the back of houses and even under beds. The Colonial Surgeon urged that such terribly insanitary condition should not be tolerated any longer.

With such highly insanitary condition, a Bubonic Plague broke out at Taipingshan District in May 1894. To prevent the recurrence of epidemic diseases, “The Taipingshan Resumption Ordinance” was enacted in September 1894 to make way for improvement works in certain portions of the resumed area. The resumed area, bounded by Taipingshan Street, Square Street, Ladder Street, Caine Road, Po Yan Street, Rutter Street and Pound Lane, of private property being 6.25 acres in extent, was resumed on 26 September 1894. Pound Lane, one of the public streets in the resumed area, was closed to public traffic. The buildings in Taipingshan Street, Market Street (街市街) (or now Po Hing Fong, 普慶坊), Upper Station Street (差館上街), Square Street (四方街), Bridges Street (必列者士街) and Tank Lane (水池巷) as well as the then Taipingshan Market were pulled down by the Government between August and October 1895. Some of the building materials salvaged from the buildings demolished were sold by public auction.

Other improvement works included the construction of retaining walls and upgrading of the drainage system. In this regards, storm-water drains and retaining walls were constructed along the frontages of Pound Lane and Taipingshan Street in 1896. According to old maps and photos, the retaining walls were built round the corner of Pound Lane and a private building at No. 38 Taipingshan Street, opposite to a new Government public bathhouse under planning.⁴ The walls, however, were demolished around 2000 when the aforesaid private lot was redeveloped into the existing residential high-rise.

A public garden was also planned in the area, which would be bounded by part of Square Street (or Kui In Fong 居賢坊 now), south of Taipingshan Street, Market Street (renamed as Po Hing Fong after resumption) and Pound Lane, as well as the public bathhouse opposite to No. 38 Taipingshan Street

⁴ View Villa (順景雅庭) is situated at No. 38 Tai Ping Shan Street at present. The location of the retaining walls was first marked on a plan named “Taipingshan Resumption – Plan of Resumed Area as at Present” in “Report on, in Years 1894 – 1905 Insanitary Properties Resumptions”, *Hongkong Legislative Council Sessional Papers 1905*. The walls were also shown in the aerial photos of 1949.

(i.e. the present location of the Pound Lane Public Toilet and Bathhouse) and the Bacteriological Institute (now a Declared Monument known as the Old Pathological Institute) at Caine Lane near the top of Ladder Street in the resumed area. In 1904, this public garden was named as Puk Kung Yun (卜公園) in Chinese and Blake Garden in English. Its masonry retaining wall runs along the lower section of Pound Lane.

Pound Lane is one of the many hillside streets; but unlike other busy vehicular thoroughfares extending up the hillside such as Aberdeen Street, it is built with steps on a slope. The oldest steps constructed of long heavy granite slabs. The steps of the uppermost section intersecting with Hospital Road have been rebuilt with concrete. However, some traces of the previous granite steps can still be identified on site.

Step streets such as this one are tangible evidence of Hong Kong's city development in the early years, reflecting the steep hilly environ of Hong Kong Island on which the city was built on. It had also undergone the deadly years of the plague. Although it was built later than Pottinger Street and Ladder Street (built in the 1840s), the flight of Pound Lane steps has social value and local interest as a pedestrian link between Tai Ping Shan Street, Hospital Road and Caine Road.

Sheung Wan is one of the oldest Chinese towns of Hong Kong and Pound Lane retains much of the atmosphere and charm of the old district which still remains for the walker to enjoy. The lane is a secluded place that is quieter than many other areas of urban Hong Kong due to the absence of through traffic. It offers commanding views in both upward and downward directions, and gives a wonderful impression of the character of the old Taipingshan district.

Pound Lane steps has group value with other historic buildings and structures in its vicinity, including the Main Block of Tung Wah Hospital (Grade 1), Kwong Fook I Tsz (廣福義祠, Grade 2), the former quarters for scavenging coolies at No. 4 Hospital Road (醫院道 4 號, Grade 2), the Man Mo Temple compound on Hollywood Road (荷李活道文武廟, Declared Monument) and Ladder Street (樓梯街, Grade 1). They testified to the development of the Chinese community in Sheung Wan from the 1840s and still closely serve the daily needs of the local community.

Pound Lane, as it is now, bears a long history. It provides a very old *Rarity*,

Architectural Merit

Social Value & Local Interest

Group Value

example of a typical long and steep street in one of the first residential areas of the Chinese to be developed on Hong Kong Island, and gives a history of the life and hardships experienced by the earliest urban Chinese residents. It is here that tourists and locals can still catch a glimpse of what life was like in old Hong Kong. Basic repairs and improvement works to the lane have been carried out over the years. For instance, works for “constructing new side channels, reforming and concreting the road, erecting new steps” in Pound Lane at the section from Station Street to Rutter Street were carried out in 1881.⁵ To date, although some of the steps have been replaced and the landings resurfaced with concrete after years of use,⁶ there is still a continuity of form, texture and pattern which it had over a hundred years ago.

**Built Heritage
Value &
Authenticity**

⁵ Government Notification No. 327, *The Hongkong Government Gazette*, 1 January 1881.

⁶ For instance, it was marked on the site layout plan of the Pound Lane Public Toilet and Bathhouse of the year 1959 that the landings outside the building would be resurfaced and made good.

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Historic Building Appraisal
Ex-Sham Shui Po Service Reservoir
(commonly known as Mission Hill Service Reservoir /
Woh Chai Shan Service Reservoir)
Sham Shui Po, Kowloon

The ex-Sham Shui Po Service Reservoir (前深水埗配水庫), formerly known as “Kowloon Tong Service Reservoir” (九龍塘配水庫), was built in 1904. It was also commonly known as the Mission Hill Service Reservoir (主教山配水庫) or Woh Chai Shan Service Reservoir (窩仔山配水庫). It formed part of Kowloon’s water supply system until it was decommissioned in 1970. The system was referred to as the “Kowloon Waterworks Gravitation Scheme” (九龍重力自流供水系統). The completion of the system’s storage reservoir (Kowloon Reservoir) on 1 December 1910 marked the completion of the first scheme of the kind in Kowloon.¹

Historical Interest

The name of the hill

The service reservoir was situated on the summit of a hill locally known as “Woh Chai Shan” (窩仔山) (with Woh Chai Street (窩仔街) nearby) or “Mission Hill” (主教山). But these names were not indicated on government survey sheets. However, the Chinese characters of Woh Chai Shan (窩仔山) can be identified from a year book for the year 1959 and some Chinese newspapers dating from the 1950s to 1970s, whereas that of Chu Kau Shan (a transliteration of Mission Hill (主教山) in Cantonese, which literally means “Bishop Hill”),² could still be identified in the newspapers of the 1990s. Some government records of the 1970s show another nickname of the hill in Chinese – Kau Hui Shan (a transliteration of “教會山” in Cantonese, which literally means “Church Hill”). Regarding the English name “Mission Hill”, it can be identified in the newspapers dating from the 1950s to 1980s, and in the government records of the 1950s and 1970s, for instance.

It is believed that the nickname “Mission Hill” was related to the Basel Evangelical Missionary Society (巴色差會) and later the Tsung Tsin Mission

¹ The Main Dam (主壩), Main Dam Valve House (主壩水掣房), Spillage Dam (溢洪壩), Spillage Dam Recorder House (溢洪壩記錄儀器房), and Recorder House (記錄儀器房) of Kowloon Reservoir are Declared Monuments.

² There are still some religious premises near the hill. They are Tsung Tsin Mission of Hong Kong Shamshuiipo Church (基督教香港崇真會深水埗堂) at No. 58 Tai Po Road (大埔道), Grace Hong Kong Evangelical Church (香港宣教會恩磐堂) at No. 11 Tong Yam Street (棠蔭街) and St. Francis of Assisi’s Church (聖方濟各堂) at No. 58 Shek Kip Mei Street (石硶尾街). But none of them have bishops.

(崇真會). On 1 July 1898, the government leased a plot of land registered as New Kowloon Inland Lot No. 1 (N.K.I.L. 1) to the Basel Evangelical Missionary Society, whose missionaries, namely Rev. Theodore Hamberg (韓山明牧師) and Rev. Rudolf Lechler (黎力基牧師), first came to Hong Kong from Switzerland in 1847. The N.K.I.L. 1 was situated on the hill occupied by the Kowloon Tong Service Reservoir (i.e. the ex-Sham Shui Po Service Reservoir), which was also where the Basel's first church base in Kowloon was established. According to land records, in 1954, N.K.I.L. 1 was sold to the Tsung Tsin Mission.³ In 1956, the ownership became registered under The President in Hong Kong of the Tsung Tsin Mission of Hong Kong Incorporated.

The water supply system in Kowloon before 1906

Up until 24 December 1906, the supply of water for Kowloon had relied on three wells. Osbert Chadwick (1844 – 1913), a consulting engineer to the Crown Agents for the Colonies,⁴ was sent to Hong Kong to investigate its sanitary condition and in 1882, he compiled a “Mr. Chadwick’s Reports on the Sanitary Condition of Hong Kong”, with his recommendations on increasing water supplies as a means of improving the sanitary condition of the territory. Chadwick returned to Hong Kong in 1890 to follow up his 1882 recommendations. His proposal related to the water supply for British Kowloon was implemented and completed in 1895. Three wells were sunk at the sources of water at three valleys situated north of the village of Yaumati.⁵ Besides, the wells were connected by iron pipes to a clear water tank at Yaumati (today’s Yau Ma Tei) having a top water level of 12.5 feet above Ordnance Datum (abbreviated as T.W.L. 12.5 ft. A.O.D.) and a capacity of 148,000

³ Cheung Wai-fung (張維豐), Chan Tat-sam (陳達三), Tsang Shui-kau (曾瑞有) and Tsok En-kau (卓恩高), acted as the purchasers of N.K.I.L. 1 on behalf of the Tsung Tsin Mission and were referred to as “Gentlemen” in the land record concerned.

⁴ Osbert Chadwick was educated at the Royal Military Academy at Woolwich, where he was trained as a civil engineer, and was then attached to the Royal Engineers from 1864 to 1873. After resigning his commission, he served as a consulting engineer to the Crown Agents for the Colonies, through which he was sent to Hong Kong in 1881 as special commissioner to report on the sanitation and public health problems of the colony. Chadwick spent several months in Hong Kong. His “Mr. Chadwick’s Reports on the Sanitary Condition of Hong Kong” was published by the Colonial Office in 1882. It recommended measures to improve hygiene, including a system of water supply, a system of sewage disposal and proper drainage, the provision of public toilets, public bathhouses and clean markets, and the establishment of a Sanitary Board (established in 1883). Chadwick returned to Hong Kong in 1890 to follow up his 1882 recommendations. For his construction of the waterworks in Malta, he was made a Companion of the Order of St. Michael and St. George (CMG) in 1886. With the outbreaks of bubonic plague since 1894, the government was determined to expedite improvements to the sanitary conditions in Hong Kong. Chadwick was, therefore, sent to Hong Kong for a third time in 1902, advising on how to improve the sanitary conditions in Hong Kong. He focused on street sewers, drains and nullahs. Chadwick had contributed to amendments of Waterworks Ordinance the enactment of the Public Health and Buildings Ordinance 1903.

⁵ Well No. 1 was situated near today’s junction of Pui Ching Road (培正道) and Man Fuk Road (文福道), Well No. 2 near the junction of Waterloo Road (窩打老道) and Argyle Street (亞皆老街), and Well No. 3 near the junction of Ho Man Tin Hill Road (何文田山道) and Wylie Road (衛理道).

gallons. On 24 December 1895, the pumping machinery at the Yaumati Pumping Station at No. 344 Shanghai Street started operation.⁶ The water was directly pumped from the clear water tank to users, whereas the surplus would be pumped to the two service reservoirs regulating water supply, which were both completed in 1894. One was at King's Park, Yau Ma Tei (T.W.L. 215 ft. A.O.D.) of 162,600 gallons capacity, while the other was at Hung Hom (T.W.L. 160 ft. A.O.D., approximately situated at today's Ho Man Tin) of 92,850 gallons capacity.

The Kowloon Waterworks Gravitation Scheme

In 1898, the consumption of water was found to be rapidly overtaking the available sources of supply.⁷ Before the lease of the New Territories on 1 July 1898, the Kowloon Peninsula under British jurisdiction contained no possible site for a reservoir. From 1899 onwards, however, considerable attention was given to the problem of supplying water to Kowloon. In 1900, Chadwick submitted to the government another proposal for increasing water supply. He highlighted the hilly nature of the new territory, and suggested that water supplies could be augmented by exploiting the new water sources in the valleys there by gravitation. With a gravitation scheme, water could be delivered under high pressure over a significant distance from a storage reservoir high in the hills, with the significant advantage that no expensive pumping was required, and the system was therefore also expected to be much more cost-effective than the pumped system in terms of operation. The idea of the gravitation scheme emerged in Britain in the 1820s and 1830s, and swept the country from the 1840s onwards. In the second half of the nineteenth century, it was introduced to cities such as Bombay (now Mumbai), Hong Kong and Singapore.⁸ In Hong Kong, a gravitation scheme was first adopted at the Pok Fu Lam Reservoir, which was built between 1863 and 1877.⁹

⁶ The surviving two-storey red brick building of the engineer's office is a Grade 1 historic building, which is now known as the former Pumping Station of Water Supplies Department.

⁷ According to government records, for instance, in 1891, there were 19,997 Chinese land population in British Kowloon. The figure increased to 26,442 in 1897, and 42,976 in 1901. In 1906, there were 52,331 Chinese land population in "Old Kowloon" and 17,836 in "New Kowloon".

⁸ The Toxteth Reservoir in the UK (built in the 1850s), Paddington Reservoir in Sydney (built from 1866 – 1878), and the Fort Canning Service Reservoir in Singapore (built in 1929) are some of the overseas examples of service reservoirs using the gravitation system of water supply.

⁹ According to a government record of 1937:

- (i) the resources of the Pok Fu Lam Valley for the Pok Fu Lam Reservoir (built between 1863 and 1877) were wholly gravitational;
- (ii) the resources of Wong Nai Chung Catchment Areas for the Wong Nai Chung Reservoir (built in 1899) were wholly gravitational;
- (iii) for the Tai Tam Group of Reservoirs (built between 1883 and 1917), about 20% of the resources of the Tai Tam Valley were primarily gravitational; and
- (iv) regarding the Aberdeen Reservoir (1931 – 1932), about 50% of the resources of the Aberdeen Valley were pumped to make the sole of them gravitational.

The Kowloon Waterworks Gravitation Scheme was carried out under the supervision of Lawrence Gibbs (c. 1867 - 1942). He was Assistant Engineer in the Public Works Department (hereafter “PWD”) when he was instructed to prepare a gravitation scheme for Kowloon and the urban districts (Kowloon City and Sham Shui Po) in New Kowloon.¹⁰ The cost-effectiveness of the operation of the gravitation scheme was set out below:

| Existing Pumping Scheme in 1900¹¹ | |
|---|-----------------------|
| Supply | 232,000 gallons a day |
| Original cost | \$128,000 |
| Capitalized cost of maintenance | \$120,000 |
| Cost of supply per million gallons, per day | \$1,070,000 |
| Proposed Gravitation Scheme in 1900 | |
| Supply | 590,000 gallons a day |
| Cost of existing works to be utilized | \$90,000 |
| Estimated cost of new works | \$380,000 |
| Estimated cost of maintenance (capitalized) | \$40,000 |
| Cost of supply per million gallons, per day | \$860,000 |

Hongkong Legislative Council Sessional Papers, 1901

Later, Gibbs left the government civil service, and joined a local firm of architects and civil engineers to form Messrs. Denison, Ram and Gibbs.¹² The firm was entrusted to design and supervise the whole of the works of the proposed gravitation scheme.

¹⁰ In his “Report on Water Supply, Kowloon” dated 8 January 1900, Gibbs pointed out that according to the census of January 1897 of the population in British Kowloon, there were 716 civil non-Chinese land population, 26,442 civil Chinese land population, 7,624 floating population, and a military and naval population of around 1,500. In Kowloon City and Sham Shui Po, with estimated population of 2,000 and 1,500 respectively, should be included in the scheme.

With the extension of their jurisdiction to the entire Kowloon Peninsula in 1898, the British named the areas to the north of Boundary Street (界限街), including Kowloon City and Sham Shui Po, as “New Kowloon”. The boundary of New Kowloon was marked on a map dated 1937. Places like Cheung Sha Wan (長沙灣), Sham Shui Po (深水埗), Kowloon Tong (九龍塘), Tai Hom (大磡), Kowloon City (九龍城), Ngau Chi Wan (牛池灣), Ngau Tau Kok (牛頭角), Sai Tso Wan (茜草灣) and Cha Kwo Ling (茶果嶺) fell within the boundary.

¹¹ Lawrence Gibbs, “Report on Water Supply, Kowloon” dated 8 January 1900, *Hongkong Legislative Council Sessional Papers*, 1900.

¹² Denison and Ram was founded by Albert Denison and Edward Albert Ram in 1897. It was renamed Denison, Ram and Gibbs after it was joined by Gibbs. The firm was entrusted to design and supervise the whole of the works of the proposed gravitation scheme on behalf of the government because of the inadequacy of the staff of PWD and the fact that Gibbs, when still working with PWD, had investigated and reported upon the feasibility of the scheme. It was probably for the first time the government commissioned a local firm to provide consultancy for the construction of a reservoir-based water supply system for Kowloon. Other works done by the firm included the May Hall and Eliot Hall of The University of Hong Kong, The Helena May (all Declared Monuments), the Maltida and War Memorial Hospital (Grade 2) and Clubhouse of Fanling Golf Course (Grade 2). Besides, Tai Po Lookout (Grade 1) was designed by Gibbs in the early 1900s and was used as his residence afterwards.

The scheme involved the construction of a storage reservoir, filter beds, a service reservoir and mains in New Kowloon. The storage reservoir (Kowloon Reservoir) would be connected by a cast iron main to filter beds on the ridge above Cheung Sha Wan near Tai Po Road. From the filter beds water would be conveyed by a main laid partly below and partly along Tai Po Road and up to a service reservoir to be built on a hill to the north of the village of Kowloon Tong (or Kau Lung Tong, 九龍塘村). The service reservoir would be connected to the distribution system at Yau Ma Tei, which would be extended to Kowloon City on the eastern side and to Tai Kok Tsui and Sham Shui Po on the western side of Kowloon.¹³ Construction works starting with the storage reservoir and the main connected to it commenced in 1902.

In December 1902, tenders were invited for the construction of the Kowloon Tong Service Reservoir. According to the “Report of the Director of Public Works for the Year 1903”, a contract for the construction of the service reservoir was entered into with Tung Shing (同盛建築公司) in February of that year.¹⁴ The report continues by stating that:

“The reservoir is sunk almost entirely below ground level and is constructed principally of cement concrete with granite pillars and brick arches to support the concrete vaulting which forms the roof. It is circular in form and has a capacity of 2 million gallons. About half the brick arches already mentioned were completed by the end of the year.”¹⁵

The construction of this service reservoir was completed on 10 August 1904 at a cost of \$67,639.31.¹⁶ According to the government records available from 1904 to the early 1950s, this service reservoir was referred to as “Kowloon Tong Service Reservoir” or “Kowloon Tong Balance Tank”. From around the mid-1950s onwards, it was known as “Sham Shui Po Balance Tank”. The water left the Kowloon Reservoir that had a top water level of 448 feet above Ordnance Datum (T.W.L. 448 ft. A.O.D.). Once it had been filtered and had

¹³ Besides, at Kowloon City, another service reservoir would be constructed to maintain the supply in case of a breakdown on the 2 miles of main between there and Hung Hom, where a service reservoir already existed.

¹⁴ The construction company of Tung Shing was founded by Ng Tsz-chor (吳子楚), alias Ng Yi-po (吳義保, 1869 – Japanese Occupation) and his younger brother Ng Tsz mei (吳子美, 1881 – 1939). Ng Tsz-meи was also a notable philanthropist. For instance, he donated to establish an outpatient clinic at Pai Tau Village (排頭村), Sha Tin. He also provided coffins free of charge for the deceased of poor families. Ng Yuen (吳園, Grade 3) at Tai Chung Kiu Road, Sha Tin, was the private residence of Ng Tsz-meи.

¹⁵ “Report of the Director of Public Works for the Year 1903”, *Hongkong Legislative Council Sessional Papers*, 1904.

¹⁶ “Report of the Director of Public Works for the Year 1904, *Hongkong Legislative Council Sessional Papers*, 1905.

the water pressure broken at the Tai Po Road Filter Beds (T.W.L. 290 ft. A.O.D.) (大埔道沙瀘池), it would have been directly distributed to users. The surplus would arrive at the Kowloon Tong Service Reservoir (T.W.L. 255 ft. A.O.D.) and be stored there until the demand for water returned to a level that required the use of the surplus. Therefore, the service reservoir was indeed designed as a balance tank (調節缸). All the processes above were done by gravitation.

In 1906, further progress of the works of the gravitation scheme enabled water to be impounded in the storage reservoir and, by the adoption of some temporary expedients, though still incomplete, the new works began to operate on 24 December of the same year. The gravitation scheme had also contributed to the protection of lives and properties from fires. The “Report of the Director of Public Works for the Year 1906” reads “*Fire Hydrants to the number of 22 were fixed on the new mains.*”¹⁷ This is for the first time fire hydrants were installed in Kowloon. In 1907, fire hydrants amounting 109 were fixed on all the old water mains on the peninsula,¹⁸ whereas in 1910, 158 fire hydrants were fixed upon the completion of the extensions and enlargements of the distribution system in the same year.¹⁹

According to a government record, the service reservoir fell into disuse in 1938 due to bad leakage. There then came the Japanese Occupation (1941 – 1945). According to Japanese records, the Kowloon Tong Service Reservoir (九龍塘配水池) was built of stone and brickwork (石及煉瓦造) and served as a balance tank (調整池). Among the waterworks installations that were rehabilitated after the war was the Kowloon Tong Service Reservoir, which was repaired and re-commissioned in 1951. It was then decommissioned in 1970, following its replacement by Shek Kip Mei Fresh Water Service Reservoir. The ex-Sham Shui Po Service Reservoir had a strong historical linkage with the Kowloon Reservoir, and they together was a group of waterworks installations which had borne witness to the historical developments of Kowloon and water supplies on the peninsula.

The ex-Sham Shui Po Service Reservoir was circular in plan, having a **Architectural Merit** diameter of about 150 feet (about 45.7 metres) and a height of about 22 feet and **Merit**

¹⁷ “Report of the Director of Public Works for the Year 1906”, *Hongkong Legislative Council Sessional Papers*, 1907.

¹⁸ “Report of the Director of Public Works for the Year 1907”, *Hongkong Legislative Council Sessional Papers*, 1908.

¹⁹ “Report of the Director of Public Works for the Year 1910”, *Hong Kong Government Administrative Reports*, 1910.

6 inches (about 6.8 metres).²⁰ It occupied an area of about 1,600 sq.m. According to the information from the Water Supplies Department, the concrete cove ceiling is supported on a layer of pentagonal profile granite spring blocks, rows of brick arches and totally 108 piers constructed of 24 x 18 x 12 inches stone blocks.²¹ Nevertheless, the architecture of the roof, the arches and piers display an imitation of Roman civil engineering works.²² The top water level was 255 feet A.O.D. A major alteration was carried out in 1951 – 1952. According to the same record plan of 1951, a new 150-mm thick concrete perimeter wall (also known as a circumferential wall) was constructed, and the space between the original wall and the new perimeter wall was filled with compacted earth filling with 7% cement content. Following this modification, the top water level was lowered from 255 feet A.O.D. to 249 feet A.O.D., and the storage height from 20 feet and 6 inches (about 6 metres) to 15 feet (about 4.5 metres), whereas the capacity was reduced from 2.183 million (about 9,900 cubic metres) to about 1.074 million gallons (or about 4,800 cubic metres). On the other hand, according to the results of open-up investigations, the new wall was constructed with reinforced concrete, while the flooring was made up of a layer of aggregates (疏水層) at the bottom for the purpose of draining off of excess water, a layer of cement concrete in the middle and a layer of bitumen on top.

Apart from the brick arches, stone block piers, and the concrete cove ceiling and wall, a range of other features relating to the operation of the service reservoir were visible during the site visit in January 2021. These included the vent pipes and ventilators in the roof, the inlet and outlet pipes, an overflow pipe, a half-round channel connected to a washout pipe for draining off all the water before the commencement of repair works, a stilling well for the operation of a ball float valve, a masonry portal (now blocked up) dressed with voussoirs, and a culvert.

The ex-Sham Shui Po Service Reservoir is within walking distance of other historic buildings, including Mei Ho House (美荷樓), the former North Kowloon Magistracy (前北九龍裁判法院), Building of The Garden Company, Limited (嘉頓有限公司建築), Precious Blood Convent (寶血會女修院) (all Grade 2), Precious Blood Hospital (寶血醫院, Grade 3), and

Group Value

²⁰ “The water ran by gravitation from the Kowloon Reservoir, Tai Po Road Filter Beds to Kowloon Tong Service Reservoir, which had top water levels of 448 feet, 290 feet and 255 feet above Ordnance Datum respectively.

²¹ The record drawing of 1951 was only marked with “EXIST. 2'-0" x 1'-6" STONE BLOCK COL”. The height of 12 inches was provided by the Water Supplies Department.

²² Semi-circular arch is a distinguished character of Roman architecture. However, in the case of the ex-Sham Shui Po Service Reservoir, the minor segemental ceiling and the arches are built of concrete and brickwork.

Saint Francis of Assisi's Catholic Church and English Primary School (聖方濟各堂及英文小學). They together formed a vivid miniature of the social life of the local community.

As an underground waterworks installation that was decommissioned in 1970, the service reservoir itself was of limited social value and interest to the local community. The service reservoir, as an integral part of the first gravitational water system in Kowloon, played an important role in the provision of safe fresh water for drinking, improvement of hygiene and installation of fire hydrants, and was, therefore, of great social value to the population of the Kowloon Peninsula. On the other hand, the nicknames of the hill where it is situated – Mission Hill (Chu Kau Shan) and Woh Chai Shan – clearly acquired certain social value and attracted local interest. The hill was also once a squatter area, within which the victims of a great fire in Sham Shui Po in about 1956 were temporarily accommodated. It was not until 1972 that the squatters, who then numbered around 1,900, were given public housing and evacuated their huts on the hill.

Social Value & Local Interest

The nickname of the hill where it is situated – Mission Hill – is also of historic interest. It is related to the Basel Mission's first base in Kowloon at New Kowloon Inland Lot No. 1, which dates back to 1898, and also serves as a historical reminder of the development of New Kowloon.

The construction of a new perimeter wall in 1951 – 1952 was the only major alteration, but it has not diminished the authenticity of the 1904 structure. Four stone piers and brick arches were removed by the works carried out in December 2020, but the fabrics had been salvaged for restoration.

Authenticity

The architecture of the roof, the arches and piers display an imitation of Roman civil engineering works with a very high level of authenticity. The stone piers and brick arches combined with a concrete cove ceiling enabled the construction of this 1904 service reservoir, which in area was ten times (about 1,600 sq.m.) larger than the 1894 ex-Yaumati Service Reservoir (about 163 sq.m.). The reinforced concrete perimeter wall, the concrete cove ceiling, brickwork and masonry work display a combination of traditional and modern building techniques and materials. Besides, important functional elements, such as vent pipes, ventilators, inlet and outlet pipes, a stilling well, a half-round channel, a washout pipe, a masonry portal dressed with voussoirs and a culvert are still visible on site.

The ex-Sham Shui Po Service Reservoir is a very rare example of its type *Rarity* in terms of construction and has considerable built heritage value. Historically, as a structure built in 1904 in Sham Shui Po in a location just to the north of Boundary Street, the service reservoir has borne witness to the significant historical development of New Kowloon. Besides, it is one of the oldest surviving service reservoirs in Hong Kong, and the second oldest service reservoir built in Kowloon (the ex-Yaumati Service Reservoir built in 1894 being the oldest). It formed an integral part as well as the first waterworks of the Kowloon Waterworks Gravitation Scheme, the first reservoir-fed water supply system in Kowloon. In Hong Kong, the gravitation scheme of water supply was first adopted at the Pok Fu Lam Reservoir, which was built between 1863 and 1877. In Kowloon, the gravitation scheme which started operation in 1906 was thus a very significant milestone in the water supply system for the peninsula.

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Historic Building Appraisal
Ex-Yaumati Service Reservoir
King's Park, Yau Ma Tei, Kowloon

The ex-Yaumati Service Reservoir (前油麻地配水庫) was built in 1894, sixteen years before the completion of the Kowloon Reservoir (九龍水塘) in 1910. The latter was the first reservoir-based water supply system with water supply from reservoirs in Kowloon. Before the lease of the New Territories on 1 July 1898, the Kowloon Peninsula under British jurisdiction contained no possible site for a reservoir. Up until 24 December 1906, the supply of water for Kowloon had relied on wells.

Historical Interest

Osbert Chadwick (1844 – 1913), a consulting engineer to the Crown Agents for the Colonies,¹ was sent to Hong Kong to investigate its sanitary condition and in 1882, he compiled a “Mr. Chadwick’s Reports on the Sanitary Condition of Hong Kong”, with his recommendations on increasing water supplies as a means of improving the sanitary condition of the territory. Chadwick returned to Hong Kong in 1890 to follow up his 1882 recommendations. His proposal related to the water supply for British Kowloon was implemented and completed in 1895. Three wells were sunk at the sources of water at three valleys situated north of the village of Yaumati. Well No. 1 was situated near today’s junction of Pui Ching Road (培正道) and Man Fuk Road (文福道), Well No. 2 was near the junction of Waterloo Road (窩打老道) and Argyle Street (亞皆老街), and Well No. 3 was near the junction of Ho Man Tin Hill Road (何文田山道) and Wylie Road (衛理道).

The wells were connected by iron pipes to a clear water tank at Yaumati (today’s Yau Ma Tei) having a top water level of 12.5 feet above Ordnance Datum (abbreviated as T.W.L. 12.5 ft. A.O.D.) and a capacity of 148,000 gallons. Mains were also laid. On 24 December 1895, the pumping machinery at the Yaumati Pumping Station at No. 344 Shanghai Street started

¹ Osbert Chadwick was educated at the Royal Military Academy at Woolwich, where he was trained as a civil engineer, and was then attached to the Royal Engineers from 1864 to 1873. After resigning his commission, he served as a consulting engineer to the Crown Agents for the Colonies, through which he was sent to Hong Kong in 1881 as special commissioner to report on the sanitation and public health problems of the colony. Chadwick spent several months in Hong Kong. His “Mr. Chadwick’s Reports on the Sanitary Condition of Hong Kong” was published by the Colonial Office in 1882. It recommended measures to improve hygiene, including a system of water supply, a system of sewage disposal and proper drainage, the provision of public toilets, public bathhouses and clean markets, and the establishment of a Sanitary Board (established in 1883). Chadwick returned to Hong Kong in 1890 to follow up his 1882 recommendations. For his construction of the waterworks in Malta, he was made a Companion of the Order of St. Michael and St. George (CMG) in 1886. With the outbreaks of bubonic plague since 1894, the government was determined to expedite improvements to the sanitary conditions in Hong Kong. Chadwick was, therefore, sent to Hong Kong for a third time in 1902, advising on how to improve the sanitary conditions in Hong Kong. He focused on street sewers, drains and nullahs. Chadwick had contributed to the amendments of Waterworks Ordinance and the enactment of the Public Health and Buildings Ordinance 1903.

operation.² The water was directly pumped from the clear water tank to users, whereas the surplus would be pumped to the two service reservoirs regulating water supply. One was at King's Park, Yau Ma Tei (T.W.L. 215 ft. A.O.D.) of 162,600 gallons capacity. Another was one at Hung Hom (T.W.L. 160 ft. A.O.D., approximately situated at today's Ho Man Tin) having a capacity of 92,850 gallons. The two reservoirs were both completed in 1894.

In 1900, Chadwick submitted to the government another proposal for increasing water supply. He highlighted the hilly nature of the new territory and suggested that water supplies could be augmented by exploiting the new water resources in the valleys there by gravitation. With a gravitation scheme, water could be delivered under high pressure over a significant distance from a storage reservoir high in the hills, with the significant advantage that no expensive pumping was required. The Kowloon Waterworks Gravitation Scheme (九龍重力自流供水系統) was carried out under the supervision of Lawrence Gibbs (c. 1867 - 1942). He was Assistant Engineer in the Public Works Department when he was instructed to prepare a gravitation scheme for Kowloon and the urban districts (Kowloon City and Sham Shui Po) in New Kowloon.³ Later, he left the government civil service, and joined a local firm of architects and civil engineers to form Messrs. Denison, Ram and Gibbs.⁴ The firm was entrusted to design and supervise the whole of the works of the proposed gravitation scheme.

The scheme involved the construction of a storage reservoir, filter beds, a service reservoir and mains in New Kowloon. The storage reservoir (i.e. Kowloon Reservoir) would be connected by a cast iron main to filter beds on

² The surviving two-storey red brick building of the engineer's office is a Grade 1 historic building, which is now known as the former Pumping Station of Water Supplies Department.

³ In his "Report on Water Supply, Kowloon" dated 8 January 1900, Gibbs pointed out that according to the census of January 1897 of the population in British Kowloon, there were 716 civil non-Chinese land population, 26,442 civil Chinese land population, 7,624 floating population, and a military and naval population of around 1,500. In Kowloon City and Sham Shui Po, with estimated population of 2,000 and 1,500 respectively, should be included in the scheme.

With the extension of their jurisdiction to the entire Kowloon Peninsula in 1898, the British named the areas to the north of Boundary Street (界限街), including Kowloon City and Sham Shui Po, as "New Kowloon". The boundary of New Kowloon was marked on a map dated 1937. Places like Cheung Sha Wan (長沙灣), Sham Shui Po (深水埗), Kowloon Tong (九龍塘), Tai Hom (大磡), Kowloon City (九龍城), Ngau Chi Wan (牛池灣), Ngau Tau Kok (牛頭角), Sai Tso Wan (西草灣) and Cha Kwo Ling (茶果嶺) fell within the boundary.

⁴ Denison and Ram was founded by Albert Denison and Edward Albert Ram in 1897. It was renamed Denison, Ram and Gibbs after it was joined by Gibbs. The firm was entrusted to design and supervise the whole of the works of the proposed gravitation scheme on behalf of the government because of the inadequacy of the staff of the Public Works Department and the fact that Gibbs, when still working with the Public Works Department, had investigated and reported upon the feasibility of the scheme. It was probably for the first time the government commissioned a local firm to provide consultancy for the construction of a reservoir-based water supply system for Kowloon. Other works done by the firm included the May Hall and Eliot Hall of The University of Hong Kong, The Helena May (Declared Monuments), the Maltida and War Memorial Hospital (Grade 2) and Clubhouse of Fanling Golf Course (Grade 2). Besides, Tai Po Lookout (Grade 1) was designed by Gibbs in the early 1900s and was used as his residence afterwards.

the ridge above Cheung Sha Wan near Tai Po Road. From the filter beds water would be conveyed by a main laid partly below and partly along Tai Po Road and up the hill to the Kowloon Tong Service Reservoir (i.e. the ex-Sham Shui Po Service Reservoir). The service reservoir would be connected to the old distribution system at Yau Ma Tei, which would be extended to Kowloon City on the eastern side and to Tai Kok Tsui and Sham Shui Po on the western side of Kowloon.⁵

In 1906, further progress of the works of the gravitation scheme enabled water to be impounded in the reservoir and, by adopting some temporary expedients, though still incomplete, the new works began to operate on 24 December of the same year.⁶ The water from Kowloon Reservoir (T.W.L. 448 ft. A.O.D.) was filtered and had the water pressure broken at the Tai Po Road Filter Beds (T.W.L. 290 ft. A.O.D.) (大埔道沙瀘池), and from there it was conveyed to the then Yaumati Service Reservoir (T.W.L. 215 ft. A.O.D.) by gravitation. In the 1910s – 1920s, the Yaumati Pumping Station was converted into a post office and was then abandoned in 1967. This service reservoir was probably disused due to bad leakage or following completion of the new service reservoir nearby in 1934.⁷

The ex-Yaumati Service Reservoir had a capacity of about 162,600 gallons (approx. 740 cubic metres). It was rectangular in plan. No record plan can be identified. However, according to the survey by the Water Supplies Department in 2021, the ex-service reservoir occupies an area of about 163 sq.m. (approx. 10.71 metres x 15.3 metres). The highest point of the building height from the floor to the ceiling on the central axis is around 5.21 meters. The construction displays an imitation of Roman civil engineering works, comprising walls, cove ceiling, arches and piers all built of red brickwork.⁸ There are six piers supporting the roof, with a span of clearance of around 3.48 meters on the longer central axis, and around 2.89 to 3.48 meters on the shorter one. The red brickwork of walls is in Flemish bond, with headers and stretchers laid alternately in each course, while the roof's brickwork is in stretcher bond. The top water level was 215 feet A.O.D. Apart from the

Architectural Merit

⁵ Besides, at Kowloon City, another service reservoir would be constructed to maintain the supply in case of a breakdown on the 2 miles of main between there and Hung Hom, where a service reservoir already existed.

⁶ According to the “Report of the Director of Public Works for the Year 1906”, the introduction of the supply from the new gravitation reservoir had superseded the pumped supply.

⁷ The new fresh water service reservoir was converted into a salt water service reservoir in 1995.

⁸ Semi-circular arch is a distinguished character of Roman architecture. However, in the case of the ex-Yaumati Service Reservoir, the minor segemental ceiling and the arches are built of brickwork.

brick walls, arches, piers, and cove ceiling, other features relating to the operation of the service reservoir, including vent pipes, the inlet and the outlet were visible during the site visit in January 2021.

As an underground waterworks structure, the ex-Yaumati Service Reservoir was not well known to the public in the past. However, the service reservoir, together with the Yaumati Pumping Station, played an important role in the provision of safe fresh water for drinking and the improvement of hygiene, and was therefore of great social value to the population of the Kowloon Peninsula.

The service reservoir has group value with other historic buildings, such as the former South Kowloon District Court (前南九龍裁判署, Grade 1) and Kowloon Methodist Church (循道衛理聯合教會九龍堂, Grade 3).

The ex-Yaumati Service Reservoir is a very rare example of its type and has considerable built heritage value. Built in 1894, it is the oldest surviving service reservoir in Kowloon. When viewed in terms of the development of waterworks installations in Kowloon, the service reservoir was constructed at a time when the water supply in the peninsula relied solely on wells and pumping machinery before gravitation system could be operated in Kowloon since 1906. Consideration of the broader historical context is also important, given that the gravitation system commencing in 1906 was technically feasible in Kowloon only after the entire peninsula and the New Territories came under British jurisdiction. Therefore, the service reservoir survives as a significant historical reminder of the development of Kowloon in the early colonial period.

Architectually speaking, important functional elements, such as vent pipes, the inlet and outlet, and a later access replacing the original one near the inlet, are still visible on site. Patch repairs to the brick walls, cove ceiling, arches, piers and floor can be identified, but they have not diminished the authenticity of the service reservoir, which was constructed using traditional building techniques and materials.

Social Value & Local Interest

Group Value

Rarity & Authenticity

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