渠務署
Drainage Services Department

淨水防洪
創新建未來

Innovation for Sustainability of
Water Purification and Flood Protection





可持續發展報告
Sustainability Report
2019-20



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渠務署里程碑
DSD Milestones

1988

9月1日成立

Established on 1 September

1989

展開淨化海港計劃（前稱「策略性污水排放計劃」）工程

Harbour Area Treatment Scheme (HATS) (formerly known as Strategic Sewage Disposal Scheme) took off



制訂水浸黑點系統，翌年公布90個黑點

Established Flooding Blackspots System, announced 90 Blackspots next year

1994



淨化海港計劃第一期工程完成，昂船洲污水處理廠啟用

HATS Stage 1 completed. Stonecutters Island Sewage Treatment Works commissioned

1995

首個提供再造水的三級污水處理廠於昂坪啟用

First tertiary treatment works with reclaimed water facilities in Ngong Ping commissioned



2001

政府展開「全港土地排水及防洪策略研究第一期」

"Territorial Land Drainage and Flood Control Strategy Study – Phase I" commenced





2004

分階段展開治理深圳河計劃

Launched Shenzhen River Regulation Project by phases



赤柱污水處理廠啟用，為東南亞首個置於岩洞內的污水處理設施

First Southeast Asia's inside cavern sewage treatment plant, Stanley Sewage Treatment Works, commissioned

2006

陸續展開「雨水排放整體計劃檢討研究」

Successively embarked on Drainage Master Plan Review Studies

首個地下蓄洪計劃於大坑東遊樂場竣工

First underground stormwater storage scheme completed under Tai Hang Tung Playground



2008

首個河流生態改善工程於蠔涌河完成

The first river ecology improvement works in Ho Chung River was completed



上環雨水泵房啟用

Sheung Wan Stormwater Pumping Station commissioned

以「新工程合約」批出福民路明渠改善計劃，為英國以外首例

Improvement of Fuk Man Road nullah was awarded based on New Engineering Contract, first outside the United Kingdom

2009

荃灣雨水排放隧道啟用

Tsuen Wan Drainage Tunnel commissioned



2012



小蠔灣污水處理廠的太陽能發電場啟用，年產110萬度電

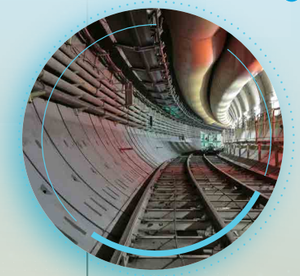
Solar farm at Siu Ho Wan Sewage Treatment Works commissioned, generating 1.1 million kilowatt-hours of electricity yearly

2013



啟德河改善工程完竣

Kai Tak River Improvement Works completed

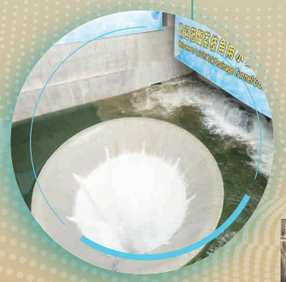


港島西雨水排放隧道啟用

Commissioning of Hong Kong West Drainage Tunnel

荔枝角雨水排放隧道啟用

Lai Chi Kok Drainage Tunnel commissioned



2015

淨化海港計劃第二期甲啟用。整個計劃是本港歷來最龐大的環保基建項目

HATS Stage 2A commissioned. HATS is the Hong Kong's largest ever environmental infrastructure project



使用柴電推進的「淨港一號」及「淨港二號」投入服務

Diesel-electric powered Clean Harbour 1 and Clean Harbour 2 set sail



2016



大型三級污水處理廠－石湖墟淨水設施主體工程展開

The large-scale tertiary treatment plant, Shek Wu Hui Effluent Polishing Plant main works commenced

2017

跑馬地地下蓄洪計劃啟用

Happy Valley Underground Stormwater Storage Scheme in service



治理深圳河計劃全面竣工

Shenzhen River Regulation Project completed

2018

展開搬遷沙田污水處理廠往岩洞工程

Relocation of Sha Tin Sewage Treatment Works to Caverns commenced



2019

署長序言
Director's Statement

渠務署自1989年成立，一直致力為本港構建世界級的高效優質渠務系統。我們積極推動可持續發展和適應性管理，以增強應對氣候變化的能力。渠務署致力提供專業的污水處理和雨水排放服務，為市民創建潔淨而健康的生活環境。

Since its establishment in 1989, the Drainage Services Department (DSD) has been devoting its efforts to building a highly effective drainage system of world-class quality for Hong Kong. We actively promote sustainable development and adaptive management to strengthen Hong Kong's resilience to climate change. By providing professional sewage treatment and stormwater drainage services, the DSD strives to create a clean and healthy living environment for the public.



渠務署署長 盧國華
Kelvin LO Kwok-wah
Director of Drainage Services

（攝於搬遷沙田污水處理廠往岩洞項目工地，背景為鑽孔機）
(Photo taken at a works site of Relocation of Sha Tin Sewage Treatment Works to Caverns, jumbo drilling machine as background)

隨着香港人口持續增長，本地對污水處理設施的需求不斷增加。經本署的公共污水處理設施所處理的污水由1989年的3.85億立方米增加至今年的10.34億立方米；同期的污水收集網絡總長度亦由約955公里大幅增加接近一倍至約1 900公里。現時，我們的污水處理服務範圍已覆蓋超過本港93%的人口。

香港作為全球其中一個人口密度最高的都市，在雨水收集和防洪工作受到極大挑戰。本署現時管理總長接近2 800公里的雨水渠和河道，較本署成立時多出約1 230公里。我們與時並進，致力在科技、工作模式，以至設計思維等不同範疇積極求變，藉以滿足公眾對本署的期望。

With Hong Kong's population continuing to increase, the local demand for sewage treatment facilities keeps rising. The volume of sewage treated by the DSD's sewage treatment facilities has increased from 385 million cubic metres in 1989 to 1.034 billion cubic metres in the current year; in the same period, the total length of our sewerage network has almost doubled from about 955 kilometres to about 1 900 kilometres. Today, our sewage treatment services cover more than 93% of the local population.

Being one of the most densely populated cities in the world, Hong Kong faces formidable challenges in stormwater collection and flood prevention. At present, the DSD manages nearly 2 800 kilometres of stormwater drains and river channels, an increase of about 1 230 kilometres in length since the establishment of the DSD. Moving with the times, we strive to innovate on various fronts such as technologies, working practices and design thinking to meet expectations of the community.

應用創新技術

渠務署一直配合政府推行「智慧城市」和「建造業2.0」的發展方向，於工程設計、建造項目和日常維修操作方面採用頂尖技術，以持續提升渠務設施的效能。本署勇於嘗試，除了廣泛利用「建築信息模擬技術」（BIM）、「供製造和裝配的設計」（DfMA）和「組裝合成」建築法（MiC）等建造技術，以提升施工速度、準確度和質素外，亦積極引入手機應用程式、虛擬實境等其他科技，達至智能工地管理。在操作維修方面，本署引入了新式的遙控清淤機械人，協助進行密閉和淹水渠管的維護，減少需要工友進入高危的工作場所，以提升安全水平。在提升渠務設施的能源效益方面，我們積極探索可再生能源技術的應用，例如安裝太陽能光伏系統、水力渦輪系統，以及採用污泥與廚餘共厭氧消化技術以更有效產生生物氣，向污水處理廠供應部分電力和熱能。

Application of Innovative Technologies

We have been working in the direction of the Government's development roadmap for "Smart City" and "Construction 2.0". Striving for continuous improvement in the efficiency of drainage facilities, the DSD has applied state-of-the-art technologies in project design, construction as well as daily operation and maintenance. We stand ready to explore new possibilities actively. Apart from widely adopting Building Information Modelling (BIM), Design for Manufacture and Assembly (DfMA) and Modular Integrated Construction (MiC) to enhance the speed, accuracy and quality of construction works, the DSD is also introducing other types of technology such as mobile apps and virtual reality for intelligent site management. As for operations and maintenance, the DSD has introduced a new remote-controlled desilting robot to facilitate maintenance of confined and submerged drains, minimising the need for workers to enter high-risk workplace, thereby enhancing safety. To improve energy efficiency of drainage facilities, we have been actively exploring the application of various renewable energy technologies, such as installation of photovoltaic systems, hydro-turbine systems and adoption of food waste and sludge anaerobic co-digestion technology to generate biogas more effectively for the purpose of supplying some electricity and heat energy to sewage treatment works.

創新工作模式

在進行渠務建設項目時，本署重視與各工作伙伴的溝通、互助、互信，尤其是工程承辦商、顧問及其他業內人士。「新工程合約」作為一種創新的工作模式，旨在以團隊精神為重點，共同提升施工效益，減少或避免不必要的工程超支或延誤風險，從而確保工程能順利完成。自2009年起，我們以「新工程合約」方式合共批出90份合約，績效有目共睹。

為確保渠道的有效運作，在大雨來臨前，本署會調配人手巡查全港約200個容易受垃圾或枯葉等阻塞的渠道位置，並即時為阻塞的進水口進行清理，達至「及時清渠」效果，主動減低暴雨期間的水浸風險。

鼓勵「設計思維」

作為城市基礎工程的重要部分，渠務設施與社區的距離愈見接近。渠務署一直本着創新的精神，落實「藍綠排水建設」的概念，藉以建造一個宜居城市。我們已先後完成蠔涌河、林村河、啟德河的改善工程，紓緩水浸風險，同時活化水體，改善自然生態系統。我們正逐步推展翠屏河、佐敦谷明渠、火炭明渠和大圍明渠的活化工程項目，進一步促進親水及近水文化和改善社區環境。

New Working Practice

When executing construction projects, we attach importance to communication, mutual assistance and mutual trust with all our partners, especially project contractors, consultants and other professionals in the industry. The New Engineering Contract (NEC) is a novel working practice emphasising teamwork that enables us to make concerted efforts to enhance construction effectiveness and avoid the risks of unnecessary cost or time overruns, thereby ensuring successful project completion. Since 2009, we have awarded a total of 90 NECs with notable achievements.

To ensure effective operation of all drainage channels, manpower is mobilised to inspect about 200 drain locations prone to blockage by litter, fallen leaves or the like before the onset of a rainstorm. All blocked intakes are cleared to realise "just-in-time clearance". This proactive effort is made to minimise flooding risks during rainstorms.

Encouraging Design Thinking

Drainage facilities play an integral part of urban infrastructure, and they become closely linked with the community today. Always committed to innovation, the DSD has been realising the concept of "Blue-Green Drainage Infrastructure" to build a liveable city. While carrying out successive improvement works to Ho Chung River, Lam Tsuen River and Kai Tak River to alleviate flooding risks, we revitalised water bodies and enhanced natural ecosystems. Currently, we are taking steps to implement river revitalisation works at Tsui Ping River, Jordan Valley Nullah, Fo Tan Nullah and Tai Wai Nullah to further promote the culture of water-friendliness and improve the local environment.

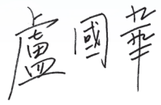
渠務與市民的日常生活息息相關，我們鼓勵同事改變舊有思維，主動與民共議，將「設計思維」融入渠務設施之中，實現「與民共生、與民共用」的共享精神。舉例說，我們在「社區環境工作室@石湖墟淨水設施公共空間」社區共創項目，透過一系列親身體驗及多平台的公眾參與活動，深入了解市民需求，與市民共同構思石湖墟淨水設施的共享方案，達至共贏目標。

我們正進行觀塘污水泵房優化工程，廠房上蓋會建造成一個面積達11 000平方米的園景平台。我們將邀請非政府組織舉辦工作坊，讓公眾就園景平台的布局，包括綠化走廊、觀景平台、野餐地點、親子遊樂場等提供意見。

盡力盡心

儘管香港過去一年經歷前所未見的挑戰，本署同事仍克盡己任，維持優質服務，更提供超過1 300小時的義工服務。全賴同事共同努力，渠務署年內得以在多方面長足發展，我在此由衷感激各位同事。

回顧渠務署過去30年的輝煌成績時，不得不歸功於許多同事本着「以心為心」的信念，竭誠盡責為市民服務。事實上，本署同事的表現獲公眾及其他政府部門的讚賞，我為此深感自豪，謹向渠務署過去及現在所有同事致敬。未來，我們定當繼續努力，不忘初心，為香港服務。



盧國華
渠務署署長
2020年11月

Drainage services and people's daily life are closely connected, we encourage our colleagues to think out of the box and engage the public to optimise our services. Embracing a spirit of "coexisting and sharing", we adopt a "design thinking" approach to construction of drainage facilities. For example, in the community-based co-creation project – "Community Design for Sustainable Development @ Shek Wu Hui Effluent Polishing Plant Public Space", we canvassed public views through a series of self-experiencing and multi-platform public engagement activities, and co-developed with the public a co-use plan for Shek Wu Hui Effluent Polishing Plant, thereby achieving a win-win situation.

We are carrying out the enhancement works for Kwun Tong Sewage Pumping Station, on the roof of which a landscaped deck with an area of 11 000 square metres will be built. We are inviting a non-government organisation to organise workshops to allow the public to give their views on its layout, including a green corridor, a viewing deck, picnic sites and a family playground.

Doing our Best

Despite the unprecedented challenges Hong Kong faced in the past year, our colleagues remained dedicated to maintaining quality services and delivering volunteer service totalling over 1 300 hours during this trying time. Thanks to their collaborative efforts, the DSD made tremendous progress in many areas during the year. My sincere appreciation goes to every one of our colleagues.

Looking back on its great achievements made in the past three decades, the DSD owes its success to the dedication and hard work of many colleagues who "do it from the heart" to serve the public. Indeed, I say with great pride that the performance of our colleagues are widely recognised by the public and other government departments. I salute all current and former colleagues of the DSD. In the future, we will continue to keep our mission firmly in mind and do our best to serve Hong Kong.



Kelvin LO Kwok-wah
Director of Drainage Services
November 2020

關於本報告
About the Report

香港特別行政區政府渠務署(「本署」)欣然發表題為「淨水防洪 創新建未來」的可持續發展報告 2019-20(「本報告」),匯報本署於過去一年在經濟、環境及社會三方面的工作進展和成果。本報告是本署與持份者溝通的重要工具,本署期望透過本報告提升可持續發展工作的透明度,讓持份者更深入了解本署的工作及對可持續發展的願景和期望。

The Drainage Services Department (DSD) of the Government of the Hong Kong Special Administrative Region takes pleasure to present its Sustainability Report 2019-20 ("this Report"), titled "Innovation for Sustainability of Water Purification and Flood Protection", to articulate work progress and achievements of the DSD on the economic, environmental and social fronts during the past year. This Report is an important tool for us to communicate with stakeholders and we hope it will enhance the transparency of our efforts on sustainable development to provide stakeholders with a more comprehensive picture of the DSD's works as well as visions and aspirations for sustainable development.



專業化驗分析服務
Professional laboratory services

灣仔東基本污水處理廠
Wan Chai East Preliminary Treatment Works





九龍城一號污水泵房
Kowloon City No. 1
Sewage Pumping Station

報告簡介
Report Profile

本報告闡述渠務署[1]於2019年4月1日至2020年3月31日財政年度期間(「報告期」)[2]在經濟、環境和社會方面的表現，報告範圍及邊界根據實質性評估結果而定，具體範圍及邊界詳見下節。本署致力在本報告提供準確數據和資訊，惟部分數據和資料由相關機構提供，非我們直接控制。

本報告依照全球報告倡議組織(GRI)出版的《可持續發展報告標準》(GRI 標準)的核心選項編制而成，並由獨立核證機構核實本報告的準確度、可靠性和公信力，以確保報告內容符合有關準則規定。獨立核實聲明已載列於第 184-185 頁。本報告亦已通過 GRI 標準的「實質性議題審核」，確認本報告按要求標示一般披露 102-40 至 102-49 的位置，以便參閱。

本報告以三款文字編輯(英文、繁體中文及簡體中文)，並以網頁版本及PDF 版本發布。此外，本報告備有線上及印刷版本的報告摘要。

我們歡迎您就本報告的內容、報告方式及本署的可持續發展表現提供寶貴意見。您的意見不僅有助我們提升報告質素和加強資料披露的相關性，同時亦是本署持續進步的基石。您可於渠務署網頁填妥關於本報告的回應表格。

This Report recounts the sustainability performance of the DSD[1] in economic, environmental and social aspects from 1 April 2019 to 31 March 2020 ("reporting period")[2]. The reporting scope and boundaries, details of which can be found in the next section, are defined with reference to the results of materiality assessment. While we make our best endeavours to present accurate data and information in this Report, certain data and information are provided by relevant organisations and thus beyond our control.

This Report has been prepared in accordance with the GRI Standards: Core option. An independent verification agency has verified the accuracy, reliability and credibility of the Report, assuring that its contents comply with requirements of the corresponding standards. The independent verification statement can be found on page 186-187. This Report has gone through the Global Reporting Initiative (GRI) Materiality Disclosures Service, which confirms that the GRI content index is clearly presented and cross references for general disclosures 102-40 to 102-49 are aligned with appropriate sections in the body of the Report.

The Report is edited in three languages (English, traditional Chinese and simplified Chinese) and available online in web-based HTML and PDF versions. Online and printed versions of an executive summary are also available.

We welcome your comments and suggestions on this Report content, reporting approach as well as our sustainability performance. Your views can help us enhance report quality and relevance of our disclosures. They will also inspire us to strive for excellence. You can complete the feedback form of this Report from the DSD website.

[1] 102-45
[2] 102-50

報告範圍及邊界
Reporting Scope and Boundary

為確定報告範圍及邊界，以及提升渠務署年度可持續發展報告的針對性，本署每年均會進行全面的實質性評估。本署在獨立顧問的協助下，根據GRI標準進行實質性評估，以識別對本署及持份者影響較大的經濟、環境和社會議題。本報告的實質性評估由以下三個主要元素組成[3]：

The DSD conducts a comprehensive materiality assessment every year to define the scope and boundaries of our sustainability reports, and to enhance focus and relevance of the report content. Conducted with support from an independent consultant, the materiality assessment is based on the GRI Standards to identify the material economic, environmental and social topics that pose greater impacts on the DSD and its stakeholders. The materiality assessment for this Report comprises the following three major components[3]:

邀請持份者參與意見調查
Inviting Stakeholders to Take Part in Opinion Survey

持份者的參與有助本署了解不同可持續發展議題的重要性。為收集持份者關注的議題和意見，我們邀請多個對本署日常運作有重大影響，或可能受本署日常運作高度影響的持份者參與焦點小組會議及問卷調查。所邀請的持份者組別包括：

Stakeholder engagement gives us insights into the materiality of various sustainability topics. To identify topics of greatest concern to stakeholders and to gauge their views, we invited stakeholder groups who have significant impacts on the DSD's operations or could be significantly affected by our operations to take part in focus group meetings and questionnaire surveys. These stakeholder groups include:



[3] 102-43
[4] 102-40, 102-42

焦點小組會議及問卷調查
Focus Group Meetings and Questionnaire Surveys

本署以焦點小組會議及問卷調查的方式，就與本署工作性質相關的可持續發展議題與持份者進行意見調查，議題涵蓋社會責任及人權保障、員工福利及發展、環保，以及營運四大範疇。本署透過獨立顧問於2020年5月至6月舉行焦點小組會議及問卷調查，對共 526 位持份者（包括 441 位外部及 85 位內部持份者）進行意見調查，了解他們對相關議題的關注度，以及收集其對本署可持續發展工作的意見和建議。此外，除了為預備本報告所舉行的持份者參與活動，本署於日常營運中亦恆常與持份者溝通和交流，有關詳情請參閱**第七章－持份者參與**。

We engaged stakeholders in focus group meetings and questionnaire surveys to solicit their views on sustainability topics relevant to the nature of the DSD's operations. Covering four major aspects, these topics include social responsibility and human rights protection, staff welfare and development, environmental protection, and operation. An independent consultant was commissioned to organise focus group meetings and questionnaire surveys in May and June 2020 to collect feedback from 526 stakeholders (including 441 external and 85 internal stakeholders). These exchanges shed light on stakeholders' level of concern towards relevant issues and provided comments and suggestions on the sustainability performance of the DSD. In addition to launching stakeholder engagement activities during the preparation of this Report, we maintain close communication with all stakeholders in the course of daily operation. For details, please refer to **Chapter 7 – Stakeholder Engagement**.

實質性分析
Materiality Analysis

我們根據焦點小組會議及問卷調查的結果繪製實質性矩陣，分析各個可持續發展議題對持份者及對本署可持續發展的重要性，並將相關議題進行優先排序，以確立報告範圍和邊界。

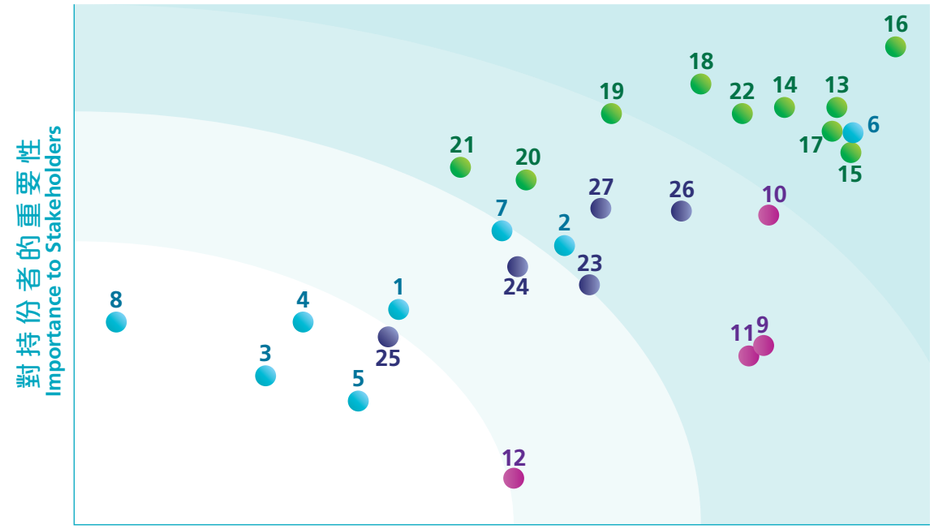
To analyse the importance of various sustainability topics to stakeholders and the DSD's sustainable development, we formulated a materiality matrix based on the results of focus group meetings and questionnaire surveys. Identified material topics are prioritised to define the scope and boundaries of this Report.



實質性矩陣
Materiality Matrix

我們以矩陣圖的方式展示相關議題對持份者及對本署可持續發展的重要性，較重要的議題列於矩陣圖的右上方。

Importance of identified topics to stakeholders and the DSD's sustainable development is presented in the form of a materiality matrix. The more important material topics are presented in the top right corner of the matrix.



社會責任及人權保障
Social Responsibility and Human Rights Protection

1 防止貪污 Anti-corruption
2 遵守社會、經濟方面法規 Social-economic Compliance
3 反歧視 Non-discrimination
4 保障集體談判的權利 Collective Bargaining Rights
5 尊重原居民權利 Respecting Indigenous Rights
6 匯報可持續發展進程 Reporting on Sustainable Development Agenda
7 投訴機制 Grievance Mechanism
8 防止強迫勞動 Prevention of Forced or Compulsory Labour

員工福利及發展
Staff Welfare and Development

9 員工培訓及發展 Employee Training and Education
10 職業安全及健康 Occupational Safety and Health
11 內部溝通渠道 Internal Communication Channel
12 員工政策及員工比例 Employment Policy and Employee Ratio

環保
Environmental Protection

13 遵守環境法規 Environmental Compliance
14 生態保育 Ecological Conservation
15 能源管理 Energy Management
16 污水及廢物處理 Effluent and Waste Treatment
17 氣味管理 Odour Control
18 水資源管理 Water Resources Management
19 氣體排放 Air Emissions
20 物料使用 Use of Materials
21 評估供應商的環境表現 Supplier Environmental Assessment
22 減緩及適應氣候變化 Climate Change Mitigation and Adaptation

營運
Operation

23 財務表現 Economic Performance
24 採購政策 Procurement Policy
25 間接經濟影響 Indirect Economic Impacts
26 服務質素標準 Service Quality Standards
27 保持公共資金和資產管理的透明度 Transparency on Public Funds and Assets Management

基於實質性分析的結果，以及渠務署高級管理層和可持續發展報告工作小組的建議，我們本年度確立共23個優先處理及報告的實質性議題。與去年度報告相比，本報告新增五項持份者關注議題，包括投訴機制、物料使用、評估供應商的環境表現、財務表現，以及間接經濟影響[5]。綜合所收集的意見，各持份者組別同樣高度關注本署的環保表現，當中以污水及廢物處理、遵守環境法規、生態保育、氣味管理、水資源管理和減緩及適應氣候變化是最備受關注的環保議題。本署除了於本報告披露相關資訊，同時在日常營運中與持份者保持緊密溝通，以積極回應其關切及意見[6]。

本報告涵蓋的實質性議題及邊界如下：

Based on the findings of the materiality analysis as well as recommendations from the senior management of the DSD and the Taskforce on Sustainability Reporting, 23 materiality issues were prioritised this reporting period as material for the DSD to address and report on. As compared with the previous sustainability report, five topics of concern to stakeholders have been added to this Report: grievance mechanism, use of materials, supplier environmental assessment, economic performance and indirect economic impacts[5]. Concluding the views of all stakeholders, we note that all stakeholder groups are highly concerned about the environmental performance of the DSD. In particular, effluent and waste treatment, environmental compliance, ecological conservation, odour control, water resources management as well as climate change mitigation and adaptation are top environmental concerns. In addition to disclosing relevant information in this Report, the DSD maintains close communication with stakeholders in the course of daily operation to ensure prompt response to all concerns and comments[6].

Material topics and boundaries of this Report are tabulated below:

實質性議題[7] Material Topics[7]	議題邊界[8,9] Topic Boundaries[8,9]	
	渠務署內部 Inside the DSD	渠務署外部 Outside the DSD
防止貪污 Anti-corruption	✓	✓
遵守社會、經濟方面法規 Social-economic Compliance	✓	✓
匯報可持續發展進程 Reporting on Sustainable Development Agenda	✓	✓
投訴機制 Grievance Mechanism	✓	
員工培訓及發展 Employee Training and Education	✓	✓
職業安全及健康 Occupational Safety and Health	✓	✓
內部溝通渠道 Internal Communication Channel	✓	✓
員工政策及員工比例 Employment Policy and Employee Ratio	✓	
遵守環境法規 Environmental Compliance	✓	✓
生態保育 Ecological Conservation	✓	✓
能源管理 Energy Management	✓	✓
污水及廢物處理 Effluent and Waste Treatment	✓	✓
氣味管理 Odour Control	✓	✓
水資源管理 Water Resources Management	✓	✓
氣體排放 Air Emissions	✓	✓
物料使用 Use of Materials	✓	✓
評估供應商的環境表現 Supplier Environmental Assessment	✓	✓
減緩及適應氣候變化 Climate Change Mitigation and Adaptation	✓	✓
財務表現 Economic Performance	✓	
採購政策 Procurement Policy	✓	✓
間接經濟影響 Indirect Economic Impacts	✓	
服務質素標準 Service Quality Standards	✓	✓
保持公共資金和資產管理的透明度 Transparency on Public Funds and Assets Management	✓	

[5] 102-49
[6] 102-44
[7] 102-47
[8] 102-46
[9] 議題邊界指本報告實質性議題涵蓋的範圍，包括渠務署辦事處及轄下設施，以及渠務署主要工程顧問和承辦商的運作。
Topic boundaries are scopes of material topics covered by this Report, including operations of the DSD offices and facilities as well as major project consultants and contractors.

第一章 CHAPTER 1

三十周年誌慶
Highlights of 30th Anniversary

在過去三十年，渠務署一直竭力為香港建構世界級的渠務系統和提供優質的污水和雨水處理排放服務，從而為市民提供安全和衞生的生活環境，以及推動香港的可持續發展。

Over the past three decades, the DSD has been striving to construct a world-class drainage system and provide high-quality wastewater and stormwater drainage services for Hong Kong. It is our aim to provide a safe and hygienic living environment for the public and promote sustainable development in Hong Kong.



第八屆國際水協亞太地區會議及展覽

The 8th International Water Association Asia Pacific Regional Group (IWA-ASPIRE) Conference and Exhibition



與各地專業人士交流經驗，提升專業水平

Enhancing professional standards through experience sharing with experts worldwide

本署上下一同慶祝渠務署成立三十周年

Celebrating the DSD's 30th Anniversary together



渠務署三十周年活動

DSD's 30th Anniversary Activities

為了慶祝渠務署成立三十周年，本署在2019年特意舉辦一系列的活動，與同事、員工家屬、專業團體和市民分享成果及喜悅，讓參加者從不同角度認識渠務署的工作。部分活動已於渠務署《可持續發展報告2018-19》中匯報。

To celebrate the 30th anniversary of the DSD, a series of activities were held in 2019 to share our achievements and joy with colleagues, their family members, professional groups and members of the public, allowing them to learn more about the DSD's responsibilities from different perspectives. Some activities have been included in DSD Sustainability Report 2018-19.



渠務署三十周年科研茶聚 2019

DSD 30th Anniversary Tea Gathering with Academia 2019

2019 4月 APRIL 12

四位渠務署助理署長帶領約60位來自專上學院、科研機構及土木工程拓展署東拓展處的嘉賓，參觀啟德河上游和啟德河一號隔沙站，並介紹本署現時和未來科研及發展項目的方向。活動當天，我們亦分享了部門之間的合作，以及啟德河和啟德河一號隔沙站的工程背景。是次活動不但加深了本署、土木工程拓展署和學者對彼此工作的認識，亦為將來的合作奠定基礎。

Four Assistant Directors of the DSD led a tour of about 60 guests from local universities, research institutes and East Development Office of the Civil Engineering and Development Department (CEDD) to the Upper Kai Tak River and Kai Tak River Desilting Compound No.1. During the event, we presented the present and future directions of our research and development projects, as well as the collaboration between the DSD and the CEDD and the project background of Kai Tak River and Kai Tak River Desilting Compound No.1. This event not only enabled the DSD, the CEDD and the academics to gain insight into each other's efforts, but also laid the foundation for future collaborations.



本署署長盧國華先生（前排左三）及時任副署長麥嘉為先生（前排左四）與參加者一同舉杯

Toasting led by Mr Kelvin LO Kwok-wah (front row, third left), Director of Drainage Services, and Mr MAK Ka-wai (front row, fourth left), the then Deputy Director of Drainage Services

員工及親友寵物同樂日

Staff and Friends Pets Fun Day

2019 5月 MAY 18

渠務署首次於荔枝角雨水排放隧道靜水池上蓋的蝴蝶谷寵物公園舉行寵物同樂日，員工及親友帶同寵物參與，並認識荔枝角雨水排放隧道設施。當日舉行了以「環保及循環再用」為主題的寵物造型比賽，參加者發揮創意，利用環保服飾為寵物悉心打扮。愛護動物協會的代表亦應邀為在場寵物提供健康檢查服務及分享照料寵物的建議。

The DSD organised the first Pets Fun Day at Butterfly Valley Road Pet Garden above the Stilling Basin of Lai Chi Kok Drainage Tunnel. Staff, relatives and friends were invited to bring along their pets to participate and visit Lai Chi Kok Drainage Tunnel facilities. A pet fashion competition under the theme "Recycling and Reuse" was held to unleash participants' creativity to make best use of recycled materials to make "statement" outfits for their pets. Representatives from The Society for the Prevention of Cruelty to Animals were invited to provide health checks for pets and offer tips on healthcare and training of pets.



參加者大合照

Group photo of all participants



本署署長盧國華先生（右九）與一眾管理層及嘉賓一同舉杯祝酒

Mr Kelvin LO Kwok-wah (ninth right), Director of Drainage Services, toasting with the senior management and guests

與綠色團體茶聚

Tea Gathering with Green Groups

2019 8月 AUGUST 9

本署再次在啟德河一號隔沙站舉辦三十周年茶聚活動，邀請到來自綠色團體、專上學院及土木工程拓展署的來賓們一同參觀啟德河上游和啟德河一號隔沙站。一眾參加者除了聽取渠務署於促進香港可持續發展的工作與成果，亦積極分享與本署的合作經驗。

The DSD organised another 30th Anniversary tea gathering event at Kai Tak River Desilting Compound No.1. Guests from green groups, tertiary institutions and the CEDD participated in the event. Besides touring the Upper Kai Tak River and Kai Tak River Desilting Compound No.1, visitors were briefed by the DSD representatives on the DSD's initiatives and achievements in promoting sustainable development in Hong Kong. Our guests warmly shared their experience of collaborating with the DSD.



出席者於啟德河一號隔沙站合照

Group photo of the participants at Kai Tak River Desilting Compound No.1

渠務署三十周年暨職員康樂會周年晚宴

DSD 30th Anniversary cum Annual Dinner

2019 8月 AUGUST 30

約380名嘉賓及同事出席渠務署三十周年晚宴。當晚除了頒發各項體育比賽獎項、進行幸運抽獎和問答遊戲外，署長盧國華先生和時任副署長麥嘉為先生更與本署樂隊一同獻唱。「渠記fans」更利用多種別具寓意的水果製作「渠記生日蛋糕」，並獻唱改編的生日歌，祝賀本署成立三十周年，令台上台下開懷盡歡。

About 380 guests and colleagues joined the DSD 30th Anniversary cum Annual Dinner. The programme included a prize presentation for sports competitions, a lucky draw and a quiz game. Mr Kelvin LO Kwok-wah, Director of Drainage Services, and Mr MAK Ka-wai, the then Deputy Director of Drainage Services, gave a musical performance alongside the DSD Band. "DSD fans" prepared a birthday fruit cake with special well wishes and performed a covered version of the traditional birthday song to celebrate the 30th anniversary of the DSD's establishment which brought joy and laughter.

渠務署三十周年歡樂跑

DSD 30th Anniversary Fun Run

2019 9月 SEPTEMBER 29

逾百名跑手，包括本署已退休的同事和業界伙伴代表，與三十多位工作人員參與於沙田污水處理廠舉行的「渠務署三十周年歡樂跑」，一同以體力和汗水慶祝渠務署成立三十周年。署長盧國華先生致辭時以長跑比喻日常工作，勉勵大家用堅定意志跨越工作上的難題。

Over a hundred runners, including a number of DSD retired staff and representatives of trade partners, and over 30 helpers participated in the DSD Fun Run held at Sha Tin Sewage Treatment Works to celebrate the event with great stamina and sweat. Speaking at the event, Mr Kelvin LO Kwok-wah, Director of Drainage Services, compared long-distance running to daily work, encouraging colleagues to cross hurdles at work with steadfast determination.

健兒們精神奕奕，賽前與工作人員合照

Group photo of spirited runners and helpers before the start of the race



參觀堆肥設施及河道人工濕地

Visit to Composting Plant and Drainage Channel Engineered Wetland

2019 10月 OCTOBER 3

本署新界北渠務部舉辦了「渠務署三十周年－參觀堆肥設施及河道人工濕地」活動，共三十多位同事一同認識人工河道工程如何兼具防洪及保育功能。參加者到訪了軍地河的人工濕地及軍地渠務維修站的堆肥設施，了解堆肥生產過程和使用要點，更獲派試用裝堆肥物料作種植之用。軍地河改善工程包括改造部分護岸及河床，以建構多孔隙生態環境及創造不同流速和生境的水道，以及種植多樣原生植物，藉以營造溫度、濕度、空間變化豐富的水棲生物棲息環境。

Over 30 DSD colleagues signed up for "DSD 30th Anniversary – Site Visit to Composting Plant and Drainage Channel Engineered Wetland" organised by Mainland North Division to see how an engineered channel serves both flood prevention and nature conservation purposes. They visited the engineered wetland at Kwan Tei River and the composting plant at Kwan Tei Depot to understand the production process and application of compost. They were given small packs of compost for trial planting. Improvement works at Kwan Tei River included modification of a section of embankment and river bed to create porous landscape as well as channels of varied water flows and habitats for small creatures. Native flora species were also planted to create suitable habitats of varied temperature, humidity and spacing for aquatic lives.

三十多名同事參觀軍地河人工濕地

Over 30 colleagues visiting the engineered wetland at Kwan Tei River



第八屆國際水協亞太地區會議及展覽

The 8th International Water Association Asia Pacific Regional Group (IWA-ASPIRE) Conference and Exhibition

2019 10月 OCT 31 – 11月 NOV 2



行政長官林鄭月娥女士（前排右八）與一眾主禮嘉賓，包括本署署長盧國華先生（前排左六）在第八屆國際水協亞太地區會議及展覽合照

Group photo of Chief Executive Mrs Carrie LAM (front row, eighth right) and the officiating guests, including Mr Kelvin LO Kwok-wah, Director of Drainage Services (front row, sixth left), at the opening ceremony of the 8th IWA-ASPIRE Conference and Exhibition

渠務署一向重視國際間的技術交流，本署署長並出任國際水協中國香港地區委員會副主席。年內，我們繼續支持及參與國際水協的活動，並與國際水協和其他機構協辦第八屆國際水協亞太地區會議及展覽，主題為「以智慧擴建穩健的水資源以科技創造韌性的水環境」。有來自超過30個國家及地區、超過1 000名水務從業者、學者及政府代表出席，並於會議上分享和學習水資源政策及管理、智慧供水、可持續發展，以及氣候變化等項目的經驗和知識。

The DSD has always placed strong emphasis on international technological exchange. The Director of Drainage Services serves as Vice Chairman of the International Water Association (IWA) Regional Committee of Hong Kong, China. During the reporting year, we continued to support and participate in activities organised by the IWA, which included being one of the co-organisers of the 8th IWA-ASPIRE Conference and Exhibition under the theme of "Smart Solutions for Water Resilience". The conference attracted over 1 000 water practitioners, academia and government officials from more than 30 countries and regions. During the conference, participants shared best practices and acquired knowledge and experience of water policy and management, smart water supply, sustainable development and climate change.

2019 建造創新博覽會

Construction Innovation Expo 2019

2019 12月 DECEMBER 17-20

本署同事向參觀者介紹跑馬地地下蓄洪計劃

The DSD colleagues presenting the Happy Valley Underground Stormwater Storage Scheme to visitors

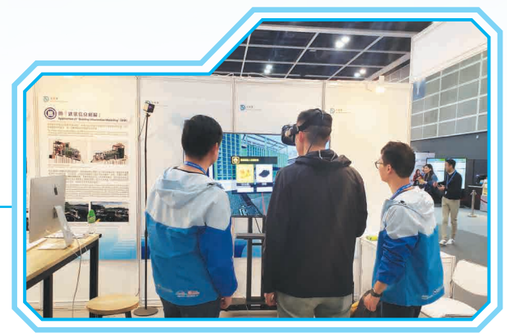


渠務署參與由發展局、中國住房和城鄉建設部科技與產業化發展中心和建造業議會合辦的「2019建造創新博覽會」。本署於展覽攤位中介紹多個創新的科研項目，包括搬遷沙田污水處理廠往岩洞計劃的綠色人工智能鷺鳥林監察系統、廚餘與污泥共厭氧消化試驗計劃、薄膜生物反應器的三級污水處理技術、跑馬地地下蓄洪計劃的智能水閘，以及沙頭角污水處理廠擴建工程所應用的各項智能科技。本署的工程師帶領技術參觀團到跑馬地地下蓄洪池和港島西雨水排放隧道參觀，實地了解本署的防洪工程。

The DSD participated in the Construction Innovation Expo 2019 co-organised by the Development Bureau, Centre of Science and Technology Industrial Development, Ministry of Housing and Urban-Rural Development of the People's Republic of China and the Construction Industry Council. We showcased a number of innovative projects in our exhibition booth, including the Green AI Egretry Monitoring System of Relocation of Sha Tin Sewage Treatments Works to Caverns project; Food Waste and Sewage Sludge Anaerobic Co-digestion Pilot Trial; tertiary sewage treatment technology - membrane bioreactor; movable weir in the Happy Valley Underground Stormwater Storage Scheme, and the smart technologies applied in Expansion of Sha Tau Kok Sewage Treatment Works project. Our engineers led technical tours to visit Happy Valley Underground Stormwater Storage Tank and Hong Kong West Drainage Tunnel to give participants an on-site experience of the DSD's flood prevention works.

公眾參觀渠務署的展覽攤位

Members of the public visiting the DSD's exhibition booth



獎項及殊榮

Awards and Honours

2018 Vision Awards

- 銀獎
  Silver Award
- 2018 最佳中文報告首 80 名
  Top 80 Reports Asia-Pacific Region of 2018
- 技術成就獎
  Technical Achievement Award
- 高度生產價值獎
  Outstanding Production Values

美國傳媒專業聯盟
League of American Communications Professionals LLC

2019 APEX Awards for Publication Excellence

卓越獎（電子媒體－綠色）
Awards of Excellence (Electronic Media - Green)

Communications Concepts

最佳企業管治大獎 2019 — 可持續發展及企業社會責任報告獎

2019 Best Corporate Governance Awards – Sustainability and Social Responsibility Reporting Awards

評判嘉許（公營/非牟利機構（大型機構）組別）
Special Mention (Public Sector/ Not-for-profit (Large) Category)

香港會計師公會
The Hong Kong Institute of Certified Public Accountants



渠務署《可持續發展報告 2017-18》
DSD Sustainability Report 2017-18

香港管理專業協會 2019 年度最佳年報獎

2019 HKMA Best Annual Reports Awards

優秀環境、社會及管治資料披露獎
Citation for Environmental, Social and Governance Disclosure

香港管理專業協會
The Hong Kong Management Association

2019 Galaxy Awards

優異獎（年報－網上可持續發展報告）
Honours Award (Annual Reports - Online: Sustainability Report)

MerComm, Inc





渠務署 DSD • Following

5/8/2019



渠務署 DSD 新圍污水處理廠改善工程的工程團隊獲環境運動委員會認證為香港綠色機構。# 渠務署 # 環保獎項

Project team of Upgrading of San Wai Sewage Treatment Works was certified as a Hong Kong Green Organisation by the Environmental Campaign Committee. #DSD #EnvironmentalAwards

渠務署 DSD • Following

20/9/2019



渠務署 DSD 工程項目啟德河改善工程（黃大仙段）及活化翠屏河，分別獲得香港城市設計學會頒發的城市設計大獎建成項目設計大獎和規劃 / 概念優異獎。# 渠務署 # 工程獎項

Projects of Kai Tak River Improvement Works (Wong Tai Sin Section) and Revitalization of Tsui Ping River received the Grand Award — Built Project Category, and the Merit Award — Plan / Concept Category, at the Urban Design Awards 2019 organised by the Hong Kong Institute of Urban Design. #DSD #EngineeringAwards

渠務署 DSD • Following

5/11/2019



渠務署 DSD 觀塘污水泵房優化工程榮獲由香港綠色建築議會頒發的環保建築大獎中的新建建築類別的優異獎。# 渠務署 # 工程獎項

Enhancement Works for Kwun Tong Sewage Pumping Station project received the Merit Award — New Buildings Category, at the Green Building Award 2019 organised by Hong Kong Green Building Council Limited. #DSD #EngineeringAwards

渠務署 DSD • Following

8/11/2019



渠務署 DSD 渠務署工程師李曉君女士（左七）和何存仁先生（左八）榮獲「2019 年申訴專員嘉許獎」的公職人員獎項。# 渠務署 # 社會獎項

The DSD Engineers, Ms Huky LI Hiu-kwan (seventh left) and Mr Robert HO Chuen-yan (eighth left), received Awards for Officers of Public Organisations at the "Ombudsman's Awards 2019". #DSD #SocialAwards

渠務署 DSD • Following

4/12/2019



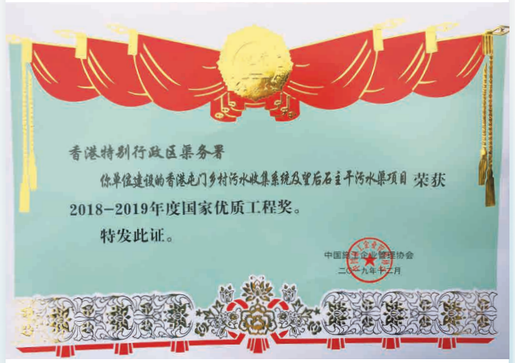
渠務署 DSD 小蠔灣污水處理廠太陽能發電場工程項目在中華電力有限公司舉辦「創新節能企業大獎」2019 榮獲「可再生能源卓越大獎 (企業 / 政府部門) 」。# 渠務署 # 環保獎項

Solar Farm at Siu Ho Wan Sewage Treatment Works received Renewable Energy Grand Award (Corporate / Government Bodies) at the CLP Smart Energy Award 2019 organised by the CLP Power Hong Kong Limited.

#DSD #EnvironmentalAwards

渠務署 DSD • Following

8/12/2019



渠務署 DSD 本署屯門鄉村污水收集系統及望后石主幹污水渠工程項目榮獲 2019 國家優質工程獎。# 渠務署 # 工程獎項

The DSD's Tuen Mun Village Sewerage and Trunk Sewers at Pillar Point project garnered the National Quality Engineering Award 2019.

#DSD #EngineeringAwards

渠務署 DSD • Following

10/12/2019



渠務署 DSD 本署在每兩年一度的「公務員優質服務獎勵計劃」榮獲兩項大獎，分別為部門精進服務獎（大部門組別）銀獎和隊伍獎（專門服務）金獎。「融和社區 • 淨水建『墟』」團隊另外獲得特別嘉許獎（與市民互動）。# 渠務署 # 社會獎項

The DSD clinched two major awards in the biennial Civil Service Outstanding Service Awards, namely, Silver Prize in Departmental Service Enhancement Award (Large Department Category) and Gold Prize in Team Award (Specialised Service). Project Team of Community Building with a Harmonised "Hui" also won the Special Citation Award (Interactive Communication with the Public). #DSD #SocialAwards

渠務署 DSD • Following

18/12/2019



渠務署 DSD 本署的沙頭角污水處理廠第一期擴建工程及塘肚鄉村污水收集系統合約工程研發的智能手機工地管理程式 – SIMple，榮獲建造業議會創新 2019 – 可持續建築第二名。# 渠務署 # 工程獎項

Mobile app for site digitalisation - SIMple, developed under the DSD's Contract - Expansion of Sha Tau Kok Sewage Treatment Works and Village Sewerage in Tong To, won the second prize of Construction Sustainability in the CIC Construction Innovation Award 2019. #DSD #EngineeringAwards

第二章 CHAPTER 2

創新技術展望未來
Innovation and Future

渠務署敢於創新、勇於嘗試，一直將先進科研成果應用於改進污水處理和雨水排放服務。我們除了有專職高級工程師統籌和執行技術研究與發展的工作外，亦自2006年起舉辦年度「研究及發展論壇」，與各界持份者攜手推動渠務技術的科研發展工作。過去30年，本署除了積極把創新技術應用於渠務工程各個層面（即工程設計建造、操作維修、污水處理及河道活化）以完善防洪及排污服務之外，亦積極把「藍綠排水建設」等創新意念納入工程，為市民構建更美好的居住環境。

Bold and innovative, the DSD has been applying advanced research results to enhancing our sewage treatment and stormwater drainage services. Apart from assigning designated senior engineers to co-ordinate and conduct technological research and development projects, we have been organising the annual Research and Development Forum since 2006 where we join hands with various stakeholders to promote technological research and development of drainage technologies. For the past 30 years, apart from actively applying innovative technologies in various areas of drainage works (i.e. project design and construction; operation and maintenance; sewage treatment; and river revitalisation) to enhance flood prevention and sewage treatment services, the DSD has incorporated innovative ideas such as Blue-Green Drainage Infrastructure into its projects to create a better living environment for the general public.



安裝於跑馬地地下蓄洪池的智能水閘

Movable weir installed at the Happy Valley Underground Stormwater Storage Tank



啟德河的魚洞穴及導流石

Fish shelter and flow deflectors in Kai Tak River



配備生物滴濾器技術的除味設施

Deodourisation facility equipped with biotrickling filter technology

在工程設計及建造方面的創新技術
Innovative Technology for Project Design and Construction

政府近年推動「建造業2.0」，鼓勵建造業應用創新科技。這項措施已在公共工程項目中先行試驗，把「創新」、「專業化」及「年輕化」三大元素納入工程合約要求中。為響應「建造業2.0」，本署在工程設計和建造階段採用場外建造方法、進行工地管理數碼化工作，以及使用多項智能環保創新技術，務求在提高施工效率、質素及安全水平之餘，亦盡量減低工程對周邊環境的影響。

The Government has been pushing forward with "Construction 2.0" to encourage the construction industry to apply innovative technologies. This initiative has been piloted in public works projects, with three key elements, "innovation", "professionalisation" and "revitalisation" incorporated into the works contract requirements. In support of "Construction 2.0", the DSD adopts off-site construction methods, undertakes site management digitalisation and employs various smart and green innovative technologies during design and construction to enhance construction efficiency, quality and safety, while minimising the impact of works on the surrounding environment.

場外建造

為了克服土地使用的限制，本署早於工程設計階段已考慮應用各項可行的建造技術，例如建築信息模擬技術(BIM)、場外建造，包括供製造和裝配的設計(DfMA)和「組裝合成」建築法(MiC)等。場外建造是指首先在工廠內生產預製組件或組裝組件，然後把組件運往施工地點以便實地安裝。

沙頭角污水處理廠第一期擴建工程的工地寫字樓和臨時污水處理廠均採用場外建造方法興建，如採用鋼筋預製組件、獨立的預製建築組件等。在廠房加工鋼筋和製造獨立的建築組件，不但能減省現場施工工序、有利施工管理工作，而且能與地基工程等施工工序同時進行，減少天氣、人手和場地限制對建築過程的影響。與傳統建造方法比較，場外建造方法能提升建造工程的生產力、安全水平、質素和可持續性。

Off-site Construction

To overcome land use constraints, the DSD takes into consideration early in the design stage various possible applications of construction technologies, such as Building Information Modelling (BIM), off-site construction, including Design for Manufacture and Assembly (DfMA) and Modular Integrated Construction (MiC). Off-site construction means manufacturing precast segments or assembled components in a factory, then transporting these precast units to the construction site for on-site installation.

The site office and temporary sewage treatment works in connection with Expansion of Sha Tau Kok Sewage Treatment Works (STW) Phase 1 are all built using off-site construction methods, such as using prefabricated steel reinforcing bars and standalone prefabricated building components. Processing pieces of rebar and manufacturing standalone prefabricated building components in a factory not only can minimise on-site works processes and facilitate construction management, but also can synchronise with works processes such as foundation works on-site to minimise impacts arising from adverse weather, labour shortage and site constraints. Compared with conventional construction methods, off-site construction has the advantage of improving work productivity, safety, quality and sustainability.



採用場外組裝方法建造工地寫字樓
Construction of site office by off-site modular approach



採用場外建造方法組裝的臨時污水處理廠均衡缸
Installation of equalisation tank of temporary STW, using off-site construction

工地管理數碼化
Digitalisation of Site Management

本署順應數碼化的趨勢，在不同的工程項目中試行虛擬實境系統、數碼工程監督系統和智能安全帽等先進技術，從而逐步實踐工地管理數碼化，藉以提升管理效率及安全水平。

Following the digitalisation trend, the DSD has piloted advanced technologies such as the virtual reality system, the digital works supervision system and smart safety helmets in various projects, taking steps towards site management digitalisation to enhance management efficiency and safety.

四維沉浸式電腦虛擬環境系統

負責搬遷沙田污水處理廠往岩洞工程的團隊利用「四維沉浸式電腦虛擬環境」系統（CAVE），將工程的最新進度以四維影像方式呈現。CAVE透過高解像度的立體投影畫面創造虛擬實境，讓多位用家在無需戴上任何輔助器材的情況下同時沉浸於同一個立體空間。管理層可簡便且準確地計劃未來工程，或預早發現潛在危機；他們亦可比較不同時期的工地外貌，甚至即時查看不同位置的監測數據，如有關沉降及環境監測點的數據，對工程進度一目了然。

工程團隊亦正利用該系統加強工友的安全意識。工程團隊與建造業議會合作，把安全訓練軟件安裝於CAVE，讓工友在不同的虛擬工作場景接受充滿實感的安全訓練。身處系統中的工友可以寓訓練於遊戲，而其他工友則可透過高解像度的立體畫面同時觀看訓練過程，藉以加深自己的記憶和提升整體安全意識。

4D Immersive CAVE System

The team responsible for the Relocation of Sha Tin STW to Caverns Project employs the 4D Immersive CAVE System (CAVE) to provide updates on the progress of the project via 4D images. CAVE can create a virtual reality environment through a high-resolution stereoscopic projection screen, enabling multiple users to immerse themselves in the same three-dimensional space simultaneously without wearing any support hardware. The management can plan ahead for future works more conveniently and precisely, or spot potential hazards in advance. By comparing works site features at different stages and even checking monitoring data, such as those on settlement and environmental monitoring points, from different locations, they can get a clear and overall picture of the progress of the project.

The project team is also using the system to strengthen workmen's safety awareness. Collaborating with the Construction Industry Council, the project team has installed safety training software onto CAVE to allow workmen to receive safety training with a strong sense of realism in different virtual workplace settings. Those workmen who have entered the system can enjoy playing games during training, while at the same time the other workmen can observe the training process through the high-resolution three-dimensional screen to deepen their memory and increase their general safety awareness.



顯示工程詳情的立體投影畫面

Stereoscopic projection screen showing details of project



透過 CAVE 進行安全訓練

Safety training through CAVE

數碼工程監督系統

本署在轄下首個「建造業2.0」先導項目沙頭角污水處理廠第一期擴建工程中試行數碼工程監督系統。項目團隊使用自行研發的手機應用程式收集工地即時數據，包括相關的相片和施工情況，以便掌握工程最新進度，從而作出適時而準確的決策。長遠而言，工地監督系統數碼化有助我們提升施工效率、減少文書工作和減低記錄出錯的風險。

Digital Works Supervision System

The DSD piloted a digital works supervision system in its first "Construction 2.0" pilot project – Expansion of Sha Tau Kok STW Phase 1. The project team used a self-developed mobile app to collect the works site's real-time data, including those related to photos and works execution, with a view to keeping abreast of the works progress and making timely and accurate decisions. In the long run, the digital works supervision system will help us enhance construction efficiency, reduce paperwork and minimise the risk of data inaccuracy.



使用手機應用程式監督工地

Site supervision by mobile app

智能安全帽

本署在進行沙頭角污水處理廠第一期擴建工程時首次採用智能安全帽。內置感應器的智能安全帽可配合BIM，實時監測工人的位置，從而確保工人在已授權的工地範圍工作。此外，感應器能即時收集工人的體溫、心跳頻率等身體狀況數據，當偵測到異常狀況，就立即通知安全主任，以保障工人安全。

Smart Safety Helmet

The DSD introduced smart safety helmets into the project Expansion of Sha Tau Kok STW Phase 1. The smart safety helmets equipped with built-in sensors can be used in conjunction with BIM to monitor the real-time locations of workers so as to ensure that workers are working within the authorised site area. The sensors can also collect real-time data on workers' physical condition, such as body temperature and heart rate; if abnormalities were detected, the safety officer would be informed immediately to ensure the safety of the workers.



智能安全帽有助大大提升工地安全水平

Smart safety helmets contribute greatly to construction site safety

智能環保裝置
Smart Green Devices

本署十分關注工程建造項目的環境影響。年內，我們採用了不同的智能環保裝置，以改善能源管理狀況和減低工程對周遭環境的影響。

The DSD is very concerned about the environmental impacts of construction projects. During the year, we adopted different smart and green devices to improve energy management and reduce the environmental impacts of the project surroundings.

淨能櫃

淨能櫃體積一般較標準貨櫃小，可在工地內靈活運用。它透過電網充電，亦能在夜間自動充電。淨能櫃的電池系統能夠為工地的高耗電設備提供穩定電力，例如向一部24噸天秤供電，又或同時向一部除砂器、六台水泵及兩部燒焊機供電。淨能櫃可減少工地對傳統發電機的需求，從而降低85%的二氧化碳排放量。它亦能記錄能源使用數據，以改善能源管理狀況和提升能源效益。

Enertainer

Generally smaller than a standard container, Enertainer can be used flexibly in works sites. It charges from the power grid and recharges automatically at night-time. The battery system of Enertainer can supply stable and reliable electricity to high-loading appliances at work sites, for instance powering a 24-tonne tower crane or powering one desander, six water pumps and two arc welders simultaneously. By lowering the demand for traditional generators, Enertainer can reduce carbon dioxide emissions by 85%. It can also record energy usage data to enhance energy management and energy efficiency.



淨能櫃為工地設備提供穩定電力

Supply of stable electricity to site appliances by Enertainer

綠色人工智能鷺鳥林監察系統

本署與香港科技大學合作，在位於白鷺飛行路線上的沙田污水處理廠安裝了360度人工智能相機，根據監測數據識別白鷺的種類和計算其數量，以便進一步了解搬遷沙田污水處理廠往岩洞的工程對這些雀鳥的影響。相機配合先進的「邊緣人工智能」技術，能讀取投影在圖像傳感器上的入射光子內容，有助分析影像並即時追蹤和識別鳥類。

Green AI Egretry Monitoring System

Working with the Hong Kong University of Science and Technology, the DSD installed 360-degree AI cameras at Sha Tin STW on the egret flight path to identify the species of egrets and count their numbers in the light of the monitoring data so as to learn more about the impact of Relocation of Sha Tin STW to Caverns on these birds. Equipped with state-of-the-art Edge AI technology, the camera can read the contents of the incoming photons projected on the image sensors, enabling image analysis as well as immediate bird tracking and identification.



安裝於沙田污水處理廠的實時環境監控儀器

Real-time environmental monitoring device installed at Sha Tin STW



人工智能相機能識別白鷺的種類

AI cameras can identify the species of egrets

在維修保養方面的創新技術
Innovative Technology for Maintenance

由渠務署管理的地下雨水渠及污水渠的總長度在過去10年增約一成，即由4 283公里增至4 717公里。為確保本港龐大而複雜的渠道網絡保養得宜，本署在保障前線員工安全的前提下一直採取創新措施，例如使用機械人和新式渠管修復技術，藉以提升工作效率，讓廣大的市民得益。

The past decade has seen an increase of about 10% in the total length of underground drains and sewers managed by the DSD, i.e. from 4 283 kilometres to 4 717 kilometres. To ensure Hong Kong's sizeable and complex drainage network is properly maintained, the DSD, under the precondition that the safety of frontline staff must be safeguarded, has been taking innovative measures, such as using robots and new pipe rehabilitation technologies, to enhance work efficiency and bring benefits to the public.

遙控清淤機械人

當雨水經箱形暗渠排出大海，隨雨水沖下的沙石和泥塵會在渠內積聚成淤泥。為降低水浸風險，渠務署定期檢查箱形暗渠，並在有需要時安排清淤工作，確保渠道正常運作。年內，我們引入新式遙控清淤機械人協助清淤，以克服傳統清淤方法的限制，並提升工作效率及安全水平。

Remote-controlled Desilting Robot

When stormwater is discharged to the sea through box culverts, the washed-off gravel and dust will accumulate gradually at the drains to form silt. To minimise flooding risks, the DSD inspects the box culverts on a regular basis and arranges desilting if necessary to ensure proper functioning of all drains. During the year, we introduced a new type of remote-controlled desilting robot to assist with desilting to overcome constraints of the traditional desilting method and improve work efficiency and safety.

工作人員如使用傳統的清淤方法，則須進入密閉的箱形暗渠裝設和操控清淤裝置，使自己承受一定的安全風險。由於傳統方法要求截斷暗渠內的水流，讓工人在沒有水流的情況下工作，所以清淤工作大多局限在旱季進行。相反，遙控清淤機械人可接掌潛水工作，免卻工人進入密閉和淹浸的箱形暗渠，從而提升安全水平。此外，使用機械人亦令清淤工作得以在雨季進行，從而加快工作進度和減低成本。

If workers use the traditional desilting method, they are required to enter confined box culverts to install and operate desilting devices, thus exposing themselves to certain safety risks. Since the traditional method requires interception of water flow in the culverts to allow workers to work in an environment free of flowing water, desilting is limited mostly to the dry season. On the contrary, the remote-controlled desilting robot can take over diving tasks to spare workers from working in the confined and submerged space of box culverts, thereby enhancing work safety. In addition, using a robot allows desilting to be carried out in the rainy season, hence expediting the work process and lowering the cost.



使用遙控清淤機械人提高清淤效率

Using remote-controlled desilting robot to enhance desilting efficiency

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中文版 English version

無開坑式渠管修復技術

香港目前有接近2 100公里的地下雨水渠及污水渠管已使用超過30年或以上，當中不少已出現老化及耗損情況。為防患未然，本署已進行預防性的修復工程，以無開坑式修復技術取代傳統的明挖回填方式，藉以更換受損渠管，從而減低工程對路面交通及市民日常生活的影響。本署現時使用三種無開坑式修復技術，即螺旋纏繞修復技術、原位固化內襯修復技術和內套喉管法。

Trenchless Pipe Rehabilitation Technologies

Almost 2 100 kilometres of underground drain and sewer pipes in Hong Kong have been in use for 30 years or longer, many of which are showing signs of ageing as well as wear and tear. As a precaution, the DSD has carried out preventive rehabilitation works aimed at substituting trenchless rehabilitation technologies for the conventional cut-and-cover method to replace damaged pipes, thereby minimising the impact of the project on road traffic and daily life. The DSD is currently using three types of trenchless pipe rehabilitation technology, namely spiral wound rehabilitation technology, cured-in-place-pipe (CIPP) lining, and slip-lining technology.

螺旋纏繞修復技術由中央電腦操作，透過繞線機先把以鋼加固的聚乙烯條纏繞成喉管形狀，再利用聚乙烯物料將其融合，在主喉管內製成新喉管。

Spiral wound rehabilitation is a centrally computerised technology. Steel-reinforced polyethylene strips are spirally wound by the winding machine. These strips are then joined by a fusion of polyethylene materials to form new pipes in the host pipe.



螺旋纏繞修復技術

Spiral wound rehabilitation technology

原位固化內襯修復技術是另一種無坑式修復技術，先運用壓縮空氣將約五毫米厚的聚酯纖維軟管套入原有渠管，再以蒸汽或熱水令軟管膨脹並固化成為新渠管。

CIPP is another trenchless rehabilitation technology whereby compressed air is used to insert into the existing pipe a five-millimetre thick soft polyester liner which, when exposed to steam or hot water, will expand and harden to form a new pipe.



原位固化內襯修復技術
Cured-in-place-pipe lining

內套喉管法是把玻璃纖維膠管逐段推入破舊或受損的渠管內，再用水泥灌漿填滿新、舊渠管之間的縫隙，從而製成新渠管。由於現有渠管在施工過程中無須臨時截流，內套喉管法適用於高流量的污水渠。

Slip-lining technology involves the formation of a new pipe by pushing a fibreglass plastic liner into an old or damaged pipe section by section and filling the gap between the new and old pipelines with cement slurry. As temporary interception of flow of water in the existing pipes is not necessary during the work process, this method is applicable to sewers with a high flow rate.



內套喉管法
Slip-lining technology

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中文版　English version

在污水處理方面的創新技術
Innovative Technology for Sewage Treatment

過去五年，渠務署合共處理接近51億立方米污水。為顧及本港發展並在土地資源有限的情況下提供世界級的污水處理服務，我們必須把創新技術應用於工作中。本署已試驗多種有助提高污水處理效能的技術，現計劃在未來把這些技術應用於轄下的污水處理設施。

In the past five years, the DSD treated a total of about 5.1 billion cubic metres of sewage. To facilitate Hong Kong's development and provide world-class sewage treatment services in the light of limited land resources, we have to apply innovative technologies to our work. Having conducted trials on various technologies that are helpful in improving sewage treatment efficiency, the DSD plans to apply these technologies in our future sewage treatment facilities.

好氧顆粒污泥技術

好氧顆粒污泥技術有助在單一個處理反應器內同時清除污水裡的有機碳、氮、磷及其他污染物。與利用懸浮微生物處理污水的傳統活性污泥技術相比，利用顆粒污泥快速沉澱特性的好氧顆粒污泥技術不但在處理污水方面更加有效，而且讓我們取得佔地面積較小、能源需求較低的優點。

Aerobic Granular Sludge Technology

The Aerobic Granular Sludge (AGS) technology allows simultaneous removal of organic carbon, nitrogen, phosphorus and other pollutants in a single treatment reactor. Compared with the conventional activated sludge process that relies on suspended biomass for sewage treatment, the AGS technology, which utilises granular sludge with a fast settling ability, is more effective in treating sewage, giving us the advantages of a smaller footprint and lower energy requirements.

渠務署於 2019 年完成好氧顆粒污泥技術的應用試驗工作，結果顯示該技術在不同負載和運行條件下仍能令排放水達到所需的排放標準。未來，我們會考慮將此具潛力的技術應用於污水處理設施。

In 2019, the DSD completed a trial application of the AGS, the results of which demonstrated that the AGS technology was capable of meeting the effluent discharge standards under different loading and operating conditions. We will consider applying this promising technology to sewage treatment plants in the future.



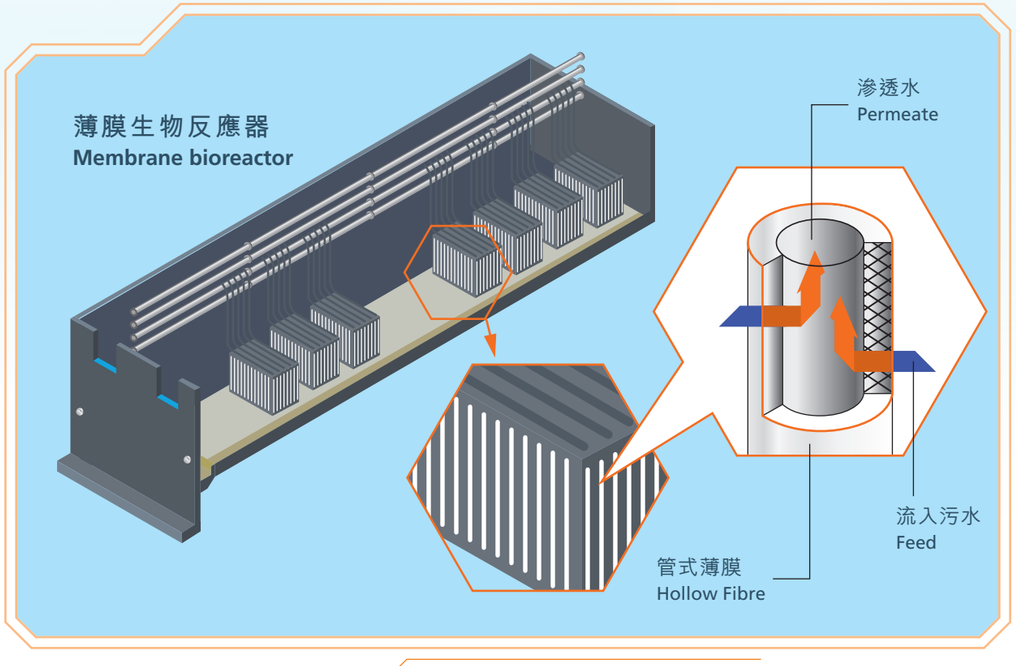
好氧顆粒污泥反應器
Aerobic Granular Sludge Reactor

薄膜生物反應器

薄膜生物反應器是緊湊型的污水處理技術，能把懸浮床生物處理程序與經由薄膜進行的固體液體分離程序結合。有別於傳統沉澱技術，薄膜生物反應器技術作為固體液體分離法，可在短時間內把排放水從較高懸浮固體濃度的混合液分離出來。因此，與體積相同的普通生物反應器相比，薄膜生物反應器能夠處理更大量的污水。膜孔的大小分為微濾級別（100至5 000納米）、超濾級別（10至100納米）、納濾級別（1至10納米）和逆滲透級別。超濾級別或更小的孔膜均能夠隔除多種病毒及細菌，包括大腸桿菌。石湖墟淨水設施將會大規模採用薄膜生物反應器處理污水，而經處理的排放水亦可達三級處理水平。此等排放水再經加氯及消毒後轉化而成的再造水可作沖廁等用途。

Membrane Bioreactor

Membrane bioreactor (MBR) is a compact sewage treatment technology that can combine the suspended growth biological treatment process with the membrane liquid-solid separation process. Unlike the conventional sedimentation technology, the MBR technology, as a means of liquid-solid separation, can separate the permeate from the high concentration of mixed liquor within a very short period of time. Hence, compared with the ordinary bioreactor of the same size, the MBR can treat a higher volume of sewage. The membrane pore sizes are classified into microfiltration (MF) (100 to 5 000 nanometres), ultrafiltration (UF) (10 to 100 nanometres), nanofiltration (NF) (1 to 10 nanometres) and reverse osmosis. Membranes with a pore size equal to or smaller than UF can filter out many types of virus and bacterium, including *E. Coli*. The MBR will be used on a massive scale in Shek Wu Hui Effluent Polishing Plant for sewage treatment and the treated effluent will reach tertiary treatment level. Such effluent, after chlorination and disinfection, can be used as reclaimed water for purposes such as toilet flushing.



斜板沉澱器

渠務署於2019年完成關於斜板沉澱器的小型試驗項目，以評估斜板沉澱器在初級沉澱池運作時的效能、穩固程度，以及操作和維修保養要求。受試驗的處理設施是由傾斜的方形分隔器及位於底部用以排放淤泥的漏斗組成。該設施的最大特點是，以55度角安裝的斜板能提供最大的表面面積供初級淤泥沉澱。與傳統初級沉澱池相比，斜板沉澱器需要較小佔地面積。試驗結果良好，不論在處理過程中有否添加化學劑，總懸浮固體物消除程度均達到預期水平。這項技術將會應用於石湖墟及元朗淨水設施。

Inclined Plate Settler

The DSD completed a small-scale trial on the inclined plate settler in 2019 to evaluate its performance, robustness as well as operation and maintenance requirements when it was operating in the primary sedimentation tank. The treatment unit put to the test consisted of an inclined and rectangular separator tank with its hopper at the bottom for sludge discharge. The key feature of the unit is that the inclined plate installed at an angle of 55 degrees can allow maximum surface area for primary sludge to settle. Compared with the traditional primary sedimentation tank, the inclined plate settler requires a smaller footprint. Results of the trial were satisfactory, with the anticipated total suspended solids removal rate achieved, irrespective of whether there was any chemical dosing in the treatment process. This technology will be adopted in the Shek Wu Hui and Yuen Long Effluent Polishing Plants.

斜板沉澱器
Inclined plate settler



兩點加氯投配研究

根據淨化海港計劃消毒設施的研究項目，本署在昂船洲污水處理廠配水室內的不同位置投配化學消毒劑，以測試消毒劑與污水的混合效率。結果發現，將次氯酸鈉投配於溢流堰處高湍流區域的污水中能有效增強混合效率，令化學劑的消耗量大幅減少20%，從而以最小量的化學劑發揮最大的消毒效果。

Study of Using Two-point Chlorine Dosing

Under a study project on the disinfection facilities of the Harbour Area Treatment Scheme, the DSD applied chemical dosing at different locations inside the Flow Distribution Chamber of Stonecutters Island STW to study the efficiency of disinfectant mixing with sewage. The result showed that the efficiency of mixing could be effectively enhanced by dosing sewage with sodium hypochlorite (NaOCl) in the high turbulent flow region at the overflow weir, with the chemical consumption substantially reduced by 20%, thereby minimising the consumption of chemicals for optimal disinfection.



在配水室的溢流堰處安裝化學劑投配裝置

Installation of chemical dosing unit at overflow weir of Flow Distribution Chamber



實體模型用以測試在不同位置將次氯酸鈉投配於污水的效果

Physical model for testing the effectiveness of dosing sewage with sodium hypochlorite at different locations

在河道活化方面的創新意念

Innovative Idea for River Revitalisation

渠務署近年致力把創新意念應用於河道活化工程中，藉以改善河道的排洪能力，並提升其美觀和生態價值。本署在研究各種河道活化方案之餘，亦將不同創新意念應用於現有河道活化工程。詳情請參閱**第四章－主要職責**及**第五章－環境管理**。

在活化河道的過程中，渠務署致力滿足公眾的期望，積極探索更經濟、更快捷的方案，務求盡快提升現有明渠的生態及觀賞價值。本署於2018年聯同香港理工大學研究河道改善方案，嘗試利用導流裝置改善一段長約330米的洪水橋明渠的生態價值。研究結果令人滿意，在改善工程完成後的監測期內，項目團隊發現河道中受保護的原生及依賴濕地的物種較以前多。這項「速效」改善措施證實有效改善明渠的生態環境。

In recent years, the DSD has been striving to apply innovative ideas to river revitalisation projects, aiming not only to improve the drainage capabilities of river channels, but also to enhance their aesthetic and ecological values. While studying various river revitalisation schemes, the DSD has been applying different innovative ideas to existing river revitalisation projects. For details, please refer to **Chapter 4 – Core Responsibilities** and **Chapter 5 – Environmental Management**.

In the course of revitalising river channels, the DSD strives to meet public expectations by actively exploring more economical and quicker options to enhance ecological and aesthetic values of existing nullahs in Hong Kong. In 2018, the DSD joined forces with the Hong Kong Polytechnic University to conduct research on using instream deflectors to enhance the ecological value of a section of about 330 metres long Hung Shui Kiu Nullah. The result of research was found satisfactory, with more native and wetland-dependent species of conservation concern recorded by the project team during post-enhancement monitoring. The "Quick-Fix" improvement measure has been proved effective in enhancing the eco-environment of nullahs.

洪水橋明渠生態改善試驗計劃

Ecological enhancement works site trial at Hung Shui Kiu Nullah



第三章 CHAPTER 3

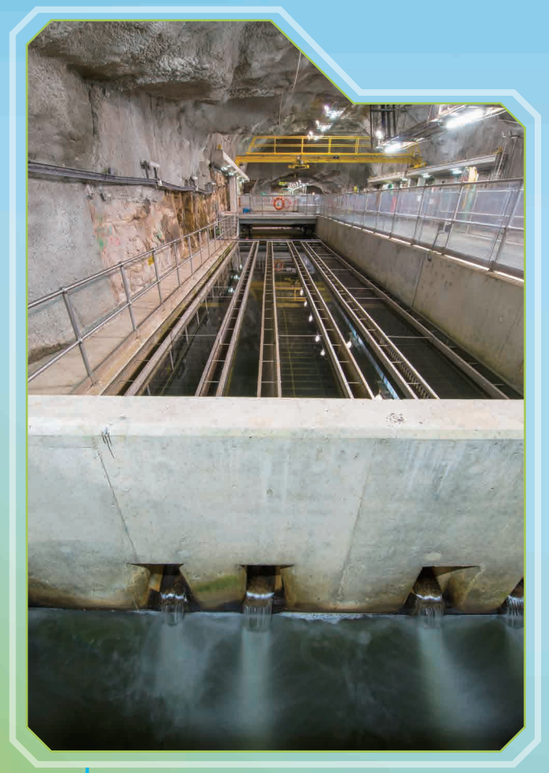
管治方針
Governance Approach

渠務署自 1989 年成立至今三十載，一直將公眾利益放於首位，同時全面披露本署管治的原則和實務，以提升我們的公信力和聲譽。在高級管理層的帶領下，本署透過多個高效的事務委員會和工作小組實踐本署的抱負、使命和信念，以及積極推動可持續發展。我們亦建立了優良、穩健及明智的管治架構，並透過所汲取的經驗、掌握國際發展趨勢和了解持份者的期望，不斷完善可持續發展管治方針及政策。

Thirty years since our establishment in 1989, the DSD has always put public interest first in our operations while openly and fully disclosing our corporate governance principles and practices to uphold credibility and reputation. Through a structure of highly efficient committees and working groups, we realise our vision, mission and values and actively promote sustainable development under the leadership of our senior management. We have also established a superior, solid and sensible corporate governance framework, and continuously optimise our sustainable development management approach and policies based on our experience, international trends and stakeholders' expectations.



昂坪污水處理廠
Ngong Ping Sewage
Treatment Works



港島西雨水排放隧道
Hong Kong West Drainage Tunnel

赤柱污水處理廠
Stanley Sewage
Treatment Works



抱負、使命和信念
Vision, Mission and Values

渠務署成立於 1989 年，為香港特別行政區政府發展局轄下部門之一，專注為香港提供專業優質的污水和雨水處理排放服務。我們決心推動香港的可持續發展，將可持續發展理念融入於本署的「抱負、使命和信念」中，同心應對氣候變化及城市發展帶來的挑戰。

Established in 1989, the DSD is one of the departments under the Development Bureau of the Government of the Hong Kong Special Administrative Region. We focus on providing professional and high quality sewage and stormwater drainage services. The DSD is determined to drive sustainable development in Hong Kong. By incorporating sustainability concepts into our "Vision, Mission and Values", we work together to combat challenges brought by climate change and urban development.

抱負 Vision

- 提供世界級的污水和雨水處理排放服務，以促進香港的可持續發展

  To provide world-class wastewater and stormwater drainage services enabling the sustainable development of Hong Kong

使命 Mission

- 以具經濟效益和合乎環保的方式改善服務

  Improving drainage services in a cost-effective and environmentally responsible manner

- 致力關懷員工，營造安全、和諧及身心健康的工作環境，培育員工的發展和創新思維

  Enhancing a caring, harmonious, safe and healthy work environment that fosters staff development and a mindset for change

- 強化與社區、業界和各地相關機構的關係

  Strengthening relationships with community, industry and worldwide counterparts

信念 Values

- 以客為本 Customer Satisfaction
- 優質服務 Quality
- 勇於承擔 Commitment
- 群策群力 Teamwork

管治架構
Governance Structure

高級管理層

本署的高級管理層以署長為首，並由一位副署長及四位助理署長組成，負責制定重大決策和監督部門日常運作，並制定和檢討本署的可持續發展策略及目標。成員包括：

Senior Management

Headed by the Director of Drainage Services, the Department's senior management comprises a Deputy Director and four Assistant Directors who are responsible for making important policy decisions and overseeing the Department's daily operations, as well as formulating and reviewing our sustainability strategies and goals. The senior management team includes:



A 渠務署署長 盧國華先生
Director of Drainage Services
Mr Kelvin LO Kwok-wah

B 渠務署副署長 彭偉成先生
Deputy Director of Drainage Services
Mr Wilson PANG Wai-shing

C 助理署長 / 設計拓展 黃緒勤先生
Assistant Director / Projects and Development
Mr Ken WONG Sui-kan

D 助理署長 / 機電工程 白諫鳴先生
Assistant Director / Electrical and Mechanical
Mr Eddie PAK Kan-ming

E 助理署長 / 污水處理服務 梁泳源先生
Assistant Director / Sewage Services
Mr Walter LEUNG Wing-yuen

F 助理署長 / 操作維修 何耀光先生
Assistant Director / Operations and Maintenance
Mr HO Yiu-kwong

G 主任秘書 李志江先生
Departmental Secretary
Mr Chris LI Chi-kong

搬遷沙田污水處理廠往岩洞項目工地
Works site of Relocation of Sha Tin Sewage Treatment Works to Caverns

組織架構
Organisational Structure

本署設有四個分科，包括污水處理服務科、操作維修科、設計拓展科及機電工程科，下設16個不同功能的分部。此外，總部另設部門行政部、財務及物料供應部，以及技術支援部，分別負責行政、會計及技術支援工作。截至2020年3月，編制共有2 020個常額職位。

The DSD consists of four branches, including Sewage Services Branch, Operations and Maintenance Branch, Projects and Development Branch and Electrical and Mechanical Branch, as well as 16 subordinate functional divisions. In addition, administration, accounting and technical support are handled by the Departmental Administration Division, Finance and Supplies Section and Technical Support Group at our headquarters respectively. As at March 2020, we have a permanent staff establishment of 2 020.



四個分科各由一位助理署長領導，負責提供所屬範疇的技術及專業支援服務。各分科的職責如下：

Each of the four branches is led by an Assistant Director and is responsible for providing technical and professional support services in its specific field. The duties of each branch are as follows:

設計拓展科
Projects and Development Branch

負責實施基本工程項目，包括設計及建造雨水渠、防洪及排洪工程、污水收集系統及污水處理設施。

is responsible for the implementation of capital works projects, including the design and construction of drains, flood control and relief works, sewerage network and sewage treatment facilities.

操作維修科
Operations and Maintenance Branch

負責全港雨水排放及污水收集系統的操作和維修、防洪、策劃雨水排放及污水收集系統、執行《土地排水條例》，以及管理和保養人工排水道。

is responsible for the operation and maintenance of drainage and sewerage systems across the territory as well as flood prevention, planning of drainage and sewerage systems, enforcement of Land Drainage Ordinance and the management and maintenance of engineered drainage channels.

機電工程科
Electrical and Mechanical Branch

負責污水處理及防洪設施的運作及維修，以及為部門轄下的污水處理及防洪項目提供機電設計和裝置。

is responsible for the operation and maintenance of sewage treatment and flood prevention facilities as well as electrical and mechanical design and installation works in sewage treatment and flood protection projects.

污水處理服務科
Sewage Services Branch

負責推展鄉村公共污水收集系統、雨水排放改善工程、包括淨化海港計劃等污水處理及收集系統和工程，以及徵收排污費。

is responsible for the implementation of village public sewerage, stormwater system enhancement projects and sewage treatment and sewerage systems and projects, including the Harbour Area Treatment Scheme, and the collection of sewage charges.

可持續發展管理
Sustainability Management

渠務署已建立完善及成熟的可持續發展管理架構，全面涵蓋多個可持續發展範疇。在高級管理層的領導下，我們積極探討相關議題，並提出適切建議及監督相關工作。本署採用合適的國際標準和管理系統，並設立多個溝通渠道，加強與持份者交流，聽取並回應其意見，以持續改善管理模式和提升可持續發展表現。

The DSD has established a holistic and mature sustainability management structure, covering a wide range of sustainability aspects comprehensively. Under the leadership of our senior management, we proactively examine relevant issues and provide appropriate recommendations as well as supervising related initiatives. In addition to adopting suitable international standards and management systems, we strengthen communication with stakeholders and solicit their views through multiple channels, with an aim to continuously invigorate our management approach and improve our sustainability performance.

管理架構
Management Structure

我們設立了三個專責委員會及兩個工作小組，包括：
We have set up three committees and two working groups, including:

環保管理委員會
Green Management Committee

由副署長領導，負責檢討環境管理政策、擬定環保工作的方針和目標，以及監察環保計劃和措施的成效。

報告期內，委員會共召開兩次會議，深入討論節能、綠化、減排、減廢等議題及檢視環保工作的進度。

Chaired by the Deputy Director, the Committee is responsible for reviewing the environmental management policy, formulating environmental work objectives and targets, and monitoring the effectiveness of environmental programmes and initiatives.

During the reporting period, the Committee held two meetings to hold in-depth discussions on energy saving, greening, emission reduction and waste reduction. Environmental initiatives were also reviewed for their latest progress.

安全督導委員會
Safety Steering Group

由副署長領導，負責監察和提升本署作業的職業安全與健康、制訂安全標準及指引、擬定改善程序及措施，以預防與工作相關的意外，並審視其執行情況和成效。

本年度，委員會共召開兩次會議，檢討本署轄下建築工地及員工的安全表現、制訂新的職業安全措施和推廣計劃等議題。

Chaired by the Deputy Director, the Group is responsible for overseeing and promoting occupational safety and health across the DSD's undertakings, setting safety standards and guidelines, formulating improvement procedures and measures to prevent work-related accidents, and reviewing their implementation and effectiveness.

In the year under review, the Group held two meetings to review the safety performance of the DSD's construction sites and staff, and to formulate new safety initiatives and safety promotion programmes.

研究及發展督導委員會
Research and Development Steering Committee

由副署長領導，專責進行研究以支持部門的發展計劃。委員會設有兩個小組，分別統籌土木工程和機電工程的研究工作。

年內，委員會共召開六次會議，並參與統籌於香港舉辦的第八屆國際水協亞太地區會議及展覽。期間，本署共完成12個研究項目，課題涵蓋元朗排水繞道的生態調查與評估、實地試驗提升河道生態價值、以好氧顆粒污泥技術處理污水、在初級沉澱池加裝斜板沉澱器、使用液壓壓濾機、對化學強化一級污泥的氣味控制和以水凝膠處理化學強化一級污泥，以及評估后海灣地區主要持久性有毒物質對生態和健康的風險。

Led by the Deputy Director, the Committee is responsible for conducting research in support of the DSD's development plans. The Committee consists of two teams which coordinate research in civil engineering and electrical and mechanical engineering respectively.

In the year under review, the Committee held six meetings and participated in the organisation of the 8th International Water Association Asia Pacific Regional Group Conference and Exhibition in Hong Kong. During the year, the DSD completed a total of 12 research projects on topics covering ecological survey and assessment for Yuen Long Bypass Floodway, site trials on ecological enhancement in river channel, aerobic granular sludge in wastewater treatment, inclined plate settler technology for primary sedimentation, hydraulic filter press, odour control and study of hydrogel on Chemically Enhanced Primary Treatment sludge, and ecological and health risk assessment of major persistent toxic substances in Deep Bay Area.

能源及排放管理小組
Energy and Emission Management Team

節能減排是本署重點關注的環保議題。小組由助理署長/機電工程領導，透過識別排放源頭、訂立基準評估表現、實施改善措施及分享專業知識等方法，改善本署在能源及排放方面的表現。

本年度，小組召開一次會議，討論節能措施及目標、可再生能源應用等議題。

Energy saving and emission reduction are key environmental issues addressed by the DSD. Chaired by the Assistant Director/Electrical and Mechanical, the Team helps improve the DSD's energy and emission performance through identifying emission sources, benchmarking performance, implementing improvement measures, and sharing professional knowledge.

In the year under review, the Team held one meeting to discuss various topics, including energy conservation measures and targets, and applications of renewable energy.

可持續發展報告工作小組
Taskforce on Sustainability Reporting

由副署長領導，就編製該年度可持續發展報告的事宜給予意見及制定決策，包括決定報告所採用的國際指引、訂定持份者參與活動計劃及確認實質性議題等。

Chaired by the Deputy Director, the Taskforce gives comments and makes decisions in relation to the preparation of our sustainability report. These include selecting the international guidelines to be adopted for reporting, defining stakeholder engagement plans, and identifying material topics.

綜合管理體系
Integrated Management System

渠務署自2002年開始建立和落實符合國際標準的管理體系，至今已實施由多套系統組成，涵蓋品質、環境、職業安全與健康系統的綜合管理體系。

我們不斷持續完善管理體系，貫徹「規劃－實施－檢查－行動」的管理原則。本署在2018年已順利將ISO 9001品質管理體系及ISO 14001環境管理體系，升級至新版本ISO 9001:2015及ISO14001:2015。年內，我們對職業安全衛生管理體系OHSAS 18001進行內部檢討，務求於2021年3月前順利提升至ISO 45001:2018的要求。

面對氣候變化及城市發展所帶來的挑戰，本署致力完善資產管理以降低營運成本。在2019年7月，除六所由「設計、建造和營運」合約下營運或正處於提升工程的污水處理廠和污水泵房外，本署轄下的污水處理廠、污水泵房和雨水泵房已通過ISO 55001資產管理標準認證審核。渠務署是首批獲得該認證的政府部門之一。

The DSD has been building and implementing management systems in line with international standards since 2002. To date, we have put in place an integrated management system made up of multiple systems that cover the aspects of quality, environment and occupational safety and health.

Adhering to the "Plan-Do-Check-Act" approach, we continuously improve our management systems. In 2018, the DSD had successfully upgraded ISO 9001 Quality Management System and ISO 14001 Environmental Management System to conform to new standards of ISO 9001:2015 and ISO 14001:2015. In the year under review, an internal review was conducted on OHSAS 18001 Occupational Health and Safety Management System with a mission to facilitate smooth transition to meet requirements of ISO 45001:2018 by March 2021.

Facing the challenges posed by climate change and urban development, we strive to optimise our asset management to reduce operational costs. In July 2019, all the DSD-owned sewage treatment works (STWs), sewage pumping stations (SPSs), and stormwater pumping stations, except six STWs and SPSs which are being operated under "Design, Build and Operate" contracts or being under upgrading projects, passed the certification audit for ISO 55001 Asset Management System, making us one of the first government departments to obtain such accreditation.



元朗污水處理廠
Yuen Long Sewage Treatment Works

第四章 CHAPTER 4

主要職責
Core Responsibilities

渠務署肩負為香港提供世界級的污水及雨水處理排放服務的使命，竭力為市民締造宜居的生活環境，保護市民免受水浸威脅，同時保障香港水體的水質，促進本港可持續發展。

The DSD shoulders the mission of providing world-class wastewater and stormwater drainage services. We are dedicated to creating a liveable environment and safeguarding citizens from threats of flooding, while protecting the quality of Hong Kong waters to promote sustainable development in Hong Kong.



昂船洲污水處理廠
Stonecutters Island Sewage Treatment Works



跑馬地地下蓄洪計劃
Happy Valley Underground Stormwater Storage Scheme



蠔涌河
Ho Chung River

2019-20年度防洪概要
Overview of Flood Prevention in 2019-20

渠務署致力提升香港的雨水排放能力，以應對颱風、暴雨等極端的天氣情況所帶來的嚴峻挑戰。香港於2019年錄得總降雨量約2 396毫米，與1981至2010年約2 400毫米的平均值相若。2019年暴雨頻繁，為香港帶來水浸風險，令防洪工作更具挑戰。

Facing the challenges brought by extreme weather conditions, such as typhoons and rainstorms, the DSD is dedicated to enhancing the stormwater drainage capacity of Hong Kong. About 2 396 millimetres of annual total rainfall was recorded in 2019, which is similar to the average value of 2 400 millimetres between 1981 and 2010. Frequent rainstorms in 2019 brought flooding risks to Hong Kong, posing challenges to our flood prevention work.

2019年天氣概況
Weather Overview in 2019

≈ 2 396	37	3	5
總降雨量（毫米） Annual total rainfall (millimetres)	黃色暴雨警告信號 Amber Rainstorm Warning Signals	紅色暴雨警告信號 Red Rainstorm Warning Signals	熱帶氣旋 Tropical cyclones

本署總結過往應對超強颱風「天鴿」和「山竹」的經驗，在颱風襲港前已加強巡查和清理主要排水道及進水口，尤其是水浸黑點，以確保渠道暢通。渠務署已識別一些容易受海水倒灌影響而出現水浸的沿岸低窪地區（包括大澳及鯉魚門等），並聯同其他政府部門為相關地區設置了防洪設施，包括裝設組合式擋水板及止回閥、建造防洪牆等。此外，政府亦為上述地區設立了風暴潮預警系統。當天文台發出風暴潮預警，本署會立即在有關地點進行緊急水浸緩解工作，以減輕水浸的影響。

Drawing on the past experience in responding to Super Typhoons Hato and Mangkhut, the DSD stepped up precautionary inspections and clearance of major drainage channels and inlets, particularly at flooding blackspots, to ensure that drains were free from obstructions. The DSD has also identified several low-lying coastal areas that are prone to tidal backflow, such as Tai O and Lei Yue Mun, and worked with other government departments to put in place flood prevention measures for these areas, such as installing demountable flood barriers and non-return flap valves, and constructing flood walls. The Government also established an early alert system for the above locations. Once storm surge alerts are issued by the Hong Kong Observatory, the DSD will immediately activate emergency flood relief measures at relevant locations to mitigate the flooding impact.

本署已設立「緊急事故及暴風雨應變組織」，專責應對緊急事故及水浸問題。應變組織24小時運作，以統籌緊急事故的信息發放和資源調配事宜，並負責與政府其他緊急應變單位協調。此外，在暴雨期間或在8號烈風或暴風信號生效前，我們會啟動「緊急事故控制中心」，並派遣應變小隊，於較容易受水浸影響的地點駐守候命，及時檢查和疏通渠道，以減低水浸風險。

The DSD has set up the Emergency and Storm Damage Organisation (ESDO) to handle emergencies and flooding incidents. The ESDO operates round-the-clock to coordinate the dissemination of information relating to emergencies and the allocation of resources, as well as liaising with other government emergency units. During heavy rainstorms or just before the Gale or Storm Signal No. 8 is in force, we will activate our Emergency Control Centre and deploy contingency teams to stand by at locations prone to flooding, with a view to conducting inspections and drain clearance in time to reduce flooding risk.

渠務署參考國際標準設計和建造雨水排放系統，並定期進行檢查和維修工作，確保轄下設施妥善運作。為配合香港未來發展需要，我們正分階段檢討各區的雨水排放整體計劃，以提升相關地區的防洪能力，並繼續以策略性的方式提升整體的防洪水平。

The DSD takes into account international standards in design and construction of drainage system, and carries out regular inspections and maintenance work to ensure proper operation of its facilities. To meet Hong Kong's future development needs, we are reviewing the Drainage Master Plans (DMPs) of various districts in stages to upgrade the flood protection capabilities of the areas concerned, while continuing to strategically raise the general standard of flood protection.



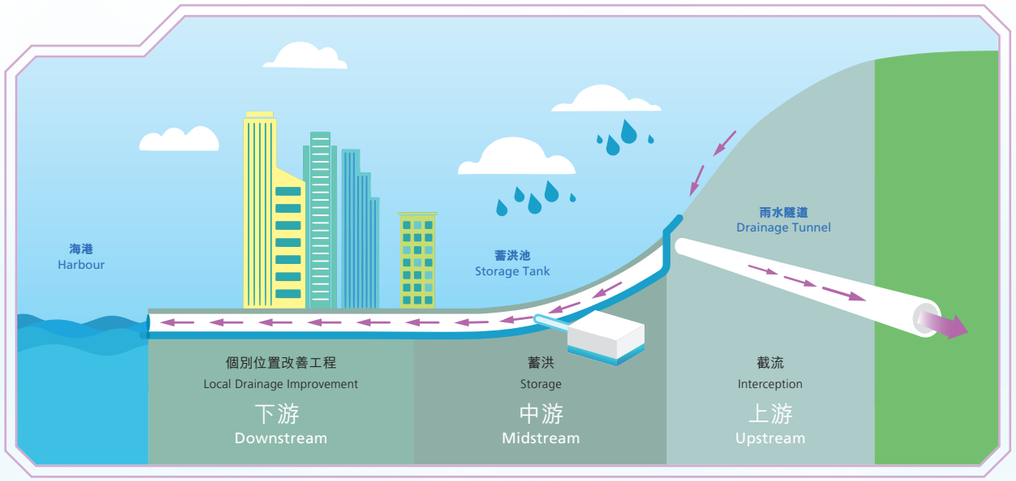
位於鯉魚門的水尺顯示以往颱風期間的最高海面水位
The staff gauge at Lei Yue Mun shows the maximum sea level of past typhoons

香港整體防洪策略
Overall Flood Prevention Strategy of Hong Kong

隨着城市化發展、地面徑流增加，以及洪泛平原減少，加上極端天氣出現的機會增加，低窪或沿海地區發生水浸的風險亦隨之上升。為解決不同地方的水浸問題，本署按不同地勢特點制訂策略，利用「防洪三招」，即截流、蓄洪、疏浚的方法，有效減低因暴雨引致的水浸風險。

With urbanisation, increased surface runoff, reduction of flood plains and the greater likelihood of extreme weather, low-lying or coastal areas are facing increasing threats of flooding. To address the flooding problem at various locations landscape, we have developed, in accordance with different topographical features, a "three-pronged flood prevention strategy", i.e. stormwater interception, flood storage, and drainage improvement, which has proven to be effective in mitigating the risk of flooding arising from heavy rains.

防洪三招
Three-pronged Flood Prevention Strategy

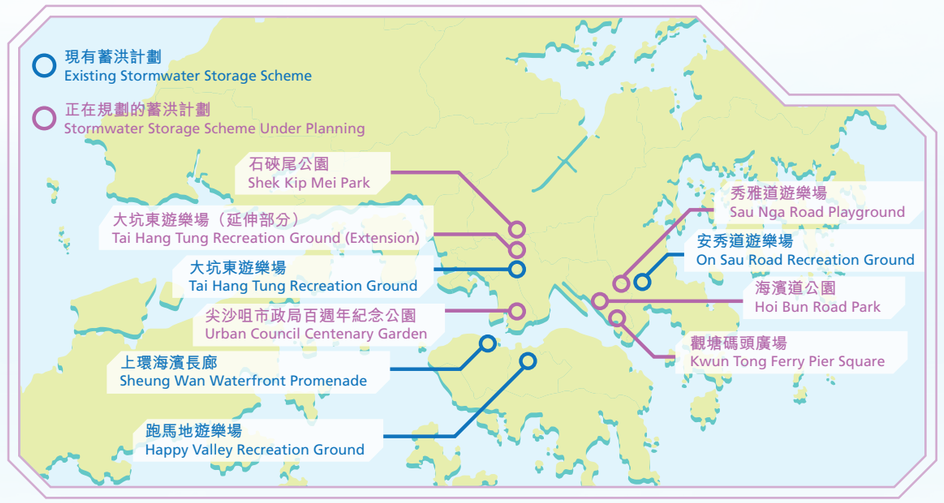


截流
Interception

- 在上游截取雨水，改變雨水流向，將之直接排出大海或河溪，降低下游地區的水浸風險
  Stormwater is intercepted upstream and diverted for direct discharge to the sea or rivers, thereby substantially mitigating the risk of flooding in downstream areas
- 可避免在下游市區進行大規模排水改善工程，從而減低對交通及公眾的影響
  Large-scale drainage improvement works in downstream urban areas are avoided to reduce the impacts on traffic and the public
- 現有四條總長約21公里的雨水排放隧道（即啟德雨水轉運計劃、港島西雨水排放隧道、荔枝角雨水排放隧道及荃灣雨水排放隧道）
  Four drainage tunnels (i.e. the Kai Tak Transfer Scheme, Hong Kong West, Lai Chi Kok and Tsuen Wan Drainage Tunnels) totalling about 21 kilometres in length are in place

蓄洪
Flood Storage

- 暴雨期間，市區部分雨水會被引流至蓄洪池暫存，以紓緩下游地區排水系統的壓力
  During heavy rainstorms, some stormwater in urban areas is diverted to storage tanks for temporary storage to relieve the burden of downstream drainage systems
- 大坑東、上環、跑馬地及安秀道的蓄洪計劃已投入運作
  Stormwater storage schemes for Tai Hang Tung, Sheung Wan, Happy Valley and On Sau Road are in operation
- 現正規劃興建五個蓄洪計劃和擴建大坑東蓄洪計劃，以進一步紓緩九龍區的水浸風險
  Five new stormwater storage schemes as well as the extension of the existing stormwater storage scheme in Tai Hang Tung are under planning to further alleviate the risk of flooding in Kowloon



疏浚
Drainage Improvement

- 進行排水系統改善工程以拉直、擴闊和挖深河道，以及擴大或建造新的地下排水渠
  Drainage improvement works are carried out to straighten, widen and deepen rivers and to enlarge or construct new underground drains
- 至今已改善逾100公里河道，另提升約94公里排水渠
  To date, over 100 kilometres of river sections have been improved and about 94 kilometres of drains upgraded to date

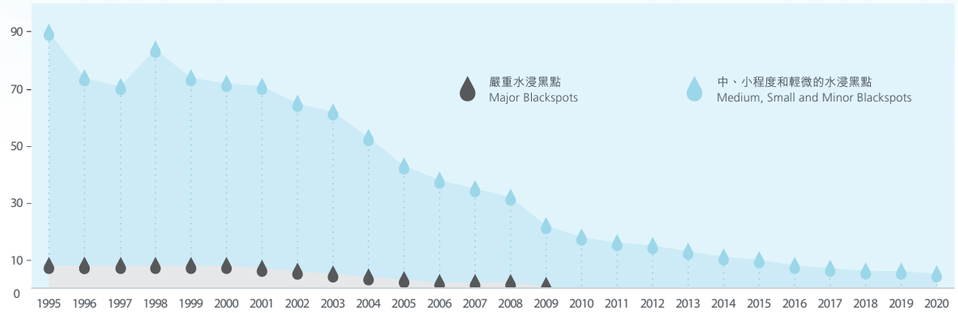
持續消除水浸黑點
Continual Elimination of Flooding Blackspots

我們於2020年年初剔除位於灣仔摩理臣山道與立德里交界的水浸黑點，令水浸黑點的數目減至五個。在餘下水浸黑點的改善工程當中，大埔汀角路的改善工程經已完成；我們現正監察工程成效。為盡快消除所有水浸黑點，我們已完成其餘四個黑點的第一階段改善工程，現正規劃和設計下一階段的工程。在雨季期間，我們會密切監察該等地區的排水情況。

A flooding blackspot at the junction of Morrison Hill Road and Lap Tak Lane in Wan Chai was removed at the beginning of 2020, leaving only five remaining flooding blackspots in Hong Kong. Amongst the drainage improvement works at the remaining flooding blackspots, those at Ting Kok Road in Tai Po have already been completed and their effectiveness is being monitored. Striving to eliminate all flooding blackspots, we have completed the first stage improvement works for the other four blackspots while the next stage improvement works are under planning and design. We will closely monitor the drainage condition in these areas during the rainy season.



水浸黑點總數
Total Number of Flooding Blackspots



風暴潮點和越堤浪點
Storm Surge Spots and Overtopping Wave Spots

本署根據過往颱風吹襲記錄，識別了七個在颱風期間因風暴潮引致海水上升而容易出現海水淹浸或海水倒灌的風暴潮點，以及三個因海浪超越海堤而容易出現水浸的越堤浪點。現時，渠務署積極與有關部門制定有效的措施，包括為風暴潮點及越堤浪點設立風暴潮預警系統。在風暴潮預警發出後，本署會在有關地點放置水泵、安裝組合式擋水板、為居民提供沙包等。

Having taken into account the records of typhoon passages, the DSD has identified seven Storm Surge Spots which are vulnerable to seawater inundation or infusion due to the rise of sea level caused by storm surge during typhoon, as well as three Overtopping Wave Spots which are vulnerable to flooding caused by waves overtopping the seawall. At present, the DSD actively works with relevant departments to formulate effective measures, including setting up an Early Alert System for Storm Surge Spots and Overtopping Wave Spots. Upon the issuance of storm surge alerts, the DSD will deploy pumping equipment, install demountable flood barriers, provide sandbags to residents, etc., at the locations concerned.



風暴潮點
Storm Surge Spots

1. 大澳 Tai O
2. 屯門聯安新村 Tuen Mun Luen On San Tsuen
3. 屯門嘉和里 Tuen Mun Kar Wo Lei
4. 深井新村 Sham Tseng San Tsuen
5. 鯉魚門 Lei Yue Mun
6. 西貢南圍 Sai Kung Nam Wai
7. 元朗西北沿岸低窪地區 Yuen Long North West Low-lying Coastal Area

越堤浪點
Overtopping Wave Spots

1. 將軍澳南 Tseung Kwan O South
2. 杏花村 Heng Fa Chuen
3. 海怡半島 South Horizons

現有排水設施的運作及維修保養
Operation and Maintenance of Existing Drainage Facilities

本署管理全港超過2 400公里的地下雨水渠、360公里的人工河道、21公里的雨水排放隧道，以及四個地下蓄洪池，致力確保雨水排放系統暢通。年內，我們檢查逾2 320公里的雨水渠及河道，較原定的年度檢查計劃多約18公里。除了進行定期檢查和維修保養工作外，我們亦定期檢測設施的功能和結構，以及在雨季前後清理淤塞物。

The DSD manages over 2 400 kilometres of underground stormwater drains, 360 kilometres of engineered channels, 21 kilometres of drainage tunnels, and four underground stormwater storage tanks in Hong Kong, striving to keep the drainage system free from obstruction. In the year under review, we inspected over 2 320 kilometres of drains and river channels, outperforming the annual total target by about 18 kilometres. Apart from carrying out regular inspections and maintenance work, we also conduct functional and structural checks on facilities periodically and clear blockages before and after the rainy season.

主動巡查和「及時清渠」
Proactive Inspection and Just-in-time Clearance

- 在2020年雨季（每年4月至10月）平日日間實施「及時清渠」安排，以減低大雨期間的水浸風險

  Introduce the 'just-in-time clearance' arrangement during daylight hours on weekdays in the rainy season (April to October every year) in 2020 to reduce the risk of flooding when rainstorms occur

- 在大雨來臨前調配人手巡查全港約200個容易受垃圾或枯葉等阻塞的渠道位置

  Send staff to inspect about 200 drain locations throughout the territory which are susceptible to blockage by litter, fallen leaves or the like before the onset of a rainstorm

- 如發現淤塞，即時安排清理渠道入水口

  Immediately arrange clearance of drainage inlets if blokage is identified



檢查渠道
Drainage channel inspection

鄉村防洪計劃
Village Flood Protection Schemes

- 在低窪村落四周興建防洪基堤，並在村內建造蓄洪池及雨水泵房，以便在暴雨期間暫時將雨水貯存，並在暴雨後將雨水抽走

  Embankments are constructed around low-lying villages where flood storage ponds and stormwater pumping stations are built in the villages for temporary storage of rainwater during heavy rainstorms and for subsequent discharge of rainwater by pumping after heavy rainstorms

- 現正運作27個鄉村防洪計劃，為38條低窪鄉村提供防洪保護

  27 Village Flood Pumping Schemes are currently in operation, providing flood protection for 38 low-lying villages



舉圍鄉村防洪計劃
Pok Wai Village Flood Pumping Scheme



橋頭圍鄉村防洪計劃
Kiu Tau Wai Village Flood Pumping Scheme

規劃、設計和建造新排水設施
Planning, Design and Construction of New Drainage Facilities

活化翠屏河
Revitalization of Tsui Ping River

為配合「起動九龍東」計劃及《2017年施政綱領》所提出有關為合適的明渠進行活化的倡議，我們建議透過環境、生態及園景美化等改善工程，將長約一公里、有逾50年歷史的觀塘敬業街明渠活化成翠綠且具活力的「翠屏河」，同時加強現有明渠的排洪能力。此項工程計劃不僅旨在提升敬業街明渠的生態價值、綠化環境和推動近水活動，亦利用其優越的地理位置及河道的水景特質，建構九龍市區中珍貴的公共空間，締造宜居城市。

我們會在河畔建造行人通道及跨河的行人橋道和園景平台，使沿河地方更加便於行走，也提高河道與周邊地區連繫。翠屏河將成為綠化河道走廊，連繫觀塘區內多個休憩及康樂設施。此外，我們採用河道與周邊休憩設施一體化的設計意念，沿河提供公共休憩空間，使翠屏河成為市民欣賞河景和進行休閒活動的新地標。

To complement "Energising Kowloon East" and the initiative put forward in the 2017 Policy Agenda to revitalise suitable existing nullahs, we propose turning King Yip Street Nullah – a 50-year old nullah that is approximately one kilometre in length – into a green and vibrant Tsui Ping River through environmental, ecological and landscaping upgrading works, while enhancing the flood conveyance capability of the nullah at the same time. In addition to enhancing ecological value, greening the environment and promoting water friendliness, the project also brings the channel's prime geographical location and riverine characteristics into play for the purpose of creating a precious public space in urban Kowloon and building a liveable city.

We will construct riverside pedestrian walkways as well as pathways and landscaped decks spanning the river to enhance walkability along the river and its connectivity with surrounding areas. Tsui Ping River will become a green river corridor that links up various leisure and recreational facilities in Kwun Tong. By adopting a design concept of integrating the river with its adjacent leisure facilities, we will also provide public leisure spaces along the river, making Tsui Ping River a new landmark where the public can enjoy waterscape and carry out leisure activities.



活化後翠屏河的構想圖
Photomontage of the revitalised Tsui Ping River

為凸顯翠屏河的水體特質，我們計劃在下游設置可隨着潮汐漲退而升降的智能水閘，以調節水位和營造富吸引力的瀑布效果。智能水閘會連接天文台的天氣預報系統，在惡劣天氣時水閘會自動降下，以確保翠屏河有足夠的排洪能力。此項設計能盡量利用潮汐漲退的天然規律來營造水景，減少利用泵水設備和減低能源消耗。

To highlight the characteristics of Tsui Ping River as a water body, we plan to install a smart water gate that moves up and down with the tide in downstream areas to regulate the water level and create an eye-catching waterfall effect. The smart water gate will be linked with the Hong Kong Observatory's weather forecast system, such that the gate will be lowered automatically during adverse weather conditions to maintain the discharge capacity of Tsui Ping River. This design utilises the natural tidal cycle to create waterscape, reducing the use of pumping facilities and cutting energy consumption.



目前進度
Current Progress

我們於2019年11月就項目諮詢立法會工務小組委員會。當項目獲財務委員會通過撥款後，建造工程將隨即展開。

We consulted the Public Works Subcommittee of the Legislative Council in November 2019. Subsequent to the funding approval of Finance Committee, the construction works will be commenced.

西九龍雨水排放系統改善計劃－水塘間轉運隧道計劃

West Kowloon Drainage Improvement – Inter-Reservoirs Transfer Scheme

我們正在興建一條全長約2.8公里的輸水隧道，以降低西九龍的水浸風險和增加本地集水量。輸水隧道連接九龍副水塘與下城門水塘，把整個九龍水塘群接收的地面徑流轉運至下城門水塘，從而減少流入深水埗、長沙灣和荔枝角雨水排放系統的地面徑流。此計劃可每年額外提供約340萬立方米食水，達到提升防洪能力及保護水資源的雙重目標。

In an attempt to reduce flooding risks in West Kowloon and increase local yield, we are constructing a water tunnel approximately 2.8 kilometres in length to connect Kowloon Byewash Reservoir and Lower Shing Mun Reservoir. The new tunnel will transfer collected surface runoff from the Kowloon group of reservoirs to Lower Shing Mun Reservoir, reducing the load of surface runoff handled by the drainage system in Sham Shui Po, Cheung Sha Wan and Lai Chi Kok. Generating an annual additional freshwater yield of about 3.4 million cubic metres, the inter-reservoirs transfer scheme serves the dual purposes of improving flood protection capabilities and saving water.

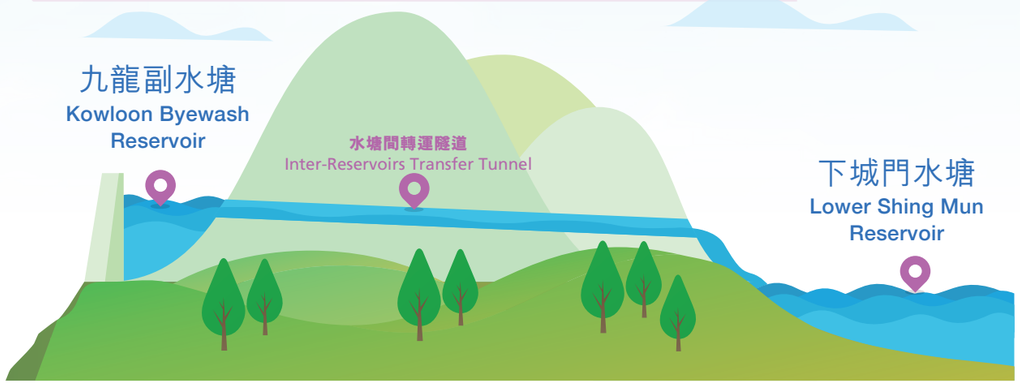


輸水隧道以隧道鑽挖機建造
The water tunnel is constructed by a tunnel boring machine

目前進度
Current Progress

工程已於2019年2月展開，於2020年年中開始隧道建造工程。整項工程預計於2022年第四季完成。工程預算費用約12.2億元。

The project commenced in February 2019. Tunnel construction is expected to start in mid-2020. The project is scheduled for completion in the fourth quarter of 2022, with an estimated cost of about $1.22 billion.

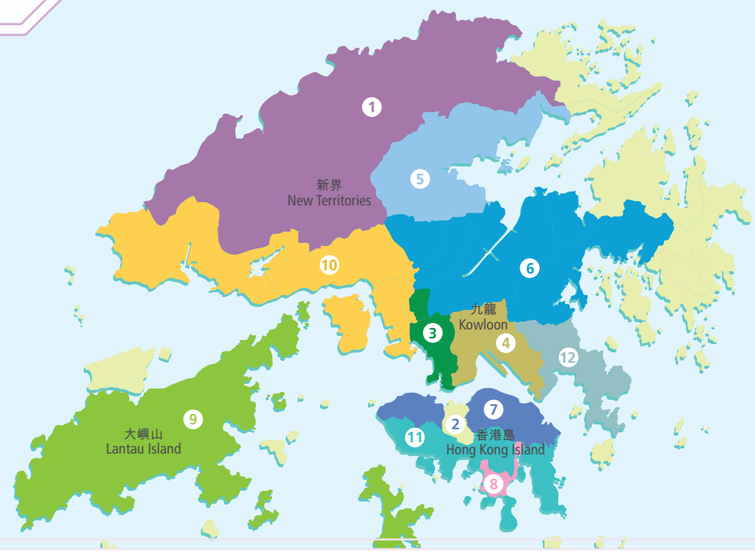


雨水排放整體計劃2.0研究

Drainage Master Plan 2.0 Studies

從1994至2010年，本署分階段為全港各區完成了雨水排放整體計劃研究及排水系統研究，並就個別地方的水浸問題提供全面的解決方法。這些研究全面檢視排水系統是否足夠，並建議短期及長遠排水改善措施，以符合防洪標準，以及未雨綢繆。為應對持續的土地發展、各地區土地用途改變及氣候變化帶來的影響，我們從2008年陸續開始檢討各區的雨水排放整體計劃，分別為12個集水區進行雨水排放整體計劃2.0研究。相關進度如下：

From 1994 to 2010, the DSD completed Drainage Master Plan (DMP) studies to provide comprehensive solutions to the flooding problems in individual areas.These studies comprehensively examined the adequacy of the existing drainage systems and recommended short- to long-term drainage improvement measures to meet the flood protection standards and future development needs. In order to cope with the latest developments in the community, change of land use in various areas and challenges brought by climate change, we have been reviewing the DMP studies of different districts in phases since 2008 by carrying out DMP 2.0 Studies for 12 catchment areas. The progress is as below:



研究地區 Study Areas		研究進展 Status
1	元朗及北區 Yuen Long and North District	已於 2011 年完成 Completed in2011
2	跑馬地 Happy Valley	
3	西九龍 West Kowloon	已於 2015 年完成 Completed in2015
4	東九龍 East Kowloon	
5	大埔 Tai Po	已於 2017 年完成 Completed in2017
6	沙田及西貢 Sha Tin and Sai Kung	
7	香港島北 Northern Hong Kong Island	已於 2019 年完成 Completed in2019

研究地區 Study Areas		研究進展 Status
8	淺水灣及大潭 Repulse Bay and Tai Tam	進行中，預計於 2020 年完成 In progress, anticipated to be completed in 2020
9	大嶼山及離島 Lantau and Outlying Islands	進行中，預計於 2021 年完成 In progress, anticipated to be completed in 2021
10	屯門、荃灣及葵青 Tuen Mun, Tsuen Wan and Kwai Tsing	
11	香港島南 Southern Hong Kong Island	預計於 2020 年年尾展開 Anticipated to commence in end 2020
12	將軍澳 Tseung Kwan O	規劃中 Under planning

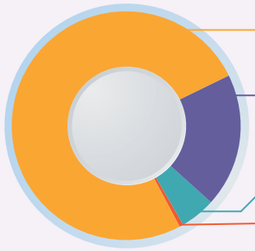
2019-20年度污水處理概要
Overview of Sewage Treatment and Sewerage System in 2019-20

我們的專業團隊致力保持高效率的污水收集、處理和排放服務，並定期進行維修保養工作，確保每一個細節有效運作，竭誠為香港提供世界級的污水處理服務。與此同時，我們善用先進科技和現代化設施，竭力確保本署轄下設施符合既定的環保目標，並減少排放污染物。展望未來，我們會繼續擴大污水收集系統的覆蓋範圍，同時持續改善污水處理設施，藉以保護本港水域水質，促進香港可持續發展。

Our professional team is dedicated to providing highly efficient sewage collection, treatment and discharge services, while conducting regular repair and maintenance work to ensure effective operation in every particular, so as to provide Hong Kong with world-class sewage treatment services. At the same time, leveraging advanced technologies and modern facilities, we make every effort to ensure that our facilities meet the established environmental protection objectives and to minimise the discharge of pollutants. Looking ahead, we will continue to expand the coverage of Hong Kong's sewerage system, while improving sewage treatment facilities to protect the quality of local waters and promote the sustainable development of Hong Kong.

每日平均污水處理量
（千立方米）
Average daily sewage treated
(thousand cubic metres)
≈ 2 800

年度污水總處理量
（百萬立方米）
Annual sewage treated
(million cubic metres)
≈ 1 033



75.8% 化學強化一級處理
Chemically Enhanced Primary Treatment (CEPT)

18.8% 二級處理
Secondary Treatment

4.9% 基本處理
Preliminary Treatment

0.5% 一級或三級處理
Primary or Tertiary Treatment

年度污泥收集及處理
（公噸）
Annual sludge collected and treated (tonnes)
≈ 381 000

污水收集網絡總長度
（公里）
Total length of sewerage network (kilometres)
≈ 1 900

污水處理廠
Sewage Treatment Works
70

污水泵房
Sewage Pumping Station
254

公共污水收集網絡
The public sewerage network serves around
93.7% 人口[1]
of Hong Kong's population[1]

[1] 以有繳付排污費的住宅水務帳戶計算
Calculations based on the number of domestic water bill accounts with sewage charges levied

2019-20 年度污水處理廠位置圖
Location Map of Sewage Treatment Works in 2019-20



主要污水處理廠
Major Sewage Treatment Works

昂船洲污水處理廠
Stonecutters Island STW

小蠔灣污水處理廠
Siu Ho Wan STW

沙田污水處理廠
Sha Tin STW

石湖墟污水處理廠
Shek Wu Hui STW

元朗污水處理廠
Yuen Long STW

大埔污水處理廠
Tai Po STW

西貢污水處理廠
Sai Kung STW

赤柱污水處理廠
Stanley STW

昂坪污水處理廠
Ngong Ping STW

圖例
Legend

- 基本污水處理廠 Preliminary Treatment Works
- 一級污水處理廠 Primary STW
- 化學強化一級污水處理廠 Chemically Enhanced Primary STW
- 二級污水處理廠 Secondary STW
- 三級污水處理廠 Tertiary STW

規劃、設計和建造新污水處理設施
Planning, Design and Construction of New Sewerage Facilities

搬遷沙田污水處理廠往岩洞工程
Relocation of Sha Tin Sewage Treatment Works to Caverns

為開拓和善用土地資源，政府一直積極探討發展岩洞的方案。我們現正規劃搬遷沙田污水處理廠往城門河對岸女婆山開挖的岩洞。搬遷後的污水處理廠，其設計的污水處理量為每日34萬立方米，較目前的設施多約36%。騰出現址約28公頃的土地會用作有利民生用途，同時改善區內生活環境。

To expand and make good use of land resources, the Government has been actively exploring viable solutions for developing rock caverns. The Sha Tin Sewage Treatment Works (STW) is earmarked for relocation to a number of caverns to be excavated in Nui Po Shan opposite Shing Mun River. Upon relocation, the STW's maximum design sewage treatment capacity is 340 000 cubic metres per day, which is about 36% greater than that of the existing facility. The relocation will release about 28 hectares of land on the existing Sha Tin STW site for other uses that benefit the public and improve the living environment of the district.



未來重置於岩洞的沙田污水處理廠將是香港同類設施中規模最大的。整項工程預計需時約13年。搬遷計劃將分階段推展，包括工地開拓和連接隧道建造工程、主體岩洞建造及上游污水收集系統工程、污水處理設施裝置工程，以及現有沙田污水處理廠停止運作和拆卸工程。

The future Sha Tin STW relocated in a cavern complex will be the largest of its kind in Hong Kong. The whole project is anticipated to be completed in about 13 years. The relocation plan will be implemented by stages, including site preparation and access tunnel construction, main caverns construction and upstream sewerage collection works, sewage treatment facilities installation, as well as decommission and demolition of the existing Sha Tin STW.



搬遷沙田污水處理廠往岩洞第一階段建造工程

Stage 1 works of the Relocation of Sha Tin Sewage Treatment Works to Caverns

目前進度
Current Progress

工程設計工作已由2017年起分階段完成。第一階段的建造工程，包括工地開拓、建造連接隧道及護土構築物和相關的道路工程等，已由2019年2月起展開，預計可如期在2022年第四季完工。本署正為其餘各階段建造工程進行詳細設計。我們會繼續全力推展各個階段工程項目，適時地向立法會財務委員會申請撥款。

The project's design work has been completed in phases since 2017. Stage 1 works, which include site formation, construction of access tunnel and retaining structures as well as associated road works, have commenced since February 2019 and are expected to be completed as scheduled in the fourth quarter of 2022. The DSD is working on the detailed design for the remaining stages of construction works. We will continue to push forward with all work stages and seek funding approval from the Finance Committee of Legislative Council timely.

淨化海港計劃
Harbour Area Treatment Scheme

淨化海港計劃是香港歷來最龐大的環保基建項目，旨在收集和處理維港兩岸污水，改善維港水質。計劃由1994年起分兩期進行，建造工程歷時逾20載，總費用達258億元。計劃第一期及第二期甲設施分別於2001年12月及2015年12月全面啟用。為了維護和提升淨化海港計劃系統的可靠性，我們將進行研究，以審視其表現效能，評估該系統不同組件的運作狀況，並提出建議來改善該計劃的設施。

The Harbour Area Treatment Scheme (HATS) is Hong Kong's largest ever environmental infrastructure project, aiming to improve the water quality of Victoria Harbour by collecting and treating sewage from both sides of the Harbour. The project had been carried out in two phases since 1994, with construction works spanning over two decades at a total cost of $25.8 billion. The facilities of HATS Stage 1 and Stage 2A were fully commissioned in December 2001 and December 2015 respectively. In order to maintain and enhance the reliability of sewage treatment services of the HATS system, we will carry out a study to review its performance, assess the operational condition of the different system components and draw up recommendations based on study findings for the enhancement of the HATS facilities.



昂船洲污水處理廠

Stonecutters Island Sewage Treatment Works

目前進度
Current Progress

系統管理的顧問諮詢研究預定於2020年年中展開，並於2021年前完成。

Consultancy study on the system management is scheduled to commence in mid-2020 for completion in 2021.

石湖墟淨水設施
Shek Wu Hui Effluent Polishing Plant

為配合北區迅速發展，我們現正分階段提高石湖墟淨水設施的處理量，由每日93 000立方米增加至190 000立方米，同時提升該設施至三級污水處理水平，以確保廠房排放水符合更高的環境要求，從而保護后海灣的生態環境。我們亦藉此改善廠房的外觀及環保表現，提升其水資源保育教學功能，使該淨水設施成為具代表性的多元化社區設施。

To keep pace with the rapid development of North District, we are expanding the treatment capacity of Shek Wu Hui Effluent Polishing Plant from 93 000 cubic metres per day to 190 000 cubic metres per day in phases, while upgrading the facility to tertiary treatment level to ensure that its discharge will comply with more stringent environmental requirements, thus protecting the ecological environment of Deep Bay. We will also take this opportunity to revamp the plant's exterior and environmental performance, bolstering its role as an educational site for water conservation and transforming the plant into an iconic multipurpose community facility.



石湖墟污水處理廠改善工程

Shek Wu Hui STW Improvement Works

目前進度
Current Progress

本署於2015年年中展開石湖墟淨水設施的前期工程，將一組20 000立方米容量的傳統二級污水處理設施改為40 000立方米容量的薄膜生物反應器。該組設施自2019年12月起投入運作。主體工程正分三個階段進行，第一階段已於2019年第三季展開，最終階段預計於2034年完成。前期工程、勘察及設計預算費用約五億元，而主體工程預算費用約132億元。

The DSD commenced the advance works of Shek Wu Hui Effluent Polishing Plant in mid-2015 to convert a group of conventional secondary treatment facilities with a capacity of 20 000 cubic metres into a membrane bioreactor with a capacity of 40 000 cubic metres. This group of facilities has been in operation since December 2019. The main works are being implemented in three phases, with the first phase started in the third quarter of 2019 and the final phase scheduled for completion in 2034. The estimated cost for advance works, investigation and design is about $500 million and the estimated cost for the main works comes to about $13.2 billion.

元朗淨水設施
Yuen Long Effluent Polishing Plant

現有的元朗污水處理廠為元朗市、元朗工業邨及錦田地區提供污水處理服務。鑑於相關地區的污水與日俱增，我們會分階段將元朗污水處理廠的處理量由每日70 000立方米增加至150 000立方米，同時提升該設施至三級污水處理水平，以確保排放水符合更高的環境要求，從而保護后海灣的生態環境。我們亦會加入大量綠化元素，美化廠戶外貌，以及採用可再生能源，提升廠房環保表現，並且為公眾提供共享設施，惠及當地社區。

The existing Yuen Long STW provides sewage treatment services for Yuen Long Town, Yuen Long Industrial Estate and Kam Tin areas. In view of the ever-increasing volume of sewage in the areas concerned, we will expand the treatment capacity of Yuen Long STW in stages from 70 000 cubic metres per day to 150 000 cubic metres per day. The facility will also be upgraded to tertiary treatment level to ensure that its discharge will comply with more stringent environmental requirements, thus protecting the ecological setting of Deep Bay. We will also take this opportunity to introduce numerous greening features to beautify the plant's exterior, as well as using renewable energy to enhance its environmental performance, and providing public co-use facilities for the benefit of the local community.

目前進度
Current Progress

工程已於2019年4月獲發環境許可證。擴建工程的招標工作正在進行。工程將分兩個階段進行。第一階段工程預計於2020年第四季展開，並於2027年完成。勘察及設計預算費用約8,900萬元，而第一階段工程預算費用約68億元。

An Environmental Permit was granted in April 2019. Tender for the extension works is on-going. Construction will be implemented in two stages. Stage 1 Works are scheduled for commencement in the fourth quarter of 2020 and completion in 2027. The estimated cost for investigation and design is about $89 million while the estimated cost for Stage 1 Works is about $6.8 billion.



元朗淨水設施構想圖

Photomontage of the Yuen Long Effluent Polishing Plant

沙頭角污水處理廠第一期擴建工程
Expansion of Sha Tau Kok Sewage Treatment Works Phase 1

沙頭角污水處理廠為一所二級污水處理廠，集中處理沙頭角墟、鹽寮下、菜園角和沙頭角邨的污水。為應付沙頭角污水集水區預計增加的污水量，我們將於現址重建沙頭角污水處理廠，令該廠的污水處理量由每日約1 660立方米，增加至約5 000立方米。工程包括建造一條長約1.7公里、直徑450毫米的海底排放管道，並拆卸現有的污水泵房及附屬的加壓污水管。

Sha Tau Kok STW is a secondary treatment works that provides centralised treatment for sewage collected from Sha Tau Kok Town, Yim Liu Ha, Tsoi Yuen Kok and Sha Tau Kok Chuen. To cope with the anticipated increase in sewage volume of the Sha Tau Kok sewage catchment, we will redevelop the Sha Tau Kok STW in situ to increase its treatment capacity from about 1 660 cubic metres per day to about 5 000 cubic metres per day. The project includes the construction of a submarine outfall which is approximately 1.7 kilometres in length and 450 millimetres in diameter, and the decommissioning of existing sewage pumping station and associated sewage rising mains.

工程是渠務署首個「建造業2.0」先導項目。工程團隊會循「創新、專業化、年青化」的方向，採用場外建造、智能基建及建築信息模擬技術，以提升效率、提高質素和加強安全管理。

This is the DSD's first "Construction 2.0" pilot project. Heading in the direction of "innovation, professionalisation and revitalisation", the project team will adopt off-site construction, smart infrastructure and Building Information Modelling to enhance efficiency, quality and safety management.

目前進度
Current Progress

工程已於2018年11月展開，預計於2025年完成。整項工程預算費用約20.4億元。承建商需要建造臨時污水處理設施，以維持服務範圍在工程期間的污水處理工作。

Construction works commenced in November 2018 for completion in 2025. The estimated project cost is about $2.04 billion. The contractor has to build temporary sewage treatment facilities to maintain sewage treatment to the service area in the construction period .



沙頭角污水處理廠擴建工程是本署首個「建造業2.0」先導項目

The expansion of Sha Tau Kok STW is the DSD's first "Construction 2.0" pilot project

新圍污水處理廠改善工程第一期
Upgrading of San Wai Sewage Treatment Works Phase 1

由於元朗、天水圍及洪水橋人口增長為污水處理設施帶來的壓力與日俱增，我們正把新圍污水處理廠的每日污水處理量由原來約164 000立方米增至約200 000立方米。工程完成後，新圍污水處理廠的污水處理水平會由基本處理，提升至化學強化一級處理，並加設紫外光消毒。屆時，本港西北水域的水質將得以改善。

Since population growth in Yuen Long, Tin Shui Wai and Hung Shui Kiu has led to increasing pressure on sewage treatment facilities in the areas, we are increasing the treatment capacity of San Wai STW from about 164 000 cubic metres per day to about 200 000 cubic metres per day. Upon completion of the project, the sewage treatment level of San Wai STW will be upgraded from preliminary treatment to chemically enhanced primary treatment with ultraviolet disinfection. By then, the quality of Hong Kong's northwestern waters will be improved.

工程進行中（攝於 2020 年 9 月）
Construction in progress (photo taken in September 2020)



目前進度
Current Progress

工程於2016年5月以「設計、建造及營運」合約形式展開，預計於2020年12月完成。建造工程完成後，承建商將負責新圍污水處理廠為期達10至15年的營運及維修工作。整項工程預算費用約31.4億元。

The project commenced under a "Design, Build and Operate" contract in May 2016 and is scheduled for completion in December 2020. Upon completion of construction works, the contractor will undertake the operation and maintenance of the new San Wai STW for a period of 10 to 15 years. The estimated project cost is about $3.14 billion.

長洲污水處理及排放改善工程
Upgrading of Cheung Chau Sewage Treatment and Disposal Facilities

現有的長洲污水處理廠為長洲居民提供污水處理服務。為配合將來逐步擴展鄉村污水收集系統至島上未接駁污水渠的地區，我們會在現有的長洲污水處理廠增建污水處理設施，把廠房的污水處理能力由每日4 000立方米增至9 800立方米，並將污水處理水平由一級提升至二級。

The existing Cheung Chau STW provides sewage treatment services for the population of Cheung Chau. To facilitate the gradual expansion of the village sewerage network to other unsewered areas on the island in the future, we will construct additional treatment facilities at Cheung Chau STW to increase its sewage treatment capacity from 4 000 cubic metres per day to 9 800 cubic metres per day, and upgrade its sewage treatment level from primary to secondary.

目前進度
Current Progress

工程已於2014年5月獲發環境許可證。改善工程的詳細設計工作現正進行中。工程預計於2020年展開，目標於2026年完成。

An Environmental Permit was granted for the project in May 2014. Detailed design for the upgrading works is in progress. Construction is scheduled for commencement in 2020 and targeted for completion in 2026.

香園圍污水處理廠
Heung Yuen Wai Sewage Treatment Works

香園圍污水處理廠位於蓮塘/香園圍口岸，屬污水處理量約為每日360立方米的小型二級污水廠。廠房採用薄膜生物反應器污水處理技術，污水會先經過隔篩，再用薄膜生物反應器除去污水中的有機物、懸浮固體、氨氮、硝酸鹽及亞硝酸鹽氮，最後透過管式纖維膜把污水淨化完才排放。在污水處理過程中產生的污泥會運往石湖墟污水處理廠再作處理。

Heung Yuen Wai STW, located in Liantang/Heung Yuen Wai Boundary Control Point (BCP), is a small-scale secondary STW with a design capacity of about 360 cubic metres per day. The plant adopts the membrane bioreactor (MBR) technology for sewage treatment. Frist, sewage passes through screens. Then, all organic matters, suspended solids, ammonia-nitrogen, nitrate and nitrite-nitrogen are removed from sewage by the MBR. As a last step, effluent is purified by hollow fibre membranes before discharge. Sludge produced during sewage treatment process is transported to Shek Wu Hui STW for further treatment.

目前進度
Current Progress

香園圍污水處理廠由2019年8月起投入服務，負責處理口岸的旅檢大樓、公共洗手間、政府部門辦公室等設施所收集的污水。

Heung Yuen Wai STW has been in operation since August 2019, providing treatment for sewage collected from various facilities such as the passenger clearance building, public toilets and government offices at the BCP.

專業化驗分析服務
Professional Laboratory Services

為了有效監察污水處理過程的水質和效率，我們會定期收集樣本和分析污水，以確保經處理的污水符合排放標準。本署營運多個化驗室，並採用化驗室信息管理系統及商業智能軟件，促進實驗室工作流程自動化和實行電腦化管理方案。整合測試結果及廠方數據，有助監察排放水水質、加強決策和調控污水處理過程。

本署的化驗室提供多個範疇的化驗服務。沙田中央化驗室利用全自動化的化驗室儀器，對營養物質、微量金屬元素含量和生化需氧量作化學分析，藉以增加效率和減少人為引致的誤差。此外，沙田中央化驗室於1999年獲創新科技署轄下的香港認可處頒發「香港實驗所認可計劃」(HOKLAS)證書，確認測試環境樣本(水及廢水)的認可資格。沙田中央化驗室亦於2017年獲得利用自動化生化需氧量分析儀測試的認可資格，為香港首間獲此認證的化驗室，其顏色和濁度等測試都已獲得認可。為確保化驗室管理系統能與時並進，沙田中央化驗室正準備更新管理系統至ISO/IEC 17025:2017，有關工作預計於2020年6月完成。

年內，沙田中央化驗室的認可測試項目達32項，完成超過242 000項分析。有關主要污水處理廠的排放水水質分析結果，可瀏覽本署網頁或經政府資料一線通索取。



To effectively monitor the water quality and efficiency of sewage treatment process so as to ensure compliance of treated sewage with specified discharge requirements, we carry out regular sewage sampling and analyses. The DSD operates a number of laboratories and adopts the Laboratory Information Management System (LIMS) as well as business intelligence software to facilitate laboratory workflow automation and computerised management. Consolidation of laboratory results and operation data allows us to monitor the quality of effluent discharged and facilitate both decision-making and control of the sewage treatment process.

The DSD's laboratories provide various types of testing services. To enhance laboratory efficiency and reduce human errors, automatic analysers for nutrient test, trace metal elements test and biochemical oxygen demand (BOD) test have been installed in the Shatin Central Laboratory. In addition, the Shatin Central Laboratory was accredited in 1999 for testing environmental samples (water & wastewater) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) operated by the Hong Kong Accreditation Service of the Innovation and Technology Commission. Having obtained HOKLAS accreditation of BOD test using automatic BOD analyser in 2017, the Shatin Central Laboratory became the first laboratory in Hong Kong to be granted this accreditation. It has also been accredited for tests such as colour and turbidity. To ensure that the laboratory management system can move with the times, the Shatin Central Laboratory is preparing to update the management system to the latest ISO/IEC 17025:2017, which is expected to be completed in June 2020.

In the year under review, up to 32 tests of the Shatin Central laboratory were accredited and more than 242 000 analyses were completed. The results of an analysis of the quality of effluent discharged from major sewage treatment works can be found on our website or retrieved through data.gov.hk.

建造旱季截流設施
Construction of Dry Weather Flow Interceptors

受污染的旱流進入雨水排放系統，不但導致附近水體水質變差，而且帶來氣味問題。為了改善有關情況，本署正沿新油麻地避風塘海濱建造一個地底旱季截流器及一個泵房，將大角咀櫻桃街箱形雨水渠內受污染的旱流堵截並分流至昂船洲污水處理廠妥善處理和排放。此外，為改善九龍西部和荃灣海岸的水質及氣味問題，我們正建造八個旱季截流器(四個位於荃灣及四個位於九龍西部)，並改建39個位於九龍西部的旱季截流器。

Ingress of polluted dry weather flow into the stormwater drainage system does not only impair the quality of water bodies nearby, but also cause an odour problem. To improve the situation, the DSD is constructing an underground dry weather flow interceptor (DWFI) and a pumping station along the seafront of New Yau Ma Tei Typhoon Shelter to intercept and divert the polluted dry weather flow from the Cherry Street box-culvert to Stonecutters Island STW for proper treatment and discharge. In addition, in order to solve the problems of water quality and odour in the coastal areas of Kowloon West and Tsuen Wan, we are constructing eight new DWFIs (four in Tsuen Wan and four in Kowloon West) and carrying out modification works to 39 existing DWFIs in Kowloon West.



櫻桃街箱形雨水渠旱季截流器構想圖
Photomontage of dry weather flow interceptor at Cherry Street box culvert

目前進度
Current Progress

大角咀櫻桃街箱形雨水渠旱季截流設施建造工程於2017年12月展開，並預計於2022年完工。整項工程預算費用約6.6億元。

九龍西部及荃灣污水系統改善工程第1期工程於2017年9月動工，而四個位於荃灣的旱季截流器於2019年9月完成。餘下工程預計於2022年年中完成。整項工程預算費用約2.8億元。

Construction works of the DWFI at Cherry Street box culvert in Tai Kok Tsui commenced in December 2017 for completion in 2022. The estimated project cost is about $660 million.

Phase 1 of upgrading works of West Kowloon and Tsuen Wan sewerage commenced in September 2017 and the four DWFIs in Tsuen Wan were completed in September 2019. The remaining works are scheduled for completion in mid-2022. The estimated project cost is about $280 million.

觀塘污水泵房優化工程
Enhancement Works for Kwun Tong Sewage Pumping Station

為配合東九龍區內發展，我們正進行觀塘污水泵房優化工程。工程項目包括建造一個容量達16 000立方米的地底污水調節設施，以及安裝通風和氣味控制設施。泵房天台亦會建成園景平台，以改善泵房外觀和提供約11 000平方米的休憩用地供公眾享用。

To support the local development of East Kowloon, we are carrying out enhancement works for Kwun Tong SPS. The works items include construction of an underground sewage balancing facility with a capacity of up to 16 000 cubic metres, and provision of ventilation and odour control equipment. The roof of the pumping station will also be turned into a landscaped deck to enhance visual appearance of the pumping station and provide an open space of about 11 000 square metres for public enjoyment.

目前進度
Current Progress

工程於2017年12月動工，並預計於2022年完竣。整項工程預算費用約10.5億元。工程同時採用供製造和裝配的設計及傳統現場建造方式，以提升工作效率，縮短工期。

Construction commenced in December 2017 with completion planned for 2022. The estimated project cost is about $1.05 billion. Both Design for Manufacture and Assembly (DfMA) and traditional cast in-situ methods are employed in the project to increase efficiency and shorten the construction period.

在東涌及小蠔灣之間增建一條加壓污水管及修復現有加壓水管工程
Construction of Additional Sewage Rising Main and Rehabilitation of the Existing Sewage Rising Main between Tung Chung and Siu Ho Wan

現時位於東涌及小蠔灣之間的加壓污水管是有關地區唯一的污水輸送渠管。該污水管道正臨近其25年的設計壽命。為了配合香港國際機場和東涌新市鎮擴展的發展需求，以及提高污水收集系統的可靠性，本署除檢查和修復現有的加壓污水管外，還同時分階段增建一條加壓污水管。整項工程完成後，兩條加壓污水管預計可應付推算至2038年的污水流量。

The existing sewage rising main between Tung Chung and Siu Ho Wan is the only pipe for conveying sewage in the area. It is approaching the end of its design life of 25 years. To meet the increased demand from the development of Hong Kong International Airport and Tung Chung New Town Extension, and to enhance the reliability of the sewerage system, the DSD regularly inspects and rehabilitates the existing sewage rising main, while constructing in parallel another sewage rising main in stages. On completion of these works, the two rising mains are expected to be able to cope with the sewage flows projected up to 2038.

目前進度
Current Progress

工程分階段於2016年8月展開。第一階段工程包括興建一條長約6.5公里、直徑1 200毫米的加壓污水管，以及進行相關的接合和附屬工程，第二階段工程是修復現有加壓污水管。第一階段及第二階段工程分別預計在2022年及2025年竣工。整項工程總預算費用約13.6億元。

Commenced in August 2016 by phases, the first phase of works includes the construction of a sewage rising main about 6.5 kilometres in length and 1 200 millimetres in diameter and associated connection and ancillary works. The second phase of works is the rehabilitation of the existing sewage rising main. The first and second phases are scheduled for completion in 2022 and 2025 respectively. The total estimated project cost is about $1.36 billion.

完善鄉村公共污水收集系統
Improvement of Village Sewerage

香港目前仍有多條鄉村未有接駁公共污水渠，而部分鄉村正依賴化糞池處理污水。保養不善的化糞池或會令污水排放至雨水系統，造成衞生問題和污染附近水體。有見及此，渠務署多年來致力擴展鄉村公共污水收集系統，以便收集並妥善處理鄉村地區的污水。本署現時為西貢、北區、觀塘、元朗及離島的多條鄉村鋪設公共污水收集系統，藉以改善鄉郊地區的衞生環境及水質。

Many villages in Hong Kong are still not connected to public sewerage; some of them are relying on septic tanks to treat their sewage. Sewage from poorly maintained septic tanks may find its way into the stormwater drainage system, posing hygiene problems and polluting nearby water bodies. In view of this, the DSD has been striving to expand the public sewerage systems to village areas over the years to collect their sewage for proper treatment. The DSD is currently carrying out construction of public sewerage for villages in Sai Kung, North District, Kwun Tong, Yuen Long and the Outlying Islands, in a bid to improve hygienic conditions and water quality in rural areas.

目前進度
Current Progress

截至2020年3月，我們已為240多條鄉村鋪設了公共污水渠。目前，有約25條鄉村正進行相關工程，另有約245條鄉村的工程正在進行規劃和設計。我們會在2020年第三季開展工程，為西貢部分地區鋪設污水收集系統，藉以改善該等地區的衞生情況及牛尾海的水質。這項工程預計於2025年完成，預算費用約12億元。

此外，我們會在沙田及大埔四個未鋪設污水設施的鄉村或地區進行污水收集系統工程。項目包括在沙田建造一所污水泵房、改建現有大埔滘污水泵房，以及鋪設共長約5.6公里的污水渠。工程預計於2020年第三季動工，並於2024年第三季完成。工程預算費用約3.08億元。

As at March 2020, we have laid public sewerage for over 240 villages. At present, the works for around 25 villages are underway while the works for around 245 villages are under planning and design. In the third quarter of 2020, we will commence a project providing sewerage for parts of Sai Kung area to improve their sanitary conditions and the water quality of Port Shelter. This project is scheduled for completion in 2025 at an estimated cost of about $1.2 billion.

Furthermore, we will carry out sewerage works in four unsewered villages or areas in Sha Tin and Tai Po. The project includes building a sewage pumping station in Sha Tin, modifying the existing Tai Po Kau sewage pumping station and laying a total of about 5.6 kilometres of sewers. Works are scheduled to commence in the third quarter of 2020 for completion in the third quarter of 2024. The estimated project cost is about $308 million.



管理排水及污水收集網絡
Managing Drainage and Sewerage Networks

本署現正管理約4 717公里的雨水渠及污水渠。其中的地下渠管平均已使用了30年，當中逾2 089公里的渠管已經使用了30年或以上，不少已出現老化及損耗跡象。嚴重損耗的渠管如出現結構問題，或會引致土壤流失甚至路陷，不但妨礙渠管正常運作，亦會對交通、環境及公眾安全帶來影響。

有見及此，我們除了定期檢查外，還正致力推行以風險為本的全港復修老化雨水渠及污水渠工程計劃，分階段勘查和修復高風險的渠管。同時，我們亦會研究和採用先進技術，以便有效地保養地下管道網絡，以及提高工程的成本效益。

The DSD is managing about 4 717 kilometres of stormwater drains and sewers. Some of the underground pipes have been in service for 30 years on average. Over 2 089 kilometres of the pipes have been used for 30 years or longer, with many of them showing signs of wear and tear. Any structural failure of seriously deteriorated pipes may result in soil erosion and even road subsidence, affecting normal operation of the pipelines and bringing adverse impacts on traffic, environment and public safety.

In view of this, in addition to carrying out regular inspections, we are striving to implement a territory-wide risk-based rehabilitation programme for aged stormwater drains and sewers, with surveys and rehabilitation of high-risk underground pipes being conducted in phases. We will also examine and employ various cutting-edge technologies to efficiently maintain our underground pipe networks and enhance the cost-effectiveness of our works.

19.8

本年度復修的雨水渠和污水渠總長度（公里）
The total length of stormwater drains and sewers rehabilitated this year (kilometres)

339

復修工程費用總開支（百萬元）
The total cost of rehabilitation works ($ million)

九龍、沙田及西貢污水幹渠修復工程
Rehabilitation of Trunk Sewers in Kowloon, Sha Tin and Sai Kung

為了增強污水系統的可靠性，以減低污水渠塌陷及污水滲漏的風險，同時加強保障公眾安全和環境衞生，本署現正就四段分別位於牛池灣、土瓜灣、沙田及西貢，合共長約1.7公里的污水幹渠進行修復工程，以及在沙田及西貢增建約0.7公里的污水幹渠，並進行相關的污水改道和沙井修復工程。

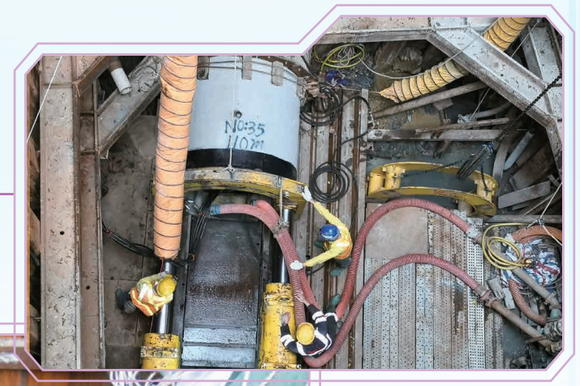
To reduce the risk of sewer collapse and sewage seepage and enhance public safety and environmental hygiene through improvement on the reliability of our sewage system, the DSD is carrying out rehabilitation works to four sections of trunk sewers totalling 1.7 kilometres in length, which are located in Ngau Chi Wan, To Kwa Wan, Sha Tin and Sai Kung respectively, as well as constructing about 0.7 kilometres of additional trunk sewers and undertaking related sewage diversion and manhole rehabilitation works in Sha Tin and Sai Kung

目前進度
Current Progress

工程於2018年1月展開，現已如期修復了約40%的污水渠管。我們以無坑挖掘技術和使用小型隧道鑽挖機增建污水幹渠。整項工程預計於2022年第一季完成，預算費用約6.8億元。

The works commenced in January 2018 and 40% of the sewers have been rehabilitated as scheduled. We are adopting trenchless construction technology and using micro-tunnel boring machines to lay additional sewers. The project is expected to be completed in the first quarter of 2022 at the estimated project cost of about $680 million.

採用無坑挖掘技術和使用小型隧道鑽挖機鋪設污水幹渠
Adopting trenchless construction technology and using micro-tunnel boring machines to lay trunk sewers





渠道修復工程
Rehabilitation works

污水處理服務收費概要
Overview of Sewage Services Charges

政府每年持續投入資源以處理本港的污水。根據污染者自付原則，本署繼續推行污水處理服務收費計劃；根據該計劃，凡接駁至公共污水渠的處所，其用戶均須繳付排污費。污水處理服務費包括排污費和工商業污水附加費。現時共有27類行業須繳付工商業污水附加費。

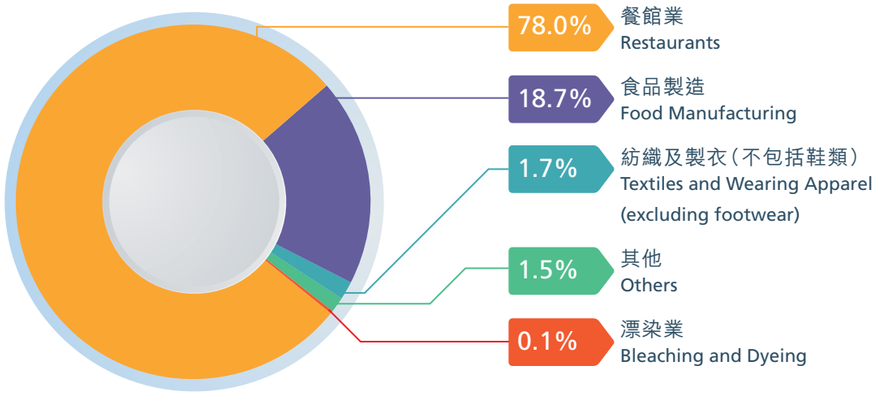
The Government has been allocating resources towards Hong Kong's sewage treatment every year. In accordance with the "Polluter Pays" principle, the DSD continues to implement the Sewage Services Charging Scheme under which all users whose premises are connected to public sewers shall pay sewage charges. The sewage services charges consist of two components, namely the Sewage Charge (SC) and the Trade Effluent Surcharge (TES). Currently, 27 trades are required to pay the TES.

帳單及用水量統計數字
Billing and Water Consumption Statistics

年內，全港約有308萬個自來水用戶，其中約285萬個用戶須繳付排污費。在所有非住宅用戶中，約有30 000個用戶須繳付工商業污水附加費。工商業污水附加費繳納戶所屬行業的分布情況見下圖。

In the year under review, among the approximately 3.08 million water utility users in Hong Kong, about 2.85 million are required to pay the SC. Among all the non-domestic users, about 30 000 are required to pay the TES. The distribution of industries to which the TES payers belong is shown in the box below.

2019-20 年度工商業污水附加費繳納戶所屬行業
Distribution of Trade Effluent Surcharge Accounts in 2019-20 by Trade

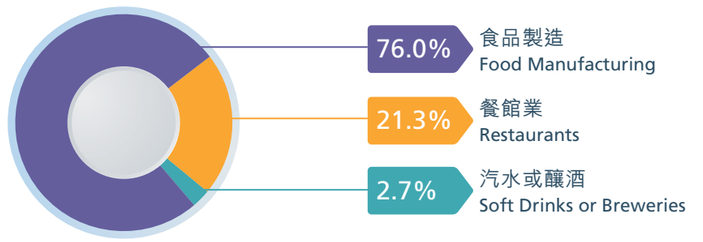


重新評估工商業污水附加費收費率及污水排放比率
Reassessment of the TES Rate and Discharge Factor

非住宅用戶若認為其排放的污水濃度或排放比率低於法例列明的數值，可申請重新評估工商業污水附加費的收費率或污水排放比率。獲重新評估的工商業污水附加費收費率有效期為三年。

Non-domestic consumers may apply for a reassessment of the TES rate or discharge factor if they consider that their effluent strength or discharge factor is lower than the corresponding values specified by law. The reassessed TES rate is valid for three years.

2019-20 年度申請重新評估化學需氧量的所屬行業
Accounts Applying for Chemical Oxygen Demand (COD) Reassessment in 2019-20 by Trade



客戶查詢
Customer Enquiries

渠務署貫徹「以客為本」的信念，致力為香港市民提供優質服務。我們除了設有24小時熱線外，亦就多個範疇訂定服務承諾，務求在適當時間內回應市民的查詢。本年度，我們共接獲2 653宗有關污水處理服務收費的電話及書面查詢，而超過98%書面查詢均在一個月內收到正式回覆。

Adhering to its value of "customer satisfaction", the DSD is dedicated to providing quality services for Hong Kong citizens. Apart from setting up a 24-hour hotline, we have also made performance pledges on different areas of our services to address public enquiries in a timely manner. In the year under review, we received a total of 2 653 telephone and written enquiries about our sewage services charges; over 98% of the written enquiries were formally replied to within a month.

2019-20 年度收到的各類書面查詢
Written Enquiries Received in 2019-20 by Category



第五章 CHAPTER 5

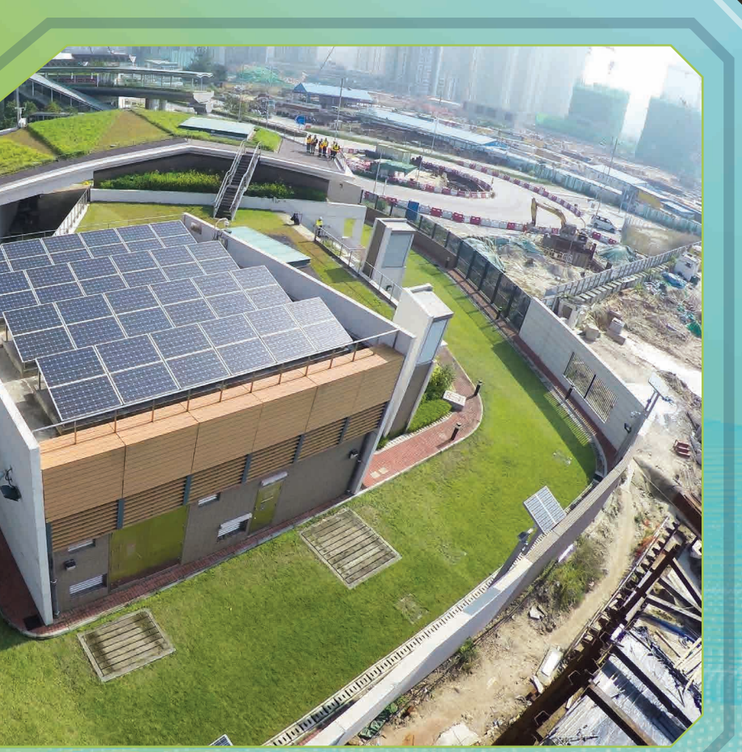
環境管理
Environmental Management

面對氣候變化帶來的機遇和挑戰，渠務署近年在渠務工程規劃階段不遺餘力地引進「藍綠排水建設」等創新理念，為改善香港城市環境而作出貢獻。同樣地，在營運方面，我們致力引入先進環保技術和實施綠色管理措施，務求提升效益，節能減排，從而達到可持續發展的目標。

Facing opportunities and challenges brought by climate change, the DSD has spared no effort in recent years to incorporate innovative concepts such as Blue-Green Drainage Infrastructure at the planning stage of drainage projects so as to contribute to the improvement of Hong Kong's urban environment. Likewise, on the operational front, we are committed to introducing advanced environmentally-friendly technologies and implementing green management measures to enhance efficiency, save energy and reduce emissions, thereby achieving the goal of sustainable development.

啟德河夜景
Kai Tak River at night





九龍城一號污水泵房
Kowloon City No. 1 Sewage Pumping Station

藍綠排水建設
Blue-Green Drainage Infrastructure

「藍」指河道及水體；「綠」指綠化景觀。「藍綠排水建設」是現代化雨水管理概念，旨在令城市像海綿一樣運作，在下雨天時能吸水、蓄水、淨水，在有需要時又能釋放暫時儲存的雨水以供使用，最後才將多餘的雨水排入大海。渠務署本着「藍綠排水建設」的理念在積極綠化污水處理設施之餘，亦致力活化水體。我們在多項工程中引進綠化和生態保育的元素，希望美化河道環境和保育河道生態系統，讓市民得以享有優質的居住環境。

"Blue" refers to rivers and water bodies; "green" refers to landscape greening. Blue-Green Drainage Infrastructure is a modern stormwater management concept of making a city function like a sponge which can not only allow absorption, storage and purification of rainwater during rainy days, but also release the temporarily stored rainwater for utilisation as needed before discharging the excess rainwater into the sea. Embracing the concept of Blue-Green Drainage Infrastructure, the DSD strives to revitalise water bodies while actively greening sewage treatment facilities. By incorporating green and eco-conservation elements into a number of projects, we hope to beautify river environment and preserve river ecosystems, so that the public can enjoy a quality living environment.

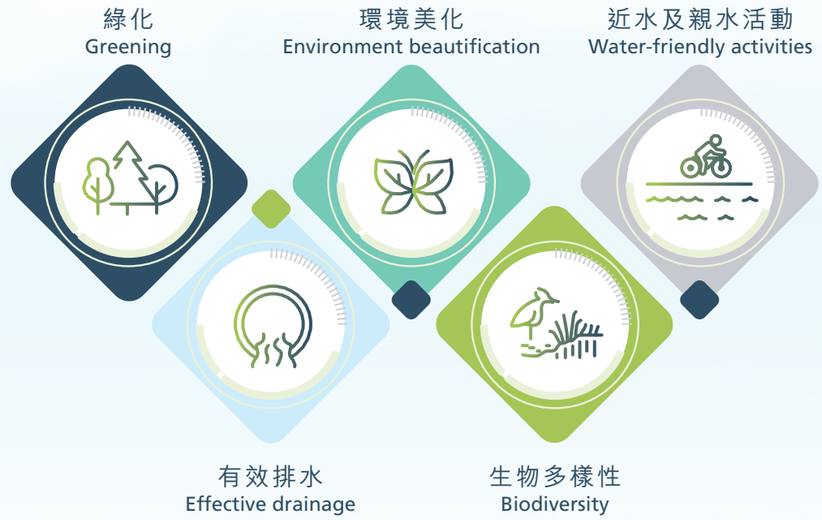


建設「河畔城市」
Building "Rivers in the City"

現今的河道不僅可用以防洪，亦是城市中充滿生機的水景。河道除了有助美化環境，亦可促進生態保育，並為社區提供共享空間。為配合《2019年施政報告》中有關發展和推進「河畔城市」的建議，渠務署已推展活化河道項目，並已在規劃新發展區時加入防洪人工湖、河畔公園等活化水體設施，從而為公眾提供優質的河道設施，並提升河道的環境及社會價值。

Serving beyond the sole purpose of flood prevention, rivers nowadays are also urban waterscapes teeming with life. Apart from beautifying the environment, rivers can promote ecological conservation and provide shared space for the community. In response to the 2019 Policy Address initiative to develop and take forward the concept of "Rivers in the City", the DSD has been implementing river revitalisation projects and introducing, when planning new development areas, waterbody rejuvenation facilities such as artificial flood attenuation lakes and river parks, thereby providing the public with quality river facilities and enhancing the environmental and social values of rivers.

活化河道的主要元素
Key Elements of River Revitalisation



河道改善工程的成果
Achievements of River Improvement Works

蠔涌河改善工程

渠務署在2009年完成蠔涌河河道改善工程，紓緩了區內的水浸風險。工程期間，我們引入河岸牆洞、魚梯等生態保育元素，藉以使水生及沿岸環境更多元化，並改善河溪生態。

Ho Chung River Improvement Works

The DSD completed the Ho Chung River Improvement Works in 2009, alleviating the flood risk of the region. During the works period, we introduced ecological conservation features such as holes in the river walls and fish ladders to enrich the aquatic and riparian environment and enhance fluvial ecology.



蠔涌河
Ho Chung River

林村河上游河道改善工程

林村河上游河道改善工程於2012年完成後，河流的生境重塑了，而河流的水質亦改善了。工程項目的成績令人十分鼓舞，河道的鳥類、魚類及蜻蜓的品種數量均回復至工程前的水平，而屬林村河稀有品種的香港瘰螈目前的數量更勝從前。

Upper Lam Tsuen River Improvement Works

Upon completion of the Upper Lam Tsuen River Improvement Works in 2012, the river habitat has been reconstructed and the water quality of the river improved. Results of the project are very encouraging, with the numbers of bird, fish and dragonfly species restored to pre-project levels, and Hong Kong Warty Newt, a rare species occurring in Lam Tsuen River, is now more abundant than before.



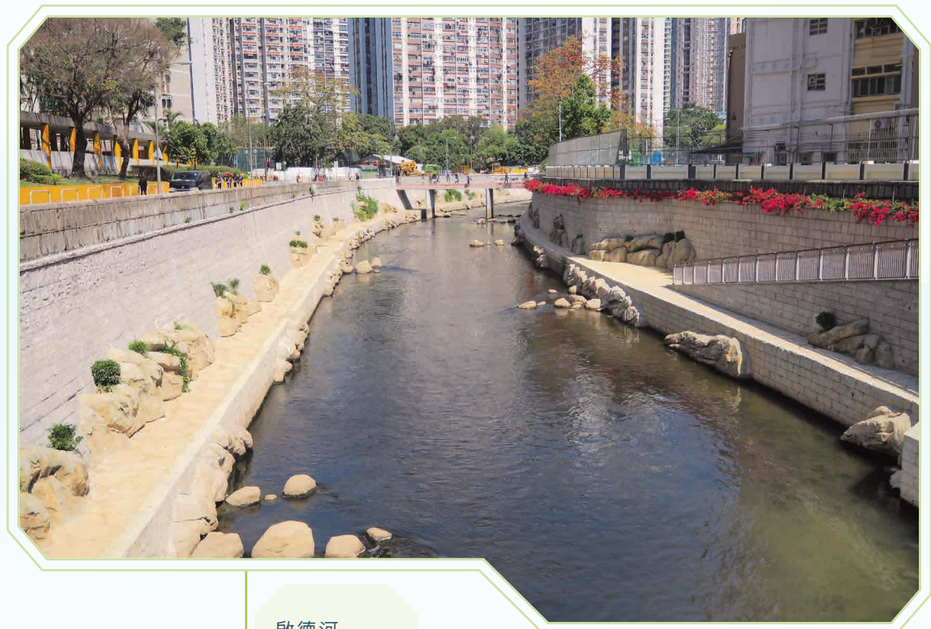
林村河上游
Upper Lam Tsuen River

啟德河改善工程

啟德河改善工程於2018年完竣後，啟德河現時能抵禦二百年一遇的暴雨，有效緩解彩虹道一帶的水浸風險。我們已把綠化、園景及生態元素納入工程，將該段長約1.1公里的明渠活化為市區第一條綠化河道走廊。活化後的啟德河綠意盎然，吸引了多種雀鳥及魚類棲息。我們亦在啟德河（黃大仙段）設置導賞徑，讓公眾欣賞啟德河活化及綠化成果，並認識其歷史、改善工程的概要及自然生態。

Kai Tak River Improvement Works

After the completion of the Kai Tak River Improvement Works in 2018, Kai Tak River can now withstand rainstorms of a 200-year return period, effectively alleviating flood risks to Choi Hung Road and its surrounding areas. By incorporating greening, landscaping and ecological elements into the project, we turned the 1.1 kilometre section of the nullah into the first urban green river corridor. Awash with flourishing greenery, the revitalised Kai Tak River has attracted many different species of birds and fish seeking a resting place. We have also set up a trail along Kai Tak River in Wong Tai Sin so that the public can learn more about the history, overview of improvement works and natural ecology of the river while enjoying the fruits of the greening and revitalisation works.



啟德河
Kai Tak River

我們現正竭力進行活化翠屏河的工程。詳情請參閱**第四章－主要職責**。

We are pressing on with the Tsui Ping River revitalisation works. Please refer to **Chapter 4 - Core Responsibilities** for details.

活化具潛力明渠的規劃
Plans to Revitalise Potential Nullahs and Rivers

本署已制定大圍明渠(香粉寮至文禮閣)、火炭明渠(桂地新村至香港體育學院),以及佐敦谷明渠(沈雲山抽水站至佐敦谷游泳池)的活化方案,旨在保持明渠排洪能力之餘亦善用河道空間,並展現水體的多重功能價值。

The DSD has formulated the revitalisation schemes for Tai Wai Nullah (from Heung Fan Liu to Man Lai Court), Fo Tan Nullah (from Kwai Tei New Village to Hong Kong Sports Institute) and Jordan Valley Nullah (from Shum Wan Shan Pumping Station to Jordan Valley Swimming Pool), aiming to optimise the use of river spaces and demonstrate the multifunctionality of waterbodies as well as maintaining the drainage capabilities of the nullahs.

大圍和火炭明渠的活化計劃旨在提升排水道的生態價值、綠化環境、促進親水文化、改善社區環境,以及提供有助改善水質的旱季截流器。為了研究計劃是否可行,本署已於2020年4月就大圍和火炭明渠活化計劃展開勘查研究。

The revitalisation schemes for Tai Wai Nullah and Fo Tan Nullah aim to enhance the ecological value of the drainage channels, green the environment, promote a water-friendly culture, improve the community environment, and provide dry weather flow interceptors that can help improve water quality. To review the feasibility of the schemes, the DSD commenced investigation studies for the revitalisation schemes for Tai Wai Nullah and Fo Tan Nullah in April 2020.



大圍明渠構想圖
Photomontage of Tai Wai Nullah



火炭明渠構想圖
Photomontage of Fo Tan Nullah

本署現正在佐敦谷明渠部分下游位置進行園景美化工程,並擬在明渠上建造觀景平台以提供休憩空間。此外,我們擬在明渠的上游部分設置水池和魚梯以營造生態環境和增加該處的生態價值。工程已於2020年3月展開,預計於2022年完成。

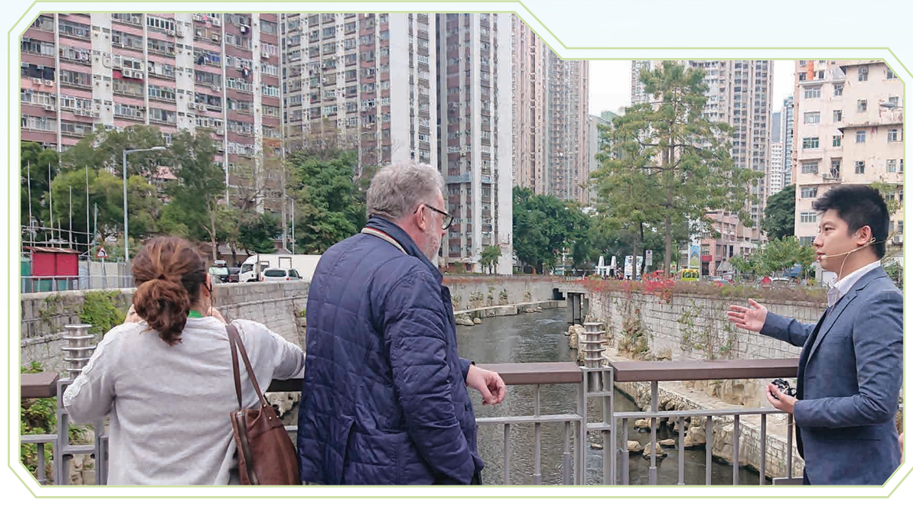
The DSD is implementing landscaping works to part of the downstream area of Jordan Valley Nullah, above which a viewing platform is proposed to be built so as to furnish a leisure space. Moreover, we proposed providing pools and fish ladders in the upstream area to create ecological habitats for enhancement of the area's ecological value. The works commenced in March 2020, with completion targeted for 2022.



佐敦谷明渠構想圖
Photomontage of Jordan Valley Nullah

在發展局首次主辦的香港2020國際城市林務研討會中,本署為海外專家安排實地考察活動,讓他們了解一下香港在落實「河畔城市」概念方面的工作。本署園境師向他們講解啟德河改善工程的背景、挑戰及河道活化概念,亦向他們介紹九龍城一號污水泵房的綠色建築元素。

During the Hong Kong 2020 International Urban Forestry Conference, the first-ever organised by the Development Bureau, the DSD arranged for overseas experts to make a field trip to learn about Hong Kong's work on realising the concept of "Rivers in the City". The DSD's landscape architect shared with them the background, challenges and river revitalisation concept of the Kai Tak River Improvement Works, as well as the green building features adopted at Kowloon City No. 1 Sewage Pumping Station (SPS).



設施融入環境和社區

Integrating Facilities into the Environment and Community

本署在提升污水處理設施時，不但考慮社區的發展需要，亦十分重視設施如何與環境和毗鄰社區連結。我們除了為污水處理設施注入環保元素外，亦積極引入社區共融的設計，以便將渠務設施改建成可與民共享的空間，從而提高公眾對渠務設施的接受程度。

When upgrading sewage treatment facilities, the DSD not only takes into account the development needs of the community, but also attaches great importance to the way in which facilities are connected with the environment and the community nearby. Apart from infusing green elements into sewage treatment facilities, we proactively adopt community inclusive designs to turn the drainage facilities into spaces that can be shared with the general public, thus improving public acceptance of the drainage facilities.

綠化天台

綠化天台有助減少建築物能源消耗、美化建築物外觀，以及改善周邊環境的生物多樣性。我們在建造綠化天台前聘請合資格專業人士進行詳細評估工作，以確保選址結構安全。年內，本署為轄下六個設施完成天台綠化工程：

Roof Greening

Roof greening can reduce building energy consumption, beautify building appearance and improve biodiversity of the surrounding environment. Prior to construction of green roofs, we hired qualified professionals to make detailed assessment so as to ensure the structural safety of selected sites. During the year, the DSD carried out roof greening works at six of its facilities listed below:



梅窩污水處理廠

Mui Wo Sewage Treatment Works



落禾沙二號污水泵房

Lok Wo Sha Sewage Pumping Station No.2



港珠澳大橋污水泵房

Hong Kong-Zhuhai-Macao Bridge Sewage Pumping Station



土瓜灣道污水泵房

To Kwa Wan Road Sewage Pumping Station



啟德河一號隔沙站

Kai Tak River Desilting Compound No.1



啟德河二號隔沙站

Kai Tak River Desilting Compound No.2

社區共融設計

本署積極將轄下的渠務設施轉化成社區設施，為市民提供共享的休憩空間，從而賦予有關設施原來用途以外多一重的社會意義。我們已把多種社區共融設計元素納入石湖墟污水處理廠及觀塘污水泵房的改善工程。

Community Inclusive Designs

The DSD actively transforms its drainage facilities into community facilities to provide citizens with communal space for rest and leisure, thereby imbuing the facilities with additional social meaning that goes beyond their intended use. We have incorporated various community inclusive design elements into the improvement works of Shek Wu Hui STW and Kwun Tong SPS.

石湖墟污水處理廠將升級為石湖墟淨水設施。工程完成後，部分設施能為市民提供共享空間，例如觀鳥區、河畔步道、生態園等，讓市民享受石上河和梧桐河的自然景色。

Shek Wu Hui STW will be upgraded to Shek Wu Hui Effluent Polishing Plant. After completion of the project, parts of the facility will provide the public with communal spaces such as a bird-watching area, a riverside promenade and an ecological garden, allowing them to enjoy the natural scenery at River Sutlej and River Indus.



石湖墟淨水設施構想圖

Photomontage of Shek Wu Hui Effluent Polishing Plant

本署正為臨海的觀塘污水泵房進行設施升級工程，在面積11 000平方米的泵房上蓋天台建造園景平台作公眾休憩用途。我們將委託非政府組織舉行公眾參與工作坊，徵詢公眾對平台兒童遊樂設施的意見。

The DSD is carrying out facility upgrade works at Kwun Tong SPS on the waterfront to transform the 11 000-square-metre roof of the SPS into a landscaped deck for recreational purposes. We will entrust an NGO with the task of conducting public engagement workshops to consult the community on the children's playground on the deck.

觀塘污水泵房園景天台構想圖

Photomontage of landscaped deck of Kwun Tong Sewage Pumping Station



水資源管理

Water Resources Management

渠務署一直貫徹可持續的水資源管理理念，鼓勵社會各界共同努力善用水資源。我們致力在轄下設施推動循環再用水資源，務求善用珍貴的水資源，並提升水資源使用效率。

Always committed to the rationale of sustainable water resources management, the DSD encourages all sectors in the community to make concerted efforts to optimise the use of water resources. We strive to promote the reuse of water resources in our facilities so as to optimise the use of the precious water resources and enhance water usage efficiency.

水資源採集與回用系統

Water Harvesting System

我們積極在新設施的設計中加入可持續的水資源管理元素，例如雨水收集系統、地下蓄洪系統、雨水花園、多孔透水路面等。現時已完成的相關工程項目包括九龍城一號及二號污水泵房、荔枝角雨水排放隧道，以及跑馬地地下蓄洪計劃。

We actively incorporate into the design of our new facilities sustainable water resources management elements such as rainwater harvesting systems, underground stormwater storage systems, rain gardens and porous pavements. The relevant projects completed to date include Kowloon City No. 1 and No. 2 SPSs, Lai Chi Kok Drainage Tunnel and Happy Valley Underground Stormwater Storage Scheme.

跑馬地地下蓄洪計劃的水資源採集及回用系統用以收集雨水、地下水和運動場的灌溉水。通過這個系統收集的水經簡單消毒處理後，已能達到作非飲用用途的回用水標準。採集得的水不但能回用作灌溉及沖廁用途，而且可供食物環境衞生署用以清洗跑馬地及灣仔一帶街道。

A water harvesting system under HVUSSS is used to collect rainwater, groundwater and sportsground irrigation water. The water collected through the system can be brought up to standard of reused water for non-potable use after simple disinfection treatment. Harvested water can not only be reused for irrigation and toilet flushing, but can also be supplied to the Food and Environmental Hygiene Department for street cleaning in Happy Valley and Wan Chai.



採集得來的回用水用於灌溉球場草地

Irrigating football pitches with harvested water

污水再造與回用
Water Reclamation and Reuse

為支持政府根據《全面水資源管理策略》推行再造水措施，本署繼續在轄下設施生產和使用再造水，並提高再造水設備的運作可靠度。污水經處理和淨化後製成可循環再用的再造水。使用再造水不但能減少污染環境和避免生態系統負荷過重，而且亦能紓緩公眾對淡水的需求；換言之，此舉有助推動本港的可持續發展和環境保護工作。

年內，我們平均每日生產逾1 500立方米再造水及再用水作非飲用用途。昂坪污水處理廠、沙田污水處理廠、大埔污水處理廠及望后石污水處理廠均設有再造水及再用水生產設施。

In support of the Government's water reclamation initiative under the Total Water Management Strategy, the DSD continues to produce and use reclaimed water within its facilities and improve the operational reliability of its water reclamation facilities. After treatment and disinfection, effluent can be recycled as reclaimed water. Using reclaimed water can not only minimise environmental pollution and avoid overloading the ecosystem, but it can also alleviate the public demand for freshwater; in other words, it can help promote sustainable development and environmental protection in Hong Kong.

During the year, we produced over 1 500 cubic metres of reclaimed and reuse water per day on average for non-potable use. Water reclamation and reuse water facilities are provided in Ngong Ping STW, Sha Tin STW, Tai Po STW and Pillar Point STW.

昂坪污水處理廠

昂坪污水處理廠是香港首間配備再造水生產設施的三級污水處理廠。該廠生產的再造水安全無味，現時供昂坪的公廁及昂坪纜車站作沖廁用途；部分再造水亦用以灌溉和飼養廠內魚池的觀賞魚。

Ngong Ping STW

Ngong Ping STW is Hong Kong's first tertiary sewage treatment plant equipped with a water reclamation facility. Safe and odourless, the reclaimed water produced by this plant is now supplied for toilet flushing at Ngong Ping public toilets and Ngong Ping Cable Car Terminal toilets; part of the reclaimed water is used for irrigation and rearing ornamental fish in fishponds inside the plant.



沙田污水處理廠及大埔污水處理廠

沙田污水處理廠及大埔污水處理廠的再造水生產設施現時每日可分別生產超過500立方米及140立方米的再造水，用以清洗廠房、灌溉園林、沖廁，以及稀釋化學品。望后石污水處理廠的再用水主要作稀釋化學品用途。

Sha Tin STW and Tai Po STW

The water reclamation facilities in Sha Tin STW and Tai Po STW can generate over 500 cubic metres and 140 cubic metres of reclaimed water every day respectively for plant cleaning, irrigation, toilet flushing and chemical dilution. Reuse water at Pillar Point STW is mainly used for chemical dilution.



沙田污水處理廠的再造水生產設施
Water reclamation facilities at Sha Tin STW



大埔污水處理廠的再造水生產設施
Water reclamation facilities at Tai Po STW

石湖墟淨水設施

此外，我們正將石湖墟污水處理廠改建為石湖墟淨水設施，水務署亦計劃使用經過該設施三級處理的排放水加工，生產再造水，分階段向上水及粉嶺等新界東北地區供應再造水作非飲用用途。

Shek Wu Hui Effluent Polishing Plant

Furthermore, we are upgrading Shek Wu Hui STW to Shek Wu Hui Effluent Polishing Plant. The Water Supplies Department plans to supply reclaimed water converted from the tertiary treated sewage effluent generated from the plant to the north-eastern part of the New Territories for non-potable uses starting with Sheung Shui and Fanling in phases.

減緩與適應氣候變化
Climate Change Mitigation and Adaptation

為應對氣候變化，渠務署積極參與政府跨部門氣候變化基建工作小組的工作，協助修訂基建設施的設計標準，並檢視和提升現有基建設施的抗逆能力。此外，我們亦與其他城市和地區保持緊密聯繫。本署代表香港特區政府加入名為「C40城市氣候領導聯盟」的國際組織旗下的「連結三角洲城市」，與其他三角洲城市交流防洪技術。此外，本署亦是粵港環保及應對氣候變化合作小組成員。

To address climate change, the DSD actively participates in the work of the Government's Inter-departmental Climate Change Working Group on Infrastructure to assist with revising infrastructure design standards as well as reviewing and reinforcing the resilience of existing infrastructure. Furthermore, we maintain close liaison with other cities and regions. Representing the HKSAR Government, the DSD joined the Connecting Delta Cities under the international organisation called C40 Cities Climate Leadership Group to exchange flood prevention techniques with other delta cities. Further, the DSD is also a member of the Hong Kong-Guangdong Joint Working Group on Environmental Protection and Combating Climate Change.

採用可再生能源
Harnessing Renewable Energy

為配合政府於2017年公布的《香港氣候行動藍圖2030+》，渠務署積極推廣使用可再生能源，包括太陽能、水力能和生物氣。我們期望在2024-25年度或之前透過一系列可再生能源項目和節能措施把耗電量減至比2018-19年度少約4%。

目前，本署廠房的可再生能源設施每年生產約2 800萬度電，約佔本署每年能源需求量的9%。此外，本署由2017-18年度至2019-20年度共獲得3.25億元的撥款，以推行16個主要的可再生能源項目。部分工程項目已於2020年初落成，其餘項目將於未來數年陸續完成。所有項目完成後，每年可額外生產相等於約690萬度電的能源。

In support of "Hong Kong's Climate Action Plan 2030+" published by the Government in 2017, the DSD has been proactively promoting the use of renewable energy (RE), including solar power, hydropower and biogas. Through a series of RE projects and energy saving initiatives, we hope to reduce electricity consumption by about 4% by 2024-25, as compared to 2018-19.

At present, RE installations in the DSD's plants generate about 28 million kilowatt-hours of electricity a year, constituting around 9% of the DSD's annual energy demand. In addition, the DSD obtained funding of $325 million in total for 16 major renewable energy projects from 2017–18 to 2019–20. Some of the projects were completed in early 2020, while the remaining projects will be completed progressively in the next few years. Upon full completion of the projects, additional energy equivalent to about 6.9 million kilowatt-hours of electricity can be generated per annum.

渠務署每年的可再生能源產量
The DSD's current annual RE contribution
≈28 000 000
度電
kilowatt-hours

相當於
Equivalent to
5 800
個家庭的能源消耗量[1]
households energy consumption[1]

減少約
Reduction of about
19 600 公噸 tonnes
二氧化碳排放量[2]
carbon dioxide emission[2]

[1] 按《香港都市節能藍圖》所述香港家庭用電量平均每月約 400 度電計算。
Calculated based on the "Energy Saving Plan", in which it is stated that the average household electricity consumption in Hong Kong is about 400 kilowatt-hours per month.

[2] 根據全港性預設值（0.70 公斤二氧化碳當量 / 千瓦時）計算。
Calculated based on a territory-wide default value (0.70 kilogram CO_2e/kilowatt-hours).

太陽能

為擷取太陽能加以利用，我們揀選合適的戶外設施安裝太陽能光伏系統。截至2020年3月底，我們已為14所污水處理廠、13所污水泵房和一所蓄洪設施安裝太陽能光伏板。在這些政府裝置當中，小蠔灣污水處理廠的太陽能發電場是目前規模最大的同類裝置，每年可生產達110萬度電。年內，本署光伏系統的總發電量約為126萬度電。

渠務署未來數年會繼續在其轄下設施加裝太陽能光伏系統。相關工程項目完成後，本署光伏系統的總裝置發電容量預計可達三兆瓦。其中項目包括盡量利用在昂船洲污水處理廠的空間，如污水沉澱池蓋等位置安裝薄膜太陽能光伏系統，以便生產太陽能。這個系統將成為香港規模最大的同類裝置，總裝置發電容量逾0.6兆瓦。

Solar Energy

To capture and harness solar power, the DSD has installed photovoltaic (PV) systems at selected outdoor facilities. As at the end of March 2020, we have installed PV panels at 14 STWs, 13 SPSs and one stormwater storage facility. Among these government installations, the solar farm at Siu Ho Wan STW is currently the largest installation of its kind and can generate up to 1.1 million kilowatt-hours of electricity annually. During the year, the DSD's PV systems generated about 1.26 million kilowatt-hours of electricity in total.

The DSD will continue to install PV systems in its facilities over the next few years. Upon completion of associated projects, the total installed capacity of the DSD's PV systems could reach three megawatts. One of these projects is the installation of thin-film PV panels at Stonecutters Island STW which utilitises space as far as possible, locations such as sedimentation tank covers will be occupied for solar power generation. This thin-film solar system will be the largest installation of its kind in Hong Kong, with a total installed capacity of over 0.6 megawatts.

小蠔灣污水處理廠的太陽能發電場
Solar Farm at Siu Ho Wan Sewage Treatment Works



水力發電

隨着淨化海港計劃第二期甲正式啓用，我們在昂船洲污水處理廠安裝了水力渦輪發電系統，利用流動污水的液壓能量推動渦輪機，發電供廠房內部使用。該系統屬全自動運作，發電機轉速根據污水處理廠的污水流量自動調節。該系統設計發電功率為23千瓦，預計每年可生產高達12萬度電能，令本署可節省電力開支，以及減少碳排放量。鑑於此項目成效顯著，我們現正在昂船洲污水處理廠安裝第二組水力渦輪發電系統。

Hydroelectric Power

Upon commissioning of the Harbour Area Treatment Scheme Stage 2A, we installed a hydro-turbine system at Stonecutters Island STW, utilising the hydraulic energy from the flow of sewage to drive the turbine and generate electricity for in-house use. Operation of the system is fully automated and the generator speed is regulated according to the sewage flow rate at the STW. With a design generating capacity of 23 kilowatts, the system is expected to be able to generate up to 120 000 kilowatt-hours of electricity per annum, making it possible for the DSD to cut electricity costs and reduce carbon emissions. In view of the high effectiveness of this project, we are currently installing the second unit of hydro-turbine system at Stonecutters Island STW.

昂船洲污水處理廠的水力發電系統

Hydro-turbine system at Stonecutters Island Sewage Treatment Works



生物氣

污水處理過程所產生的污泥，在厭氧消化期間會釋出可用於生產電能和熱能的生物氣。本署轄下的污水處理廠共設有六台電熱聯供發電機及三台渦輪發動機（全都以生物氣作為燃燒），用以生產電力和熱能作內部用途。年內，本署轄下污水處理廠的生物氣總發電量相等於約2 670萬度電。為了盡量使用源自污泥處理過程的生物氣以生產電能和熱能，本署現正為沙田污水處理廠和大埔污水處理廠增設總裝置發電容量將達6.8兆瓦的電熱聯供發電機系統作發電、供熱、製冷用途。為進一步使用可再生能源，我們正計劃安排在大埔污水處理廠設置另一個發電系統，利用電熱聯供發電機的餘熱發電。

本署與環保署合作在大埔污水處理廠推行的「廚餘、污泥共厭氧消化試驗計劃」，於2019年9月開始運作，將廚餘與污泥進行共厭，期間所產生的生物氣生產電力和熱能，供污水處理廠使用。這項計劃源於「轉廢為能」的概念，旨在減少都市固體廢物量，同時增加生物氣產量。經厭氧消化後的污泥在脫水後運往「源 • 區」用作焚化燃料；在燃燒過程中產生的熱能回收轉化為電力。



電熱聯供發電機

Combined heat and power generator

微型渦輪發動機

Micro-turbine generator



Biogas

Biogas generated during anaerobic digestion of sludge during the sewage treatment process can be used to generate electricity and heat. A total of six combined heat and power (CHP) generators and three gas turbines (all running on biogas) have been installed in the DSD's STWs to generate electricity and heat for in-house use. During the year, the total energy generated by biogas at our STWs amounted to about 26.7 million kilowatt-hours. To maximise the use of biogas from the sludge treatment process for electricity and heat generation, the DSD is installing at Sha Tin STW and Tai Po STW additional CHP generator systems with a total generating capacity of 6.8 megawatts for electricity generation, heating and cooling. To further utilise renewable energy, we are planning to have another system installed in Tai Po STW to generate electricity from waste heat of CHP generators.

In collaboration with the Environmental Protection Department, the DSD has commenced operation of the Food Waste /Sewage Sludge Anaerobic Co-digestion Trial Scheme at Tai Po STW since September 2019 to generate electricity and heat for the STW by using biogas produced during food waste and sludge anaerobic co-digestion. Based on the concept of "waste-to-energy", the scheme is aimed at reducing municipal solid waste while increasing biogas production. The digested sludge is dewatered and then transported to T• Park to serve as fuel in the incineration process; the heat generated during incineration is recovered and transformed into electricity.

完善能源耗用
Optimising Energy Consumption

為減低能源耗量，渠務署不斷完善轄下污水及防洪設施的運作狀況，以達到節能目標。年內，本署推行新的主要節能措施如下：

To reduce energy consumption, the DSD keeps optimising the operation of its sewage and flood prevention facilities to enhance their energy usage efficiency in order to achieve the energy saving target. During the year, the new major energy consumption optimising measures taken by the DSD are as follows:

完善污水處理廠及污水泵房的操作流程
Optimising operation procedures of sewage treatment works and sewage pumping stations

把舊式廠房設備更換為能源效益較高的廠房設備，包括更換鼓風機、照明系統、水泵和隔篩等
Replacing outdated plant equipment with more energy-efficient ones, including replacement of air blowers, lighting systems, pumps and screens

安裝電熱聯供發電系統
Installing Combined Heat and Power Generating System

年內，上述新的完善運作和使用可再生能源措施節省約 270 萬度電（相當於約 1 890 公噸碳）[3]
During the year, the above new measures on operation optimisation and use of renewable energy saved about 2.7 million kilowatt-hours of electricity (equivalent to about 1 890 tonnes of carbon)[3]

[3] 根據全港性預設值（0.70 公斤二氧化碳當量 / 千瓦時）計算。
Calculated based on a territory-wide default value (0.70 kilogram CO_2e / kilowatt-hours).

碳審計
Carbon Audit

本署明白採取具針對性的減排措施有助減少溫室氣體排放量，因此正積極為轄下廠房進行碳審計，以便識別主要排放源，並制定合適的減排措施，例如降低機器耗能、提升運作效率、利用可再生能源等。年內，我們分別為昂船洲污水處理廠、沙田污水處理廠、大埔污水處理廠、石湖墟污水處理廠、小蠔灣污水處理廠、赤柱污水處理廠，以及深井污水處理廠進行了碳審計。展望未來，渠務署會繼續為污水處理廠進行碳審計，並根據分析結果制訂合適的減碳措施，從而實踐綠色營運。

Understanding that targeted emission reduction measures can be taken to reduce greenhouse gas emissions, the DSD is actively conducting carbon audits in its plants to identify major emission sources and formulate appropriate emission reduction measures such as reducing energy consumption of machinery, enhancing operation efficiency and utilising renewable energy. During the year, carbon audits were carried out at Stonecutters Island STW, Sha Tin STW, Tai Po STW, Shek Wu Hui STW, Siu Ho Wan STW, Stanley STW and Sham Tseng STW. Looking ahead, the DSD will continue to conduct carbon audits in STWs and formulate appropriate carbon reduction measures based on analysis findings so as to implement green operations.

2019 年碳排放量（以公噸二氧化碳當量計算）
Carbon Emissions in 2019 (in tonnes of CO_2 equivalent)



範圍 1
經直接使用燃料而產生的直接排放 + 除氮過程中釋放的氧化氮 + 製冷劑排放 + 污泥消化池中的甲烷釋放 — 因植樹 / 太陽能移除的碳排放（以公噸二氧化碳當量計算）

Scope 1
Direct emissions generated from direct combustion of fuels + N_2O emissions through nitrogen removal + Refrigerant emissions + Methane release from sludge digester – GHG removals by planting trees / applying solar power (in tonnes of CO_2 equivalent)

範圍 2
經使用電力及煤氣而產生的間接排放

Scope 2
Indirect emissions generated from the use of electricity + Towngas

綠色辦公室
Green Office

我們致力在日常工作中實踐「綠色辦公室」的概念，實行一系列的環保政策及措施，以提高員工的環保意識。

We make every effort to practise the "green office" concept in every aspect of our day-to-day operation, putting in place a series of green policies and measures to raise environmental awareness of our staff.

源頭減廢
Reducing Waste at Source

為了全面貫徹「綠色辦公室」的概念，我們實施了多項源頭減廢措施，包括發出節約用紙指引和綠色資訊，以及鼓勵員工盡量利用紙張兩面印刷和重用單面紙及信封。另外，我們在辦公室設置回收點，收集打印機碳粉盒、充電電池、廢紙、塑料、金屬容器等物品以便循環再用，並以定期巡查辦公室的方式提升同事的環保意識。

To bring the "green office" concept into full play, we introduced a number of measures aimed at reducing waste at source, including issuing guidelines on reducing paper consumption and green tips, as well as encouraging colleagues to print on both sides of paper and reuse one-sided paper and envelopes whenever possible. Moreover, we set up collection points to recycle items including toner cartridges, rechargeable batteries, waste paper, plastic and metal containers, as well as conducting regular office inspections to heighten environmental awareness among our colleagues.

渠務署一直支持政府倡議政府物業及場所內所有食堂、小食亭及餐廳盡量避免使用即棄塑膠餐具。為響應此項建議，我們積極鼓勵同事在舉辦會議和公務活動時使用可重用的餐具，並培養同事自備餐具的習慣。

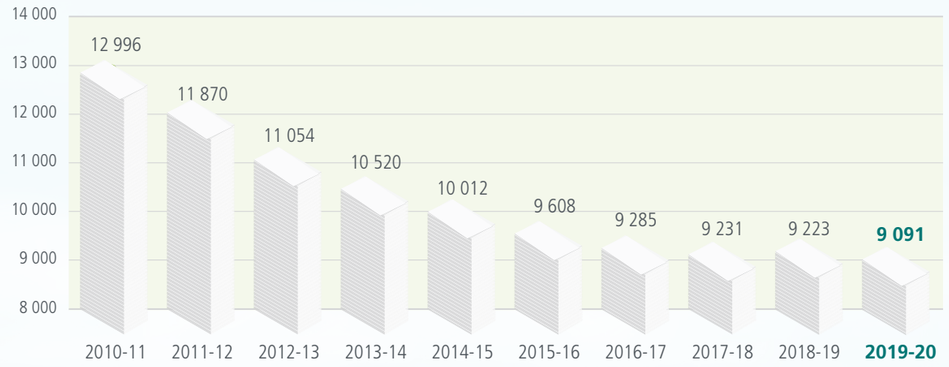
The DSD has always supported the initiative taken by the Government to minimise the use of disposable plastic tableware in all the canteens, kiosks and restaurants in government properties and venues. In support of the initiative, we actively promote the use of reusable tableware for meetings and official events and foster a habit of bring-your-own tableware among our colleagues.

我們因應數碼科技的發展步伐，一直積極推廣「無紙會議」，鼓勵同事在日常會議中以平板電腦和手提電腦等電子設備進行簡報和討論，從而減少耗紙量。年內，本署舉行了共183次無紙會議，並以電子方式傳閱了1 592份相關文件。此外，本署自2017年年中開始推廣電子傳真。自2018年起，本署轄下所有行政部門已改以電子傳真方式收發文件。現時，本署共有142個電子傳真號碼。這些節約用紙措施推行之後，渠務署的用紙量逐年遞減，年內總用紙量為9 091令[4]，較2009-10年度少約35%。

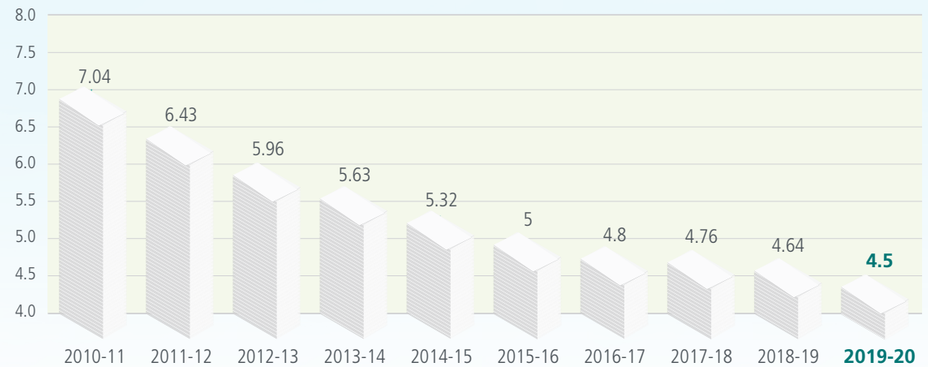
Keeping pace with the development of digital technology, we have been actively promoting "paperless meetings" by encouraging our colleagues to use electronic devices such as tablets and laptop computers for presentations and discussions in day-to-day meetings so as to reduce paper consumption. During the year, the DSD held a total of 183 paperless meetings and circulated 1 592 documents electronically. In addition, we have been promoting e-fax since mid-2017. As from 2018, all the administration divisions under the DSD have switched to e-fax for receipt and dispatch of documents. We now have a total of 142 e-fax numbers department-wide. Thanks to these paper saving measures, the DSD's paper consumption gradually declines, with a total paper consumption during the year of 9 091 reams[4], down about 35% compared to 2009-10.

[4] 撇除用於新合約 / 工程項目的招標 / 報價程序的用紙量。
Excluding the paper used in tender / quotation exercises for new contracts / projects.

用紙量（令）
Total paper consumption (ream)



每名員工用紙量（令）
Paper consumption per staff member (ream)



節約能源
Energy Saving

本署參考《香港氣候行動藍圖2030+》所載的建議以加強推廣綠色建築和減少政府大樓耗電量，在辦公室實施多項節能措施，包括把室溫設定在攝氏25.5度、減少非必要照明，以及使用計時器以便在辦公時間過後關閉公用辦公室設備。此外，我們以自身行動，積極支持其他社會組織所倡議的節能措施。

In the light of the suggestions set out in "Hong Kong's Climate Action Plan 2030+" to step up promotion of green buildings and reduce electricity consumption of government buildings, the DSD has implemented in its offices a number of energy saving measures including setting the room temperature at 25.5°C, reducing non-essential lighting and using timers to turn off office equipment after office hours. Moreover, we lead by example to proactively support energy conservation initiatives launched by other social organisations.

響應「地球一小時」熄燈行動

為響應由世界自然基金會舉辦的「地球一小時」熄燈行動，全港多幢政府建築物及地標於2020年3月28日晚上8時30分起關掉非必要的電燈及電器一小時，以示關注和承諾應對地球氣候危機及生物多樣性衰退的問題。為響應呼籲，渠務署在舉行上述活動的晚間關掉辦公室及設施非必要的電燈及電器一小時。

Supporting "Earth Hour 2020"

In support of "Earth Hour 2020", a lights-off event organised by the World Wide Fund for Nature, many government premises and iconic landmarks throughout the territory went dark by switching off non-essential lights and electrical appliances for an hour from 8:30 pm on 28 March 2020 to show concern about and commitment to tackling the climate crisis and biodiversity decline of our planet. Heeding the call, all non-essential lights and electrical appliances in the DSD's offices and facilities were switched off for one hour on the evening of the event.

綠色採購
Green Procurement

渠務署大力支持政府的綠色採購政策，在採購貨品及服務時適當考慮環保因素。舉例說，我們採用環境保護署的環保採購產品清單。年內，我們採購了多種符合環保規格的產品，包括節能電器（如影印機、打印機、電風扇、電腦和冰箱），以及環保辦公室消耗品（如再造紙、塗改帶、鉛筆、充電池、衞生紙和垃圾袋）。為了在本港推廣低碳生活，我們致力在工程期間盡量使用電動車。

Vigorously supporting the Government's green procurement policy, the DSD gives due consideration to environmental factors when procuring goods and services. For example, we adopt the EPD's list of Green Procurement Items. During the year, we purchased a wide variety of products in compliance with green specifications, including energy-saving electrical appliances (e.g. photocopiers, printers, electric fans, computers and refrigerators) and green office consumables (e.g. recycled paper, correction tapes, pencils, rechargeable batteries, toilet paper and garbage bags). To promote low carbon living in Hong Kong, we use electric vehicles as much as possible during construction.

培養可持續文化
Nourishing a Sustainable Culture

「綠色先鋒」由渠務署一羣熱心推廣可持續綠色生活及辦公室文化的同事組成。他們除舉辦環保活動外，亦會向環保管理委員會提出意見，藉此加強同事的環保意識、鼓勵他們參與環保工作，以及促進本署可持續發展。年內，「綠色先鋒」舉辦一系列環保活動，如綠色耕種比賽、海灘清潔活動，與同事及其家人分享可持續生活方式的樂趣，並培養愛護環境的文化。

The Green Champions is formed by a group of the DSD's colleagues who have a passion for promoting sustainable green living and office culture. In addition to launching green events, they give their views to the Green Management Committee so as to promote colleagues' green awareness, encourage their participation in environmental protection and enhance sustainable development of the DSD. During the year, the Green Champions organised a series of activities such as a green farming competition and beach clean-up activities to share the joy of a sustainable way of life with colleagues and their families and develop an environment-friendly culture.

同事利用本署設施的可用空間設置耕種地點，在綠化環境之餘，亦可與家人一起享受耕種的樂趣。

Colleagues have set aside some areas available within the DSD's facilities for farming lots where they can green the environment and get enjoyment out of farming with their families.



綠色耕種比賽
Green Farming Competition



渠務署除了與其他政府部門和組織合辦海岸清潔活動，還參與由其他組織舉辦的國際海岸清潔運動，清理海灘上的垃圾。

Apart from co-organising coastal clean-up events with other governmental departments and organisations, the DSD also participated in an international coastal clean-up event organised by other organisations to remove refuse from beaches.



海灘清潔活動
Beach Clean-up Activities

第六章 CHAPTER 6

關愛員工
Caring for Staff

渠務署致力為員工提供多元化的培訓，在提升員工競爭力和增長知識同時，促進他們事業和個人發展。我們為員工提供安全和愉快的工作環境，並定期舉辦各類型的康樂活動，以增進他們對本署的歸屬感和團隊精神。

The DSD strives to provide diverse training to our staff to enhance their competitiveness and knowledge while promoting career and personal development. To promote sense of belonging and team spirit, we organise a variety of recreational activities regularly and provide a safe and pleasant working environment.



部門聖誕聯歡會
Christmas Party

將軍澳龍舟比賽 2019
Tseung Kwan O Dragon Boat Race 2019



三十周年歡樂跑
30th Anniversary Fun Run



員工培訓與發展
Staff Training and Development

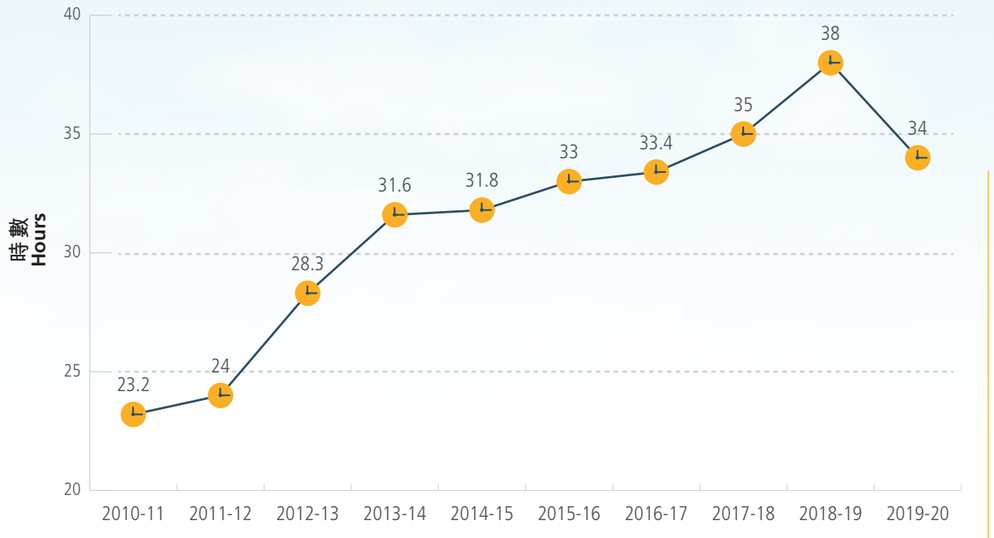
我們深明多元化的培訓計劃有助提升新入職及現有員工的專業知識和技能。年內，我們為員工舉辦了600次培訓活動，包括內部培訓和職務考察等。本署員工年內的平均培訓時數為34小時，較2010-11至2018-19年度的平均時數高約三小時。

We fully appreciate the importance of providing diverse training programmes to enhance the professional knowledge and skills of both new and existing employees. We held 600 training activities during the reporting year, including in-house training sessions and duty visits. The average number of training hours per capita in the year under review was 34 hours, which was about three hours more than the average recorded between 2010-11 and 2018-19.





員工平均培訓時數
Average number of training hours per capita



內部培訓
In-house training

為持續提升員工的知識和技能，本署於年內為管理層和員工舉辦了多項內部培訓，涵蓋例如「新工程合約」應用、污水處理技術、工程項目的生態評估等範疇。此外，我們亦舉辦了四次入職課程，共有逾191名新入職同事參與，協助他們了解部門的運作和服務承諾。

To continously enhance the knowledge and skills, the DSD organised a wide range of in-house training for our management and staff in the year under review, covering topics such as implementation of New Engineering Contract, sewage treatment technologies and ecological assessment for the projects, etc. In addition, four induction courses were held for more than 191 new hires to help them understand the Department's operation and performance pledges.



職務考察
Duty Visits

本署除了提供本地培訓課程，亦安排員工到海外考察，讓他們與外地專家交流、學習及借鑒他們的成功經驗和先進技術，相關活動對提升本署整體的服務質素和效率有莫大裨益。

In addition to providing local training programmes, we also arrange overseas visits for our colleagues, so that they can exchange, learn and draw successful experiences and cutting-edge technologies from overseas experts. These activities are especially conducive to optimising our services and efficiency.

2019年第二屆智能傳感與智能系統國際會議

2019年4月，本署同事參與於上海舉行的2019年第二屆智能傳感與智能系統國際會議，當中的課題與香港智能管道網路、智能污水處理和智慧城市概念息息相關。會議期間，同事到上海上實龍創智慧能源科技股份有限公司的總部考察，加深了對大型智能系統的管理和安全應用，以及智能傳感器應用的認識。

2019 Second International Conference on Smart Sensing and Intelligent Systems

In April 2019, our colleagues attended the 2019 Second International Conference on Smart Sensing and Intelligent Systems held in Shanghai. A number of featured topics were closely related to the concepts of smart drainage systems, smart sewage treatment and smart city in Hong Kong. Our delegates visited the Headquarters of Shanghai SIIC-LongChuang Smarter Energy Technology Co., Ltd during the conference where they gained insight into the management and safe operation of large-scale intelligent systems, as well as the latest smart sensor application.



第16屆厭氧消化國際會議

2019年6月，本署同事出席在荷蘭舉行的第16屆厭氧消化國際會議。來自多個地方的與會者於為期四天的活動中，分享和交流有關厭氧消化及相關工序的最新發展和技術資料，讓本署同事增進及擴闊對管理和提升污水處理廠內厭氧消化工序的認識。

The 16th World Conference on Anaerobic Digestion

In June 2019, our colleagues attended the 16th International Water Association World Conference on Anaerobic Digestion held in the Netherlands. During the four-day event, participants from different regions shared and exchanged information on the latest development and technologies in anaerobic digestion and related processes. Our colleagues reinforced and broadened their knowledge in managing and enhancing the anaerobic digestion process in sewage treatment plants.



首屆粵港澳大灣區水務論壇暨第十三屆深港澳供水界學術交流會

2019年9月，本署同事出席在珠海舉行的首屆粵港澳大灣區水務論壇暨第十三屆深港澳供水界學術交流會，亦到訪位於珠海前山的地下水質淨化廠。活動為期三天，由粵港澳大灣區區內11個城市的水務單位共同舉辦，旨在就搶險互援、政策法規支援、管理成本控制、服務質量提升、技術發展及管理等範疇交流與討論。

The 1st Guangdong-Hong Kong-Macao Greater Bay Area Water Congress cum the 13th Shenzhen-Hong Kong-Macao Water Supply Academic Seminar

In September 2019, our colleagues attended the 1st Guangdong-Hong Kong-Macao Greater Bay Area Water Congress cum the 13th Shenzhen-Hong Kong-Macao Water Supply Academic Seminar in Zhuhai and visited an underground wastewater treatment plant in Qianshan, Zhuhai. The three-day event was jointly initiated and organised by water authorities of 11 cities in the Guangdong-Hong Kong-Macao Greater Bay Area. It aimed at providing a platform for exchanges and discussions on various topics, including mutual assistance and emergency rescue, policy and regulation support, control of management cost, enhancement of service quality, technology development and management.



北歐污水處理研討會2019

2019年9月，本署同事出席在芬蘭舉行的北歐污水處理研討會2019，了解北歐國家對可持續污水處理、氣候變化的適應及可持續雨水系統管理方案的發展。研討會提供機會予同事與海外同業互相交流，分享經驗成果。主辦單位亦安排參加者考察Viikinmäki污水處理廠。

Nordic Wastewater Conference 2019

In September 2019, our colleagues attended the Nordic Wastewater Conference 2019 held in Finland to understand the development of sustainable wastewater treatment, adaptation to the changing climate and sustainable stormwater management solutions in the Nordic countries. The conference provided opportunities to exchange and share experience with peers overseas. The host also arranged a technical tour to Viikinmäki Wastewater Treatment Plant for the participants.



第四屆亞洲環境與可持續發展研討會

2019年11月，本署同事出席於日本橫濱舉行的第四屆亞洲環境與可持續發展研討會，並參觀位於茨城縣的國立環境研究所。為期兩天的研討會為同事提供機會，與亞洲區內的學者、研究人員及從業員探究和交流有關環境科學和技術方面的經驗，以增強有關廢物管理、可再生能源、氣候變化，以及可持續發展的最新技術和知識。

The 4th Asia Conference on Environment and Sustainable Development

In November 2019, a DSD delegation attended the 4th Asia Conference on Environment and Sustainable Development in Yokohama, Japan and visited the National Institute for Environmental Studies in Ibaraki Prefecture. The two-day conference offered an opportunity for our colleagues to exchange ideas and experience with scholars, researchers and practitioners on environmental sciences and technologies in the Asian region, so as to drive cutting-edge technologies and enhance knowledge in waste management, renewable energy, climate change and sustainable development.



安全與健康
Safety and Health

渠務署一直將職業安全及健康（職安健）置於首位，除了遵守與職安健有關的法律和法規，如《職業安全及健康條例》外，本署要求員工、工程顧問和承建商在執行本署工作時須遵從本署所設立的安全政策。同時，本署不斷完善我們的安全管理系統，亦為員工舉辦各種職安健培訓和活動，以確保在安全的大前提下為市民提供高水平的渠務服務。

Occupational safety and health (OSH) has always been our top priority. While strictly adhering to all applicable laws and regulations, such as the Occupational Safety and Health Ordinance, we require employees, project consultants and contractors to follow our Safety Policy when undertaking duties and works for the DSD. We also make every effort to optimise our safety management system and organise a host of the OSH training and activities, so as to empower and develop our staff to provide excellent drainage services to the public under the premise of safety first.

職安健管理
OSH Management

為控制職安健的相關風險，本署成立了安全督導委員會，並設立由署內不同職系和職級的人員組成的多個監察委員會，包括機電工程科安全管理委員會、污水處理廠安全管理委員會，以及直屬員工隊安全管理委員會。各委員會定期舉行會議，討論及檢視與職安健相關的事項和措施。

本署的安全政策遵循預防為主的原則，評估潛在的安全隱患風險，盡量避免或減低意外發生的機會。本署於工程規劃及設計的早期階段時，已由合資格人士嚴謹地評估工程期間潛在的安全及健康風險和危害。我們於工程展開時進行充足的現場巡查及調查，並按照風險評估結果和建議實施適當的安全措施，以致力減低發生工傷事故的機會。不幸發生工傷事故時，相關人員需要按照程序即時及準確地匯報事件。負責人員會就事故作出調查，透過採證及分析了解事故原因，以及制定相應預防措施，避免同類事故再次發生。為保障員工的安全與健康，我們亦為他們提供足夠的個人防護裝備。我們採取開放態度，為員工提供暢所欲言的環境，讓員工就潛在的安全及健康危害和工傷事故作出報告，從而改善安全管理。

To control OSH-related risks, we have in place a Safety Steering Group as well as a number of monitoring committees formed by colleagues of different disciplines and grades, including the Electrical and Mechanical Branch Safety Management Committee, the Sewage Treatment Works Safety and Health Management Committee, and the Direct Labour Force Safety Management Committee. They meet regularly to discuss and review the OSH issues and initiatives.

The DSD Safety Policy accentuates a preventive approach. Potential safety hazards are assessed to prevent or minimise accidents. In the early stage of project planning and design, qualified professionals are engaged to stringently evaluate potential safety and health risks and hazards of the projects. During subsequent works execution, the OSH is ensured by frequent site inspections and investigations, while safety measures are implemented according to findings and recommendations of the safety assessment to minimise work injuries. In the unfortunate event of accident at any work site, there is an established procedure that requires the personnel concerned to report the case promptly and accurately. The person in charge will carry out investigations to gather evidence and analyse the cause, and appropriate precautions will be mulled to prevent the recurrence of similar incidents. In addition, adequate personal protective equipment is provided to protect employees' safety and health. The DSD remains open-minded and offers a liberal environment for employees to report potential OSH hazards and work injuries for improving safety management.

渠務署的工傷和嚴重工傷事故[1]數據2019-20

Figures of the DSD's work-related injury and high-consequence work-related injury[1] 2019-20

渠務署員工 **The DSD staff**	工傷事故（包括滑倒、絆倒或在同一高度跌倒） Work-related injury (including slip, trip or fall on the same level)	宗數 No. of cases	4
		比率 （每 200 000 工時） Rate (per 200 000 man-hours)	0.13
	嚴重工傷事故[1]（包括滑倒、絆倒或在同一高度跌倒） High-consequence work-related injury[1] (including slip, trip or fall on the same level)	宗數 No. of cases	1
		比率 （每 200 000 工時） Rate (per 200 000 man-hours)	0.03
由承辦商負責的建築及維修工程 **Construction and maintenance works undertaken by the DSD's contractors**	工傷事故（包括從高處墮下、滑倒、絆倒或在同一高度跌倒） Work-related injury (including fall from height, slip, trip or fall on the same level)	宗數 No. of cases	6
		比率 （每 200 000 工時） Rate (per 200 000 man-hours)	0.17
	嚴重工傷事故[1]（包括滑倒、絆倒或在同一高度跌倒） High-consequence work-related injury[1] (including slip, trip or fall on the same level)	宗數 No. of cases	4
		比率 （每 200 000 工時） Rate (per 200 000 man-hours)	0.11

[1] 嚴重工傷事故指職業傷害而導致死亡、或導致工作者無法、難以於六個月內恢復至受傷前健康狀態的傷害。年內發生的嚴重工傷事故主要由物理性的潛在安全危害引致。
High-consequence work-related injury refers to work-related injury that results in a fatality or in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months. High-consequence work-related injuries recorded during the reporting year were mainly resulted from physical safety hazards.

職安健培訓
Occupational Safety and Health Training

為加強員工對職安健的意識，我們於年內為員工舉辦了多達24類職安健培訓活動，相關課程的內容及參加人數如下：

In the year under review, we organised 24 types of the OSH training for our colleagues to raise their OSH awareness. The details and breakdown are as follows:

項目 Item	課程名稱 Course Title	受訓人數 Number of Participants
1	船上貨物處理基礎安全訓練課程 Shipboard Cargo Handling Basic Training Course	12
2	龍門式起重機資格證明課程連測試 Gantry Crane Certification Training and Test	26
3	龍門式起重機資格證明課程（測試） Gantry Crane Certification Training (Practical Test only)	18
4	建造業安全督導員課程 Construction Safety Supervisor Course	27
5	如何避免在工作中被狗隻咬傷 Dog Bite Safety	11
6	用電安全 Electrical Safety	88
7	叉式起重車新手操作員課程 Training Course for New Operators of Fork-lift Truck	7
8	叉式起重車操作員訓練重新甄審資格課程 Revalidation Training Course for Operators of Fork-lift Truck	18
9	化學品安全處理 Safe Handling of Chemicals	57
10	安全使用磨輪 Safe Use of Abrasive Wheels	14
11	安全施工程序 Safe Working Cycle	34
12	人力提舉及搬運 Manual Lifting and Handling	4
13	氣體焊接安全訓練課程 Gas Welding Safety Training Course	11
14	氣體焊接安全訓練重新甄審資格課程 Gas Welding Safety Training Revalidation Course	4

項目 Item	課程名稱 Course Title	受訓人數 Number of Participants
15	船舶修理拆卸工程督導員安全訓練課程 Works Supervisor Safety Training Course (Ship-repairing and Ship-breaking)	26
16	密閉空間核准工人之從事渠務署工程安全訓練課程 Confined Space Safety Training Course for Certified Workers Engaged in the DSD's Works	313
17	密閉空間合資格人士之從事渠務署工程安全訓練課程 Confined Space Safety Training Course for Competent Persons Engaged in the DSD's Works	207
18	強制性基本安全訓練重新甄審資格課程（建築工程）[建造業平安卡重溫課程] Mandatory Basic Safety Training Revalidation Course (Construction Work) [Green Card Training Revalidation Course]	244
19	強制性基本安全訓練課程（建築工程）[建造業平安卡課程] Mandatory Basic Safety Training Course (Construction Work) [Green Card Training Course]	66
20	密閉空間核准工人安全訓練課程 Safety Training Course for Certified Workers of Confined Spaces Operation	122
21	密閉空間合資格人士安全訓練課程 Safety Training Course for Competent Persons of Confined Spaces Operation	134
22	密閉空間核准工人安全訓練覆證課程 Safety Training Revalidation Course for Certified Workers of Confined Spaces Operation	268
23	密閉空間合資格人士安全訓練覆證課程 Safety Training Revalidation Course for Competent Persons of Confined Spaces Operation	123
24	密閉空間核准工人及合資格人士安全訓練覆證課程 Safety Training Revalidation Course for Certified Workers and Competent Persons of Confined Spaces Operation	38
	總數 Total	**1 872**

職安健活動
OSH Activities

為把職安健文化植根於本署的日常運作，本署由2019年1月起展開安全關懷探訪計劃，與於污水處理設施工作的前線員工會面，收集他們對工作場所安全的意見。年內，我們進行了13次探訪，期間亦進行了安全簡報、影片播放和經驗分享，以提升員工的安全意識。

To ensure that the OSH culture is embedded across the DSD, we introduced the Safety Caring Visit Programme in January 2019 to meet frontline colleagues working in sewage treatment facilities and gauge their views on workplace safety. In the year under review, 13 visits were arranged which were complemented by safety briefings, video shows and experience sharing sessions to heighten staff's safety awareness.



到訪鴨脷洲基本污水處理廠與員工溝通

Visiting Ap Lei Chau Preliminary Treatment Works to communicate with colleagues

此外，本署於年內積極籌辦和鼓勵員工參與職安健活動，包括：

Complementing these efforts, the DSD actively organised and encouraged employees to participate in the OSH promotional campaigns during the reporting year. These activities include:

- 32項工程項目參與發展局及建造業議會主辦的第26屆公德地盤嘉許計劃
  32 works projects joined the 26th Considerate Contractors Site Award Scheme organised by the Development Bureau and the Construction Industry Council
- 34項工程項目參與本署舉辦的2019年工地安全及整潔獎勵計劃
  34 works projects joined the DSD's Construction Sites Safety and Housekeeping Award Scheme 2019
- 為本署員工、顧問公司駐工地人員及承建商代表舉辦2個安全講座及1個實地考察
  2 safety talks and 1 site visit were organised for our colleagues, resident site staff of consultants and representatives of contractors

本署重視工作場所安全之餘，亦非常關注員工的精神健康。我們每年舉辦壓力管理工作坊，亦邀請員工參與相關講座，從而推動精神健康友善的工作環境。本署已簽署由衞生署推行的《精神健康職場約章》，並於2020年1月獲嘉許為「精神健康友善機構」，以肯定本署的努力。

Workplace safety is not the only priority for the DSD, we place equally strong emphasis on employee's mental health. To promote a mental health-friendly working environment, a stress management workshop is held every year along with related seminars which colleagues are encouraged to attend. The DSD is a signatory to the Department of Health's Mental Health Workplace Charter. We were awarded the title "Mental Health Friendly Organisation" in January 2020 to recognise our effort.

精神健康友善機構
Mental Health Friendly Organisation

員工康樂活動
Staff Recreational Activities

本署着重與員工保持良好溝通，並鼓勵工作和生活平衡的文化。渠務署職員康樂會定期為員工籌劃和舉辦不同的康樂活動，藉此促進員工的身心健康、鼓勵平衡的生活模式，以及建立團隊精神。

The DSD strives to maintain good communication with the workforce and encourages a culture of work-life balance. The DSD Staff Club regularly plans and organises various recreational activities to promote physical and mental health, champion a balanced lifestyle and support team-building.

親善探訪
Goodwill Visits

為加強管理層與前線員工之間的溝通和聯繫，本署由2013年起推行親善探訪計劃，本署署長、副署長和其他首長級人員每年均會到訪前線員工的工作地點與他們對話，了解他們關心的議題。年內，管理層共進行了10次親善探訪與員工溝通。

To foster communication and reinforce ties between the management and frontline staff, the DSD introduced the Goodwill Visits programme in 2013. Under the programme, Director and Deputy Director of Drainage Services, as well as other directorate staff, pay visits to frontline colleagues at their workplaces annually to understand their concerns through warm dialogue. In the year under review, the management made a total of 10 Goodwill Visits to communicate with frontline staff.



管理層到訪不同工作地點進行親善探訪

Our management made Goodwill Visits to different workplaces

部門聖誕聯歡會

逾470位同事及嘉賓於2019年的聖誕聯歡會共聚一堂，共慶佳節。我們舉行了幸運抽獎，多位同事亦獻唱聖誕詩歌，聯歡會上洋溢一片歡樂的節日氣氛。

Christmas Party

Over 470 colleagues and guests joined the DSD Christmas Party 2019 to celebrate the holiday season. Christmas carols were performed by colleagues and a lucky draw brought festive joy to the staff function.



發展局局長黃偉綸先生（中）、環境局常任秘書長/環境保護署署長鄭美施女士（右一）和發展局副局長廖振新先生（左二）應邀與本署員工一同參與聖誕聯歡會

Mr Michael WONG Wai-lun (centre), Secretary for Development, Ms Maisie CHENG Mei-sze (first right), Permanent Secretary for the Environment / Director of Environmental Protection, and Mr LIU Chun-san (second left), Under Secretary for Development, were invited to join our Christmas Party

戶外活動及興趣班
Outdoor Activities and Interest Classes

本署的職員康樂會為同事安排各類型的戶外活動和興趣班，包括本地旅行團、單車遊、遠足、綠化講座、烹飪班、攝影技巧教學班及盆景工作坊等。

The DSD Staff Club organises a wide range of outdoor activities and classes for our colleagues. These include local tours, cycling trips, hiking, green seminars, cooking classes, photography classes and terrarium workshop.



DIY迷你積木生態缸工作坊

DIY miniature ecology building block workshop



多肉植物聖誕盆景工作坊

Christmas Succulent Terrarium Workshop



烹飪班

Cookery class

運動競賽
Sports Competitions

渠務署職員康樂會致力提升員工身心健康及讓員工發揮運動潛能。因此，康樂會積極參與其他機構舉辦的體育競賽，並於年內舉辦多項跨部門運動競賽，包括足球、籃球、乒乓球、壁球、桌球、網球、羽毛球、保齡球及飛鏢等。

The DSD Staff Club spares no effort to promote physical and emotional wellness and unleash our staff's athletic potential. The club took an active part in external sports competitions and a series of inter-departmental sports tournaments were organised throughout the reporting year, including football, basketball, table tennis, squash, snooker, tennis, badminton, bowling and dart.



發展局羽毛球錦標賽

The Development Bureau Badminton Tournament

龍舟競渡

本署的龍舟隊定期進行訓練，讓員工強健體魄的同時亦提升團隊凝聚力。龍舟隊每年均積極參與不同的龍舟賽事，並於年內取得佳績，勇奪第16屆中華電力友誼盃龍舟賽2019季軍，以及於將軍澳龍舟比賽2019奪得發展局盃(政府部門)金盃(殿軍)。

Dragon Boat Race

The DSD dragon boat team trains regularly to keep all members in shape and strengthen team bonding. The team is an active player in many annual dragon boat races. The DSD dragon boat team staged stellar performance in the past year, finishing in third place in the 16th CLP Dragon Boat Friendship Cup 2019 and clinching the Gold Cup (third runner-up) of the Development Bureau Cup (Government Cup) at Tseung Kwan O Dragon Boat Race 2019.



渠務署於第16屆中華電力友誼盃龍舟賽2019奪得季軍

The DSD was the second runner-up at the 16th CLP Dragon Boat Friendship Cup 2019

渠務署於將軍澳龍舟比賽2019奪得發展局盃(政府部門)金盃(殿軍)

The DSD won the Gold Cup (third runner-up) of the Development Bureau Cup (Government Cup) at Tseung Kwan O Dragon Boat Race 2019



第七章 CHAPTER 7

持份者參與
Stakeholder Engagement

渠務署一直重視與各界持份者保持雙向和長遠的伙伴關係，以開放態度，積極聆聽持份者的意見。年內，本署致力利用不同平台向公眾匯報轄下工程項目進度，並向各團體推廣與教育生態保育及親水文化，以期提升市民對渠務署的了解並支持我們的工作。本署在提供優質渠務服務以外，亦繼續以支持社區活動及義工服務的方式回饋社會。

The DSD has always attached great importance to maintaining two-way and long-term partnerships with stakeholders, listening to their opinions proactively with an open mind. During the reporting year, the DSD was committed to updating the public on our projects' progress through different platforms, as well as promoting and educating organisations about ecological conservation and the water-friendly culture, so as to enhance public understanding and support for our work. In addition to providing quality drainage services, the DSD continues to give back to society by supporting community activities and volunteer services.



工地安全及整潔獎勵計劃 2019
Construction Sites Safety and Housekeeping Award Scheme 2019

年內，我們透過多元化的渠道與不同持份者保持緊密溝通[1]：

During the reporting year, we maintained close communication with different stakeholders through diverse channels, including the following[1]:

員工 Staff

- 公務員建議書計劃 Staff Suggestions Scheme
- 署方管理層親善探訪 Goodwill Visits by the DSD management
- 部門各協商委員會和討論小組 Consultative committees and discussion groups across the DSD

供應商 Suppliers

- 公開研討會 Public seminars
- 投標活動 Tender activities

顧問及承辦商 Consultants and Contractors

- 工地考察 Site visits
- 經驗分享會 Experience sharing sessions
- 工地整潔獎勵計劃 Construction Sites Housekeeping Award Scheme

學術組織 / 專業團體 Academia/ Professional Bodies

- 外展活動 Outreach activities
- 參觀渠務署設施及工程工地 Visits to the DSD facilities and construction sites
- 渠務署國際會議 The DSD International Conference

環保團體 Green Groups

- 環保團體會議 Meetings with environmental groups
- 河道考察 Site visits to river channels

公眾 Public

- 客戶滿意度調查 Customer satisfaction surveys
- 參觀渠務署設施及工程工地 Visits to the DSD facilities and construction sites
- 問卷調查 Questionnaire surveys

議員 Councillors

- 立法會會議 Legislative Council meetings
- 區議會會議 District Council meetings

其他政府部門 Other Government Departments

- 跨部門會議 Inter-departmental meetings
- 跨部門義工活動 Inter-departmental volunteer activities

[1] 102-40

公眾參與
Public Engagement

渠務署致力實踐與民共議。透過恆常舉辦多項公眾參與活動，我們能夠有效地向公眾傳遞與渠務署相關的最新資訊。年內，我們就不同的工程項目與市民溝通，並舉辦一系列社區活動及展覽和教育計劃，從而加深公眾對本署服務和工程的認識，並提升本署的工作透明度。

The DSD is dedicated to taking a public participatory approach. Through organising diverse public engagement activities regularly, we can disseminate the public the latest news about the DSD effectively. During the reporting year, we communicated with the public regarding a number of projects. In addition, we organised a series of community activities and exhibitions as well as educational programmes to foster public understanding of the DSD's services and projects and enhance transparency of our work.

工程項目公眾參與
Public Engagement for the DSD Projects

渠務署於年內舉辦不同的公眾參與活動，與市民分享本署工程的資訊，例如沙頭角污水處理廠第一期擴建工程及塘肚鄉村污水收集系統，以及啟德河改善工程。

The DSD organised various public engagement activities during the reporting year to share information on our projects, such as Expansion of Sha Tau Kok Sewage Treatment Works Phase I and Village Sewerage in Tong To, as well as Kai Tak River Improvement Works.

沙頭角污水處理廠第一期擴建工程及塘肚鄉村污水收集系統

為增加公眾對項目和施工進度的了解，項目團隊設立了專門網頁和製作通訊，定期更新以發放項目資訊。項目團隊與沙頭角區鄉事委員會保持緊密聯繫，聆聽他們對工程的意見，回應所關注的議題，務求減少工程對區內居民的影響。此外，我們亦積極與社區互動，於年內邀請了田家炳中學的學生到工地實地考察，了解工程項目的目的、挑戰和成效。此外，團隊自行研發的智能手機工地管理程式榮獲建造業議會創新2019－可持續建築第二名，他們於頒獎禮上向業界代表分享創新工地管理的應用，讓參加者認識本署的創新工地管理技術。

Expansion of Sha Tau Kok Sewage Treatment Works Phase I and Village Sewerage in Tong To

To provide the latest project details and construction progress to the public, the Project Team has set up a designated website and publishes newsletters with regular updates to disseminate information. The Project Team has kept close liaison with Sha Tau Kok District Rural Committee to solicit their views and address their concerns by minimising impacts to local residents during construction. We also maintained dynamic interaction with the community. During the reporting year, students from Tin Ka Ping Secondary School were invited to visit the works site to understand the objectives, challenges and outcomes of this project. Moreover, the self-developed mobile app for site digitalisation won the second prize of Construction Sustainability in the CIC Construction Innovation Award 2019. In the prize presentation ceremony, the Project Team shared their experience in implementing innovative site management with the industry. Participants also had the opportunity to learn about and experience the DSD's innovative site management technologies.



同學到訪位於沙頭角的工地實地考察
Students visiting the Sha Tau Kok works site



項目團隊與沙頭角區鄉事委員會保持緊密聯繫
The project team has kept close liaison with Sha Tau Kok District Rural Committee

啟德河改善工程

本署於年內安排多個團體實地考察啟德河，並於啟德河附近的中學舉辦講座，藉此加深公眾對啟德河改善工程的認識，以及了解工程為社區所帶來的裨益。除了社區宣傳活動外，我們亦於啟德河（黃大仙段）的導賞徑設置資訊牌，期望市民在欣賞啟德河活化及綠化成果的同時，亦可認識啟德河的歷史演變、改善工程概要，以及自然生態資訊。

Kai Tak River Improvement Works

To help the public learn more about Kai Tak River Improvement Works and how the project benefits the community, the DSD organised site visits for various organisations and conducted a talk at a secondary school near Kai Tak River during the reporting year. Apart from community and publicity activities, information panels were erected at different locations along Kai Tak River Trail (Wong Tai Sin section) to allow the public to understand Kai Tak River's evolution over the past few decades, the project overview and the local ecology while enjoying the scenic greenery.



水利部珠江水利委員會成員於2019年7月參觀啟德河
Delegates from the Pearl River Water Resources Commission of the Ministry of Water Resources visited Kai Tak River in July 2019



導賞徑資訊牌
Information panel along the trail

掃描二維碼瀏覽導賞徑網頁
Scan QR code to browse the trail website

社區活動及展覽
Community Activities and Exhibitions

年內，本署舉辦和參與多項不同類型的社區活動及展覽，包括：

During the reporting year, the DSD hosted and participated in various community activities and exhibitions:

「工程師體驗巡禮」

2019年4月13日，本署參與由香港工程師學會及香港理工大學合辦的「工程師體驗巡禮」，以「從污水到能源：污水處理廠的全面能源管理」為題，展示多幅有關再生能源及提升用電效能的展板和短片。

The HKIE Engineer Day

The DSD participated in HKIE Engineer Day co-organised by the Hong Kong Institution of Engineers and the Hong Kong Polytechnic University on 13 April 2019. Promoting the theme "From Sewage to Energy: Total Energy Management at Sewage Treatment Works", the DSD booth presented our utilisation of renewable energy and enhancement of energy efficiency by display panels and videos.



公眾參觀渠務署的展區
Members of the public visiting the DSD's booth

2019香港科學節

為配合「2019香港科學節」的主題STEM，即科學(Science)、科技(Technology)、工程(Engineering)和數學(Mathematics)，渠務署特意於2019年4月為公眾安排參觀跑馬地地下蓄洪池和赤柱污水處理廠，認識防洪和污水處理設施的設備及其運作。此外，本署亦在科學講座以「適應氣候變化－藍綠建設概念」為題，介紹本署在提升香港適應氣候變化的貢獻，以及締造宜居和可持續發展的環境方面的工作。

HK SciFest 2019

To support the theme of "HK SciFest 2019" – STEM (i.e. Science, Technology, Engineering and Mathematics), the DSD arranged visits in April 2019 to arrange the public to visit our Happy Valley Underground Stormwater Storage Tank and Stanley STW to see the facilities and operation of drainage and sewage facilities. Besides, in a science talk under the theme "Adapting to Climate Change – Blue-green Infrastructure Concept", we introduced our efforts in building Hong Kong's capacity for adapting to climate change and creating a liveable and sustainable environment.



本署工程師陳敬樂先生向參觀者介紹赤柱污水處理廠的運作
Our Engineer, Mr Michael CHAN King-lok, explaining the operation of Stanley Sewage Treatment Works to visitors



本署時任工程師李靜文女士在科學講座中介紹渠務署如何應對氣候變化所帶來的影響
The DSD then Engineer, Ms Joy LEE Ching-man, presenting how the DSD tackles the impact of climate change in the science talk

晴天行動2.0

「晴天行動2.0」在2019年6月10日正式啟動，是為期一年的跨部門公眾教育活動，透過舉辦一系列的展覽、講座、參觀和比賽等活動，提高市民大眾對自然災害的認識。本署在活動中以短片、展板、模型及互動遊戲，向市民介紹本署於加強城市耐洪能力和提升防洪意識的工作，例如建造防洪牆、安裝可拆卸式擋水板、止回閥、設立洪水警告系統、加強巡查和清理等，以減少人命傷亡和財物損失。

Safer Living 2.0

Launched on 10 June 2019, "Safer Living 2.0" is a year-long inter-departmental public education campaign comprising a series of exhibitions, seminars, tours and competitions, aiming to enhance public understanding of natural disasters. With the aid of videos, display panels, physical models and interactive games, the DSD helped visitors learn more about our efforts in enhancing flood resilience of the city and heightening awareness of flood prevention, such as building flood walls, installing demountable flood barriers, flap valves, setting up flood alert system and stepping up inspection and clearance to minimising casualties and property loss.



渠務署署長盧國華先生親身體驗安裝擋水板
Director of Drainage Services, Mr Kelvin LO Kwok-wah, trying his hands at installing demountable flood barriers

科學為民巡禮

本署於年內繼續參與「科學為民」年度服務巡禮。在題為「活在科學都市」的2019年服務巡禮中，我們除了向公眾簡介部門的科學工作和應用的科技，亦重點介紹了活化河道工程的多重益處，包括有助提升生物多樣性、綠化和美化河道，同時能夠推廣親水文化和近水活動。

Science in the Public Service

As in previous year, the DSD participated in the annual "Science in the Public Service" event. "Science in My City" was the theme for the 2019 event, where we communicated the DSD's scientific work and application of technologies to the general public. The multiple benefits of river revitalisation were also highlighted, including enhancing biodiversity, river greening and beautification, as well as popularising the water-friendly culture and riverside activities.



本署工程師梁建基先生在2019年8月10日的論壇中介紹活化河道的資訊
Mr Keith LEUNG Kin-kei, our Engineer, delivering a presentation on river revitalisation at the forum on 10 August 2019

香港生物多樣性節 2019

本署在2019年10月19日於螢火蟲保育基金會的「螢火蟲生態教育廳」舉辦「保育河道螢火蟲講座/手作坊」，向參加者介紹了螢火蟲的基本知識，以及改善新界河道水生生物生境工程情況。

Hong Kong Biodiversity Festival 2019

During the "Preservation of Fireflies in River Channels Talk/Workshop" taken place at the Fireflies Education Centre of Firefly Conservation Foundation on 19 October 2019, the DSD shared general knowledge of fireflies with the public and presented our improvement works for river channel aquatic habitats in the New Territories.



公眾可以近距離觀察螢火蟲幼蟲、成蟲和其他水棲昆蟲

A chance to observe firefly larvae and adults as well as other water insects at close range

參觀及外展教育活動
Educational Visits and Outreach

我們為學校及公眾團體安排參觀及外展教育活動，務求以靈活多變的模式加強他們對本署工作的了解。

Adopting an approach that encourages versatility and diversity, we organise visits and educational outreach activities for schools and public organisations to deepen their understanding of our work.





團體參觀

年內，我們共接待超過11 000名來自中小學、內地及海外等多個機構的訪客，安排他們參觀跑馬地地下蓄洪池、小蠔灣污水處理廠、荔枝角雨水排放隧道、沙田污水處理廠，以及元朗排水繞道人工濕地等本署設施。

Group Visits

In the year under review, we received over 11 000 visitors from primary and secondary schools as well as various mainland and overseas organisations. Tours were arranged to our facilities, including Happy Valley Underground Stormwater Storage Tank, Siu Ho Wan STW, Lai Chi Kok Drainage Tunnel, Sha Tin STW and the engineered wetland of Yuen Long Bypass Floodway, etc.





外展教育活動

我們定期到學校推行外展教育活動，向師生講解本署的工作及工程項目。年內，我們到訪了11所學校，向約2 000名師生介紹香港的污水處理及防洪工作。

Education Outreach

As part of our regular educational outreach programmes, the DSD representatives visit schools to present the department's work and projects to teachers and students. In the year under review, we visited 11 schools to explain works about sewage treatment and flood prevention in Hong Kong to about 2 000 teachers and students.





青少年工作體驗計劃

於2019年暑假，渠務署再次參與青少年發展企業聯盟的「Y-WE」計劃，為青少年提供職場體驗的機會，幫助其規劃未來職業發展方向。計劃中的一位中學生到本署進行為期一星期的工作體驗，在工作導師指導下，同學積極參與導師給予的職務，加深了解自己的興趣。

Youth Work Experience Program

During the 2019 summer vacation, the DSD once again supported the "Y-WE" programme organised by the Child Development Initiative Alliance to offer teenagers an opportunity to gain workplace experience and assist them in planning their future career paths. A secondary school student joined the DSD for a one-week work experience project, working under the guidance of mentors and actively participating in assigned duties. It was a great opportunity for self-discovery.



工作伙伴參與
Working Partners Engagement

本署重視與工作伙伴建立良好和緊密的合作關係。我們積極推動「新工程合約」模式，提倡與工程顧問及承建商建立互助互信的伙伴關係。除了工程進展外，我們亦專注於與工作伙伴進行推廣職業安全與健康方面的交流及合作。

The DSD is dedicated to establishing good and close partnerships with our working partners. Advocating mutual trust and cooperation with consultants and contractors, we proactively promote the New Engineering Contract (NEC) model. While actively driving project progress, we also place strong emphasis on exchanges and cooperation with partners regarding occupational health and safety.

採用「新工程合約」

於「新工程合約」的模式下，工程顧問和承建商的參與度大大提高。它較傳統工程合約更着重共同管理和工程的風險分擔。此嶄新的緊密合作模式不但促進本署與工作伙伴建立良好關係，同時有助減低工程延誤的風險，提高施工效率。本署批出的「新工程合約」涵蓋土木工程、機電工程、維修保養和工程顧問服務等範疇。

Launch of New Engineering Contracts

The NEC model has boosted participation from consultants and contractors significantly. Compared with the traditional engineering contract, the NEC model emphasises joint management and risk-sharing. This new collaborative practice encourages the DSD to establish amicable working relationships with working partners, while minimising the risk of project delay and improving productivity. The awarded NECs cover civil engineering projects, electrical and mechanical engineering projects, maintenance works and consultancy services.

於已完成的18份「新工程合約」中，跑馬地地下蓄洪計劃提早14個月完工，節省約1.1億元工程費用，成績令人鼓舞。

Among the 18 completed NECs, the Happy Valley Underground Stormwater Storage Scheme yielded a very encouraging result – it was completed 14 months ahead of the schedule, saving around $110 million of the total project cost.

90
本署由 2009 年至今共批出的新工程合約數目
NECs the DSD has awarded since 2009

24
年內共批出的新工程合約
NECs awarded in the year under review

推動「新工程合約」的認可

本署繼2016年後，於年內再次榮獲英國新工程合約用戶組織頒發的2019年度工程委託機構大獎。此外，為慶祝「新工程合約」在香港推行10周年，本署兩項工程計劃，包括西貢福民路明渠改善計劃及跑馬地地下蓄洪計劃，獲收錄於新工程合約亞太區用戶組織周年大會派發的10周年紀念冊內。

Recognitions in Promoting the NEC

The DSD was awarded the UK's NEC Awards – Client of the Year 2019, which is another notch on the belt following the receipt of the same award in 2016. In addition, marking the 10th anniversary of the NEC in Hong Kong, two DSD projects – Improvement of Fuk Man Road Nullah in Sai Kung and Happy Valley Underground Stormwater Storage Scheme – were featured in the 10th Anniversary Commemorative Booklet which was distributed at the NEC Asia-Pacific Users' Group Annual Conference.



渠務署於推動「新工程合約」的工作屢獲肯定
The DSD has been repeatedly recognised for the efforts in promoting the New Engineering Contract

工程顧問意見
Comments from Consultant



曾敏良博士
助理董事
奧雅納工程顧問有限公司

Dr Simon TSANG
Associate Director
Ove Arup & Partners Hong Kong Limited

作為渠務署多個項目的工程顧問，我們一直與渠務署合作無間。渠務署作為統籌方，就工程項目提供充足支援，亦恆常與顧問及承辦商保持緊密溝通，讓工程得以順利進行。渠務署維持與合作伙伴良好關係的努力有目共睹，又於近年積極推行「新工程合約」模式，與我們建立互助互信的關係，同時為業界帶來良好的競爭環境。

除了與合作伙伴維持良好關係外，我們非常欣賞渠務署敢於創新和嘗試的態度。以搬遷沙田污水處理廠往岩洞工程為例，渠務署以創新的方法將設施遷至岩洞，不但能善用土地資源和改善民生問題，亦能提升市民的生活質素。展望未來，我們期望渠務署能採用類似方式，以及可與其他政府部門合作，集中建造或搬遷不受歡迎的設施，盡可能善用珍貴的土地資源。

此外，作為工程顧問，我們明白工程項目的順利進行不但需要高效合作，社會的支持亦不可或缺。因此我們十分樂意協助渠務署於日後舉辦更多不同類型的公眾參與和教育活動，以提升公眾對工程項目的認識及接受程度之餘，亦讓市民多了解渠務署的工作。

Being the consultant of various DSD projects, we have a close partnership with the department. The DSD provides adequate support as a coordinator and maintains close communication with consultants and contractors to facilitate smooth implementation of projects. Clearly, they have made major efforts to maintain good relationships with all partners, and the NEC model is instrumental in building mutual trust and creating a competitive environment for the industry.

In addition to maintaining long-term partnerships, we appreciate the DSD's attitude to innovation and willingness to experiment. Taking the Relocation of Sha Tin STW to Caverns as an example, the DSD moved the facilities to caverns in an innovative way, which not only utilises land resources and improves the public's livelihood, but also enhances the quality of life. We hope the DSD can continue to adopt a similar approach and work with other government departments, especially in the construction or relocation of undesirable facilities so that valuable land resources can be used effectively.

As a works consultant, we understand smooth project operation requires both efficient cooperation and community support. Therefore, we are pleased to assist the DSD in organising more public engagement and educational activities in the future to enhance public awareness and acceptance of projects. These initiatives will also help the public understand the DSD's work.

渠務署的話
Our Response

本署衷心感謝合作伙伴的努力和支持，以及就「新工程合約」和其他範疇提出的寶貴意見。未來，我們將繼續與工程顧問及承辦商保持良好溝通，並本着以項目為首的精神，開拓不同的創新方法，為市民提供優質的服務。為加深市民對工程項目的認識，我們會持續舉辦各種社區參與活動，並收集市民意見，與民共議，以建構可持續發展城市。

The DSD appreciates our partners' efforts and support, as well as their valuable comments on the NEC and other related issues. In the future, we will continue to maintain good communication with our consultants and contractors. Remaining project-focused, we will also explore more innovative ways to provide quality services to the public. To enhance public understanding of our projects, we will continue to organise various community engagement activities regularly and collect public opinion on building a sustainable city.

伙伴工作坊

為體現「新工程合約」中互助互信的團隊精神，石湖墟淨水設施－主體工程第一階段工程團隊在2019年12月2日舉辦伙伴工作坊，邀請渠務署、工程顧問及總承建商三方的管理層和前線員工參與，透過工作坊了解到各展所長、創新求變和平衡各方意見對工程的重要性。參加者於工作坊中交流工程所面對的各項困難，並訂定共同目標，以減低工程阻礙、加強溝通及資訊交流、加快工程進度和提升品質控制，以及提升地盤管理效率。藉着「新工程合約」的合作模式，工程團隊會攜手克服工程上的各種挑戰。

Partnering Workshop

Staying true to the trusting and cooperative team spirit of the NEC model, the Project Team for Shek Wu Hui Effluent Polishing Plant – Main Works Phase 1 hosted a partnering workshop on 2 December 2019. Managerial personnel and frontline staff from the DSD, the project consultant and the main contractors participated in the workshop to understand the importance of leveraging each other's strengths, pursuing innovation and balancing the views of all parties to ensure project success. During the workshop, participants exchanged views on challenges encountered during construction. Common goals were set to reduce project disruption, facilitate exchange of information and better coordination, fast-track project progress and better quality control, as well as enhancing site management efficiency. By dint of the partnering approach of the NEC, the Project Team will overcome engineering challenges collaboratively.



「伙伴工作坊」參加者合照
Group photo of Partnering Workshop participants



參加者在工作坊為工程訂定共同目標
Participants setting common objectives at the Workshop

推廣職業安全與健康
Promoting Occupational Safety and Health

為加強於本署員工及工作伙伴間推廣職業安全與健康，我們推行多項工地安全改善措施及舉辦不同活動，包括經驗分享會、實地考察和工地安全及整潔獎勵計劃。

To promote occupational safety and health among the DSD staff and project partners, we rolled out a number of site safety improvement measures and activities, including experience sharing sessions, site visits and the Construction Sites Safety and Housekeeping Award Scheme.

經驗分享會及實地考察

我們於2019年6月安排約20名本署員工參觀職業安全健康局轄下的青衣職安健學院，並於2019年9月為超過20名來自本署不同分部的同事舉行分享會，邀請職業安全健康局的安全人員講解電力安全課程，以及分享近期電力意外。

Experience Sharing Sessions and Site Visits

In June 2019, a visit to the Occupational Safety and Health Academy of Occupational Safety and Health Council (OSHC) at Tsing Yi was arranged for about 20 DSD colleagues. In September 2019, we organised an electrical safety course delivered by a safety specialist from the OSHC for more than 20 colleagues from different divisions of the DSD. Case studies on recent electrical accidents were also shared at the session.



本署同事參觀青衣職安健學院
Our colleagues visiting Occupational Safety and Health Academy at Tsing Yi

工地安全及整潔獎勵計劃2019

本署十分重視工地安全及管理，自2004年起舉辦年度「工地整潔獎勵計劃」，旨在與本署工地督導人員、承建商和工程顧問建立優良的工地管理文化並加強彼此合作。該計劃於2018年改名為「工地安全及整潔獎勵計劃」。我們頒發獎項予工地安全及整潔表現突出的團隊。共有34支隊伍參與2019年度的計劃，當中12支獲頒「最佳工地安全及整潔獎」或「優異獎」。

Construction Sites Safety and Housekeeping Award Scheme 2019

Safety and management of construction sites are among the DSD's top priorities. We have been hosting the annual "Construction Sites Housekeeping Award Scheme" since 2004 with the aim of instilling a culture of good site management and team spirit among the DSD's in-house site supervisory staff, contractors and consultants. In 2018, the Scheme was renamed "Construction Sites Safety and Housekeeping Award Scheme", recognising teams with outstanding site management performance. Among the 34 contract teams participating in the 2019 Scheme, 12 of them received either "The Best Construction Sites Safety and Housekeeping Award" or the "Meritorious Award".

區議員參與
District Councillors Engagement

本署定期出席區議會會議，與區議員保持緊密聯繫，以確保我們的服務切合社會需求。年內，本署署長和部門代表出席九龍城、南區及油尖旺區議會會議，與區議員交流和介紹各地區的主要工程項目。

To ensure our services accommodate the needs of the community, we maintain close contact with District Councillors and attend District Council (DC) meetings regularly. In the year under review, the Director of Drainage Services and departmental representatives attended meetings convened by the Kowloon City, Southern District and Yau Tsim Mong DCs to give an account of our major projects and exchange views.



2019年4月11日，本署署長盧國華先生（前排右三）出席九龍城區區議會會議
On 11 April 2019, Mr Kelvin LO Kwok-wah (front row, third right), Director of Drainage Services, attended the Kowloon City DC meeting

環保團體參與
Green Groups Engagement



本署在處理工程項目相關環保及保育事宜時，積極與環保團體保持長期溝通。年內，我們安排共兩次會議，與長春社、創建香港、綠色力量、香港觀鳥會、嘉道理農場暨植物園和世界自然基金會香港分會等環保團體交流意見。會議討論範疇廣泛，包括提高河流生態價值、保育現存河流生境、活化水體、促進生物多樣性、推廣親水文化，以及解決有關操作及維修工程的環保議題。我們更在2019年8月9日舉辦與綠色團體的茶聚，實地考察活化後的啟德河，分享多年來合作的點滴和展望將來。

When dealing with environmental protection and conservation issues of the DSD projects, we take a proactive stance to maintain long-term relationships with green groups. In the year under review, we arranged two meetings to exchange views with local green groups, including Conservancy Association, Designing Hong Kong, Green Power, Hong Kong Bird Watching Society, Kadoorie Farm and Botanic Garden and World Wide Fund for Nature Hong Kong. Discussions were held over wide-ranging issues, such as enhancing the ecological value of rivers, preserving habitats in existing rivers, revitalising water bodies, promoting biodiversity, fostering a water-friendly culture and addressing environmental issues related to operation and maintenance work. We also arranged a tea gathering with green groups on 9 August 2019 that included a site visit to the revitalised Kai Tak River. We were happy to review our collaboration over the years and plan our way forward.

媒體參與
Media Engagement

本署繼續透過不同媒體平台向公眾介紹我們於創新科技、河道活化和藍綠排水建設等方面的工作，致力加深市民對本署工作的了解。年內，我們除了透過媒體專訪發布相關工作的資訊外，亦透過軟性新聞建立更立體的部門形象。

The DSD continues to present our efforts in introducing innovative technologies, river revitalisation and blue-green drainage infrastructure to the public through different media channels, so as to deepen public understanding of our work. During the reporting year, apart from giving media interviews to channel news about our work, we use soft news as a medium to establish a more dynamic image for the DSD.

渠務署特寫
The DSD Close-up



2019年11月7日，本署時任總工程師謝悅嘉先生（左）及時任高級工程師曾慧華女士（右）向蘋果日報、信報、英文虎報及文匯報的記者介紹部門的日常工作，並細說在本署工作30年的點滴和難忘經歷。相關訪問已在2019年11月14日刊出。

Then Chief Engineer Mr TSE Yuet-kar (left) and then Senior Engineer Ms TSANG Wai-wah (right) shared their daily work as well as their thirty-year career and unforgettable memories at the DSD with Apple Daily, Hong Kong Economic Journal, The Standard and Wen Wei Po on 7 November 2019. The interview was published on 14 November 2019.



2019年11月13日，無綫電視節目《家居築則》就渠蓋設計訪問了本署時任園境師徐志強先生。徐先生向記者講解渠蓋的歷史及種類，並介紹本署早前舉辦的渠蓋設計比賽中的得獎作品。專訪已在2019年12月10日播出。

On 13 November 2019, our then Landscape Architect Mr Chris CHUI Chi-keung gave an interview to Television Broadcasts Limited's programme "A Dream Home Planning" about manhole cover design. Mr CHUI introduced the history of local manhole covers and their categories, as well as the winning entries of our manhole cover design competition. The interview was broadcast on 10 December 2019.

引進創新科技
Bringing in New Technologies



2019年5月16日，本署時任機電工程師梁志滔先生（右）及時任工程師唐綺薇女士（左）在接受經濟日報、明報、香港01及大公報的專訪時，分別介紹薄膜生物反應器及移動床生物膜反應器的細節及優點。專訪已在2019年5月27日刊登。

On 16 May 2019, our then Electrical and Mechanical Engineer Mr Vincent LEUNG Chi-to (right) and then Engineer Ms Angela TONG Yee-mei (left) were interviewed by Hong Kong Economic Times, Ming Pao, HK01 and Ta Kung Pao. They explained the technical details and advantages of the two sewage treatment technologies, MBR and Moving-bed Biofilm Reactors (MBBR) respectively. The interview was published on 27 May 2019.

2019年5月27日，本署時任工程師葉麗玉女士（左）和香港科技大學王幼行教授（中）及其團隊接受政府新聞處、明報、南華早報及大公報的訪問，介紹沙田污水處理廠搬遷往岩洞工程中使用的綠色人工智能鷺鳥林監察技術。相關專訪已在2019年6月9日出版。

Our then Engineer Ms Carol YIP Lai-yuk (left) and Professor WANG Yu-hsing of Hong Kong University of Science and Technology (centre) and his team were interviewed by Information Services Department, Ming Pao, South China Morning Post and Ta Kung Pao on 27 May 2019. They presented the Green AI egretry monitoring technology used in the project of Relocation of Sha Tin Sewage Treatment Works to Caverns. The relevant articles were published on 9 June 2019.



推廣活化河道
Promoting River Revitalisation



2019年6月6日，蘋果日報就梧桐河的河道綠化先導計劃，專訪本署時任工程師譚傑帆先生（中）及葉婉儀女士（左）。兩人向記者講述渠務署於綠化及改善河道生態和排水能力的持續努力，並說明先導計劃的細節。報道已在2019年6月25日刊出。

On 6 June 2019, the Apple Daily exclusively interviewed our then Engineers, Mr Keith TAM Kit-fan (centre) and Ms Queenie IP Yuen-yi (left), about the river greening pilot scheme of River Indus. They briefed the reporter on the DSD's continuous effort in greening and improving the ecology and drainage capacity of rivers. They also gave details of the pilot scheme. The report was published on 25 June 2019.

2019年10月4日，本署高級工程師梁華明先生接受蘋果日報、巴士的報、經濟日報、明報及星島日報專訪，分享本署的活化水體方案，以及河床種植槽及魚洞穴等的活化河道元素。相關報道已在2019年10月9日刊登。

During an interview conducted on 4 October 2019, our Senior Engineer, Mr Richard LEUNG Wah-ming, shared the DSD's proposals for revitalising water bodies with reporters from Apple Daily, Bastille Post, Hong Kong Economic Times, Ming Pao and Sing Tao Daily. Mr LEUNG also explained various river revitalisation elements, such as submerged planters and fish shelters. The articles were published on 9 October 2019.





2020年1月23日，本署工程師葉沛璣女士（左）和香港理工大學土木及環境工程學系韋永康教授（右）向蘋果日報、東方日報、星島日報及大公報介紹已完成的河道生態改善試驗工程，以及講解於洪水橋明渠進行的生態水力研究。相關專訪已在2020年1月30日出版。

On 23 January 2020, Apple Daily, Oriental Daily, Sing Tao Daily and Ta Kung Pao conducted an interview with our Engineer, Ms Maggie YIP Pui-kei (left), and Professor Onyx WAI (right), Department of Civil and Environmental Engineering, Hong Kong Polytechnic University. Details of the completed Site Trials on Ecological Enhancement Works and the Eco-Hydraulic Study conducted at Hung Shui Kiu Nullah were provided to the press. The interviews were published on 30 January 2020.

發展藍綠排水建設
Developing Blue-Green Drainage Infrastructure







2019年4月11日，本署高級工程師黎玉安先生、工程師劉耀文先生和時任工程師黃德誠先生接受香港電台《日常8點半》訪問，介紹本署的防洪設施和雨季前的準備工作。專訪已在2019年5月13日播出。

On 11 April 2019, RTHK's "830 Mag" interviewed our Senior Engineer Mr Simon LAI Yuk-on, Engineer Mr Alex LAU Yiu-man and then Engineer Mr Tommy WONG Tak-shing, presented our flood prevention facilities and precautionary measures for the rainy season. The interview was broadcast on 13 May 2019.

專業團體參與
Professional Bodies Engagement

本署相信與業界交流有助推動創新科研和可持續發展的進程。年內，我們除了協辦第八屆國際水協亞太地區會議及展覽和科研茶聚（詳見**第一章－三十周年誌慶**）外，亦透過工作坊及研討會與本地學者、專業人士、業界代表、其他持份者和政府部門分享本署工作，以及進行技術交流。

The DSD believes that interaction with the industry is beneficial to advancing innovation and sustainable development. In the year under review, apart from co-organising the 8th International Water Association Asia Pacific Regional Group (IWA-ASPIRE) Conference and Exhibition as well as research and development tea gatherings (refer to **Chapter 1 – Highlights of 30th Anniversary** for details), we took the initiative to recount our work and carry out technical exchanges with local academics, professionals, industry representatives, other stakeholders and government departments through workshops and seminars.

混凝土研究會2019

2019年4月2日，渠務署與其他同為混凝土科技常務委員會的政府部門合辦以「混凝土優化方法與嶄新技術」為主題的混凝土研究會2019。活動當日共有超過300位來自建造業的代表、學者和工程師參與，講者們亦於會上分享其工程經驗和科研成果，並和與會者交流有關混凝土技術的意見。

Annual Concrete Seminar 2019

The DSD and other government departments on the Standing Committee on Concrete Technology co-hosted the Annual Concrete Seminar (ACS) 2019 themed "Solutions of Enhancement and New Technology in Concrete" on 2 April 2019. Over 300 practitioners, scholars and engineers from the construction industry attended the event. Speakers shared their valuable engineering experience and research findings and exchanged ideas on concrete technology.



超過300位來自建造業的代表、學者和工程師參與研究會

Over 300 practitioners, scholars and engineers from the construction industry participated in the ACS 2019

2019港滬科技合作研討會

2019年9月27至28日期間，以「建設世界級城市群－科技工作者的機遇及挑戰」為主題的第12屆港滬科技合作研討會於香港召開。研討會旨在透過與參加者的討論，促進香港及上海兩地間的技術和知識交流。出席嘉賓包括上海市城市規劃設計研究院交通分院綜合交通規劃室主任周翔高級工程師、創新及科技局副局長鍾偉強博士、機電工程署時任副署長彭耀雄工程師和本署時任副署長麥嘉為先生。

Hong Kong and Shanghai Symposium on Science and Technology 2019

Themed "Building a World-Class City Cluster – Opportunities and Challenges for Technologists", the 12th Hong Kong and Shanghai Symposium on Science and Technology was held in Hong Kong from 27 to 28 September 2019. The Symposium promoted the exchange of experience in technology and knowledge between Shanghai and Hong Kong through discussion. Guests included Mr ZHOU Xiang, Transports Planning Officer of Shanghai Academy of Urban Planning and Design, Dr CHUNG Wai-keung, Under Secretary for Innovation & Technology, Mr PANG Yiu-hung, the then Deputy Director of Electrical & Mechanical Services, and Mr MAK Ka-wai, the then Deputy Director of Drainage Services.



本署高級工程師古少朗先生及時任高級工程師何家儀女士於研討會就「智能排污設施的管理與應用」分享經驗

The DSD Senior Engineer, Mr KOO Siu-long and then Senior Engineer Ms HO Ka-yee, shared their experience on "Management and Application of Smart Sewage Facilities" during the Symposium

與荷蘭IHE Delft水教育學院合辦工作坊

2019年10月31日，渠務署與荷蘭IHE Delft水教育學院合辦了主題為「提高香港氣候應變能力於不同時間階段的策略規劃」的工作坊。來自荷蘭的講者向約40名來自不同政府部門的同事，以及國際水協中國香港地區委員會成員及代表，分享他們的寶貴知識和應對氣候變化的國際經驗。參加者亦透過小組討論，探討短期和長期策略來提高香港的氣候應變能力。在工作坊完結後，本署署長盧國華先生與IHE Delft的代表簽署了一份為期五年的諒解備忘錄，共同推動可持續雨水管理的知識及能力發展。

Co-organising a Workshop with IHE Delft Institute for Water Education

The DSD and the IHE Delft Institute for Water Education (IHE Delft) co-organised a workshop titled "Shifting Time Horizons in Strategic Planning to Enhance Climate Resilience in Hong Kong" on 31 October 2019. Speakers from the Netherlands shared their valuable knowledge and international experience on combating climate change with around 40 participants from different government departments as well as Executive Committee members and representatives of IWA Hong Kong. Participants gained insights into both short-term and long-term strategies for enhancing climate resilience in Hong Kong through group discussions. At the end of the workshop, Director of Drainage Services, Mr Kelvin LO Kwok-wah, and representative of the IHE Delft, signed a five-year Memorandum of Understanding on Knowledge and Capacity Development in Sustainable Stormwater Management.



渠務署署長盧國華先生（左三）與IHE Delft的代表Chris ZEVENBERGEN教授（右三）簽署諒解備忘錄，並由發展局副秘書長（工務）2麥成章先生（左二）和荷蘭駐香港及澳門時任總領事Annemieka RUIGROK女士（右二）見證

Director of Drainage Services, Mr Kelvin LO Kwok-wah, (third left), and Professor Chris ZEVENBERGEN (third right), on behalf of IHE Delft, signed a Memorandum of Understanding witnessed by Deputy Secretary of Development (Works) 2 of Development Bureau, Mr Vincent MAK Shing-cheung (second left) and the then Consul General of the Kingdom of the Netherlands in Hong Kong and Macau, Ms Annemieka RUIGROK

義工服務及慈善活動
Voluntary Services and Charity Activities

本署同事不僅熱情投入工作，同時熱衷參與社區工作。年內，本署義工隊共參與39項義工服務，總服務時數超過1 332小時。

Our colleagues are equally enthusiastic about their work and community service. During the year under review, the DSD Volunteer Team took part in more than 39 volunteer services, clocking over 1 332 service hours in total.

「防疫義務工作」

面對2019冠狀病毒病疫情，本署義工隊迅速組織了一群熱心的同事，聯同其他政府部門的義工合組成一支跨部門義工隊，齊心參與支援抗疫工作，包括到海關總部負責聯絡需要接受家居自我隔離的市民、到香港科學園為電子手環進行品質檢測、參與建造業議會統籌的「抗疫關愛行動」，協助包裝「關愛包」贈予前線建造業工友，以及到南丫島派發由其他慈善團體所捐贈的福袋等。

"Fight the Virus"

To combat COVID-19, the DSD Volunteer Team swiftly gathered a group of compassionate colleagues to form an inter-departmental volunteer team with volunteers from other government departments to support anti-pandemic work. Actions included telephoning members of the public subject to home confinement at the Customs Headquarters, inspecting the quality of electronic wristbands at Hong Kong Science Park, packaging "Caring Packs" for frontline workers during the Construction Industry Council's "Fight against Novel Coronavirus" campaign, and dispatching gift packs donated by other charity groups to residents of Lamma Island.



本署義工隊及其親友一同協助包裝贈予前線建造業工友的「關愛包」

Our Volunteer Team, together with their relatives and friends, pitched in to package "Caring Pack" for frontline workers

「愛 • 與耆義同行」義工活動

渠務署義工隊自2017年起舉辦一系列以「愛 • 與耆義同行」為主題的義工活動，並於建造業議會的「建造業義工獎勵計劃2019」中脱穎而出，榮獲「評審嘉許－非凡建造業義工項目」金獎。除此之外，本署的義工吳天賜先生更獲得業界加許，贏得「評審嘉許－卓越建造業義工」銅獎。

"i-connect" Voluntary Programme

The DSD Volunteer Team has been hosting "i-connect" voluntary programmes since 2017. This volunteering series clinched the "Judges' Appreciation – Excellence in Construction Industry Volunteering Project" Gold Award of the Construction Industry Volunteer Award Scheme 2019 organised by the Construction Industry Council. In addition, Mr Ivan NG Tin-chi, the DSD volunteer, was recognised by the industry and crowned with the honour of "Judges' Appreciation – Excellence in Construction Industry Volunteering" Bronze Award.



建造業議會主席陳家駒先生(中)、渠務署署長盧國華先生(左五)及時任副署長麥嘉為先生(右五)與渠務署義工隊成員合照

Group photo of the Chairman of Construction Industry Council, Mr CHAN Ka-kui (centre), Director of Drainage Services, Mr Kelvin LO Kwok-wah (fifth left), the then Deputy Director of Drainage Services, Mr MAK Ka-wai (fifth right) and members of DSD Volunteer Team

年內，本署義工隊繼續舉辦「愛 • 與耆義同行」義工活動。當中「愛 • 與耆義同行」－認知障礙症義工項目為重點活動之一，由義工隊伙拍其他義工團體的長者義工一同參加與認知障礙症長者有關的義工活動。活動中，我們安排義工參加講座，加深他們對認知障礙症的了解。義工們於其後的探訪活動透過問卷初步評估個別受訪長者的情況，並為其度身訂製「健腦Kit Set」，透過認知訓練延緩認知功能退化。

In the year under review, the DSD Volunteer Team continued to organise a series of volunteer activities under the theme of "i-connect". One of the highlights was "i-connect" – Dementia, in which our Volunteer Team partnered with a group of senior volunteers from other organisations to support elderly with dementia. During the programme, we arranged a seminar to deepen our volunteer's understanding of the disease. In the subsequent home visits, volunteers preliminary evaluated the health status of those elderlies through questionnaires and used the tailor-made "Brain Health Kit Set" to conduct cognitive training to delay their cognition decline.



義工們與長者進行認知訓練活動

Volunteers and the elderly participated in cognitive training activities

推動師友文化－「友 • 導向」師友計劃

一如以往，本署義工隊於年內繼續參與由扶貧委員會籌劃的跨界別職志師友計劃「友 • 導向」2019，以師友角色為世界龍岡學校劉皇發中學十多名高中生安排一系列活動包括溝通工作坊、求職技巧基礎訓練、生涯規劃和職場探訪等，讓他們了解職場及不同行業的運作，以及訂立未來職業發展方向。

Promoting Mentoring Culture – " Life Buddies" Mentoring Scheme

As in previous years, the DSD Volunteer Team continued to join the multi-sectoral mentoring scheme "Life Buddies 2019" organised by the Commission on Poverty. Taking on the roles of mentors for about 10 high school students from Lung Kong World Federation School Limited Lau Wong Fat Secondary School, the Volunteer Team organised a series of activities, including communication workshops, basic job hunting skills and career planning classes, workplace visits, etc., with the aim to give them insights into different careers and help them navigate their future career development.



義工隊擔任同學們的成長伙伴，協助其規劃未來職業發展

As partners of growing youths, the Volunteer Team gave guidance to students on career roadmapping

渠務署30週年「愛 • 渠務30小時義工馬拉松」活動

為慶祝部門成立30周年，本署義工隊舉辦了一項名為「愛 • 渠務30小時義工馬拉松」活動。活動由2019年1月1日至8月29日舉行，期間我們為各分部統計義工時數，並鼓勵同事投放多達30小時義工時數，發揚本署「以心為心　盡力盡心」的助人精神。參加人數和參加人次分別為117名及275名，較去年同期均錄得顯著升幅，成績令人鼓舞。

"30 Hours Volunteer Marathon" to Celebrate 30th Anniversary of the DSD

To celebrate the 30th anniversary of the DSD, the DSD Volunteer Team organised an innovative event named "30 Hours Volunteer Marathon" that ran from 1 January to 29 August 2019. During that period, colleagues' volunteering hours were recorded by division and we encouraged everyone to achieve 30 hours of voluntary services to promote the DSD's spirit of "Do it from the Heart". With 117 colleagues and 275 person-times joining the event, rising sharply year-on-year, the result was heartening.



本署同事參與清潔海岸義工活動

The DSD colleagues at a volunteer coastal clean-up

附錄一 完成目標
Appendix I Meeting the Targets

本附錄總結了本署於年內在環保、社會和常規服務方面的目標及整體表現。展望2020-21年度，我們會繼續訂立目標，以監察及確保本署工作及服務質素，實踐對各持份者及香港的可持續發展承諾。

This appendix summarised the objectives and their overall performance of the DSD's environmental, social and routine services during the reporting year. Looking ahead to the year 2020-21, we will continue to set targets to monitor and ensure the quality of our work and services so as to demonstrate the commitment to sustainability to our stakeholders and Hong Kong.

環保事務 Environmental Issues

2019-20 年度環保事務目標 Environmental Targets 2019-20	成果 Achievement
發展智能科技、完善運作、引入創新技術以提升成效和效率、減少環境影響及符合公眾期望 **Developing smart technologies, optimising operations, introducing innovative measures to enhance effectiveness and efficiency, minimising environmental impacts and meeting public expectations**	
自2019-20年起，三年內採用三項嶄新的可持續發展技術 Adopt three new sustainable technologies within a three-year period starting from 2019-20	我們已應用無人駕駛飛機及三維激光掃描，對有蓋上的渠務署設施進行狀況調查，並在昂船洲污水處理廠採用薄膜光伏技術以提供再生能源供應。未來兩年我們會於沙田污水處理廠試驗以「殺泥技術」作污水處理。 DSD adopted unmanned aircraft systems and 3D laser scanning for condition survey of covered facilities, and adopted thin-film photovoltaic technologies at Stonecutters Island Sewage Treatment Works as a source of renewable energy. We are conducting a trial on SANI (Sulphate Reduction, Autotrophic Denitrification and Nitrification Integrated) Process for treatment of sewage at Sha Tin Sewage Treatment Works in the coming two years.
展開三項研發完善運作及創新技術的項目 Conduct three Research and Development (R&D) items for optimisation and innovation technologies	達標。我們已展開三項研發項目，包括在初級沉澱池試驗加裝斜板沉澱器、在馬鞍崗河道研究適合該處淡水人工濕地的種植組合，以及於沙田污水處理廠試驗薄膜傳氧生物膜反應器。 Target met. Three R&D projects have been commissioned, including pilot trial of inclined plate settler technology for primary sedimentation, developing suitable planting mix for a freshwater constructed wetland eco-system in Ma On Kong Channel and pilot trial on the Membrane Aerated Biofilm Reactor at Sha Tin Sewage Treatment Works.
每年至少六次與社區組織/環保團體/學者會面，研討可持續發展事務 Meet with community groups / green groups / academics at least six times each year to consider sustainability matters	達標。我們舉辦了超過六次會面及實地考察。 Target met. We conducted more than six meetings and site inspections.
藉提高能源效益、使用可再生能源、減少二氧化碳及污染物排放、發展水資源管理及再造水重用，作為可持續發展技術和氣候變化的減緩、適應及應變措施 **Integrating sustainability measures and climate change mitigation, adaptation and resilience considerations through improving energy efficiency, utilising renewable energy, reducing carbon and pollution emissions, and achieving water management, water reclamation and reuse**	
自2019-20年起的三年內，將電動車佔所有車輛的行車里數比率提高至13% Increase the mileage percentage of electric vehicles to all vehicles to 13% in three years starting from 2019-20	進度良好。2019-20年度電動車的行車里數為整體車輛的16.2%。 The progress was promising. In 2019-20, 16.2% of total mileage of work transport were contributed by electric vehicles.
進行七次監察碳審計 Conduct seven surveillance carbon audits	達標。我們已進行了七次監察碳審計。 Target met. We conducted seven surveillance carbon audits.
完善運作和使用再生能源以進一步節省270萬度電 Further save 2.7 million kilowatt-hours from process optimisation and use of renewable energy	達標。我們共節省了270萬度電。 Target met. We saved 2.7 million kilowatt-hours.
再造水和回用雨水的使用量達到平均每日1 500立方米 Use an average of 1 500 cubic metres of reclaimed water and harvested water per day	達標。年內平均每日使用約1 688立方米再造水和回用雨水。 Target met. During the year, we used an average of 1 688 cubic metres of reclaimed water and harvested water per day.
標準化用紙量達至零增長，保持在2018-19年度的水平 To achieve zero growth of normalised paper usage from 2018-19 level	達標。用紙量是9 091令[1]（較全年目標用紙量少92令）。 Target met. 9 091 reams of paper were used[1] (i.e. 92 reams less than the annual consumption target).
引入藍綠排水建設、增加綠化、保護生態系統及促進社區的健康、宜居性及生物多樣性 **Developing blue-green drainage infrastructure, maximising greening, conserving ecosystems and enhancing community health, liveability and biodiversity**	
建造2 000平方米綠化天台和150平方米垂直綠化 Build 2 000 square metres green roof and 150 square metres vertical greening	達標。我們已完成了7 359平方米綠化天台和210平方米垂直綠化。 Target met. We completed 7 359 square metres green roof and 210 square metres vertical greening.
種植12 000棵樹、竹或灌木 Plant 12 000 trees, bamboos and shrubs	達標。我們種植了239棵樹及37 478叢灌木。 Target met. We planted 239 trees and 37 478 shrubs.
在工程項目和日常運作中全面遵守有關環保的法例和規定 **Meeting all statutory and regulatory requirements on environmental performance in our projects and operations**	
完全符合法定環境影響評估程序 Fully comply with the statutory EIA process	達標。 Target met.
完全符合環保法例要求 Fully comply with environmental legislations	達標。 Target met.

[1] 撇除用於新合約 / 工程項目的招標 / 報價程序的用紙量。
Excluding the paper used in tender / quotation exercises for new contracts / projects.

2020-21年度環保事務目標 Environmental Targets 2020-21
發展智能科技、完善運作、引入創新技術以提升成效和效率、減少環境影響及符合公眾期望 **Developing smart technologies, optimising operations, introducing innovative measures to enhance effectiveness and efficiency, minimise environmental impacts and meet public expectations**
自2019-20年起，三年內採用三項嶄新的可持續發展技術 Adopt three new sustainable technologies within a three-year period starting from 2019-20
展開三項研發完善運作及創新技術的項目 Conduct three Research and Development (R&D) items for optimisation and innovation technologies
每年至少六次與社區組織 / 環保團體 / 學者會面，研討可持續發展事務 Meet with community groups / green groups / academics at least six times each year to consider sustainability matters
藉提高能源效益、使用可再生能源、減少二氧化碳及污染物排放、發展水資源管理及再造水重用，作為可持續發展技術和氣候變化的減緩、適應及應變措施 **Integrating sustainability measures and climate change mitigation, adaptation and resilience considerations through improving energy efficiency, utilising renewable energy, reducing carbon and pollution emissions, and achieving water management, water reclamation and reuse**
自2019-20年起的三年內，將電動車佔所有車輛的行車里數比率提高至13% Increase the mileage percentage of electric vehicles to all vehicles to 13% in three years starting from 2019-20
進行七次監察碳審計 Conduct seven surveillance carbon audits
透過使用新的再生能源項目及完善運作以進一步節省95萬度電 Further save 0.95 million kilowatt-hours from use of new items of renewable energy and process optimisation
再造水和回用雨水的使用量達到平均每日1 700立方米 Use an average of 1 700 cubic metres of reclaimed water and harvested water per day
標準化用紙量達至零增長，保持在2019-20年度的水平 To achieve zero growth of normalised paper usage from 2019-20 level
引入藍綠排水建設、增加綠化、保護生態系統及促進社區的健康、宜居性及生物多樣性 **Developing blue-green drainage infrastructure, maximising greening, conserving ecosystems and enhancing community health, liveability and biodiversity**
透過園境和綠化工程美化三個現有設施的外觀 Enhance the external appearance of three existing facilities by carrying out landscaping and greening works
種植12 000棵樹或灌木 Plant 12 000 trees or shrubs
在工程項目和日常運作中全面遵守有關環保的法例和規定 **Meeting all statutory and regulatory requirements on environmental performance in our projects and operations**
完全符合法定環境影響評估程序 Fully comply with the statutory EIA process
完全符合環保法例要求 Fully comply with environmental legislations

社會事務
Social Issues

2019-20年度社會事務目標 Social Targets 2019-20	成果 Achievement	2020-21年度社會事務目標 Social Targets 2020-21
降低渠務署員工的工傷意外率 **Minimising the accident rate for the DSD staff**		
渠務署員工的工傷意外率每年每1 000名員工應少於10宗 Maintain not more than 10 occupational injuries per 1 000 staff per year	達標。報告期內每年每1 000名員工有2.9宗工傷意外。 Target met. 2.9 occupational injuries per 1 000 staff per year was reported in the reporting period.	由2020-21年度起，將內部員工的工傷意外率降至每年每1 000名員工不多於5宗 To lower the target accident frequency rate of in-house staff to within 5 nos. of reportable accidents per 1 000 staff per year from 2020-2021
降低渠務署承建商的工傷意外率 **Minimising the accident rate for the DSD's contractors**		
渠務署承建商的工傷意外率應低於每100 000工時0.6宗須呈報意外 Maintain less than 0.6 reportable accident per 100 000 man-hours worked	達標。報告期內渠務署承建商每100 000工時有0.14宗須呈報意外。 Target Met. DSD's contractors had 0.14 reportable accident per 100 000 man-hours in the reporting period.	與2019-20年度工作目標一致 Same as 2019-20 targets
舉行內部簡報會，確保專業、技術及工地督導人員、顧問和承建商時刻具有職安健意識 **Maintaining occupational safety and health awareness of professional, technical and site supervisory staff, consultants and contractors with in-house briefing**		
最少舉辦兩次署內職安健工作坊 Organise at least two in-house occupational safety and health (OSH) workshops	達標。共舉辦了兩次署內職安健工作坊。 Target met. Two in-house workshops on OSH were organised.	與2019-20年度工作目標一致 Same as 2019-20 targets
提高承建商的職安健意識 **Promoting the awareness on occupational safety and health amongst contractors**		
達至最少80%的渠務署合資格新建工程合約及30%的合資格維修定期工程合約的承建商，參加發展局的「公德地盤嘉許計劃」 Maintain DSD's contractors of at least 80% of eligible new works contracts and 30% of eligible maintenance term contracts, have participated in Development Bureau's Considerate Contractors Site Award Scheme (CCSAS)	達標。全部21項渠務署合資格新建工程的承建商均參加了發展局的「公德地盤嘉許計劃」；而13項合資格維修定期工程的承建商中，則有11項(85%)的承建商參加了該計劃。 Target met. All of the 21 contractors of eligible new works contracts participated in CCSAS; out of the 13 contractors of eligible maintenance term contracts, 11 (85%) of them participated in the CCSAS.	與2019-20年度工作目標一致 Same as 2019-20 targets

常規服務
Routine Services

服務 Service	承諾 Pledge	2019-20年度工作目標 Performance Target 2019-20	成果 Achievement	2020-21年度工作目標 Performance Target 2020-21
清理堵塞污水渠/排水渠 Clearance of blocked sewers / drains	即日回應在下午一時前接獲的投訴 Respond within the same day for complaints received before 1 pm	99%	99.80%	
	翌日正午前回應在下午一時後接獲的投訴 Respond before noon of next day for complaints received after 1 pm	99%	99.84%	
	市民對清理工作的滿意程度[2] Customers satisfied with the clearing work[2]	95%	99.77%	
為接駁公共排水/排污系統的工程提供技術審核 Technical audit for connection to the public drainage / sewerage systems	於接獲HBP1表格後九個工作天內回應 Reply to the applicant within nine working days upon receipt of HBP1 application	99%	100%	與2019-20年度工作目標一致 Same as 2019-20 targets
回應關於排污費帳目的書面查詢 Response to written enquiries on sewage services accounts	兩個工作天內作出初步回應 Initial respond within two working days	100%	96.78% [3]	
	一個月內作出詳細回覆 Full reply within a month	98%	98.39%	
回應其他投訴和查詢 Response to complaints and enquiries	10天內作出回應 Within 10 calendar days	98%	98.64%	
提供渠務系統紀錄圖則 Provision of drainage record plans	即日安排查閱 Allow inspection within the same day	95%	100%	
	確認付款後的四個工作天內提供影印本 Provide photocopy within four working days upon confirmation of payment	95%	100%	
在涉及挖掘路面的渠務工程工地張貼告示，說明工程目的及預計竣工日期 On-site display of the purpose and anticipated completion date of drainage works involving road excavation	在工地張貼告示，簡介正進行的渠務工程及預計竣工日期，讓公眾了解需要施工的原因及工程將於何時完成 A simple description of drainage works with anticipated completion date will be displayed on site to enable the public to understand why the works are necessary and when they will be completed	98%	99.49%	與2019-20年度工作目標一致 Same as 2019-20 targets

[2] 透過隨機選擇受訪者，每星期進行一次市民對清理淤塞的污水渠 / 排水渠滿意度調查。
The customer satisfaction survey on the clearance of blocked sewers / drains is conducted once a week by selecting the respondents randomly.

[3] 為減低 2019 冠狀病毒病在社區擴散的風險，渠務署由 2020 年 1 月底至 4 月實施特別上班安排。除維持緊急及必要的公共服務外，渠務署亦為市民提供基本及有限度公共服務，包括 24 小時渠務熱線、查閱渠務紀錄圖則和處理排污費 / 工商業污水附加費事宜等，然而相關服務處理時間可能較一般為長。
In order to reduce the risk of the spread of the Coronavirus Disease 2019 (COVID-19) in the community, the DSD implemented special work arrangement from late January to April 2020. In addition to the emergency and essential public services being maintained, the DSD also provided basic and limited public services to members of the public, including the 24-hour DSD Drainage Hotline, the inspection of drainage records, and the handling of Sewage Charges / Trade Effluent Surcharge matters, however the handling time of the related services would be longer than usual.

附錄二 主要統計數據
Appendix II Key Statistics and Data

環境工作表現
Environmental Performance

能源使用量
Energy Consumption

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
渠務署 (302-1) By the DSD (302-1)						
汽油 Gasoline						
徵用車隊 Pool cars	千兆焦耳[1](公升) GJ[1] (Litre)	825 (24 974)	627 (18 995)	599 (18 155)	379 (11 474)	**533 (16 132)**
部門車隊 AM cars	千兆焦耳[1](公升) GJ[1] (Litre)	3 497 (105 901)	3 173 (96 097)	3 422 (103 615)	2 874 (87 045)	**2 837 (85 928)**
購買電力[2] Electricity purchased[2]	千兆焦耳[1] (百萬千瓦時) GJ[1] (Million kWh)	992 808 (275.78)	1 024 092 (284.47)	1 082 376 (300.66)	1 054 656 (292.96)	**1 081 184 (300.33)**

[1] 換算成千兆焦耳的轉換系數為汽油(0.033千兆焦耳/公升)、柴油(0.036千兆焦耳/公升)、電力(0.0036千兆焦耳/千瓦時)。因估算方式使用不同的轉換系數，致能源使用量的有效數據有細微不同。
Conversion factors for standardising units to GJ are gasoline (0.033 GJ / L), diesel (0.036 GJ / L), electricity (0.0036 GJ / kWh). Since different conversion factors are adopted in estimation methods, the significant figure of energy consumption are slightly different.

[2] 總耗電量包括九龍政府合署和西區裁判法院的辦公室，以及本署轄下防洪和污水處理設施(包括污水處理廠、污水泵房及雨水泵房)。並不適用於稅務大樓的辦公室耗電量。
The total electricity consumption includes the offices at Kowloon Government Offices, Western Magistracy, and the DSD's flood prevention and sewage treatment facilities (including sewage treatment works, sewage pumping stations and stormwater pumping stations). Electricity consumption at office at Revenue Tower is not applicable.

能源使用量
Energy Consumption

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
渠務署 (302-1) By the DSD (302-1)						
處理每單位體積污水的平均購買用電量 (302-3) Purchased electricity consumption per unit volume of sewage treated (302-3)	千瓦時 kWh	0.27	0.28	0.30	0.28	**0.29**
可再生能源所產生的等量總電力[3] Total equivalent electricity generated from renewable energy sources[3]	百萬千瓦時 Million kWh	34.68	21.70	28.15	28.50	**27.96**
生物氣[4] Biogas[4]	百萬立方米 Million m^3	10	7	9	8	**9**
渠務署的承建商 (302-2) By the DSD's Contractors (302-2)						
汽油 Gasoline	千兆焦耳[1](公升) GJ[1] (Litre)	6 834 (187 239)	4 473 (135 461)	4 525 (137 045)	4 035 (122 186)	**5 191** **(157 208)**
柴油 Diesel	千兆焦耳[1](公升) GJ[1] (Litre)	42 601 (1 167 162)	12 540 (343 571)	16 566 (454 411)	39 106 (1 071 408)	**67 626** **(1 855 021)**
電力 Electricity	千兆焦耳[1] (百萬千瓦時) GJ[1] (Million kWh)	97 798 (27.17)	56 616 (15.73)	16 480 (4.58)	22 693 (6.30)	**14 808** **(4.11)**

溫室氣體排放量[5]
Greenhouse Gas (GHG) Emissions[5]

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
渠務署 By the DSD						
購買電力(範圍2)[6] (305-2) Electricity purchased (Scope 2)[6] (305-2)	二氧化碳，以公噸計算 Tonnes CO_2e	193 046	199 129	210 462	205 072	**210 230**

[3] 渠務署使用的可再生能源包括水力能、太陽能和生物氣產能。
The renewable energy sources harnessed by the DSD include hydropower, solar power and biogas.

[4] 由污水處理廠產生。
Generated from sewage treatment works.

[5] 溫室氣體排放量的計算是參考香港環境保護署及機電工程署在2010年2月編制的《香港建築物(商業、住宅或公共用途)的溫室氣體排放及減除的審計和報告指引》。溫室氣體包括二氧化碳、甲烷及氧化亞氮。
GHG emission were calculated based on the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for buildings (Commercial, Residential or Institutional Purpose) in Hong Kong issued by the Environmental Protection Department and Electrical and Mechanical Services Department, HKSAR in February 2010. Types of GHG include CO_2, CH_4 and N_2O.

[6] 間接（範圍 2）溫室氣體排放是根據全港性的預設值 0.7 千克 / 千瓦時計算。
Scope 2 GHG emissions were calculated based on a territory-wide default value of 0.7 kg / kWh.

溫室氣體排放量[5]
Greenhouse Gas (GHG) Emissions[5]

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
渠務署 By the DSD						
燃燒汽油（範圍1）(305-1) Gasoline Combustion (Scope 1) (305-1)						
徵用車隊 Pool cars	二氧化碳，以公噸計算 Tonnes CO_2e	65.90	44.83	42.85	27.08	**38.07**
部門車隊 AM cars	二氧化碳，以公噸計算 Tonnes CO_2e	249.93	226.79	244.53	205.43	**202.79**
渠務署的承建商 (305-3) By the DSD's Contractors (305-3)						
購買電力（範圍3） Electricity purchased (Scope 3)	二氧化碳，以公噸計算 Tonnes CO_2e	19 016	11 009	19 019	4 412	**2 879**
燃燒燃料（範圍3）[7] Fuel consumption (Scope 3)[7]	二氧化碳，以公噸計算 Tonnes CO_2e	3 561	1 218	1 511	3 089	**4 749**

耗水量[8] (301-1, 303-3, 303-5)
Water Consumption[8] (301-1, 303-3, 303-5)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
用於防洪及污水處理設施的淡水耗用量 Freshwater consumption at flood prevention and sewage treatment facilities	立方米 m^3	2 050 936	2 433 500	2 191 991	2 436 440	**2 525 919**
污水處理設施的再造水每日生產量 Daily reclaimed water produced at sewage treatment facilities	立方米 m^3	1 512	1 332	1 340	1 861	**1 576**
再造水佔用水量百分比 Percentage of reclaimed water used	%	0.07	0.05	0.05	0.08	**0.06**

[7] 由固定燃燒柴油及流動燃燒汽油產生，即車輛用油。渠務署承建商的車輛用油所產生的溫室氣體排放量是基於所有車輛均為消耗汽油的私家車的假設而計算。渠務署會持續改善數據統計方式以提高數據準確性。
Generated from stationary combustion of diesel and mobile combustion of petrol i.e. vehicle consumption. GHG emissions from vehicle consumption by the DSD's contractors was calculated based on the assumption that all vehicles were passenger cars that consume gasoline. The DSD will continue optimising the data collection method to enhance data accuracy.

[8] 渠務署所耗用的淡水和再造水均為可再生物料。
Freshwater and reclaimed water consumed by the DSD are renewable materials.

污水處理
Sewage Treatment

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
污水處理量 (102-7) Volume of sewage treated (102-7)	百萬立方米 Million m^3	1 007	1 015	1 007	1 028	**1 033**
從污水中移除的生化需氧量 Biochemical oxygen demand removed from sewage	公噸 Tonnes	124 569	151 406	146 159	132 797	**132 089**
從污水中移除的懸浮固體量 Suspended solids removed from sewage		242 933	277 232	223 165	194 751	**207 672**
從污水中移除的氮量 Nitrogen removed from sewage		6 551	6 683	7 106	7 388	**7 084**
從污水中移除的脱水污泥量 Dewatered sludge removed from sewage		392 396	410 526	386 137	392 140	**381 045**
從污水中移除的隔濾物量 Screenings removed from sewage		15 172	14 823	14 970	14 292	**12 842**
從污水中移除的砂礫量 Grits removed from sewage		6 631	6 513	4 996	5 721	**4 981**

廢物管理[9] (306-3)
Waste Management[9] (306-3)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
建築及拆卸廢料 Construction and Demolition (C&D) Materials						
運往堆填區的建築及拆卸廢物[10] C&D waste disposed to landfills[10]	千公斤 '000 kg	6 998	5 801	2 273	2 335	**6 188**
運往公眾堆填區的建築及拆卸廢物[11] C&D waste disposed to public fill areas[11]	千公斤 '000 kg	235 735	170 162	155 469	151 918	**68 491**

[9] 渠務署中央收集不同分部和承建商的廢物數據。
The DSD centrally collects waste data from different divisions and contractors.

[10] 廢物包括金屬、塑膠、紙張或紙皮包裝物料，以及其他廢料，包括一般廢物。
Waste includes metals, plastics, paper / cardboard packaging waste and other wastes, such as general refuse.

[11] 廢物包括磚塊、混凝土、建築廢料、瓦礫，以及挖掘料。
Waste include bricks, concrete, building debris, rubble and excavated soil.

廢物管理[9] (306-3)
Waste Management[9] (306-3)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
可循環再造廢料收集量 Recyclable Waste Collected						
廢紙[12] Waste paper[12]	公斤 kg	19 360	20 587	15 954	20 087	**15 083**
鋁罐[13] Aluminium cans[13]	公斤 kg	19.73	29.51	32.23	92.21	**86.76**
膠樽[13] Plastic bottles[13]	公斤 kg	20.71	18.76	22.72	52.66	**45.53**

物料使用[14] (301-1)
Material Consumption[14] (301-1)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
渠務署 By the DSD						
紙張總用量 Total paper consumption	令 Reams	9 608	9 285	9 231	9 223	**9 091**
A4 紙張 A4 paper		9 357	8 992	8 854	8 817	**8 726**
A3 紙張 A3 paper		251	293	377	406	**365**
購買含再造成分的 A4 / A3 紙張 Purchased A4 / A3 paper with recycle content	令（佔購入紙張的百分率） Reams (% of total paper purchased)	9 608 (100%)	9 285 (100%)	9 231 (100%)	9 223 (100%)	**9 091 (100%)**
每名員工紙張用量（以職員編制計算） Paper consumed per staff (By establishment)	令 Reams	5.0	4.8	4.8	4.6	**4.5**

[12] 數字並不包括於工地所收集的廢紙量。
The amount of waste paper collected did not include those collected from project sites.

[13] 由於未能獲得相關數據，數字並不包括於西區裁判法院辦公室收集的鋁罐及膠樽數量。
The amount of aluminium cans and plastic bottles collected did not include those collected from the Western Magistracy as the data were not available.

[14] 除紙張為可再生物料外，其他均為非可再生物料。
Except for paper, which is a renewable material, others are non-renewable materials.

物料使用[14] (301-1)
Material Consumption[14] (301-1)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
渠務署的承建商 By the DSD's contractors						
鋼筋 Rebar	公噸 Tonnes	7 165	10 643	13 325	11 811	**14 998**
鋼 Steel	公噸 Tonnes	3 171	3 402	5 042	4 159	**9 843**
磚塊 Bricks	立方米 m^3	30	5 817	1 993	126	**140**
水泥 Cement	公噸 Tonnes	2 406	2 248	3 500	763	**2 181**
沙漿 Cement mortar	立方米 m^3	263	640	1 946	873	**812**
混凝土 Concrete	立方米 m^3	50 616	73 175	74 651	52 150	**57 418**
沙 Sand	公噸 Tonnes	12 586	24 117	23 111	2 602	**6 857**
石料 Stones	公噸 Tonnes	9 617	31 898	26 775	8 762	**6 326**
辦公室用紙 Office paper	公噸 Tonnes	27	40	74	20	**66**

綠化
Greening

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
總種植樹木數量 Total no. of trees planted	棵 Tree	2 300	10 000	1 300	64	**239**
增設的綠化天台面積 Area of green roof added	平方米 m^2	4 015	4 200	4 150	2 028	**7 359**

社會工作表現
Social Performance

員工
Staff

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
職員編制 (102-7) Staff establishment (102-7)	人數 No.	1 914	1 937	1 940	1 986	**2 020**
首長級人員 Directorate	人數 No.	18	18	18	18	**18**
專業人員 Professional	人數 No.	310	310	307	327	**346**
技術人員及工地督導人員 Technical & Site Supervisory	人數 No.	865	884	888	908	**920**
一般職系人員 General & Common Grades	人數 No.	526	531	533	538	**540**
第一標準薪級人員 Model Scale I	人數 No.	195	194	194	195	**196**
培訓 Training						
培訓課程[15] Training courses[15]	數目 No.	654	674	638	681	**600**
受訓員工 Trainees	人數 No.	8 019	9 042	8 033	10 011	**6 873**
員工培訓時數 Training hours received	小時 Hours	58 520	57 737	60 524	66 110	**58 781**
員工平均培訓時數 （以員工實際人數計算） Average training hours per staff (Based on the staff strength)	小時 Hours	33.0	33.4	35.0	38.4	**33.9**
培訓總開支 （只包括本地培訓）[15] Total expenditure on training (Includes local training only)[15]	元 $	3,585,011	3,046,283	2,929,551	2,701,879	**3,772,082**

[15] 包括內部和外界座談會、工作坊、培訓課程、參觀，以及由公務員培訓處舉辦的培訓班和員工發起的外部課程。
It includes internal and external seminars, workshops, training courses, visits and training courses held by Civil Service Training and Development Institute and staff-initiated external courses.

2019-20 年度職員編制 [16] (102-8)
Staff Breakdown in 2019-20[16] (102-8)

	單位 Unit	以實際人數計算 By Strength
員工人數 No. of Staff	人數 No.	1 736
按職位分類 By Post		
首長級人員 Directorate	% (人數 No.)	1.04 (18)
專業人員 Professional		18.78 (326)
技術人員及工地督導人員 Technical & Site Supervisory		49.14 (853)
一般職系人員 General & Common Grades		23.44 (407)
第一標準薪級人員 Model Scale I		7.60 (132)
按僱用類型分類 By Employment Type		
全職 Full-time	% (人數 No.)	100 (1 736)
兼職 Part-time		0 (0)

	單位 Unit	以實際人數計算 By Strength
按僱用合約及性別分類 By Employment Contract, by Gender		
永久合約(男性) Permanent (Male)	% (人數 No.)	80.93 (1 405)
永久合約(女性) Permanent (Female)		19.07 (331)
按年齡分類 By Age		
20-29 歲 Age 20-29	% (人數 No.)	12.04 (209)
30-39 歲 Age 30-39		25.12 (436)
40-49 歲 Age 40-49		28.00 (486)
50-59 歲 Age 50-59		31.51 (547)
60 歲或以上 Age 60 or above		3.34 (58)
按國籍分類 By Nationality		
中國 Local	% (人數 No.)	100 (1 736)
外國 Non-local		0 (0)

2019-20 年度高級管理人員編制 (405-1)
Senior Management Breakdown in 2019-20 (405-1)

	單位 Unit	以實際人數計算 By Strength
員工人數 No. of Staff	人數 No.	7
按年齡分類 By Age		
20-29 歲 Age 20-29	% (人數 No.)	0 (0)
30-39 歲 Age 30-39		0 (0)
40-49 歲 Age 40-49		0 (0)
50-59 歲 Age 50-59		71.43 (5)
60 歲或以上 Age 60 or above		28.57 (2)

	單位 Unit	以實際人數計算 By Strength
按性別分類 By Gender		
男性 Male	% (人數 No.)	100 (7)
女性 Female		0 (0)
按國籍分類 By Nationality		
中國 Local	% (人數 No.)	100 (7)
外國 Non-local		0 (0)

[16] 我們的主要營運由渠務署員工負責執行。
The majority of our operations are performed by the DSD's employees.

2019-20 年度員工培訓時數 [17] (404-1)
Training Hours Breakdown in 2019-20[17] (404-1)

職位 Type of Staff	員工人數 (以實際人數計算) No. of Staff (By Strength)	接受培訓時數 (小時) Training Hours Received (Hours)	每名員工培訓時數 (小時) Training Hours per Staff (Hours)
首長級人員 Directorate Staff	18	1 366	75.89
專業人員 Professional Grade Staff	326	26 507	81.31
技術人員、工地督導人員、一般職系人員及第一標準薪級人員 Technical, Site Supervisory, General & Common Grades and Model Scale I Staff	1 392	30 908	22.20

2019-20 新入職員工和員工流失量 (401-1)
New Employees and Staff Turnover in 2019-20 (401-1)

		新入職員工 [18] New Employee[18]		員工流失量 [19] Staff Turnover[19]	
	單位 Unit	男性 Male	女性 Female	男性 Male	女性 Female
按年齡分類 By Age					
20-29 歲 Age 20-29	人數 No.	51	13	3	1
30-39 歲 Age 30-39		39	14	2	1
40-49 歲 Age 40-49		12	5	9	0
50-59 歲 Age 50-59		7	0	0	2
60 歲或以上 Age 60 or above		0	0	59	10

社區工作及慈善捐款 (203-1)
Community Work and Charitable Contributions (203-1)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
員工參與義工活動總時數 Total number of voluntary work hours carried out by our staff	小時 Hours	1 200	1 115	1 795	1 120	**1 332**
已完成的義工服務數目 Number of voluntary projects completed	數目 No.	27	20	41	40	**39**
員工募捐 Employee fundraising	千元 $'000	65	53	49	40	**65**

[17] 培訓方面沒有特定的性別要求，因此我們不按性別細分相關數據。
As there is no distinct requirement regarding receiving training in terms of gender, therefore we do not report the data broken down by gender.

[18] 以上數字包括於 2019 年 4 月 1 日至 2020 年 3 月 31 日期間入職的員工。
The above figures involve staff with their 1st appointment date falling within the period from 1 April 2019 to 31 March 2020.

[19] 員工流失率數字不包括在部門間轉職的人員。
The staff turnover figures exclude staff on inter-departmental transfer.

職業安全及健康 (403-9)
Occupational Safety and Health (403-9)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
死亡數目 Number of Fatalities						
總死亡數目 Number of fatalities	人數 No.	1	0	1	0	**0**
渠務署員工 The DSD staff		0	0	0	0	**0**
由承辦商負責的建築及維修工程 Construction and maintenance works undertaken by the DSD's contractors		1 (男性 Male)	0	1 (男性 Male)	0	**0**
每20萬工時發生的致命意外率 Fatal accident rate per 200 000 man-hours						
渠務署員工 The DSD staff	-	0	0	0	0	**0**
由承建商負責的建築及維修工程 Construction and maintenance works undertaken by the DSD's contractors	-	0.022	0	0.02	0	**0**
非致命意外數目 Number of non-fatal accidents						
渠務署員工 The DSD staff	人數 No.	13	7	5	8	5
由承建商負責的建築及維修工程 Construction and maintenance works undertaken by the DSD's contractors		14	8	15	6	**10**
每20萬工時發生的非致命意外率 Non-fatal accident rate per 200 000 man-hours						
渠務署員工 The DSD staff	-	0.40	0.20	0.16	0.24	**0.16**
由承建商負責的建築及維修工程 Construction and maintenance works undertaken by the DSD's contractors	-	0.32	0.22	0.44	0.18	**0.28**

	單位 Unit	2019-20
總工作時數 Total hours worked		
渠務署員工 The DSD staff	小時 Hours	**6 237 200**
由承建商負責的建築及維修工程 Construction and maintenance works undertaken by the DSD's contractors		**7 245 997**

經濟工作表現
Economic Performance

本署的開支主要分為營運開支和公共工程項目開支兩類。我們的日常營運經費來自政府的一般收入帳目；公共工程項目的開支，則由立法會財務委員會按個別項目批核。為確保公帑用得其所，我們採用創新技術及管理模式，致力提高營運效率。

The two major types of expenses in the DSD are operational expenses and public works project expenses. Our day-to-day departmental operation is financed by the General Revenue Account of the Government, while funding for public works projects are approved on a project-by-project basis by the Finance Committee of the Legislative Council. To ensure public funds are used effectively, we strive to enhance operation efficiency by adopting new technologies and management practices.

營運開支 (201-1)
Operating Expenditure (201-1)

		單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
經常開支 Recurrent Expenditure	個人薪酬 Personal Emoluments	百萬元 $M	882.31	917.19	916.87	958.68	**1,009.37**
	部門開支[20] Departmental Expenses[20]	百萬元 $M	1,487.83	1,646.92	1,692.80	1,774.93	**1,869.07**
非經營帳目開支 Capital Account Expenditure		百萬元 $M	23.23	30.04	37.26	94.99	**81.12**
總額 Total		**百萬元 $M**	**2,393.37**	**2,594.15**	**2,646.93**	**2,828.60**	**2,959.56**

基本工程的項目開支 (203-1)
Capital Works Project Expenditure (203-1)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20[21]
正在規劃、設計和施工階段的雨水排放工程項目數目 No. of drainage projects under planning, design and construction	數目 No.	18	18	24	24	**{2} [24]**
正在規劃、設計和施工的雨水排放工程項目總值 Value of drainage projects under planning, design and construction	百萬元 $M	13,983	14,445	26,876	31,935	**{1,345} [34,758]**
正在規劃、設計和施工階段的污水處理工程項目數目 No. of sewerage projects under planning, design and construction	數目 No.	73	69	66	63	**{21} [44]**
正在規劃、設計和施工的污水處理工程項目總值 Value of sewerage projects under planning, design and construction	百萬元 $M	72,402	70,093	73,175	89,220	**{27,031} [77,608]**

[20] 包括強制性公積金和公務員公積金。
It included expenses on Mandatory Provident Fund and Civil Service Provident Fund.

[21] { } 內數字為施工中的甲級工程，金額以付款當日價格計算；[ ] 內數字為正在規劃或設計的乙級工程，金額以 2020 年 3 月價格計算。
Figures in { } are Category A projects under construction and the amount shown in money-of-the-day price; figures in [ ] are Category B projects under planning or design and amount shown in March 2020 price level.

污水處理服務經營帳目 (102-7)
Sewage Services Operating Accounts (102-7)

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20[22]
排污費收入 Sewage Charge Revenue	百萬元 $M	1,047.0	1,161.1	1,296.2	1,323.1	**1,154.1**
工商業污水附加費收入 Trade Effluent Surcharge Revenue	百萬元 $M	221.5	231.8	243.5	241.0	**154.4**
其他收入 Other Revenue	百萬元 $M	48.3	45.5	45.9	50.6	**52.4**
總收入 Overall Revenue	**百萬元 $M**	**1,316.8**	**1,438.4**	**1,585.6**	**1,614.7**	**1,455.6**
開支（不包括折舊） Expenditure (Excluding Depreciation)	百萬元 $M	(2,149.2)	(2,340.6)	(2,334.2)	(2,515.4)	**(2,615.5)**
折舊 Depreciation	百萬元 $M	(1,042.3)	(1,518.2)	(1,546.1)	(1,547.0)	**(1,631.4)**
總開支 Overall Expenditure	**百萬元 $M**	**(3,191.5)**	**(3,858.8)**	**(3,880.3)**	**(4,062.4)**	**(4,246.9)**
（虧損）(Deficit)	**百萬元 $M**	**(1,874.7)**	**(2,420.4)**	**(2,294.7)**	**(2,447.7)**	**(2,791.3)**

污水處理服務成本回收率[23]
Sewage Services Operating Cost Recovery Rate[23]

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
排污費及工商業污水附加費收入 Revenue of Sewage Charge and Trade Effluent Surcharge	百萬元 $M	1,268.5	1,392.9	1,539.7	1,564.1	**1,308.5**
排污費及工商業污水附加費開支（不包括折舊）[24] Expenditure (excluding depreciation) of Sewage Charge and Trade Effluent Surcharge[24]	百萬元 $M	2,101.4	2,295.7	2,288.9	2,465.5	**2,563.8**
收回經營成本比率 Operating Cost Recovery Rate	%	60.4	60.7	67.3	63.4	**54.7[25]**

污水處理服務的使用量和付款統計數字
Sewage Service Charge Consumption and Payment Statistics

	2015-16	2016-17	2017-18	2018-19	2019-20
自來水用戶數目（以千計） Number of water accounts (in thousand)	2 907	2 955	2 989	3 043	**3 078**
需繳付排污費的用戶數目（以千計） Number of water accounts liable to pay Sewage Charge (in thousand)	2 689	2 735	2 765	2 818	**2 853**
工商業污水附加費繳納戶數目（以千計） Number of accounts - Trade Effluent Surcharge (in thousand)	25	27	28	29	**30**

[22] 2019-20 年度數字只屬暫時性，有待污水處理服務帳目委員會確認。
The 2019-20 figures are provisional and subject to endorsement by the Sewage Services Accounts Committee.

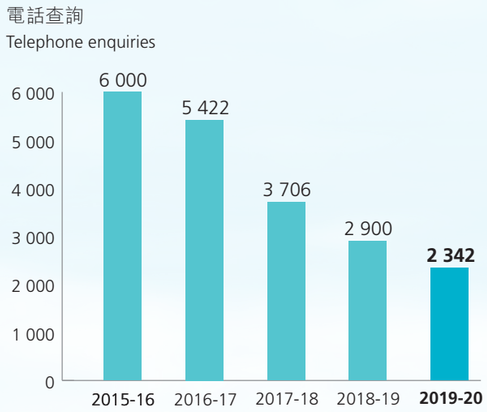
[23] 本表的收入及開支總額均不包括「其他雜項服務」。
"Miscellaneous services" are excluded from the revenues and expenditure in this table.

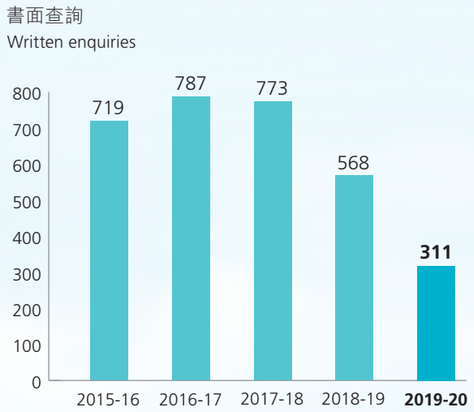
[24] 現時，本署並未透過排污費及工商業污水附加費收回折舊的開支。
Depreciation is not recovered through the Sewage Charge and the Trade Effluent Surcharge at present.

[25] 數字反映政府在 2019 年 12 月至 2020 年 3 月期間的排污費寬免措施。未計寬免措施的收回經營成本比率則為 61.8%。
The figure reflects the waiver to sewage treatment from December 2019 to March 2020. Operating cost recovery rate before waiver was 61.8%.

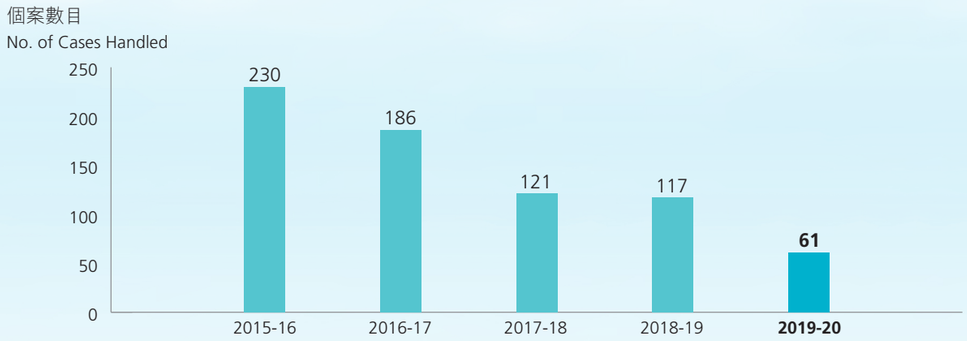
常規服務
Routine Services

過去五年接到的查詢數目
Number of Enquiries Received for the Past Five Years

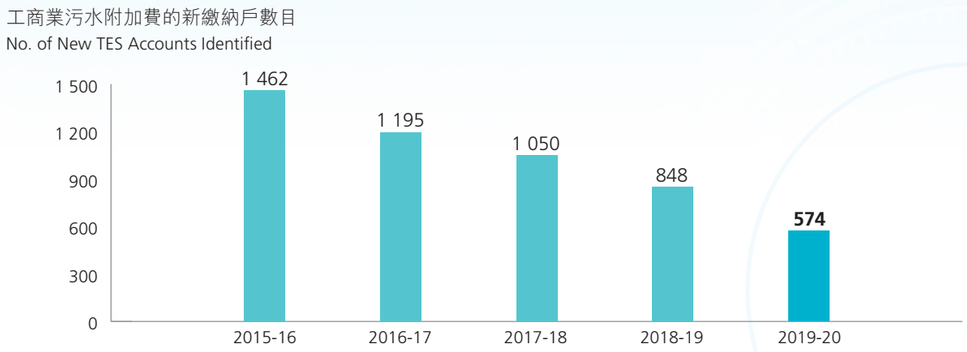




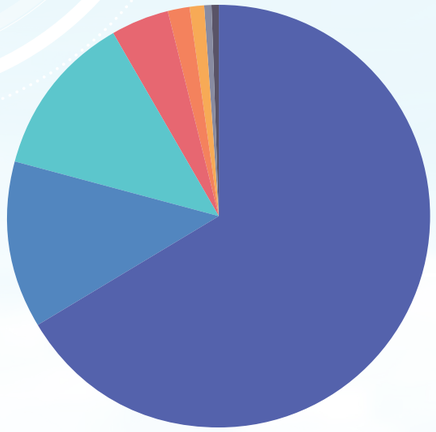
過去五年所處理有關行業重新分類的申請
Business Reclassification Applications Handled for the Past Five Years



過去五年所發現工商業污水附加費的新繳納戶數目
Number of New TES Accounts Identified for the Past Five Years



2019-20 年度污水排放用戶用水量 (507 百萬立方米) – 用戶情況
Water Consumption of Sewered Accounts (507 million m^3) - Customers Pattern in 2019-20



68% 住宅 Domestic

12.9% 餐館業 Restaurants

12.4% 其他非住宅用戶 Other Non-domestic

4.4% 政府 Government

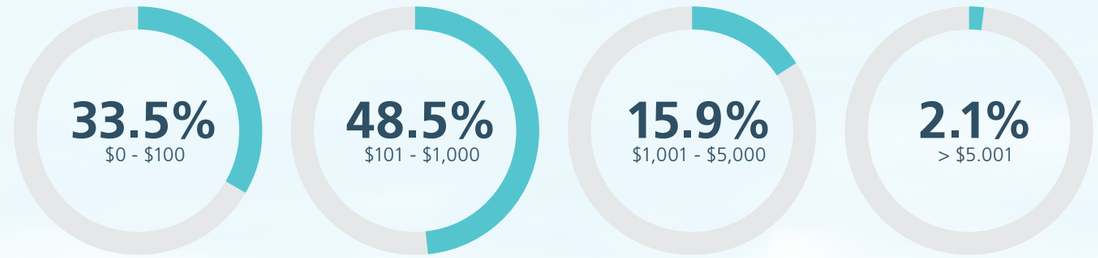
1.3% 食品製造 Food Manufacturing

0.8% 洗衣業務 Laundries

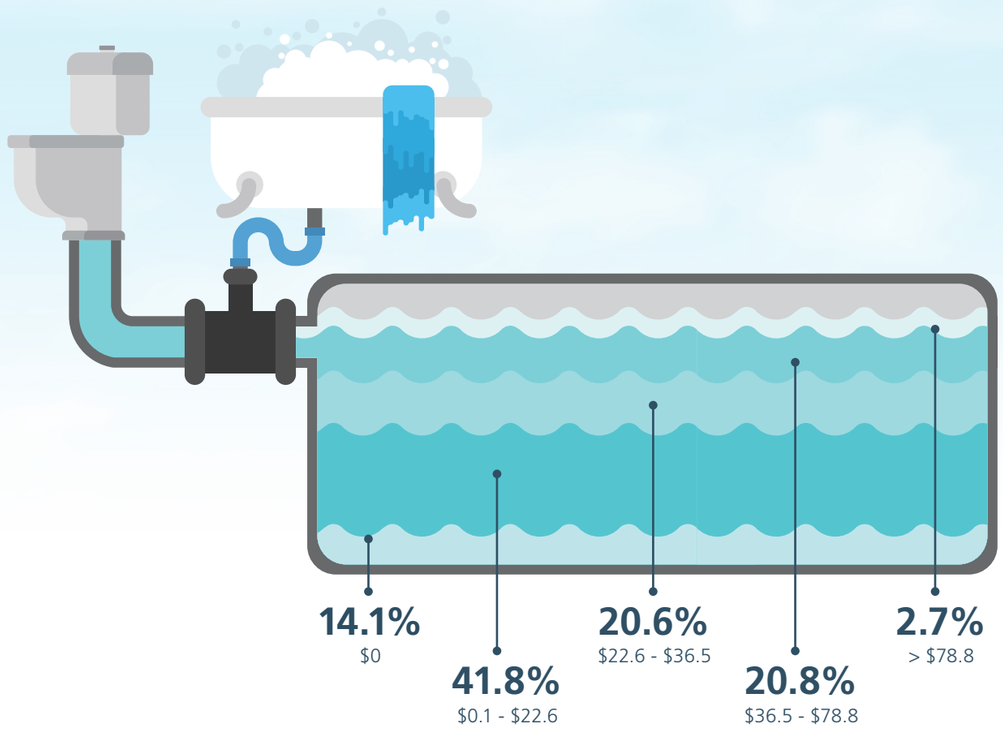
0.1% 紡織業及針織服飾 (不包括造鞋業) Textiles & Wearing Apparel except Footwear

0.1% 漂染業 Bleaching & Dyeing

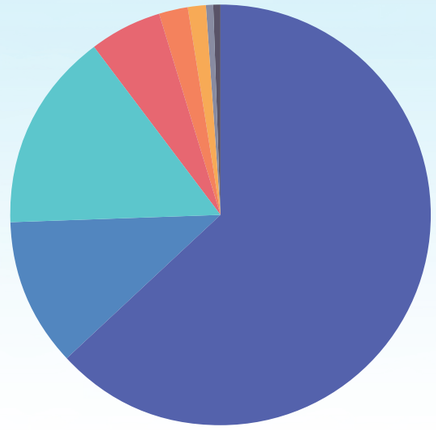
工商業污水附加費用戶 – 2019-20 年度工商業污水附加費收費情況（元 / 月）
Trade Effluent Surcharge Accounts - TES Payment Pattern in 2019-20 ($/month)



住宅用戶 – 2019-20 年度排污費收費情況（元 / 月）
Domestic Accounts - Sewage Charge Payment Pattern in 2019-20 ($/month)



排污費（11.54 億元）– 2019-20 年度用戶種類收費情況[26]
Sewage Charge ($1.154 billion) - Revenue Pattern by Type in 2019-20[26]



64.6% 住宅 Domestic

11.4% 餐館業 Restaurants

15.4% 其他非住宅用戶 Other Non-domestic

5.6% 政府 Government

1.8% 食品製造 Food Manufacturing

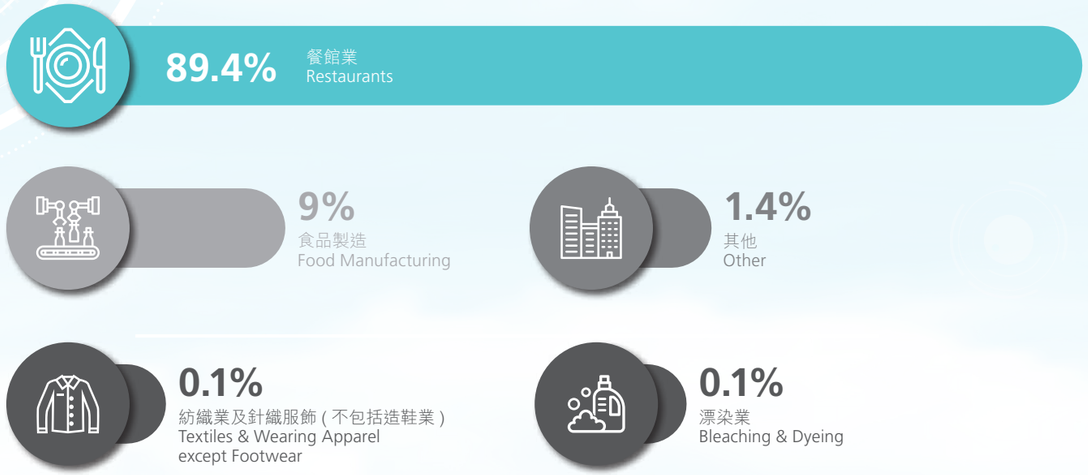
1% 洗衣業務 Laundries

0.1% 紡織業及針織服飾 (不包括造鞋業) Textiles & Wearing Apparel except Footwear

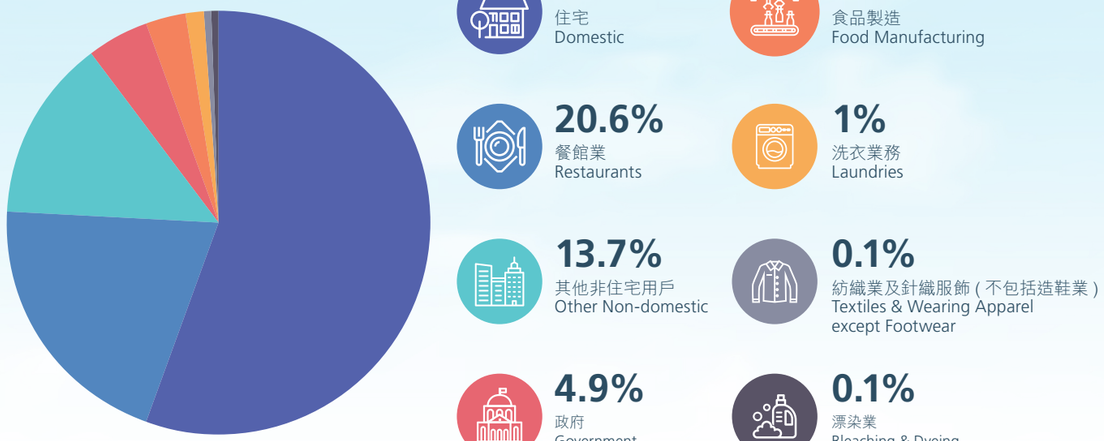
0.1% 漂染業 Bleaching & Dyeing

[26] 數字只屬暫時性，有待污水處理服務帳目委員會確認。
The figures are provisional and subject to endorsement by the Sewage Services Accounts Committee.

工商業污水附加費（1.54 億元）– 2019-20 年度用戶種類收費情況[27]
Trade Effluent Surcharge ($154 million) - Revenue Pattern by Type in 2019-20[27]



排污費及工商業污水附加費（13.085 億元）– 2019-20 年度用戶種類收費情況[27]
Sewage Charge and Trade Effluent Surcharge ($1.3085 billion) - Revenue Pattern by Type in 2019-20[27]



[27] 數字只屬暫時性，有待污水處理服務帳目委員會確認。
The figures are provisional and subject to endorsement by the Sewage Services Accounts Committee.

其他主要數據
Other Key Statistics

	單位 Unit	2015-16	2016-17	2017-18	2018-19	2019-20
防洪 Flood Prevention						
水浸黑點總數 Total no. of flooding blackspots	數目 No.	8	7	6	6	**5**
地下雨水渠總長度 Total length of stormwater drains	公里 km	2 385	2 386	2 388	2 427	**2 429**
人工河道總長度 Total length of engineered channels		361	363	363	363	**363**
雨水排放隧道總長度 Total length of drainage tunnels		21	21	21	21	**21**
雨水泵房總數 Total no. of stormwater pumping stations	數目 No.	36	36	36	36	**36**
污水處理 Sewage Treatment						
公共污水收集網絡覆蓋（佔人口百分比）[28] Coverage of Public Sewerage (Population percentage)[28]	%	93.5	93.5	93.5	93.6	**93.7**
污水收集網絡總長度 Total length of sewerage network	公里 km	1 728	1 755	1 770	1 832	**1 841**
污水隧道總長度 Total length of sewage tunnels		42	63	63	63	**63**
污水處理設施總數 Total no. of sewage treatment facilities	數目 No.	300	304	314	319	**324**
總污水處理量 Total volume of sewage treated	百萬立方米 Million m^3	1 007	1 015	1 007	1 028	**1 033**
基本處理 By Preliminary Treatment		138	45	58	75	**50**
一級處理 By Primary Treatment		5	5	5	6	**5**
化學強化一級處理 By Chemically Enhanced Primary Treatment		690	779	757	751	**784**
二級處理 By Secondary Treatment		174	186	187	196	**194**
三級處理 By Tertiary Treatment		0.14	0.17	0.17	0.16	**0.17**
每天產生的總污泥量 Total sewage sludge generated daily	公噸 Tonnes	1 048	1 121	1 043	1 075	**1 041**
處理污水時使用電力而引起的溫室氣體排放系數 Emission factor of GHG emissions due to electricity used for processing sewage	-	0.19	0.20	0.21	0.20	**0.20**

[28] 以有繳付排污費的住宅水務帳戶計算。
Based on the number of domestic water bill accounts with sewage charges levied.

附錄三 全球報告倡議組織內容索引

Appendix III GRI Content Index

全球報告倡議組織已審議「實質性議題審核」，並認為全球報告倡議組織內容索引闡述清晰，102-40 至 102-49 披露議題的參照索引與報告內文的相應章節相符。此審核是以報告英文版本評核。

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the English version of the report.

可持續發展報告標準 GRI Standards	一般披露 General Disclosures		參照/直接解釋/省略資料的原因 Reference/Direct Answer Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
GRI 101: 基礎 2016 GRI 101: Foundation 2016					
GRI 102: 一般披露 2016 GRI 102: General Disclosures 2016	組織概況 Organisational Profile				
	102-1	機構名稱 Name of the organisation	關於本報告 About the Report	P.8	✓
	102-2	業務活動、品牌、產品及服務 Activities, brands, products, and services	主要職責 Core Responsibilities	P.58	✓
	102-3	機構總部的位置 Location of headquarters	香港灣仔稅務大樓 43 樓 Hong Kong, 43/F Revenue Tower, Wanchai	—	✓
	102-4	營運地點 Location of operations	只限香港 Hong Kong only	—	✓
	102-5	擁有權及法律形式 Ownership and legal form	屬於香港特區政府的一部分 Part of the Hong Kong SAR Government	—	✓
	102-6	所服務的市場 Markets served	只限香港 Hong Kong only	—	✓
	102-7	機構的規模 Scale of the organisation	附錄二 — 主要統計數據 Appendix II - Key Statistics and Data	P.162, 165, 170	✓
	102-8	有關僱員及其他員工的資料 Information on employees and other workers	附錄二 — 主要統計數據 Appendix II - Key Statistics and Data	P.166	✓
	102-9	供應鏈 Supply chain	持份者參與 Stakeholder Engagement	P.138-142	✓
	102-10	機構與其供應鏈方面的重大改變 Significant changes to the organisation and its supply chain	沒有顯著改變 No significant changes	—	✓
	102-11	謹慎方針或原則 Precautionary Principle or approach	管治方針 Governance Approach 渠務署於日常營運中採取預防措施以盡量減少對環境及社會產生的負面影響。 The DSD adopts precautionary approaches in our daily operations to minimise negative environmental and social impacts.	P.54-57	✓
	102-12	由外部所制定的倡議 External initiatives	三十周年誌慶 Highlights of 30th Anniversary 持份者參與 Stakeholder Engagement	P.16-31 P.148-150	✓
	102-13	機構參與的協會的會員資格 Membership of associations	渠務署屬於以下協會的成員：國際水協會；國際水利與環境工程學會香港分會；香港綠色建築議會；新工程合約用戶組織和建造業創新及科技應用中心 i-Club。 DSD holds membership in the following associations: The International Water Association; The International Association for Hydro-Environment Engineering and Research (IAHR) - Hong Kong Chapter; The Hong Kong Green Building Council; The NEC Users' Group and CITAC i-Club Corporate Member.	—	✓
	策略 Strategy				
	102-14	最高決策者的聲明 Statement from Senior decision-maker	署長序言 Director's Statement	P.4-7	✓
	102-15	關鍵影響、風險及機遇 Key impacts, risks, and opportunities	管治方針 Governance Approach	P.54-57	✓
	道德與誠信 Ethics and Integrity				
	102-16	價值、原則、標準和行為規範 Values, principles, standards, and norms of behaviour	管治方針 Governance Approach	P.50	✓
	管治 Governance				
	102-18	管治結構 Governance structure	管治方針 Governance Approach	P.51-55	✓
	102-20	管理層在經濟、環境和社會議題方面的責任 Executive-level responsibility for economic, environmental, and social topics	管治方針 Governance Approach	P.51	✓
	102-21	就經濟、環境和社會議題與利益相關方進行的磋商 Consulting stakeholders on economic, environmental, and social topics	關於本報告 About the Report 持份者參與 Stakeholder Engagement	P.11 P.131	✓
	102-23	最高管治機構主席 Chair of the highest governance body	管治方針 Governance Approach	P.51	✓
	102-32	機構可持續發展報告的最高委員會 Highest governance body's role in sustainability reporting	管治方針 Governance Approach	P.55	✓
	持份者參與 Stakeholder Engagement				
	102-40	持份群體清單 List of stakeholder groups	關於本報告 About the Report 持份者參與 Stakeholder Engagement	P.11 P.131	✓
	102-41	集體談判協議 Collective bargaining agreements	沒有 Nil	—	✓
	102-42	界定及挑選持份者 Identifying and selecting stakeholders	關於本報告 About the Report	P.11	✓
	102-43	引入持份者參與的方針 Approach to stakeholder engagement	關於本報告 About the Report	P.11	✓
	102-44	提出的主要議題及關注事項 Key topics and concerns raised	關於本報告 About the Report	P.14	✓
	匯報實務 Reporting Practice				
	102-45	財務報表所包含的單位 Entities included in the consolidated financial statements	關於本報告 About the Report	P.10	✓
	102-46	界定報告內容及議題界限 Defining report content and topic Boundaries	關於本報告 About the Report	P.14	✓
	102-47	重要議題清單 List of material topics	關於本報告 About the Report	P.14	✓
	102-48	重整信息 Restatements of information	本報告沒有重整舊報告所提供的信息。 There is no such re-statement in this Report.	—	✓
	102-49	匯報上的改變 Changes in reporting	關於本報告 About the Report	P.14	✓
	102-50	匯報期 Reporting period	關於本報告 About the Report	P.10	✓
	102-51	上一份報告的日期 Date of most recent report	2019 年 12 月 December 2019	—	✓

可持續發展報告標準 GRI Standards	一般披露 General Disclosures		參照/直接解釋/省略資料的原因 Reference/Direct Answer Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
GRI 102: 一般披露 2016 GRI 102: General Disclosures 2016	102-52	匯報周期 Reporting cycle	自 2012-13 年度起每年發表可持續發展報告。 Our Sustainability Report has been published annually since 2012-13.	—	✓
	102-53	查詢報告的聯絡點 Contact point for questions regarding the report	回應表格 Feedback Form	封底 Back cover	✓
	102-54	按照 GRI 標準提出的的匯報申述 Claims of reporting in accordance with the GRI Standards	關於本報告 About the Report	P.10	✓
	102-55	全球報告倡議組織內容索引 GRI content index	附錄三 — 全球報告倡議組織內容索引 Appendix III - GRI Content Index	P.176-183	✓
	102-56	外部認證 External assurance	關於本報告 About the Report 核實聲明 Verification Statement	P.10 P.184-187	✓

可持續發展報告標準 GRI Standards	特定議題標準 Topic-specific Standards		參照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
	經濟 ECONOMIC				
	經濟績效 Economic Performance				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 附錄二 — 主要統計數據 Appendix II - Key Statistics and Data	P.11-15 P.50, 54 P.169-170	✓
GRI 201: 經濟績效 2016 GRI 201: Economic Performance 2016	201-1	機構所產生及分配的直接經濟價值 Direct economic value generated and distributed	附錄二 — 主要統計數據 Appendix II - Key Statistics and Data	P.169	✓
	201-2	氣候變化所造成的財務影響及其他風險與機會 Financial implications and other risks and opportunities due to climate change	管治方針 Governance Approach 環境管理 Environmental Management	P.56 P.104-109	✓
	間接經濟影響及保持公共資金和資產管理的透明度 Indirect Economic Impacts and Transparency on Public Funds and Assets Management				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 主要職責 Core Responsibilities 持份者參與 Stakeholder Engagement	P.11-15 P.50, 54 P.58-59 P.130-153	✓
GRI 203: 間接經濟影響 2016 GRI 203: Indirect Economic Impacts 2016	203-1	基礎設施投資和支持性服務 Infrastructure investments and services supported	主要職責 Core Responsibilities 附錄二 — 主要統計數據 Appendix II - Key Statistics and Data	P.68-71, 74-87 P.167, 169	✓
	203-2	重大間接經濟影響 Significant indirect economic impacts	主要職責 Core Responsibilities 持份者參與 Stakeholder Engagement	P.68-71, 74-87 P.138-142	✓

可持續發展報告標準 GRI Standards	特定議題標準 Topic-specific Standards		參照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
	採購實務 Procurement Practices				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 持份者參與 Stakeholder Engagement	P.11-15 P.50, 54 P.138-141	✓
GRI 204: 採購實務 2016 GRI 204: Procurement Practices 2016	204-1	本地供應商採購的支出比例 Proportion of spending on local suppliers	於 2019-20 年度，經本署物料供應組採購的服務和產品 100% 來自本地 (即指香港) 供應商 / 承辦商或分銷商。 Procurement of services and goods made by the DSD's Supplies Unit in 2019-20 are 100% local (i.e. Hong Kong) supplier, contractors or local agents.	—	✓
	反貪污 Anti-corruption				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 我們要求員工恪守最高的道德標準。如發現任何涉嫌貪腐的個案，會立即向廉政公署舉報，以作進一步調查。 We request our staff to adhere to the highest ethical standard. If any suspected corruption cases are reported, they will be submitted to the Independent Commission Against Corruption for further investigation.	P.11-15 P.50, 54	✓
GRI 205: 反貪污 2016 GRI 205: Anti-corruption 2016	205-3	經確認的貪污事件和採取的行動 Confirmed incidents of corruption and actions taken	自 2013-14 年度起並沒有確認的貪污事件。 No Confirmed incidents of corruption since 2013-14.	—	✓
	環境 ENVIRONMENTAL				
	氣味管理 Odour Control				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 主要職責 Core Responsibilities	P.11-15 P.50, 54 P.83	✓
	減緩及適應氣候變化 Climate Change and Mitigation and Adaptation				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.104-109	✓
	物料 Materials				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.110	✓
GRI 301: 物料 2016 GRI 301: Materials 2016	301-1	所採用原材料的重量或體積 Materials used by weight or volume	附錄二— 主要統計數據 Appendix II - Key Statistics and Data	P.161, 163-164	✓

可持續發展報告標準 GRI Standards	特定議題標準 Topic-specific Standards		參照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
	能源 Energy				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.104-109, 112	✓
GRI 302: 能源 2016 GRI 302: Energy 2016	302-1	組織內部的能源消耗量 Energy consumption within the organisation	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.159-160	✓
	302-2	組織外部的能源消耗量 Energy consumption outside of the organisation	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.160	✓
	302-3	能源強度 Energy intensity	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.160	✓
	302-4	減少能源的消耗 Reduction of energy consumption	環境管理 Environmental Management	P.108	✓
	水與放流水 Water and Effluents				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.92-103	✓
GRI 303: 水與放流水 2018 GRI 303: Water and Effluents 2018	303-1	共享水資源之相互影響 Interactions with water as a shared resource	主要職責 Core Responsibilities 環境管理 Environmental Management 附錄一 – 完成目標 Appendix I - Meeting the Targets	P.82 P.92-103 P.154-156	✓
	303-2	與排水相關衝擊的管理 Management of water discharge-related impacts	主要職責 Core Responsibilities	P.72-73, 82	✓
	303-3	取水量 Water withdrawal	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.161	✓
	303-5	耗水量 Water consumption	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.161	✓
	生物多樣性 Biodiversity				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 創新技術 展望未來 Innovation and Future 環境管理 Environmental Management	P.11-15 P.50, 54 P.47 P.92-100	✓
GRI 304: 生物多樣性 2016 GRI 304: Biodiversity 2016	304-3	受保護或經修復的棲息地 Habitats protected or restored	創新技術 展望未來 Innovation and Future 環境管理 Environmental Management	P.47 P.94-95	✓

可持續發展報告標準 GRI Standards	特定議題標準 Topic-specific Standards		參照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
	排放物 Emissions				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.104-109, 112	✓
GRI 305: 排放物 2016 GRI 305: Emissions 2016	305-1	直接溫室氣體排放（範疇 1） Direct (Scope 1) GHG emissions	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.161	✓
	305-2	能源間接溫室氣體排放（範疇 2） Energy indirect (Scope 2) GHG emissions	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.160	✓
	305-3	其他間接溫室氣體排放（範疇 3） Other indirect (Scope 3) GHG emissions	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.161	✓
	305-5	減少溫室氣體的排放量 Reduction of GHG emissions	環境管理 Environmental Management	P.105	✓
	廢棄物 Waste				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.110	✓
GRI 306: 廢棄物 2020 GRI 306: Waste 2020	306-1	廢物產生及與廢物有關的重大影響 Waste generation and significant waste-related impacts	環境管理 Environmental Management	P. 107	✓
	306-2	管理與廢物有關的重大影響 Management of significant waste-related impacts	環境管理 Environmental Management 附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.107 P.162-163	✓
	306-3	廢物產生 Waste generated	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.162-163	✓
	環境法規遵循 Environmental Compliance				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 附錄一 – 完成目標 Appendix I - Meeting the Targets	P.11-15 P.50, 54 P.156	✓
GRI 307: 環境法規遵循 2016 GRI 307: Environmental Compliance 2016	307-1	違反環境法律和法規 Non-compliance with environmental laws and regulations	渠務署於 2019-20 年度，並沒有該類別的違規情況。 No non-compliance with environmental laws and regulations in 2019-20.	–	✓
	評估供應商的環境表現 Supplier Environmental Assessment				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 環境管理 Environmental Management	P.11-15 P.50, 54 P.112	✓
GRI 308: 評估供應商 / 承辦商的環境表現 2016 GRI 308: Supplier Environmental Assessment 2016	308-1	按照環境準則篩選的新供應商 New suppliers that were screened using environmental criteria	渠務署歡迎供應商遵從環保規格或準則，並未有採用環境準則篩選新供應商。 The DSD welcomes suppliers to follow the green specifications or criteria. No new suppliers have been screened using environmental criteria so far.	–	✓

可持續發展報告標準 GRI Standards	特定議題標準 Topic-specific Standards		參照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
	社會 SOCIAL				
	匯報可持續發展進程 Reporting on Sustainable Development Agenda				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach	P.8, 11-15 P.50, 54	✓
	投訴機制 Grievance Mechanism				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 關愛員工 Caring for Our Staff	P.11-15 P.50, 54 P.126-127	✓
	內部溝通渠道 Internal Communication Channel				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 關愛員工 Caring for Staff	P.11-15 P.50, 54 P.114-126	✓
	員工政策及員工比例 Employment Policy and Employee Ratio				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 關愛員工 Caring for Staff	P.11-15 P.50, 54 P.114-126	✓
GRI 401: 僱傭 2016 GRI 401: Employment 2016	401-1	新進員工和員工流動率 New employee hires and employee turnover	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.167	✓
GRI 405: 多元化與平等機會 2016 GRI 405: Diversity and Equal Opportunity 2016	405-1	管治機構與員工的多元化 Diversity of governance bodies and employees	附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.166	✓
	職業健康及安全 Occupational Health and Safety				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 關愛員工 Caring for Our Staff 持份者參與 Stakeholder Engagement	P.11-15 P.50, 54 P.121-126 P.142	✓
GRI 403: 職業健康及安全 2018 GRI 403: Occupational Health and Safety 2018	403-1	職業安全與健康管理系統 Occupational health and safety management system	關愛員工 Caring for Staff	P.121	✓
	403-2	識別危險、評估風險及調查事故 Hazard identification, risk assessment and incident investigation	關愛員工 Caring for Staff	P.121	✓
	403-3	職業健康服務 Occupational health services	關愛員工 Caring for Staff	P.121-126	✓
GRI 403: 職業健康及安全 2018 GRI 403: Occupational Health and Safety 2018	403-4	鼓勵員工參與職安健事務、諮詢及溝通 Worker participation, consultation, and communication on occupational health and safety	關愛員工 Caring for Staff	P.125-126	✓
	403-5	員工的職安健培訓 Worker training on occupational health and safety	關愛員工 Caring for Staff	P.123-124	✓
	403-6	促進員工健康 Promotion of worker health	關愛員工 Caring for Staff	P.126	✓
	403-7	預防及減輕與業務關係直接相關的職安健影響 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	關愛員工 Caring for Staff	P.121	✓
	403-9	工傷 Work-related injuries	關愛員工 Caring for Staff 附錄二 – 主要統計數據 Appendix II - Key Statistics and Data	P.122 P.168	✓
	員工培訓與教育 Staff Training and Education				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 關愛員工 Caring for Our Staff	P.11-15 P.50, 54 P.114-120	✓
GRI 404: 培訓與教育 2016 GRI 404: Training and Education 2016	404-1	每名員工每年接受培訓的平均時數 Average hours of training per year per employee	關愛員工 Caring for Our Staff 附錄二 – 主要統計數據 Appendix II – Key Statistics and Data	P.116 P.167	✓
	服務質量標準 Service Quality Standards				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 主要職責 Core Responsibilities 附錄一 – 完成目標 Appendix I - Meeting the Targets	P.11-15 P.50, 54 P.60-89 P.154, 158-159	✓
GRI 416: 客戶健康與安全 2016 GRI 416: Customer Health and Safety 2016	416-2	涉及產品和服務的健康與安全的違規事件 Incidents of non-compliance concerning the health and safety impacts of products and services	渠務署於 2019-20 年度並沒有該類別的違規情況。 No incidents of non-compliance concerning the health and safety impacts of products and services in 2019-20.	–	✓
	社會經濟法規遵循 Socioeconomic Compliance				
GRI 103: 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3	管理方針 Management approach	關於本報告 About the Report 管治方針 Governance Approach 附錄一 – 完成目標 Appendix I - Meeting the Targets	P.11-15 P.50, 54 P.154-159	✓
GRI 419: 社會經濟法規遵循 2016 GRI 419: Socioeconomic Compliance 2016	419-1	違反社會及經濟領域方面的法律和規定 Non-compliance with laws and regulations in the social and economic area	渠務署於 2019-20 年度並沒有該類別的違規情況。 No non-compliance with laws and regulations in the social and economic area in 2019-20.	–	✓

獨立保證意見聲明書

聲明書號碼: SRA-HK-738155

渠務署
可持續發展報告 2019-20

英國標準協會與香港特別行政區政府渠務署 (以下簡稱「渠務署」) 為相互獨立的公司及組織，英國標準協會除了針對渠務署可持續發展報告 2019-20 (以下簡稱「報告」) 進行評估和核查外，與渠務署並無任何財務上的關係。

本獨立保證意見聲明書的目的，僅作為對下列有關渠務署可持續發展報告所界定範圍內的相關事項進行保證之結論，而不作為其他之用途。除對查證事實提出獨立保證意見聲明書外，對於關於其他目的之使用，或閱讀此獨立保證意見聲明書的任何人，英國標準協會並不負有或承擔任何有關法律或其他之責任。本獨立保證意見聲明書供渠務署之持份者及管理人員使用。

本獨立保證意見聲明書是基於渠務署提供予英國標準協會之相關資料審查所作成之結論，因此審查範圍乃基於並只限在這些提供的資料內容之內，英國標準協會認為這些資料內容都是完整且準確的。

對於這份獨立保證意見聲明書所載內容或相關事項之任何疑問，只能向渠務署提出。

核查範圍

渠務署與英國標準協會協議的核查範圍包括：

1. 整份報告及焦點放於渠務署於2019年4月1日至2020年3月31日期間的系統與活動。報告依據全球報告倡議組織標準的核心選項編制而成。
2. 第一類型中度保證等級評估渠務署遵循三項報告原則: 包容性，實質性及回應性的本質與程度，以及對報告中指定可持續發展的資料/數據作出評估。

意見聲明

我們可以總結，報告為渠務署本報告年度的的可持續發展計劃與成效提供一個公平的觀點。我們相信報告內之經濟、社會及環境成效指標是被正確無誤地展現。報告所披露的成效指標展現了渠務署為可持續發展所作出的努力，備受持份者的廣泛認同。

這次核查工作是由一組具有可持續發展報告核查能力之團隊執行。透過策劃和進行核查時所獲得的資料及說明，我們認為渠務署就符合全球報告倡議組織標準的核心選項之聲明，是屬公允的描述。

核查方法

為了收集能讓我們得出結論的證據，我們執行了以下工作：

- 對來自外部團體關於渠務署政策的議題，進行高階審查，以確認本報告中聲明書的合適性
- 與渠務署管理人員討論有關持份者參與的方式，然而，我們並無直接接觸外部持份者
- 訪問與可持續發展管理、報告編制及資料提供有關的員工
- 審查組織的主要發展內容
- 審查報告中所作宣告的支持性證據
- 審查報告的製作及管理流程是否按照包容性、實質性及回應性的原則進行

結論

我們對於包容性，實質性及回應性原則，及全球報告倡議組織標準的審查如下:

包容性

此報告反映渠務署透過以下多種渠道作持份者參與，包括研討會、座談會、工作坊、問卷調查等。

渠務署日常運作包括不同的持份者參與方式。此報告包括持份者關注的經濟、社會及環境範疇，並以公允的水平披露。我們專業的意見認為，渠務署遵循包容性原則。我們對報告的改善意見已被渠務署於發出本意見聲明書前採納。

實質性

渠務署發佈可持續發展資訊，讓持份者對渠務署的管理及表現可作出有事實根據的判斷。通過進行實質性分析，渠務署掌握各持份者於環境、社會及經濟三個類別中最為關心的議題，並透過既定機制訂出組織的實質性議題，從而作出具針對性的討論及跟進。

我們專業的意見認為，報告遵循實質性原則，並透過合適的方法識別出渠務署的實質範疇，以重要範疇概覽展現出實質範疇。我們對報告的改善意見已被渠務署於發出本意見聲明書前採納。

回應性

渠務署實行措施以回應持份者的期望與意見，包括對內部及外部持份者的各種問卷及反映機制。以我們專業的意見，渠務署遵循回應性原則。我們對報告的改善意見已被渠務署於發出本意見聲明書前採納。

全球報告倡議組織標準

渠務署向我們提供有關於已符合依循全球報告倡議組織標準的核心選項的自我申報。從審查的結果，我們確定報告內之三個類別(環境、社會及經濟) 的可持續發展披露，是根據符合全球報告倡議組織標準的核心選項披露。

以我們專業的意見認為，本報告包括渠務署的可持續發展事務。我們對報告的改善意見已被渠務署於發出本意見聲明書前採納。

保證等級

我們提供的第一類型中度保證等級審查，是以本聲明書內之範圍及方法作定義。

責任

這份報告所展現的資料，是由渠務署的高階管理層負責確保準確。我們的責任為基於所描述的範圍與方法，提供專業意見並提供持份者一個獨立的保證意見聲明書。

能力與獨立性

本核查團隊是由具房地產行背景，且接受過包括全球報告倡議組織(以下簡稱「GRI 」)GRI G3、GRI G3.1、GRI G4、GRI標準、當責性原則、香港聯交所「環境、社會及管治報告指引」、聯合國全球契約十項原則、ISO 10002、ISO 14001、OHSAS 18001、ISO 45001 及 ISO 9001 等之一系列可持續發展、環境及社會標準的訓練，具有主導擔保及核查員資格之成員組成。 英國標準協會於 1901 年成立，是全球標準及驗證機構的領導者。本保證是依據英國標準協會公平交易準則執行。

英國標準協會代表：

張見心先生
亞太區合規和風險主管

本報告驗證員：

陳肇雄
主任驗證員

香港
2020 年 11 月 24 日

本聲明書以英文編制，中文翻譯本只供參考。

INDEPENDENT ASSURANCE OPINION STATEMENT

Statement No.: **SRA-HK-738155**

Drainage Services Department Sustainability Report 2019-20

The British Standards Institution is independent to the Drainage Services Department of the Government of the Hong Kong Special Administrative Region (hereafter referred to as "DSD" in this statement) and has no financial interest in the operation of the DSD other than for the assessment and assurance of the DSD Sustainability Report 2019-20 ("Report").

This independent assurance opinion statement has been prepared for the DSD only for the purposes of assuring its statements relating to the Report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read. This statement is intended to be used by stakeholders & management of the DSD.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by the DSD. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to the DSD only.

Scope

The scope of engagement agreed upon with the DSD includes the following:

1. The assurance covers the whole Report, and focuses on systems and activities of the DSD during the period from 1st April 2019 to 31st March 2020. The Report is prepared in accordance with the Core option of GRI Sustainability Reporting Standards ("GRI Standards").
2. Type 1 Moderate Level of Assurance evaluates of the nature and extent of the DSD's adherence to three reporting principles, which include Inclusivity, Materiality and Responsiveness. The specified sustainability performance information/data disclosed in the Report has been evaluated.

Opinion Statement

We conclude that the Report provides a fair view of the DSD's sustainability programmes and performances in the reporting year. We believe that the economic, social and environmental performance indicators are fairly represented in the Report, in which the DSD's efforts being made to pursue sustainable development are widely recognised by its stakeholders.

Our work was carried out by a team of sustainability report assurors. We planned and performed this part of our work to obtain the necessary information and explanations. We considered the DSD has provided sufficient evidence that the DSD's self-declaration of compliance with the Core option of GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- A top level review of issues raised by external parties that could be relevant to the DSD's policies to provide a check on the appropriateness of statements made in the Report
- Discussion with senior executives on the DSD's approach to stakeholder engagement. We had no direct contact with external stakeholders
- Interview with staff involved in sustainability management, report preparation and provision of report information were carried out
- Review of key organisational developments
- Review of supporting evidence for claims made in the Report
- Assessment of the organisation's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and GRI Standards.

Conclusions

A detailed review against the principles of Inclusivity, Materiality and Responsiveness, and in accordance with the GRI Standards (Core Option) is set out below:

Inclusivity

The Report has reflected a fact that the DSD is seeking the engagement of its stakeholders through numerous channels such as consultation platform, seminars, workshops, questionnaires and surveys. Surveys have been systematically recorded and evaluated.

The DSD's operation involves various methods of engaging its stakeholders on daily basis. The Report covers economic, social and environmental aspects concerned by its stakeholder with a fair level of disclosures. In our professional opinion, the DSD adheres to the principle of Inclusivity. Our view in area for enhancement to the Report was adopted by the DSD before issue of this opinion statement.

Materiality

The DSD publishes sustainability information that enables its stakeholders to make informed judgments about the organisation's management and performance. The stakeholder issues have been identified and evaluated through materiality assessment, including employee surveys, contractor's surveys, focus group meetings, questionnaire surveys, customer satisfaction index and various feedback mechanism. The topics considered material are covered in the report includes ranges from economic, environmental, and social impacts.

In our professional opinion, the Report adheres to the principle of Materiality and identifies the DSD's material topics by using appropriate method of materiality assessment and demonstrating material topics in a matrix form. Area for enhancement to the Report was adopted by the DSD before issue of this opinion statement.

Responsiveness

Being a government department, the DSD has a public mission and sustainability is embedded in their operation strategy. They respond to the internal and external needs, therefore, they have been actively promoting initiatives around energy efficiency, health and safety, community engagement, and local procurement. The use of internet, social media platform, and workshop-type activities further enhance the interaction with their stakeholders. The DSD adequately communicates these responses in the Sustainability Report and demonstrate what it has decided to do in response to specific stakeholder concerns and interests, and also provide adequate indicators of associated changes in Sustainability Performance.

GRI Standards Reporting

The DSD provided us with their self-declaration of compliance with GRI Standards "In Accordance" – Core option. Based on our verification review, we are able to confirm that social responsibility and sustainable development disclosures in all three categories (Environmental, Social and Economic) are reported with reference to "In accordance" with the GRI Standards – Core option.

In our professional opinion the report covers the DSD's social responsibility and issues. Areas for enhancement of the Report were adopted by the DSD before the issue of this opinion statement.

Assurance Level

The Type 1 Moderate Level of Assurance provided in our review is defined by the scope and methodology described in this statement.

Responsibility

It is the responsibility of the DSD's senior management to ensure the information being presented in the Report is accurate. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of Lead Assuror, who are experienced in public services sector, and trained in a range of sustainability, environmental and social standards including GRI G3, GRI G3.1, GRI G4, GRI Standards, AA1000, HKEX ESG Guide, UNGC's Ten Principles, ISO 10002, ISO 14001, OHSAS 18001, ISO 45001 and ISO 9001, etc. British Standards Institution is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Chris Cheung
Regional Technical & Compliance Director

Verifier of the Report

Wilfred Chan Lead
Assuror

Hong Kong
24th Nov 2020

This statement was prepared in English and translated into Chinese for reference only.



昂船洲污水處理廠

Stonecutters Island Sewage
Treatment Works

本報告的電子版及回應表格可參閱以下網址：
The electronic version of the report and feedback form can be found at the following link:

https://www.dsd.gov.hk/TC/Publicity_and_Publications/Publicity/DSD_Sustainability_Reports/index.html (繁體中文版)
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服務查詢 Service Enquiries

渠務熱線 Drainage Hotline:
2300 1110

排污費服務查詢 Sewage Charges Customer Services Enquiries:
2834 9432

一般查詢 General Enquiries:
2877 0660

電郵地址 Email Address:
enquiry@dsd.gov.hk

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