



Desmond Tsoi
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集團建築部總經理

18 Desmond Tsoi: Implementing the Group's sustainability strategies through construction

The United Nations established the Sustainable Development Goals in 2015 as a call to action to protect the environment and build sustainable cities and communities in tandem with economic development. Sun Hung Kai Properties has committed to engaging the related goals since 2019. Desmond Tsoi, General Manager of the Group's Construction Department, said that in order to create sustainable, quality living space for its employees and the community, the Group, as a responsible property developer, is committed to careful planning, adopting eco-friendly construction methods, and optimizing the environment and safety level on construction sites. The Construction Department actively integrates new ideas, creativity and technology into the construction process to drive the Group's continuous improvement in sustainable development.

Pursuing sustainable development through five priority pillars

The Group's sustainability strategy is built on five priority pillars – the Environment, People, Customers, Supply Chain and Community – enabling the Group to create long-term value for all stakeholders. In terms of the environment, the Group has been introducing sustainable building elements in new projects and actively improving the environmental performance of its existing buildings. Regarding the supply chain, green procurement policies have been formulated to guide the purchase of materials in nearby areas, whenever possible, to reduce carbon emissions from transportation, with sustainability performance a key consideration in the selection of suppliers. In addition, family-

friendly employment policies have been put in place to encourage a good work-life balance among staff. As part of its commitment to Building Homes with Heart, the Group delivers quality products and services to its customers while caring for the community by leveraging its expertise.

Specializing in building properties, the Construction Department plays an important role in implementing the Group's sustainability strategies in different areas. Desmond said it takes the concerted effort of the entire Group to step up its corporate ESG performance. As far as construction is concerned, extra investment and consideration are required to introduce eco-friendly building elements. "For example, the installation of a sewage recycling

system is constrained by the site area, so a tailor-made design is necessary for the system to function effectively. Fortunately, our senior management is more than willing to invest, and our colleagues are happy to take on extra work and apply new technologies. As a result, the construction process has become more environmentally friendly." He revealed that the Construction Department is planning to introduce 'Enertainer' to reduce the use of traditional diesel generators to further reduce noise and improve air quality on work sites.

Striking a balance between development and conservation

The Construction Department gives priority to minimizing resource consumption and impact on the environment during the construction

“ Sustainable development definitely requires more resources and careful consideration. Thanks to senior management's support and increasing recognition from our staff and workers, the Group's Construction Department has continuously improved its ESG performance. 要推動可持續發展，無疑要投放更多資源和心思。除得到管理層支持，同事以至工友都愈趨認同相關理念，令集團建築部在ESG的表現不斷進步。 ”

process. In the Group's project in Shap Sze Heung, for example, solar panels were installed to generate renewable energy, which provides electricity for the on-site offices and can be sold to an electricity company. The Department also strikes a balance between project development and environmental conservation when planning the construction workflow. Desmond explained, "To preserve giant native twin trees in the Shap Sze Heung project, our landscaping division partnered with our associates and subcontractors to adopt leading-edge technologies in the tree transplantation process. A large number of mobile sensors were installed to monitor the real-time health of the trees; and for the first time in Hong Kong, an integrated double self-propelled modular transporter was used for the move, which significantly reduced labour, time and safety risks." The project won the gold award in the CIC Sustainable Construction Award and received the silver award in the Innovative Safety Initiative Award in 2020, reflecting widespread recognition by the industry.

Leveraging innovative technology to improve efficiency and reduce consumption

In recent years, the Group has deployed new methods, including Building Information Modelling (BIM), to substantially enhance the precision of project design and construction efficiency. Desmond said, "Since we adopted BIM, we have increased our construction efficiency with less waste. It has helped us achieve remarkably improved environmental performance in our projects." The Construction Department has also utilized other innovative construction methods, such as the extensive use of prefabricated steel reinforcing bars and a new method of leveraging turntables to install a dual-use bridge weighing 638 tonnes. These methods have resulted in increased work efficiency and reduced resource consumption.

Developing intelligent construction sites

Employees are the Group's valuable assets. To improve the environment and safety level on work sites, the Construction Department recently spearheaded the intelligent transformation of construction sites, including

the integrated commercial development at 98 How Ming Street, Kwun Tong. In addition to introducing virtual reality training to heighten workers' safety awareness, the Department collaborated with SmarTone to develop a solution, named 'SmartWorks', to make site operations more efficient and to better protect workers. The solution equips workers with smart helmets, which integrate Internet of Things (IoT) sensors and GPS tracking, allowing workers' attendance records, as well as their real-time health condition, to be closely monitored on-site. The smart helmet also has an emergency button that can trigger an SOS signal either automatically or manually in case of an accident to ensure workers' safety.

To achieve the goal of zero accidents on construction sites, the Group has established a safety management system and conducts regular external audits, covering the Real Estate Developers Association of Hong Kong (REDA), ISO 45001:2018, and the Factories and Industrial Undertakings (Safety Management) (F&IU). "We also carry out routine internal inspections, and various safety award schemes are in place to recognize project teams with outstanding safety performance," said Desmond. "We believe that healthy competition will help us continuously improve site safety."

Safeguarding workers' well-being amid the pandemic

At the start of the COVID-19 outbreak, the Group swiftly took a series of measures to protect the safety and health of its employees. For example, the Group successfully purchased surgical masks from overseas when there were insufficiencies in Hong Kong early last year, and distributed them to employees, workers and people in need in the community. Apart from stepping up cleaning and disinfection on all work sites, the Construction Department set up individual rest and dining spaces and installed temperature sensors, while providing alcohol hand sanitizers and other disinfecting supplies.

At present, all site employees and workers must hold valid proof of a negative COVID-19 test result, and they are required to undergo temperature

checks and fill out health declaration forms before entering the sites. Desmond said, "If a confirmed case is found, work on the site will be suspended at once, virus tests will be arranged immediately for all employees and workers on the site, and thorough disinfection will be carried out. The site will not resume operations until a negative test result for all workers has been obtained."

Valuing talent cultivation and creativity

The Group's Construction Department places great emphasis on nurturing the younger generation through a wide range of training and apprenticeship programmes. To provide practical work experience for young people, more than 100 construction-related students from universities and other tertiary institutions were recruited last summer to take part in internships in the Department. Desmond pointed out, "The differences between theory and real-world practice are often a conundrum for graduates. Through systematic training and apprenticeships, we hope that the apprentices will gain valuable practical experience and learn how to communicate and work with their colleagues and other workers. During the training, mentors regularly monitor the progress of the apprentices and maintain close ties and communication." According to Desmond, the extra effort and time colleagues have invested are worthwhile because the participants highly treasure the learning opportunities, and over 90% of them are interested in working in the Group after graduation.

He remarked that continuous improvement is not only part of the Group's corporate culture, but also a core belief in the Construction Department. The construction teams have actively participated in the Group's annual Quality Raising and Work Safety Suggestion Schemes with innovative solutions, many of which have been deployed in various developments. "The Group supports innovation by investing considerable resources, and the construction teams enjoy taking on challenges with a strong pursuit of excellence. The more job satisfaction our colleagues get, the greater sense of belonging to the company they develop," he said.

蔡旭文：藉建築實踐集團可持續發展理念

聯合國於2015年通過了「可持續發展目標」(Sustainable Development Goals)，鼓勵發展經濟同時，也致力保護環境和建構可持續城市和社區，新地亦於2019年起積極實踐相關目標。集團建築部總經理蔡旭文表示，作為負責任的地產發展商，集團一直透過完善規劃、採用更環保的建築方式，以及優化工地的環境和安全水平，為社會、以至每位員工創造可持續發展的優質生活空間。建築部積極將新思維、創意及科技融入施工層面，推動集團在可持續發展方面不斷向前邁進。

五大範疇推動可持續發展

集團的可持續發展策略建基於五個核心範疇，包括環境、員工、顧客、供應鏈和社群，務求為所有持份者創造長遠價值。環境方面，集團將可持續建築元素注入新項目，同時積極改善現有物業的環境表現。在供應鏈方面，集團制定綠色採購政策，盡量選用鄰近地區生產的物料，以減低運輸時產生的碳排放；並在挑選供應商時，以他們在可持續發展的表現，作為重要考慮條件之一。此外，集團一直推行友善僱主政策，助員工在工作與家庭生活之間取得平衡；同時本著「以心建家」的精神，提供優質的產品和服務予顧客，並積極運用自身專長關懷社群。

建築部作為物業施工部隊，在集團於各範疇落實可持續發展策略時擔當重要角色。蔡旭文稱提升企業的ESG水平，須集團上下齊心配合。以施工為例，要引入環保建築元素，便需要投放額外的

資金和心思。「例如設置污水循環系統，由於受到地盤面積影響，需要度身訂造設計，才能發揮效益。慶幸管理層十分願意投放資源，同事亦樂意為此承擔額外工作，並引進各種新技術，令我們的施工過程愈趨環保。」他透露，建築部正計劃引入淨能櫃(Enertainer)，以減少使用傳統柴油發電機，未來將進一步減低工地的噪音和提升工地空氣質素。

發展與保育取得平衡

此外，建築部在施工期間以減低資源消耗和對環境滋擾為前提，例如為集團位於十四鄉的項目安裝太陽能板，所生產的可再生能源不僅足夠供應地盤寫字樓使用，還可以將電能售予電力公司；在規劃施工流程時，建築部亦致力在項目發展與環境保育之間取得平衡。「為保育十四鄉項目內的一棵巨型連理樹，我們的園藝組與聯營公司及分判商，引入多項新科技協助

移植樹木，包括安裝大量移動感應器，以實時監測樹木；更破天荒在香港首次運用兩組高端遙控自行式及組裝化運載工具，大大減少搬運人手和時間，並降低安全風險。」此項目在2020年「建造業議會可持續建築大獎」中獲得金獎，並奪得「2020創意工程安全獎」銀獎，廣受業界認同。

借助創新科技 提升施工效率以減省耗費資源

近年集團引入嶄新技術，包括「建築信息模型」(BIM)，令項目設計更為精準和施工效率大幅提升。蔡旭文表示：「引入BIM後，施工效率提高，減少浪費，令項目的環保效益明顯提升。」此外，建築部亦採用其他創新建築方法，例如廣泛使用預製鋼筋、以嶄新方法利用轉盤安裝重達638噸的兩用橋樑等，提升工作效率，減省資源消耗。



According to Desmond (third left), mutual trust in a team comes from open communication and solving problems together
蔡旭文(左三)認為要在團隊建立互信，在於坦誠溝通，遇到問題時一同解決



Solar panels were installed in the Group's project in Shap Sze Heung to generate energy, which provides electricity for the on-site offices and can be sold to an electricity company
集團為十四鄉項目安裝太陽能板，所生產的電能不僅足夠地盤寫字樓使用，還可以售予電力公司



The Group's successful transplantation and preservation of giant native twin trees in the Shap Sze Heung project demonstrates how to strike a balance between development and conservation
集團成功搬遷和保留十四鄉項目的一棵巨型連理樹，印證發展與保育能取得平衡

工地智能化

集團一直視員工為重要資產，為提升地盤的工作環境和安全水平，建築部近年致力推動「工地智能化」，其中包括觀塘巧明街98號綜合商業發展項目。該項目除引入虛擬實境安全訓練，強化工友相關意識，更與數碼通合力研發「SmartWorks智安建」系統，提升地盤營運效率和保障工友安全。SmartWorks專為工人而設的智能頭盔，配合物聯網(IoT)感應器及GPS追蹤技術，可實時掌握工友出入地盤記錄及健康狀況。智能頭盔同時設有緊急按鈕，若工友發生意外，可自動或手動發出求救訊號，有效保障他們在地盤內的安全。

另外，為達至工地「零意外」，集團制訂安全管理系統，並定期進行外部稽核，稽核範圍包括香港地產建設商會(RED A)、ISO 45001:2018及工廠及工業經營安全管理規例(F&IU)安全稽核。「我們同時會進行內部常務巡查，又設立多個安全獎項，表揚安全表現傑出的項目團隊，希望藉著良性競爭，鼓勵員工持續提升工地安全水平。」

疫情期間保障工友健康

在新型冠狀病毒疫情之初，集團迅速採取多項措施，以保障僱員的安全及健康。例如去年初香港出現「口罩荒」，

集團便積極四處搜羅醫療級口罩，免費派予員工、工友及社區人士。建築部亦於各工地加強清潔消毒，並增設獨立休息及用膳區，以及設置探熱器和酒精搓手液等消毒用品。

現時，所有地盤員工及工友均必須持有有效陰性檢測證明，而進入工地前亦須量度體溫及簽署健康申報表。「倘若出現確診個案，地盤更立刻暫停運作，並即時安排全體員工及工友檢測，以及進行全面消毒，直至取得陰性報告後才重啟工地。」

重視人才培訓 鼓勵創意

集團建築部一直致力通過不同培訓和學徒計劃，栽培年輕一代。去年暑假更招募逾百位修讀建築相關課程的大專院校學生，到集團建築部實習，為年輕人提供實戰經驗。「畢業生常遇到的問題，往往是書本理論跟實際工作有落差。所以我們希望透過系統化的培訓，配以師徒教授模式，讓學員盡量吸收實戰經驗，並學會如何與同事和工友溝通共事。培訓期間，師傅會定期跟進學員的進度，加強彼此間聯繫和溝通。」蔡旭文稱雖然同事要付出額外精神和時間，但一切也是值得，因為學員都十分珍惜學習機會，當中逾九成人更願意畢業後能重回集團工作。

他表示，「與時並進」不僅是集團的企業文化，也是建築部的工作信念。集團內部每年均舉辦「提升質素及工作安全意見獎勵計劃」，建築團隊都會積極參與，努力鑽研創新技術，當中不少新意念已應用到工程之上。「集團支持創新，並願意投放資源，建築團隊亦喜歡接受挑戰，力求進步。同事在工作得到滿足感，對公司自然更有歸屬感。」



Desmond likes to balance his busy work life with sports
平日工作繁忙的蔡旭文喜歡以運動來減壓