土木工程拓展署
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

Environmental Report 2024 環保報告

We build to make Hong Kong
a world-class sustainable
and resilient city for **living, working and playing**

致力建設香港成為可持續發展、具抗禦力、
宜居、宜業、宜樂的世界級城市

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Message from the Director 署長的話

Climate change is no longer distant from us. Rising temperatures and extreme weather events are urgent reminders that we must act now. In response, our department has stepped up efforts in environmental conservation and sustainable development. This Environmental Report showcases our contributions and accomplishments in 2024.

Our mission is clear - to integrate smart, green, and resilient strategies into every aspect of our work, from project planning, design to construction. We prioritise nature-based solutions in our designs and adopt innovative approaches to reduce carbon emissions from construction activities. These initiatives have not only achieved sustainable development goals but have also earned us recognitions in environmental conservation in 2024, including the United Nations Sustainable Development Goals (UNSDG) Achievement Awards Hong Kong and the Gold Award in the Construction Industry Sector of the Hong Kong Awards for Environmental Excellence. These achievements reflect the hard work and passion of our teams, as well as the invaluable support from our partners and stakeholders.

Looking forward, we remain committed to making environmental sustainability a cornerstone of our services. From expanding green infrastructures to promoting environmental publicity, we understand that this journey requires collective effort from the public, stakeholders, and academia. Together, we can face the challenges of climate change and build a sustainable city for future generations.

I would like to reaffirm our department's unwavering commitment to the environment, and extend my gratitude to my colleagues who share the same vision as me:

We build to make Hong Kong a world-class sustainable and resilient city for living, working and playing

FONG Hok Shing, Michael
Director of Civil Engineering and Development and Commissioner of Mines

氣候變化不再遙不可及。氣溫上升和極端天氣事故是迫在眉睫的警示，提醒我們必須立即採取行動。對此，本部門已加強在環境保護和可持續發展方面的努力。這份環境報告充分展示了我們在2024年的貢獻和成就。

我們的使命是明確的 - 將智慧、環保和具抗禦力的策略融入工作每一方面，包括項目規劃、設計和施工。我們在設計中優先考慮以自然為本的解決方案，並採用創新方法來減少施工活動所產生的碳排放。這些措施不僅實現可持續發展的目標，還為我們在2024年贏得多項環境保護領域的殊榮，包括聯合國可持續發展目標（UNSDG）香港成就獎和香港環境卓越大獎建造業金獎。這些成就反映了我們團隊的付出和工作熱誠，以及來自合作夥伴和持份者的寶貴支持。

展望未來，我們將繼續致力於把環境可持續發展作為我們服務的基石。從擴展綠色基礎設施到促進保護環境宣傳，我們明白這條道路需要公眾、各持份者和學術界的共同努力。攜手合作，我們定能應對氣候變化的挑戰，為未來世代建設一個可持續發展的城市。

我在此重申本部門對環境保護的堅定承諾，並向我的同事表達衷心的感謝，我們的共同抱負是：

致力建設香港成為可持續發展、具抗禦力、宜居、宜業、宜樂的世界級城市

方學誠
土木工程拓展署署長及礦務處處長

1. Introduction 引言

1.1 Scope of Report

This Report summarises Civil Engineering and Development Department (CEDD)'s environmental achievements during the period from January 2024 to December 2024. It also presents our efforts in supporting the Clean Air Charter, Carbon Reduction Charter, energy saving, staff environmental training, renewable energy and environmental management in CEDD projects and premises to promote sustainable development in various development plans and infrastructure works. In 2024, the objectives and targets for gross paper consumption, recycled paper consumption, office energy consumption, the number of landscaped upgraded slopes, and the number of trees/shrubs planted have been achieved.

Organisation

CEDD is a works department of the HKSAR Government under the Development Bureau. The major service areas of CEDD cover the provision of land and infrastructure, port and marine services, geotechnical services, and environment and sustainability services. Besides its Headquarters, CEDD has two functional offices and four development offices. Among the functional offices, the Civil Engineering Office is responsible for infrastructure, port works, landfill management and the implementation of the Greening Master Plan, while the Geotechnical Engineering Office's work includes slope safety, quarry maintenance and geotechnical consultations. Meanwhile, the East, West and North Development Offices are responsible for land development and associated works, infrastructure development, strategic studies, etc. in their respective areas. Last but not least, the South Development and Sustainable Lantau Office, established in May 2025, is responsible for implementing development projects and conservation plans to foster the sustainable development of Lantau, Hong Kong Island and West Kowloon as well as the conservation of Lantau.

1.1 報告範圍

這份報告闡述土木工程拓展署在2024年1月至2024年12月期間的環境保護成果，並展示我們在支持《清新空氣約章》、《減碳約章》、節約能源、員工環保培訓、可再生能源及部門項目和處所的環境管理方面所作出的努力，以推動各項發展及基建項目的可持續發展。在2024年，本署在總用紙量、環保紙用量、辦公室的總耗電量、美化已鞏固的斜坡數目，以及樹木／灌木的種植數量等目標均已達成。

組織結構

土木工程拓展署是香港特區政府發展局轄下的工務部門，主要服務範疇包括開發土地及基礎設施建設、港口及海事服務、岩土工程服務，以及環境及可持續發展服務。除了總部外，部門還設有兩個功能分處及四個分區拓展處。兩個功能分處分別是土木工程處及土力工程處。土木工程處負責基礎設施、港口工程、公眾填料管理，以及制訂並執行綠化總綱圖等工作；而土力工程處的工作包括斜坡安全、管理石礦場、提供岩土諮詢服務等。此外，東、西、北三個分區拓展處則負責各自區域的土地開發及其配套工程、基礎設施建設、策略性研究等工作。最後，在2025年5月成立的南拓展及可持續大嶼辦事處則負責執行發展項目和保育計劃以推動大嶼山、港島和西九龍的可持續發展以及保育大嶼山。

Organisation 組織結構

2. Environmental Governance 環境治理

2.1 Vision, Mission and Values (VMV)

Vision:

- We build to make Hong Kong a world-class sustainable and resilient city for living, working and playing

Mission:

- Creating a caring culture in our workplaces and unleashing the potential of our colleagues
- Pursuing innovation and technology to enhance the efficiency, productivity, quality and safety of our works
- Championing smart, green and resilient strategies and initiatives in our services
- Being a collaborative client to achieve engineering excellence and people-oriented solutions

Values:

- Collaboration
- Innovation
- Creativity
- People-centred
- Strive for Excellence
- Serve with passion

2.1 抱負、使命和信念

抱負

- 致力建設香港成為可持續發展、具抗禦力、宜居、宜業、宜樂的世界級城市

使命

- 建立團隊間的關懷文化，發揮同事潛能
- 追求創新科技，以提升工作效率、生產力、質量和安全
- 倡導智慧、環保及具抗禦力的策略和措施，以推展我們的服務
- 與合作夥伴携手達至卓越工程及落實以人為本的方案

信念

- 協作共贏
- 創新求變
- 創意思維
- 以人為本
- 追求卓越
- 竭誠服務

2.2 Environmental Policy

CEDD places due emphasis on environmental protection considerations in all stages of our office management and construction projects, which are achieved through the following commitments in our Integrated Management System (IMS) Policy:

- Complying with legal and other requirements relevant to environmental protection
- Creating a safe, green and sustainable environment
- Monitoring the performance of our consultants and contractors to ensure their compliance with our requirements on environmental protection
- Preventing pollution and mitigating potential environmental impacts arising from our projects and operations
- Observing the principles of reduction of consumption, reuse and recycling of resources wherever practicable
- Achieving continual improvement through regular review of the effectiveness of our IMS as well as its Objectives and Targets

We have also implemented an environmental management system and obtained ISO14001:2015 Certification. Our environmental measures and greening achievements have been well recognised by professional bodies.

2.2 環保政策

我們在辦公室管理及建造工程項目的各個階段，均非常注重環境保護，致力履行綜合管理系統政策下所訂定的各項承諾，包括：

- 遵守與保護環境相關的法例及其他規定
- 創建安全、綠化和可持續發展的環境
- 監督顧問及承建商的表現，確保他們遵守本署的環保規定
- 避免環境污染，並致力緩解因工程項目及部門運作而可能對環境構成的影響
- 在可行的情況下，奉行以下原則：資源減省、資源再用和資源循環再造
- 為持續改進表現，定期檢討綜合管理系統的成效及其目標和指標

我們還推行一套環境管理系統，本署的綜合管理系統已成功取得ISO14001:2015認證。我們的環保措施和綠化成果，均獲專業團體的認同。

2.3 Environmental Targets and Achievements in 2024/25

To achieve continuous improvement in our environmental performance, we have set annual environmental objectives and targets. Our targets and achievements in 2024/25 are summarised as follows:

Environmental Objectives and Targets in 2024/25	Achievements in 2024/25
To reduce total paper consumption by 22.5% as compared with that in 2003	Total paper consumption has been reduced by **44.8%** when compared with that in 2003
To substitute 60% of plain paper with recycled paper	Recycled paper accounted for **64.5%** of total paper consumption
To landscape 150 upgraded slopes under the Landslip Prevention and Mitigation Programme	**150** upgraded slopes under the Landslip Prevention and Mitigation Programme have been landscaped
To plant at least 756,000 trees/shrubs	**996,000** trees/shrubs have been planted

2.3 2024/25年度環保目標和成就

為了持續提升我們在環保方面的表現，我們已訂立年度環保目標和指標。以下是我們在2024/25年度的目標與成果摘要：

2024/25年度的環保目標和指標	2024/25年度的成果
與2003年相比，將總用紙量減少22.5%	總用紙量較2003年減少了**44.8%**
以環保紙取代60%的普通紙	環保紙佔總用紙量**64.5%**
美化150幅在「長遠防治山泥傾瀉計劃」下鞏固的斜坡	已美化**150**幅在「長遠防治山泥傾瀉計劃」下鞏固的斜坡
種植至少75.6萬棵樹/灌木	已種植**99.6**萬棵樹/灌木

2.4 Green Office

We actively fulfilled our commitment under the "Clean Air Charter". In the past five years, we continued to actively participate in the Indoor Air Quality Certification Scheme, and our Civil Engineering and Development (CED) Building has been awarded the "Good Class" Indoor Air Quality Certificate for 21 consecutive years. Together with our outstation offices, we have received a total of one "Excellent Class" and 10 "Good Class" Indoor Air Quality Certificates.

We continued to fulfil our obligations under the "Carbon Reduction Charter", and were committed to achieving a progressive reduction in the total amount of carbon dioxide generated directly by office operations. From January 2024 to December 2024, the amount of carbon dioxide generated directly by the operation of the CED Building was about 24.95 tonnes, which was 0.5 tonnes less than the preceding year. The amount of indirect emission through consumption of water and electricity as well as disposal of paper waste was about 1,276.02 tonnes, which was 4.81 tonnes more than the preceding year. The increase was mainly due to more greenhouse gases were generated from handling of disposal of paper wastage at landfill compared to the preceding year. During the same period, the amount of carbon dioxide generated directly and indirectly by the operation of the Public Works Central Laboratory was about 711.4 tonnes, which was 82.9 tonnes more than the preceding year. The increase in carbon dioxide was mainly due to more tests done during the year.

The total electricity consumption of the Department was 5.52 million kWh in 2024. The Department will continue to strive towards its environmental targets. In 2024, we implemented and planned the following electricity saving measures:

- **Housekeeping Measures** - we continued to proactively remind colleagues to adopt daily energy saving measures (e.g. switching off lights and computers when away from office) and operated fewer passenger lifts during non-peak office hours. In addition, waste paper recycling bins were placed on every floor of CED Building to encourage recycling of waste paper. We also continued to proactively remind colleagues to reuse paper and print on both sides of the papers wherever possible.
- **Electricity Saving Projects** - we continued to upgrade the lighting system of the CED Building to enhance its efficiency. We also maintained close liaison with the EMSD to explore feasible energy saving opportunities.

Electric vehicles (EVs) do not produce exhaust emissions, which are one of the major sources of roadside air pollution. They reduce greenhouse gas emissions, thus improving roadside air quality. Moreover, EVs in motion do not involve internal combustion. Hence, they are therefore quieter than those powered by internal combustion engine, and they help reduce traffic noise pollution. By the end of 2024, CEDD had a total of 88 EVs (63 full EVs and 25 hybrid EVs).

2.4 綠色辦公室

我們繼續積極履行《清新空氣約章》的承諾。在過去五年，我們繼續積極參與室內空氣質素檢定計劃，而土木工程拓展署大樓已連續21年獲頒發「良好級」室內空氣質素檢定證書。連同總部以外的辦事處，本署獲頒合共一張「卓越級」及十張「良好級」檢定證書。

我們繼續履行《減碳約章》的承諾，並致力逐步減少辦公室運作直接產生的二氧化碳總量。在2024年1月至2024年12月期間，總部大樓的運作直接產生的二氧化碳為24.95公噸，比上一年度少0.5公噸。由水電消耗及廢紙棄置所引致的間接排放量則為1,276.02公噸，比上一年度多4.81公噸，增加的主要原因是在堆填區處理棄置的廢紙所產生的溫室氣體排放量較上一年度多。在同一期間，工務中央試驗所的運作直接和間接產生的二氧化碳為711.4公噸，比上一年度多82.9公噸。二氧化碳排放量的增加主要是由於本年度試驗數量增加。

本署2024年的總耗電量為552萬度千瓦時。我們會繼續致力達成環保目標。在2024年，本署已推行和計劃以下節省用電措施：

- **日常運作** - 本署繼續積極提醒同事採取日常節能措施 （例如在離開辦公室時關掉電燈及電腦），並於非繁忙辦公時段減少載客升降機的運行數量。此外，總部大樓每層皆設置廢紙回收箱，以鼓勵回收廢紙。同時，本署積極提醒同事盡可能重複使用紙張或雙面打印。
- **節能方案** - 本署繼續提升大樓的照明系統，以改善其效能。我們亦與機電工程署保持緊密聯繫，探討各種可行的節能方案。

電動車輛不會產生廢氣排放，而廢氣排放是引致路邊空氣污染的主要來源之一。電動車輛能減少溫室氣體排放，從而改善路邊的空氣質素。此外，電動車行走時不會進行內燃運動，因此較使用內燃引擎推動的車輛寧靜，有助減少交通噪音污染。截至2024年年底，本署共有88輛電動汽車（63輛全電動車及25輛混能車）。

2.5 Staff Training

To equip our staff and our consultants' site supervisory staff with the necessary knowledge of environmental legislation and to strengthen their competency in environmental monitoring duties, CEDD, in collaboration with the Environmental Protection Department, continued to organise training on the latest developments in environmental legislation. As of September 2024, over 90% of our project engineers, CEDD / consultants' site supervisory staff and contractors' key site staff members have completed the training.

2.5 員工培訓

為了讓我們的員工和顧問的工地監督人員具備必要的環境法例知識，並加強他們在環境監督工作上的能力，本署與環境保護署合作，持續舉辦有關環境法例最新發展的培訓。截至2024年9月，超過九成的項目工程師、土木工程拓展署/顧問的工地監督人員及承建商的工地要員已完成相關培訓。

3. Strengthen Resilience, Forward-looking Measures and Emergency Preparedness 加強抗禦力、前瞻性措施和應急準備

3.1 Climate Change Working Group on Infrastructure

The Government attaches great importance to the capability of government infrastructure in combating climate change and extreme weather, and in 2016 established the Climate Change Working Group on Infrastructure (CCWGI) in which CEDD coordinates the efforts of works departments in adapting to climate change. The CCWGI reports its work plans and progress to the inter-departmental Steering Committee on Climate Change and Carbon Neutrality [1] chaired by the Chief Executive. The CCWGI has coordinated studies relating to the potential effects of extreme temperatures, storm surges and super typhoons on government critical infrastructure. The CCWGI will take into account climate change parameters to update the relevant design standards [2] for infrastructure in a timely manner. With reference to the Sixth Assessment Report published by the United Nations' Intergovernmental Panel on Climate Change, the works departments under CCWGI updated relevant design manuals, guidance notes and practice notes in recent years. The CCWGI has completed a resilience study review for about 350 government CI, covering government buildings, coastal structures, drainage and sewerage, transport, water supplies, waste management and fill management infrastructure. Based on the recommendations of the resilience study, relevant departments responsible for government CI continue to formulate necessary works and measures to enhance resilience, and to implement plans in an orderly manner. The CCWGI also shares relevant experience and findings with public organisations and utility undertakers through relevant government departments, thereby facilitating the enhancement of overall infrastructure resilience of our society.

CEDD's continuous effort in coordinating the CCWGI underscores its commitment to advancing the United Nations Sustainable Development Goal 13 on "Climate Action" by combating climate change, mitigating its adverse impacts, and making Hong Kong a world-class sustainable and resilient city for living, working and playing.

1. To align with our country's commitment to achieving carbon neutrality by 2060, Hong Kong strives to achieve carbon neutrality by 2050. The inter-departmental Steering Committee on Climate Change and Carbon Neutrality chaired by the Chief Executive formulates the overall strategy and oversees the coordination of various actions.

2. The updated design manuals, guidance notes and practice notes include Port Works Design Manual, Stormwater Drainage Manual, Guidance Notes on Road Pavement Drainage Design, Structures Design Manual for Highways and Railways, Enhanced Design Standards of Aboveground Drainage System, GEO Technical Guidance Note No. 30 (TGN 30) on Updated Intensity-Duration-Frequency Curves with Provision for Climate Change for Slope Drainage Design, Design Guide for Drainage Installation for Government Buildings, etc.

3.1 氣候變化基建工作小組

政府十分重視公共基礎設施在應對氣候變化和極端天氣方面的能力，並於2016年成立了「氣候變化基建工作小組」，由本署協調各工務部門在適應氣候變化方面的工作。工作小組向由行政長官主持的跨部門「氣候變化及碳中和督導委員會」[1] 匯報其工作計劃和進度。工作小組已經協調進行針對極端溫度、極端風暴潮和超強颱風對政府關鍵基礎設施潛在影響的研究。工作小組會根據氣候變化參數，適時更新相關基礎設施的設計標準。參考聯合國政府間氣候變化專門委員會發表的《第六次評估報告》，工作小組轄下的工務部門在過去數年已更新相關的設計手冊、指引和作業備考[2]。工作小組已完成約350個政府關鍵基礎設施的抗禦力研究檢討，涵蓋政府建築物、沿海設施、排水及排污系統、運輸、水務、廢物管理和填料管理的基礎設施。相關負責政府關鍵基礎設施的部門根據研究建議，繼續制訂必要的工程和措施，以提升基礎設施的抗禦力，並有序推行計劃。此外，工作小組會透過相關部門將研究經驗及成果分享予公營機構及公用事業，從而促進社會整體提升基礎設施的抗禦力。

本署持續協調「氣候變化基建工作小組」的工作，彰顯了我們致力推動聯合國可持續發展目標第十三項「氣候行動」的承諾，透過應對氣候變化、減輕其不利影響，並建設香港成為可持續發展、具抗禦力、宜居、宜業、宜樂的世界級城市。

The Climate Change Working Group on Infrastructure strengthens government critical infrastructure
氣候變化基建工作小組強化政府關鍵基礎設施

1. 為配合國家於2060年前實現碳中和的承諾，香港特區正致力爭取於2050年前實現碳中和。由行政長官主持的跨部門「氣候變化及碳中和督導委員會」，負責制訂整體策略和監督各行動的協調工作。

2. 已更新的設計手冊、指引和作業備考包括《海港工程設計手冊》、《雨水排放系統手冊》、《路面排水設施設計指引》、《道路及鐵路結構設計手冊》、《提升地底以上排水系統的設計標準》、《土力工程處技術指引編號30-應用於斜坡排水設計並加入氣候變化考量修訂的降雨強度-持續時間-頻率曲線》和政府樓宇的排水設施設計指引等。

3.2 Emergency Preparedness for Extreme Weather

Emergency preparedness plays a vital role in ensuring the safety of communities. With the increasing occurrence of extreme weather events due to climate change, it is crucial to be prepared for more frequent and large-scale landslide incidents to support the sustainable development of Hong Kong. The Geotechnical Engineering Office (GEO) of CEDD maintains a 24-hour, year-round Emergency Service which provides geotechnical advice to government departments, including rescue teams and slope maintenance departments, on actions to be taken in case of danger arising from landslides. The primary objective of the GEO Emergency Service is to protect the general public from landslide hazards and to assist government departments in restoring public services disrupted by landslides as soon as possible. Upon receipt of landslide reports, GEO deploys its geotechnical engineers to inspect the site so as to provide geotechnical advice to other government departments. Such advice may involve closure of roads, evacuation of buildings and implementation of emergency slope repair works, all of which aim to mitigate the risks posed by landslides to the public.

GEO has been making continuous effort to enhance its emergency preparedness for extreme weather events through the application of new technologies, enhanced training for members of emergency teams and strengthened logistic support for emergency operations. The new enhancement initiatives implemented before the onset of 2024 wet season included (i) enhancing communication with the incident callers to collect first-hand information on landslides (e.g. uploading incident photos to the Landslide Information System) to facilitate preliminary assessment of the severity of incident by the GEO Emergency Control Centre for prioritisation; (ii) enhancing the provision of key incident information for upward reporting to Emergency Monitoring and Support Centre; (iii) adopting new technologies, such as robotics and remote sensing, to assess emergency situations and residual risks of landslide incidents; and (iv) mobilising back-up vehicle fleets from other CEDD offices to cater for possible surge in landslide incidents. These enhancements improved the effectiveness and efficiency of GEO emergency services during the 2024 wet season.

3.2 為極端天氣作應急準備

應急準備在確保社區安全方面發揮着至關重要的作用。隨着氣候變化導致極端天氣事件日益增多，為更頻繁及大規模的山泥傾瀉事故做好準備，對香港的可持續發展十分重要。本署轄下土力工程處設有全年24小時緊急服務，一旦發生山泥傾瀉等危險情況，能適時為各政府部門（包括救援隊伍和斜坡維修部門）提供有關岩土工程方面的意見和須採取的應變行動。土力工程處緊急服務的主要目的，是保障公眾免受山泥傾瀉威脅，以及協助政府部門盡快恢復受影響的公共服務。在接到山泥傾瀉報告後，土力工程處會調派土力工程師趕赴現場視察，為各部門提供有關岩土工程的意見。這些意見包括封閉道路、疏散受影響樓宇的居民和進行緊急斜坡維修工程，以盡量減低山泥傾瀉對公眾所構成的風險。

土力工程處一直不斷努力，透過利用嶄新科技、加強緊急隊伍人員的培訓，以及強化緊急行動的後勤支援，以提升其在應對極端天氣事件方面的緊急應變能力。在2024年雨季開始前，所推行的新改善措施包括(i)加強與事故報告者的溝通，以收集山泥傾瀉的第一手資料（例如將照片上載至山泥傾瀉資訊系統），以幫助緊急控制中心作初步嚴重性評估及確定處理優先次序；(ii)優化向緊急事故監察及支援中心提供訊息的系統功能；(iii)採用機器人和遙感等新技術評估山泥傾瀉事故的緊急情況和剩餘風險；(iv)從土木工程拓展署轄下其他辦事處調配後備車隊，以應對可能出現的大量山泥傾瀉事故。這些改善措施在2024年雨季期間進一步提升了土力工程處緊急服務的效能和效率。

Landslide at Bride's Pool Road
新娘潭路山泥傾瀉

Emergency Control Centre
緊急控制中心

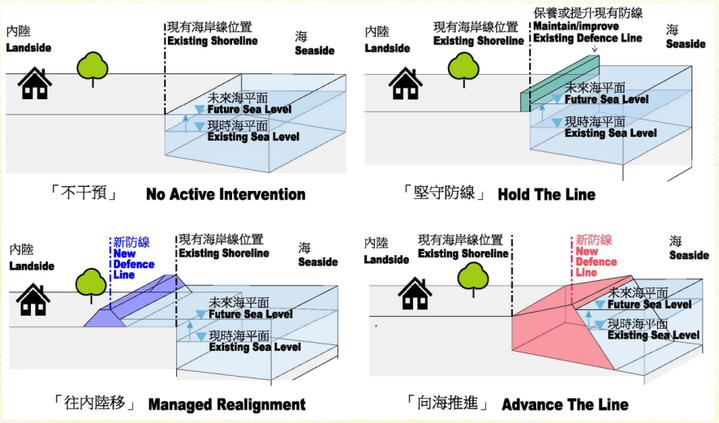
3.3 Combating Sea Level Rise and Storm Surges

CEDD completed a territory-wide Coastal Hazards Study in 2021. Adopting a risk management approach to assess the likelihood of coastal hazards and the severity of their consequences as well as drawing on records of past damage caused by coastal flooding during severe typhoons, the study identified 26 low-lying or exposed coastal residential areas with higher risks. Improvement works have been taken progressively to safeguard public safety. As of the end of 2024, improvement works had been completed in 13 areas, and all the remaining works are anticipated to be completed in an orderly manner by 2027.

CEDD adopts multi-layered enhancement measures in the formulation of a pragmatic and cost-effective enhancement plan that strikes the right balance between potential coastal risks and practical mitigation solutions.

In addressing the uncertainties in climate change projections, CEDD has adopted the Progressive Adaptive Approach (PAA) in planning coastal enhancement measures. By incorporating Design Allowance where practically feasible, coastal infrastructure is designed with provision for expansion to enable future upgrades as needed to address these uncertainties. The advantage of including Design Allowance is that it provides sufficient flexibility and adaptability. If actual conditions change or the adverse effects of climate change exceed current projections, effective response measures can still be implemented in a timely manner (e.g. building larger foundations to allow for increasing the height of seawalls or wave wall towards the end of the century based on actual conditions).

To strategically address the potential risks associated with ongoing sea level rise and increasing storm surges, CEDD completed a study on the Shoreline Management Plan by the end of 2024. It provides guidelines on planning and implementing urban coastal development and protection measures, as well as formulating related long-term strategies and preventive measures to enhance the capacity of the Government and relevant stakeholders to combat climate change.



Shoreline management strategies
海岸管理策略

3.3 應對海平面上升及風暴潮

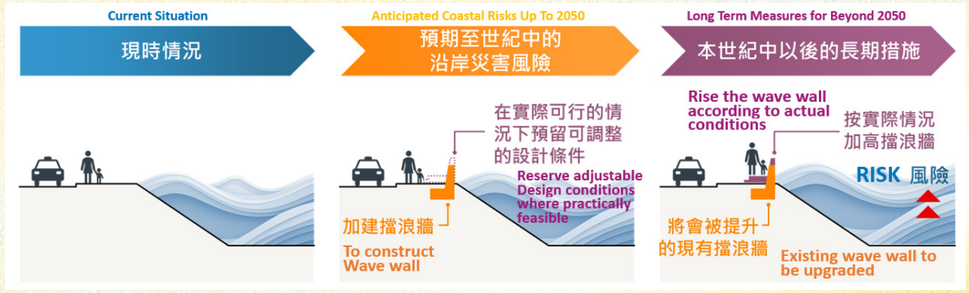
本署於2021年完成了全港性的沿岸災害研究。研究採用風險管理方法，評估發生沿岸災害的可能性及其後果的嚴重程度，並參考過往在超強颱風襲港期間因沿岸水浸導致的損毀記錄，識別了26個較高風險的沿岸低窪或當風住宅地區，並已陸續推展改善工程，保障市民生命安全。截至2024年年底，13個地區已完成改善工程，預計餘下工程將在2027年或以前有序完成。

本署採取多層保護的改善措施，制訂務實且具成本效益的改善計劃，在潛在的沿岸風險和實際的緩解方案之間取得適當的平衡。

為了應對推算氣候變化的不確定性，我們在規劃沿岸改善措施時採取了「循序漸進的原則」。在實際可行的情況下加入「應變設計容量」，即在設計上預留可擴展的條件，讓日後有需要時可以進一步提升基礎設施的設計容量，以應對這些不確定性。加入「應變設計容量」的優點是可提供足夠的靈活性和可調整性，當實際情況改變或氣候變化的不良影響超過原有估計，我們仍可及時制定有效的應對措施，例如建造較大的地基，以便臨近本世紀末時，可以按實際情況加高海堤或擋浪牆。

為策略性地應對海平面持續上升和風暴潮增加帶來的潛在風險，我們於2024年年底完成「海岸管理計劃」研究，為規劃和實施城市的沿岸建設和防護措施提供指引，並制訂相關的長遠策略及防禦措施，以加強政府及相關持份者應對氣候變化的能力。

Multi-layered enhancement measures
多層保護的改善措施



Progressive Adaptive Approach
循序漸進的原則

Strengthen Resilience, Forward-looking Measures and Emergency Preparedness
加強抗禦力、前瞻性措施和應急準備

In addition to the provision of emergency landslide services, CEDD has been executing a series of emergency response action plans during the typhoon season to mitigate the impacts of coastal hazards. Sandbags are available in multiple areas for public use to address emergencies.

When a typhoon approaches Hong Kong, CEDD staff will inspect the sandbag storage containers in remote and outlying island locations and arrange for contractors to refill sandbags as needed. With the typhoon intensifying, we will provide sandbags for public use at other designated locations which are accessible by land transport, and arrange contractors to assist the public in transporting sandbags as required. In addition, the latest information is disseminated to the public via social media platforms.

Arranging contractors to refill sandbags as needed
安排承建商按需要補充沙包

In addition to regular inspections and maintenance of marine facilities, we will promptly initiate special inspections, after the lowering of Typhoon Signal No. 8 or above, to ensure the structural safety and normal operation of ferry piers and essential marine facilities.

除提供山泥傾瀉緊急服務外，本署在颱風季節會執行一系列緊急應變行動計劃，以減輕沿海災害的危險，並在多個地區提供沙包供市民使用，以應對緊急情況。

當颱風逼近香港時，我們的同事會檢查離島和偏遠地區的沙包儲存箱，並安排承建商按需要補充沙包。隨着颱風增強，我們會在其他可通過陸路運輸到達的特定地點提供沙包供市民使用，並安排承建商按需要協助市民運送沙包。另外，我們亦會透過社交媒體向市民發布最新的有關資訊。

除了定期檢查和維修海事設施外，每當8號或以上颱風信號解除後，我們會迅速展開風後的特別檢查，以確保各渡輪碼頭和重要海事設施的結構安全及正常運作。

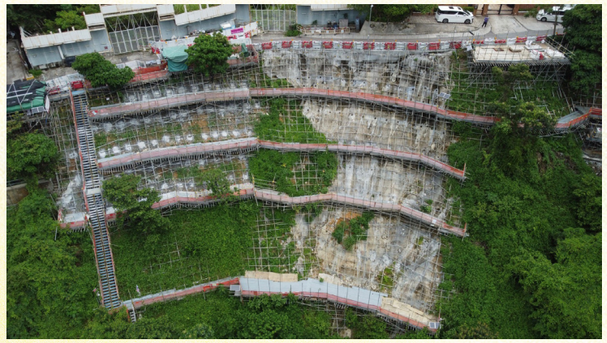
Post-typhoon special inspection
颱風後的特別檢查

3.4 Continuously Enhancing Resilience in Coping with Landslide Risk

In order to cope with the landslide risk caused by more frequent extreme rainstorms under climate change, the GEO of CEDD keeps enhancing the capability of existing slopes to withstand landslide risk through the following strategies:

(a) carrying out regular inspections and preventive maintenance for government slopes, requiring private owners to fulfill their duties in maintaining their slopes, and exercising geotechnical control over public works and private development projects to ensure slope safety;
(b) continuing the Landslip Prevention and Mitigation Programme (LPMitP) for strengthening slopes against inclement weather according to a risk-based approach; and
(c) reviewing slope management in Hong Kong and advising the Government on technical aspects by international experts regularly, with the aim of continuously improving the quality of slope management.

Through the above strategies, the number of landslides in recent years has been significantly reduced, and the casualties caused by landslides have also been noticeably reduced. In response to the extreme weather brought by climate change, the Government will adopt a more pre-emptive and strategic approach to continuously enhance the prevailing slope engineering design standard and preventive measures, and to support slope safety and natural hillside risk management through the application of innovation and new technologies (e.g. remote sensing technology), as well as advanced computer equipment to analyse enormous data. The Government will also explore the use of big data, artificial intelligence and other technologies to improve our landslide risk assessment capabilities. In addition, the Government has been conducting systematic investigations and studies on major landslide incidents triggered by extreme rainstorms and devising focused measures to mitigate landslides from natural hillsides.



Upgrading substandard man-made slopes
鞏固不合標準的人造斜坡

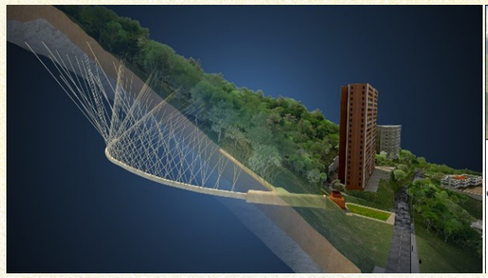
3.4 持續提升應對山泥傾瀉風險的抗禦力

為應對在氣候變化下更頻繁的極端暴雨所帶來的山泥傾瀉風險，本署轄下的土力工程處會繼續透過以下策略，持續提升現有斜坡應對山泥傾瀉風險的能力：

(a) 為政府管有的斜坡進行定期檢測和預防性的維修工作，屬私人管有的斜坡則要求業主履行維修責任，並管制工務工程和私人發展計劃的岩土工程，保障斜坡安全；
(b) 持續推展「長遠防治山泥傾瀉計劃」，按「風險為本」原則，持續強化斜坡抵禦惡劣天氣的能力；以及
(c) 由國際專家定期檢討斜坡管理工作和就技術議題向政府提供意見，務求不斷提升斜坡管理的質素。

透過上述策略，近年山泥傾瀉的數目已大幅降低，導致的傷亡人數亦已明顯減少。因應氣候變化帶來的極端天氣，政府會作前瞻性預防和策略部署，持續優化現行斜坡工程的設計標準和預防措施，應用創新科技（例如利用遙感探測技術）及採用先進的電腦設備以分析大量數據，支援各方面與斜坡安全和天然山坡風險管理相關的工作。政府亦會研究更好善用科技如大數據和人工智能，進一步提高山泥傾瀉風險評估能力。另外，政府一直就極端暴雨引發較大型的山泥傾瀉事故進行系統性調查和研究，並針對天然山坡策劃山泥傾瀉緩減措施。

The Slope Safety Technical Review Board regularly reviews the Government's work in slope safety management and provide advice on the technical aspects of the Slope Safety System
斜坡安全技術檢討委員會，定期檢討政府斜坡安全管理工作及就斜坡安全系統提供技術意見



Po Shan Drainage Tunnel – Innovative groundwater regulation system
寶珊排水隧道 - 創新地下水位調控系統

Applications of remote sensing technologies
遙感技術的應用

4. Green, Sustainable and Nature-based Developments 綠色、可持續和自然為本發展

4.1 Round-the-Island Trail

The 60km-long "Round-the-Island Trail" (the Trail) will connect the waterfront promenades on the northern shore on Hong Kong Island with a number of existing promenades and countryside walking trails in the Southern District. Through a sustainable and nature-based development planning, we aim to connect the urban with nature, create a living environment with a greater sense of well-being and optimise the liveability of Hong Kong.

CEDD commenced a feasibility study in May 2023 on the overall planning, alignment and enhancement proposals for various sections of the Trail, and undertook works in phases to progressively connect the Trail and improve the pedestrian environment of some existing sections. In 2024, we completed the landscape improvement works at Victoria Road near Mount Davis, and constructed a trail connecting Tai Tam Tuk Reservoir Dam to Hong Kong Trail Section 7, providing the public and tourists with an additional picnic route to enjoy the nature.

The overall design of the Trail is based on three main concepts. The first is "people-oriented and social inclusion", allowing visitors to enjoy the experience with water and enhancing their connection and interaction with waterfront spaces. The second design concept is "Culture, Heritage and Hong Kong's Characteristic". The Trail connects nearby historical heritages, cultural landmarks and major attractions of Hong Kong Island, allowing visitors to walk along the trail and explore Hong Kong at the same time. The third one is "Development and Conservation". During the planning and design stages, we exchanged views and collaborated with relevant departments, stakeholders and environmental groups to actively consider adopting sustainable approach and handmade trail method for constructing the Trail at appropriate locations.

The section between South Bay Beach and Chung Hom Kok Service Reservoir will be the first hiking trail in Hong Kong adopting the handmade trail method outside country park areas. The handmade trail method advocates "adapting to local conditions and using locally sourced materials". This method uses natural materials available on site, such as stone and wood, to build hiking trails manually, so as to reduce adverse impacts on the natural environment and ecology, as well as to protect the existing natural landforms and landscapes.

We also plan to organise workshops to allow the public to participate in the hiking trail construction, including each stone step, so as to enhance public awareness of protecting hiking trails and promote the concepts of ecological conservation and sustainable development.

4.1 活力環島長廊

全長約60公里的活力環島長廊，將連接港島北岸海濱長廊及南區多條現有海濱及郊野步行徑。我們以可持續及自然為本的發展規劃，讓城市與大自然聯繫起來，優化生活環境，以締造更宜居的香港。

本署於2023年5月就環島長廊的整體規劃、走線和不同路段的優化方案展開可行性研究，並分階段展開工程以陸續駁通長廊及改善部分現有路段的步行環境，當中我們已於2024年完成域多利道近摩星嶺一段行人路的園境美化工程及駁通了連接大潭篤水塘水壩至港島徑第7段的行山徑，為市民和遊客提供多一條接觸大自然的郊遊路線。

環島長廊整體設計圍繞三個主要概念。第一是「以人為本、社區共融」，讓遊人享受親水、近水、觀水的體驗，增強他們與海濱空間的連繫和互動。第二個設計概念為「歷史文化及香港特色」，環島長廊連繫香港島的歷史遺產、文化地標和特色景點，讓遊人環島同時可以深度遊香港。第三是「發展與保育」，在規劃和設計環島長廊時，我們與相關政府部門、持份者及環保團體交流意見和協作，因應不同山徑的位置及實際狀況，積極考慮在合適的路段以可持續山徑概念和手作步道方式修築山徑。

當中接駁南灣泳灘至春磡角配水庫的一段，將會是全港第一條在郊野公園範圍外採用手作步道方式建造的行山徑。手作步道提倡「因地制宜、就地取材」，盡量採用現場天然物料，例如石頭、木材等，以人手方式修建行山徑，減少對自然環境和生態造成不良影響，保護現有天然地貌及景觀。

我們亦計劃舉辦工作坊，透過讓市民親身參與建造行山徑，打造每一級石階，藉此增強公眾對保護行山徑的意識，推廣生態保育和可持續發展的理念。

Hiking trail built using handmade trail method
採用手作步道方式建造的行山徑

4.2 East Coast Boardwalk

Background

The 2.2 km-long East Coast Boardwalk (ECB), connecting Fortress Hill and Quarry Bay, aims to enhance connectivity along the North Point waterfront and provide a vibrant promenade for public enjoyment. It provides the missing link to accomplish a continuous harbourfront promenade of about 13 km, spanning from Kennedy Town in the west to Shau Kei Wan in the east.

Layout plan of East Coast Boardwalk
東岸板道的平面圖

Environmental Management

The protection and preservation of the Victoria Harbour and the compliance with the Protection of the Harbour Ordinance (PHO) were major considerations in the planning and design stages of the ECB. The alignment of the ECB falls mainly underneath the Island Eastern Corridor (IEC) such that the existing piled foundations and protection structures of IEC can be utilised as structural supports for the boardwalk decks, thereby minimising the need for constructing new foundations in the harbour.

"Design for Manufacture and Assembly (DfMA)" was adopted in the construction of the ECB. Deck segments, comprising steelwork structures and architectural finishing works (such as glass balustrades), were completed in an off-site prefabrication yard in Zhongshan. They were then transported individually to the site by barge and accurately placed into position using self-propelled modular transporters (SPMT).

Boardwalk decks utilising existing IEC piled foundations
東岸板道利用東區走廊現有的樁柱基礎

DfMA reduces material wastage through precise prefabrication, as components are produced in controlled environments to exact specifications. This approach helps avoid over-ordering of materials and excess scrap.

As compared with on-site construction, DfMA also lowers energy consumption by reducing complicated logistics, transportation needs, and construction time, thus contributing to a reduced carbon footprint. In addition, the design of the ECB incorporated the consideration of sustainability by adopting more durable and recyclable materials, such as recycled timber and fibre-reinforced plastic, which helps extend lifespans of materials and promote end-of-life recycling .

With regard to the marine piling works for the ECB, the construction method was thoroughly planned to elimate any risk of water contamination in Victoria Harbour during the course of the works.

With meticulous planning, the Contractor adopted a new Reverse Circulation Drilling method for the construction of the pre-bored rock socketed H-pile. Using this method, excavated debris was transported directly to a sedimentation tank through drill rods and pipes, thus preventing water pollution problems more effectively than the conventional method.

Also, during the period when night time works were required, temporary acoustic noise barriers were set up around the temporary piling platform to mitigate any noise and light nuisance to nearby residents.

4.2 東岸板道

背景

連接炮台山與鰂魚涌的東岸板道全長約2.2公里，旨在提升北角海濱的連接，為公眾提供一個充滿活力的海濱空間，貫通西至堅尼地城及東至筲箕灣長達13公里的海濱長廊。

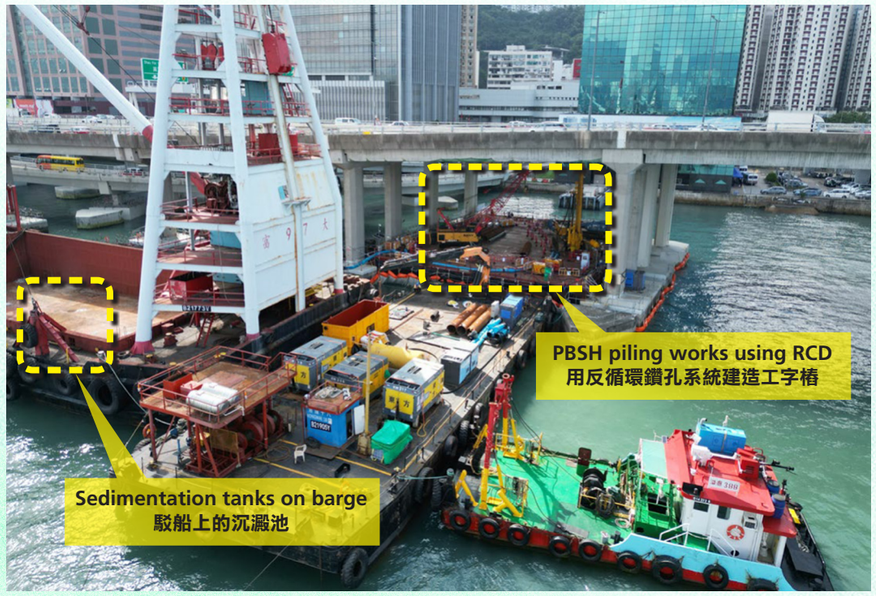
環境管理措施

保育和保護維多利亞港及遵守《保護海港條例》是我們在規劃和設計東岸板道階段的主要考慮。東岸板道的走線大致位於東區走廊的下方，利用東區走廊現有的樁柱基礎和防護結構作為板道的支撐，減少在海港建造新的地基。

我們在東岸板道的建造過程中採用了「裝配式設計」方法。橋面段由鋼結構和建築裝飾工程(例如玻璃欄杆)組成，並在中山的場外預製組件場地完成。這些橋面段隨後以躉船逐一運送至施工現場，再由自動模組化運輸車精準安放到位。

「裝配式設計」透過精確的預製工序來減少材料浪費，因為各組件均在受控環境下依照精確規格製造。這種方法有助於避免過度採購物料和產生多餘的廢料。

與傳統現場施工相比，這種方法透過減少複雜的物流、運輸需求以及施工時間來降低能源消耗，從而減少碳足跡。此外，東岸板道的設計亦有考慮可持續發展，採用更耐用及可回收的材料，例如再生木材和纖維強化塑料，有助延長材料的使用壽命並推動材料在生命週期末的回收再利用。



Reverse circulation drilling method for marine piling works
使用反循環鑽孔方法在海上建造樁柱

至於板道的海上樁柱工程方面，其施工方法經過全面規劃，以防止在施工過程中使維多利亞港的水質受到污染。

經過周密的規劃，承建商採用了一種新的反循環鑽孔方法來建造樁柱。這種方法透過鑽桿和管道將鑽挖的碎石直接運送到沉澱池，所以比傳統方法能更有效地預防海水污染問題。

此外，在夜間施工時，工程人員在臨時打樁平台周圍設置了臨時隔音屏障，以減少噪音和燈光對附近居民的影響。

Temporary acoustic noise barrier for marine piling works near residential blocks
於住宅附近進行海上樁基工程時的臨時隔音屏障

4.3 Planting Day at Needle Hill, Shatin 2024

On 2 November 2024, CEDD organised a Tree Planting Day at Needle Hill in Shatin to plant native tree seedlings on the bare and eroded slopes that were once damaged by a hill fire. Apart from serving as a soil erosion control measure, the planting event served a dual purpose. In addition to erosion control planting, biochar was adopted to test its ability in enhancing the growth of tree seedlings planted during the dry season. Biochar is an eco-friendly soil amendment converted from organic waste through pyrolysis, a thermal decomposition process under low oxygen. Biochar is also a highly porous form of charcoal which can help with water retention as well as improving nutrient availability and soil properties. In the trial, biochar produced from local woody waste was mixed into the growing media before planting. As observed, although the planting was conducted beyond the usual planting season, the tree seedlings survived the harsh, dry and exposed winter conditions at the Needle Hill top. With the experience gained, we are planning to set up more trials on the use of Biochar under the Soil Erosion Control Planting Programme. The objective is to identify climate-resilient vegetation covers for application on natural slopes with different degrees of soil erosion.

DCED led CEDD colleagues to participate in the Tree Planting Day at Needle Hill, Shatin
署長帶領本署同事參與在沙田針山舉行的種植日

4.3 沙田針山種植日

本署於2024年11月2日在沙田針山舉辦了植樹日，為曾遭山火燒毀及出現土蝕的山坡，栽種本地苗木。此次種植活動具有雙重目的，除了作為水土流失的控制措施外，還試驗了生物炭對旱季種植苗木的成效。生物炭是一種生態友善的土壤改良劑，由有機廢棄物經熱裂解（低氧條件下的熱分解過程）轉化而來。生物炭亦是一種多孔的木炭，能夠儲存水分、改善泥土養分的可用性和土壤特性。在是次種植試驗前，我們在泥土內混入了由本地木廢料生產的生物炭。據觀察，儘管植物是在一般種植季節之後栽種，但樹苗在該冬天經得起針山惡劣環境的考驗，例如乾燥和空曠的山頂情況。憑藉所獲得的經驗，我們計劃在「保土種植計劃」下進行更多的生物炭試驗，目的是識別能適應氣候變化並適用種植於不同土壤侵蝕程度的天然山坡上的植被。

Group photo after the completion of planting
在種植完成後的大合照

4.4 Nature-based Solutions Study

The term "Nature-based Solutions" (NbS) has been widely adopted in international site development or conservation projects in recent years. The International Union for Conservation of Nature (IUCN) defines NbS as " actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits". The concept of NbS is about working hand in hand with nature to design and implement solutions that are not only efficient and effective, but also environmentally friendly and socially inclusive.

It's the harmony between human development and the natural world. CEDD's projects, including Long Valley Nature Park, San Tin Technopole and Sam Po Shue Wetland Conservation Park, have already adopted the NbS concept. Moreover, we have engaged a consultant to study and advise on the NbS framework applicable to new development areas in Hong Kong, and to develop standardised and systematic NbS design guidelines.

We have reviewed relevant literature and publications from Chinese Mainland and overseas to understand global practices, and to identify what we can incorporate and improve to better suit the local context in Hong Kong. Experts from academia, professional institutes, green groups and private sector have been consulted in the preparation of the guidelines.

The guidelines will provide guiding principles for project proponents in planning and designing of NbS measures for a sustainable future.

We anticipate that with the implementation of the NbS design guidelines, we can effectively design, monitor, and manage our infrastructure to benefit both humans and nature.

4.4 自然為本的解決方案研究

近年來，「自然為本的解決方案」（NbS）於國際上土地開發或保育項目中經常採用。國際自然保護聯盟(IUCN)將其定義為『保護、可持續管理和恢復自然的和被改變的生態系統的行動，能有效和適應性地應對社會挑戰，同時提供人類福祉和生物多樣性效益』。NbS的核心概念在於與自然融合，設計並實施不僅高效、實用，同時兼具環保與社會包容性的解決方案。

這是人類發展與自然世界的和諧共生。本署推行的項目已採用NbS理念，當中包括塱原自然生態公園、新田科技城及三寶樹濕地保育公園等。此外，我們已委聘顧問進行研究，就適用於香港新發展區的NbS框架提供建議，並制定一套規範化及系統化的NbS設計指引。

我們參考了國內和海外的相關文獻及刊物，藉此了解國際實踐經驗，並從中篩選可借鑒及優化的內容，以更切合香港本地情況。在制定指引過程中，我們諮詢了來自學術界、專業機構、環保團體及私營機構的專家意見。

這套指引將為項目倡議者在規劃和設計NbS措施時提供指導原則，以實現可持續發展的未來。

我們預期隨着NbS設計指引的實施，將能有效地設計、監測和管理基礎設施，實現人與自然和諧共生的目標。

Photo of Long Valley Nature Park
塱原自然生態公園照片

Photomontage of San Tin Technopole's Riverside Park
新田科技城河畔公園合成照片

Photomontage of Sam Po Shue Wetland Conservation Park
三寶樹濕地保育公園合成照片

4.5 Office Green Measures

- Lighting Zone Control to encourage staff to switch off lights in areas that not occupied or in use
- The use of air-conditioning and lifts beyond normal office hours should be carefully controlled to avoid energy waste
- Staff staying beyond normal office hours should open the windows or use electric fans for ventilation
- Extended use of air-conditioning due to overtime work will require full justification

4.5 辦公室的綠色措施

- 照明區域控制，鼓勵員工關閉無人或不使用的區域的燈光
- 嚴格控制正常辦公時間以外的空調和電梯的使用，以避免能源浪費
- 在正常辦公時間以外留守的人員應打開窗戶或使用電風扇通風
- 因加班而延長空調使用時間需提供充分理由

5. Caring for Our Environment 關心我們的環境

5.1 Mitigation Measures at Works Sites

CEDD adopts a comprehensive and proactive technical approach to implement environmental mitigation measures at work sites, ensuring sustainable development while minimising environmental impact.

Key Strategies include the integration of advanced construction technologies, such as low-noise equipment and dust suppression systems, to reduce air and noise pollution. Water pollution control measures, including the adoption of silt curtain and tarpaulin on slopes adjacent to the river, are systematically deployed to prevent water contamination. The department also emphasises the use of environmentally friendly materials and sustainable practices, such as upcycling felled trees into furniture or decorations. Real-time environmental monitoring systems are employed to track air quality, noise levels, and water discharge, ensuring compliance with regulatory requirements.

CEDD aligns with sustainability goals while safeguarding public health and environmental protection through continuous research and innovation, further enhancing the effectiveness of mitigation strategies in the future.

5.1 在工地採取的緩解措施

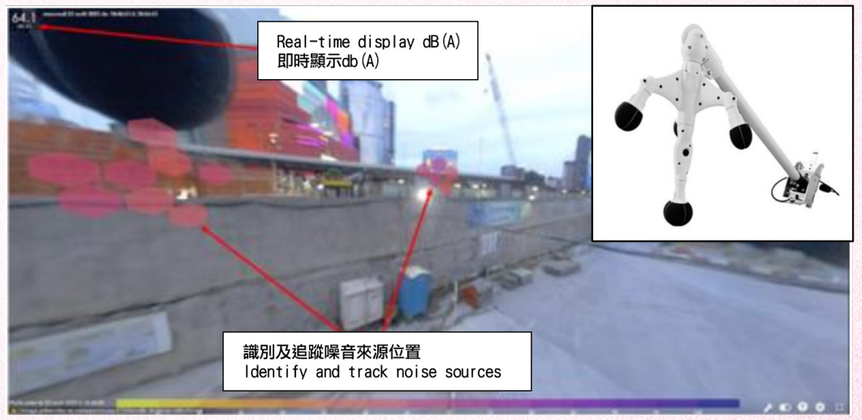
本署採取全面且積極的技術方法，在部門管轄下的工地實施環境緩解措施，確保可持續發展同時減低對周邊的環境影響。

主要的策略包括整合先進的建築技術，例如低噪音設備、塵埃控制系統等，以減少空氣及噪音污染；採用有系統的水污染管制方案，包括設置防淤泥帳篷、在鄰近河道的斜坡設置淤泥屏障及防水布等，以防止水質污染。此外，部門同時注重可持續發展，多採用環保材料循環再用，例如將砍伐後的樹木升級再造為家具或裝飾物。通過實時環境監測系統監控工地的空氣質量、噪音水平及排水數據等，確保工地施工程序符合法例要求。

本署將通過科研創新以優化未來緩解措施的成效，在保障公眾健康與環境保護的同時，繼續推動可持續發展的目標。

a. Noise Pollution 噪音污染

Install acoustic blankets at the site and conduct regular additional noise monitoring to protect the public from construction noise and dust.
在工地設置隔音屏障，並定期進行額外的噪音監測，以減低施工噪音和灰塵對公眾的影響



Use 360° Noise Monitoring Sensor to identify and track noise sources
使用360度噪音監測感應器識別和追蹤噪音源

To minimise noise, dust and vibration, the projects utilise the 'cut-and-lift' method instead of the conventional demolition method to safeguard the safety and health of workers and prevent disturbances to the surrounding environment
為減少噪音、塵埃及震動，盡可能使用「切割及吊運」方法取代傳統拆卸方法（挖掘機附設油壓砲），以保障工友的安全及健康，並避免對周邊環境造成滋擾

Wrap breaking tip with sound insulating material
以隔音材料包裹破碎機的尖端

b. Air Pollution 空氣污染

The wedge prevents the vehicle from sliding, hence also improving the efficiency of wheel washing
此楔塊能防止車輛滑動，從而提高清洗車輪的效率

Install dust sensors to monitor air quality in real time
安裝灰塵感應器以實時監測空氣質量

Inspection of emission by construction plants to ensure no excessive dark smoke is emitted
檢測施工機械以確保沒有釋放過量黑煙

c. Water Pollution 水污染

Measures to reduce water pollution from the sites:

- Install water saving sanitary fitments to reduce water consumption of site offices
- Install rainwater harvesting systems to collect rainwater for irrigation
- Install effluent rense systems to collect treated water for wheel washing
- Install cut-off drains at site entrances to prevent overflowing. Conduct regular maintenance to ensure the normal operation of drainage system

減少工地水污染的措施:

- 安裝節水衛生設備，以減少工地辦公室用水量
- 安裝雨水回收系統，以收集雨水供灌溉之用
- 安裝再生水系統，以收集處理後的水供清洗車輪
- 在工地入口設置截流排水系統，以防止溢流，並為系統進行定期維修保養以確保其正常運作

Water saving aerator
節水型起泡器

Rainwater harvesting system
雨水回收系統

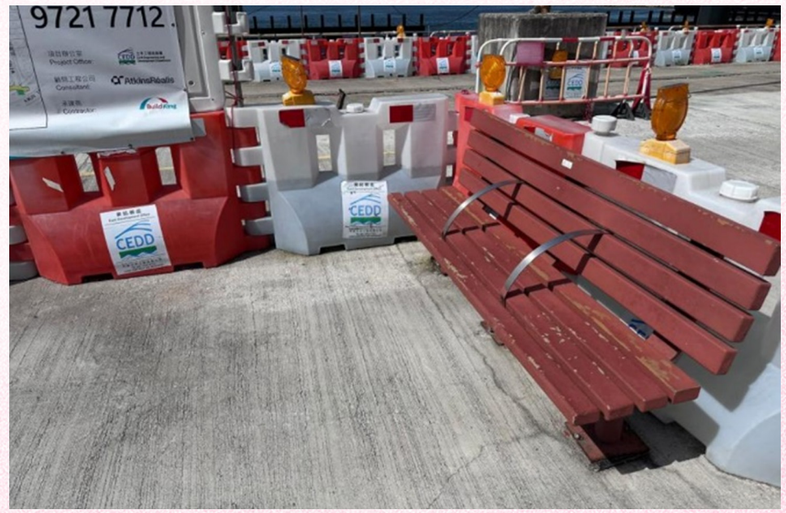
Recycle effluent with the treatment system
利用處理系統回收再生水

Install silt curtains to protect the river from leakage of silty water
設置淤泥屏障，以保護河流免受泥水滲漏影響

Cover the slopes adjacent to the river with tarpaulin sheet to reduce silty runoff
以防水布覆蓋鄰近河流的斜坡，從而減少泥水徑流

d. Waste Management 廢物管理

Upcycle felled trees into furniture and public benches
將砍伐的樹木升級再造為家具和公共長椅



Refurbished furniture from ex-Kwun Tong Ferry Pier Square
將前觀塘碼頭廣場的設施翻新再用

Use of aluminum formwork for concrete formation
使用鋁模板進行混凝土成型

Use of recycled aggregates in concrete pavers (eco-pavers) for footpaths
在行人路採用加入循環再造物料的混凝土鋪路磚（環保地磚）

5.2 Bioremediation Treatment at To Kwa Wan Typhoon Shelter to Alleviate the Water Quality and Odour

Bioremediation Treatment Works at To Kwa Wan Typhoon Shelter

Over the years, the water quality at the To Kwa Wan Typhoon Shelter (TKWTS) has deteriorated due to issues such as misconnections of sewer pipes to stormwater drains and unauthorised discharge of pollutants into stormwater drains. Pollutants accumulated on the seabed and gave off odour, affecting not only the nearby environment but also the living quality of local residents.

To tackle these issues, the Environmental Protection Department (EPD) initiated the bioremediation treatment works at TKWTS and entrusted CEDD as the works agent. Upon completion of the project design by the EPD, CEDD commenced the bioremediation treatment works at TKWTS in June 2024. The treatment works covered an area of approximately 3.3 hectares adjacent to the Kai Tak Sports Park. The goals were to improve water quality and mitigate the odour problem of the typhoon shelter through bioremediation technology, thereby resulting in a better coastal environment . The treatment works were completed in December 2024.

Bioremediation treatment employs micro-organisms to degrade pollutants into non-toxic substances and harmless gases such as nitrogen and carbon dioxide. CEDD's project team deployed a specially designed injection barge to inject calcium nitrate solution as oxidants into the seabed sediments to facilitate the degradation process. The bioremediation treatment, being environmental friendly and sustainable, could effectively reduce organic pollutants and odour.

After the completion of the bioremediation treatment, multiple sediment tests and water quality monitoring were conducted in the area. The results indicated the concentration of acid volatile sulphide in sediments had been substantially reduced. Also, the turbidity of seawater at the TKWTS was improved, with the dark sediment colour turned pale, and the odour problem was notably alleviated.

5.2 以生物除污法改善土瓜灣避風塘的水質及氣味

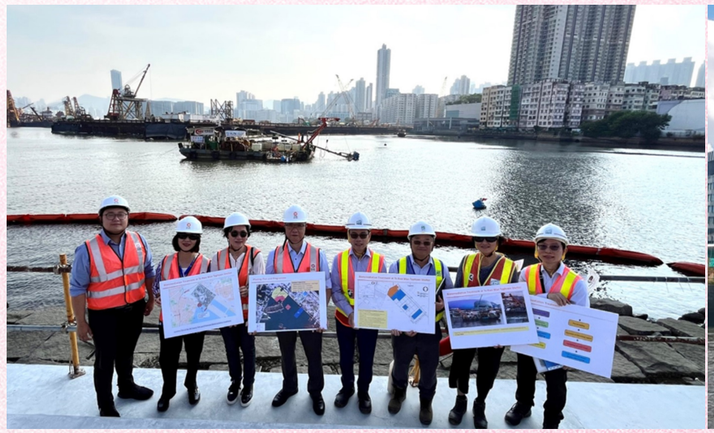
土瓜灣避風塘生物除污工程

多年來，土瓜灣避風塘的水質因污水渠錯駁至雨水渠及非法傾倒污染物入雨水渠等問題而持續惡化。污染物在海牀積聚，並散發異味，不僅影響近岸環境，更有損該區居民的生活質素。

為解決這些問題，環境保護署倡導土瓜灣避風塘生物的除污工程，並委託本署作為工程代理。在環境保護署完成除污工程設計後，本署於2024年6月在土瓜灣避風塘展開除污工程。除污工程毗鄰啟德體育園，覆蓋面積約為3.3公頃。其目標是透過生物除污技術改善避風塘的水質和氣味，從而改良沿海環境。除污工程已於2024年12月完成。

生物除污處理利用微生物將污染物分解為無毒物質和無害氣體（如氮氣和二氧化碳）。本署工程團隊利用一艘特別設計的注射機械船，將硝酸鈣溶液作為氧化劑注入海牀海泥中，從而促使微生物分解有機污染物。生物除污技術能夠有效減少有機污染物和異味，而且對環境無害，兼具可持續性。

在完成生物除污處理後，團隊於該區域進行了多次海泥測試和水質監測。結果顯示，海泥中酸揮發性硫化物的濃度大幅下降，提升避風塘海水的清澈度，將海泥的顏色變淺，並顯著改善異味問題。



CEDD's project team introduced the bioremediation treatment works at To Kwa Wan Typhoon Shelter to the Secretary for Environment and Ecology
本署工程團隊向環境及生態局局長介紹土瓜灣避風塘生物除污工程

Use of an injection barge to inject oxidants into the seabed sediments
利用注射機械船將氧化劑注入海牀海泥中

5.3 Ecological Monitoring on Lantau Island

Ecological Monitoring on Lantau Island

The unique landform on the Lantau Island provides diverse natural habitats, such as woodlands, shrublands, grasslands, streams, freshwater marshes, etc. The Island is rich in biodiversity, nurturing various rare and endemic plants and animals of conservation importance.

Ecosystems are constantly changing in response to factors such as anthropogenic disturbances and climate change. Therefore, there is a need to conduct a long-term monitoring to continuously review the ecological condition and habitat quality, detect any adverse changes in advance and evaluate the effectiveness of conservation measures. Our ecological monitoring mainly covers several sites of ecological importance outside Country Parks, as well as Sites of Special Scientific Interest (SSSI) and Ecologically Important Streams (EIS) on Lantau Island. Apart from specific localities, we also monitor some species of special conservation value and their habitats, such as horseshoe crabs, ardeid night roost and migratory waterbirds, to assist in formulating necessary conservation measures. The following link is a video published in 2024 to show our routine ecological monitoring work on Lantau Island:

https://www.lantau.gov.hk/en/exploring-lantau/nature-conservation/our-initiatives/ecological-studies/index.html

The major findings from the ecological monitoring in 2024 are as follows:

- Sunset Peak and Lantau Peak SSSI – Populations of Lantau Star-anise, Hong Kong Asarum and Hairy Urn Orchid were found in stable and healthy condition;
- EIS in Tung Chung (Mok Ka and Shek Mun Kap) – Detected and removed several fish traps to avoid trapping endangered fish species;
- Control of invasive species in mangroves sites – After the removal of over 400 invasive Sonneratia plants at six mangrove sites from 2021 to 2023, post-removal monitoring in 2024 revealed there were only sporadic re-sprouts at two sites. New seedlings found during monitoring were all removed; and
- Monitoring of target species – rare animal species including Pheasant-tailed Jacana, Chinese Grassbird, Three-striped Grass Frog, Golden Birdwing and Mangrove Skimmer were recorded in their respective natural habitats.

5.3 大嶼山的生態監察工作

大嶼山的生態監察工作

大嶼山地貌獨特，擁有多樣化的自然生境，例如林地、灌木林、草地、河溪、淡水沼澤等，並孕育出多種具重要保育價值的稀有原生動植物，極富生物多樣性。

因生態系統會受人為干擾、氣候變化等因素影響而不斷改變，所以有需要進行長期監察，持續檢視生態狀況及生境質素，提早發現任何不良變化，並評估保育措施的成效。我們的生態監察主要覆蓋大嶼山內數個具生態價值、位處郊野公園外的地區，以及具特殊科學價值的地點和具重要生態價值的河溪。除了特定地點，我們亦會監察一些具特別保育價值的物種和牠們的棲息地，例如馬蹄蟹、鷺鳥夜棲地和遷徙性水鳥，以幫助制定所需的保育措施。我們於2024年發布了一套短片，展示在大嶼山進行生態監察的日常工作：

https://www.lantau.gov.hk/tc/exploring-lantau/nature-conservation/our-initiatives/ecological-studies/index.html

2024年生態監察的主要發現如下:

- 大東山及鳳凰山具特殊科學價值地點 - 稀植物群落如大嶼八角、香港細辛及粉紅叉柱蘭穩定生長，狀況健康;
- 於東涌(莫家及石門甲)的具重要生態價值河溪 - 發現了數個捕魚陷阱後立即移除，以防瀕危魚類被捕獲；
- 紅樹林地點控制入侵物種的生長 - 自2021至2023年在6個紅樹林地點移除了超過400株外來入侵的海桑後，我們於2024年進行後續監察，只有於兩個地點發現零星重新發芽的海桑 ，並已即時移除所有新生幼苗;以及
- 目標物種的監察 - 在相應的自然生境分別錄得各類稀有動物，包括水雉、大草鶯、長趾蛙、金裳鳳蝶、斑灰蜻等。

Lantau Star-anise
大嶼八角

Hong Kong Asarum
香港細辛

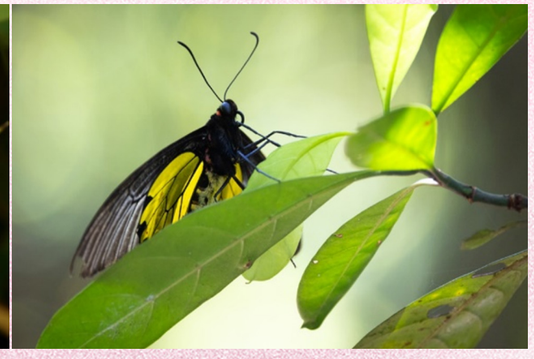
Hairy Urn Orchid
粉紅叉柱蘭

Mangrove Skimmer
斑灰蜻

Pheasant-tailed Jacana
水雉

Chinese Grassbird
大草鶯

Three-striped Grass Frog
長趾蛙



Golden Birdwing
金裳鳳蝶

6. Carbon Reduction Measures 減碳措施

6.1 Study on Carbon Removal Potential of Trees in Hong Kong

Trees absorb carbon dioxide through photosynthesis and reduce the amount of greenhouse gas in the atmosphere, serving as natural carbon sinks. The role of trees should not be overlooked when assessing the net carbon emissions from New Development Areas (NDAs). However, there is a lack of data about carbon sequestration of local tree species, and as a result only general and conservative assumptions could be made in this regard when conducting carbon audits. To assess more accurately the contribution of trees towards carbon reduction in NDAs and assist in developing the landscape design therein, CEDD collaborated with the University of Hong Kong and the Hong Kong Polytechnic University to study the carbon sequestration potential of different tree species, with support from the Environment and Ecology Bureau and the Greening, Landscape and Tree Management Section of the Development Bureau.

In the study, reference was made to relevant literature to develop mathematical models for estimating the carbon sequestration potential of some common tree species in Hong Kong. Local tree growth data such as wood density and diameter at breast height (DBH), were collected and incorporated in these models. To further verify the model parameters, trees of target species were identified for sampling and testing. The selected trees were first scanned using Light Detection and Ranging technology to estimate their volumes. Samples of different parts of the trees were then collected and analysed by chemical tests, so as to project the total carbon content of the entire tree.

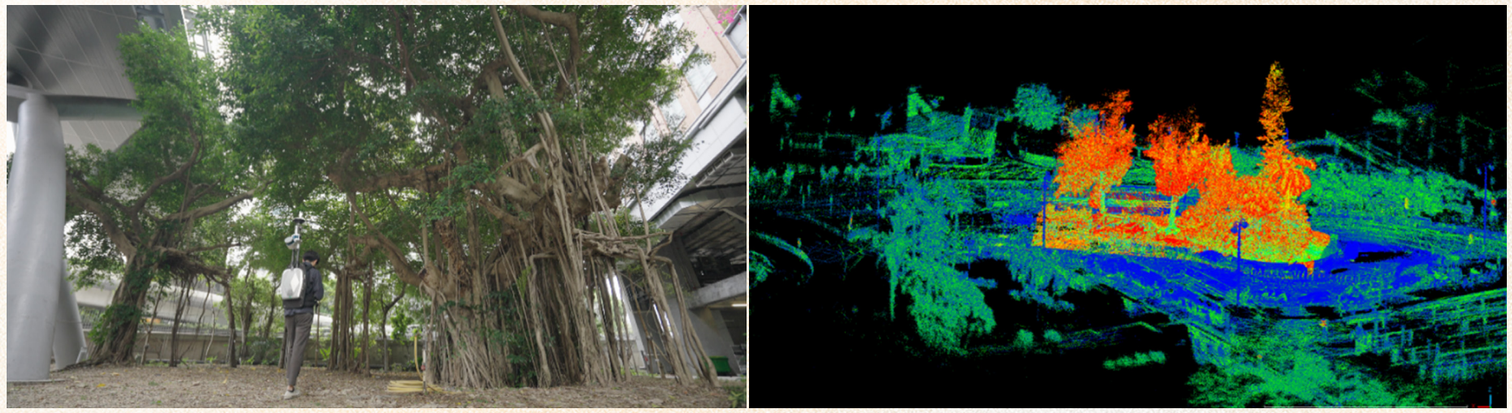
The study findings show that the carbon sequestration potential of different tree species could vary severalfold, depending on their wood density, growth rate, age and ultimate size. Despite the limited number of tree species assessed due to the pilot nature of the study, the findings provide additional reference information for the landscape design of NDAs, apart from perspectives of ornamental value and ecological function, to improve the carbon removal potential of urban greening, thereby contributing to the achievement of carbon reduction in NDAs.

6.1 香港樹木除碳能力研究

樹木通過光合作用吸收二氧化碳，從而減少大氣中的溫室氣體，是天然的碳匯。在評估新發展區的淨碳排放時，樹木的作用不容忽視。然而，本地樹木品種碳封存能力的數據，因此在進行碳審計時，只能就此方面作出籠統而保守的假設。為更準確地評估樹木在新發展區中對減低碳排放的貢獻，並協助制定新發展區的園景設計，土木工程拓展署與香港大學和香港理工大學合作，並在環境及生態局和發展局綠化、園境及樹木管理組的支持下，研究不同樹種的碳封存能力。

在研究中，土木工程拓展署參考了相關文獻資料，並結合本地樹木的生長數據（如木材密度、胸高直徑等），構建數學模型以評估部分香港常見樹木品種的碳封存表現。為進一步印證模型參數，我們選定目標樹木品種進行採樣及測試。首先，利用光學雷達掃描樹木以估算其體積。隨後，我們採集這些樹木不同部位的樣本，進行化學測試分析，以推算整棵樹木的總碳含量。

研究顯示，不同樹木品種的碳封存能力可相差數倍，其差異取決於樹種的木材密度、生長速度、樹齡和最終大小。雖然這項研究屬於先導形式，涵蓋的樹木種類有限，但其結果仍可為新發展區項目的園境設計，從觀賞價值、生態功能以外的角度提供額外的參考資料，以提高市區綠化的除碳效益，有助新發展區達成減低碳排放的目標。



Estimation of tree volume using LiDAR to project its total carbon content
利用光學雷達技術估算樹木的體積，以推算其總碳含量

6.2 Recycling of Construction and Demolition Materials

Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works comprise site formation of about 8 hectares of land for development of multi-storey buildings.

The site formation works involved the removal of over 10,000m³ of rock and existing concrete pavement structure.

Disposal of such substantial amount of concrete debris/rock pieces to public fill reception facilities (PFRFs) would not only incur high transportation and disposal costs for the contractor but also increase carbon emission during transportation and treatment at the PFRFs. To enhance the sustainability of the project, the project team deployed a large mobile crushing plant to break the concrete debris/rock pieces into appropriately sized aggregates for reuse. All the recycled aggregates were either reused by the project or other CEDD projects. This centralised rock-crushing and on-site reuse approach not only reduced the carbon emission, but also saved soil compaction and testing time, accelerating works progress. As a result, the shortened construction period reduced the overall carbon emissions of the project.

6.2 拆建物料的循環再造

洪水橋 / 厦村新發展區第一階段工程包括為約8公頃土地進行工地平整，以供開發多層現代產業大樓。

該工地平整工程需要移除有超過10,000立方米的石塊和原有的混凝土路面結構。

將如此大量的混凝土廢料或石塊廢棄至公共填土接收設施，不僅會導致承建商須負擔高昂的運輸及處理成本，還在運輸及在公共填土接收設施處理時產生碳排放。為了提升工程項目的可持續性，工程團隊動用了一台大型移動式碎石機，將混凝土廢料或石塊輾碎為適當尺寸的石料，以供重用。循環再石料已於本工程項目或本署其他工程項目中重用。這種集中式碎石與現場重用的方法，不僅減少了碳排放，還能夠節省泥土壓實工序及後續測試的時間，從而加快了施工進度。施工期的縮短減低了工程項目的整體碳排放。

Use of mobile crushing plant to breakdown concrete debris/rock pieces
將移動式碎石機用於輾碎混凝土廢料或石塊

Slope built with recycled aggregates
採用循環再造石料建成的斜坡

6.3 Soil Erosion Control Planting Enhancement Study

For over 30 years, CEDD has been carrying out the Soil Erosion Control Planting Programme (the Programme) on unleased or unallocated government land outside Country Parks to establish primary vegetation covers on degraded or eroded natural slopes to control soil erosion and enhance their ecological value and visual quality. Through natural succession, the established woodland will become a natural carbon sink in the neighbourhood.

To optimise the Programme, especially in terms of enhancing the resiliency of vegetation covers against climate change challenges, we regularly review the prevailing techniques and international practices on landscape rehabilitation and afforestation. We have commissioned the Technological and Higher Education Institute of Hong Kong to conduct the Soil Erosion Control Planting Enhancement Study (the Study), with a view to identifying improvements on the existing restoration techniques and carrying out trials of new techniques. To enhance existing techniques, different trials will be conducted under the Study, covering the use of uncommon species, application of new planting techniques such as inoculation of mycorrhizal fungi on native tree seedlings to promote water and mineral uptake, and installation of seedling protection tubes to modify the microclimate of newly planted vegetation.

We will also test the addition of biochar to soil. Biochar is a stable and durable eco-friendly soil amendment product that can effectively store carbon dioxide for extended periods. Through these trials, we aim to identify climate-resilient vegetation covers with high biodiversity and ecological value to enhance the natural woodland succession in Hong Kong.

6.3 保土種植的優化研究

土木工程拓展署在郊野公園外未經批租或撥用的政府土地上已進行保土種植計劃超過30年，目的是為劣地及受土蝕的天然山坡建立初期植被，以防止土壤流失並提升環境的生態價值和景觀質素。透過自然演替，種植的林地將成為社區的天然碳匯。

為優化該計劃，特別是提升植被應對氣候變化挑戰的韌性，我們定期探討環境復修和造林的現有技術及國際做法。我們已委託香港高等教育科技學院進行保土種植的優化研究，旨在為現有修復技術尋求改善方案並試驗新技術。該研究將進行不同的試驗，涵蓋不常種植的品種、應用新種植技術（如在原生樹苗上接種菌根菌以促進水分和礦物質的吸收），以及安裝幼苗保護管以調節新種植樹苗周邊的微氣候。

為優化現有技術，我們亦將測試在土壤中添加生物炭。生物炭是一種穩定持久且生態友善的土壤改良劑，能夠有效地長期儲存二氧化碳。透過這些試驗，我們的目標是識別具高生物多樣性和生態價值且能應對氣候變化的植被，以促進香港天然林地的自然演替。

Inoculation of mycorrhizal fungi on tree seedling
在樹苗根部培育菌根菌

Seedling protection tube
幼苗保護管

Biochar is stable and durable eco-friendly soil amendment product that can effectively store carbon dioxide for extended periods
生物炭是一種穩定持久且生態友善的土壤改良劑，能夠有效地長期儲存二氧化碳

6.4 Urban Mini-Forest Initiative

To promote urban greening and enhance biodiversity, we collaborated with the Hong Kong Institute of Landscape Architects (HKILA) to launch the Urban Mini-forest Initiative (the Initiative). By planting native species in dense, multi-layered configurations akin to natural forests, the Initiative aims to establish sustainable native forests within limited urban spaces (as small as 25 square metres) in a short period of time. By employing this innovative greening approach, we seek to rapidly create self-sustainable dense forests in an urban context, contributing to air purification, carbon sequestration and urban environmental quality enhancement.

CEDD and HKILA jointly conceived the Initiative in April 2024 and completed the planting of the first pilot project within a few months. The pilot site is located at the first phase construction site of the Fanling North New Development Area (FLN NDA) with an area of 100 square metres. It is a green space to grow alongside the ongoing infrastructure works. The urban mini-forest is envisioned to become an ecological oasis for both the construction site and the future community, improving urban ecology and microclimate.

CEDD and HKILA will jointly monitor the performance of the pilot site for three years. With the experience gained, we will conduct further trials at other suitable projects.

6.4 都市微森林計劃

為推動城市綠化及提升生物多樣性，我們與香港園境師學會合作，推展都市微森林計劃。該計劃透過模擬天然森林的結構，以密集、多層次的方式種植原生植物，從而在有限的城市空間（小至25平方米）內迅速建立可持續的原生森林。透過採用這項創新的綠化模式，我們旨在於城市環境中，快速建立可自給自足的密林，為淨化空氣、碳封存及提升城市環境質素作出貢獻。

我們於2024年4月與香港園境師學會共同構思這項計劃，並於數月內完成首個試點種植項目。該試點項目位於粉嶺北新發展區第一階段的工地，佔地約 100 平方米，是一個與工程同步成長的綠化空間。都市微森林可望成為工程地盤和未來社區的一片生態綠洲，能夠改善城市生態及微氣候環境。

本署與香港園境師學會將對試點進行為期三年的監察。憑藉於試點項目累積的經驗，我們將於其他合適項目展開進一步試驗。

100m² Urban Mini-Forest pilot site at FLN NDA
位於粉嶺北工地的100 平方米都市微森林試點

DCED's participation in planting at the pilot site
署長參與試點種植活動

Group Photo taken on the Planting Day
大合照攝於種植日

6.5 Use of Electric Construction Plants

Yuen Long South New Development Area (YLS NDA) is one of the major new development areas within the Northern Metropolis. The comprehensive planning and improvement works of infrastructure to meeting Hong Kong's medium to long-term housing needs were being carried out. YLS NDA is to be implemented in three phases. The works contracts for the First Phase Development (FPD) commenced progressively since August 2022. The formed sites will be used for development of public housing, village resite areas for affected building lots under the Village Removal Terms, public open spaces, as well as the development of multi-storey buildings for modern industries, which may facilitate the relocation of the affected brownfield operations in the later stage.

Under the decarbonisation strategies outlined in Hong Kong's Climate Action Plan 2050, we commenced a trial programme for an electric excavator in the FPD of YLS NDA in May 2024. The trial aimed to evaluate the performance of the electric excavator, including its charging efficiency, operational capacity, and adaptability to Hong Kong's environment. Findings indicated that the electric excavator was fully capable of meeting the demands of daily site formation works. The machinery could save 400–450 liters of diesel per month, effectively reducing both carbon emissions and operational costs. Furthermore, the use of electric motors significantly reduced noise, vibration and exhaust emissions, minimising disturbances to nearby residents while providing operators with a safer and more comfort working environment.

6.5 使用電動建築器材

元朗南新發展區是北部都會區內的主要新發展區之一，正進行全面規劃和基建改善工程，以應付香港中長期的房屋需要。元朗南新發展區共分三期推展，第一期發展工程合約已於2022年8月起陸續展開。經平整的土地將用作發展公營房屋、鄉村遷置區以安置受影響而又符合搬村資格的屋地、公共休憩用地，以及發展多層現代產業大樓，有助重置受後期發展影響的棕地作業。

根據《香港氣候行動藍圖2050》訂下的減碳策略，我們自2024年5月起於元朗南新發展區第一期發展展開電動挖掘機試驗計劃，旨在評估該電動挖掘機的表現，包括充電效能、作業能力及適應香港環境的能力。試驗結果顯示，電動挖掘機完全適用於日常工地平整工程。該機械每月可節省400至450公升柴油，有效減少碳排放和降低運營成本。此外，採用電動馬達能大幅減少噪音、震動與廢氣排放，既減輕對鄰近居民的影響，亦為操作人員提供更安全及舒適的工作環境。

7. Environmental Awards 環境獎項

7.1 Environmental Awards / Commendations Received in 2024

UNSDG Achievement Awards Hong Kong 2024 – Contract No.CV/2023/06 "Site Formation Works at Kwok Shui Road, Tsuen Wan"

The United Nations Sustainable Development Goals (UNSDGs), adopted by all United Nations Member States since September 2015, provide a framework and blueprint for all stakeholders to take actions by 2030 on some of the most pressing issues confronting us in the pursuit of a more prosperous, inclusive and peaceful world for future generations. The UNSDG Achievement Awards Hong Kong was first organised and staged by the Green Council in 2021 with the goal of identifying and recognising organisations with exceptional performance on their business practices and sustainability projects meeting Sustainable Development Goals (SDGs). The objective of the Award is to encourage and recognise sustainability initiatives across all sectors and organisational types. The Award is designed to be inclusive, with the aim of promoting sustainability and environmental protection across a wide range of organisations.

In Contract No. CV/2023/06 "Site Formation Works at Kwok Shui Road, Tsuen Wan", the contractor adopted various environmental measures , including the installation of acoustic barriers to mitigate noise impact and an automatic sprinker system to suppress dust and improve the air quality during construction. These measures had successfully minimised public nuisance and fostered a balance between construction works and environmental sustainability.

7.1 2024年獲頒發的環境獎項 / 嘉許

聯合國可持續發展目標香港成就獎2024 – 工程合約編號CV/2023/06 「荃灣國瑞路公營房屋發展的工地平整工程」

聯合國可持續發展目標自2015年9月起已獲所有聯合國成員國採納，它為全球正面臨的最迫切問題提供解決框架和藍圖以便各持分者於2030年前採取行動，為下一代創造一個更繁榮、共融與和平的未來。「聯合國可持續發展目標香港成就獎」由環保促進會於2021年首次主辦，旨在識別和表彰在業務實踐與可持續發展項目上表現卓越且符合可持續發展目標的機構。本獎項的目的是鼓勵和表彰各行各業及不同類型機構的可持續倡議。獎項具有包容性，旨在向更多企業推廣可持續性和環境保護的重要性。

於工程合約編號CV/2023/06「荃灣國瑞路的工地平整工程」中，承建商採取了多項環保措施，例如安裝隔音屏障以減低噪音，以及自動灑水系統以抑制塵埃並改善施工期間的空氣質素。這些措施大大減少了對公眾的滋擾，並促進了建築工程與環境可持續發展之間的平衡。

Contract No. CV/2023/06 was honoured as a "Recognized Project" for its contributions to promoting sustainability and environmental protection
工程合約編號CV/2023/06憑藉對推動可持續發展及環保的貢獻，獲頒發「認可項目」的殊榮

The Hong Kong Awards for Environmental Excellence (Gold Award in the category of Construction Industry)

In 2024, the Trunk Road T2 and Cha Kwo Ling Tunnel Project received the Gold Award in the category of Construction Industry of the Hong Kong Awards for Environmental Excellence (HKAEE). The HKAEE is led by the Environmental Campaign Committee alongside the Environment and Ecology Bureau and in conjunction with nine organizations. The HKAEE commends organisations with outstanding environmental performances across 11 sectors for large organisations and 5 sectors for Small and Medium Enterprises.

The assessment criteria for the HKAEE are based on the well-established "Eco-Business Model," which emphasizes the close relationship between a business's internal operations and the environment. The three key factors, including Green Leadership, Environmental Programs and Performance, and Partner Synergy, played crucial roles in integrating environmental measures of the Trunk Road T2 and Cha Kwo Ling Tunnel Project. This Award reflects our commitment to sustainability and effective environmental management.

香港環境卓越大獎（建造業界別金獎）

在2024年，T2主幹路及茶果嶺隧道獲得香港環境卓越大獎的建造業金獎。「香港環境卓越大獎」由環境運動委員會聯同環境及生態局及九個機構合辦，旨在嘉許在11個非中小企界別及5個中小企界中具卓越環保表現的機構。

「香港環境卓越大獎」的評審準則建基於已完善建立的「環保企業模式」。該模式重點顯示企業的內部運作與環境的密切關係。三個關鍵範疇—環保領導、環保計劃與表現及夥伴協力合作—在我們整合T2主幹路及茶果嶺隧道的環保措施的過程中發揮了重要角色。這個獎項反映了我們對可持續發展和有效環境管理的承諾。

The Hong Kong Awards for Environmental Excellence (Gold Award in the category of Construction Industry)
香港環境卓越大獎的（建造業界別金獎）

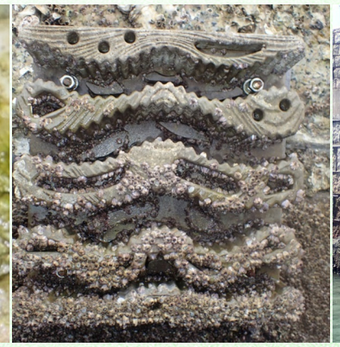
2024 Dayu Water Conservancy Science and Technology Progress Award (2nd Class)

CEDD collaborated with the State Key Laboratory of Marine Pollution at the City University of Hong Kong to promote the research and application of eco-shorelines. The team conducted tests on multiple artificial seawalls in Hong Kong, in which various innovative eco-engineered fixtures were applied and refined to support the development of artificial ecological seawalls. The recently completed Tung Chung New Town Extension project features Hong Kong's first eco-shoreline with a total length of approximately 3.8 kilometre, where different species of organisms, including crabs, rock oysters, and barnacles, were recorded. Additionally, CEDD is actively collaborating with the team to study the practical application of eco-shoreline features to more existing seawalls, with a recent successful example at Lei Yue Mun. The innovative eco-shoreline initiative was awarded the 2024 National Dayu Water Conservancy Science and Technology Progress Award (2nd Class).

2024年度全國大禹水利科技進步二等獎

土木工程拓展署與香港城市大學海洋污染國家重點實驗室合作，推動有關生態海岸線的研究及應用。團隊在本港多個人造海堤進行測試，應用和改良各種創新生態工程組件，以支持人造海堤生態化發展。我們於近期竣工的東涌新市鎮擴展計劃打造了全港首條全長約3.8公里的生態海岸線，並已錄得許多種生物，包括蟹類、石蠔、藤壺等。土木工程拓展署亦正聯同團隊積極研究將生態海岸線元素實際應用於更多現有海提，近期於鯉魚門便有一個成功的案例。這項創新的生態海岸線倡議榮獲2024年度全國大禹水利科技進步二等獎。

The eco-shoreline can attract a greater variety of marine life to inhabit the area
生態海岸線可吸引更多種類的海洋生物棲息在此



CEDD collaborates with various academic teams to promote the research and application of eco-shorelines
土木工程拓展署與不同學術團隊合作，推動有關生態海岸線的研究及應用

The first eco-shoreline in Hong Kong, stretching approximately 3.8 kilometres in the Tung Chung New Town
位於東涌新市鎮的全港首條生態海岸線，全長約3.8公里

Newly installed eco-shoreline fixtures on the existing seawall in Lei Yue Mun
新設於鯉魚門現有海堤的生態海岸線組件

Greater Bay Area Planning Awards 2024 - Supreme Planning Award

At the Hong Kong Institute of Planners Awards Ceremony held on 27 November 2024, the East Coast Boardwalk project was honoured with two prestigious awards: the "Greater Bay Area Planning Awards 2024 - Supreme Planning Award" and the "Awards 2023 - Silver Award," which fully affirms our outstanding performance, the "Greater Bay Area Planning Awards 2024"under the theme of "Sustainable Urban Development: Integration and Utilization of Blue-Green Resources" recognised exceptional projects within the Greater Bay Area that contribute to sustainable and liveable cities. The "Supreme Planning Award" was the most prestigious honour of the "Greater Bay Area Planning Awards 2024". The "Awards 2023 - Silver Award" was the highest accolade presented by the Hong Kong Institute of Planners in 2024 to projects with outstanding achievements in urban planning.

The construction works for East Coast Boardwalk (Western Section), including the enhancement works at the North Point Promenade, were substantially completed in end December 2024.

Greater Bay Area Planning Awards 2024 - Supreme Planning Award
大灣區規劃大獎2024 - 至尊規劃獎

大灣區規劃大獎2024 - 至尊規劃獎

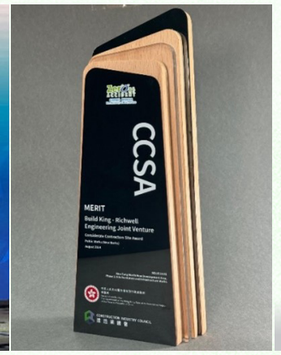
在2024年11月27日舉行的香港規劃師學會頒獎典禮上，東岸板道工程項目獲頒發兩項殊榮，分別是「大灣區規劃大獎2024 - 至尊規劃獎」和「周年大獎2023 - 銀獎」，充分肯定了我們的卓越表現。大灣區規劃獎2024以「可持續城市發展: 藍綠資源的整合與運用」為主題，旨在表彰大灣區內對建設可持續及宜居城市作出貢獻的傑出項目。「至尊規劃獎」是「大灣區規劃大獎2024」的最高殊榮，而「周年大獎2023 - 銀獎」則是香港規劃師學會於2024年度頒發予傑出城市規劃項目的最高殊榮。

東岸板道(西段)的建造工程，包括北角海濱花園的優化工程，已於2024年12月底大致完成。

Greater Bay Area Planning Awards 2024 - Supreme Planning Award and the Annual Awards 2023 - Silver Award
大灣區規劃大獎2024 - 至尊規劃獎及周年大獎2023 - 銀獎

CEDD's work in sustainability has been widely recognised. Below is the list of awards received in 2024.
本署在可持續發展方面的工作已獲得廣泛認可。我們在2024年度分別獲得以下獎項：

Contract Name : Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Award Title : ESG Contribution Advocate Award 2023 for Benchmark Service of ESG Recognition Scheme
Organisation : Hong Kong Construction Association
合約名稱 : 工程合約編號 ND/2019/01 -古洞北新發展區第一階段-地盤平整及基礎設施工程
獎項 : ESG Contribution Advocate Award 2023 for Benchmark Service of ESG Recognition Scheme
機構 : 香港建造商會



Contract Name : Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Award Title : 30th Considerate Contractors Site Award Scheme - Considerate Contractors Site Awards - Merit Award
Organisation : Development Bureau and Construction Industry Council
合約名稱 : 工程合約編號 ND/2019/01 -古洞北新發展區第一階段-地盤平整及基礎設施工程
獎項 : 第30屆公德地盤嘉許計劃-公德地盤獎 - 優異獎
機構 : 發展局及建造業議會

Contract Name : Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Award Title : 30th Considerate Contractors Site Award Scheme – Outstanding Environmental Management and Performance Awards - Merit Award
Organisation : Development Bureau and Construction Industry Council
合約名稱 : 工程合約編號 ND/2019/01 -古洞北新發展區第一階段-地盤平整及基礎設施工程
獎項 : 第30屆公德地盤嘉許計劃-傑出環境管理獎 - 優異獎
機構 : 發展局及建造業議會

Contract Name : Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Award Title : Hong Kong Green Awards 2024 Green Management Award - Project Management (Large Corporation) Sliver Award
Organisation : Green Council
合約名稱 : 工程合約編號 ND/2019/01 -古洞北新發展區第一階段 — 地盤平整及基礎設施工程
獎項 : 香港綠色企業大獎2024 - 優越環保管理獎 - 項目管理(大型企業) - 銀獎
機構 : 環保促進會

Contract Name : Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Award Title : Hong Kong Green Awards 2024 Sustained Performance (4 years+)
Organisation : Green Council
合約名稱 : 工程合約編號 ND/2019/01 - 古洞北新發展區第一階段 — 地盤平整及基礎設施工程
獎項 : 香港綠色企業大獎2024 - 連續獲獎機構 (4 年或以上)
機構 : 環保促進會

Contract Name : Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Award Title : Indoor Air Quality Award 2023 – Excellent Class
Organisation : Environmental Protection Department
合約名稱 : 工程合約編號 ND/2019/01 - 古洞北新發展區第一階段 — 地盤平整及基礎設施工程
獎項 : 室內空氣質素嘉獎狀2023 -卓越級
機構 : 環境保護署

Contract Name : Contract No. ND/2019/03 - Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park
Award Title : Hong Kong Green Awards 2024 Green Management Award - Project Management (Large Corporation) Sliver Award
Organisation : Green Council
合約名稱 : 工程合約編號 ND/2019/03 -古洞北及粉嶺北新發展區第一階段一發展塑原自然生態公園
獎項 : 香港綠色企業大獎2024 - 優越環保管理獎 - 項目管理(大型企業) - 銀獎
機構 : 環保促進會

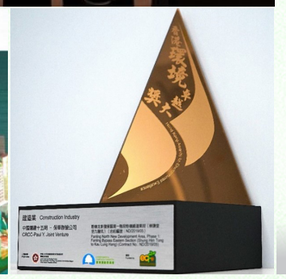
Contract Name : Contract No. ND/2019/03 - Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park
Award Title : The Hong Kong Institute of Landscape Architects Award 2024 (Category of Excellence in Public Development) - Gold Award
Organisation : The Hong Kong Institute of Landscape Architects
合約名稱 : 工程合約編號 ND/2019/03 - 古洞北及粉嶺北新發展區第一階段 — 發展塑原自然生態公園
獎項 : 香港園境師學會2024年獎 - 公共項目金獎
機構 : 香港園境師學會

Contract Name : Contract No. ND/2019/03 - Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park
Award Title : Martin Barnes Awards 2024 - Demonstrating Carbon Dioxide Reduction Initiatives Towards Net-Zero
Organisation : NEC
合約名稱 : 工程合約編號 ND/2019/03 - 古洞北及粉嶺北新發展區第一階段 — 發展塑原自然生態公園
獎項 : Martin Barnes Awards 2024
機構 : 新工程合約組織

Contract Name : Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)
Award Title : United Nations Sustainable Development Group (UNSDG) Achievement Award – Project Award – Recognised Project
Organisation : Green Council
合約名稱 : 工程合約編號 ND/2019/04-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）
獎項 : 聯合國可持續發展目標香港成就獎 - 項目獎項-獲認可項目
機構 : 環保促進會

Contract Name : Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)
Award Title : United Nations Sustainable Development Group (UNSDG) Achievement Award – Organization Award – Sustainable Organisation – Bronze Award
Organisation : Green Council
合約名稱 : 工程合約編號 ND/2019/04-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）
獎項 : 聯合國可持續發展目標香港成就獎 - 機構獎項 - 銅獎
機構 : 環保促進會

Contract Name : Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)
Award Title : 30th Considerate Contractors Site Award Scheme – Outstanding Environmental Management and Performance Awards - Merit Award
Organisation : Development Bureau and Construction Industry Council
合約名稱 : 工程合約編號 ND/2019/04-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）
獎項 : 第30屆公德地盤嘉許計劃 - 傑出環境管理獎 - 優異獎
機構 : 發展局及建造業議會



Contract Name : Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)
Award Title : 2023 Hong Kong Awards for Environmental Excellence – Construction Industry – Bronze Award
Organisation : Environmental Campaign Committee
合約名稱 : 工程合約編號 ND/2019/05 -粉嶺北新發展區第一階段 — 粉嶺繞道東段（崇謙堂至九龍坑）
獎項 : 2023香港環境卓越大獎 - 建造業 - 銅獎
機構 : 環境運動委員會

Contract Name : Contract No. ND/2024/09 - San Tin Technopole Phase 1 Stage 1 (West) – Contract 1 – Site Formation and Associated Works
Award Title : "Outstanding Planning Award" at The Hong Kong Institute of Planners Greater Bay Area Planning Awards 2024
Organisation : The Hong Kong Institute of Planners
合約名稱 : 工程合約編號 ND/2024/09 - 新田科技城第一期第一階段（西）— 合約一 — 地盤平整及相關工程
獎項 : 「香港規劃師學會大灣區規劃大獎2024」- 大灣區優異規劃獎
機構 : 香港規劃師學會

Contract Name : Contract No. YL/2022/01 - Site Formation and Infrastructure Works for Yuen Long South First Phase Development - Contract 3
Award Title : Grade 'Good' received in WasteWi$e Certificate
Organisation : Hong Kong Green Organisation Certification
合約名稱 : 工程合約編號YL/2022/01 - 元朗南第一期發展工地平整及基礎設施工程 - 合約三
獎項 : 減廢證書 - 良好級別
機構 : 香港綠色機構認證

Contract Name : Contract No. YL/2022/01 - Site Formation and Infrastructure Works for Yuen Long South First Phase Development - Contract 3
Award Title : Hong Kong Green Day 2024 – "綠續典範"
Organisation : Green Council
合約名稱 : 工程合約編號YL/2022/01 - 元朗南第一期發展工地平整及基礎設施工程 - 合約三
獎項 : 香港綠色日2024 -"綠續典範"獎狀
機構 : 環保促進會

Contract Name : Contract No. YL/2022/01 - Site Formation and Infrastructure Works for Yuen Long South First Phase Development - Contract 3
Award Title : Bronze Award Received in Hong Kong Green Award 2024
Organisation : Green Council
合約名稱 : 工程合約編號YL/2022/01 - 元朗南第一期發展工地平整及基礎設施工程 - 合約三
獎項 : 香港綠色企業大獎2024 - 銅獎
機構 : 環保促進會

Contract Name : Contract No. GE/2022/14 - Joint Cavern Development at Anderson Road Quarry Site
Award Title : Green Pledge, Hong Kong Green Day 2024
Organisation : Green Council
合約名稱 : 工程合約編號GE/2022/14 - 安達臣道石礦場用地聯用岩洞發展
獎項 : 綠色承諾　香港綠色日2024
機構 : 環保促進會

Contract Name : Contract No. GE/2022/14 - Joint Cavern Development at Anderson Road Quarry Site
Award Title : Energy Saving Charter 2024
Organisation : EPD & EMSD
合約名稱 : 工程合約編號GE/2022/14 - 安達臣道石礦場用地聯用岩洞發展
獎項 : 節能約章2024
機構 : 環境保護署 & 機電工程署

Contract Name : Contract No. GE/2022/14 - Joint Cavern Development at Anderson Road Quarry Site
Award Title : Give an Hour for Earth 2024 - Certificate of Appreciation
Organisation : WWF
合約名稱 : 工程合約編號GE/2022/14 - 安達臣道石礦場用地聯用岩洞發展
獎項 : 地球一小時2024 ー 嘉許獎
機構 : 世界自然基金會