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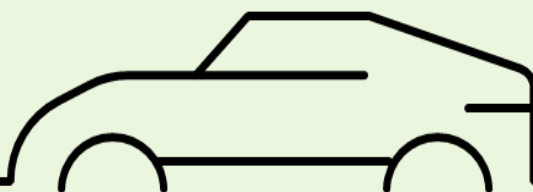
Transport Department

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# Environmental Report

## 2022

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## ***FOREWORD***

The Transport Department is fully committed to environmental protection. We have been working whole-heartedly to improve air quality by taking proactive measures to mitigate the air pollution generated from our transport system. We have also exerted influence over our business partners in the transport sector, for example, franchised bus, public light bus and taxi operators, to encourage them to join us in pursuing the wide range of measures aimed at protecting the environment.

We will continue to strive for achievement of our Departmental Vision, viz. *“we will provide the world’s best transport system which is safe, reliable, efficient, **environmentally friendly** and satisfying to both users and operators”*. In this issue of our Environmental Report we aim to advise the readers what have been done in 2022 by or through the Transport Department to improve the quality of our living environment.



## ***ABOUT THIS REPORT***

This Environmental Report covers the period from 1 January 2022 to 31 December 2022. It is published in electronic version on our web site for the sake of reducing paper consumption. Its target readers are members of the general public. The readers will be informed of the business of our Department, the efforts we have made and the measures we have taken to protect the environment.

Any suggestions or  
comments on this  
report are most  
welcome and can  
be sent to  
[tdenq@td.gov.hk](mailto:tdenq@td.gov.hk).



## ***ABOUT TRANSPORT DEPARTMENT***

Our Department is responsible for the implementation of the Government's transport policy under the following 5 programme areas:

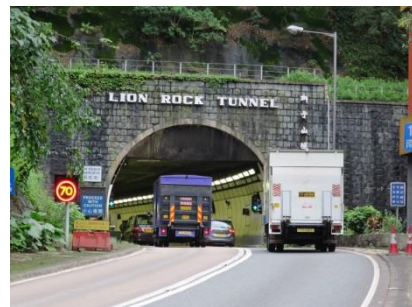
- (i) Planning and Development;
- (ii) Licensing of Vehicles and Drivers;
- (iii) District Traffic and Transport Services;
- (iv) Management of Transport Services; and
- (v) Transport Services for People with Disabilities.

Our headquarters are located in the South Tower of West Kowloon Government Offices in Yau Ma Tei. We also have some 20 sub-offices accommodated in other government offices or private commercial buildings. As at the end of 2022, we had an establishment of 36 directorate posts and 1,871 non-directorate posts. In our daily business, we manage or operate the following main types of facilities:

- (i) public transport interchanges/termini;
- (ii) vehicle inspection centres;
- (iii) driving test centres;
- (iv) traffic lights;
- (v) escalators;
- (vi) intelligent transport systems; and
- (vii) roads and pedestrian facilities.



Besides other government departments, our business partners include the operators of franchised and non-franchised buses, tram, taxi, ferry and public light buses. We also run maintenance, operation and management contracts with the various tunnel and Government carpark operators.



## ***ENVIRONMENTAL GOAL***

Our environmental goal is to provide an environmentally friendly transport system in Hong Kong.



## ***ENVIRONMENTAL POLICY***

We are committed to providing a transport system in an environmentally acceptable manner to align with the sustainable development of Hong Kong.

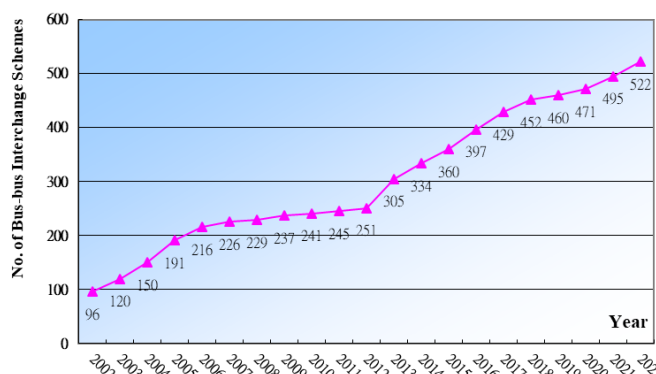
## ***ENVIRONMENTAL OBJECTIVES***

### **Environmental Objective No. 1 - Reduction in Vehicular Traffic**

In managing the public transport system, we coordinate the roles played by the various public transport modes, including the rail, bus, tram, public light bus, taxi, ferry etc., so as to achieve the highest possible overall efficiency. This includes rationalizing public transport services to improve accessibility whilst avoiding duplication and raising the level of service to improve attractiveness. In the end, it helps to reduce vehicular traffic and mitigate air pollution. With these benefits in mind, we made our best efforts to enhance the efficiency of the transport system in the following ways:

#### **(i) Implementation of public transport interchange schemes**

The introduction of interchange schemes enables passengers to make the most efficient use of the transport system across different modes. They include bus-rail interchange, green minibus-rail interchange, taxi-rail interchange, green minibus-bus interchange, tramway-bus interchange and bus-bus interchange schemes. The numbers of bus-bus interchange schemes implemented since 2002 are shown in the graph on the right.



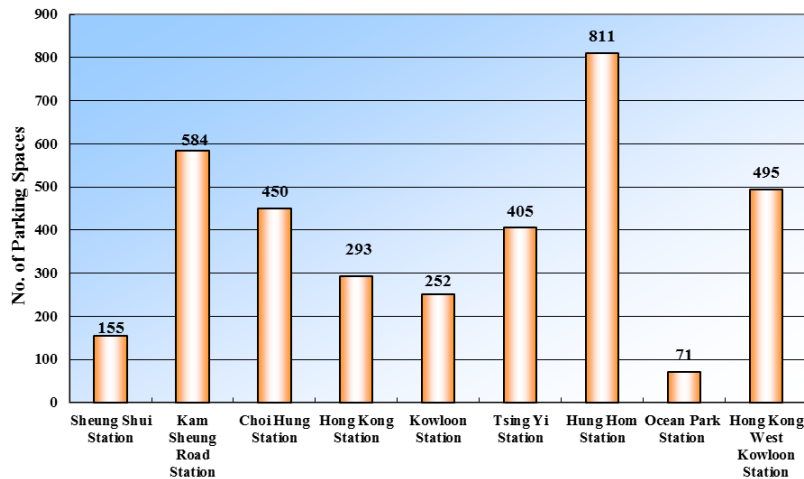


**(ii) Rationalization of bus routes and stops**

This process includes amalgamation, truncation and modification of bus routes, re-location of bus stops and adjustment of bus schedules to match the prevailing passenger demands. The resulting arrangements can help to reduce traffic congestion. Between 2013 and 2022, the cumulative reduction of the number of bus trips in the busy corridors in Central, Causeway Bay and Yau Tsim Mong was 7,310.

**(iii) Provision of park-and-ride (PnR) facilities**

These facilities are carpark provided near railway stations. People can shorten their private car trips and switch to the rail for the major part of their journeys. The numbers of parking spaces provided in some PnR facilities are shown in the graph below.



**(iv) Fostering bicycle-friendly environment**

We aim to enable the public to use bicycles for recreational or short-distance commuting purposes, thereby reducing the use of mechanized transport. Where road safety considerations and circumstances permit, we would explore the feasibility to enhance our cycle tracks network and cycle parking facilities in the New Territories, as well as to provide comprehensive cycling facilities in



new development areas and new towns under the collaboration with other departments. As at the end 2022, there are a total of about 250km long of cycle tracks and a total of about 41,000 cycle parking spaces managed by our Department in Hong Kong.

## **Environmental Objective No. 2 – Reduction of Vehicular Emissions**

We have been implementing the following series of measures to reduce vehicle emissions so as to better protect public health. Between 2013 and 2022, the concentrations of major air pollutants recorded at the roadside air quality monitoring stations have been on a declining trend: the annual average concentrations of respirable suspended particulates (RSP/PM10), fine suspended particulates (FSP/PM2.5), nitrogen dioxide (NO<sub>2</sub>), and sulphur dioxide (SO<sub>2</sub>) have dropped by 49%, 51%, 47% and 64% respectively.

### **(i) Tightening vehicle emission standards for motor vehicles**

Tightened the emission standards for first registered diesel private cars and motorcycles to California LEV III from October 2017 and Euro 4 from October 2020 respectively, and for first registered light buses (with a design weight of more than 3.5 tonnes) and buses (with a design weight of not more than 9 tonnes) to Euro VI from 1 March 2021. Besides, the Government launched an incentive cum regulatory programme in October 2020 to progressively phase out some 40,000 Euro IV Diesel Commercial Vehicles (DCVs) by the end of 2027 and offers ex-gratia payment to eligible vehicle owners whose DCVs are required to be phased out.

### **(ii) Reducing emissions from franchised buses**

In order to reduce emissions from the franchised buses, the Government is conducting a trial of retrofitting Euro V bus models with enhanced selective catalytic reduction systems (SCR) so as to review the technical feasibility of the retrofit as well as the emission reduction performance of the enhanced SCR systems under the local driving and operation conditions.



Subject to the outcome for the trial and resources required, the Government would consider installing relevant emission

reduction devices onto other eligible buses.

**(iii) Franchised bus low emission zones (FBLEZs)**

The emission requirements of franchised buses plying through the FBLEZs in Central, Causeway Bay and Mong Kok were tightened to Euro V from 31 December 2019. The franchised bus companies has been regularly reporting to the Environmental Protection Department and Transport Department regarding the deployment of buses to the FBLEZs.

**(iv) All private cars, taxis, light buses, goods vehicles, buses and special purpose vehicles**

We required them to pass smoke or emission tests during their annual inspection.



**Smoke Test**

**Environmental Objective No. 3 - Use of Alternative Fuel Vehicles to replace Diesel Vehicles**

To continuously improve roadside air quality, the Government implemented a series of measures and ex-gratia payment schemes to phase out old diesel commercial vehicles. Besides, we took part jointly with other Government departments in the promotion of “cleaner” fuel such as liquefied petroleum gas (LPG), hydrogen or electricity in place of diesel. Our efforts include the implementation of the following:

**(i) Conversion of diesel taxis to LPG taxis and introduction of alternate fuel**

As at the end of 2022, about 99% (i.e. 18,151 Nos.) of the taxis were LPG taxis. Hybrid taxis have started serving Hong Kong since 2013. In addition, the trial on new generation pure electric taxis (“e-taxis”) commenced in September 2022. We also facilitate the Environmental Protection Department (EPD)



to implement trial scheme of e-taxis, by identifying suitable existing taxi stands

for setting up quick charging facilities to promote wider use of e-taxis.

**(ii) Set-up of LPG Refilling Stations**

We worked jointly with other departments to facilitate the setting up of LPG refilling stations at convenient locations. Up to end 2022, there were a total of 70 LPG refilling stations in Hong Kong.

**(iii) Phasing out old diesel commercial vehicles (DCV)**

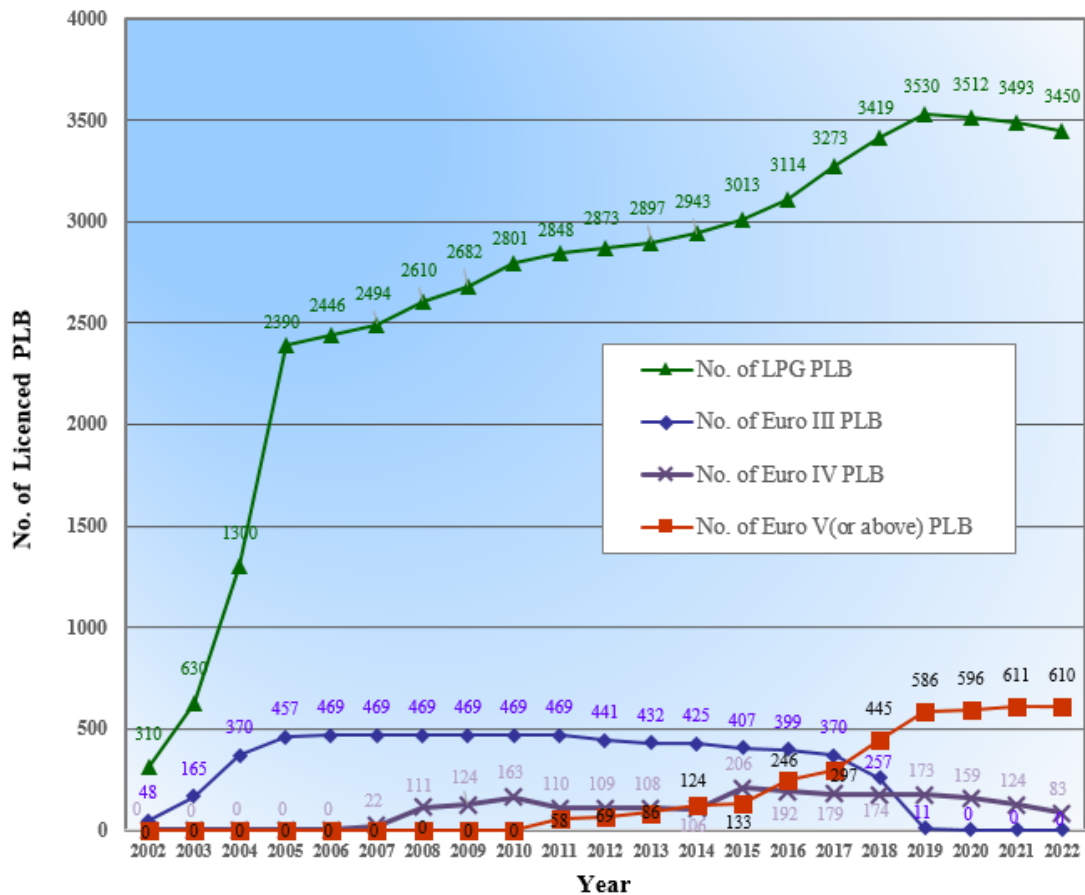
To continue improving the roadside air quality, further to the phasing out of 80 000 pre-Euro IV DCVs, the Government launched in October 2020 the programme for phasing out Euro IV DCVs (“the Programme”) to progressively phase out about 40 000 Euro IV DCVs by the end of 2027, among which about 16 000 DCVs have been phased out by the end of 2022. With the Programme, the high polluting DCVs have been removing from the road gradually. Besides, newer DCVs have a service life limit of 15 years, ensuring that the DCVs will be phased out in due course.

**(iv) Programme for phasing out Euro IV diesel Public Light Buses and pilot scheme for electric Public Light Buses**

The Programme was launched in October 2020 to phase out Euro IV DCVs which also covered the diesel public light buses (PLBs). Moreover, we facilitate the EPD to implement the pilot scheme for electric Public Light Buses (“e-PLB”), including providing operational advices for identifying suitable PLB terminus or public transport interchanges (“PTIs”), and conducting site visit to confirm the electricity supply and suitability of installation and operation of charging facilities at the concerned terminus or PTIs.

As at end of 2022, there were 3,450 licensed LPG PLBs, 83 licensed Euro IV diesel PLBs, and 610 licensed EuroV or above diesel PLBs. The numbers of licensed LPG PLB, Euro III, IV and V (or above) diesel PLBs since 2002 are shown in the graph below.





**(v) Trial of Hydrogen Fuel Cell (HFC) Double-deckers and heavy vehicles**

The Chief Executive's 2022 Policy Address mentioned to progressively commence trials of HFC double-deckers bus and heavy vehicles in 2023, and formulate the long-term strategies for the application of hydrogen energy in road transport by 2025. To keep pace with the development trend of hydrogen fuel adoption, the HKSAR Government set up the Inter-departmental Working Group on Using Hydrogen as Fuel (the Working Group) in 2022, to coordinate preparation works of bureaux/departments for using hydrogen as fuel locally, with a view to encouraging local adoption of hydrogen energy. The Transport Department is a member of the Working Group and provide advice on the assessment of HFC vehicle safety. The first key task of the Working Group is to progressively commence the trials of HFC double-deckers and heavy vehicles in phases, taking local circumstances into account. The Working Group will review and assess applications of trial projects, and advise on aspects such as safety and planning, in order to aid the relevant trades to commence their trials early.

**(vi) Introduction of electric buses**

Since 2015, the Government has fully subsidised franchised bus companies (FBCs) to purchase a total of 36 electric single-deck buses and related charging facilities for trial on a number of routes, with a view to assessing their operational performance under local road circumstances. With the experience accumulated in the trials, currently some FBCs have been progressively introducing electric double-deck buses at their own cost.

The first electric double-deck bus in Hong Kong has already commenced passenger service trials starting from mid-2022. Preliminary results showed stable operational performance of the bus. In this connection, FBCs would progressively deploy more electric double-deck buses for commence operations in 2023. The Government also provides policy support for FBCs to set up charging facilities in new and existing bus depots.

**Environmental Objective No. 4 - Pedestrian & Traffic Calming Schemes**

These schemes have been recognized by the public since we first introduced them to busy areas like Causeway Bay in 2000. The cumulative numbers of pedestrian schemes implemented since 2002 are shown in the graph on the right.



Before improvement



After improvement

**Traffic Calming Street: Jaffe Road (near O'Brien Road)**

## **Environmental Objective No. 5 - Enhancing Walkability**

### ***Fostering “Walk in HK”***

The Government has been promoting “Walk in HK” with a view to encouraging people to walk more and ride less. Promoting walkability is not only a key element in the Government’s effort to combat climate change, but will also help encourage a healthy lifestyle, strengthen community interaction and build an age-friendly environment. To develop Hong Kong into a walkable city, we formulated the overall walkability strategy for Hong Kong in December 2020. The strategy enshrines the value of placing high priority on pedestrians in transport planning, fosters a pedestrian-friendly environment, and promotes walking as a form of sustainable urban mobility to bring about transport, social, environmental, economic and health benefits. After testing out new initiatives for walkability enhancement measures, we plan to bring them forward for territory-wide application along the four pillars of walkability, namely “Make it smart”, “Make it connected”, “Make it enjoyable” and “Make it safe”. Besides, we have developed a pedestrian planning framework, which integrates traffic, transport, land use and development projects. We have sought opportunity to apply the pedestrian planning framework for pedestrian planning in collaboration with relevant departments in the planning of new development areas and in suitable built-up areas.

#### **(i) “Make it smart”**

To “make it smart” by providing user-friendly information on walking routes, we implemented a pilot pedestrian wayfinding signage system in Tsim Sha Tsui in July 2018, with reference to overseas experiences, providing legible and consistent pedestrian information to facilitate better pedestrian route planning and to make pedestrian journey smart. We developed a new pedestrian wayfinding system having regard to the experience gained from the pilot system. We are reviewing the strategy for territory-wide implementation of the system.

#### **(ii) “Make it connected”**

To “make it connected” by enhancing the pedestrian networks, we are endeavouring to take forward initiatives to provide a continuous east-west walkway from Wan Chai to Sheung Wan through effective linkages between the existing walkway systems in Central, Admiralty and Wan Chai, which include the footpath widening on Jaffe Road between Tonnochy Road and Canal Road West and possible provision of a pedestrian-friendly link between Admiralty and Wan Chai Government Offices redevelopment. Moreover, we continued taking forward various hillside escalator links and elevator systems (HEL) projects. On

the basis of the revised assessment mechanism, we conducted assessment for 114 new HEL proposals which were received up to Q3 2017, through a due process for initial screening and proposals prioritisation. With the support obtained from local consultations, we were implementing the selected priority projects.

**(iii) “Make it enjoyable”**

To “make it enjoyable” by making walking a pleasant experience, about 750 non-essential traffic signs and 24km of pedestrian railings in the territory were removed as at the end 2022 to reclaim space for pedestrians at ground level. Furthermore, we have been taking forward the provision of covers to walkways connecting to public hospitals, and embarked on a plan to provide covers to walkways nominated by the 18 District Councils. We also reviewed and relaxed relevant criteria set in the Transport Planning and Design Manual for provision of covers to walkways.

**(iv) “Make it safe”**

To “make it safe” by providing a safe and quality pedestrian environment, we implemented trials of low speed limit zone in 2020 and raised crossing with colour dressing in 2021 at Wai Chi Street, Sham Shui Po to further calm the traffic, thus enhancing pedestrian safety. We further implemented low speed limit zones in various streets, including Tong Yam Street in Sham Shui Po, Muk Hung Street in Kowloon City, On Shun Street and Po Shu Lane in Yuen Long, a section of Man Lai Road in Shatin, and sections of Tai Hong Street and Lei King Road in Eastern, progressively from end 2022. We would review and update the relevant planning standards and design in relation to pedestrian environment and facilities. Examples include enhanced standards for footway widths, pedestrian crossing facilities, and traffic calming street design, etc.

We will continue to work towards the aim of enhancing the walkability of our city for Hong Kong people to commute, connect and enjoy, making walking an integral part of Hong Kong as a sustainable city.

## **Environmental Objective No. 6 - Efficient Use of Road Space through Application of Advanced Technologies**

We aim to reduce the journey times of motorists, and hence the consumption of vehicle fuel and emission of air pollutants from vehicles, through the enhancement of the efficiency of the transport network by promoting the application of intelligent transport systems in the following aspects:

### **(i) Provision of Transport Information through Internet and Mobile Applications**

We have been providing traffic and transport information through the Internet on our Homepage for the motorists and passengers to plan their journeys and make better use of the road network and public transport services.

In July 2018, we launched an integrated mobile application "HKeMobility" to replace TD's 3 previous mobile applications, viz. "Hong Kong eRouting", "Hong Kong eTransport" and "eTraffic News". In March 2021, we enhanced the user interface of the "HKeMobility" mobile application with personalised traffic and public transport information. Public can conveniently and swiftly search for routes, journey time and fares of different transportation modes and obtain real-time traffic news which facilitate commuting and route planning by the public. The traffic and transport information was also disseminated to the public through DATA.GOV.HK.

As at the end of 2022, the accumulated no. of download of "HKeMobility" was over 2.6 million and the average daily hit rate in Year 2022 was about 50,000.



### **HKeMobility Mobile Application**



**(ii) Dissemination of Real-time Traffic Information on Roads**

To enhance smooth traffic flow and alleviate traffic congestion, we provided efficient traffic monitoring and incident management by installation of traffic control and surveillance (TCS) facilities in tunnels and Tsing Ma Control Area, Tsing Sha Control Area, Kong Sham Western Highway, Tuen Mun Road, Tolo Highway, Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road, Tuen Mun-Chek Lap Kok Link and Cross Bay Link. Real-time traffic information was provided to motorists via the TCS facilities, such as variable message signs, lane control signals, etc.



Journey Time Indication System



Speed Map Panel

To facilitate the public to plan their journeys and select suitable routes or transport modes, we provided Journey Time Indication System (JTIS) at major divergent points towards the three cross-harbour tunnels to show the journey times from the specific divergent points to the exit portals of various cross-harbour tunnels. We also provided Speed Map Panels (SMP) and JTIS at critical divergent points of strategic routes in the New Territories to show the real-time traffic conditions on the roads ahead towards Kowloon. As at the end of 2022, there were 28 sets of JTIS and 5 sets of SMP in Hong Kong in operation. Installation of additional 2 sets of JTIS before the

critical divergent points at major roads over the territory was in progress for completion by end 2023.

We have developed a Traffic and Incident Management System (TIMS) to enhance the efficiency and effectiveness in managing traffic and transport incidents and in disseminating traffic and transport information to the public. The TIMS was commissioned in 2017. With the benefit of more real-time traffic information, motorists can better plan their journeys ahead to avoid traffic congestion, thus effectively reducing their journey times.

Since March 2011, we have been disseminating real-time traffic data for free download and value-added re-use by the public through DATA.GOV.HK. We completed the installation of about 1200 traffic detectors on strategic routes and major roads in 2020 to enhance the coverage of real-time traffic information.

**(iii) Operation of Area Traffic Control (ATC) Systems**

The Area Traffic Control (ATC) system optimises the utilisation of road capacity, minimizes traffic delay and reduces the journey time of road users through optimization of traffic signals. Due to better coordination of traffic signals resulting in less stop and start activities, fuel consumption and emissions of vehicles are also reduced. As at the end of 2022, out of the 1978 road junctions operating with traffic signals in the territory, 1955 were under the control of ATC system.



**Environmental Objective No. 7 - Saving Electricity and Maintaining Good Indoor Air Quality at our Facilities**

***Saving Electricity at our Facilities***

Our facilities that have major consumption of electricity are broadly divided into 3 categories for the sake of formulating our electricity saving measures:

**(i) Category 1 including all our offices, vehicle inspection centres, and driving test centres**

We adopted green office management to reduce electricity consumption in this category of facilities.



Transport Department  
Vehicle Examination  
Complex

- (ii) **Category 2 including traffic lights, CCTVs, variable message signs, intelligent transport systems and journey time indication systems, etc, that are in operation round the clock for the purpose of regulating and monitoring road traffic**

To reduce power consumption, light emitting diode (LED) lights were adopted in this category of road traffic facilities.



- (iii) **Category 3 including escalators and public transport interchanges/terminus that serve pedestrians and public transport passengers**

There is room for energy-saving but we have to strike a balance between the saving of electricity and the service to the public. The measures adopted to reduce electricity consumption by the facilities in this category include the following:



- Turning off escalators at the end of the operating period
- Turning off the ventilation and part of the lighting of the public transport interchanges/termini as soon as the public transport services cease every night
- Using lighting of low power consumption rating
- Maintaining the ventilation systems properly for them to work efficiently in respect of power consumption

The situation of electricity consumption of the above category 1<sup>1</sup> and 3 facilities since 2010 is shown in the following table:

<b>Year</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Electricity consumed (kWh)</b>	3,326,832	3,186,493	2,986,255	2,652,430	2,776,030	2,716,586
<b>Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Electricity consumed (kWh)</b>	2,787,039	3,037,216	2,725,799	2,558,874	2,586,834	5,662,572
<b>Year</b>	<b>2022</b>					
<b>Electricity consumed (kWh)</b>	5,711,139					

### ***Maintaining Good Indoor Air Quality at our Facilities***

In 2003, EPD launched the Indoor Air Quality (IAQ) Certification Scheme to promote and commend good IAQ management practice.

The following eligible premises of TD have joined the IAQ Certification Scheme and obtained a “Good/Excellent” class of indoor air quality in 2022:

1. Queensway Government Offices, 66 Queensway, Hong Kong
2. Harbour Building, 38 Pier Road, Central, Hong Kong
3. Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong
4. Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
5. Central-Wan Chai Bypass Tunnel Administration Building, Administration Building, Oil Street, North Point, Hong Kong
6. Aberdeen Tunnel Administration Building, Aberdeen Tunnel Administration Building, Wong Chuk Hang, Hong Kong
7. Cheung Sha Wan Government Offices, 303 Cheung Sha Wan Road, Cheung Sha Wan, Kowloon
8. Mong Kok Government Offices, Kowloon, 30 Luen Wan Street, Mong Kok, Kowloon
9. West Kowloon Government Offices South Tower, 11 Hoi Ting Road, Yau Ma

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<sup>1</sup> Excluding electricity consumption in joint-user government buildings which are reported by the Government Property Agency

- Tei, Kowloon
10. Cross Harbour Tunnel Administration Building, Cross Harbour Tunnel, Hung Hom, Kowloon
  11. Kai Tak Tunnel Administration Building, Kai Tak Tunnel, Kowloon City, Kowloon
  12. Kowloon East Government Offices, 12 Lei Yue Mun Road, Kwun Tong, Kowloon
  13. Eastern Harbour Crossing Administration Building, Eastern Harbour Crossing, New Kowloon Inland Lot 6047, Cha Kwo Ling East, Kwun Tong, Kowloon
  14. Lung Shan Tunnel and Cheung Shan Tunnel Administration Building, Wo Keng Shan Road, Ta Kwu Ling, New Territories
  15. North District Government Offices, 3 Pik Fung Road, Fanling, New Territories
  16. Scenic Hill Tunnel and Airport Tunnel Administration Building, 38 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road, Lantau Island, New Territories
  17. Tuen Mun Chek Lap Kok Tunnel Administration Building, 1 Ho Wo Street, Tuen Mun, New Territories
  18. Tuen Mun Chek Lap Kok Tunnel Main Control Building, 20 Tuen Mun Chek Lap Kok Tunnel Road, Tuen Mun, New Territories
  19. Transport Department Vehicle Examination Complex, 18 Sai Tso Wan Road, Tsing Yi, New Territories
  20. Tsing Sha Control Area-Shatin Administration Building, 668 Tsing Sha Highway, Shatin, New Territories
  21. Sha Tin Government Offices, 1 Sheung Wo Che Road, Shatin, New Territories
  22. Lion Rock Tunnel Administration Building, Lion Rock Tunnel, Sha Tin, New Territories
  23. Tate's Cairn Tunnel Administration Building, Siu Lek Yuen Road, Shatin, New Territories
  24. Tower II of Grand Central Plaza, 138 Shatin Rural Committee Road, Sha Tin, New Territories
  25. Tseung Kwan O Tunnel Administration Building, 1 Tseung Kwan O Tunnel Road, New Territories





## Environmental Objective No. 8 - Green Office Management

We always keep abreast of the green practices recommended by the Environmental Protection Department and Electrical & Mechanical Services Department and introduce them to our offices whenever appropriate. Our aim is to reduce paper and electricity consumption as far as possible and to use recycled materials as much as possible. The latest green office practices adopted by us are summarized below.

### *Paper-reduction Measures*

- Sharing documents via the Local Area Network and the Internet by uploading reports, circulars and other documents on the Transport Department Intranet and Internet website
- Using e-mails and e-memos within the department and, as far as practicable, when communicating with other departments and the public
- Reducing the font size of the letters and characters, and the line spacing for drafting, and preview of documents before final print
- Issuing tender documents in electronic format
- Printing and photocopying on both sides of paper and on used paper
- Re-using envelopes and loose-minute jackets
- Sending unclassified documents without using envelopes



- Sending electronic seasonal greeting cards
- Sending no originals when these are sent by fax
- Using no covering sheets when documents are faxed
- Using electronic devices to carry departmental publications and consultancy study reports instead of hard copies
- Monitoring the quantity of paper consumed
- Adopting e-Filing system where appropriate

The situation of paper consumption since 2010 is shown in the following table:

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>A4 Paper equivalent (reams)</b>	27,477	29,464	28,426	28,732	28,804	32,615	28,731	30,982	34,076	30,910	29,854	35,158	34,069

#### *Energy-saving Measures*

- Monitoring and promoting energy-saving measures (e.g. switching off air-conditioning units, computers, etc.) by designated staff
- Setting the air conditioning temperature to 25.5°C in the summer months
- Reminding all staff to switch off lights when not in office
- Turning off unnecessary lighting when the area is not in use and affixing “Save Energy” stickers near switches to remind staff to save energy
- Turning off some air-conditioning units when the occupancy is low (e.g. after normal office-hours)
- Reminding all staff to set all computers and office equipment to energy-saving mode during office hours and to turn them off after use
- Adopting an open plan office concept through the use of half-glass walls to allow light to pass through when designing the layout of a new office
- Using T8 fluorescent lamps to replace T10 fluorescent lamps for energy saving
- Promoting walking up and down the floors instead of using lifts



#### *Recycling Measures*

- Providing green boxes for the collection of waste paper and arranging with recyclers to collect waste paper for recycling

- Collecting used printer toner cartridges for recycling
- Promoting the use of recycled paper

*Other Measures*

- Practising no-smoking policy within all our offices



**Environmental Objective No. 9 - Staff Awareness**

We strive to develop a green culture within the Department and promote environmental consciousness. To this end we arranged colleagues to attend relevant seminars and programmes on environmental protection, and uploaded relevant information to our intranet for colleagues' reference.

## ENVIRONMENTAL ACHIEVEMENTS IN 2022

The progress/achievements versus the targets for 2022 are summarized in the following table.

Objectives	2022 Targets	Progress & Achievements
Reduction in Vehicular Traffic	(i) To continue the existing bus-rail interchange schemes (ii) To continue the existing GMB-rail interchange schemes (iii) To continue the existing taxi-rail interchange schemes (iv) To rationalize more bus routes in busy area and on busy road	(i) The details of bus-rail interchange schemes are as follows: <ul style="list-style-type: none"> <li>• Passengers travelling on MTR Tung Chung Line using adult Octopus were offered \$1 fare discount for interchanging with New Lantau Bus (NLB) routes 37, 37H, 37P, 37M, 38, 38X, 39M, N37 and N38 at Tung Chung Station or vice versa;</li> <li>• Passengers travelling on MTR Disneyland Resort Line or Tung Chung Line using adult Octopus were offered \$1 fare discount for interchanging with CTB route B5 at Disneyland Resort or Sunny Bay Stations or vice versa. Besides, passengers could also enjoy free interchange on MTR feeder bus routes K12, K14, K17 and K18 which were operated by KMB at Tai Po Market Station or vice versa<sup>2</sup>;</li> <li>• To promote Tuen Ma Line, a “Special Interchange Discount” in collaboration with franchised bus</li> </ul>

<sup>2</sup> MTRCL offers free transfer on MTR bus routes for Tuen Ma Line and Light Rail passengers in North-west Transit Service Area at the moment.

Objectives	2022 Targets	Progress & Achievements
		<p>operators was introduced until 1 January 2022. Adult Octopus users were offered \$1 fare discount for interchanging between designated MTR stations and eighteen franchised bus routes (CTB routes 20, 22, 22M and KMB routes 3B, 5, 5A, 5C, 5D, 5P, 6F, 11, 11K, 11X, 12A, 15X, 21, 26 and 28), while other Octopus holders (including children, elderly, persons with disabilities and students) were offered \$0.5 fare discount. Also, with effect from 2 January 2022, passengers travelling on MTR Tuen Ma Line using adult Octopus were offered \$0.6 fare discount for interchanging with CTB route 22 and 22M at Kai Tak or Sung Wong Toi Stations or vice versa. Besides, with effect from 28 February 2022, passengers travelling on MTR Tuen Ma Line using adult Octopus were offered \$1 fare discount for interchanging with CTB route E23 and E23A at Sung Wong Toi Station; and</p> <ul style="list-style-type: none"> <li>• To promotion the extension of East Rail Line to Admiralty station, adult Octopus users were offered \$2 fare discount for interchanging between MTR at Exhibition Centre stations and five franchised bus routes (CTB routes 1M, 25A, 722, 780 and 788). The</li> </ul>



Objectives	2022 Targets	Progress & Achievements
		<p>promotions for Route 722, 780 and 788 were terminated from 15 November 2022. Besides, adult passengers could also enjoy \$1.0 discount for interchanging KMB route 78A at Fanling Station or vice versa.</p> <p>(ii) The details of GMB-rail interchange schemes are as follows:</p> <ul style="list-style-type: none"> <li>• Passengers were offered \$0.3 to \$3.0 fare discount for interchanging between over 500 GMB routes and MTR; and</li> <li>• To promote Tuen Ma Line, a “Special Interchange Discount” in collaboration with GMB operators was introduced until 1 January 2022. Adult Octopus users were offered \$1 fare discount for interchanging between designated MTR stations and six GMB routes 25A, 25B, 26, 27M, 28MS and 49, while other Octopus holders (including children, elderly, persons with disabilities and students) were offered \$0.5 fare discount. After the promotion, all passengers interchange between MTR and the above six GMB routes could enjoy \$0.3 fare discount.</li> </ul>

Objectives	2022 Targets	Progress & Achievements
		<p>(iii) The details of taxi-rail interchange schemes are as follows:</p> <ul style="list-style-type: none"> <li>• From 16 December 2022 to 30 November 2023, taxi passengers were offered 30% fare discount on Airport Express by booking taxi on the designated taxi hailing app to Hong Kong, Kowloon or Tsing Yi Stations.; and</li> <li>• Passengers were offered a taxi fare rebate equivalent to 30% of the Airport Express ticket fare by purchasing the Airport Express ticket from Airport to urban direction at the original price on the designated taxi hailing app, and then take taxi to transfer to the destination.</li> </ul> <p>(iv) Between 2013 and 2022, the cumulative reduction of the number of bus trips in the busy corridors in Central, Causeway Bay and Yau Tsim Mong was 7,310.</p>
Reduction of Vehicular Emissions	(i) In the ex-gratia payment scheme to phase out Euro IV Diesel Commercial Vehicles, about 6,000 vehicles of this category are expected to be phased out within 2022.	(i) The Government has been implementing an ex-gratia payment scheme to phase out Euro IV DCVs since 2020. About 6 600 concerned vehicles were phased out in 2022.
Use of Alternative Fuel Vehicles to Replace Old	(i) To phase out old diesel commercial vehicles (ii) To continue to encourage more owners to have	(i) The Government launched in October 2020 an ex-gratia payment scheme to progressively phase out about 40 000

Objectives	2022 Targets	Progress & Achievements
Diesel Vehicles	their diesel Public Light Buses converted to LPG, Euro V or above, or electric ones	<p>Euro IV DCVs, among which about 16 000 vehicles have been phased out by the end of 2022. The Administration limited the service life of DCVs newly registered on or after 1 February 2014 to 15 years to ensure the DCVs will be phased out in due course.</p> <p>(ii) As at the end of 2022, there were 3,450 licensed LPG, 83 licensed Euro IV and 610 licensed Euro V or above PLBs.</p>
Use of New Energy	<p>(i) To promote the use of new energy in private cars and commercial vehicles</p> <p>(ii) To take part in the Inter-departmental Working Group on Using Hydrogen as Fuel to promote the development of hydrogen transport</p> <p>(iii) To take forward the trial of hybrid ferries under the Vessel Subsidy Scheme</p>	<p>(i) In order to facilitate the import of electric vehicles in Hong Kong, TD issued revised guidelines on “Vehicle Construction Approval Requirements for Electric Vehicles” in July 2022 to establish technical requirements for electric vehicles in Hong Kong. Moreover, to facilitate the parallel/individual imported electric vehicles model to be imported to Hong Kong, TD arranged facilitation measure for the trade to introduce electric vehicles in bulk on one hand and to ensure such electric vehicles are in compliance with relevant technical requirements on the other hand.</p> <p>(ii) The number of registered electric private cars and electric commercial vehicles increased from 27 358 and 378 in 2021 to 46 565 and 483 in 2022, respectively.</p>

Objectives	2022 Targets	Progress & Achievements
		<p>(iii) The Government has set up the Inter-departmental Working Group on Using Hydrogen as Fuel in 2022 to coordinate preparation works of bureaux/departments for using hydrogen as fuel locally. Transport Department assists in encouraging local adoption of hydrogen energy, and provided advice on the assessment of hydrogen fuel cell vehicle safety .</p> <p>(iv) Under Phase I of the Vessel Subsidy Scheme, the two operators of ferry services for outlying islands signed the shipbuilding contracts with the shipbuilders in mid-2022 to procure four hybrid vessels for trial starting from Q3 2024 the earliest.</p>
Pedestrian Schemes	(i) To explore opportunities for the implementation of traffic calming schemes to meet public needs	(i) The Administration continued to look for opportunities to improve overall pedestrian environment.
Enhancing Walkability	<p>(i) To continue identify suitable locations for territory-wide application of walkability enhancement measures</p> <p>(ii) To continue the implementation of provision of covers to walkways connecting public hospitals and other selected walkways</p>	<p>(i) Target achieved. Walkability enhancement measures are being implemented progressively at the identified suitable locations.</p> <p>(ii) Construction of seven walkway covers, where were nominated by District Councils, were completed. Design work of the walkway covers for 5 public hospitals are in progress.</p>

Objectives	2022 Targets	Progress & Achievements
Efficient Use of Road Space through Application of Advanced Technologies	<ul style="list-style-type: none"> <li>(i) To launch a new version of the “HKeMobility” application</li> <li>(ii) To continue the collection and dissemination of real-time traffic data through HKeMobility and DATA.GOV.HK for free download and value-added re-use by the public</li> <li>(iii) To operate, maintain and enhance the Traffic and Incident Management System</li> <li>(iv) To conduct survey to gauge the performance of Area Traffic Control Systems and identify improvements if appropriate</li> <li>(v) To complete the installation of Journey Time Indication Systems</li> <li>(vi) To progressively implement the Free-Flow Tolling System at government tolled tunnels and the Tsing Sha Control Area</li> <li>(vii) To study on “congestion charging” at government tolled tunnels</li> </ul>	<ul style="list-style-type: none"> <li>(i) Target achieved.</li> <li>(ii) Target achieved, collection and dissemination of real-time traffic data to be continued.</li> <li>(iii) Target achieved.</li> <li>(iv) Car journey time surveys were conducted in the 3<sup>rd</sup> and 4<sup>th</sup> quarters and local improvements have been carried out if necessary.</li> <li>(v) Completed installation 11 additional sets of Journey Time Indication Systems.</li> <li>(vi) In progress.</li> <li>(vii) In progress.</li> </ul>
Saving Electricity and Maintaining Good Indoor Air Quality at our facilities	<ul style="list-style-type: none"> <li>(i) To contain the electricity consumption of our non-office facilities to the level of 2021 as far as possible.</li> </ul>	<ul style="list-style-type: none"> <li>(i) Electricity consumption of our non-office facilities in 2022 was 1.77 million kWh, i.e., comparable to the consumption in 2021.</li> </ul>

Objectives	2022 Targets	Progress & Achievements
	<p>(ii) To contain the electricity consumption of our office facilities<sup>3</sup> to the level of 2021 as far as possible.</p> <p>(iii) To maintain a “Good/Excellent” class of indoor air quality at our premises eligible to join the IAQ Certification Scheme.</p>	<p>(ii) Electricity consumption of our office facilities in 2022 was 3.94 million kWh, showing an modest increase of 1.3% as compared with the consumption in 2021. This rise in electricity consumption attributed to the commissioning of the mega Transport Department Vehicle Examination Complex (TDVEC) in Tsing Yi in 2021. In January 2022, the Vehicle examination services, previously conducted in To Kwa Wan Vehicle Examination Centre, was relocated to the new Vehicle Examination Complex.</p> <p>The TDVEC is a multi-storey facility specifically designed for vehicle examinations. In addition to providing of extra inspection lanes, it incorporates state-of-the-art facilities such as dynamometers, a tilt test platform, a brake test lane, and a parking brake test ramp, etc., These enhancements were necessary to accommodate the growing demand for vehicle examination due to the increased number of vehicles. Consequently, the operational requirements of the TDVEC led to higher electricity consumption.</p>

<sup>3</sup> Excluding electricity consumption in joint-user government buildings which are reported by the Government Property Agency.

Objectives	2022 Targets	Progress & Achievements
		<p>In addition, due to the impact of the COVID-19 pandemic, Transport Department suspended the driving test services during the outbreak. In April 2022, the department resumed the road test services for all vehicle types and arranged make-up road tests for a large number of affected candidates. As a result, the driving test centers also needed to extend their service hours.</p> <p>(iii) Target achieved.</p>
Green Office Management	<p>(i) To continue with the green office management practices</p> <p>(ii) To contain the paper consumption to the level of 2021</p> <p>(iii) To maintain the use of recycle paper to 60% or above of paper consumption</p>	<p>(i) Target achieved, green office management practices to be continued.</p> <p>(ii) Paper consumption in 2022 has reduced by 0.6% as compared to the consumption in 2021.</p> <p>(iii) Target achieved, recycle paper contributes 80% of total paper consumption.</p>
Staff Awareness	<p>(i) To enhance staff awareness in related aspects through training and self-learning.</p>	<p>(i) Relevant seminars and programmes on environmental protection were arranged for colleagues.</p> <p>(ii) Relevant information was uploaded to intranet for colleagues' reference.</p>



## OUR 2023 OBJECTIVES & TARGETS

Objectives	Targets
Reduction in Vehicular Traffic	<ul style="list-style-type: none"> <li>(i) To continue the existing bus-rail interchange schemes</li> <li>(ii) To continue the existing GMB-rail interchange schemes</li> <li>(iii) To continue the existing taxi-rail interchange schemes</li> <li>(iv) To rationalize more bus routes in busy areas and on busy roads</li> </ul>
Reduction of Vehicular Emissions	<ul style="list-style-type: none"> <li>(i) In the ex-gratia payment scheme to phase out Euro IV DCVs, about 6 500 concerned vehicles are expected to be phased out within 2023.</li> </ul>
Use of Alternative Fuel Vehicles to Replace Old Diesel Vehicles	<ul style="list-style-type: none"> <li>(i) To continue to encourage more owners to have their diesel Public Light Buses converted to LPG, Euro V or above, or electric ones</li> </ul>
Use of New Energy	<ul style="list-style-type: none"> <li>(i) To promote the use of new energy in private cars and commercial vehicles</li> <li>(ii) To facilitate the New Energy Bus Projects of the Environmental Protection Department and franchised bus companies</li> <li>(iii) To take forward the trial of hybrid ferries under the Vessel Subsidy Scheme</li> </ul>
Pedestrian Schemes	<ul style="list-style-type: none"> <li>(i) To explore opportunities for the implementation of traffic calming schemes to meet public needs</li> </ul>
Enhancing Walkability	<ul style="list-style-type: none"> <li>(i) To continue identifying suitable locations for territory-wide application of walkability enhancement measures</li> <li>(ii) To continue the implementation of provision of covers to walkways connecting public hospitals and other</li> </ul>

Objectives	Targets
	selected walkways
Efficient Use of Road Space through Application of Advanced Technologies	<ul style="list-style-type: none"> <li>(i) To launch a new version of the “HKeMobility” application</li> <li>(ii) To continue the collection and dissemination of real-time traffic data through HKeMobility and DATA.GOV.HK for free download and value-added re-use by the public</li> <li>(iii) To operate, maintain and enhance the Traffic and Incident Management System</li> <li>(iv) To conduct survey to gauge the performance of Area Traffic Control Systems and identify improvements if appropriate</li> <li>(v) To complete installation of additional Journey Time Indication Systems</li> <li>(vi) To progressively implement the Free-Flow Tolling System at government tolled tunnels and the Tsing Sha Control Area</li> <li>(vii) To study on “congestion charging” at government tolled tunnels</li> </ul>
Saving Electricity and Maintaining Good Indoor Air Quality at our Facilities	<ul style="list-style-type: none"> <li>(i) To contain the electricity consumption of our non-office facilities to the level of 2022 as far as possible.</li> <li>(ii) To contain the electricity consumption of our office facilities to the level of 2022 as far as possible.</li> <li>(iii) To maintain a “Good/Excellent” class of indoor air quality at our premises which are eligible to join the IAQ Certification Scheme.</li> </ul>
Green Office Management	<ul style="list-style-type: none"> <li>(i) To continue with the green office management practices.</li> <li>(ii) To contain the paper consumption to</li> </ul>

Objectives	Targets
	<p>the level of 2022.</p> <p>(iii) To maintain the use of recycle paper to 60% or above of total paper consumption.</p>
Staff Awareness	<p>(i) To enhance staff awareness in related aspects through training and self-learning.</p>