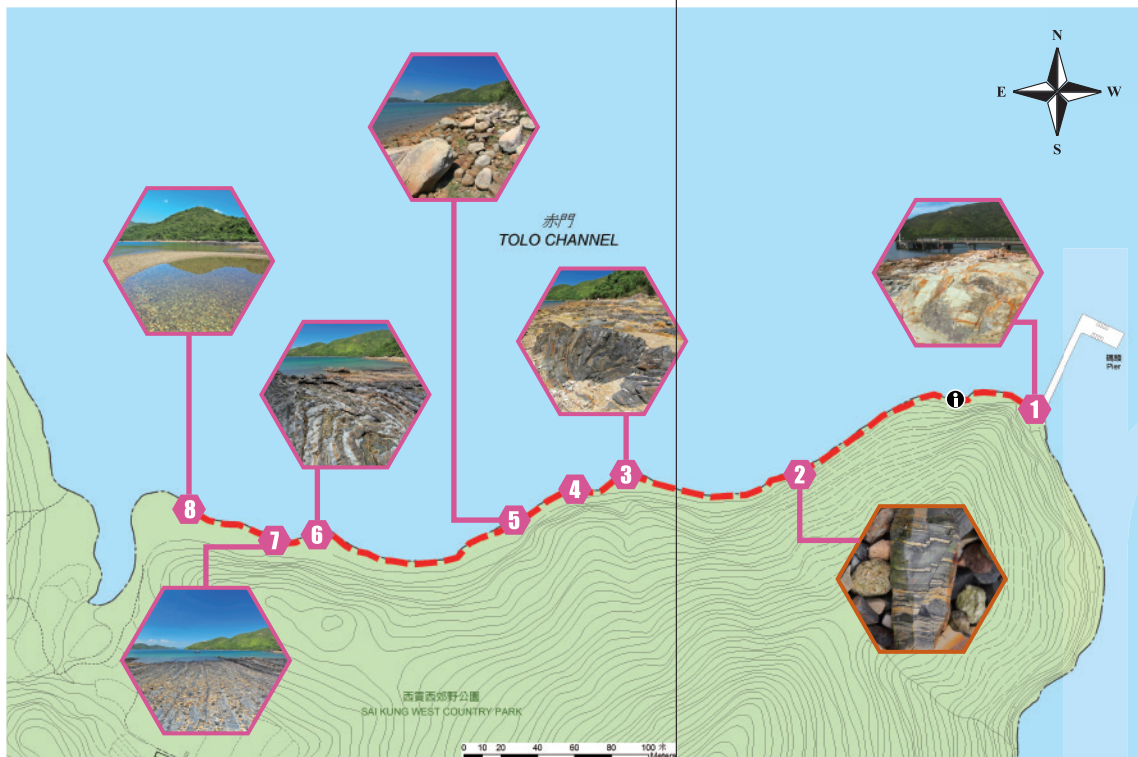


荔枝莊地質景點

Lai Chi Chong Geosite

荔枝莊地質遊覽路線

Lai Chi Chong Geotour Route



- 圖例 Legend**
- 西貢西郊野公園 Sai Kung West Country Park
 - - - 荔枝莊地質遊覽路線 Lai Chi Chong Geotour Route
 - 1 觀察點 Observation Point
 - i 資訊牌 Information Board



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漁農自然護理署
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 COUNTRY AND MARINE PARKS AUTHORITY
 A.F.C.D.



起點 Start ■ 1 公里 km ■ 1 小時 hour
 來回 Round Trip

- | | |
|--|---|
| 1 沉凝灰岩
Tuffite | 5 孤石原
Boulder field |
| 2 小型斷層
Mini-faults | 6 褶曲
Fold |
| 3 旋卷層裡
Convolute bedding | 7 韻律層裡
Rhythmic bedding |
| 4 石英脈
Quartz vein | 8 石灘
Pebble beach |



荔枝莊地質遊覽路線位於荔枝莊北岸，是一條天然海岸線，長約500米，途經岩石露頭、沙灘、石灘、大型褶曲等地質景觀，遊覽時須小心濕滑鬆軟的地面。

Located on the northern shore of Lai Chi Chong, the geotour route traces the natural coastline. About 500 metres in total length, it offers geo-attractions like outcrops, sandy beach, pebble beach and large folds. Visitors are reminded to walk carefully on the soft wet ground.

沉凝灰岩露頭 Tuffite Outcrops

明顯可見大小不一的岩屑，當中夾雜一些磨圓度較高的沙石，局部展現較清晰的層理。此處的岩石很可能是被雨水沖刷到窪地的火山噴發物，繼而在水底沉積而成。

Shards are distinctly different in grain size. The rock contains some rounded sand and gravel. Clear bedding is visible in some parts. Rock here might have been formed by eruptive products brought down to the lowland by rain, and deposited under water to form rock.



角度不整合 Angular Unconformity

水底半固結的沉積物在地震中滑塌，破壞原本層層疊疊的水平結構，兩組岩層相交，構成夾角。

Semi-solidified sediments under water slumped during an earthquake, upsetting the original horizontal structure of stacking layers. When two sets of sediment layers intersected, an angle was formed.



石英脈 Quartz Vein

岩石形成後受到擠壓而破碎，富含二氧化矽的地下水侵入岩石的裂縫中，結晶成石英脈。由於石英的抗蝕力較高，因此凸出岩石表面，形成網絡狀的紋理。



Rock was fractured by compression. Subterranean water rich in silicon dioxide intruded the cracks in the rock. Subsequently, silicon dioxide turned into quartz veins. Given its robust resistance to erosion, it cropped out on the ground in a web pattern.

大型褶曲 Large Fold

這組大型褶曲位於遊覽路徑後段，位於黑色的碳質泥岩層中，很可能是因為湖底的沉積物在動蕩環境下滑塌造成，是香港景觀最好、最有代表性，並能近距離觀賞的大型褶曲。

A large fold can be found among the dark carbonaceous mudstone near the end of the trail. It was possibly created by lakebed sediments that slumped in a quake. It is the best and most iconic formation of large folds in Hong Kong that can be observed at close range.



荔枝莊 地質遊覽路線 Lai Chi Chong Geotour Route



United Nations
 Educational, Scientific and
 Cultural Organization

Hong Kong
 UNESCO
 Global Geopark

HONG KONG
 GEOPARK
 香港地質公園



荔枝莊地質概況 Geological Overview of Lai Chi Chong

荔枝莊位於香港新界東北赤門海峽南岸，屬西貢西郊野公園範圍，這裏擁有多樣化的地質遺跡，沿岸更出露了香港罕有的岩石類型——火山沉積岩，是進行野外考察及郊遊的理想地點。

Lai Chi Chong is situated on the south coast of Tolo Channel in Northeastern New Territories of Hong Kong. It lies within the boundaries of Sai Kung West Country Park. Here, you will find an extensive range of geological relics as well as volcanic sedimentary rocks rarely seen in Hong Kong. It is an ideal destination for field studies and leisure.

如何前往 How to get there



馬料水 Ma Liu Shui	深涌 Sham Chung	荔枝莊 Lai Chi Chong	塔門 Tap Mun	高流灣 Ko Lau Wan	赤徑 Chek Keng	黃石 Wong Shek
8:30 a.m.	9:00 a.m.	9:15 a.m.	10:00 a.m.	10:05 a.m.	10:20 a.m.	10:35 a.m.
12:25 p.m.	11:55 a.m.	11:40 a.m.	11:10 a.m.	11:00 a.m.	10:45 a.m.	
3:00 p.m.	3:30 p.m.	3:45 p.m.	4:20 p.m.	4:25 p.m.	4:40 p.m.	4:55 p.m.
6:45 p.m.	6:15 p.m.	6:00 p.m.	5:30 p.m.	5:20 p.m.	5:05 p.m.	
星期六、日及公眾假期增加班次 Additional Sailing on Saturday, Sunday and Public Holidays						
12:30 p.m.	1:00 p.m.	1:15 p.m.	1:45 p.m.			
3:00 p.m.	2:30 p.m.	2:15 p.m.				

查詢：翠華旅遊有限公司 2527 2513 或 2272 2022
Inquiry: Traway Travel Limited 2527 2513 或 2272 2022

在恐龍繁盛的時代，約1億4600萬年前，位於現今大嶼山的火山發生猛烈噴發，火山碎屑和火山灰飄落到這裏，堆積在地表，最終冷凝固結成凝灰岩。有部分火山灰混雜沙泥等物質，在湖底沉積，固結成同時具有火山岩和沉積岩特點的火山沉積岩。

About 146 million years ago when dinosaurs roamed the earth, violent volcanic eruptions shook the region where Lantau Island lies today. Tephra and volcanic ash fell onto the ground and accumulated there, eventually turning into tuff through consolidation. Some volcanic ash mixed with silt and other matters were deposited on the lakebed and consolidated into volcanic sedimentary rock that has combined features of volcanic rock and sedimentary rock.

地質年代：晚侏羅紀（約1億4600萬年前）
Geological Age: Late Jurassic (About 146 Ma)



荔枝莊的岩石 Rocks of Lai Chi Chong

	岩石類型 Rock Type	凝灰岩 Tuff
	定義 Definition	含>75%火山灰 Contains >75% volcanic ash
	主要成份 Component	火山灰：小於2毫米的岩石碎屑、礦物晶體或岩漿碎屑。 Volcanic ash: rock or mineral fragments which grain size smaller than 2mm.

特徵
Feature 包含岩石碎屑或破碎的礦物晶體；岩石結構緻密、堅固。
Contains fragmented rock or minerals. Rock texture is tight and tough.

	岩石類型 Rock Type	沉凝灰岩 Tuffite
	定義 Definition	含25%-75%火山灰 Contains 25%-75% volcanic ash
	主要成份 Component	火山灰為主，含少量沙泥 Mainly volcanic ash, contains a small amount of mud and silt.

特徵
Feature 包含岩石碎屑或破碎的礦物晶體，或有清晰的層理，一般情況下結構比凝灰岩鬆散。
Contains fragmented rock or minerals. Clear bedding may be visible. Generally looser in texture than tuff.

	岩石類型 Rock Type	粉砂岩 Siltstone
	定義 Definition 及 主要成份 Component	主要含石英、長石和雲母等礦物的細小顆粒。 Mainly composed of small mineral grains like quartz, feldspar and mica.

特徵
Feature 觸摸時能感受到礦物顆粒，但肉眼不能分辨，一般具有薄層理。
Mineral grains detectable by touch but not visible to the eye.

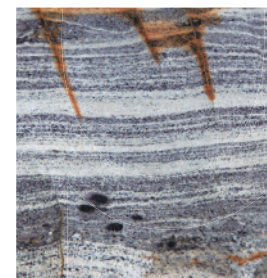
	岩石類型 Rock Type	泥岩 Mudstone
	定義 Definition 及 主要成份 Component	主要含極細的黏土礦物。 Mainly composed of extremely fine clay minerals.

特徵
Feature 觸感幼滑
Fine and smooth to the touch.

地質構造 Geological structures

除了岩石類型罕有之外，荔枝莊的岩層還展示了許多獨特的沉積構造，這與荔枝莊當時的環境有莫大關係。火山噴發時期經常發生地震，不同的震動幅度與頻率會在一定程度上擾動周邊地區水底的沉積物。這些沉積物或會因而滑塌，形成褶皺，又或被壓實；近乎固結的岩層發生斷裂，形成大小不一的斷層。這些罕見的地質構造都在荔枝莊的岩層中完好地保留下來。

Apart from rare rock types, strata in Lai Chi Chong also showcases unique sedimentary structure occasioned by the region's ancient geological setting. Earthquakes were common in volcanic eruption times. Seismic force of varied magnitudes and frequencies disturbed underwater sediments in different ways. Sediments might collapse as a result and formed folds, or get compacted. When near-solidified rock was fractured, faults of different sizes occurred. In Lai Chi Chong, all these rare geological structures have been perfectly preserved.



韻律層理 Rhythmic bedding

岩層的物質、結構或顏色規律地重複，反映沉積過程的環境條件，例如旱季與雨季和冷暖氣候交替出現，火山噴發及息止。

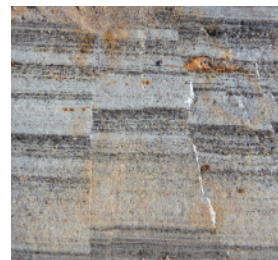
Orderly repetition of composition, structure or colour in rock reflects the sedimentary setting, e.g. alternating dry season and rainy season; cold and warm weather; volcanic eruption and calm period.



粒漸層理 Graded bedding

火山噴發物中較大的岩屑首先降落在海底，繼而是較細的灰，堆積成顆粒下粗上細的沉積層。

Larger shards in eruptive products fell into the water first, followed by finer ash. They accumulated to form a sedimentary layer that is coarse-grained at the bottom and fine-grained at the top.



斷層/微斷層 Fault / Microfault

被壓實或近乎固結的沉積物無法承受外力擠壓或劇烈震盪，發生斷裂。

Compacted or near-solidified sediments gave way to exogenetic compression or strong vibration. A fault occurred.



負載構造 Load structure

沉積物在頻繁的震盪中液態化，其中顆粒較粗及密度較大的下沉至下面較鬆軟的一層。

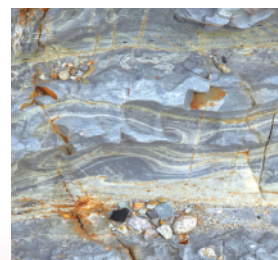
Frequent quakes caused sediments to liquify. Coarse and dense grains sink to the loose deposit layer below.



褶曲 Fold

沉積物或岩層受到較緩和的擠壓，導致岩層扭曲變形。

Sediments or rock was contorted and deformed by less forceful compression.



旋卷層理 Convolute bedding

褶曲現象只發生在單一岩層，上下的岩層維持水平的狀態。

The folding occurred at particular sedimentary layer, and the horizontal unfolded beds above and below.