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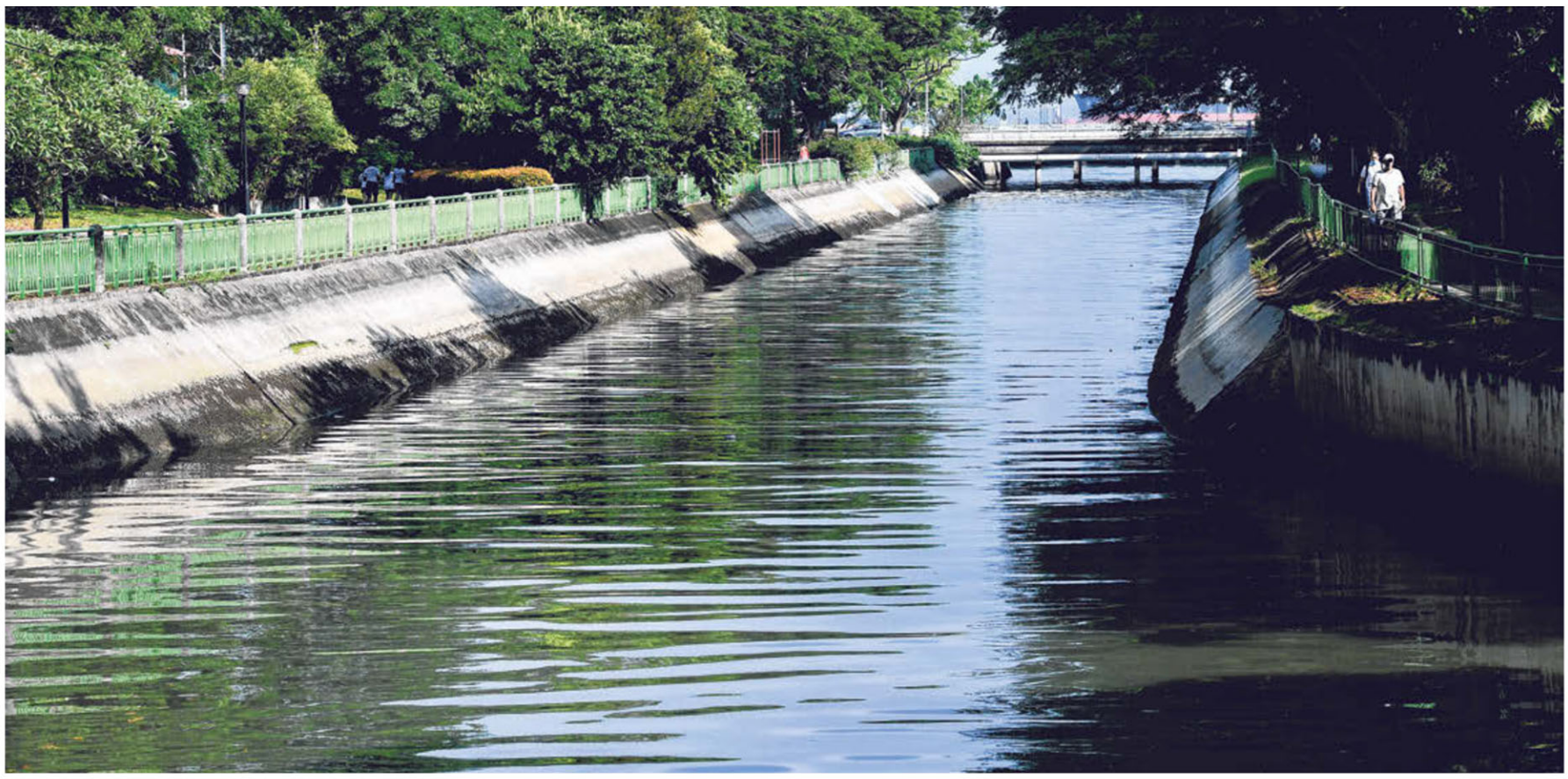
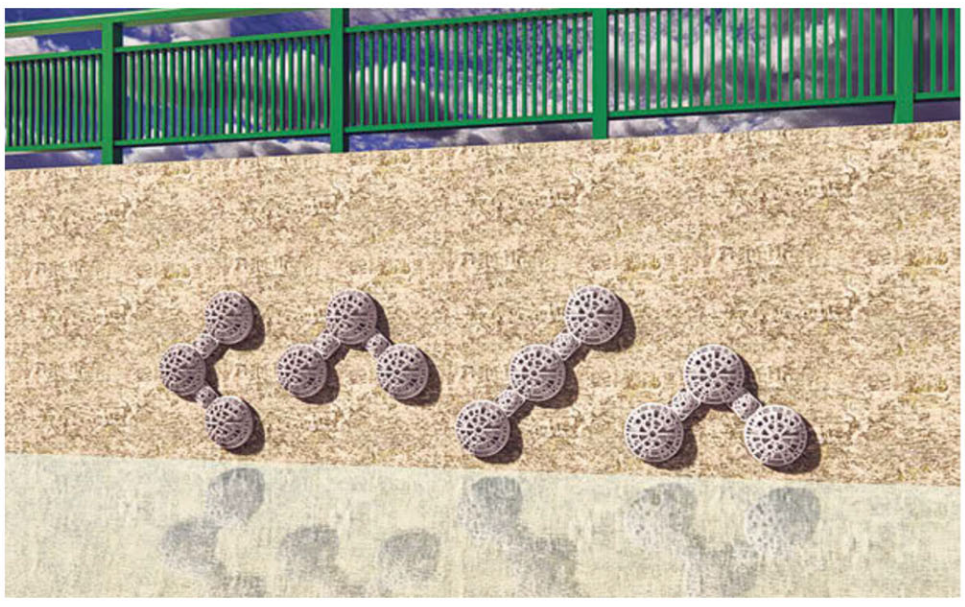


The project at Siglap Canal marks the first time that special biodiversity tiles are installed in a canal as part of upgrading works to enhance flood resilience. The 420m stretch from Marine Parade to East Coast Park Service Road, which is subject to tidal influence, will also be deepened and widened.
ST PHOTO: DESMOND FOO

Part of Siglap Canal to get biodiversity tiles in boost to marine life



An artist's impression of the biodiversity tiles that will be installed at the canal. The tiles are unobtrusive and rounded and so do not affect the canal's water flow.
PHOTO: EXPERIMENTAL MARINE ECOLOGY LAB

Tiles mimicking natural habitat features to be installed as part of works to enhance flood resilience

Cheryl Tan

A segment of Siglap Canal could soon be more conducive to marine life, now that scientists from the National University of Singapore (NUS) will be installing special biodiversity tiles on its walls.

This is the first time such tiles will be set up in a canal as part of upgrading works to enhance its flood resilience to cater to a 60 per cent increase in rainfall intensity, said Mr Yeo Keng Soon, director of the catchment and waterways department at national water agency PUB.

He added that as the canal leads to the sea and has a variety of marine life, there was an opportunity for PUB to support NUS' Experimental Marine Ecology Lab in incorporating biodiversity tiles in the project design, while ensuring that the main function of the canal is not compromised.

As part of the trial, the laboratory will assess the effectiveness of the tiles, which mimic natural habitat features and can serve as homes for marine organisms, said Mr Yeo.

The 420m stretch from Marine Parade to East Coast Park Service Road, which is subject to tidal influence, will also be deepened and widened, he added.

Associate Professor Peter Todd from the lab said his team is focusing on the intertidal part of the canal where estuarine species such as seagrass, crustaceans and fish can be found.

"Some of these species benefit from the addition of habitat complexity, such as pits and grooves that provide damp, cool spaces and protection from predators," he said.

The tiles are unobtrusive and rounded, so they do not affect the canal's water flow, said Prof Todd.

The Straits Times understands that the project will start next year and is scheduled for completion by 2026. Around 50 tiles will be installed.

Mr Yeo noted that such tiles have been rolled out in some sections of Singapore's coastline, including Sentosa and Changi Bay.

"Designing with nature is also a key consideration for PUB when developing coastal protection solutions that can help to maintain or even enhance biodiversity," he said.

Prof Todd previously told ST that the tiles can support between 20 and 25 species compared with a traditional granite seawall, which can support about 10 species.

These organisms include algae, bivalves, marine snails and some crustaceans.

Mr Yeo said that aside from the drainage upgrading works, PUB will also create multi-functional blue-green spaces around Siglap Canal by building a wellness deck, shelters and a fitness corner to enhance users' experience along the Siglap Park Connector Network.

In addition, Active, Beautiful, Clean Waters (ABC Waters) design features like rain gardens and additional greenery will improve the aesthetics and liveability of the surrounding areas.

Similarly, a 1km section of the concrete canal of the recently completed ABC Waters @ Sungei Tampines was naturalised to enhance biodiversity.

In February, PUB introduced habitat cells along the canal banks of Sungei Ulu Pandan to provide nesting spots for fauna, and shelter for shyer animals like nesting birds.

Next year, PUB will be completing Alkaff Lake, which will be integrated within the 10ha Bidadari Park, said Mr Yeo.

The lake will serve two functions: as a storm water retention pond to hold and reduce run-off during heavy rain, as the drain downstream cannot be further widened, and as a recreational space with terraced wetlands and a cascading creek.

In dry weather, people can get close to the lake via a designated footpath, Mr Yeo added.

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