

改善海洋生态及渔业提升策略： 改善生态环境的海堤设计

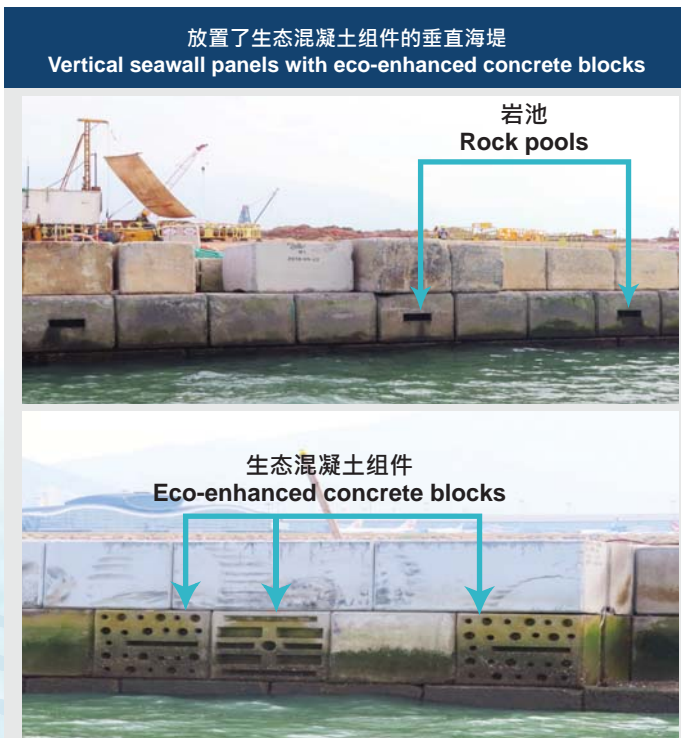
Marine Ecology and Fisheries Enhancement Strategy: Eco-enhancement of Seawall Design



在扩建香港国际机场成为三跑道系统项目的改善海洋生态及渔业提升策略当中，项目所使用的人工海堤建筑运用了有助改善生态环境的设计，以提升人工海堤的海洋生物多样性及生态价值。

As part of the Marine Ecology and Fisheries Enhancement Strategy for the Expansion of Hong Kong International Airport into a Three-Runway System (3RS), eco-enhanced designs were adopted in the artificial seawall of the 3RS project to help enrich the marine biodiversity and ecological value of the seawalls.

有助改善生态环境的海堤设计 Eco-enhanced Seawall Design	
粗糙表面 Rough surfaces 促使附着生物生长 facilitate recruitment of sessile organisms	岩池 Rock pools 在潮间带及潮下带为各种生物提供庇护空间 provide refuge areas in intertidal/subtidal zones for various organisms
空间和空隙 Spaces and voids 为可移动生物及附着生物提供受庇护的生境 provide sheltered habitats for both mobile and sessile organisms	平缓的斜坡 Gentle slopes 仿效自然的海岸线，增加表面积以促使附着生物生长 mimic natural shores and increase the surface area for recruitment of sessile organisms



相对于一般的人工海堤组件，生态混凝土组件分散地设置於斜坡式海堤及垂直海堤上，并加入了一系列的独特设计以增加微生境的多样性。生态混凝土组件上有小型的岩池、沟槽及坑纹以增加组件表面的异质性，为潮间带生物提供生境，而岩池则为潮间带及潮下带的可移动生物及附着生物提供庇护空间，使其免受海流和波浪影响。垂直海堤的岩池设有细小的开口，避免吸引雀鸟聚集，从而确保飞机的航行安全。

Eco-enhanced concrete blocks are scattered along sloping and vertical seawalls, incorporating a range of design features intended to increase microhabitat complexity compared to normal artificial seawall blocks. The eco-enhanced concrete blocks consist of small scale pools, grooves and pits to increase surface heterogeneity and to provide habitats for intertidal organisms, while rock pools provide refuge and shelter for intertidal and subtidal mobile and sessile organisms from current and wave actions. Vertical seawalls have rock pools designed with small openings to minimise attraction to birds and hence safeguard aircraft operational safety.

生态混凝土组件及岩池位於不同的潮汐水位，以助潮间带和潮下带生物在人工海堤上生长
 Eco-enhanced concrete blocks and rock pools are located at different tidal levels to promote colonisation of intertidal and subtidal species on artificial seawalls

