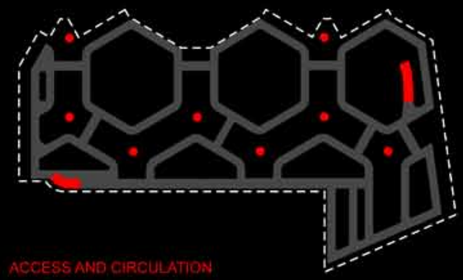
# PUNGGOL WATERFRONT HOUSING DESIGN_TERRACES ON THE WATER

PGH334E

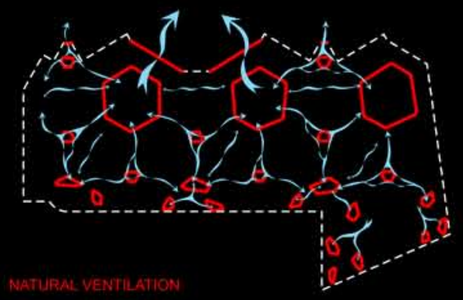
PARKING PLAN BLOCK A-B 1:500

## FOUNDATION

The site is challenging for foundations systems. The soil report indicates that there is a 5 to 15m thick sand fill underlying the site and the waterway running at the northern boundary of the site contribute to potential ground instability. **Bore pile foundations system** are therefore proposed, as they have the ability to resist both the vertical gravity load as well as horizontal load induced by the change in ground water table and the wind.
During construction stage, installation of bored piles foundation will also **minimize vibration** transmitted to the LRT structures.



ACCESS AND CIRCULATION



NATURAL VENTILATION

NATURAL LIGHT

## STRUCTURAL SYSTEM

The proposed structural system for the residential blocks comprises a cast-insitu reinforced concrete flat plate, **precast concrete walls, precast concrete columns and beams**. Cast insitu flat slab with drop panel, precast concrete columns and beams would be used for the Environmental Deck and Carparks. The use of cast insitu structural elements is avoided where possible to maximise buildability. However, after careful consideration this system was chose for the E-Deck and tower floor systems because of the design flexibility it provides. This system will allow E-deck structure to subtlety and easily **integrate the complex landscape** provisions and allow the apartments to be beam free even in the larger living/dining spaces. All reinforced concrete walls and columns will be directly founded on pile foundation. Selected walls will be designed as shear walls to ensure the lateral stability of the building.