ENGINEERING AWARD (DESIGN) BUILDING

Bedok Beacon

Project Overview

Bedok Beacon comprises 3 residential blocks of 16 to 17 storeys with a total of 500 units. The project also includes a single-level car park, a dedicated block for social communal facilities and a precinct pavilion.

Project Achievements

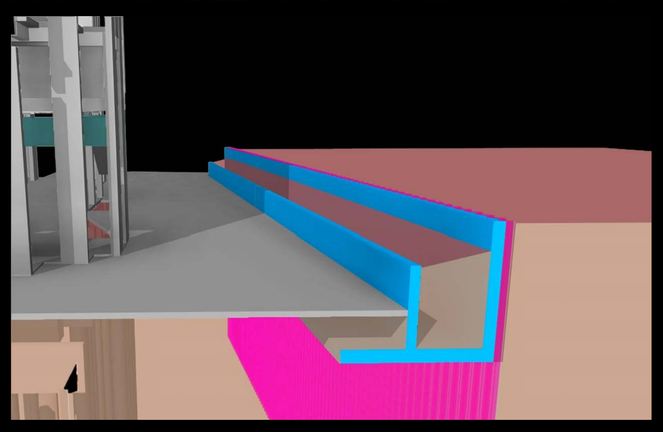
A mixed-use public housing development, Bedok Beacon embodies collaborative engineering creations in achieving a unique programme stacking with zero transfer structures.

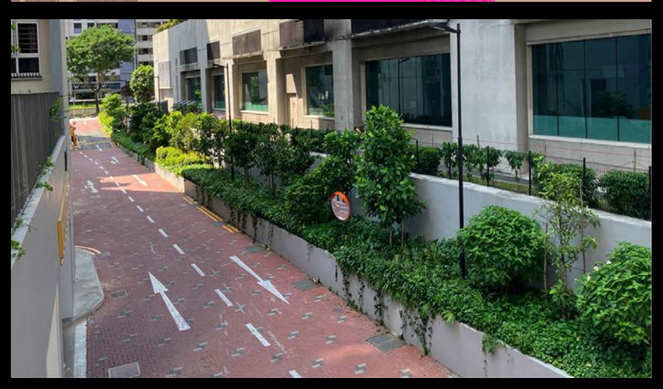
The engineered green buffer retaining structure along the development's boundary abutting the Bedok Integrated Transport Hub serves dual functions – it maximises spaces accessible by the community and optimises site topography in a sustainable approach to minimise carbon footprint. The outcome is a space-efficient and cost-effective system that eliminates the need for conventional space-intensive piled wall earth retaining structures.

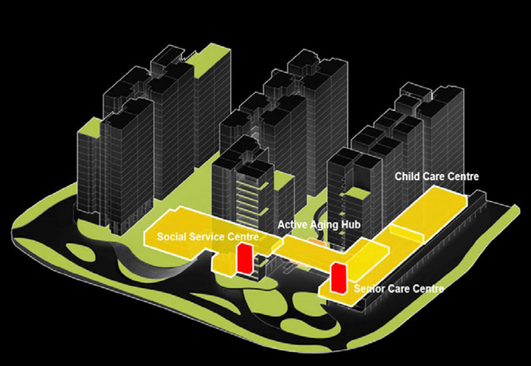
Ultra-High-Performance Fibre Reinforced Concrete (UHPFRC) was used in a demountable terracing structure, which forms the iconic Play Corridor (corridor at the atrium). The design incorporates important aspects of design for safety, buildability and maintainability while pushing the boundaries for high sustainability through materials used.

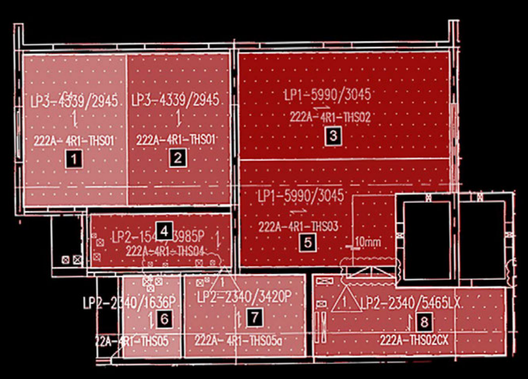
Bedok Beacon is one of the early adopters of precast Large Panel System (LPS) in the construction of residential blocks. Its implementation improved floor construction cycle by up to 15% in a safe and practical manner.

Innovative demountable structures with UHPFRC

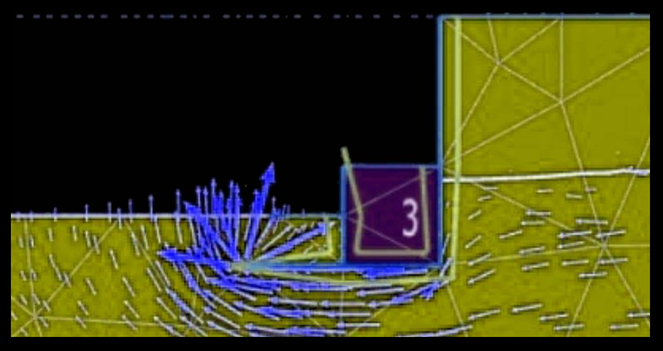








Unique programme stacking with zero transfer structures and early adopter of LPS in the construction of residential blocks



Engineered green buffer retaining structure addresses the site level difference of up to 4 metres with minimum footprint

HOUSING & DEVELOPMENT BOARD

HDB AWARDS 2022

K T P
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