

Discovery Bay Tunnel Link Regulation
(Made under section 28 of the Discovery Bay
Tunnel Link Ordinance (Cap. 520))

1. Commencement

This Regulation shall come into operation on a day to be appointed by the Secretary for Transport by notice in the Gazette.

2. Interpretation

In this Regulation, unless the context otherwise requires---

"control centre" (控制中心) means the control centre referred to in section 3(b) but does not include a minor control centre referred to in section 3(c);

"lane" (行車綫) means a traffic lane in the tunnel area;

"light signal" (管制燈號) means an illuminated signal to control vehicular traffic within the tunnel area;

"road marking" (道路標記) means a line, word, mark or device placed on, or set into, the surface of a road for conveying to persons using the road any warning, information, requirement, restriction, prohibition or direction;

"toll booth" (收費亭) means a structure erected at the entrance to, or exit from, a lane in the tunnel area for the purpose of collecting tolls;

"traffic sign" (交通標誌) means a sign, object or device for conveying to persons using a road any warning, information, requirement, restriction, prohibition or direction;

"Tunnel Manager" (隧道經理) means the tunnel officer appointed to control and manage the tunnel area.

3. Traffic control

The Company shall, to the satisfaction of the Commissioner---

(a) erect and maintain adequate and efficient traffic signs and light signals, and place and maintain adequate and efficient road markings, in the tunnel area;

(b) provide and maintain a control centre which shall---

(i) be situated at the western entrance to the tunnel;

(ii) contain adequate and appropriate equipment for the regulation, control, restriction and guidance of vehicles and persons using or employed in the tunnel area; and

(iii) be manned at all times by an adequate number of persons trained in the use of equipment provided for the purposes mentioned in subparagraph (ii) and who are fully conversant with emergency traffic arrangements;

(c) provide and maintain a minor control centre at the eastern entrance to the tunnel which shall---

(i) be equipped with direct telephone link or intercom to the control centre;

and

(ii) be manned at all times by a tunnel officer; and

(d) provide adequate number of patrol vehicles and speed check equipment, the type, specification and quantity of which shall be subject to the prior approval of the Commissioner.

4. Traffic signs, light signals and road markings

(1) In order to comply with section 3(a), the Company may cause or permit to be erected or placed in the tunnel area---

(a) any traffic sign, light signal or road marking of the size, colour and type prescribed in bylaws made under the Ordinance;

(b) any warning or informatory traffic sign or road marking or any supplementary plate that may be used with any such traffic sign or road marking of the size, colour and type shown in Schedules 1 and 2 to the Road Traffic (Traffic Control) Regulations (Cap. 374 sub. leg.);

(c) if the Commissioner approves each such erection or placing, any regulatory traffic sign, light signal or road marking or any supplementary plate that may be used with any such traffic sign, light signal or road marking of the size, colour and type shown in Schedules 1, 2 and 3 to the Road Traffic (Traffic Control) Regulations (Cap. 374 sub. leg.); and

(d) any traffic sign, light signal or road marking as it may think appropriate for the giving of advice and information to persons using the tunnel area.

(2) The Company may by the erection or placing of an appropriate sign cancel, alter or temporarily suspend the operation of any traffic sign, light signal or road marking erected or placed under subsection (1)(a), (b) or (d).

(3) The Company shall, if directed to do so by the Commissioner, remove or alter at its own cost any traffic sign, light signal or road marking erected or placed in the tunnel area under subsection (1) or (2).

5. Communication

(1) The Company shall, to the satisfaction of the Commissioner, provide and maintain in efficient working order at all times---

(a) direct telecommunication links, including direct telephone link, between the control centre and---

(i) a regional command and control centre of the Hong Kong Police Force;

(ii) the communication centre of the Fire Services Department; and

(iii) the Emergency Transport Coordination Centre of the Transport Department;

(b) an emergency communication system in the Tunnel Link for officers of the Fire Services Department to communicate with the communication centre of that department;

(c) a radio re-broadcasting system for the transmission of messages on traffic

conditions and arrangements from the control centre to persons using the tunnel;
(d) a video output port in the control centre for the central closed circuit television system of the Tunnel Link for the installation of closed circuit television monitor to the Emergency Transport Coordination Centre of the Transport Department; and

(e) an emergency telephone system for users of the Tunnel Link to communicate with the control centre in case of emergency.

(2) The Company shall, without delay, report any diversion or interruption of traffic within the tunnel area that may affect the flow of traffic outside that area to a regional command and control centre of the Hong Kong Police Force and to an officer designated by the Commissioner.

6. Recovery and rescue

(1) The Company shall, to the satisfaction of the Commissioner---

(a) provide an adequate number of trained personnel and service vehicles suitable for dealing with vehicular breakdowns, accidents and obstruction in the tunnel area;

(b) ensure that---

(i) the vehicles referred to in paragraph (a) are of the type, specification and quantity for which the Commissioner has given prior approval and are manned and maintained at all times in a state of readiness; and

(ii) while any such vehicle is present in a lane, a 2-way radio link is maintained between the vehicle and the control centre; and

(c) provide and maintain at all times adequate and efficient first aid equipment.

(2) The Company shall, to the satisfaction of the Director of Fire Services, provide and maintain adequate and efficient fire service installations and equipment in the tunnel area at all times.

(3) The Company shall in the event of fire, traffic accident or injury to persons in the tunnel area, conduct fire fighting operation and render first aid treatment to the injured persons as soon as and so far as it is reasonably practicable prior to the arrival of those officers of the Fire Services Department and Hong Kong Police Force, and offer assistance to those officers in the course of any fire fighting or rescue operation.

7. Air quality and ventilation

(1) The Company shall, to the satisfaction of the Commissioner---

(a) provide and maintain in good working order at all times an adequate system of ventilation for the health and safety of persons using or employed in the tunnel area;

(b) provide equipment for the continuous measurement and recording of the concentration of carbon monoxide gas, nitrogen dioxide gas and extinction coefficient

in the tunnel and for visual and audible alarm warnings to be given in the control centre if the concentration exceeds the level specified in subsection (2); where the equipment for measuring nitrogen dioxide gas is not commercially available in the market, equipment for the continuous measurement and recording of nitric oxide gas shall be provided subject to it being immediately replaced by equipment for measuring nitrogen dioxide gas when such equipment is available; and

(c) submit monthly report with statistical data showing the results of the continuous measurements referred to in paragraph (b) to the Commissioner, in a form and containing the information required by him.

(2) The Company shall ensure that---

(a) the concentration of carbon monoxide gas in the tunnel does not during any 5-minute period exceed an average of 100 parts per million by volume;

(b) the concentration of nitrogen dioxide gas in the tunnel does not during any 5-minute period exceed an average of 1 part per million by volume or; where the Company has provided the equipment for measuring nitric oxide gas under subsection (1)(b), the concentration of nitric oxide gas in the tunnel does not during any 5-minute period exceed an average of 11.4 parts per million by volume; and

(c) the visibility in the tunnel does not during any 5-minute period exceed an extinction coefficient of 0.005 per metre.

8. Order and cleanliness, etc.

(1) The Company shall, to the satisfaction of the Commissioner, keep the tunnel area in a clean and orderly condition.

(2) The Company shall ensure that---

(a) the tunnel washing equipment is of the type, specification and quantity approved by the Commissioner; and

(b) the discharge of wash water from regular tunnel washing meets the prevailing standards for effluents as specified in the Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (Cap. 358 sub. leg.).

9. Illumination

The Company shall, to the satisfaction of the Commissioner---

(a) provide adequate and efficient illumination within the tunnel area; and

(b) ensure that the illumination referred to in paragraph (a) is varied having regard to the light conditions outside the tunnel.

10. Electricity supply

The Company shall, to the satisfaction of the Commissioner---

(a) provide connection to 2 independent outside sources of electric power so that,

if there is failure of one source, adequate electric power continues to be available for the full operation of the tunnel facilities;

(b) install and maintain an uninterruptible power supply system to operate the following essential equipment in the tunnel area for a minimum of 30 minutes---

(i) emergency lighting including essential tunnel lighting;

(ii) essential communication system;

(iii) computer system;

(iv) essential control and monitoring system;

(v) traffic control and surveillance system; and

(vi) toll collection system;

(c) in addition to the requirements mentioned in paragraphs (a) and (b), provide and maintain in a state of readiness and in efficient working order at all times an electricity generating apparatus which, in the event of failure of the outside sources of electric power, will be sufficient to operate the following emergency systems and equipment in the tunnel area for a minimum of 6 hours---

(i) fire services systems;

(ii) all loads backed up by uninterruptible power supply;

(iii) emergency power points inside the tunnel;

(iv) air-conditioning for computer rooms, control rooms and uninterruptible power supply rooms;

(v) mechanical ventilation for battery rooms; and

(vi) emergency lighting, essential tunnel lighting and essential power points for ancillary buildings of the Tunnel Link; and

(d) maintain in efficient working order at all times an emergency power supply for use in the tunnel by the Fire Services Department.

11. Control of dangerous goods

The Company shall take measures to prevent or control the carriage of dangerous goods through the Tunnel Link to the satisfaction of the Commissioner.

12. Adequate manning requirements

The Company shall, to the satisfaction of the Commissioner---

(a) deploy adequate and efficient personnel for the safe and orderly passage of motor vehicles through the Tunnel Link and the control and safety of motor vehicles and persons in the tunnel area in accordance with the manning requirements approved by the Commissioner; and

(b) ensure that all the tunnel officers, who are engaged in traffic control and operational duties, are trained in fire fighting procedures, first aid techniques and the use of fire fighting and first aid equipment.

13. Display of notices of tolls and sale thereof

(1) The Company shall, to the satisfaction of the Commissioner cause to be displayed at both ends of the Tunnel Link, in conspicuous places, notices stating the toll payable in respect of each category of motor vehicle.

(2) The Company shall cause printed copies of a list of the tolls currently chargeable by the Company to be kept at the registered office of the Company and to be available for sale to any person at a reasonable charge.

14. Records on tunnel operation

(1) The Company shall at all times maintain, in form and substance satisfactory to the Commissioner, records relating to the operation of the Tunnel Link including---

(a) the frequency, duration, location, time and nature of any equipment failure and of any remedial action taken;

(b) the details of accidents or incidents that occurred in the tunnel area;

(c) the volume of traffic passing through the Tunnel Link during each hour by vehicle type;

(d) the breakdown, according to vehicle type, of tolls collected on each day;

(e) the times at which each toll booth is kept open and the starting and finishing times at which it is operated by a particular tunnel officer;

(f) all cash and other receipts deriving from the use of the Tunnel Link;

(g) air quality and ventilation fan operation;

(h) books and records for financial assessment; and

(i) the staffing situation in connection with the operation of the Tunnel Link.

(2) The Commissioner may, with such assistance from the Company as the Commissioner may reasonably require, have free access to and make copies of records maintained under subsection (1).

15. Records on tunnel maintenance

(1) The Company shall at all times maintain, in form and substance satisfactory to the Director of Highways, records relating to the inspections, routine maintenance, repair and replacement of the tunnel area and the tunnel facilities including---

(a) the time, duration, location and nature of inspection and maintenance works;

(b) the time, duration, location and nature of failure or defects of the tunnel facilities;

(c) the time, duration and location of parts, equipment and facilities replaced; and

(d) the staffing situation in connection with the maintenance of the tunnel area and tunnel facilities.

(2) The Director of Highways may, with such assistance from the Company as the Director of Highways may reasonably require, have free access to and make copies of records maintained under subsection (1).

16. Uniforms and identification

A tunnel officer on duty shall---

- (a) except in the case of the Tunnel Manager, wear a uniform of a design approved by the Commissioner of Police;
- (b) carry such means of identity issued by the Company and approved by the Commissioner; and
- (c) promptly produce to any person who on reasonable grounds requests him to do so his means of identity and evidence of appointment.

Nicholas NG

Secretary for Transport

6 July 1999

Explanatory Note

This Regulation sets out the duties and powers of the Discovery Bay Road Tunnel Company Limited ("the Company") in relation to the Discovery Bay Tunnel Link.

2. The Company's duties include---

- (a) provision of equipment and facilities for traffic control, communication, rescue and recovery, ventilation, illumination and power supply;
- (b) deployment of adequate efficient trained personnel;
- (c) reporting on diversion or interruption of traffic;
- (d) conducting and rendering assistance in fire fighting or rescue operations;
- (e) control of the carriage of dangerous goods;
- (f) maintaining the tunnel area in a clean and orderly condition;
- (g) maintenance of records on tunnel operation and maintenance; and
- (h) display of notices of tolls.

3. The Regulation also empowers the Company to erect and place specified traffic signs, light signals and road markings and requires a tunnel officer to wear a uniform, and to carry and produce on reasonable request means of identity and evidence of his appointment.