

# 改善海洋生態及漁業提升策略： 改善生態環境的海堤設計

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

在擴建香港國際機場成為三跑道系統項目的改善海洋生態及漁業提升策略當中，項目所使用的人工海堤建築運用了有助改善生態環境的設計，以提升人工海堤的海洋生物多樣性及生態價值。

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.

有助改善生態環境的海堤設計 Eco-enhanced Seawall Design	
<b>粗糙表面 Rough surfaces</b> 促使附著生物生長 facilitate recruitment of sessile organisms	<b>岩池 Rock pools</b> 在潮間帶及潮下帶為各種生物提供庇護空間 provide refuge areas in intertidal/subtidal zones for various organisms
<b>空間和空隙 Spaces and voids</b> 為可移動生物及附著生物提供受庇護的生境 provide sheltered habitats for both mobile and sessile organisms	<b>平緩的斜坡 Gentle slopes</b> 仿效自然的海岸線，增加表面面積以促使附著生物生長 mimic natural shores and increase the surface area for recruitment of sessile organisms

放置了生態混凝土組件的垂直海堤  
Vertical seawall panels with eco-enhanced concrete blocks



相對於一般的人工海堤組件，生態混凝土組件分散地設置於斜坡式海堤及垂直海堤上，並加入了一系列的獨特設計以增加微生境的多樣性。生態混凝土組件上有小型的岩池、溝槽及坑紋以增加組件表面的異質性，為潮間帶生物提供生境，而岩池則為潮間帶及潮下帶的可移動生物及附著生物提供庇護空間，使其免受海流和波浪影響。垂直海堤的岩池設有細小的開口，避免吸引雀鳥聚集，從而確保飛機的航行安全。

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.

生態混凝土組件及岩池位於不同的潮汐水位，以助潮間帶和潮下帶生物在人工海堤上生長  
Eco-enhanced concrete blocks and rock pools are located at different tidal levels to promote colonisation of intertidal and subtidal species on artificial seawalls

