Highways Department

Traffic Improvement Scheme in Tuen Mun – Widening and Addition of slip roads at Lung Fu Road / Tuen Mun Road / Wong Chu Road / Hoi Wing Road

Project Profile

CONTENTS

DRAWING

1 BASIC INFORMATION

1.1 Project Title

Proposed Traffic Improvement Scheme in Tuen Mun –
Widening and Addition of slip roads at Lung Fu Road / Tuen Mun Road / Wong Chu Road / Hoi Wing Road

1.2 Purpose and Nature of the Project

Upon commissioning of Tuen Mun – Chek Lap Kok Link (Northern Connection) (TM-CLKL(NC)), more traffic to and from Tuen Mun North and TM-CLKL(NC) through Tuen Mun Road (Town Centre Section) and its slip road to Wong Chu Road is expected. To cope with the anticipated increase in traffic flow in the road networks of Tuen Mun, it is proposed to construct a pair of grade-separated flyovers or elevated slip roads connecting Tsing Wun Road and Lung Fu Road (northbound and southbound), widen an existing slip road connecting Tuen Mun Road (Town Centre Section) southbound to Wong Chu Road westbound and construct an additional slip road between Hoi Wing Road westbound and Tuen Mun Road northbound.

The purpose of the Project is to improve the existing road infrastructure in Tuen Mun and to enhance the accessibility, so as to provide better infrastructure support to various current and upcoming developments in Northwest New Territories.

1.3 Name of Project Proponent

Highways Department, HKSAR Government

1.4 Location and Scale of the Project

The Project is located at the junction between Tsing Wun Road, Lung Fu Road and Wong Chu Road; and junction between Tuen Mun Road and Wong Chu Road.

The proposed traffic improvement schemes in Tuen Mun under this Project comprise the followings:

1) Lung Fu Road Slip Road (Southbound) – this scheme includes the construction of a 10.3m wide elevated carriageway, of approximately 800 meters in length connecting Tsing Wun Road to Lung Fu Road southbound.

2) Lung Fu Road Slip Road (Northbound) – this scheme includes the construction of a 6.3m wide elevated carriageway, of approximately 600 meters in length connecting Lung Fu Road to Tsing Wun Road northbound

3) Widening of existing slip road connecting Tuen Mun Road to Wong Chu Road – this scheme includes the widening of an approximately 300 meters long existing HyD Structure No. N568 by 4m to 5m to two traffic lanes connecting Tuen Mun Road (Town Centre Section) southbound to Wong Chu Road Westbound.

4) Depressed at-grade road linking Tuen Mun Road and Hoi Wing Road – this scheme includes the construction of a single lane carriageway, of approximately 550 meters in length connecting Tuen Mun Road northbound and Hoi Wing Road westbound.

The location of the project is shown on the attached Drawing No. HMS6880TH-SK0001.

1.5 Number and Types of Designated Projects to be covered by the Project Profile

The proposed works involve the construction of new elevated viaducts, modification of existing bridge structures, widening existing slip road and associated road works, slope and geotechnical works, which is classified as Designated Projects under the following categories under Schedule 2 of the Environmental Impact Assessment Ordinance:

A.1. A road which is an expressway, trunk road, primary distributor road or district distributor road including new roads, and major extensions or improvements to existing roads; and

A.8. A road or railway bridge more than 100 m in length between abutments.

1.6 Contact Person

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2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Planning and Implementation

The Project will be planned and implemented by Major Works Project Management Office (Special Duties) of Highways Department together with external consultants and contractor.

2.2 Project Programme

The construction works is tentatively scheduled to be completed by 2031 or before.

2.3 Interfacing with other Projects

Potential projects that would interface with the construction of this Project have been identified and are listed below.

Phase	Other Projects in the Vicinity
Construction	Site Formation and Infrastructure Works for Public Housing Development at Tuen Mun
	Housing Site at Kau Hui
	Cycle track between Tsuen Wan and Tuen Mun
	Provision of Fitness Facility at Lung Chak Road
	Tuen Mun South Extension Project by MTRCL
	Widening of Castle Peak Road between Kwun Tsing Road and Hoi Wing Road
	Rehabilitation of Trunk Sewers in Tuen Mun
	Tuen Mun Bypass Project
	Route 11 Project
Operation	Site Formation and Infrastructure Works for Public Housing Development at Tuen Mun
	Route 11 Project
	Cycle track between Tsuen Wan and Tuen Mun
	Tuen Mun South Extension Project by MTRCL
	Tuen Mun Bypass Project

3 POSSIBLE IMPACT ON THE ENVIRONMENT

3.1 Outline of Process Involved

Based on the preliminary study, the proposed works would conceptually be made up of the following elements:

- Elevated carriageways
- Depressed / At-grade roads
- Junctions modifications

The elevated carriageways are likely to be pre-stressed concrete construction with piled foundation. The depressed / at-grade road is likely to be retaining structure with piled foundation. The layouts and construction methods of the elevated carriageways and depressed / at-grade road, would be examined under the investigation and detailed design of this project, and considerations would be taken in the design to avoid and/or minimize the environmental impacts to the sensitive receivers.

The works areas, haul roads, locations for stockpiles associated with the construction works would also be examined and identified during the investigation and detailed design of the project.

3.2 Existing Available Data

In 2017, Highways Department engaged a consultant to undertake a Further Investigation Study for an alternative alignment option of (Tuen Mun Western Bypass) TMWB. Additional Services Nos. 1, 4 and 5 were issued by Highways Department to the consultant to carry out preliminary engineering feasibility study for the proposed traffic improvement schemes in Tuen Mun.

Under the Additional Services, areas along the project alignments were examined and assessed based on environment criteria including noise, air quality, visual impact, landscape, heritage and waste management.

3.3 Construction and Operation Environmental Impact

It is anticipated that surrounding sensitive receivers could be potentially affected by noise, air quality, water quality, ecology, visual impact, landscape, heritage and waste management during the construction and operation stages.

3.3.1 Air Quality

During construction, the major construction works would be site formation, utility diversion, piling works, bridge construction, retaining structure construction, excavation and road building works. The potential air quality impact on air sensitive receivers would be generated from excavation and materials handlings, filling activities, exhaust emissions from construction plants and equipment, haul roads and wind erosion of open sites and stockpiling areas. The construction dust generating activities would be those associated with site formation and construction works. Other major projects planned in the vicinity of the study area which might cause

cumulative construction phase impacts to the environment will be identified.

During operation phase, potential air quality impacts will be associated with the background pollutant concentrations; vehicle emissions from open existing and proposed road networks within the study area; vehicle emissions from portal opening of full enclosures within the study area; nearby chimney emission; and industrial emission within the study area.

3.3.2 Noise

During construction phase, potential noise impacts on noise sensitive receivers will be associated with construction activities and powered mechanical equipment including breakers, excavators, lorries, mobile cranes, concrete truck mixers, pokers, rollers, etc. The key construction activities which would create noise impacts will be site formation, utility diversion, piling works, bridge construction, retaining structure construction, excavation and road building works etc. The noise impact and vibration arising from those construction activities will be minimized. As the construction works may overlap with the other construction projects as mentioned in Section 2.3, cumulative noise impact from the overlapping works during the construction phase of the project should be considered. The impact for any night time work would also need to be considered as well.

During operation phase, traffic noise impacts to the noise sensitive receivers will be generated by the proposed roads and existing local roads along the project areas. In addition, noise impact of neighbouring roads such as Lung Mun Road, Tsing Wun Road, Lung Fu Road, Wong Chu Road and Hoi Wing Road and would need to be considered.

3.3.3 Water Quality

During construction phase, potential water quality impacts would be from general construction activities; construction site run-off; accidental spillage; sewage effluent from construction workforce; and excavation activities.

During operation phase, potential water pollution sources would include the road surface run-off from the bridges. The surface run-off may contain grit, oil and debris from the road users including vehicles and pedestrians. Since road drainage system design has been included silt traps in the gully inlets to remove silt and grit before the runoff enters the public storm water drainage system, it is expected that the impact on water quality will be minimal.

3.3.4 Ecology

During construction phase, potential ecological impacts will include loss of vegetation/terrestrial habitats due to site clearance and tree felling; loss of foraging and roosting ground for birds due to tree felling as well as indirect disturbance to nearby habitats and associated wildlife due to increase human activities, dust, noise, glare, surface run-off etc. generated from construction works.

During operation phase, potential ecological impacts will include disturbance to

surrounding habitats and associated wildlife due to increased human activites, dust, noise, glare, surface run-off etc. Potential bird morality may also occur due to collision with newly constructed noise barriers/enclosures..

3.3.5 Landscape and Visual

During construction phase, sources of impacts on landscape would include direct impacts such as construction works and associated slope works; and indirect impacts such as construction traffic, laying of utilities, temporary site access areas, site cabins and heavy machinery, increased road traffic congestion, after dark lighting and welding and dust during dry weather. For visual impacts during the construction phase, the unmitigated visual impacts will be adverse in nature and will mainly include blockage of views to the visual resources, degrading of visual quality of existing views and visual incompatibility of the construction works with the surroundings.

During operation phase, the sources of impacts on landscape would be the operation of the new bridges and the noise barriers and enclosures. As the new bridges would be connected with Tsing Wun Road, Lung Fu Road and Hoi Wing Road, there will be impacts due to vehicular emission on the vegetation at the adjacent land and on the road side planting. For visual impacts during the operation phase, the nature of unmitigated visual impacts could be adverse. Impact will be resulted from the blockage of views to the visual resources and permanent loss of open views.

3.3.6 Cultural Heritage

The proposed works will not encroach upon any Sites of Archaeological Interest. There will be no direct impacts to any cultural heritage resources. There is no heritage site within 40m of the project site boundary. However, there is a Grade 2 historic building “Sam Shing Temple” in close proximity from the project site boundary, there may be direct or indirect impacts to the built heritage. The impacts on cultural heritage sites should be avoided as far as practicable, or recommend mitigation measures to minimize the direct or indirect impact on built heritage resources.

3.3.7 Waste Management

During construction phase, waste materials which will be generated can broadly be classified into distinct categories based on their nature and disposal options as inert construction and demolition (C&D) materials; non-inert portion of C&D materials (C&D waste); chemical waste; and general refuse. Waste generation will first be avoided and reduced following by reusing materials on-site in order to minimize the off-site waste disposal as far as practicable. With proper waste management, adverse impact from the Project is unlikely.

In operation phase, it is not expected to generate any solid wastes except those arising from occasional replacement of damaged/worn parts/component, such as replaced parts of noise barrier/enclosures or street lights. In view of infrequent maintenance expected, it is therefore not expected to generate significant waste. Further waste management assessment will be conducted as necessary under the EIA study to identify any potential waste generation during operation phase.

3.3.8 Land Contamination

Based on preliminary desktop review, there are no potential land contamination sources. Site inspection will be conducted in EIA study. Further land contamination assessment will be conducted as necessary.

4 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 Existing and Planned Sensitive Receivers

A number of existing potential sensitive receivers have already been identified in the preparation of this project profile. Other potential sensitive receivers including those existing and planned sensitive receivers identified during the EIA study will be considered. Detailed investigation and surveys will be carried out to assess how they are affected by the proposed project under this EIA study.

4.1.1 Air Quality

Potential air sensitive receivers (ASRs) are located at:

- Luen Cheong Can Centre, Nam Fung Industrial City
- Kin Lung House, Lung Yat Estate, Lung Mun Oasis, Lung Mun Oasis car park, Glorious Garden, village houses of Tsing Shan Tsuen, Chi Lok Fa Yuen, Hong King Garden, Harvest Garden, Kam Fai Garden, Siu Lun Court, On Ting Estate, Tuen King Building, Handford Garden, Palm Cove, Dragon Inn Court
- The Church of Christ in China Hoh Fuk Tong Primary School, Yan Chai Hospital No. 2 Secondary School, Ju Ching Chu Secondary School (Tuen Mun), Hong Chi Tuen Mun Morninglight School, Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School, Lui Cheung Kwong Lutheran Primary School, Semple Memorial Secondary School, CSBS Mrs. Aw Boon Haw Secondary School, Lui Cheung Kwong Lutheran College, Shun Tak Fraternal Association Leung Kau Kui College
- Independent Commission Against Corruption Training Camp, Tuen Mun Siu Lun Government Complex
- Tsing Sin Street Basketball Court, Siu Lun Sports Ground
- Sam Saint Temple
- Planned developments (“Kau Hiu” Site)

The above listed ASRs is not exhaustive, it will be further reviewed during the EIA study.

The locations of the above potential air sensitive receivers are shown in Drawing Nos. HMS6880TH-SK0002 and HMS6881TH-SK0002.

4.1.2 Noise

Potential noise sensitive receivers are located at:

- Hong Kong Institute of Vocational Education (Tuen Mun), SKH Saint Peter’s Church Kindergarten, Yan Chai Hospital No.2 Secondary School, Ju Ching

Chu Secondary School (Tuen Mun), Hong Chi Tuen Mun Morninglight School, C.C.C Hoh Fuk Tong Primary School, W.F.B Avalokitesvara Nursery School, Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School, Shun Tak Fraternal Association Leung Kau Kui College, Lui Cheung Kwong Lutheran Primary School, Lui Cheung Kwong Lutheran College, Po Leung Kuk Hong Kong Taoist Association Yuen Yuen Primary School, Semple Memorial Secondary School, CSBS Mrs. Aw Boon Haw Secondary School

- Hong Kong Christian Service Jockey Club Lodge of Rising Sun
- ICAC Training Camp, Tuen Mun Children and Juvenile Home, Pok Oi Hospital Tuen Mun Nursing Home, TWGHs Tai Tung Pui Social Services Building, Tuen Mun Siu Lun Complex
- Saint Peter's Church Castle Peak, Tin Tak Shing Kau To Tong – Tuen Mun, Sam Shing Temple
- Lung Yat Estate, Lung Mun Oasis, Glorious Garden, village houses of Tsing Shan Tsuen, On Ting Estate, Yau Oi Estate, Chi Lok Fa Yuen, Siu Lun Court, Hong King Garden, JC Place, Handford Garden, Harvest Garden, Kam Fai Garden, Palm Cove, Dragon Inn Court, Tsing Yung Terrace, Rainbow Garden, Sam Shing Estate

The locations of the above potential noise sensitive receivers are shown in Drawing Nos. HMS6880TH-SK0003 and HMS6881TH-SK0003.

4.1.3 Water Quality

Potential water sensitive receivers are located at:

- Tuen Mun River Channel, Tuen Mun Typhoon Shelter, Castle Peak Beach

The locations of the above potential water sensitive receivers are shown in Drawing Nos. HMS6880TH-SK0006 and HMS6881TH-SK0006.

4.1.4 Ecology

The proposed works sites are situated along and in the immediate vicinity of existing roads with some roadside planting. The habitats likely to be impacted by the Project are man-made, disturbed and with the most situtated in well-developed area. Wildlife that utilizes these habitats should already be habituated to be the existing disturbed environment.

4.1.5 Landscape and Visual

Potential landscape and visual sensitive receivers would be:

Lung Fu Road Slip Roads (LFRSRs)

- Tsing Shan Tsuen Village Office, Luen Cheong Can Centre, Nan Fung Industrial City
- Tsing Wun Road, Yip Wong Road, Tin Hau Road, footpath outside Lung Yat Estate, Lung Chak Road, Yeung Tsing Road, Wan Shan Road
- Lung Yat Estate, Lung Mun Oasis, Glorious Garden
- Yan Chai Hospital No.2 Secondary School, Ju Ching Chu Secondary School (Tuen Mun), Hong Chi Tuen Mun Morninglight School, Hong Chi Tuen Mun Morninghill School
- ICAC Training Camp, Lung Yat Community Hall, Lung Mun Oasis Rest Garden, Tuen Mun Children and Juvenile Home, Yuen Ming Monastery, Fat Yuen Ching Shea, Wu Shan Riverside Park
- Lung Mun Light Rail Transit Station, Tsing Shan Tsuen Light Rail Transit Station

Tuen Mun Road / Wong Chu Road / Hoi Wing Road (TMR/WCR/HWR)

- Dragon Inn Seafood
- slip road from WCR to TMR, Tuen Mun Road, Siu Lun Street, Hoi Wing Road, Castle Peak Road, Sam Shing Street, Wah Fat Street, Wing Fat Lane, footbridge above Tuen Mun Road, Yau Oi Road, Tsing Hoi Circuit, Tsing Sin Street, Fu Fat Lane, New Territories Circular Road
- Harvest Garden, Kam Fai Garden, Hanford Garden, Palm Cove, Dragon Inn Court, Sam Shing Estate, On Ting Estate, Chi Lok Fa Yuen, Hong King Garden, Siu Lun Court
- Sam Saint Temple
- Tuen Mun Siu Lun Complex, Siu Lun Sport Ground, Maclehose Trail Section 10, Tsing Sin Playground, resting area outside On Ting Estate, Tsing Wah Soccer Pitch, Tsing Sin Street Basketball Court
- Siu Lun Court Car Park, Public parking lot at Siu Lun Street
- CSBS Mrs. Aw Boon Haw Secondary School, Semple Memorial Secondary School, The Salvation Army Sam Shing Chuen Lau Ng Ying School, Shun Tak Fraternal Association Wu Siu Kui Memorial Primary School, Lui Cheung Kwong Lutheran Primary School

The locations of most of the above potential landscape and visual sensitive receivers

are shown in Drawing Nos. HMS6880TH-SK0004 and HMS6881TH-SK0004.

4.1.6 Cultural Heritage

There is a Grade 2 historic building, Sam Shing Temple, located outside 40m from the proposed works.

There is no site of archaeological interest located within the project area.

5 ENVIRONMENTAL MITIGATION MEASURES

Based upon the potential impacts as a result of the construction and operation of the project, it is anticipated that mitigation measures will be required. Measures to minimize environmental effects are detailed below.

5.1 Measures to Minimize Environmental Impacts

5.1.1 Air Quality

Appropriate dust mitigation measures as stipulated in the Air Pollution Control (Construction Dust) Regulations will be implemented during the construction period to control fugitive dust emission.

The key measures are:

1. Regular watering on all exposed and unpaved surface, particularly during dry weather;

2. Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers;

3. Covering all excavated or stockpile of dusty material by impervious sheeting or spraying with water to maintain the entire surface wet;

4. Provision of wheel washing facilities at the exit points of the site;

5. Covering of any dusty materials on vehicles leaving the site; and

6. Avoid slope cutting.

Subject to investigation and detailed design to identify additional mitigation measures, e.g. enclosures / roadside barriers will be considered during operation period to minimize the air quality impacts on nearby air sensitive receivers.

5.1.2 Noise

Subject to investigation and detailed design, the following measures will be considered during construction period to minimize construction noise impacts on nearby noise sensitive receivers.

1. Implementing good site practices such as orientating the noisy plant away from the nearby noise sensitive receivers, proper fitting of silencer on the construction equipment and use of quiet plant;

2. Temporary noise barriers are likely to be required along the construction site boundary such that construction equipment and noise are screened;

3. Silencers on construction equipment should be properly fitted and maintained during the construction works;

4. Mobile plant should be sited as far as possible and practicable away from noise sensitive receivers; and

5. Quieter alternative construction method for mitigating the construction noise.

Subject to investigation, the following measure will be considered during operation period to minimize the traffic noise impacts on nearby noise sensitive receivers.

1. Noise barriers and low noise surface material may be required along some sections of the new highway for reducing traffic noise during the operation phase.

5.1.3 Water Quality

The following mitigation measures during the construction period will be adopted to control the water quality impact:

1. Good site practice in accordance with the ProPECC PN 1/94 "Construction Site Drainage" and "Recommended Pollution Control Clauses for Construction Contracts" issued by EPD; and

2. All runoffs arising from the construction site should be properly collected and treated to ensure the effluent comply with Water Pollution Control Ordinance (Cap. 358). Silt trap and oil interceptor will be provided to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before being pumped to the public stormwater drainage system. The silt traps and oil interceptors will be cleaned and maintained regularly.

The following measures will be adopted during operation period to minimize the water quality impacts on nearby water sensitive receivers.

1. Stormwater from road surface should be collected into drainage system via silt traps and oil interceptor to remove silt / grit and oil before discharging; and

2. Regular maintenance of silt traps and oil interceptor.

5.1.4 Ecology

The mitigation measures that are to be implemented to minimize the impacts on air quality, noise and water quality will also help to minimize any impacts on ecological resources. Adopting bird friendly design, such as using falcon sticker, tinted materials, etc., for noise barrier/enclosures can minimize the chance of bird collision during operation phase.

As regards ecological impact, the best mitigation is avoidance and will be used wherever possible. For impact which is considered unavoidable, mitigation measure will be adopted to minimize such impact. Compensation will be provided for the loss of important species or habitats, if any.

5.1.5 Cultural Heritage

No typical mitigation method is required for built heritage resources as no impacts are anticipated. The Antiquities and Monument Office (AMO) has advised that no Heritage Impact Assessment is required for this Project.

Though impact on archaeological resources is not expected, in the unlikely event that archaeological finds are identified in the course of excavation works, the Contractor should stop the excavation works and inform AMO immediately. Mitigation measures to be adopted for any identified archaeological deposits should be agreed by AMO before implementation.

Impacts to cultural heritage sites would be avoided as far as practicable during both construction and operation phases. If unavoidable, mitigation measures for built heritage and archaeological resources would be implemented such as use of sensibly designed screen hoardings for reducing the potential visual impact on identified cultural heritage.

5.1.6 Landscape and Visual

Mitigation measures to minimize environmental impact during both the construction and operation phases should be comprehensively reviewed for both landscape and visual aspects. Possible mitigation measures are as follows:

<u>During construction phase</u>

- Temporary greening treatment on bare soil surface before construction works of structures take place;
- The works limit should be clearly defined to avoid further impact on the adjacent offsite landscape. Screens or hoardings around the works limit should be in visually unobtrusive colours to screen the proposed works;
- Early formation of the planting area and advance planting of vegetations on the concerned landscape sensitive receivers;
- Sensible locations of bridge alignment, columns and portals to minimize impact to existing trees;
- Tree identified to be preserved according to the approved tree survey plan and tree assessments schedule prepared in accordance with DEVB TC(W) No. 4/2020 – Tree Preservation should be protected until the end of the construction works;
- Tree identified to be preserved according to the approved tree survey plan and tree assessments schedule prepared in accordance with DEVB TC(W) No. 4/2020 – Tree Preservation should be transplanted and maintained until the end of the Establishment Period;

- Noise barriers which will surround the works sites will hide the unsightly views from overhead buildings and lower possible dust emissions to the surrounding areas. Temporary greening and beautifying of the noise barriers will also be considered; and

- Tree transplanting and compensatory planting will be considered to mitigate the impact on the existing tree/woodland.

During operation phase

- Aesthetic design of any noise barrier on bridges near residential areas;

- Early formation of the planting area and advance planting of vegetations on the concerned landscape sensitive receivers in operation phase;

- Sensible locations of bridges alignment and columns to minimize impact to existing trees. Felled trees have to be compensated;

- Earth mounds and tree planting near columns to reduce the apparent height and massiveness of supporting columns;

- Compensatory planting will be provided to mitigate the impact of the potential tree felling. Off-site planting may be required due to the lack of adequate space within the works area;

- Vertical greening for noise barriers could soften and hide these structures, as well as acting as a dust ameliorator and noise reducer. The potential areas for vertical greening are dependent on the location of noise barriers; and

- Reprovision of any loss open spaces and recreational facilities on-site or off-site.

5.1.7 Waste Management

The waste management hierarchy is to minimize the waste generation. If waste generation cannot be avoided, a material/waste management plan will be established prior to commencement of excavation and construction work to outline the methods that can be incorporated into the project for waste minimization, including reuse, recycle, matching disposal with other projects, handling, storage, transportation and disposal of expected waste materials.

As the proposed works are slip roads for use by road traffic, waste impact during the operation stage is considered as extremely small.

5.1.8 Land Contamination

Subject to EIA findings, the following mitigation measures will be considered during the construction phase to mimimise any potential exposure to contaminated soils or

groundwater:

- Site workers should wear gloves, masks and other protective clothing where exposure to vapour or contaminated soil may be encountered.
- Contaminated materials should be removed with bulk earth movers to prevent human contact.
- Adequate washing facilities should be provided and smoking / eating should be prohibited in the area.
- Any contaminated sediments that may need stockpiling or need to be transported should be covered with tarpaulin.
- Leakage of pollutants or leaching from excavated soil should be prevented by storing on an impermeable surface.
- Only licensed waste hauliers should be used to collect and transport any contaminated materials to an appropriated disposal site and procedures should be developed to ensure that illegal disposal of wastes does not occur.
- The necessary waste disposal permits should be obtained, as required, from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cao 354), as required.

5.2 Severity, Distribution and Duration of Environmental Effects

It is expected that the proposed works will not cause insurmountable or adverse environmental impacts.

Subject to investigation on noise impacts, permanent noise barrier or low noise surfacing may be required to keep the noise impact to acceptable level.

5.3 Environmental Monitoring and Audit

The Project Profile has outlined the potential environmental impacts which would arise from the construction and operation phases of the Project and has introduced briefly some possible environmental mitigation measures that can be incorporated into the Project. An environmental monitoring and audit programme, for the construction and/or operation phase of the Project, will be developed in the EIA study.

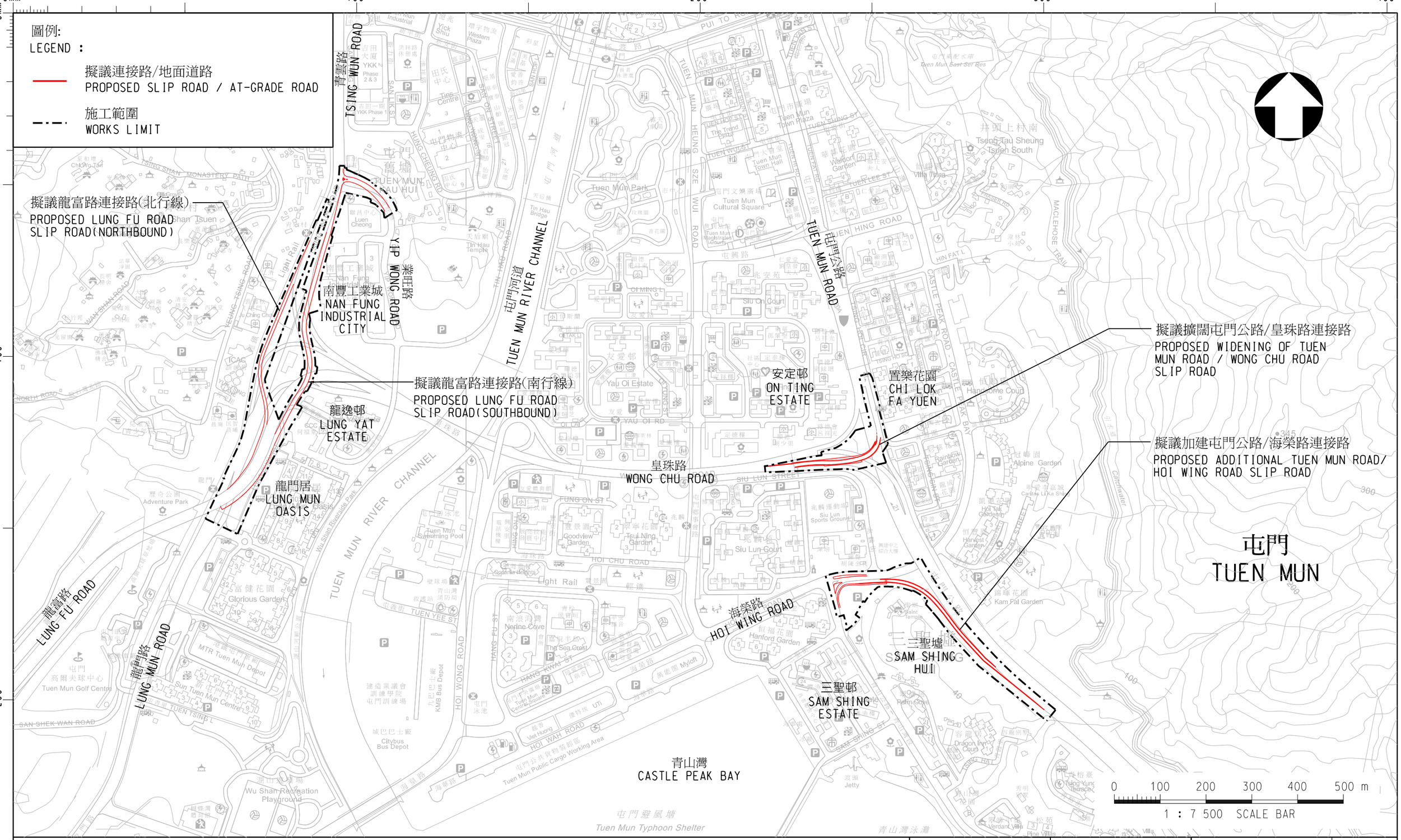
5.4 Further Implication

Public consultation will be arranged once sufficient information is available.

6 USE OF PREVIOUSLY APPROVED EIA REPORTS

No previous approved EIA report exists for the proposed project. However, reference may be made to the following previously approved EIA reports within the study area:

Register No	Title
EIA-015/1999	Planning and Development Study of Potential Housing Sites in Area 54, Tuen Mun
EIA-142/2007	Widening of Tuen Mun Road at Tsing Tin Interchange
EIA-158/2008	Traffic Improvement to Tuen Mun Road Town Centre Section
EIA-174/2009	Tuen Mun - Chek Lap Kok Link
EIA-297/2017	Tuen Mun Western Bypass



圖則名稱 drawing title

屯門交通改善計劃 - 研究範圍
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - STUDY AREA

設計 designed	繪圖 drawn	圖則編號 drawing no.	比例 scale
W Y NG 19/03/21	C K AU 19/03/21	HMS6880TH-SK0001	1:7500
覆核 checked	批准 approved	© 版權所有 COPYRIGHT RESERVED	

主要工程管理處(專責事務)
MAJOR WORKS PROJECT MANAGEMENT OFFICE (SPECIAL DUTIES)

HIGHWAYS DEPARTMENT HONG KONG 香港政府路政署

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

村屋
VILLAGE HOUSES

擬議龍富路連接路（北行線）
PROPOSED LUNG FU ROAD SLIP ROAD(NORTHBOUND)

仁濟醫院第二中學
YAN CHAI HOSPITAL NO.2 SECONDARY SCHOOL

裘錦秋中學（屯門）
JU CHING CHU SECONDARY SCHOOL (TUEN MUN)

廉政公署訓練營
ICAC TRAINING CAMP

匡智屯門晨崗學校
HONG CHI TUEN MUN MORNINGLIGHT SCHOOL

龍富路
LUNG FU ROAD

龍門路
LUNG MUN ROAD

聯昌製罐中心
LUEN CHEONG CAN CENTRE

南豐工業城
NAM FUNG INDUSTRIAL CITY

計劃發展地區
PLANNED DEVELOPMENTS

擬議龍富路連接路(南行線)
PROPOSED LUNG FU ROAD SLIP ROAD(SOUTHBOUND)

健龍樓
KIN LUNG HOUSE

龍逸邨
LUNG YAT ESTATE

中華基督教會何福堂小學
C.C.C. HOH FUK TONG PRIMARY SCHOOL

龍門居
LUNG MUN OASIS

龍門居停車場
LUNG MUN OASIS CAR PARK

富健花園
GLORIOUS GARDEN

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 空氣的敏感受體（1）
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - AIR SENSITIVE RECEIVERS (1)

圖則編號 drawing no.	比例 scale
HMS6880TH-SK0002	1:4000

HIGHWAYS DEPARTMENT HONG KONG 香港 路政署

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

路德會呂祥光中學
LUI CHEUNG KWONG LUTHERAN COLLEGE

屯景大廈
TUEN KING BUILDING

順德聯誼總會梁銶琚中學
SHUN TAK FRATERNAL ASSOCIATION LEUNG KAU KUI COLLEGE

安定邨
ON TING ESTATE

置樂花園
CHI LOK FA YUEN

青善街籃球場
TSING SIN STREET BASKETBALL COURT

路德會呂祥光小學
LUI CHEUNG KWONG LUTHERAN PRIMARY SCHOOL

擬議擴闊屯門公路/皇珠路連接路
PROPOSED WIDENING OF TUEN MUN ROAD / WONG CHU ROAD SLIP ROAD

順德聯誼總會胡少渠紀念小學
SHUN TAK FRATERNAL ASSOCIATION WU SIU KUI MEMORIAL PRIMARY SCHOOL

皇珠路
WONG CHU ROAD

康景花園
HONG KING GARDEN

兆麟運動場
SIU LUN SPORTS GROUND

屯門兆麟綜合大樓
TUEN MUN SIU LUN COMPLEX

兆麟苑
SIU LUN COURT

恆豐園
HARVEST GARDEN

深培中學
SEMPLE MEMORIAL SECONDARY SCHOOL

錦暉花園
KAM FAI GARDEN

海榮路
HOI WING ROAD

鐘聲慈善社胡陳金枝中學
CSBS MRS. AW BOON HAW SECONDARY SCHOOL

擬議加建屯門公路/海榮路連接路
PROPOSED ADDITIONAL TUEN MUN ROAD / HOI WING ROAD SLIP ROAD

恒福花園
HANDFORD GARDEN

三聖廟
SAM SHING TEMPLE

青山灣
CASTLE PEAK BAY

翠濤居
PALM COVE

容龍居
DRAGON INN COURT

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 空氣的敏感受體 (2)
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - AIR SENSITIVE RECEIVERS (2)

圖則編號 drawing no.	比例 scale
HMS6881TH-SK0002	1:4000

HIGHWAYS DEPARTMENT HONG KONG 路政署 香港

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

香港聖公會青山聖彼得堂
SAINT PETER'S CHURCH (CASTLE PEAK)

聖公會青山聖彼得堂幼稚園
SKH SAINT PETER'S CHURCH KINDERGARTEN

青山村村屋
TSING SHAN TSUEN VILLAGE HOUSES

擬議龍富路連接路（北行線）
PROPOSED LUNG FU ROAD SLIP ROAD (NORTHBOUND)

仁濟醫院第二中學
YAN CHAI HOSPITAL NO.2 SECONDARY SCHOOL

裘錦秋中學（屯門）
JU CHING CHU SECONDARY SCHOOL (TUEN MUN)

廉政公署訓練營
ICAC TRAINING CAMP

天德聖教道堂 - 屯門
TIN TAK SHING KAU TO TONG - TUEN MUN

屯門兒童及青少年院
TUEN MUN CHILDREN AND JUVENILE HOME

匡智屯門晨曦學校
HONG CHI TUEN MUN MORNINGLIGHT SCHOOL

香港專業教育學院（屯門）
HONG KONG INSTITUTE OF VOCATIONAL EDUCATION (TUEN MUN)

香港基督教服務處賽馬會日出山莊
HONG KONG CHRISTIAN SERVICE JOCKEY CLUB LODGE OF RISING SUN

擬議龍富路連接路(南行線)
PROPOSED LUNG FU ROAD SLIP ROAD (SOUTHBOUND)

龍逸邨
LUNG YAT ESTATE

中華基督教會何福堂小學
C.C.C. HOH FUK TONG PRIMARY SCHOOL

龍門居
LUNG MUN OASIS

世佛會觀自在幼兒學校
WFB AVALOKITESVARA NURSERY SCHOOL

富健花園
GLORIOUS GARDEN

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 噪音的敏感受體（1）
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - NOISE SENSITIVE RECEIVERS (1)

圖則編號 drawing no.	比例 scale
HMS6880TH-SK0003	1:4000

HIGHWAYS DEPARTMENT HONG KONG 路政署 香港

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

擬議擴闊屯門公路/皇珠路連接路
PROPOSED WIDENING OF TUEN MUN ROAD / WONG CHU ROAD SLIP ROAD

順德聯誼總會梁銶琚中學
SHUN TAK FRATERNAL ASSOCIATION LEUNG KAU KUI COLLEGE

路德會呂祥光中學
LUI CHEUNG KWONG LUTHERAN COLLEGE

安定邨
ON TING ESTATE

友愛邨
YAU OI ESTATE

路德會呂祥光小學
LUI CHEUNG KWONG LUTHERAN PRIMARY SCHOOL

順德聯誼總會胡少渠紀念小學
SHUN TAK FRATERNAL ASSOCIATION WU SIU KUI MEMORIAL PRIMARY SCHOOL

皇珠路
WONG CHU ROAD

博愛醫院屯門護養院
POK OI HOSPITAL TUEN MUN NURSING HOME

兆麟苑
SIU LUN COURT

深培中學
SEMPLE MEMORIAL SECONDARY SCHOOL

鐘聲慈善社胡陳金枝中學
CSBS MRS. AW BOON HAW SECONDARY SCHOOL

海榮路
HOI WING ROAD

恒福花園
HANDFORD GARDEN

三聖廟
SAM SHING TEMPLE

三聖邨
SAM SHING ESTATE

青山灣
CASTLE PEAK BAY

翠濤居
PALM COVE

容龍居
DRAGON INN COURT

青榕台
TSING YUNG TERRACE

置樂花園
CHI LOK FA YUEN

保良局香港道教聯合會圓玄小學
PO LEUNG KUK HONG KONG TAOIST ASSOCIATION YUEN YUEN PRIMARY SCHOOL

康景花園
HONG KING GARDEN

彩華花園
RAINBOW GARDEN

東華三院戴東培社會服務大樓
TWGHS TAI TUNG PUI SOCIAL SERVICES BUILDING

龍成花園
JC PLACE

屯門兆麟綜合大樓
TUEN MUN SIU LUN COMPLEX

恆豐園
HARVEST GARDEN

錦暉花園
KAM FAI GARDEN

擬議加建屯門公路/海榮路連接路
PROPOSED ADDITIONAL TUEN MUN ROAD / HOI WING ROAD SLIP ROAD

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 噪音的敏感受體 (2)
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - NOISE SENSITIVE RECEIVERS (2)

圖則編號 drawing no. HMS6881TH-SK0003

比例 scale 1:4000

HIGHWAYS DEPARTMENT HONG KONG 香港路政署

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

青山村輕鐵站
TSING SHAN TSUEN
LIGHT RAIL TRANSIT STATION

擬議龍富路連接路（北行線）
PROPOSED LUNG FU ROAD
SLIP ROAD(NORTHBOUND)

青山村村公所
TSING SHAN TSUEN
VILLAGE OFFICE

圓明寺
YUEN MING
MONASTERY

環山路
WAN SHAN ROAD

仁濟醫院第二中學
YAN CHAI HOSPITAL NO.2
SECONDARY SCHOOL

裘錦秋中學(屯門)
JU CHING CHU
SECONDARY SCHOOL
(TUEN MUN)

佛緣精舍
FAY YUEN
CHING SHEA

楊青路
YEUNG TSING ROAD

廉政公署訓練營
ICAC TRAINING CAMP

匡智屯門晨崗學校
HONG CHI TUEN MUN
MORNINGHILL SCHOOL

匡智屯門晨曦學校
HONG CHI TUEN MUN
MORNINGLIGHT SCHOOL

屯門兒童及青少年院
TUEN MUN CHILDREN
AND JUVENILE HOME

龍門輕鐵站
LUNG MUN LIGHT RAIL
TRANSIT STATION

龍富路
LUNG FU ROAD

青雲路
TSING WUN ROAD

聯昌中心
LUEN CHEONG CAN CENTRE

業旺路
YIP WONG ROAD

天后路
TIN HAU ROAD

擬議龍富路連接路(南行線)
PROPOSED LUNG FU ROAD
SLIP ROAD(SOUTHBOUND)

龍逸邨
LUNG YAT ESTATE

龍逸社區會堂
LUNG YAT
COMMUNITY HALL

龍澤路
LUNG CHAK ROAD

龍門居休憩花園
LUNG MUN OASIS
REST GARDEN

龍門居
LUNG MUN OASIS

湖山河畔公園
WU SHAN
RIVERSIDE PARK

富健花園
GLORIOUS GARDEN

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 景觀及視覺的敏感受體（1）
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - LANDSCAPE AND VISUAL SENSITIVE RECEIVERS (1)

圖則編號 drawing no.	比例 scale
HMS6880TH-SK0004	1:4000

HIGHWAYS DEPARTMENT HONG KONG 路政署 香港

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

屯門公路行人天橋
FOOTBRIDGE ABOVE TUEN MUN ROAD

擬議擴闊屯門公路/皇珠路連接路
PROPOSED WIDENING OF TUEN MUN ROAD / WONG CHU ROAD SLIP ROAD

屯門公路
TUEN MUN ROAD

皇珠路屯門公路連接路
SLIP ROAD FROM WCR TO TMR

置樂花園
CHI LOK FA YUEN

安定邨
ON TING ESTATE

安定邨對出的休憩區
RESTING AREA OUTSIDE ON TING ESTATE

青華球場
TSING WAH SOCCER PITCH

路德會呂祥光小學
LUI CHEUNG KWONG LUTHERAN PRIMARY SCHOOL

友愛路
YAU OI ROAD

青善街籃球場
TSING SIN STREET BASKETBALL COURT

順德聯誼總會胡少渠紀念小學
SHUN TAK FRATERNAL ASSOCIATION WU SIU KUI MEMORIAL PRIMARY SCHOOL

青海圍
TSING HOI CIRCUIT

富發里
FU FAT LANE

兆麟街
SIU LUN STREET

康景花園
HONG KING GARDEN

兆麟苑停車場
SIU LUN COURT CAR PARK

青善街
TSING SIN STREET

皇珠路
WONG CHU ROAD

青善遊樂場
TSING SIN PLAYGROUND

兆麟運動場
SIU LUN SPORT GROUND

屯門兆麟綜合大樓
TUEN MUN SIU LUN COMPLEX

兆麟街公共停車場
PUBLIC PARKING LOT AT SIU LUN STREET

青山公路
CASTLE PEAK ROAD

兆麟苑
SIU LUN COURT

深培中學
SEMPLE MEMORIAL SECONDARY SCHOOL

榮發里
WING FAT LANE

海榮路
HOI WING ROAD

鐘聲慈善社胡陳金枝中學
CSBS MRS. AW BOON HAW SECONDARY SCHOOL

恆豐園
HARVEST GARDEN

屯門新界環迴公路
NEW TERRITORIES CIRCULAR ROAD

錦暉花園
KAM FAI GARDEN

華發街
WAH FAT STREET

海榮路
HOI WING ROAD

恒福花園
HANDFORD GARDEN

三聖廟
SAM SHING TEMPLE

三聖街
SAM SHING STREET

三聖邨
SAM SHING ESTATE

屯門避風塘
Tuen Mun Typhoon Shelter

翠濤居
PALM COVE

容龍居
DRAGON INN COURT

青山灣泳灘
Castle Peak Beach

救世軍三聖村劉伍英學校
THE SALVATION ARMY SAM SHING CHUEN LAU NG YING SCHOOL

擬議加建屯門公路/海榮路連接路
PROPOSED ADDITIONAL TUEN MUN ROAD / HOI WING ROAD SLIP ROAD

容龍海鮮酒家
DRAGON INN SEAFOOD

麥理浩徑10段
MACLEHOSE TRAIL SECTION 10

青山灣
CASTLE PEAK BAY

0 50 100 150 200 250 m
1 : 5 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 景觀及視覺的敏感受體 (2)
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - LANDSCAPE AND VISUAL SENSITIVE RECEIVERS (2)

圖則編號 drawing no.	比例 scale
HMS6881TH-SK0004	1:5000

HIGHWAYS DEPARTMENT HONG KONG 香港路政署

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

擬議擴闊屯門公路/皇珠路連接路
PROPOSED WIDENING OF TUEN MUN ROAD / WONG CHU ROAD SLIP ROAD

二級歷史建築 - 三聖廟
GRADE 2 HISTORIC BUILDING - SAM SHING TEMPLE

青山灣
CASTLE PEAK BAY

擬議加建屯門公路/海榮路連接路
PROPOSED ADDITIONAL TUEN MUN ROAD / HOI WING ROAD SLIP ROAD

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 文化遺產覆蓋範圍
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - COVER AREA OF CULTURAL HERITAGE

圖則編號 drawing no. HMS6881TH-SK0005

比例 scale 1:4000

HIGHWAYS DEPARTMENT HONG KONG 香港路政署

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

擬議龍富路連接路（北行線）
PROPOSED LUNG FU ROAD
SLIP ROAD(NORTHBOUND)

擬議龍富路連接路(南行線)
PROPOSED LUNG FU ROAD
SLIP ROAD(SOUTHBOUND)

屯門河
TUEN MUN RIVER CHANNEL

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 水敏感受體（1）
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - WATER SENSITIVE RECEIVERS (1)

圖則編號 drawing no.	比例 scale
HMS6880TH-SK0006	1:4000

HIGHWAYS DEPARTMENT HONG KONG 香港 路政署

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A3 420 x 297

圖例:
LEGEND :

擬議連接路/地面道路
PROPOSED SLIP ROAD / AT-GRADE ROAD

擬議擴闊屯門公路/皇珠路連接路
PROPOSED WIDENING OF TUEN MUN ROAD / WONG CHU ROAD SLIP ROAD

擬議加建屯門公路/海榮路連接路
PROPOSED ADDITIONAL TUEN MUN ROAD / HOI WING ROAD SLIP ROAD

屯門避風塘
TUEN MUN TYPHOON SHELTER

青山灣
CASTLE PEAK BAY

青山灣泳灘
CASTLE PEAK BEACH

皇珠路 WONG CHU ROAD
SIU LUN STREET
海榮路 HOI WING ROAD
屯門公路 TUEN MUN ROAD
TSING HA CIR
TSING SHAN SQ
TSING HO SQ
TSING WU ST
CHI LOK FA YUEN
CASTLE PEAK ROAD - CASTLE PEAK BAY
FU FAT L
WAH FAT STREET
TSING HAI
SAM SHING ST
TSING BIK ST
Catchwater
Siu On Court
On Ting Estate
Siu Lun Court
Siu Lun Sports Ground
Hanford Garden
Sam Shing Estate
Rainbow Garden
Handsome Court
Alpine Garden
Caritas Li Ka Shing
Hoi Tak Gardens
Harvest Garden
Kam Fai Garden
Palm Cove
Dragon Inn Court
Tsing Yung Terrace
Verdant Villa
Pine Villas
South Crest
Kadoorie Pier
Jetty
三聖墟
SAM SHING HUI
Saint Temple
安定邨
兆麟苑
恒福花園
彩華苑
冠峰園
恒順園
恒豐園
錦暉花園
容龍居
容龍別墅
翠濤居
青山灣花園
秀明別墅
翠峰小築
松苑
南岸
青榕臺
碧翠花園
萬能閣 Myloft
渡頭
興建中之綜合大樓

0 50 100 150 200 250 m
1 : 4 000 SCALE BAR

圖則名稱 drawing title

屯門交通改善計劃 - 水敏感受體 (2)
TRAFFIC IMPROVEMENT SCHEME IN TUEN MUN - WATER SENSITIVE RECEIVERS (2)

圖則編號 drawing no.	比例 scale
HMS6881TH-SK0006	1:4000

HIGHWAYS DEPARTMENT HONG KONG 香港 路政署

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A3 420 x 297