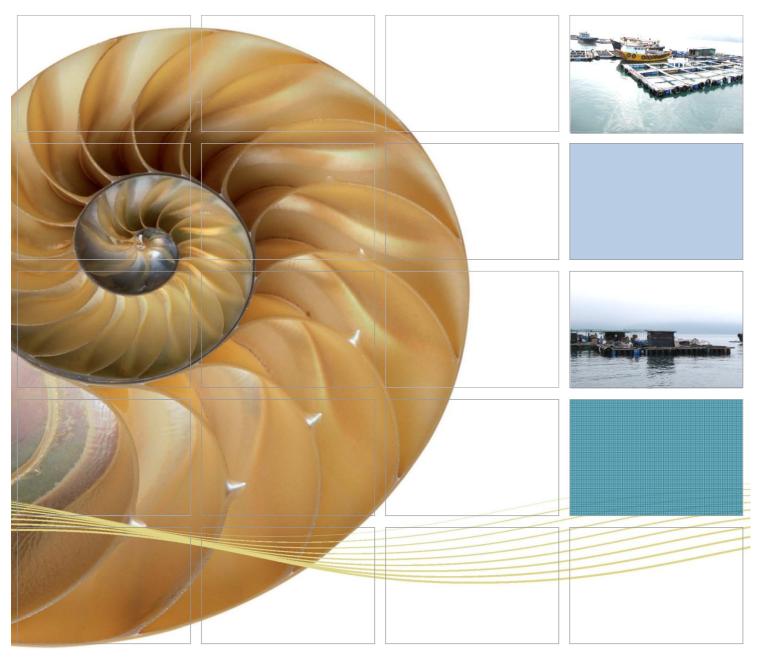
EM&A REPORT



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

Twelfth Weekly Site Inspection Report

27 December 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

12th 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: 27 December 2012 Approved by: /////						
		Terence Fong Project Director						
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Revision	Description	Ву	Checked	Approved	Date			
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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:	Twelfth Site Inspection Report
Date of Report:	27 December 2012
Date prepared by ET:	ERM-Hong Kong Ltd
Date received by IEC:	Ecosystem Ltd

Reference EM&A Manual/ EP Requirement

Site Inspections

EM&A Manual Requirement:

Section 5.1

Content:

"...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.

/MOE

Terence Fong, Environmental Team Leader: Date:

27 December 2012

IEC Verification

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

Vincent Lai, Independent Environmental Checker:

Date: 27 De

27 December 2012

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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 **Twelfth Weekly Site Inspection Report** (the Report), which summarises the inspection findings for the period from **17 December 2012** to **23 December 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. 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 construction programme of the Project is given in *Figure 2.1*.

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

Starting from 8 October 2012, the submarine-cable laying works in Zone A, Zone B and Zone C have been largely finished and the installation barge reached the boundary of Hong Kong marine waters on 24 October 2012. The remaining protection works at the crossing point of Drainage Services Department (DSD) sewage pipe in Zone A will be conducted in a later stage.

Landing Point Construction

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

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

Construction Activities Undertaken

- Site reinstatement of the seawall,
- Site reinstatement of the new manholes, and
- Site reinstatement of the land duct.

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.

Daily impact water quality monitoring was not conducted in the reporting period as no jetting works of any types in Zone A, Zone B or Zone C were involved from 17 December 2012 to 23 December 2012.

3.2 MARINE MAMMAL OBSERVATION (MMO)

Daily marine mammal exclusion zone monitoring is required to be conducted during the cable installation works taking place in daylight hours along the sections 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 were completed on 24 October 2012.

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.

In the week of 8 October 2012 when the cable installation barge passed the identified coral communities as presented in the *Baseline Coral Monitoring Survey Report*, the nearest distances between the barge and the identified coral communities in Zone A and Zone B were 230m and 270m respectively, indicating the cable alignment of more than 180m away from the identified coral communities as required in the Environmental Permit (EP- 433/2011).

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 in terms of noise, water quality and housekeeping etc (*Annex C*).

During the reporting period, the site inspection was conducted on 21 December 2012. Construction works for both the new beach manhole and land duct at the cable landing point have been largely completed, with only the boundary fences of the construction site to be removed soon. Areas within and in vicinity of the construction site have been reinstated to their original status (*Annex D Photos Nos. 1 - 4*), There was no non-compliance recorded during the site audit.

5 ENVIRONMENTAL NON-CONFORMANCE

5.1 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance of PP/ EM&A/ 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 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 Period

Work to be taken

• Removal of the boundary fences surrounding the construction site is scheduled on the 2nd week of Jan 2013.

Potential environmental impacts arising from the above activities are mainly associated with dust and waste management.

6.2 MONITORING SCHEDULE FOR THE NEXT REPORTING PERIOD

Impact water quality monitoring would be conducted should any works involving hand jetting be carried out in next reporting week. The results (if any) will be summarised in the *Fourth Weekly Water Quality Impact Monitoring Report* after the relevant monitoring data become available.

Next weekly site inspection will be conducted in the week when hoarding fences are removed from the new beach manhole and the land duct.

CONCLUSIONS

7

This **Twelfth Weekly Site Inspection Report** presents the findings of the site inspection and other EM&A activities undertaken during the period from **17 December** to **23 December 2012**, in accordance with the PP (Register No. PP – 452/2011), revised EM&A Manual and the requirements of Environmental Permit (EP- 433/2011).

No impact water quality monitoring was carried out in the reporting week and neither was the daily marine mammal exclusion zone monitoring, as no jetting works of any types were carried out in the reporting week.

A weekly environmental site inspection was conducted on 21 December 2012 during 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.

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 **Twelfth Weekly Site Inspection Report** that presents the findings of the site inspection and other EM&A activities undertaken during the period from **17 December 2012** to **23 December 2012**.

Environmental Site Inspection

A weekly environmental site inspection was carried out by the representatives 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 PP recommendations, EP 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.

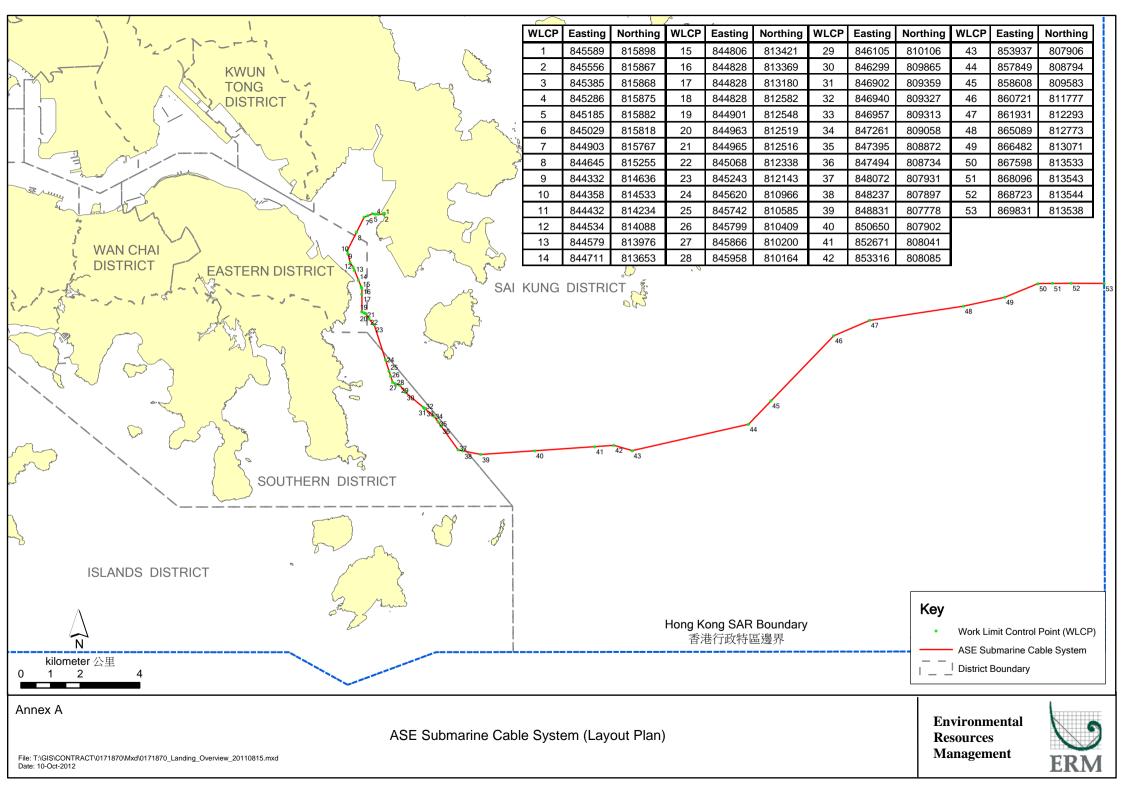
Upcoming Works for the Next Reporting Period

The remaining works at the cable landing point are the dismantlement of the hoarding fences along the new beach manhole and land duct. Potential environmental impacts arising from these activities are mainly associated with dust and waste management.

Impact water quality monitoring will be conducted should hand jetting works be involved.

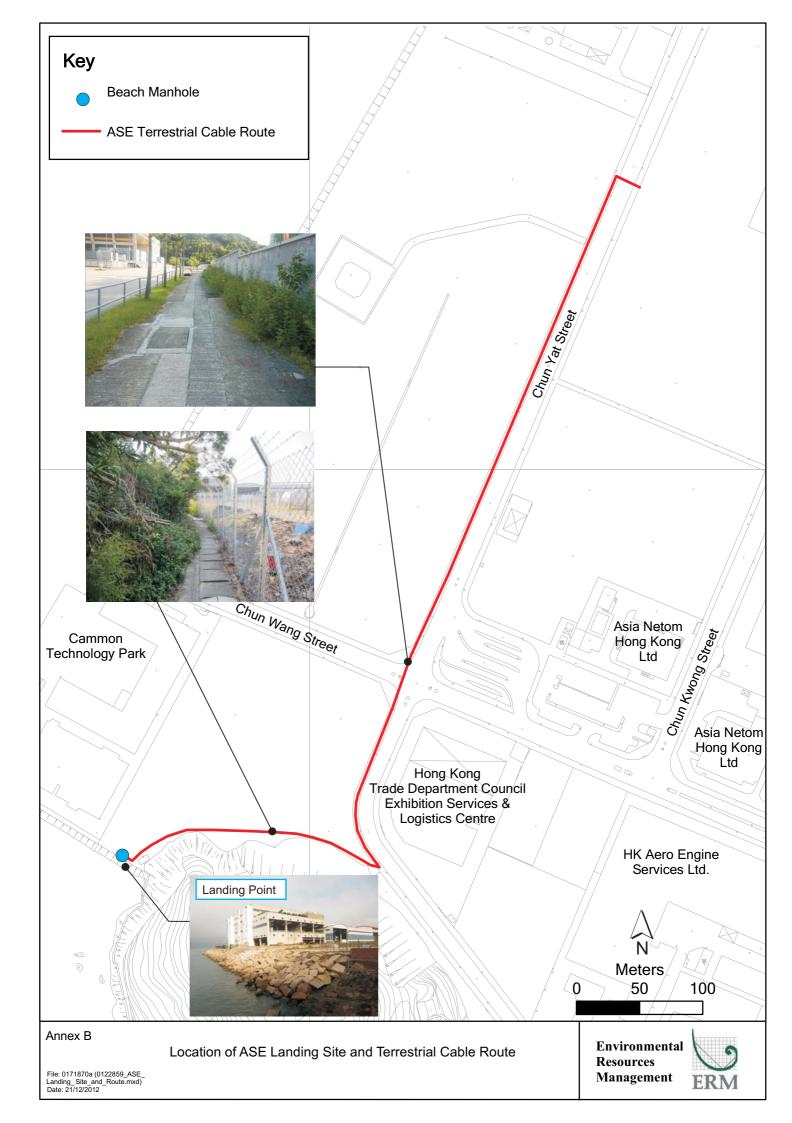
Annex A

Proposed ASE Submarine Cable System (Layout Plan)



Annex B

Location of ASE Landing Point and Terrestrial Cable Route



Annex C

Completed Site Inspection Log

Site	ASE Tseung Kwan O Landing Point	Inspected By:					
Insp	ection Date: 21-Dec-12 Time: 09:00 - 0	9:30	3 L	Grace	YANG		
Wea	ather						
Con	dition Sunny Fine ✓Overcast Drizzle	Rain Storm Hazy					
Tem	perature 18 °C Humidity High	✓ Moderate		ow			
Win	d Calm ✓ Light Breeze Strong						
Α	Noise	N/A or not observed	Yes	No	Photo/Remarks		
A1	Are all plant and equipment well maintained and in good operating condition?	\checkmark					
A2	Is idle equipment turned off or throttled down?	\checkmark					
A3	A3 Are powered mechanical equipment covered or shielded by acoustic materials?						
A4							
A5	Do mobile plants be sited as far away from NSRs as possible?	\checkmark			No NSRs nearby.		
A6	Do plants known to emit noise strongly in one direction be oriented away A6 from nearby NSRs? No NSRs nearby.						
A7	A7 Major noise source(s) Traffic Construction activities inside of site						
	Construction activities outside of site	✓ Others	No cor	nstruction a	activities in process.		
A8 Any remedial action undertaken?							

Site Inspection Log

в	Water Quality		N/A or not observed	Yes	No	Photo/Remarks
B1	Is drainage system adequate?		\checkmark			B1 - B10:
	Are there temporary ditches for runoff disc	charge into appropriate				
B2	Watercourse?		\checkmark			Silt curtain
B3	With silt retention pond?		\checkmark			decommissioned as
B4	Do permanent drainage channels have:	sediment basin?	\checkmark			construction works at the
B5		traps and baffles?	\checkmark			seawall side finished.
B6	Are there sediment tanks for settling runof	f prior to disposal?	\checkmark			
B7	Are there oil interceptors in drainage syste	em?	\checkmark			
B8	Oil and grease removed regularly?		\checkmark			
B9	Bypass to prevent flushing during pe	riods of heavy rain?	\checkmark			
B10	Is drainage system well maintained?		\checkmark			
B11	Is exposed earth stabilized after earthwork	ks have been completed?		\checkmark		
B12	Are exposed slope surfaces covered (by ta	arpaulin or other means)?	\checkmark			
B13	Are open stockpiles of more than 20 m ³ c	overed during rainstorm?	\checkmark			
B14	Are manholes covered and sealed?		\checkmark			
	Rainy Season					
B15	Drainage system adequately designed	ed for storm flow?	\checkmark			B15 & B16: Inspection
B16	Sediment control measures inspecte rain storms?	d and maintained after	\checkmark			conducted in dry season.
B17	Is debris and rubbish on site collected and	I disposed of properly?		\checkmark		
B18	318 Is wastewater discharge license available for inspection?					
B19	Measures to prevent the washing away of	sand/silt to drains?		\checkmark		
B20	Is there any sediment plume observed exi	sting the marine works area?			\checkmark	

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

C Environmental Complaint

C1	Number of Environmental Complaint Received from 17-Dec-12	to	23-De	<u>c-12</u> .	0	
D	General / Housekeeping		N/A or t observed	Yes	No	Photo/Remarks
D1	Are potential stagnant pools cleared and mosquito breeding prevented?		\checkmark			

Items for Inspection
- New beach manhole, and
- Land duct construction site
Notes / Issues Recorded On Site
Nil.
Corrective Actions
Nil.
Simotumon
Signatures: ET:

)

(Name: Grace YANG

Annex D

Photographic Records on Site



Photo 1 – Construction of the new beach manhole has been finished and the site has been reinstated to its original conditions.



Photo 3 – Artificial Seawall in front of the cable landing point has been reinstated to its original conditions.



Photo 2 – Construction of the land duct has been finished and the site has been reinstated to its original conditions.



Photo 4 – Areas in vicinity of the cable landing point have been cleaned.

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