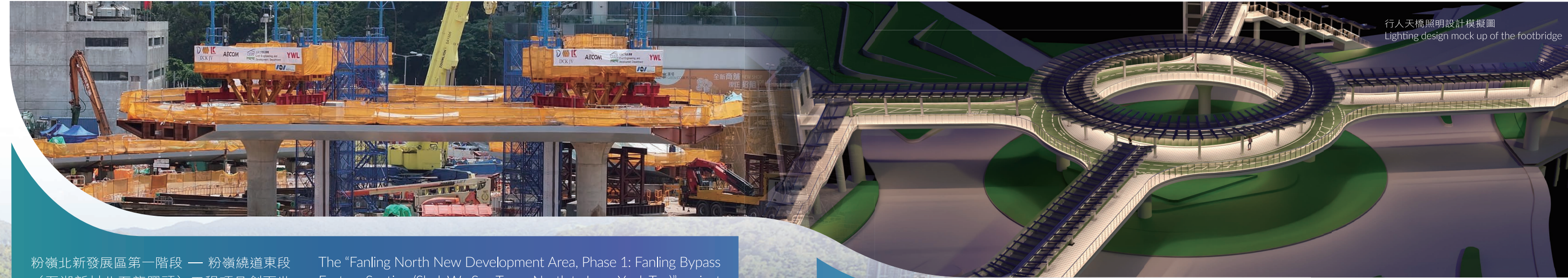


S960 超高強度鋼材 行人天橋 四跨度橋面成功架設

Successful Completion of Quadruple Span Lifting of Circular Deck of
Ultra-high Strength S960 Steel Footbridge



成功架設 S960 超高強度鋼材行人天橋架設成功 Successful Lifting of Ultra-high Strength S960 Steel Footbridge



行人天橋照明設計模擬圖
Lighting design mock up of the footbridge

粉嶺北新發展區第一階段 — 粉嶺繞道東段（石湖新村北至龍躍頭）工程項目創下世界首例，把「S960超高強度鋼材」應用於行人天橋建設。繼2024年9月成功架設橫跨梧桐河的行人天橋後，位於龍躍頭交匯處的四跨度圓環行人天橋已於2025年7月初完成架設，連接橋亦已於8月及9月期間陸續完成架設。

The "Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)" project pioneered the world's first application of ultra-high strength S960 steel in footbridge construction. After completing the footbridge across Ng Tung River in September 2024, the quadruple span circular footbridge at the Lung Yeuk Tau Interchange was erected in early-July 2025, followed by the completion of its link bridges between August and September.

透過使用S960鋼材的輕量化設計，四跨度圓環橋面及4座連接橋的重量得以大幅降低，為工程團隊帶來更多安裝選項。利用絞索吊裝，即可在數小時內，將直徑達40米的圓環橋面，舉升5米至設計高度，整個操作過程既安全又穩定。

By utilizing a lightweight design with S960 steel, the weight of the quadruple span circular bridge deck and the 4 connecting bridges has been significantly reduced, providing the project team with more installation options. With the application of strand jacks, the 40 metre-diameter circular bridge deck can be lifted up by 5 metres to the design height within hours, ensuring that the entire process is safe and stable.

Delegates from various government departments and professional bodies were invited by the Civil Engineering and Development Department (CEDD) and the project team to the construction site to witness the achievements.

眾代表亦於現場觀摩另一項新技術——**S960結構鋼材機械臂焊接**。使用機械臂焊接可以提升過程中控制熱輸入量的精準度，確保質量穩定性，亦可替代人手進行熱工序，不但令整體工序更安全，速度更是人手焊接的兩倍。



The delegation also admired another innovation on site — the **robotic arm welding** on S960 structural steel. Robotic welding allows precise control of heat input during the welding process, thereby ensuring stable welding quality. It can also replace labour for hot works and make the process not only safer but also twice as fast as manual welding.

The achievement not only marks an important milestone for the Fanling Bypass Eastern Section project but also signifies the successful implementation and internationalization of China-made high strength structural steel, accumulating valuable and pragmatic experience for China and Hong Kong's joint compilation of the "Group Standard" that can align with the European standards.



龍躍頭交匯處工地
Lung Yeuk Tau Interchange Work Site

繞道東段粉嶺公路
Bypass connecting to
Fanling Highway

圓環行人天橋
Circular Footbridge

以組合式建造法建造的升降橋
MiC Lifts

沙頭角公路-龍躍頭段
Sha Tau Kok Road-Lung Yeuk Tau and Roundabout



土木工程拓展署署長方學誠、太平紳士聯同路政署、香港建築科技研究院、建造業議會、香港理工大學國家鋼結構工程技術研究中心香港分中心、香港工程師學會、香港公路學會等業界代表，一同見證四跨度圓環行人天橋橋面成功架設。

Michael Fong, JP, the Director of Civil Engineering and Development, together with the delegates of the industry from the Highways Department, Building Technology Research Institute, Construction Industry Council, The Chinese National Engineering Research Centre for Steel Construction (Hong Kong Branch) of The Hong Kong Polytechnic University, The Hong Kong Institution of Engineers, Hong Kong Institution of Highways and Transportation, witnessed the successful erection of the quadruple span circular footbridge deck.

跨部門高效協作 運送S960大型天橋模組

為減少行人橋面的現場焊接工作量，工程團隊策略性地將53個闊度4.5米以內的模組，預先於廠房內拼成40個達7.8米闊的大型模組。然而，運輸路線的部分路段卻只有7.3米闊，團隊遂特製支架，將模組傾斜放置在拖頭車上，成功通過較窄路段，把模組運抵工地。

Effective Interdepartmental Collaboration for Transport of Oversized Bridge Modules

To effectively reduce the on-site welding works for the footbridge deck, the project team strategically pre-assembled 53 modules, each within a width of 4.5 metres, into 40 large modules measuring 7.8 metres in width in the factory. However, some sections of the transportation route are only with 7.3 metres width. Hence, the project team custom-designed supporting frames to fix the modules at an oblique angle on the trailer, successfully transported the oversized modules through the narrower roads to the construction site.

Upon arrival from the factory in Jiangsu to Hong Kong, the modules were then departed from Tuen Mun, passing through major routes in Yuen Long, Sheung Shui and Fanling. Since other engineering works were ongoing along the 34-kilometre route every night, the project team must carry out meticulous planning in advance. Apart from prior communication and coordination with the Transport Department, Hong Kong Police Force and other project teams along the route, the project team also made use of the geospatial data obtained by the "Vehicle-based Mobile Mapping System" of the Lands Department and the "3D Swept Path Analysis" technology developed by the Modular Integrated Construction Laboratory (MiCLab) of The University of Hong Kong to streamline the analysis and approval processes, successfully delivering 40 modules safely to the construction site over 12 nights.



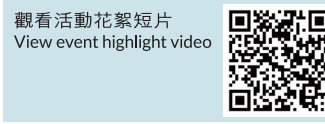
大型模組陸路運送
Land transport of oversized modules



粉北創作 — 社區共融壁畫創作活動
工程團隊聯同豐盛社企學會及菁然社企 (wePaint) 攜手舉辦第二階段「粉北創作」活動，邀得超過100位社區成員參與，包括長者、特殊學習需要人士以及中小學生，共同在粉嶺北社區聯絡中心外牆描繪出多個充滿地區文化特色的粉嶺地標。在2025年7月，工程團隊特別邀請粉嶺龍躍頭村代表提筆，完成龍躍頭牌樓部分的壁畫，象徵新發展與傳統社區的融合與延續。



Community Inclusive Mural Painting Programme
The project team, in collaboration with Fullness Social Enterprise Society and Natural Direct Co. Ltd (wePaint), launched the second phase programme. The event brought together over 100 community members, including elderly, individuals with special educational needs (SEN) as well as primary and secondary school students, to jointly depict a series of Fanling landmarks which are rich in local character and cultural significance on the exterior wall at Fanling North Community Liaison Centre. Moreover, in July 2025, Villager Representatives from Lung Yeuk Tau were invited to complete the mural segment featuring the Lung Yeuk Tau Pai Lau, symbolizing the integration and continuity of new developments with traditional communities.



城市生態攝影入門工作坊

兩場由本地生態課程導師指導的工作坊已分別於2025年7至8月順利舉行。活動中，參加者不僅加深了對古洞北及粉嶺北新發展區工程的了解，亦學習利用手機捕捉昆蟲及植物的姿態，透過「貼地」的親身體驗，提升對生態保育的認識與關注，並體會到城市發展與自然保育能夠相輔相成、和諧共存。

Urban Ecology Photography Beginners' Workshop

Two workshops guided by local ecology course tutors were held on July and August 2025. During the activities, participants not only deepened their understanding of the engineering developments in Kwu Tung North and Fanling North but also learned how to capture the postures of insects and plants with mobile phones. Through this down-to-earth hands-on experience, all participants enhanced awareness and concern of ecological conservation and recognized the potential for urban development and nature preservation can complement each other and coexist harmoniously.

卓越表現 Outstanding Performance



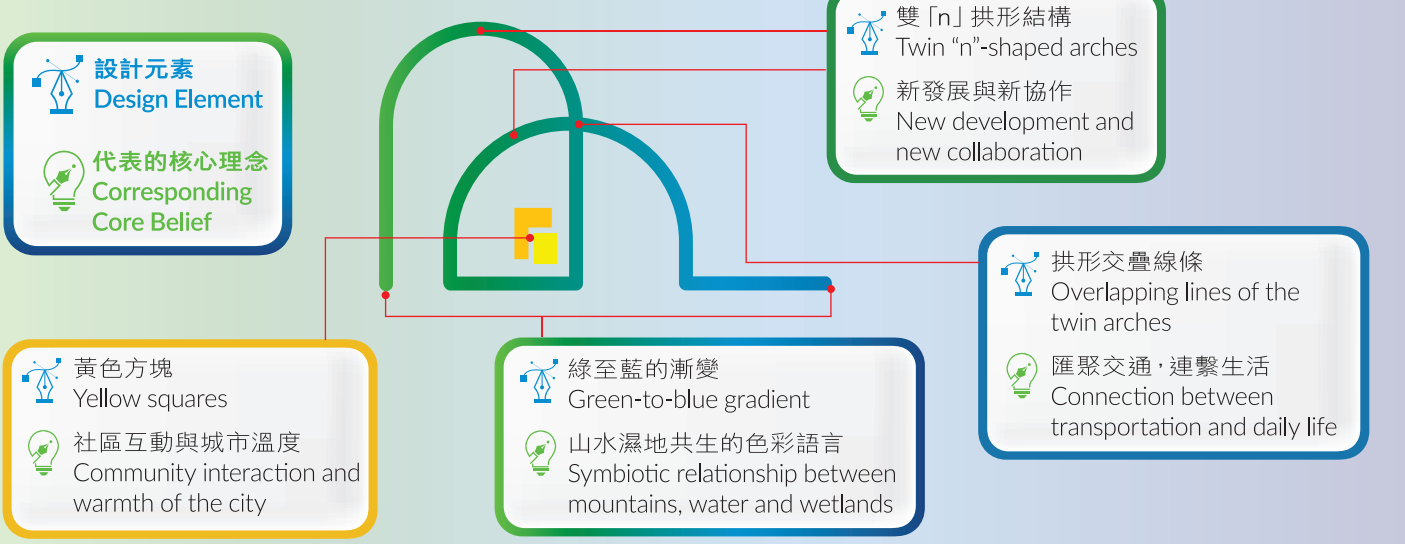
新工程合約「Martin Barnes」獎項 2025 — 「表揚項目的卓越性及創新」組別亞軍

「粉嶺繞道東段」工程合約ND/2019/05在2025年度新工程合約「Martin Barnes」獎項頒獎典禮上，榮獲「表揚項目的卓越性及創新」組別亞軍，以表揚工程團隊有效運用「新工程合約」機制，以夥伴合作方式推動工程項目及在應用創新科技建造橋樑的卓越表現。

NEC Martin Barnes Awards 2025 – Runner-up in “Project Excellence and Innovation” Category

The project team of Contract No. – ND/2019/05 “Fanling Bypass Eastern Section” received the runner-up award under the “Project Excellence and Innovation” category in the Martin Barnes Awards 2025, in recognition of the project team's excellent performance in project delivery under the framework of NEC Contract and application of innovative technology on bridge construction.

全新「古洞北/粉嶺北新發展區」標誌及網站正式亮相
Launch of New Logo and Website of “Kwu Tung North / Fanling North New Development Area” (KTN / FLN NDA)



請即瀏覽 <https://ktnfln-nda.hk/cht/home> 或掃描二維碼，以獲取更多古洞北/粉嶺北新發展區的最新资讯！
Please visit <https://ktnfln-nda.hk/eng/home> or scan the QR code for more latest information on the KTN/ FLN NDA!



工程小知識 Engineering Knowledge

如何有效防治山泥傾瀉？

在粉嶺公路的道路擴闊工程中，現有的斜坡通過挖掘和修整，形成新的斜坡地貌，以容納擴建後的道路。工程團隊採用雙管齊下的方法，提升斜坡的穩定性，並將山泥傾瀉的風險降至最低，確保道路使用者安全。採用的措施包括：

How to Prevent Landslip Effectively?

In the road widening works on Fanling Highway, existing slopes were excavated and reshaped to new profiles to accommodate the widened carriageway. The project team adopted a dual approach to enhance stability of the slopes, thereby minimizing the risk of landslides and ensure safety of the road users. Adopted measures include:

安裝泥釘：泥釘一般由鋼筋製成，安裝後以水泥漿固定於斜坡內，把土體的拉力轉移到泥釘上，從而增加斜坡的抗灣能力。
Soil Nail Installation: Soil nails are typically made of steel and anchored into the slope with cement grout after installation in order to stabilise the soil mass. The soil tension force from the soil mass is transferred to the soil nails, increasing the resistance against landslip.
填土材料更換：將鬆散或不穩定的填料更換為壓實及穩定的材料，例如填土、碎石或無砂混凝土。此舉可強化斜坡的結構及穩定性，確保公眾安全及周邊基礎設施的長期運作。
Fill Replacement: Loose or unstable fill is replaced with compacted and stable materials, such as compacted fill, rockfill or no-fines concrete. This method enhances the structural integrity of the slope and its stability, ensuring public safety and long-term operation of the surrounding infrastructures.



查詢詳情，請與古洞北及粉嶺北新發展區辦事處聯絡。
For further information, please contact the Kwu Tung North (KTN) and Fanling North (FLN) New Development Area Office.
古洞北 KTN ☎ 6700 4259 ✉ ktnrp@cedd.gov.hk
粉嶺北 FLN ☎ 6157 4051 ✉ flnpr@cedd.gov.hk

瀏覽古洞北及粉嶺北新發展區新網頁，了解更多最新工程資訊！
Visit the NEW WEBPAGE of Kwu Tung North and Fanling North New Development Area for more latest project information!

