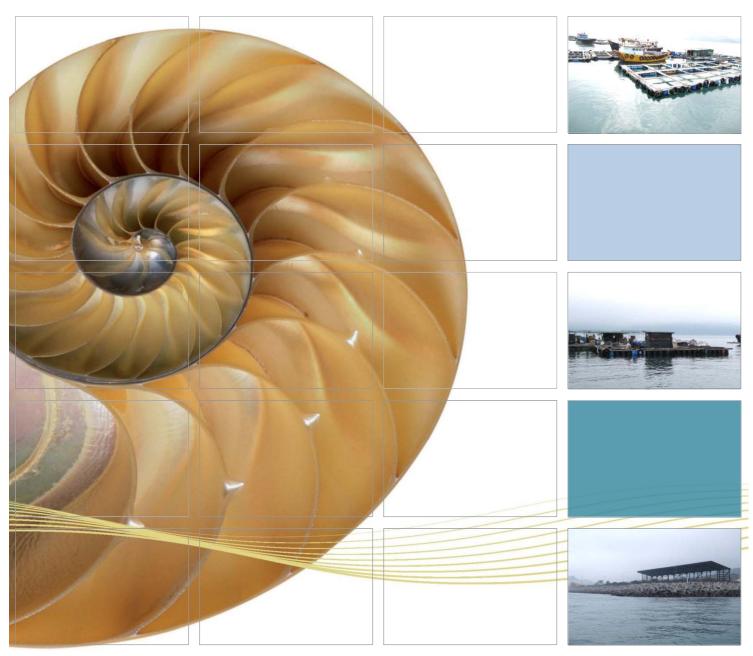
EM&A REPORT





Asia Submarine-cable Express (ASE) – Tseung Kwan O

First Weekly Site Inspection Report

10 October 2012

Environmental Resources Management

16/F DCH Commercial Centre 25 Westlands Road Quarry Bay, Hong Kong Telephone 2271 3000 Facsimile 2723 5660

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Asia Submarine-cable Express (ASE) – Tseung Kwan O

1st Weekly Site Inspection Report

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Client:		GMS No:					
NTT Co	m Asia Ltd	0171870					
status of	ort presents the inspection findings and the implementation the EM&A recommendations on environmental protection tion control mitigation measures and monitoring.	Date: 10 October 2012 Approved by:					
		Terence Fong Project Director					
0	1 st Weekly Site Inspection Report	GYANG	GYANG	TFONG	10 Oct 12		
Revision	Description	Ву	Checked	Approved	Date		
to third parti relies on the This report I of 'ERM Hor of the Contr and taking a We disclaim scope of the This report i to third parti	s confidential to the client and we accept no responsibility of whatsoever nature es to whom this report, or any part thereof, is made known. Any such party are peort at their own risk. has been prepared by Environmental Resources Management the trading name ng-Kong, Limited', with all reasonable skill, care and diligence within the terms act with the client, incorporating our General Terms and Conditions of Business incount of the resources devoted to it by agreement with the client. If any responsibility to the client and others in respect of any matters outside the e above. It is confidential to the client and we accept no responsibility of whatsoever nature es to whom this report, or any part thereof, is made known. Any such party report at their own risk.	Distribution Internal Public Confidential			DISAS JECOLO		

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Asia Submarine-cable Express (ASE) – Tseung Kwan O Environmental Certification Sheet EP-433/2011

Reference Document/Plan

Document/Plan-to be-Certified/ Verified:	First Site Inspection Report
Date of Report:	10 October 2012
Date prepared by ET:	ERM-Hong Kong Ltd
Date received by IEC:	Ecosystem Ltd

Reference EM&A Manual/ EP Requirement

EM&A Manual Requirement:

Section 5.1

Content: Site Inspections

"...A weekly site inspection will be carried out at the proposed BMH in TKO Industrial Estate until the completion of construction works at the landing point. The areas of inspection will not be limited to the site area and should also include the environmental conditions outside the site which are likely to be affected, directly or indirectly, by the site activities..."

EP Condition:

Condition No. 2.4

Content: Site Audit

"To monitor the environmental impacts and timely implementation of the recommended mitigation measures, the Permit Holder shall:

(i) implement the EM&A programme of the Project in accordance with the procedures and requirements set out in the approved EM&A"

(ii) submit to the Direct... (a)...; (b) weekly impact monitoring and site audit report within three days after the relevant monitoring data are collected or become available; and (c)..."

ET Certification

I hereby certify that the above referenced document/plan complies with the above referenced condition of EP-433/2011.

lure

Terence Fong, Environmental Team Leader: Date:

10 October 2012

IEC Verification

I hereby verify that the above referenced document/plan complies with the above referenced condition of EP-433/2011.

Dr Vincent Lai, Independent Environmental Checker:

Date:

10 October 2012

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EXECUTIVE SUMMARY

NTT Com Asia (NTTCA) proposes to install a telecommunication cable (Asia Submarine-cable Express (ASE) cable) of approximately 7,200 km in length, connecting Japan and Singapore with branches to the Philippines, Hong Kong SAR (HKSAR) and Malaysia. A Project Profile (PP-452/2011) which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system 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). The Environmental Protection Department, subsequently issued an Environmental Permit (EP- 433/2011).

This is the **First Weekly Site Inspection Report** that presents the findings of the site inspection and other EM&A activities undertaken during the period from **4** to **7 October 2012**.

Environmental Site Inspection

A weekly joint environmental site inspection was carried out by the representatives of the Contractor, the Environmental Team (ET) and NTTCA. Environmental performance complied with the environmental requirements and all necessary mitigation measures were properly implemented.

Marine Mammal Observation

Daily marine mammal exclusion zone monitoring was not carried out in the reporting period as the cable installation works in Zone C and from C to the boundary of HKSAR waters has not started.

Summary of Breaches of Action/Limit Levels

Per plan, no marine water quality monitoring was conducted in the reporting period. Thus, no exceedances of Action and Limit Levels for water quality were recorded during the reporting week.

Environmental Complaints, Non-compliance & Summons

No non-compliance with PP recommendations, EP conditions and other requirements associated with the construction of the Project was recorded in this 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

Works to be undertaken in the coming monitoring period include cable laying works in Zone A, seawall duct work, land duct laying works and beach manhole construction.

Potential environmental impacts arising from the above construction activities are mainly associated with marine water quality, dust, construction noise and waste management.

1 INTRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by NTT Com Asia (NTTCA) as the Environmental Team to conduct regular site inspections and audit the implementation of all environmental monitoring and mitigation measures recommended in the Project Profile (PP) (Register No. PP – 452/2011) for the Proposed Asia Submarine-cable Express (ASE) – Tseung Kwan O (the Project).

1.1 PURPOSE OF THE REPORT

This is the **First Weekly Site Inspection Report** (the Report), which summarises the inspection findings for the period from **4 October 2012** to **7 October 2012** 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 PP and the monitoring undertaken during the reporting period.

Section 4 : **Site Inspection Results** Summarises the findings of the weekly 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

NTT Com Asia (NTTCA) proposes to install a telecommunication cable (Asia Submarine-cable Express (ASE) cable) of approximately 7,200 km in length, connecting Japan and Singapore with branches to the Philippines, Hong Kong SAR (HKSAR) and Malaysia. NTTCA is responsible for securing the approval to land the ASE cable in Tseung Kwan O, Hong Kong SAR (HKSAR). The proposed landing site will be at a new Beach Manhole (BMH) and ultimately connect with a Data Centre in Tseung Kwan O (TKO) Industrial Estate which is scheduled for completion in 2012. It should be noted that Tseung Kwan O is currently the landing site for a number of submarine cables. From Tseung Kwan O, the cable will extend eastward approaching the Tathong Channel. Near to Cape Collinson, the cable is approximately parallel to the Tathong Channel until north of Waglan Island where the cable travels eastward to the boundary of HKSAR waters where it enters the South China Sea. The total length of cable in Hong Kong SAR waters is approximately 33.5 km. A map of the proposed cable route is presented in Annex A.

A Project Profile (PP-452/2011) which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system 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). The Environmental Protection Department, subsequently issued an Environmental Permit (EP-433/2011).

Under the requirements of Condition 2.4 of the EP, an EM&A programme as set out in the revised Environmental Monitoring and Audit Manual (EM&A Manual) is required to be implemented. The EM&A programme includes water quality monitoring, marine mammal observation, coral monitoring and weekly site inspection.

2.2 WORKS PROGRAMME AND WORKS LOCATIONS

The location of the cable installation works within the boundary of Hong Kong SAR waters is shown in *Annex A*, while the location of the landing point (ie new Beach Manhole (BMH) in TKO Industrial Estate) is shown in *Annex B*. The preliminary construction programme of the Project is given in *Figure 2.1*.

ENVIRONMENTAL RESOURCES MANAGEMENT

Figure 2.1 Preliminary Construction Programme

		Week										
	1	2	3	4	5	6	7	8	9	10	11	12
Submarine Cable Installation												
Zone A												
Zone B												
Zone C												
Outside Zone C to HK Boundary												
Post-installation Works												
Diver Jetting												
Landing Point Construction												
Preparation Work												
Seawall Duct Work												
Land Duct Laying												
Beach Manhole Construction												
Reinstatement												

2.3 CONSTRUCTION ACTIVITIES

Submarine Cable Installation

There are no submarine-cable installation works during the reporting period.

Landing Point Construction

The construction works of the landing point commenced on 4 October 2012 and are temporarily scheduled to be completed in early December of 2012. A summary of the major construction activities undertaken on the landing point during the reporting period is shown in *Table 2.1*.

Table 2.1Summary of Landing Point Construction Activities Undertaken during the
Reporting Period

Construction Activities Undertaken

- Install fence at seawall side
- Install Fence at Yi Feng
- Mobilization of marine and land equipment for seawall construction
- Installation of silt curtain at seaside
- Removal of seawall rock armor
- Installation of silt markers and settlement check points

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 2.2*.

Table 2.2Summary of Current Environmental Licensing, Notification and Permit
Status

Permit/ Licences/	Reference	Validity Period	Remarks
Notification Environmental Permit	EP-433/2011	Throughout the construction and operation of the Project	Permit granted on 20 December 2011
Construction Noise Permit	GW-RE0774-12	18 Sep 2012 – 31 Jan 2013	Permits granted on using of registered powered mechanical equipment for 07:00- 23:00 hrs on general holidays (including Sundays) and 19:00- 23:00 hrs on any day not being a general holiday for Sub-marine cable laying works of the Project

3 ENVIRONMENTAL MONITORING

3.1 CABLE INSTALLATION WATER QUALITY MONITORING

Baseline water quality monitoring was completed by the end of September 2012. Baseline Water Quality Monitoring Reports for Zone A, Zone B and Zone C were submitted on 19 September 2012, 25 September 2012 and 1 October 2012, respectively.

No impact water quality monitoring was conducted during the reporting period as the cable laying works has yet to commence. Mitigation measures to control water quality pollution as recommended in the PP will be checked in due course and summarised in the Weekly Water Quality Impact Monitoring Reports.

3.2 MARINE MAMMAL OBSERVATION

Daily marine mammal exclusion zone monitoring is required to be conducted during the cable installation works taking place in daylight hours along the section outside Zone A to Zone B (ie Zone C and from C to the boundary of HKSAR waters). This monitoring was not carried out in the reporting period as the cable installation works in Zone C and from C to the boundary of HKSAR waters has not started.

3.3 CORAL MONITORING

Baseline coral monitoring was completed in September 2012. The Baseline Coral Monitoring Survey Report was submitted on 28 September 2012. Postproject coral monitoring will be conducted within one month after completion of the jetting works, with the Post-project Coral Monitoring Survey Report to be submitted within one month after completion of the marine works. Impact monitoring for coral during cable installation works is not required under the Project.

3.4 SITE INSPECTION AND AUDIT

In accordance with the revised EM&A Manual, a weekly site inspection should be undertaken at the landing point (ie new Beach Manhole (BMH) in TKO Industrial Estate) to ensure that the appropriate environmental protection and pollution control mitigation measures are properly implemented in accordance with the Project Profile (PP-452/2011). Results of the site inspection in the reporting period are provided in *Section 4*.

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

During the reporting period, the site inspection was conducted on 5 October 2012 by the representatives of the Contractor, the ET and NTTCA. There was no non-compliance recorded during the site audit. Major findings and recommendations are summarised as follows:

- (i) A copy of EP was displayed conspicuously at the vehicular site entrance in accordance with the requirement of Condition 1.5 of the EP. (*Annex D Photo No. 1*)
- (ii) A silt curtain was employed around the seawall area in order to reduce the dispersion of sediments from the landing site (*Annex D Photo No.* 2).
- (iii) Spillage containment such as dip tray was found to have been provided for the equipment (eg generator), which potentially has oil leakage (*Annex D Photo No. 3*).
- (iv) Housekeeping of the construction site was observed to have been conducted in a proper way. A portable toilet has been placed on site (*Annex D Photo No. 4*), and general refuse was not frequently found. The Contractor was nevertheless recommended to provide enough rubbish bins within the construction site for better rubbish disposal. Following-up actions by the Contractor will be checked in next week's site inspection.
- (v) An idling excavator was observed during the site inspection. The Contractor was reminded to turn off all equipment/ vehicles when they are not actively in use. The excavator was turned off by the Contractor immediately after the recommendation.
- (vi) The Contractor was suggested to display labels stating the sound power level in dB on all major PME. The corrective action was being undertaken as observed during the same audit and will be checked in next week's site inspection.

5 ENVIRONMENTAL NON-CONFORMANCE

5.1 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance event was recorded during the reporting period. Since construction phase impact water quality monitoring has not commenced, no non-compliance of Action and Limit Levels for water quality was recorded during the reporting week.

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 KEY ISSUES FOR THE NEXT REPORTING PERIOD

Works to be taken for the next reporting period are summarised in Table 6.1.

Table 6.1Construction Works to Be Taken For the Next Reporting Week

Work to be taken			
Submarine Cable Installation			
Cable laying works in Zone A			
Landing Point Construction			
• Seawall duct work			
• Land duct laying works			

• Beach manhole construction

Potential environmental impacts arising from the above construction activities are mainly associated with marine water quality, dust, construction noise and waste management.

6.2 MONITORING SCHEDULE FOR THE NEXT REPORTING PERIOD

Daily impact water quality monitoring will be conducted in next week and the results will be summarised in the First Weekly Water Quality Impact Monitoring Report.

Next weekly site inspection is temporarily scheduled on 12 October 2012.

CONCLUSIONS

This **First Weekly Site Inspection Report** presents the findings of the site inspection and other EM&A activities undertaken during the period from **4** to **7 October 2012**, in accordance with the PP (Register No. PP – 452/2011), revised EM&A Manual and the requirements of Environmental Permit (EP-433/2011).

Since there were no jetting activities during the reporting period, no construction phase impact water quality and marine mammal monitoring were deemed necessary and hence none was conducted during the reporting period. No exceedance of Action and Limit Levels of water quality was reported during the reporting period.

A weekly joint environmental site inspection was conducted in the reporting period. It confirmed that the environmental mitigation measures recommended in the PP were properly implemented by the Contractor.

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

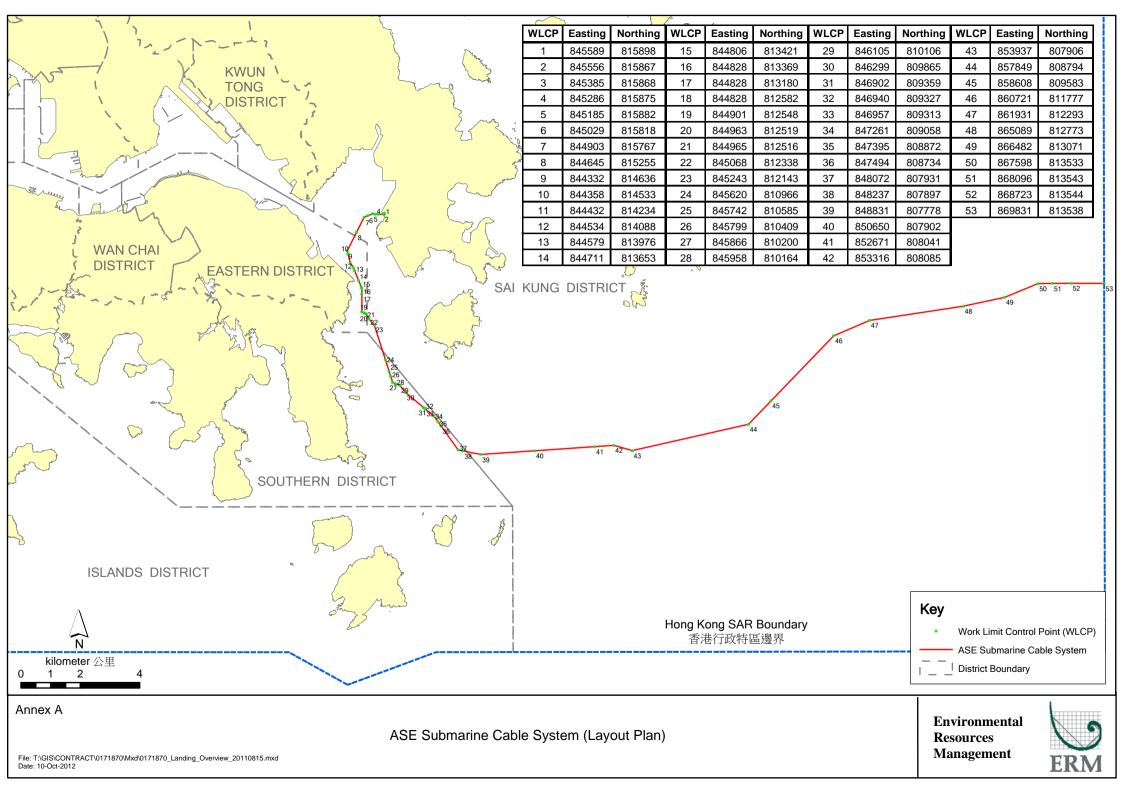
No complaint and summons/prosecution was received during the reporting period.

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

7

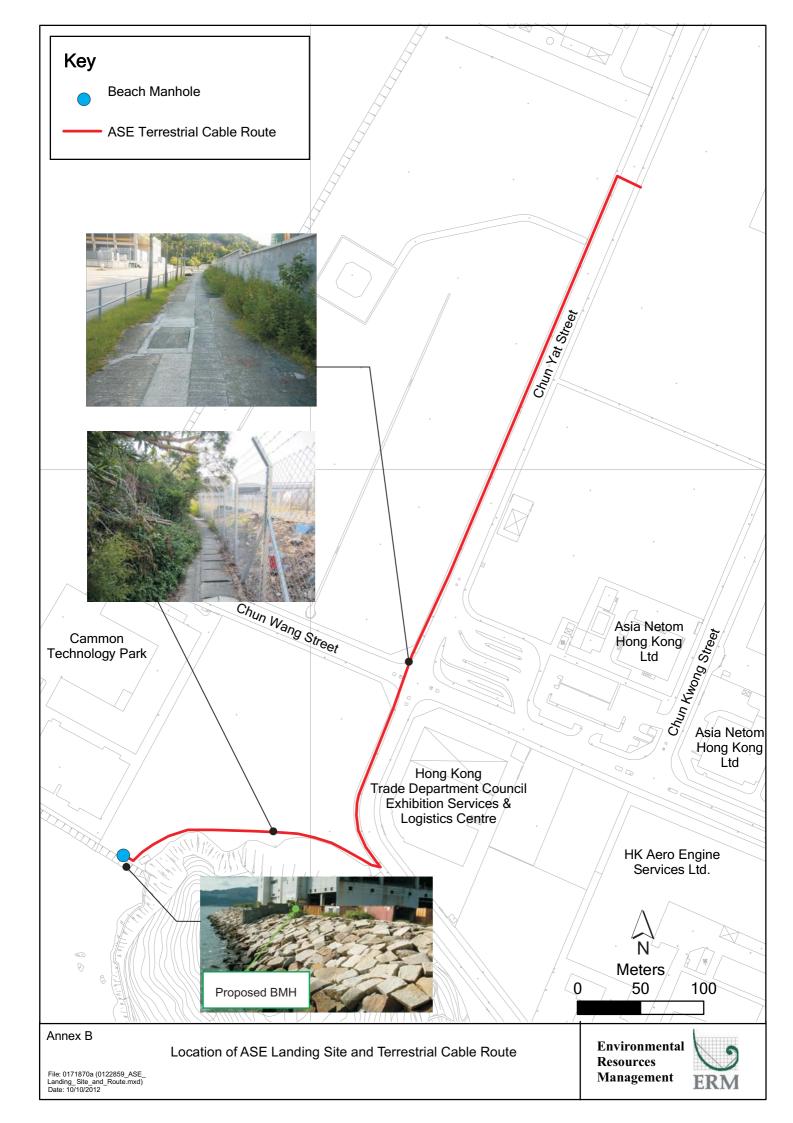
Annex A

Proposed ASE Submarine Cable System (Layout Plan)



Annex B

Location of ASE Landing Point and Terrestrial Cable Route



Annex C

Completed Site Inspection Log ٠

-

Site	
Insp	ection Date: 5/10/12 Time: 15:00 - 16:00 Girave TANG
We	ather
Cor	dition 🗹 Sunny 🔄 Fine 🔄 Overcast 🔄 Drizzle 🔄 Rain 🔄 Storm 🔄 Hazy
Ten	nperature 29 °C 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
A2	Is idle equipment turned off or throttled down?
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) Traffic Construction activities inside of site
A8	Any remedial action undertaken?
	Major noise source(s) Traffic Construction activities outside of site activities outsi

Asia Submarine-cable Express (ASE) - Tseung Kwan O

Site Inspection Log

в	Water Quality	N/A or not observed	Yes	No	Photo/Remarks
B1	Is drainage system adequate?	V			
	Are there temporary ditches for runoff discharge into appropriate				
B2	Watercourse?	V			
B3	With silt retention pond?	V			
B4	Do permanent drainage channels have: sediment basin?	V			
B5	traps and baffles?	V		\Box	Silt Curtain available
B6	Are there sediment tanks for settling runoff prior to disposal?	V			in front of the
B7	Are there oil interceptors in drainage system?	V			Seawall opening point.
B8	Oil and grease removed regularly?	1			
B9	Bypass to prevent flushing during periods of heavy rain?	V			
B10	Is drainage system well maintained?			1	
B11	Is exposed earth stabilized after earthworks have been completed?	V V V			Vot completed yet.
B12	Are exposed slope surfaces covered (by tarpaulin or other means)?	V			/ /
B13	Are open stockpiles of more than 20 m ³ covered during rainstorm?				
B14	Are manholes covered and sealed?	V			
	Rainy Season				
B15	Drainage system adequately designed for storm flow?	\checkmark			
B16	Sediment control measures inspected and maintained after rain storms?	\sim			
B17	Is debris and rubbish on site collected and disposed of properly?		\checkmark		
B18	Is wastewater discharge license available for inspection?		\checkmark		
B19	Measures to prevent the washing away of sand/silt to drains?	\checkmark			
B20	Is there any sediment plume observed existing the marine works area?			V	

Site Inspection Log

Asia Submarine-cable Express (ASE) - Tseung Kwan O

C Environmental Complaint

C1	Number of Environmental Complaint Received from 400	_ to _ out. 201.	2	0		
D	General / Housekeeping	N/A or not observed	Yes	No	Photo/Remarks	
D1	Are potential stagnant pools cleared and mosquito breeding prevented?				No stagnant poo	ls on site

Items for Inspection Construction Site -Storage Area for Construction Materials Notes / Issues Recorded On Site 1. An iding exavator was observed on site. The Contractor was reminded to turn of the equipment vehicle when not actively 2. Although general refuse was not frequently found within the construction site, the Contractor was suggested to provide rubbish bins on site for a better disposal of rubbish. 3. The contractor was suggested to display labels stating the sound power level in all on major PME.

Corrective Actions 1. The excalator was torned off by the Contractor during the site inspection. 2.83. Follow-up actions by the Contractor will be chuked in next week's site inspection.

Signatures: ET: (Name: (Name: Grave YANG) Annex D

Photographic Records on Site



Photo 1 - A copy of EP was displayed conspicuously at the vehicular site entrance.



Photo 3 - A dip tray was provided for the generator that potentially has oil leakage.



Photo 2 - A silt curtain was employed around the seawall area.



Photo 4 - Portable toilet was provided on the construction site.

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