

JOB NO.: TCS00975/18

CEDD CONTRACT AGREEMENT NO. EDO/04/2018 - ENVIRONMENTAL TEAM FOR CROSS BAY LINK, TSEUNG KWAN O

QUARTERLY ENVIRONMENTAL MONITORING AND AUDIT (EM&A) SUMMARY REPORT

(SEPTEMBER TO NOVEMBER 2022)

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
(CEDD)

Date Reference No. Prepared By Certified By

8 May 2023 TCS00975/18/600/R0709v2

Martin Li Tam Tak Wing (Environmental Consultant) (Environmental Team Leader)

Version	Date	Remarks
1	28 December 2022	First Submission
2	8 May 2023	Amended against IEC's comments



Acuity Sustainability Consulting Limited Nature & Technologies (HK) Limited Joint Venture



Our ref: PL-202305011

AECOM Asia Company Limited 8/F., Grand Central Plaza, Tower 2 138 Shatin Rural Committee Road Shatin, New Territories, Hong Kong

Attention: Mr. Conrad NG

8 May 2023

Dear Sir,

Contract No. NE/2017/07 & NE/2017/08
Cross Bay Link, Tseung Kwan O
Quarterly EM&A Report for September to November 2022

I refer to the email of the ET concerning the Quarterly EM&A Report for September to November 2022 (Version 2) with Ref. No. TCS00975/18/600/R0709v2. I have no adverse comment on it and verify the captioned according to section 1.9 of Environmental Permit with No. EP-459-2013.

Yours faithfully,

Li Wai Ming Kevin

Independent Environmental Checker

cc. Mr. T.W. TAM (ETL)

Mr. Wilson CHUNG (CEDD)



EXECUTIVE SUMMARY

- ES01 Civil Engineering and Development Department (hereafter referred as "CEDD") is the Project Proponent and the Permit Holder of the Project Cross Bay Link, Tseung Kwan O (hereinafter referred as "the Project") which is a Designated Project to be implemented under Environmental Permit number EP-459/2013 (hereinafter referred as "the EP-459/2013" or "the EP").
- ES02 AUES was awarded the CEDD Contract Agreement No. EDO/04/2018 Environmental Team for Cross Bay Link, Tseung Kwan O (hereinafter called "the Service Contract"). The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the Approved EM&A Manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Agreement No. CE 43/2008 (HY) Cross Bay Link, Tseung Kwan O Investigation and other relevant statutory requirements.
- ES03 This is the 16th Quarterly EM&A report presenting the monitoring results and inspection findings for the reporting period from 1 September 2022 to 30 November 2022 (hereinafter 'the Reporting Period').

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES04 Environmental monitoring activities under the EM&A program in this Reporting Period are summarized in the following table.

Table ES-4 Summary Environmental Monitoring Activities Undertaken in the Reporting Period

Issues	Enviror	Sessions	
Air Ovolity	1-Hour TSF	96	
Air Quality	24-Hr TSP		32
	Leq (30min) Daytime	39
Construction Noise		Evening ^(Note 1)	0
	Leq (5min)	0	
Water Quality	Marine Wat	Marine Water Sampling ^{(Note 2) (Note 3)}	
	Contract 1	ET Regular Environmental Site Inspection	12
Inspection / Audit		Joint site audit with Project Consultant and IEC	3
Inspection / Audit	Contract 2	ET Regular Environmental Site Inspection	12
	Contract 2	Joint site audit with Project Consultant and IEC	3

Note 1 Total sessions are counted by every 3 consecutive Leq5min

Note 2 Total sessions are counted by monitoring days

Note 3 Since the marine construction works that requires marine water quality monitoring as stated in the EM&A Manual were completed, the impact water quality monitoring was ceased with effect from 1 May 2020.

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES05 No air quality monitoring exceedance was recorded in this Reporting Period. For construction noise monitoring, three noise complaints were recorded in this Reporting Period. The statistics of environmental exceedance and investigation of exceedance are summarized in the following table.



Table ES-5 Summary Environmental Monitoring Parameter Exceedance in the Reporting Period

Environmental	Monitoring	Action	Limit Level	Event & Action		
Issues	Parameters Parameters	Level		Investigation Results	Corrective Actions	
Air Quality	1-Hour TSP	0	0		-	
All Quality	24-Hr TSP	0	0		1	
	Leq _{30min} Daytime	2	0	Not project related	NA	
Construction Noise	Leq _{5min} Evening	0	0	1		
	Leq _{5min} Night	1	0	Not project related	NA	
Water Ouglitz	DO	0	0			
Water Quality (Marine Water)	Turbidity	0	0		1	
(Marine Water)	SS	0	0			

ENVIRONMENTAL COMPLAINT

ES06 Four (4) environmental complaints were recorded in this Reporting Period for the Project. The statistics of environmental complaint are summarized in the following table.

Table ES-6 Summary Environmental Complaint Records in the Reporting Period

Donouting		Environn	Related with		
Reporting Period	Contract	Frequency	Cumulative	Complaint Nature	the Works Contract(s)
1 September	1	4	33	Noise, Light pollution complaint	Noise - not related; Light pollution - related
2022 – 30 November 2022	2	1	24	Noise	No

Remark: Noise complaint received on 9 November 2022 suspected related to Contract 1 & 2.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES07 No environmental summons or prosecutions was received in this Reporting Period for the Project. The statistics of environmental summons or prosecutions are summarized in the following tables.

Table ES-7 Summary Environmental Summons Records in the Reporting Period

Deporting		Environn	Related with		
Reporting Period	Contract	Frequency	Cumulative	Complaint Nature	the Works Contract(s)
1 September	1	0	0	NA	NA
2022 – 30 November 2022	2	0	0	NA	NA

Table ES-8 Summary Environmental Prosecutions Records in the Reporting Period

				-	<u> </u>
Donouting		Environm	Related with		
Reporting Period	Contract	Frequency	Cumulative	Complaint Nature	the Works Contract(s)
1 September 2022 – 30 November 2022	1	0	0	NA	NA
	2	0	0	NA	NA

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Quarterly EM&A Summary Report (September to November 2022)



SITE INSPECTION BY EXTERNAL PARTIES

ES08 No site inspection was undertaken AFCD within the Reporting Period. No EPD inspection was carried out during the reporting period.



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1. INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1 Civil Engineering and Development Department (hereafter referred as "CEDD") is the Project Proponent and the Permit Holder of the Project Cross Bay Link, Tseung Kwan O (hereinafter referred as "the Project") which is a Designated Project to be implemented under Environmental Permit number EP-459/2013 (hereinafter referred as "the EP-459/2013" or "the EP").
- 1.1.2 AUES was awarded the CEDD Contract Agreement No. EDO/04/2018 Environmental Team for Cross Bay Link, Tseung Kwan O (hereinafter called "the Service Contract"). The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the Approved EM&A Manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Agreement No. CE 43/2008 (HY) Cross Bay Link, Tseung Kwan O Investigation and other relevant statutory requirements.
- 1.1.3 As part of the EM&A programme, baseline monitoring shall be undertaken before the Project construction work commencement to determine the ambient environmental condition. The baseline air quality, background noise and water quality monitoring has been carried out between 21st September 2018 and 13th November 2018 at the designated and interim locations. The baseline monitoring report under the EP-459/2013 has been compiled by the ET and verified by Independent Environmental Checker (hereinafter the "IEC") prior submitted to EPD on 19th November 2018 for endorsement.
- 1.1.4 This is the 16th Quarterly EM&A report presenting the monitoring results and inspection findings for the reporting period from 1 September 2022 to 30 November 2022 (hereinafter 'the Reporting Period').

1.2 REPORT STRUCTURE

Section 10

1.2.1 The Environmental Monitoring and Audit (EM&A) Monthly Report is structured into the following sections:-

Section 1	Introduction
Section 2	Project Organization and Construction Progress
Section 3	Summary of Impact Monitoring Requirements
Section 4	Impact Monitoring Results
Section 5	Waste Management
Section 6	Site Inspections
Section 7	Landfill Gas Monitoring
Section 8	Environmental Complaints and Non-Compliance
Section 9	Implementation Status of Mitigation Measures

Conclusions and Recommendations



2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS AND SUBMISSION

2.1 PROJECT ORGANIZATION

2.1.1 The project organization is shown in *Appendix B*. The responsibilities of respective parties can be referred to Monthly Report.

2.2 CONSTRUCTION PROGRESS

2.2.1 3-month rolling construction program of each Works Contract is enclosed in *Appendix C*; and the major construction activities undertaken in the Reporting Period is presented in below sub-sections.

Contract 1 (Contract No. NE/2017/07)

- 2.2.2 The major construction activities of Contract 1 undertaken in this Reporting Period are:-
 - · Concreting works at TKOI
 - E&M Work at Portion V Plant Room Building
 - EA to W4 E&M Cable tray installation & maintenance
 - Steel bridge E&M Cable tray installation
 - Top coating of steel deck and painting repair of the arch rib
 - Waterproofing works at CBL concrete bridge
 - Paving block for steel bridge
 - Installation of L3 parapet post & railing, isolation panel and PMMA panel at east concrete bridge at Portion II

Contract 2 (Contract No. NE/2017/08)

- 2.2.3 The major construction activities of Contract 2 undertaken in this Reporting Period are:-
 - UU Diversion
 - Drainage work at Portion III
 - Monitoring and Instrumentation works
 - Ducting installation along Portion III, U-through and Elevated Deck
 - Ducting installation along At grade road and general backfilling
 - SENB installation at At-Grade Road and Wan O Road
 - SENB installation at Portion III, U-trough and Elevated Deck
 - Road Paving Work
 - Lift Installation
 - Remedial drainage work at Portion III
 - Footpath and cycle track paving work

2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

- 2.3.1 All the documents required under Environmental Permit No. EP-459/2013 were submitted within the required timeframe. The details can be referred to the Monthly Report.
- 2.3.2 Upon completed baseline monitoring, a Baseline Monitoring Report was verified by IEC on 19 November 2018 and submitted to EPD on that day for endorsement.
- 2.3.3 The notification of Project dedicated web site to EPD was made on 9 January 2019 (http://www.envcbltko.hk/).



3. SUMMARY OF ENVIRONMENTAL MONITORING PROGRAMMES AND REQUIREMENTS

3.1 GENERAL

3.1.1 The Environmental Monitoring and Audit Programmes and requirements are set out in the Approved EM&A manual. Environmental issues such as air quality, construction noise and water quality were identified as the key issues during the construction phase of the Project. A summary of EM&A programmes and requirements are presented in the sub-sections below.

3.2 MONITORING PARAMETERS

3.2.1 Monitoring parameters of air quality, noise and water quality are summarized in *Table 3-1*.

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Air Quality	 1-hour TSP by Real-Time Portable Dust Meter; and
All Quality	 24-hour TSP by High Volume Air Sampler
Noise	 Leq (30min) in six consecutive Leq(5 min) between 07:00-19:00 on normal weekdays Supplementary information for data auditing, statistical results such as L₁₀ and L₉₀
	shall also be obtained for reference.
Water Quality	 In-situ measurement – Dissolved Oxygen (DO) concentration (mg/L) & saturation (%), pH, Salinity (mg/L), Temperature (°C) and Turbidity (NTU); and Laboratory analysis – SS (mg/L)

3.3 MONITORING LOCATIONS

Air Quality and Construction Noise

3.3.1 According to the Approved EM&A Manual Section 5.4 and Section 6.3, three (3) representative air sensitive receivers (ASR) and four (4) representative noise sensitive receivers were designated as monitoring stations. The designated air quality and noise monitoring locations are listed in *Table 3-2* and *Table 3-3*, and illustrated in *Appendix D*.

Table 3-2 Designated Air Quality Monitoring Location recommended in EM&A Manual

ID	Location in the EM&A Manual	Currently Situation
AM1	Tung Wah Group of Hospitals Aided Primary School & Secondary School	Not yet construct
AM2	Lohas Park Stage 2 (Planned Development in Area 86)	Available for resident occupation in February 2021
AM3	Lohas Park Stage 3 (Planned Development in Area 86)	Under Construction

Table 3-3 Designated Construction Noise Monitoring Location recommended by EM&A Manual

ID	Location	Currently Situation	
CNMS-1	Lohas Park Stage 1(Planned Development in Area 86, Package 5) (Southeast facade)	Available for resident occupation in November 2019	
CNMS-2	Lohas Park Stage 1 (Planned Development in Area 86, Package 6) (Southeast facade)	Available for resident occupation in February 2021	
CNMS-3	Lohas Park Stage 3 (Planned Development in Area 86,Package 11) (West facade) Under Construction		
CNMS-4	Tung Wah Group of Hospitals Aided Primary School & Secondary School (Southwest facade) Not yet construct		

3.3.2 As observed and confirmed by ET and IEC during the joint site visit on 29th August 2018, the designated air quality and noise monitoring locations are under construction or yet to construct. It is considered that these designated locations are not appropriate to perform air quality and noise



monitoring. In this regard, alternative locations were proposed as interim arrangement to carry out air quality and noise monitoring before occupation of the designated monitoring location. A letter enclosed with the alternative location proposal and IEC verification (Our Ref: TCS00975/18/300/L0038) was sent to EPD on 19th October 2018 and the proposal was agreed by EPD. Therefore, air quality and construction noise impact monitoring would be performed at the agreed alternative locations until the designated sensitive receivers occupied and granted the premises.

3.3.3 The designated and interim alternative monitoring location for impact air quality and noise monitoring in the Reporting Period are summarized in Table 3-4 and illustrated in *Appendix D*.

Table 3-4 Designated and interim alternative location for air quality and noise monitoring in the Reporting Period

Location ID	Monitoring Parameter	Location
AM2	1-Hour TSP Air Quality	Lohas Park Phase 6
AM4	1-Hour TSP Air Quality	Podium of Lohas Park Phase 2A (Le Prestige)
AM5	24-Hour TSP Air Quality	Boundary of Site Office near Junction of Wan Po Road and Wan O Road
CNMS-1	Noise (L _{eq} , L ₁₀ & L ₉₀)	Podium of Lohas Park Package 4
CNMS-2	Noise (L _{eq} , L ₁₀ & L ₉₀)	Lohas Park Package 6
CNMS-5	Noise (L _{eq} , L ₁₀ & L ₉₀)	Podium of Lohas Park Phase 2A (Le Prestige)

Remark:

Water Quality

3.3.4 According to Table 7.1 of the approved EM&A Manual Section 7.4, two Control Stations (C3 & C4), six (6) sensitive receivers (CC1, CC2, CC3, CC4, CC13 & SWI1) and one (1) Gradient station (I1) are recommended to perform water quality monitoring. Details and coordinate of these water quality monitoring stations are described in *Table 3-5* and the locations is shown in *Appendix D*.

 Table 3-5
 Location of Water Quality Monitoring Station

Station	Coord	linates	Description	
Station	Easting	Northing	Description	
CC1	843201	816416	Sensitive Receiver – Coral Sites at Chiu Keng Wan	
CC2	844076	817091	Sensitive Receiver – Coral Sites at Junk Bay	
CC3	844606	817941	Sensitive Receiver – Coral Sites at Junk Island	
CC4	845444	815595	Sensitive Receiver – Coral Sites at Fat Tong Chau West	
CC13	844200	817495	Sensitive Receiver – Coral Sites at Junk Bay near Chiu Keng Wan	
SWI1	845512	817442	Sensitive Receiver – Tseung Kwan O Salt Water Intake	
C3	843821	816211	Control Station (Ebb Tide) – within Junk Bay	
C4	844621	815770	Control Station (Flood Tide) – within Junk Bay	
I 1	844602	817675	Gradient Station – in between Lam Tin Tunnel (LTT) and CBL	

3.4 MONITORING FREQUENCY AND PERIOD

3.4.1 To according with the approved *EM&A Manual*, impact monitoring requirements are presented as follows.

Air Quality Monitoring

- 3.4.2 Air quality impact monitoring frequency is as follows:
 - Once every 6 days of 24-hour TSP and 3 times of 1-hour TSP monitoring; during course of works throughout the construction period.

^{1.} Since 24-Hour TSP Air Quality monitoring is not granted at AM4 Lohas Park Phase 2A, the 24-Hour TSP monitoring was therefore proposed at AM5 which is located at the boundary of the project site office.

^{2. 24-}Hour TSP Air Quality Monitoring at AM2 will be commenced once approval of High Volume Sampler installation was obtained from Lohas Park 6.



Construction Noise Monitoring

- 3.4.3 Construction noise monitoring frequency is as follows:
 - One set of Leq_(30min) measurements in a weekly basis between 07:00 and 19:00 hours on normal weekdays during course of works as throughout the construction period.
 - If construction works are extended to include works during the hours of 1900-0700, additional weekly impact monitoring shall be carried out during evening and night-time works. Applicable permits under the NCO shall be obtained by the Contractor.

Water Quality (Marine Water) Monitoring

- 3.4.4 Marine water impact monitoring frequency is as follows:
 - Three days a week, at mid ebb and mid flood tides during course of pile excavation works for the bridge pier foundations underway. Moreover, the intervals between 2 consecutive sets of monitoring day shall not be less than 36 hours.

3.5 DETERMINATION OF ACTION/LIMIT (A/L) LEVELS

3.5.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. A summary of the Action/Limit (A/L) Levels for air quality, construction noise and water quality are shown in *Tables 3-6*, 3-7 and 3-8 respectively.

Table 3-6 Action & Limit Levels of Air Quality (1-Hour & 24-Hr TSP)

Manitaring Station	Action Lev	vel (μg /m³)	Limit Level (μg/m³)		
Monitoring Station	1-Hour TSP	24-Hr TSP	1-Hour TSP	24-Hr TSP	
AM2	278	NA	500	NA	
AM4	278	NA	500	NA	
AM5	NA	190	NA	260	
Note: 1-Hour & 24-Hr TSP of Action Level = (Average Baseline Results × 1.3 + Limit level)/2					

Table 3-7 Action and Limit Levels for Construction Noise, dB(A)

Monitoring Location	Action Level	Limit Level (Leq30min)			
8	Time Period: 0700-1900 hours on normal weekdays				
CNMS-1 CNMS-2	When one or more documented complaints are received	75 dB(A)			
CNMS-5	Time Period: 1900-2300 hours on all days (Leq15min)				
	When one or more documented complaints are received	<i>55</i> dB(A)			

Remarks:

- 1. Construction noise monitoring will be resumed at the designated locations CNMS-3 and CNMS4 once they are available and permission are granted;
- 2. The designated locations CNMS-3 is located at residential building which is still under construction, Limit Level of 75dB(A) will be adopted until they are occupied;
- 3. The designated location CNMS-4 is located at planned school and still not yet to construction. When the school occupied and operated, Limit Level of 70dB(A) should be adopted and should be reduced to 65dB(A) during examination period; and
- 4. If construction works are required during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority shall be followed.



Table 3-8 Action and Limit Levels for Water Quality

	- The state of the					
Monitoring	Depth Average of SS (mg/L)					
Station	Actio	on Level	$\mathbf{L}_{\mathbf{i}}$	imit Level		
CC1	7.8	OR 120% of	9.3	OR 130% of		
		upstream control		upstream control		
CC2	9.0	station at the same	9.2	station at the same		
CC3	8.2	tide of the same day (Control Station C3	9.0	tide of the same day (Control Station C3		
CC3	0.2	at Ebb tide and	2.0	at Ebb tide and		
CC4	13.8	Control Station C4 at	15.4	Control Station C4 at		
GG12	0.0	Flood tide),	10.2	Flood tide),		
CC13	8.9	whichever is higher	10.3	whichever is higher		
SWI1	8	mg/L		10 mg/L		
		Dissolved Oxy	gen (mg/L)			
Monitoring	Depth Average of S	Surface and Mid-depth		Bottom		
Location	Action Level	Limit Level	Action Leve	l Limit Level		
CC1	5.8	5.7	5.3	5.2		
CC2	5.8	5.7	5.3	5.1		
CC3	5.5	5.4	4.9	4.7		
CC4	5.7	5.7	5.5	5.4		
CC13	5.6	5.5	5.3	5.2		
SWI1	5.4	4.8	5.1	5.0		
Monitoring		Depth Average of T	Turbidity (NTL))		
Location	Actio	on Level	•	imit Level		
CC1	5.8	OR 120% of	6.0	OR 130% of		
		upstream control		upstream control		
CC2	4.6	station at the same	5.5	station at the same		
CC3	4.8	tide of the same day	5.4	tide of the same day		
004	<i>C</i> 1	(Control Station C3	7.1	(Control Station C3		
CC4	6.1	at Ebb tide and	7.1	at Ebb tide and		
CC13	6.0	Control Station C4 at Flood tide),	6.3	Control Station C4 at Flood tide),		
SWI1	6.1	whichever is higher	7.1	whichever is higher		

3.5.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan as stated EM&A Manual.



4. IMPACT MONITORING RESULT

4.1 RESULTS OF AIR QUALITY MONITORING IN THE REPORTING MONTH

- 4.1.1 As notified that Lohas Park Package 6 was available for resident occupation in late January 2021, air quality monitoring at designated monitoring location AM2 was therefore commenced in February 2021. Since the installation of High Volume Sampler for 24-Hour TSP monitoring is still under review by Property Management Team of Lohas Park Package 6, an interim alternative monitoring location AM2a was proposed for the 24-Hour TSP monitoring and was commenced on 13 July 2021 upon agreed by ER and IEC.
- 4.1.2 In the Reporting Period, 1-Hour TSP monitoring was performed at designated monitoring location AM2 and interim alternative monitoring locations AM4, and 24-Hr TSP of air quality monitoring was performed at interim alternative monitoring locations AM2a and AM5.
- 4.1.3 During the Reporting Period, 96 sessions of 1-hour TSP and 32 sessions of 24-hours TSP monitoring were carried out and the monitoring results are summarized in Table 4-1. The relevant graphical plots are shown in *Appendix E*.

1-hour TSP (µg/m³) 24-hour TSP (µg/m³) **Monitoring** Location Min Min Max Max Average Average 34 120 85 AM2 Record Date 25-Oct-22 19-Oct-22 48 events 70 AM2a 174 112 Record Date 6-Oct-22 24-Oct-22 16 events AM4 36 137 84 Record Date 25-Oct-22 19-Oct-22 48 events AM5 29 136 86 Record Date 28-Nov-22 14-Sep-22 16 events

Table 4-1 **Summary of Air Quality Impact Monitoring Results**

- As shown in Table 4-1, all the 1-hour TSP and 24-hour TSP monitoring results were below the 4.1.4 Action / Limit Levels. No Notification of Exceedance (NOE) was issued in this Reporting Period.
- 4.1.5 No adverse impact due to weather condition on the monitoring result was observed in reporting quarter. The summary of meteorological information for the Reporting Period is shown in Appendix F.

4.2 RESULTS OF CONSTRUCTION NOISE MONITORING

4.2.1 13 sessions of daytime construction noise monitoring were performed at the designated location CNMS-1, CNMS-2 and interim alternative monitoring location CNMS-5 respectively in the reporting period. The daytime noise monitoring results at designated location CNMS-1 and CNMS-2, and interim alternative monitoring location CNMS-5 are summarized in *Table 4-2*. The relevant graphical plots are shown in *Appendix E*.

Table 4-2 Summary of Daytime Construction Noise Impact Monitoring Results

Monitoring	Leq, 30min (dB((A))				
Location	Min	Max	Average		
CNMS-1	59.7	71.9	65.9		
Record Date	29-Nov-22	27-Sep-22	13 sessions		
CNMS-2	58.3	65.8	62.0		
Record Date	17-Nov-22	19-Oct-22	13 sessions		
CNMS-5	61.2	65.6	63.6		
Record Date	23-Nov-22	11-Nov-22	13 sessions		



4.2.2 All the measured daytime construction noise results were below 75dB(A) of the limit level acceptance criteria.

4.3 RESULTS OF WATER QUALITY MONITORING

- 4.3.1 According to the approved EM&A Manual Section 7.6.1, the impact marine water quality monitoring work shall be carried out during the CBL piling and pile excavation works (marine construction activity) of the Project. Impact marine water quality monitoring was commenced in December 2018 when CBL piling and pile excavation works started.
- 4.3.2 As confirmed, all the marine piling and piling excavation work were completed in January 2020 and all pile cap installation work was completed in mid-March 2020. Due to the marine construction works that requires marine water quality monitoring as stated in the EM&A Manual were completed, the impact water quality monitoring was ceased with effect from 1 May 2020 and IEC has no particular comment on this arrangement.
- 4.3.3 No impact water quality monitoring was therefore carried out in the reporting period.



5. WASTE MANAGEMENT

5.1 GENERAL WASTE MANAGEMENT

5.1.1 Waste management would be carried out by an on-site Environmental Officer or an Environmental Consultant from time to time.

5.2 RECORDS OF WASTE QUANTITIES

- 5.2.1 All types of waste arising from the construction work are classified into the following:
 - Construction & Demolition (C&D) Material;
 - Chemical Waste; and
 - General Refuse
- 5.2.2 According to the information provided by Contractor of Contract 1 and Contract 2, waste disposal was made in the Reporting period are summarized in *Tables 5-1* and *5-2*.

Table 5-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Contract		Quantity		Disposal
Type of waste	No	Sep 2022	Oct 2022	Nov 2022	Location
Total Generated C&D	1	0.096	0.012	0.090	TKO 137
Materials (Inert) (in '000m ³)	2	0.649	1.053	0.517	1 KO 137
Reused in this Project (Inert)	1	0	0	0	-
(in '000m ³)	2	0	0	0	-
Reused in other Projects	1	0	0	0	-
(Inert) (in '000m ³)	2	0	0	0	-
Disposal as Public Fill	1	0.096	0.012	0.090	TKO 127
(Inert) (in '000m ³)	2	0.649	1.053	0.517	- TKO 137
Imported Fill ('000m ³)	1	0	0	0	-
imported Fili (000m²)	2	0.358	0.061	0	-

Table 5-2 Summary of Quantities of C&D Wastes

Type of Wests	Contract		Quantity		Disposal
Type of Waste	No	Sep 2022	Oct 2022	Nov 2022	Location
Daniela I Matel ((000lan)	1	0	0	0	
Recycled Metal ('000kg)	2	0	0	0	_
Recycled Paper /	1	0.195	0.150	0.210	Licensed
Cardboard Packing ('000kg)	2	0	0	0	collector
Decycled Plactic (1000lsa)	1	0	0	0	
Recycled Plastic ('000kg)	2	0	0	0	_
Chamical Wastes (1000les)	1	0	0	0	
Chemical Wastes ('000kg)	2	0	0	0	_
Canaral Patrices (1000m3)	1	1.450	1.011	1.037	NENT
General Refuses ('000m³)	2	0.143	0.076	0.173	NENT

5.2.3 The Monthly Summary Waste Flow Table of the Contracts 1 and Contract 2 are shown in *Appendix G*.



6. SITE INSPECTION

6.1 REQUIREMENTS

6.1.1 According to the approved EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

6.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH Contract 1

6.2.1 In this Reporting Period, 12 events of weekly joint site inspection was carried out for Contract 1 to evaluate site environmental performance. The summaries of the findings during site inspection are presented in *Table 6-1* and the details of site inspection can be found in relevant EM&A monthly report.

Table 6-1 Summary of Site Observations of the Contract 1

Reporting Period	Date of site inspection	Nos. of Findings/ Deficiencies	Follow-Up Status
September 2022	8, 14, 20 & 28 September 2022	4	Completed
October 2022	5, 13, 19 & 26 October 2022	4	Completed
November 2022	4, 9, 16 & 25 November 2022	3	Completed

6.2.2 In the Reporting Period, no non-compliance was recorded for Contract 1; however, 11 observations were recorded during the site inspections and the major findings were related to dust control and chemical management mitigation measures. Details of the findings of the inspection in the reporting period can be referred to the Monthly EM&A Report. The findings found in the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

Contract 2

6.2.3 In this Reporting Period, 12 events of weekly joint site inspection was carried out for Contract 2 to evaluate site environmental performance. The summaries of the findings during site inspection are presented in *Table 6-2* and the details of site inspection can be found in relevant EM&A monthly report.

Table 6-2 Summary of Site Observations of the Contract 2

Reporting Period	Date of site inspection	Nos. of Findings/ Deficiencies	Follow-Up Status
September 2022	8, 14, 20 & 28 September 2022	5	Completed
October 2022	5, 13, 19 & 26 October 2022	2	Completed
November 2022	4, 9, 16 & 25 November 2022	5	Completed

6.2.4 In the Reporting Period, no non-compliance was recorded for Contract 2; however, 12 observations were recorded during the site inspections and the major findings were related to dust control, general housekeeping and chemical management mitigation measures. Details of the findings of the inspection in the reporting period can be referred to the Monthly EM&A Report. The findings found in the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.



7. LANDFILL GAS MONITORING

7.1 GENERAL REQUIREMENT

- 7.1.1 Pursuant to Section 13 of the Project's EM&A Manual, Landfill gas monitoring shall perform during construction activities within the 250m Consultation Zone of Tseung Kwan O Stage II & III Landfill. For landfill gas monitoring requirements, pre entry and routine measurement shall be undertaken in accordance with the *Factories and Industrial Undertaking (Confined Spaces) Regulation*.
- 7.1.2 According to Environmental Mitigation Implementation Schedule (EMIS) S14.7.6, portable monitoring equipment can be used to conduct landfill gas monitoring. Moreover, the frequency and areas to be monitored should be set down prior to commencement of the works either by the Safety Officer or by an appropriately qualified person.

7.2 LIMIT LEVELS AND EVENT AND ACTION PLAN

7.2.1 In event of the trigger levels specified in Table 14.6 of the EIA report being exceeded, a person, such as the Safety Officer, shall be nominated, with deputies, to be responsible for dealing with any emergency which may occur due to LFG. In an emergency situation the nominated person, or his deputies, shall have the necessary authority and shall ensure that the confined space is evacuated and the necessary works implemented for reducing the concentrations of gas. The Limit levels and relevant Action Plans for landfill gas detected in utilities and any on-site areas following construction is listed in *Table 7-1*.

Table 7-1 Actions in the Event of Landfill Gas Being Detected in Excavations

Parameter	Limit Level	Actions
	>10% LEL (i.e.	Post "No Smoking" signs
	>0.5% by volume)	Prohibit hot works
Methane		Ventilate to restore methane to <10% LEL
Methane	>20% LEL (i.e.	Stop excavation works
	>1% by volume)	Evacuate personnel/prohibit entry
		• Increase ventilation to restore methane to <10% LEL
	>0.5%	• Ventilate to restore carbon dioxide to <0.5%
Carbon	>1.5%	Stop excavation works
dioxide		Evacuate personnel/prohibit entry
		• Increase ventilation to restore carbon dioxide to <0.5%
	<19%	Ventilation to restore oxygen >19%
Ovvegon	<18%	Stop excavation works
Oxygen		Evacuate personnel/prohibit entry
		• Increase ventilation to restore oxygen to >19%

7.2.2 In the event of the trigger levels specified in Table 9-1 being exceeded, the Safety Officer shall be responsible for dealing with any emergency which may occur due to landfill gas.

7.3 LANDFILL GAS MONITORING

- 7.3.1 In the Reporting Period, landfill gas monitoring was conducted at the zone Wan O Road which excavation work of Contract 2 was carried out.
- 7.3.2 There were a total of 77 days monitoring were carried by the Safety Officer or an approved and qualified persons. The results of landfill gas measurement are summarized in *Table 7-2*.



TABLE 7-2SUMMARY OF LANDFILL GAS MEASUREMENT RESULTS

Landfill Gas	A ation I aval	Limit Level	Detectable at LMR	
Parameter	Action Level	Limit Level	Min	Max
Methane	>10% LEL (>0.5% v/v)	>20% LEL (>1% v/v)	0.0%	0.0%
Oxygen	<19%	<18%	20.3%	20.7%
Carbon Dioxide	>0.5%	>1.5%	0.0%	0.0%

7.3.3 The measurement results shown that slightly methane concentration was detected, oxygen concentration measured was over 19.0 %. No exceedance was triggered and therefore no corrective action was required accordingly.



8. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

8.1 Environmental Complaint, Summons and Prosecution

8.1.1 In the Reporting Period, four (4) environmental complaints were received with respect to the noise nuisance, water quality and odour arising from the Project. Besides, no summons and prosecution under the EM&A Programme was lodged for the project. The statistical summary table of environmental complaint is presented in *Tables 8-1*, 8-2 and 8-3. A summarized record of all complaints received was provided in *Appendix H*.

 Table 8-1
 Statistical Summary of Environmental Complaints

Donauting David	Comtract	Environmental Complaint Statistics			
Reporting Period	Contract	Frequency	Cumulative	Complaint Nature	
1 – 30 September 2022		0	29	NA	
1 – 31 October 2022	1	2	31	Noise	
1 – 30 November 2022		2	33	Noise, Light Pollution	
1 – 30 September 2022		0	23	NA	
1 – 31 October 2022	2	0	23	NA	
1 – 30 November 2022		1	24	Noise	

Remark: Noise complaint received on 9 November 2022 suspected related to Contract 1 & 2.

Table 8-2 Statistical Summary of Environmental Summons

Donouting Donied	Comtract	Environmental Complaint Statistics			
Reporting Period	Contract	Frequency	Cumulative	Complaint Nature	
1 – 30 September 2022		0	0	NA	
1 – 31 October 2022	1	0	0	NA	
1 – 30 November 2022		0	0	NA	
1 – 30 September 2022		0	0	NA	
1 – 31 October 2022	2	0	0	NA	
1 – 30 November 2022		0	0	NA	

Table 8-3 Statistical Summary of Environmental Prosecution

Donauting Davied	Contract	Environmental Complaint Statistics			
Reporting Period	Contract	Frequency	Cumulative	Complaint Nature	
1 – 30 September 2022		0	0	NA	
1 – 31 October 2022	1	0	0	NA	
1 – 30 November 2022		0	0	NA	
1 – 30 September 2022		0	0	NA	
1 – 31 October 2022	2	0	0	NA	
1 – 30 November 2022		0	0	NA	



9. IMPLEMENTATION STATUS OF MITIGATION MEASURES

9.1 GENERAL REQUIREMENTS

- 9.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in *Appendix I*.
- 9.1.2 The Contractors had been implementing the required environmental mitigation measures according to the Environmental Monitoring and Audit Manual subject to the site condition. Environmental mitigation measures generally implemented by the Contractors in this Reporting Month are summarized in *Table 9-1*.

Table 9-1 Environmental Mitigation Measures in the Reporting Period

1 able 9-1	Environmental Mitigation Measures in the Reporting Period
Issues	Environmental Mitigation Measures
Construction Noise	 Regularly to maintain all plants, so only the good condition plants were used on-site; If possible, all mobile plants onsite operation has located far from NSRs; When machines and plants (such as trucks) were not in using, it was switched off; Wherever possible, plant was prevented oriented directly the nearby NSRs; Provided quiet powered mechanical equipment to use onsite; Weekly noise monitoring was conducted to ensure construction noise meet the criteria.
Air Quality	 Stockpile of dusty material was covered entirely with impervious sheeting or sprayed with water so as to maintain the entire surface wet; The construction plants regularly maintained to avoid the emissions of black smoke; The construction plants switched off when it not in use;
	 Water spraying on haul road and dry site area was provided regularly; Where a vehicle leaving the works site is carrying a load of dusty materials, the load has covered entirely with clean impervious sheeting; and Before any vehicle leaving the works site, wheel watering has been performed.
Water Quality	 Debris and refuse generated on-site collected daily; Oils and fuels were stored in designated areas; The chemical waste storage as sealed area provided; Site hoarding with sealed foot were provided surrounding the boundary of working site to prevent wastewater or site surface water runoff get into public areas; and Portable chemical toilets were provided on-site. A licensed contractor was regularly disposal and maintenance of these facilities. Silt curtain was installed and maintained in accordance with EP condition
Waste and Chemical Management	 Excavated material reused on site as far as possible to minimize off-site disposal. Scrap metals or abandoned equipment should be recycled if possible; Waste arising kept to a minimum and be handled, transported and disposed of in a suitable manner; Disposal of C&D wastes to any designated public filling facility and/or landfill followed a trip ticket system; and Chemical waste handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.
General	 The site is generally kept tidy and clean. Mosquito control is performed to prevent mosquito breeding on site.



10. CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS

- 10.1.1 This is the **16**th Quarterly EM&A report as presented the monitoring results and inspection findings for the reporting period from *1 September 2022* to *30 November 2022*.
- 10.1.2 In the Reporting Period, three (3) action level exceedance for construction noise was recorded due to three (3) noise complaint was recorded. Investigations were undertaken by ET and the construction noise action level exceedances triggered are concluded unlikely due to the Project.
- 10.1.3 In this Reporting Period, no 1-Hour TSP or 24-Hr TSP air quality monitoring exceedance was recorded. No NOE or the associated corrective actions were therefore issued.
- 10.1.4 No water quality monitoring was carried out in the reporting period.
- 10.1.5 In the Reporting Period, four (4) environmental complaints were received with respect to the noise nuisance and light pollution arising from the Project. Investigation for the complaints were undertaken by ET and it is considered that one of the complaints (light pollution) was Project related. However, the Contractor has taken measures to minimise the impact from the testing of the operational stage functional lights.
- 10.1.6 No notification of summons or prosecution was received and recorded for the Project.

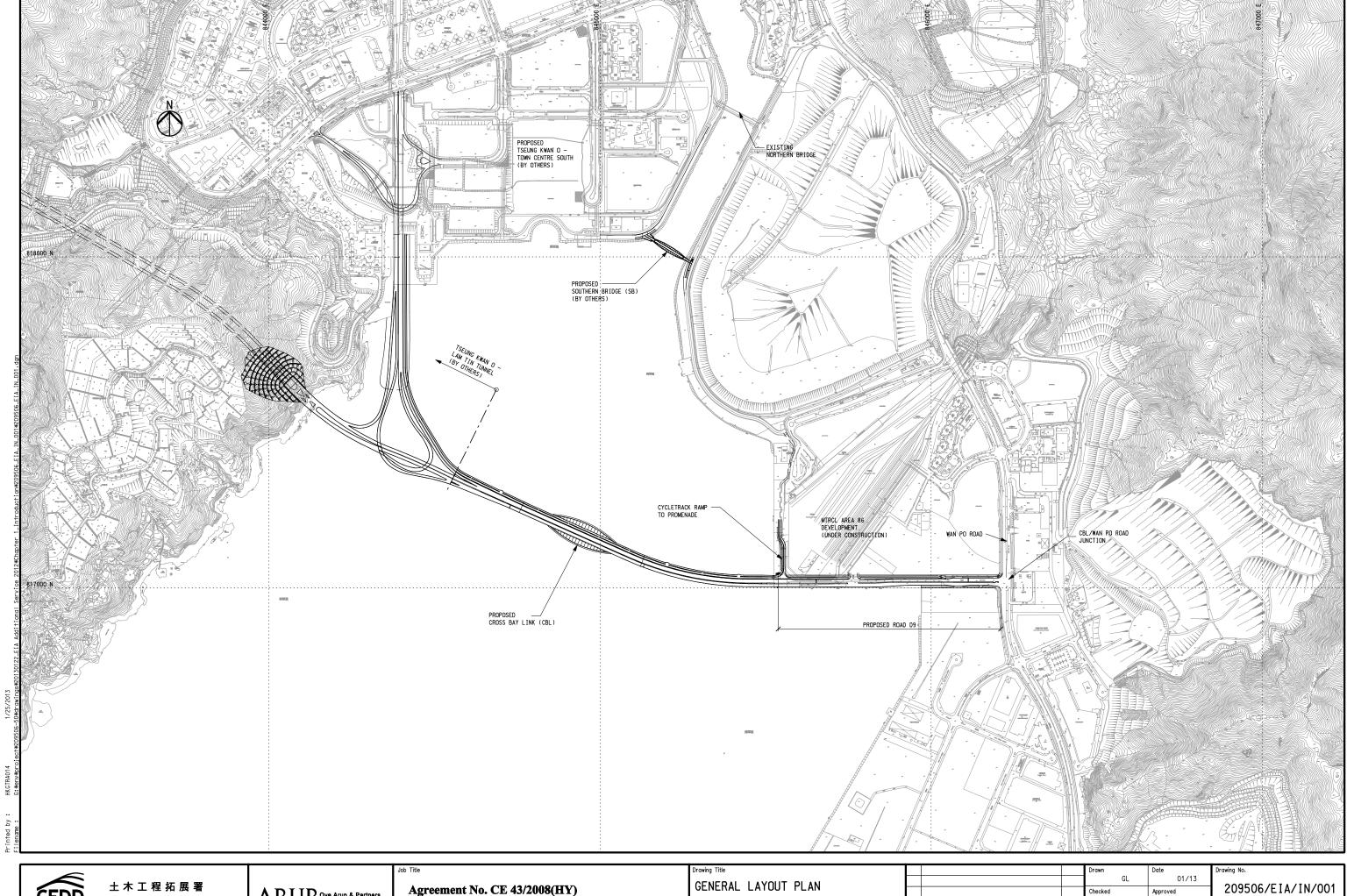
10.2 RECOMMENDATIONS

- 10.2.1 Due to the coming month is dry and windy season for Hong Kong, the Contractor was reminded that all the works to undertaking must be fulfill environmental statutory requirement, especially construction dust come from working sites of the Project.
- 10.2.2 Construction noise would be the key environmental issue as Lohas Park Phase 4 & 6 were already available for resident occupation. The noise mitigation measures such as use of quiet plants and installation of temporary noise barrier at the construction noise predominate area should be fully implemented in accordance with the EM&A requirement.



Appendix A

Project Layout Plan

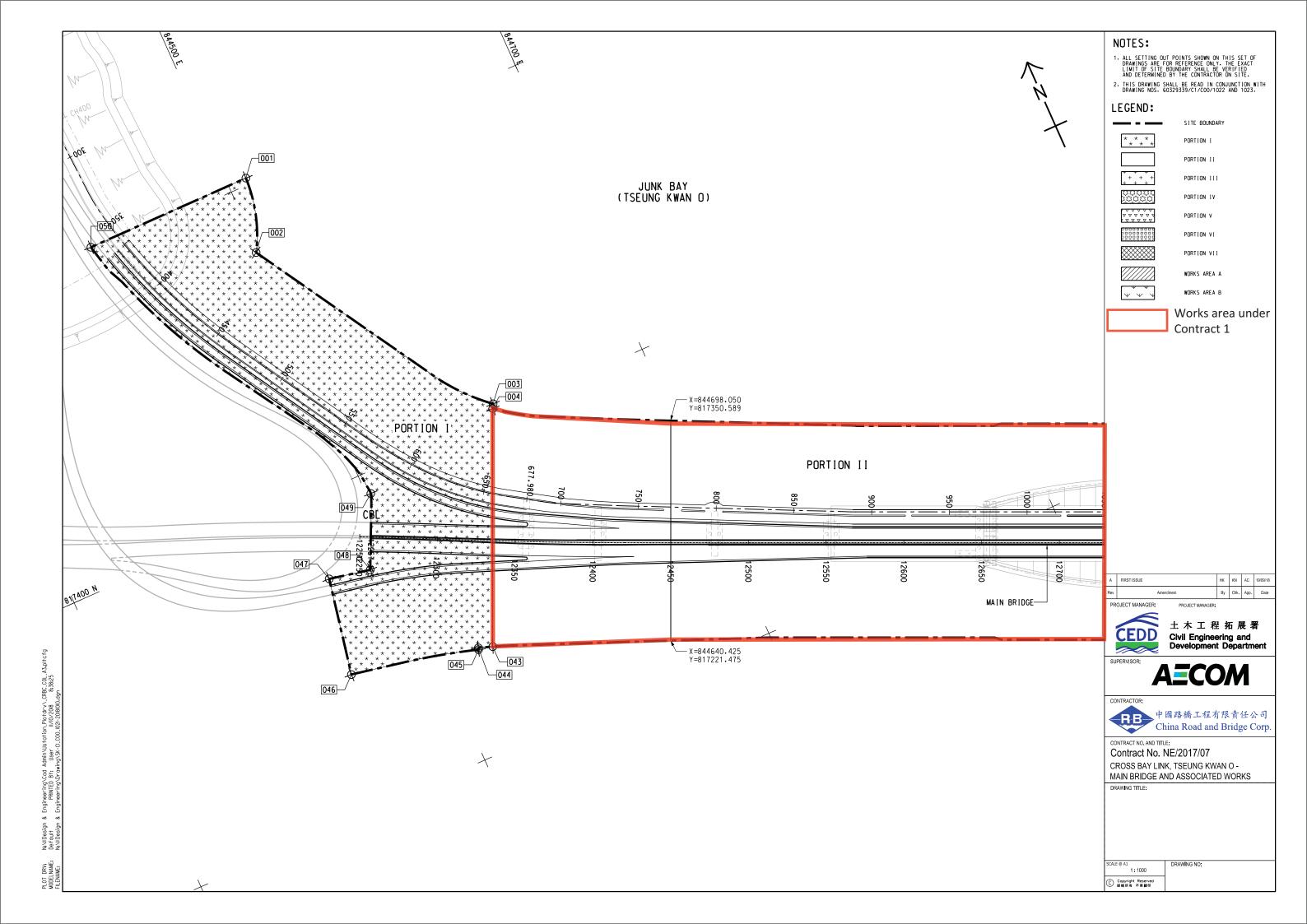


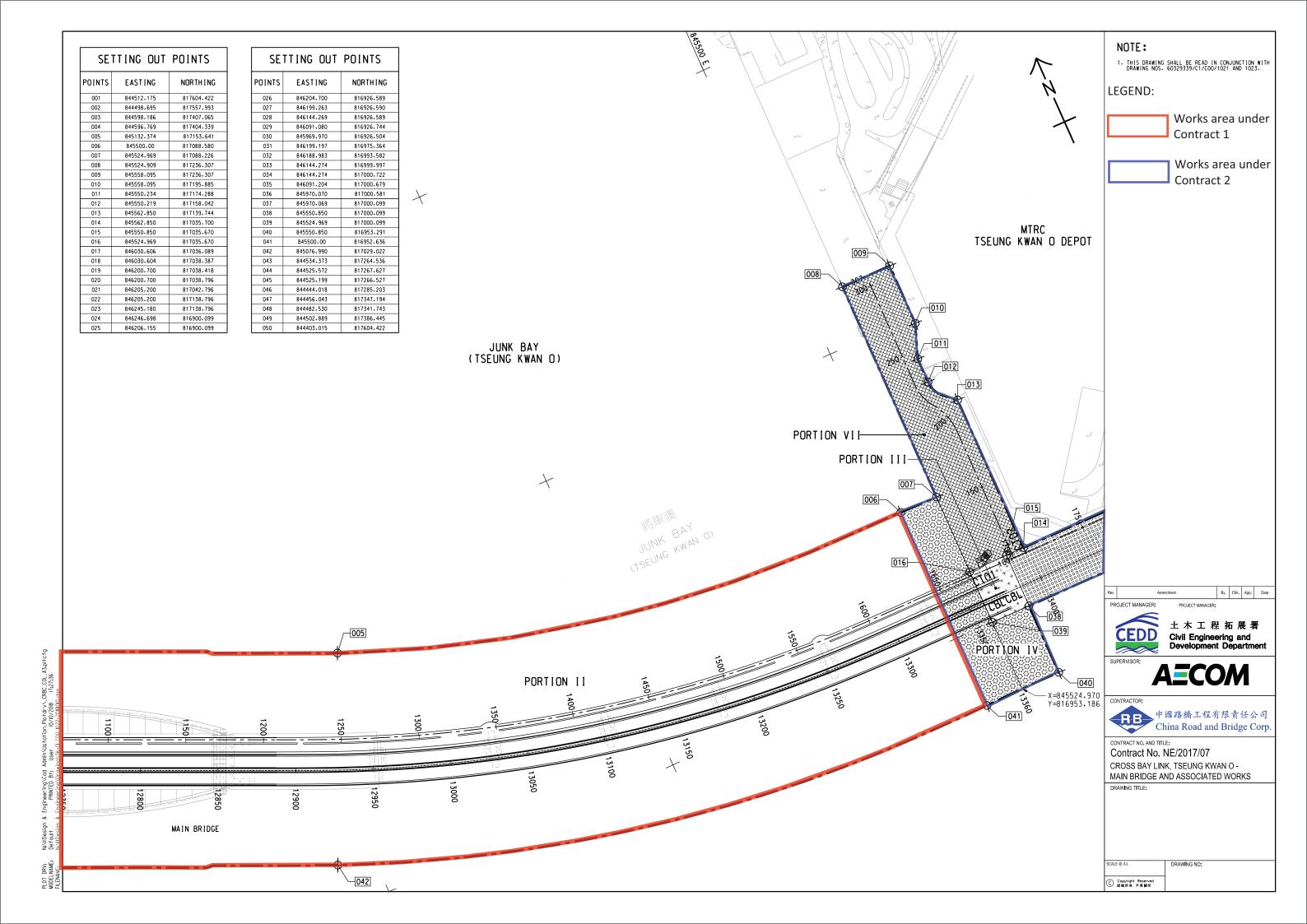
Civil Engineering and Development Department

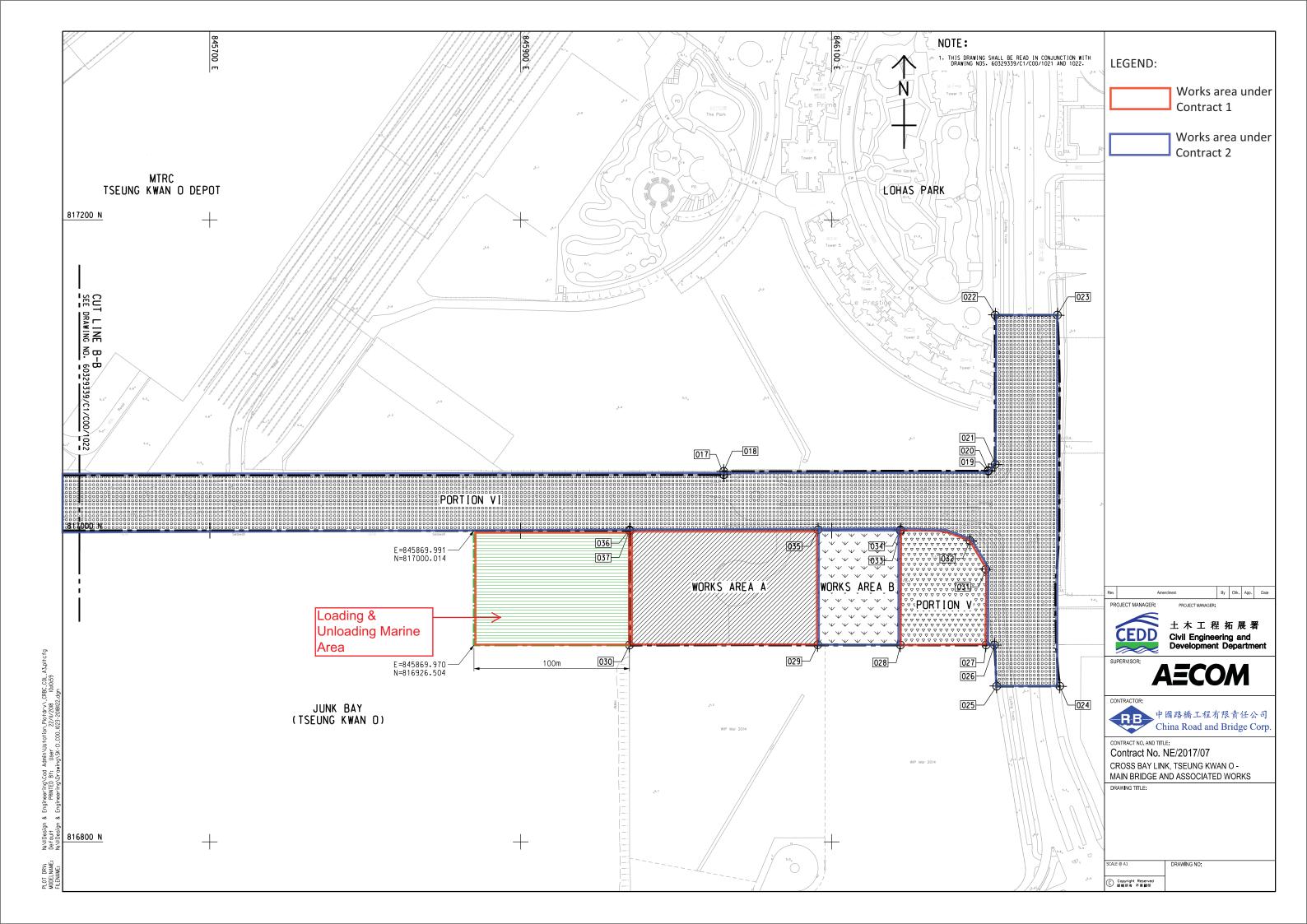
ARUP Ove Arup & Partners Hong Kong Limited

Agreement No. CE 43/2008(HY) Cross Bay Link, Tseung Kwan O – Investigation

B SECOND ISSUE A FIRST ISSUE Scale 1:5000 on A1 & 1:10000 on A3 FINAL







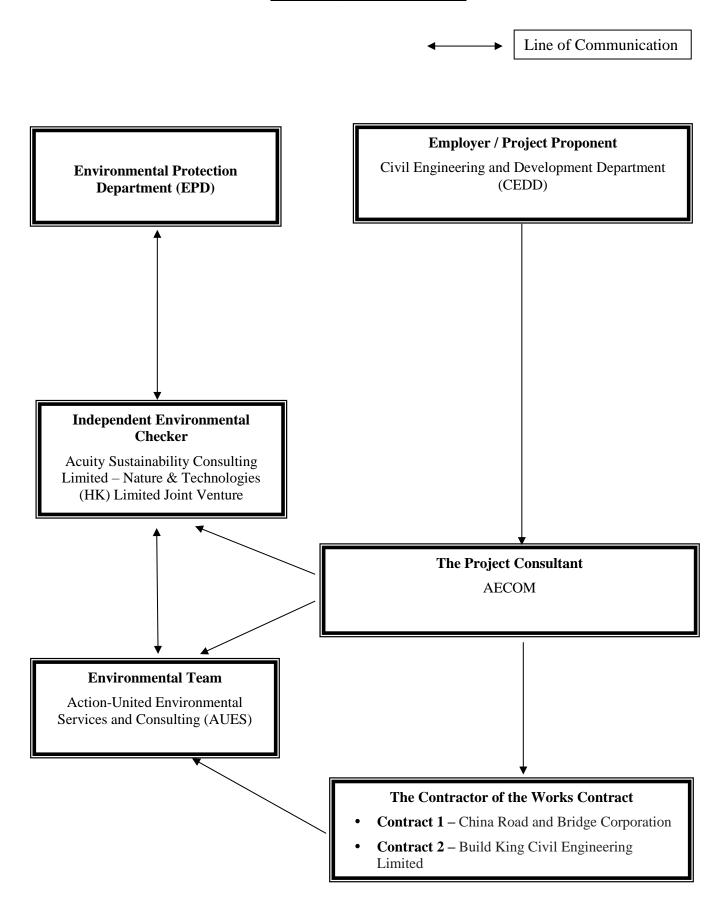


Appendix B

Project Organization Chart & Contact Details of Key Personnel for the Project



Project Organization Structure





Contact Details of Key Personnel for the Project

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Project Proponent	CK Lam	2301 1398	2714 5174
CEDD	Project Proponent	Sheri Leung	2301 1398	2714 5174
AECOM	Senior Resident Engineer	Jackie Chan	3595 8045	3596 6118
AECOM	Resident Engineer	Kelvin Chan	3595 8045	3596 6118
ASC – N&T JV	Independent Environmental Checker	Kevin Li	2698 6833	2698 9383
ASC – N&T JV	Senior Environmental Consultant	Tandy Tse	2698 6833	2698 9383
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Martin Li	2959 6059	2959 6079
CRBC	Site Agent	Raymond Suen	9779 8871	2283 1689
CRBC	Environmental Officer	Sedo Sze	9724 6254	2283 1689
CRBC	Environmental Supervisor	Janice Poon	9148 5688	2283 1689
Build King	Site Agent	Stephen Leung	9071 7657	NA
Build King	Environmental Officer	Louisa Fung	9271 5370	NA
Build King	Environmental Supervisor	Kenneth Hung	6170 9304	NA

Legend:

CEDD (Employer) - Civil Engineering and Development Department

AECOM (Project Consultant) – AECOM Asia Co. Ltd.

ASC – N&T JV (IEC) – Acuity Sustainability Consulting Limited – Nature & Technologies (HK) Limited Joint Venture

AUES (ET) – Action-United Environmental Services & Consulting

CRBC (the Main Contractor of the Works Contract 1) – China Road and Bridge Corporation

Build King (the Main Contractor of the Works Contract 2) - Build King Civil Engineering Limited

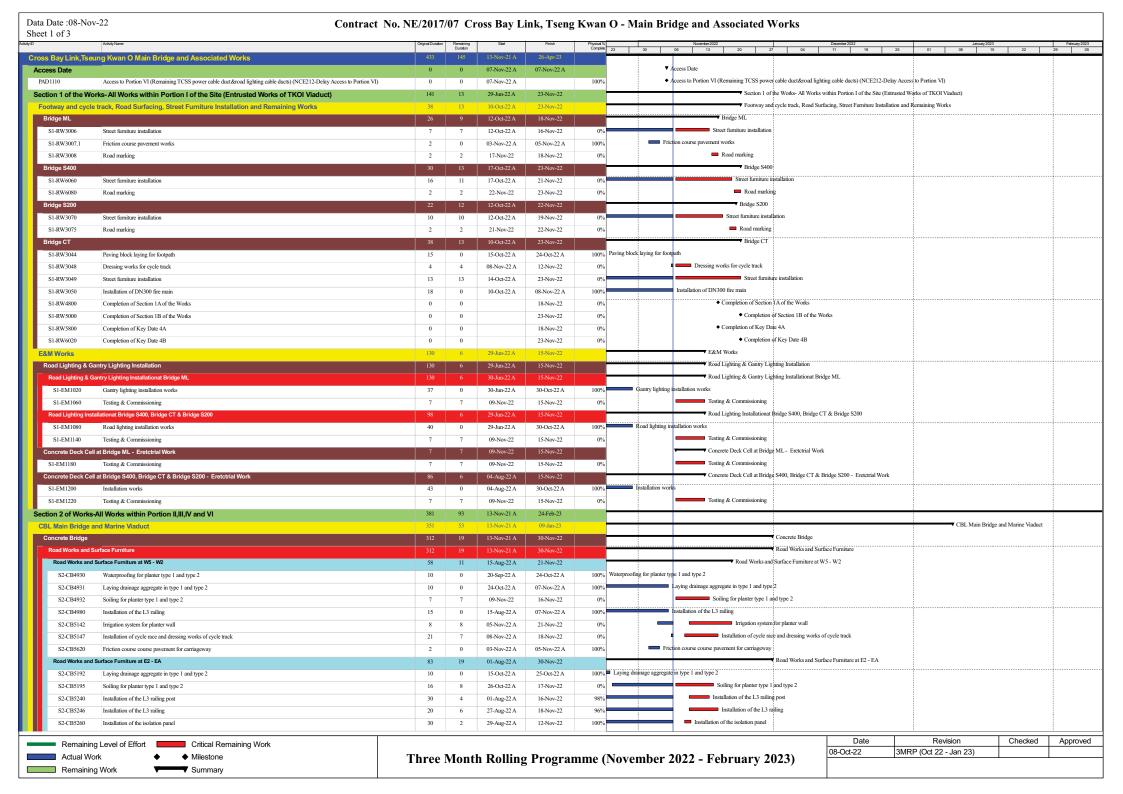


Appendix C

3-Month Rolling Construction Programme



Contract 1



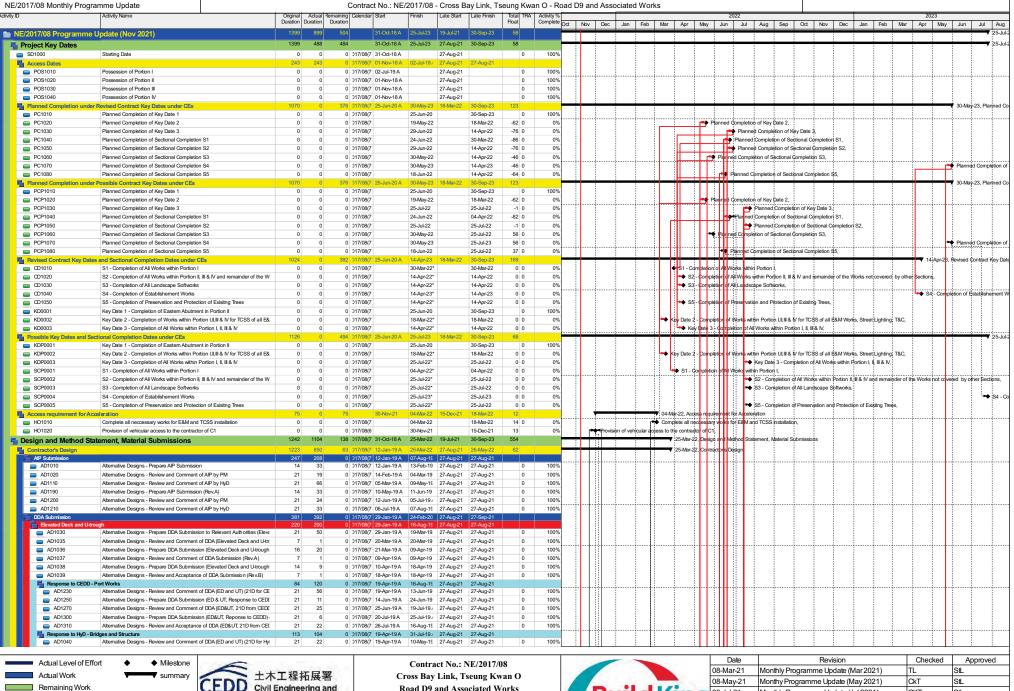
Data Date:08-Nov-22 Contract No. NE/2017/07 Cross Bay Link, Tseng Kwan O - Main Bridge and Associated Works Sheet 2 of 3 Physical % 23 30 S2_CB5280 Installation of isolation PMMA panel 15-Oct-22 A 16-Nov-22 04-Nov-22 A Friction course pavement for carriageway S2-CB5406 05-Nov-22 A 100% Friction course pavement for carriageway Road Marking works S2-CB5410 Road Marking works 4 08-Nov-22 A 18-Nov-22 25% nstallation of DN300 fire mair Installation of DN300 fire main 15 \$2,CB5415 14-Oct-22 A 08-Nov-22 A 100% ■ Irrigation system for planter type 2 S2-CB5420 Irrigation system for planter type 2 12-Nov-22 21-Nov-22 Planting works for planter type 1 and 2 S2-CB5440 Planting works for planter type 1 and 2 22-Nov-22 30-Nov-22 Installation of cycle race and dressing works of cycle track Installation of cycle race and dressing works of cycle track 15 \$2,CB5460 25-Oct-22 A 29-Oct-22 A 100% 13-Nov-21 A 15-Nov-22 Fabrication and delivery of steel post and transom for L3 parapet S2-CB5480 Fabrication and delivery of steel post and transom for L3 parapet 60 05-Jan-22 A 15-Nov-22 Fabrication and delivery of steel works for isolation panel 80 2 13-Nov-21 A 10-Nov-22 Fabrication and delivery of steel works for isolation panel S2-CB5500 69% ▼ Steel Bridge ▼ Road Works and Surface Furniture Road Works and Surface Furniture 15-Oct-22 A 28-Nov-22 S2-RW1063 Installation traffic sign pos 14 15-Oct-22 A 16-Nov-22 Installation traffic sign post Laying drainage aggregate in type 1 and type 2 S2-RW1068.0 Laying drainage aggregate in type 1 and type 2 15 16-Oct-22 A 05-Nov-22 A 100% Soiling for planter type 1 and type 2 S2-RW1068.1 Soiling for planter type 1 and type 2 15 10 07-Nov-22 A 19-Nov-22 SMA for carriageway at Steel Bridge (WB) S2-RW1076 SMA for carriageway at Steel Bridge (WB) 27-Oct-22 A 27-Oct-22 A 100% SMA for carriageway at Steel Bridge (EB) S2-RW1076-5 SMA for carriageway at Steel Bridge (EB) 0 27-Oct-22 A 27-Oct-22 A 100% 12 Irrigation system for planter type 2 S2-RW1077 Irrigation system for planter type 2 12 15-Nov-22 28-Nov-22 S2-RW1078-2 Installation of cycle race and dressing works of cycle track 12 12 09-Nov-22 22-Nov-22 Installation of cycle race and dressing works of cycle track ▼ Welding & Painting Works Welding & Painting Works Painting of the Ring Weld 08-Jan-22 A 08-Dec-22 214 S2-SB2072 Top coating of the steel deck (east span) (NCE No.181) 08-Jan-22 A 25-Nov-22 Top coating of the steel deck (east span) (NCE No.181) 75 75 Top coating of the steel deck (west span) (NCE No.181) S2-SB2076 Top coating of the steel deck (west span) (NCE No.181) 08-Jan-22 A 26-Nov-22 ■ Top coating of the steel deck (main span) (NCE No.181) S2-SB2080 Top coating of the steel deck (main span) (NCE No.181) 98 18 08-Jan-22 A 08-Dec-22 80% Painting repair of the arch rib (Internal) S2-SB2100 Painting repair of the arch rib (Internal) 12 07-Apr-22 A 22-Nov-22 S2-SB2105 Painting repair of the arch rib (External) (south rib) 25 25 06-Sep-22 A 07-Dec-22 Painting repair of the arch rib (External) (south rib) Painting repair of the arch rib (External) (north rib) Painting repair of the arch rib (External) (north rib) 20 14 29-Nov-22 S2-SB2300 02-Aug-22 A 10% Removal of the Temporary Supports at W1 & E1 13-Oct-22 A 19-Nov-22 Removal of the temporary supports at W2 S2-SB2240 Removal of the temporary supports at W2 10 10 13-Oct-22 A 19-Nov-22 Removal of the temporary supports at E2 S2-SB2280 Removal of the temporary supports at E2 25-Oct-22 A 18-Nov-22 ■ Associated, E&M Works for CBL Main Bridge and Marine Via UBG and AIC UBG and AIC 21 21 05-Nov-22 A 02-Dec-22 05-Nov-22 A 29-Nov-22 Testing of the AIC (for south rib) Testing of the AIC (for south rib) 14 14 09-Nov-22 24-Nov-22 Internal test for Arch Inspection Cradle (for north rib) S2-EM1360 Internal test for Arch Inspection Cradle (for north rib 4 05-Nov-22 A 12-Nov-22 40% S2-EM1370 14 14 Testing of the AIC (for north rib) 14-Nov-22 29-Nov-22 0% UBG Testing of the UBG and SAT 30-Nov-22 02-Dec-22 S2-EM1300 SAT (delay delivery material (genset) on site due to COVID-19) 30-Nov-22 02-Dec-22 SAT (delay delivery material (genset) on site due to COVID-19) 3 3 Installation of Other Systems 25-Oct-22 A 08-Dec-22 Commission and testing of the dehumidification system S2-EM1400 Commission and testing of the dehumidification system 30 3 25-Oct-22 A 11-Nov-22 80% Fine tune stressing force of the stay cables S2-EM1420 Fine tune stressing force of the stay cables 08-Dec-22 08-Dec-22 SHMS installati 18-Jul-22 A ■ Cable laying from stormwater planting room to bridge deck (NCE198 -Delay Access to Portion VI) S2-EM1362 Cable laying from stormwater planting room to bridge deck (NCE198 -Delay Access to Portion VI) 40 15 10-Oct-22 A 25-Nov-22 Laying of dynamic systems S2-EM3140 Laving of dynamic systems 15 15 09-Nov-22 25-Nov-22 Sensor connected with PXI to access system building service S2-EM3160 14 13 18-Jul-22 A 10-Dec-22 Sensor connected with PXI to access system building service Testing & Commissioning Testing & Commissioning 30 S2-EM3180 30 11-Dec-22 09-Jan-23 30-Jun-22 A 24-Feb-23 F&M Works Pier Head Lighting Installation at Piers W5-EA Pier Head Lighting Installation at Piers W5-EA Pier Head Lighting Installation at Piers W2-W5 S2-EM3040 Pier Head Lighting Installation at Piers W2-W5 30 03-Oct-22 A 16-Nov-22 S2-EM3060 Pier Head Lighting Installation at Piers E2-EA 30 03-Oct-22 A 16-Nov-22 ■ Pier Head Lighting Installation at Piers E2-EA ■ Pier Head Lighting Installation at Piers W1-E1 Pier Head Lighting Installation at Piers W1-E1 30 16-Nov-22 S2-EM3080 03-Oct-22 A Fixed Red Lighting Installation at Piers W1-E1 Revision Date Checked Approved Remaining Level of Effort Critical Remaining Work 08-Oct-22 3MRP (Oct 22 - Jan 23) Milestone Actual Work Three Month Rolling Programme (November 2022 - February 2023) Remaining Work Summary

Data Date:08-Nov-22 Contract No. NE/2017/07 Cross Bay Link, Tseng Kwan O - Main Bridge and Associated Works Sheet 3 of 3 S2-EM3100 Installation of Pier Head Lighting 03-Oct-22 A 16-Nov-22 Testing & Commissioning S2-EM3120 Testing & Commissioning 30 30 20-Nov-22 19-Dec-22 0% 24-Feb-2 08-Oct-22 A 29-Oct-22 A Equipment cabling & wiring completion for termination S5_PR3300 Equipment cabling & wiring completion for termination 20 Rack & Equipment on site installation S5-PR3320 14 08-Oct-22 A 31-Oct-22 A Rack & Equipment on site installation Equipment & RIOU panel termination S5-PR3340 Equipment & RIOU panel termination 18 0 08-Oct-22 A 31-Oct-22 A 100% Optical fibre cable laying (NCE198 -Delay Access to Portion VI) S5_PR3360 Optical fibre cable laying (NCE198 -Delay Access to Portion VI) 60 05-Oct-22 A 14-Nov-22 S5-PR3380 37 15-Nov-22 29-Dec-22 Cable & wiring Termination Cable & wiring Termination System testing and commissioning S5-PR3400 System testing and commissioning 21 30-Dec-22 19-Jan-23 0% SAT & System testing 36 20-Jan-23 24-Feb-23 0% S5-PR3420 ▼ Navigation Lighting at Piers W1-E1 ■ Navigation Lighting Installation at Piers W1-E1 S2-EM1630 Navigation Lighting Installation at Piers W1-E1 30 03-Oct-22 A 16-Nov-22 Avigation Lighting at Piers W1-E1 S2-EM1700 Avigation Lighting Installation at Piers W1-E1 30 10 07-Nov-22 A 19-Nov-22 Avigation Lighting Installation at Piers W1-E1 ▼ Functional Lighting at Piers W1-E1 Equipment Installation of Functional Light 31-Oct-22 A S2-EM1760 09-Oct-22 A 100% S2-EM1920 Testing and Commissioning including SAT & Scene Program 30 17 07-Nov-22 A 25-Nov-22 Testing and Commissioning including SAT & Scene Program Lightning System and Main Earthing System T&C for lightning system 19-Dec-22 T&C for lightning system S2-EM1960 20-Nov-22 Installation of earthing tape at Portion VI (NCE198 -Delay Access to Portion VI) S2-EM1985 Installation of earthing tape at Portion VI (NCE198 -Delay Access to Portion VI) 49 05-Oct-22 A 31-Oct-22 A 100% 30 22 T&C for main earthing system S2-EM1990 T&C for main earthing system 01-Nov-22 A 30-Nov-22 08-Dec-22 ➡ Steel Deck Cell at Piers E1-E2 East Side Span Deck 09-Nov-22 Testing & Commissioning S1-EM1480 Testing & Commissioning 30 09-Nov-22 08-Dec-22 Dehumidification System at Piers W1-E1 Installation of Dehumidification System at Piers W1-E1 Installation of Dehumidification System at Piers W1-E1 30 10-Sep-22 A 30-Oct-22 A 0 Gantry Lighting Installation at Piers W2 & E3 ▼ Gantry Lighting Installation at Piers W2 & E3 Gantry Lighting Installation at Piers W2 & E3 17-Nov-22 Gantry Lighting Installation at Piers W2 & E3 S1-EM1520 30-Jun-22 A ▼ 17M Information Sign Lighting Installation at Piers W1-E1 17M Information Sign Lighting Installation at Piers W1-E1 07-Nov-22 A 19-Nov-22 0% 17M Information Sign Lighting Installation at Piers W1-E1 S2-EM3020 30 Section 3 of the Works-Comprises All of the Landscape Works Landscape works for CBL bridge Landscape works for CBL bridge 18 10-Nov-22 30-Nov-22 Landscape works for TKO-LTT bridge S3-LW2020 Landscape works for TKO-LTT bridge 18 18 09-Nov-22 0% 29-Nov-22 Completion of Section 3 of the Works 0% Completion of Section 3 of the Works S3-LW2040 30-Nov-22 Section 5 of the Works-All Works within Portion V (CBL E&M Plantroom) 26-Apr-23 S5-PR2300 T&C for all systems after connection from plantroom to the bridge (incl. 15 days TRA) 28-Jan-23 76 26-Apr-23

08-Oct-22 3MRP	(Oct 22 - Jan 23)	



Contract 2



Civil Engineering and **Development Department**

Critical Remaining Work

Road D9 and Associated Works Page 1 of 26



Date	Revision	Checked	Approved
08-Mar-21	Monthly Programme Update (Mar 2021)	TL	StL
08-May-21	Monthy Programme Update (May 2021)	CkT	StL
08-Jul-21	Monthly Programme Update (Jul 2021)	СКТ	StL
16-Sep-21	Acceleration Programme	CKT	Stl

	Activity Name	Original Actua Duration Duratio		g Calendar Start	Finish Late Start	Late Finish Total TR	Complete						_			$\overline{}$					-			2020		
		Duration Duratio					Complete Oct	Nov	Dec	Jan	Feb N	Mar Apı	Ma	ay Ji	un J	ul Aug	Sep	Oct	Nov	/ Dec	Jan	Feb	Mar	Apr Ma	ıy Jun	i J
NCE130	NCE130 - Extra Length of PBSH at Portion I	0		0 017/08(7 11-Sep-2		0	100%		ļ						-	ļļ						44			ļ	
NCE131	NCE131 - Extra Length of PBSH at Portion III			0 017/08(7 11-Sep-2		0	100%				- 11															
NCE132	NCE132 - Additional Works for Left-in Steel Casing for PBSH at Cycle Track I			0 017/08(7 11-Sep-2				- sep-zu			- 11	- 1												1		
NCE133	NCE133 - Additional Works for Left-in Steel Casing for PBSH at Lift and Stai	-		0 017/08(7 11-Sep-2		0	100% 020, 1	-Sep-20/															1	1		- 1
NCE134	NCE134 - Additional Works for Left-in Steel Casing for PBSH at Wan O Road			0 017/08(7 11-Sep-2		0	100% A		1		- 11		- 11		II II											
NCE135	NCE135 - Additional Point Load Test for Proof Drill Hole no. PC9,10-PD1			0 017/08(7 16-Sep-2		0	100%	I. I. III.	i i		Li		i									.11	1	ii		L
NCE136	NCE136 - Inclement Weather for the Period of 9 July 2020 to 8 August 2020	0	0 (0 017/08(7 16-Sep-2	0 A 30-Sep-23	0	100%		11 1		- 11				11 11							1 1				
NCE137	NCE137 - Special Arrangement for Concrete Testing Services from the Publi	0	0	0 017/08(7 08-Oct-20	A 30-Sep-23	0	100% 0 A		11 1		- 11				II II -											
NCE138	NCE138 - Inclement Weather for the Period of 9 August 2020 to 8 Septemb	0	0	0 017/08(7 16-Oct-20	A 30-Sep-23	0	100%		1 1	- 1	- 11	- 1										1 1	- 1	- 1		- 1
NCE139	NCE139 - Works affected by the Tropical Cyclone Warning Signal No. No. 8	0	0 0	0 017/08(7 16-Oct-20	A 30-Sep-23	0	100% 16-Oc	20 A	11 1		- 11											1 1	- 1	1		
NCE140	NCE140 - Uncharted Steel Materials Found at Pre-Bored Socketed H-Pile No	0	0	0 017/08(7 28-Oct-20	A 30-Sep-23	0	100% ad, 28	Cct-20 Å	1		- 11		- 11		II II											- 1
NCE141	NCE141 - Uncharted Steel Materials Found at Pre-Bored Socketed H-Pile No	0	0	0 017/08(7 28-Oct-20	A 30-Sep-23	0	100% ad. 28	Cct-2d Å	1					1	1							11			1-1	
NCF142	NCE142 - Extra Length of Pre-Bored Socketed H-Piles at Lift and Staircase	0		0 017/08/7 28-Oct-20		0	100%		11 1		- 11		- 1		II II .											
NCE143	NCE143 - Additional Works for Left-in Steel Casing for 610mm PBSH at Lift :	0	0	0 017/08(7 28-Oct-20	A 30-Sep-23	0	100% 20. 28	0 1200		- 1	- 11	- 1										1 1	- 1	- 1		
NCE144	NCE144 - Additional Works for Left-in Steel Casing for 610mm PBSH at War	0		0 017/08/7 28-Oct-20		0	100% 8-Oct-	- H - H B	1 1	- 1	- 11	- 1										1 1	- 1	- 1		- 1
						0	100% 2020		al i		- 11				11 11							1 1				
NCE145	NCE145 - Works affected by the Tropical Cyclone Warning Signal No. No. 8			0 017/08(7 30-Oct-20				30-Object	f						4-44	ļ									ļ	
NCE146	NCE146 - Inclement Weather for the Period of 9 September 2020 to 8 Octol			0 017/08(7 05-Nov-2		0	100%			- 1	- 11	- 1											- 1	- 1		
NCE148	NCE148 - Additional Works for Left-in Steel Casing for 610mm PBSH at War	0		0 017/08(7 24-Nov-2		0	100% 2020,	24 No M 20	1		- 11				11 11							1 1				
NCE149	NCE149 - Extra Length of Pre-Bored Socketed H-Piles at Wan O Road in Po	0		0 017/08(7 25-Nov-2		0	100% 20 A		1		- 11			111	П							1 1			H	
NCE150	NCE150 - Inclement Weather for the Period of 9 October 2020 to 8 Novemb	0	0	0 017/08(7 08-Dec-2	A 30-Sep-23	0	100% Dec-2	P4	1		- 11	- 1			11 11 11	1 1	1	1	1	1	1	1 1	- 1		11	1
NCE151	NCE151 - Additional Works for Left-in Steel Casing for 610mm PBSH at War	0	0	0 017/08(7 09-Feb-2	A 30-Sep-23	0	100% at War	o Roadi	Nov 2	020, 09 Fet	-21 A														1.1	
NCE152	NCE152 - Unexpected Obstruction to Manhole no. SMH011 at Road D9 in P	0	0	0 017/08(7 07-Jan-2	A 30-Sep-23	0	100% on III, (7 Jan 26	A			1	11				1	1	1	1	1	1		1	T	1
NCE153	NCE153 - Extra Works for Carry Out Laboratory Testings for Gully Formers up	0	0	0 017/08(7 07-Jan-2	A 30-Sep-23	0	100% Febru	ary 2021	Jan-2	1 A			+1		11 11	1 1							İ	1	H	i
NCE154	NCE154 - Unexpected Obstruction to Manhole no. SMH012 at Road D9 in P	0	0	0 017/08(7 18-Jan-2	A 30-Sep-23	0	100% ortion	III, 18-Uan-	2 A				-11												11	
NCE155	NCE155 - Works affected by COVID-19 - Additional Cost for Supply of Aggre	0		0 017/08(7 18-Jan-2		0	100% gates t	b HK III ir	Jany	18-Jan-21 A	. 11		-11			1							- 1		11	
NCE156	NCE156 - Movement Joint Construction at 2nd Portion of Abutment 2B	0		0 017/08(7 18-Jan-2		0	100 % gates i	1 III	1		11			111								1 1	- 1		11	- 1
NCE157		-		0 017/08(7 18-Jan-2 0 017/08(7 18-Jan-2		0	100% No SR	CHARLES.	1	ral Fill 18-J	an 34'A				+	ļļ						+			++	 -
	NCE157 - Delay in Backfilling Works along At-Grade Road due to Repeated	-	-					111111111111111111111111111111111111111	: :		111		- 11		II II											
NCE158	NCE158 - Conflict between Existing Manhole No. SMH4046896 and Pile Cay	0		0 017/08(7 18-Jan-2		0	100% No. F		: 1		1.1				II II							1 1				- 1
NCE159	NCE159 - Delay in Using Imported General Fill from ND/2018/01 Due to Una	0		0 017/08(7 20-Jan-2		0	100% ivailab		sult of S	ılphate Cor	itent, 20-	lan-21A	- 1		11 11	1 1	1					1 1	1	- 1		- 1
NCE160	NCE160 - Additional Point Load Test for Proof Drill Hole no. PD-1 at PC77	0	0	0 017/08(7 05-Feb-2		0	100% 77, 05	Feb-21A	11 1		- 11				11 11							1 1				- 1
NCE161	NCE161 - Additional Material Testing for Steel Works of Semi-Enclosure Nois	0	0	0 017/08(7 01-Mar-2	A 30-Sep-23	0	100% iclosur	e Noisse Ba	rriers aft	er Hot Ben	d Treatme	nt, 01-Mar-	21 A		II II											
NCE162	NCE162- Compulsory Valid Negative COVID-19 Test Result for Entry of Cons	0	0	0 017/08(7 05-Mar-2	A 30-Sep-23	0	100% Entry	f Constru	tion Site	s, 05-Mar-2	1 A						-	-	-	1		T				
NCE163	NCE163 - Revision of Spacing of Movement Joints for Semi-Enclosure Noise	0	0	0 017/08(6 19-Mar-2	A 30-Sep-23		100% ni-End			at Elevate	d Deck, 19	9-Mar 21 A			11 11							1 1				
NCE164	NCE164 - Inclement Weather Period of 9 Feb 2021 to 8 March 2021	0	0	0 017/08(6 29-Mar-2	A 30-Sep-23		100% March	2021, 29	Mar-21	Δ.	- 11		11		II II -								- 1			- 1
NCE165	NCE165 - Unexpected CLP Power Cables at XYZ Junction near Manhole no	0		0 017/08(6 08-Apr-2			100% nction	near Maini	nole no.	SMH009, 0	8-Apr-21 /	λ I										1 1	- 1	- 1		- 1
NCE166	NCE166 - Delay in Procurement of Watermain Pipes due to Revised Waterm	0		0 017/08(6 08-Apr-2			100% due to	Flevised.	Waterma	in Lavout a	ind lanitu	dinal Profile	08-An	21 A			1	1	1	1	1	1 1	1	1		- 1
NCE167	NCE167 - Ground Settlement Issue at Portion I	0		0 017/08(6 08-Apr-2			100% pr-21	K-E-HE						F	+	ł						+			+	
NCE168		-	-	0 017/08(6 19-Apr-2			100% Semi-		Noine P	arriers. 19-/													- 1			
	NCE168 - Additional Coating fo Sub-Frame of the Semi-Enclosure Noise Bar	0	-				100% r-21 A	Elicosule	INCISE D	alliels, 10-7	4PI-2 II A	1	- 1		11 11		-				1	1 1	- 1	1		- 1
NCE169	NCE169 - Lighting works for Traffic Sign	0		0 017/08(6 29-Apr-2				Ш			- 11				II II											
NCE170	NCE170 - Revised Landscape Softworks and Hardworks			0 017/08(6 30-Apr-2			100% Hardw	onis, Julia	21 A		- 11.	J										1 1	- 1	- 1		- 1
NCE171	NCE171 - Extra Works for Carry Out Laboratory Testings for Precast Concreti	-		0 017/08(6 03-Jun-2			100% Labor	F. 12. 447.	uri		4-1	s, 03-Jun-2			4.44	ļļ						.44			4.4	
NCE172	NCE172 - Extra Works for Carry Out Laboratory testings for Impact Resistant	0		0 017/08(6 26-May-2			100% aborate	on testing	s or Imp	act Resista	nce lest a	nd Heat Re	version	est of u	FVC Pip	s, 26-May-	21 A									
NCE173	NCE173 - Electric Suspension for Semi-Enclosure Noise Barrier Factory	0	0 (0 017/08(6 28-Jun-2	A 30-Sep-23		100% n for S	emi-Endic	sure No	se Barrier F	actory, 28	-Jun-21 A											- 1			
NCE174	NCE174 - Inclement Weather for the Period of 9 May 2021 to 8 June 2021	0	0	0 017/08(6 29-Jun-2	A 30-Sep-23		100% er for ti	e Perod	9 May	2021 to 8	June 2021	, 29-Jun-21	I A		11 11							1 1				
arly Warning (EW	n	860 65	3 (0 10-Dec-1	BA 08-Nov-21 29-Sep-23	30-Sep-23 562		−r oβlγk	21, Ea	ırly Warning	(EW)				II II -											
EW001	Temporary Discharges from LOHAS Park Development MTRC Contractors In	0	0	0 017/08/7	10-Dec-18	30-Sep-23 0	100%						- 1		II II -							1 1				- 1
EW002	Construction Debris and Domestic Waste Left Behind by MTRC's Contractors	-		0 017/08/7	10-Dec-18	30-Sep-23 0	100%		Hi						++	·						+			+	
EW002	Maintenance of EVA at Portion II and II for MTRC's Depot along Road D9			0 017/08(7	10-Dec-18	30-Sep-23 0	100%		1		- 11			1 1	П	1									H	
										- 1			-11			1				- 1	1	1 1	İ	1	1	- 1
EW004	Diversion of Existing Fire Service Main along D9 Road upon Possession of P			0 017/08(7	10-Dec-18	30-Sep-23 0	100%				- 11		-11		11								- 1		11	- 1
EW005	Severe Cracks and Abnormal Movement Observed on the Existing Road D9	-		0 017/08(7	14-Jan-19	30-Sep-23 0	100%						-11												11	
EW006	Uncharted Utilities (Hong Kong Broadband and CLP) identified at Road D9, 1			0 017/08(7	17-Jan-19	30-Sep-23 0	100%		4					1		4						4			1.1	
EW007	Additional Works for Determination of Bond Properety of Steel Reinforcing B	0		0 017/08(7	25-Apr-19	30-Sep-23 0	100%		1	- 1	- 11		-11							1		1 1	- 1		H	- 1
EW008	Additional Works for Laying Concrete Blocks on Top of the Existing Seawall 1	0		0 017/08(7	14-Feb-19	30-Sep-23 0	100%		1				11	1 1	П										11	i
EW009	Existing Public Lighting Columns Removal by Others	0	0	0 017/08(7	10-Feb-19	30-Sep-23 0	100%		1		- 11	1								1		1 1	- 1		11	
EW010	Unexpeced CLP Cables Identified at Wan O Road	0	0	0 017/08(7	10-Jun-19	30-Sep-23 0	100%		1		- 11		-11									1 1	- 1		H	- 1
EW012	Obstruction of Construction of Elevated Deck and U-Trough by Unexpected	0	0	0 017/08(7	13-Feb-19	30-Sep-23 0	100%		1		- 11					1				1		1 1	- 1		H	
EW014	Unregistered Tree No. A0001 found at Wan O Road and obstruct the UU div	0		0 017/08(7	16-Feb-19	30-Sep-23 0	100%	-	1		+			1	11:11:11	/ 						+			†-†	-+-
EW015	Constraints on TTA Scheme for Full Enclosure in Wan O Road	0		0 017/08(7	21-Feb-19	30-Sep-23 0	100%		1	İ			+1		11 11	1 1							İ	İ	11	- 1
EW016	Accumilation of Settlement Values with the Existing Data			0 017/08(7	21-Feb-19	30-Sep-23 0	100%		1		- 11				11 11	1							- 1		H	
				0 017/08(7	21-Feb-19 14-Mar-19		100%		1					111	Ш	1									11	
W017	Additional Works for Disposal of Unsuitable Materials to NENT in Lieu of TK(U			1111000110				1		- 11	- 1			Ш	1				- 1		1			11	- 1
EW018	Unexpected Traxcomm Cable Ducts at Portion I	0		0 017/08(7	10-Jun-19	30-Sep-23 0	100%	-	4					1	 	ļļ						44-			 	4
EW019	Obstruction of Construction of Elevated Deck and U-Trough by Unexpected (0		0 017/08(7	14-Mar-19	30-Sep-23 0	100%									1							1		11	
EW023	Extra Length of Bored Pile No. PL131, 132, 133, 107, 110, 113, 149, 152			0 017/08(7	21-Jun-19	30-Sep-23 0	100%		1				11	1 1	Ш										11	i
W024	Unexpected WTT and HKT Ducts Identified at Wan O Road	0	0	0 017/08(7	26-Jul-19 /	30-Sep-23 0	100%						-11							- 1	1	1 1	- 1		1	- 1
EW025	Uncertain Information of the Existing DN1800 drainage Pipe	0	0	0 017/08(7	16-Aug-19	30-Sep-23 0	100%						-11									1 1		1	11	- 1
EW026	Delay in Response from HyD on Submission of Alternative Foundation design	0	0	0 017/08(7	20-Aug-19	30-Sep-23 0	100%		1	- 1	- 11					1.1						1 1	- 1		11	- 1
EW027	Maintenance of EVA at Portion I for MTRC's Depot	0		0 017/08(7	21-Aug-19	30-Sep-23 0	100%	- -	+		+			+	+-+	r						+			t	
EW027		-	-	0 017/08(7	22-Aug-19	30-Sep-23 0	100%		1				11	1 1											11	
	Unexpected Gas Main at Extent of Portion I	-	-	-	_				1				+1			1							İ		H	- 1
EW029	Discrepancy of Finish Ground Level in Portion I	-		0 017/08(7	23-Aug-19	30-Sep-23 0	100%		1		- 11				Ш							1 1			H	
EW030	Insufficiency of Information for Construction of Drainage works in U-Trough in			0 017/08(7	02-Sep-19	30-Sep-23 0	100%		1				-11			1							- 1		11	
EW031	Potential of Excessive Concrete Loss at Bored Piles No. PL132, PL133, P6,			0 017/08(7	03-Sep-19	30-Sep-23 0	100%		4		41			4.11.	1.11	Li						4			1	
EW032	Extra Length of Pre-Bored Socketed H-Pile No. UP06, 11, 16, 21, 26, 31-38,	0	0 (0 017/08(7	09-Sep-19	30-Sep-23 0	100%																			





Contract No.: NE/2017/08 Cross Bay Link, Tseung Kwan O Road D9 and Associated Works Page 10 of 26

	08-
	08-
Build King	08-
Duita King	16-

	Date	Revision	Checked	Approved
	08-Mar-21	Monthly Programme Update (Mar 2021)	TL	StL
	08-May-21	Monthy Programme Update (May 2021)	CkT	StL
T	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
ś	16-Sep-21	Acceleration Programme	CKT	Stl
-				

)	Programme Update Activity Name	Original Actu-	al Remaining	Calendar Start	/2017/08 - Cross		Total TRA	Activity %								2022									2023		_
	AND INCHES	Duration Duratio	on Duration	Saleriuar Statt	Late Sta	Late Fillish	Float	Complete Oct	Nov	Dec	Jan F	eb Ma	r Anr	May	.lun	.022	Aug	Sen	Oct	Nov	Dec	Jan	Feb	Mar A	or May	Jun	.Ju
PMI037	Request for Quotation - Additional Road Marking and Traffic Sign Poles	0	0 0	017/08/7	03-Jan-20	30-Sep-23	0	100%	10.	1	oun i		. 740	1 1	1 1	1 00	7.09	СОР	1 000	1401	500	GGIII	100	7,	,y	- Cuii	
PMI038	Request for Quotation - Works affected by Strike Event, Riots and Blockage	-		017/08/7	08-Feb-20	30-Sep-23	0	100%				- 11		11	1111												1
PMI039	Request for Quotation - Enhancement Measures for TTA at Wan Po Road			017/08/7	08-Feb-20	30-Sep-23	0	100%		+							 		÷	ļ	÷			 		++	F
		-	-	017/08(7			0	100%	1 11			- 11	1	111	3 111	- 11	- 1	1	1		1 1			- 1		1 1	1
PMI040	Request for Quotation - Works affected by Spreading of Novel Coronavirus				13-Feb-20	30-Sep-23						- 11		111	1111	- 11								- 1		1 1	1
PMI041	Request for Quotation - Extra Length of PBSH PC24-P1, PC25-P3, PC26-P			017/08(7	20-Feb-20	30-Sep-23	0	100%				- 11		11	1111						1 1			- 1		1 1	į.
PMI042	Request for Quotation - Extra Length of Pre-Bored Socketed H-Pile No	_		017/08(7	20-Feb-20	30-Sep-23	0	100%						111							1 1			- 1		1 1	:
PMI043	Provision of Additional Computer Equipment	0	0 0	017/08(7	26-Feb-20	30-Sep-23	0	100%						111	1	- 11		1	1		1 1			1		1 1	:
PMI044	Request for Quotation - Revised Details of Type D Semi-enclosure Noise Bar	0	0 0	017/08(7	04-Mar-20	30-Sep-23	0	100%				1		11	TI												
PMI045	Request for Quotation - Revised Drainage Details at Eastbound of D9 Road	0	0 0	017/08(7	28-Feb-20	30-Sep-23	0	100%				- 11		111	1111	- 11								- 1		1 1	1
PMI046	Request for Quotation - Additional Works for Laying Concrete Blocks on Top	0	0 0	017/08(7	03-Mar-20	30-Sep-23	0	100%					1	111	1	- 11	1	1	1	1	1 1			1		1 1	:
PMI047	Laying of Cable Duct and Earthing Conductor at Portion III	0	0 0	017/08/7	10-Mar-20	30-Sep-23	0	100%				- 11		111	1111	- 11								- 1		1 1	1
PMI048	Request for Quotation - Revised the Extent and Details of the Stern Wall for	0		017/08(7	13-Mar-20	30-Sep-23	0	100%				- 11		111	- 111	- 11					1 1			- 1		1 1	1
PMI049		0		017/08(7	16-Mar-20		0	100%		#									÷	į	÷					++	F
	Request for Quotation - Extra Length of Pre-Bored Socketed H-Pile					30-Sep-23						- 11	- 1	111					1		1 1			- 1		1 1	1
PMI051	Request for Quotation - Extra Length of Pre-Bored Socketed H-Pile			017/08(7	22-Apr-20	30-Sep-23	0	100%					1	111	1	- 11	1	1	1	1	1 1			1		1 1	1
PMI052	Request for Quotation - Revised Drainage Details at Portion I and Western F	-		017/08(7	25-Apr-20	30-Sep-23	0	100%				- 11		111	1111	- 11								- 1		1 1	1
■ PMI053	Request for Quotation - Uncharted Mass Concrete Conflict with Proposed PE	0	0 0	017/08(7	04-May-20	30-Sep-23	0	100%				- 11		111	- 111	- 11					1 1			- 1		1 1	1
PMI054	Request for Quotation - Low Noise Road Surfacing	0	0 0	017/08(7	06-May-20	30-Sep-23	0	100%				- 11		111	3 1 11	- 11								- 1		1 1	į
PMI055	Engaging a HOKLAS Laboratory for Impact Resistance Test and Heat Rever	0	0 0	017/08(7	06-May-20	30-Sep-23	0	100%		1				-11	****			1	†		1					11	
PMI056	Request for Quotation - Additional E&M Facilities in the enclosed area under	0		017/08/7	07-May-20	30-Sep-23	0	100%				- 11	1	111	3 111		1	1	1	1	1 1			1		1 1	1
PMI057	Request for Quotation - Extra Length of Pre-Bored Socketed H-Piles for Pile	-		017/08(7	20-May-20	30-Sep-23	0	100%				11									1 1				-		
				· · · · · · · · · · · · · · · · · · ·								11					1										:
PMI058	Request for Quotation - Extra Length of Pre-Bored Socketed H-Piles for Pile	-		017/08(7	20-May-20	30-Sep-23	0	100%				11			$+\Pi$				1						- -		:
■ PMI059	Request for Quotation - Extra Length of Pre-Bored Socketed H-Pile No. PC2	0		017/08(7	20-May-20	30-Sep-23	0	100%		4				444	4411	Щ.		.4	4	ļ	<u></u>					41	Ļ
PMI060	Additional Material Testing & Concrete Coring	0		017/08(7	08-Jun-20	30-Sep-23	0	100%			1	11	1	1 1	3 []]	- ()	1		:	1	: 1			İ	- i - I	1 1	:
PMI061	Request for Quotation - Revised Seawall Modification Works and Revision of	0	0 0	017/08(7	12-Jun-20	30-Sep-23	0	100%			1	11	1	111	$+\Pi$	11					1 1			1	-		1
PMI062	Point Load Test for Proof Drilling Works of Pre-bored Socketed H-pile No. PC	0	0 0	017/08(7	10-Jul-20 /	30-Sep-23	0	100%				11			$+\Pi$										- -		i
PMI063	Request for Quotation - Extra Length of Pre-Bored Socketed H-Piles	0	0 0	017/08/7	27-Jul-20 /	30-Sep-23	0	100%				- 11		111	: I III	- 11								- 1		1 1	į
PMI064	Request for Quotation - Delay in PMMA Panel Production for Noise Barrier D	0	0 0	017/08/7	27-Jul-20	30-Sep-23	0	100%				- 11		111	1111	- 11					1 1			- 1		1 1	į.
_	· · · · · · · · · · · · · · · · · · ·	-		017/08/7		30-Sep-23	0	100%		+									÷	į	÷					÷÷	r
PMI065	Engaging an Independent HOKLAS Accredited Laboratory for Testing of Sta		-		10-Aug-20							- 11		111	3 111	- 11	1	1	1	1	1 1			1		1 1	:
PMI066	Request for Quotation - Details for Abutment 2B	-		017/08(7	18-Aug-20	30-Sep-23	0	100%	1 11			- 11	1	111	3 111	- 11	- 1	1	1		1 1			- 1		1 1	:
PMI067	Request for Quotation - Revised Fresh Water Main Layout and Details	0	0 0	017/08(7	27-Aug-20	30-Sep-23	0	100%				- 11	1	111	3	- 11	- 1	1	1		1 1			- 1		1 1	į.
PMI068	Request for Quotation - Cancellation of Preservation and Protection of Existi	0	0 0	017/08(7	01-Sep-20	30-Sep-23	0	100%				- 11		111	- 111	- 11								1		1 1	1
PMI069	Request for Quotation - Revised Power Cable Ducting Layout and Civil Provi	0	0 0	017/08(7	02-Sep-20	30-Sep-23	0	100%				- 11	i	111	- 111						1 1			- 1	-	1 1	i
PMI070	Request for Quotation - Revised Details for Abutment 2A for the Installation of	0	0 0	017/08/7	10-Sep-20	30-Sep-23	0	100%								1			Ť		†					11	
PMI071	Request for Quotation - Revised of U-Trough structure and Abutment 2B	0	0 0	017/08/7	06-Oct-20	30-Sep-23	0	100%				- 11		111	3 I III						1 1			- 1		1 1	1
PMI072	Request for Quotation - Additional Lightning Protection System for Semi-enc	-		017/08(7	16-Sep-20	30-Sep-23	0	100%					1	111	1	- 11	1	1	1	1	1 1			- 1		1 1	1
	* * * *	0		017/08(7	16-Sep-20	30-Sep-23	0	100%				- 11		111	1111	- 11								- 1		1 1	1
■ PMI073	Removal of 5 nos. of Uncharted Trees at Wan O Road and Wan Po Road	-										- 11		111	1111									- 1		1 1	
■ PMI074	Request for Quotation - Extra Length of PBSH No. PC72-P1 and PC79-P1 a	-		017/08(7	17-Sep-20	30-Sep-23	0	100%		4											ii					1	Ļ
PMI075	Request for Quotation - Extra Length of PBSH at Lift and Staircase in Portio	0	0 0	017/08(7	17-Sep-20	30-Sep-23	0	100%				- 11		111	1111	- 11								- 1		1 1	1
PMI076	Request for Quotation - Extra Length of PBSH at Elevated Cycle Track in Po	0	0 0	017/08(7	17-Sep-20	30-Sep-23	0	100%				- 11	1	111	3 111	- 11	1	1	1	1	1 1			1		1 1	1
PMI077	Point Load Test for Proof Drill Hole no. PC9, 10-PD1	0	0 0	017/08(7	07-Oct-20	30-Sep-23	0	100%				- 11	1	111	3	- 11	- 1	1	1		1 1			- 1	- 1	1 1	:
PMI078	Request for Quotation - Revised Drainage Details near Abutment 2A	0	0 0	017/08/7	16-Oct-20	30-Sep-23	0	100%				- 11	i	111	- 111						1 1			- 1	-	1 1	i
PMI079	Request for Quotation - Tropical Cyclone Warning Signal No. 8 on 19 August	0	0 0	017/08(7	22-Oct-20	30-Sep-23	0	100%				- 11		111	1111						1 1			1		1 1	:
PMI080	Engaging a HOKLAS Lab for Compression Tests of Concrete Cubes during			017/08(7	27-Oct-20	30-Sep-23	0	100% 020 to					· †					-+	÷		÷			 		++	r
									Z o Suly.	ZUKU,		- 11	1	111	3 111	- 11	1	1	1	1	1 1			1		1 1	1
PMI081	Revised Landscape Details at Wan O Road and Wan Po Road			017/08(7	27-Oct-20	30-Sep-23	0	100%				- 11	1	111	3	- 11	- 1	1	1		1 1			- 1	- 1	1 1	:
PMI082	Request for Quotation - Top Level of the Concrete Blocks for the Proposed \	0	0 0	017/08(7	04-Nov-20	30-Sep-23	0	100% rks fo	Portion I			- 11		111	- 111	- 11					1 1			- 1		1 1	1
PMI083	Request for Quotation - Extra Length of PBSH at Lift and Staircase in Portio	0	0 0	017/08(7	04-Nov-20	30-Sep-23	0	100%				- 11		111	3 111	- 11								- 1		1 1	į
PMI084	Request for Quotation - Seawall Modification Works Along MTRCL Promenax	0	0 0	017/08(7	10-Nov-20	30-Sep-23	0	100%				11		111	$+\Pi$				1								:
PMI085	Request for Quotation - Works affected by the Tropical Cyclone Warning Sig.	0	0 0	017/08(7	13-Nov-20	30-Sep-23	0	100% ka" on	1 Odt	2020			·†	777	7711	1111		7	T	7	T†					т	(
PMI086	Request for Quotation - Revised the Type of Steel Vehicle Parapet and Tran			017/08/7	19-Nov-20	30-Sep-23	0	100% the In	erace	in C1		11	- 1	1 1	3 []]	- ()	1		:	1	: 1			İ	+ 1	1 1	:
PMI087	Request for Quotation - Nevised the Type of Steel verifice Parapet and Trail			317/08(7	24-Nov-20	30-Sep-23	0	100% the in	100	TIT"		11	- 1	111	$+\Pi$		- 1	1	1		1 1			- 1	-		1
PMI088							0	100% e no.				11		111	$+\Pi$:
	Request for Quotation - Revised Design for Lift Internal Panels and Door fror	-	0	017/08(7	25-Nov-20	30-Sep-23	-	10070	ız ng,					11	+100						1 1					1 1	
PMI089	Request for Quotation - Revised Design for Lift Internal Panels and Door fror	-		017/08(7	25-Nov-20	30-Sep-23	0	100% I to G	az ng,	4				4-1-1-	441	Щ.,			4	ļ	<u> </u>					4	Ļ
PMI090	Request for Quotation - Revised Drainage Details at Westbound of Road D9	-		017/08(7	02-Dec-20	30-Sep-23	0	100% toad,				11		111	$+\Pi$			1	1	1	1 1				- i T	1 Ĭ	1
PMI091	Request for Quotation - Extra Length of Pre-Bored Socketed H-Pile at Wan (0	0 0	017/08(7	04-Dec-20	30-Sep-23	0	100% rtion II				11	- 1	111	$+\Pi$		- 1	1	1		1 1			- 1	-		;
PMI092	Request for Quotation - Additional Footpath Pavement Underneath Elevated	0	0 0	017/08(7	08-Jan-21	30-Sep-23	0	100% eck,						111							1 1			- 1		1 1	į
PMI093	Request for Quotation - Revision of M.J. Detail	0	0 0	017/08/7	11-Jan-21	30-Sep-23	0	100%				11		11	1111						1 1			- 1		1 1	
PMI094	Removal of Uncharted Tree Nos. A0006 and A0008 at Wan O Road and Wa			017/08(7	14-Jan-21	30-Sep-23	0	100% Po R				11		11										- 1			
		-					0	100% FOR	FF-+ -	+							·	-+	+	 	÷i					+	r
PMI095	Request for Quotation - Revision of Interface Structure and Associated Detai	-		017/08(7	15-Jan-21	30-Sep-23		10070				11	- 1	111	$+\Pi$		- 1	1	1		1 1			- 1	-		;
PMI096	Request for Quotation - Clarification of Detail for Wall Opening	-		017/08(7	28-Jan-21	30-Sep-23	0	100%				11	- 1	111	$+\Pi\Pi$						1 1			- 1	-	1 1	i
PMI097	Request for Quotation - Revision of the Extent and Detail of Concrete Profile			017/08(7	28-Jan-21	30-Sep-23	0	100% file Ba	mier,	1		11		111	$+\Pi$			1			1 1			-			
PMI098	Engaging a HOKLAS Accredited Independent Laboratory for Testing of Gully			017/08(7	03-Feb-21	30-Sep-23	0	100% Gully			uary 2021,	11		11			1										:
PMI099	Additional R.C. Corbel and Structural Steelwork Connection for Sign Gantry	0	0 0	017/08(7	09-Feb-21	30-Sep-23	0	100% antry	f Lane	or trol Si	nal at U Tro	gh,	- 1						1	1				- 1	- -	1 1	:
PMI100	Request for Quotation - Conflict between Existing Manhole No. SMH404689	0	0 0	017/08(7	10-Feb-21	30-Sep-23	0	100% 04689			PC20 at Ele		ck,	777	7711			1	7		T					7	(
PMI101	Point Load Test for Proof Drill Hole no. PD-1 at PC77	0		017/08(7	25-Feb-21	30-Sep-23	0	100%			1	11		3 1	3 []]	- 11	1		:	1	: !				-	1 1	;
PMI102	Provision of Temporary Concrete Pavement at the Access to the E&M Plant	-		017/08/7	31-Mar-21	30-Sep-23		100% ess to	be Earl	Plant Ro	m	11	- 1	111	$+\Pi$	- (1)					1 1			- 1	-	1 1	į
			0						,		,				+ 10	- (1					1 1			1		1 1	1
PMI103	Request for Quotation - Update Details of Semi-Enclosed Noise Barrier and		-	017/08(7	13-Apr-21	30-Sep-23		100% closed	Noise B		Shifting the															1 1	i
PMI104	Request for Quotation - Additional TCSS Civil Provisions for Full Closure of C	-		017/08(7	14-Apr-21	30-Sep-23		100% sions	or Full (osure of	BL under Ad	verse We	ather Condi	itions,	Ш				1		1				1	1	ļ
PMI105	Risk Assessment for Lightning Protection System of the Semi-Enclosed Nois	0	0 0	017/08(7	22-Apr-21	30-Sep-23		100% n of th	Semi	hoosed I	loise Endosu	re.	1	11		m	-								1		1
PMI106	Request for Quotation - Additional Civil Provisions of Lighting Pillar Box Foun	0	0 0	017/08(7	18-Jun-21	30-Sep-23		100% hal Civ	Frovesio	ns of Lig	ting Pillar Bo	x Founda	tion and Ro	ad Lighti	ng Fou	ndation								1			:
PMI107	Engaging a HOKLAS Accredited Independent Laboratory for Testing of Prec			017/08(7	24-Jun-21	30-Sep-23		100% ed Inc	ependa		ory for Testin					h).			1	1					- -		:
PMI113		_		017/08/6	15-Dec-21	15-Dec-21	0	0%			celeration for			T	TT			1						1		1 1	:
Request for Infon	Acceleration for the access for C1	-	-				U	U%		: To ac	LOIDIANON 101	LIP ACCES	o IUI UI,	111	$+\Pi$				1	1	1 1			1		1 1	:
		125 12	25 0	24-Dec-18 A	31-May-19 27-Aug-							1.4				16								- 1			

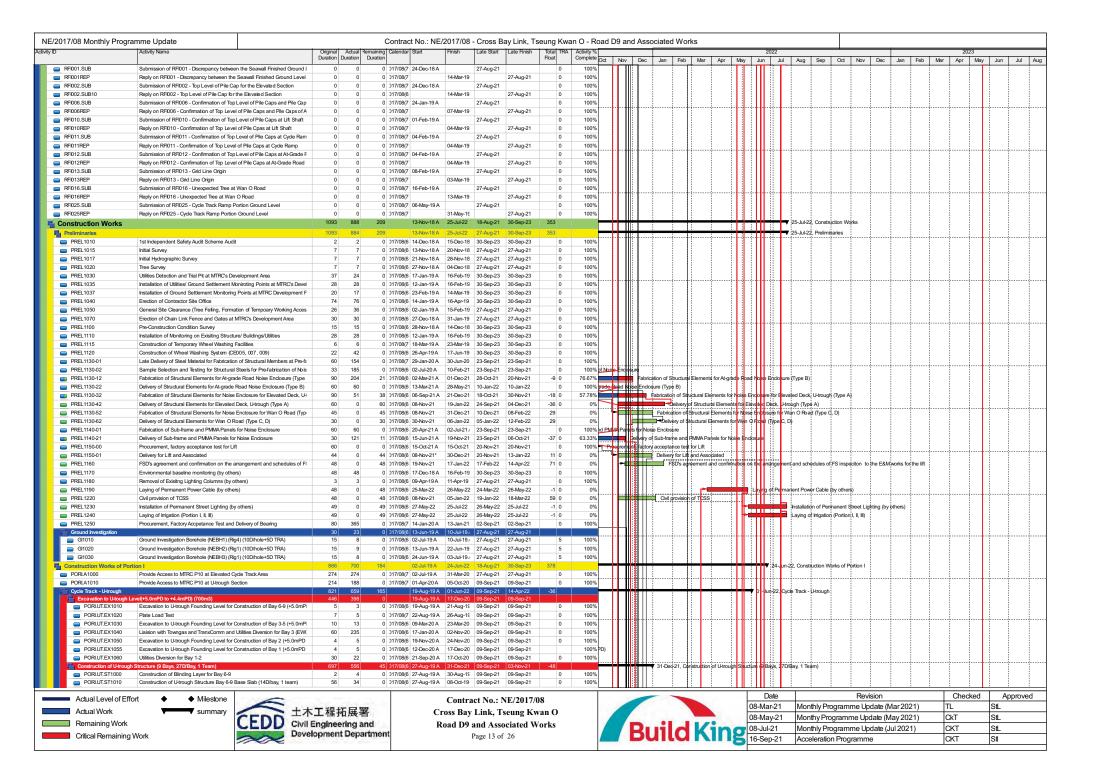


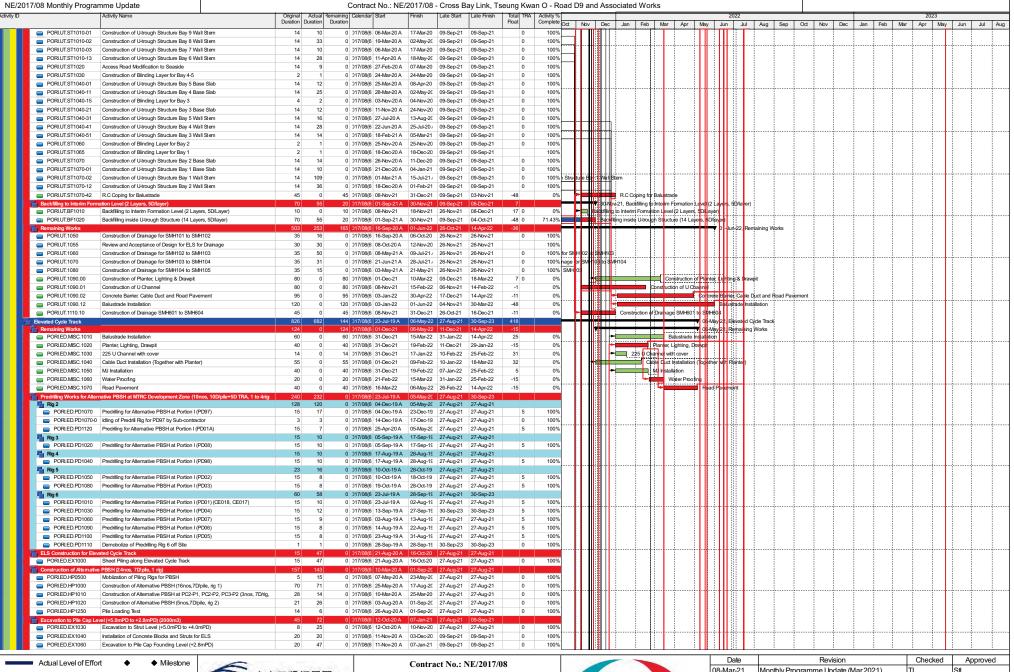


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Build King	08
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Ī	Date	Revision	Checked	Approved
	08-Mar-21	Monthly Programme Update (Mar 2021)	TL	StL
	08-May-21	Monthy Programme Update (May 2021)	CkT	StL
	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
6	16-Sep-21	Acceleration Programme	CKT	St
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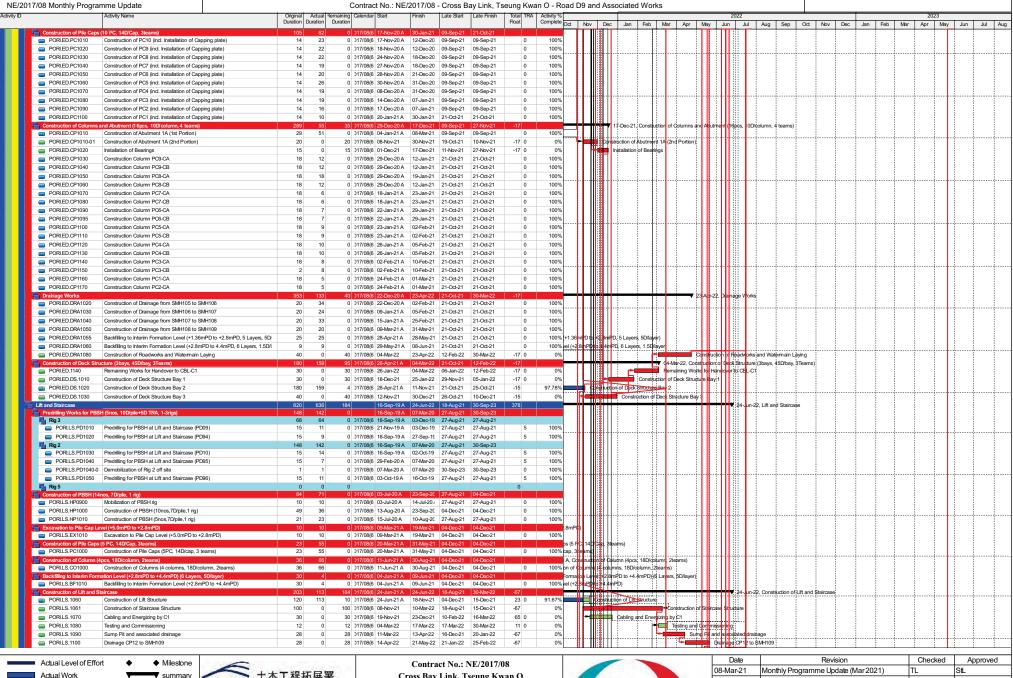
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work



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	Date	Revision	Checked	Approved
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	08-May-21	Monthy Programme Update (May 2021)	CkT	StL
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6	16-Sep-21	Acceleration Programme	CKT	Stl



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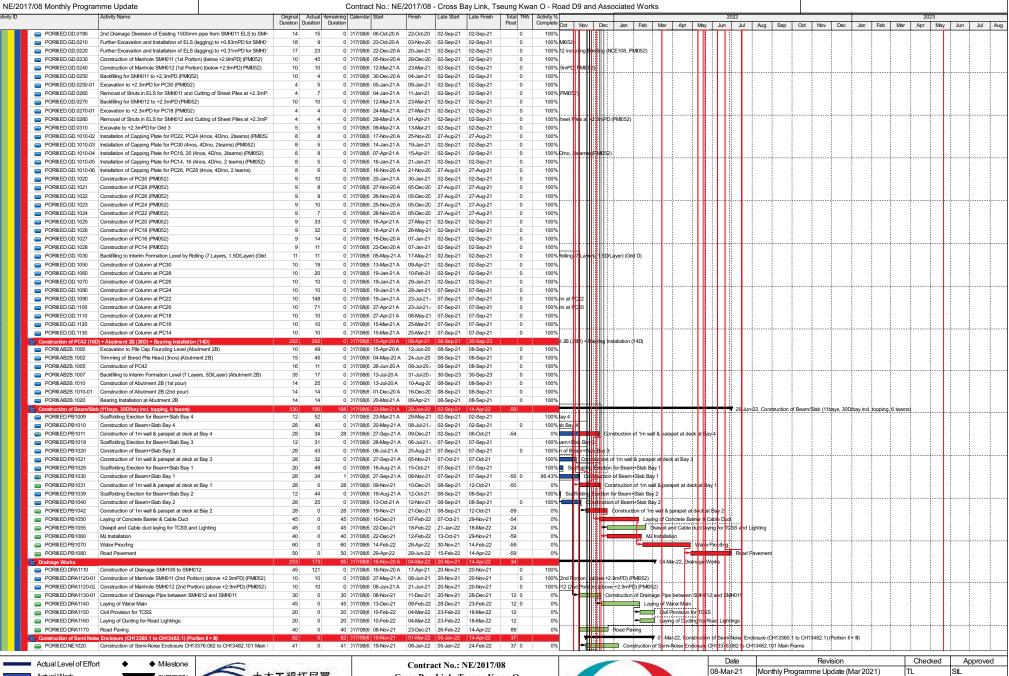
Remaining Work

Critical Remaining Work

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Date	Revision	Checked	Approved
08-Mar-21	Monthly Programme Update (Mar 2021)	TL	StL
08-May-21	Monthy Programme Update (May 2021)	CkT	StL
08-Jul-21	Monthly Programme Update (Jul 2021)	СКТ	StL
16-Sep-21	Acceleration Programme	CKT	Stl

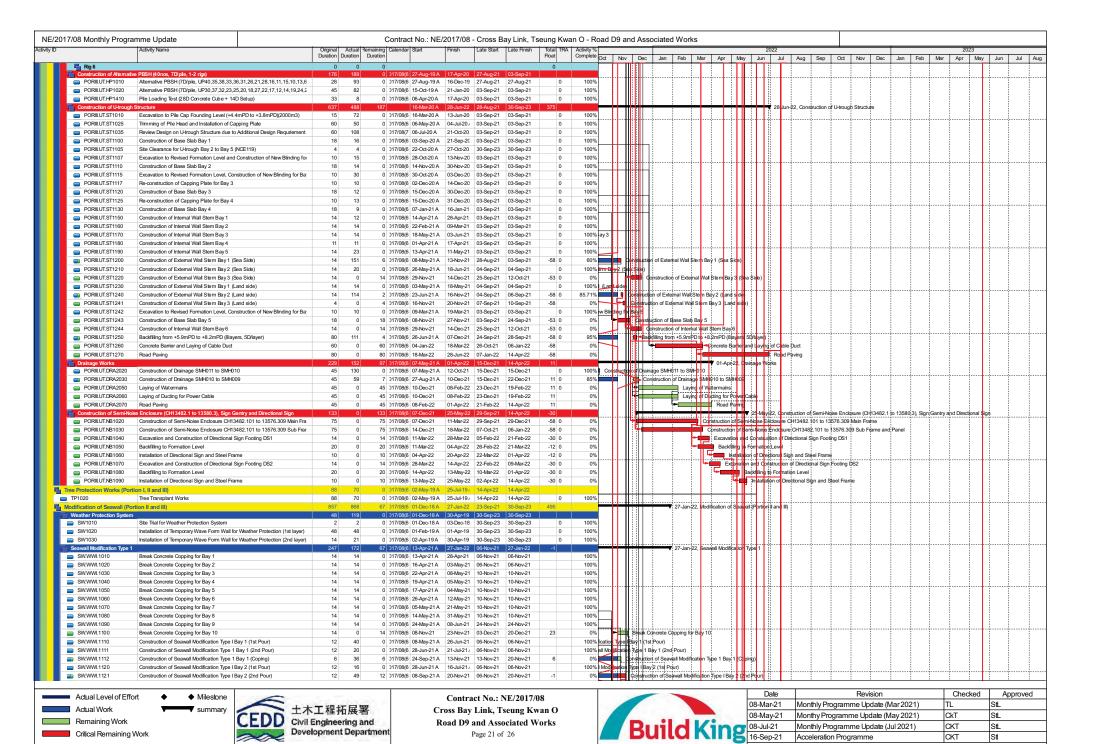


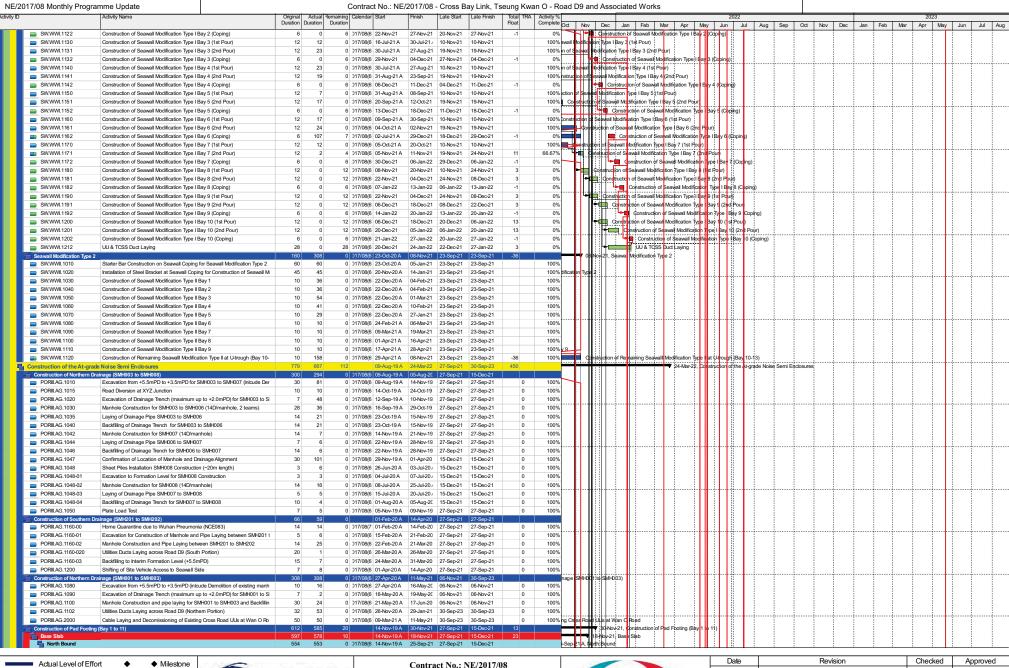


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	Date	Revision	Checked	Approved
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•	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
ś	16-Sep-21	Acceleration Programme	CKT	Stl





Actual Level of Effort

Actual Work

Remaining Work

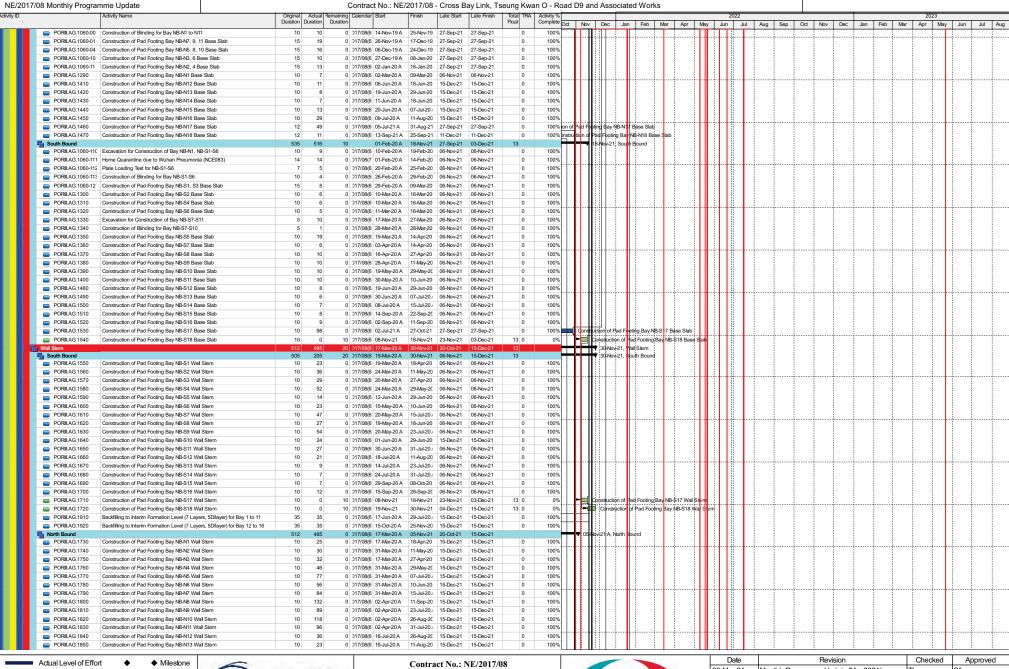
Critical Remaining Work



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	Date	Revision	Checked	Approved
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	08-May-21	Monthy Programme Update (May 2021)	CkT	StL
r	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
5	16-Sep-21	Acceleration Programme	CKT	Stl



Actual Work

Remaining Work

Critical Remaining Work

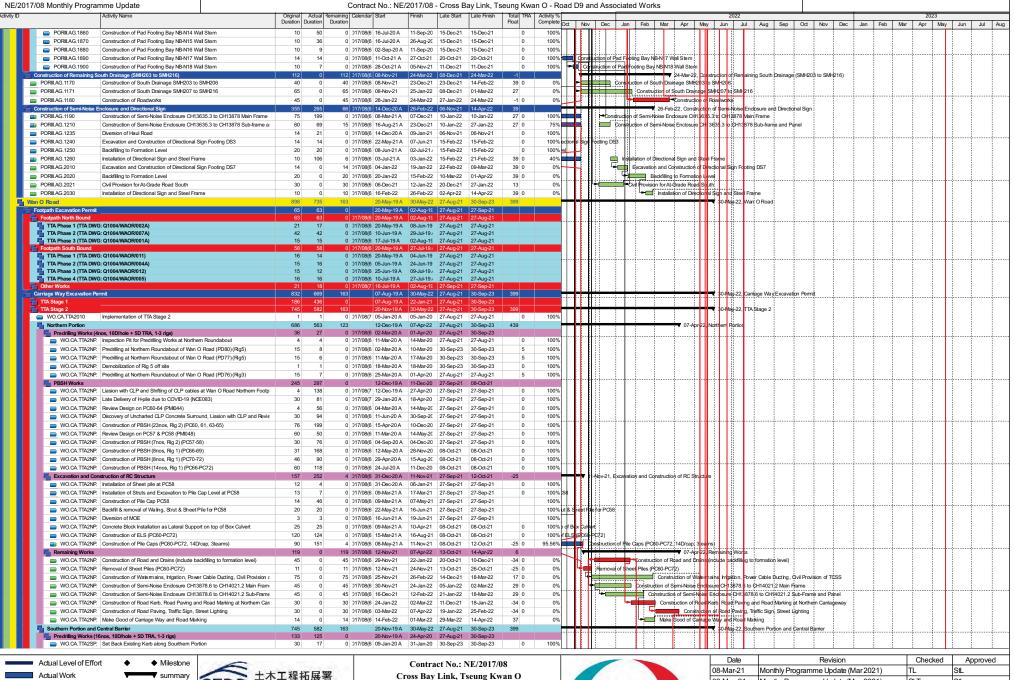


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	Date	Revision	Checked	Approved
	08-Mar-21	Monthly Programme Update (Mar 2021)	TL	StL
	08-May-21	Monthy Programme Update (May 2021)	CkT	StL
r	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
5	16-Sep-21	Acceleration Programme	CKT	Stl





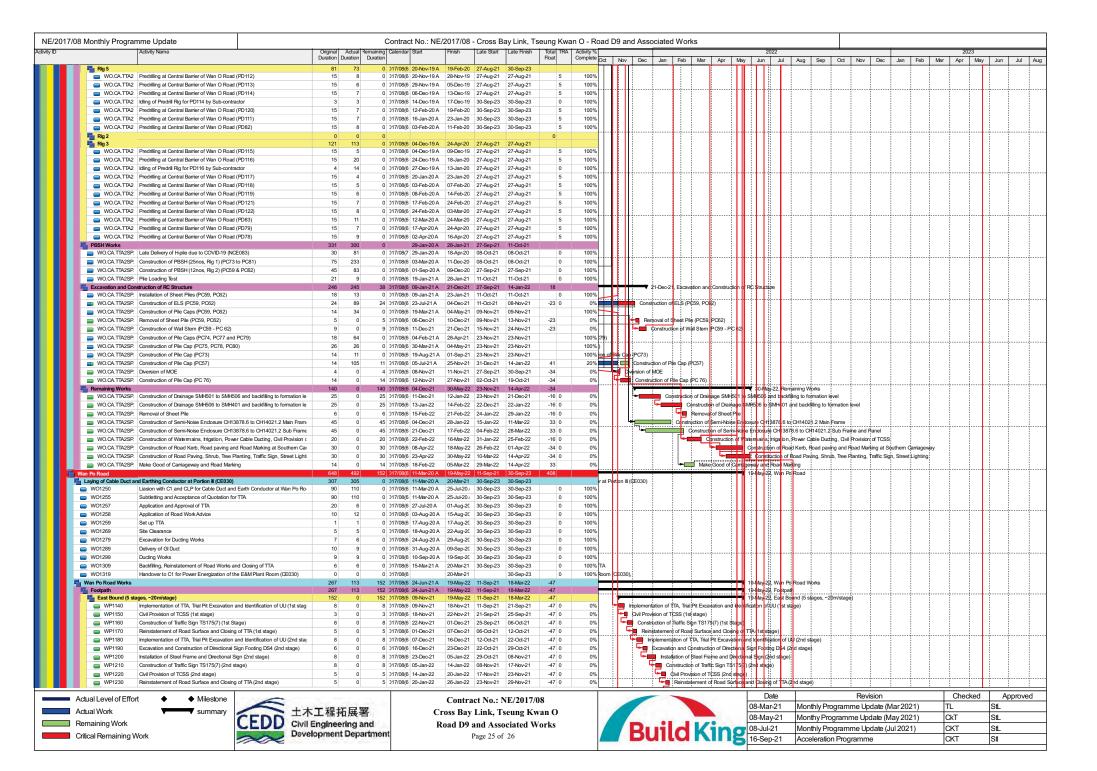
Remaining Work

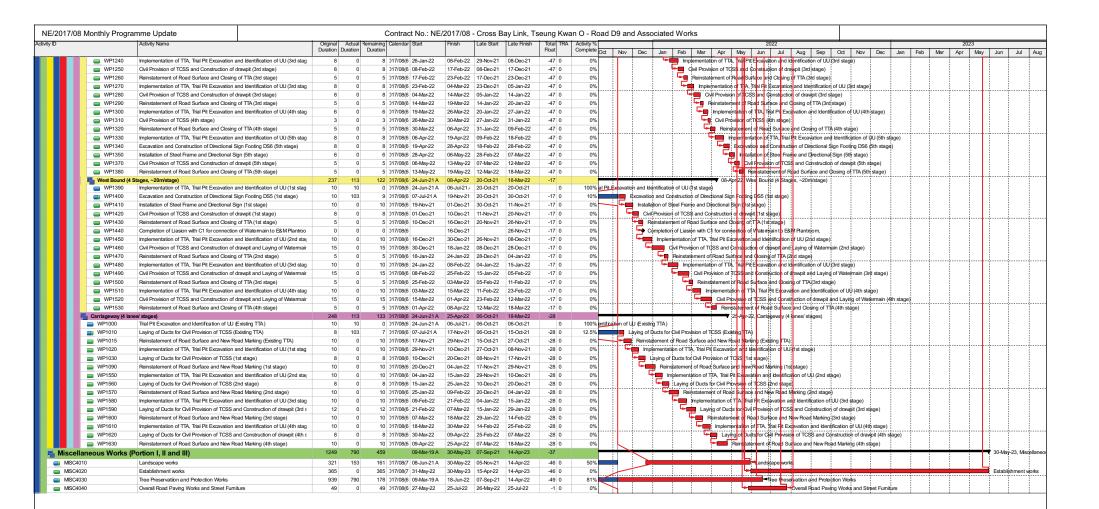
Critical Remaining Work

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	Date	Revision	Checked	Approved
	08-Mar-21	Monthly Programme Update (Mar 2021)	TL	StL
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	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
5	16-Sep-21	Acceleration Programme	CKT	Stl
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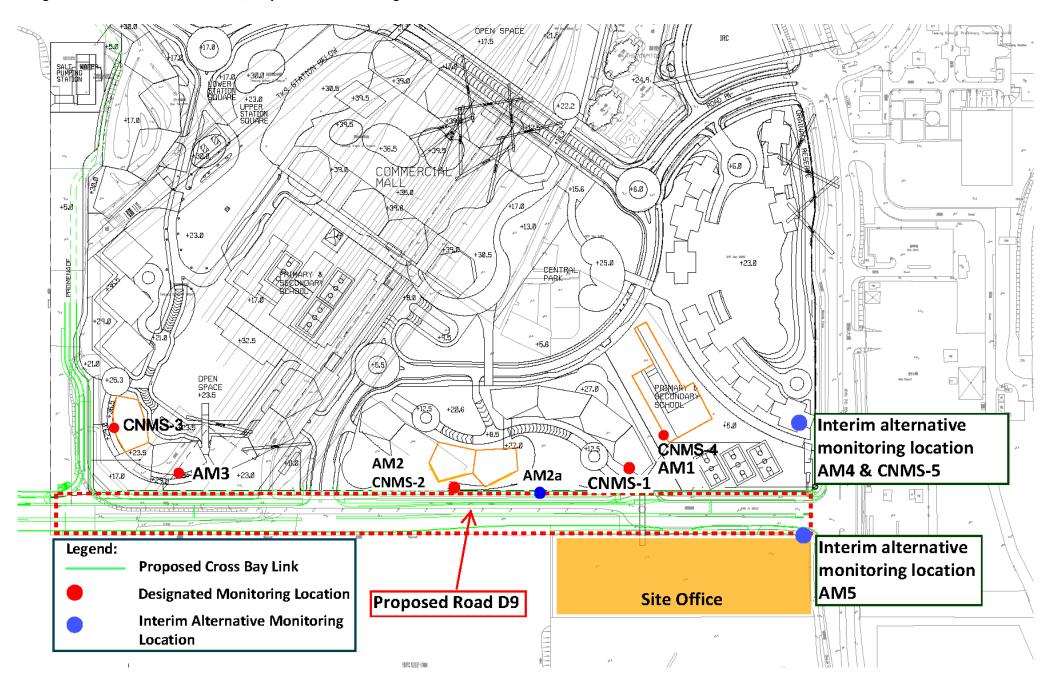
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	08-May-21	Monthy Programme Update (May 2021)	CkT	StL
•	08-Jul-21	Monthly Programme Update (Jul 2021)	CKT	StL
ś	16-Sep-21	Acceleration Programme	CKT	Stl

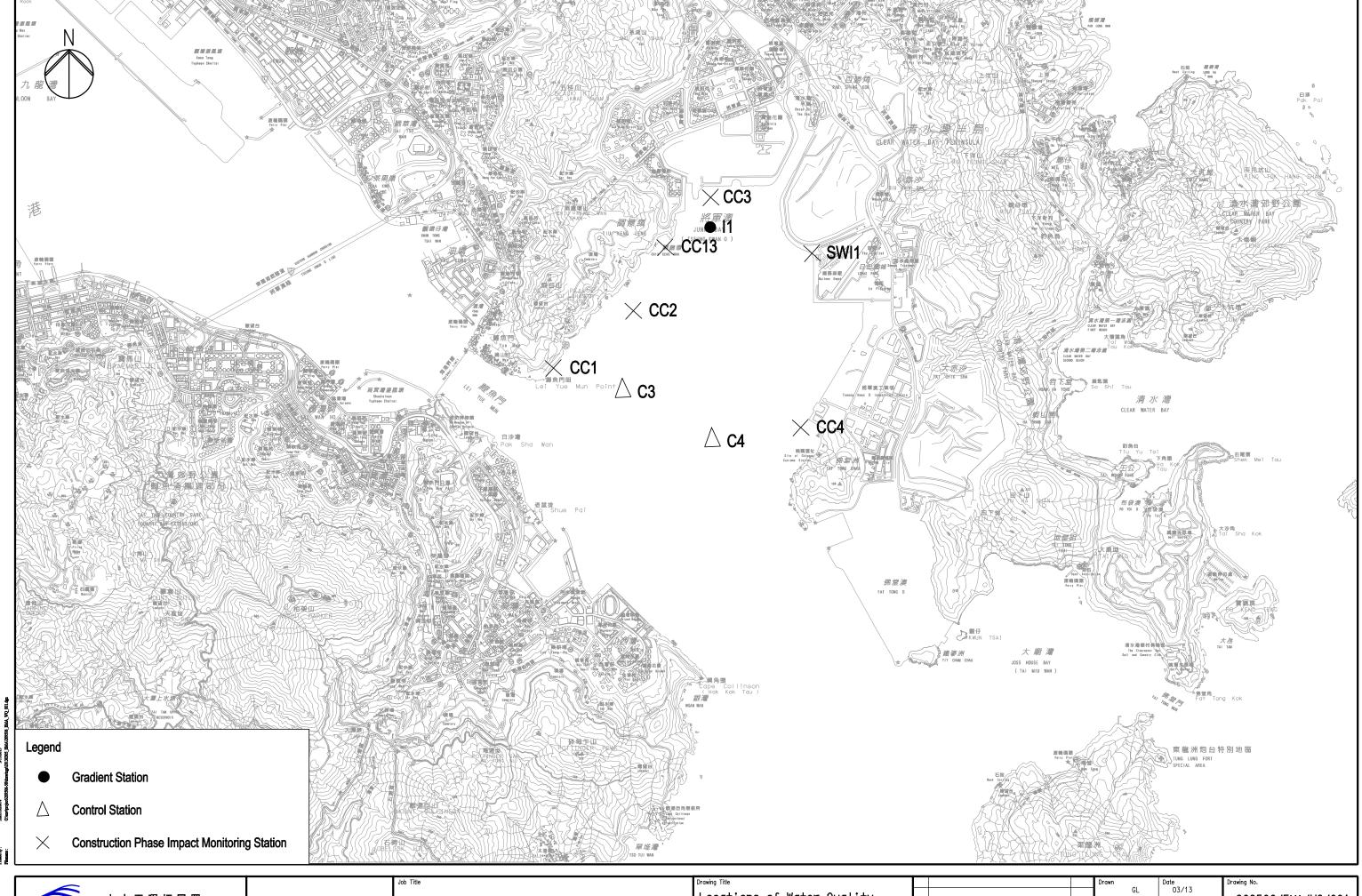


Appendix D

Monitoring Location (Air Quality, Noise and Water Quality)









Civil Engineering and Development Department ARUP Ove Arup & Partners Hong Kong Limited

Agreement No. CE 43/2008(HY) Cross Bay Link, Tseung Kwan O - Investigation Locations of Water Quality Monitoring Stations | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. | Drawing No. |

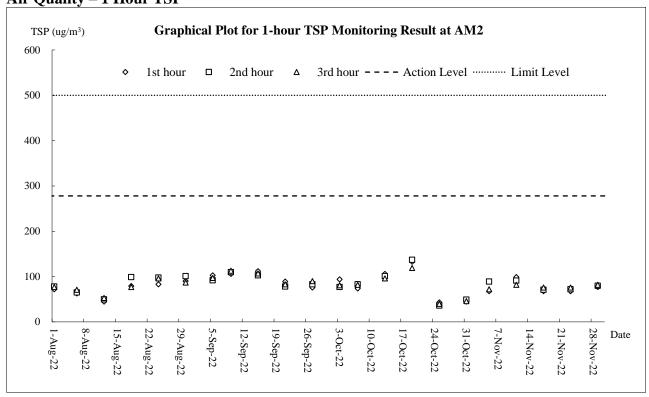


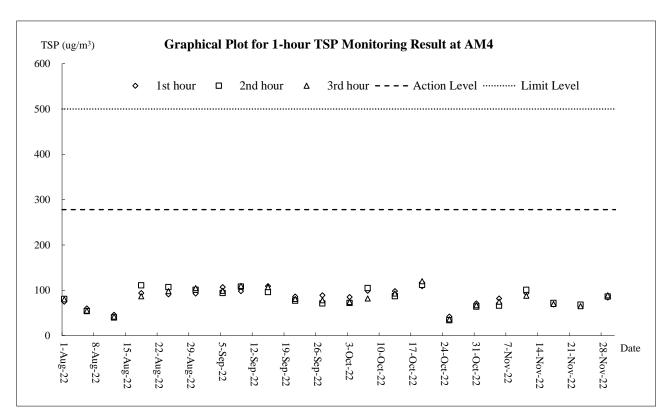
Appendix E

Graphical Plots of Monitoring Results



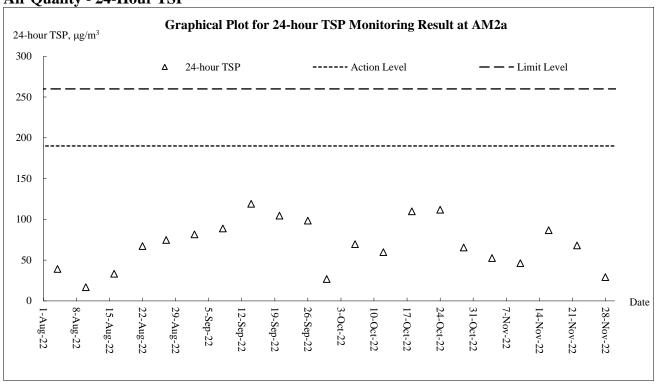
Air Quality - 1 Hour TSP

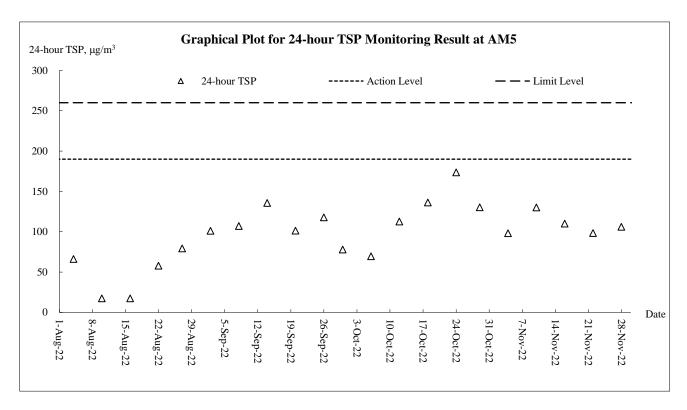






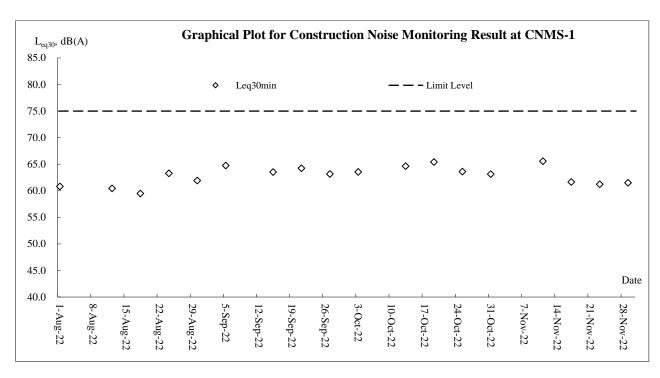
Air Quality - 24-Hour TSP

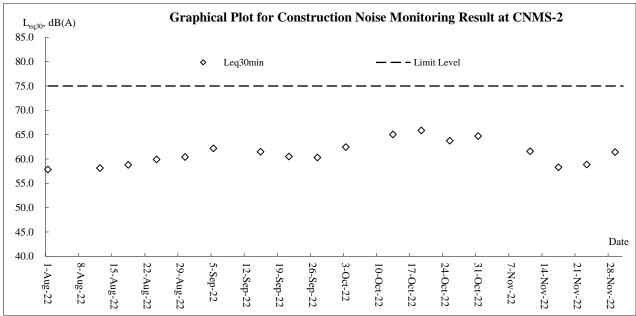




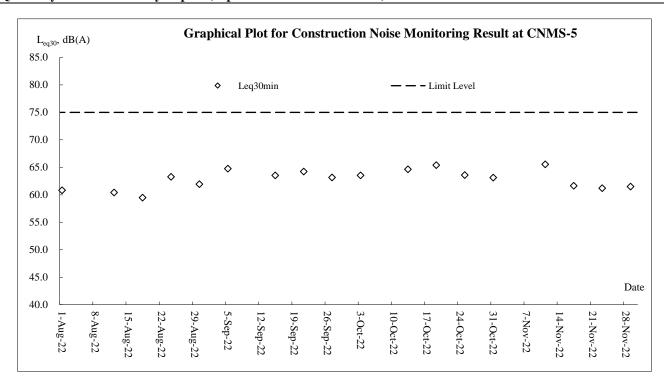


Construction Noise











Appendix F

Meteorological Information



The weather of September 2022

With much sunnier weather than usual in the month, September 2022 was exceptionally hot in Hong Kong. The monthly mean maximum temperature of 32.7 degrees, mean temperature of 29.6 degrees and mean minimum temperature of 27.3 degrees were 2.2 degrees, 1.7 degrees and 1.2 degrees above their corresponding normals and all of them were the second highest on record for September. There were 3 days with daily maximum temperatures at the Hong Kong Observatory equal to or higher than 35.0 degrees in the month, the highest number on record for September. The total duration of bright sunshine of 237.4 hours in the month was about 36 percent higher than the normal of 174.4 hours and the eighth highest on record for September. The month was also drier than usual with a monthly rainfall of only 171.2 millimetres, about 53 percent of the normal of 321.4 millimetres. The accumulated rainfall this year up to September was 1999.0 millimetres, about 11 percent lower than the normal figure of 2242.8 millimetres for the same period.

The weather of October 2022

Mainly attributed to the stronger than normal subtropical ridge over southern China, October 2022 was sunnier than usual in Hong Kong. The duration of bright sunshine in the month was 241.0 hours, 43.2 hours above normal. The mean maximum temperature of 29.5 degrees and mean temperature of 26.2 degrees were 1.4 degrees and 0.5 degrees above the respective normals and were respectively one of the highest and one of the eighth highest for October on record. The month was also drier than usual with a monthly rainfall of only 49.9 millimetres, about 41 percent of the normal of 120.3 millimetres. The accumulated rainfall this year up to October was 2048.9 millimetres, about 13 percent lower than the normal figure of 2363.1 millimetres for the same period.

The weather of November 2022

With the northeast monsoon over southern China generally weaker than normal for most of the time in the month, November 2022 was much warmer than usual in Hong Kong. The mean minimum temperature of 22.0 degrees and mean temperature of 23.4 degrees were 1.7 degrees and 1.2 degrees above the respective normals and were respectively the second and the third highest for November on record. Together with the exceptionally hot weather in September 2022, Hong Kong experienced the warmest autumn on record from September to November 2022. The mean maximum temperature of 29.2 degrees and the mean temperature of 26.4 degrees for September to November 2022 were both the highest on record for the same period. Moreover, the mean minimum temperature of 24.4 degrees was also one of the highest on record for the same period. Attributing to the rainfall associated with tropical cyclone Nalgae in early November, the month was also much wetter than usual. The monthly total rainfall was 130.8 millimetres, more than three times of the normal figure of 39.3 millimetres. The accumulated rainfall up to November this year was 2179.7 millimetres, a deficit of around 9 percent compared with the normal of 2402.4 millimetres for the same period. The month was also unseasonably gloomy with only 100.3 hours of bright sunshine, about 42 percent below the normal figure of 172.3 hours and the lowest for November on record.

*The detailed meterological data for each successive day can be referred to in the Monthly EM&A Reports (September 2022, October 2022 and November 2022.)



Appendix G

Waste Flow Table



Contract 1

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record: <u>Sedo Sze (EO)</u>

Project : C1	roject: Cross Bay Link, TKO, Main Bridge and Associated Works Contract No.: NE/2017/07												
		Actual Quantit	ies of Inert C&	D Materials Ger	nerated Monthly		Actual Quantities of C&D Wastes Generated Monthly						
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse		
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m ³)		
Jan	0.162	0.000	0.000	0.000	0.162	0.000	0.000	0.171	0.000	0.000	0.768		
Feb	0.066	0.000	0.000	0.000	0.066	0.000	0.000	0.210	0.000	0.000	0.513		
Mar	0.306	0.000	0.000	0.000	0.306	0.000	0.000	0.163	0.000	0.000	0.750		
Apr	0.126	0.000	0.000	0.000	0.126	0.000	0.000	0.182	0.000	0.000	0.552		
May	0.054	0.000	0.000	0.000	0.054	0.000	0.000	0.194	0.000	0.000	0.600		
Jun	0.306	0.000	0.000	0.000	0.306	0.000	0.000	0.158	0.000	0.000	0.439		
Sub-total	1.020	0.000	0.000	0.000	1.020	0.000	0.000	1.078	0.000	0.000	3.623		
Jul	0.102	0.000	0.000	0.000	0.102	0.000	0.000	0.204	0.000	0.000	0.422		
Aug	0.246	0.000	0.000	0.000	0.246	0.000	0.000	0.168	0.000	0.000	0.784		
Sep	0.096	0.000	0.000	0.000	0.096	0.000	0.000	0.195	0.000	0.000	1.450		
Oct	0.012	0.000	0.000	0.000	0.012	0.000	0.000	0.150	0.000	0.000	1.011		
Nov	0.090	0.000	0.000	0.000	0.090	0.000	0.000	0.210	0.000	0.000	1.037		
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Total	1.566	0.000	0.000	0.000	1.566	0.000	0.000	2.005	0.000	0.000	8.327		

Note:

- 1. For non-inert portion of C&D material, assume the density of 1 m³ general refuse is equal to 200 kg.
- For inert portion of C&D material, assume 6 m³ per each full-filled dump truck.
- 3. All values are round off to the third decimal places.



Contract 2

Monthly Summary Waste Flow Table for 2022 Year

		Actual Qua	ntities of Inert C&I	Materials Generat	ed Monthly		Actual Quantities of C&D Wastes Generated Monthly						
Month	Total Quantity Generated	Hard Rock and Large Borken Concrete	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (See note 3)	Chemical Waste	Other, e.g. general refuse		
	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m ³]		
Jan	2.835	0.000	0.000	0.000	2.835	0.530	0.000	0.000	0.000	0.000	0.160		
Feb	0.199	0.000	0.000	0.000	0.199	1.049	0.000	0.000	0.000	0.000	0.048		
Mar	0.298	0.000	0.000	0.000	0.298	0.780	0.000	0.000	0.000	0.000	0.072		
Apr	0.348	0.000	0.000	0.000	0.348	0.567	0.000	0.000	0.000	0.000	0.067		
May	0.251	0.000	0.000	0.000	0.251	0.422	0.000	0.000	0.000	0.000	0.110		
June	1.642	0.000	0.000	0.000	1.642	0.468	0.000	0.000	0.000	0.000	0.052		
SUB-TOTAL	5.573	0.000	0.000	0.000	5.573	3.816	0.000	0.000	0.000	0.000	0.509		
Jul	0.965	0.000	0.000	0.000	0.965	1.590	0.000	0.000	0.000	0.000	0.070		
Aug	0.692	0.000	0.000	0.000	0.692	0.453	0.000	0.000	0.000	0.000	0.070		
Sep	0.649	0.000	0.000	0.000	0.649	0.358	0.000	0.000	0.000	0.000	0.143		
Oct	1.053	0.000	0.000	0.000	1.053	0.061	0.000	0.000	0.000	0.000	0.076		
Nov	0.517	0.000	0.000	0.000	0.517	0.000	0.000	0.000	0.000	0.000	0.173		
Dec													
TOTAL	9.449	0.000	0.000	0.000	9.449	6.278	0.000	0.000	0.000	0.000	1.042		

Note: Conversion to 1000m³ for general refuse is weight in 1000kg multiply by 0.002

Conversion to 1000m³ for Inert C&D is weight in 1000kg multiply by 0.0005 Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material

Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m³



Appendix H

Complaint Summary

Log ref.		Date of Received by ET	Complaint Location	Complainant	Complaint nature	Channel	Ref. no.	Complaint details	Contract Related	Follow up action
49	20-Oct-22	21-Oct-22		SKDC member Mr. CHEUNG Mei Hung	Noise	CEDD	NA	The Complainant complained about the low frequency noise from engines of vessels travelling or berthing on the sea at Tsueng Kwan O from 9pm to 8am.	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), no marine construction work and no operation of marine vessel was carried out from 21:00 to 08:00 during the week of complaint received under the Project. It is also confirmed by RSS that there is no marine construction work and no operation of marine vessel during the complaint period under the Project. The Investigation conducted by the ET revealed that the complaint was unlikely due to the Project since no construction work and operation of marine vessel was carried out under the Project during the complaint period
50	27-Oct-22	27-Oct-22	Junk Bay	Resident of Lohas Park Sea to Sky	Noise	EPD	N08/RE/00023 617-22	The Complainant complained about the noise nuisance generated from construction barges suspected from CBL project.		As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC), lifting work were conducted at Pier E3 from 15:00 to 16:00 on 27 October 2022 (Photo 1) and no work barge was used for the rest of the day. One (1) construction barge was involved for the lifting work. According to the site photo taken on 27 October 2022, the lifting work was carried under the bridge and there should be no direct sight of the work barge from Lohas Park Sea to Sky. In addition, Pier E3 is about 350m far from Lohas Park Sea to Sky which the noise generated from the work barge should be insignificant. The Investigation conducted by the ET revealed that the complaint was unlikely due to the work barge of the Project since the lifting work was carried out under the bridge and the work location is far from the Lohas Park Sea to Sky.
51	9-Nov-22	11-Nov-22		Security Guard of Lohas Park Sea to Sky	Noise	CEDD	NA	The Complainant complained about the high frequency noise suspected generated by the works carried out at the CBL mainbridge and elevated deck from 21:15 - 21:45 and 01:15 - 01:45.	Contract 1 (NE/2017/07)	As advised by the Contractor of Contract 1 – Contract No. NE/2017/07 (CRBC) and the Contract or of Contract 2 – Contract No. NE/2017/08 (Buildking), no site work and no operation of Powered Mechanical Equipment (PME) was carried out at CBL main bridge and elevated deck from 21:15 - 21:45 and 01:15 - 01:45 from 7 to 9 November 2022. It is also confirmed by RSS that there is no site work and no operation of PME at main bridge and elevated deck during the complaint period under the Project. The Investigation conducted by the ET revealed that the complaint was unlikely due to the Project since there is no site work and no operation of PME carried out at the concerned location under the Project during the complaint period.
52	17-Nov-22	18-Nov-22	Junk Bay	Unwilling to disclose	Light Pollution	CEDD	NA	The Complainant complained about the high frequency noise suspected generated by the works carried out at the CBL mainbridge from 21:15 - 21:45 and 01:15 - 01:45.	Contract 2 (NE/2017/08)	As advised by the Contractor of Contract 1 — Contract No. NE/2017/07 (CRBC), the operational stage functional lights were under testing for the nighttime illumination effect of CBL from 14 — 18 November 2022 from 19:00 to 22:00. As confirmed by the Contractor and RSS, the operation stage functional light were not point towards the residential building during period and will not point towards the residential building during operation stage. The Investigation conducted by the ET revealed that the complaint was related to the Project. However, the operational stage functional lights were turned off before 22:00 during the testing period to minimize any light pollution to surrounding residential building.



Appendix I

Implementation Schedule for Environmental Mitigation Measures



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures &	Location/ Timing	Agent Stage		and/or Standards to
D 17		Main Concerns to Address				be Achieved
	ct (Contraction Phase)			Τ ~	I ~ .	1700 (0 011)
\$5.5.5.1	Regular watering under good site practice shall be adopted. In accordance with the "Control of Open Fugitive Dust Sources" (USEPA AP-42), watering once per hour on exposed worksites and haul road is recommended to achieve dust removal efficiency of 91.7%.	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	All construction sites	Contractor	Construction stage	APCO (Cap. 311); and Air Pollution Control (Construction Dust) Regulation
\$5.5.5.3	 The following dust suppression measures shall also be incorporated by the Contractor to control the dust nuisance throughout the construction phase: Any excavated or stockpiled dusty material shall be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads; A stockpile of dusty material shall not extend beyond the pedestrian barriers, fencing or traffic cones; The load of dusty materials on a vehicle leaving a construction site shall be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high pressure water jet shall be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcores; When there are open excavation and reinstatement works, hoarding of not less than 2.4m high shall be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period; The portion of any road leading to the construction site that is within 30m of a vehicle entrance or exit shall be kept clear 	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	All construction sites	Contractor	Construction stage	APCO (Cap. 311); and Air Pollution Control (Construction Dust) Regulation



of dusty materials; Surfaces where any pneumatic or power driven drilling, cutting, polishing or other mechanical breaking operation takes place shall be sprayed with water or a dust suppression chemical continuously; Any area that involves demolition activities shall be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport shall be totally enclosed by impervious sheeting; Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. S5.5.5.4 For the barging facilities at the site compound, the following good site practice is required: All road surfaces within the barging facilities shall be paved. Vehicles should pass through designated wheel wash facilities. Site compound provided construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria			Objectives of the		Implementation		Requirements
of dusty materials; * Surfaces where any pneumatic or power driven drilling, cutting, polishing or other mechanical breaking operation takes place shall be sprayed with water or a dust suppression chemical continuously; * Any area that involves demolition activities shall be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; * Where a scaffolding is crected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; * Any skip hoist for material transport shall be totally enclosed by impervious sheeting; * Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction site where the exposed earth lies. S5.5.5.4 For the barging facilities at the site compound, the following good site practice is required: * All road surfaces within the barging facilities shall be paved. Vehicles should pass through designated wheel wash facilities.	EIA Ref	Environmental Protection Measures/ Mitigation Measures		Location/ Timing	Agent	Stage	and/or Standards to
Surfaces where any pneumatic or power driven drilling, cutting, polishing or other mechanical breaking operation takes place shall be sprayed with water or a dust suppression chemical continuously; Any area that involves demolition activities shall be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport shall be totally enclosed by impervious sheeting; Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. S55.5.5.4 For the barging facilities at the site compound, the following good site practice is required: All road surfaces within the barging facilities shall be paved. Vehicles should pass through designated wheel wash facilities.			Main Concerns to Address		1180110	~ suge	be Achieved
S5.5.4 For the barging facilities at the site compound, the following good site practice is required: • All road surfaces within the barging facilities shall be paved. • Vehicles should pass through designated wheel wash facilities. • Construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria • APCO and construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria		 Surfaces where any pneumatic or power driven drilling, cutting, polishing or other mechanical breaking operation takes place shall be sprayed with water or a dust suppression chemical continuously; Any area that involves demolition activities shall be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport shall be totally enclosed by impervious sheeting; Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction 					De l'Italie e u
• Continuous water spray shall be installed at the loading point.	S5.5.5.4	 For the barging facilities at the site compound, the following good site practice is required: All road surfaces within the barging facilities shall be paved. Vehicles should pass through designated wheel wash facilities. Continuous water spray shall be installed at the loading 	practices to control the dust impact on the nearby sensitive receivers to	Site compound	Contractor		
phase should be implemented by the Contractor to ensure that the construction dust impacts are controlled to within the HKAQO. Detailed requirements for the audit and monitoring programmes are given separately in the EM&A manual. 24-Hr TSP levels at the representative dust monitoring station (Drawing no. 209506/EMA/ AIR/001) stage and • Air Control (Construction dust impacts are controlled to within the monitoring stations to ensure compliance with AIR/001)		phase should be implemented by the Contractor to ensure that the construction dust impacts are controlled to within the HKAQO. Detailed requirements for the audit and monitoring programmes are given separately in the EM&A manual.	24-Hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout	dust monitoring station (Drawing no. 209506/EMA/	Contractor		



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
S6.6.4.3	 Good site practice and noise management techniques: Only well-maintained plant shall be operated on-site and the plant shall be serviced regularly during the construction programme; Machines and plant (such as trucks, cranes) that are in intermittent use shall be shut down between work periods or throttled down to a minimum; Plant known to emit noise strongly in one direction, where possible, shall be orientated so that the noise is directed away from nearby NSRs; Silencers or mufflers on construction equipment shall be properly fitted and maintained during the construction works; Mobile plant shall be sited as far away from NSRs as possible and practicable; and Material stockpiles, site office and other structures shall be effectively utilised, where practicable, to screen noise from on-site construction activities. 	To minimize construction noise impact arising from the Project on the affected NSRs	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.5-6		Reduce noise levels of plant items	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.7	Install site hoarding at the site boundaries between noisy construction activities and NSRs	Reduce the construction noise levels at low-level zone of NSRs through partial screening	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.8-11	Use of temporary or movable noise barriers and full enclosure for relatively fixed plant source	Screen the noisy plant items to be used at all construction sites	For plant items listed in Table 6.7 and Appendix 6.1 of the EIA report at all construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
	Implement a noise monitoring programme under the EM&A manual	Monitor the construction noise levels at the selected representative locations	Selected representative noise monitoring stations (Drawing no. 209506/EMA/NS/001 & 209506/EMA/NS/002)	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.7.3.1	Partial enclosures along Road D9 and application of low noise surfacing material along CBL and Road D9	To minimize road traffic noise impact arising from the CBL and Road D9 on the affected NSRs	CBL and Road D9 (Drawing no. 209506/EMA/NS/003)	CEDD/ Contractor	During operational stage	• Annex 5, TM-EIAO



		Objectives of the		Impler	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures &	Location/ Timing	Agent	Stage	and/or Standards to
		Main Concerns to Address		Agent	Stage	be Achieved
	lity Impact (Contraction Phase)					
S8.6.4.3	 Marine Piling and Pile Excavation Works Marine piling and pile excavation works shall be undertaken in such a manner as to minimize re-suspension of sediments. Standard good practice measures shall be implemented, including the following requirements: All marine piling and pile excavation works shall be conducted within a floating single silt curtain. Mechanical closed grabs (with a size of5m3) shall be designed and maintained to avoid spillage and should seal tightly while being lifted. Barges shall have tight fitting seals to their bottom openings to prevent leakage of material. Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes. Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water. Barges shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation. Excess material shall be cleaned from the decks and exposed fittings of barges before the vessel is moved. Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action. All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash. The works shall not cause foam, oil, grease, litter or other 	To control potential impacts from marine piling and pile excavation works	During marine piling and pile excavation works	Contractor	Construction stage	• TM-EIAO; and • WPCO
	objectionable matter to be present in the water within and adjacent to the works site.					
S8.6.4.4	Construction Site Runoff In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures, where appropriate, shall include the following: • The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The	Control potential water quality impacts from construction site run-off	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO



		Objectives of the		Implementation		Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction; Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 shall be covered with tarpaulin or similar fabric during rainstorms. Measures shall be taken to prevent the washing away of construction materials, soil, silt or debris into any marine water bodies; All vehicles and plant shall be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities shall be provided at every construction site exit where practicable. Wash-water shall have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road shall be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains; Construction solid waste, debris and rubbish on site shall be collected, handled and disposed of properly to avoid water quality impacts; All fuel tanks and storage areas shall be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby; and Regular environmental audit on the construction site shall be carried out in order to prevent any malpractices. Notices shall be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds. 					
S8.6.4.6	Sewage from workforce Portable chemical toilets and sewage holding tanks shall be provided for handling the construction sewage generated by the workforce; A licensed contractor shall be employed to provide	Control potential water quality impacts from sewage	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures &	Location/ Timing	Agent	Stage	and/or Standards to
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	appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.					
	Monitoring Implement a marine water quality monitoring programme under the EM&A on level of suspended solids (SS) / turbidity and dissolved oxygen (DO) shall be carried out.	Control potential water quality impacts from marine piling and pile excavation works	` 0	Contractor	Construction station	• TM-EIAO; and • WPCO
S8.7.3.2	Operational phase – Runoff from road surface Proper drainage systems with silt traps and oil interceptors shall be installed, maintained and cleaned at regular intervals.	Control potential water quality impacts from road surface runoff	CBL and Road D9	Contractor	Construction and operational stage	TM-EIAO; and WPCO
	nagement (Contraction Phase)					
S9.5.2	 Good Site Practices Recommendations for good site practices: Nomination of an approved personnel to be responsible for the implementation of good site practices, arrangements for collection and effective deposal to an appropriate facility of all wastes generated at the site; Training of site personnel in proper waste management and chemical handling procedures; Provision of sufficient waste disposal points and regular collection for disposal; Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre; Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and Implementation of a recording system for the amount of wastes generated/recycled and disposal sites. 	Good site practices which ensure waste generated during construction phase is properly managed	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures &	Location/ Timing	Agent	Stage	and/or Standards to
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S9.5.4	 Waste Reduction Measures Recommendations for achieving waste reduction include: On-site reuse of any material excavated as far as practicable; Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal; Collection of aluminum cans and waste paper by individual collectors during construction should be encouraged. Separately labelled recycling bins should also be provided to segregate these wastes from other general refuse by the workforce; Recycling of any unused chemicals and those with remaining functional capacity as far as possible; Prevention of the potential damage or contamination to the construction materials though proper storage and good site practices; Planning and stocking of construction materials should be made carefully to minimize amount of waste generated avoid unnecessary generation of waste; and Training on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling should be provided to workers. 	To reduce amount of waste generated during construction phase	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005
S9.5.5-6	 Storage, Collection and Transportation of Waste Recommendations for proper storage include: Waste such as soil should be handled and stored well to ensure secure containment; Stockpiling area should be provided with covers and water spraying system to prevent materials from being washed away and to reduce wind-blown litter; and Different locations should be designated to stockpile each material to enhance reuse. With respect to the collection and transportation of waste from the construction works, the following is recommended: Remove waste in a timely manner; Employ trucks with cover or enclosed containers for waste transportations; Obtain relevant waste disposal permits from the appropriate 	To reduce the environmental implications of improper storage	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005



		Objectives of the		Impler	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	authorities; andDisposal of waste should be done at licensed waste disposal facilities.					
S9.5.8-11	C&D Materials The following mitigation measures shall be implemented in handling the waste: • Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; • Carry out on-site sorting; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; • Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; • Disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation; • Standard formwork or pre-fabrication order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage; and • The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005 ETWB TCW No. 06/2010
S9.5.13	Excavated Marine Sediments During transportation and disposal of the excavated marine sediments, the following measures shall be taken to minimize potential environmental impacts: • Bottom opening of barges should be fitted with tight fitting	To minimize potential impacts on water quality	All construction sites where applicable	Contractor	Construction stage	• ETWBTC (Works) No. 34/2002



		Objectives of the		Implementation		Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved; • Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation; • Transport barges or vessels should be equipped with automatic self-monitoring devices as specified by the DEP; and • Barges should not be filled to a level that would cause the overflow of materials or sediment-laden water during loading or transportation.					
S9.5.14-17	For those processes which generate chemical waste, the Contractor shall identify any alternatives that generate reduced quantities or even no chemical waste, or less dangerous types of chemical waste.	To ensure proper management of chemical waste	All construction sites	Contractor	Construction stage	• Waste Disposal (Chemical Waste) (General) Regulation;
	If chemical waste is produced at the construction site, the Contractor is required to register with EPD as chemical waste producers. Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. Containers used for storage of chemical wastes shall: • Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely					Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
	 corrosion, maintained in a good condition, and securely closed; Have a capacity of less than 450 L unless the specification have been approved by EPD; and Display a label in English and Chinese in accordance with 					
	 instructions prescribed in Schedule 2 of the Regulations. The storage area for chemical wastes shall: Be clearly labelled and used solely for the storage of chemical wastes; Be enclosed on at least 3 sides; 					
	• Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest;					



		Objectives of the		Implen	nentation	Requirements	
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved	
	 Have adequate ventilation; Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste, if necessary); and Be arranged so that incompatible materials are adequately separated. Disposal of chemical waste shall: Be via a licensed waste collector; and Be to a facility licensed to receive chemical waste, such as the CWTC which also offers a chemical waste collection service and can supply the necessary storage containers; or Be to a re-user of the waste, under approval from EPD. 	Main Concerns to Address				De Acmeved	
S9.5.18	Sewage An adequate number of portable toilets shall be provided for the on-site construction workers. Any waste shall be transferred to a sewage treatment works by a licensed collector.	Proper handling of sewage from worker to avoid odour, pest and litter impacts	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54)	
S9.5.19	General Refuse General refuse generated on-site shall be stored in enclosed bins or compaction units separately from construction and chemical wastes. Recycling bins shall also be provided to encourage recycling. A reputable waste collector shall be employed by the Contractor to remove general refuse from the site on a daily basis separately from the construction and chemical wastes. Burning of refuse on construction sites is prohibited by law.	Minimize production of general refuse and avoid odour, pest and litter impacts	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54)	
S10.7.2.4	Good Site Practices – The integrity and effectiveness of all silt curtains shall be regularly inspected. Effluent monitoring should be incorporated to make sure that the discharged effluent from construction sites meets the relevant effluent discharge guidelines.	To minimize potential impacts on water quality and protect marine communities within Junk Bay	All construction sites	Contractor	Construction stage	TM-EIAO; and WPCO	
S10.7.2.5	Site runoff control – For works on land, standard site runoff control measures will be established and strictly enforced to ensure that discharge of contaminated or silt-laden runoff into marine waters is minimized.	To minimize potential impacts on water quality and protect marine communities within Junk Bay	All construction sites	Contractor	Construction stage	TM-EIAO; and WPCO	
S10.9.1.1	The marine water quality monitoring programme recommended in Chapter 8 of this EIA report and this EMIS would also serve to protect the marine communities inside Junk Bay.	To minimize potential impacts on water quality and protect marine	Selected monitoring stations (Drawing no. 209506/EMA/WQ/001)	Contractor	Construction stage	TM-EIAO; and WPCO	



		Objectives of the		Implementation		Requirements	
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved	
		communities within Junk Bay					
S11.6.2.2	Good Site Practices: – The integrity and effectiveness of all silt curtains should be regularly inspected. Effluent monitoring shall be incorporated to make sure that the discharged effluent from construction sites meets the relevant effluent discharge guidelines.	To minimize potential impacts on water quality and protect fishery resources	All construction sites	Contractor	Construction stage	• TM-EIAO; and • WPCO	
S11.6.2.3	Site runoff control - For works on land, standard site runoff control measures will be established and strictly enforced to ensure that discharge of contaminated or silt-laden runoff is minimized.	To minimize potential impacts on water quality and protect fishery resources	All construction sites	Contractor	Construction stage	TM-EIAO; and WPCO	
S11.8.1.1	The marine water quality monitoring programme recommended in Chapter 8 of this EIA report and this EMIS would also serve to protect the fishery resources.	To minimize potential impacts on water quality and protect fishery resources	Selected monitoring stations (Drawing no. 209506/EMA/WQ/001)	Contractor	Construction stage	• TM-EIAO; and • WPCO	
Landscape	and Visual						
S13.8.1.2	 The following mitigation measures should be implemented in the construction stage CM1 – The construction area and contractor's temporary works areas should be minimized to avoid impacts on adjacent landscape. CM2 – Reduction of construction period to practical minimum. CM3 – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where the soil material meets acceptable criteria and where practical. The Contract Specification shall include storage and reuse of topsoil as appropriate. CM4 – Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage). 	Minimize effects of landscape and visual impacts	Work site/during construction	Funded and implemented by CEDD			



		Objectives of the		Implementation		Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 CM5 – Trees unavoidably affected by the works shall be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, if applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. CM6 – Advance screen planting to proposed roads and associated structures. CM7 – hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone). CM8 – Screening of construction works by hoardings/noise barriers around works area in visually unobtrusive colours, to screen Works. CM9 – Control night-time lighting and glare by hooding all lights. CM10 – Ensure no run-off into water body adjacent to the Project Area. CM11 – Avoidance of excessive height and bulk of 					
S13.8.1.2	buildings and structures OM1 – Compensatory tree planting for all felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006.	Minimize effects of landscape and visual impacts	Within the site boundary of the proposed works	Funded and implemented by CEDD. Maintained by CEDD and LCSD.	construction	
S13.8.1.2	 The following mitigation measures should be implemented in the operational stage: OM2 – A continuous belt of screen planting along the roads. Planting of the belt of trees shall be carried out as advance works ahead of other site formation and building works. OM3 – Maximise soft landscape of the site, where space permits, roadside berms /slope treatment works should be created. OM4 – During detailed design, refine structure layout to create a planting strips along the roads to enhance greenery. OM5 – Use appropriate (visually unobtrusive and 	Minimize effects of landscape and visual impacts	CBL and Road D9/during construction and operation	Funded and implemented by CEDD. Maintained by CEDD and LCSD.	construction and operational	



		Objectives of the	A 7 11 17 1	Implementation		Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 non-reflective) building materials and colours, and aesthetic design in built structures. OM6 – Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimizes potential negative landscape and visual impacts. Lighting units should be directional and minimize unnecessary light spill. OM7 – Avoidance of excessive height and bulk of buildings and structures 					
Landfill G						
S14.7.5	 Precautionary measures The following guidance has been extracted from the EPD's Landfill Gas Hazard Assessment Guidance Note Guidance to ensure a robust and comprehensive set of measures to protect workers are provided. During all works, safety procedures shall be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater. Safety officers who are specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in adverse circumstances shall be present on all worksites throughout the works. All personnel who work on site and all visitors to the site shall be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it. Those staff who work in, or have responsibility for "at risk" areas, including all excavation workers, supervisors and engineers working within the consultation zone, shall receive appropriate training on working in areas susceptible to LFG hazards. Enhanced personal hygiene practices including washing 	Health and safety of the workers	Construction sites within 250m Consultation Zone (Drawing no. 209506/EMA/LFG/001)	Contractor	Construction stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)
	thoroughly after working and eating only in "clean" areas shall be adopted where contact may have been made with any groundwater which is thought to be contaminated with					



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 leachate. Ground level construction plant shall be fitted with vertical exhausts at least 0.6m above ground level and with spark arrestors. During piping assembly or ducting construction, all valves/seals shall be closed immediately after installation. As construction progresses, all valves/seals should be closed as installed to prevent the migration of gases through the pipeline/conduit. All piping /ducting shall be capped at the end of each working day. Mobile offices, equipment stores, mess rooms etc. shall be located on an area which has been proven to be gas free (by survey with portable gas detectors) and ongoing monitoring shall be carried out to ensure that these areas remain gas free. Alternatively, such buildings shall be raised clear of the ground. If buildings are raised clear of the ground, the minimum, clear separation distance (as measured from the highest point on the ground surface to the underside of the lowest floor joist) shall be 500mm. However, in this case, it is highly recommended that all the site offices, equipment stores and mess rooms should be located outside the 250m Consultation Zone. Smoking and naked flames shall be prohibited within confined spaces. "No Smoking" and "No Naked Flame" notices in Chinese and English shall be posted prominently around the construction site. Safety notices shall be posted warning of the potential hazards. Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Office. The permit to work procedure shall set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure shall also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements 			Agent	Stage	
	also require the presence of an appropriately qualified person					



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures &	Location/ Timing	Agent	Stage	and/or Standards to
		Main Concerns to Address		rigent	Stage	be Achieved
	 unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise shall be permitted to carry out hot works in confined areas. During the construction works, adequate fire extinguishers and breathing apparatus sets shall be made available on site and appropriate training given in their use. 					
S14.7.6	 Landfill gas monitoring The following monitoring shall be undertaken when construction works are carried out in confined space within the 250m Consultation Zone: The works area shall be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring requirements and procedures specified in Paragraphs 8.23 to 8.28 of EPD's Guidance Note shall be followed. The monitoring frequency and areas to be monitored shall be set down prior to commencement of the works. Depending on the results of the measurements, actions required will vary. As a minimum these shall encompass the actions specified in Table 14.6 of the EIA report. When portable monitoring equipment is used, the frequency and areas to be monitored should be set down prior to commencement of the works either by the Safety Officer or by an appropriately qualified person. All measurements shall be made with the monitoring tube located not more than 10mm from the surface. A standard form, detailing the location, time of monitoring and equipment used together with the gas concentrations measured, shall be used when undertaking manual monitoring to ensure that all relevant data are recorded. If methane (flammable gas) or carbon dioxide concentrations are in excess of the trigger levels or that of oxygen is below the level specified in the Emergency Management in the 	Health and safety of the workers	Confined space of construction sites within 250m Consultation Zone	Contractor	Construction stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)
	following section, then evacuation shall be initiated.					
S14.7.8-9	Emergency management In the event of the trigger levels specified in Table 14.6 of the EIA report being exceeded, a person, such as the Safety	Health and safety of the workers	Confined space of construction sites within 250m Consultation Zone	Contractor	Construction stage	• Landfill Gas Hazard Assessment



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	Officer, shall be nominated, with deputies, to be responsible for dealing with any emergency which may occur due to LFG.					Guidance Note (EPD/TR8/97)
	In an emergency situation the nominated person, or his deputies, shall have the necessary authority and shall ensure that the confined space is evacuated and the necessary works implemented for reducing the concentrations of gas.					
S14.7.16	 Protection measures – Operational phase An assumed presence of landfill gas shall be adopted at all times by maintenance workers; all maintenance workers inspecting any manhole shall be fully trained in the issue of LFG hazard; any manhole which is large enough to permit to access to personnel shall be subject to entry safety procedure; Code of Practice on Safety and Health at Work in Confined Spaces shall be followed to ensures compliance with the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance; a strictly regulated "work permit procedure" shall be implemented and the relevant safety procedures must be rigidly followed; and Adequate communication with maintenance staff shall be maintained with respect to LFG. 	Health and safety of the workers	Utility maintenance areas within 250m Consultation Zone/during operational period	Utility companies	Operational stage	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97); and Code of Practice on Safety and Health at Work in Confined Space
S14.7.17	General recommended precautionary & protection measures – Operational phase LGF surveillance exercise shall be undertaken by the utility companies at the utility manholes/inspection chambers. The surveillance exercise shall be undertaken for the duration of the site occupancy, or until such time that EPD agree that surveillance is no longer required and this shall be based on all the available monitoring data for methane, carbon dioxide and oxygen.	Health and safety of the workers	Utility maintenance areas within 250m Consultation Zone/during operational period	Utility companies	Operational stage	 Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97); and Code of Practice on Safety and Health at Work in Confined Space