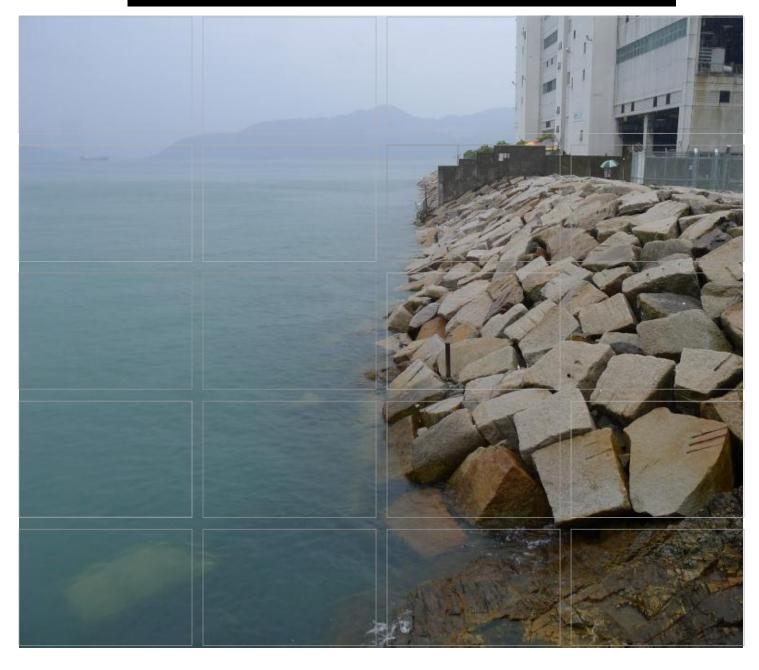
SITE INSPECTION REPORT





Asia Pacific Gateway (APG) – Tseung Kwan O

Site Inspection Report

3 June 2016

Submitted by Environmental Resources Management 16/F Berkshire House 25 Westlands Road Quarry Bay, Hong Kong Telephone 2271 3000 Facsimile 2723 5660 www.erm.com





Asia Pacific Gateway (APG) – Tseung Kwan O Environmental Certification Sheet EP-485/2014

Reference Document/Plan

Document/Plan to be Certified/ Verified:	Second Weekly Impact Water Quality Monitoring Report
Date of Report:	3 June 2016
Date prepared by ET:	3 June 2016
Date received by IEC:	3 June 2016

Reference EM&A Manual

EM&A Manual:

2.5

Section 2

Content: Reporting on Impact Water Quality Monitoring

"An Impact Monitoring Report will be provided weekly within three days after the relevant monitoring data are collected or become available during Project marine installation work...."

"A Weekly Impact Monitoring shall include, but not limited to, the following details: Basic Project Information – Project marine installation works programme with fine tuning of activities showing the interrelationship with environmental protection/mitigation measures for the week and works undertaken during the week; Operating practices of any Project marine installation works machinery (e.g. cable burial machine) during sampling (including: position, speed, cable burial depth) and an interpretation of monitoring results; and The monitoring data should be provided graphically to show the relationship between the Control and the Impact monitoring stations and compliance or non-compliance with respect to the Action/Limit Levels."

EP Condition:

Condition 2

Content: Impact Monitoring Report on Water Quality

2.5 "(ii)(b): To monitor the environmental impacts and timely implementation of the recommended mitigation measures, the Permit Holder shall submit to the director four hard copies and one electronic copy of weekly impact monitoring and site audit report within three days after the relevant monitoring data are collected or become available, as defined in the approved EM&A Manual."

"All environmental monitoring and audit results submitted under this Permit shall be true, valid and correct. Before submission to the Director, the reports as required in Condition 2.4 and 2.5 (ii) shall be certified by the independent checker that all mitigation measures recommended in the Project Profile (Register No.:PP-496/2013) have been fully implemented."

ET Certification

I hereby certify that the above referenced document/plan complies with the above referenced condition of EP-485/2014.

INDE

Terence Fong, Environmental Team Leader: Date:

3 June 2016



IEC Verification

I hereby verify that the above referenced document/plan complies with the above referenced condition of EP-485/2014.

Vincent Lai, Independent Environmental Checker:

Date:

3 June 2016

Asia Pacific Gateway (APG) – Tseung Kwan O

Site Inspection Report

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Environmental Resources Management

16/F Berkshire House 25 Westlands Road Quarry Bay, Hong Kong Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660 E-mail: post.hk@erm.com http://www.erm.com

Client:		Project N	0:				
China M	obile International Limited (CMI Ltd)	0324228					
This document presents • a Ánspection findings and the implementation status of the EM&A recommendations on environmental protection and pollution control mitigation measures and monitoring.			2016 I by: Fong				
v0	Site Inspection Report_v0	YL	ME	TF	3/6/16		
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. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.			on ernal blic nfidentia	Certificate	BS1001:2007 No. OHS 515956 BS1001:2008 p001:2008 te No. PS 32515		

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Status

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EXECUTIVE SUMMARY

This is the *Site Inspection Report* that presents the findings of the site inspection and other EM&A activities undertaken during the land-based construction works period from 26 to 30 May 2016.

Environmental Site Inspection

Environmental site inspection was carried out by the representative of the Environmental Team (ET). Environmental performance complied with the environmental requirements and all necessary mitigation measures were properly implemented.

Environmental Complaints, Non-compliance & Summons

No non-compliance with Project Profile recommendations, Environmental Permit conditions and other requirements associated with the construction of the Project was recorded in the reporting period.

No environmental complaint was received in this reporting period.

No environmental summons was received in this reporting period.

Upcoming Works for the Next Reporting Period

All the land-based construction works of this project have been completed; no further site inspection will be carried out.

INTRODUCTION

1

ERM-Hong Kong, Limited (ERM) was appointed by China Mobile International Limited (CMI Ltd) as the Environmental Team to conduct site inspections to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented in accordance with the Project Profile (*PP-496/2013*), the *Environmental Monitoring & Audit Manual* (*EM&A Manual*) and Environmental Permit (*EP-485/2014*) for the 'Asia Pacific Gateway (APG) – Tseung Kwan O' (hereafter referred to as the 'Project').

1.1 PURPOSE OF THE REPORT

This is the *Site Inspection Report* (the 'Report'), which summarises the inspection findings for the land-based construction works period from 26 to 30 May 2016 and the implementation status of the EM&A recommendations on environmental protection and pollution control mitigation measures and monitoring.

1.2 STRUCTURE OF THE REPORT

The structure of the Report is as follows:

Section 1 : Introduction

Details the scope and structure of the Report.

Section 2: Project Information

Summarises background and scope of the Project, site description, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3 : Environmental Monitoring

Summarises the monitoring programmes as recommended in the *EM&A Manual* and the monitoring undertaken during the reporting period.

Section 4 : **Site Inspection Results** Summarises the findings of the site inspection undertaken within the reporting period.

Section 5 : Environmental Non-conformance

Summarises any exceedances of environmental performance standard, environmental complaints and environmental summons received within the reporting period.

Section 6 : **Upcoming Works for the Next Reporting Period** Summarises the impact forecast and monitoring schedule for the next reporting week.

Section 7 : Conclusions

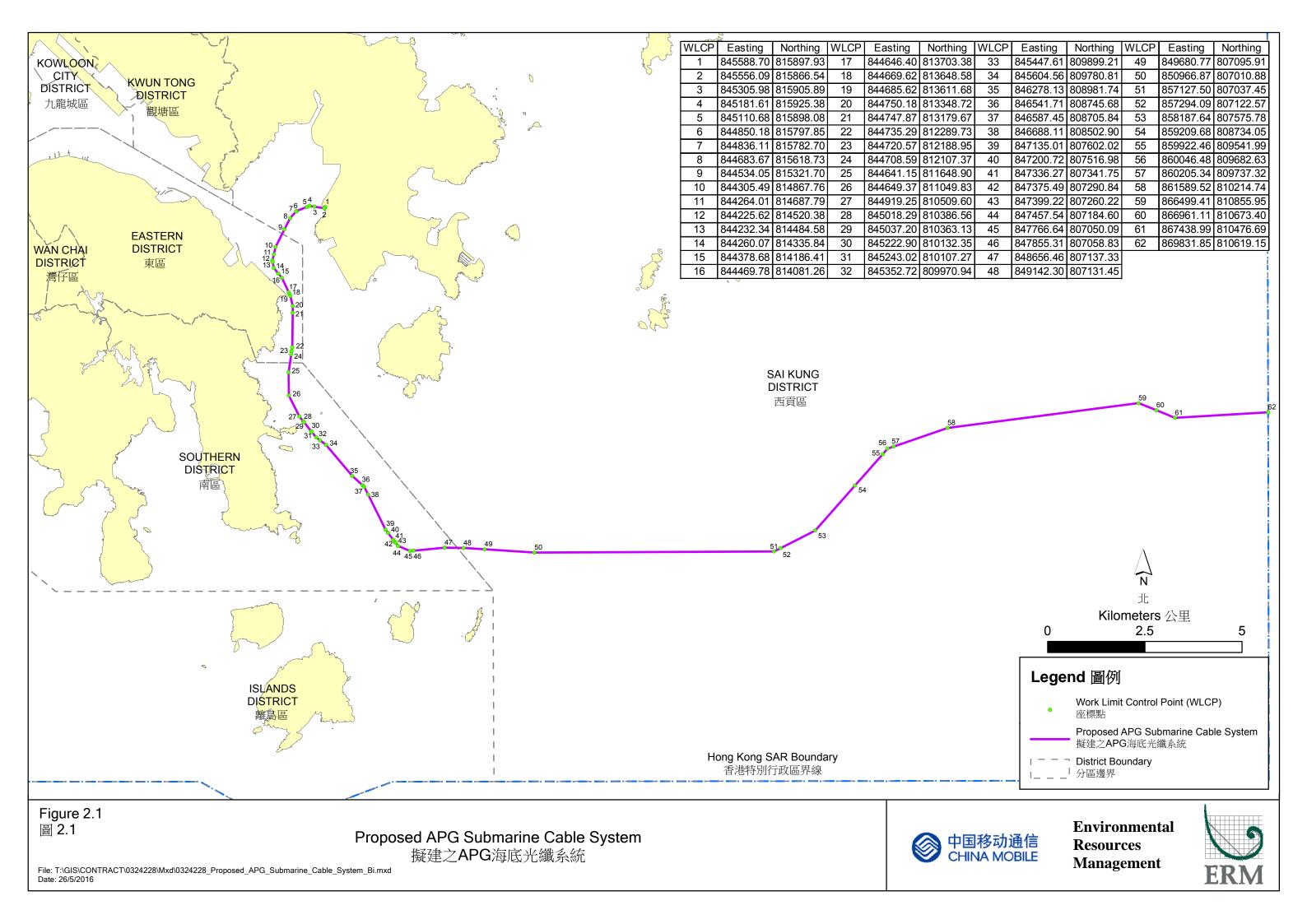
2.1 BACKGROUND

In order to help meet the tremendous telecommunication services requirements for intra-Asia connectivity between South East Asia and North Asia, the APG Consortium has decided to build a submarine telecommunication cable system, which will be approximately 10,400 km in length, connecting the major business hubs across the region – the Asia Pacific Gateway (APG). The cable will link up with several countries, including Malaysia, Singapore, Vietnam, Taiwan, Mainland China, Japan, Korea and the Hong Kong Special Administrative Region (HKSAR). Since the cable that branches to HKSAR will ultimately connect to land at Tseung Kwan O (TKO), the HKSAR section of the submarine cable will be referred to at the APG-TKO cable.

As one of the members of the APG Consortium, China Mobile International Limited (CMI) proposes to install the APG-TKO section of the cable. The proposed submarine cable will travel west and southward from TKO as it approaches the Tathong Channel. After crossing the Tathong Channel and near to Cape Collinson, the cable then runs approximately parallel to the Tathong Channel until north of Sung Kong Island where it then turns eastward to the boundary of HKSAR waters where it enters the South China Sea. At the southeast offshore waters, it will be necessary to install a grout mattress to protect the cable where it crosses Hong Kong Electric Co., Ltd's (HKE) gas pipeline. A map of the proposed cable route is presented in Figure 2.1. The proposed cable will land via an existing Beach Manhole (BMH) within the TKO Industrial Estate on the reclaimed land and ultimately connect with a Cable Landing Station in the TKO Industrial Estate. It should be noted that Tseung Kwan O is currently the landing site for a number of submarine cables.

The Project Profile (PP) (<u>PP-496/2013</u>) (which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system within HKSAR, including the connection to land at TKO), was prepared and submitted to the Environmental Protection Department (EPD) under *section* 5(1)(*b*) *and* 5(11) of the *Environmental Impact Assessment Ordinance (EIAO)* for the application for Permission to apply directly for *Environmental Permit (EP)*. EPD subsequently issued an approval letter on *Application for Permission to Apply Directly for Environmental Permit* on 15th November 2013 (<u>DIR-233/2013</u>) and issued an EP on 18 February 2014 (<u>EP-485/2014</u>).

<u>EP-485/2014</u> Special Condition 2.5 states that an EM&A programme should be implemented in accordance with the procedures and requirements set out in the *EM&A Manual*. In accordance with the *EM&A Manual*, site inspection is required during the Project land-based construction.



2.2 LAND WORKS LOCATIONS

The shore end of the APG cable segment will be connected to the existing BMH via the existing conduit laid under the seawall. In order to complete the link between the BMH and the Cable Landing Station, the land cable will be installed in an existing conduit along the terrestrial route and ultimately connects to the Cable Landing Station via existing underground cable conduit. The location of the existing BMH and the proposed land cable route are shown in *Figure 2.2*. As shown in *Figure 2.2*, the existing BMH lies within a construction site managed by China Unicom (thereafter 'CU site').

2.3 CONSTRUCTION ACTIVITIES UNDERTAKEN

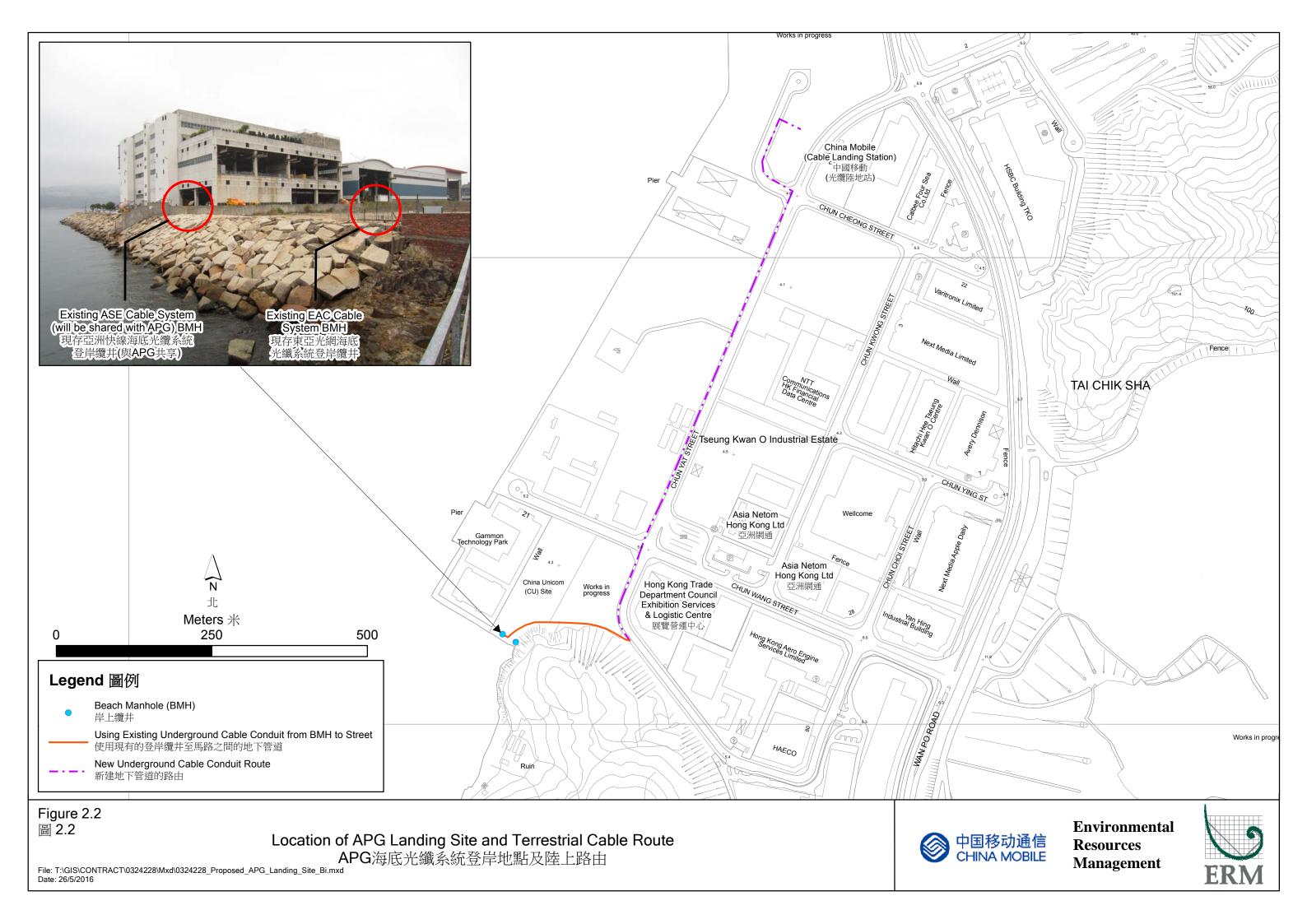
The land works connecting shore end of the APG cable segment to the existing BMH and then the Cable Landing Station via the existing underground conduit commenced on 26 May 2016. Land construction works were completed and only post processing (i.e. restoration and closure of the BMH opening) was underway by 30 May 2016. All land works have been completed by the submission of the *Site Inspection Report*.

2.4 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in *Table 2.1*.

Table 2.1Summary of Current Environmental Licensing, Notification and Permit
Status

Permit / Licence /	/ Reference	Validity Period	Remarks
Notification / Report			
Project Profile	PP-496/2013	Throughout the	Submitted on
		construction and	9 October 2013
		operation stages	
EM&A Manual	-	Throughout the	Approved by
		construction and	EPD on
		operation stages	17 January 2014
Environmental Permit	EP-485/2014	Throughout the	Granted by EPD
		construction and	on 18 February
		operation stages	2014
Baseline Water Quality	-	Throughout the	Submitted on
Monitoring Report		construction period for	9 May 2016
		Zones A to C	
First Weekly Impact Water	-	Throughout the	Submitted on 26
Quality Monitoring Report		construction period for	May 2016
		Zones A to C	
Second Weekly Impact	t	Throughout the	Submitted on 3
Water Quality Monitoring		construction period for	June 2016
Report		Zones A to C	



Site inspections have been undertaken at the landing point (i.e. existing Beach Manhole (BMH) in TKO Industrial Estate) and at the underground cable installation area on 26 and 30 May 2016. Site inspections are to ensure that the appropriate environmental protection and pollution control mitigation measures are properly implemented in accordance with the *PP-496/2013, EM&A Manual* and *EP-485/2014*. Results of the site inspections are provided in *Section 4*.

The site inspection is required to be carried out by the representative of the Contractor and the Environmental Team (ET). A Site Inspection Log was completed by the ET representative to record whether the Contractor is compliant with environmental regulations in terms of noise, water quality and housekeeping etc. (*Annex A*).

During the reporting period, the site inspection was conducted on 26 and 30 May 2016. Land construction works were completed and only post processing was underway by 30 May 2016. All land works have been completed by the time of the submission of this *Site Inspection Report*. Photos taken during the site inspections are presented in *Annex B*. No non-compliance was recorded during the site audit.

5 ENVIRONMENTAL NON-CONFORMANCE

5.1 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance of PP/ EM&A Manual / EP/ legislative requirements was recorded during the reporting period.

5.2 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaint was received during the reporting period.

5.3 SUMMARY OF ENVIRONMENTAL SUMMON AND SUCCESSFUL PROSECUTION

No summons was received during the reporting period.

6 FUTURE KEY ISSUES

6.1 MONITORING SCHEDULE FOR THE NEXT REPORTING PERIOD

All the land-based construction works have been completed. No further inspection will be required.

CONCLUSIONS

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This *Site Inspection Report* presents the findings of the site inspections and other EM&A activities undertaken during the land-based construction works period from 26 to 30 May 2016, in accordance with the *PP-496/2013*, *EM&A Manual* and *EP-485/2014*.

Environmental site inspection was conducted on 26 and 30 May 2016 during the reporting period. It confirmed that the environmental mitigation measures recommended in the *EM&A Manual* were properly implemented by the Contractor.

No non-compliance event was recorded during the reporting period.

No complaint and summons/prosecution was received during the reporting period.

All the construction works of this project have been completed by 30 May 2016, no further site inspection will be carried out.

Annex A

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Site Inspection Log

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Site	APG-TKO @TKO BMH Site and Adjacent CU Site	Inspecte	ed By: F	. ZINO	& J Ma ;
Insp	spection Date: 26 MAY 2016 Time: 14:00		<u>] L</u>		
Wea	eather				
Con	ondition Sunny Fine Overcast Drizzle	Rain	Sto	rm	Hazy
Tem	emperature 28.2 ℃ Humidity High	Moderate	Low	/	
Win	ind Calm Light Breeze Strong				
A	Noise	N/A or ot observed	Yes	No	Photo/Remarks
A1	Are all plant and equipment well maintained and in good operating condition?				
A2	2 Is idle equipment turned off or throttled down?				
A3	3 Are powered mechanical equipment covered or shielded by acoustic materials?				
A4	4 Are silenced equipment used where practicable?				
A5	Do mobile plants be sited as far away from NSRs as possible?				
A6	Do plants known to emit noise strongly in one direction be oriented away from nearby NSRs?				
A7	7 Major noise source(s) Traffic		on activitie		
	Construction activities outside of site	Others	Constru	iction a	ctivities at adjacent site
A8	Any remedial action undertaken?				None needed

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Site Inspection Log

в	Water Quality	N/A or not observed	Yes	No	Photo/Remarks
B1	Is drainage system adequate?				
	Are there temporary ditches for runoff discharge into appropriate				
B2	Watercourse?				No temporary ditches
B3	With silt retention pond?				
B4	Do permanent drainage channels have: sediment basin?			F	Drainage belongs to CU site and
B5	traps and baffles?				drains towards road & public drain
B6	Are there sediment tanks for settling runoff prior to disposal?				Not observed
B7	Are there oil interceptors in drainage system?				
B8	Oil and grease removed regularly?				
B9	Bypass to prevent flushing during periods of heavy rain?				
B10	Is drainage system well maintained?				ves for BMH site
B11	Is exposed earth stabilized after earthworks have been completed?				Earthworks are for CU not our project
B12	Are exposed slope surfaces covered (by tarpaulin or other means)?				
B13	Are open stockpiles of more than 20 m ³ covered during rainstorm?				
B14	Are manholes covered and sealed?				BMH open for Project works
	Rainy Season				성수가 이렇게 걸렸다. 영상 영상 이렇게 하는 것이다.
B15	Drainage system adequately designed for storm flow?				CU site drainage
B16	Sediment control measures inspected and maintained after rain storms?				
B17	Is debris and rubbish on site collected and disposed of properly?				Some debris on site
B18	Is wastewater discharge license available for inspection?				
B19	Measures to prevent the washing away of sand/silt to drains?				See B4 and B10 above
B20	Is there any sediment plume observed existing the marine works area?				

Asia Pacific Gateway (APG) - Tseung Kwan O

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C Environmental Complaint

C1	Number of Environmental Complaint Received from up	to_26/05/16		0	
D	General / Housekeeping	N/A or not observed	Yes	No	Photo/Remarks
D1	Are potential stagnant pools cleared and mosquito breeding prevented?				

	1.0
Items for Inspection	
- BMH area	
Walked through CU site to reach BMH area, shown around by K.H. Li (6850-6655);	
Notes / Issues Recorded On Site	
- BMH area (ie. our project site for inspection) site is within a construction site manmged	
by CU (ie. not our Project). Checked with Mr. Ho - CU site manager, regarding the	
drainage system for the CU site as there was a member of area with loose soil exposed.	
He confirmed that the CU site drainage ran away from BMH area and drained towards	
public drain near the road. Drainage therefore is not considered an issue for BMH area.	
-Some litter around the site.	
-No noisey equipment required for BMH works - mainly manual works.	
the holdey equipment required for Dimit works - mainly manual works.	

Corrective Actions

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- Ensure site is kept clear of litter and is properly disposed of at bins provided on site. e.g. to prevent plastic bottles inadvertently entering marine environment.

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Signatures: ET:

(Name:

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Site:	Site: APG-TKO @TKO BMH Site and adjacent CU Site Inspected By: Jacob Ma				
Insp	ection Date: 30 MAY 2016 Time: 10:45				
Wea	ather				
Con	dition Sunny Fine Overcast Drizzle	Rain Storm Hazy			
Tem	perature 29.5 ℃ Humidity High	Moderate Low			
Win	d Calm Light Breeze Strong				
A	Noise	N/A or Yes No Photo/Remarks not observed			
A1	Are all plant and equipment well maintained and in good operating condition?				
A2	Is idle equipment turned off or throttled down?	\Box \blacksquare \Box			
A3	Are powered mechanical equipment covered or shielded by acoustic materials?				
A4	Are silenced equipment used where practicable?				
A5	Do mobile plants be sited as far away from NSRs as possible?				
A6	Do plants known to emit noise strongly in one direction be oriented away from nearby NSRs?	′			
A7	Major noise source(s)	Construction activities inside of site			
	Construction activities outside of site	Others			
A8	Any remedial action undertaken?	None needed			

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Site Inspection Log

в	Water Quality		N/A or not observed	Yes	No	Photo/Remarks
B1	Is drainage system adequate?					
	Are there temporary ditches for runoff dis	scharge into appropriate				
B2	Watercourse?					
B3	With silt retention pond?					
B4	Do permanent drainage channels have:	sediment basin?				
B5		traps and baffles?				
B6	Are there sediment tanks for settling rund	off prior to disposal?				
B7	Are there oil interceptors in drainage syst	tem?				
B8	Oil and grease removed regularly?					
B9	Bypass to prevent flushing during pe	eriods of heavy rain?				
B10	Is drainage system well maintained?					
B11	Is exposed earth stabilized after earthwork	rks have been completed?				
B12	Are exposed slope surfaces covered (by	tarpaulin or other means)?				
B13	Are open stockpiles of more than 20 m ³ c	covered during rainstorm?				
B14	Are manholes covered and sealed?			\checkmark		BMH closed.
	Rainy Season					
B15	Drainage system adequately design	ed for storm flow?				CU site drainage.
B16	Sediment control measures inspecte rain storms?	ed and maintained after				
B17	Is debris and rubbish on site collected an	d disposed of properly?				Some debris on site
B18	Is wastewater discharge license available	e for inspection?				
B19	Measures to prevent the washing away o	f sand/silt to drains?				
B20	Is there any sediment plume observed ex	sisting the marine works area?				

Asia Pacific Gateway (APG) - Tseung Kwan O

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C Environmental Complaint

C1	Number of Environmental Complaint Received from up	to <u>30/05/16</u>		0	
D	General / Housekeeping	N/A or not observed	Yes	No	Photo/Remarks
D1	Are potential stagnant pools cleared and mosquito breeding prevented?				

Items for Inspection - BMH area (on 30May16) Walked through CU site to reach BMH area, shown around by Thomas K.C. Poon (6765-7034);

Notes / Issues Recorded On Site No recordable issues.)

Corrective Actions

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No corrective actions required.

Signatures: ET:

(Name:

Annex B

Photographic Records on Site



Photo 1 – The BMH Manhole Cover was open for the Project works to occur/caution was taken during the site inspection on 26 May 2016.



Photo 2 - The drainage system for the CU site (within which the APG Project is located) had loose and exposed soil during the site inspection on 26 May 2016.
The CU site manager confirmed that site runoff from CU site would drain away from APG BMH area and therefore the site runoff from CU site was not considered an issue for the APG BMH (see also Annex A).



Photo 3 - Tarpaulin sheets were used to cover exposed soil and stockpiles on the Project site to prevent dust generation from the construction site during the site inspection on 26 May 2016.



Photo 4 – Some litter and debris were observed on the Project site during site inspection on 26 May 2016.



Photo 5 - Land works were completed and BMH Manhole was closed during the Project site inspection on 30 May 2016.

ENVIRONMENTAL RESOURCES MANAGEMENT

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Environmental Resources Management

16/F Berkshire House 25 Westlands Road Quarry Bay, Hong Kong

T: 2271 3000 F: 2723 5660

www.erm.com

