水務署
Water Supplies Department

萬宜水庫
High Island Reservoir

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萬宜水庫位於西貢郊野公園內，是香港儲水量最大的水塘，也是在海中興建而成。水庫的興建工程宏偉，分別於糧船灣洲和西貢半島東部海峽的東西兩端，興建了兩條分別高出平均海平面64米的石壩。工程於1971年開始，1979年完成，儲水容量達2.81億立方米，水庫總面積為6.67平方公里。

High Island Reservoir, located in Sai Kung Country Park, has the largest reservoir capacity in Hong Kong and was built in the sea. The construction works of the reservoir was magnificent, which entailed the building of two rock dams with rising 64 metres above mean sea level at the eastern and western approaches of the strait running between High Island and the eastern Sai Kung Peninsula. The construction commenced in 1971 and was completed in 1979. The reservoir has a storage capacity of 281 million cubic metres with surface area of 6.67 square kilometers

1 萬宜水庫建造記念碑
High Island Reservoir Monument

建造萬宜水庫的工程浩大，估計共有13,000位工人參與。在建造的過程中有五位工程人員殉職，包括一名意大利工程師、一名法國工程師和三名中國工人。為悼念犧牲的工程人員，東壩建造了一塊巨型藍色錨形防波石，上面鐫有一塊刻了他們名字的記念碑，以紀念他們對萬宜水庫的貢獻。這亦是香港唯一一個水塘設有紀念碑悼念犧牲的工程人員。

Construction of High Island Reservoir is a tremendous project. It was estimated that there were 13,000 construction workers involved in building High Island Reservoir. During the construction stage, five engineering staff perished in the line of duty, including an Italian engineer, a French engineer and three Chinese construction workers. In memory of those engineering staff, a blue anchor-shaped monument on which their names were engraved, was built at the East Dam to commemorate their contribution to High Island Reservoir project. High Island Reservoir is also the only reservoir in Hong Kong with the monument in memory of those engineering staff lost their lives in the project.

2 萬宜水庫的由來
Origin of High Island reservoir

隨著1950年代社會開始急速發展，用水的需求越見增加，有見及此，政府便於60年代興建船灣淡水湖，但仍不足以應付不斷增長的食水需求。1963至1964年，香港發生嚴重水荒，曾經需要每四天供水一次。為了解決水資源不足的問題，當局在1969年開始構思興建另一個與船灣淡水湖類近的大型水塘，水塘最終選址西貢半島東部與糧船灣洲的狹窄海道之中，故曾被稱為糧船灣淡水湖，但為免中文名稱與船灣淡水湖混淆，及後改名為萬宜水庫，而英文名稱則維持以糧船灣的英文（High Island）命名。在建造萬宜水庫的過程中，不少村落被淹沒，政府花了近8年時間將村民安置在現時西貢市中心一帶，並重建學校、祠堂和住所作補償。

As the society began to develop rapidly in the 1950s, the demand for water became increasingly high. In view of this, the government built Plover Cove Reservoir, but it was still insufficient to meet the growing demand of fresh water. A severe water shortage occurred between 1963 and 1964, during which water was only supplied every 4 days. To cope with insufficient water resources, the administration began in 1969 to conceive the construction of another large-scale reservoir similar to Plover Cove Reservoir. The reservoir was eventually located in the narrow waterway of the eastern Sai Kung Peninsula and Leung Shuen Wan Island. To avoid confusion between the Chinese name of the new reservoir and that in Plover Cove, the reservoir was named "High Island Reservoir". During construction, many villages were submerged. It took the government almost 8 years to resettle the villagers in the current downtown area of Sai Kung and rebuild schools, ancestral halls as well as residences as compensation.

3 萬宜水庫附近的地質 (一)
Surrounding Geology of the High Island Reservoir (I)

1.4億年前，萬宜水庫的所在地經歷了一場激烈的火山爆發，火山碎屑物質經過長時間沉澱形成岩石，形成平均直徑約1.2米至3米的六角岩柱群。香港的六角岩柱較其他國家淺色，是富含矽質的流紋質火山岩。

About 140 million years ago, there was an intense volcanic eruption in the area of High Island Reservoir. After a long period of time, the pyroclastics precipitated into rocks, and formulated the group of hexagonal rock columns with diameter of about 1.2 to 3 meters. When compared with other countries' rock columns, Hong Kong's hexagonal rock columns are lighter in colour as they are silica-riched volcanic rocks.

在過往的地殼運動中，巨大的能量被釋放，令岩層出現裂隙。當兩邊岩層有不同程度的推動和提升時，裂隙內的岩石被研磨成碎礫，並一直延伸，形成斷層角礫帶。

Huge energy was released in earth crustal movement in the past, creating fissures in rocks. As the stratum was uplifted to varying extents, the rocks inside the fissures were crushed into fragments. The extension of fragments formed the fault breccia belt.

4 萬宜水庫附近的地質 (二)
Surrounding Geology of the High Island Reservoir (I)

初形成的六角形岩柱仍在破火山口內緩慢冷卻，未完全固結，在受到地震和區域下沉影響下，岩柱扭曲變形成S形。岩柱彎曲的地方就是最脆弱的部分，在地質作用下，該處會形成一條從斜行斷開的裂縫，地下岩漿沿裂縫侵入，在冷卻後形成深灰色的侵入岩牆。

The newly formed hexagonal rock columns were slowly cooled down in the caldera and were not completely consolidated. Under the influence of earthquakes and regional subsidence, the rock columns were distorted into an S-shape. The distorted area of the rock columns was the most vulnerable part. During geological process, there was a diagonal weak line in the rock columns. Magma intruded along the weak line of the columns and cooled to form a dark grey intrusive dyke.

5 萬宜水庫東西壩
High Island Reservoir East and West Dam

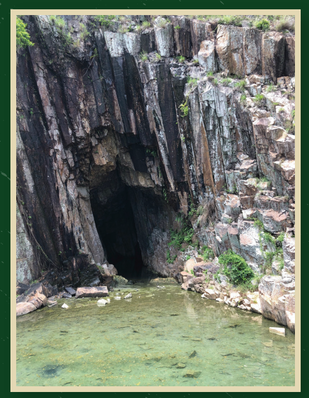
萬宜水庫共有東、西兩條主壩，東壩面向太平洋，西壩面向牛尾海，另外有三條副壩作緩衝。東壩長485米，高106米，建有以巨大混凝土製成的防波堤，以抵擋海浪。西壩長753米，高101米，由於位處內海灣中，海浪衝蝕較東壩少，故沒有混凝土防波堤。在建造東壩的時候，曾在海床發掘了不少明朝陶瓷，古代船隻組件和波斯製造的玻璃珠。

There are two main dams in High Island Reservoir, of which the East Dam faces Pacific Ocean and the West Dam faces Port Shelter, and three other cofferdams for buffering. The East Dam of High Island Reservoir is about 485 meters long and 106 meters high with enormous concrete breakwaters for protection against the pounding ocean waves. The West Dam is about 753 meters long and 101 meters high. There is no concrete breakwater at the West Dam as it is located in the inner bay and erosion by wave actions are lesser than that of the East Dam. During the construction of the East Dam, quite a number of ceramics in the Ming Dynasty, ancient ship components and glass beads made in Persia were excavated from the seabed

6 官門海峽和海蝕洞
Kwun Mun Channel and Sea Caves

萬宜水庫的前身是官門海峽，是香港大型斷裂帶之一。未建水庫之前，這裡是一個狹窄水道，水退之時，可以涉足而過。當岩層斷裂帶上碎裂的岩石受長期風化和侵蝕後，逐漸形成河谷，及後便變成海峽。此外，岩層斷裂帶在不斷受到海浪侵蝕時，會擴大成天然的洞穴，形成海蝕洞。

High Island Reservoir was originally the Kwun Mun Channel, one of the major fault zones in Hong Kong. Before the reservoir was built, the channel was a narrow waterway. When the water receded, people could walk through it. The fractured rocks in the fault zone of the rock layer had been weathered and eroded for a long time, which gradually formed a valley and eventually became a channel. In addition, when the fault zone was continuously eroded by the waves, it would expand to form natural caves and thus sea caves.



7 防波堤
Breakwater

東壩防波堤以約7,000個巨大錨形混凝土預制組件（弱波石）組成，主要設計是以堤壩建築形式穩固抵禦海岸的地基，防止被潮水沖蝕。錨形外觀令它們相繫扣得更穩妥，每個重25噸，面向外海，幾十年來晝夜承受海浪沖擊，依然堅不可摧。除此以外，弱波堤上佈滿小孔，用以減慢水流速度，以減低海浪對堤壩的傷害。

The cofferdam in High Island Reservoir East Dam is composed of approximately 7,000 anchor-shaped concrete prefabricated components (dolosse). The main design of the cofferdam is to stabilize the foundation of the coast in the form of dam construction to prevent erosion by the tides. The anchor-shape allows them to interlock with each other. The weight of each dolosse is 25 tonnes. Facing the outer sea, the dolosse have been exposed to sea waves for more than decades and they are still indestructible. In addition, the embankment is covered with numerous small holes to slow down the speed of water flow and reduce the damage caused to the dam by sea waves.

水務署
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萬宜水庫

往北潭涌
To Pak Tam Chung

西貢萬宜路 Sai Kung Man Yee Road

1

2

萬宜水庫
High Island Reservoir

香港聯合國教科文組織世界地質公園

6

東壩
East Dam

5

4

3

7

綠色小巴9A
green mini bus 9A

1 – 7 請參閱背頁簡介
Please see information at the back

萬宜水庫東壩交通資訊

Transportation Information of East Dam of High Island Reservoir

專線小巴 Green Minibus

9A 北潭涌至萬宜水庫東壩
Pak Tam Chung ～ East Dam of High Island Reservoir

(逢星期日及公眾假期服務，小巴服務會因應天氣情況而調整)
(Sundays and Public Holidays only. Services will be adjusted due to weather conditions)

的士 Taxi

可於西貢市中心或北潭涌乘坐計程車前往，即可到達位於萬宜水庫東壩的地質步道
Take a taxi from Sai Kung Town Centre or Pak Tam Chung to the geo-trail at the East Dam of High Island Reservoir