



**BY EMAIL ONLY**

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2 September, 2019

Dear Sir/Madam,

**Pilot Study on**  
**Underground Space Development in Selected Strategic Urban Areas-**  
**Stage 2 Public Engagement**

1. I would like to supplement Green Power's comment about the above captioned public engagement which was submitted on-line through the official website on 21 August, 2019.
2. Green Power has conducted a survey to reveal the temperature modification function under urban heat island effect in Kowloon Peninsula, and collected a tree list by site visit in Kowloon Park(KP). We opine that any developments in KP should not jeopardize its irreplaceable function to relieve urban heat island effect and the preservation of tree population and diversity.

**Urban heat island effect**

3. Green Power continually monitored the urban heat island effect in Hong Kong for nine years (2002 to 2011). Temperature profiles were obtained for various districts, including urban areas in the Kowloon peninsula. The temperature distribution was expressed as Average Temperature Profile (ATP) on a certain line lying across an area. Figure 1 shows the ATP plotted for Kowloon Peninsula (from CLP Centenary Substation(P6) to Hung Hom Ferry Pier(K7), and for traversing KP(from China Hong Kong City(G5) to Tsimshatsui Promenade(G17)).
4. The ATPs demonstrates the situation of heat island effect occurring in the urban area of Kowloon Peninsula. The temperature difference between the centre and the edges of the Kowloon Peninsula heat islands was about 5.5 °C which were surveyed on 15 Jul 2002. The situation in summer and winter was alike.

## The cooling effect of urban greening

- To learn about the effect of vegetation on the heat island, KP were included in the measurements on the Kowloon Peninsula. Results on a summer day in 2004 showed that the temperature at the innermost area differed from that at the outermost area of the KP by 3°C; on a winter day, the difference measured was 2°C. This indicated that the park is clearly a cooler zone, having a profound impact to moderate the adverse heat impact of urban heat island.

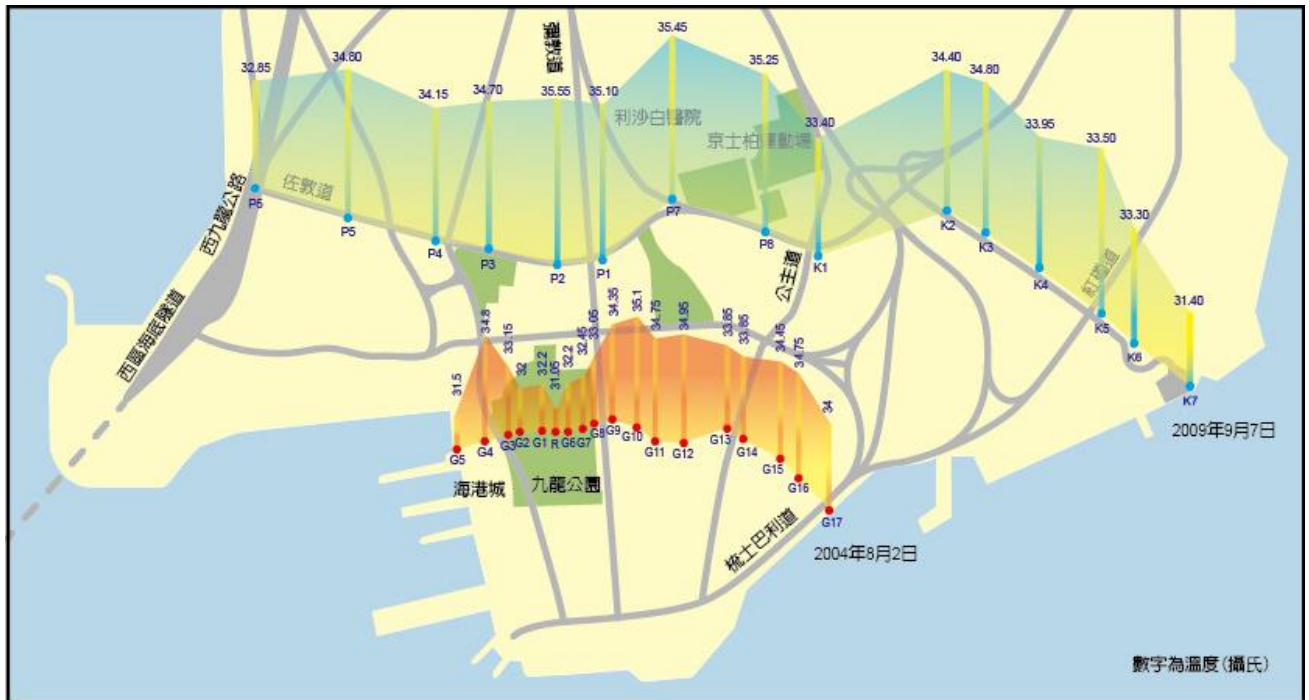


Figure 1. ATP for Kowloon Peninsula with dates annotated. (The figure is temperature in °C)

### **Tree preservation**

- Trees, especially large aggregates of mature trees like those established in KP, provide a variety of ecosystem services to the community, including balancing oxygen/carbon dioxide in air, absorption of toxic air pollutants such as NO<sub>x</sub> and suspended particulate, lowering the traffic noise, moderating the urban microclimate in terms of air temperature and humidity, etc. These ecosystem services support the well beings of the citizens and community through improving living and health quality, and provision of aesthetic, leisure, recreation and sport enjoyment, that contribute to sense of belonging.
- In a tree survey conducted by Green Power in 2003, at least 1120 trees belonging to 114 species were identified (refer to Table 1). Amongst them include Old and Valueable Trees (e.g. several Chinese Banyan trees) and species of conservation values, e.g. Scaly Tree-fern (*Sphaeropteris lepifera*).
- We are gravely concerned that about 300 trees, i.e. about 27% of the total number, in KP would be affected, which could irreversibly bring about environmental impacts, including worsen the air quality, weaken the noise barrier function, damaging the ecology and habitats in KP.

9. According to the consultation Digest of the above-captioned study, large areas of mature trees are proposed to be removed without proper replanting of trees, i.e. Colour Garden and playground to the south of Sports Centre.
10. Also, the depth of Upper Ground level of proposed underground development is only 8 metres below the Park level. Therefore, only 3 metres or fewer depth of soil will be remained which will permanently damage and restrict the growth of tree roots, and obstruct the availability of ground water to trees.
11. We urge the Administration to preserve the trees in KP as an invaluable public asset for their environmental, microclimate moderation, ecological (especially birds and trees), aesthetic, recreational, educational and cultural functions. And such public asset should not be sacrificed for 85% of non-community purposes in the proposed development.

Thank you very much for your kind attention.

For any enquiries, please contact the undersigned at Green Power (T: 3961 0200. F: 2314 2661, email: [lkcheng@greenpower.org.hk](mailto:lkcheng@greenpower.org.hk))

Yours faithfully,



CHENG Luk-ki  
Director

**Table 1. Tree species recorded in Kowloon Park in 2003 (Source: Green Power)**

中文名稱	English Common Name	學名 Scientific Name
人心果	Sapodilla	<i>Manilkara zapota</i>
九里香	Organe-jessamine, Orange Jasmine	<i>Murraya paniculata</i>
三角葵	Triangle Palm	<i>Neodypsis decaryi</i>
土沉香／牙香樹／白木香	Incense Tree	<i>Aquilaria sinensis</i>
土蜜樹／逼迫仔	Pop-gun Seed	<i>Bridelia tomentosa</i>
大葉合歡	Lebbeck Tree	<i>Albizia lebbeck</i>
大葉桉	Swamp Mahogany	<i>Eucalyptus robusta</i>
大葉相思／馬占相思	Big-leaved Acacia	<i>Acacia mangium</i>
大花紫薇／洋紫薇	Queen Crape Myrtle	<i>Lagerstroemia speciosa</i>
大葉榕	Big-leaved Fig	<i>Ficus virens var. sub lanceolata</i>
山指甲	Chinese Privet	<i>Ligustrum sinense</i>
木油桐／千年桐	Wood-oil Tree	<i>Vernicia montana</i>
木棉	Tree Cotton, Red Kapok Tree	<i>Bombax ceiba</i>
木麻黃／牛尾松	Horsetail Tree	<i>Casuarina equisetifolia</i>
水黃皮	Wild Bean, Pongamia	<i>Pongamia pinnata</i>
水石榕	Hainan Elaeocarpus	<i>Elaeocarpus hainanensis</i>
火焰樹	African Tulip Tree	<i>Spathodea campanulata</i>
王棕	Royal Palm	<i>Roystonea regia</i>
大蕉／甘蕉	Common Banana	<i>Musa paradisiaca</i>
台灣相思	Taiwan Acacia	<i>Acacia confusa</i>
白千層	Paper-bark Tree, Cajeput-tree	<i>Melaleuca quinquenervia</i>
白花洋紫荊	White Bauhinia	<i>Bauhinia variegata var. candida</i>
白花泡桐／泡桐	Foxglove Tree	<i>Paulownia fortunei</i>
白蘭	White Jade Orchid Tree, White Champak	<i>Michelia alba</i>
石栗	Candleunt Tree	<i>Aleurites moluccana</i>
印度榕／印度橡樹	India-rubber Tree, Indian Rubber Tree, Caoutchuc	<i>Ficus elastica</i>
朴樹	Chinese Hackberry	<i>Celtis sinensis</i>
竹	Bamboo	
米仔蘭	Mock Lime, Chu-lan Tree	<i>Aglaia odorata</i>
血桐	Elephant's Ear	<i>Macaranga tanarius</i>
串錢柳	Tall Bottle Brush	<i>Callistemon viminalis</i>
佛肚竹	Buddha Bamboo, Buddha's Belly Bamboo	<i>Bambusa ventricosa</i>
含笑	Banana Shrub	<i>Michelia figo</i>
果	Mango	<i>Mangifera indica</i>
金山葵／皇后葵	Queen Palm	<i>Syagrus romanzoffiana</i>
恒春黃槿／繖楊	Portia Tree	<i>Thespesia populnea</i>

刺桐	Coral Tree	<i>Erythrina variegata</i>
青果榕	Common Red-stem Fig	<i>Ficus variegata</i> var. <i>chlorocarpa</i>
花葉刺桐	-	<i>Erythrina indica</i> 'Picta'
垂葉榕	Weeping Fig	<i>Ficus benjamina</i>
垂柳	Weeping Willow	<i>Salix babylonica</i>
柚	Pomelo, Pummelo	<i>Citrus maxima</i>
洋紫荊	Hong Kong Orchid Tree	<i>Bauhinia blakeana</i>
紅千層	Stiff Bottle-brush, Rigid Bottle-brush	<i>Callistemon rigidus</i>
紅花洋蹄甲	Purple Camel's Foot	<i>Bauhinia purpurea</i>
昆士蘭銀樺／紅花銀樺	Scarlet Grevillea, Bank's Grevillea	<i>Grevillea banksii</i>
紅膠木	Brisbane Box	<i>Lophostemon confertus</i>
重陽木	Chinese Bishopwood	<i>Bischofia polycarpa</i>
柑橘	Mandarine, Tangerine	<i>Citrus reticulata</i>
盾柱木／雙翼豆	Yellow Poinciana	<i>Peltophorum pterocarpum</i>
宮粉洋蹄甲	Camel's Foot Tree	<i>Bauhinia variegata</i>
旅人蕉	Traveller's Tree	<i>Ravenala madagascariensis</i>
桑	White Mulberry	<i>Morus alba</i>
海南蒲桃	Jambolan Plum	<i>Syzygium cumini</i>
烏	Chinese Tallow Tree	<i>Sapium sebiferum</i>
酒瓶椰子	Bottle Palm	<i>Hyophorebe lagenicaulis</i>
荷花玉蘭／洋玉蘭	Bull Bay Magnolia, Southern Magnolia	<i>Magnolia grandiflora</i>
陰香	Batavia Cinnamon, Cinnamon Tree	<i>Cinnamomum burmannii</i>
破布葉／布渣葉	Microcos	<i>Microcos paniculata</i>
側柏	Chinese Arborvitae	<i>Thuja orientalis</i>
常綠臭椿／福氏臭椿	Ailanthus, Green Ailanthus	<i>Ailanthus fordii</i>
軟葉刺葵／日本葵	Dwarf Date Palm	<i>Phoenix roebelenii</i>
假檳榔	Alexandra Palm, King Palm	<i>Archontophoenix alexandrae</i>
假蘋婆	Lance-leaved Sterculia, Scarlet Sterculia	<i>Sterculia lanceolata</i>
魚尾葵	Fishtail Palm	<i>Caryota ochlandra</i>
梅	Mume, Flowering Apricot	<i>Prunus mume</i>
異葉南洋杉／南洋杉	Norfolk Island Pine	<i>Araucaria heterophylla</i>
散沫花／指甲花	Henna	<i>Lawsonia inermis</i>
筆筒樹	Scaly Tree-fern	<i>Sphaeropteris lepifera</i>
傘樹	Umbrella Tree	<i>Schefflera actinophylla</i>
散尾葵	Bamboo Palm	<i>Chrysalidocarpus lutescens</i>
菩提樹	Peepul Tree, Bodh Tree	<i>Ficus religiosa</i>
棕竹	Lady Palm	<i>Rhapis excelsa</i>
棕櫚	Windmill Palm	<i>Trachycarpus fortunei</i>
番石榴	Guava	<i>Psidium guajava</i>

紫玉蘭／木蘭／辛夷	Purple Magnolia	<i>Magnolia liliiflora</i>
紫檀	Burmese Rosewood	<i>Pterocarpus indicus</i>
菠蘿蜜	Jackfruit	<i>Artocarpus macrocarpus</i>
象牙花	Ivory Coral Tree	<i>Erythrina speciosa</i>
黃花夾竹桃	Yellow Oleander	<i>Thevetia peruviana</i>
黃金間碧竹	Stripe Bamboo, Green-stripe Common Bamboo	<i>Bambusa vulgaris</i>
黃葛樹	Superb Fig	<i>Ficus superba var. japonica</i>
黃槐決明／黃槐	Sunshine tree	<i>Cassia surattensis</i>
黃槿	Cuban Bast, Sea Hibiscus	<i>Hibiscus tiliaceus</i>
圓柏	Chinese Juniper	<i>Juniperus chinensis</i>
楓香	Sweet Gum, Chinese Sweet Gum	<i>Liquidambar formosana</i>
楝／苦楝／森樹	China-berry, Persian Lilac	<i>Melia azedarach</i>
福木	False Olive	<i>Elaeodendron orientale</i>
蒲桃	Rose Apple	<i>Syzygium jambos</i>
蒲葵	Chinese Fan-palm	<i>Livistona chinensis</i>
榕樹／細葉榕	Chinese Banyan, Small-fruited Fig	<i>Ficus microcarpa</i>
銀樺	Silk Oak	<i>Grevillea robusta</i>
鳳凰木	Flame Tree, Flame of the Forest	<i>Delonix regia</i>
複羽葉欒樹	Golden Rain Tree	<i>Koelreuteria bipinnata</i>
樟	Camphor Tree	<i>Cinnamomum camphora</i>
潺槁樹	Pond Spice	<i>Litsea glutinosa</i>
樹頭菜	Spider Tree	<i>Crateva unilocularis</i>
糖膠樹	Devil Tree	<i>Alstonia scholaris</i>
龍牙花	Coral Tree, Coralbean Tree	<i>Erythrina corallodendron</i>
龍柏	Dragon Juniper	<i>Juniperus chinensis cv. Kaizuca</i>
龍眼	Longan, Lungan	<i>Dimocarpus longan</i>
濕地松／愛氏松	Slash pine	<i>Pinus elliottii</i>
藍花楹	Jacaranda	<i>Jacaranda mimosifolia</i>
雞冠刺桐	Cockspur Coral Tree	<i>Erythrina crista-galli</i>
雞蛋花	Frangipani, Red Frangipani	<i>Plumeria rubra</i>
檳榔	Betel Nut Palm	<i>Areca catechu</i>
羅漢松	Buddhist Pine	<i>Podocarpus macrophyllus</i>
臘腸樹／豬腸豆	Golden-shower	<i>Cassia fistula</i>
麵包樹	Breadfruit	<i>Artocarpus altilis</i>
鰲蒴錐／裂斗錐栗	Castanopsis	<i>Castanopsis fissa</i>
鐵刀木	Kassod Tree	<i>Cassia siamea</i>
鐵冬青	Chinese Holly, Panacea Holly	<i>Ilex rotunda</i>
露兜樹	Pandanus, Screw Pine	<i>Pandanus tectorius</i>
欖仁樹	Indian Almond	<i>Terminalia catappa</i>