

# Tai Po Wun Yiu kiln site

## 大埔 碗窑



Tai Po is located at the northeast of the New Territories in Hong Kong. Wun Yiu Heung comprises multiple villages near Tai Po Market. Wun Yiu kiln site is the only known site in Hong Kong where blue-and-white porcelain was manufactured in large scale for extended periods of time. With respect to the historical significance of the kiln site, part of the area where kilns remains were discovered was declared as monument in 1983. Fan Sin Temple at Sheung Wun Yiu Village in Tai Po was the only temple in Hong Kong dedicated to Fan Sin, the patron deity of potters. The temple was declared a monument in 1999.

### Archaeological Remains of Wun Yiu Kiln Site

The Wun Yiu Kiln Site is located at Wun Yiu Heung near Tai Po Market. The site is spread over an area of nearly 50,000 square metres and covers villages of Sheung Wun Yiu, Ha Wun Yiu, To Chi Yin, Cheung Uk Tei, and areas of Dui Liu and Da Nai Dong at the hill behind Wun Yiu. The porcelain manufacturing industry at Wun Yiu Heung was facilitated by the rich clay mines in the hills, dense vegetation and the abundance of firewood. The small streams running down the hill had provided hydropower to operate the watermills. Rivers and streams in the vicinity served as a source of water for production and a convenient means of transportation.

According to the genealogical records of the Ma clan at Wun Yiu and the oral descriptions of village elders, the pottery kilns were once operated by the Man and Tse clans. In the 13<sup>th</sup> year of the reign of Emperor Kangxi of the Qing dynasty (1674), the Ma clan of Hakka descent migrated to

Tai Po from Changle county (now Wuhua county) of Guangdong province, and acquired the kilns from the Man clan. It is believed that at its peak, the kilns housed multiple manufacturers and had over 300 workers in employment.

The porcelain products manufactured there were sold not only to the coastal areas of South China, but also to Southeast Asian countries. It was not until early 20<sup>th</sup> century that, facing intense competition from cheap porcelain manufactured along the coast of Guangdong province, the porcelain manufacturing industry gradually declined and the kilns finally closed in the late 1930s.

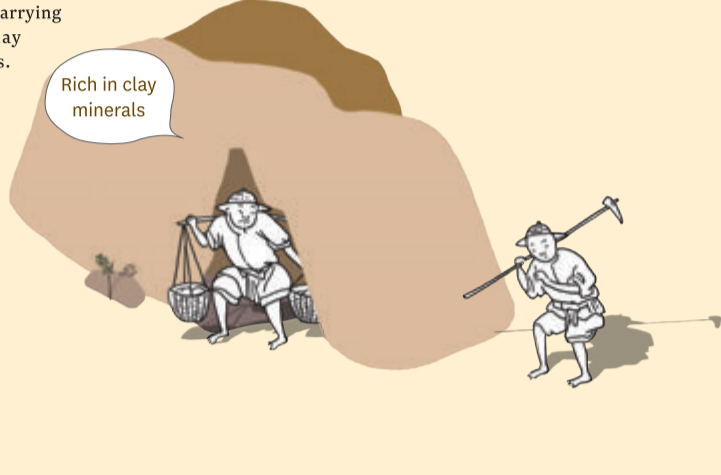
In recent years, after extensive archaeological surveys, the remains of various work processes of the industry from mining to saggar firing were discovered. These remains include the quarrying pits, the watermill workshop, the animal-driven grinders, the clay soaking tanks and dragon kilns. They are all important cultural heritages of Hong Kong.



Then

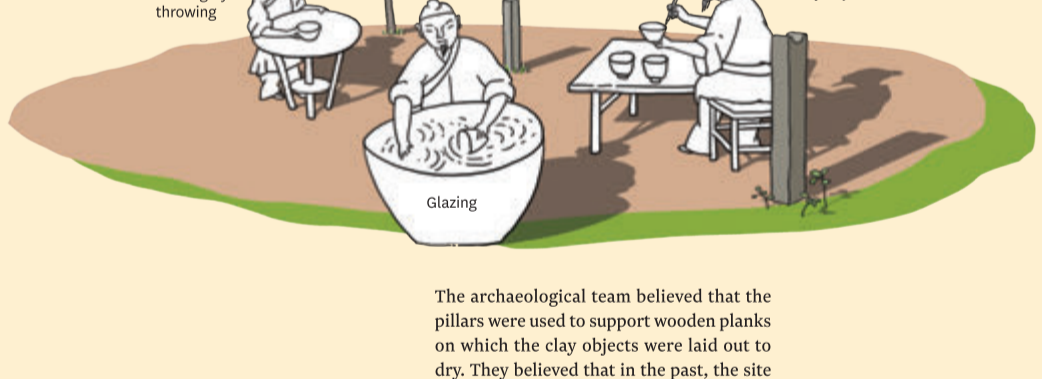
### Quarrying pits

In the hills of Wun Yiu Heung one may still find a number of quarrying pits used for mining clay minerals in the old days. The quarries provide two major ingredients for making porcelain: kaolinite and kaolinite clay.



### Paste-making

Three rectangular stone pillars were discovered on the farmland in Sheung Wun Yiu Village. Each stone pillar had a curved indentation and they were of the same height.



The archaeological team believed that the pillars were used to support wooden planks on which the clay objects were laid out to dry. They believed that in the past, the site might be the location of the paste-making workshop.



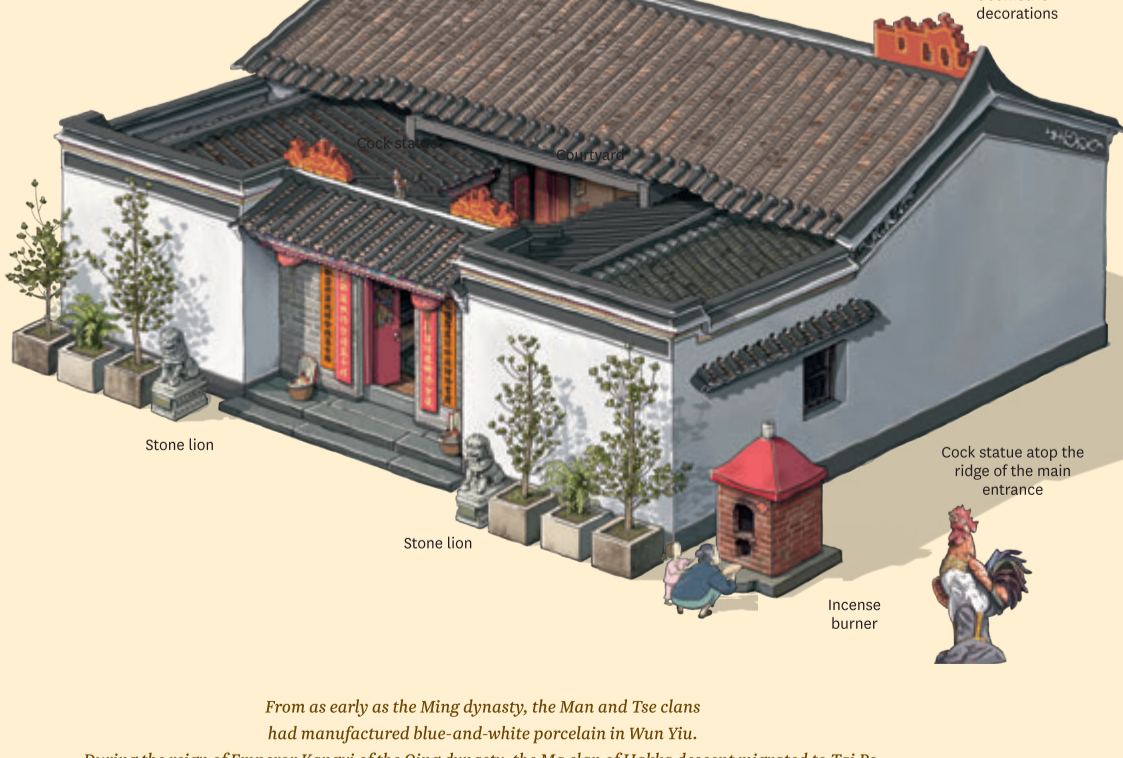
### Kiln-firing

Beside the paste-making workshop were the remains of two kilns. They were both built on slopes. As the shape of the kilns resembled a sprawling dragon, this type of structure is known as "Dragon Kiln". The firing chamber has a stepped design, which allows stacked saggars, firing discs and blocks to lie flat without falling over.

Placing the clay objects directly into the kiln may save space, but the clay objects may stick together. The use of saggars solves the problem and protects the clay objects from direct contact with the fire, and prevents damage by fire or contamination by smoke and soot.



### Fan Sin Temple



From as early as the Ming dynasty, the Man and Tse clans manufactured blue-and-white porcelain in Wun Yiu. During the reign of Emperor Kangxi of the Qing dynasty, the Ma clan of Hakka descent migrated to Tai Po, acquired the kilns from the Man clan and continued to run the business. It is believed that at its peak the kiln site housed multiple manufacturers and had some 300 workers in employment. The annual output was over 400,000 pieces of ceramic ware, and the products were sold as far as Malaysia.



"Manufactured in the 15<sup>th</sup> year of the reign of the Emperor Chongzhen of the Ming dynasty" Fragment of blue-and-white porcelain bowl  
"Year of the Great Qing dynasty" Fragment of blue-and-white porcelain bowl  
Seal of shipment of porcelain bowls Collection of the Ma clan of Sheung Wun Yiu Village



**Wun Yiu Exhibition**  
Opening hours: 9:30am to 1:00pm, 2:00pm to 5:30pm  
Closed on Thursdays, Christmas Day, Boxing Day, New Year's Day and the first 3 days of the Chinese New Year

**Fan Sin Temple**  
Opening hours: 9:00am to 1:00pm, 2:00pm to 5:00pm  
Closed on Tuesdays, Christmas Day, Boxing Day, New Year's Day and the first 3 days of the Chinese New Year

**Transportation**  
Visitors may get a 15-minute ride on Green Minibus (GMB) No. 23K at Tai Po Market MTR Station. A further 3-minute walk will reach Wun Yiu Exhibition and Fan Sin Temple.

Visitors may also walk southwest from Tai Po Market MTR Station, past through Wan Tau Tong Estate, and continue heading south along Tat Wan Road to reach Wun Yiu. It takes approximately 25 minutes by foot.

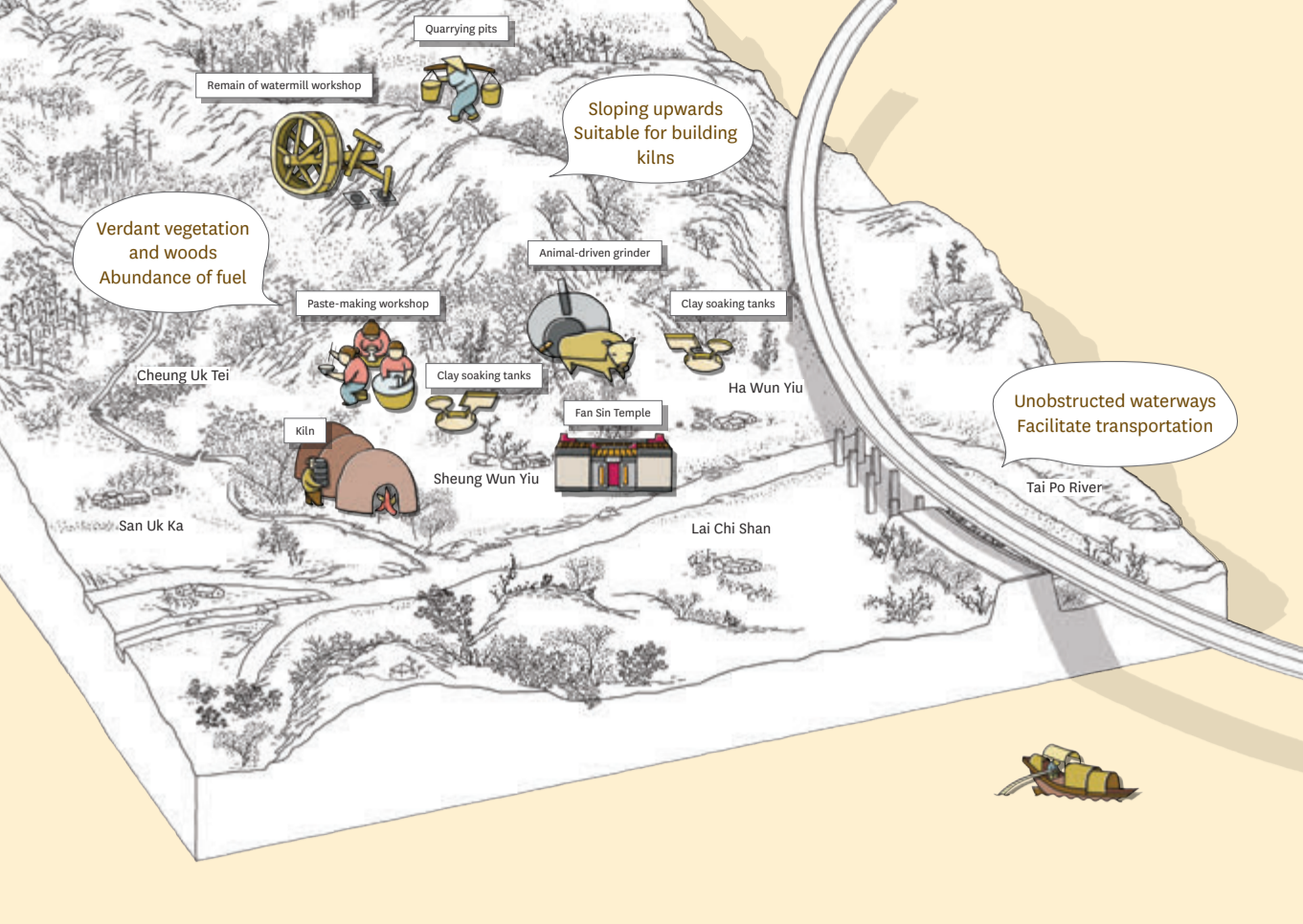
\*Should there be any changes to the traffic information, please refer to announcements by relevant transportation organizations or the Transport Department.

## Tai Po Wun Yiu Kiln Site

According to *Report on the New Territories, 1899–1912*, Wun Yiu Kiln Site produced as many as 400,000 pieces of porcelain ware a year. Over the past two decades, multiple archaeological investigations and excavations have been conducted at the site and numerous features of key production processes were identified; about 13,000 pieces of relics were unearthed.

Today, many pieces of porcelain ware and kiln firing tools are still preserved and showcased at the Wun Yiu Exhibition. The picture shows the manufacturing processes in the past.

Tai Mo Shan in the background  
Rich in clay minerals



The manufacturing processes of porcelain were extracted from *Heavenly Creations* by Song Yingxing of the Ming dynasty, and scroll one of *Illustrations of Pottery Records of Jingdezhen* by Lan Fu and Zheng Tinggui of the Qing dynasty.

Now



Quarrying pits



Remain of watermill workshop



Animal-driven grinder



Clay soaking tanks



Remain of paste-making workshop



Remain of Kiln



Fan Sin Temple is located beside Wun Yiu Public School and was built during the reign of Emperor Qianlong of the Qing dynasty (1736–1795). It has a history of over 200 years.

The Temple enshrines the statue of Fan Sin, the patron deity of potters, which was invited by Ma Choi Yuen of the clan's 16<sup>th</sup> generation from Ma's hometown in Chang county (now Wuhua county) in Guangdong province to Wun Yiu. Legends had it that Fan Sin pioneered the making of bowls from fired clay, and had excelled in a competition against Lu Ban, the master of all crafts. He therefore won the respect of the potters.

The Fan Sin Temple has one hall and one courtyard. The entrance is ornately decorated and the interior décor is highly refined.

Both ends of the roof ridges are decorated with geometric decorations. At the top of the walls are fine murals. The temple still retains the wooden plaque inscribed with the Chinese characters "Fan Sin Temple" carved in the 55<sup>th</sup> year of the reign of Emperor Qianlong (1790) and the stone tablets recorded the multiple renovations, both of which are valuable research materials.

The 16<sup>th</sup> day of the 5<sup>th</sup> Month of each lunar year is the birthday of Fan Sin. Villagers of Wun Yiu Heung celebrated the festival together each year. In the past, they staged god-worshipping operas in front of the temple, and organised god-worshipping parades marching through various villages of Wun Yiu. These festivities are still organised today.



# Blue-and-white Porcelain

also known as porcelain ware in underglazed blue



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Blue-and-white

Porcelain piece

History and culture are not something farfetched. The above picture shows a blue-and-white porcelain bowl unearthed in Hong Kong.

It was originally made in the Wun Yiu Kiln Site at Tai Po.

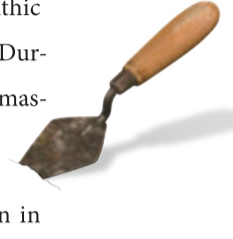
The Wun Yiu Kiln Site was in operation during the Ming and Qing dynasties and the early Republic period. At its height, the kilns produced over 400,000 pieces of porcelain per year, and its products were sold to as far as Malaysia. Today, at the Wun Yiu Exhibition, one can still see these pieces of cultural relics that bore witness to the early cultural and economic developments of Hong Kong.

**Kaolinite**, also named "porcelain stone"

**Kaolinite clay**, also named "porcelain clay"

Both are the main ingredients for making porcelain. They share the same chemical composition of aluminium silicate hydroxide,  $Al_2Si_2O_5(OH)_4$ , which is a clay mineral. Their difference is that kaolinite is a rock material, while kaolinite clay is the silt formed from weathered kaolinite. In as early as the Neolithic period, the Chinese has been making use of kaolinite clay. During the Yuan dynasty, the town of Jingdezhen has already mastered techniques to produce blue-and-white porcelain.

**Kaolinite** was first discovered and put into application in China, thus China is regarded as the country which invented porcelain. For a long time in history, China was the largest manufacturer and exporter of porcelain ware in the world. Through the maritime silk route, porcelain products were exported in bulk to Southeast Asia, North Africa and Europe.



## Porcelain Ware

is made of porcelain stone and porcelain clay, coated with glaze or painted with colour, and fired at high temperature.



Unearthed at Wun Yiu Kiln Site  
Bowl fragment inscribed  
"made in the 15<sup>th</sup> year of Emperor Chongzhen's reign"  
of the Ming dynasty

### Name

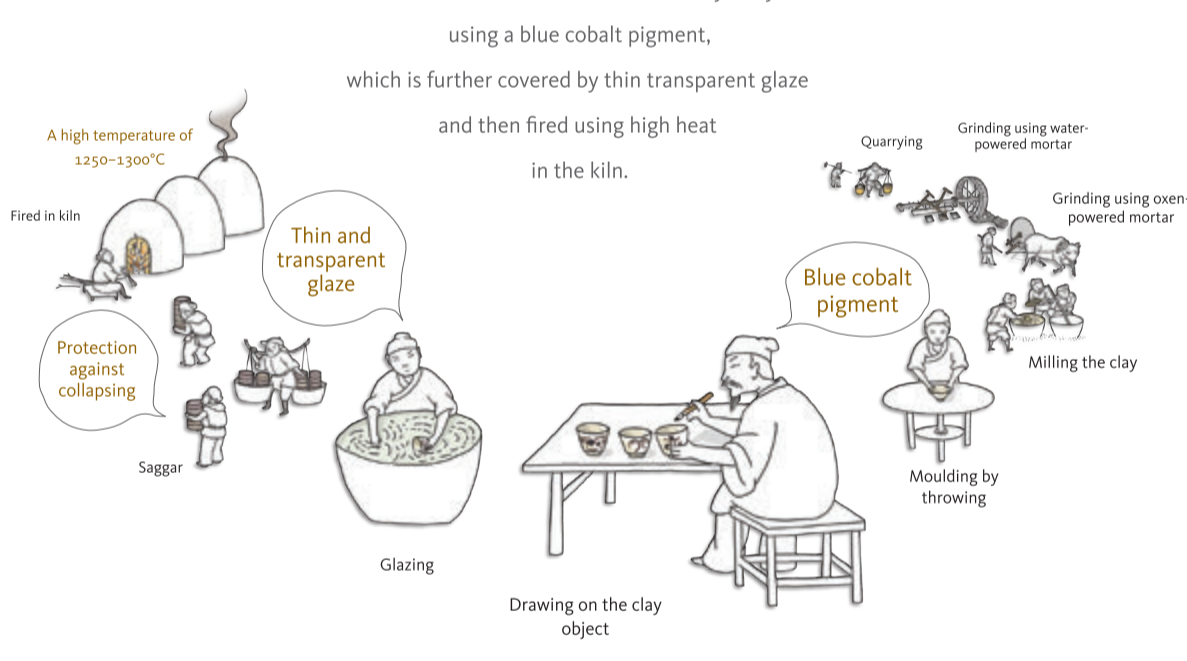
Some say that the English word "China" originated from China-made ceramics. Today, ceramic ware is generally called "porcelain", though fine ceramic is still named "China". From this, one can see the close relationship between porcelain and its country of origin.

### Advantages

Compared to pottery, the body of porcelain ware is lighter and thinner for ease of use and transportation. The transparent glaze on the porcelain ware has anti-acidic properties, which makes cleaning easier and is more hygienic; the transparent glaze also protects the colour underneath from fading and lowers the chance of leeching the poisonous paint into the food. High-grade porcelain is waterproof, vividly coloured, resonant, and wear-resistant. They require highly sophisticated skills to manufacture and are valuable objects for practical use as well as appreciation and collection.

## Blue-and-white

means decorations drawn on the clay body using a blue cobalt pigment, which is further covered by thin transparent glaze and then fired using high heat in the kiln.



and then fired using high heat in the kiln.

Bowl with white background and chrysanthemums decoration

Bowl decorated with chrysanthemums design against blue ground

Decorative pattern with 'child at play' design

Pattern of 'flowers in a precious vase'

Decorative pattern with 'child at play' design

### Blue-and-white

came into existence in the Tang and Song dynasties, with those produced in Jingdezhen most well-known. The chemical component of the blue cobalt pigment was cobalt oxide ( $Co_3O_4$ ), and came into two categories—China-made and imported:



The pigment produced in China was characterized by a mix of blue with a tinge of gray. Imported pigment was called Smaltum, which was characterized by their bright colour.

Before the Ming dynasty, Chinese porcelain was mostly of a single colour without decorations, and the quality was determined by the pureness of the colour. Adornment by colouring or gold dredging gained in popularity in the Ming dynasty.

There are two types of porcelain colouring:

#### Underglaze colouring

Colour is applied directly on the unglazed piece, which is then covered with glaze. The colour is protected under a layer of glaze which offers resistance against wear. Common household porcelain and blue-and-white porcelain of the Yuan dynasty are of this category.

#### Overglaze colouring

The glazed piece is fired and colour is applied after cooling. The coloured one is then placed in a kiln of a relatively lower temperature (around 700–900°C) for a second firing. The process makes the drawing and colour on the porcelain appear richer, but prolonged exposure under daylight or extensive use would cause surface abrasion and colour erosion.

#### Saggars firing

The temperature of the kiln must be precisely controlled. The clay object should be heated to approaching, but not over, its melting point (usually at least 1000°C), otherwise it would become deformed. To achieve the high temperatures required for the production of blue-and-white porcelain, the technician needs to choose the suitable type of kiln and clay to produce high-quality porcelain ware.

There are usually two ways of porcelain firing: one that uses saggars, and one that does not. The saggars protect the clay object against deformation and contamination by the ash. Not using a saggars would allow a larger number of clay objects to be placed in the kiln, which lowers the production cost but increases the risk of production failure.



Saggars

## Decorative designs

Blue cobalt pigments are water-soluble. The painter normally uses a brush to draw patterns on the unglazed clay object, creating an effect similar to Chinese ink-and-wash painting and calligraphy. Combining two-dimensional elements with a three-dimensional form gives the otherwise practical utensil an artistic look.

The blue-and-white porcelain ware unearthed at the Wun Yiu Kiln Site at Tai Po, as a case in point, carry over 120 types of decorative designs. The styles are down-to-earth, thematically diverse, and feature a variety of animals and plants, scenery and landscapes, characters, poems, and words with auspicious meaning and patterns. They are a representation of the wish and pursuit among commoners for longevity, happiness, affluence, filial piety, loyalty and plentiful offspring.



Deer design



Bird-in-flight design



Carp design



Leaf design



Willow tree design



Floral design



Children at play design



Imperial official design



Child at play design



Dragon design



Crane holding a scroll in mouth design



Lions design

The blue-and-white porcelain ware unearthed at Wun Yiu is tied closely to folk life: there are bowls, cups, jars, trays, plates, pots, jars with lid, incense burners, lamps, candle holders, inkslabs, briars, and beads for abacus. Bowls take the majority.

Also unearthed from the Wun Yiu are Kendi, a common type of water container of the Muslims. The utensil was rarely used by the Han Chinese, and was most likely manufactured for export to regions where Islamism was practised, such as Southeast Asia.



Kendi



Cup with chrysanthemum design



Cover with "fortune" character



Jar with entwined flower and grass design



Cover with smudge design



Dish with grass and leaf design



Pipe chamber



Lamp



Pot with entwined flower and grass design



Circular inkslab



Bowl decorated in stripes



Bowl with chrysanthemum design



Bowl with dragon design



Bowl with scenery design



Bowl decorated with Eight trigrams and the yinyang symbol design



Bowl with floral design



Bowl decorated with poem inscription



Bowl with bird-in-flight design



Bowl decorated with chrysanthemum pattern



## Bowls

were in use from as early as the Neolithic period. Bowls take the form of two palms cupped together, and are a vivid representation of how one treasures the contents of the bowl.

All nations use bowls. Chinese bowls have developed the flared rim and ring foot design, which insulates against heat and encourages one to pick up the bowl and pass to others.

This type of bowl indicates that the food culture of the Chinese emphasizes not only on "treasuring", but also on "sharing". Chopsticks, a close "relative" of the bowl, are designed with a length to facilitate the passing of food to friends and family at the same table. Such memories of the utensils have been passed down many generations and still influence us today.

## Exhibition gallery



[http://www.amo.gov.hk/en/wun\\_yiu.php](http://www.amo.gov.hk/en/wun_yiu.php)

The Wun Yiu Exhibition at Tai Po was converted from a classroom. Through the exhibition, the public can learn about the important historical value of the Wun Yiu Kiln Site. The exhibition showcases the history and the archaeological findings of the site, as well as the unearthed cultural relics from the Ming and Qing dynasties.



[http://www.amo.gov.hk/en/tdiscovery\\_center.php](http://www.amo.gov.hk/en/tdiscovery_center.php)

The Hong Kong Heritage Discovery Centre is an exhibition centre managed by the Antiquities and Monuments Office. It showcases Hong Kong's cultural heritage including historic buildings and important archaeological discoveries. The exhibits include porcelain ware unearthed at the Wun Yiu Kiln Site.



<http://hk.history.museum>

The Hong Kong Museum of History houses a permanent exhibition, "The Hong Kong Story", which outlines the natural environment, folk culture, archaeological findings and historical development of Hong Kong. The exhibition also showcases unearthed porcelain ware from the Wun Yiu Kiln Site.



<http://www.heritagemuseum.gov.hk>

The Hong Kong Heritage Museum houses a permanent exhibition to illustrate various natural and social changes of the New Territories. Exhibits of the New Territories Heritage Hall include the porcelain ware recovered from previous archaeological investigations conducted at Wun Yiu.