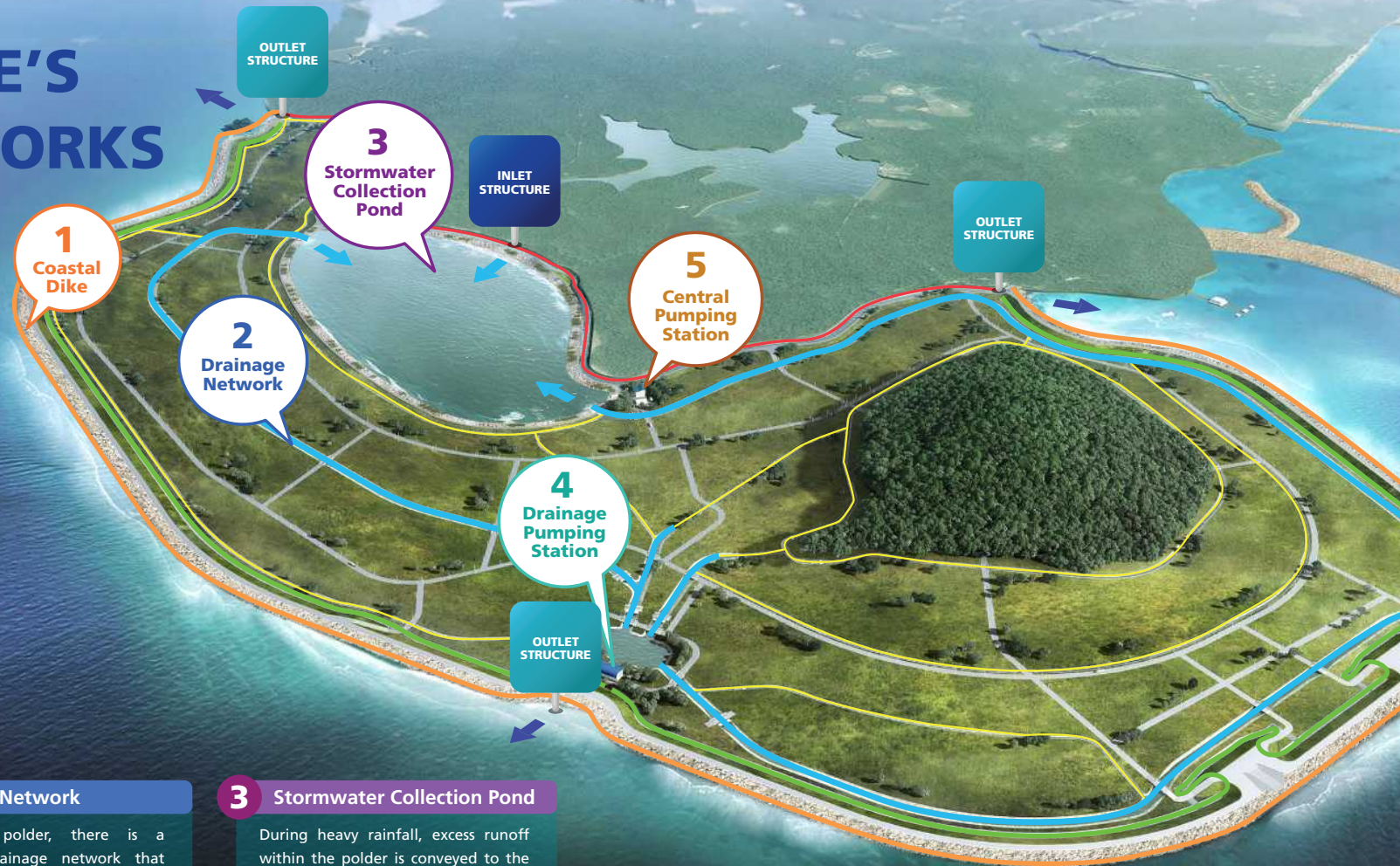


HOW SINGAPORE'S FIRST POLDER WORKS

Singapore's first polder – a low-lying tract of land enclosed by a coastal dike – has been constructed at the north-western tip of Pulau Tekong by the Housing & Development Board (HDB). The coastal dike protects the polder from the sea, while a comprehensive drainage system manages the stormwater collected within. Together, these protect the area against rising sea levels and flooding caused by more intense rainfall. National water agency PUB will operate and maintain the coastal dike and drainage infrastructure.



1 Coastal Dike

The coastal dike is a barrier that is built around the polder to keep seawater out. Standing at up to 6 metres above mean sea level, it features a cement bentonite wall, which helps to minimise seawater seepage.

2 Drainage Network

Within the polder, there is a 45km-long drainage network that regulates stormwater and maintains good water quality. It includes more than 30 water control, inlet and outlet structures with multiple gates.

3 Stormwater Collection Pond

During heavy rainfall, excess runoff within the polder is conveyed to the 116-hectare Stormwater Collection Pond for storage.

4 Drainage Pumping Station

When the water level in the Stormwater Collection Pond reaches a preset level, excess water is channelled into the Drainage Pumping Station and subsequently pumped out to the sea.

5 Central Pumping Station

During dry weather, the Central Pumping Station draws water from the stormwater collection pond and circulates it within the drainage network to maintain water level in the drain. The circulation also helps to maintain consistent groundwater level and prevent stagnation to ensure water quality.

Drainage Network

- Main Drain
- Cut-off Drain
- Secondary Drain
- Seepage Drain



Inlet Structure

Diverts the stormwater runoff into the Stormwater Collection Pond.



Outlet Structure

Discharges excess water from the cut-off drain into the sea.