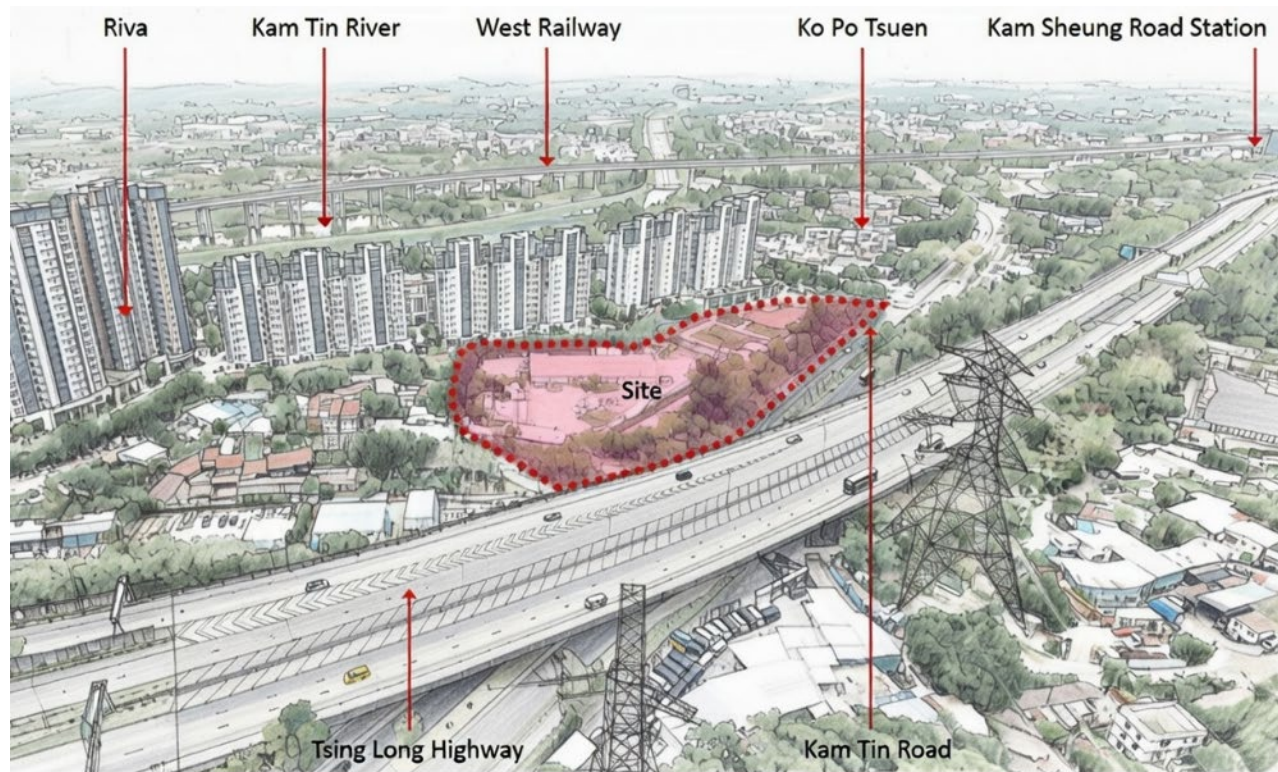




下高埔村住宅發展項目 設計安全良好實踐

DfS Good Practice of Residential Development at Ha Ko Po Tsuen



演講者
Speaker

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Wallace Lam

黃湛徽
Grant Wong

Major Subsidiaries

Registered General Building Contractor (RGBC)

 新輝建築有限公司
Sanfield Building Contractors Ltd.

 新輝城建工程有限公司
Sanfield Engineering Construction Ltd.

 駿輝建築有限公司
Chun Fai Construction Company Ltd.

 添輝建築有限公司
Teamfield Building Contractors Limited

 怡輝建築有限公司
Yee Fai Construction Co., Ltd.

Innovative Construction Technologies

 EVERBIM DIGITAL TECH LIMITED
(Established in 2022)

 **Sanfield** Construction Innovations Ltd.
(Established in 2021)

 **Lighthouse** Inno-lab Ltd.
(Established in 2024)


Sanfield Construction Group

Building Homes with Heart

 新輝(建築管理)有限公司
Sanfield (Management) Ltd.
Sanfield Landscape Co. Ltd.
Fordco Engineering Ltd.

Alteration & fitting-out Works

 新高建築有限公司
Sanko Construction Co., Ltd.

M&E Installation Works

Everfield Engineering Company Ltd.

 恒安工程有限公司
EVERLIGHT ENGINEERING CO., LTD.

Precast Production Factory at Dongguan

 鴻輝預製件有限公司
ORIENTFUNDS PRECAST LIMITED

Timber Door Factory at Zhong Shan

Sanfield Woodwork Company Ltd.

Construction Plant Fleet

 **Aegis** Engineering Company Ltd.

Concrete Production Plant

 永輝混凝土(香港)有限公司
GLORIOUS CONCRETE (H.K.) LTD.

Steelworks Specialist

 **Sanfield** Steelworks Construction Ltd.

願景。使命。價值

Vision。Mission。Value



早期參與

Early Engagement

- 設計階段融入安全考量，從源頭降低風險，避免事後補救
- Reduce risks from source and avoid remedial works afterwards



全流程覆蓋

Full Lifecycle Coverage

- 覆蓋設計、建造、營運及維護 階段



Design



Build



Operation &
Maintenance



垂直整合

Vertical Integration

- 一條龍垂直管理模式，由規劃設計，合約購料，供應商網絡，技術研發，工程監察，物業管理，形成協同效應
- Seamlessly connected among group resources



品質一致性

Quality Consistency

- 統一安全標準，確保管理品質始終如一
- Unified safety standards to ensure quality assurance

以心建家。以客為先。以人為本

項目概況 Project Overview

- **項目名稱 Project Name**

下高埔村住宅發展項目

Residential Development at Ha Ko Po Tsuen

- **位置 Location**

下高埔村錦田路第103號地段第1071號

Lot No.1071 in D.D.103, Kam Tin Road, Ha Ko Po Tsuen, Yuen Long

- **時間 Timeline**

(1) 設計階段: 2021年2月 至 2024年11月

Design Stage : 2021 Feb to 2024 Nov

(2) 施工階段: 2024 至 2027

Construction Stage : 2024 to 2027



安全主題概覽

Key Safety Themes

1

臨時結構及高風險工序 Temporary works & High Risk Process

- 明坑開掘減少閘板
Open-cut instead of
ELS
- 使用預製組件
Extensive use of
Precast Façade

2

安全智慧工地系統 Smart Site Safety System (4S)

- 智能吊鉤
Ai Lift Smart Hook
- 智能棚架監測系統
TIE.Ai
Intelligent Scaffolding
Monitoring System

3

生命週期安全設計 Lifecycle Safety by Design

- 露台牆身照明
Wall-Mounted Lighting at
Balconies
- 優化樑陣設計
Enhance Beam Design
- 空腔牆 + 地台去水
Cavity Wall w/ floor drain

4

可持續建設 Construction Sustainability

- 淨能櫃
Ampd Entertainers

優化開挖：ELS vs 明坑開挖

Optimizing Excavation: ELS vs Open-Cut

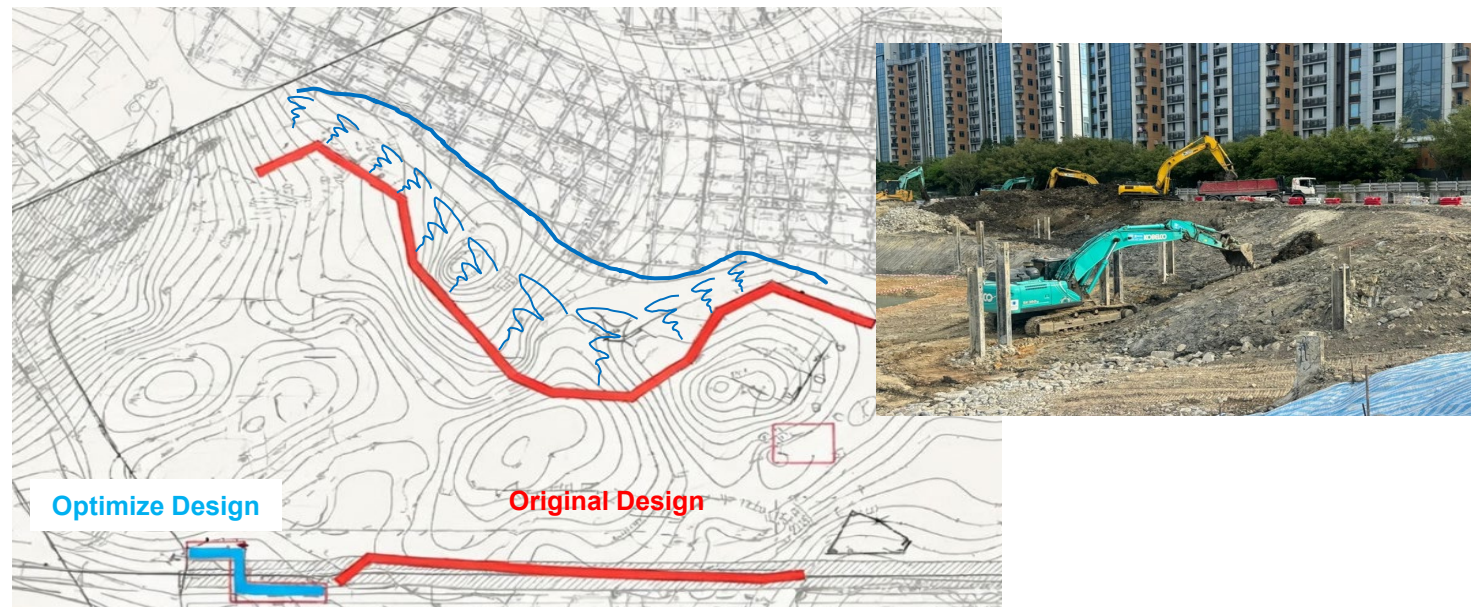
原設計 Original Design



風險 Risks

- 深坑挖掘
Deep excavation
- 工序複雜
Complex Construction Sequence
- 管控難度
Difficulty in Control
- 嘈音滋擾
Noise Disturbance

優化設計 Optimize Design



安全提升 Safety Enhancement

- 圍板總長度由550m 減至 35m
Sheet piling length reduced from 550m to 35 m
- 深坑作業時間大幅降低
Reduced time spent in excavation zones

採用預製外牆組件

Extensive Use of Precast Façade Panels

原設計 Original Design



Indicative Only

風險 Risks

- 大量外牆高空作業
Work-at-Height
- 多重工序及重疊施工
Multi-trade works interface

優化設計 Optimize Design



安全提升 Safety Enhancement

- 預製組件由 52 件提升至 124 件
Precast Façade Panels from 52 to 124
- 減少工序、易於安裝
Reduce process for easy installation

安全智慧工地系統：吊運預製組件

Smart Site Safety System (4S)：Façade Lifting

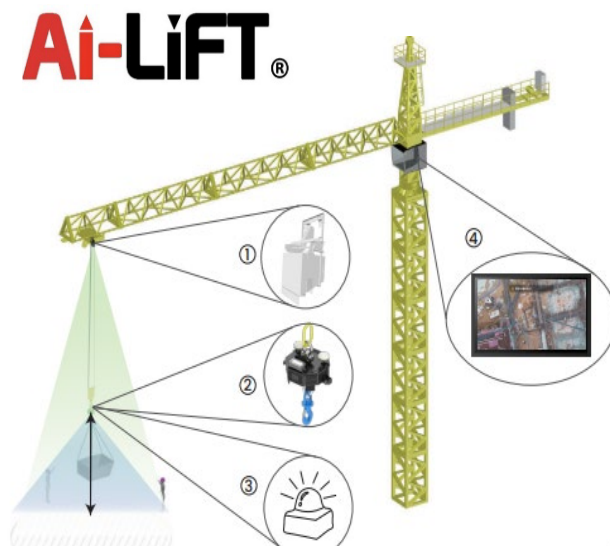
傳統 Traditional



風險 Risks

- 缺乏即時監察
Limited Real-Time Monitoring
- 吊運盲點
Blind Spot
- 意外後果嚴重
Severe Consequences

優化 Optimize



安全提升 Safety Enhancement

- 可視化及 實時監察
Visibility & Real-Time Monitoring
- 預警 及 管控
Early Warning & Control



智能棚架監測系統 (TIE.Ai) Intelligent Scaffolding Monitoring System

傳統 Traditional



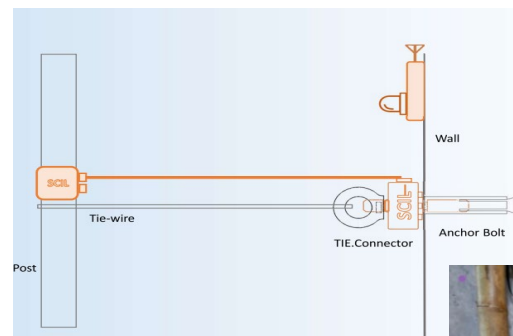
Indicative Only



風險 Risks

- 結構坍塌
Structural Collapse
- 監管效率低
Low Monitoring Effectiveness

優化 Optimize



安全提升 Safety Enhancement

- 無縫監督
Seamless Supervision
- 降低坍塌風險
Reduce collapse risks

露台採用牆身照明 Adopt Wall-Mounted Lighting at Balconies

原設計 Original Design



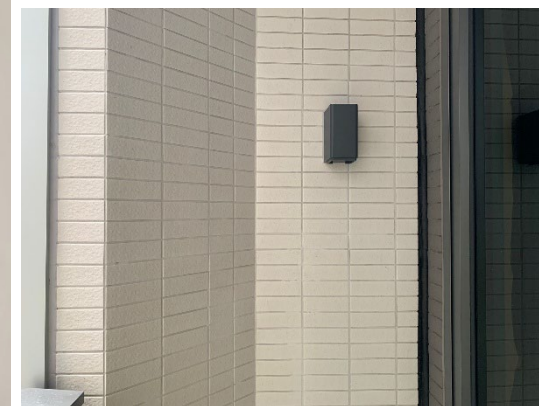
風險 Risks

- 高空作業
Work-at-Height
- 用家及維修
Installation and Maintenance

優化設計 Optimize Design



Wall-Mounted



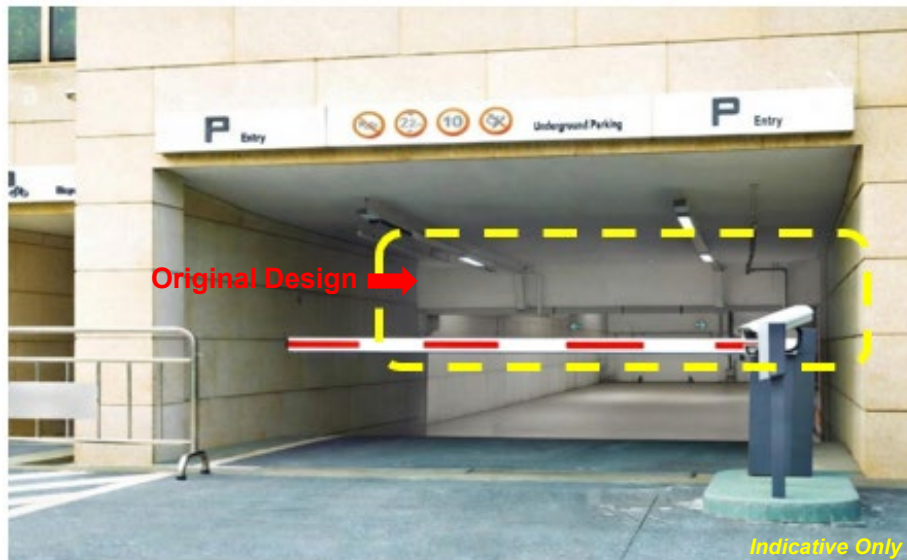
安全提升 Safety Enhancement

- 安全位置進行維修
Maintenance Safely
- 減少高空作業
Reducing Work-at-Height

樑陣設計優化空間

Headroom Solutions via Revised Beam Design

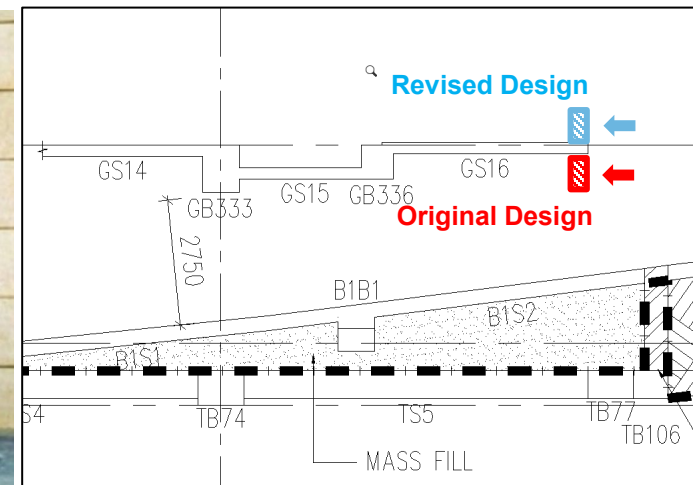
原設計 Original Design



風險 Risks

- 淨空高度不足作業
Insufficient Headroom
- 空間實用性受限 及 壓迫感
Limited Usability & Tight Spacing

優化設計 Optimize Design



安全提升

Safety Enhancement

- 反梁陣結構重新設計
Cranked Beams Design
- 車路高度一致
Headroom consistency



地庫採用空腔牆 + 地台去水

Cavity Wall with Floor Drain at Basement Level

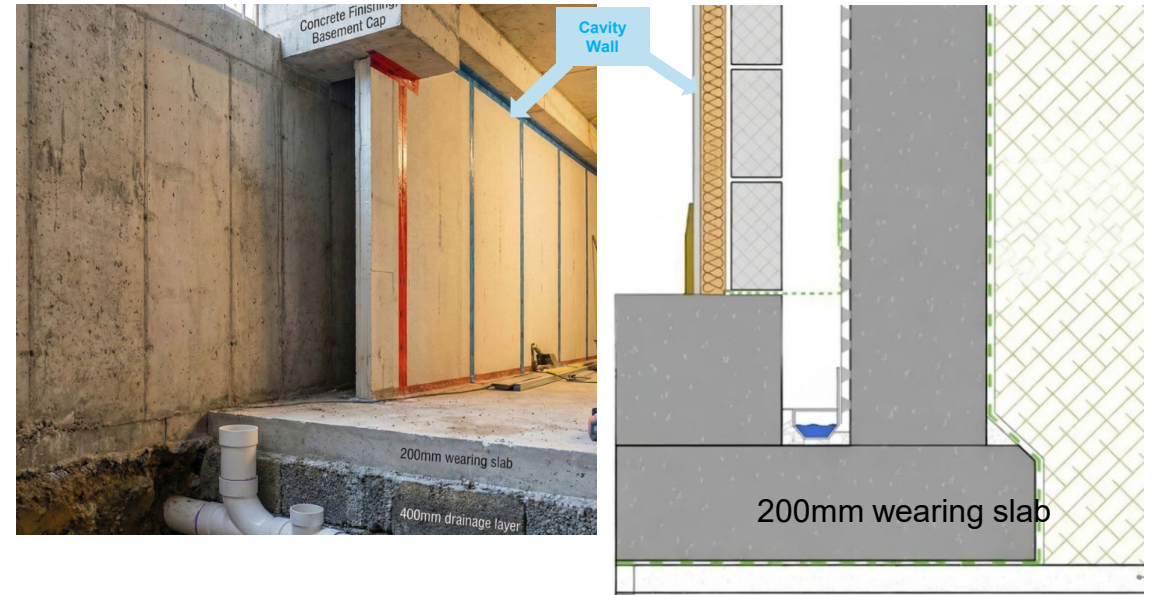
傳統設計 Traditional Design



風險 Risks

- 滲水及積水
Water Ingress & Ponding
- 維修頻繁
Frequent Maintenance
- 濕滑環境
Slippery Condition

優化設計 Optimize Design



安全提升 Safety Enhancement

- 採用空腔牆
Use Cavity Wall
- 減少源頭滲水
Reduced Water Egress

淨能櫃。可持續發展

Building Sustainability with Ampd Entertainers

傳統 Traditional



風險 Risks

- 有毒氣體
Toxic Gas
- 火險
Fire Hazard
- 噪音
Noise Disturbance

優化 Optimize



安全提升 Safety Enhancement

- 潔淨能源
Clean Energy
- 遠程監控 及 數據分析
Remote Monitoring & Data Analysis
- 增進鄰里關係
Improve neighborhood relation



Design for Safety Pilot Run



Introducing the
Design for Safety Pilot Run



Thank You