AECOM

China Harbour Engineering Company Limited

Contract No. HY/2010/02

Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works

Quarterly EM&A Report for June 2013- August 2013

[04/2014]

	Name	Signature
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Ref.: HYDHZMBEEM00_0_1875L.14 2 May 2014

Engineer's Representative
Ove Arup & Partners
Chief Resident Engineer's Office
5 Ying Hei Road, Tung Chung, Lantau
Hong Kong

By Fax (3698 5999) and By Post

Attention: Mr. Roger Marechal

Dear Mr. Lo,

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

Contract No. HY/2010/02
Hong Kong – Zhuhai – Macao Bridge
Hong Kong Boundary Crossing Facilities – Reclamation Work
Quarterly Environmental Monitoring & Audit Report for June 2013 to August 2013

Reference is made to the Environmental Team's submission of the Quarterly Environmental Monitoring & Audit Report for June 2013 to August 2013 (letter ref. 60249820/C/RMKY14043001 dated 30 April 2014) copied to us by E-mail on 25 April 2014.

Please be informed that we have no adverse comment on the captioned report. The ET Leader and the relevant specialist(s) of the ET are reminded that our verification to your report does not release any of their obligation in the EM&A Manual under the applicable Environmental Permit(s) for this project, in particular on dolphin monitoring and checking on any change in density and distribution pattern of Chinese White Dolphin and recommending appropriate actions and mitigation measures.

The ET is further reminded to advise the status of the development of multi-parameter analytical approach which should be incorporated in the report for next reporting quarter, i.e. Sep – Nov 2013.

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

Raymond Dai
Independent Environmental Checker

ENVIRON Hong Kong Limited 英環香港有限公司
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c.c.	HyD	Mr. Matthew Fung	(By Fax: 3188 6614)
	HyD	Mr. Wai-ping Lee	(By Fax: 3188 6614)
	AECOM	Ms. Echo Leong	(By Fax: 2317 7609)
	CHEC	Mr. C M Wong	(By Fax: 2578 0413)

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EXECUTIVE SUMMARY

Contract No. HY/2010/02 – Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Work (here below, known as "the Project") mainly comprises reclamation at the northeast of the Hong Kong International Airport of an area of about 130-hectare for the construction of an artificial island for the development of the Hong Kong Boundary Crossing Facilities (HKBCF), and about 19-hectare for the southern landfall of the Tuen Mun - Chek Lap Kok Link (TMCLKL). It is a designated project and is governed by the current permits for the Project, i.e. the amended Environmental Permits (EPs) issued on 06 August 2013 (EP-353/2009/G) and 28 January 2014 (EP-354/2009/B) (for TMCLKL Southern Landfall Reclamation only).

Ove Arup & Partners Hong Kong Limited (Arup) was appointed by Highways Department (HyD) as the consultants for the design and construction assignment for the Project's reclamation works (i.e. the Engineer for the Project).

China Harbour Engineering Company Limited (CHEC) was awarded by HyD as the Contractor to undertake the construction work of the Project.

ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) for the Project.

AECOM Asia Co. Ltd. (AECOM) was appointed by CHEC to undertake the role of Environmental Team for the Project for carrying out the environmental monitoring and audit (EM&A) works.

The construction phase of the Project under the EPs was commenced on 12 March 2012 and will be tentatively completed by early Year 2016. The EM&A programme, including air quality, noise, water quality and dolphin monitoring and environmental site inspections, was commenced on 12 March 2012.

This report documents the findings of EM&A works conducted in the period between 1 June 2013 and 31 August 2013. As informed by the Contractor, major activities in the reporting quarter were:-

Marine-based Works

- Cellular structure installation
- Connecting arc cell installation
- Laying geo-textile
- Sand blanket laying
- Sand filling
- Maintenance of silt curtain & silt screen at sea water intake of HKIA
- Stone column installation
- Laying stone blanket
- Band drain installation
- Backfill cellular structure
- Instrumentation works
- Rubble mound seawall construction
- Construction of temporary seawall
- Ground investigation

Land-based Works

- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Geo-textile fabrication at Works Area WA2
- Silt curtain fabrication at Works Area WA4
- Maintenance of Temporary Marine Access at Works Area WA2

A summary of monitoring and audit activities conducted in the reporting quarter is listed below:

24-hour Total Suspended Particulates (TSP) monitoring	15 sessions
1-hour TSP monitoring	15 sessions
Noise monitoring	12 sessions
Impact water quality monitoring	39 sessions

Impact dolphin monitoring	6 surveys
Joint Environmental site inspection	13 sessions

Breaches of Action and Limit Levels for Air Quality
All 1-Hour TSP and 24-hour TSP results were below the Action and Limit Level in the reporting quarter.

Breaches of Action and Limit Levels for Noise

For construction noise, no exceedance was recorded at all monitoring stations in the reporting period.

Breaches of Action and Limit Levels for Water Quality

Fourteen (14) Action Level exceedances and two (2) limit level exceedance were recorded in the reporting quarter. Six (6) Action Level Exceedances of DO (Bottom), one (1) Limit Level Exceedance of DO (Surface & Middle) and one (1) Limit Level Exceedances of SS were recorded in June 13. Three (3) Action Level Exceedances of SS were recorded in the July 13. Five (5) Action Level Exceedances of SS were recorded in August 13. Investigation results show that the exceedances were not due to the Project works.

Breaches of Action and Limit Levels for Impact Dolphin Monitoring

Two (2) Action level exceedances of Chinese White Dolphin monitoring were recorded in the reporting. After investigation, it was noted although no unacceptable changes in environmental parameters of this project have been measured, at this time it is not possible to make a conclusive assessment of the Project impact on dolphins. Investigation details are annexed in Appendix L.

Implementation Status and Review of Environmental Mitigation Measures

Most of the recommended mitigation measures, as included in the EM&A programme, were implemented properly in the reporting quarter.

The recommended environmental mitigation measures effectively minimize the potential environmental impacts from the Project. The EM&A programme effectively monitored the environmental impacts from the construction activities and ensure the proper implementation of mitigation measures. No particular recommendation was advised for the improvement of the programme.

Moreover, regular review and checking on the construction methodologies, working processes and plants were carried out to ensure the environmental impacts were kept minimal and recommended environmental mitigation measures were implemented effectively.

Complaint, Notification of Summons and Successful Prosecution

No complaint, notification of summons and successful prosecution was received were received in the reporting quarter.

1 INTRODUCTION

1.1 Background

1.1.1 Contract No. HY/2010/02 – Hong Kong-Zhuhai-Macao Bridge Hong Kog Boundary Crossing Facilities – Reclamation Work (here below, known as "the Project") mainly comprises seawall construction and reclamation at the northeast of the Hong Kong International Airport of an area of about 130-hectare for the construction of an artificial island for the development of the Hong Kong Boundary Crossing Facilities (HKBCF), and about 19-hectare for the southern landfall of the Tuen Mun - Chek Lap Kok Link (TMCLKL).

1.1.2 The environmental impact assessment (EIA) reports (Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities – EIA Report (Register No. AEIAR-145/2009) (HKBCFEIA) and Tuen Mun – Chek Lap Kok Link – EIA Report (Register No. AEIAR-146/2009) (TMCLKLEIA), and their environmental monitoring and audit (EM&A) Manuals (original EM&A Manuals), for the Project were approved by Environmental Protection Department (EPD) in October 2009.

1.1.3 EPD subsequently issued the Environmental Permit (EP) for HKBCF in November 2009 (EP-353/2009) and the Variation of Environmental Permit (VEP) in June 2010 (EP-353/2009/A), November 2010 (EP-353/2009/B), November 2011 (EP-353/2009/C), March 2012 (EP-353/2009/D), October 2012 (EP-353/2009/E), April 2013 (EP-353/2009/F) and August 2013 (EP-353/2009/G). Similarly, EPD issued the Environmental Permit (EP) for TMCLKL in November 2009 (EP-354/2009) and the Variation of Environmental Permit (VEP) in December 2010 (EP-354/2009/A) and January 2014 (EP-354/2009/B).

1.1.4 The Project is a designated project and is governed by the current permits for the Project, i.e. the amended EPs issued on 6 August 2013 (EP-353/2009/G) and 28 January 2014 (EP-354/2009/B) (for TMCLKL Southern Landfall Reclamation only).

1.1.5 A Project Specific EM&A Manual, which included all project-relation contents from the original EM&A Manuals for the Project, was issued in May 2012.

1.1.6 Ove Arup & Partners Hong Kong Limited (Arup) was appointed by Highways Department (HyD) as the consultants for the design and construction assignment for the Project's reclamation works (i.e. the Engineer for the Project).

1.1.7 China Harbour Engineering Company Limited (CHEC) was awarded by HyD as the Contractor to undertake the construction work of the Project.

1.1.8 ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) for the Project.

1.1.9 AECOM Asia Co. Ltd. (AECOM) was appointed by CHEC to undertake the role of Environmental Team for the Project for carrying out the EM&A works.

1.1.10 The construction phase of the Project under the EPs was commenced on 12 March 2012 and will be tentatively completed by early Year 2016.

1.1.11 According to the Project Specific EM&A Manual, there is a need of an EM&A programme including air quality, noise, water quality and dolphin monitoring and environmental site inspections. The EM&A programme of the Project commenced on 12 March 2012.

1.2 Scope of Report

1.2.1 This is the sixth quarterly EM&A Report under the Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. This report presents a summary of the environmental monitoring and audit works, list of activities and mitigation measures proposed by the ET for the Project from 1 June 2013 and 31 August 2013.

1.3 Project Organization

1.3.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Engineer's Representative (ER) (Ove Arup & Partners Hong Kong Limited)	Chief Resident Engineer	Roger Marechal	2528 3031	2668 3970
IEC / ENPO (ENVIRON Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3548 6988
	Environmental Project Office Leader	Y.H. Hui	3465 2868	3465 2899
Contractor (China Harbour Engineering Company Limited)	General Manager (S&E)	Daniel Leung	3157 1086	2578 0413
	Environmental Officer	Richard Ng	36932253	2578 0413
	24-hour Hotline	Alan C.C. Yeung	9448 0325	--
ET (AECOM Asia Company Limited)	ET Leader	Echo Leong	3922 9280	2317 7609

1.4 Summary of Construction Works

1.4.1 The construction phase of the Project under the EP commenced on 12 March 2012.

1.4.2 As informed by the Contractor, details of the major works carried out in the reporting quarter are listed below:-

Marine-based Works

- Cellular structure installation
- Connecting arc cell installation
- Laying geo-textile
- Sand blanket laying
- Sand filling
- Maintenance of silt curtain & silt screen at sea water intake of HKIA
- Stone column installation
- Laying stone blanket
- Band drain installation
- Backfill cellular structure
- Instrumentation works
- Rubble mound seawall construction
- Construction of temporary seawall

- Ground investigation

Land-based Works

- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Geo-textile fabrication at Works Area WA2
- Silt curtain fabrication at Works Area WA4
- Maintenance of Temporary Marine Access at Works Area WA2

1.4.3 The 3-month rolling construction programme of the Project is shown in Appendix B.

1.4.4 The general layout plan of the Project site showing the detailed works areas is shown in Figure 1.

1.4.5 The environmental mitigation measures implementation schedule are presented in Appendix C.

2 SUMMARY OF EM&A PROGRAMME REQUIREMENTS

2.1 Monitoring Parameters

2.1.1 The Project Specific EM&A Manual designated 4 air quality monitoring stations, 2 noise monitoring stations, 21 water monitoring stations (9 Impact Stations, 7 Sensitive Receiver Stations and 5 Control/Far Field Stations) to monitor environmental impacts on air quality, noise and water quality respectively. Pre-set and fixed transect line vessel based dolphin survey was required in two AFCD designated areas (Northeast and Northwest Lantau survey areas). The impact dolphin monitoring at each survey area should be conducted twice per month.

2.1.2 For impact air quality monitoring, monitoring locations AMS2 (Tung Chung Development Pier) and AMS7 (Hong Kong SkyCity Marriott Hotel) were set up at the proposed locations in accordance with Project Specific EM&A Manual. The conditional omission of Monitoring Station AMS6 was effective since 19 November 2012. For monitoring location AMS3 (Ho Yu College), as proposed in the Project Specific EM&A Manual, approval for carrying out impact monitoring could not be obtained from the principal of the school. Permission on setting up and carrying out impact monitoring works at nearby sensitive receivers, like Caribbean Coast and Coastal Skyline, was also sought. However, approvals for carrying out impact monitoring works within their premises were not obtained. Impact air quality monitoring was conducted at site boundary of the site office area in Works Area WA2 (AMS3A) respectively. Same baseline and Action Level for air quality, as derived from the baseline monitoring data recorded at Ho Yu College, was adopted for this alternative air quality location.

2.1.3 For impact noise monitoring, monitoring locations NMS2 (Seaview Crescent Tower 1) was set up at the proposed locations in accordance with Project Specific EM&A Manual. However, for monitoring location NMS3 (Ho Yu College), as proposed in the Project Specific EM&A Manual, approval for carrying out impact monitoring could not be obtained from the principal of the school. Permission on setting up and carrying out impact monitoring works at nearby sensitive receivers, like Caribbean Coast and Coastal Skyline, was also sought. However, approvals for carrying out impact monitoring works within their premises were not obtained. Impact noise monitoring was conducted at site boundary of the site office area in Works Area WA2 (NMS3A) respectively. Same baseline noise level, as derived from the baseline monitoring data recorded at Ho Yu College was adopted for this alternative noise monitoring location.

2.1.4 In accordance with the Project Specific EM&A Manual, twenty-one stations were designated for impact water quality monitoring. The nine Impact Stations (IS) were chosen on the basis of their proximity to the reclamation and thus the greatest potential for water quality impacts, the seven Sensitive Receiver Stations (SR) were chosen as they are close to the key sensitive receives and the five Control/ Far Field Stations (CS) were chosen to facilitate comparison of the water quality of the IS stations with less influence by the Project/ ambient water quality conditions.

2.1.5 Due to safety concern and topographical condition of the original locations of SR4 and SR10B, alternative impact water quality monitoring stations, naming as SR4(N) and SR10B(N), were adopted, which are situated in vicinity of the original impact water quality monitoring stations (SR4 and SR10B) and could be reachable. Same baseline and Action Level for water quality, as derived from the baseline monitoring data recorded, were adopted for these alternative impact water quality monitoring stations.

2.1.6 The monitoring locations used during the reporting quarter are depicted in Figures 2, 3 and 4 respectively.

2.1.7 The Project Specific EM&A Manual also required environmental site inspections for air quality, noise, water quality, chemical, waste management, marine ecology and landscape and visual impact.

2.2 Environmental Quality Performance (Action/Limit Levels)

2.2.1 The environmental quality performance limits (i.e. Action and/or Limit Levels) of air and water quality monitoring were derived from the baseline air and water quality monitoring results at the respective

monitoring stations, while the environmental quality performance limits of noise monitoring were defined in the EM&A Manual.

2.2.2 The environmental quality performance limits of air quality, noise and water monitoring are given in Appendix D.

2.3 Environmental Mitigation Measures

2.3.1 Relevant environmental mitigation measures were stipulated in the Particular Specification and EPs (EP-353/2009/G and EP-354/2009/B) (for TMCLKL Southern Landfall Reclamation only) for the Contractor to adopt. A list of environmental mitigation measures and their implementation statuses are given in Appendix C.

3 MONITORING RESULTS

3.1 Air Quality Monitoring

3.1.1 In accordance with the Project Specific EM&A Manual, impact 1-hour Total Suspended Particulates (TSP) monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days at the 4 monitoring stations (AMS2, AMS3A, AMS6 and AMS7).

3.1.2 The monitoring locations for impact air quality monitoring are depicted in Figure 2. However, for AMS6 (Dragonair/CNAC (Group) Building), permission on setting up and carrying out impact monitoring works was sought, however, access to the premise has not been granted yet on this report issuing date.

3.1.3 The weather was mostly sunny, with occasional cloudy and occasional rainy in the reporting quarter. The major dust source in the reporting quarter included construction activities from the Project, as well as nearby traffic emissions.

3.1.4 The number of monitoring events and exceedances recorded in each month of the reporting quarter are presented in Table 3.1 and Table 3.2 respectively.

Table 3.1 Summary of Number of Monitoring Events for 1-hr & 24-hr TSP Concentration

Monitoring Parameter	Location	No. of monitoring events		
		June 13	July 13	August13
1-hr TSP	AMS2	15	15	15
	AMS3A	15	15	15
	AMS7	15	15	15
24-hr TSP	AMS2	5	5	5
	AMS3A	5	5	5
	AMS7	5	5	5

Table 3.2 Summary of Number of Exceedances for 1-hr & 24-hr TSP Monitoring

Monitoring Parameter	Location	Level of Exceedance	Level of Exceedance		
			June 13	July 13	August 13
1-hr TSP	AMS2	Action	0	0	0
		Limit	0	0	0
	AMS3A	Action	0	0	0
		Limit	0	0	0
	AMS7	Action	0	0	0
		Limit	0	0	0
		Total	***0***	***0***	***0***
24-hr TSP	AMS2	Action	0	0	0
		Limit	0	0	0
	AMS3A	Action	0	0	0
		Limit	0	0	0
	AMS7	Action	0	0	0
		Limit	0	0	0
		Total	***0***	***0***	***0***

3.1.5 All impact 1-hour TSP and 24-hour TSP monitoring results at all monitoring locations were below the Action and Limit Levels in the reporting quarter.

3.1.6 The graphical plots of the trends of the monitoring results are provided in Appendix E. No specific trend of the monitoring results or existence of persistent pollution source was noted.

3.1.7 The event action plan is annexed in Appendix L.

3.2 Noise Monitoring

3.2.1 Impact noise monitoring was conducted at the 2 monitoring stations (NMS2 and NMS3A) for at least once per week during 07:00 – 19:00 in the reporting quarter.

3.2.2 The monitoring locations used during the reporting quarter are depicted in Figure 2.

3.2.3 Due to one documented complaint is received; one (1) Action Level Exceedance of construction noise was recorded in the reporting quarter. The investigation results showed that the action level exceedance was non-project related. No Limit Level Exceedance of construction noise was recorded in the reporting quarter.

3.2.4 Major noise sources during the noise monitoring included construction activities of the Project and nearby traffic noise.

3.2.5 The number of impact noise monitoring events and exceedances are summarized in Table 3.3 and Table 3.4 respectively

Table 3.3 Summary of Number of Monitoring Events for Impact Noise

Monitoring Parameter	Location	No. of monitoring events		
		June 13	July 13	August 13
	NMS2	4	4	4
	NMS3A	4	4	4

Table 3.4 Summary of Number of Monitoring Exceedances for Impact Noise

Monitoring Parameter	Location	Level of Exceedance	Level of Exceedance		
			June 13	July 13	August 13
	NMS2	Action	0	0	0
		Limit	0	0	0
	NMS3A	Action	0	0	0
		Limit	0	0	0
		Total	***0***	***0***	***0***

3.2.6 The graphical plots of the trends of the monitoring results are provided in Appendix F. No specific trend of the monitoring results or existence of persistent pollution source was noted.

3.2.7 The event action plan is annexed in Appendix L.

3.3 Water Quality Monitoring

3.3.1 The monitoring locations used during the reporting quarter are depicted in Figure 3.

3.3.2 Fourteen (14) Action Level exceedances and two (2) limit level exceedance were recorded in the reporting quarter. Six (6) Action Level Exceedances of DO (Bottom), one (1) Limit Level Exceedance of DO (Surface & Middle) and one (1) Limit Level Exceedances of SS were recorded in June 13. Three (3) Action Level Exceedances of SS were recorded in the July 13. Five (5) Action Level Exceedances of SS were recorded in August 13. Investigation results show that the exceedances were not due to the Project works.

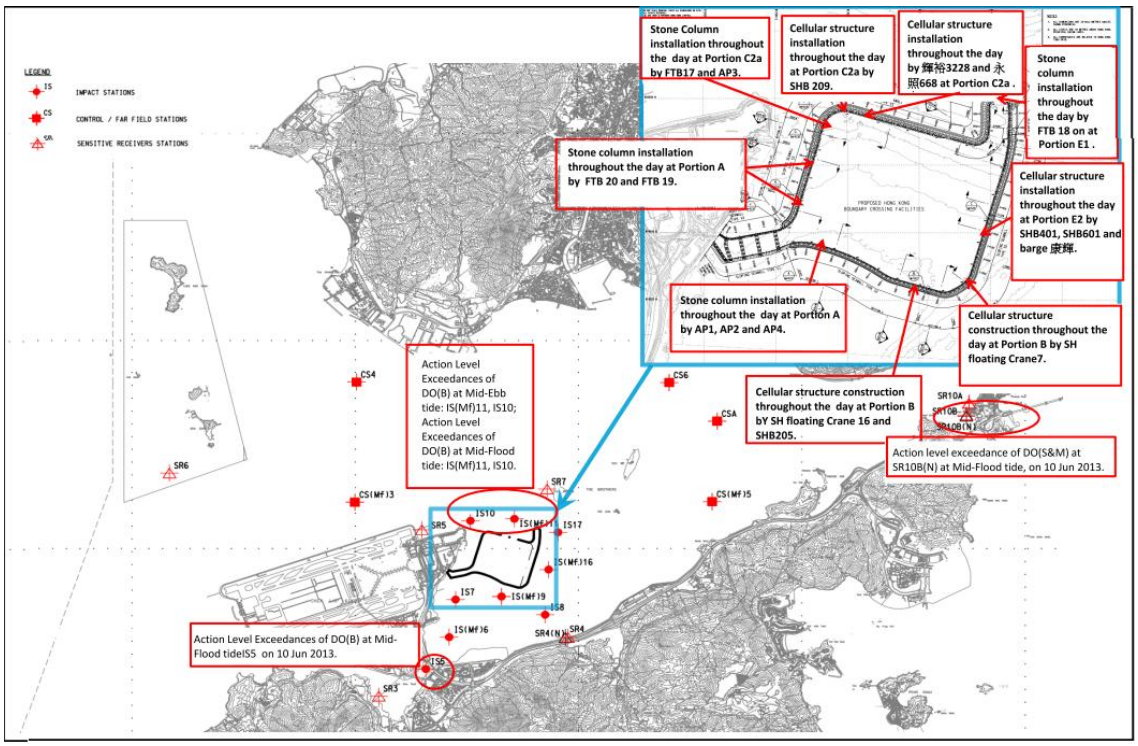
3.3.3 **Table 3.5 Summary of Water Quality Exceedances in Jun 13-Aug 13**

Station	Exceedance Level	DO (S&M)		DO (Bottom)		Turbidity		SS		Total	
		Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood
IS5	Action	0	0	0	**1 (10 June 13)**	0	0	0	**1 (7 Aug 2013)**	0	**2**
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)6	Action	0	0	0	0	0	0	0	**1 (7 Aug 2013)**	0	**1**
	Limit	0	0	0	0	0	0	0	0	0	0
IS7	Action	0	0	0	0	0	0	0	**1 (7 Aug 2013)**	0	**1**
	Limit	0	0	0	0	0	0	0	0	0	0
IS8	Action	0	0	0	0	0	0	0	**0**	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)9	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS10	Action	0	0	**1 (10 June 13)**	**1 (10 June 13)**	0	0	0	**1 (26 July 13)**	**1**	**2**
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)11	Action	0	0	**1 (10 June 13)**	**1 (10 June 13)**	0	0	0	0	**1**	**1**
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)16	Action	0	0	0	0	0	0	**1 (23 Aug 2013)**	0	**1**	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS17	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR3	Action	0	0	0	0	0	0	0	**1 (7 Aug 2013)**	0	**1**
	Limit	0	0	0	0	0	0	0	0	0	0
SR4(N)	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	**1 (24 June 13)**	0	**1**	0
SR5	Action	0	0	0	0	0	0	0	**2 (26 and 31 July 13)**	0	**2**

Station	Exceedance Level	DO (S&M)		DO (Bottom)		Turbidity		SS		Total	
		Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood
	Limit	0	0	0	0	0	0	0	0	0	0
SR6	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR7	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR10A	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR10B (N)	Action	0	0	0	**1 (10 June 13)**	0	0	0	0	0	**1**
	Limit	0	**1 (10 June 13)**	0	0	0	0	0	0	0	**1**
Total	**Action**	0	0	**2**	**4**	0	0	**1**	**7**	**14**	
	Limit	0	**1**	0	0	0	0	**1**	0	**2**	

Note: S: Surface;
M: Mid-depth;

3.3.4 For the one (1) Limit Level Exceedance record at SR10(B)N during flood tide, two (2) Action Level Exceedances of DO recorded IS10 and IS(Mf)11 during ebb tide, (4) Action Level Exceedance of DO recorded at IS5, IS10, SR10B(N) and IS(Mf)11 during mid flood tide on 10 Jun 13.



3.3.3.1 For type, location and duration of works carried out on 10 June 2013 please refer to the above layout map.

3.3.3.2 Exceedances were not due to marine based construction works of the Project because:

3.3.3.3 During ebb tide, monitoring station IS(Mf)11 and IS10 are considered upstream to active works which the water quality are unlikely to be affected by active works. In addition, no exceedance was recorded at IS(Mf)16 and IS17 which are considered downstream to active works suggesting active works were unlikely to be the source of impact.

3.3.3.4 During ebb tide, low DO (Bottom) - 4.8mg/L was noted at control station CS(Mf)3 which is considered upstream to monitoring station IS(Mf)11 and IS10, indicating DO (Bottom) at location upstream to active construction works was adversed affected by local effects in the vicinity. As such, the exceedances recorded were likely due to local effects in the vicinity at IS(Mf)11 and IS10 .

3.3.3.5 Low DO (Bottom) - 4.4mg/L, 4.2mg/L, 4.0mg/L and 4.0mg/L were noted at monitoring station SR10B(N), CS6, CSA and CS(Mf)5 respectively which are considered upstream to monitoring stations IS(Mf)11 and IS10 during mid flood tide indicating DO (Bottom) at locations upstream to active construction works were adversed affected by local effects in the vicinity. As such, the exceedances recorded were likely due to local effects in the vicinity at IS(Mf)11, IS10 and IS5 during mid flood tide.

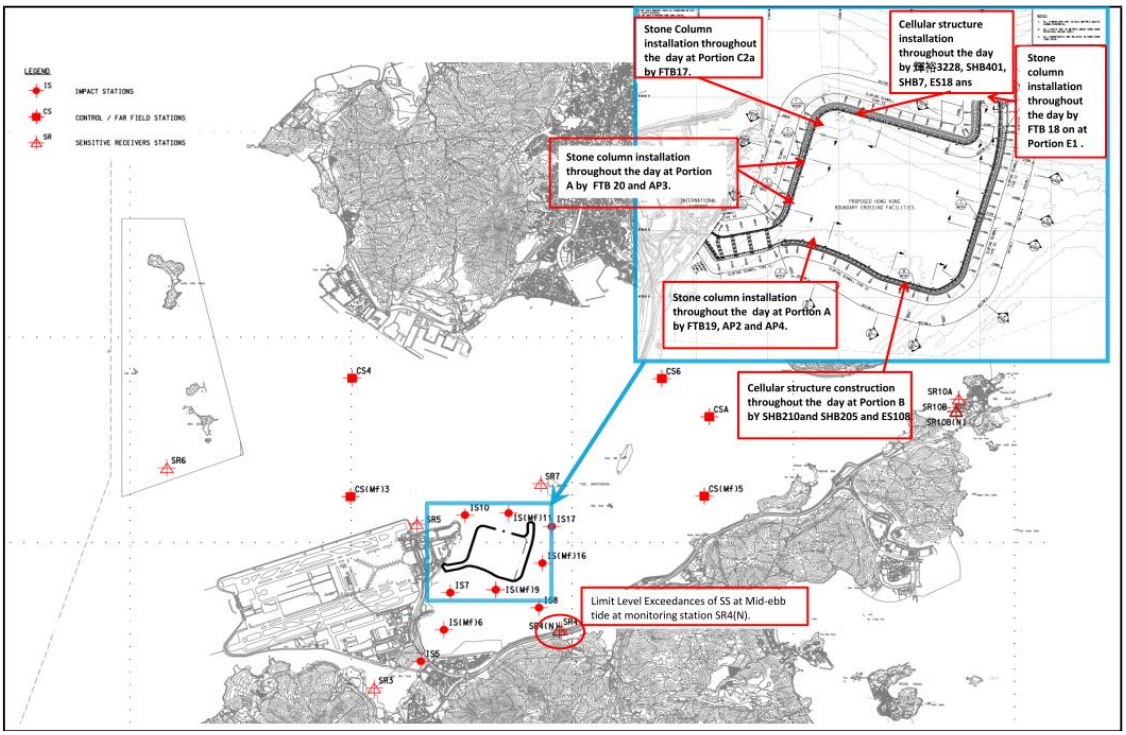
3.3.3.6 No DO (Bottom) exceedance was recorded during flood tide at monitoring locations IS7, IS(Mf)6 and IS(Mf)9 which are closer to active works than monitoring location IS5, indicating exceedance of DO (Bottom) recorded at monitoring location IS5 during flood tide was unlikely to be contributed by active works.

3.3.3.7 The exceedances were considered as Non-Project Related.

3.3.3.8 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains.

3.3.3.9 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

3.3.5 For the one (1) Limit Level Exceedance of SS was recorded at SR4(N) during mid ebb tide on 24 June 2013.



3.3.4.1 For type, location and duration of works carried out on 10 June 2013 please refer to the above layout map.

3.3.4.2 Exceedance was not due to marine based construction works of the Project because:

3.3.4.3 Red rain storm signal was hoisted between 10:20am - 11:35am by Hong Kong Observatory during flood tide and adverse weather condition e.g. heavy rainfall in the monitoring area was noted before the limit level exceedance recorded at SR4(N) at 12:53pm on 24 June 2013. As such, the water quality at SR4(N) was likely to be affected.

3.3.4.4 The monitoring sites SR4 far away from where active works were carried out during ebb tide. Suspended solids values recorded at Impact Stations closer to the works are (e.g. IS(Mf)9, IS7 and IS8) all below the Action and Limit Level during the same tide on the same day.

3.3.4.5 For limit level exceedance of depth averaged SS (in mg/L) recorded at SR4(N) during mid ebb tide, same works were carried out at almost the same locations on 21, 24 and 26 June 13, but all depth averaged SS (in mg/L) results recorded at all monitoring location on 21 and 26 June 13 were all below the Action and Limit Level. Which indicates project works is unlikely to contribute to the limit level exceedance recorded at SR4(N).

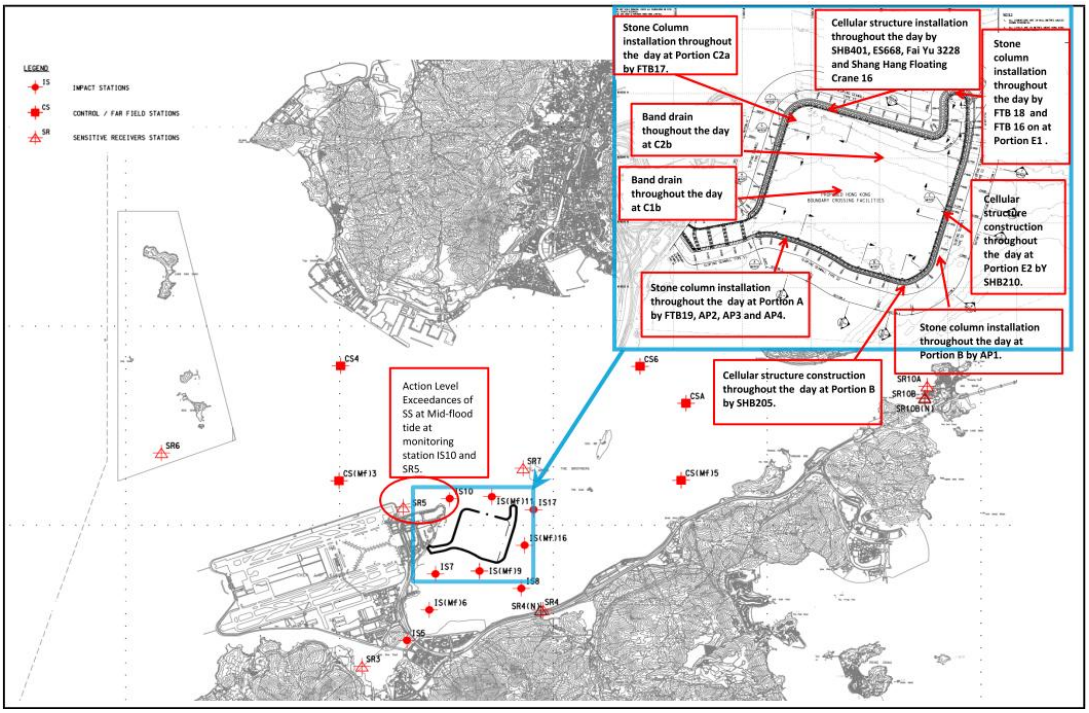
3.3.4.6 The exceedance was likely due to local effects in the vicinity SR4(N).

3.3.4.7 The exceedance was considered as Non-Project Related.

3.3.4.8 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

3.3.4.9 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

3.3.6 Two (2) Action Level exceedances at measured Suspended Solids (mg/L) were recorded on 26 Jul 2013 during mid-flood tide at monitoring station IS10 and SR5. For Action Level exceedances at measured Suspended Solids (mg/L), 23.9 mg/L and 23.8 mg/L were recorded at Monitoring Station IS10 and SR5 respectively.



3.3.5.1 For works activities carried out on 26 July 2013, please refer to above layout map which shows the locations active works.

3.3.5.2 Exceedances were not due to marine based construction works of the Project because:

3.3.5.3 Same type of works were carried out at the same location on 24 and 29 July 13 but Suspended Solids values recorded at IS10 and SR5 on 24 and 29 July 13 are all below the Action and Limit Level during the same tide on the same day which indicates project works are unlikely to contribute to the action level exceedance recorded at IS10 and SR5.

3.3.5.4 Suspended solids values recorded at Monitoring Stations CS(Mf)3 located downstream of monitoring station IS10 and SR5 during mid-flood tide were below the action and limit level.

3.3.5.5 No silt plume was observed flowing from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when monitoring works were conducted IS10 on 26 July 13 during mid flood tide.

3.3.5.6 Turbidity measurements results at IS10 and SR5 were 14.8(NTU) and 13.7(NTU) respectively during flood tide and are all below the Action and Limit Level. It is considered that the turbidity recorded at IS10 and IS(Mf)11 were not adversely affected by active works.

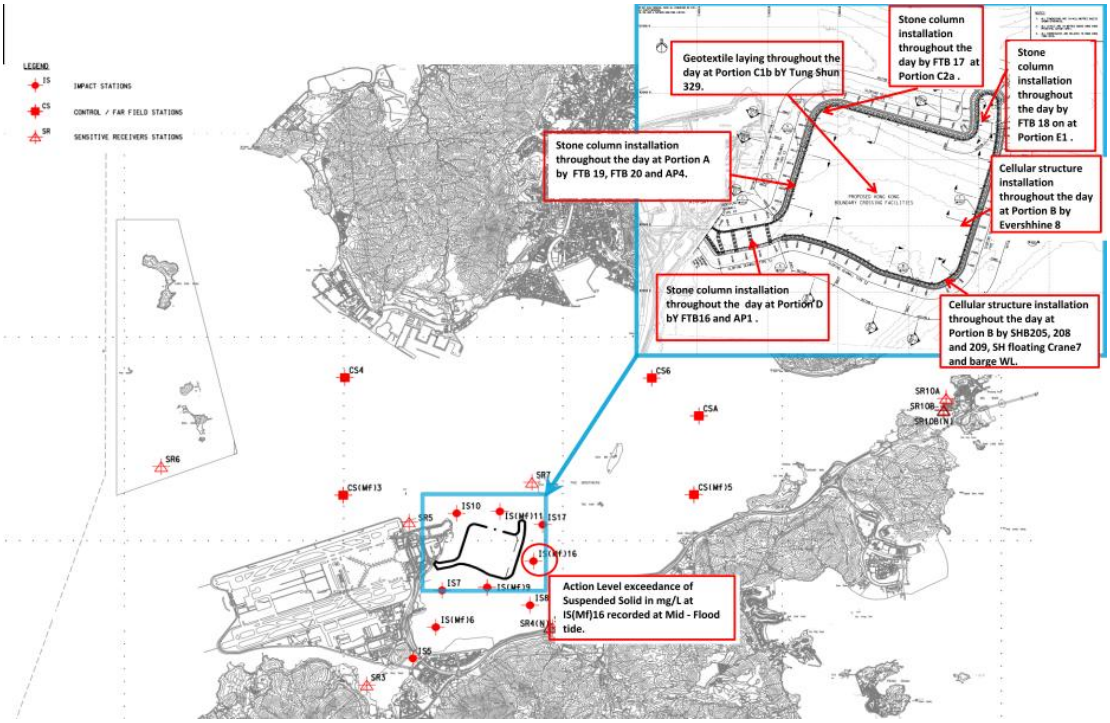
3.3.5.7 The exceedances were likely due to local effects in the vicinity of IS10 and SR5.

3.3.5.8 The exceedances were considered as non-Project related.

3.3.5.9 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

3.3.5.10 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

3.3.7 One (1) Action Level Exceedance at measured Suspended Solids (mg/L) was recorded on 31 July 2013 during mid-flood tide at monitoring station SR5. For Action Level exceedance at measured Suspended Solids (mg/L), 23.6 mg/L was recorded.



3.3.6.1 Exceedance was not due to marine based construction works of the Project because:

3.3.6.2 For works activities carried out on 31 July 2013, please refer to above layout map which shows the locations active works.

3.3.6.3 Same type of works were carried out at the same location on 29 July 13 but Suspended Solids values recorded at SR5 on 29 July 13 is below the Action and Limit Level during the same tide which indicates project works is unlikely to contribute to the limit level exceedance recorded at SR5.

3.3.6.4 Monitoring Stations IS10 and IS(Mf)11 which are considered downstream and closer to the active works than monitoring Station SR5. Since the Suspended Solids values recorded at IS10 and IS(Mf)11 are all below the Action and Limit Level during same tide on the same day which shows that the water quality noted at IS10 and IS(Mf)11 which are downstream of and closer to active works during flood tide than SR5 were not adversely affected by active works. Hence it is considered that the exceedance recorded at SR5 is not related to the Project.

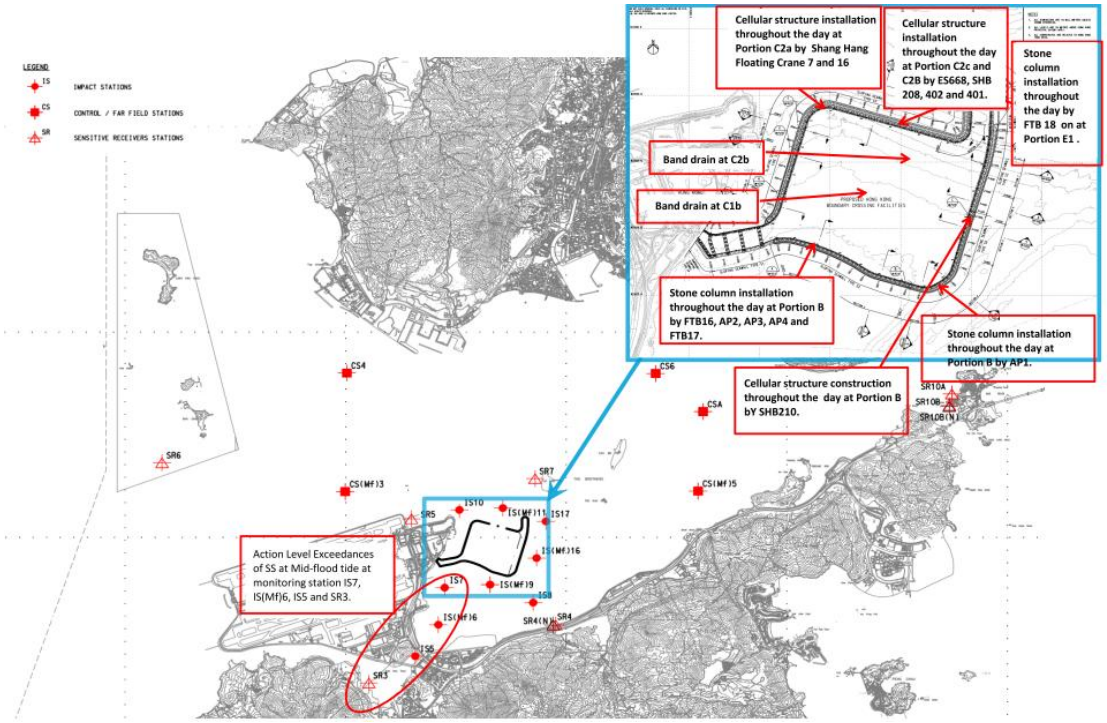
3.3.6.5 The exceedance was likely due to local effects in the vicinity of SR5.

3.3.6.6 The exceedance was considered as non-Project related.

3.3.6.7 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

3.3.6.8 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

3.3.8 Four (4) Action Level exceedances at measured Suspended Solids (mg/L) were recorded on 07 August 2013 during mid-flood tide at monitoring station IS(Mf)6, IS5, IS7 and SR3. For Action Level exceedances at measured Suspended Solids (mg/L), 24.7 mg/L, 29.8mg/L, 24.9 and 28.1 were recorded at Monitoring Station IS(Mf)6, IS5, IS7 and SR3 respectively.



3.3.7.1 For locations and type of active works carried out on 7 Aug 13, please refer to the above layout map.

3.3.7.2 Exceedances were not due to marine based construction works of the Project because:

3.3.7.3 Same type of works were carried out at the same locations on 5 and 9 Aug 13 but Suspended Solids values recorded at IS(Mf)6, IS5, IS7 and SR3 on 5 and 9 Aug 13 are below the Action and Limit Level during the same tide which indicates project works is unlikely to contribute to the action level exceedances recorded at IS(Mf)6, IS5, IS7 and SR3.

3.3.7.4 Monitoring Stations IS10 and IS(Mf)11 which are considered downstream to the active works of during mid flood tide. The Suspended Solids values recorded at IS10 and IS(Mf)11 are all below the Action and Limit Level during same tide on the same day which shows that the water quality noted downstream of active works during flood tide were not adversely affected by active works. Hence it is considered that the action level exceedances recorded at IS(Mf)6, IS5, IS7 and SR3 are unlikely contributed by project works.

3.3.7.5 Amongst the 4 exceedance stations, relatively higher SS value were recorded at IS5 and SR3 which are further away from HKBCF's active works than it is for IS(Mf)6 and IS7, indicating that the localized non-project source is likely to be located at upstream to the BCF site during flood tide.

3.3.7.6 Turbidity measurements results at IS(Mf)6, IS5, IS7 and SR3 during flood tide are all below the Action and Limit Level. It is considered that the turbidity recorded at IS(Mf)6, IS5, IS7 and SR3 were not adversely affected by active works.

3.3.7.7 The exceedances were likely due to local effects in the vicinity of IS(Mf)6, IS5, IS7 and SR3.

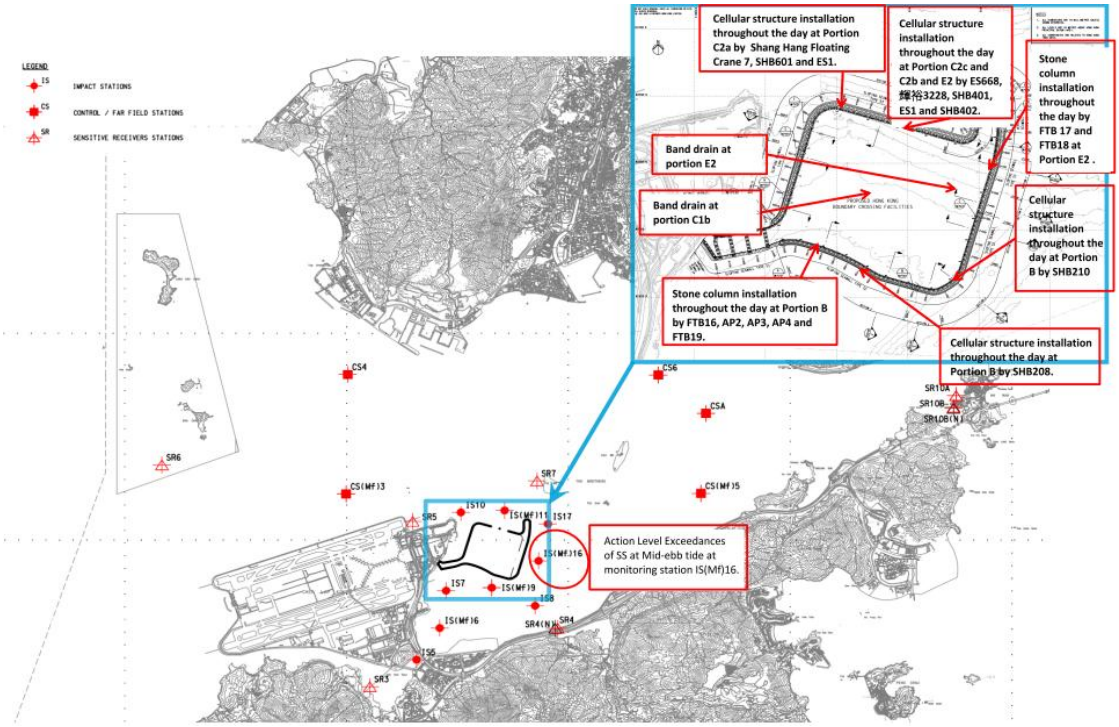
3.3.7.8 The exceedances were considered as non-Project related.

3.3.7.9 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt

curtains and to carry out maintenance work once defects were found.

3.3.7.10 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

3.3.9 One (1) Action Level exceedance at measured Suspended Solids (mg/L) were recorded on 23 August 2013 during mid-Ebb tide at monitoring station IS(Mf)16. For Action Level exceedance at measured Suspended Solids (mg/L), 24.1 mg/L was recorded.



3.3.8.1 For locations and type of active works carried out on 23 Aug 13, please refer to the above layout map.

3.3.8.2 Exceedance was not due to marine based construction works of the Project because:

3.3.8.3 Same type of works were carried out at the same locations on 21 and 26 Aug 13 but Suspended Solids values recorded at IS(Mf)16 on 21 and 26 Aug 13 are below the Action and Limit Level during the same tide which indicates project works is unlikely to contribute to the action level exceedances recorded at IS(Mf)16.

3.3.8.4 Turbidity measurements results at IS(Mf)16 during Ebb tide is 13.5 NTU which is well below the Action and Limit Level. It is considered that the turbidity recorded at IS(Mf)16 were not adversely affected by active works.

3.3.8.5 No silt plume was observed flowing from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when water quality monitoring was conducted at IS(Mf)16.

3.3.8.6 In view of there is no damage can be observed from the perimeter silt curtain which deployed in the works area at Portion D and E2.

3.3.8.7 The exceedance was likely due to local effects in the vicinity of IS(Mf)16 and considered non-project related.

3.3.8.8 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

3.3.8.9 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

3.3.8.10 The graphical plots of the trends of the monitoring results are provided in Appendix G. No specific trend

of the monitoring results or existence of persistent pollution source was noted.

3.4 Dolphin Monitoring

3.4.1 In accordance with the Project Specific EM&A Manual, pre-set and fixed transect line vessel based dolphin survey was required in two AFCD designated areas (Northeast Lantau (NEL) and Northwest Lantau (NWL) survey areas). The impact dolphin monitoring at each survey area should be conducted twice per month.

3.4.2 The impact dolphin monitoring conducted is vessel-based and combines line-transect and photo-ID methodology, which have adopted similar survey methodologies as that adopted during baseline monitoring to facilitate comparisons between datasets.

3.4.3 The layout map of impact dolphin monitoring have been provided by AFCD and is shown in Figure 4.

3.4.4 The effort summary and sighting details during the reporting quarter are shown in the Appendix H. A summary of key findings of the dolphin surveys completed during the reporting quarter is shown below:

Table 3.6 Summary of Key Dolphin Survey Findings in Jun 2013- Aug 2013

Number of Impact Surveys Completed^	6
Survey Distance Travelled under Favourable On- Effort Condition	663.8km
Number of Sightings	45 sightings (29 sightings are ”on effort” (which are all under favourable condition), 16 “sightings are opportunistic”)
Number of dolphin individual sighted	125 individuals (the best estimated group size)
Dolphin Encounter Rate#	NEL: 1.8 NWL:5.7
Dolphin Group Size	Average of 2.8 Varied from 1-12 individuals
Most Often frequent dolphin sighting area	Sha Chau and Lung Kwu Chau Marine Park, Tai O, and areas to the east of the Brothers Islands.

Remarks:
^ Completion of line transect survey of NEL and NWL survey area once was counted as one complete survey.
# Dolphin Encounter Rate = (Sum of 1st 2nd, 3rd month’s total sighting/ Sum of 1st 2nd, 3rd month’s total effort)*100km (encounter rates are calculated using on effort sightings made under favourable conditions only.)

3.4.5 Two (2) Action level exceedances of Chinese White Dolphin monitoring were recorded in the reporting. After investigation, it was noted although no unacceptable changes in environmental parameters of this project have been measured, at this time it is not possible to make a conclusive assessment of the Project impact on dolphins. Actions were taken according to the Event and Action Plan for impact dolphin monitoring. Please refer to Appendix L for details of action taken. Table 3.7 shows the summary of STG and ANI encounter rates in Jun 2013 – Aug 2013.

Table 3.7 Summary of STG and ANI encounter rates in Jun 2013- Aug 2013

	NEL	NWL	Level Exceeded
STG*	1.8	1.8	Action
ANI**	5.7	16.6	Action

*Quarterly Average Encounter Rate of Number of Dolphin Sightings (STG) presents averaged encounter rates of the three monitored months in terms of groups per 100km per survey event.
STG Encounter rate = (Average of (total number sighting/total effort) of 1st and 2nd completed survey# of 1st month+ Average of (total number sighting/total effort) of 1st and 2nd completed survey# of 2nd month + Average of (total number sighting/total effort) of 1st and 2nd completed survey# of 3rd month)/3*100km
**Quarterly Average Encounter Rate of Total Number of Dolphins (ANI) presents averaged encounter rates of the three monitored months in terms of individuals per 100km per survey event.

ANI Encounter rate = (Average of (total number of Individual/total effort) of 1st and 2nd completed survey# of 1st month+ Average of (total number of Individual/total effort) of 1st and 2nd completed survey# of 2nd month + Average of (total number of Individual/total effort) of 1st and 2nd completed survey# of 3rd month +)/3*100km

3.4.6 Details of the comparison and analysis methodology and their findings and discussions are annexed in Appendix H.

3.5 Environmental Site Inspection and Audit

3.5.1 Site Inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. In the reporting quarter, 13 site inspections were carried out. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

3.5.2 Particular observations during the site inspections are described below:

Air Quality

3.5.3 No adverse observation was identified in the in the reporting Quarter.

Noise

3.5.4 No adverse observation was identified in the reporting quarter.

Water Quality

3.5.5 Litter and silty plumes were observed when filling material was being used for filling cellular structure number C057. The Contractor stopped the activity to prevent litter and silty plumes from dispersing. The Contractor was advised to provide mitigation measures such as silt curtain to enclose active filling activities at cellular structures to prevent litter and silty plumes from dispersing. (Reminder)

3.5.6 While inspection was conducted on FTB 23, silty plume was observed to flow from the inside to the outside of a cellular structure. The Contractor stopped prevented the silty plumes from dispersing. The Contractor was advised to provide mitigation measures such as silt curtain to enclose active filling activities at cellular structures to prevent litter and silty plumes from dispersing. (Reminder)

3.5.7 Hole was observed within the frame of the drip tray on barge Evershine No.1, barge 401 and FTB17. The Contractor was advised to rectify the situation by sealing the open hole properly to prevent potential waste oil leakage. The Contractor provided mitigation measures and sealed the hole of the drip tray to prevent potential oil leakage. (Closed)

3.5.8 It was observed that the frame of bunding on barge SHB 401 was deformed. The Contractor was reminded to fix the deformed part of frame so that the bunding may have appropriate height to confine potential oil leakage. (Reminder)

3.5.9 Generator was observed without drip tray or bunding on barge Evershine No.1, barge 401 and FTB17. The Contractor was advised to provide mitigation measures such as bunding/drip tray to confine potential oil leakage or to relocate the generator to an area with bunding.The Contractor provided bunding to generator to contain any potential oil leakage. (Closed)

3.5.10 Defect was observed within the side of the enclosing silt curtain on barge AP4. The contractor was rectified the defected silt curtain in order to prevent silt plumes from dispersing out from the vicinity of active stone column works. The contractor rectified the defected silt curtain in order to prevent silt plumes from dispersing out from the vicinity of active stone column works.

3.5.11 Defects were observed at portion B (southwest part of the perimeter silt curtain), E2 (northeast part of the perimeter silt curtain) and around portion C2a (northwest part of the perimeter silt curtain). The Contractor rectified the defects of the silt curtain at portion B (southwest part of the perimeter silt curtain), E2 (northeast part of the perimeter silt curtain) and around portion C2a (northwest part of the perimeter silt curtain) so the silt can be effectively prevented from dispersing from the inside to the outside of the site boundary. (Closed)

3.5.12 Oil stain was observed on barge Fai Yu 3228 and Evershine No.1. The Contractor was reminded to provide mitigation measures such adsorbents to clean the oil stain. The Contractor immediately provided mitigation measures such as adsorbents to clean the oil stain and treated the used absorbents as chemical waste. (Closed)

3.5.13 Oil stain was discovered over the sea on 25 July 2013 at 11:20 near the cell K038 at Portion B. The Contractor was advised to follow the actions stated on the Spill Response Plan and clear the oil waste on sea. The Contractor rectified the situation and clear the oil waste on sea using absorption boom according to the Spill Response Plan. The used absorption boom was disposed of as chemical waste. (Closed)

Chinese White Dolphin

3.5.14 No adverse observation was identified in the reporting quarter.

Chemical and Waste Management

Waste

3.5.15 Oil drum was observed improperly stored on barge Chi Full, Kiu Chi (AP1), FTB20 and FTB17. The Contractor was reminded to provide mitigation measures such as bunding/ drip tray to all oil drums. The Contractor relocated the oil drum to area enclosed by bunding. (Closed)

3.5.16 Oil drums were found without chemical label on barge SHB 209 and Evershine No.1. The Contractor was reminded to provide chemical label to all oil drum. The Contractor immediately provided chemical labels to oil drums. (Closed)

3.5.17 Oil drums were improperly covered on barge FTB 17. The Contractor was reminded to provide mitigation measures such as lid to oil drums to prevent potential spillage The Contractor immediately provided mitigation measures such a relocate the waste oil to another oil drum with lid to prevent potential spillage. (Closed)

3.5.18 Waste oil was observed accumulated inside bunding. The Contractor was reminded to clear the waste oil with water and disposed of as chemical waste. The Contractor cleared the waste oil with water and disposed of as chemical waste. (Closed)

3.5.19 General waste was observed improperly covered. The Contractor immediately provided mitigation measures such as to remove the general waste via a waste collector. The Contractor was reminded to provide mitigation measures such bin bag(s) or container to properly cover all general waste. (Reminder)

Landscape and Visual Impact

3.5.20 No relevant works was carried out in the reporting month.

Others

3.5.21 No other adverse observation was identified in the reporting month.

3.5.22 The Contractor had rectified most of the observations as identified during environmental site inspection in the reporting month. Rectifications of remaining identified items are undergoing by the Contractor. Follow-up inspections on the status on provision of mitigation measures will be conducted to ensure all identified items are mitigated properly.

4 ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

4.1 Summary of Solid and Liquid Waste Management

4.1.1 The Contractor registered as a chemical waste producer for this project. Sufficient numbers of receptacles were available for general refuse collection and sorting.

4.1.2 As advised by the Contractor, 1,261,392.3 m^3 of imported fill were imported for the Project use in the reporting quarter. 4 tonnes of Paper/ cardboard packaging was generated, 5,600 L of chemical waste were generated and disposed of in the reporting quarter. 71.5 tonnes of general refuse were generated and disposed of in the reporting quarter. Summary of waste flow table is detailed in Appendix I.

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

4.1.4 The Contractor is reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

5 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

5.1 Implementation Status of Environmental Mitigation Measures

5.1.1 In response to the site audit findings, the Contractors carried out corrective actions.

5.1.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in Appendix C. Most of the recommended mitigation measures are being upheld. Moreover, regular review and checking on the construction methodologies, working processes and plants were carried out to ensure the environmental impacts were kept minimal and recommended environmental mitigation measures were implemented effectively.

5.1.3 Training of marine travel route for marine vessels operator was given to relevant staff and relevant records were kept properly.

5.1.4 Regarding the implementation of dolphin monitoring and protection measures (i.e. implementation of Dolphin Watching Plan, Dolphin Exclusion Zone and Silt Curtain integrity Check), regular checks were conducted by experienced MMOs within the works area to ensure that no dolphins were trapped by the silt curtain area. There were no dolphins spotted within the silt curtain during this quarter. The relevant procedures were followed and all measures were well implemented. The silt curtains were also inspected in accordance to the submitted plan.

5.1.5 Inadequacy of acoustic decoupling measures on noisy plants on construction vessels were identified by EPD during the site visit on 22 August 2013. The Contractor was reminded to provide acoustic decoupling measures to noisy plants on construction vessels and acoustic decoupling measures should be properly implemented for all existing and incoming construction vessels with continuous and regularly checking to ensure effective implementation of acoustic decoupling measures.

6 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

6.1 Summary of Exceedances of the Environmental Quality Performance Limit

6.1.1 For air quality monitoring, no Action/Limit Level exceedance of 1-hour TSP or 24-hour TSP results were below the Action and Limit Level in the reporting quarter.

6.1.2 For construction noise, no exceedance was recorded at all monitoring stations in the reporting period.

6.1.3 Fourteen (14) Action Level exceedances and two (2) limit level exceedance were recorded in the reporting quarter. Six (6) Action Level Exceedances of DO (Bottom), one (1) Limit Level Exceedance of DO (Surface & Middle) and one (1) Limit Level Exceedances of SS were recorded in June 13. Three (3) Action Level Exceedances of SS were recorded in the July 13. Five (5) Action Level Exceedances of SS were recorded in August 13. Investigation results show that the exceedances were not due to the Project works.

6.1.4 Two (2) Action level exceedances of Chinese White Dolphin monitoring were recorded in the reporting. After investigation, it was noted although no unacceptable changes in environmental parameters of this project have been measured, at this time it is not possible to make a conclusive assessment of the Project impact on dolphins.

6.1.5 Cumulative statistics on exceedances is provided in Appendix J.

7 SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

7.1 Summary of Environmental Compliants, Notification of Summons and Successful Prosecutions

7.1.1 The Environmental Complaint Handling Procedure is annexed in Figure 5.

7.1.2 No environmental complaint, notification of Summons and Successful Prosecutions was received in the reporting quarter.

7.1.3 As informed by the Contractor on 9 May 13, one summons was received on 29 April 13 regarding the suspected violation case of Noise Control Ordinance (Cap.400) at Works Area WA4 on 31 Oct 2012. As informed by the Contractor in August 13, the Contractor was subsequently prosecuted on 21 May 2013 for breaching Cap.400 Noise Control Ordinance.

7.1.4 Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix J.

8 COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

8.1 Comments on mitigation measures

8.1.1 According to the environmental site inspections performed in the reporting quarter, the following recommendations were provided:

Air Quality Impact

- All working plants and vessels on site should be regularly inspected and properly maintained to avoid dark smoke emission.
- All vehicles should be washed to remove any dusty materials before leaving the site.
- Haul roads should be sufficiently dampened to minimize fugitive dust generation.
- Wheel washing facilities should be properly maintained and reviewed to ensure properly functioning.
- Temporary exposed slopes and open stockpiles should be properly covered.
- Enclosure should be erected for cement debagging, batching and mixing operations.
- Water spraying should be provided to suppress fugitive dust for any dusty construction activity.

Construction Noise Impact

- Quieter powered mechanical equipment should be used as far as possible.
- Noisy operations should be oriented to a direction away from sensitive receivers as far as possible.
- Proper and effective noise control measures for operating equipment and machinery on-site should be provided, such as erection of movable noise barriers or enclosure for noisy plants. Closely check and replace the sound insulation materials regularly
- Vessels and equipment operating should be checked regularly and properly maintained.
- Noise Emission Label (NEL) shall be affixed to the air compressor and hand-held breaker operating within works area.
- Better scheduling of construction works to minimize noise nuisance.
- Acoustic decoupling measures should be properly implemented for all existing and incoming construction vessels with continuous and regularly checking to ensure effective implementation of acoustic decoupling measures.

Water Quality Impact

- Regular review and maintenance of silt curtain systems, drainage systems and desilting facilities in order to make sure they are functioning effectively.
- Construction of seawall should be completed as early as possible.
- Regular inspect and review the loading process from barges to avoid splashing of material.
- Silt, debris and leaves accumulated at public drains, wheel washing bays and perimeter u-channels and desilting facilities should be cleaned up regularly.
- Silty effluent should be treated/ desilted before discharged. Untreated effluent should be prevented from entering public drain channel.
- Proper drainage channels/bunds should be provided at the site boundaries to collect/intercept the surface run-off from works areas.

- Exposed slopes and stockpiles should be covered up properly during rainstorm.

Chemical and Waste Management

- All types of wastes, both on land and floating in the sea, should be collected and sorted properly and disposed of timely and properly. They should be properly stored in designated areas within works areas temporarily.
- All chemical containers and oil drums should be properly stored and labelled.
- All plants and vehicles on site should be properly maintained to prevent oil leakage.
- All kinds of maintenance works should be carried out within roofed, paved and confined areas.
- All drain holes of the drip trays utilized within works areas should be properly plugged to avoid any oil and chemical waste leakage.
- Oil stains on soil surface and empty chemical containers should be cleared and disposed of as chemical waste.
- Regular review should be conducted for working barges and patrol boats to ensure sufficient measures and spill control kits were provided on working barges and patrol boats to avoid any spreading of leaked oil/chemicals.

Landscape and Visual Impact

- All existing, retained/transplanted trees at the works areas should be properly fenced off and regularly inspected.

8.2 Recommendations on EM&A Programme

8.2.1 The impact monitoring programme for air quality, noise, water quality and dolphin ensured that any deterioration in environmental condition was readily detected and timely actions taken to rectify any non-compliance. Assessment and analysis of monitoring results collected demonstrated the environmental impacts of the Project. With implementation of recommended effective environmental mitigation measures, the Project's environmental impacts were considered as environmentally acceptable. The weekly environmental site inspections ensured that all the environmental mitigation measures recommended were effectively implemented.

8.2.2 The recommended environmental mitigation measures, as included in the EM&A programme, effectively minimize the potential environmental impacts from the Project. Also, the EM&A programme effectively monitored the environmental impacts from the construction activities and ensure the proper implementation of mitigation measures. No particular recommendation was advised for the improvement of the programme.

8.3 Conclusions

8.3.1 The construction phase and EM&A programme of the Project commenced on 12 March 2012.

8.3.2 All 1-Hour TSP and 24-hour TSP results were below the Action and Limit Level in the reporting quarter.

8.3.3 For construction noise, no exceedance was recorded at all monitoring stations in the reporting period.

8.3.4 Fourteen (14) Action Level exceedances and two (2) limit level exceedance were recorded in the reporting quarter. Six (6) Action Level Exceedances of DO (Bottom), one (1) Limit Level Exceedance of DO (Surface & Middle) and one (1) Limit Level Exceedances of SS were recorded in June 13. Three (3) Action Level Exceedances of SS were recorded in the July 13. Five (5) Action Level Exceedances of SS were recorded in August 13. Investigation results show that the exceedances were not due to the Project works.

8.3.5 Two (2) Action level exceedances of Chinese White Dolphin monitoring were recorded in the reporting. After investigation, it was noted although no unacceptable changes in environmental parameters of this project have been measured, at this time it is not possible to make a conclusive assessment of the Project impact on dolphins.

8.3.6 Environmental site inspection was carried out thirteen times in the reporting quarter. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

8.3.7 No environmental complaints, notification of summons or prosecution were received in the reporting quarter.

8.3.8 As informed by the Contractor on 9 May 13, one summons was received on 29 April 13 regarding the suspected violation case of Noise Control Ordinance (Cap.400) at Works Area WA4 on 31 Oct 2012. As informed by the Contractor in August 13, the Contractor was subsequently prosecuted on 21 May 2013 for breaching Cap.400 Noise Control Ordinance.

8.3.9 Apart from the above mentioned monitoring, most of the recommended mitigation measures, as included in the EM&A programme, were implemented properly in the reporting quarter.

8.3.10 The recommended environmental mitigation measures effectively minimize the potential environmental impacts from the Project. The EM&A programme effectively monitored the environmental impacts from the construction activities and ensure the proper implementation of mitigation measures. No particular recommendation was advised for the improvement of the programme.

8.3.11 Moreover, regular review and checking on the construction methodologies, working processes and plants were carried out to ensure the environmental impacts were kept minimal and recommended environmental mitigation measures were implemented effectively.