

GOMBAK SELANGOR QUARTZ RIDGE

Country : Malaysia

Date of Submission: 23/02/2017

Criteria: (vii)

Category: Natural

State, Province or Region: Gombak, Selangor

Description

In the early 20th century the quartz ridge was called the Klang Gates Ridge. This informal geographical name remained until the 1980s when the quartz ridge was then better known as the Klang Gates Quartz Ridge or Permatang Kuarza Genting Kelang. On 24 June 2015 the Klang Gates Quartz Ridge was formally named the Gombak Selangor Quartz Ridge or Permatang Kuarza Gombak Selangor (PKGS) by the Selangor State Government.

The nominated site is built entirely of quartz, a natural mineral with chemical composition of silicon dioxide (SiO_2), formed when residual magma crystallized and consolidated within vertical slab of dyke as the magma forced themselves through large linear fissures within massive granitic rock known as Kuala Lumpur Granite about 200 million years ago.

The most spectacular part of the quartz ridge is its protruding mid-section, which encompasses Taman Melawati, National Zoo (Zoo Negara) in the Ampang Jaya area and part of Selayang Municipal Area. From a distance, this section is said to resemble the *guling ayam* (cocks combs) or more dramatically, the spine of a dragon.

Pseudo-karst morphology comprising at least four shapes; the dome, table, ramp and tower may be observed on the Gombak Selangor Quartz Ridge.

Justification of Outstanding Universal Value

The Gombak Selangor Quartz Ridge is unique not only due to its size, but also the outstanding beauty of its landscape, which comprises elongated craggy rocks in the midst of a green tropical forest. Three combined characteristics make the Gombak Selangor Quartz Ridge a truly unique natural treasure: its size, the fact that it is fully exposed and its pseudo-karst morphology. It is a gigantic vertical rock slab built entirely of quartz mineral in various forms, extended for up to 14 km long and 200 meters wide and it is believed to be the longest pure quartz dyke in the world.

The information of a giant-size quartz vein that is more than 10 kilometers long is rare, and for it to transform into a magnificent landscape like the Gombak Selangor Quartz Ridge is extraordinary. Its dramatic mid-section is particularly breath-taking – an elongated and vertical craggy rock landscape that rises out of the green tropical forest, deserving indeed of its comparison to the spine of a dragon.

Criterion (vii): Gombak Selangor Quartz Ridge not only demonstrates a stunningly beautiful landscape, but also records the incredible history that has lasted for over 200 million years. Geological aspects related to the quartz ridge can be divided into several episodes starting with the process of sedimentation for the Early Paleozoic clastic and carbonate sedimentary rocks followed by the Late Palaeozoic continental collision and Late Triassic's regional granite emplacement (the Main Range Granite which also includes Kuala Lumpur Granite). These collision and emplacement have transformed the original sedimentary rocks into metamorphic rocks of schist and quartzite (Gobbett 1964, 1973). The granite emplacement is followed by the Early Jurassic intrusion of quartz in forms of dykes including the Gombak Selangor Quartz Dyke. Afterward, a long process of natural weathering and erosion took place on metamorphic and granitic rocks to expose and craft the highly resistant quartz dyke into a geological monument that is so beautiful which can be viewed today.

Statements of authenticity and/or integrity

The nominated site is a natural site which is under the State Government of Selangor and the Federal Territory of Kuala Lumpur. The Property area has never been touched or penetrated by any development except for small agricultural farms nearby which do not harm any formation of quartz. In addition, it is now under process to be gazetted under the National Heritage Act 2005 (Act 645).

To date, the Gombak Selangor Quartz Ridge stood still mainly due to the relatively low demand on industrial quartz mineral in the country and the high cost for quartz hard rock quarrying operation. The recent increasing demand on silica for glass making industries can still be met with the much cheaper silica sand mining operations capitalizing on the vast waste land of the country's ex-tin mines and those clogging the main river systems.

Additionally, the fact that the quartz ridge produced a sterile harsh land had slowed down the encroachment from Kuala Lumpur City expansion. All these discouraging factors have resulted on going State Government plan to further enhance the conservation and protection. As no such activities and development, it helps in protecting the Gombak Selangor Quartz Ridge from activities that would disturb its authenticity and integrity until today.

Comparison with other similar properties

There are many quartz ridges in Peninsular Malaysia with widths of more than 10 meters and lengths of more than 1 kilometer. One of the examples is the Tekali Quartz Ridge (8 km) located in the Hulu Langat, Selangor area. This ridge exposed only in short patches and does not exhibits pseudo-karst morphology.

Outside Malaysia for instance, India has gigantic quartz veins measuring more than 100 kilometers in length. However, it lacks aesthetic value as it does not rise much above the surface, and much of it extension had been damaged due to the extensive land use in this poor barren region.