

Highways Department

5th Floor, Ho Man Tin Government Offices

88 Chung Hau Street

Ho Man Tin

Kowloon

Your reference:

Our reference:

HKHYD203/50/108388

Date:

23 November 2022

Attention: Mr YF Lau

BY EMAIL & POST

(email: pc7.mwsd@hyd.gov.hk)

Dear Sirs

Agreement No. HMWSD 6/2022 (EP)

Environmental Project Office for the Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road, Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities & Tuen Mun-Chek Lap Kok Link – Investigation

Contract No. HY/2019/01 HZMB HKBCF – Phase 2 and Other Works Monthly EM&A Report for October 2022

We refer to the email of 22 November 2022, attaching a Monthly EM&A Report for October 2022 prepared by the Environmental Team (ET) of the captioned.

We have no comment and hereby verify the Monthly EM&A Report for October 2022 per Clause 5.4 of the Environmental Permit no. EP-353/2009/K.

Should you have any queries, please do not hesitate to contact the undersigned or our Mr Macavity Yau on 2618 2831.

Yours faithfully

ANEWR CONSULTING LIMITED

Jannes Choi

Independent Environmental Checker

CPSJ/LCCR/YCFM/lsmt

cc Highway Department – Mr Eric Wong (Fax no.: 3188 6614) Highway Department – Mr Tony Wong (Fax no.: 3188 6614) AECOM Asia Co. Ltd. – Mr Jason Yu (Fax no.: 3748 8900)

Fugro Technical Services Limited - Mr Calvin Leung (Fax no.: 2450 6138)

China Harbour Engineering Company Limited – Mr Matthew Wu (Fax no.:2887 3104)

ANewR Consulting Limited

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FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre 5 Lok Yi Street, Tai Lam Tuen Mun, NT Hong Kong

Date 23 November 2022

Our Ref. MCL/ED/0459/2022/C

ANewR Consulting Limited Unit 517, 5/F, Tower A, Regent Centre 63 Wo Yi Hop Road, Kwai Chung, Hong Kong

BY EMAIL

Attn.: Mr. James Choi, Independent Environmental Checker

Dear Sir,

EP Condition 5.4 – Monthly EM&A Report for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Phase 2 and Other Works (Contract No. HY/2019/01)

Pursuant to Condition 5.4 of the Environmental Permit (EP-353/2009K) for the captioned project, we hereby submit the certified Monthly EM&A Report for October 2022 for your verification.

Thank you for your attention, should there be any comments or queries, please contact our Mr. Cyrus Lai at 3565-4442 or the undersigned at 3565-4441.

Yours faithfully, for and on behalf of FUGRO TECHNICAL SERVICES LIMITED

Calvin Leung

Environmental Team Leader

c.c. AECOM Attn: Mr. Jason Yu

ANewR Attn: Mr. Louis Kwan, Mr. Ricky Lau CHEC Attn: Mr. Marko Chan, Mr. Matthew Wu



Monthly EM&A Report (October 2022)

0002/20/ED/0538 02 |

Contact No. HY/2019/01 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Phase 2 and Other Works

Document Control

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Client Information

	Client	China Harbour Engineering Co., Ltd Contract No. HY/2019/01
	Client Address	China Harbour Building, 370-4 King's Road, North Point Hong Kong
Client Contact		Matthew Wu

Environmental Team

Initials	Name	Role	Signature
МР	Calvin M.P. Leung	Environmental Team Leader	Calvin Leuns
СҮ	Cyrus C.Y. Lai	Senior Environmental Consultant	
КН	Toby K.H. Wan	Environmental Consultant	N.Ry.



EXECUTIVE SUMMARY

This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. HY/2019/01 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Phase 2 and Other Works" (hereafter referred to as "the Contract") for the Highways Department of Hong Kong Special Administrative Region (HKSAR). Contract No. HY/2019/01 was awarded to China Harbour Engineering Co. Limited and Fugro Technical Services Limited (FTS) was appointed as the Environmental Team (ET) by the Contractor.

Contract No. HY/2019/01 is part of the "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities" (HZMB HKBCF) Project which is a "Designated Project" under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/K, was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. Commencement of the Contract took place on 4 December 2019 and the construction site preparation works commenced in early February 2020.

Fugro Technical Services Limited (FTS) has been appointed by the Contractor to implement the Environmental Monitoring & Audit (EM&A) programme for the Contract in accordance with the Updated EM&A Manual for HKBCF (Version 1.0) and is providing environmental team services for the Contract.

This is the 33rd Monthly EM&A Report for the Contract which summaries findings of the EM&A programme during the reporting period from 1 October 2022 to 31 October 2022.

Environmental Monitoring and Audit Progress

The monthly EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). It should be noted that the air quality, noise and the post-construction dolphin monitoring works for the Contract are covered by Contract No. HY/2019/01 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Phase 2 and Other Works". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 as part of EM&A programme if the impact air quality monitoring work is no longer covered by Contract No. HY/2011/03 respectively. However, this is subject to ENPO's final decision on which ET should carry out the monitoring work at these stations.

Breaches of Action and Limit Levels

According to the EPD's reply email, EPD has no comment on the Proposal for Termination of Air quality and Noise Monitoring, the air quality and noise monitoring for Contract No: HY/2019/01 have been terminated on 25 March 2022, no Action / Limit Level exceedance for air quality and noise monitoring was recorded during the period.

Complaint Log

No complaints were received in the reporting period.

Notifications of any Summons and Successful Prosecutions

No notifications of summons and prosecutions were received in the reporting period.



Reporting Change

No reporting change in the reporting period.

Future Key Issues

No main construction works will be carried out in the next reporting period.



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1. INTRODUCTION

1.1 Background

- 1.1.1 Fugro Technical Services Limited was commissioned by China Harbour Engineering Co. Limited (also referred to as "the Contractor") to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for Contract No. HY/2019/01 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities Phase 2 and Other Works".
- 1.1.2 Contract No. HY/2019/01 is part of the "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities" (HZMB HKBCF) Project which is a "Designated Project" under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/K, was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. The general layout of the Project area is shown in **Figure 1**. Commencement of the Contract took place on 4 December 2019 and the construction site preparation works commenced in early February 2020.
- 1.1.3 This is the 33rd Monthly EM&A report to document the findings of site inspection activities and EM&A programme carried out by the Contractor of Contract No. HY/2019/01 from 1 October 2022 to 31 October 2022 (reporting period) and is submitted to fulfil Condition 5.4 of the EP.

1.2 Project Description

- 1.2.1 The works to be executed under Contract No. HY/2019/01 include the following major items:
 - Landscaping and establishment works;
 - Irrigation system and associated drainage pumping system and facilities;
 - Erection and installation in the Passenger Clearance Building;
 - Public transport interchange (PTI) public toilet, satellite refuse collection point (RCP) and observation guard booths;
 - PTI cross boundary shuttle (CBS) / cross boundary coach (CBC) lanes and covered walkway;
 - Vehicle clearance plazas (VCP) vehicle kiosks and associate automatic vehicle clearance supporting system (AVCSS).



1.3 Project Organization

1.3.1 The Project Organization structure is shown in **Appendix B**. The key personnel contact names and numbers are summarized in **Table 1.1**.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	
Engineer or Engineer's	Senior Resident Engineer	Mr. Jason Yu	3748 8903	
Representative (AECOM Asia Co. Ltd.)	Resident Engineer	Mr. K.W. Wong	3748 8967	
Environmental Project Office /	Environmental Project Office Leader	Mr. Louis Kwan	2618 2836	
Independent Environmental Checker	Independent Environmental Checker (IEC)	Mr. James Choi	2618 2836	
(ANewR Consulting Limited)	Environmental Site Supervisor	Mr. Ricky Lau	2618 2836	
Contractor	Environmental Manager	Mr. Marko Chan	9427 2879	
(China Harbour Engineering Co. Ltd)	Environmental Officer	Mr. Matthew Wu	6076 2675	
Environmental Team (Fugro Technical Services Limited)	Environmental Team Leader (ETL)	Mr. Calvin Leung	3565 4441	

1.4 Construction Programme and Activities

- 1.4.1 The site layout plan of the Contract is shown in **Figure 1**.
- 1.4.2 The construction programme of this Contract is shown in **Appendix A**.
- 1.4.3 The Proposal for Termination of EM&A Programme in Construction Phase (0002_20_ED_0467_04) was verified by IEC on 13 June 2022 and approved by EPD on 5 July 2022 (EPD ref. () in AX(12) in EP771/E1/100).

1.5 Works undertaken during the month

1.5.1 No main construction works was carried out in the reporting period.



1.6 Status of Environmental Licences, Notification and Permits

1.6.1 A summary of the relevant permits, licenses and/or notifications on environmental protection for this Contract is presented in **Table 1.2**.

Table 1.2 Environmental Licenses, Notification and Permits Summary

Permit/ Notification/ License	Reference No	Valid From	Valid Till		
Environmental Permit	EP-353/2009/K	11-Apr-16	Not Applicable		
Notification pursuant to Air Pollution (Construction Dust) Regulation	451380	28-Nov-19	Not Applicable		
Billing Account for Disposal of C&D waste	A/C No. 7036097	18-Dec-19	Not Applicable		
Chemical Waste Producer Registration	5296-951-C1186-32	6-Feb-20	Not Applicable		
Water Discharge License	WT00035721-2020	8-Jun-21	30-Apr 25		



2. AIR QUALITY

2.1 Monitoring Requirement

- 2.1.1 In accordance with the Contract Specific EM&A Manual, 1-hour and 24-hour Total Suspended Particulates (TSP) levels should be measured at the designated air quality monitoring stations to indicate the impacts of construction dust on air quality. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days.
- 2.1.2 According to the EPD's reply email, EPD has no comment on the Proposal for Termination of Air quality and Noise Monitoring, the air quality monitoring for Contract No: HY/2019/01 have been terminated on 25 March 2022. The last monitoring was completed on 24 March 2022.

2.2 Monitoring Locations

- 2.2.1 In accordance with the Contract Specific EM&A Manual, four air quality monitoring locations, namely AMS2, AMS3C, AMS6 and AMS7B were set up at the proposed locations. AMS2, AMS3C and AMS7B are covered by Contract No. HY/2019/01 "Hong Kong-Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities Phase 2 and Other Works"
- 2.2.2 AMS6 is covered by Contract No. HY/2011/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road (HZMB HKLR) Section between Scenic Hill and HKBCF". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 as part of EM&A programme if this air quality monitoring station is no longer covered by Contract No. HY/2011/03.
- 2.2.3 Due to the existing air quality monitoring location AMS7B would be hand over back to Airport Authority for their construction works. A new alternative air quality monitoring location is still under processing. Air quality monitoring location AMS7B was temporary suspended, effective from 10 December 2020.
- 2.2.4 According to the email date 11 August 2021, EPD have no comment on the Proposal for Relocation of Monitoring Location AMS 7B, the monitoring location AMS 7B are proposed to be relocated by alternative monitoring location AMS 7C for air quality monitoring. The monitoring location AMS 7C has resumed air quality monitoring on 5 October 2021.
- 2.2.5 The most updated locations of air quality monitoring are summarized in **Table 2.1** and they are shown in **Figure 2**.

Table 2.1 Air Quality Monitoring Location

Monitoring Station	Location					
AMS2	Tung Chung Development Pier					
AMS3C	Ying Tung Estate Market Rooftop					
AMS6	Dragonair / CNAC (Group) Building (HKIA)					
AMS7C	East Sea Rescue Berth – Airport Fire ContingentThird Runway Site Office					

Remarks: The ET of this Contract should conduct impact air quality monitoring at station AMS6 listed in the table as part of EM&A programme according to latest notification from ENPO when the monitoring station is no longer covered by another ET of the HZMB project.



3. NOISE

3.1 Monitoring Requirement

- 3.1.1 In accordance with the Contract Specific EM&A Manuals, L_{eq} (30min) monitoring is conducted for at least once a week during the construction phase between 0700 and 1900 on normal weekdays at the designated monitoring locations.
- 3.1.2 According to the EPD's reply email, EPD has no comment on the Proposal for Termination of Air quality and Noise Monitoring, the noise monitoring for Contract No: HY/2019/01 have been terminated on 25 March 2022. The last monitoring was completed on 24 March 2022.

3.2 Monitoring Parameters and Frequency

3.2.1 The parameters and frequencies of impact noise monitoring is summarized in **Table 3.1**.

Table 3.1 Monitoring Parameters and Frequencies of Noise Monitoring

Parameter	Fraguency
Parameter	Frequency
L _{eq} (30min)	At each station at 0700-1900 hours on normal weekdays at a frequency of
L ₁₀ and L ₉₀ will be recorded	once a week
for reference	

3.3 Monitoring Locations

- 3.3.1 In accordance with the Contract Specific EM&A Manual, two noise monitoring locations, namely NMS2 and NMS3C are covered under Contract No. HY/2019/01 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities Phase 2 and Other Works.
- 3.3.2 Due to rejection from Ho Yu College (NMS3) for setting up a noise monitoring station at their school, an alternative location at site boundary of the site office area at Works Area WA2 (NMS3B) is proposed. Impact noise monitoring has been relocated from NMS3B to Ying Tung Estate Market Rooftop (NMS3C) on 20 August 2018 under Contract No. HY/2013/04. The same baseline and Action and Limit levels for noise, as derived from the baseline monitoring data recorded at Ho Yu College, are adopted for this alternative noise monitoring location.
- 3.3.3 The most updated locations are summarized in **Table 3.2** and the locations of the noise monitoring stations shown in **Figure 3**.

Table 3.2 Construction Noise Monitoring Location

Monitoring Station	Location
NMS2	Seaview Crescent
NMS3C	Ying Tung Estate Refuse Collection Point

Remark: The Limit Levels for schools will be applied for this alternative monitoring location at NMS3C.



4. ECOLOGY MONITORING

4.1 Monitoring Requirements

- 4.1.1 All marine-based construction activities for the HKBCF project were completed in January 2019. No marine-based construction activities will be undertaken under this Contract. However, the ET of this Contract or another ET of the HZMB is required to conduct post-construction dolphin monitoring in accordance with Section 10.7 of the updated EM&A Manual.
- 4.1.2 The CV of the proposed dolphin specialist for this Contract has been submitted to IEC for review prior to submission to AFCD for approval.
- 4.1.3 According to the Proposal on Post-construction Dolphin Monitoring (PCDM) prepared by Contract No. HY/2013/04 which has been verified by ENPO and approved by EPD on 8 March 2019 (EPD ref. () in Ax(5) to E771/E1/100), the completion date of the PCDM is in February 2021. Therefore, the reporting of Chinese White Dolphins monitoring works under this contract was completed on 1 March 2021.

4.2 Monitoring Locations and Methodology

4.2.1 In accordance with the requirements of the updated EM&A manual, the dolphin monitoring programme have adopted the standard line-transect method (Buckland et al. 2001) to survey the pre-set and fixed transect lines defined by AFCD in the Northeast Lantau (NEL) and Northwest Lantau (NWL) survey areas. The layout map of the transect lines provided by AFCD is presented in **Figure 4**.



5. SITE INSPECTION AND AUDIT

5.1 Site Inspection

5.1.1 According to the EPD's letter (EPD ref. () in AX(12) in EP771/E1/100), EPD has no comment on the Proposal for Termination of EM&A Programme in Construction Phase, the site inspection for Contract No: HY/2019/01 have been terminated on 5 July 2022. The last inspection was completed on 29 June 2022.

5.2 Landscape and Visual Site Audit (Establishment Period)

- 5.2.1 As informed by AECOM, the commencement date of the 12-month establishment period for the landscape monitoring under this contract is 5 January 2022. Bi-monthly landscape and visual site audits will be conducted from 5 January 2022 to 4 January 2023.
- 5.2.2 A bi-monthly landscape and visual site audit was carried out on 31 October 2022. This was a joint inspection with the IEC, the engineer, the contractor and the ET's Registered Landscape Architect. The bi-monthly landscape and visual site audit checklist was counter-signed by IEC and presented in **Appendix J**.

5.3 Advice on the Solid and Liquid Waste Management Status

- 5.3.1 The Contractor registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.
- 5.3.2 The monthly summary of waste flow table is detailed in **Appendix D**.
- 5.3.3 If off-site disposal is required, the excavated marine mud from the land-based works shall be disposed of at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee or other locations as agreed by the Director. The Contractor shall ensure no spilling and overflowing of materials during loading / unloading / transportation is allowed.
- 5.3.4 The Contractor was reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packing, Labelling and Storage of Chemical Waste.



6. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

6.1 Environmental Exceedance

6.1.1 According to the EPD's reply email, EPD has no comment on the Proposal for Termination of Air quality and Noise Monitoring, the air quality and noise monitoring for Contract No: HY/2019/01 have been terminated on 25 March 2022, no Action / Limit Level exceedance for air quality and noise monitoring was recorded during the period.

6.2 Complaints, Notification of Summons and Prosecution

- 6.2.1 No environmental complaint, notification of summons and successful prosecution were received in the reporting month.
- 6.2.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix F**.



7. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURE

7.1 Implementation Status

According to the EPD's letter (EPD ref. () in AX(12) in EP771/E1/100), EPD has no comment on the Proposal for Termination of EM&A Programme in Construction Phase, the EM&A programme for Contract No: HY/2019/01 have been terminated on 5 July 2022. The implementation status of the environmental mitigation measures during the reporting period is summarized in **Appendix C**.



8. FUTURE KEY ISSUES

8.1 Construction Programme for the Next Month

• No main construction works will be carried out in the next reporting period.

8.2 Key Issues for the Coming Month

8.2.1 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, waste management and landscape and visual impact issues.

8.3 Monitoring Schedules for the Next Month

8.3.1 The tentative schedule for environmental monitoring in the coming month is provided in **Appendix I**.



9. CONCLUSION AND RECOMMENDATION

9.1 Conclusions

- 9.1.1 According to the EPD's reply email, EPD has no comment on the Proposal for Termination of Air quality and Noise Monitoring, the air quality and noise monitoring for Contract No: HY/2019/01 have been terminated on 25 March 2022, no Action / Limit Level exceedance for air quality and noise monitoring was recorded during the period.
- 9.1.2 According to the EPD's letter (EPD ref. () in AX(12) in EP771/E1/100), EPD has no comment on the Proposal for Termination of EM&A Programme in Construction Phase, the site inspection for Contract No: HY/2019/01 have been terminated on 5 July 2022.
- 9.1.3 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting month.

9.2 Comment and Recommendations

- 9.2.1 The recommended environmental mitigation measures, as proposed in the EIA reports and EM&A Manuals shall be effectively implemented to minimize the potential environmental impacts from the Project. The EM&A programme would effectively monitor the environmental impacts generated from the construction activities and ensure the proper implementation of mitigation measures.
- 9.2.2 According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

Air Quality Impact

• No specific observation was identified in the reporting month.

Construction Noise Impact

• No specific observation was identified in the reporting month.

Water Quality Impact

• No specific observation was identified in the reporting month.

Chemical and Waste Management

• No specific observation was identified in the reporting month.

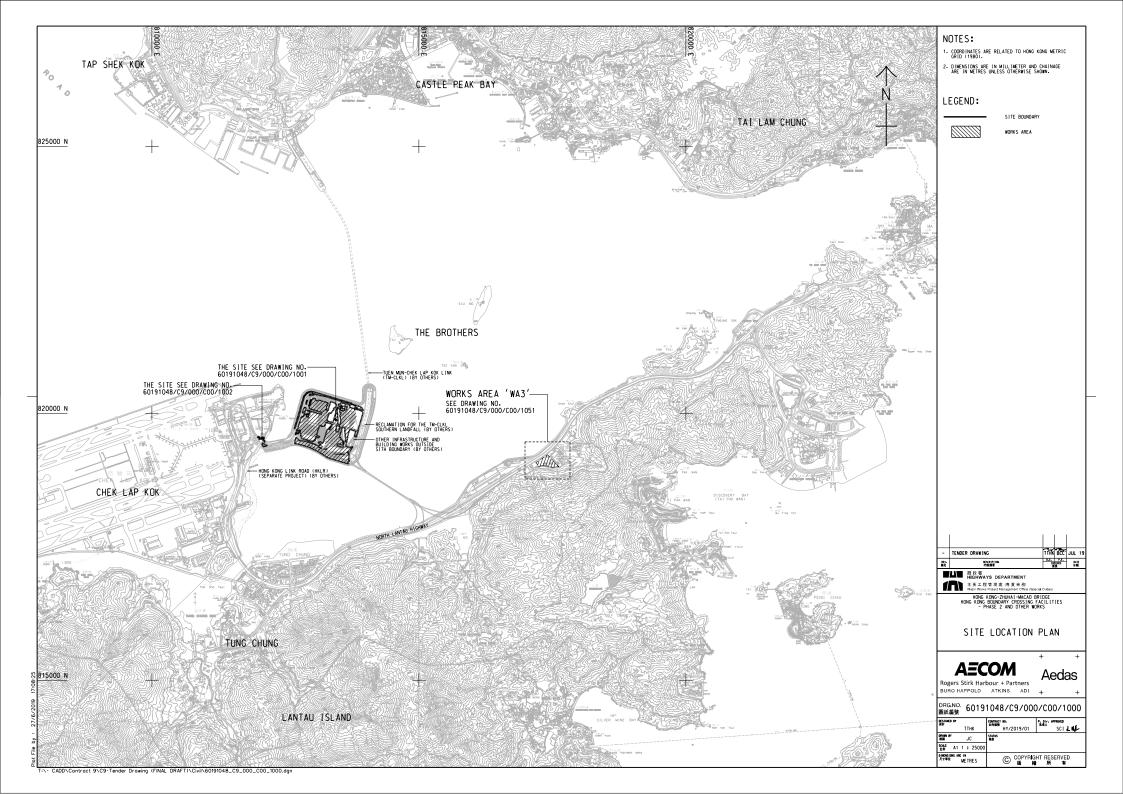
Permit/ Licenses

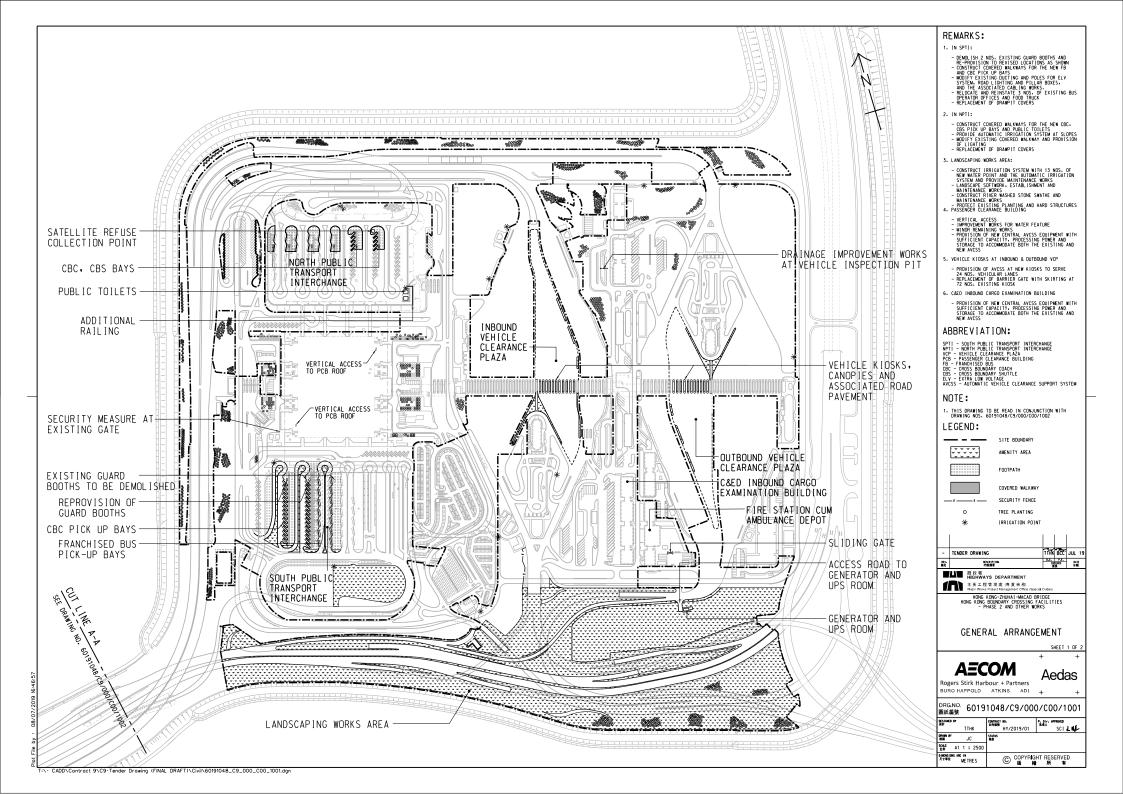
• No specific observation was identified in the reporting month.

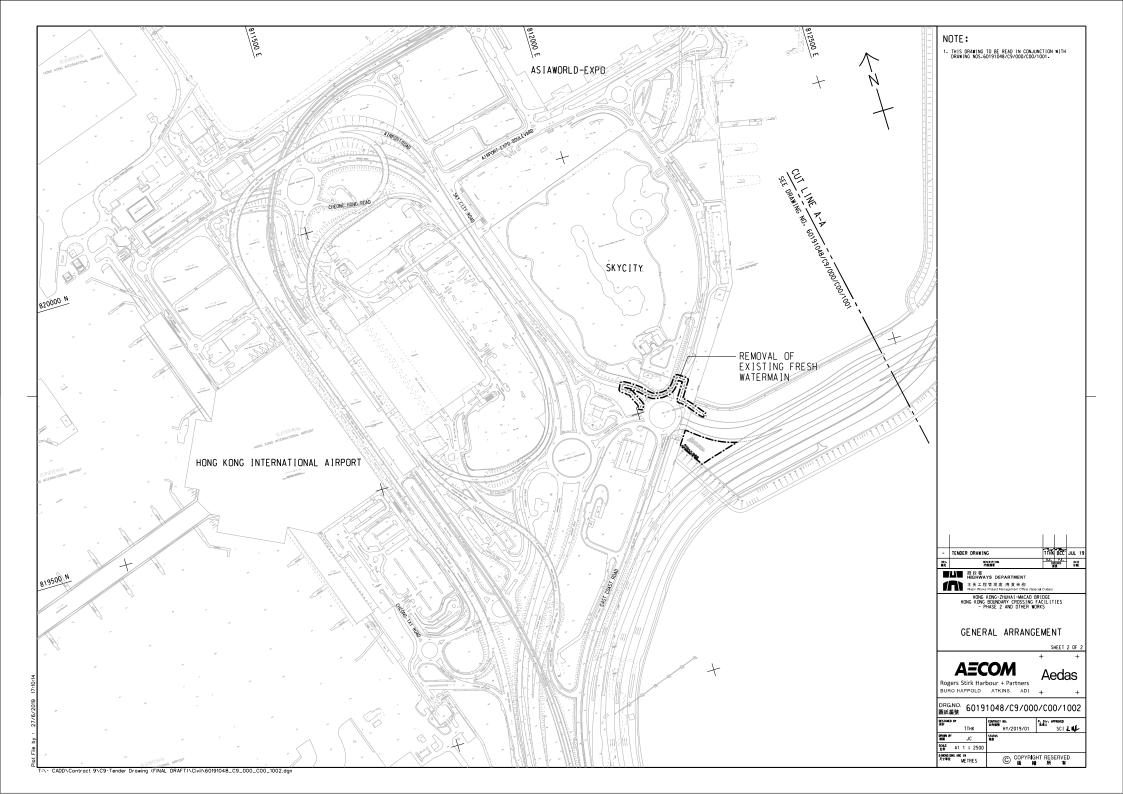


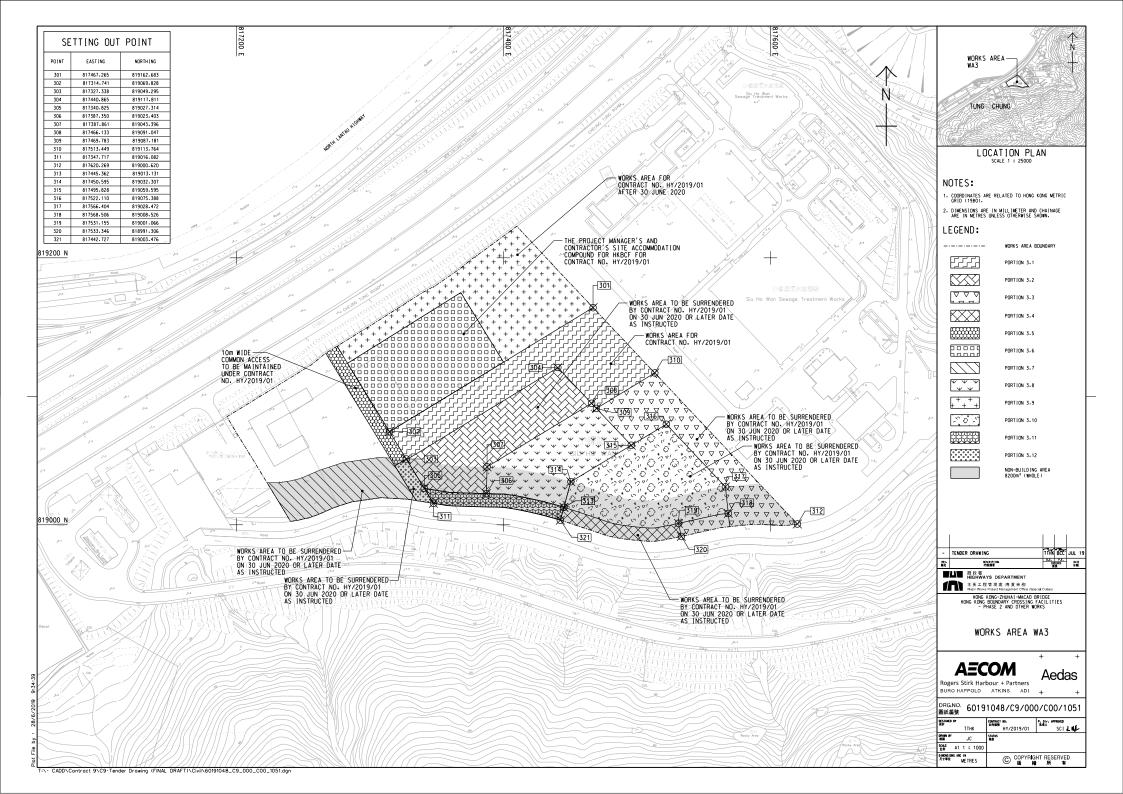
The Site Layout Plan of the Contract





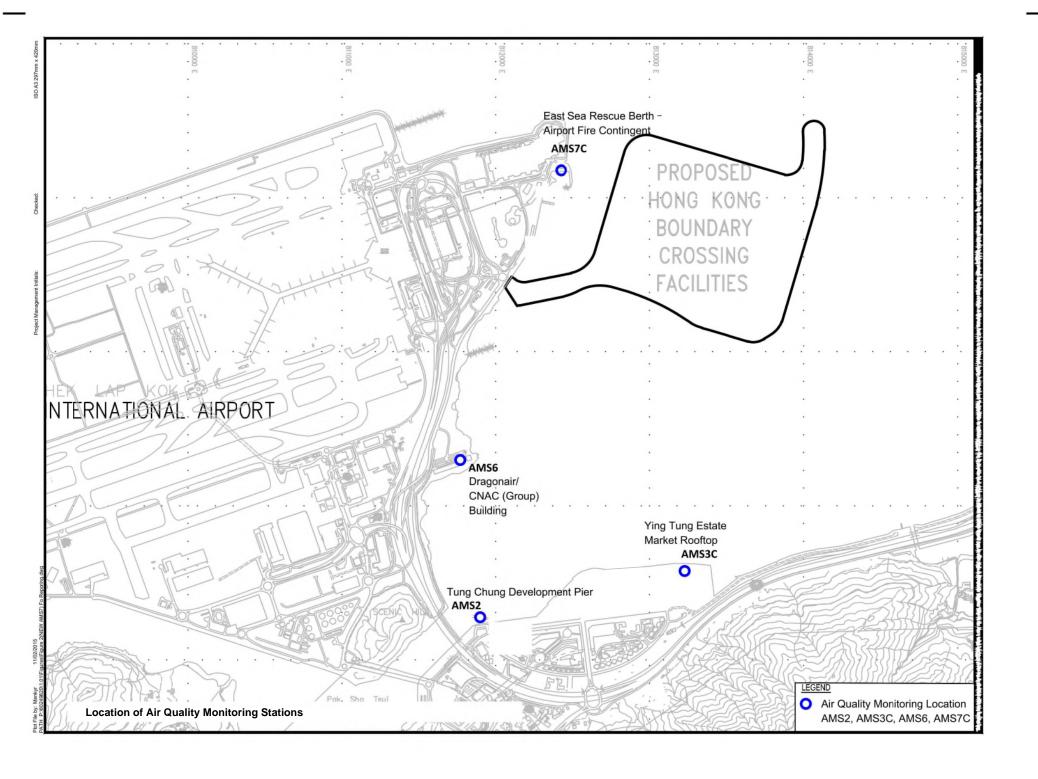




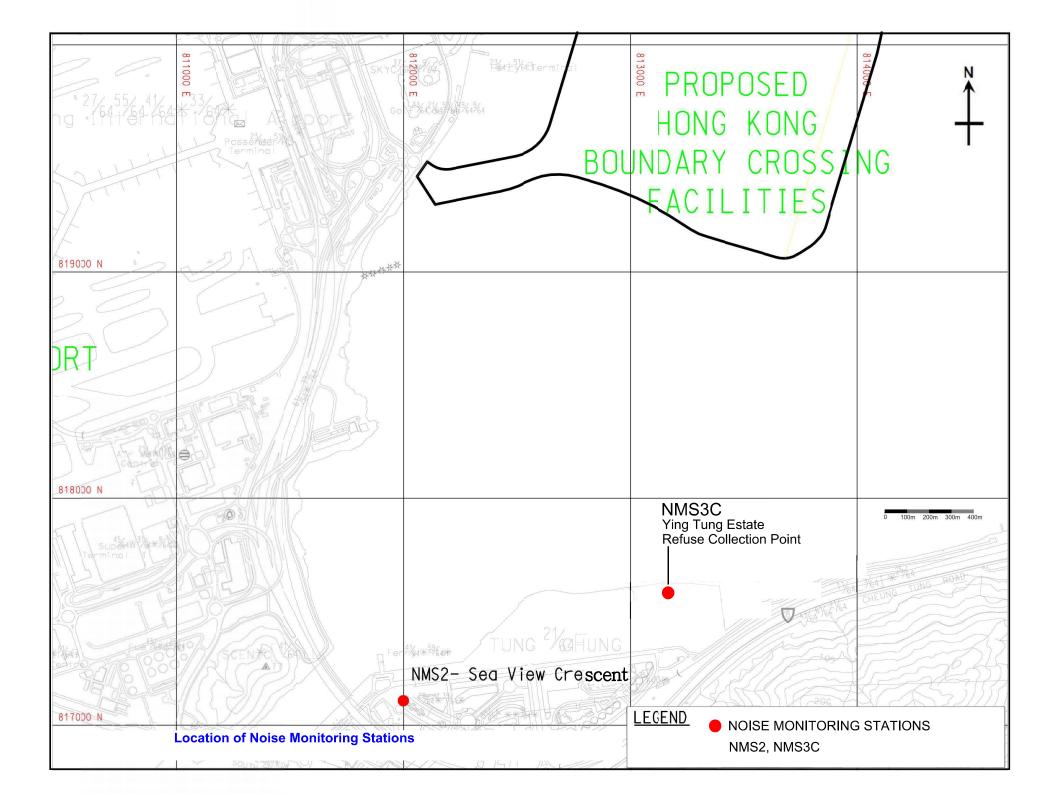


The Location of the Air Quality Monitoring Station

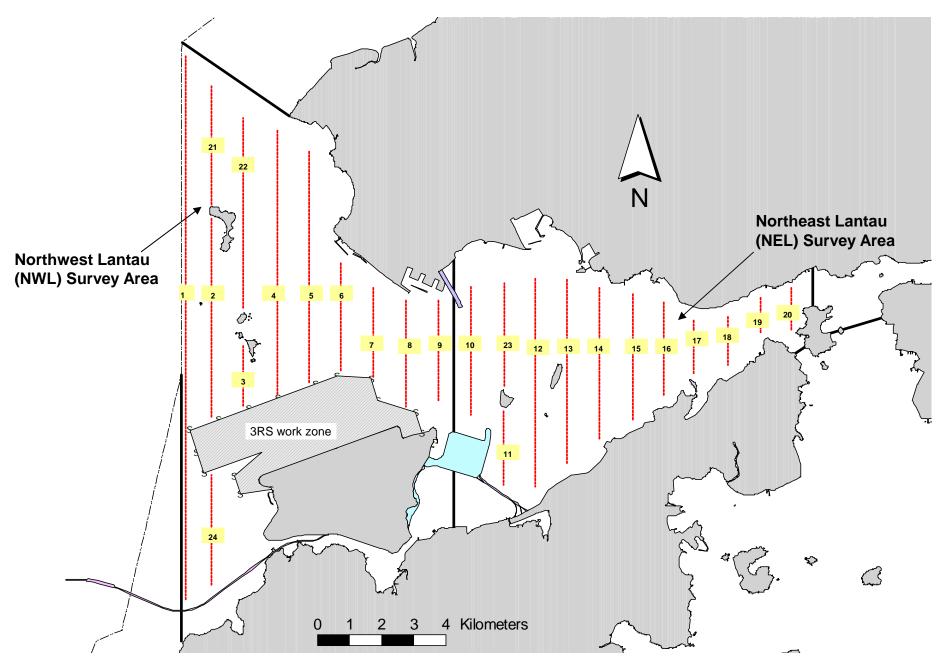




The Location of the Noise Monitoring Station



Post-Construction Dolphin Monitoring Line Transect Layout Map



Transect Line Layout in Northwest and Northeast Lantau Survey Areas

Appendix A

Construction Programme

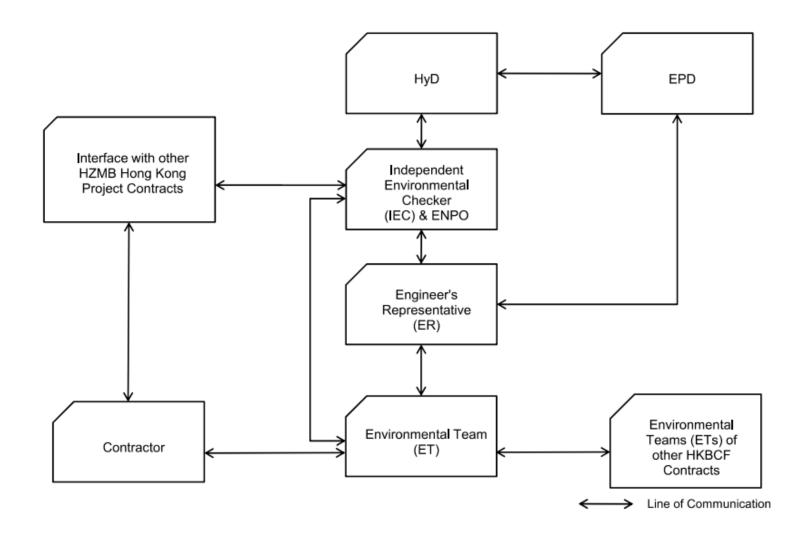


HKZMB HK Boundary Crossing Facilities - Phase 2 and Other Works (HY/2019/01)													
Establishment Period (January 2022 - Jauary 2023)													
Description								Jan-23					
Landscape Establishment Works													

Appendix B

Project Organization Chart





Appendix C

Event and Action Plan



Event / Action Plan for Air Quality

	ACTION			
EVENT	ET	IEC	ER	CONTRACTOR
	ACTION LEVEL			
1. Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	Rectify any unacceptable practice; Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source;	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor;	 Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.

EVENT		ACT	ION	
	ET	IEC	ER	CONTRACTOR
		LIMIT I	_EVEL	
1. Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	 Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Construction Noise

		ACTI	ON	
EVENT	ET	IEC	ER	CONTRACTOR
Action Level	 Notify IEC and Contractor; Identify source, investigate the causes of exceedance and propose remedial measures; Report the results of investigation to the IEC, ER and Contractor; Discuss with the Contractor and formulate remedial measures; Increase monitoring frequency to check mitigation effectiveness. 	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented	Submit noise mitigation proposals to IEC; Implement noise mitigation proposals.
Limit Level	 Inform IEC, ER, EPD and Contractor; Identify source; Repeat measurements to confirm findings; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, ER and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. 	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Dolphin Monitoring

		ACTI	ON	
EVENT	ET	IEC	ER	CONTRACTOR
	Repeat statistical data analysis to confirm findings; Review all available and	Check monitoring data submitted by ET and Contractor; Discuss monitoring	Discuss monitoring with the IEC and any other measures proposed by the ET;	Inform the ER/SOR and confirm notification of the non-compliance in writing;
Action Level	relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;	results and finding with the ET and the Contractor.	2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented.	 Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR; Implement the agreed measures.
	3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR			
	and Contractor; 5. Check monitoring data.			
	6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.			

EVENT.		ACTION	
EVENT	ET	IEC ER	CONTRACTOR
Limit Level	 Repeat statistical data analysis to confirm findings; Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; Identify source(s) of impact; Inform the IEC, ER/SOR and Contractor of findings Check monitoring data; Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary. 	and any other mitigation measures submitted by ET and Contractor and advise ER/SOR of the results and findings accordingly. 5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.	 Inform the ER/SOR and confirm notification of the non-compliance in writing; Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.

Appendix D

Waste Flow Table



Waste Flov	v Table for Yea	r 2020								
	Actua	al Quantities of Ir	nert C&D Materia	als Generated M	lonthly	Actual	Quantities of No	n-inert C&D Wa	stes Generated	Monthly
Monthly Ending	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)
2020 Jan	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2020 Feb	720.34	Nil	720.34	Nil	Nil	Nil	0.335	Nil	Nil	2.23
2020 Mar	11344.57	Nil	10218.92	Nil	1125.65	Nil	0.669	Nil	Nil	8.05
2020 Apr	19649.37	Nil	18670.3	Nil	979.07	Nil	Nil	Nil	Nil	21.64
2020 May	26767.55	Nil	26692.04	Nil	75.51	Nil	2.42	Nil	Nil	196.64
2020 Jun	4628.13	Nil	4198.52	Nil	429.61	Nil	Nil	Nil	Nil	117.19
2020 Jul	4895.66	Nil	3398.41	Nil	1497.25	Nil	Nil	Nil	Nil	30.33
2020 Aug	4971.00	Nil	4774.49	Nil	196.51	Nil	0.418	Nil	Nil	36.91
2020 Sep	1175.26	Nil	736.1	Nil	439.16	Nil	Nil	Nil	Nil	36.16
2020 Oct	3433.83	Nil	Nil	2262.7	1171.13	Nil	Nil	Nil	Nil	32.25
2020 Nov	26481.72	Nil	Nil	24393.64	2088.08	Nil	Nil	Nil	Nil	40.09
2020 Dec	14361.90	Nil	Nil	13468.00	893.90	Nil	Nil	Nil	Nil	39.56
Total	118429.33	0	69409.12	40124.34	8895.87	0	3.842	0	0	561.05

Note:

The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
 Total Quantity Generated (Inert) = Hard Rock and Large Broken Concrete + Reused in the Contract + Disposed as Public Fill – Imported Fill

Waste Flov	v Table for Yea	r 2021								
	Actua	Actual Quantities of Inert C&D Materials Generated Monthly				Actual	Quantities of No	n-inert C&D Wa	stes Generated	Monthly
Monthly Ending	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)
2021 Jan	787.6	0	0	0	787.6	0	0	0	0	18.19
2021 Feb	254.95	0	0	0	254.95	0	0	0	0	154.94
2021 Mar	1899.61	0	0	1720.5	179.11	0	0	0	0	371.73
2021 Apr	4056.27	0	0	0	4056.27	2.13	8.17	0	0	144.08
2021 May	2738.81	0	0	0	2738.81	0.495	0	0	0	31.63
2021 Jun	1009.53	0	0	0	1009.53	0	0	0	0	90.91
2021 Jul	1384.29	0	0	0	1384.29	0	0	0	0	51.69
2021 Aug	340.46	0	0	0	340.46	5.85	0	0	0	42.99
2021 Sep	732.9	0	0	0	732.9	0	0	0	0	70.11
2021 Oct	1023.81	0	0	0	1023.81	0	0	0	0	74.68
2021 Nov	1155.56	0	0	0	1155.56	3.195	0	0	0	121.99
2021 Dec	271.67	0	0	0.00	271.67	0	0	0	0	70.97
Total	15655.46	0	0	1720.5	13934.96	11.665	8.17	0	0	1243.91

Note:

The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
 Total Quantity Generated (Inert) = Hard Rock and Large Broken Concrete + Reused in the Contract + Disposed as Public Fill – Imported Fill

Waste Flov	v Table for Yea	r 2022								
	Actual Quantities of Inert C&D Materials Generated Monthly				Actual	Quantities of No	n-inert C&D Wa	stes Generated	Monthly	
Monthly Ending	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)
2022 Jan	167.72	0	0	0	167.72	0	0	0	0	58.92
2022 Feb	50.85	0	0	0	50.85	0	0	0	0	20.48
2022 Mar	10.10	0	0	0	10.10	0	0	0	0	16.46
2022 Apr	154.27	0	0	0	154.27	0	0	0	0	20.09
2022 May	186.03	0	0	0	186.03	0	0	0	0	6.33
2022 Jun	7.86	0	0	0	7.86	0	0	0	0	8.08
2022 Jul	0	0	0	0	0	0	0	0	0	0
2022 Aug	0	0	0	0	0	0	0	0	0	0
2022 Sep	0	0	0	0	0	0	0	0	0	0
2022 Oct	0	0	0	0	0	0	0	0	0	0
2022 Nov										
2022 Dec										
Total	576.83	0	0	0	576.83	0	0	0	0	130.36

Note:

The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
 Total Quantity Generated (Inert) = Hard Rock and Large Broken Concrete + Reused in the Contract + Disposed as Public Fill – Imported Fill

Appendix E

Implementation Status of Environment Mitigation Measures (Operation Phase)



Implementation Status of Environment Mitigation Measures (Construction Phase) - Contract No. HY/2019/01

EIA Ref.	EM&A Log Ref. ape & Visu	Recommended Mitigation Measures al (Operation Phase)	Location / Duration of Measures	Implementation Status
\$14.3.3 3 <i>Waste l</i>		Mitigate both Landscape and Visual Impacts G10.Provide proper planting maintenance on the new planting areas to enhance the aesthetic degree. Int (Operational Waste)	Operational stage	Implemented
S8.4.3	WM6	Chemical Waste The requirements given in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes should be followed in handling of these chemical wastes. A trip-ticket system should be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation to monitor all movements of chemical wastes which will be collected by a licensed collector to a licensed facility for final treatment and disposal.	Operational stage	Implemented

Appendix F

Cumulative statistics on Environmental Complaints,
Notifications of Summons and Successful Prosecutions



Environmental Complaints Log

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Outcome	Date of Reply

Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to- Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

Cumulative Statistics on Notification of Summons and Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Notification of Summons and Prosecutions This Month	Cumulative Project-to- Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

Appendix G (Not Applicable)

Summary of Site Audit in the Reporting Month



Appendix H (Not Applicable)

Outstanding Issues and Deficiencies



Appendix I

Environmental Monitoring Schedule



Project: Contract No. HY/2019/01 - Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Phase 2 and Other Works

Impact Monitoring Schedule (October 2022)

Sun	Mon	Tue	Wed	Thur	Fri	Sat	
						1	
2	2	4	-		7	0	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	31						
	Bi-monthly						
	landscape and	l 					
	visual site aud	lit					

Remarks



^{1.} As informed by AECOM, the commencement date of the 12-month establishment period for the landscape monitoring under this contract is 5 January 2022. Bi-monthly landscape and visual site audits will be conducted from 5 Jan 2022 to 4 Jan 2023.

Project: Contract No. HY/2019/01 - Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Phase 2 and Other Works

Impact Monitoring Schedule (November 2022)

Mon	Tue	Wed	Thur	Fri	Sat	
	1	2	3	4	5	
7	8	9	10	11	12	
14	15	16	17	18	19	
21	22	23	24	25	26	
28	29	30				
	7 14 21	Mon Tue 1 1 7 8 14 15 21 22	Mon Tue Wed 1 2 7 8 9 14 15 16 21 22 23	7 8 9 10 14 15 16 17 21 22 23 24	Mon Tue Wed Thur Fri 1 2 3 4 7 8 9 10 11 14 15 16 17 18 21 22 23 24 25	Mon Tue Wed Thur Fri Sat 1 2 3 4 5 7 8 9 10 11 12 14 15 16 17 18 19 21 22 23 24 25 26

Remarks



^{1.} As informed by AECOM, the commencement date of the 12-month establishment period for the landscape monitoring under this contract is 5 January 2022. Bi-monthly landscape and visual site audits will be conducted from 5 Jan 2022 to 4 Jan 2023.

Appendix J

Bi-Monthly Landscape and Visual Audit Checklist



Contract No. HY/2019/01 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Phase 2 and Other Works Establishment Inspection Checklist

Date of Site Audit:	2022-10-31	Time of Site Audit:	10:00-11:45
Site Auditor:	Aloysius Wong	Humidity:	45%
Weather Condition:	Fine	Temperature:	25.0°C

ltem	Description	N.A. or	Yes	No	Remarks
		N.O.			
1	Portion A-1				1
1.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
1.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
1.3	Are litter and debris removed?		✓		
1.4	Are planting areas matched with the approved landscape plan?		✓		
1.5	Is planting pattern matched with the approved landscape plan?		✓		
1.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
1.7	Are the planting species on site matched with the approved landscape plan?		✓		
1.8	Are the plants in satisfied condition?		✓		
1.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
1.10	Are trees or limb overhanging branches pruned?	N.O.			
2	Portion A-2				
2.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
2.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
2.3	Are litter and debris removed?		✓		
2.4	Are planting areas matched with the approved landscape plan?		✓		
2.5	Is planting pattern matched with the approved landscape plan?		✓		
2.6	Are planting locations and spacing matched with the approved landscape plan?		✓		



ltem	Description	N.A. or N.O.	Yes	No	Remarks
2.7	Are the planting species on site matched with the approved landscape plan?		✓		
2.8	Are the plants in satisfied condition?		✓		
3	Portion A-3				
3.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
3.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
3.3	Are litter and debris removed?		✓		
3.4	Are planting areas matched with the approved landscape plan?		✓		
3.5	Is planting pattern matched with the approved landscape plan?		✓		
3.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
3.7	Are the planting species on site matched with the approved landscape plan?		✓		
3.8	Are the plants in satisfied condition?		✓		
4	Portion B				
4.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
4.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
4.3	Are litter and debris removed?		✓		
4.4	Are planting areas matched with the approved landscape plan?		✓		
4.5	Is planting pattern matched with the approved landscape plan?		✓		
4.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
4.7	Are the planting species on site matched with the approved landscape plan?		✓		
4.8	Are the plants in satisfied condition?		✓		



Item	Description	N.A. or N.O.	Yes	No	Remarks
4.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
4.10	Are trees or limb overhanging branches pruned?	N.O.			
5	Portion C				
5.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
5.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
5.3	Are litter and debris removed?		✓		
5.4	Are planting areas matched with the approved landscape plan?		✓		
5.5	Is planting pattern matched with the approved landscape plan?		✓		
5.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
5.7	Are the planting species on site matched with the approved landscape plan?		✓		
5.8	Are the plants in satisfied condition?		✓		
5.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
5.10	Are trees or limb overhanging branches pruned?	N.O.			
6	Portion D				
6.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
6.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
6.3	Are litter and debris removed?		✓		
6.4	Are planting areas matched with the approved landscape plan?		✓		
6.5	Is planting pattern matched with the approved landscape plan?		✓		
6.6	Are planting locations and spacing matched with the approved landscape plan?		✓		



Item	Description	N.A. or N.O.	Yes	No	Remarks
6.7	Are the planting species on site matched with the approved landscape plan?		✓		
6.8	Are the plants in satisfied condition?		✓		See Observations for TG01.
6.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
6.10	Are trees or limb overhanging branches pruned?	N.O.			
_					
7	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
7.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
7.3	Are litter and debris removed?		✓		
7.4	Are planting areas matched with the approved landscape plan?		✓		
7.5	Is planting pattern matched with the approved landscape plan?		✓		
7.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
7.7	Are the planting species on site matched with the approved landscape plan?		✓		
7.8	Are the plants in satisfied condition?		✓		
7.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
7.10	Are trees or limb overhanging branches pruned?	N.O.			
8	Portion F				
8.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
8.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
8.3	Are litter and debris removed?		✓		
8.4	Are planting areas matched with the approved landscape plan?		✓		



Item	Description	N.A. or N.O.	Yes	No	Remarks
8.5	Is planting pattern matched with the approved landscape plan?		✓		
8.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
8.7	Are the planting species on site matched with the approved landscape plan?		✓		
8.8	Are the plants in satisfied condition?		✓		
8.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
8.10	Are trees or limb overhanging branches pruned?	N.O.			
9	Portion G				
9.1	Is watering provided to all plants to ensure satisfactory growth and health (manual and automatic irrigation)?		✓		
9.2	After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			
9.3	Are litter and debris removed?		✓		
9.4	Are planting areas matched with the approved landscape plan?		✓		
9.5	Is planting pattern matched with the approved landscape plan?		✓		
9.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
9.7	Are the planting species on site matched with the approved landscape plan?		✓		
9.8	Are the plants in satisfied condition?		✓		
9.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
9.10	Are trees or limb overhanging branches pruned?	N.O.			
10	Portion H				
10.1	Is watering provided to all plants to ensure satisfactory growth and health		✓		
10.2	(manual and automatic irrigation)? After exceptional weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	N.O.			



Contract No. HY/2019/01 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Phase 2 and Other Works Establishment Inspection Checklist

Item	Description	N.A. or N.O.	Yes	No	Remarks
10.3	Are litter and debris removed?		✓		
10.4	Are planting areas matched with the approved landscape plan?		✓		
10.5	Is planting pattern matched with the approved landscape plan?		✓		
10.6	Are planting locations and spacing matched with the approved landscape plan?		✓		
10.7	Are the planting species on site matched with the approved landscape plan?		✓		
10.8	Are the plants in satisfied condition?		✓		
10.9	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?		✓		
10.10	Are trees or limb overhanging branches pruned?	N.O.			



Contract No. HY/2019/01

Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities -

Phase 2 and Other Works

Establishment Inspection Checklist

Remarks / Recommendations for Contractor

Observation and/or Recommended Measures:

Portion A-1

- TG46: 2 Grevillea banksii (GB) previously missing have been replanted.
- TG47: 1 Grevillea robusta (GR) previous planted with wrong species has been rectified.
- TG48: 18 Plumeria rubra (PR) previous planted with 18 Grevillea banksii (GB) has been rectified.

Portion A-2

- Area C33 construction completed and handed over for disease control facilities. Other areas have no particular findings.

Portion A-3

- No Particular findings.

Portion B

No particular findings.

Portion C

- TG22: 3 Grevillea banksii (GB) previously missing have been replanted.
- 3 Grevillea banksii (GB) in poor condition have been replaced.

Portion D

- TG02: 1 Bauhinia variegata (BV) is found dead.
- TG03: 3 Bauhinia variegata (BV) 1 Heteropanax fragrans (HF) previously missing have been replanted.
- + TG05: 4 Bauhinia variegata (BV) and 3 Brassaia actinophylla (BA) previously missing have been replanted.
- TG06: 2 Cassia siamea (CS) previously missing have been replanted.
- TG07: 3 Cassia siamea (CS) and 2 Brassaia actinophylla (BA) previously missing have been replanted.
- TG08: 1 Cassia siamea (CS) in poor condition have been replaced.
- TG10: 1 Albizia lebbeck (AL) in poor condition have been replaced.
- TG11: 2 Cassia siamea (CS) in poor condition have been replaced.
- TG12: 16 Heteropanax fragrans (HF) previously found missing have been replanted.
- 2 Heteropanax fragrans (HF) in poor condition have been replaced.
- TG13: 1 Bauhinia variegata (BV) previously found missing have been replanted.
- TG14: 2 Grevillea banksii (GB) in poor condition have been replaced.
- TG15: 10 Heteropanax fragrans (HF) previously found missing have been replanted.
- 7 Heteropanax fragrans (HF) in poor condition have been replaced.
- TG16: 4 Bauhinia variegata (BV) previously found missing have been replanted.
- 1 Brassaia actinophylla (BA) in poor condition have been replaced.

Portion E, F & G

- No particular findings.

Portion H

 TG17: 10 Grevillea banksii (GB) and 9 Juniperus chinensis (JC) are found transplanted by AAHK's contractor without permission from HyD.

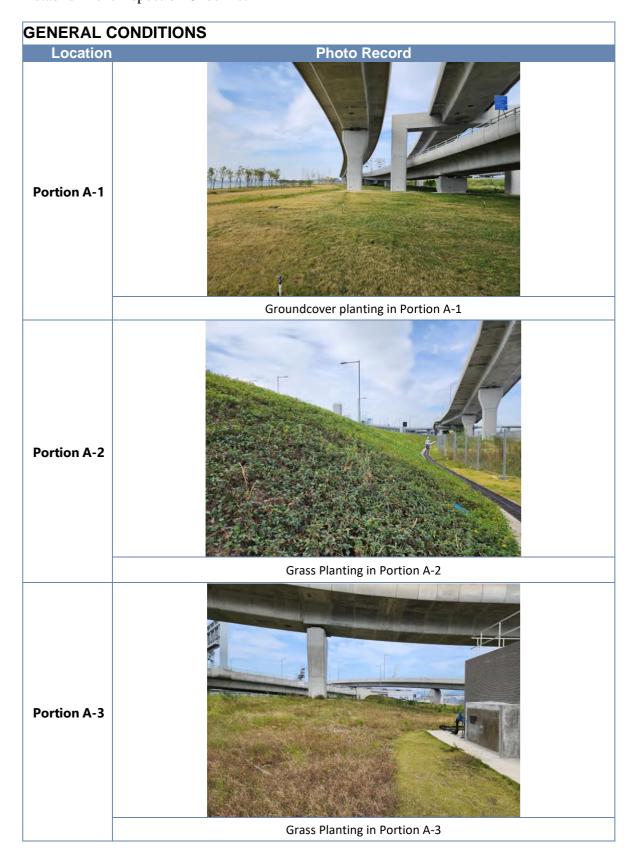
Signatures:

	Name	Signature	Date
ET's Representative	ALOYSIN My	Dlenn	31/10/2002
Contractor's Representative	Mortthen Wh	414	31/10/2012
PM's/Supervisor's Representative	CHAN Pak Kin		31 007 2022
IEC's Representative	M. Yan	nf	31 Oct 7022

OBSERVATIONS						
Location	Photo R	ecord				
Portion D						
	TG02: 1 Bauhinia variegata (BV) is found dead.					
Portion H	TG17: 10 Grevillea banksii (GB) and 9 Juniperus chinensis (JC) are found					
	transplanted by AAHK's contractor without permission from HyD.					



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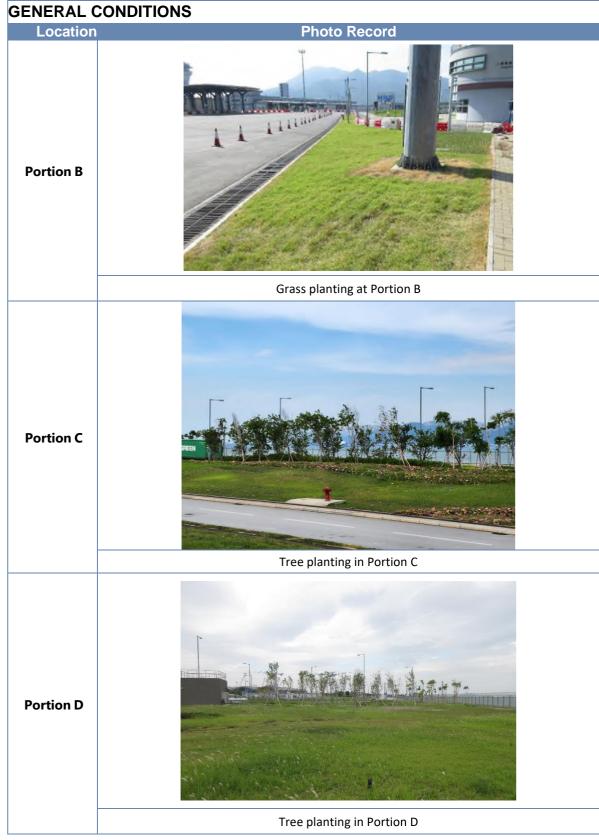


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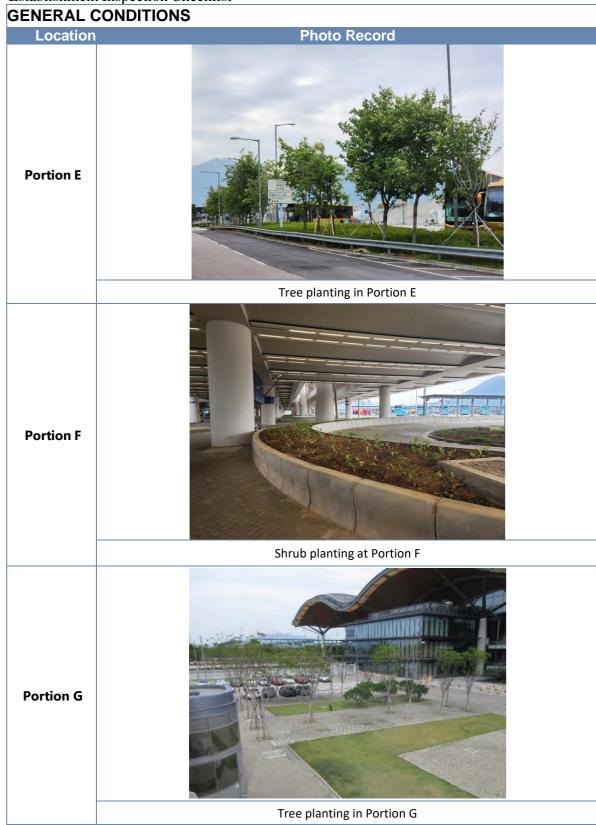


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Portion H Pertion H Tree planting in Portion H.

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FOLLOW-UP ACTION

Location

Photo Record

TG46: 2 Grevillea banksii (GB) previously missing have been replanted.



Portion A-1

G47: 1 Grevillea robusta (GR) previous planted with wrong species has been rectified.



TG48: 18 *Plumeria rubra* (PR) previous planted with 18 *Grevillea banksii* (GB) has been rectified.

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FOLLOW-UP ACTION

Location

Photo Record

TG22: 3 Grevillea banksii (GB) previously missing have been replanted.

Portion C



TG22: 3 Grevillea banksii (GB) in poor condition have been replaced.

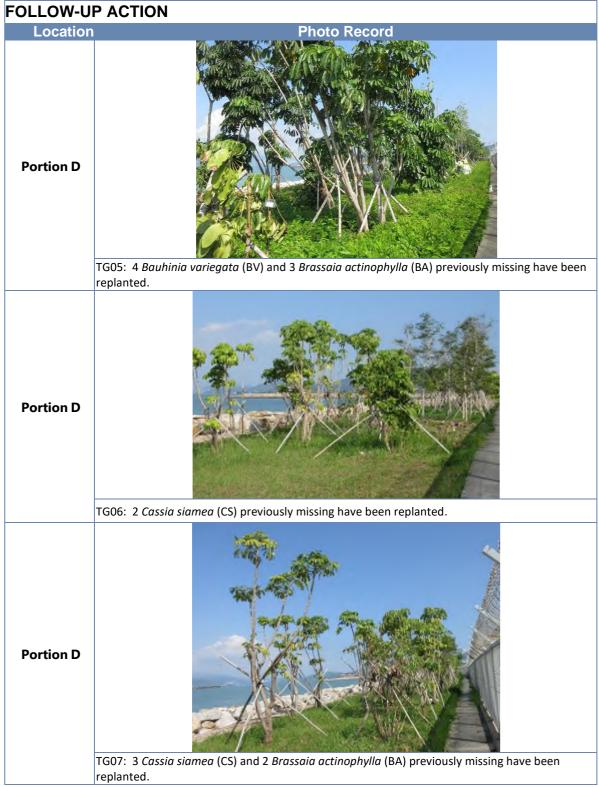
Portion D



TG03: 3 Bauhinia variegata (BV) 1 Heteropanax fragrans (HF) previously missing have been replanted.

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Location

Portion D

Photo Record

TG08: 1 Cassia siamea (CS) in poor condition have been replaced.

Portion D



TG10: 1 Albizia lebbeck (AL) in poor condition have been replaced.

Portion D



TG11: 2 Cassia siamea (CS) in poor condition have been replaced.

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Phase 2 and Other Works

Establishment Inspection Checklist FOLLOW-UP ACTION Location **Photo Record Portion D** TG12: 16 Heteropanax fragrans (HF) previously found missing have been replanted. 2 Heteropanax fragrans (HF) in poor condition have been replaced. **Portion D** TG13: 1 Bauhinia variegata (BV) previously found missing has been replanted.





TG14: 2 Grevillea banksii (GB) in poor condition have been replaced.

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FOLLOW-UP ACTION

Location

Photo Record

Portion D

TG15:
10 Heteropanax fragrans (HF) previously found missing have been replanted.



Portion D

TG16: 4 Bauhinia variegata (BV) previously found missing have been replanted.

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FOLLOW-UP ACTION Location Photo Record Portion D

TG16: 1 Brassaia actinophylla (BA) in poor condition have been replaced.

