

# LTA, NParks planting a cool idea at bus stops across S'pore

150 bus stops to be fitted with green roofs over next two years to reduce ambient heat

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Money does not grow on trees, but shrubs will on roofs.

As part of a plan to cool the city, the National Parks Board (NParks) and Land Transport Authority (LTA) have started rolling out green-roofed bus stops across the island.

In response to queries from The Straits Times, the LTA said it is working with NParks to build such amenities "to reduce ambient heat and provide a more comfortable experience for commuters".

It added that preliminary studies have shown that such roofs are able to lower ambient temperatures by "around 2 deg C".

In total, 150 bus stops – or some 3 per cent of Singapore's network of around 5,000 – will have such roofs. They comprise new bus stops and those slated for upgrading.

"As at July this year, we have fitted about 30 bus stops with green roofs and the remaining will be progressively deployed over the next two years," an LTA spokesman said.

Examples include bus stops in Jalan Bukit Merah (opposite Block 28), Henderson Road (opposite Block 55) and Ang Mo Kio Avenue 1 (at Block 248). A pair of bus stops in Serangoon Central are among the latest to go green.

NParks said it has shared with the LTA on the types of plants to be used. For now, *Cyanotis cristata* – a short shrub commonly known as nabhali or crested dew-grass – is chosen "for its hardiness and ability to grow and spread well on



A green-roofed bus stop in Serangoon Central. As at July, about 30 bus stops have been fitted with green roofs, said a spokesman for the Land Transport Authority (LTA). Preliminary studies have shown that such roofs can lower ambient temperatures by "around 2 deg C", said LTA. ST PHOTO: ARIFFIN JAMAR

green roofs".

It added that the shrub is self-sustaining and requires minimal upkeep – such as occasional trimming.

NParks group director of streetscape Oh Cheow Sheng said: "Incorporating greenery onto infrastructure is part of our efforts in extending nature into our urban landscape, bringing greenery closer to Singaporeans."

"High-rise greenery, such as vertical green walls, green roofs and rooftop gardens will cool buildings

and make them more comfortable to live, work and play in, while beautifying our city."

Associate Professor Winston Chow from Singapore Management University said that while plant cover can be effective in reducing surface temperatures, its influence on ambient temperatures "isn't that significant".

"You will need large patches of roof-top greenery to have that effect," he added.

Prof Chow, also a lead investigator in Cooling Singapore, a re-

search initiative tackling urban heat, said: "For bus stops, the cooling effect is highly unlikely to be felt by the waiting passengers. A better option is to concentrate on improving shade and airflow, which in my view is already quite well done in Singapore."

A recent study by sustainability scientist Yuliya Dzyuban in Phoenix, Arizona, in the United States found that while "a vegetated awning did not provide statistically significant shade reductions in the afternoon" for commuters at

bus stops, "aesthetically pleasing stops were rated as cooler than stops rated as less beautiful".

In 2019, some 10 public buses with planted roofs formed part of a three-month study funded by Temasek Foundation to see whether temperatures inside buses could be lowered.

The Straits Times has reached out to various parties to find out what the conclusions of the study were.

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