IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

PROJECT PROFILE

Prepared in accordance with the
Environmental Impact Assessment Ordinance
(Cap 499)

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1. BACKGROUND

At present, Tung Chung Road is the only existing vehicular access between north and south Lantau. The road is a single lane two way road with a general carriageway width of 3.5 metres. Along its 7 km length, there are about 40 passing bays. Each passing bay can only accommodate 1 to 2 vehicles at a time. The road has sharp bends and steep gradients in excess of 1 in 6. It has an operating capacity of about 100 -120 vehicles/hour (two-way). Since the completion of the North Lantau Highway, the new Hong Kong International Airport and the developments in Tung Chung New Town, the traffic demand between north and south Lantau has increased significantly, exacerbating the situation in Tung Chung Road.

2. BASIC INFORMATION

2.1 Project Title

Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha.

2.2 Purpose and Nature of the Project

This project is to improve the 7 km long section of Tung Chung Road between Lung Tseng Tau and Cheung Sha to a two lane rural road.

2.3 Name of Project Proponent

Highways Department, HKSAR Government

2.4 Location and Scale of Project

The location of the project is shown on Drawing No. MW6718TH-GL0008A. The scope of the project includes the following:

(a) Widening or realigning the existing section of Tung Chung Road between Lung Tseng Tau and Cheung Sha to a two lane rural road with a general carriageway width of 7.3 metres and a footpath of about 1.6 metres wide. If necessary, the widths of the carriageway and footpath may be reduced to suit the actual site situation.

(b) Construction of associated bridges, retaining walls, geotechnical works, landscape works, drainage works, utility works, traffic aids, traffic safety enhancement measures, environmental mitigation measures and other ancillary works.

2.5 Number and Types of Designated Projects

This project profile covers only one project. It is for a major improvement to an existing road and part of the works are within the existing country park. It is classified as a Designated Project under Schedule 2 Section A1 and Section Q1 of the Environmental

Impact Assessment Ordinance.

2.6 Name and Telephone Number of Contact Person

3. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

3.1 Project Planning and Implementation

The Investigation (including Environmental Impact Assessment), Preliminary Design and Detailed Design of the project will be carried out by consultants.

3.2 Tentative Project Timetable

(a)	Preparation and circulation of consultancy brief for the Investigation and Preliminary Design Assignment (I&PD)	Jan.2001- Feb.2001
(b)	Consultants selection for the I&PD	Mar.2001 - Jul.2001
(c)	Preliminary design and Environmental Impact Assessment (EIA) study	Aug.2001 - May2002
(d)	Submission of EIA Report and EIA Ordinance procedures	Jun.2002 - Oct.2002
(e)	Consultants selection for detailed design	Nov.2002 - Mar.2003
(f)	Detailed design and gazettal under the Roads (Works, Use and Compensation) Ordinance	Apr.2003 - Feb.2004
(g)	Tendering	Mar.2004 - Jun.2004
(h)	Construction	Jul.2004 - Dec.2006

The above programme is only tentative. The project proponent will try to speed up the implementation of the project.

3.3 Interactions with other projects

The project may have interactions with some projects, including but not limited to the following:-

(a) 132kV overhead power lines and underground cables between Tung Chung Substation and Cheung Sha Substation by CLP Power Hong Kong Limited;

(b) Remaining Development in Tung Chung and Tai Ho by the Territory Development Department;

(c) Widening of the section of Tung Chung Road between Wong Lung Hang Road and Lung Tseng Tau and extension of Burial Ground No. 18L by the Territory Development Department;

(d) Provision of water supply to Ngong Ping by the Water Supplies Department.

The above list of projects is not intended to be exhaustive and will be reviewed during the EIA study.

4. POSSIBLE IMPACTS ON THE ENVIRONMENT

4.1 Introduction

This section describes the likely environmental impacts of the proposed works in both the construction and operational phases.

4.2 Construction Phase

4.2.1 Dust

Air quality impacts have the potential to occur during construction from dust generated due to exposed site areas, stockpiling of materials, movement of vehicles along the road and excavation and handling of construction materials.

4.2.2 Gaseous Emissions

Vehicle and plant exhaust emissions from the site are not considered to be a significant source of air pollutants.

4.2.3 Noise

Noise will be generated from the powered mechanical equipment during construction. Major noisy activities include breaking road surface, excavation, piling, concreting, road surfacing and handling of earth materials.

4.2.4 Traffic

Construction traffic will add to the overall traffic volume on Tung Chung Road and the adjoining roads. Temporary traffic management measures may be implemented to minimize disturbance to the road users in Tung Chung Road.

4.2.5 Solid Waste

Waste generated will comprise excavated materials, construction and demolition waste and general refuse.

4.2.6 Storage, handling, transport, and disposal of dangerous goods, hazardous materials or wastes

No dangerous goods or hazardous materials will be used or generated from the works.

4.2.7 Water Quality

Possible impacts on water quality will arise from the site runoff carrying suspended earth materials, fuel or oil spills from construction plant into adjacent stream courses. Impacts could also arise from the discharge of wastewater from the site. The prevention of such

possible impacts needs to be addressed.

As a large portion of the project is situated within designated water gathering ground and the proposed road alignment will also cross the water catchment channel near Cheung Sha, the potential impacts on the water gathering ground and the water catchment channel should be assessed.

4.2.8 Landscape and Visual Impact

The project will involve earthworks and construction of bridges and retaining walls, which may disturb the natural topography, natural streams and woodland within the site. This may also affect the landscape character and create visual impacts. The potential landscape and visual impacts should be addressed with suitable mitigation measures recommended.

4.2.9 Ecological Impacts

The major habitat types in the vicinity of the proposed works include streams, woodland and shrubland. Impacts during construction on these habitats and the associated fauna and flora should be assessed.

4.2.10 Cultural Heritage Impacts

The known sensitive cultural resources in the vicinity of the proposed works include the Tung Chung Fort and burial grounds. Impacts on the cultural resources should be assessed.

4.3 Operational Phase

4.3.1 Gaseous Emissions

During the operational phase, vehicular traffic will be the main source of gaseous emissions.

4.3.2 Particulates

Particulates will be generated from vehicle emissions during the operational phase.

4.3.3 Noise

Traffic noise from the new road may have impact on the sensitive receivers and should be assessed.

4.3.4 Hazard

The Cheung Sha Water Treatment Works of Water Supplies Department (WSD) in the vicinity of the proposed road alignment contains some chlorine storage. A hazard

assessment of the project should be carried out.

4.3.5 Landscape and Visual Impacts

The project may have residual landscape and visual impacts and an assessment on the landscape and visual impacts should be carried out.

4.3.6 Traffic

Traffic safety and capacity of Tung Chung Road will be improved after completion of the project. Traffic flow in Tung Chung Road and the adjoining roads will be increased.

4.3.7 Ecology

Potential impact may arise from the road runoff on the local streams and should be assessed.

5. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

5.1 Existing and Planned Sensitive Receivers/Natural Environment

Existing and planned sensitive receivers and sensitive parts of the natural environment, which might be affected during the construction and/or operational phases of the project are listed in Table 5.1 and shown on Drawing No. MW6718TH-GL0008A.

Table 5.1 Representative Sensitive Receivers/Natural Environment

Ref. No.	Area	Type	Current Status
1.	Lung Tseng Tau Village	Village	Existing
2.	Fong Yuen	Marshland	Existing
3.	Burial ground No. 18L	Burial ground	Existing
4.	Burial ground extension	Burial ground	Planned
5.	Service Reservoir	Waterworks facilities	Existing
6.	Lantau North and South Country Parks	Conservation	Existing
7.	Tung Chung Stream	Stream	Existing
8.	Country Park Management Office	Office	Existing
9.	Water Dam and Intake tunnel	Waterworks facilities	Existing
10.	WSD Header Tank	Waterworks facilities	Existing
11.	WSD water catchment channel	Waterworks facilities	Existing
12.	WSD Cheung Sha Water Treatment Works	Waterworks facilities and hazardous installation	Existing
13.	Shek Mun Kap Village	Village	Existing

14.	Villas at Cheung Sha	Residential	Existing
15.	Cheung Sha Beach	Beach	Existing
16	Water gathering ground	Water gathering ground	Existing
17	Tung Chung Fort	Heritage	Existing
18	Cheung Sha Stream	Stream	Existing
19	Woodland/Shrubland	Woodland/ Shrubland	Existing
20	Potential housing sites	Residential	Planned
21	Housing development at Tung Chung Area 30/31	Residential	Planned
22	Wong Ka Wai, Sheung Ling Pei, Ha Ling Pei, Fui Yiu Ha	Villages	Existing

Note: This list is not intended to be exhaustive and will be reviewed with EPD during the EIA study.

6. ENVIRONMENTAL PROTECTION MEASURES AND ENVIRONMENTAL IMPLICATIONS

6.1 Noise

6.1.1 Construction Phase

A construction noise assessment will be carried out as part of the EIA study. Different types of plant will be used during construction, including breakers, excavators, air compressors, drilling rigs, cranes and trucks, which will significantly contribute to elevated noise levels at the works site. To mitigate the noise impacts, the following measures should be considered:-

- Use of silenced equipment;
- Use of mufflers, silencers and acoustic linings for noisy mechanical equipment;
- Use of temporary acoustic barriers for noisy operations;
- Siting of equipment;
- Staging of work.

6.1.2 Operational Phase

Mitigation options for reducing traffic noise during the operational phase in the form of vertical or cantilever barriers may be required along some sections of the proposed road.

6.2 Air Quality

6.2.1 Construction Phase

A construction dust assessment will be undertaken as part of the EIA. The following dust control measures are recommended to minimize dust nuisance:

- Regular wetting of the site (using browsers, sprays or vapour mists) to reduce dust;
- Reduction of vehicular speed on unpaved roads;
- Vehicle wheel and body washing facilities at site exits;
- Tarpaulin covering of all dusty vehicle loads transported to and off site.

6.2.2 Operational Phase

Dust, which is predominantly associated with construction, is not expected to be an issue during the operational stage.

6.3 Water Quality

6.3.1 Construction Phase

Mitigation measures will be required to control the site runoff in order to avoid polluting the local streams. The mitigation measures may include:

- Use of temporary steel bridges passing over water courses to avoid direct impacts on streams;
- Temporary drainage system;
- Covering the stockpiled materials to avoid erosion and washing of solid waste into the drainage system.

6.3.2 Operational Phase

During the operational phase, pollutants may be generated by vehicles and a proper road drainage system should be provided.

6.4 Waste

6.4.1 Construction Phase

The main source of solid waste during the construction phase will be excavated spoil. Other materials including surplus construction material, used products and municipal type waste will also be generated, all of which will be disposed of in accordance with environmental guidelines.

To minimize impacts, the following will be taken into consideration:

- Construction vehicles to and from the site will be routed to avoid sensitive receivers where possible;
- Solid materials and waste will be removed from the site and taken to a designated

disposal site;

- Construction waste will be sorted into inert and non-inert materials, and disposed of at filling/reclamation areas or landfill sites respectively.

6.4.2 Operational Phase

No solid waste in excess of normal roadside litter will be produced during the operational phase.

6.5 Ecology

6.5.1 Construction Phase

Potential ecological impacts may arise from the construction activities of the project. The proposed road alignment will be fine-tuned during the course of the EIA study so as to avoid and/or minimize the potential ecological impacts. The EIA study should recommend controlling measures to control the site run-off, which might affect the ecologically sensitive streams close to the works area. Mitigation measures to minimize potential ecological impacts and ecological monitoring programme will be derived during the course of the EIA study.

6.5.2 Operational Phase

Proper road drainage system will be provided to control road runoff from polluting the ecologically sensitive streams.

6.6 Landscape and Visual Impacts

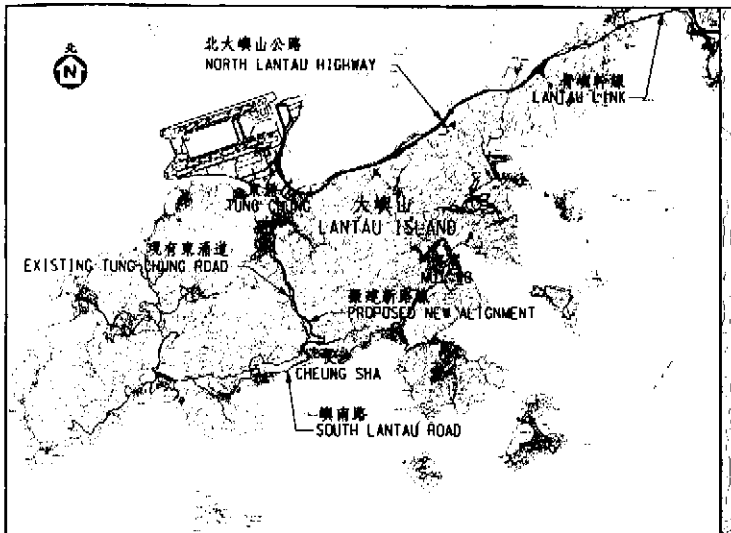
Mitigation measures to minimize the landscape and visual impacts may include but not limited to:

- Use of crib walls, retaining walls or bridge structures to reduce the amount of earthworks;
- Aesthetic design of retaining walls and elevated structures;
- Landscape treatment on slopes; and
- Compensatory planting.

6.7 Possible Severity, Distribution and Duration of Environmental Effects

.With proper implementation and monitoring of the mitigation measures, adverse environmental effects will be minimized during the construction and operational phases.

-END-



要覽圖 KEY PLAN 比例 SCALE : 1 : 200000

大嶼山
LANTAU ISLAND

嶼南路
SOUTH LANTAU ROAD

長沙
CHEUNG SHA

擬建新路線
PROPOSED NEW ROAD ALIGNMENT

現有東涌道
EXISTING TUNG CHUNG ROAD

龍井頭
LUNG TSENG TAU

東涌
TUNG CHUNG

石門甲
SHEK MUN KAP

此段道路依原有路線擴闊
THIS SECTION OF TUNG CHUNG ROAD TO BE WIDENED ALONG THE EXISTING ALIGNMENT

400 0 400 800 1200 1600 2000 METERS 米

NOTES: 註釋

LEGEND : 圖例

- 擬建削土斜坡 PROPOSED CUTTING SLOPE
- 擬建填土斜坡 PROPOSED FILLING SLOPE
- 郊野公園界線 COUNTRY PARK BOUNDARY
- 現有東涌道 EXISTING TUNG CHUNG ROAD
- 擬建高架道路 PROPOSED VIADUCT
- 擬建道路 PROPOSED ROAD
- ① 感應強的代表地方/自然環境（見工程項目簡介第5.1段） REPRESENTATIVE SENSITIVE RECEIVERS/ NATURAL ENVIRONMENT (SEE PARAGRAPH 5.1 OF PROJECT PROFILE)

no.	date	description	initial
A	01/01	GENERAL REVISION	SIGNED

REVISION

designed T. Y. CHEUNG SIGNED 16/12/2000	drawn H. Y. YIP SIGNED 16/12/2000
checked T. Y. CHEUNG SIGNED 18/12/2000	approved W. L I SIGNED 19/12/2000

contract no. 合約編號

file no. 檔案編號

project no. 工程編號

contract 合約
東涌道介乎龍井頭與長沙之間的改善工程
IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

drawing title 圖則名稱
感應強的代表地方/自然環境
REPRESENTATIVE SENSITIVE RECEIVERS/NATURAL ENVIRONMENT

drawing no. 圖號	scale 比例
MW6718TH-GL00008A	1 : 20000

office
MAJOR WORKS
PROJECT MANAGEMENT OFFICE
主要工程管理處

HIGHWAYS DEPARTMENT HONG KONG 香港路政署

A3 420 x 297