Civil Engineering and Development Department

EP-344/2009 – New Sewage Pumping Stations Serving KTD EP-337/2009 – New Distributor Roads Serving the Planned KTD

Contract No. KL/2012/03 Kai Tak Development –Stage 4 Infrastructure at Former North Apron Area

Monthly EM&A Report

May 2019

(Version 1.0)

Approved By	(Environmental Team Leader)
REMARKS:	

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

WELLAB accepts no responsibility for changes made to this report by third parties

WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, NT, Hong Kong Tel: (852) 2898 7388 Fax: (852) 2898 7076 Website: www.wellab.com.hk



Kai Tak Development Site Office Contract No. KL/2012/03 c/o AECOM 8/F, Grand Central Plaza, Tower 2 138 Shatin Rural Committee Road Shatin New Territories Hong Kong Your reference:

Our reference:

HKCEDD11/50/105811

Date: 13 June 2019

Attention: Mr Mickey Lee

BY EMAIL & POST (email: RE3@ktd-5a.com)

Dear Sirs

Agreement No. EDO 08/2018 Independent Environmental Checker (IEC) for CEDD Contract No. KL/2012/03 Kai Tak Development – Stage 4 Infrastructure at Former North Apron Area Verification of Monthly EM&A Report for May 2019

We refer to emails of 6 and 12 June 2019 attaching a Monthly EM&A Report for May 2019 prepared by the ET.

We have no further comment and hereby verify the captioned report in accordance with Clause 3.3 of the Environmental Permit nos. EP-337/2009 and EP-344/2009.

Please do not hesitate to contact the undersigned or our Ms Katherine Chu on 2618 2831 should you have any queries.

Yours faithfully ANEWR CONSULTING LIMITED

Independent Environmental Checker

LYMA/CWKK/lhmh

cc CEDD – Mr C K Choi (email: ckchoi@cedd.gov.hk) Wellab – Dr Priscilla Choy (email: Priscilla.Choy@wellab.com.hk)



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EXECUTIVE SUMMARY

Introduction

- This is the 66th Monthly Environmental Monitoring and Audit (EM&A) Report prepared by Wellab Ltd. for "Contract No. KL/2012/03 - Kai Tak Development –Stage 4 Infrastructure at Former North Apron Area" (Hereafter referred to as "the Project"). This contract comprises the construction of Schedule 2 Designated Projects (DP) Road D2 & Sewage Pumping Station PS2 and PS NPS which forms a part of the works under two Environmental Permits (EP), EP-337/2009 and EP-344/2009. The title of the designated projects under Environmental Permit No.: EP-344/2009 is "New sewage pumping stations serving Kai Tak Development" and under Environmental Permit No.: EP-337/2009 is "New distributor roads serving the planned Kai Tak Development". This report documents the findings of EM&A Works conducted from 1 to 31 May 2019.
- 2. All major construction works were completed, the site activities undertaken in the reporting month included:
 - Daily Cleaning
 - E&M Work , GRC coping, Landscape Work in PS2
 - Maintenance platform in DCS
 - E&M Works Scaffold Platform Installation in NPS

Environmental Monitoring Works

- 3. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- 4. Summary of the breaches of action and limit levels in the reporting month for the Project is tabulated in **Table I**.

Parameter	No. of Project-related Exceedance		Action Taken
I al'ameter	Action Level	Limit Level	Action Taken
1-hr TSP	0	0	N/A
24-hr TSP	0	0	N/A
Noise	0	0	N/A

 Table I
 Breaches of Action and Limit Levels for the Project in the Reporting Month

5. The Proposal for Cessation of Construction Phase EM&A Works at Road D2 for Environmental Permits (EP) No. EP-377/2009 was approved by the EPD on 15 April 2019. The impact environmental monitoring has been ceased since 15 April 2019.

Environmental Licenses and Permits

- 6. Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, Environmental Permits No. EP-344/2009 and EP-337/2009 were issued on 23 April 2009.
- 7. Registration of Chemical Waste Producer (Waste Producer Number: 5213-286-K2958-05).

8. Water Discharge License (WT00020971-2015).

Key Information in the Reporting Month

9. Summary of complaint received, reporting changes and notifications of any summons and successful prosecutions in the reporting month is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0		N/A	N/A	
Reporting Changes	0		N/A	N/A	
Notifications of any summons & prosecutions received	0		N/A	N/A	

Future Key Issues

10. The future key environmental issues in the coming month include:

- Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Water spraying for dust generating activity and on haul road;
- Proper storage of construction materials on site;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation of general and construction waste on site;
- Noise from operation of the equipment, especially for machinery on-site; and
- Review and implementation of temporary drainage system for the surface runoff.

1. INTRODUCTION

Background

- 1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kuk, Kowloon Bay, Kwun Tong and Cha Kwo Ling. It covers a land area of about 328 hectares. Stage 4 Infrastructure at Former North Apron Area is one of the construction stages of KTD. Schedule 2 DPs in this Project include new distributor roads serving the planned KTD and new sewage pumping stations serving the planned KTD. The general layout of the Project is shown in **Figure 1**.
- 1.2 Two Environmental Permits (EPs) No. EP-344/2009 and EP-337/2009 were also issued to the Permit Holder Civil Engineering and Development Department on 23 April 2009 for new sewage pumping stations serving the planned KTD and new distributor roads serving the planned KTD respectively.
- 1.3 A study of environmental impact assessment (EIA) was undertaken to identify the key issues of air quality, noise, water quality, waste, land contamination, cultural heritage and landscape and visual impact, and recommend possible mitigation measures associated with the works. The EIA Report (Register No. AEIAR-130/2009) was approved by the Environmental Protection Department (EPD) on 4 April 2009.
- 1.4 Wellab Limited (Wellab) is commissioned by Kwan On Construction Co., Ltd. (the Contractor) on 1st January 2019 to undertake the role of the Environmental Team (ET) for the Contract No. KL/2012/03 Stage 4 Infrastructure at Former North Apron Area. The construction work under KL/2012/03 comprises the construction of Road D2 & Sewage Pumping Station PS2 and PS NPS which forms a part of the works under two EPs (EP-337/2009 and EP-344/2009).
- 1.5 The construction commencement of this Contract was on 1st December 2013 for Road D2, Sewage Pumping Station PS2 and PS NPS. This is the 66th Monthly EM&A report summarizing the EM&A works for the Project from 1 to 31 May 2019.

Project Organizations

- 1.6 Different parties with different levels of involvement in the project organization include:
 - Project Proponent Civil Engineering and Development Department (CEDD).
 - The Engineer and the Engineer's Representative (ER) AECOM.
 - Environmental Team (ET) Wellab Limited (WL).
 - Independent Environmental Checker (IEC) ANewR Consulting Limited. (ANewR).
 - Contractor Kwan On Construction Co., Ltd. (Kwan On).

1.7 The key contacts of the Project are shown in **Table 1.1** and **Figure 5**.

Table 1.1Key Project Contacts					
Party	Role	Contact Person	Position	Phone No.	Fax No.
CEDD	Project Proponent	Mr. C. K. Choi	Senior Engineer	3106 2583	3579 4512
AECOM	Engineer's Representative	Mr. W. K. Leung Mr. Mickey Lee	CRE RE	2798 0771	3013 8864
	Environmental	Dr. Priscilla Choy	Environmental Team Leader	2151 2089	
Wellab	Team	Ms. Ivy Tam	Project Coordinator and Audit Team Leader	2151 2090	3107 1388
ANewR	Independent Environmental Checker	Mr. Adi Lee	Independent Environmental Checker	2618 2831	3007 8648
				2889 8675	2558 6900
Kwan On	Contractor	Mr. P.H. Ho	Site Agent	6146 6761 (H telephone nur	

Construction Activities undertaken during the Reporting Month

- 1.8 The site activities undertaken in the reporting month included:
 - Daily Cleaning
 - E&M Work , GRC coping, Landscape Work in PS2
 - Maintenance platform in DCS
 - E&M Works Scaffold Platform Installation in NPS
- 1.9 The construction programme showing the inter-relationship with environmental protection/mitigation measures is presented in **Table 1.2**.

Protection/Mitigation Measures			
Construction Works	Generated Major Environmental Impact	Control Measures	
Construction of superstructure of Pumping Station PS2 and NPS;	Dust, Water Quality, Waste Management	 Sufficient watering of the works site with active dust emitting activities; Properly cover the stockpiles; Appropriate desilting/sedimentation devices provided on site for treatment before discharge; Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall; and On-site waste sorting and implementation of trip ticket system. 	
Backfilling between sewerage manholes 1K1_1 and FMH10_340 and construction of manhole FMH10_370a at L6;	Dust, Noise	 Use of quiet plant and well-maintained construction plant; and Properly cover the stockpiles; 	
Installation of precast unit and construction of in-situ portions of Box Culvert B6; Construction of jacking pits nos. 1 and 2; Installation of gas pipe at pit no. 10; Construction of washout chamber at pit no. 11;	Noise, Waste Management	 Use of quiet plant and well-maintained construction plant; and Provide hoarding. Good management and control on construction waste reduction 	
Construction of sewerage manhole FMH 10 at Bailey Street; Widening works of Sung Wong Toi Road.	Noise	 Use of quiet plant and well-maintained construction plant; and Provide hoarding. 	
Pipe laying from manhole SMH2204 to Box Culvert B6; Laying of rising mains from PS2 to chainage CHA-18; Pipe laying from stormwater manholes SMH1962 to SMH1963 and construction of manholes SMH1953 and SMH1963 at L6; Installation of DCS;	Noise, Water Quality	 Use of quiet plant and well-maintained construction plant; and Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall. 	

Table 1.2 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures

Summary of EM&A Requirements

- 1.10 The EM&A programme requires construction noise monitoring, air quality monitoring, landscape and visual monitoring and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
 - All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event Action Plans;
 - Environmental requirements and mitigation measures, as recommended in the EM&A Manual under the EP.
- 1.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 6 of this report.
- 1.12 This report presents the implementation of the EM&A programme for the Project from 1 to 31 May 2019.

1.13 Air quality monitoring stations within 500m and noise monitoring stations within 300m from the boundary of this Project are considered as relevant monitoring locations. In such regard, the relevant air quality and noise monitoring locations are tabulated in **Table 1.3** (see **Figure 2 and 3** for their locations).

Locations	Monitoring Stations In accordance with EM&A Manual	Alternative Monitoring Stations
Air Quality Monitoring Stations		
AM2 - Lee Kau Yan Memorial School	Yes	AM2(A) – Ng Wah Catholic Secondary School
AM3 – Sky Tower	No	AM3(A) – Holy Trinity Bradbury Centre AM3(B) – Family Planning Association of Hong Kong**
AM4 – Grand Waterfront	No	AM4(A) – EMSD Workshop*
AM5 – CCC Kei To Secondary School	No	N/A^
AM6 – Site 1B4 (Planned)		N/A
Noise Monitoring Stations		
M6 – Holy Carpenter Primary School	No	M6(A) – Oblate Primary School
M7 – CCC Kei To Secondary School	Yes	N/A
M8 – Po Leung Kuk Ngan Po Ling College	No	M8(A) – Po Leung Kuk Ngan Po Ling College (Site Boundary) [#]
M9 – Tak Long Estate	Yes	N/A
M10 – Site 1B4 (Planned)	ed) N/A	

Table 1.3 Air Quality and Noise Monitoring Stations for this Project

Remarks:

> "Yes" – Monitoring station is the same as that stated in EM&A Manual

No – Monitoring station is not the same as that stated in EM&A Manual. Request for carrying monitoring works at the monitoring stations stated in EM&A Manual was rejected by owner of premise. Alternative monitoring stations were proposed by the ET of Schedule 3 EIA and approved by the EPD.

 \rightarrow N/A – No alternative monitoring station is required.

**AM3(B) – The permission of air quality monitoring works (24-hour TSP) at station AM3(A) was denied in November 2017, the monitoring works were resumed at the alternative station – AM3(B) in December 2017.

- *AM4(A) EMSD Workshop was cancelled due to unsuccessful accessibility of the facility. 1-hr TSP monitoring was conducted at AM4(B) Ma Tau Kuk Road (next to EMSD workshop) temporarily and 24-hr TSP monitoring was conducted at AM4(C) New Pumping Station under Contract No. KL/2012/03.
- ^AM5(A) Po Leung Kuk Ngan Po Ling College was cancelled because no permission was granted from the premise. Air quality monitoring was carried out at AM5 – CCC Kei To Secondary School.
- > # The alternative position of M8 (remark as M8(A)) was adopted on .
- 1.14 According to the Environmental Monitoring and Audit Manual (EM&A Manual) of the Kai Tak Development (KTD) Schedule 3 Environmental Impact Assessment (EIA) Report, the impact monitoring at the designated monitoring stations as required in KTD EM&A Manual under the EP, has been conducted in Environmental Monitoring Works for Kai Tak Development under Schedule 3 of KTD, which is on-going starting from December 2010, when the impact monitoring data under Schedule 3 of KTD were adopted for the Project.
- 1.15 Although Contract no. KLN/2013/16 under Schedule 3 of KTD has been superseded by KLN/2016/09 since early March 2017, the ET continued to adopt the impact monitoring data under Schedule 3 of KTD until appropriate new arrangement is agreed.

- 1.16 The Proposal for Cessation of Construction Phase EM&A Works at Road D2 for Environmental Permits (EP) No. EP-377/2009 was approved by the EPD on 15 April 2019. The impact environmental monitoring has been ceased since 15 April 2019. Weekly site inspection, Landscape and Visual Monitoring and reporting will be remained until the completion of Landscape Works.
- 1.17 Weekly site inspection, Landscape and Visual monitoring and reporting will be remained until the completion of landscape works for Environmental Permits (EP) No. EP-344/2009.

Status of Compliance with Environmental Permits Conditions

1.18 The status of required submission related to this Project under the Environmental Permits No. EP-337/2009 and EP-344/2009 is summarized in the **Table 1.4** and **Table 1.5** respectively:

EP Conditions	Submission	Submission Date	Remark
1.11	Notification of Commencement Date of Construction of Project	31 October 2013	For Road D2
2.3	Management Organization of Main Construction Companies	31 October 2013	For Contract No. KL/2012/03
2.4	Design Drawing(s) of the Project	28 October 2013	For Road D2
2.11	Landscape Mitigation Plan(s) for distributors road(s)	7 January 2014	For Road D2
2.12	As-built drawing(s) for the distributor road(s)	To be submitted at least one commencement of operation	
3.2	Baseline Monitoring Report	26 November 2010 (Part I) 24 December 2010 (Part II)	/
3.3	Four hard copies and one electronic copy of the Monthly EM&A Report No. 65 (April 2019)	14 May 2019	Monthly EM&A Report for Contract No. KL/2012/03

Table 1.4 Summary Table for Required Submission under EP No. EP-337/2009

Table 1.5 Summary Table for Required Submission under EP No. EP-344/2009

EP Conditions	Submission	Submission Date	Remark
1.11	Notification of Commencement Date of Construction of Project	31 October 2013	For Pumping Station PS2 and PS NPS
2.3	Management Organization of Main Construction Companies	31 October 2013	For Contract No. KL/2012/03
2.4	Design Drawing(s) of the Project	28 October 2013	For Pumping Station PS2 and PS NPS

EP Conditions	Submission	Submission Date	Remark
2.11	Landscape Mitigation Plan(s) for sewage pumping station(s)	7 January 2014	For Pumping Station PS2 and PS NPS
2.12	As-built drawing(s) for the sewage pumping station (s)	To be submitted at least one commencement of operation	
3.2	Baseline Monitoring Report	26 November 2010 (Part I) 24 December 2010 (Part II)	/
3.3	Four hard copies and one electronic copy of the Monthly EM&A Report No. 65 (April 2019)	14 May 2019	Monthly EM&A Report for Contract No. KL/2012/03

2. AIR QUALITY

Monitoring Requirements

2.1 According to EM&A Manual under the EPs, 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted to monitor the air quality for this Project. For regular impact monitoring, a sampling frequency of at least once in every six days at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

2.2 Seven designated monitoring stations were selected for air quality monitoring programme. Impact dust monitoring was conducted at six of the air quality monitoring stations (AM2, AM2(A), AM3(A), AM3(B), AM4(C) and AM5. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

Monitoring Stations	Locations	Location of Measurement
AM2	Lee Kau Yan Memorial School	Rooftop (about 8/F) Area
AM2(A)	Ng Wah Catholic Secondary School	Rooftop (about 8/F) Area
AM3(A)	Holy Trinity Bradbury Centre	Rooftop (about 8/F) Area
AM3(B)	Hong Kong Family Planning Association	Rooftop (about 4/F) Area
AM4(C)	New Pumping Station	Rooftop (about 6/F) Area
AM5	CCC Kei To Secondary School	Rooftop (about 10/F) Area
AM6	PA 15	Site 1B4 (Planned)

 Table 2.1
 Locations for Air Quality Monitoring

- 2.3 The Proposal for Cessation of Construction Phase EM&A Works at Road D2 for Environmental Permits (EP) No. EP-377/2009 was approved by the EPD on 15 April 2019. The impact environmental monitoring has been ceased since 15 April 2019.
- 2.4 1-hr TSP and 24-hr TSP monitoring were not required for Environmental Permits (EP) No. EP-344/2009.

3. NOISE

Monitoring Requirements

3.1 According to EM&A Manuals under the EP, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities within KTD. The regular monitoring frequency for each monitoring station shall be on a weekly basis to conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

- 3.2 Five designated monitoring stations were selected for noise monitoring programme. Noise monitoring was conducted at four designated monitoring stations (M6, M7, M8 and M9). **Figure 3** shows the locations of these stations.
- 3.3 Construction noise monitoring at Station M6 Holy Carpenter Primary School was rejected by the premise owner on 6th October 2014. The monitoring station has been relocated at a proposed alternative noise monitoring station M6(A) Oblate Primary School since 10th October 2014 to carry out the monitoring works.
- 3.4 The proposal for alternative position of M8 (remark as M8(A)) was agreed by IEC on 20th March 2019 in accordance with the Section 2.3.9 of EM&A Manual of the Project and the Environmental Protection Department (EPD) has no major objection on the proposal.

Monitoring Stations	Locations	Location of Measurement	
*M6(A)	Oblate Primary School	Rooftop (about 7/F) Area	
M7	CCC Kei To Secondary School	Rooftop (about 8/F) Area	
^M8(A)	Po Leung Kuk Ngan Po Ling College	Ground Level (at a position	
(A)	(Site Boundary)	3m above the ground)	
M9	Tak Long Estate	Car Park Building (about 2/F)	
M10	Site 1B4 (Planned)	-	

Table 3.1Noise Monitoring Stations

Remarks:

* Alternative noise monitoring station for M6 – Holy Carpenter Primary School from 10th October 2014 onwards

- 3.5 The Proposal for Cessation of Construction Phase EM&A Works at Road D2 for Environmental Permits (EP) No. EP-377/2009 was approved by the EPD on 15 April 2019. The impact environmental monitoring has been ceased since 15 April 2019.
- 3.6 1-hr TSP and 24-hr TSP monitoring were not required for Environmental Permits (EP) No. EP-344/2009.

[^] The proposal for alternative position of M8 (remark as M8(A)) was agreed by IEC on 20th March 2019 in accordance with the Section 2.3.9 of EM&A Manual of the Project and the Environmental Protection Department (EPD) has no major objection on the proposal. The Free Field noise measurement was adopted for Station M8(A) and its baseline reference noise level was adjusted with a correction of +3dB(A).

4. LANDSCAPE AND VISUAL

Monitoring Requirements

- 4.1 According to EM&A Manual of the Kai Tak Development EIA Study, ET shall monitor and audit the contractor's activities during the construction period on a weekly basis, and to report on the contractor's performance.
- 4.2 The Proposal for Cessation of Construction Phase EM&A Works at Road D2 for Environmental Permits (EP) No. EP-377/2009 was approved by the EPD on 15 April 2019. The impact environmental monitoring has been ceased since 15 April 2019. Weekly site inspection, Landscape and Visual Monitoring and reporting will be remained until the completion of Landscape Works.

Results and Observations

- 4.3 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix B**.
- 4.4 No non-compliance of the landscape and visual impact was recorded in the reporting month.
- 4.5 In accordance with the Action Plan presented in **Appendix C**, no corrective actions were required in the reporting month.

5. ENVIRONMENTAL AUDIT

Site Audits

- 5.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix B**.
- 5.2 Site audits were conducted on 3rd, 10th, 15th, 24th and 31st May 2019 in the reporting month. IEC site inspection was conducted on 15th May 2019. No non-compliance was observed during the site audits.

Status of Environmental Licensing and Permitting

5.3 All permits/licenses obtained for the Project are summarized in Table 6.1.

Permit No.	Valid	Period	— Details Stat	
Fermit No.	From	То	Details	Status
Environmental Perm	it (EP)			
EP-337/2009	23/04/09	N/A	Construction of new distributor roads serving the planned Kai Tak development.	Valid
EP-344/2009	23/04/09	N/A	Construction of a new sewage pumping station serving the planned Kai Tak development with installed capacity of more than 2,000 m ³ per day and a boundary of which is less than 150m from an existing or planned residential area or educational institution.	Valid
Effluent Discharge Li	icense			
WT00020971-2015	22/04/15	21/04/20	Discharge License for the discharge of wastewater from the construction site including contaminated surface run-off to the communal storm water drain	Valid
Registration of Chem	ical Waste P	Producer		
5213-286-K2958-05			Registration of chemical waste producer for chemical waste produced during construction of Stage 4 at former North Apron Area Infrastructure.	Valid

Table 5.1Summary of Environmental Licensing and Permit Status

Status of Waste Management

- 5.4 The amount of wastes generated by the major site activities of this Project during the reporting month is shown in **Appendix F**.
- 5.5 In respect of the dump truck cover, the Contractor is advised to take record photos and inspection to ensure that the skips of all dump trucks have been fully covered before leaving the site.

Implementation Status of Environmental Mitigation Measures

5.6 During site inspections in the reporting month, no non-conformance was identified. ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in Table 6.2.

	Obset valions	and Recommendations of Site ms	pechons for E1 -337/2009
Parameters	Date	Observations and Recommendations	Follow-up
Water Quality			
Air Quality			
Noise			
Waste/Chemical Management			
Landscape and Visual			
Permits /Licences			

 Table 5.2
 Observations and Recommendations of Site Inspections for EP-337/2009

Table 5.3	Observations and Recommendations of Site Inspections for EP-344/2009	9
	observations and recommendations of site inspections for Er 01,200	-

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality			
Air Quality			
Noise			
Waste/Chemical Management			
Landscape and Visual			
Permits /Licences			

Summary of Mitigation Measures Implemented

5.7 The monthly IEC audit was carried out on 15th May 2019, the summary were recorded as follows:

Follow up of last monthly audit:

• No major environmental deficiency was observed during the previous site audit.

Observation(s) in the reporting month:

- No major environmental deficiency was observed during the site audit.
- 5.8 An updated summary of the EMIS is provided in **Appendix D**.

Implementation Status of Event Action Plans

5.9 The Event Action Plans for air quality, noise and landscape and visual are presented in **Appendix C**.

Environmental Monitoring

5.10 The Cessation of Impact Environmental Monitoring Works (Construction Phase) was approved by the EPD. Impact Environmental Monitoring was ceased since 15 April 2019.

Landscape and visual

5.11 No non-compliance was recorded in the reporting month.

Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution

5.12 No environmental complaint and environmental prosecution was received in the reporting month. The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project are presented in **Appendix E**.

6. FUTURE KEY ISSUES

- 6.1 Major site activities undertaken for the coming two months include:
 - Daily Cleaning
 - E&M Work, GRC coping, Landscape Work in PS2
 - Maintenance platform, Leakage Detection,
 - Remedial Works in DCS
 - E&M Works Scaffold Platform Installation in NPS
 - Rectification Works at Sung Wong Toi Road
 - Maintenance at Pit 3
- 6.2 The tentative construction program for the Project is provided in **Appendix G.**

Key Issues for the Coming Month

- 6.3 Key environmental issues in the coming month include:
 - Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
 - Proper storage of construction materials on site;
 - Storage of chemicals/fuel and chemical waste/waste oil on site;
 - Accumulation of general and construction waste on site;
 - Noise from operation of the equipment, especially for machinery on-site; and
 - Review and implementation of temporary drainage system for the surface runoff.
- 6.4 The tentative program of major site activities and the impact prediction and environmental mitigation measures for the coming two months, i.e. June 2019 and July 2019 are summarized as follows:

Table 6.1Summary of the tentative program of major site activities, the impact prediction
and control measures for June and July 2019

Construction Works	Major Impact	Control Measures
	Prediction	
	Air quality impact	a) Covering stockpiles with tarpaulin or
	(dust)	similar means;
	Water quality	b) Provision of measures to prevent discharge into the
As mentioned in	impact (surface	stream;
Section 7.1	run-off)	
	Noise Impact	c) Controlling the number of plants use on site; and
	-	d) Regular maintenance of machines.
		-

7. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 7.1 The Proposal for Cessation of Construction Phase EM&A Works at Road D2 for Environmental Permits (EP) No. EP-377/2009 was approved by the EPD on 15 April 2019. The impact environmental monitoring has been ceased since 15 April 2019. Weekly site inspection, Landscape and Visual Monitoring and reporting will be remained until the completion of Landscape Works.
- 7.2 Weekly site inspection, Landscape and Visual Monitoring and reporting will be remained until the completion of Landscape Works for Environmental Permits (EP) No. EP-344/2009.

Complaints, Notification of any Summons and Prosecution Received

7.3 No environmental complaint and environmental prosecution was received in the reporting month. The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project are presented in **Appendix E**.

Recommendations

7.4 According to the environmental audit performed in the reporting month, the following recommendations were made:

Air Quality Impact

• To implement dust suppression measures on stockpiles.

Noise Impact

- To inspect the noise sources inside the site.
- To disperse the locations of noisy equipments and position the equipments as far away as possible from sensitive receivers.

Water Impact

• To prevent any surface runoff discharge into any stream course.

Waste/Chemical Management

- To check for any accumulation of waste materials or rubbish on site.
- To ensure the performance of sorting of C&D materials at source (during generation);
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the site.
- To provide proper storage area or drip trays for oil containers/ equipment on site.
- To avoid improper handling or storage of oil drum on site.

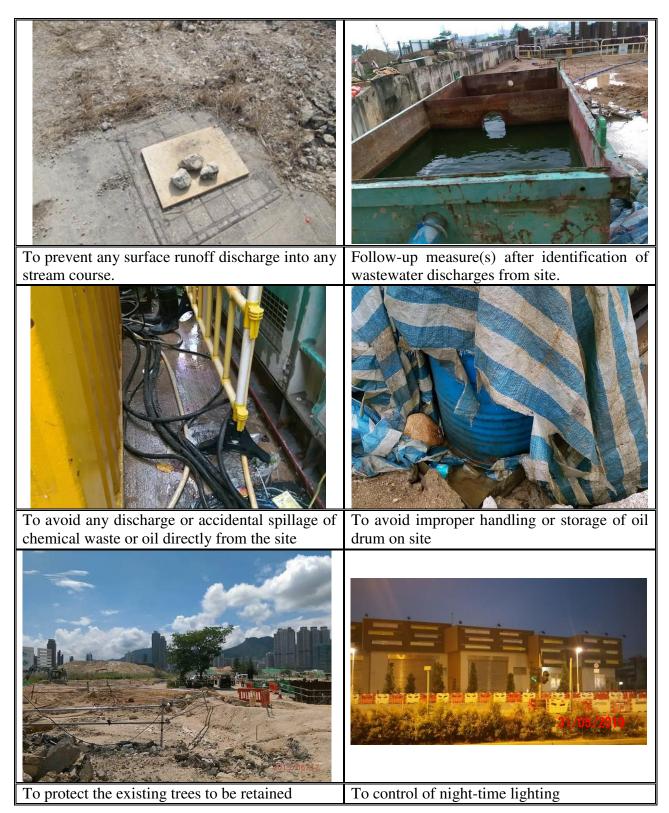
Landscape and Visual

- To protect the existing trees to be retained.
- To transplant the trees unavoidably affected by the works.
- To control of night-time lighting.
- To provide decorative screen hoarding.
- To complete landscape works at site area as early as possible.

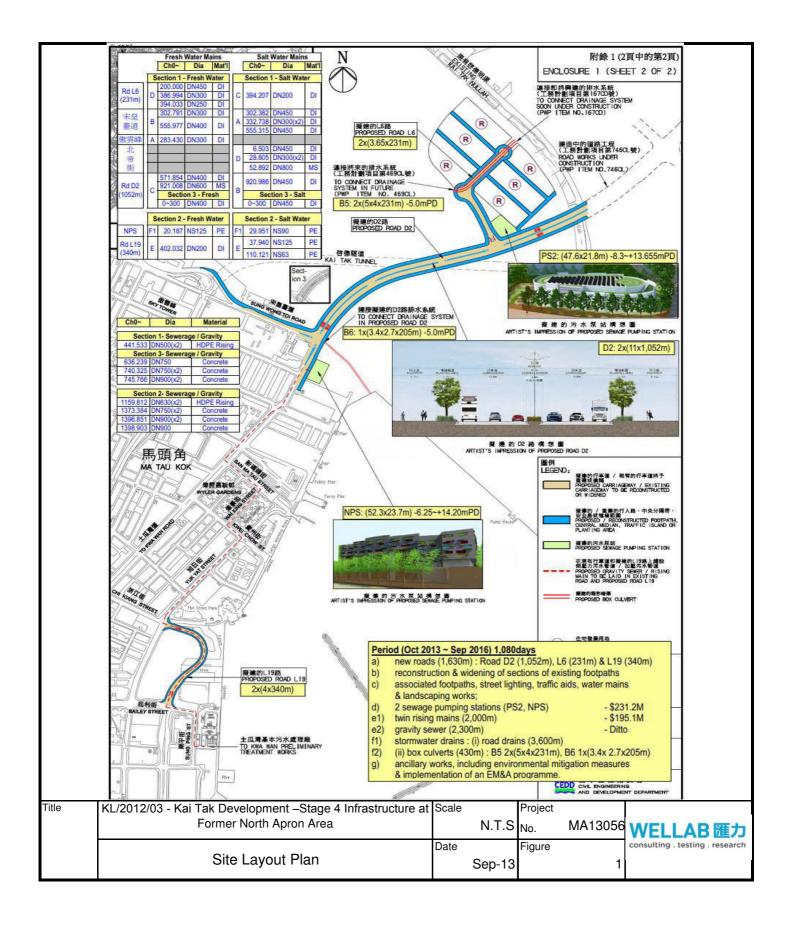
Effectiveness of Environmental Management

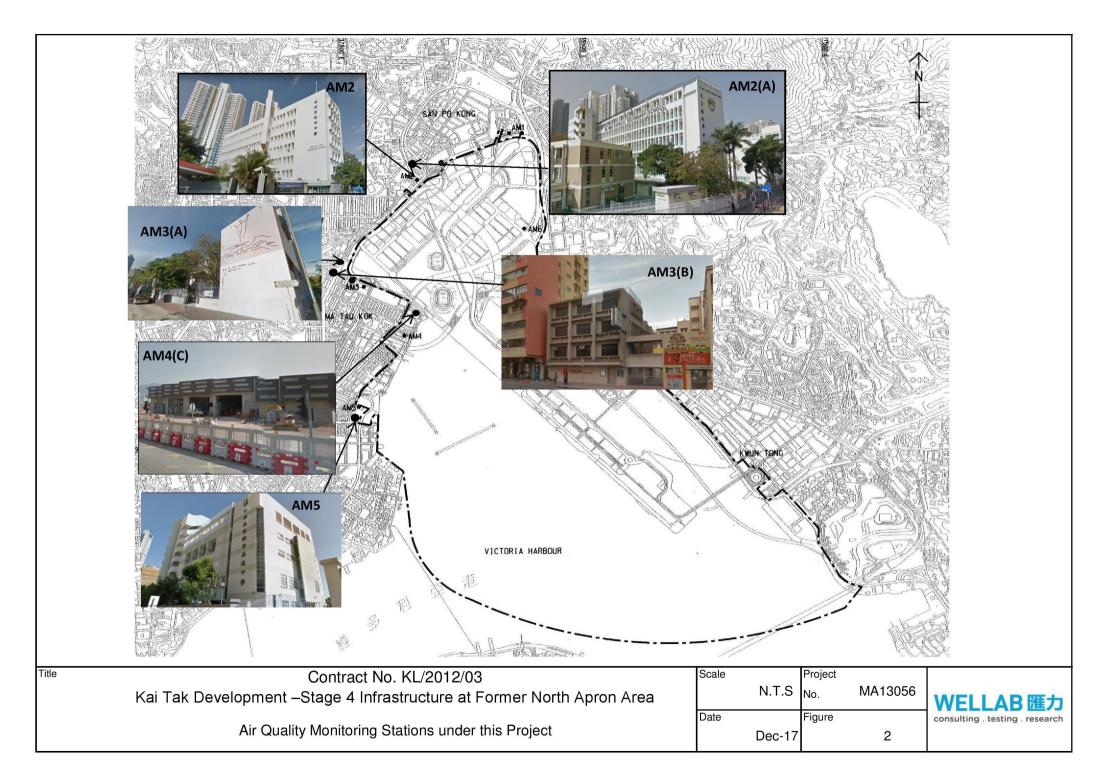
- 7.5 The above recommendations and the recommended mitigation measures in the EM&A Manual were carried out by the Contractor during construction. No non-compliance was recorded during the environmental site inspections as shown in **Appendix B**.
- 7.6 The effectiveness of environmental management is satisfactory as the above recommendations are met. Some of the examples of mitigation measures for the following recommendations are given in **Table 7.1** below.
 - Surface runoff discharge into any stream course is prevented;
 - Provision of sedimentation facilities after identification of wastewater discharges from site;
 - Discharge or accidental spillage of chemical waste or oil directly from the site is avoided;
 - Improper handling or storage of oil drum on site is avoided;
 - The existing trees to be retained are protected; and
 - Night-time lighting is controlled.

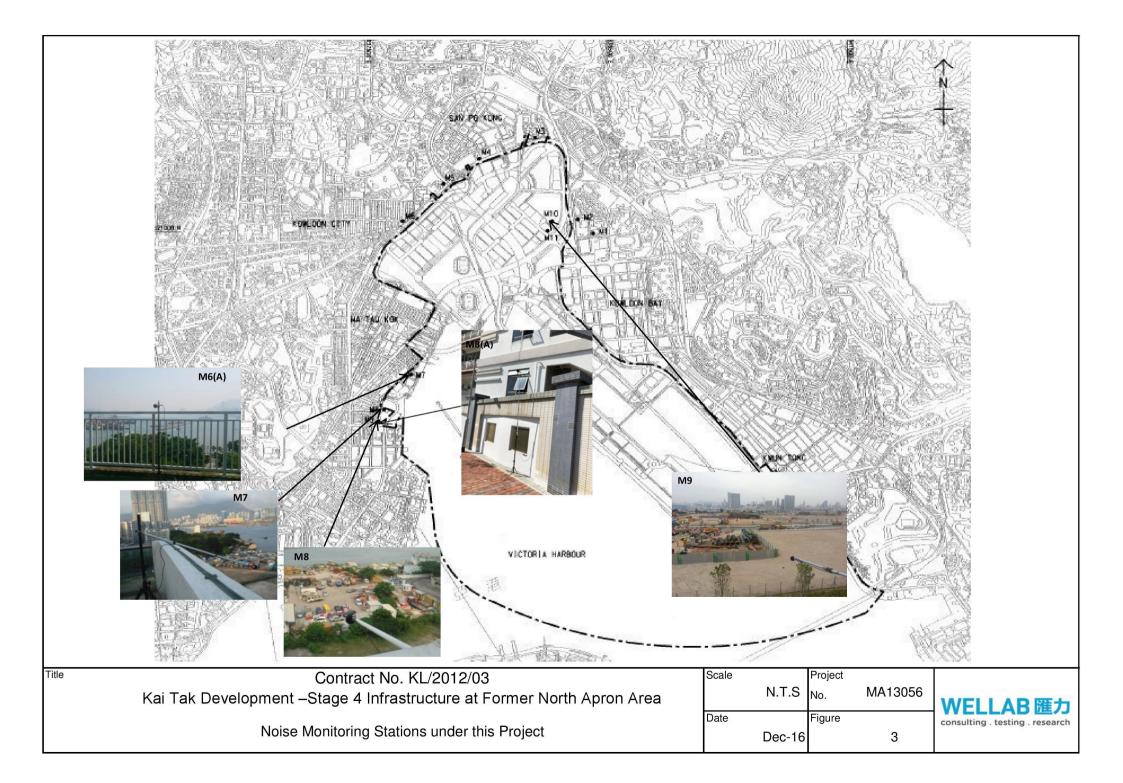
Table 7.1 Examples of Mitigation Measures for Environmental Recommendations

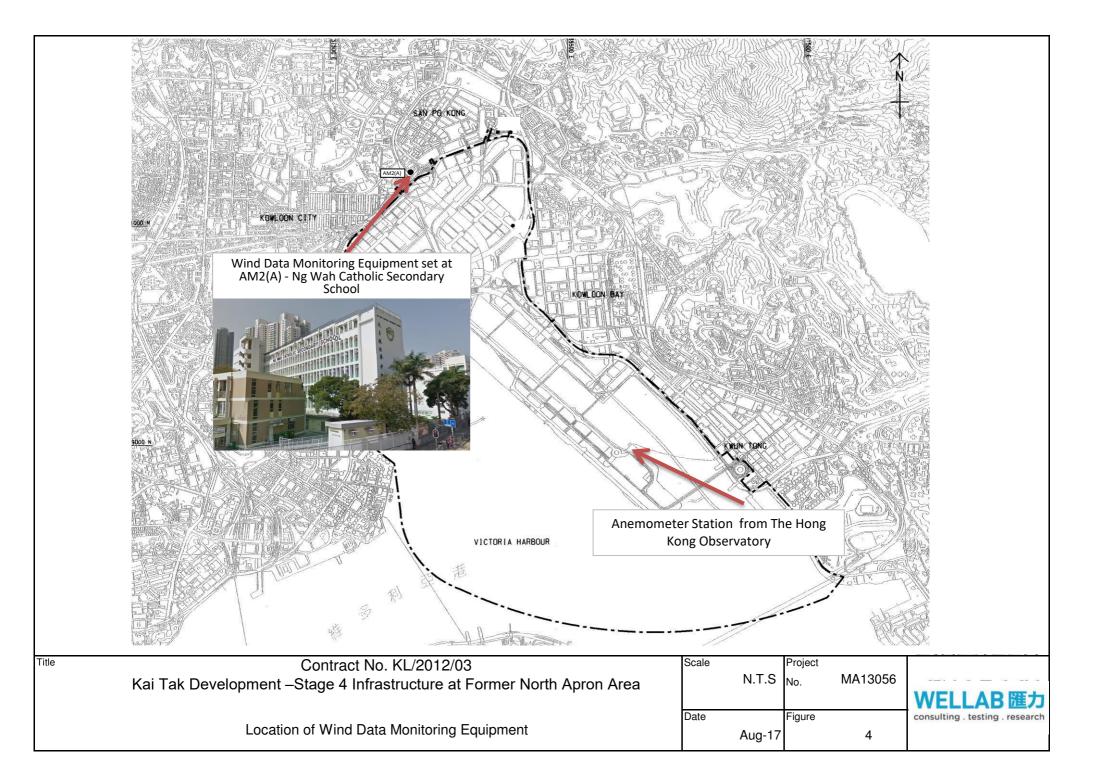


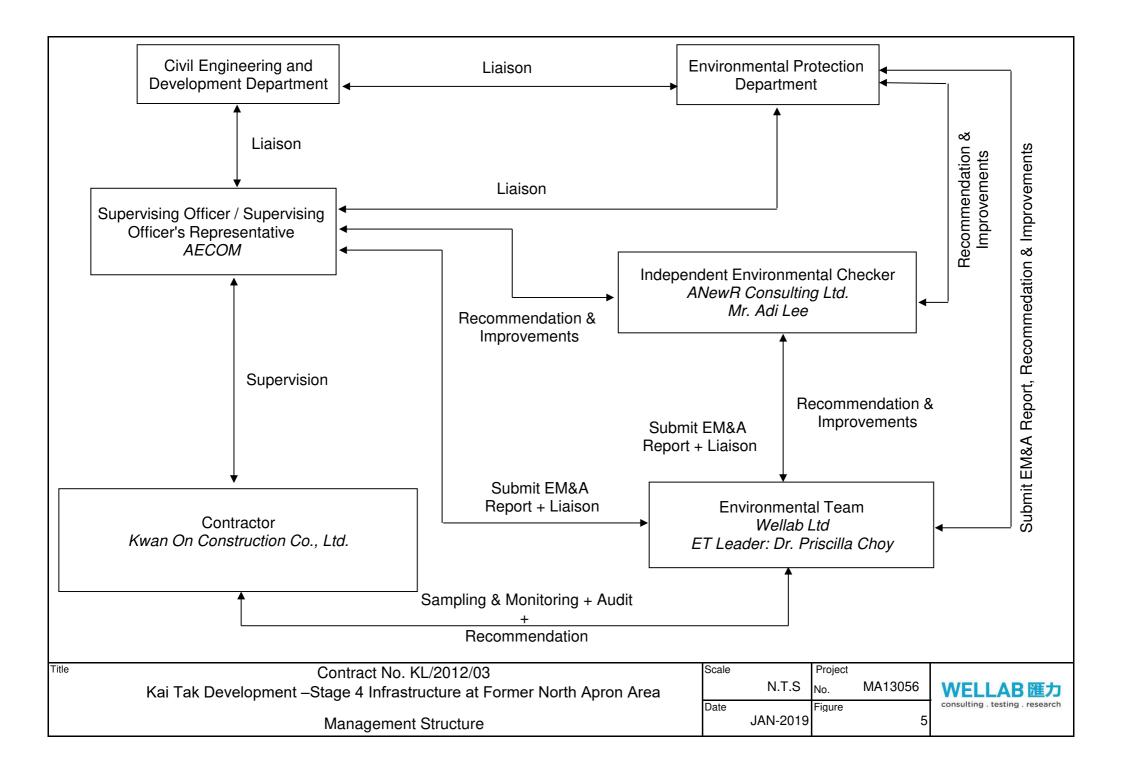
FIGURES











APPENDIX A ACTION AND LIMIT LEVELS

Appendix A - Action and Limit Levels

Location	Action Level, µg/m ³	Limit Level, µg/m ³
AM2	346	
AM3(A)	351	500
AM4(C)	371	500
AM5	345	

Table A-1Action and Limit Levels for 1-Hour TSP

1 able A-2 Action and Limit Levels for 24-Hour 18	Table A-2	Action and Limit Levels for 24-Hour TSI
---------------------------------------------------	-----------	-----------------------------------------

Location	Action Level, μg/m ³	Limit Level, µg/m ³
AM2(A)	157	
AM3(B)	167	260
AM4(C)	187	260
AM5	156	

Table A-3 Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) 70dB(A)/65dB(A)*

Remarks: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed. *70dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods, respectively.

APPENDIX B SITE AUDIT SUMMARY

Contract No. KL/2012/03 Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area EP-337/2009 - New Distributor Roads serving the Planned Kai Tak Development

Weekly Site Inspection Record Summary Inspection Information

•

Checklist Reference Number	190503	
Date	3 May 2019	
Time	11:00-13:00	

		Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G, Permits / Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190426), no major environmental deficiency was observed.	

Name	Signature	Date
Eric Chan	24	6 May 2019
r. Priscilla Choy	WF	6 May 2019
	Eric Chan	Eric Chan 1

Contract No. KL/2012/03 Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area EP-337/2009 - New Distributor Roads serving the Planned Kai Tak Development

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	190510	
Date	10 May 2019	
Time	15:00-17:00	

		Related
Ref. No.	Non-Compliance	Item No
**	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits / Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190503), no major environmental deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	20	14 May 2019
Checked by	Dr. Priscilla Choy	NE	14 May 2019

Contract No. KL/2012/03 Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area EP-337/2009 - New Distributor Roads serving the Planned Kai Tak Development

Weekly Site Inspection Record Summary Inspection Information

Checklist Reference Number	190515	
Date	15 May 2019	
Time	14:00-16:00	

		Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits / Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190510), no major environmental deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	2-0	16 May 2019
Checked by	Dr. Priscilla Choy	WZ	16 May 2019

Contract No. KL/2012/03 Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area EP-337/2009 - New Distributor Roads serving the Planned Kai Tak Development

Checklist Reference Number	190524	
Date	24 May 2019	
Time	15:00-17:00	

Ref. No.	Non-Compliance	Related Item No.
Kel. INU.	None identified	Red 110.
-	None Identified	Related
D 4 M		Item No.
Ref. No.	Remarks/Observations	Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits / Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190515), no major environmental deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	2-P	27 May 2019
Checked by	Dr. Priscilla Choy	IZI	27 May 2019

Checklist Reference Number	190531	
Date	31 May 2019	
Time	10:00-12:00	

		Related
Ref. No.	Non-Compliance	Item No
-	None identified	ы
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
· · ·	G. Permits / Licenses	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190524), no major environmental deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	24	3 June 2019
Checked by	Dr. Priscilla Choy	WZ-	3 June 2019
		Nif	5 Julie 2017

Checklist Reference Number	190503
Date	3 May 2019
Time	11:00-13:00

		Related
Ref. No.	Non-Compliance	Item No
	None identified	-
-		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
Natura 10 10 10 10 10 10 10 10 10 10 10 10 10	H. Others	
	• Follow-up on previous audit session (Ref. No. 190426), no major environmental deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	2	6 May 2019
Checked by	Dr. Priscilla Choy	NZ	6 May 2019

Contract No. KL/2012/03 Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area EP-344/2009 - New Sewage Pumping Stations serving Kai Tak Development

Checklist Reference Number	190510
Date	10 May 2019
Time	15:00-17:00

DAN		Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
T) C NI		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licences	
	• No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190503), no major environmental	
	deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	np	14 May 2019
Checked by	Dr. Priscilla Choy	NI	14 May 2019

Checklist Reference Number	190515
Date	15 May 2019
Time	14:00-16:00

		Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	-
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190510), no major environmental	
	deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	20	16 May 2019
Checked by	Dr. Priscilla Choy	NI	16 May 2019

Contract No. KL/2012/03 Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area EP-344/2009 - New Sewage Pumping Stations serving Kai Tak Development

Checklist Reference Number	190524
Date	24 May 2019
Time	15:00-17:00

		Related
Ref. No.	Non-Compliance	Item No
	None identified	
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licences	•••
	No environmental deficiency was identified during site inspection.	
	H. Others	
	Follow-up on previous audit session (Ref. No. 190515), no major environmental deficiency was observed	

	Name	Signature	Date
Recorded by	Eric Chan	2-P	27 May 2019
Checked by	Dr. Priscilla Choy	N	27 May 2019
			4

Checklist Reference Number	190531
Date	31 May 2019
Time	10:00-12:00

		Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Noise	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Visual and Landscape	
	No environmental deficiency was identified during site inspection.	
	G. Permits /Licences	
	No environmental deficiency was identified during site inspection.	
	H. Others	
	• Follow-up on previous audit session (Ref. No. 190524), no major environmental	
	deficiency was observed.	

	Name	Signature	Date
Recorded by	Eric Chan	2-P	3 June 2019
Checked by	Dr. Priscilla Choy	WI	3 June 2019
	<u> </u>		1

APPENDIX C EVENT ACTION PLANS

Event/Action Plan for Air Quality

EVENT	ACTION				
	ET	IEC	ER	CONTRACTOR	
Action Level being	1. Identify source and investigate the	1. Check monitoring data submitted	1. Notify Contractor.	1. Rectify any unacceptable practice;	
exceeded by	causes of exceedance;	by ET;		2. Amend working methods if	
one sampling	2. Inform Contactor, IEC and ER;	2. Check Contractor's working		appropriate.	
	3. Repeat measurement to confirm finding.	method.			
Action Level being	1. Identify source and investigate the	1. Check monitoring data submitted	1. Confirm receipt of notification	1. Discuss with ET and IEC on proper	
exceeded by	causes of exceedance;	by ET;	of exceedance in writing;	remedial actions;	
two or more	2. Inform Contractor, IEC and ER;	2. Check Contractor's working	2. Notify Contractor;	2. Submit proposals for remedial	
consecutive	3. Increase monitoring frequency to daily;	method;	3. In consolidation with the IEC,	actions to ER and IEC within three	
sampling	4. Discuss with IEC and Contractor on	3. Discuss with ET and Contractor on	agree with the Contractor on the	working days of notification;	
	remedial actions required;	possible remedial measures;	remedial measures to be	3. Implement the agreed proposals;	
	5. Assess the effectiveness of	4. Advise the ER on the effectiveness	implemented;	4. Amend proposal if appropriate.	
	Contractor's remedial actions;	of the proposed remedial measures.	4. Supervise implementation of		
	6. If exceedance continues, arrange		remedial measures;		
	meeting with IEC and ER;		5. Conduct meeting with ET and		
	7. If exceedance stops, cease additional		IEC if exceedance continues.		
	monitoring.				
Limit Level being	1. Identify source and investigate the	1. Check monitoring data submitted	1. Confirm receipt of notification	1. Take immediate action to avoid	
exceeded by	causes of exceedance;	by ET;	of exceedance in writing;	further exceedance;	
one sampling	2. Inform Contractor, IEC, ER, and EPD;	2. Check Contractor's working	2. Notify Contractor;	2. Discuss with ET and IEC on proper	
	3. Repeat measurement to confirm finding;	method;	3. In consolidation with the IEC,	remedial actions;	
	4. Assess effectiveness of	3. Discuss with ET and Contractor on	agree with the Contractor on the	3. Submit proposals for remedial	
	Contractor's remedial actions and keep	possible remedial measures;	remedial measures to be	actions to ER and IEC within three	

	EPD, IEC and ER informed of	4. Advise the ER on the	implemented;	working days of notification;
	the results.	effectiveness of the proposed	4. Supervise implementation of	4. Implement the agreed proposals.
		remedial measures.	remedial measures;	
			5. Conduct meeting with ET and	
			IEC if exceedance continues.	
Limit Level being	1. Notify IEC, ER, Contractor and	1. Check monitoring data submitted	1. Confirm receipt of notification	1. Take immediate action to avoid
exceeded by	EPD;	by ET;	of exceedance in writing;	further exceedance;
two or more	2. Repeat measurement to confirm	2. Check Contractor's working	2. Notify Contractor;	2. Discuss with ET, ER and IEC on
consecutive	findings;	method;	3. In consolidation with the IEC,	proper remedial actions;
sampling	3. Carry out analysis of Contractor's	3. Discuss amongst ER, ET, and	agree with the Contractor on the	3. Submit proposals for remedial
	working procedures to identify source and	Contractor on the potential remedial	remedial measures to be	actions to IEC within three working
	investigate the causes of exceedance;	actions;	implemented;	days of notification;
	4. Increase monitoring frequency to	4. Review Contractor's remedial	4. Supervise implementation of	4. Implement the agreed proposals;
	daily;	actions whenever necessary to	remedial measures;	5. Submit further remedial actions if
	5. Arrange meeting with IEC, ER	assure their effectiveness and	5. If exceedance continues,	problem still not under control;
	and Contractor to discuss the	advise the ER accordingly.	consider stopping the Contractor	6. Stop the relevant portion of works
	remedial actions to be taken;		to continue working on that	as instructed by the ER until the
	6. Assess effectiveness of		portion of work which causes the	exceedance is abated.
	Contractor's remedial actions and		exceedance until the	
	keep EPD, IEC and ER informed		exceedance is abated.	
	of the results;			
	7. If exceedance stops, cease additional			
	monitoring.			

Event/Action Plan for Construction Noise

EVENT	ACTION				
	ET	IEC	ER	CONTRACTOR	
Action Level	1. Notify ER, IEC and Contractor;	1. Review the investigation	1. Confirm receipt of	1. Submit noise mitigation	
being	2. Carry out investigation;	results submitted by the ET;	notification of failure in	proposals to IEC and ER;	
exceeded	3. Report the results of investigation	2. Review the proposed remedial	writing;	2. Implement noise mitigation	
	to the IEC, ER and Contractor;	measures by the Contractor and	2. Notify Contractor;	proposals.	
	4. Discuss with the IEC and	advise the ER accordingly;	3. In consolidation with the	(The above actions should be	
	Contractor on remedial measures	3. Advise the ER on the	IEC, agree with the	taken within 2 working days after	
	required;	effectiveness of the proposed	Contractor on the remedial	the exceedance is identified)	
	5. Increase monitoring frequency to	remedial measures.	measures to be implemented;		
	check mitigation effectiveness.	(The above actions should be	4. Supervise the		
	(The above actions should be taken	taken within 2 working days after	implementation of remedial		
	within 2 working days after the	the exceedance is identified)	measures.		
	exceedance is identified)		(The above actions should be		
			taken within 2 working days		
			after the exceedance is		
			identified)		
Limit Level	1. Inform IEC, ER, Contractor and	1. Discuss amongst ER, ET, and	1. Confirm receipt of	1. Take immediate action to	
being	EPD;	Contractor on the potential	notification of failure in	avoid further exceedance;	
exceeded	2. Repeat measurements to confirm	remedial actions;	writing;	2. Submit proposals for remedial	
	findings;	2. Review Contractor's remedial	2. Notify Contractor;	actions to IEC and ER within 3	
	3. Increase monitoring frequency;	actions whenever necessary to	3. In consolidation with the	working days of notification;	
	4. Identify source and investigate the	assure their effectiveness and	IEC, agree with the	3. Implement the agreed	
	cause of exceedance;	advise the ER accordingly.	Contractor on the remedial	proposals;	

5. Carry out analysis of Contractor's	(The above actions should be	measures to be implemented;	4. Submit further proposal if
working procedures;	taken within 2 working days after	4. Supervise the	problem still not under control;
6. Discuss with the IEC, Contractor	the exceedance is identified)	implementation of remedial	5. Stop the relevant portion of
and ER on remedial measures		measures;	works as instructed by the ER
required;		5. If exceedance continues,	until the exceedance is abated.
7. Assess effectiveness of		consider stopping the	(The above actions should be
Contractor's remedial actions and		Contractor to continue	taken within 2 working days after
keep IEC, EPD and ER informed of		working on that portion of	the exceedance is identified)
the results;		work which causes the	
8. If exceedance stops, cease		exceedance until the	
additional monitoring.		exceedance is abated.	
(The above actions should be taken		(The above actions should be	
within 2 working days after the		taken within 2 working days	
exceedance is identified)		after the exceedance is	
		identified)	

Event/Action Plan for Landscape and Visual

EVENT	ACTION				
ACTION LEVEL	ET	IEC	ER	CONTRACTOR	
Design Check	1. Check final	1. Check report.	1. Undertake remedial design if necessary		
	design conforms to	2. Recommend			
	the requirements	remedial design if			
	of EP and prepare	necessary			
	report.				
Non-conformity on one occasion	1. Identify Source	1. Check report	1. Notify Contractor	1. Amend working methods	
	2. Inform IEC and	2. Check Contractor's	2. Ensure remedial measures are properly	2. Rectify damage and	
	ER	working method	implemented	undertake any necessary	
	3. Discuss remedial	3. Discuss with ET and		replacement	
	actions with IEC,	Contractor on possible			
	ER and Contractor	remedial measures			
	4. Monitor remedial	4. Advise ER on			
	actions until	effectiveness of			
	rectification has	proposed remedial			
	been completed	measures.			
		5. Check implementation			
		of remedial measures.			
Repeated Non-conformity	1. Identify Source	1. Check monitoring	1. Notify Contractor	1. Amend working methods	
	Inform IEC and	report	2. Ensure remedial measures are properly	2. Rectify damage and	

ER	2. Check Contractor's	implemented	undertake any necessary
2. Increase	working method		replacement
monitoring	3. Discuss with ET and		
frequency	Contractor on possible		
3. Discuss remedial	remedial measures		
actions with IEC,	4. Advise ER on		
ER and Contractor	effectiveness of		
4. Monitor remedial	proposed remedial		
actions until	measures		
rectification has	5. Supervise		
been completed	implementation of		
5. If non-conformity	remedial measures.		
stops, cease			
additional			
monitoring			

APPENDIX D ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

Appendix D - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

Types of Impacts	Mitigation Measures	Status
	 8 times daily watering of the work site with active dust emitting activities. Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts. Stockpiling site(s) should be lined with impermeable 	Λ
	 sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission. Misting for the dusty material should be carried out 	Λ
	 before being loaded into the vehicle. Any vehicle with an open load carrying area should have properly fitted side and tail boards. 	^
	 Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin. 	۸
	 The tarpaulin should be properly secured and should extent at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation. 	٨
Construction Dust	 The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways insider the site. On- site unpaved roads should be compacted and kept free of lose materials. 	۸
	 Vehicle washing facilities should be provided at every vehicle exit point. 	٨
	 The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. 	۸
	 Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet. 	٨
	 Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides. Every vehicle should be washed to remove any dusty 	^
	 Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. 	Λ

	Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump	^
Construction Noise	 Good Site Practice: Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. Scheduling of Construction Works during School Examination Period (i) Provision of low noise surfacing in a section of Road L2; and 	^ N/A(1) ^ ^ ^ ^ N/A
noise	(ii) Provision of structural fine	NT/ A
	(ii) Provision of structural fins(i) Avoid the sensitive façade of class room facing Road L2 and L4; and	N/A N/A
	(ii) Provision of low noise surfacing in a section of Road L2& L4	N/A
	 (i) Provision of low noise surfacing in a section of Road L4 before occupation of Site 1I1; and 	N/A
	(ii) Setback of building about 5m from site boundary.	N/A
	Setback of building about 35m to the northwest direction at 1L3 and 5m at Site 1L2.	N/A
	 avoid any sensitive façades with openable window facing the existing Kowloon City Road network; and 	N/A
	 (ii) for the sensitive facades facing the To Kwa Wan direction, either setback the facades by about 5m to the northeast direction or do not provide the facades with openable window. 	N/A

-	(i) avoid any appoints founded with grantels window	
	 avoid any sensitive facades with openable window facing the existing To Kwa Wan Road or 	N/A
	 (ii) provision of 17.5m high noise tolerant building fronting To Kwa Wan Road and restrict the height of the residential block(s) located at less than 55m 	N/A
	 away from To Kwa Wan Road to no more than 25m above ground. avoid any sensitive facades with openable window facing the slip road connecting Prince Edward Road East and San Po Kong or other alternative mitigation measures and at-source mitigation measures for the surrounding new local roads to minimise the potential traffic noise impacts from the slip road 	N/A
	All the ventilation fans installed in the below will be provided with silencers or acoustics treatment. (i) SPS (ii) ESS (iii) Tunnel Ventilation Shaft (iv) EFTS depot	N/A N/A N/A N/A
	Installation of retractable roof or other equivalent measures	N/A
	The following mitigation measures are proposed to be incorporated in the design of the SPS at KTD, including:	
	 Dual power supply or emergency generator should be provided at all the SPSs to secure electrical power supply; 	N/A
	 Standby pumps should be provided at all SPSs to ensure smooth operation of the SPS during maintenance of the duty pumps; 	N/A
	 An alarm should be installed to signal emergency high 	N/A
Construction Water	 water level in the wet well at all SPSs; and For all unmanned SPSs, a remote monitor system connecting SPSs with the control station through telemetry system should be provided so that swift actions could be taken in case of malfunction of unmanned facilities. 	N/A
Quality	Land-based Construction	
	Construction Runoff	
	Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:	^
	 use of sediment traps adequate maintenance of drainage systems to prevent flooding and overflow 	^

Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.

Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.

Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.

Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.

Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.

Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.

Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain. ۸

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All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.

Drainage

It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.

All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.

All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ.

Sewage Effluent

Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.

Stormwater Discharges

Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes

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Debris and Litter	
In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised and that disposal of any solid materials. litter or wastes to marine waters does not occur	^
Construction Works at or in Close Proximity of Storm Culvert or Seafront	
The proposed works should preferably be carried out within the dry season where the flow in the drainage channel /storm culvert/ nullah is low.	^
The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel /storm culvert / nullah.	^
Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works.	^
Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.	^
Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.	^
Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.	^
Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.	^
Construction effluent, site run-off and sewage should be properly collected and/or treated.	~
Any works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the storm water quality.	^
Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of construction materials.	^
Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.	^
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	Supervisory staff should be assigned to station on site to closely supervise and monitor the works	^
	Marine water quality monitoring and audit programme shall be implemented for the proposed sediment treatment operation.	۸
	 Good Site Practices It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during construction activities include: Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site Training of site personnel in proper waste management and chemical waste handling procedures Provision of sufficient waste disposal points and regular collection for disposal Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) 	∧ ∧ ∧ ∧
Construction Waste Management	 Waste Reduction Measures Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force Any unused chemicals or those with remaining functional capacity should be recycled Proper storage and site practices to minimise the potential for damage or contamination of construction materials 	

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incorporated into contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include: • Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles of uncertucion materials or construction wastes on-site should be covered with tarpaulin or similar fabric • Skip hoist for material transport should be totally enclosed by impervious sheeting • Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site • The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bitminous materials or hardcores • The load of dusty materials carried by vehicle leaving a construction site should be paved with vehicle values and the exit point should be paved with concrete, bitminous materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeling to ensure dust materials should be strayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet • The height from which excavated materials wet • The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading When delivering inert C&D material to public fill reception facilities, the material should be constant trinely of inert construction and the Secretary of the Public Fill Committee. In order to monite fill reception facility and to control fly tipping, a trip tickst system for Disposal of Construction and Demolition Materials' should be included as one of the contractual requirements and imdependent Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system	Construction and Demolition Material	
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D-8	solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the Waste Disposal (Chemical Waste)	Λ
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	General Refuse	
	General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem	~
	CM1 All existing trees should be carefully protected during construction.	^
Landscape and Visual	CM2 Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.	N/A
	CM3 Control of night-time lighting.	Λ
	CM4 Erection of decorative screen hoarding.	٨

Remarks:	 Compliance of mitigation measure; 			
	X Non-compliance of mitigation measure;			
	N/A Not Applicable at this stage;			
	N/A(1) Not observed;			
	Non-compliance but rectified by the contractor;			
	* Recommendation was made during site audit but improved/rectified by the contractor.			
	# Recommendation was made during site audit and to be improved / rectified by the contractor.			

APPENDIX E SUMMARIES OF ENVIRONMENTAL COMPLAINT, WARNING, SUMMON AND NOTIFICATION OF SUCCESSFUL PROSECUTION

Contract No. KL/2012/03 Kai Tak Development –Stage 4 Infrastructure at Former North Apron Area

Appendix E – Summary of environmental complaint, warning, summon and notification of successful prosecution

Reporting Month: May 2019

Log R	f. Received Date	Details of Warning / Summons and Successful Prosecutions	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A

Warnings / Summons and Successful Prosecutions received in the reporting month

Remarks: No warning/summon and prosecution were received in the reporting period.

Complaint Log

EPD Complaint Ref No.	Date of Complaint	Complaint Details	Investigation / Mitigation Action						
N/A	N/A	N/A	N/A	N/A					

APPENDIX F WASTE GENERATED QUANTITY

APPENDIX IV Monthly Summary Waste Flow Table

(PS Clause 1.86)

Name of Department: CEDD

Contract No. : KL/2012/03

Monthly Summary Waste Flow Table for May 2019 (year) (in tons)

			Actual	Quantities of In	nert C&D Mater	ials Generated N	Ionthly	Actu	al Quantities o	f C&D Wastes	Generated Mo	onthly
Month	Total Disposal Loads	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemicals Waste	Others, e.g. general refuse
	(No.s)	(in tons)	0	(in tons)	(in tons)	(in tons)	(in tons)	(in tons)	(in tons)	(in tons)	(in tons)	(in tons)
2013 (Oct - Dec) Sub-Total	108	463.69	0	0	0	0	0	0	0	0	0	463.69
2014 (Jan – Dec) Sub-Total	24	16925.7	0	0	16798.93	83.66	1804.27	0	0	0	0	43.11
2015 (Jan – Dec) Sub-Total	284	81859.97	0	0	38291.91	43457.21	19920	0	0	0	0	310.26
2016 (Jan – Dec) Sub-Total	3369	50762.64	0	0	0	49894.67	4020	0	0	0	0	867.95
2017 (Jan – Dec) Sub-Total	2737	39615.16	0	0	0	38996.26	0	0	0	0	0	603.11
2018 (Jan – Dec) Sub-Total	566	7483.57	0	0	0	6803.57	0	0	0	0	0	680
Jan-19	27	237.51	0	0	0	0	0	0	0	0	0	237.51
Feb-19	8	23.03	0	0	0	0	0	0	0	0	0	23.03
Mar-19	22	55.8	0	0	0	0	0	0	0	0	0	55.8
Apr-19	3	5.26	0	0	0	0	0	0	0	0	0	5.26
May-19	2	7.81	0	0	0	0	0	0	0	0	0	7.81
Jun-19												
Total	7150	197440.14	0	0	55090.84	139235.4	25744.27	0	0	0	0	3297.53

APPENDIX G CONSTRUCTION PROGRAMME

			۸	wil			2019 May June							T,	July			
	-	7	Ap 14	21	30	7			31	7			30	7			31	
1	Sung Wong Tai Road Plumbing and Drainage Base course Asphalt laying Road Marking Planting Resurfacing Temp. Traffic Arrangement																	
2	Scraping and asphalt laying Pump Station NPS and PS2 NPS : FSI Scada system test Three days test Recycle wood installation Painting Window Glass installation External lighting & CCTV Planting Made good defects																	
3	PS2 : FSI Scada system test Benching Three days test Fall arrest system Cladding Fence wall External lighting & CCTV Planting																	
	Landscaping (Patch up) Road L6 footpath																	