



JOB NO.: TCS00694/13

AGREEMENT NO. CE 45/2008 (CE)
LIANTANG/ HEUNG YUEN WAI
BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

ENVIRONMENTAL MONITORING AND AUDIT REPORT ON
THE IMPLEMENTATION OF MITIGATION MEASURES
FOR OPERATION STAGE OF THE PROJECT

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
(CEDD)

Date	Reference No.	Prepared By	Certified By
17 November 2020	TCS00694/13/600/R2151v3	 Nicola Hon (Environmental Consultant)	 Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	5 August 2019	First Submission
2	22 August 2019	Amended according to the IEC's comment on 13 and 22 August 2019
3	17 November 2020	Amended according to the EPD's comment on 16 September 2019



Member of the Surbana Jurong Group

local people
global experience

Our ref: 7076192/L26666/AW/MCC/rw

18 November 2020

AECOM
8/F, Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, N.T.

By Email & Post

Attention: Mr Owen NG

Dear Sir

Agreement No. CE 45/2008 (CE)
Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
Independent Environmental Checker – Investigation
Environmental Monitoring and Audit Report on the Implementation of Mitigation Measures for
Operation Stage of the Project

With reference to the captioned (Version 3) certified by the ET Leader, please note that we have no adverse comments on the captioned submission. We herewith verify the captioned submission in accordance with Condition 5.5 of the Environmental Permit No. EP-404/2011/D.

Thank you for your attention and please do not hesitate to contact the undersigned on tel. 3995-8120 or by email to antony.wong@smec.com; or our Mr Arthur CHIU on tel. 3995-8144 or by email to arthur.chiu@smec.com.

Yours faithfully

Antony WONG
Independent Environmental Checker

cc	CEDD/BCP	-	Mr LU Pei Yu / Mr William CHEUNG	by fax: 3547 1659
	ArchSD	-	Ms Becky WAN	by fax: 2804 6805
	AECOM	-	Mr Pat LAM / Mr Julian LING	by email
	Ronald Lu	-	Mr Peter YAM / Mr Justin CHEUNG	by email
	AUES	-	Mr TW TAM	by email
	CCKJV	-	Mr Vincent CHAN	by email

SMEC ASIA LIMITED
27/F Ford Glory Plaza, 37-39 Wing Hong Street
Cheung Sha Wan, Kowloon, Hong Kong
T +852 3995 8100
F +852 3995 8101
E hongkong@smec.com
W www.smec.com



Table of Contents

1# INTRODUCTION	1#
1.1# PROJECT BACKGROUND	1#
1.2# PROJECT ORGANIZATION	2#
2# IMPLEMENTATION STATUS OF MITIGATION MEASURES	8#
2.1# GENERAL REQUIREMENTS	8#
3# CONCLUSIONS	20#
3.1# CONCLUSIONS	20#

LIST OF TABLES

TABLE 1-1	SUMMARY OF EP SUBMISSIONS
TABLE 1-2	SUMMARY OF IMPLEMENTATION OF THE MITIGATION MEASURES FOR OPERATION STAGE UNDER THE EP SUBMISSION

LIST OF APPENDICES

APPENDIX A	LAYOUT PLAN OF THE PROJECT
APPENDIX B	PHOTOS ILLUSTRATING THE MITIGATION MEASURES

1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Civil Engineering and Development Department (CEDD) is the Project Proponent and the Permit Holder of *Agreement No. CE 45/2008 (CE) Liantang / Heung Yuen Wai Boundary Control Point and Associated Works* (hereinafter referred as “the Project”), which is a Designated Project to be implemented under the latest Environmental Permit (EP) number EP-404/2011/D granted on 20 January 2017.

1.1.2 The Project consists of two main components: Construction of a Boundary Control Point (hereinafter referred as “BCP”); and Construction of a connecting road alignment. Layout plan of the Project is shown in *Appendix A*. The scope of the Project mainly comprises the followings:

- (i) construction of a dual two-lane trunk road of 11km in length;
- (ii) on-site sewage treatment facility and effluent reuse;
- (iii) site formation for construction of a Boundary Control Point (BCP) building in the area of Chuk Yuen Village;
- (iv) associated drainage facilities discharging into the Shenzhen River;
- (v) cargo processing facilities; (managed under ArchSD’s Contract SS C505)
- (vi) passenger related facilities; (managed under ArchSD’s Contract SS C505)
- (vii) accommodation for and facilities of the Government departments;
- (viii) provision of transport related facilities inside the BCP; (managed under ArchSD’s Contract SS C505)
- (ix) other peripheral structures and supporting facilities;
- (x) associated diversion / modification works at Lin Ma Hang Road; and
- (xi) associated environmental mitigation measures.

1.1.3 The proposed BCP is located at the boundary with Shenzhen near the existing Chuk Yuen Village, comprising a main passenger building with passenger and cargo processing facilities and the associated customs, transport and ancillary facilities. The connecting road alignment consists of six main sections:

- 1) Lin Ma Hang to Frontier Closed Area (FCA) Boundary – this section comprises at-grade and viaducts and includes the improvement works at Lin Ma Hang Road;
- 2) Ping Yeung to Wo Keng Shan – this section stretches from the Frontier Closed Area Boundary to the tunnel portal at Cheung Shan and comprises at-grade and viaducts including an interchange at Ping Yeung;
- 3) North Tunnel – this section comprises the tunnel segment at Cheung Shan and includes a ventilation building at the portals on either end of the tunnel;
- 4) Sha Tau Kok Road – this section stretches from the tunnel portal at Wo Keng Shan to the tunnel portal south of Loi Tung and comprises at-grade and viaducts including an interchange at Sha Tau Kok and an administration building;
- 5) South Tunnel – this section comprises a tunnel segment that stretches from Loi Tung to Fanling and includes a ventilation building at the portals on either end of the tunnel as well as a ventilation building in the middle of the tunnel near Lau Shui Heung;
- 6) Fanling – this section comprises the at-grade, viaducts and interchange connection to the existing Fanling Highway.

1.1.4 To facilitate the project management and implementation, the Project was divided by six CEDD work contracts and an Architectural Services Department (ArchSD) Contract as follows:

- CEDD contract no. CV/2012/08 (Contract 2)
- CEDD contract no. CV/2012/09 (Contract 3)
- CEDD contract no. NE/2014/02 (Contract 4)
- CEDD contract no. CV/2013/08 (Contract 6)
- CEDD contract no. NE/2014/03 (Contract 7)
- CEDD contract no. CV/2013/03 (Contract 5) (The construction works of Contract 5 was

substantially completed on 31 August 2016 and the relevant duties under EM&A were handover to Contract 6)

- ArchSD contract no. SS C505 (Contract SS C505)

- 1.1.5 As stipulated in the Environmental Permit no. EP-404/2011/D condition 5.5, “The Permit Holder shall, no later than three months after the commencement of operation of the Project, deposit with the Director an Environmental Monitoring and Audit report on the implementation of the mitigation measures for operation stage of the Project in accordance with the EIA Report and the submissions required under of this Permit.”
- 1.1.6 The Heung Yuen Wai (HYW) Highway and connecting roads under the Project was opened on 26 May 2019. Since partial commencement of operation is the same as the commencement of operation for the entire project from EIAO perspective. An EM&A Report on the Implementation of Mitigation Measures for Operation Stage of the Project (Heung Yuen Wai Highway and Connecting Roads Section) was submitted to EPD on 5 August 2019 in accordance with EP-404/2011/D condition 5.5.
- 1.1.7 On 26 August 2020, the cargo clearance facilities of the Liantang Port / HYW BCP, i.e., Contract SS C505 were partially commissioned. The EM&A report on the Implementation of Mitigation Measures for Operation Stage of the Project is subsequently updated to include the implementation of the mitigation measures for operation stage of BCP. This EM&A report will be submitted to EPD no later than three (3) months after the partial commencement of BCP.
- 1.1.8 All relevant requirements as stipulated in the EP and the approved EIA report (including the EM&A Manual) for the commencement of operation of the Project shall be strictly complied with. Since all the mitigation measures required by the EP, EIA and EM&A Manual have been implemented for the Project including whole BCP, this is the final Operation EM&A Report and no additional report will be submitted in the future once the cross boundary facilities for passenger will be commissioned.

1.2 PROJECT ORGANIZATION

- 1.2.1 The project organization and the responsibilities of respective parties are presented below:

Civil Engineering and Development Department (CEDD)

- 1.2.2 CEDD is the Project Proponent and the Permit Holder of the EP of the development of the Project and will assume overall responsibility for the project. An Independent Environmental Checker (IEC) shall be employed by CEDD to audit the results of the EM&A works carried out by the ET.

Architectural Services Department (ArchSD)

- 1.2.3 ArchSD acts as the works agent for Development Bureau (DEVB), for Contract SS C505 Liantang/ Heung Yuen Wai Boundary Control Point (BCP) – BCP Buildings and Associated Facilities.

Environmental Protection Department (EPD)

- 1.2.4 EPD is the statutory enforcement body for environmental protection matters in Hong Kong.

Ronald Lu & Partners (Hong Kong) Ltd (The Architect)

- 1.2.5 Ronald Lu & Partners (Hong Kong) Ltd is appointed by ArchSD as an Architect for Contract SS C505 Liantang/ Heung Yuen Wai Boundary Control Point (BCP) – BCP Buildings and Associated Facilities. It responsible for overseeing the construction works of Contract SS C505 and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the Architect with respect to EM&A are:

- Monitor the Contractors’ compliance with contract specifications, including the

implementation and operation of the environmental mitigation measures and their effectiveness

- Monitor Contractors' and ET's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation
- Liaison with DSD, Engineer/Engineer's Representative, ET, IEC and the Contractor of the "Construction of the DSD's Regulation of Shenzhen River Stage 4 (RSR 4)" Project discussing regarding the cumulative impact issues.

Engineer or Engineers Representative (ER)

1.2.6 The ER is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the ER with respect to EM&A are:

- Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
- Monitor Contractors's, ET's and IEC's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation
- Liaison with DSD, Engineer/Engineer's Representative, ET, IEC and the Contractor of the "Construction of the DSD's Regulation of Shenzhen River Stage 4 (RSR 4)" Project discussing regarding the cumulative impact issues.

The Contractor(s)

1.2.7 There will be one contractor for each individual works contract. Once the contractors are appointed, EPD, ET and IEC will be notified the details of the contractor.

1.2.8 The Contractor for Contracts under CEDD should report to the ER. For ArchSD Contract, the Contractor should report to the Architect or Architect's Representative (AR). The duties and responsibilities of the Contractor are:

- Comply with the relevant contract conditions and specifications on environmental protection
- Employ an Environmental Team (ET) to undertake monitoring, laboratory analysis and reporting of EM & A Facilitate ET's monitoring and site inspection activities
- Participate in the site inspections by the ET and IEC, and undertake any corrective actions
- Provide information / advice to the ET regarding works programme and activities which may contribute to the generation of adverse environmental impacts
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event / Action Plans
- Implement measures to reduce impact where Action and Limit levels are exceeded
- Adhere to the procedures for carrying out complaint investigation

Environmental Team (ET)

1.2.9 Once the ET is appointed, the EPD, CEDD, ER, Architect and IEC will be notified the details of the ET.

1.2.10 The ET shall not be in any way an associated body of the Contractor(s), and shall be employed by

the Project Proponent/Contractor to conduct the EM&A programme. The ET should be managed by the ET Leader. The ET Leader shall be a person who has at least 7 years' experience in EM&A and has relevant professional qualifications. Suitably qualified staff should be included in the ET, and resources for the implementation of the EM&A programme should be allocated in time under the Contract(s), to enable fulfillment of the Project's EM&A requirements as specified in the EM&A Manual during construction of the Project. The ET shall report to the Project Proponent and the duties shall include:

- Monitor and audit various environmental parameters as required in this EM&A Manual
- Analyse the environmental monitoring and audit data, review the success of EM&A programme and the adequacy of mitigation measures implemented, confirm the validity of the EIA predictions and identify any adverse environmental impacts arising
- Carry out regular site inspection to investigate and audit the Contractors' site practice, equipment/plant and work methodologies with respect to pollution control and environmental mitigation, and effect proactive action to pre-empt problems
- Monitor compliance with conditions in the EP, environmental protection, pollution prevention and control regulations and contract specifications
- Audit environmental conditions on site
- Report on the environmental monitoring and audit results to EPD, the ER, the Architect, the IEC and Contractor or their delegated representatives
- Recommend suitable mitigation measures to the Contractor in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans
- Liaise with the IEC on all environmental performance matters and timely submit all relevant EM&A proforma for approval by IEC
- Advise the Contractor(s) on environmental improvement, awareness, enhancement measures etc., on site
- Adhere to the procedures for carrying out complaint investigation
- Liaison with the client departments, Engineer/Engineer's Representative, ET, IEC and the Contractor(s) of the concurrent projects as listed under Section 2.3 below regarding the cumulative impact issues.

Independent Environmental Checker (IEC)

- 1.2.11 One IEC will be employed for this Project. Once the IEC is appointed, EPD, ER, the Architect and ET will be notified the details of the IEC.
- 1.2.12 The Independent Environmental Checker (IEC) should not be in any way an associated body of the Contractor or the ET for the Project. The IEC should be employed by the Permit Holder (i.e., CEDD) prior to the commencement of the construction of the Project. The IEC should have at least 10 years' experience in EM&A and have relevant professional qualifications. The appointment of IEC should be subject to the approval of EPD. The IEC should:
- Provide proactive advice to the ER and the Project Proponent on EM&A matters related to the project, independent from the management of construction works, but empowered to audit the environmental performance of construction
 - Review and audit all aspects of the EM&A programme implemented by the ET
 - Review and verify the monitoring data and all submissions in connection with the EP and EM&A Manual submitted by the ET
 - Arrange and conduct regular, at least monthly site inspections of the works during construction phase, and ad hoc inspections if significant environmental problems are identified
 - Check compliance with the agreed Event / Action Plan in the event of any exceedance
 - Check compliance with the procedures for carrying out complaint investigation
 - Check the effectiveness of corrective measures
 - Feedback audit results to ET by signing off relevant EM&A proforma

- Check that the mitigation measures are effectively implemented
- Verify the log-book(s) mentioned in Condition 2.2 of the EP, notify the Director by fax, within one working day of receipt of notification from the ET Leader of each and every occurrence, change of circumstances or non-compliance with the EIA Report and/or the EP, which might affect the monitoring or control of adverse environmental impacts from the Project
- Report the works conducted, the findings, recommendation and improvement of the site inspections, after reviewing ET's and Contractor's works, and advices to the ER and Project Proponent on a monthly basis
- Liaison with the client departments, Engineer/Engineer's Representative, the Architect, ET, IEC and the Contractor of the concurrent projects as listed under Section 2.3 below regarding the cumulative impact issues.

1.3 SUBMISSION UNDER ENVIRONMENTAL PERMIT

1.3.1 The required submissions under the EP and the statuses are summarised in **Table 1-1**. The submissions contain the implementation of the mitigation measures for operation stage of the Project are summarised in **Table 1-2**.

Table 1-1 Summary of EP submissions

EP condition	Submission	Status	Implementation of the Mitigation Measures for Operation Stage
2.7	Project Layout Plans	C5 – Approved by EPD on 20 August 2013 C3 – Approved by EPD on 13 August 2013 C2 – Approved by EPD on 3 April 2014 C6 – Submission on 18 Sep 2015 – no reply from EPD C7 – Approved by EPD on 20 January 2016 C4 – submission on 31 Mar 2017 – no reply from EPD SS C505 – Submission on 31 Aug 2015 - no reply from EPD <i>Remark: Approval for this submission is not required, required deposit only</i>	Not applicable
2.8	Vegetation Survey Report	C2, C3 & C5 – Approved by EPD on 17 November 2014 C6 – Approved by EPD on 12 October 2015; Report updated and submitted on 18 Jan 2019 <i>Remark: Approval for this submission is not required, required deposit only</i>	Not applicable
2.9	Woodland Compensation Plan	Rev 2 – Approved by EPD on 10 October 2017	Refer to Table 1-2
2.10	Habitat Creation and Management Plan (HCMP)	Rev 3 – Approved by EPD on 17 October 2019	Refer to Table 1-2
2.11	Landscape Plan	Rev 3 – Approved by EPD on 24 October 2019	Refer to Table 1-2
2.12	Topsoil Management Plan	Overall approval in principle – Approved by EPD on 29 November 2013 C5 – Approved by EPD on 18 June 2013 C2 – Updated plan submitted on 20 June 2014 C6 - Updated plan submitted on 26 Feb 2016	Not applicable

		No topsoil for other contracts	
2.13	Environmental Monitoring and Audit Programme	Rev 7 – Approved by EPD on 7 April 2017	Not applicable
2.14 to 2.16	Archaeological surveys	The Archaeological Survey Report was deposited to EPD on 30 August 2016	Not applicable
3.2 & 3.3	Waste Management Plan	C5 – Approved by EPD on 23 December 2013 C3 – Approved by EPD on 23 December 2013 C2 – Approved by EPD on 21 June 2018 C6 – Approved by EPD on 17 October 2019 C7 – Approved by EPD on 21 June 2018 C4 – Approved by EPD on 26 August 2017	Not applicable
3.4	Contamination Assessment Plan (CAP) and Contamination Assessment Report (CAR) for Po Kat Tsai, Loi Tung and the workshops in Fanling	C2 (CAP) – Approved by EPD on 26 August 2014 C2 (CAR) – Approved by EPD on 24 December 2014 C3 (CAP) – Approved by EPD on 26 August 2014 C3 (CAR) – Approved by EPD on 24 December 2014	Not applicable
3.5	Noise Mitigation Plan (NMP)	Approved by EPD on 10 May 2019	Refer to Table 1-2
5.3	Baseline Monitoring Report	Report deposited to EPD on 29 August 2013 by ET, no approval is required	Not applicable
5.4	Monthly EM&A Report	Submitted to EPD within 10 working days after the end of the reporting month	Not applicable
5.5	EM&A report on the implementation of the mitigation measures for operation stage	1st submission on 5 Aug 2019 which three months after the partial commencement of operation of the Project	Refer to Table 1-2

Table 1-2 Summary of Implementation of the Mitigation Measures for Operation Stage under the EP Submission

EP condition	Submission	Implementation of the Mitigation Measures for Operation Stage
2.9	Woodland Compensation Plan	According to the EIA report, a total of 6.2 ha of woodland habitats would be lost permanently for the construction of the portals of tunnels and some sections of the connecting road. Mitigation measures in the form of creation of a 18.6 ha compensatory woodland at Cheung Shan were therefore recommended to avoid residual ecological impacts from the Project. Construction phase of compensation woodland was completed. Establishment works for planning and ecological monitoring are in progress and will be continued during the operation phase until handover to AFCD.

2.10	Habitat Creation and Management Plan	<p>According to the EIA Report, 1.4ha freshwater wetland habitat (mainly the abandoned wet agricultural land located at Loi Tung, Wo Keng Shan and Nga Yiu Ha areas) were loss due to the construction. Wetland Compensation Area (WCA) comprised of an area not less than 1.4 ha is therefore provided near the affected habitat areas for the purpose of on-site mitigation.</p> <p>Implementation phase for construction of compensation wetland was completed. Establishment works for wetland and ecological monitoring are in progress and will be continued during the operation phase until handover to AFCD.</p>
2.11	Landscape Plan	<p>The operation phase mitigation measures have been adopted during the detailed design and be built as part of the construction works at the last stage of construction period so they are in place at the date of commissioning of the Project.</p>
3.5	Noise Mitigation Plan	<p>To mitigate traffic noise, the noise barrier described in NMP has installed prior to the commencement of operation of the Project.</p>
4.1	Measures during operation of the Project	<p>The ecological mitigation measures stated in the Woodland Compensation Plan and HCMP are properly implemented, maintained and monitored during the entire period of the life of the Project.</p>
5.5	EM&A report on the implementation of the mitigation measures for operation stage	<p>The implementation of the mitigation measures for operation stage summarised in the EM&A report would be maintained throughout the operation phase.</p>

2 IMPLEMENTATION STATUS OF MITIGATION MEASURES

2.1 GENERAL REQUIREMENTS

- 2.1.1 The implementation of the mitigation measures for operation stage of the Project in accordance with the EIA Report and the submissions required under of the EP are summarised in the table form of checklist below. It also made reference to The Implementation Schedule for Environmental Mitigation Measures (ISEMM) is appended in the approved EM&A Manual.
- 2.1.2 Photos illustrating the status of mitigation measures are shown *Appendix B*.

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
Air Quality Impact (Operation)							
EP C3.11/ EIA Section 3.5.2.2	<p>The sewage treatment plant installed for the Project shall be installed at the location shown in Figure 3 of the EP</p> <p>The plant shall be designed with the following odour containment and control measures :</p> <ol style="list-style-type: none"> 1. <u>Negative Pressure Ventilation</u> <ol style="list-style-type: none"> (a) The treatment plant shall be totally enclosed with negative pressure ventilation to avoid odorous emission from the treatment works. The tanks will be connected to deodorisation facilities designed for a minimum removal of 90% directly to eliminate odour problem. 2. <u>Total Containment of Sewage Channels</u> <ol style="list-style-type: none"> (a) air-tight cover shall be installed to sewage channels, sewage tanks, and equipment with potential odour emission and the trapped gases shall be collected by air handling equipment for containing and directing odorous gases to deodorisation facilities. (b) Gravity sewer, equalization and 	To minimize potential odour impact of the proposed sewage treatment work at BCP	DSD	Sewage Treatment Plant (STP) at BCP	Operation Phase	<p>Fully implemented</p> <p>Fully implemented</p> <p>Fully implemented</p>	<p>STP was implemented at BCP and it was handover to DSD on 29 July 2019 for operation. <i>Photo 1</i> shows the overview of STP at BCP.</p> <p>The STP was enclosed with negative pressure ventilation and the tanks are connected to deodorisation facilities.</p> <p>The underground sewage tank, sewage channel and potential odour emission with air tight cover and were connected to deodorisation facilities.</p> <p>-</p>

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	<p>sludge holding tanks shall be designed with suitable sewer distance and retention time to prevent sewage septicity.</p> <p>3. Proper mixing will be provided at the equalization and sludge holding tanks to prevent sewage septicity.</p> <p>4. <u>Deodorisation</u> (a) Deodorisation facilities at the sewage treatment plant shall be designed with a minimum odour removal efficiency of 90%.</p>					<p>Fully implemented</p> <p>Fully implemented</p>	<p>-</p> <p>The deodorisation facilities was monitored by control room to ensure odour removal efficiency of 90%.</p>
EP C3.12	The air intake point of Boundary Control Point Building shall be located at least 150m from the sewage treatment plant.	To minimize potential odour impact from operation of the proposed sewage treatment work at BCP	DSD	STP at BCP	During detailed design/ before operation Phase	Fully implemented	
Noise Impact (Operation)							
Road Traffic Noise							
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	<p>Erection of noise barrier/ enclosure along the viaduct section.</p> <p>- To mitigate the traffic noise impact arising from the operation of the Project, the noise mitigation measures shall be implemented in accordance with Fig 4, 5, 6 and 7</p>	To minimize the road traffic noise along the connecting road of BCP	Contractor	Loi Tung and Fanling Highway Interchange	Before Operation	Fully implemented	Noise barriers were installed in accordance with the Noise Mitigation Plan. Photos 2a to 2k show the installation of the noise barriers.

Agreement No. CE 45/2008 (CE)
Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
Environmental Monitoring & Audit Report on the Implementation of
Mitigation Measures for Operation Stage of the Project

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	attached to the EP, or otherwise approved by the Director subject to the submission of a Noise Mitigation Plan by the Permit Holder to cater for the final layout and design of the Project.						
Fixed Plant Noise							
EIA Table 4.46	Specification of the maximum allowable sound power levels of the proposed fixed plants during daytime and night-time.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-
EIA Section 4.6.2	Commissioning test should be conducted for all major fixed noise sources to ensure compliance of the operational for all major fixed noise sources before operation.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-
EIA Section 4.5.2.4	The following noise reduction measures shall be considered as far as practicable during operation: <ul style="list-style-type: none"> Choose quieter plant such as those which have been effectively silenced; Include noise levels specification when ordering new plant (including chillier and E/M equipment); Locate fixed plant/louver away from any NSRs as far as practicable; 	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	<ul style="list-style-type: none"> Locate fixed plant in walled plant rooms or in specially designed enclosures; Locate noisy machines in a basement or a completely separate building; Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary; and Develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise. 						
<u>Sewage and Sewerage Treatment Impact (Operation)</u>							
EIA Section 5.6.2.1	The implementation of proper channel/pipeline/cross road pipes to maintain the overland flow path, and that drainage channel would be provided to convey the storm drain and discharge at downstream of River Indus.	To minimize water quality impacts	DSD	For connecting road	Operation phase	Fully implemented	The permanent drainage works have been implemented in accordance with the recommendations in the Drainage Impact Assessment (DIA) for the project
EIA Section 6.6.3	Sewage generated by the BCP and Chuk Yuen Village Resite will be collected and treated by the proposed on-site sewage treatment facility using Membrane Bioreactor treatment with a portion of the treated wastewater reused	To minimize water quality impacts	DSD	BCP	Operation phase	Fully implemented	-

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	for irrigation and flushing within the BCP.						
EIA Section 6.5.3	Sewage generated from the Administration Building will be discharged to the existing local sewerage system.	To minimize water quality impacts	DSD	Administration Building	Operation phase	Fully implemented	-
Waste Management (Operation)							
7.6.2.1	General refuse General refuse should be collected on daily basis and delivered to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest and vermin problem. Recycling containers are recommended to be provided to encourage recycling of aluminium cans and waste paper.	To minimize impacts resulting from collection and transportation of general refuse for off-site disposal	Managing Authority of the BCP	BCP and its Associated facilities	Operation phase	Fully implemented	
7.6.2.2	Chemical waste <ul style="list-style-type: none"> Register with the EPD as a chemical waste producer should be made and guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes should be followed. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container 	To minimize impacts resulting from collection and transportation of general refuse for off-site disposal	Managing Authority of the BCP	BCP and its Associated facilities	Operation phase	Fully implemented	

Agreement No. CE 45/2008 (CE)
 Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
 Environmental Monitoring & Audit Report on the Implementation of
 Mitigation Measures for Operation Stage of the Project



EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. Licensed collector should be deployed to transport and dispose of the chemical wastes, to the licensed Chemical Waste Treatment Centre, or licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.						
Ecological Impact							
EIA Section 9.8	<p>Mitigation to Noise Disturbance to Wildlife</p> <p>The following noise reduction measures shall be considered as far as practicable during operation:</p> <ul style="list-style-type: none"> Choose quieter plant such as those which have been effectively silenced; Include noise levels specification when ordering new plant (including chillier and E/M equipment); Locate fixed plant in walled plant rooms or in specially designed enclosures; Locate noisy machines in a basement or a completely separate building; Install direct noise mitigation 	To minimize the impact to wildlife	Contractors	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	measures including silencers, acoustic louvers and acoustic enclosure where necessary; and <ul style="list-style-type: none"> Develop and implement a regularly scheduled plant maintenance; programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise. 						
EIA Section 9.8	Mitigation to Anthropogenic Disturbance <ul style="list-style-type: none"> Buffer planting shall be provided for screening the proposed structures and associated facilities. 	To screen the Proposed structures and associated facilities.	Contractors	In proximity to administration Building and all ventilation buildings and associated facilities.	Operation phase	Fully implemented	Refer to OM4 below
EIA Section 9.8	Mitigation to Habitat Fragmentation <ul style="list-style-type: none"> Landscape fragmentation should be kept to a minimum and key wildlife routes preserved as far as possible (i.e. OM1 of EM&A Manual Chapter 10). Provision of landscape plantings (i.e. OM3-7 of EM&A Manual Chapter 10) 	To minimize the obstruction on wildlife movement	Contractors	All viaduct sections	Operation phase	Fully implemented	Refer to OM1 below. Refer to OM3 to 7 below.
EP C3.7	To reduce collisions from birds, the design of noise barriers shall avoid/minimize the use of transparent / reflective materials or adopt bird-friendly design on such surfaces.	To avoid bird mortality due to collision with noise barrier	Contractors	Locations with erection of noise barrier	During detailed design and construction phases	Fully implemented	Steel works of noise barrier was painted in different tone of mat finished green and avoid use of transparent / reflective materials. (Photo OM2)

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
EP C4.1	The ecological mitigation measures stated in the Woodland Compensation Plan and Habitat Creation and Management Plan are properly implemented, maintained and monitored during the entire period of the life of the Project.	To mitigate the loss woodland and Wetland	Contractors	woodland compensation area and wetland compensation area	Operation phase	Fully implemented	Refer Table 1-2
Landscapes, Visual and Glare Impact							
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM1)	(OM1) Detailed Design Considerations Detailed design of development components should aim to reduce landscape footprint and visibility of structures. The area allowed for any development components should be reduced to a practical minimum.	To reduce architectural footprint on the land and minimize visibility of structures.	Detailed designer/ Consultants	BCP, Administration Building and all ventilation buildings	During Detailed Design & Construction/ Operation Phase	Fully implemented	The detail landscape design of the project is divided into 3 packages as described in the Landscape Plan.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM2)	(OM2) Aesthetically Pleasing Design The form, textures, finishes and colours of the proposed development components should be compatible with the existing surroundings. Light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white may be utilised where technically feasible to reduce the visibility of the development components, including all roadwork, buildings and noise barriers etc. To further improve visual amenity, natural building materials such as stone and timber, should be preferably adopted for architectural features, where technically feasible.	To reduce visibility of structures and increase their compatibility with the surrounding	Detailed designer/ Consultants	Noise Barriers	During Detailed Design & Construction/ Operation Phase	Fully implemented	The steel works of noise barrier are painted in different tone of mat finished green to blend in with the surrounding. (Photo OM2)

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM3)	(OM3) Compensatory Planting All compensatory planting of trees is to be carried out in accordance with ETWB TCW No. 03/2006.	To compensate for loss of trees and some shrubs due to the Project.	Contractors	Woodland compensation area, in proximity to administration Building and all ventilation buildings and associated facilities and Viaduct Structure	During Construction/ Operation Phase	Fully implemented	The programme of woodland compensation has been commenced in early 2016 according to the Woodland Compensation Plan. (Photo OM3) Other compensatory planting shall refer to OM4 and OM10.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM4)	(OM4) Buffer Tree Planting Tree planting shall be provided to screen the proposed structures and associated facilities. In addition, the compensatory shrub and ground cover planting detailed in OM4 will provide screening and improve compatibility with the surrounding environment.	To screen the proposed structures and associated facilities including roads.	Contractors	In proximity to administration Building and all ventilation buildings and associated facilities.	During Construction/ Operation Phase	Fully implemented	New planting has been provided for Buffet Tree Planting. (Photo OM4)
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM5)	(OM5) Aesthetic Improvement Planting - Viaduct Structure Planters will be provided for trailer planting to soften the hard, straight edges of the viaduct. Where space allows for planters, climbers are proposed to cover vertical, hard surfaces of the piers.	To soften the hard edges on the viaduct and maximize greening opportunity.	Contractors	Viaduct Structure.	During Construction/ Operation Phase	Fully implemented	Shrub plantings are provided on the viaduct planters. (Photo OM5)
EP C3.8 & EIA 11.6.3 & Table 11.16	(OM6) Aesthetic Improvement Planting – under Viaduct Shade tolerant plant will be planted, where light is insufficient, to improve value of areas under viaducts.	To soften the hard edges on the viaduct and maximize greening opportunity.	Contractors	Viaduct Structure.	During Construction/ Operation Phase	Fully implemented	Amenity palm and shrub are planted under the viaduct structures connecting the existing Fanling Highway.

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
(OM6)							(Photo OM6)
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM7)	(OM7) Landscaped Slope Where existing hillside slopes are anticipated to be modified (eg cut slope at the portals of the tunnel sections and embankments along the alignment) the final slope surface will be landscaped by hydroseeding, tree or shrub planting where slope gradient allows.	To prevent soil erosion and reduce visible impact of man-made slopes.	Contractors	Newly formed slope	During Construction/ Operation Phase	Fully implemented	Varies format of landscape treatment are applied on all newly formed slope features, to suit the site conditions including slope gradient and soil depth. (Photo OM7)
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM8)	(OM8) Green Roof Green roofing should be established on proposed buildings to reduce exposure to untreated concrete surfaces and mitigate visual impact to VSRs at high levels.	To reduce exposure to untreated concrete surfaces, reduce visual impact to VSRs at high levels and maximize greening opportunity.	Contractors	BCP, Administration Building and all ventilation buildings	During Construction/ Operation Phase	Fully implemented	Suitable shrubs and ground covers are planted in building roofs of new buildings. (Photo OM8) & BCP (OM8)
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM9)	(OM9) Vertical Greening Vertical planting should be established to soften the hard, vertical surfaces of the proposed development components. These components will include walls of administration and ventilation buildings, retaining walls and road abutments.	To reduce visible impact of proposed new structures and facilities and maximize greening opportunity.	Contractors	BCP, Administration Building and all ventilation buildings	During Construction/ Operation Phase	Fully implemented	Planters are provided by the building edges in building roofs of new development structures. (Photo OM9) & BCP (OM 9)
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM10)	(OM10) Roadside Amenity Planting Roadside amenity planting should be provided, to enhance the landscape and visual quality of the existing and proposed transport routes and car parks.	To soften edges of the proposed engineer structures and associated facilities and enhance the landscape and visual quality of the existing and proposed road.	Contractors	Roadside of the project	During Construction/ Operation Phase	Fully implemented	New plantings are provided for Roadside Amenity Planting (Photo OM10)
EP C3.8	(OM11) Reinstatement	Particularly aimed at	Contractors	Existing	During Construction/	Fully	Reinstatement works

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
& EIA 11.6.3 & Table 11.16 (OM11)	Certain areas unavoidably disturbed by the Project will be re-provisioned.	temporarily disturbed areas, to reduce long term impact on landscape.		engineering channel Ma Wat River.	Operation Phase	implemented	are provided to the disturbed existing engineering channel Ma Wat River. (Photo OM11)
EP C3.8, EP C3.9 & EIA 11.6.3 & Table 11.16 (OM12)	(OM12) Light Control Street and night time lighting glare will be controlled to minimize glare impact to adjacent VSRs during the operation stage.	To minimize glare impact to adjacent VSRs.	Contractors	Lit areas around BCP, Administration Building and all ventilation buildings and along roads.	During Operation Phase	Fully implemented	Light controls are provided at new buildings. (Photo OM12) & BCP (OM12)
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM13)	(OM13) Re-provisioned LCSD Garden The Open Space of Wo Keng Shan public garden falls within the Project Site and will be re-provisioned to re-provide the amenities of the garden on a one to one basis.	To compensate for loss of Open Space due to the Project.	Contractors	Near existing Wo Keng Shan public garden	During Construction/ Operation Phase	Fully implemented	1256.4m ² of site area at the north of Sha Tau Kok Interchange will be converted to a re-provision LCSD Wo Keng Shan Garden is implemented.

3 CONCLUSIONS

3.1 CONCLUSIONS

3.1.1 The HYW Highway and connecting roads under the Project was opened on 26 May 2019. Since partial commencement of operation is the same as the commencement of operation for the entire project from EIAO perspective. An EM&A Report on the Implementation of Mitigation Measures for Operation Stage of the Project (Heung Yuen Wai Highway and Connecting Roads Section) was submitted to EPD on 5 August 2019 to comply EP-404/2011/D condition 5.5.

3.1.2 On 26 August 2020, the cargo clearance facilities of the Liantang LP/ HYW BCP, i.e., Contract SS C505 were partially commissioned. The EM&A report on the Implementation of Mitigation Measures for Operation Stage of the Project is subsequently updated to include the implementation of the mitigation measures for operation stage of BCP. This EM&A report will be submitted to EPD no later than three (3) months after the partial commencement of BCP.

3.1.3 The Liantang LP/ HYW BCP was partial commissioned for the cargo clearance facilities. The passenger facilities would be commenced subject to the epidemic situation and the cross-boundary anti-epidemic measures to be reviewed by relevant departments. In environmental point of view, there are no changes on the implementation of mitigation measures during the operation phase in BCP when the passenger facilities commenced in operation.

3.1.4 All relevant requirements as stipulated in the EP and the approved EIA report (including the EM&A Manual) for the commencement of operation of the Project shall be strictly complied with. Since all the mitigation measures required by the EP, EIA and EM&A Manual have been implemented for the Project including whole BCP, this is the final Operation EM&A Report and no additional report will be submitted in the future once the cross boundary facilities for passenger will be commissioned.

Air Quality

3.1.5 The Sewage Treatment Plant at BCP was handover to Drainage Services Department (DSD) for operation on 29 July 2019. The odour containment and control measures for the STP recommended in the EIA and EP are fully implemented.

Noise

Road Traffic Noise

3.1.6 To mitigate the traffic noise impact arising from the operation of the Project, direct noise mitigation measures of erection of noise barriers along the viaduct section have fully implemented in accordance to the Noise Mitigation Plan.

Fix Plant Noise

3.1.7 Specifications of the maximum allowable sound power levels of the major fixed plants have been followed by the Contractor. Commissioning test for all major fixed plant have been conducted by the Contractor and reviewed by the ER.

Sewage and Sewerage Treatment Impact

3.1.8 Sewage Treatment Plant comprises of on-site sewage treatment facility was implemented at BCP to collect the sewage generated by the BCP and Chuk Yuen Village Resite.

3.1.9 The permanent drainage works have been implemented in accordance with the recommendations in the DIA for the project. Sewage generated from the Administration Building discharged to the existing local sewerage system was implemented.

Ecology

3.1.10 According to EP condition 4.1, the ecological mitigation measures stated in the Woodland Compensation Plan and Habitat Creation and Management Plan are properly implemented,

maintained and monitored during the entire period of the life of the Project.

Woodland Compensation Plan

- 3.1.11 According to the EIA report, a total of 6.2 ha of woodland habitats would be lost permanently for the construction of the portals of tunnels and some sections of the connecting road. Mitigation measures in the form of creation of a 18.6 ha compensatory woodland at Cheung Shan were therefore recommended to avoid residual ecological impacts from the Project. Establishment works for planning and ecological monitoring are in progress and will be continued during the operation phase until handover to AFCD.

Habitat Creation and Management Plan

- 3.1.12 According to the EIA Report, 1.4ha freshwater wetland habitat (mainly the abandoned wet agricultural land located at Loi Tung, Wo Keng Shan and Nga Yiu Ha areas) were loss due to the construction. Wetland Compensation Area (WCA) comprised of an area not less than 1.4 ha is therefore provided near the affected habitat areas for the purpose of on-site mitigation. Establishment works for wetland and ecological monitoring are in progress and will be continued during the operation phase until handover to AFCD.

- 3.1.13 To reduce collisions from birds, steel works of noise barrier was painted in different tone of mat finished green and avoid use of transparent / reflective materials were implemented.

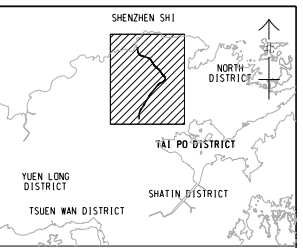
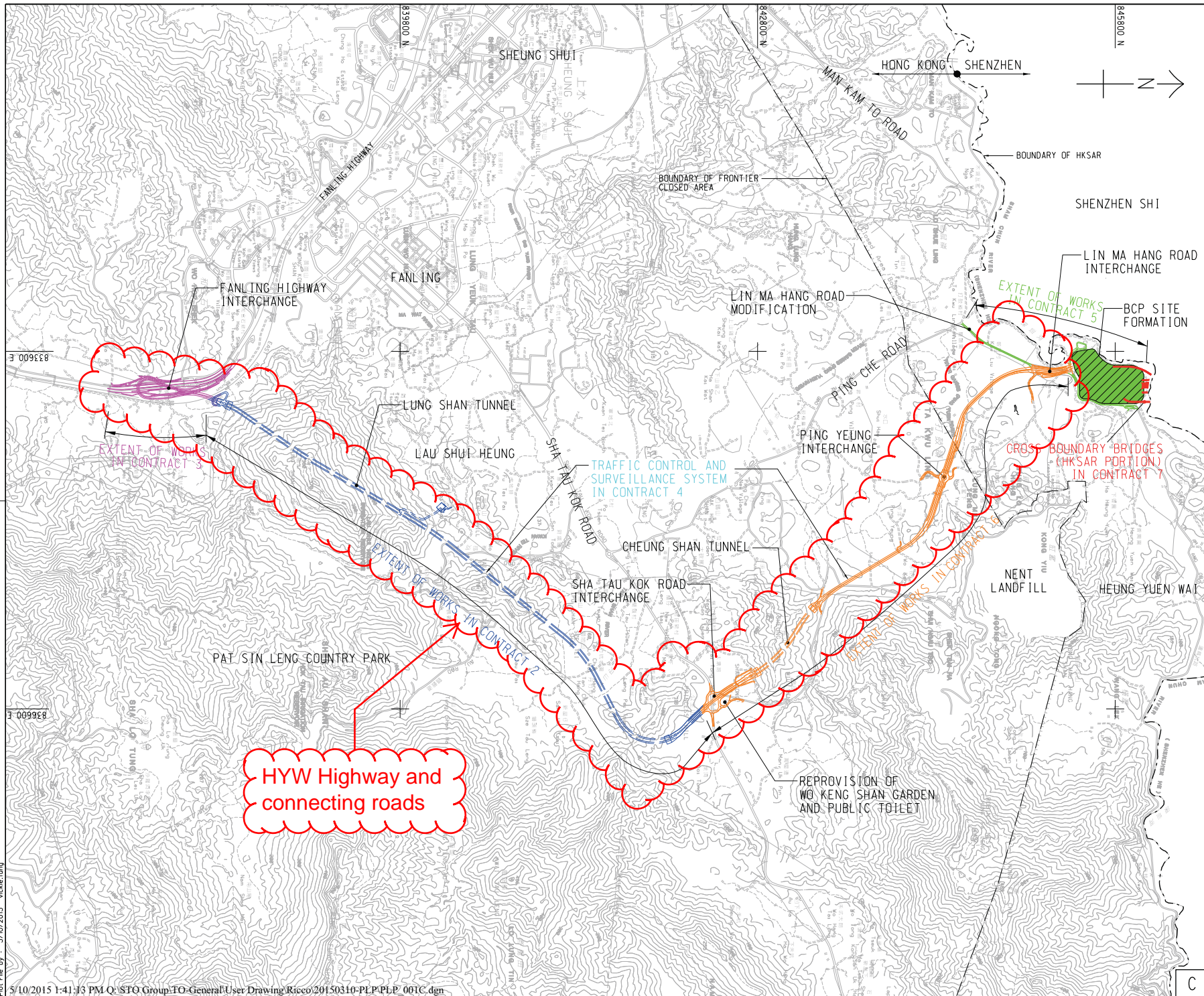
Landscape, Visual and Glare

- 3.1.14 The proposed Landscape and Visual Mitigation Measures OM1 to OM13 are annotated in the Landscape Plan. The landscape and visual mitigation measures were implemented.

- 3.1.15 In conclusion, all recommended mitigation measures for operation stage of HYW Highway and connecting roads and BCP under the Project have been implemented. It is concluded that the environmental mitigation measures as recommended in the approved EIA Report and the EP have been complied.

Appendix A

Layout plan of the Project



LOCATION PLAN
SCALE 1 : 30000

LEGEND:
 - - - - - UNDERGROUND WORKS

NO.	REVISION	DATE

CEDD 土木工程拓展署
 Civil Engineering and Development Department

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION

PROJECT LAYOUT PLAN

AECOM

DRGNO. 60212563/PLP/001
 圖紙編號

DESIGNED BY	CHECKED BY	DATE


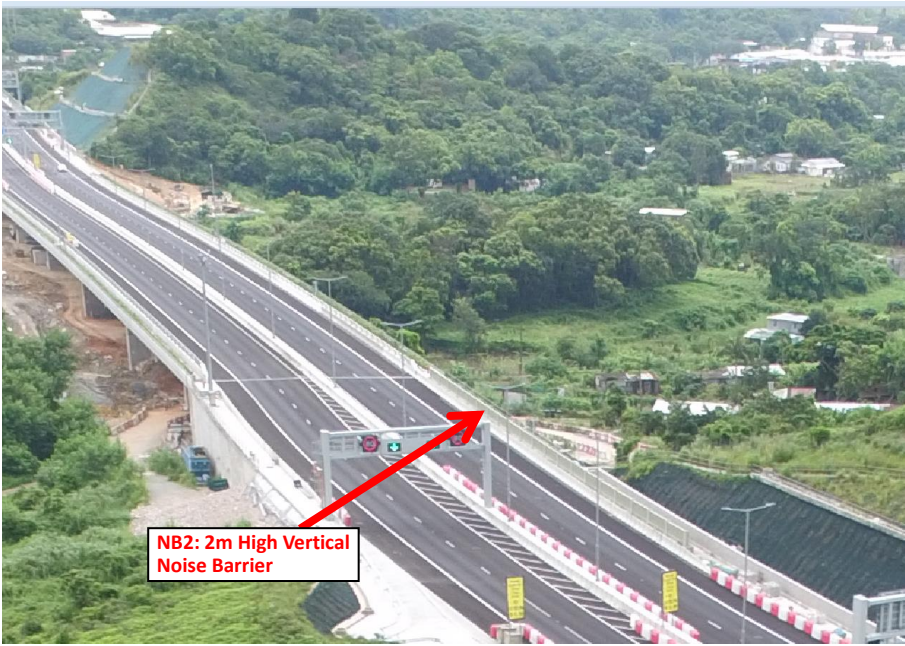
SCALE: A3 1 : 15000
 A4 1 : 30000
 UNIT: METRES
 © COPYRIGHT RESERVED



Plot File by : 5/10/2015 1:41:13 PM Q:\STO Group\TO-General\User Drawing\Ricoo\20150310-PLP\PLP_001C.dgn



Appendix B

Photos Illustrating the Mitigation Measures


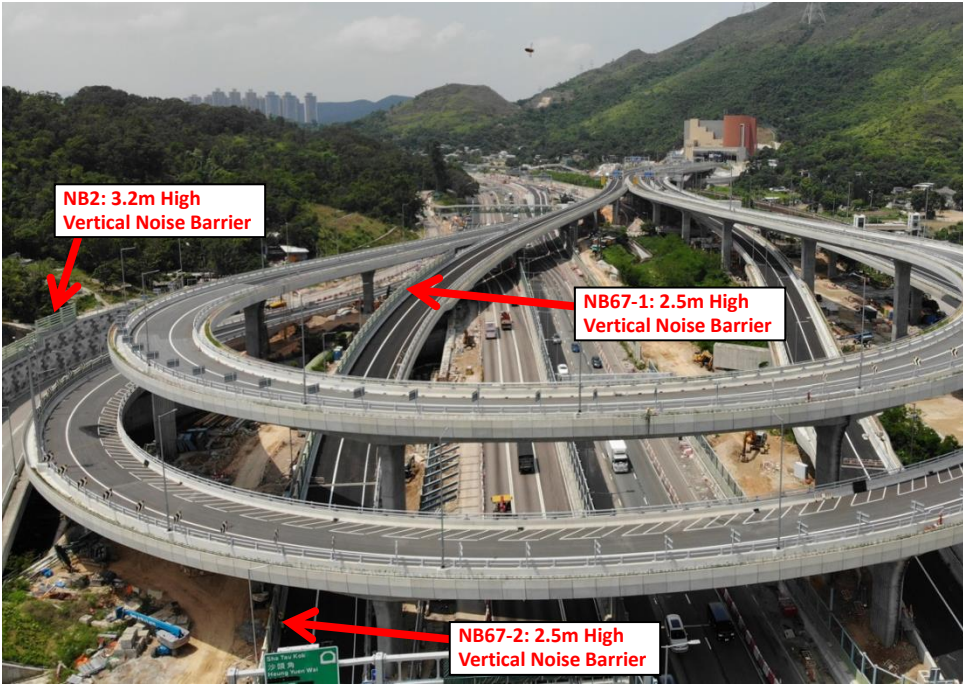
EP/EIA Ref.	Photo Record
EP C3.11/ EIA Section 3.5.2.2 / 6.6.3	 <p data-bbox="312 1070 1254 1133">Photo Ref.: 1 The overview of the Sewage Treatment Plant (STP) at Boundary Control Point.</p>


EIA / EP Ref.	Photo Record
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>1. NB1-A: 2.5m High Vertical Noise Barrier</p> <p>3.6m Gap between Two Noise Barriers to Allow Local Access</p> <p>NB1-B: 2.5m High Vertical Noise Barrier</p> <p>Photo Ref.: 2a Photo shows the noise barriers at Ping Yeung Interchange including NB1-A: 2.5m High Vertical Noise Barrier and NB1-B: 2.5m High Vertical Noise Barrier</p>
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>NB2: 2m High Vertical Noise Barrier</p> <p>Photo Ref.: 2b Photo shows the noise barriers at Wo Keng Shan including NB2: 2m High Vertical Noise Barrier</p>



EIA / EP Ref.	Photo Record
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>Photo Ref.: 2c Photo shows the noise barriers at Wo Keng Shan including NB3-A: 3m High Vertical Noise Barrier, NB3-B: 2m High Vertical Noise Barrier above Parapet, NB4-A: 3.5m High Vertical Noise Barrier and NB4-B: 2.5m High Vertical Noise Barrier above Parapet</p>
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>Photo Ref.: 2d Photo shows the noise barriers at Wo Keng Shan including C6-NB5: 1m High Vertical Noise Barrier above Parapet</p>

EIA / EP Ref.	Photo Record
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>Photo Ref.: 2e Photo shows the noise barriers at Sha Tau Kok Interchange including NB8: 6m High Vertical Noise Barrier, NB9: 5m High Vertical Noise Barrier and NB10: 5m High Vertical Noise Barrier</p>
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>Photo Ref.: 2f Photo shows the noise barriers at Sha Tau Kok Interchange including NB6: 2m High Vertical Noise Barrier and NB7: 2m High Vertical Noise Barrier</p>

EIA / EP Ref.	Photo Record
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	<p>Photo Ref.: 2g Photo shows the noise barriers at Sha Tau Kok Interchange including NB11-A: 2m High Vertical Noise Barrier, NB11-B: 2m High Vertical Noise Barrier, NB12: 2m High Vertical Noise Barrier and NB13: 2m High Vertical Noise Barrier</p>
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	<p>Photo Ref.: 2h Photo shows the noise barriers at Kau Lung Hang including C2-NB1: 3m High Vertical Noise Barrier, C2-NB2: 3m High Vertical Noise Barrier, C2-NB3: 5m High Vertical Noise Barrier, C2-NB4: 1.2m High Vertical Noise Barrier above Parapet and NB5: 4m High Vertical Noise Barrier above Parapet</p>

EIA / EP Ref.	Photo Record
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>Photo Ref.: 2i Photo shows the noise barriers at Kau Lung Hang including NB3: 3m High Vertical Noise Barrier</p>
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p>Photo Ref.: 2j Photo shows the noise barriers at Nam Wa Po including NB67-1: 2.5m High Vertical Noise Barrier above Parapet, NB67-2: 2.5m High Vertical Noise Barrier above Parapet, NB2: 3.2m High Vertical Noise Barrier above Parapet</p>

EIA / EP Ref.	Photo Record
EP C3.5 / EIA Table 4.42 and Figure 4.20.1 to 4.20.4	 <p data-bbox="311 1070 496 1104">Photo Ref.: 2k</p> <p data-bbox="311 1111 1401 1202">Photo shows the noise barriers at Nam Wa Po including NB8: 1.7m High Vertical Noise Barrier above Parapet, NB1b: 3m High Vertical Noise Barrier above Parapet and 0.8m High Vertical Noise Barrier</p>

EP/EIA Ref.	Photo Record
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM2)	 <p>Photo Ref.: OM2 Photo shows (OM2) Aesthetically Pleasing Design - the steel works of noise barrier are painted in different tone of mat finished green to blend in with the surrounding environment.</p>
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM3)	 <p>Photo Ref.: OM3 Photo shows the existing woodland compensation area for (OM3) Compensatory Planting. The programme of woodland compensation has been commenced in early 2016 according to the Woodland Compensation Plan.</p>

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM4)



Photo Ref.: OM4

Photo shows (OM4) Buffer Tree Planting - new planting provided for Buffet Tree Planting

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM5)



Photo Ref.: OM5

Photo shows the (OM5) Aesthetic Improvement Planting - Viaduct Structure- shrub planting provided on the viaduct planters.

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM6)



Photo Ref.: OM6

Photo shows OM6 Aesthetic Improvement Planting – under Viaduct - amenity shrub has been planted under the viaduct structures connecting the existing Fanling Highway.

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM7,
OM8 &
OM9)



Photo Ref.: OM7

Photo shows the landscape treatment of (OM7) Landscaped Slope, (OM8) Green Roof and (OM9) Vertical Greening at Lung Shan Tunnel North Ventilation Building.

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM10)



Photo Ref.: OM10

Photo shows the (OM10) Roadside Amenity Planting - new planting are provided for Roadside Amenity Planting

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM11)



Photo Ref.: OM11

Photo shows (OM11) Reinstatement to the disturbed existing engineering channel Ma Wat River

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM12)



Photo Ref.: OM12

Photo shows (OM12) Light Control - the night time lighting glare are controlled to minimize glare impact to adjacent VSRs during the operation stage. (Mid-ventilation building)

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM8)



Photo Ref.: BCP (OM8)

Photo shows the landscape treatment of (OM8) Green Roof at BCP.

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM9)



Photo Ref.: BCP (OM 9)

Photo shows the landscape treatment of (OM9) Vertical Greening at BCP.

EP C3.8
& EIA
11.6.3 &
Table
11.16
(OM12)



Photo Ref.: BCP (OM12)

Photo shows (OM12) Light Control - the night time lighting glare are controlled to minimize glare impact to adjacent VSRs during the operation stage. (BCP)