

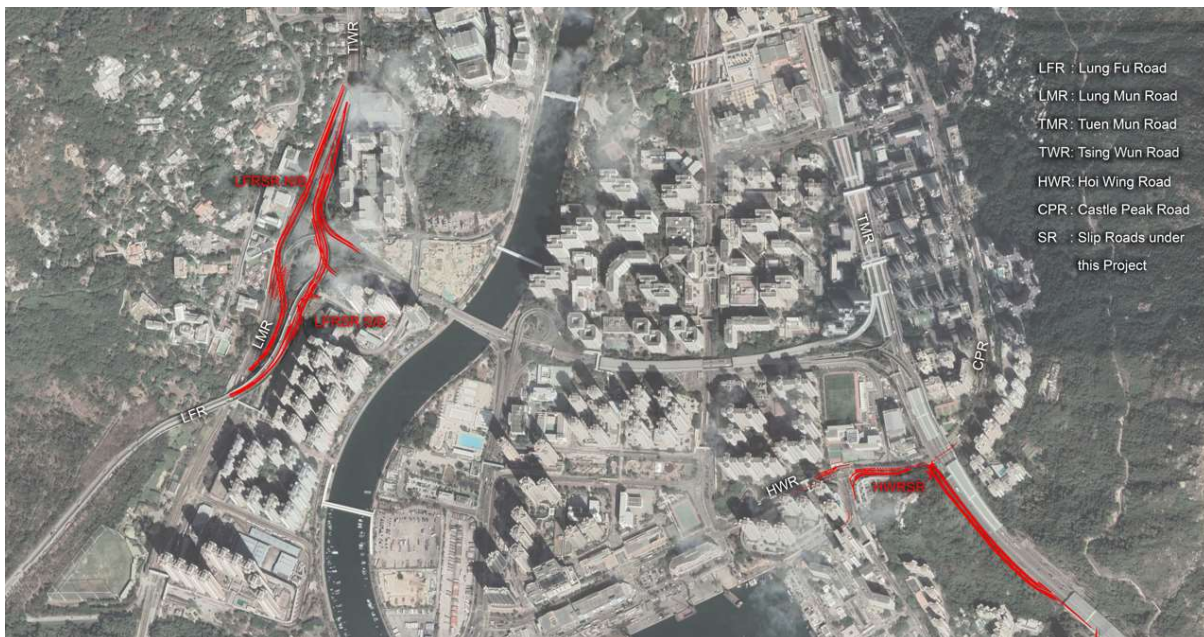
HIGHWAYS DEPARTMENT

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 (EXTENSION WORKS TO MAJOR ROADS IN TUEN MUN) – INVESTIGATION, DESIGN AND CONSTRUCTION

ENVIRONMENTAL IMPACT ASSESSMENT

CHAPTER 12 – SUMMARY OF ENVIRONMENTAL OUTCOMES

(DRAFT – ISSUE 2)





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Environmental Impact Assessment

Chapter 12 – Summary of Environmental Outcomes

(Draft – Issue 2)

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12 SUMMARY OF ENVIRONMENTAL OUTCOMES

12.1 INTRODUCTION

- 12.1.1 An assessment of potential environmental impacts associated with the construction and operation phase of the Project has been conducted in accordance with the requirements of the EIA Stud Brief and EIAO-TM.
- 12.1.2 This section summarises the key environmental outcomes associated with the Project, as well as environmentally friendly options adopted and key environmental problems avoided in the design of the Project.
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12.2 ENVIRONMENTAL BENEFITS OF THE PROJECT

- 12.2.1 As the Project will provide an alternative route for traffic to and from Tuen Mun East and Tuen Mun West, and also an alternative route between northwest of the New Territories and southern of Tuen Mun/ TM-CLKT, a decrease in traffic volume along Tuen Mun Road and Wong Chu Road is expected. As a result, the capacity problem of the major roads in Tuen Mun District would be improved during peak hours in the medium-term. With the alleviation of traffic problem, the noise impact to residential premises nearby local roads in Tuen Mun would also be improved as a result of the Project.
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12.3 INCORPORATION OF ENVIRONMENTALLY FRIENDLY OPTIONS

- 12.3.1 Avoidance of environmental impacts is one of the main considerations throughout elevation and development of alignment options. In case due to limitation of actual site situation that environmental impacts could not be completely avoided, environmentally friendly alternatives or designs were taken as much as practicable for compliance with relevant EIA requirements. The following approaches to avoid environmental impacts have been suitably incorporated into the layout of the preferred alignment option, as discussed below.

Avoiding construction works at junction of Tsing Wun Road (TWR) and Yip Wong Road (YWR)

- 12.3.2 The proposed realignment of the slip road from TWR SB to WCR EB under the preferred Option LS2 would avoid the need to extending the existing junction of TWR/YWR northwards, which would greatly affect the existing slopes and squatter areas in the north of YWR. Construction works at the existing junction of TWR/YWR have the potential to generate large amount of excavated materials which have now been avoided under the preferred Option LS2.

Setback of the LFRSR-NB from existing sensitive receivers to the west

- 12.3.3 The proposed LFRSR-NB alignment under the preferred Option LN2 is developed such that LFRSR-NB, in particular the elevated section with existing schools located at close vicinity, is located away from the nearby sensitive receivers to the west as far as possible to minimise potential air quality and noise impacts to them during operation phase.

Setback of HWRSR from the boundary of Shing Miu

12.3.4 The proposed HWRSR alignment under the preferred Option H3 is located away from the existing Shing Miu, a graded historic building, such that direct impact to Shing Miu can be avoided.

12.4 ENVIRONMENTAL DESIGN RECOMMENDED

12.4.1 Other than initiatives to avoid environmental impacts as summarised in **Section 12.3**, further efforts have been exercised to minimise impacts. The need for any environmental designs required to mitigate the associated impacts have also been identified and will be implemented, as appropriate. A summary of these approaches is given below:

- Adoption of environmentally friendly construction method;
- Implementation of trip-ticket system; and
- Implementation of environmental monitoring and auditing system.

Adoption of Environmentally Friendly Construction Method

12.4.2 Excavation and lateral support (ELS) method rather than the traditional open cut excavation method will be adopted for the construction of HWRSR in order to minimise generation of C&D materials and the extent of tree felling required. Also, silent press-in techniques would be used for installing piles for ELS so as to reduce potential noise impact as much as possible.

Implementation of Trip-Ticket System

12.4.3 In order to monitor, document and verify the disposal of C&D materials at landfills and public fill reception facilities and to control fly tipping, a trip-ticket system for disposal of construction and demolition materials would be implemented. All dump trucks should be equipped with GPS or equivalent system for monitoring of their transportation routes and parking locations to prohibit illegal dumping and landfilling of C&D materials.

Implementation of Environmental Monitoring and Auditing System

12.4.4 In addition to the mitigation measures as described above (detailed Implementation Schedule of Recommended Mitigation Measures is provided in **Appendix 11.1**), a comprehensive environmental monitoring and auditing programme would be implemented to cover various aspects of concern. An independent environmental checker would also be employed to ensure that all the necessary mitigation measures are implemented in a timely and orderly manner.

12.5 KEY ENVIRONMENTAL PROBLEMS AVOIDED AND ENVIRONMENTALLY SENSITIVE AREAS PROTECTED

12.5.1 **Sections 12.3** and **12.4** have summarised the key approaches adopted in the current proposal to avoid, minimise and mitigate environmental impacts. Some of these approaches have contributed to avoiding a number of environmental problems and protecting a number of environmentally sensitive areas. The key environmental problems that have been avoided and any sensitive areas protected by these approaches are presented in **Table 12.1**.

Table 12.1 Summary of Key Environmental Problems Avoided and Sensitive Areas Protected

Design Approach	Environmental Problems Avoided and Sensitive Areas Protected
Adoption of environmentally friendly construction method (Section 2)	<ul style="list-style-type: none"> • Adoption of quiet piling method to minimise the construction noise impact to nearby sensitive receivers. • Earthworks are carried out in phases to minimise the construction dust impact to nearby sensitive receivers.
Avoidance of illegal dumping (Section 6)	<ul style="list-style-type: none"> • The recommended preventive measures would avoid/minimise the chance of illegal dumping.
Bird friendly design for noise barriers (Section 8)	<ul style="list-style-type: none"> • Minimise potential bird collision.
Implementation of Environmental Monitoring and Auditing System (Section 11)	<ul style="list-style-type: none"> • Ensure all the recommended measures are properly in place and their effectiveness.

12.6 ESTIMATION OF POPULATION PROTECTED

12.6.1 Population and environmental sensitive areas in the vicinity of the Project site have been protected through the avoidance and/or minimisation of environmental impacts from the construction and operation of the Project. Population protected from air quality impacts include air sensitive receivers within 500m from the Project Boundary including residential buildings, commercial buildings, industrial buildings, cultural uses, educational uses, recreational uses, places of public worship, and government/institutional or community uses. Population protected from noise impacts include noise sensitive receivers within 300m from the Project Boundary including residential buildings. Population protected from water quality impacts include water sensitive receivers within 500m from the Project Boundary.