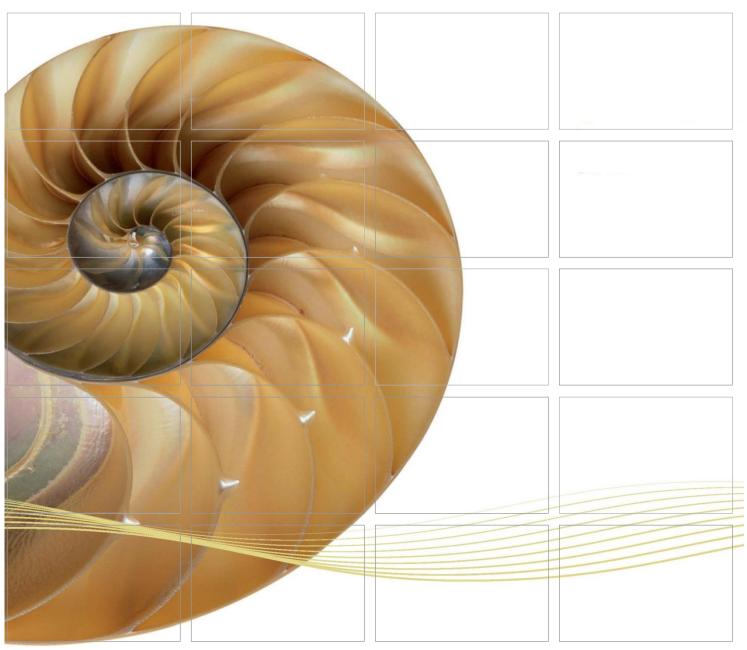
#### REPORT



Contract No. HY/2017/10 Tuen Mun – Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works

### Thirty-First Monthly EM&A Report

11 January 2021

### Environmental Resources Management 2509, 25/F One Harbourfront 18 Tak Fung Street Hunghom, Kowloon Hong Kong Telephone 2271 3000



www.erm.com

Facsimile 2723 5660



## Contract No. HY/2017/10 Tuen Mun – Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works

### Environmental Resources Management

2509, 25/F One Harbourfront 18 Tak Fung Street Hunghom, Kowloon Hong Kong Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660 E-mail: post.hk@erm.com http://www.erm.com

### Thirty-First Monthly EM&A Report

### Document Code: 0463091\_31st Monthly EM&A\_20210111.doc

Client:		Project No	0:			
Gammo	n	046309 <sup>-</sup>	1			
Summary		Date:				
,		11 Janu	ary 2021			
		Approved	•			
This document presents the Thirty-First Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works.			Mr Craig Reid			
		Partner				
		Certified b	oy:			
		Jam				
		Dr Jasn	•			
		ET Leade	er			
	Thirty-First Monthly EM&A Report	CW	JN	CAR	11/1/21	
Revision	Description	Ву	Checked	Approved	Date	
This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.			on ernal olic nfidential	Certificate I	5 18001:2007 No. OHS 515956 BSS 001 : 2008 e No. FS 32515	





### Ref.: HYDHZMBEEM00\_0\_8333L.21

12 January 2021

By Fax (2783 0155) and By Post

AECOM Asia Company Limited Supervising Officer's Representative Office No. 8 Mong Fat Street, Tuen Mun, New Territories, Hong Kong

Attention: Mr. Desmond Fung

Dear Mr. Fung,

Re: Agreement No. CE 48/2011 (EP) Environmental Project Office for the HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing Facilities, and Tuen Mun-Chek Lap Kok Link – Investigation

### Contract No. HY/2017/10 TM-CLKL – Northern Connection Tunnel Buildings, E&M Works <u>31<sup>st</sup> Monthly EM&A Report for December 2020</u>

Reference is made to the Environmental Team's submission of the monthly EM&A report for December 2020 (ET's ref.: "0463091\_31st Monthly EM&A\_20210111.doc" dated 11 January 2021) certified by the ET Leader and provided to us via e-mail on 11 January 2021.

Please be informed that we have no adverse comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/D.

Thank you for your attention. Please feel free to contact the undersigned or the ENPO Leader, Mr. Y H Hui, should you require further information.

Yours sincerely, For and on behalf of Ramboll Hong Kong Limited

Manson Yeung Independent Environmental Checker Tuen Mun-Chek Lap Kok Link

c.c.

HyD	Mr. Patrick Ng	(By Fax: 3188 6614)
HyD	Mr. Alan Ip	(By Fax: 3188 6614)
AECOM	Mr. Conrad Ng	(By Fax: 3922 9797)
ERM	Dr. Jasmine Ng	(By Fax: 2723 5660)
Gammon	Mr. Max Poon	(By Fax: 3520 0486)

Internal: DY, YH, ENPO Site

Q:\Projects\HYDHZMBEEM00\02\_Proj\_Mgt\02\_Corr\HYDHZMBEEM00\_0\_8333L.21.doc Ramboll Hong Kong Limited 英環香港有限公司 21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899 www.ramboll.com TABLE OF CONTENTS

### EXECUTIVE SUMMARY

1	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	Scope of Report	2
1.3	ORGANIZATION STRUCTURE	2
1.4	SUMMARY OF CONSTRUCTION WORKS	2
2	EM&A RESULTS	4
2.1	AIR QUALITY	4
2.2	LANDFILL GAS HAZARD MONITORING	5
2.3	EM&A SITE INSPECTION	6
2.4	WASTE MANAGEMENT STATUS	7
2.5	Environmental Licenses and Permits	7
2.6	IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES	9
2.7	SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMAN	NCE
	LIMIT	9
2.8	SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL Prosecutions	9
3	FUTURE KEY ISSUES	10
3.1	CONSTRUCTION ACTIVITIES FOR THE COMING MONTH	10
3.2	Key Issues for the Coming Month	10
4	CONCLUSIONS AND RECOMMENDATIONS	11
4.1	Conclusions	11

I

### List of Appendices

- Appendix A Project Organization for Environmental Works
- Appendix B Construction Programmes
- Appendix C Implementation Schedule of Environmental Mitigation Measures (EMIS)
- Appendix D Summary of Action and Limit Levels
- Appendix E Event Action Plan
- Appendix F EM&A Monitoring Schedule
- Appendix G Calibration Certificate of Monitoring Equipment
- Appendix H Landfill Gas Monitoring Results and Graphical Presentation
- Appendix I Monthly Summary of Waste Flow Table
- Appendix J Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

### EXECUTIVE SUMMARY

Under *Contract No. HY/2017/10*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake Northern Connection Tunnel Buildings, Electrical and Mechanical Works of the Tuen Mun – Chek Lap Kok Link Project (TM-CLK Link Project) while AECOM Asia Company Limited was appointed by HyD as the Engineer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET) in accordance with *Environmental Permit No. EP-354/2009/A*. Ramboll Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO). Subsequent applications for variation of environmental permits (VEP), *EP-354/2009/B*, *EP-354/2009/C* and *EP-354/2009/D*, were granted on 28 January 2014, 10 December 2014 and 13 March 2015, respectively.

The construction phase of the Contract commenced on 7 June 2018 and will tentatively be completed by 2021. The impact monitoring of the EM&A programme, including air quality and environmental site inspections, were commenced on 7 June 2018.

This is the Thirty-First Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 31 December 2020 for the *Contract No. HY/2017/10 Northern Connection Tunnel Buildings, Electrical and Mechanical Works* (the "Contract") in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

### Land-based Works

- Handover Inspection at Main Control Building;
- Handover Inspection at Ventilation Plant Room;
- Handover Inspection at North Ventilation Building;
- Handover Inspection at Administration Building;
- Handover Inspection at Maintenance Depot;
- ABWF Works at Fire Services Department Building;
- External cladding & louvre installation, E&M works and final finishing works at Customs and Excise Department Building;
- Handover Inspection at Kiosk N1;
- Handover Inspection at Kiosk N2;

- Handover Inspection at the Tunnel;
- Handover Inspection at C3 area;
- Handover Inspection at Satellite Control Building;
- Handover Inspection at Kiosk S2;
- Handover Inspection at South Ventilation Building; and
- Handover Inspection at Northern Landfall and Southern Landfall.

A summary of monitoring and audit activities conducted in the reporting period is listed below <sup>(1)</sup>:

24-hour TSP Monitoring	5 sessions
1-hour TSP Monitoring	5 sessions
Landfill Gas Hazard Monitoring	25 days
Joint Environmental Site Inspection	5 sessions

Summary of Breaches of Action/Limit Levels

Breaches of Action and Limit Levels for Air Quality

One (1) Action Level exceedance for 1-hour TSP was recorded by the Environmental Team of Contract No. *HY/2012/08* during the reporting period.

### Breaches of Action Level for Landfill Gas Hazard Montioring

Results of landfill gas hazard monitoring in the reporting month complied with the Action Level.

### Environmental Complaints, Non-compliance & Summons

There was no environmental complaint, notification of summons or successful prosecution recorded in the reporting period.

### Reporting Change

Landscape and visual monitoring for 24-month establishment period conducted by Contract No. HY/2012/07 and HY/2013/12 was not reported in the EM&A report for this Contract in this reporting period.

### Upcoming Works for the Next Reporting Month

Works to be undertaken in the next monitoring period of January 2021 include the following:

ET justification on the Contract Specific Environmental Monitoring and Audit activities under this Contract was submitted to ENPO on 11 September 2018

### Land-based Works

- Architectural Builder's Work and Finishes and handover inspection at Fire Services Department Building; and
- External cladding & louvre installation, E&M works, final finishing works and handover inspection at Customs and Excise Department Building.

### **Future Key Issues**

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of January 2021 are mainly associated with waste management and landfill gas monitoring issues.

### 1.1 BACKGROUND

According to the findings of the Northwest New Territories (NWNT) Traffic and Infrastructure Review conducted by the Transport Department, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway would be operating beyond capacity after 2016. This forecast has been based on the estimated increase in cross boundary traffic, developments in the Northwest New Territories (NWNT), and possible developments in North Lantau, including the Airport developments, the Lantau Logistics Park (LLP) and the Hong Kong – Zhuhai – Macao Bridge (HZMB). In order to cope with the anticipated traffic demand, two new road sections between NWNT and North Lantau – Tuen Mun – Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB) are proposed.

An Environmental Impact Assessment (EIA) of TM-CLKL (the Project) was prepared in accordance with the EIA Study Brief (No. ESB-175/2007) and the *Technical Memorandum of the Environmental Impact Assessment Process (EIAO-TM*). The EIA Report was submitted under the Environmental Impact Assessment Ordinance (EIAO) in August 2009. Subsequent to the approval of the EIA Report (EIAO Register Number AEIAR-146/2009), an Environmental Permit (EP-354/2009) for TM-CLKL was granted by the Director of Environmental Protection (DEP) on 4 November 2009, and EP variation (VEP) (EP-354/2009/A) was issued on 8 December 2010. Subsequent applications for variation of environmental permits (VEPs), *EP-354/2009/B, EP-354/2009/C* and *EP-354/2009/D*, were granted on 28 January 2014, 10 December 2014 and 13 March 2015, respectively.

Under *Contract No. HY/2017/10*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the Northern Connection Tunnel Buildings, Electrical and Mechanical Works of TM-CLKL while AECOM Asia Company Limited was appointed by HyD as the Engineer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). Ramboll Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO).

The construction phase of the Contract commenced on 7 June 2018 and will be tentatively completed by 2021. The impact monitoring phase of the EM&A programme, including air quality and environmental site inspections, commenced on 7 June 2018.

The general layout plan of the Contract components is presented in *Figures 1.1* & *1.2a to c.* 





PROJECT

TUEN MUN -CHEK LAP KOK LINK

CONTRACT TITLE TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TUNNEL BUILDINGS, ELECTRICAL AND MECHANICAL WORKS CLIENT





#### CONSULTANT

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分月工作新闻公司

# Figure 1.1

#### ISSUE/REVISION

-			Kul
A	JAN.18	TENDER ADDENDUM NO.1	SYLC
	DEC.17	TENDER DRAWING	SYLC
I/R	DATE	DESCRIPTION 内容摘要	CHK.

#### STATUS

SCALE

#### DIMENSION UNIT

A1 1:40000

MILLIMETRES

KEY PLAN

PROJECT NO.

CONTRACT NO.

60240249

HY/2017/10

SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER

60240249/C4/7051A





#### PROJECT

### TUEN MUN -CHEK LAP KOK LINK

#### CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TUNNEL BUILDINGS, ELECTRICAL AND MECHANICAL WORKS

#### CLIENT



#### CONSULTANT

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 公用工程即開会可

# Figure 1.2a

#### ISSUE/REVISION

			<u> </u>
			-
			Kerl
А	JAN.18	TENDER ADDENDUM NO.1	SYLC
-	DEC.17	TENDER DRAWING	SYLC
<b>/R</b> 修訂	DATE 山翔	DESCRIPTION 內容摘要	CHK. 後株

STATUS

SCALE

DIMENSION UNIT

KEY PLAN

MILLIMETRES

PROJECT NO.

CONTRACT NO. HY/2017/10

60240249

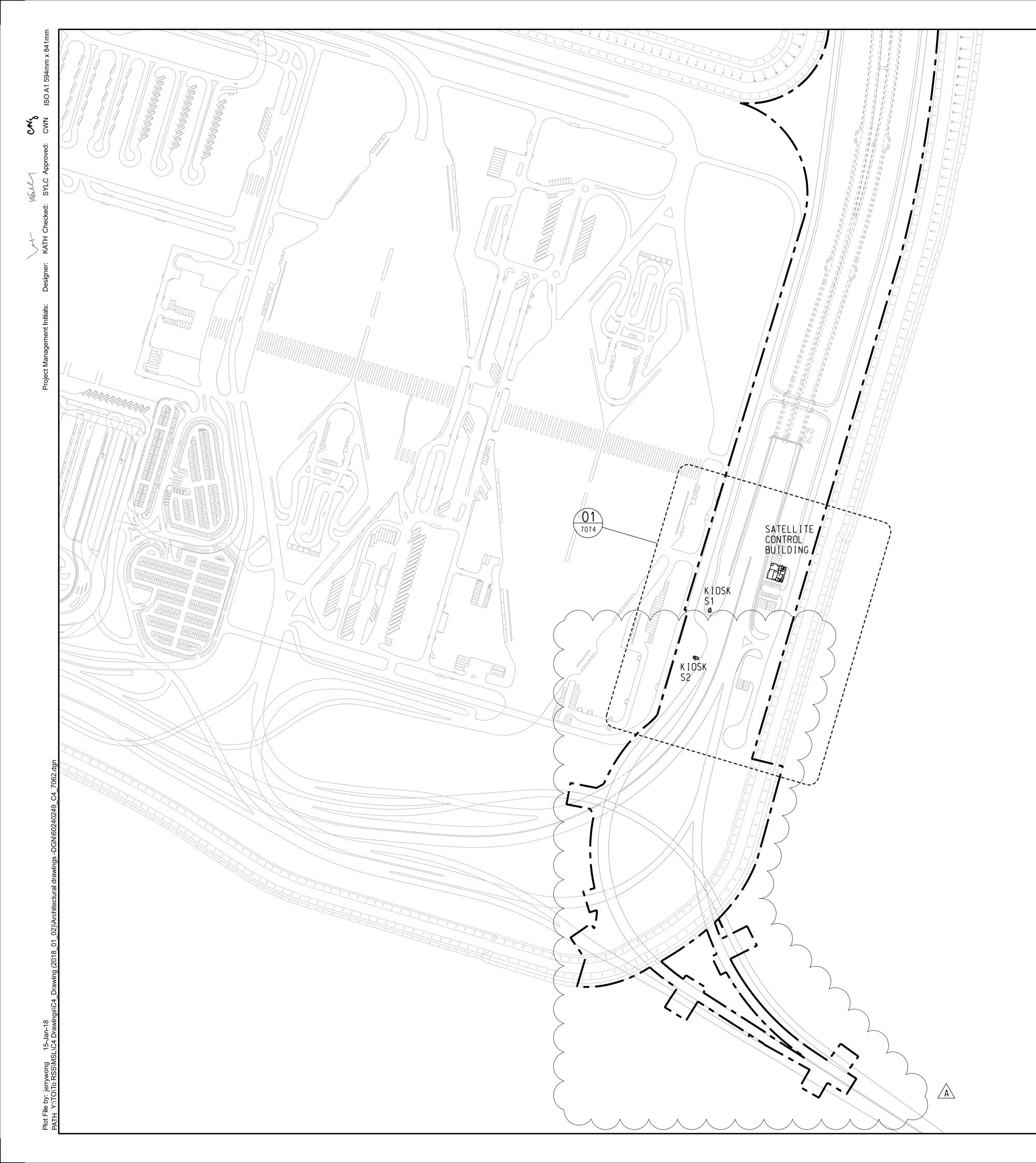
SHEET TITLE

ZONING PLAN

(SHEET 1)

#### SHEET NUMBER

60240249/C4/7061A





 $\wedge$ 

Ν

# TUEN MUN -CHEK LAP KOK LINK

### CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TUNNEL BUILDINGS, ELECTRICAL AND MECHANICAL WORKS

# CLIENT <sup>業主</sup>



■▲■ 路 政 署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

# **CONSULTANT** 工程顧問公司

AECOM Asia Company Ltd. www.aecom.com

# **SUB-CONSULTANTS** 分判工程顧問公司

# Figure 1.2b

### **ISSUE/REVISION**

修訂	日期	内容摘要	複核
I/R	DATE	DESCRIPTION	СНК.
-	DEC.17	TENDER DRAWING	SYLC
А	JAN.18	TENDER ADDENDUM NO.1	SYLC
			sterel

# **STATUS** 階段

SCALE <sup>比例</sup>	DIMENSION UNIT <sup>尺寸單位</sup>
1 1:2500	MILLIMETRES

**KEY PLAN** 索引圖

**PROJECT NO.** 項目編號

# CONTRACT NO. <sup>合約編號</sup>

60240249

HY/2017/10

**SHEET TITLE** 圖紙名稱

ZONING PLAN (SHEET 2)

# SHEET NUMBER 圖紙編號

60240249/C4/7062A





PROJECT

Ν

\_\_\_\_\_

# TUEN MUN -CHEK LAP KOK LINK

### CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TUNNEL BUILDINGS, ELECTRICAL AND MECHANICAL WORKS

# CLIENT <sup>業主</sup>



■▲■ 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

# **CONSULTANT** 工程顧問公司

AECOM Asia Company Ltd. www.aecom.com

# **SUB-CONSULTANTS** 分判工程顧問公司

# Figure 1.2c

### **ISSUE/REVISION**

			sterel
А	JAN.18	TENDER ADDENDUM NO.1	SYLC
-	DEC.17	TENDER DRAWING	SYLC
<b>I/R</b> 修訂	<b>DATE</b> 日期	<b>DESCRIPTION</b> 內容摘要	<b>CHK.</b> 複核

## **STATUS** 階段

SCALE <sup>比例</sup>	DIMENSION UNIT 尺寸單位
1 1:2500	MILLIMETRES

**KEY PLAN** 索引圖

**PROJECT NO.** 項目編號

# CONTRACT NO. <sup>合約編號</sup>

HY/2017/10

60240249

**SHEET TITLE** 圖紙名稱

ZONING PLAN (SHEET 3)

# SHEET NUMBER 圖紙編號

60240249/C4/7063A

### 1.2 SCOPE OF REPORT

This is the Thirty-First Monthly EM&A Report under the *Contract No. HY*/2017/10 *Tuen Mun – Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works.* This report presents a summary of the environmental monitoring and audit works in December 2020.

### 1.3 ORGANIZATION STRUCTURE

The organization structure of the Contract is shown in *Appendix A*. The key personnel contact names and contact details are summarized in *Table 1.1* below.

Party	Position	Name	Telephone	Fax
HyD (Highways Department)	Project Coordinator	Joseph Lee	2762 4958	3188 6614
-	Senior Engineer	Cheng Pan	2762 3383	3188 6614
ER (AECOM Asia Company Limited)	Principle Resident Engineer	S. W. Fok	2293 6200	2293 6300
	Resident Engineer	Desmond Fung	2293 6200	2293 6300
ENPO / IEC (Ramboll Hong Kong	ENPO Leader	Y.H. Hui	3465 2850	3465 2899
Ltd.)	IEC	Manson Yeung	9700 6767	3465 2899
Contractor (Gammon	Site Agent	H. H. Lee	6096 6281	-
Construction Limited)	Environmental Officer	Phoebe Ng	9869 1105	-
ET (ERM-HK)	ET Leader	Dr. Jasmine Ng	2271 3311	2723 5660

### Table 1.1Contact Information of Key Personnel

### 1.4 SUMMARY OF CONSTRUCTION WORKS

The construction phase of the Contract commenced on 7 June 2018. The three-month rolling construction programme is shown in Appendix B.

As informed by the Contractor, details of the major works carried out in this reporting month are listed below:

### Land-based Works

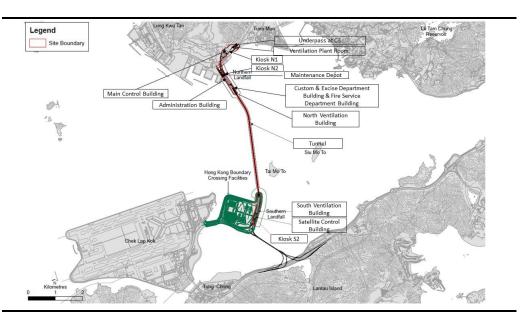
- Handover Inspection at Main Control Building;
- Handover Inspection at Ventilation Plant Room;
- Handover Inspection at North Ventilation Building;

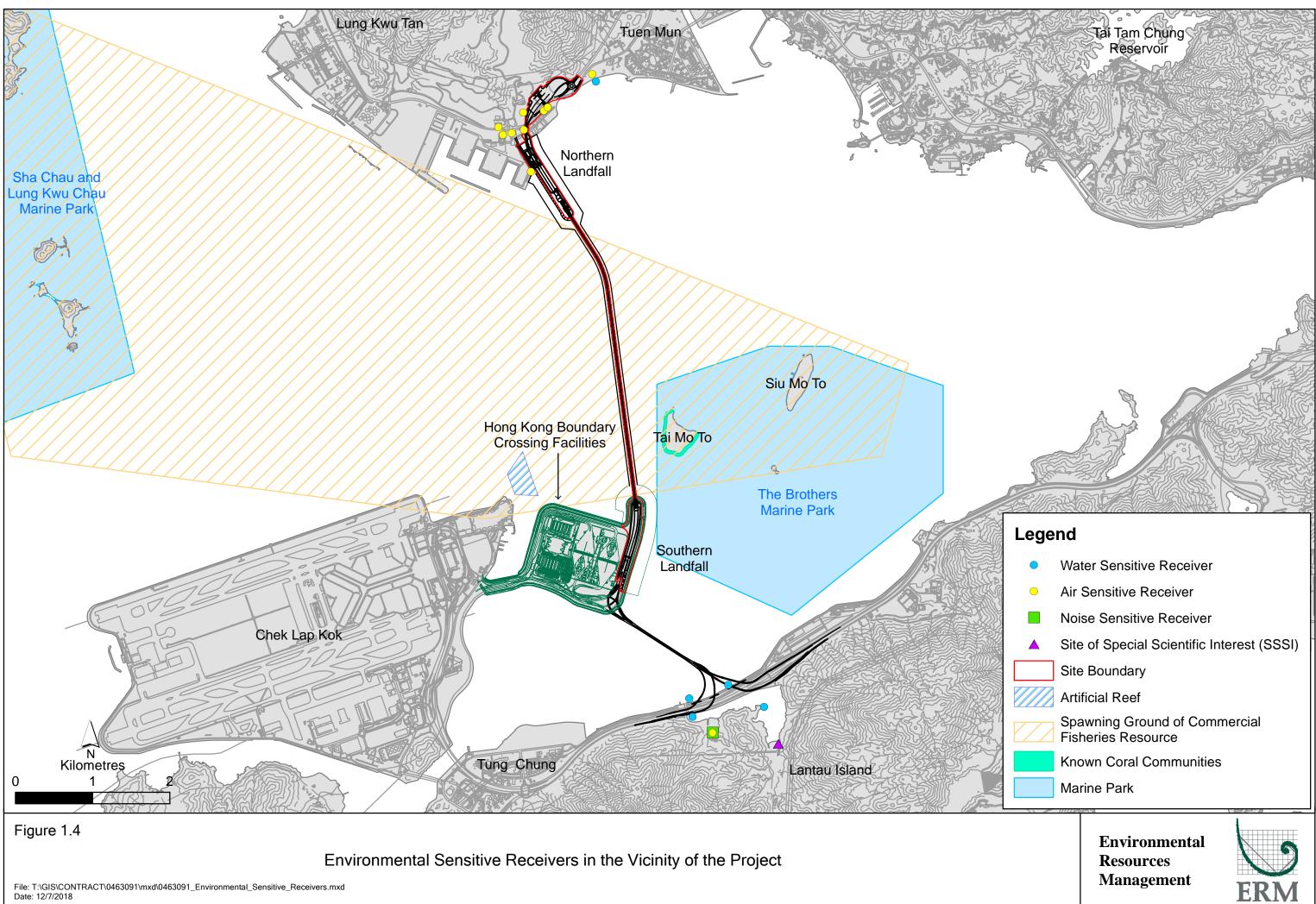
- Handover Inspection at Administration Building;
- Handover Inspection at Maintenance Depot;
- ABWF Works at Fire Services Department Building;
- External cladding & louvre installation, E&M works and final finishing works at Customs and Excise Department Building;
- Handover Inspection at Kiosk N1;
- Handover Inspection at Kiosk N2;
- Handover Inspection at the Tunnel;
- Handover Inspection at C3 area;
- Handover Inspection at Satellite Control Building;
- Handover Inspection at Kiosk S2;
- Handover Inspection at South Ventilation Building; and
- Handover Inspection at Northern Landfall and Southern Landfall.

The locations of the construction activities are shown in *Figure 1.3*. The Environmental Sensitive Receivers in the vicinity of the Contract are shown in *Figure 1.4*.

The implementation schedule of environmental mitigation measures is presented in *Appendix C*.

Figure 1.3 Locations of Major Construction Activities in the Reporting Month





### 2 EM&A RESULTS

The EM&A programme required environmental monitoring for air quality and environmental site inspections for air quality, water quality and waste management. The EM&A requirements and related findings for each component are summarized in the following sections

### 2.1 AIR QUALITY

### 2.1.1 Monitoring Requirements and Equipment

In accordance with the Updated EM&A Manual and the Enhanced TSP Monitoring Plan, impact 1-hour TSP monitoring was conducted three (3) times every six (6) days and impact 24-hour TSP monitoring was carried out once every six (6) days when the highest dust impact was expected. 1-hr and 24hr TSP monitoring frequency was increased to three times per day every three days and daily every three days, respectively, as excavation works for launching shaft under *Contract No. HY/2012/08 Tuen Mun-Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section* commenced on 24 October 2014.

Informed by the Environmental Team of *Contract No. HY/2012/08 Tuen Mun-Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section*, excavation works for lauching shaft were completed and notification of change on air quality monitoring frequency was submitted to EPD on 14 September 2020. 1-hr and 24-hr TSP monitoring frequency was changed to three times per day every six days and daily every six days, respectively, since 14 September 2020.

Results of air quality monitoring were adopted from the published EM&A data of *Contract No. HY/2012/08 Tuen Mun-Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section* <sup>(1)</sup>.

The Action and Limit Levels of the air quality monitoring were adopted from the published EM&A reports of *Contract No. HY/2012/08 Tuen Mun-Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section* <sup>(2)</sup>. The Action and Limit Levels are provided in *Appendix D*.

The locations of the monitoring stations overlapped with Contract No. HY/2012/08 are shown in *Figure 2.1* and presented in *Table 2.1*.

# Table 2.1Locations of Impact Air Quality Monitoring Stations and its Corresponding<br/>Monitoring Requirements

Monitoring Station Monitoring Dates Location Description Parameters & Frequency

 Published EM&A data for impact air quality monitoring by Contract No. HY/2012/08 are available at: http://www.hzmbenpo.com/

(2) Published EM&A reports of Contract No. HY/2012/08 are available at: http://www.hzmbenpo.com/

<b>Monitoring Station</b>	Monitoring Dates	Location	Description	Parameters & Frequency
ASR1	4, 10, 16, 22 and 28	Tuen Mun	Office	TSP monitoring
	December 2020	<b>Fireboat Station</b>		<ul> <li>1-hour Total Suspended</li> </ul>
				Particulates (1-hour TSP,
ASR5		Pillar Point Fire	Office	$\mu$ g/m <sup>3</sup> ), 3 times in every 6 days
		Station		• 24-hour Total Suspended
				Particulates (24-hour TSP,
AQMS1		Previous River	Bare ground	$\mu$ g/m <sup>3</sup> ), daily for 24-hour in
		Trade Golf		every 6 days
				Enhanced TSP monitoring
ASR6		Butterfly Beach	Office	(commenced on 24 October 2014
		Laundry		under Contract No. HY/2012/08)
				<ul> <li>1-hour Total Suspended</li> </ul>
ASR10		Butterfly Beach	Recreational	Particulates (1-hour TSP,
		Park	uses	$\mu$ g/m <sup>3</sup> ), 3 times in every 3 days
				24-hour Total Suspended
				Particulates (24-hour TSP,
				$\mu$ g/m <sup>3</sup> ), daily for 24-hour in
				every 3 days

### 2.1.2 Results and Observations

Results of air quality monitoring were adopted from the published EM&A data of *Contract No. HY/2012/08 Tuen Mun-Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section* <sup>(1)</sup>.

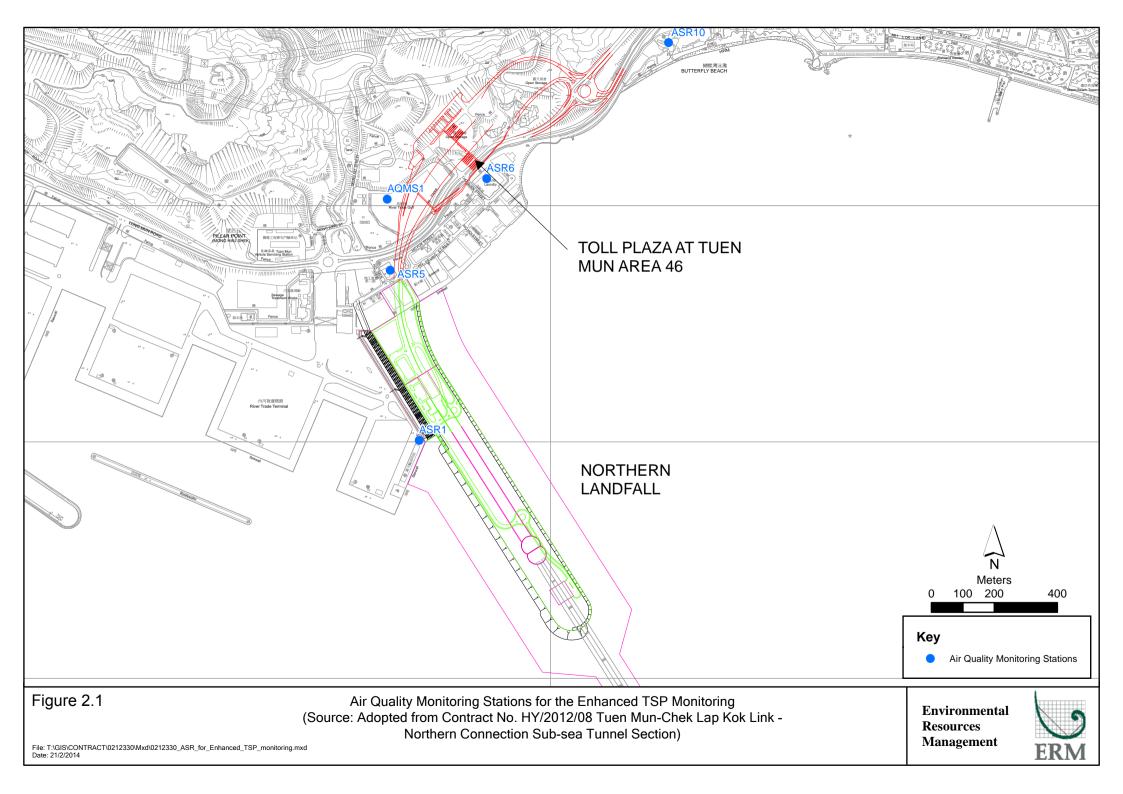
One (1) Action Level exceedance for 1-hour was recorded in the reporting period. The exceedance was considered not related to this Contract upon further investigation and the investigation reports are presented in *Appendix J*. No action is required to be undertaken in accordance with the Event Action Plan as presented in *Appendix E*.

### 2.2 LANDFILL GAS HAZARD MONITORING

In accordance with the Updated EM&A Manual of the TM-CLK Link Project, landfill gas hazard monitoring should be perform to ensure that the works area at Pillar Point Valley (PPV) Landfill is free of landfill gas. A total of 25 days of landfill gas hazard monitoring was conducted at Main Control Building during 1 to 30 November 2020 (*Appendix F*).

The landfill gas hazard monitoring was conducted in accordance to the Upated EM&A Manual with a Altair 5X Gas Detector. The calibration certificate for the equipment is presented in *Appendix G*.

The Action Level of the landfill gas hazard monitoring was adopted from the Updated EM&A Manual of the TM-CLK Link Project and are provided in Appendix D.



#### 2.2.1 **Results and Observations**

Results for landfill gas hazard monitoring are summarized in Table 2.2 and the monitoring data is provided in *Appendix H*.

Results of methane, oxygen and carbon dioxide in the reporting month complied with the Action Level. No action as stated in the Updated EM&A Manual of the TM-CLK Link Project and presented in Appendix D is required to be undertaken.

#### Table 2.2 Summary of Landfill Gas Hazard Monitoring Results in the Reporting Period

	Average (%)	Range (%)	Action Level (%) (a)
Methane	0	0	10/20
Oxygen	20.8	20.8-20.8	19/18
Carbon Dioxide	0.03	0.03-0.03	0.5/1.5

Notes

(a) Depending on the results of the measurements, actions required will vary. Actions in the event of landfill gas being detected in excavation/confined area was adopted from the Updated EM&A Manual of the TM-CLK Link Project.

#### 2.3 EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, five (5) site inspections were carried out on 4, 10, 16, 24 and 31 December 2020.

Key observations and recommendations during the site inspections in this reporting period are summarized in Table 2.3.

#### Table 2.3 Specific Observations and Recommendations during the Weekly Site Inspection in this Reporting Month

Inspection Date	Observations	<b>Recommendations/ Remarks</b>
4 December 2020	<ul><li>Container Village</li><li>Dry haul road was observed.</li><li>Drip tray was not provided for the oil pump.</li></ul>	<ul> <li>Container Village</li> <li>The Contractor was reminded to provide water spraying along the haul road.</li> <li>The Contractor was reminded to provide drip tray for the oil pump.</li> </ul>
10 December	Southern Landfall	Southern Landfall
2020	• Nil.	• Nil.
16 December 2020	<ul><li>Container Village</li><li>Drip tray was not provided for the oil</li></ul>	<ul> <li>Container Village</li> <li>The Contractor was reminded to provide drip tray for the gil nump</li> </ul>
24 December 2020	<ul> <li>pump.</li> <li>Customs and Excise Department Building</li> <li>Chemical containers were not placed in dtip tray.</li> <li>Container Village</li> <li>Dry haul road was observed.</li> </ul>	<ul> <li>provide drip tray for the oil pump.</li> <li>Customs and Excise Department Building</li> <li>The Contractor was reminded to provide drip tray for the chemicals.</li> <li>Container Village</li> <li>The Contractor was reminded to provide water spraying along the haul road.</li> </ul>

Inspection Date	Observations	<b>Recommendations/ Remarks</b>
31 December	Customs and Excise Department Building	Customs and Excise Department Building
2020	Chemical containers were not placed in dtip	<ul> <li>The Contractor was reminded to</li> </ul>
	tray.	provide drip tray for the chemicals.

The Contractor has rectified all of the observations as identified during environmental site inspections in the reporting month.

### 2.4 WASTE MANAGEMENT STATUS

The Contractor had submitted application form for registration as chemical waste producer under the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.

Wastes generated during this reporting period included mainly construction wastes (inert and non-inert). Reference has been made to the waste flow table prepared by the Contractor (*Appendix I*). The quantities of different types of wastes are summarized in *Table 2.4*.

### Table 2.4Quantities of Different Waste Generated in the Reporting Month

	Materials <sup>(a)</sup> (m <sup>3</sup> )	Construction Waste Re- used (m <sup>3</sup> )	Construction Waste <sup>(b)</sup> (kg)	(m³)	Materials (¢) (kg)	
December 2020	20	0	69,780	0	0	0

(a) Inert construction wastes include hard rock and large broken concrete disposed as public fill.

(b) Non-inert construction wastes include general refuse disposed at landfill.

(c) Recyclable materials include metals, paper, cardboard, plastics, timber and others.

The Contractor was advised to properly maintain on site C&D materials and waste collection, sorting and recording system, dispose of C&D materials and wastes at designated ground and maximize reuse/ recycle of C&D materials and wastes. The Contractor was also reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

For chemical waste containers, the Contractor was reminded to treat properly and store temporarily in designated chemical waste storage area on site in accordance with the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*.

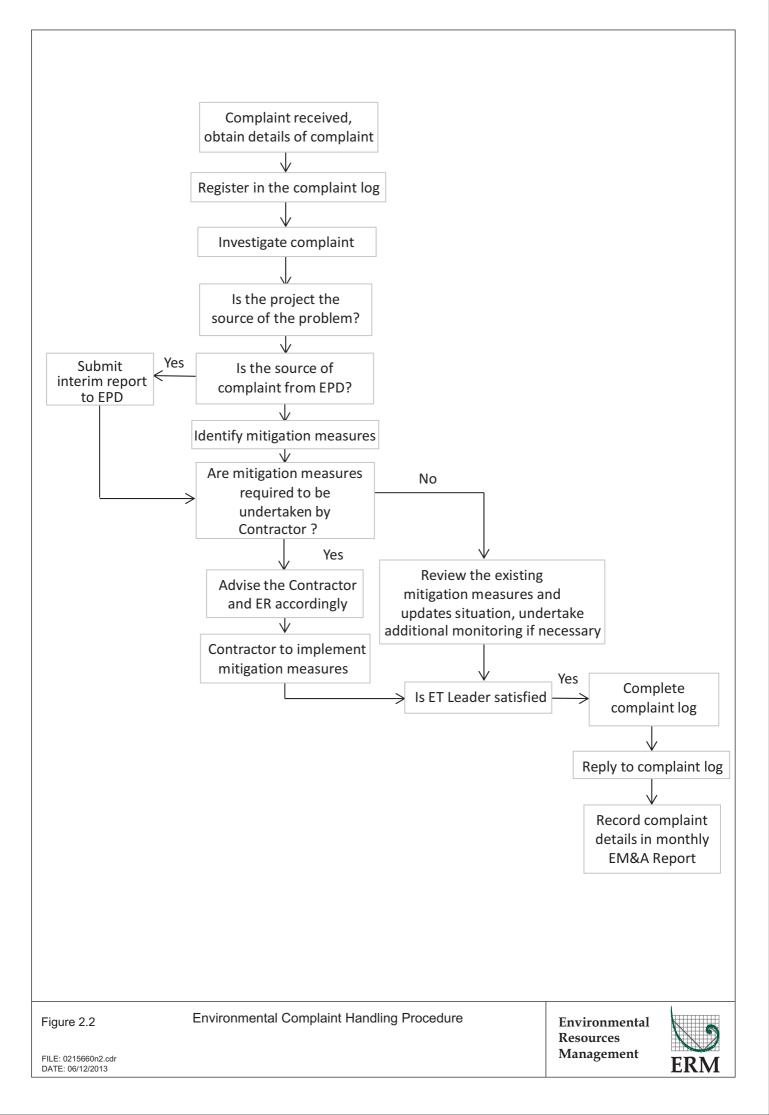
### 2.5 Environmental Licenses and Permits

The status of environmental licensing and permit is summarized in *Table 2.5* below.

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/D	13 March 2015	N/A	HyD	Tuen Mun- Chek Lap Kok Link
APCO Construction Dust	433493	14 May 2018	N/A	GCL	For Tuen Mun working area
Notification					
Construction Waste Billing	7030836	15 May 2018	N/A	GCL	N/A
Account					
Chemical Waste Producer	5213-422-G2827-01	13 June 2018	N/A	GCL	N/A
Registration					
Discharge License under	WT00031783-2018	22 October 2018	31 October 2023	GCL	Sampling Frequency: Bimonthly
WPCO for Buildings at C2					
area					
Discharge License under	WT00032062-2018	30 October 2018	31 October 2023	GCL	Sampling Frequency: Quarterly
WPCO for Buildings at C3					
area					
Discharge License under	WT00034878-2019	1 April 2020	31 March 2025	GCL	Sampling Frequency: Quarterly
WPCO for Southern					
Landfall					
Construction Noise Permit	GW-RW0351-20	3 August 2020	29 January 2021	GCL	For Northern Landfall and Tunnel
Construction Noise Permit	GW-RS0413-20	19 June 2020	15 December 2020	GCL	For HKBCF Area
Construction Noise Permit	GW-RS0904-20	16 December 2020	14 June 2021	GCL	For HKBCF Area
Construction Noise Permit	GW-RW0501-20	27 October 2020	24 December 2020	GCL	For Lung Mun Road Overnight Works
Construction Noise Permit	GW-RW0578-20	31 December 2020	14 June 2021	GCL	For Northern Landfall and Tunnel

### Table 2.5Summary of Environmental Licensing and Permit Status

2.6	IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES
	In response to the site audit findings, the Contractors carried out all corrective actions.
	A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in <i>Appendix C</i> . The necessary mitigation measures relevant to this Contract were implemented properly.
	The landscape and visual (L&V) mitigation measures were also monitored on weekly basis in the reporting period. The monitoring status is summarized in <i>Appendix C</i> .
2.7	SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE Limit
	One (1) Action Level exceedance for 1-hour TSP was recorded by the Environmental Team of Contract No. <i>HY/2012/08</i> during the reporting period.
	Results of landfill gas hazard monitoring in the reporting month complied with the Action Level.
	Cumulative statistics are provided in <i>Appendix J</i> .
2.8	SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL Prosecutions
	The Environmental Complaint Handling Procedure is provided in Figure 2.2.
	There was no environmental complaint, notification of summons or successful prosecution recorded in the reporting period.
	Statistics on complaints, notifications of summons, successful prosecutions are summarized in <i>Appendix J</i> .



### 3 FUTURE KEY ISSUES

### 3.1 CONSTRUCTION ACTIVITIES FOR THE COMING MONTH

As informed by the Contractor, the major works for the Contract in January 2021 will be:

### Land-based Works

- Architectural Builder's Work and Finishes and handover inspection at Fire Services Department Building; and
- External cladding & louvre installation, E&M works, final finishing works and handover inspection at Customs and Excise Department Building.

### 3.2 KEY ISSUES FOR THE COMING MONTH

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of January 2021 are mainly associated with waste management and landfill gas monitoring issues.

### 4 CONCLUSIONS AND RECOMMENDATIONS

### 4.1 CONCLUSIONS

This Thirty-First Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 31 December 2020, in accordance with the Updated EM&A Manual and the requirements of EP-354/2009/D.

Air quality (including 1-hour TSP and 24-hour TSP) monitoring were carried out in this reporting month.

One (1) Action Level exceedance for 1-hour TSP was recorded by the Environmental Team of Contract No. *HY/2012/08* during the reporting period.

Results of landfill gas hazard monitoring in the reporting month complied with the Action Level.

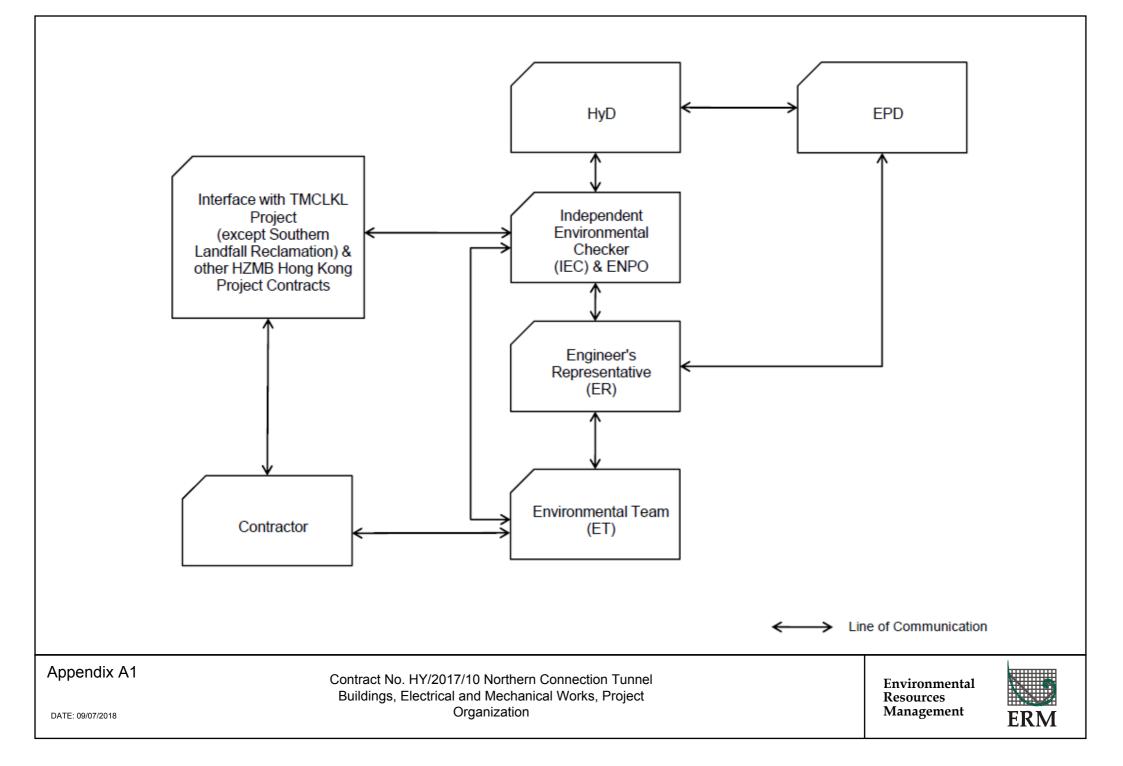
Environmental site inspection was carried out five (5) times in December 2020. Remedial actions recommended for the deficiencies identified during the site audits were properly implemented by the Contractor.

Landscape and visual monitoring for 24-month establishment period conducted by Contract No. HY/2012/07 and HY/2013/12 was not reported in the EM&A report for this Contract in this reporting period.

There was no environmental complaint, notification of summons or successful prosecution recorded in the reporting period.

The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures. Appendix A

Project Organization for Environmental Works



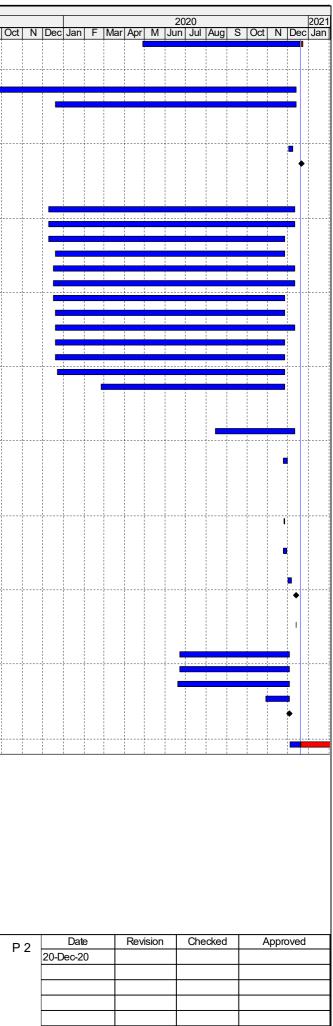
Appendix B

Construction Programme

ID	Activity	Duration (Days)	Activity % Start Complete	Finish	Total Float	2018			•	21	019				2020		
		(20)0)			N	1 Jun Jul A	S Oct	N Dec Ja	an F Mar			S Oct N	Dec Jan F	Mar Apr			
HY2017/10 - Works Program	me Three Month Rolling Programme 20-Dec-20																
Contract Dates																	
Key Dates																	
KD08	KD08 - All Other Works for Tunnel Comissioning & Opening	0	100%	04-Dec-20 A													٠
KD09	KD09 - C&ED Building, E&M Works, & FSD Inspection	0	0%	20-Dec-20*	-133												•
KD10	KD10 - FSD Building, E&M Works, & FSD Inspection	0	0%	20-Dec-20*	-194												•
Portion Possession Dates																	
P325	Possession to Portion XXII (Day 483)	0	0% 20-Dec-20		-64												•
P335	Possession to Portion XXIII (Day 483)	0	0% 20-Dec-20		-64												•
Portion Handover Dates																	
H120	Vacate Portion XVIb (KD10+28)	0	0%	20-Dec-20*	-167												•
H130	Vacate Portion XVIa (KD10+28)	0	0%	20-Dec-20*	-167												•
H140	Vacate Portion XVb (KD9+28)	0	0%	20-Dec-20*	-106												•
H150	Vacate Portion XVa (KD9+28)	0	0%	20-Dec-20*	-106												•
H160	Vacate Portion XXIa (KD8+28)	0	0%	20-Dec-20*	-21												•
H170	Vacate Portion XXIb (KD8+28)	0	0%	20-Dec-20*	-21												•
H180	Vacate Portion XXII (KD8+28)	0	0%	20-Dec-20*	-21												•
H190	Vacate Portion XXIII (KD8+28)	0	0%	20-Dec-20*	-21												•
H200	Vacate Portion XII (KD8+28)	0	0%	20-Dec-20*	-21												•
H210	Vacate Portion XIII (KD8+28)	0	0%	20-Dec-20*	-21												•
H220	Vacate Portion XIV (KD8+28)	0	0%	20-Dec-20*	-21												•
H230	Vacate Portion XVIIa (KD8+28)	0	0%	20-Dec-20*	-21												•
H240	Vacate Portion Ve (KD8+28)	0	0%	20-Dec-20*	-21												•
H250	Vacate Portion Vc (KD8+28)	0	0%	20-Dec-20*	-21												•
H260	Vacate Portion VIb (KD8+28)	0	0%	20-Dec-20*	-21												•
H270	Vacate Portion VIII (KD8+28)	0	0%	20-Dec-20*	-21												•
H280	Vacate Portion XI (KD8+28)	0	0%	20-Dec-20*	-21												•
H290	Vacate Portion VII (KD8+28)	0	0%	20-Dec-20*	-21												•
H300	Vacate Portion IX (KD8+28)	0	0%	20-Dec-20*	-21												•
H310	Vacate Portion X (KD8+28)	0	0%	20-Dec-20*	-21												•
H320	Vacate Portion XXIc (KD8+28)	0	0%	20-Dec-20*	-21						++		+				•
H330	Vacate Portion WA6 (KD8+28)	0	0%	20-Dec-20*	-21												•
H340	Vacate Portion XIX (KD11+28)	0	0%	20-Dec-20*	-64												•
Key Date 1 - Toll Control Bui		Ū		10 200 10													
ABWF Works (for All)																	
ATCB1130	ABWF second fix & final fix	90	100% 27-Aug-19 A	04-Dec-20 A									·····				
	Building, Maintenance Depot, Kiosk N2, TCSS Provision																
Administration Building (AD																	
ABWF Works (for All)																	
AADB1200	ABWF second fix & final fix	90	100% 02-Oct-19 A	04-Dec-20 A													
	Administration Building, Maintenance Depot, North Vent Building, Kiosk N2			012002071							++-		+				
Remaining Works																	
KD6-OSW-1000	Remaining Works (Non FSI related)	42	100% 12-Dec-19 A	23-Dec-20	-31												
Key Date 3 - Satellite Contro		42	100 % 12-Dec-19 A	23-060-20	-51												
ABWF Works (for All)					<u></u>												
ASCB1020	ABWF Works to Plant Rooms G/F	60	100% 27-Aug-19 A	26-Nov-20 A							· · · · · · · · · · ·						
ASCB1020	ABWF second fix & final fix	56	100% 14-Jan-20 A	04-Dec-20 A													
		50	100 % 14-Jan-20 A	04-Dec-20 A													
	TCB, Toll Area, Kiosk N1, Underpass, Plant Rm, and Approach Roads																
E&M Works for TCB																	
Remaining Works for TC		10	00% 00 4 00 4	04.5													
KD5-OSW-1000	Remaining Works (Non FSI related)	42	98% 08-Apr-20 A	24-Dec-20	-32												
	Satellite Control Building and Kiosks S1&S2				2000 <u>- 1</u> 000 - 1000												
E&M Works for Satellite Co	ntrol Building																
E&M Works																	
	r SCB (Non-FSI related)																
KD7-OSW-1010	Remaining Works (Non-FSI related)	42	98% 30-May-20 A	23-Dec-20	-31												
Koy Data 6C 58 M Works fr	pr South Montilation Building																
	or South Ventilation Building																
Remaining Works for SVB (																	
													Doto	Rev	sion CL	necked	Δορτοικος
			CONTE	RACT NO. HY20	017/10							P 1	Date 20-Dec-20				Approved
		TM-CIKI N	ORTHERN CONN	ECTION TUNN		INGS FR		RS					20-000-20				
						-								<del></del>		—	
		11	HREE MONTHLY F	RUGRAMME	AS OF 20	Dec 2020	)							<u> </u>		—	
														<u> </u>		—	

Image of the set of t	ID	Activity	Duration	Activity % Start	Finish	Total		00	40					·				0010			
BBC/02/01:00         Personang Wates (March Strategies)         42         6% (BAL (In SADecida )         SADecida )         SADecida (In SADecida )           Version         Personang Wates (March Strates Office on Oracles Official )         124         1000// 100-0010			(Days)	Complete		Float	M				SIC	)ct		lan	FIM	lar An	r M			SIC	)ct
AVE Works       Set Office and Data starts       124       100%       105%	KD6C-OSW-1000	Remaining Works (Non-FSI related)	42	98% 29-Apr-20 A	23-Dec-20	-31		Jun	Jui					Juan				Jun Ju	i jAug		
APR/F Works to Circan Contrator OF       114       100/k       10/k       10/k       10/k	Key Date 10 - FSD Building St	tructure & E&M Works										1									
FX201001         AMP/F second fits A final fits         7,3         1000         20.450-10.4         14.260-20.4         1           FX80.0001         Columination of the fits and water supply seconded in a fit of the fits and water supply se	ABWF Works																1				
FX201001         AMP/F second fits A final fits         7,3         1000         20.450-10.4         14.260-20.4         1           FX80.0001         Columination of the fits and water supply seconded in a fit of the fits and water supply se	AFSD1030	ABWF Works to Office and Corridors G/F	124	100% 10-Sep-19 A	14-Dec-20 A																
FBCBS/IND         Obin Water Carfinds and water supply connectors - PL         0         00/04/03-02.0.4         -162           FBCBS/IND         ADDI Accilenced         0         0/04/03-02.0.4         -162           FBCBS/IND         ADDI Accilenced         0         0/04/03-02.0.4         -162           AVEX/IND         ADDI Accilenced         0         0/04/03-02.0.4         -162           AVEX/IND         ADDI Accilenced         0         0/04/03-02.0.4         -162           AVEX/IND         ADDI Accilenced         0         100/01.10-06-19.A         12.0-00.0.A           ACCID 1021         ADMF Works 0 First Recome 3F         00         100/01.10-06-19.A         12.0-00.0.A           ACCID 1022         ADMF Works 0 First Recome 3F         00         100/01.10-06-19.A         12.0-00.0.A           ACCID 1023         ADMF Works 0 Totes and Carlscha 2F         100         100/02.00-19.A         12.0-00.0.A           ACCID 1023         ADMF Works 10.0168.0.5 GF         142         100/02.00-19.A         12.0-00.0.A           ACCID 1024         ADMF Works 10.0168.0.5 GF         142         100/02.00-19.A         12.0-00.0.A           ACCID 1024         ADMF Works 10.0168.0.5 GF         142         100/02.00-19.A         12.0-00.0.A           ACCID 1024	AFSD1070	ABWF second fix & final fix	73		14-Dec-20 A		-					-									
FSDE-S1100         Oblin Water Catflings and water supply connection - PL         4         100% 02.0-02.0         -162           FSDE-S1100         FOLD-Achemed         0         0.0%         21-00-2.0         -162           Victore - G&Daulande StaMurots         -	E&M Works																				
FSDE-S1100         Oblin Water Catflings and water supply connection - PL         4         100% 02.0-02.0         -162           FSDE-S1100         FOLD-Achemed         0         0.0%         21-00-2.0         -162           Victore - G&Daulande StaMurots         -	Statutory Inspections and	approvals					-														
FSDRS1140         K010 Achieves         9         0%         21.De:20         162           FV2109 - 02.050 adlog F5.40 Moth         50.000 M010 FV Mots De Nath Roms GF         60         100% 10.De:15 A         12.De:20 A           ACED1021         ARVF Wots De Nath Roms GF         60         100% 10.De:15 A         12.De:20 A           ACED1022         ARVF Wots De Nath Roms 3/F         60         100% 10.De:15 A         27.Nv:20 A           ACED1023         ARVF Wots De Nath Roms 3/F         60         100% 10.De:15 A         27.Nv:20 A           ACED1033         ARVF Wots De Ontin on Crimits 7F         118         100% 17.De:15 A         27.Nv:20 A           ACED1033         ARVF Wots De Ontin on Crimits 7F         118         100% 17.De:15 A         27.Nv:20 A           ACED1033         ARVF Wots De Ontin on Crimits 7F         118         100% 17.De:15 A         27.Nv:20 A           ACED1040         ARVF Wots De Tobies 6F         142         100% 20De:15 A         27.Nv:20 A           ACED1040         ARVF Wots De Tobies 67F         142         100% 20De:15 A         27.Nv:20 A           ACED1041         ARVF Wots De Tobies 27F         142         100% 20De:15 A         27.Nv:20 A           ACED1041         ARVF Wots De Tobies 27F         142         100% 22De:20 A         <			4	100% 03-Dec-20 A	09-Dec-20 A																
ACED 1020         ARUPF Works to Plant Rooms (JF         60         1000% 102-019A         1220-020A           ACED 1021         ARUPF Works to Plant Rooms 2/F         60         1000% 102-019A         7240-020A           ACED 1022         ARUPF Works to Plant Rooms 2/F         60         1000% 102-019A         7240-020A           ACED 1023         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         7240-020A           ACED 1023         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         1220-020A           ACED 1030         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         1220-020A           ACED 1033         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         1220-020A           ACED 1034         ARUPF Works to Toles and Controls 0/F         130         1000% 1720-019A         274-00-20A           ACED 1040         ARUPF Works to Toles and Controls 0/F         142         100% 120-02-19A         274-00-20A           ACED 1040         ARUPF Works to Toles 0/F         142         100% 120-02-10A         274-00-20A           ACED 1040         ARUPF Works to Toles 0/F         142         100% 120-02-10A         274-00-20A           ACED 1040         Controls 0/F         1000% 120	FSDB-SI1140		0	0%	21-Dec-20	-162	-					1			-	1					
ACED 1020         ARUPF Works to Plant Rooms (JF         60         1000% 102-019A         1220-020A           ACED 1021         ARUPF Works to Plant Rooms 2/F         60         1000% 102-019A         7240-020A           ACED 1022         ARUPF Works to Plant Rooms 2/F         60         1000% 102-019A         7240-020A           ACED 1023         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         7240-020A           ACED 1023         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         1220-020A           ACED 1030         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         1220-020A           ACED 1033         ARUPF Works to Office and Controls 0/F         138         1000% 1720-019A         1220-020A           ACED 1034         ARUPF Works to Toles and Controls 0/F         130         1000% 1720-019A         274-00-20A           ACED 1040         ARUPF Works to Toles and Controls 0/F         142         100% 120-02-19A         274-00-20A           ACED 1040         ARUPF Works to Toles 0/F         142         100% 120-02-10A         274-00-20A           ACED 1040         ARUPF Works to Toles 0/F         142         100% 120-02-10A         274-00-20A           ACED 1040         Controls 0/F         1000% 120	Key Date 9 - C&ED Building &	k E&M Works																			
ACED 1020         ARWF Works to Park Rooms (F)         B0         100% 10.Dex:19A         12.Dex:20A           ACED 1021         ARWF Works to Park Rooms (F)         B0         100% 10.Dex:19A         22.Nev:20A           ACED 1022         ARWF Works to Offer and Continues (F)         B0         100% 10.Dex:19A         22.Nev:20A           ACED 1023         ARWF Works to Offer and Continues (F)         103         100% 17.Dex:19A         12.Dex:20A           ACED 1030         ARWF Works to Offer and Continues (F)         113         100% 17.Dex:19A         12.Dex:20A           ACED 1031         ARWF Works to Offer and Continues FP         113         100% 17.Dex:19A         12.Dex:20A           ACED 1032         ARWF Works to Offer and Continues FP         118         100% 17.Dex:19A         12.Dex:20A           ACED 1032         ARWF Works to Tolles GF         142         100% 20.Dex:19A         12.Dex:20A           ACED 1040         ARWF Works to Tolles GF         142         100% 20.Dex:19A         12.Dex:20A           ACED 1050         Market Cartificating and Wale Pashing         97         100% 20.Dex:19A         12.Dex:20A           ACED 1050         None-Secreting Take         100% 20.Dex:19A         12.Dex:20A         12.Dex:20A           ACED 1050         None-Secreting Take         100% 20.D																					
ACED1021         AWW Works to Paint Borns I/F         60         100% 10.00=19A         12.0e.02A           ACED1023         AWW Works to Paint Borns 2/F         60         100% 10.00=19A         27.4wv20A           ACED1030         AWW Works to Office and Condexs 9/F         133         100% 10.00=19A         27.4wv20A           ACED1030         AWW Works to Office and Condexs 9/F         133         100% 17.00=19A         12.0ee.20A           ACED1031         AWW Works to Office and Condexs 9/F         133         100% 17.00=19A         12.0ee.20A           ACED1032         AWW Works to Office and Condexs 9/F         132         100% 17.00=19A         12.0ee.20A           ACED1040         AWW Works to Office and Condexs 9/F         132         100% 17.00=19A         12.0ee.20A           ACED1040         AWW Works to Toiled 5.0F         142         100% 20.0e=19A         27.4wv20A           ACED1040         AWW Works to Toiled 5.0F         142         100% 20.0e=19A         27.4wv20A           ACED1040         AWW Works to Toiled 5.0F         142         100% 20.0e=19A         27.4wv20A           ACED1040         AWW Forks to Toiled 5.0F         142         100% 20.0e=19A         27.4wv20A           ACED1040         AWW Forks to Toiled 5.0F         142         100% 20.0e=10A		ABWE Works to Plant Rooms G/E	60	100% 10-Dec-19 A	12-Dec-20 A		i					1			-	1 1 1			:		
ACED 1022       AVW FWests D Fair Rooms 3/F       60       100% 100-59A       274-0x-20 A         ACED 1023       AVW FWests D Fair Rooms 3/F       60       100% 120-bc:19A       274-0x-20 A         ACED 1030       AWV FWests D Offer and Common 0/F       133       100% 172-bc:19A       122-bce:20 A         ACED 1031       AWV FWests D Offer and Common 2/F       133       100% 172-bc:19A       122-bce:20 A         ACED 1032       AWV FWests D Offer and Common 2/F       130       100% 172-bc:19A       274-0x-20 A         ACED 1032       AWV FWests D Offer and Common 3/F       192       100% 122-bc:19A       274-0x-20 A         ACED 1040       AWV FWests D Toller 6/F       142       100% 22-bc:19A       274-0x-20 A         ACED 1040       AWV FWests D Toller 6/F       142       100% 22-bc:19A       274-0x-20 A         ACED 1070       AWV FWests D Toller 6/F       142       100% 22-bc:19A       274-0x-20 A         ACED 1070       AWV Facend 1/k 8 Inst fw       69       100% 22-bc:10A       274-0x-20 A         ACED 1070       AWV Facend 1/k 8 Inst fw       69       100% 22-bc:10A       274-0x-20 A         Status V isocction and approvid					-																
ACED 1023         AMVF Works to Park Rooms 3F         00         100% 2000-19A         27-Ave-20A           ACED 1021         AMVF Works to Office and Contring 0F         133         1000% 17-Dec 19A         12-Dec 20A           ACED 1021         AMVF Works to Office and Contring 0F         138         1000% 17-Dec 19A         12-Dec 20A           ACED 1021         AMVF Works to Office and Contring 3F         130         1000% 17-Dec 19A         27-Ave-20A           ACED 1023         AMVF Works to Totiles 0F         142         100% 20-Dec 19A         27-Ave-20A           ACED 1024         AMVF Works to Totiles 0F         142         100% 20-Dec 19A         27-Ave-20A           ACED 1024         AMVF Works to Totiles 3F         98         100% 20-Dec 19A         27-Ave-20A           ACED 1024         AMVF Works to Totiles 3F         98         100% 20-Dec 19A         27-Ave-20A           ACED 1020         ABWF Works to Totiles 3F         98         100% 20-Dec 19A         27-Ave-20A           ACED 1020         ABWF Works to Totiles 3F         99         100% 20-Dec 19A         27-Ave-20A           ACED 1020         AbwE Stand Tables 3F         99         100% 20-Dec 19A         27-Ave-20A           ACED 1020         AbwE Stand Tables 2F         100% 12-Ave-20A         12-Dec 20A         <					-																
ACED1030         ARWF Works to Office and Contists GF         133         100% 17.0bc/19A         12.0bc/20A           ACED1031         ARWF Works to Office and Contists ZF         130         100% 17.0bc/19A         12.0bc/20A           ACED1032         ARWF Works to Office and Contists ZF         130         100% 17.0bc/19A         27.Nbc/20A           ACED1031         ARWF Works to Tollets ZF         130         100% 12.0bc/19A         27.Nbc/20A           ACED1040         ARWF Works to Tollets ZF         142         100% 20.0bc/19A         27.Nbc/20A           ACED1040         ARWF Works to Tollets ZF         142         100% 20.0bc/19A         27.Nbc/20A           ACED1040         ARWF Works to Tollets ZF         142         100% 20.0bc/19A         27.Nbc/20A           ACED1000         BAWF Works to Tollets ZF         164         100% 20.0bc/19A         27.Nbc/20A           ACED1000         BAWF Works to Tollets ZF         180         100% 20.0bc/19A         27.Nbc/20A           ACED1000         BAWF Works to Tollets ZF         180         100% 20.0bc/19A         27.Nbc/20A           ACED1000         BAWF Works to Tollets ZF         100% 20.0bc/19A         27.Nbc/20A         100%           Statuty Inspections and approxits         24         100% 15.Abu/20A         100% 20.0bc/20A							-					1				-					
ACED 1031         ABWF Works to Office and Contions IF         118         100% 172-bc-10A         12.0bc-20A         1 <t< td=""><td></td><td>**************************************</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		**************************************																			
ACED 1032         ABWF Works to Office and Controls 2F         100         100% 120be-10A         27Abw-20A           ACED 1033         ABWF Works to Tolles QF         142         100% 120be-10A         12bbe-20A           ACED 1040         ABWF Works to Tolles QF         142         100% 120be-10A         12bbe-20A           ACED 1042         ABWF Works to Tolles QF         142         100% 120be-10A         27Abw-20A           ACED 1050         Determinit Controls of PF         98         100% 120be-10A         27Abw-20A           ACED 1050         Determinit Controls of PF         98         100% 122be-10A         27Abw-20A           ACED 1050         Determinit Controls of PF         99         100% 122be-10A         27Abw-20A           ACED 1050         Non-Essential T&C         24         100% 154ug-20A         122be-20A           CBLDE-101030         Non-Essential T&C         24         100% 154ug-20A         122be-20A           CAUDESTAND ADELSTAND ADELS					-		-														
ACED 1033       ABWF Works to Diffue and Cundors 3F       92       100% 20Dec-19A       274w-20A         ACED 1040       ABWF Works to Tolitets CIF       142       100% 20Dec-19A       274w-20A         ACED 1041       ABWF Works to Tolitets CIF       142       100% 20Dec-19A       274w-20A         ACED 1042       ABWF Works to Tolitets 3F       98       100% 20Dec-19A       274w-20A         ACED 1042       ABWF Works to Tolitets 3F       98       100% 20Dec-19A       274w-20A         ACED 1042       ABWF works to Tolitets 3F       98       100% 20Dec-19A       274w-20A         ACED 1047       ABWF works to Tolitets 3F       98       100% 20Dec-19A       274w-20A         ACED 1047       ABWF works to Tolitets 3F       99       100% 25Dec-3PA       274w-20A         Statutory Inspectroar and agrowsh       24       100% 15Aug-20A       12Dec-20A         Statutory Inspectroar and agrowsh       30       01-Dec-20A       01-Dec-20A         Admentation Building       ADE-104       100% 12Abu-20A       12Dec-20A         PM Sattradia Building       100% 12Abu-20A       12Dec-20A       12Dec-20A         PM Sattradia Building       100% 12Abu-20A       30-Nov-20A       14Dec-20A         PF Sat1040       Obtain Water Certificate and water														·					·		
ACED1040         ABWF Works to Toilets G/F         142         100% 20.Dec-19.A         120ec:20.A         1           ACED1041         ABWF Works to Toilets 3/F         142         100% 20.Dec-19.A         27.Nov:20.A         1           ACED102         ABWF Second fix & Toilets 3/F         168         100% 120.Dec-19.A         27.Nov:20.A         1           ACED102         ABWF Second fix & Toilets 3/F         168         100% 125.Dec-19.A         27.Nov:20.A         1           ACED1070         ABWF Second fix & Toilets 3/F         169         100% 125.Dec-19.A         27.Nov:20.A         1           ACED1070         ABWF Second fix & Toilets 3/F         169         100% 15.Aug-20.A         12.Dec-20.A         1           Edwords         CateD5-S1100         Nor-Essential T&C         24         100% 15.Aug-20.A         12.Dec-20.A         1           Statutory Interctions and approxals         CateD5-S1100         Obtain Water Certificate and water supply connection - P.         4         100% 12.Perve>20.A         17.Dec-20.A         1           Statutory Inscritors and agrees         Toilet 2.Perve>20.A         17.Nov:20.A         1         1         1           Protectors and agrees         Toilet 3.Perve>20.A         17.Nov:20.A         1         1         1         1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																					
ACED1041         ABWF Works to Toilets 2/F         142         100%         2020e-19.A         27.Nov-20.A           ACED1042         ABWF Works to Toilets 3/F         98         100%         2020e-19.A         27.Nov-20.A           ACED1060         External Clading and Wall Plastering         97         100%         252.0e-19.A         27.Nov-20.A           ACED1070         ABWF Second fits & final fitx         69         100%         252.4e-19.A         27.Nov-20.A           EXM Works         Tatting and Commissioning         Commissio							-														
ACED (M2         ADWE from to Tablets SF         98         100% (20-bc-19A         27-Aw-20A         Image: Control Section Sectin Sectin Sectin Section Section Sectin Section Section Section S							-						-								
ACED 1080         External Classing and Wall Plastering         97         100%         22-Dec-19.A         27-Nov-20.A           ACED 1070         ABWF second fix & final fix         69         100%         28-Dec-19.A         27-Nov-20.A           Exting and Commissioning         Exting and Commissioning & Commission					-		-														
ACED 1070         ABWF second fix & final fix         69         100% [26-Feb-20 A         27-Nov-20 A           EAM Works         Easting and Commissioning         CAED PTC 1030         Non-Essential T&C         24         100% [5-Aug-20 A         12-Dec-20 A           Statutory topeschora and approvals         CAED PTC 1030         Obtain Water Cartificate and water supply connection - PL         4         100% [25-Nov-20 A         01-Dec-20 A           Statutory topeschora and water supply connection - PL         4         100% [26-Nov-20 A         01-Dec-20 A           More threatman Suding         Administration Suding         Cattributory         Administration Suding         Cattributory         Cattributo																				÷	
E&M Works         Testing and Commissioning C&EDEPTC1030         Non-Essential T&C         24         100%         15:Aug-20.A         12:Dec-20.A           Saturbury Inspections and approvals C&EDB-S11100         Obtain Water Certificate and water supply connection - PL         4         100%         25:Nov-20.A         01-Dec-20.A           Key totas - All Works of Chirante and water supply connection - PL         4         100%         25:Nov-20.A         01-Dec-20.A           Administration Building ADB-S1070         Obtain Water Certificate and water supply connection - PL         4         100%         27:Nov-20.A         27:Nov-20.A           North Vernitation Building ADB-S1070         Obtain Water Certificate and water supply connection - PL         4         100%         25:Nov-20.A         27:Nov-20.A           Press 11300         DC lanspection         18         100%         12:Dec-20.A         7:Dec-20.A           PFS-S11040         Dotain DG Lisence         0         100%         14:Dec-20.A         14:Dec-20.A           TCB-S12050         Obtain Mater Certificate and water supply connection - PL         4         100%         23:Jun-20.A         04:Dec-20.A           Other Works for Road Opening         I         100%         14:Dec-20.A         14:Dec-20.A         14:Dec-20.A           OW1450         EUX System Test         70<					-																
Testing and Commissioning C&EDB-TC1030         Non-Essential T&C         24         100%         15Aug-20 A         12-Dec-20 A           Statutory Inspections and payroxis C&EDB-S1100         Obtain Water Certificate and water supply connection - PL         4         100% 25-Nov-20 A         01-Dec-20 A           Key Date 3- All Works for Tunnel Comissioning & Opening		ABWF Second IIX & IINALIIX	69	100% 20-FeD-20 A	27-NOV-20 A		-					1			-	-					
C&EDB-TC1030         Non-Essential T&C         24         100%         15-Aug-20.A         12-Dec-20.A           Statubary inspections and approvals							-														
Statutory Inspections and approvals       0         C&EDB-SI1100       Obtain Water Certificate and water supply connection - PL       4       100% 25-Nov-20 A       01-Dec-20 A         Statutory Inspections and approvals         Administration Building         ADB-SI1070       Obtain Water Certificate and water supply connection - PL       4       100% 26-Nov-20 A       27-Nov-20 A         North-Ventitation Building			04	4000/ 45 4	40 Da - 00 A		-														
C&EDB-Si1100         Obtain Water Certificate and water supply connection - PL         4         100%         25-Nov-20 A         01-Dec-20 A           Vegettes 3-All Works for Turnel Consisting & Opening           Statutory Ingections and approvals           Administration Building           Administration Building           ADB-SI 1070         Obtain Water Certificate and water supply connection - PL         4         100%         25-Nov-20 A         30-Nov-20 A           North-Weillation Building           Preto Filing Station           Person Filing Station           PERS 1010 Obtain Water Certificate and water supply connection - PL         4         100%         02-Dec-20 A         07-Dec-20 A           Obtain Water Certificate and water supply connection - PL         4         100%         02-Dec-20 A         07-Dec-20 A           Obtain Water Certificate and water supply connection - PL         4         100%         14-Dec-20 A         04-Dec-20 A           OV120         Hard Landscaping Works & Irrigation Systems         96         100%         23-Un-20 A         04-Dec-20 A           OW120         Hard Landscaping Works & Irrigation Systems         96         100%         23-Un-20 A         04-Dec-20 A			24	100% 15-Aug-20 A	12-Dec-20 A																
Key Date 8 - All Works for Tunnel Comissioning & Opening         Statutory inspections and approvals         Administration Building       Administration Building         ADB-S1070       Obtain Water Certificate and water supply connection - PL       4       100%       25-Nov-20 A       27-Nov-20 A         North Ventilation Building       Image: Certificate and water supply connection - PL       4       100%       25-Nov-20 A       30-Nov-20 A         Perce of Ling Station       Image: Certificate and water supply connection - PL       4       100%       25-Nov-20 A       07-Dec-20 A         PFS-S11030       DG Inspection       18       100%       02-Dec-20 A       07-Dec-20 A         TOB Control Building & Tol Collector Subway       TCB-S12050       Obtain Water Certificate and water supply connection - PL       4       100%       14-Dec-20 A         OW120       Hard Landscaping Works & Imgation Systems       96       100%       23-Jun-20 A       04-Dec-20 A         OW130       Street Furniture       96       100%       23-Jun-20 A       04-Dec-20 A       04-Dec-20 A         OW145       ELV System Test       70       100%       30-Qu-20 A       04-Dec-20 A       04-Dec-20 A         OW175       Operation Verifications and Trial       18       100%       30-Qu-20			4	400% 05 Nov 00 A	04 Day 00 A								Ì								
Statutory Inspections and approvals         Administration Building         ADB-S11070       Obtain Waler Certificate and water supply connection - PL       4       100%       26-Nov-20 A       27-Nov-20 A         North Ventilation Building         NVB-S11140       Obtain Waler Certificate and water supply connection - PL       4       100%       25-Nov-20 A       30-Nov-20 A         PetrolFiling Station        1       100%       02-Dec-20 A       07-Dec-20 A         PFS-S11040       Obtain Waler Certificate and water supply connection - PL       4       100%       02-Dec-20 A       07-Dec-20 A         Tol Cortrol Building & Toll Collector Subway        14-Dec-20 A       14-Dec-20 A       14-Dec-20 A         Others Works for Road Opening       Othain Water Certificate and water supply connection - PL       4       100%       23-Jun-20 A       04-Dec-20 A         OW120       Hard Landscaping Works & Imgation Systems       96       100%       23-Jun-20 A       04-Dec-20 A         OW130       Street Furniture       96       100%       23-Jun-20 A       04-Dec-20 A       04-Dec-20 A         OW145       ELV System Test       70       100%       20-Jun-20 A       04-Dec-20 A       04-Dec-20 A         OW175       Operation Verifications and Trial			4	100% 25-NOV-20 A	01-Dec-20 A		-					1									
Administration Building       Obtain Water Certificate and water supply connection - PL       4       100%       26-Nov-20 A       27Nov-20 A         North Ventilation Building       NVB-S11140       Obtain Water Certificate and water supply connection - PL       4       100%       25-Nov-20 A       30-Nov-20 A         Petrol Filing Station        100%       25-Nov-20 A       30-Nov-20 A       0         PFS-S11040       Obtain DG Licence       0       100%       02-Dec-20 A       07-Dec-20 A         PFS-S11040       Obtain DG Licence       0       100%       14-Dec-20 A       0         TGB-S12050       Obtain Water Certificate and water supply connection - PL       4       100%       14-Dec-20 A       0         OW120       Hard Landscaping Works & Imgation Systems       96       100%       23-Jun-20 A       04-Dec-20 A       0         OW130       Street Fumiture       96       100%       23-Jun-20 A       04-Dec-20 A       0         OW145       ELV System Test       70       100%       20-Jun-20 A       04-Dec-20 A       0         OW120       Key Date 12-Establishment Works       0       100%       04-Dec-20 A       0       0																					
ADB-Sl1070       Obtain Water Certificate and water supply connection - PL       4       100% 26-Nov-20 A       27-Nov-20 A         North Ventilation Building         30-Nov-20 A       30-Nov-20 A         NVB-Sl1140       Obtain Water Certificate and water supply connection - PL       4       100% 25-Nov-20 A       30-Nov-20 A         Petrol Filing Station        18       100% 02-Dec-20 A       07-Dec-20 A         PFS-Sl1040       Obtain DG Licence       0       100%       14-Dec-20 A         Tol Cortrol Building & Toll Collector Subway            TCB-Sl2050       Obtain Water Certificate and water supply connection - PL       4       100% 14-Dec-20 A       14-Dec-20 A         Others Works for Road Opening              OW120       Hard Landscaping Works & Irigation Systems       96       100% 23-Jun-20 A       04-Dec-20 A         OW145       ELV System Test       70       100% 20-Jun-20 A       04-Dec-20 A         OW120       Kay Station Verifications and Trial       18       100% 30-Oct-20 A       04-Dec-20 A         OW120       K09 Achieved       0       100%       20-Jun-20 A       04-Dec-20 A         OW120       K08 Achieved       0       100% <td></td> <td>pprovals</td> <td></td>		pprovals																			
North Ventilation Building         NVB-S1140         Obtain Water Certificate and water supply connection - PL         4         100%         25-Nov-20 A         30-Nov-20 A           Petrod Filing Station					07.11 00.4		}													÷	}
NVB-SI1140         Obtain Water Certificate and water supply connection - PL         4         100%         25-Nov-20 A         30-Nov-20 A           Petrol Filing Station         I         100%         02-Dec-20 A         07-Dec-20 A         0           PFS-SI1030         DG Inspection         18         100%         02-Dec-20 A         07-Dec-20 A         0           PFS-SI1040         Obtain DG Licence         0         100%         14-Dec-20 A         0 <td></td> <td></td> <td>4</td> <td>100% 26-Nov-20 A</td> <td>27-Nov-20 A</td> <td></td>			4	100% 26-Nov-20 A	27-Nov-20 A																
Petrol Filing StationPFS-SI1030DG Inspection18100%02-Dec-20 A07-Dec-20 APFS-SI1040Obtain DG Licence0100%14-Dec-20 ATol Cortrol Building & Toll Collector SubwayTCB-S12050Obtain Water Certificate and water supply connection - PL4100%14-Dec-20 AOthers Works for Road OpeningOW120Hard Landscaping Works & Irrigation Systems96100%23-Jun-20 A04-Dec-20 AOW130Street Fumiture96100%23-Jun-20 A04-Dec-20 AOW145ELV System Test70100%20-Jun-20 A04-Dec-20 AOW200KD8 Achieved0100%00-text04-Dec-20 AKey Date 12 - Establishment Works0100%04-Dec-20 A04-Dec-20 A		-					-					-				-					
PFS-SI1030       DG Inspection       18       100%       02-Dec-20 A       07-Dec-20 A       07         PFS-SI1040       Obtain DG Licence       0       100%       14-Dec-20 A       14-Dec-20 A         Toll Control Building & Toll Collector Subway       TCB-SI2050       Obtain Water Certificate and water supply connection - PL       4       100%       14-Dec-20 A         Others Works for Road Opening       TCB-SI2050       Obtain Water Certificate and water supply connection - PL       4       100%       23-Jun-20 A       04-Dec-20 A         OW120       Hard Landscaping Works & Irigation Systems       96       100%       23-Jun-20 A       04-Dec-20 A         OW130       Street Furniture       96       100%       23-Jun-20 A       04-Dec-20 A         OW145       ELV System Test       70       100%       20-Jun-20 A       04-Dec-20 A         OW175       Operation Verifications and Trial       18       100%       30-Oct-20 A       04-Dec-20 A         W200       KD8 Achieved       0       100%       04-Dec-20 A       04-Dec-20 A       04-Dec-20 A         Key Date 12 - Establishment Works       0       100%       04-Dec-20 A       04-Dec-20 A       04-Dec-20 A		Obtain Water Certificate and water supply connection - PL	4	100% 25-Nov-20 A	30-Nov-20 A																
PFS-SI1040       Obtain DG Licence       0       100%       14-Dec-20 A         Toll Control Building & Toll Cotteror Subway       TCB-SI2050       Obtain Water Certificate and water supply connection - PL       4       100%       14-Dec-20 A         Others Works for Road Opening       Othain Mater Certificate and water supply connection - PL       4       100%       23-Jun-20 A       04-Dec-20 A         OW120       Hard Landscaping Works & Irigation Systems       96       100%       23-Jun-20 A       04-Dec-20 A         OW130       Street Fumiture       96       100%       23-Jun-20 A       04-Dec-20 A         OW145       ELV System Test       70       100%       20-Jun-20 A       04-Dec-20 A         OW175       Operation Verifications and Trial       18       100%       30-Oct-20 A       04-Dec-20 A         OW200       KD8 Achieved       0       100%       04-Dec-20 A       04-Dec-20 A       04-Dec-20 A         W200       KD8 Achieved       0       100%       30-Oct-20 A       04-Dec-20 A       04-Dec-20 A         Key Date 12 - Establishment Works       Volta       0       100%       04-Dec-20 A       04-Dec-20 A																					
Toll Control Building & Toll Collector Subway         TCB-SI2050       Obtain Water Certificate and water supply connection - PL       4       100%       14-Dec-20 A       14-Dec-20 A         Others Works for Road Opening       Own 14-Dec-20 A       04-Dec-20 A       04-Dec-20 A       04-Dec-20 A         OW120       Hard Landscaping Works & Irrigation Systems       96       100%       23-Jun-20 A       04-Dec-20 A       04-Dec-20 A         OW130       Street Furniture       96       100%       23-Jun-20 A       04-Dec-20 A <th< td=""><td></td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>    </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>÷</td><td></td></th<>		•								 										÷	
TCB-SI2050Obtain Water Certificate and water supply connection - PL4100%14-Dec-20 A14-Dec-20 AOthers Works for Road OpeningHard Landscaping Works & Irrigation Systems96100%23-Jun-20 A04-Dec-20 AOW120Hard Landscaping Works & Irrigation Systems96100%23-Jun-20 A04-Dec-20 A04OW130Street Furniture96100%23-Jun-20 A04-Dec-20 A04OW145ELV System Test70100%20-Jun-20 A04-Dec-20 A04OW175Operation Verifications and Trial18100%30-Oct-20 A04-Dec-20 A04OW200KD8 Achieved0100%004-Dec-20 A0404-Dec-20 A04-Dec-20 AKey Date 12 - Establishment WorksKey Date 12 - Estab			0	100%	14-Dec-20 A		-					1			-	8					
Others Works for Road Opening         OW120       Hard Landscaping Works & Irrigation Systems       96       100%       23-Jun-20 A       04-Dec-20 A         OW130       Street Furniture       96       100%       23-Jun-20 A       04-Dec-20 A       04-Dec-20 A         OW145       ELV System Test       70       100%       20-Jun-20 A       04-Dec-20 A       04-Dec-20 A         OW175       Operation Verifications and Trial       18       100%       30-Oct-20 A       04-Dec-20 A         OW200       KD8 Achieved       0       100%       04-Dec-20 A       04-Dec-20 A       04-Dec-20 A       04-Dec-20 A         Key Date 12 - Establishment Works       0       100%       04-Dec-20 A																					
OW120         Hard Landscaping Works & Irrigation Systems         96         100%         23-Jun-20 A         04-Dec-20 A           OW130         Street Furniture         96         100%         23-Jun-20 A         04-Dec-20 A           OW145         ELV System Test         70         100%         20-Jun-20 A         04-Dec-20 A           OW175         Operation Verifications and Trial         18         100%         30-Oct-20 A         04-Dec-20 A           OW200         KD8 Achieved         0         100%         04-Dec-20 A         04-Dec-20 A		,	4	100% 14-Dec-20 A	14-Dec-20 A																
OW130         Street Furniture         96         100%         23-Jun-20 A         04-Dec-20 A           OW145         ELV System Test         70         100%         20-Jun-20 A         04-Dec-20 A           OW175         Operation Verifications and Trial         18         100%         30-Oct-20 A         04-Dec-20 A           OW200         KD8 Achieved         0         100%         04-Dec-20 A         04-Dec-20 A           Key Date 12 - Establishment Works         Verse         Verse         Verse         Verse         Verse																					
OW145         ELV System Test         70         100%         20-Jun-20 A         04-Dec-20 A         Image: Control Contrelating Contenter Control Contentere Control Control Control Co										ļ										ļ	
OW175       Operation Verifications and Trial       18       100%       30-Oct-20 A       04-Dec-20 A         OW200       KD8 Achieved       0       100%       04-Dec-20 A       04-Dec-20 A         Key Date 12 - Establishment Works       Vertex       Vertex       Vertex       Vertex																-					
OW200     KD8 Achieved     0     100%     04-Dec-20 A       Key Date 12 - Establishment Works			70																		
Key Date 12 - Establishment Works		•																			
			0	100%	04-Dec-20 A								-								
EW110 Establishment Works 365 15% 05-Dec-20 A 26-Oct-21 -38	Key Date 12 - Establishment	Works																			
	EW110	Establishment Works	365	15% 05-Dec-20 A	26-Oct-21	-38															

### CONTRACT NO. HY2017/10 TM-CLKL NORTHERN CONNECTION TUNNEL BUILDINGS, E&M WORKS THREE MONTHLY PROGRAMME AS OF 20 Dec 2020



Appendix C

# Environmental Mitigation and Enhancement Measure Implementation Schedules

(In reference to CINOTECH (2011) Agreement No. CE35/2011 EP Baseline Environmental Monitoring for Hong Kong-Zhuhai-Macao Bridge Tuen Mun-Chep Lap Kok Link – Investigation. Updated EM&A Manual for Tuen Mun-Chek Lap Kok Link)

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imj	plementa Stages	tion	Status *
Air Quality	Reference					D	С	0	
4.8.1	3.8	Watering of the construction sites in Lantau for 8 times/day and in Tuen Mun for 12 times/day to reduce dust emissions by 87.5% and 91.7% respectively and shall be undertaken.		Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	The Contractor shall, to the satisfaction of the Engineer, install effective dust suppression measures and take such other measures as may be necessary to ensure that at the Site boundary and any nearby sensitive receiver, dust levels are kept to acceptable levels.	construction period	Contractor	TMEIA Avoid dust generation		Y		~
4.8.1	3.8	The Contractor shall not burn debris or other materials on the works areas.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	In hot, dry or windy weather, the watering programme shall maintain all exposed road surfaces and dust sources wet.	All unpaved haul roads / throughout construction period in hot, dry or windy weather	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		\$
4.8.1	3.8	Where breaking of oversize rock/concrete is required, watering shall be implemented to control dust. Water spray shall be used during the handling of fill material at the site and at active cuts, excavation and fill sites where dust is likely to be created.	construction period	Contractor	TMEIA Avoid dust generation		Y		N/A
4.8. 1	3.8	Open dropping heights for excavated materials shall be controlled to a maximum height of 2m to minimise the fugitive dust arising from unloading.		Contractor	TMEIA Avoid dust generation		Y		N/A
4.8.1	3.8	During transportation by truck, materials shall not be loaded to a level higher than the side and tail boards, and shall be dampened or covered before transport.		Contractor	TMEIA Avoid dust generation		Y		N/A
4.8.1	3.8	Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards.	construction period	Contractor	TMEIA Avoid dust generation		Y		N/A
4.8.1	3.8	No earth, mud, debris, dust and the like shall be deposited on public roads. Wheel washing facility shall be usable prior to any earthworks excavation activity on the site.		Contractor	TMEIA Avoid dust		Y		✓

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imj	plementa Stages	tion	Status *
	Reference					D	С	0	
4.8.1	3.8	Areas of exposed soil shall be minimised to areas in which works have been completed shall be restored as soon as is practicable.	All exposed surfaces / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		V
4.8.1	3.8	All stockpiles of aggregate or spoil shall be enclosed or covered and water applied in dry or windy condition.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		N/A
4.11	Section 3	EM&A in the form of 1 hour and 24 hour dust monitoring and site audit.	All representative existing ASRs / throughout construction period	Contractor	EM&A Manual		Y		N/A (Results adopted from published EM&A data of Contract No. HY/2012/08)
WATER QUAL	ITY (LAND V	NORKS)							
6.10	-	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		N/A
6.10	-	Sewage effluent and discharges from on- site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided.		Contractor	TM-EIAO		Y		¥
6.10	-	Storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<i>·</i>
6.10	-	Silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm.		Contractor	TM-EIAO		Y		~
6.10	-	Temporary access roads should be surfaced with crushed stone or gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		1
6.10	-	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.		Contractor	TM-EIAO		Y		N/A
6.10	-	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		4
6.10	-	Open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms.		Contractor	TM-EIAO		Y		N/A

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	-	olementa Stages		Status *
						D	C	0	
6.10	5.8	Manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers.	construction period	Contractor	TM-EIAO		Y		4
6.10	-	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		1
6.10	-	All vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit.	construction period	Contractor	TM-EIAO		Y		~
6.10	-	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		N/A
6.10	-	Vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal.	construction period	Contractor	TM-EIAO		Y		N/A
6.10	-	The Contractor shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately.		Contractor	TM-EIAO		Y		✓
6.10	-	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	All areas/ throughout construction period	Contractor	TM-EIAO Waste Disposal Ordinance		Y		<i>•</i>

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imp	plementa Stages	tion	Status *
	Reference					D	C	0	
6.10	-	All fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank.		Contractor	TM-EIAO		Y		\$
6.10	-	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		N/A
6.10	-	Roadside gullies to trap silt and grit shall be provided prior to discharging the stormwater into the marine environment. The sumps will be maintained and cleaned at regular intervals.	Roadside/design and operation	Design Consultant/ Contractor	TM-EIAO	Y		Y	N/A
6.10	Section 11	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	All areas/ throughout construction period	Contractor	EM&A Manual		Y		~
WASTE									
12.6		The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		4
12.6		The Contractor shall prepare and implement a Waste Management Plan which specifies procedures such as a ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of wastes does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposed. A recording system for the amount of waste generated, recycled and disposed (locations) should be established.		Contractor	TMEIA, Works Branch Technical Circular No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material		Y		~
12.6		The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.		Y		
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures including waste reduction, reuse and recycling.	Contract Mobilisation	Contractor	TMEIA		Y		✓

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imp	lementa Stages	tion	Status *
	Reference					D	C	0	
12.6	8.1	The extent of cutting operation should be optimised where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.		Contractor	TMEIA		Y		✓
12.6	8.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	No waste shall be burnt on site.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The Contractor shall be prohibited from disposing of C&D materials at any sensitive locations. The Contractor should propose the final disposal sites in the EMP and WMP for approval before implementation.	construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust/ surface run off.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation.	All areas / throughout construction period	Contractor	TMEIA		Y		1
12.6	8.1	Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D materials arising. The use of more durable formwork/plastic facing for construction works should be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should avoid over-ordering and wastage.	construction period	Contractor	TMEIA		Y		✓

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual		Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imj	plementa Stages	tion	Status *
	Reference					D	C	0	
12.6	8.1	The Contractor should recycle as many C&D materials (this is a waste section) as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities.	construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All falsework will be steel instead of wood.	All areas / throughout construction period	Contractor	TMEIA		Y		1
12.6	8.1	Chemical waste producers should register with the EPD. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows: <i>f</i> suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; <i>f</i> Having a capacity of <450L unless the specifications have been approved by the EPD; and w Chinese according to the instructions prescribed in Schedule 2 of the Regulations. <i>f</i> Clearly labelled and used solely for the storage of chemical wastes; <i>f</i> Enclosed with at least 3 sides; <i>f</i> Impermeable floor and bund with 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; <i>f</i> Adequate ventilation;	construction period	Contractor	TMEIA		Y		\$

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imp	plementa Stages	tion	Status *
	Reference					D	С	0	
		f Sufficiently covered to prevent rainfall							
		entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and							
		f Incompatible materials are adequately							
		separated.							
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Adequate numbers of portable toilets should be provided for on- site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.		Contractor	TMEIA		Y		*
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A
12.6	8.1	General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes. Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared daily and shall be disposed of to the nearest licensed landfill or refuse transfer station. Burning of refuse on construction sites is prohibited.	construction period	Contractor	TMEIA		Y		
12.6	8.1	All waste containers shall be in a secure area on hardstanding;	All areas / throughout construction period	Contractor	TMEIA		Y		<>
12.6	8.1	Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.	construction period	Contractor	TMEIA		Y		*
12.6	Section 8	EM&A of waste handling, storage, transportation, disposal procedures and documentation through the site audit programme shall be undertaken.		Contractor	EM&A Manual		Y		~

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Imp	plementa Stages	tion	Status *
	Reference					D	С	0	
10.9	7.6	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) (CM1)		Design Consultant/ Contractor	TMEIA	Υ	Y		N/A
10.9	7.6	Trees unavoidably affected by the works shall be transplanted where practical. Trees will 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. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme (CM2)	during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Hillside and roadside screen planting to proposed roads, associated structures and slope works (CM3)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Hydroseeding or sheeting of soil stockpiles with visually unobstrusive material (in earth tone) (CM4)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Screening of construction works by hoardings around works area in visually unobtrusive colours, to screen works (CM5)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Control night-time lighting and glare by hooding all lights (CM6)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Ensure no run-off into water body adjacent to the Project Area (CM7)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (CM8)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Recycle/ Reuse all felled trees and vegetation, e.g. mulching (CM9)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Compensatory tree planting 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 (CM10)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A

Legend: D=Design, C=Construction, O=Operation

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Im	plementa Stages	tion	Status *
	Reference					D	С	0	
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y		n/a. To be maintained by HyD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y		n/a. To be maintained by HyD/LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and minimise unnecessary light spill (OM3)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y		n/a. To be maintained by HyD
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement (OM4)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y		n/a. To be maintained by HyD/ArchSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities (OM5)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y		n/a. To be maintained by HyD/ArchSD
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (OM6)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y		n/a. To be maintained by HyD/ArchSD

Legend: D=Design, C=Construction, O=Operation

<b>EIA Reference</b>	EM&A	Environmental Protection Measures	Location/ Timing	Implementation	<b>Relevant Standard</b>	Imp	lementa	tion	Status *
	Manual			Agent	or Requirement		Stages		
	Reference					D	С	0	

\* Remarks:

✓ Compliance of Mitigation Measures

<> Compliance of Mitigation but need improvement

x Non-compliance of Mitigation Measures

▲ Non-compliance of Mitigation Measures but rectified by Contractor

△ Deficiency of Mitigation Measures but rectified by Contractor

N/A Not Applicable in Reporting Period

Legend: D=Design, C=Construction, O=Operation

Appendix D

Summary of Action and Limit Levels

Parameters	Action	Limit
4 Hour TSP Level in μg/m³	ASR1 = 213	260
	ASR5 = 238	
	AQMS1 = 213	
	ASR6 = 238	
	ASR10 = 214	
Hour TSP Level in µg /m³	ASR1 = 331	500
	ASR5 = 340	
	AQMS1 = 335	
	ASR6 = 338	
	ASR10 = 337	

## Table D1Action and Limit Levels for 1-hour and 24-hour TSP

# Table D2Actions in the Event of Landfill Gas being Detectedin Excavation / Confined Area

Parameter	Measurement	Action
Oxygen	< 19%	- Ventilate to restore oxygen to > 19%
	< 18%	- Stop work
		- Evacuate personnel / prohibit entry
		- Increase ventilation to restore to > 19%
Methane	>10% LEL (>	- Prohibit hot work
	0.5% v/v)	- Ventilate to restore methane to < 10% LEL
	> 20% LEL	- Stop work
	(>1% v/v)	- Evacuate personnel / prohibit entry
		- Increase ventilation to restore to $< 10\%$
Carbon Dioxide	> 0.5%	- Ventilate to restore oxygen to $< 0.5\%$
	> 1.5%	- Stop work
		- Evacuate personnel / prohibit entry
		- Increase ventilation to restore to $< 0.5\%$

Appendix E

## Event Action Plan

## Appendix E1Event/Action Plan for Air Quality

	ACTION								
EVENT	ET <sup>(1)</sup>	IEC <sup>(1)</sup>	ER <sup>(1)</sup>	Contractor					
Action Level									
1. Exceedance for one sample	1. Identify the source.	1. Check monitoring data submitted	1. Notify Contractor.	1. Rectify any unacceptable practice					
	2. Inform the IEC and the ER.	by the ET.		2. Amend working methods if					
	<ol><li>Repeat measurement to confirm finding.</li></ol>	<ol><li>Check Contractor's working method.</li></ol>		appropriate					
	<ol> <li>Increase monitoring frequency to daily.</li> </ol>								
2. Exceedance for two	1. Identify the source.	<ul><li>submitted by the ET.</li><li>2. Check the Contractor's working 2.</li></ul>	1. Confirm receipt of notification of	1. Submit proposals for remedial					
or more consecutive	2. Inform the IEC and the ER.		failure in writing.	actions to IEC within 3 working					
samples	3. Repeat measurements to confirm		2. Notify the Contractor.	days of notification					
	findings.	method.	3. Ensure remedial measures properly	2. Implement the agreed proposals					
	<ol> <li>Increase monitoring frequency to daily.</li> </ol>	3. Discuss with the ET and the Contractor on possible remedial	implemented.	3. Amend proposal if appropriate					
	5. Discuss with the IEC and the	measures.							
	Contractor on remedial actions required.	<ol> <li>Advise the ER on the effectiveness of the proposed remedial measures.</li> </ol>							
	6. If exceedance continues, arrange	5. Supervise implementation of							
	meeting with the IEC and the ER.	remedial measures.							
	<ol><li>If exceedance stops, cease additional monitoring.</li></ol>								

	ACTION								
EVENT	ET <sup>(1)</sup>	IEC <sup>(1)</sup>	ER <sup>(1)</sup>	Contractor					
Limit Level									
1. Exceedance for one sample	<ol> <li>Identify the source.</li> <li>Inform the ER and the DEP.</li> </ol>	1. Check monitoring data submitted by the ET.	<ol> <li>Confirm receipt of notification of failure in writing.</li> </ol>	1. Take immediate action to avoid further exceedance					
	3. Repeat measurement to confirm finding.	2. Check Contractor's working method.	<ol> <li>Notify the Contractor.</li> <li>Ensure remedial measures are</li> </ol>	2. Submit proposals for remedial actions to IEC within 3 working days of notification					
	4. Increase monitoring frequency to daily.	<ol> <li>Discuss with the ET and the Contractor on possible remedial measures.</li> </ol>	properly implemented.	3. Implement the agreed proposals					
	5. Assess effectiveness of Contractor's remedial actions and keep the IEC, the DEP and the ER informed of	<ol> <li>Advise the ER on the effectiveness of the proposed remedial measures.</li> </ol>		4. Amend proposal if appropriate					
	the results.	5. Supervise implementation of remedial measures.							
2. Exceedance for two or more consecutive	1. Notify the IEC, the ER, the DEP and the Contractor.	the Contractor on the potential	1. Confirm receipt of notification of failure in writing.	1. Take immediate action to avoid further exceedance.					
samples	2. Identify the source.		remedial actions. 2. Notify the Contractor.	2. Notify the Contractor.	2. Submit proposals for remedial				
	3. Repeat measurements to confirm findings.	2. Review the Contractor's remedial actions whenever	3. In consultation with the IEC, agree with the Contractor on the	actions to IEC within 3 working days of notification.					
	4. Increase monitoring frequency to daily.	necessary to assure their effectiveness and advise the ER accordingly.	remedial measures to be implemented.	<ul><li>3. Implement the agreed proposals.</li><li>4. Resubmit proposals if problem sti</li></ul>					
	<ul> <li>5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Arrange meeting with the IEC</li> </ul>	<ol> <li>Supervise the implementation of remedial measures.</li> </ol>	<ol> <li>Ensure remedial measures are properly implemented.</li> <li>If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is</li> </ol>	not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.					
	and the ER to discuss the remedial actions to be taken. 7. Assess effectiveness of the Contractor's remedial actions		work until the exceedance is abated.						

and keep the IEC, the DEP and the ER informed of the results.

8. If the exceedance stops, cease additional monitoring.

Abbreviations: ET - Environmental Team, IEC - Independent Environmental Checker, ER - Engineer's Representative, DEP - Director of Environmental Protection

Appendix F

## EM&A Monitoring Schedule

## HY/2017/10 Tuen Mun - Chek Lap Kok Link - Northern Tunnel Connection Buildings, E&M Works Landfill Gas Monitoring Schedule (1 to 31 December 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01-Dec			04-Dec	
		LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &
		p.m.)	p.m.)	p.m.)	p.m.)	p.m.)
06-Dec	07-Dec	08-Dec	09-Dec	10-Dec	11-Dec	12-Dec
	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &
			p.m.)		p.m.)	p.m.)
13-Dec	14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	19-Dec
		LFG Monitoring (a.m. &			LFG Monitoring (a.m. &	
			p.m.)		p.m.)	p.m.)
	. ,	. ,	. ,	. ,	. ,	. ,
20 Dec	01 Dec	00 Dec	00 Dec			
20-Dec	21-Dec		23-Dec	24-Dec	25-Dec	26-Dec
		LFG Monitoring (a.m. & p.m.)	p.m.)	p.m.)		
	p.m.)	p.m.)	p.m.)	p.m.)		
27-Dec	28-Dec		30-Dec			
	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &		
	p.m.)	p.m.)	p.m.)	p.m.)		

## HY/2017/10 Tuen Mun - Chek Lap Kok Link - Northern Tunnel Connection Buildings, E&M Works Landfill Gas Monitoring Schedule (1 to 31 January 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					01-Jan	02-Jan
						LFG Monitoring (a.m. 8
						p.m.)
00.1						
03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	
	•	LFG Monitoring (a.m. &	• •	•		• •
	p.m.)	p.m.)	p.m.)	p.m.)	p.m.)	p.m.)
10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jar
10-Jan		LFG Monitoring (a.m. &				
	p.m.)	p.m.)	p.m.)	p.m.)	p.m.)	p.m.)
17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jar
	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	
	p.m.)		p.m.)	• •	p.m.)	p.m.)
	, ,	,	, ,	, ,	r ,	r /
24-Jan	25-Jan					
	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. &	LFG Monitoring (a.m. 8
	p.m.)	p.m.)	p.m.)	p.m.)	p.m.)	p.m.)
04 1						
31-Jan						
		o Control Building The co		<u> </u>	l	

The schedule is subject to excavation work at Main Control Building. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

Appendix G

Calibration Certificate of Monitoring Equipment



## MSA Hong Kong Ltd. 25/F Jupiter Tower, 9 Jupiter Street, Hong Kong Tel 852-22587588 Fax 25478780 Email info.hk@msasafety.com Website www.msasafety.com

Date: 26-Nov-20

# Ref.2020/11/056CustomerGammon Constructions Limited

## CERTIFICATE FOR CALIBRATION CHECK TEST

Model	Serial No.	Calibration Check Gas	Regulator	Full Scale	Response
		1.45% Methane,		100% LEL	29%LEL
Altair 5XIR	145986	15% Oxygen	.25litre/min	30% Vol	15% O2
		2.5% Carbon Dioxide		9.99%	2.5% CO2

Remarks: Regular inspection completed. Calibration passed

MSA Hong Kong Ltd. certify that instrument/s listed above has/have been calibrated check tested on: 26-Nov-20

This instrument was calibrated in accordance with all requirements of the specifications of MSA.

This instrument must be calibration checked prior to use in accordance with the instruction manual.

This instrument was calibrated using NIST traceable equipment and was in accordance with all requirements of the drawings and specifications of MSA.

For and on behalf of MSA Hong Kong Ltd.

Authorised Signature

Appendix H

Landfill Gas Monitoring Results and Graphical Presentation

#### Landfill Gas Monitoring Results on Methane Level

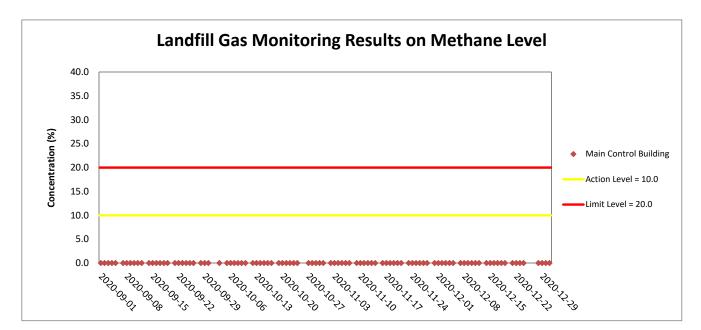
Project	Works	Date(yyyy-mm-dd)	Monitoring Location	Time (hh:mm, 24hour)	Results (%)	Action Level (%)	Limit Level (%)
TMCLKL		2020-12-01	Main Control Building	8:15	0	. /	1
TMCLKL	HY/2017/10	2020-12-01	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-02	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-02	Main Control Building	13:15	0		
TMCLKL		2020-12-03	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-03	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-04	Main Control Building	8:15	0		
TMCLKL		2020-12-04	Main Control Building	13:15	0		
TMCLKL		2020-12-05	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-05	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-07	Main Control Building	8:15	0		
TMCLKL		2020-12-07	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-08	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-08	Main Control Building	13:15	0		
TMCLKL		2020-12-09	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-09	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-09	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-10	Main Control Building	13:15	0		
TMCLKL		2020-12-10	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-11	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-11	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-12	Main Control Building	13:15	0		
TMCLKL			0		0		
TMCLKL		2020-12-14 2020-12-14	Main Control Building Main Control Building	8:15 13:15	0		
TMCLKL	HY/2017/10 HY/2017/10		-	8:15	0		
TMCLKL		2020-12-15	Main Control Building		0	10.0	20.0
		2020-12-15	Main Control Building	13:15	0		
TMCLKL		2020-12-16	Main Control Building	8:15	-		
TMCLKL	HY/2017/10	2020-12-16	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-17	Main Control Building	8:15	0		
TMCLKL		2020-12-17	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-18	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-18	Main Control Building	13:15	0		
TMCLKL		2020-12-19	Main Control Building	8:15	0		
	HY/2017/10	2020-12-19	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-21	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-21	Main Control Building	13:15	0		
TMCLKL		2020-12-22	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-22	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-23	Main Control Building	8:15	0		
TMCLKL		2020-12-23	Main Control Building	13:15	0		
TMCLKL		2020-12-24	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-24	Main Control Building	13:15	0		
TMCLKL		2020-12-28	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-28	Main Control Building	13:15	0		
TMCLKL		2020-12-29	Main Control Building	8:15	0		
TMCLKL		2020-12-29	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-30	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-30	Main Control Building	13:15	0		
TMCLKL	HY/2017/10	2020-12-31	Main Control Building	8:15	0		
TMCLKL	HY/2017/10	2020-12-31	Main Control Building	13:15	0		
	·		· · · · ·	Average	0		•
				Min.	0		
				Max.	0		

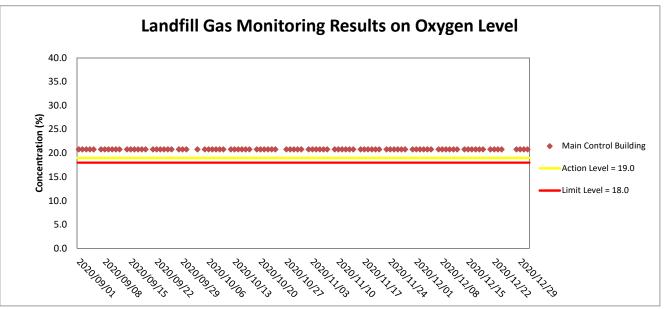
#### Landfill Gas Monitoring Results on Oxygen Level

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Results (%)	Action Level (%)	Limit Level (%)
TMCLKL		2020-12-01	Main Control Building	8:15	20.8		
MCLKL		2020-12-01	Main Control Building	13:15	20.8		
<b>MCLKL</b>	HY/2017/10	2020-12-02	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-02	Main Control Building	13:15	20.8		
TMCLKL		2020-12-03	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-03	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-04	Main Control Building	8:15	20.8		
TMCLKL		2020-12-04	Main Control Building	13:15	20.8		
TMCLKL		2020-12-05	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-05	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-07	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-07	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-08	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-08	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-09	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-03	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-09	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-10	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-10	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-11	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-11	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-12	Main Control Building	13:15	20.8		
TMCLKL		2020-12-12	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-14	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-14	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10		0			19.0	18.0
TMCLKL		2020-12-15	Main Control Building	13:15 8:15	20.8 20.8		
TMCLKL	HY/2017/10 HY/2017/10	2020-12-16	Main Control Building				
		2020-12-16	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-17	Main Control Building	8:15	20.8		
TMCLKL		2020-12-17	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-18	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-18	Main Control Building	13:15	20.8		
TMCLKL		2020-12-19	Main Control Building	8:15	20.8		
TMCLKL		2020-12-19	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-21	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-21	Main Control Building	13:15	20.8		
TMCLKL		2020-12-22	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-22	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-23	Main Control Building	8:15	20.8		
TMCLKL		2020-12-23	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-24	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-24	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-28	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-28	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-29	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-29	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-30	Main Control Building	8:15	20.8		
TMCLKL		2020-12-30	Main Control Building	13:15	20.8		
TMCLKL	HY/2017/10	2020-12-31	Main Control Building	8:15	20.8		
TMCLKL	HY/2017/10	2020-12-31	Main Control Building	13:15	20.8		
				Average	20.8		
				Min.	20.8		
				Max.	20.8		

### Landfill Gas Monitoring Results on Carbon Dioxide Level

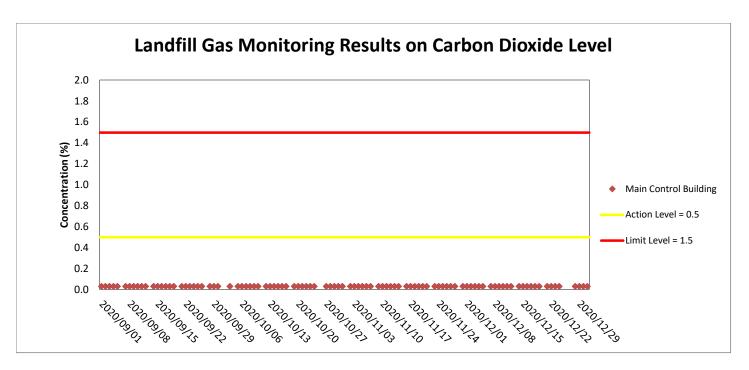
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Results (%)	Action Level (%)	Limit Level (%)
TMCLKL	HY/2017/10	2020-12-01	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-01	Main Control Building	13:15	0.03		
TMCLKL	HY/2017/10	2020-12-02	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-02	Main Control Building	13:15	0.03		
TMCLKL	HY/2017/10	2020-12-03	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-03	Main Control Building	13:15	0.03		
TMCLKL	HY/2017/10	2020-12-04	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-04	Main Control Building	13:15	0.03		
TMCLKL	HY/2017/10	2020-12-05	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-05	Main Control Building	13:15	0.03		
TMCLKL	HY/2017/10	2020-12-07	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-07	Main Control Building	13:15	0.03		
TMCLKL		2020-12-08	Main Control Building	8:15	0.03		
TMCLKL		2020-12-08	Main Control Building	13:15	0.03		
TMCLKL		2020-12-09	Main Control Building	8:15	0.03		
TMCLKL		2020-12-09	Main Control Building	13:15	0.03		
TMCLKL		2020-12-10	Main Control Building	8:15	0.03		
TMCLKL		2020-12-10	Main Control Building	13:15	0.03		
TMCLKL		2020-12-11	Main Control Building	8:15	0.03		
TMCLKL		2020-12-11	Main Control Building	13:15	0.03		
TMCLKL		2020-12-12	Main Control Building	8:15	0.03		
TMCLKL		2020-12-12	Main Control Building	13:15	0.03		
TMCLKL		2020-12-12	Main Control Building	8:15	0.03		
TMCLKL		2020-12-14	Main Control Building	13:15	0.03		
TMCLKL		2020-12-14	Main Control Building	8:15	0.03		
TMCLKL		2020-12-15	Main Control Building	13:15	0.03	0.5	1.5
TMCLKL		2020-12-15	Main Control Building	8:15	0.03		
TMCLKL		2020-12-16	Main Control Building	13:15	0.03		
TMCLKL				8:15	0.03		
TMCLKL		2020-12-17 2020-12-17	Main Control Building Main Control Building	13:15	0.03		
TMCLKL		2020-12-17	Main Control Building	8:15	0.03		
TMCLKL			9		0.03		
TMCLKL		2020-12-18	Main Control Building	13:15			
TMCLKL		2020-12-19	Main Control Building	8:15	0.03		
		2020-12-19	Main Control Building	13:15	0.03		
TMCLKL		2020-12-21	Main Control Building	8:15	0.03		
TMCLKL		2020-12-21	Main Control Building	13:15	0.03		
TMCLKL		2020-12-22	Main Control Building	8:15	0.03		
TMCLKL		2020-12-22	Main Control Building	13:15	0.03		
TMCLKL		2020-12-23	Main Control Building	8:15	0.03		
TMCLKL		2020-12-23	Main Control Building	13:15	0.03		
TMCLKL		2020-12-24	Main Control Building	8:15	0.03		
TMCLKL		2020-12-24	Main Control Building	13:15	0.03		
TMCLKL		2020-12-28	Main Control Building	8:15	0.03		
TMCLKL		2020-12-28	Main Control Building	13:15	0.03		
TMCLKL		2020-12-29	Main Control Building	8:15	0.03		
TMCLKL		2020-12-29	Main Control Building	13:15	0.03		
TMCLKL		2020-12-30	Main Control Building	8:15	0.03		
TMCLKL		2020-12-30	Main Control Building	13:15	0.03		
TMCLKL		2020-12-31	Main Control Building	8:15	0.03		
TMCLKL	HY/2017/10	2020-12-31	Main Control Building	13:15	0.03		
				Average	0.03		
				Min.	0.03		
				Max.	0.03		





Weather condition within the reporting period was sunny to rainy

- Major construction works undertaken within the reporting period include
- Handover Inspection at Main Control Building;
- Handover Inspection at Ventilation Plant Room;
- Handover Inspection at North Ventilation Building;
- Handover Inspection at Administration Building;
- Handover Inspection at Maintenance Depot;
- ABWF Works at Fire Services Department Building;
- External cladding & luvre installation, E&M works and final finishing works at Customs and Excise Department Building;
- Handover Inspection at Kiosk N1;
- Handover Inspection at Kiosk N2;
- Handover Inspection at the Tunnel;
- Handover Inspection at C3 area;
- Handover Inspection at Satellite Control Building;
- Handover Inspection at Kiosk S2;
- Handover Inspection at South Ventilation Building; and
- Handover Inspection at Northern Landfall and Southern Landfall.



Weather condition within the reporting period was sunny to rainy Major construction works undertaken within the reporting period include

- Handover Inspection at Main Control Building;
- Handover Inspection at Ventilation Plant Room;
- Handover Inspection at North Ventilation Building;
- Handover Inspection at Administration Building;
- Handover Inspection at Maintenance Depot;
- ABWF Works at Fire Services Department Building;
- External cladding & luvre installation, E&M works and final finishing works at Customs and Excise Department Building;
- Handover Inspection at Kiosk N1;
- Handover Inspection at Kiosk N2;
- Handover Inspection at the Tunnel;
- Handover Inspection at C3 area;
- Handover Inspection at Satellite Control Building;
- Handover Inspection at Kiosk S2;
- Handover Inspection at South Ventilation Building; and
- Handover Inspection at Northern Landfall and Southern Landfall.

Appendix I

Monthly Summary of Waste Flow Table

## Contract No. : HY/2017/10 Tuen Mun Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works Monthly Summary Waste Flow Table for 2020 (Year)

		Actual Quantities of Inert C&D Materials Generation								C&D wastes Generation	Actu	al Quantities of R	ecyclables Generation	ation
Month\Material	Total Quantity Generated	Hard Roo	ck and Large Bro	oken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Chemical Waste	General Refuse	Metals	Felled trees	Paper/ cardboard	Plastics
	sub-total	Broken Concrete	Milled Asphalt	sub-total	sub-total	sub-total	sub-total	sub-total					packaging	
Unit	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000m <sup>3</sup> )	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	0.025			0.000	-	-	0.025	-	-	187.500	-	-	0.070	-
Feb	0.074	0.026		0.026	-	-	0.074	-	-	176.100	-	-	0.084	-
Mar	0.650	0.117		0.117	_	-	0.366	0.284		237.850	-	-	0.042	_
Apr	0.139			0.000	_	-	0.139	-		167.820	-	-	-	-
Мау	6.431			0.000	-	1.975	0.023	4.433		255.300	_	-	0.056	-
Jun	17.433	0.053		0.053	-	0.421	0.087	16.925		200.740	-	-	-	
SUB-TOTAL	24.752	0.196	0.000	0.196	0.000	2.396	0.714	21.642	0.000	1225.310	0.000	0.000	0.252	0.000
Jul	41.112	0.008		0.008	_	6.284	0.103	34.725	-	231.480	_	-	0.056	-
Aug	21.401	0.007		0.007	-	-	0.163	21.238		132.420	-	-	0.035	_
Sep	30.658	0.005		0.005	-	-	0.033	30.625	-	89.120	_	-	0.028	-
Oct	1.129	0.011		0.011	-	-	0.210	0.919	-	188.690	_	-	0.028	-
Nov	0.114			-	_	-	0.114	-	-	150.600	-	-	0.014	-
Dec	0.020			-	_	-	0.020	_	-	69.780	-	-	-	-
TOTAL	119.185	0.227	-	0.227	0.000	8.680	1.356	109.149	0.000	2,087.400	0.000	0.000	0.413	0.000

Notes :

1 - The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

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

3 - Broken concrete for recycling into aggregates.

4 - Assumed 5 kg per damaged water-filled barrier.

5 - Disposed as Public Fills includes Hard Rock and Large Broken Concrete.

Appendix J

Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

### Appendix J1 Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	Total No. recorded since contract commencement
1-Hr TSP	Action	1	54
	Limit	0	11
24-Hr TSP	Action	0	4
	Limit	0	0
Landfill gas hazar	d monitoring		
Methane		0	0
<ul> <li>Oxygen</li> </ul>		0	0
Carbon Dioxi	de	0	0

## Appendix J2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

<b>Reporting Period</b>	Cumulative Statistics					
	Complaints	Notifications of Summons	Successful Prosecutions			
This Reporting Month (December 2020)	0	0	0			
Total No. received since contract commencement	1	0	0			

Email message		Environmental Resources Management
То	Ramboll Hong Kong Limited (ENPO)	2507, 25/F One Harbourfront, 18 Tak Fung Street,
From	ERM- Hong Kong, Limited	Hung Hom, Hong Kong Telephone: (852) 2271 3113 Facsimile: (852) 2723 5660
Ref/Project number	Contract No. HY/2017/10 Tuen Mun – Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works	E-mail: jasmine.ng@erm.com
Subject	Notification of Exceedance for Air Quality Impact Monitoring	ERM
Date	22 December 2020	

Dear Sir/ Madam,

Please find attached the Notification of Exceedance (NOE) of the following Log no.:

Action Level Exceedance 0463091\_10December2020\_1hrTSP\_Station ASR5

One (1) exceedance was recorded on 10 December 2020.

Regards,

famin

Dr Jasmine Ng Environmental Team Leader

### CONFIDENTIALITY NOTICE

This facsimile transmission is intended only for the use of the addressee and is confidential. If you are not the addressee it may be unlawful for you to read, copy, distribute, disclose or otherwise use the information in this facsimile. If you are not the intended recipient, please telephone or fax us immediately.



ERM-Hong Kong, Limited

## Contract No. HY/2017/10 Tuen Mun – Chek Lap Kok Link – Northern Connection Tunnel Buildings, Electrical and Mechanical Works

## Air Quality Impact Monitoring

### Notification of Exceedance

Log No.		Action Level Exceedance					
LUG NO.	0463	091_10December 2020_1hrTSP_Station ASR5					
	04030						
	[Total No. of Exceedances = 1]						
Date		10 December 2020 (Measured)					
	22 Decer	mber 2020 (Results obtained from ENPO Website)					
Monitoring Station		ASR5					
Parameter(s) with		1 – hr TSP					
Exceedance(s)		1 – III 15r					
Action Levels	1-hr TSP (μg/m <sup>3</sup> )	ASR1 = 331					
		ASR5 = 340					
		ASR6 = 338					
		ASR10 = 335 AOMS1 = 337					
	24-hr TSP (μg/m <sup>3</sup> )	AQMS1 = 337 ASR1 = 213					
	24-11 131 (µg/ 11*)	ASR5 = 238					
		ASR6 = 238					
		ASR10 = 214					
		AQMS1 = 213					
Limit Levels	1-hr TSP (μg/m <sup>3</sup> )	500					
	24-hr TSP (µg/m <sup>3</sup> )	260					
Measured Levels	Refer to Appendix A (Data are	source from Contract No. HY/2012/08).					
Works Undertaken (at	Works undertaken under this	Contract on 10 December 2020 included					
the time of monitoring	Indoor Architectural Buil	der's Work and Finishes works at Fire Services Department Building					
event)	• External cladding and lou	uvre installation and internal E&M works and final finishing works at					
	Customs and Excise Depa	artment Building.					
Possible Reason for	The exceedance is unlikely to	be due to the Contract, in view of the following:					
Action or Limit Level	With reference to the record	rded wind direction (vary between 13° and 24° and) and wind speed					
Exceedance(s)		ainly from north-easterly direction. Haze was observed during the					
	sampling time.						
		were conducted which are considered not major dust generating					
	,	our TSP at ASR5 was unlikely impacted by the works under this					
	project.	for the works universe impacted by the works under this					
	- /	or this Contract ware neved (several with vegetation _ Duct are not					
		er this Contract were paved/covered with vegetation. Dust are not					
	anticipated.						
		dance is unlikely to be due to the Contract.					
Actions Taken / To Be	No immediate action is considered ances.	lered necessary. The ET will monitor for future trends in					
Taken							
Remarks	_	December 2020, locations of air quality monitoring stations and wind					
	data are attached (refer to App	pendix A).					

Appendix A

Results of Air Quality Monitoring, Meteorological Data and Locations of Air Quality Monitoring Stations

		Air quali	ty monitor	ing results	on 10/12/20	20		
Project	Contract	Date	Station	Weather	Start time	Parameters	Results	Unit
TMCLKL	HY/2012/08	2020-12-10	ASR10	Hazy	8:08:00	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR10	Hazy	9:10:00	1-hour TSP	84	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR10	Hazy	10:12:00	1-hour TSP	128	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR6	Hazy	8:18:00	1-hour TSP	185	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR6	Hazy	9:20:00	1-hour TSP	217	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR6	Hazy	10:22:00	1-hour TSP	131	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR5	Hazy	8:30:00	1-hour TSP	255	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR5	Hazy	9:32:00	1-hour TSP	<mark>348</mark>	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR5	Hazy	10:34:00	1-hour TSP	191	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR1	Hazy	8:42:00	1-hour TSP	140	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR1	Hazy	9:44:00	1-hour TSP	162	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR1	Hazy	10:46:00	1-hour TSP	99	ug/m3
TMCLKL	HY/2012/08	2020-12-10	AQMS1	Hazy	8:53:00	1-hour TSP	110	ug/m3
TMCLKL	HY/2012/08	2020-12-10	AQMS1	Hazy	9:55:00	1-hour TSP	114	ug/m3
TMCLKL	HY/2012/08	2020-12-10	AQMS1	Hazy	10:57:00	1-hour TSP	105	ug/m3
TMCLKL	HY/2012/08	2020-12-10	AQMS1	Hazy	11:59:00	24-hour TSP	87	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR1	Hazy	11:48:00	24-hour TSP	114	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR10	Hazy	11:14:00	24-hour TSP	72	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR5	Hazy	11:36:00	24-hour TSP	166	ug/m3
TMCLKL	HY/2012/08	2020-12-10	ASR6	Hazy	11:24:00	24-hour TSP	110	ug/m3

Action level exceedance Limit level exceedance

	N	leteorological Data for Impact Monitoring i	n the reporting period
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction(degree)
20/12/10	0:00	0.4	102
20/12/10	1:00	0.4	29
20/12/10	2:00	0.4	20
20/12/10	3:00	0.4	30
20/12/10	4:00	0	97
20/12/10	5:00	0.9	351
20/12/10	6:00	0.4	335
20/12/10	7:00	0.4	49
20/12/10	8:00	1.3	12
20/12/10	9:00	1.3	24
20/12/10	10:00	1.3	13
20/12/10	11:00	1.3	19
20/12/10	12:00	1.3	21
20/12/10	13:00	0.9	202
20/12/10	14:00	1.3	192
20/12/10	15:00	1.3	261
20/12/10	16:00	0.9	279
20/12/10	17:00	0.4	96
20/12/10	18:00	0.4	96
20/12/10	19:00	0	85
20/12/10	20:00	0.4	78
20/12/10	21:00	0.9	38
20/12/10	22:00	1.3	101
20/12/10	23:00	1.8	82
20/12/11	0:00	1.8	91
20/12/11	1:00	0.4	87
20/12/11	2:00	0.9	38
20/12/11	3:00	0.9	13
20/12/11	4:00	0.4	16
20/12/11	5:00	0	102
20/12/11	6:00	0	114
20/12/11	7:00	0	103
20/12/11	8:00	0.4	135
20/12/11	9:00	1.3	141
20/12/11	10:00	0.4	130
20/12/11	11:00	0.9	141
20/12/11	12:00	1.3	206
20/12/11	13:00	0.9	203
20/12/11	14:00	1.8	201
20/12/11	15:00	1.3	207
20/12/11	16:00	0.4	276
20/12/11	17:00	0.9	269
20/12/11	18:00	0.4	267
20/12/11	19:00	0.4	274
20/12/11	20:00	0	58
20/12/11	21:00	0	158
20/12/11	22:00	0.4	290
20/12/11	23:00	0.4	306

