# MAUNSELL AECOM



# Ocean Park Master Redevelopment Project

# Quarterly Environmental Monitoring & Audit Report – from October 2007 to December 2007



Ocean Park Master Redevelopment Project Quarterly EM&A Report for October to December 2007 Submitted by Maunsell Consultants Asia Ltd on 05-02-2008

This is to verify that

Quarterly EM&A Report for October to December 2007

Submitted by Maunsell Consultants Asia Ltd

On 05-02-2008

Has been verified by the undersigned.

Signed

Dr Anne F Kerr Independent Environmental Checker (IEC) Retained by Ocean Park Corporation pursuant to Environmental Permit No. EP-249/2006/A

Date

6 February 2008

### **Ocean Park Master Redevelopment Project**

### Quarterly Environmental Monitoring & Audit Report -

### from October to December 2007

kny Certified by on 05-Feb-08 Terence Kong

Terence Kong Project Environmental Team Leader

**Verified by** Independent Environmental Checker **on** 06-Feb-08 IEC Certificate attached in the submission? Yes

#### Submitted to Ocean Park on 15-Feb-08

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#### EXECUTIVE SUMMARY

This is the third combined quarterly Environmental Monitoring and Audit (EM&A) report for the Project "Master Redevelopment Project of Ocean Park". This report summarizes the EM&A works performed in the period between 26 September 2007 and 25 December 2007.

#### **Environmental Monitoring Works**

#### **Environmental Monitoring and Audit Progress**

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

1-hour Total Suspended Particulates (TSP) monitoring	46 sessions for AM1 46 sessions for AM2 46 sessions for AM3A
24-hour TSP monitoring	15 sessions for AM1
	15 sessions for AM2
	15 sessions for AM3A
Daytime noise monitoring	13 sessions for all stations
Evening and night time noise monitoring	0 sessions for all stations
Holiday daytime noise monitoring	0 sessions for all stations
Terrestrial ecology monitoring	7 sessions
Coral monitoring	1 session for Site 1-4
Ū.	2 sessions for Site 5 and Control Station
Environmental site inspection	14 sessions

#### Air Quality

All measured 1-hour TSP and 24-hour TSP concentrations in the reporting quarter were below the Action and Limit Levels.

#### Noise

All measured noise levels during daytime were below the Action and Limited levels in the reporting quarter. No evening, night time and holiday noise monitoring was scheduled in the reporting quarter due to no construction activities at Waterfront during restricted hour.

#### Terrestrial Ecology

Seven sessions of terrestrial ecology monitoring was conducted in the reporting quarter. The results showed that all the transplanted Sword leaved Orchids were in good condition. The above ground part of Chinese Lily and Balloon Flower were withered due to seasonality while the underground roots were alive and expected to geminated in the coming growing season.

#### **Coral Monitoring**

One session of coral monitoring was scheduled for Site 1-4 whilst two sessions of coral monitoring were scheduled for Site 5 & Control Station in the reporting quarter. The results showed that there was no exceedance of Action and Limit Levels.

#### **Environmental Complaints and Prosecutions**

1 complaint from the public through EPD was received on 5 November 2007 with regards to dust nuisance at Tai Shue Wan. During the inspection on 6 November 2007 with EPD, no significant observation was made regarding dust generation at the barging area at Tai Shue Wan. No further follow up actions were taken by the Contractor or Engineer.

1 warning from EPD was received on 15 November 2007 with regards to the insufficient air quality control of the crushing plant and the conveyor system as required under the specified process license following the surveillance inspection on 13 November 2007. The following immediate actions were taken:

- Rubber curtains hanging at the excavated material discharge point at the conveyor belt was replaced.
- The rubber curtains were also extended to ensure the crushed material is enclosed as much as possible



during the excavated material fall.

- The water sprayers at the crusher were replaced with misting nozzles to increase the contact area between the water and dust particles generated.
- Water spraying of the truck loading area of the crusher and along haul road was increased.

No summon or prosecution related to environmental issues was made against the Project within this reporting quarter.



#### 1. INTRODUCTION

#### Background

- 1.1 The "Master Redevelopment Project of Ocean Park" (hereinafter known as the "Project") is implemented by the Ocean Park Corporation at its existing site of Ocean Park and Nam Long Shan, Aberdeen. The Project involves both reconstruction/modification of existing facilities and expansion of the Park, and therefore under Environmental Permit, EP-249/2006/A.
- 1.2 The construction works of the project consists of various contracts. Details of the contracts, which are required to perform the EM&A programme, are shown in **Table 1.1** below.

Contract No.	Contract Title	Contractor	Construction Commencement
CI-05	Site Formation, Funicular Tunnel and Miscellaneous Works	Dragages-Bouygues JV	12 March 2007
CS-01	Vet Hospital	Kaden – ATAL JV	26 March 2007
CW-02	Astounding Asia	W. Hing Construction Co. Ltd.	1 August 2007

#### Table 1.1 Details of the Contracts

1.3 The contractors will conduct environmental monitoring and audits during the construction stage and produce contract specific monthly & quarterly EM&A reports. The RSS would prepare a combined monthly and quarterly EM&A for the whole project. This is the combined quarterly EM&A Report including the IEC audit findings, CI05, CS01 and CW02 EM&A Works. This report presents the results of EM&A works conducted in the reporting quarter (from 26 September 2007 to 25 December 2007).

#### **Project Organization and Contacts of Key Management**

1.4 An organization structure and the line of communication were set up for the Project between the Project Proponent, Project Manager's Representative (PMR), Independent Environmental Checker (IEC), the Contractor and the Environmental Team (ET). The project organization and contact details of key management are shown in **Figure 1.1** and **Appendix A** respectively.

#### **Construction Activities During The Reporting Quarter**

1.5 The site activities during the reporting quarter are summarized in **Table 1.2**.

Table 1.2	Summary of Works undertaken in the Reporting Quarter
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Item	Work Activity	Month			
item		Oct 07	Nov 07	Dec 07	
Water	Waterfront (CI-05)				
1.	Waterfront Terminus Excavation (e.g. Sheet Pile Installation)	✓	✓	✓	
2.	North Portal Soft Ground Tunnel Temporary Support	$\checkmark$	~		



ltem	Morte Activity	Month		
ltem	Work Activity	Oct 07	Nov 07	Dec 07
3.	Waterfront Access Road (e.g. Site Formation, Hoarding, Trench Excavation, Temporary Road Diversion)	✓	~	~
4.	Utilities Diversion (e.g. Watermain & Stormdrain) at Entry Plaza Advance Works	$\checkmark$	~	~
5.	Permanent Bus Terminus	$\checkmark$	$\checkmark$	✓
6.	Tree Root Pruning at Ex-waterworld	$\checkmark$		
7.	Soft Ground Tunnel Excavation (e.g. Installation of Noise Cover, Preparation Works)		~	~
8.	Works for Aqua City (e.g. Pipe pile Installation, Open Cut Excavation)		~	~
Summ	iit (CI-05)			
1.	Main Tunnel Excavation, Both from Adit to Summit and from Adit to Waterfront	$\checkmark$	~	✓
2.	Slope Improvement Work	✓	✓	✓
3.	North Haul Road and EVA	✓	✓	✓
4.	Summit Site Formation (Drill & Blast)	✓	✓	✓
5.	Summit Excavation	✓	✓	✓
6.	Site Formation for Summit Terminus	✓	✓	✓
7.	Crusher and Conveyor Belts Operation	✓	✓	✓
Tai Sh	ue Wan (CI-05)			
1.	Conveyor Belt and Barging Point Operation	$\checkmark$	$\checkmark$	✓
Gover	nment Entrusted Works (CI05)			
1.	Excavation	$\checkmark$	$\checkmark$	✓
2.	Construction of Manhole	$\checkmark$	$\checkmark$	✓
3.	Pipe Laying	$\checkmark$	$\checkmark$	✓
4.	Road Surface Reinstatement	$\checkmark$	✓	✓
5.	Backfilling		$\checkmark$	✓
6.	Erection of Temporary Steel Platform or Formwork		~	~
7.	Trial Pit Excavation			✓
8.	Temporary Removal of Existing Parapet & Concrete Edge			~
Vet Ho	ospital (CS-01)			
1.	General: E & M Materials Delivery & Preparation Works	~	~	~
2.	Pool Block: Construction of Screed Wall	$\checkmark$	✓	



Item	Work Activity	Month		
item	Work Activity	Oct 07	Nov 07	Dec 07
3.	Pool Block: External Wall & Columns, Concrete Plinthes	✓	~	
4.	Pool Block: Erect Falsework and Formwork for EVA slab	$\checkmark$	~	~
5.	Pool Block: Construction of Slab & Beamof Dolphin Pool		~	~
6.	Plant Block: Construction of Wall & Roof Slab, Internal Finishing Work	$\checkmark$	~	~
7.	Office Block: Formwork& Falsework of Bearing Wall, Slab & Beam.	$\checkmark$	~	~
8.	Office Block: Construct 1/F & Water Tank Base, Construction of Main Roof Floor & ✓ Water Tank, Construction of Upper Roof		~	
Astou	nding Asia (CW-02)			
1.	Tree Felling & Transplanting, Excavation Works for Footings and R.C works for Footings at the New Bird House	$\checkmark$	1	~
2.	Under Ground Drainage Works at the Flight Exercise Aviay	$\checkmark$	~	~
3.	R.C. works & Blockworks for Walls, Wall Plastering, E&A Conduit Laying, Floor Finishing, Drainage and E&M Installations at the Bird Central Kitchen	✓	~	~
4.	Tree Felling & Transplant Works at Main Aviary and New Bird Theatre	$\checkmark$	~	~
5.	ELS Works for Footings, Site Investigation Works and Erection of Tower Crane at New Panda Habitat	✓	1	~
6.	Hoarding and Fencing at the Guest Route Diversion	$\checkmark$		
7.	Setting up the Site Access	$\checkmark$		
8.	Erection of W-Hing 's Site Office	$\checkmark$	✓	

- 1.6 A layout plan of the Project is provided in **Figure 1.2** to **Figure 1.3**, **Figure 1.6** and **Figure 1.7**. Figure 1.2 and 1.3 shows the layout plan of CI-05 waterfront work site and CI05 Summit work site. Figure 1.6 shows the layout plan of CS-01 vet hospital. Figure 1.7 shows the layout plan of CW-02 Astounding Asia.
- 1.7 The status of submissions until 25 December 2007 as specified in the Environmental Permit No. EP-249/2006/A is presented in **Table 1.3**.



EP-249/2006/A	Submission	Revision	Status
Condition			
Contract Cl05			
1.12	Notification of Commencement Date of	Dated 14 February 2007	Submitted to EPD on 15 February 2007
	construction stage	rebruary 2007	rebruary 2007
2.3	Management	Dated 15	Submitted to the EPD on 29
0.4	Organization	December 2006 2	December 2006. Submitted to the EPD on 15
2.4	Construction Programme	∠ Dated 14	February 2007
	riogramme	February 2007	rebruary 2007
2.13	Drainage Proposal	A2	Placed in EIAO Register
		Dated 26 April 2007	Office for public information on 30 May 2007
2.14	Silt Curtain Proposal	В	Placed in EIAO Register
		Dated 30 January 2007	Office for public information on 1 March 2007
2.18	As-built Drawing for	A	Placed in EIAO Register
	Enhancement Works for Pond 35	Dated 17 July 2007	Office for public information on 7 August 2007
2.20a	Transplantation Proposal	D	Placed in EIAO Register
	for Uncommon Plant	Dated 27 August	Office for public information on
0.00h	Species	2007	25 September 2007
2.20b	Detailed Compensatory Planting As-built	A Dated 4 October	Placed in EIAO Register Office for public information on
	Drawing	2007	30 October 2007
2.21	Waste Management	D	Placed in EIAO Register
	Plan	Dated 27 August 2007	Office for public information on 25 September 2007
3.3	Baseline Air Quality and	В	Submitted to the EPD on 5
	Noise Monitoring Report	Dated 28 February 2007	March 2007
3.3	Baseline Coral Survey	A	Submitted to the EPD on 18
	Report	Dated 13 June 2007	June 2007
	luding Cl05, CS01 and CW		
3.1 and under	· · ·	A Dated 1	Submitted to the EPD on 5
Section 13.14 of	for July 2007 to	November 2007	November 2007
EM&A Manual 3.4	September 2007 Monthly EM&A Report	A	Submitted to the EPD on 15
5.4	for October 2007	Dated 9	November 2007
		November 2007	
3.4	Monthly EM&A Report	A	Submitted to the EPD on 18
	for November 2007	Dated 13 December 2007	December 2007
3.4	Monthly EM&A Report	A	Submitted to the EPD on 16
	for December 2007	Dated 14 January 2008	January 2008
CityBus Limited			
2.5	Written Notice on	Dated 17	Submitted to the EPD on 22
	Completion of Total	January 2007	January 2007.
	Petroleum Hydrocarbon		
	(TPH) Contaminated Soil Disposal		
2.6	Written Notice on	Dated 17	Submitted to the EPD on 22
		24.04 17	

#### Table 1.3 Status of Environmental Submissions



EP-249/2006/A Condition	Submission	Revision	Status
	Completion of Solidification Treatment of Heavy Metals Contaminated Soil	January 2007	January 2007.
2.8	As-built Remediation Plan	3 Dated 14 March 2007	Submitted to the EPD on 16 March 2007
Hong Kong Scho	ool of Motoring Ltd.		
2.10	Confirmation letter to confirm that land contamination remediation works within HKSM has been completed	Dated 13 April 2007	Submitted to EPD on 13 April 2007.



#### 2. ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

#### Monitoring Parameters and Locations

2.1 The EM&A Manual designates locations for the CET to monitor environmental impacts in terms of air quality, noise and ecology from the Project. The locations of air quality, noise and ecology monitoring and their control station(s) if applicable, are depicted in **Figure 1.4** and **Figure 1.5**. **Appendix B** gives the details of the monitoring programme.

#### Monitoring Methodology and Calibration Details

2.2 All monitoring works were conducted and monitoring equipment was regularly calibrated in accordance with the EM&A Manual. The calibration certificates were provided in the Monthly EM&A report. Summary of calibration are attached in **Appendix C**.

#### **Environmental Quality Performance Limits (Action and Limit Levels)**

2.3 The environmental quality performance limits, i.e. Action and Limit levels (AL Levels) were derived from the baseline monitoring results and/or other approaches as detailed in the EM&A Manual. Should the measured environmental quality parameters exceed the AL Levels, the respective action plans would be implemented. The AL Levels for each environmental parameter are given in **Appendix D**.

#### **Environmental Mitigation Measures**

2.4 Relevant mitigation measures as recommended in the Project EIA Report had been stipulated in the EM&A Manual and EMIS for the Contractor to adopt. A list of mitigation measures is given in **Appendix G**.



#### 3. MONITORING RESULTS

#### Air Quality

3.1 No exceedance of Action and Limit Level for 1-hour TSP and 24-hour TSP was recorded in the reporting quarter. Graphical presentations of the air quality monitoring results are provided in **Appendix E**.

#### Noise

- 3.2 Noise monitoring was carried out for daytime (0700-1900) at four stations in the reporting quarter. No evening, night time and holiday noise monitoring was scheduled in the reporting quarter due to no construction activities at Waterfront during restricted hour. Graphical presentations of the noise monitoring results are provided in **Appendix F**.
- 3.3 All measured noise levels during daytime were below the AL levels in the reporting quarter.

#### **Terrestrial Ecology**

- 3.4 Seven sessions of terrestrial ecology monitoring were carried out within this quarter.
- 3.5 The results showed that all the transplanted Sword leaved Orchids were in good condition. The above ground part of Chinese Lily and Balloon Flower were withered due to seasonality while the underground roots were alive and expected to geminated in the coming growing season. Summary of results are shown in **Appendix K** and photos for the plants were provided in the Monthly EM&A Report.

#### Marine Ecology

3.6 One session of coral monitoring was scheduled for Site 1-4 whilst two sessions of coral monitoring were scheduled for Site 5 & Control Station in the reporting quarter. The results showed that there was no exceedance of Action and Limit Levels. Details of results are shown in **Appendix J**.



#### 4. AUDIT RESULTS

#### Implementation Status of Environmental Mitigation Measures

- 4.1 This was the third quarter of Ocean Park Master Redevelopment Project including Contract Cl05, CS01 and CW02. The major activities were summarized in Table 1.2. The Contractor and sub-Contractor had implemented most of the mitigation measures to minimize the environmental impacts due to construction activities. Regarding a few minor observations as noted during ET's site inspections, the Contractor and sub-Contractor rectified all the problems and no major environmental impact was induced.
- 4.2 IEC's audits were carried in monthly basis (i.e. on 18 October 2007, 27 November 2007 and 20 December 2007). No non-compliance was issued for Cl05, CS01 and CW02. 10 observations were recorded for Cl05 during the reporting quarter, 8 and 5 observations were recorded for CS01 and CW02 respectively during the reporting quarter. Observations details were provided in the Monthly EM&A report.
- 4.3 The updated implementation status of environmental mitigation measures (EMIS) is given in **Appendix G**.

CI05

- 4.4 Some access roads at Summit were observed dry. The Contractor and Sub-contractor were reminded to keep watering the surface in order to minimize the impacts. Water sprinklers and water truck were used at some works areas.
- 4.5 Although the Crusher and Conveyor Belt is fully enclosed, frequent water spraying should still be provided at the nearby access road and material transferred point. The Crusher Area and the Conveyor Crusher Area were generally dusty. The Contractor shall ensure the automatic water spray is always kept on to suppress dust.
- 4.6 Regular cleaning at the surface channel should be carried out in order to reduce mud and sand accumulating or blocking at the channel. All the site discharge should be diverted to the sedimentation tanks and Wetsep for treatment before discharge to the public drainage or seaside.
- 4.7 Stockpile should be fully covered with tarpaulin when not in use in order to avoid dust impact during dry season and water impact during rainy day.
- 4.8 Dump Trucks were observed without cover when transportation. The Contractor and Sub-Contractor were reminded to cover the trucks when transportation of materials/wastes.
- 4.9 General refuses and C&D waste were collected by licensed haulers and disposed of by using the Chit and trip tickets respectively. The procedures in WMP were fully implemented and followed. Apart from that, accumulation of waste would be avoidable.
- 4.10 One oil tank was observed at Conveyor Transfer Area while another one was observed at North Portal without drip trays. The Contractor should provide drip trays to these oil tanks to avoid oil spillage.
- 4.11 On-site stagnant water was removed regularly in order to minimize the potential mosquito breeding problems.
- 4.12 Accumulation of mud at the wheel washing bay and the sedimentation tank at the haul road to Summit was identified and cleaning was undertaken. The Contractor was reminded to maintain the drainage system all the times in order to keep the discharge quality in good condition.
- 4.13 Silt curtain was in place and maintained regularly and in acceptable condition by the weekly site inspections.



CS01

- 4.14 General refuse was observed scattered along the slope of Pool Block. The Contractor should cover it with tarpaulin sheets to suppress dust.
- 4.15 A stockpile of dusty material next to Office Block was observed. The Contractor was reminded to cover the stockpile with tarpaulin sheets for suppress dust.
- 4.16 Debris was observed accumulated in the temporary drainage channel. The Contractor was reminded to remove all blockages as soon as possible.
- 4.17 Stagnant water and general refuse were accumulated along the boundary of Plant Block. The Contractor was reminded to clean up the stagnant water and general refuse as soon as possible.
- 4.18 Site housekeeping should be kept on improved

#### CW02

- 4.19 Exposed slope surfaces and stockpiles were not entirely covered. The Contractor was reminded to cover them entirely by tarpaulin or other means.
- 4.20 Common access road was accumulated with mud and sand. The Contractor was reminded to clean up the access road in order to keep it tidy.
- 4.21 Sand and soil were observed accumulated in the perimeter channel. The channel should be covered properly while not in use.
- 4.22 An empty oil drum was left next to Ocean Park Administration Building. The Contractor was reminded to removed and disposed it properly.

#### Status of Environmental Licensing and Permitting

4.23 Environmental licenses and permits including Environmental Permit for the Project, construction noise permits, chemical waste producer and effluent discharge license were in place and valid during the reporting quarter. A summary status of licences and permits is given in **Appendix H**.

#### Advice on Materials Management Status

- 4.24 **Table 4.1** summarises the estimated amounts of different types of materials generated from the Project during the reporting quarter. The materials were reused in other projects specified as below:
  - TKOGV (Green Valley), the soil materials were reused as the topsoil of landfill. This would be delivered by trucks. The delivery was started in May 2007 and no excavated materials were delivered to TKOGV in the reporting quarter.
  - NW-SW (Swire Sita), the soil materials were reused as the topsoil of landfill. This would be delivered by barges. The delivery was started in September 2007 and excavated materials were delivered to the site within the reporting quarter.
  - Central Reclamation Phase III, the excavated materials were reused as forming an access road. This would be delivered by barges. The delivery was started in November 2007 and excavated materials were delivered to the site within the reporting quarter.
  - Ma On Shan Waterfront Promenade Project, the rock materials were reused as the seawall layer. This would be delivered by barges. The delivery was started in December 2007 and rock materials were delivered to the site within the reporting quarter.
  - Shenzhen Airport Extension, the rock materials (size less than 300mm) would be exported as



usable materials by barges to the Shenzhen Airport Extension site for site formation works. The rock materials would be exported as goods in compliance with the Import and Export Ordinance. The delivery was started by the end of September 2007 and rock materials were delivered to Shenzhen Airport Extension in the reporting quarter.

• Hung Wan Quarry at Zhuhai, it was proposed to EPD on 8 November 2007 and rock materials were delivered to Zhuhai within the reporting quarter for reuse purpose. This would be delivered by barges.

## Table 4.1Estimated Amounts of Different Types of Materials Generation from October 2007to December 2007

Matariala Typa	Estimated Amount (tonnes)			Disposal Locations	
Materials Type	Oct 07	Nov 07	Dec 07	Disposal Locations	
C&D waste	68.55 tonnes	50.39 tonnes	77.11 tonnes	SENT Landfill	
				NENT Landfill	
	2.24 tonnes			WENT Landfill	
	8.47 tonnes		15.58 tonnes	TKOSF	
				TMSF	
Excavated Material (mainly soil)	5,856.49 tonnes	9,215.76 tonnes	12, 283.53 tonnes	QBBP	
	46.98 tonnes			ТКОҒВ	
				Green Valley	
	24,216.42 tonnes	110,245.7 5 tonnes	120,470.29 tonnes	Swire Sita	
		1,924.34 tonnes		Central Reclamation Phase III	
Rock Material			2,067.38 tonnes	Ma On Shan Waterfront Promenade	
	4,157.00 tonnes			Shenzhen Airport Extension	
			7,131.45 tonnes	Hung Wan Quarry	
Chemical waste				Collected by licensed collector	
General waste	48.0m <sup>3</sup>	45.0m <sup>3</sup>	45.0m <sup>3</sup>	Collected by licensed collector	

Notes: All figures are in tonnes unless specific.



## 5. NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

#### Summary of Exceedances

5.1 In the reporting quarter, no exceedance was recorded in the air quality monitoring events, noise monitoring events and the coral monitoring events.

#### Review of the Reasons for and the Implications of Non-compliance

5.2 As there was no exceedance or non-compliance during the reporting quarter. Thus, no further action was required.

#### Summary of Actions Taken

5.3 The Contractor and sub-Contractor generally implemented all the required mitigation measures to suppress the environmental impacts. As no exceedance was recorded in the reporting quarter, no further action was required.



#### 6. ENVIRONMENTAL COMPLAINTS

#### Complaints Log

- 6.1 During this quarter, 1 complaint and 1 warning were received from EPD.
- 6.2 1 complaint from the public through EPD was received on 5 November 2007 with regards to dust nuisance at Tai Shue Wan. During the inspection on 6 November 2007 with EPD, no significant observation was made regarding dust generation at the barging area at Tai Shue Wan. No further follow up actions were taken by the Contractor or Engineer. EPD would be replied the complainant.

1 warning from EPD was received on 15 November 2007 with regards to the insufficient air quality control of the crushing plant and the conveyor system as required under the specified process license following the surveillance inspection on 13 November 2007. Following immediate action was taken.

- Rubber curtains hanging at the excavated material discharge point at the conveyor belt was replaced.
- The rubber curtains were also extended to ensure the crushed material is enclosed as much as possible during the excavated material fall.
- The water sprayers at the crusher were replaced with misting nozzles to increase the contact area between the water and dust particles generated.
- Water spraying of the truck loading area of the crusher and along haul road was increased.

#### **Complaints Handling Procedure**

6.3 All complaints will be handled in accordance with the EM&A Manual. The complaint handling procedure and the complaint log are provided in **Appendix I.** 

#### 7. NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

7.1 No summon or prosecution related to environmental issues was made against the Project within the reporting quarter.

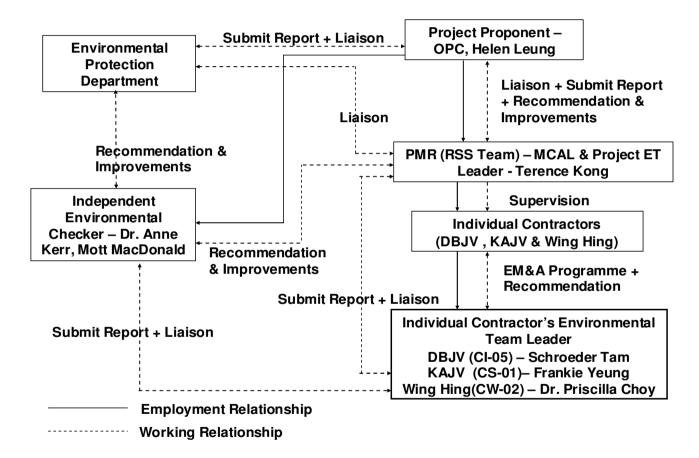


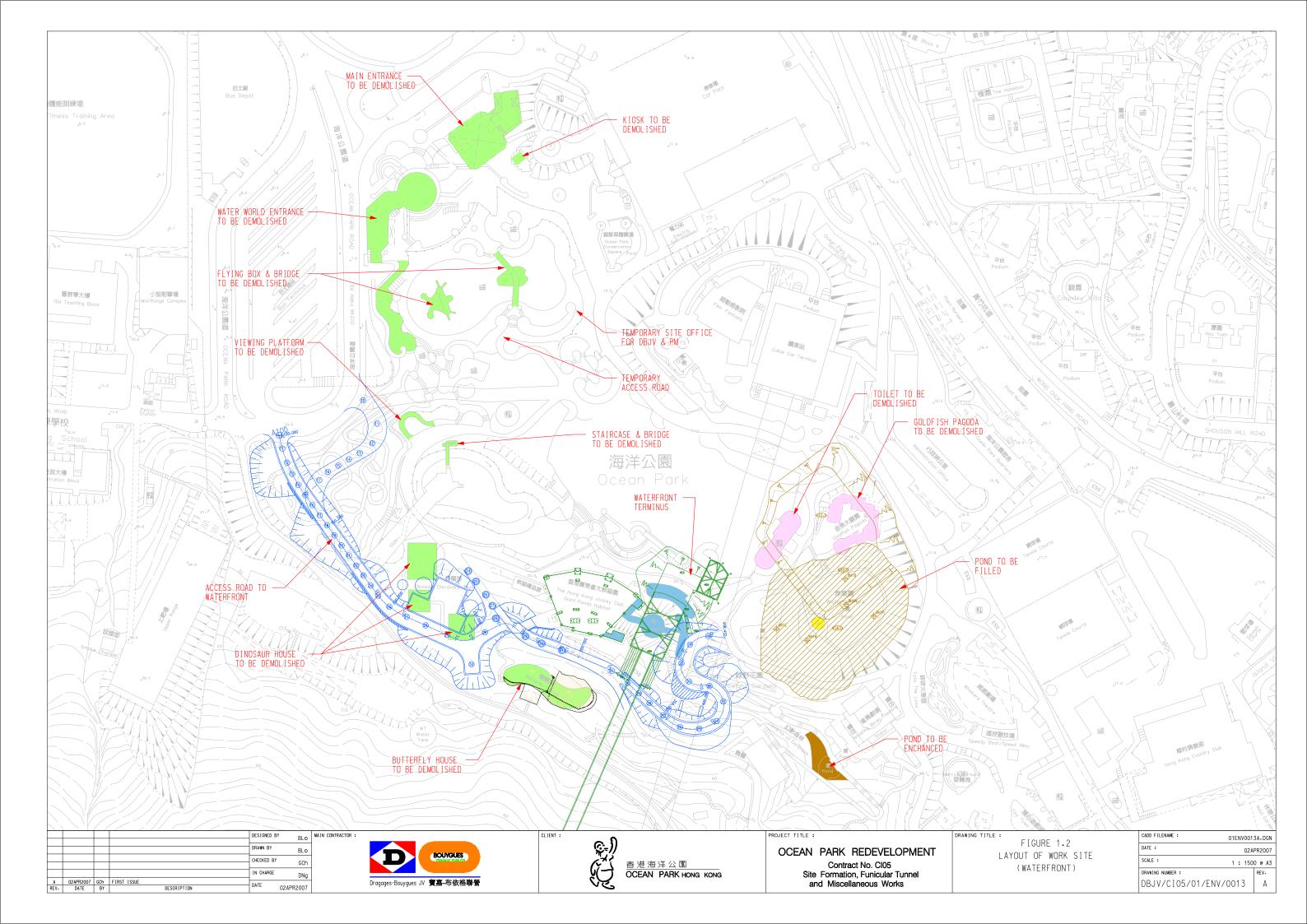
#### 8. COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

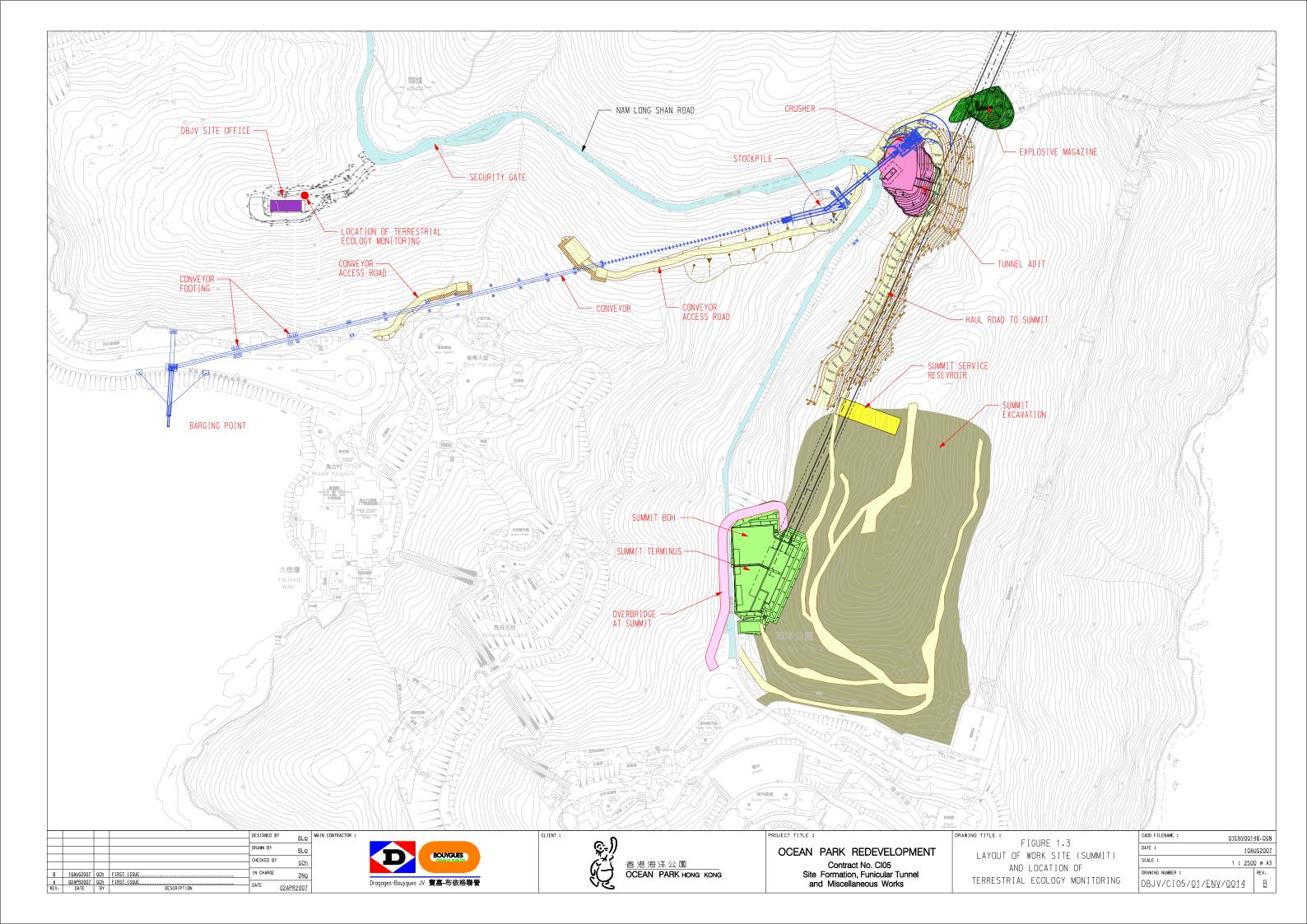
- 8.1 The implemented EM&A programme ensured that any environmental impacts to the receivers would be readily detected and timely actions could be taken to rectify any non-compliance. Assessment and analysis of monitoring results collected demonstrated the environmental acceptability of the Project. Weekly site inspections ensured that the EIA recommendations were effectively implemented.
- 8.2 The CET carried out air quality, noise monitoring, coral monitoring and weekly site inspection in accordance with the EM&A Manual. No exceedance or non-compliance was recorded during this quarter.
- 8.3 No exceedance of Action and Limit Level for 1-hour TSP, 24-hour TSP and daytime noise monitoring were recorded in the reporting guarter.
- 8.4 Seven sessions of terrestrial ecology monitoring were carried within this quarter. The results showed that all the transplanted Sword leaved Orchids were in good condition. The above ground part of Chinese Lily and Balloon Flower were withered due to seasonality while the underground roots were alive and expected to geminated in the coming growing season.
- 8.5 One session of coral monitoring was scheduled for Site 1-4 whilst two sessions of coral monitoring were scheduled for Site 5 & Control Station in the reporting quarter. The results showed that there was no exceedance of Action and Limit Levels.
- 8.6 1 complaint from the public through EPD was received on 5 November 2007 with regards to dust nuisance at Tai Shue Wan. During the inspection on 6 November 2007 with EPD, no significant observation was made regarding dust generation at the barging area at Tai Shue Wan. No further follow up actions were taken by the Contractor or Engineer. EPD would be replied the complainant.
- 8.7 1 warning from EPD was received on 15 November 2007 with regards to the insufficient air quality control of the crushing plant and the conveyor system as required under the specified process license following the surveillance inspection on 13 November 2007. Following immediate action was taken.
  - Rubber curtains hanging at the excavated material discharge point at the conveyor belt was replaced.
  - The rubber curtains were also extended to ensure the crushed material is enclosed as much as possible during the excavated material fall.
  - The water sprayers at the crusher were replaced with misting nozzles to increase the contact area between the water and dust particles generated.
  - Water spraying of the truck loading area of the crusher and along haul road was increased.
- 8.8 No summons and prosecutions related to environmental issues were made against the Project in the reporting quarter.

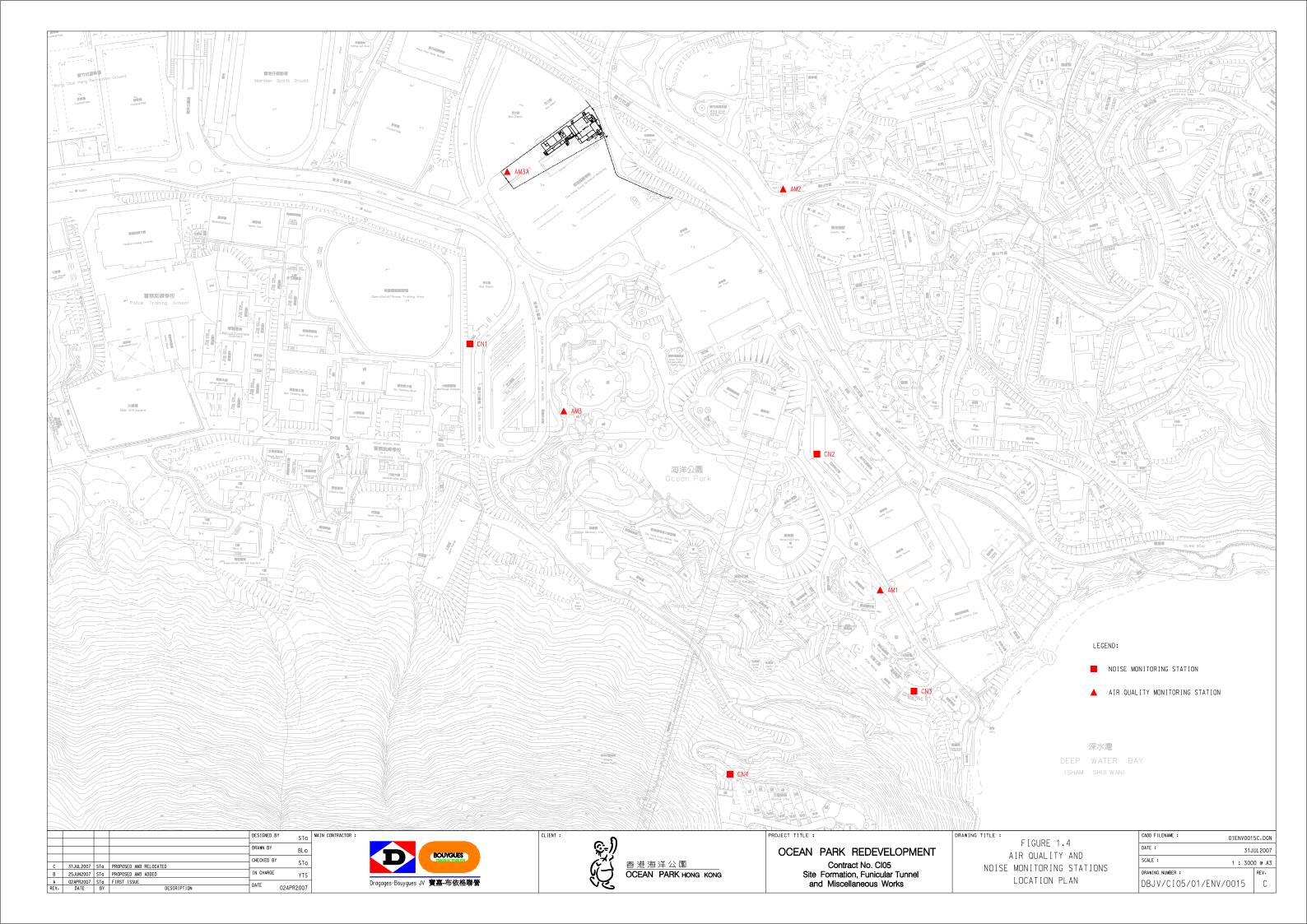
Figures

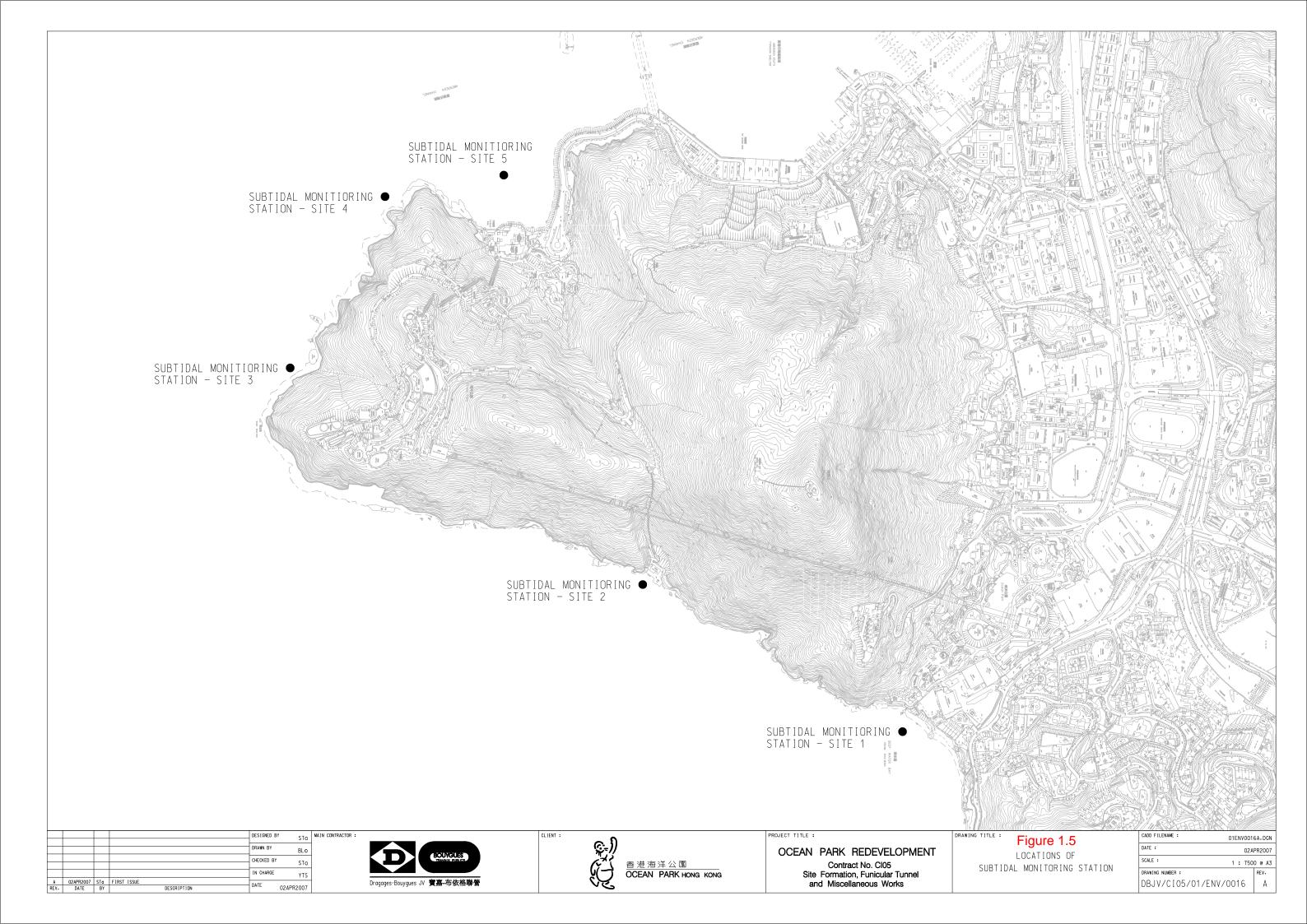
### Figure 1.1 Management Organization

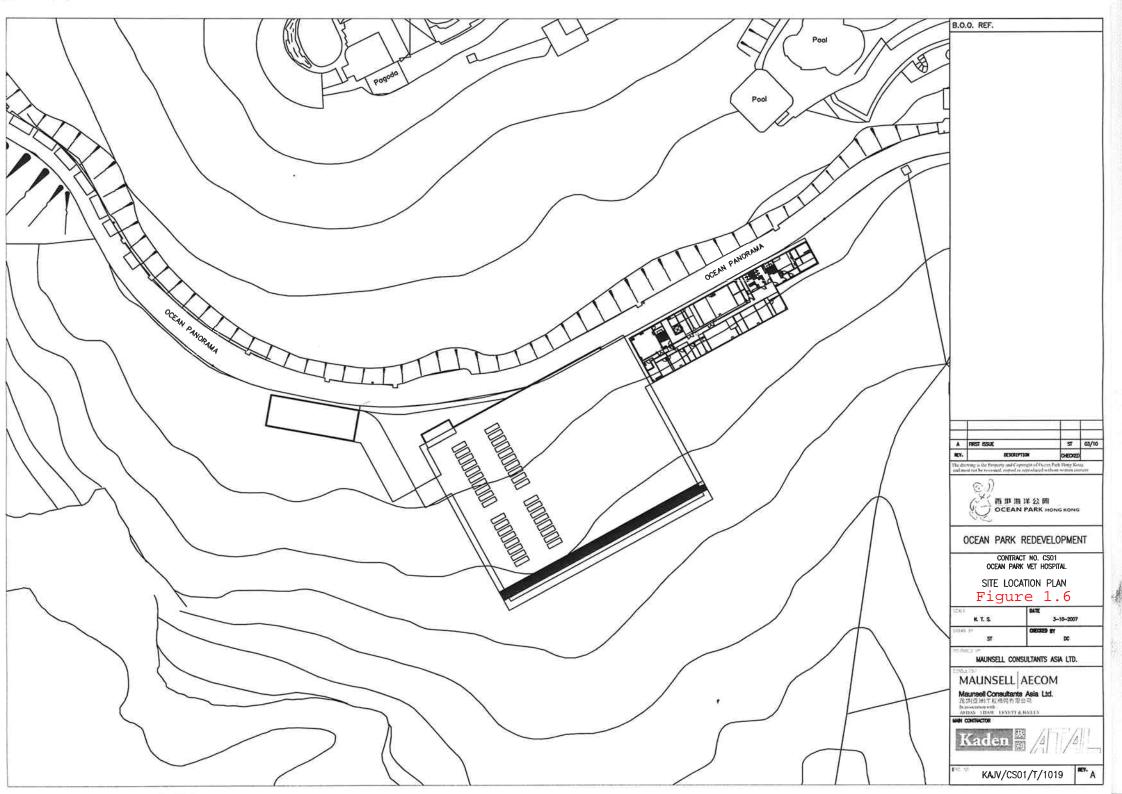


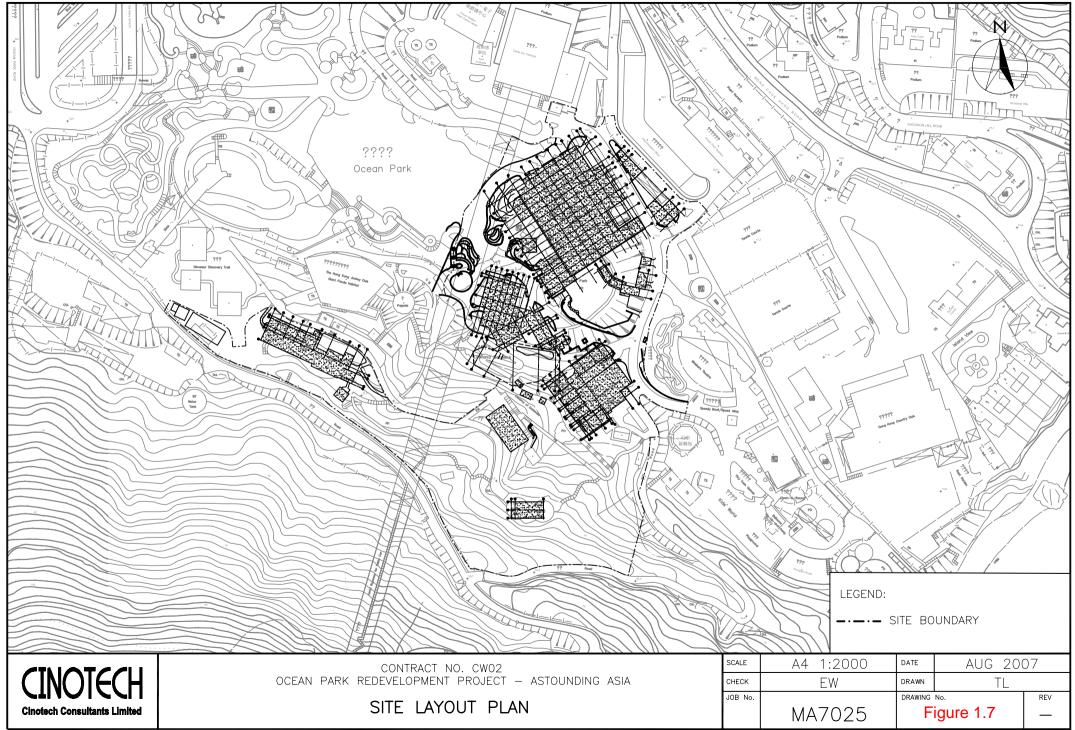












Appendix A



#### APPENDIX A – CONTACTS OF KEY ENVIRONMENTAL PERSONNEL

Company	Contact Person	Position	Telephone No.
Ocean Park Corporation	Helen LEUNG	Project Manager	2910 3106
Maunsell Consultants Asia Ltd	Edmund PANG	Project Manager Representative (PMR)	2871 5888
	Terence KONG	Project ETL	2871 5893
Mott MacDonald Hong Kong Ltd	Dr. Anne KERR	Independent Environmental Checker	2828 5757
Dragages-Bouygues J.V. (for	YT SO	Project QSE Manager	2555 4110
Contract CI05)	Schroeder TAM	Contractor's ETL	2555 4113
Kaden-ATAL J.V. (for Contract CS01)	Frankie Yeung	Contractor's ETL	9033 6055
W. Hing Construction Co., Ltd. (for Contract CW02)	Billy Lee	Contractor's Project Manager	6193 4096
Cinotech Consultant Ltd. (for Contract CW02)	Dr. Priscilla Choy	Contractor's ETL	2151 2089

Appendix B

#### **APPENDIX B – ENVIRONMENTAL MONITORING PROGRAMME**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
September						
			26	27	28 1-hr TSP	29 TM
30						
October						
	1	2 1-hr TSP 24-hr TSP NM (D)	3 TM	4 1-hr TSP	5	6 1-hr TSP
7	8 1-hr TSP 24-hr TSP NM (D)	9	10 1-hr TSP	11	12 1-hr TSP TM	13 1-hr TSP 24-hr TSP
14 SM (Site 5 and Control Station C)	15 1-hr TSP NM (D)	16	17 1-hr TSP	18 1-hr TSP 24-hr TSP	19	20 1-hr TSP
21	22 1-hr TSP NM (D)	23	24 1-hr TSP 24-hr TSP	25	26 1-hr TSP	27 TM
28	29 1-hr TSP NM (D)	30 1-hr TSP 24-hr TSP	31 1-hr TSP			

#### From 26 September 2007 to 25 December 2007

Notes: NM (D) denotes Daytime Noise Monitoring.

NM (E) denotes Evening Noise Monitoring if construction work is in progress.

NM (H) denotes Holiday Noise Monitoring if construction work is in progress.

SM denotes Subtidal Monitoring.

TM denotes Terrestrial Ecology Monitoring.

#### **APPENDIX B – ENVIRONMENTAL MONITORING PROGRAMME**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
November		I				
				1	2 1-hr TSP	3 TM
4	5 1-hr TSP 24-hr TSP NM (D)	6	7 1-hr TSP	8	9 1-hr TSP	10 1-hr TSP 24-hr TSP SM (Sites 1 to 5 and Control Station C)
11	12 1-hr TSP NM (D)	13	14 1-hr TSP	15	16 1-hr TSP 24-hr TSP	17
18	19 1-hr TSP NM (D)	20	21 1-hr TSP	22 1-hr TSP 24-hr TSP	23 1-hr TSP	24
25	26 1-hr TSP NM (D)	27	28 1-hr TSP 24-hr TSP	29	30 1-hr TSP TM	
December		1				
						1
2	3 1-hr TSP NM (D)	4 1-hr TSP 24-hr TSP	5 1-hr TSP	6	7 1-hr TSP	8
9	10 1-hr TSP 24-hr TSP NM (D) TM	11	12 1-hr TSP	13	14 1-hr TSP	15 1-hr TSP 24-hr TSP
16	17 1-hr TSP NM (D)	18	19 1-hr TSP	20	21 1-hr TSP 24-hr TSP	22
23	24 1-hr TSP (2) NM (D)	25				

#### From 26 September 2007 to 25 December 2007

Notes: NM (D) denotes Daytime Noise Monitoring.

NM (E) denotes Evening Noise Monitoring if construction work is in progress.

NM (H) denotes Holiday Noise Monitoring if construction work is in progress.

SM denotes Subtidal Monitoring.

TM denotes Terrestrial Ecology Monitoring.

Appendix C

#### APPENDIX C - CALIBRATION DETAILS

#### Air Quality Monitoring Equipments

Monitoring Location	AM1	AM2	АМЗ/АМЗА
High Volume Sample/Dust Trak Serial No.	1174	1177	9998
Sampler Identification	ET / EA / 003 / 08	ET / EA / 003 / 07	ET / EA / 003 / 12
Date of Calibration	03 September 2007	03 September 2007	14 September 2007
Calibration Due Date	02 November 2007	02 November 2007	13 November 2007
Result	Good	Good	Good

#### Noise Monitoring Equipments

Monitoring Location	CN1, CN2, CN3 & CN4	
Sound Level Meter Brand Name and Model	Rion NL-31	
Serial No.	01120826	
Date of Calibration	27 December 2006	
Calibration Due Date	26 December 2007	
Result	Good	

#### APPENDIX C - CALIBRATION DETAILS

#### Air Quality Monitoring Equipments

Monitoring Location	AM1	AM2	AM3/AM3A
High Volume Sample/Dust Trak Serial No.	1174	1177	9998
Sampler Identification	ET / EA / 003 / 08	ET / EA / 003 / 07	ET / EA / 003 / 12
Date of Calibration	02 November 2007	02 November 2007	14 November 2007
Calibration Due Date	01 January 2008	01 January 2008	13 January 2008
Result	Good	Good	Good

#### Noise Monitoring Equipments

Monitoring Location	CN1, CN2, CN3 & CN4	
Sound Level Meter Brand Name and Model	Rion NL-31	
Serial No.	01120826	
Date of Calibration	27 December 2006	
Calibration Due Date	26 December 2007	
Result	Good	

Appendix D

## **APPENDIX D - ACTION AND LIMIT LEVELS**

Table D.1	Action and Limit Levels for 1-hour average TSP and 24-hour average TSP
	Monitoring

Monitoring	24-hr T	SP (μg/m³)	1-hr TSP (μg/m³)		
Location	Action Level	Limit Level	Action Level	Limit Level	
AM1	183	260	440	500	
AM2	181	260	500	500	
AM3/AM3A	194	260	500	500	

### Table D.2 Action and Limit Levels for Daytime, Evening & Night-time Noise Monitoring

Time Period	Action	Limit
0700-1900 hrs on normal weekdays		75 dB(A) *
1900-2300 hrs on normal weekdays; and 0700-1900 hrs on holidays	When one documented complaint is received from any one of the sensitive receivers	60/65/70 dB(A) **
2300-0700 hrs of next day		45/50/55 dB(A) **

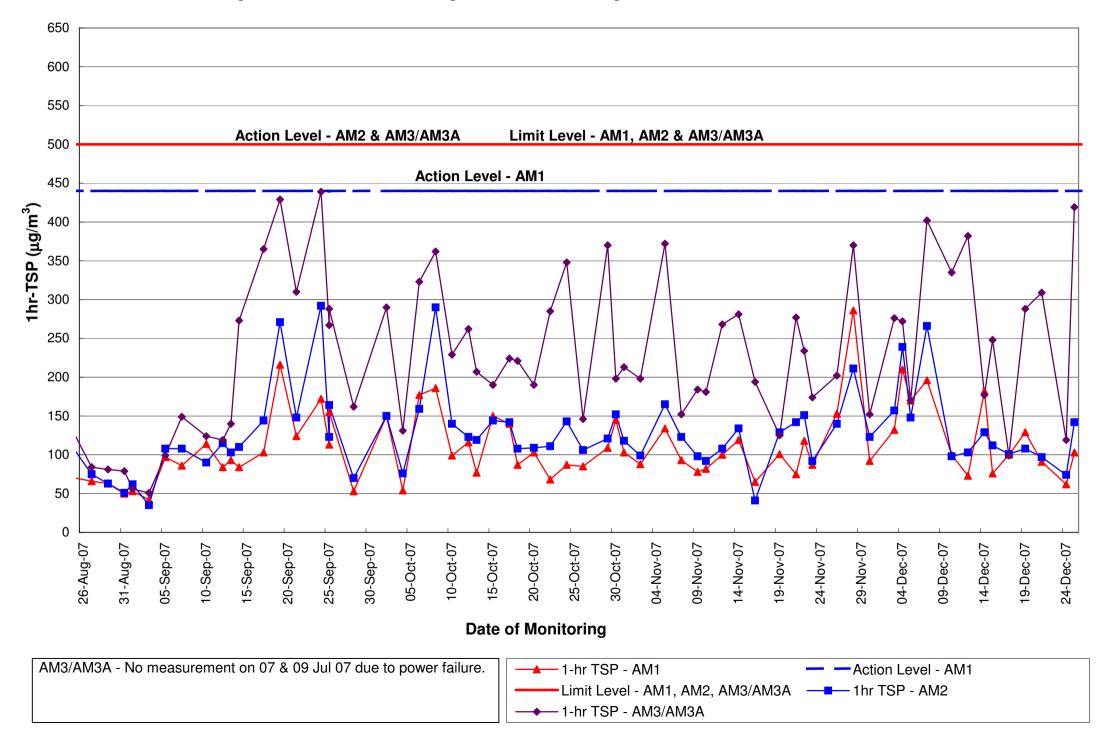
\* reduce to 70dB(A) for school and 65dB(A) during school examination periods, if applicable

\*\* to be selected based on the Area Sensitivity Rating of A/B/C, and the conditions of the CNP(s) must be followed

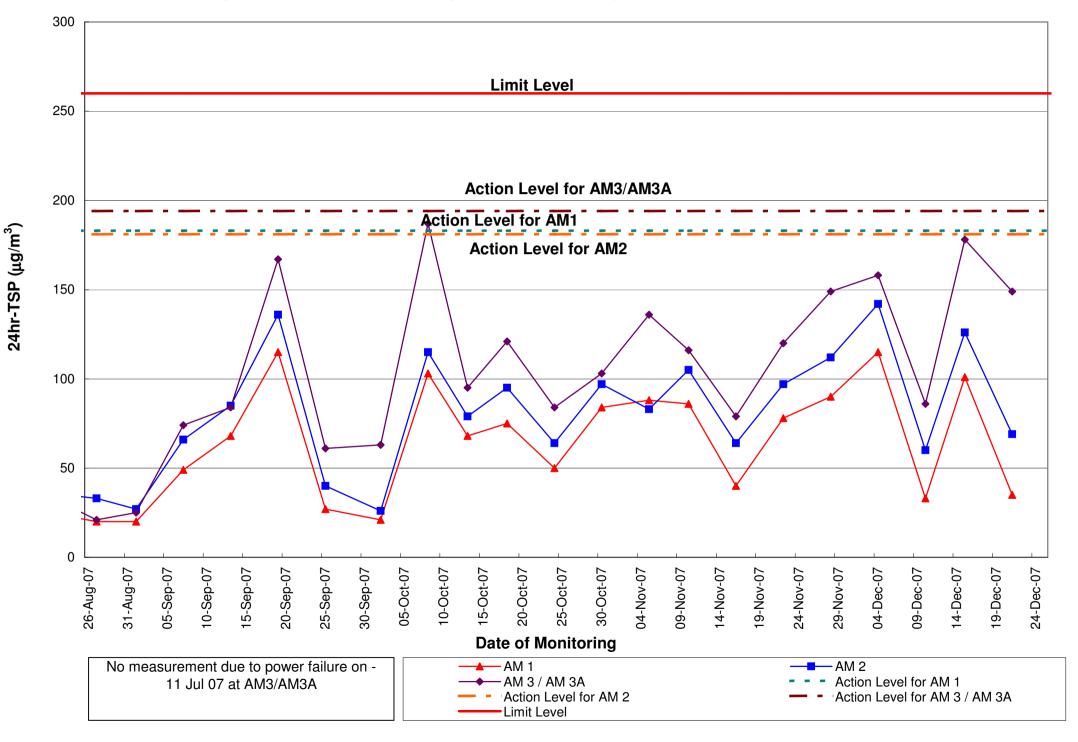
Table D.3	Action and Limit Levels for Subtidal Monitoring
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Parameter	Action Level Definition	Limit Level Definition
Sedimentation	If during Impact Monitoring a 15% increase in the percentage of sediment cover on hard corals occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Action Level is exceeded.	If during the Impact Monitoring a 25% increase in the percentage of sediment cover occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Limit Level is exceeded.
Bleaching	If during Impact Monitoring a 15% increase in the percentage of bleaching (bleached white) on hard corals occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Action Level is exceeded.	If during the Impact Monitoring a 25% increase in the percentage of bleaching (bleached white) occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Limit Level is exceeded.
Mortality	If during Impact Monitoring a 15% increase in the percentage of partial mortality on hard corals occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Action Level is exceeded.	If during the Impact Monitoring a 25% increase in the percentage of partial mortality occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Limit Level is exceeded.

Appendix E

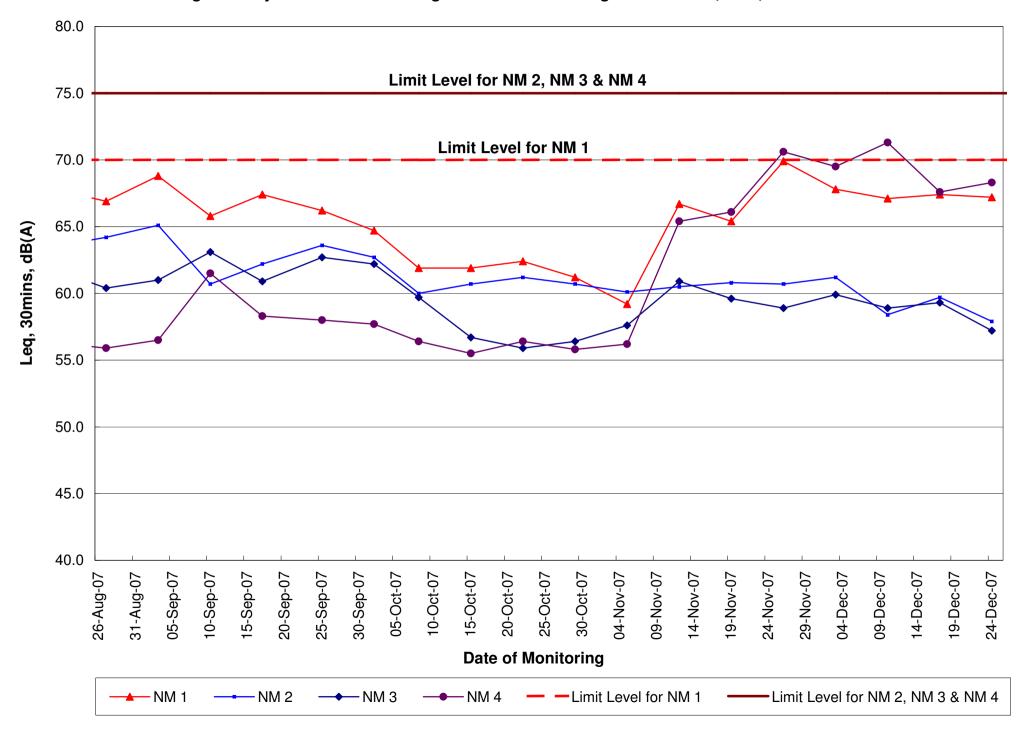


## Figure E.1 1-hr TSP monitoring results of Monitoring Station AM1, AM2 & AM3/AM3A

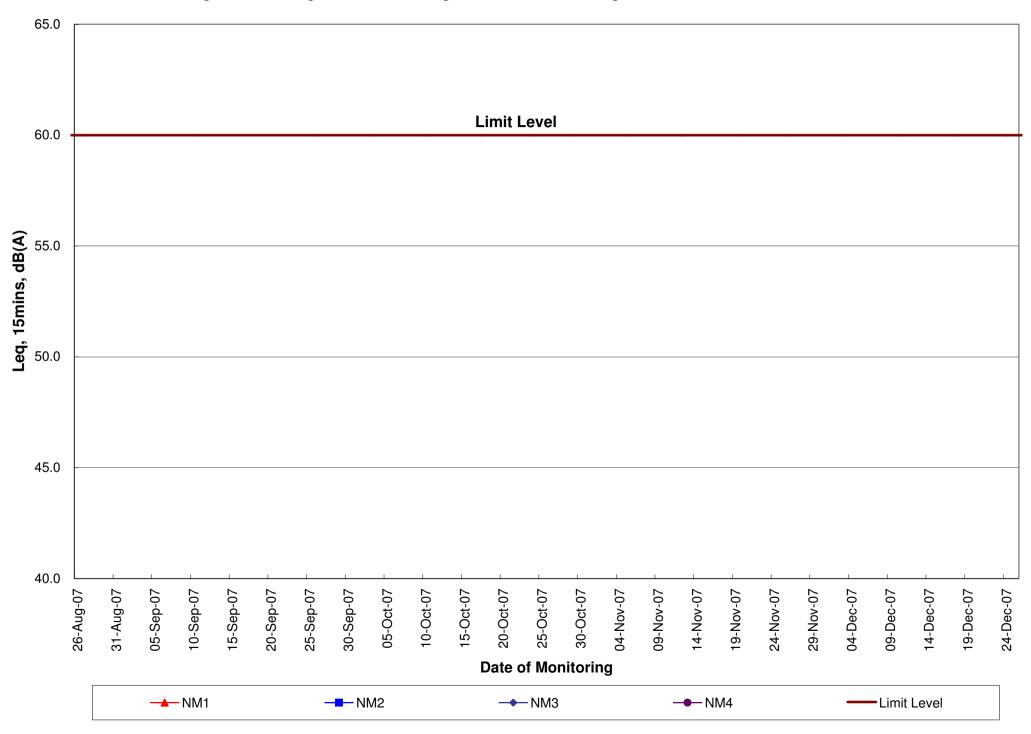


## Figure E.2 24-hr TSP monitoring results of Monitoring Station AM1, AM2 & AM3/AM3A

Appendix F

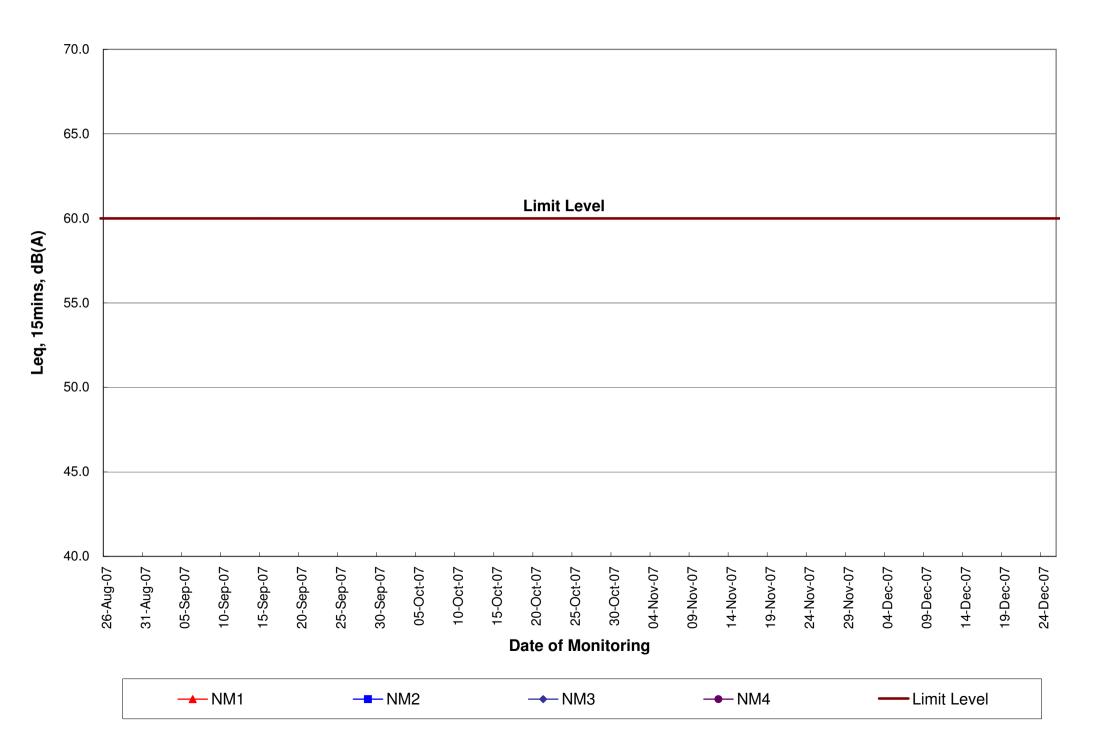


## Fig F.1 - Daytime Noise Monitoring Results of Monitoring Stations NM1, NM2, NM3 & NM4



## Fig F.2 - Evening Noise Monitoring Results of Monitoring Stations NM1, NM2, NM3 & NM4

# Figure F.3 - Holiday Noise Monitoring Results of Monitoring Stations NM1, NM2, NM3 & NM4



Appendix G

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Air Qualit	y							
AQ01	Dust emission from construction site in general	Cap 311, sub leg R Schedule III S.13	Hoardings of not less than 2.4m high from ground level should be erected along the entire length of the site boundary except for site entrance or exit.	~			1	
AQ02	Dust emission from construction site in general	Cap 311, sub leg R Schedule III S.13 & PS 26.10(6)(i)(e)	To minimize dust emissions, the amount of soil exposed and the dust generation potential should be kept as low as possible. This can be accomplished by water sprays, surface compaction; temporary fabric covers, minimizing the extent of exposed soil, and prompt re-vegetation of completed earthworks.	✓		1	√	
AQ03	Dust emission from construction site in general	Cap 311, sub leg R Schedule III S.13 & PS 26.10(6)(i)(j)	Wheel washing facilities should be provided at all vehicle site entrances/exits to prevent dusty material from being carried off-site on vehicles and deposited on public roads. The facilities shall be provided in advance of any major construction activities.	✓			✓	
AQ04	Dust emission from site clearance	Cap 311, sub leg R Schedule IV S.26 (1), (2) & PS 26.10(6)(i)(1)	The working area for uprooting of trees, shrubs or vegetation or for the removal of boulders, poles, pillars or temporary or permanent structures shall be sprayed with water or a dust suppression agent immediately before, during and immediately after the operation so as to maintain the entire surface wet.		<b>~</b>	✓ 	✓	
AQ05	Dust emission from excavation or earth moving	Cap 311, sub leg R Schedule III S.24	The heights from which excavated materials are dropped should be minimized to limit fugitive dust generation from loading/unloading.	✓		1	✓	
AQ06	Dust emission from excavation or earth moving	Cap 311, sub leg R Schedule III S.24	Working areas of any excavation or earth moving operation will be sprayed with water.		~	~	$\checkmark$	
AQ07	Access Road	PS 26.10(6)(i)(g)	Effective water sprays should be used on the site to dampen potential dust emission sources such as unpaved areas used by site traffic and active construction areas.		<b>~</b>	~	~	
AQ08	Access Road	Cap 311, sub leg R Schedule III S.14 (1) & PS 26.10 (6)(i)(a)	Areas of site with regular movement of vehicles shall have an approved hard surface and be kept clean of loose material.	$\checkmark$			✓	

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Air Qualit	y							
AQ09	Access Road	PS 26.10 (6)(i)(d)	All on-site motorized vehicles speeds shall be restricted to a max. speed of 10km/h and delivery vehicles to designated roadways inside the Site to reduce dust re-suspension and dispersion.			✓	~	
AQ10	Access Road	Cap 311, sub leg R Schedule III S.14 (1) & PS 26.10(6)(i)(a)	The roadway between the wheel wash and the public road will be paved.	✓			✓	
AQ11	Dust emission from material transporting and handling	PS 26.10(6)(i)(h) & (i)	Vehicles transporting materials with the potential to generate dust should have properly fitting side and tailboards.	✓		✓	✓	
AQ12	Dust emission from material transporting and handling	PS 1.110 (a)	The cover of the bed of dump truck shall be power operated with manual backup, so that the operator would not need to climb on the dump bed to operate the cover (both under power mode and manual mode). Operation from driver cab or with the operator standing on ground is acceptable. After the cover to the dump bed is closed, any gap left on the system of enclosure should be less than 25mm wide measured in a direction across the gap. Any remaining gap is to be sealed up tightly with a layer of nylon bristle of sufficient length to bridge across the gap.	✓		✓	✓	
AQ12	Dust emission from material transporting and handling	Cap 311, sub leg R Schedule IV S.26 (1)	Materials transported by vehicles should be covered, with the cover properly secured and extended over the edges of the side and tail boards.	✓		~	✓	
AQ13	Dust emission from material transporting and handling	PS 26.10(6)(i)(k)	Spraying all dusty materials with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet.	✓		✓	✓	
AQ14	Dust emission from material transporting and handling	PS 26.10(6)(i)(a)	Material storage and handling areas shall be located on hard core or paved.	$\checkmark$		~	$\checkmark$	
AQ15	Dust emission from material transporting and handling	Cap 311, sub leg R Schedule IV S.26	All stockpiled aggregate or spoil of more than $50 \text{ m}^3$ should be enclosed or covered and water applied twice per day during dry or windy conditions.	✓		~	✓	

					Delivery Method			
No.	Environmental Aspect	<b>Requirement</b> (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Air Qualit	у							
AQ16	Dust emission from materials transporting and handling	Cap 311, sub leg R Schedule III S.15 (1) & PS 26.10(6)(i)(f)	Stockpiles of dusty materials shall be covered and minimized the extent of spoil exposed at any given time.	✓		~	✓	
AQ17	Dust emission from materials transporting and handling	Cap 311, sub leg R Schedule III S.15 (1)	Every stock of more than 20 bags of cement shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.	✓		×	V	
AQ18	Dust emission from materials transporting and handling	Cap 311, sub leg R Schedule III S.15 (1) & PS 26.10 (6)(i)(b)	Material conveyors for the transfer of dusty materials shall be fitted with windboards and enclosed conveyor transfer points and hopper discharge areas to minimize dust emission.	✓	~		√	
AQ19	Dust emission from materials transporting and handling	PS 26.10 (6)(i)(c)	Totally enclosing all conveyors carrying materials which have the potential to create dust and fitting them with belt cleaners.	✓	✓		✓	
AQ20	Dust emission from materials transporting and handling	PS26.16 (2)(ii)	Profiled steel cladding should be provided at two sides of loading point at barge.	✓	~		$\checkmark$	
AQ21	Dust emission from materials transporting and handling	PS 26.16 (2)(iii)	Dust suppression sprays should be installed and operated in strategic locations at the feeding inlet and outlet.	$\checkmark$	✓		1	
AQ22	Dust emission from materials transporting and handling	PS 26.16 (2)(iv)	The barging point should be placed within a totally enclosed structure incorporating an enclosed chute for material transfer to barge.	$\checkmark$	✓		1	
AQ23	Dust emission from materials transporting and handling	PS 26.16 (2)(iv)	Flexible curtain should be hanged on the enclosed chute to prevent dust emission when excavated material/rocks are transported into the barge.	✓	~		√	
AQ24	Dust emission from materials transporting and handling	Cap 311, sub leg R Schedule III S.15	Debagging of cement and similar materials to be done in a ventilated enclosure with a filtered extraction system.	✓		✓	√	
AQ25	Dust Emission from Blasting	Cap 311. sub leg R Schedule IV S.27 (1), (2)	Wet the area within 30m from the blasting area with water prior to blasting.	~	✓	✓	1	

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Air Qualit	ty					· · · · · ·		
AQ26	Dust Emission from Blasting	Cap 311. sub leg R Schedule IV S.27 (1), (2)	Wire mesh, gunnysack and sandbag should be used on top of the blast area on each shot to prevent flying rock and reduce fugitive dust generation.	~			~	
AQ27	Dust Emission from Blasting	Cap 311. sub leg R Schedule IV S.27 (1), (2)	Do not carry out blasting when the strong wind signal or tropical cyclone warning no. 3 is hoisted unless prior permission of the Commissioner of Mines is obtained.		~	~	✓	
AQ28	Dust Emission from Blasting	Cap 311. sub leg R Schedule IV S.27 (1), (2)	Blasting shall not be carried out when a Hong Kong Observatory Thunderstorm Warning is in force.		✓	√	✓	
AQ29	Dust Emission from Blasting	Cap 311. sub leg R Schedule IV S.27 (1), (2)	Use of vacuum extraction drilling methods and sequenced the blasting works carefully.		✓		✓	
AQ30	Dust Emission from Blasting	Cap 311. sub leg R Schedule IV S.27 (1), (2); PS 26.13(4)(iv)	Firing of explosive shall be carried out in the morning prior to opening of the Park.	✓	~	~	✓	
AQ31	Dust Emission from Tunnel		Exhausts from tunnel ventilation should face away from sensitive receivers.	✓	✓	~	$\checkmark$	
AQ32	Dust Emission from Tunnel		Forced ventilation shall be maintained in the tunnel to ensure noxious or asphyxiating gases do not accumulate. At the tunnel access shaft or portal the expelled air shall be vented to the atmosphere ensuring adequate diffusion of gases. Expelled air shall be directed away from nearby buildings.	✓	<b>~</b>	~	✓	
AQ33	Dust Emission from Tunnel		Tunnel ventilation containing high level of Total Suspended Particulates (TSP) shall be filtered at least to the satisfaction of the Safety and Environmental Officers prior to being vented to the atmosphere. The filters should be changed weekly to prevent blockages, which may affect the performance of the system.	✓		~	✓	
AQ34	Dust Emission from Crushing Plant	PS 26.10(2)	The crushing plant shall be operated in accordance with the specified process licence.	~		~	$\checkmark$	

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Air Qualit	ty	-				-	-	
AQ35	Gas Emission Smoke/fume from construction plants and equipments	Cap 311, sub leg C S.3	All plants and equipments should be well maintenance to avoid dark smoke.	~		~	such a manner tha emitted for more the period of 4 hours	perates any plant in t any dark smoke is han 6 minutes in any or for more than 3 sly at any one time,
AQ36	Smoke/fume from construction plants and equipments	Cap 311, sub leg A S.4, 5 & 6	Prior approval should be obtained before the installation of the emergency generator.	$\checkmark$			N/A	Include in the design
AQ37	Smoke from open burning	Cap 311, sub leg O S.4 (1)	Open burning for the purpose of disposal of construction waste/tyres, the salvage of metal or the clearance of site in preparation for construction work is prohibited.			~	~	
AQ38	Smoke/fume from all site vehicles	Cap 374, sub leg A S.31(1)	Black smoke should be avoided from any vehicle whether or not mechanically propelled which is constructed or adapted for use on roads (exclude a vehicle of the North-west Railway or a tram)	✓		✓	✓	
AQ39	Smoke/fume from all site vehicles	Cap 311, sub leg L Schedule I	Ensure the correct diesel used in any vehicle whether or not mechanically propelled which is constructed or adapted for use on roads (exclude a vehicle of the North-west Railway or a tram)		~	~	✓	
AQ40	Emission from spraying products	Cap 403, sub. leg C s.3	Ozone depleting paint sprayers shall not be used on sites.		✓	~	~	
Noise/Vib	ration							
NV01	Noise from construction work other than percussive piling	Cap 400, S.6(1), PS 26.11 (2)	Work required for the use of powered mechanical equipment (PME) in restricted hours, i.e. the hours between 7pm and 7am on weekdays or at any time on Sundays or a public holiday, for carrying out construction activity shall be required a valid Construction Noise Permit (CNP).		1	✓	✓ 	
NV02	Noise Emission from construction plants and equipments	PS 26.11 (9)	Relocation of noise-emitting plant, the use of silencers, mufflers, acoustic sheds or shields or acoustic sheds or screens upon the best reasonable practice.	✓		~	~	

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Noise/Vib	ration	-						
NV03	Noise Emission from construction plants and equipments	PS 26.11 (10)	Maintain all plant and silencing equipment in good condition so as to minimize the noise emission during the works.			✓	✓	
NV04	Noise Emission from construction plants and equipments	Cap 400, sub. leg. C, s17(1)	Compressors should have Noise Emission Labels (NELS).			✓	✓	
NV05	Noise Emission from construction plants and equipments	Cap 400, sub. leg. D, s17(1)	Hand held breakers should have Noise Emission Labels (NELS).			✓	~	
NV06	Noise Emission from construction plants and equipments	PS 26.11 (13)(i)	<ul> <li>If the work causing serious noise pollution impacts or reached the Target Limit as stated in the Contractor's EM&amp;A Manual, the Contractor shall provide the following proposed remedial measures:</li> <li>Change of construction equipment location and scheduling of activities;</li> <li>Change of construction equipment location and scheduling of activities;</li> <li>Installation of construction equipment soundproofing;</li> <li>Provision of alternative Contractor's equipment;</li> <li>Erection of sound barriers around the part of the Site or the location of the construction noise source; or</li> <li>Any other measures that may be effective in reducing noise.</li> </ul>	✓ ✓ ✓	√		↓ ↓ ↓ ↓	
NV07	Noise Emission from Blasting	PS 26.13(4)(iv)	Firing of explosive shall be carried out in the morning prior to opening of the Park.	✓	~	<b>√</b>	✓	

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Noise/Vibr	ration	-					-	
NV08	Noise Emission from Blasting	GEP Technical Guidance Note No. 25 (TGN 25)	Blast doors on tunnels to be closed during blasting if required by the blasting period.	~		✓	✓	
NV09	Noise Emission for Vehicles	Cap 374, sub leg A S.30(1)	Every vehicle propelled by an internal combustion engine shall be fitted with a silencer, expansion chamber or other contrivance suitable and sufficient for reducing, as far as may be reasonable, the noise caused by the escape of the exhaust gases from the engine.	✓		✓	1	
Water Qua	ality (Refer to Drainage Managem	ent Plan as stated in PS	5 26.17(7))			·		
WQ01	Flooding and wastewater including surface runoff discharges from the construction site/work to inland coastal waters, communal sewers and drains	PS 26.12 (2)	Before commencing any site formation work, all sewer and drainage connection should be sealed to prevent debris, soil, sand and etc from entering public sewers/drains	✓		✓	The existing drainage system is in use and the temporary drainage system is under preparation	
WQ02		PS 26.12 (2)	The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection.	✓			N/A	
WQ03		PS 26.12 (2)	Wheel wash water shall be changed frequently and sediment removed regularly	✓		✓	~	
WQ04		PS 26.12 (2)	Construction runoff related impacts associated with tunneling and above ground construction activities can be readily controlled through the use of appropriate mitigations measures which include: • Use of sediment traps, oil interceptors; and	<b>√</b>				
			<ul> <li>Adequate maintenance of drainage systems to prevent flooding and overflow.</li> </ul>	v	$\checkmark$	✓ ✓	0 ✓	
WQ05	Flooding and wastewater including surface runoff discharges from the construction	PS 26.12 (2)	Exposed areas should be minimised to reduce the potential for increased siltation, runoff contamination, and erosion.	✓	✓	✓	✓	
WQ06	site/work to inland coastal waters, communal sewers and drains	EIA Ref. S9.44 EM&A Ref. S8.3	Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses via silt retention points.	✓	$\checkmark$	~	1	

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Water Qu	ality (Refer to Drainage Managem	ent Plan as stated in PS	5 26.17(7))					
WQ07	Flooding and wastewater including surface runoff discharges from the construction	EPD ProPECC Note No. PN1/94; PS 26.17(6)(ii)	The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94.	✓	√		$\checkmark$	
WQ08	site/work to inland coastal waters, communal sewers and drains	EP Clause2.13	To improve the coagulation and sedimentation process for construction phase discharges from excavation works at Headland, sand/silt removal facilities, including sand/silt traps and sediment basins should be provided.	✓		~	0	Drainage Proposal
WQ09		PS 26.12(4)	All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable.		~	1	0	
WQ10		PS 26.12	If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.	✓	~	~	0	
WQ11		PS 26.12(6)(iv)	Sediment tanks of sufficient capacity are recommended as a general mitigation measure that can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	✓		~	0	
WQ12		PS 26.12(6)(ii)	All silt removal facilities will be inspected daily and cleaned whenever necessary.			~	✓	
WQ13		PS 26.12(6)(iv)	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed in to foul sewers.		✓ 	~	✓	
WQ14		EP Clause2.12 & 2.14; PS 26.17(6)(iii)	Design and install a silt curtain system to enclose the existing 1000mm diameter storm water pipe outlet at Tai Shue Wan to minimize the water quality impacts on the marine environment during rainy seasons.	✓	1		✓	Silt curtain proposal was deposited in the EIAO Register Office for public inspection.

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Water Qu	ality (Refer to Drainage Managem	ent Plan as stated in PS	S 26.17(7))					
WQ15	Flooding and wastewater including surface runoff discharges from the construction site/work to inland coastal waters, communal sewers and drains	EPD ProPECC Note No. PN1/94; PS 26.17(8)(e)	Precautions should be taken at any time of year when rainstorms are likely. Actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms, are summarized in Appendix A2 or ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.			~	*	Heavy rain procedures
WQ16		PS 26.12(6)(i)	Oil interceptors should be provided in the drainage system and these should be regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	~			1	
WQ17		PS 26.12(2)	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited on roads.			~	1	
WQ18		PS 26.12	Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	$\checkmark$			1	
WQ19		PS 26.12(6)(iii)	An adequately designed and located wheel washing bay should be provided at every site exit and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process.	✓			1	
WQ21		PS 26.12	Open stockpiles of construction materials of more than 50m <sup>3</sup> should be covered with tarpaulin or similar fabric.			~	1	
WQ20		PS 26.12	The section of access road leading to, and exiting from, the wheel wash bay to the public road should be paved with sufficient backfall towards the wheel wash bay towards the wheel wash bay to prevent transport of soils and silty water to public roads and drains.	✓			1	

					Delivery Method			Other / Remarks         Drainage Proposal         Note         I         Note         I <td< th=""></td<>
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Drainage a	and Sewage (Refer to Drainage Ma	nagement Plan as state	ed in PS 26.17(7) and Drainage Proposals as stated	l in EP Clause 2.13	)			
DS01	Polluted water discharge from construction site or works	PS 26.17(4)	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharges should be adequately designed for the controlled release of storm flow (one in five year event).	~			✓	Drainage Proposal
DS02	Polluted water entry stormwater system during the site activities	PS 26.17(6)	All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms.	~		✓	√	
DS03	Polluted water from site reinstatement	PS 26.17(2)	Temporarily diverted drainage systems should be reinstated to their original condition when the construction work has finished, or the temporary diversion is no longer required.				✓	Note
Drainage a	and Sewage (Refer to Drainage Ma	nagement Plan as state	ed in PS 26.17(7) and Drainage Proposals as stated	l in EP Clause 2.13	)			
DS04	Polluted water from concrete lorry washing	PS 26.17	Wash water from concrete trucks and pumps is to be collected in skips for treatment.	1		✓	$\checkmark$	
DS05	Polluted water from the plant yard	WMP	Plant maintenance areas to be enclosed.	✓			$\checkmark$	
DS06	Polluted water from excavation	PS 26.17(6)(ii)	Temporary open storage of excavated materials used for backfill on site should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials should be diverted through appropriate sediment traps before discharge to storm water drainage systems.			~	✓	
DS07	Polluted water entry from waste collected area	PS 26.18(2)	Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column to cause water quality impacts.	~		~	√	
DS08	Polluted water and sewage entry the chemical toilets	PS 26.12(3)	Construction sewage may need to be handled by portable chemical toilets if construction workers are likely to be dispersed along the alignment.	~			~	
DS09	Polluted water and sewage entry the chemical toilets	PS 26.12(3)	Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the construction workers. This contractor will also be responsible for waste disposal and maintenance practices.	✓			~	

					Delivery Method			Other / Remarks         Spill procedures         Image: Spill procedures         Image: Spill procedures         Image: Spill procedures
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Drainage	and Sewage (Refer to Drainage Ma	nagement Plan as state	d in PS 26.17(7) and Drainage Proposals as stated	in EP Clause 2.13	3)			
DS10	Polluted water from chemical storage area	PS 26.12(9)	All fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching WSRs.	~			V	
DS11	Polluted water from spillage	WMP; PS 26.12(10)	Spill action plan is to be prepared.			✓	✓	Spill procedures
DS12	Polluted water from petrol filling activity	WMP; PS 26.17(8)(l)	Petrol interception for oil filling point.	$\checkmark$			$\checkmark$	
DS13	Polluted water from tunnel pump out	PS 26.17(8)	Ground water pumped from tunnels etc., should be discharged into drainage channels that incorporate sediment traps to entrance deposition rates and to remove silt.	✓			N/A	
DS14	Polluted water from construction works	PS 26.17(8)(i)	Construction work force sewage discharges on site should be connected to the existing trunk sewer or sewage treatment facilities, if practicable.	~		<b>v</b>	~	
DS15	Polluted water from pantry	PS 26.17(8)(k)	Wastewater collected from pantry including that from basins, sinks and floor drains, should be discharged into foul sewers via grease traps capable of providing at least 20 minutes retention during peak flow.	✓			✓	
Waste Ma	nagement (Refer to Waste Manage	ment Plan as stated in	EP Clause 2.21)					
WM01	Disposal of waste (general)	PS 26.18	Minimize the generation of waste from Works. Avoidance and minimization of waste generation shall be achieved through changing or improving design and practices, careful planning and good site management.			×	√	Note
WM02	Disposal of waste (general)	PS 26.18	Different types of waste are segregated on-site and stored in different containers, skips or stockpiles to facilitate the reuse/recycling of materials, thus avoiding disposal (generally with only limited processing and reprocessing may be required).	✓		~	✓	

					Delivery Method			Other / Remarks
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Waste Ma	nagement (Refer to Waste Manage	ement Plan as stated in	EP Clause 2.21)					
WM03	Disposal of waste (general)	WMP	A trip ticket system for the disposal of Construction and Demolition (C&D) materials following the guidelines stipulated in the Environment, Transport and Works Bureau Technical Circular (Works) No. 31/2004 shall be used to prevent any illegal dumping.			✓ 	V	
WM04	Disposal of waste (general)	PS 26.18	No construction waste of more than 20% inert material by volume shall be disposed of to landfill. Inert materials like rock, sand, concrete debris should be sorted out from construction waste before disposal. Dry concrete waste or the excavated materials should be recycled for reuse or sorted for disposal at public dumps.			~	✓	
WM05	Generation and disposal of construction and demolition waste	WMP; PS 26.18	All non-inert construction waste material deemed unsuitable for reclamation or land formation and all other waste material shall be disposed at public dumps.	~		~	1	Note
WM06	Generation and disposal of construction and demolition waste	WMP; PS 26.18	The C&D materials shall be sorted into public fill (inert portion) and C&D waste (non-inert portion). The inert portion which comprises soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works as far as possible. Where excavated rock is of the appropriate grade, it shall be crushed and reused as aggregate or for other surfacing uses, wherever possible. The non-inert portion, which comprises metal, timber, paper, glass, junk and general garbage	~	~	<b>v</b>	1	
WM07	Disposal of waste (general)	WMP; PS 26.18	shall be reused or recycled. Record of the amount of waste generated, recycled and disposed of shall be kept on site for easy reference and checking.			✓	✓	
WM08	Disposal of waste (general)	WMP; PS 26.18	Authorized/Licensed Waste Hauliers/Collectors should be used to collect and transport different category wastes to the appropriate disposal points.			<b>v</b>	1	

					Delivery Method			Other / Remarks         Note         Image: Contract of the second
No.	Environmental Aspect	<b>Requirement</b> (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Waste Ma	nagement (Refer to Waste Manag	ement Plan as stated in	EP Clause 2.21)					
WM09	Disposal of waste (general)	WMP; PS 26.18	Handle and store wastes in a manner, which ensures that they are held securely without loss or leakage, thereby minimizing the potential for pollution.			<b>√</b>	✓	Note
WM10	Disposal of waste (general)	WMP; PS 26.18	Remove wastes in a timely manner and maintain the waste storage areas clean regularly.			~	✓	
WM11	Disposal of waste (general)	WMP; PS 26.17(8)	Regular cleaning and maintenance the drainage system, sumps, oil interceptors and grease traps. The waste from these facilities shall be collected and disposed of by a licensed Collector.	✓		<b>√</b>	✓	
WM12	Disposal of waste (general)	WMP	<ul> <li>Obtain the necessary permits and licenses with regards to the waste management from the appropriate authorities wherever necessary, in accordance with</li> <li>The Waste Disposal Ordinance (Cap 354),</li> <li>Waste Disposal (Chemical Waste)(General) Regulation (Cap 354),</li> <li>The Crown Land Ordinance (Cap 28), and</li> <li>Dumping at Sea Ordinance (Cap 466)</li> </ul>			~	1	
WM13	Disposal of waste (general)	WMP	Provide training for workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.			~	✓	
WM14	Generation and disposal of construction and demolition waste	WMP & WBTC 5/99 (Appendix A)	The Contractor shall produce a Construction and Demolition Material Disposal Delivery Form (the Form) for each and every vehicular trip transporting Construction and Demolition (C&D) materials off-site. The Contractor shall complete the Form and maintain records as per procedures.			✓ 	1	
WM15	Production of Chemical Waste (general)	Magnitude	For those processes that generate chemical waste, it may be possible to find alternatives that generate reduced quantities or even no chemical wastes, or less dangerous types of chemical waste	~	1		0	

					Delivery Method		_	
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Waste Ma	nagement (Refer to Waste Manag	ement Plan as stated in	EP Clause 2.21)					
WM16	Production of Chemical Waste (general)	Cap 354 sub. leg. C; PS 26.18 (4)	The Contractor shall be required to register with EPD as a chemical waste producer and to follow the guidelines as stated in the Code of Practice on the Packaging, Labeling and Storage of Chemical Wastes.				1	Register as chemical waste producer has done
WM17	Storage of Chemical Waste	Cap 354 sub. leg. C s. 13, 14, 15, 16, 18 & 19; PS 26.18(4)	Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste)(General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labeling and Storage of Chemical Wastes as follows:					
			• A suitable area (special container(s) would be proposed to use) for temporary storage of chemical waste shall be provided. The best location for the storage area shall be located close to the source of chemical waste generation.	✓			✓	
			• The container used for the storage of chemical waste should be used for chemical waste only and kept clean and dry all the times.	~		~	~	
			• The container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	~		~	~	
			• The container should have a capacity of less than 450 l unless the specifications have been approved by EPD.	✓			✓	
			• If the container is not used as the storage, the storage area shall be enclosed on at least three sides by a wall, partition or fence with a height of not less than 2m or the total height in stack, whichever is less.	~			1	

					Delivery Method			
No.	Environmental Aspect	<b>Requirement</b> (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Waste Mar	nagement (Refer to Waste Manag	ement Plan as stated in	EP Clause 2.21)					
WM17 (contd)	Storage of Chemical Waste	Cap 354 sub. leg. C s. 13, 14, 15, 16, 18 & 19; PS 26.18(4)	• Adequate ventilation shall be allowed by leaving some space between the top of the enclosure walls and ceiling, or provision of louvers on the sides of the enclosure walls.	✓		<b>~</b>	V	
			• The storage area should have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest	✓		~	V	
			• The storage area should be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary)	✓		~	1	
			<ul> <li>Every chemical waste storage area should display a hazard-warning panel, notice or marking at or near the entrance or opening of the storage area in English and Chinese characters "CHEMICAL WASTE" and " 化學廢物" clearly and boldly in red on a white background with a letter/character size of not less than 60mm high.</li> </ul>	~		<b>~</b>	*	
WM18	Disposal of Chemical Waste	WMP; PS 26.18	Disposal of chemical waste be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility that also offers a chemical waste collection service and can supply the necessary storage containers, or to a re-user of the waste under approval from EPD.			✓	✓	
WM19	Disposal of Chemical Waste	Cap 354, sub. leg. C s21 & 22	Disposal of chemical waste should be via a licensed waste collector.			~	~	
WM20	Generation of general refuse	Cap 311, sub leg O S.4 (1)	Law prohibits the burning of refuse on construction sites.			<ul> <li>✓</li> </ul>	~	

					Delivery Method			Other / Remarks         Image: Control of the second seco
No.	Environmental Aspect	<b>Requirement</b> (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Waste Ma	nagement (Refer to Waste Manag	ement Plan as stated in	EP Clause 2.21)					
WM21	Generation of general refuse	Magnitude	Office wastes can be reduced through recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered if one is available.	~		~	✓	
WM22	Generation of general refuse	WMP	General refuse generated on site should be stored in enclosed bins or compaction units separate from construction and chemical wastes. A reputable waste collector should be employed to remove general refuse from the site, separately from construction and chemical wastes, on a daily or every second day basis to minimize odour, pest and litter impacts.	✓		✓	1	
WM23	Generation of general refuse	Magnitude	General refuse will be generated largely by food service activities on site, so reusable rather than disposable dishware should be used if feasible. Individual collectors often recover aluminum cans from the waste stream if they are segregated or easily accessible, so separate labeled bins for their deposit should be provided wherever feasible.	~		~	1	
Ecology	1							
EC01	Ozone Emission entry the ambient environment	PS 26.08 (3) (i)	Ozone depleting fire extinguishers shall not be used for temporary firefighting measures and ozone depleting substances shall not be used in carrying out the Works.				√	Note restriction
EC02	Disturbance the marine ecological sensitive receivers	EP Clause 2.12; PS 26.14(5)	Divert the construction phase discharges from excavation works at Headland to an existing 1000mm diameter storm water pipe outlet at Tai Shue Wan to avoid impacts on coral communities in the marine water around the Nam Long Shan headland.	✓		~	1	Drainage Proposal
EC03	Disturbance the marine ecological sensitive receivers	EP Clause 2.15	No marine-based construction works shall be allowed for the Project to conserve the marine ecological resources in the vicinity of the project area.	<b>√</b>	1	~	✓	

					<b>Delivery Method</b>			Other / Remarks         Image: Constraint of the second s
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Ecology								
EC04	Disturbance the ecological sensitive receivers	EP Clause 2.17 & PS 26.14 (1)	The site clearance works before bulk excavation to the existing mountain to provide a new platform for the Summit shall commence before or outside the breeding season of Black Kites, i.e. from October to May of the next year.	~	1	*	~	
EC05	Disturbance the ecological sensitive receivers	PS 26.14 (2)	Design of temporary conveyor belt system and the location of temporary adit portals should be considered to avoid impact to potential nest sites in the tall shrubland habitat at Tai Shue Wan area where possible.	~	1	~	✓ 	
EC06	Disturbance the ecological sensitive receivers	EP Clause 2.19	No construction works and discharge from the construction site(s) shall be allowed within the existing freshwater ponds at the Tai Shue Wan area and within the enhanced Pond 35 after enhancement works.	~		~	✓ 	
EC07	Disturbance the ecological sensitive receivers	EM&A section 6.2.5	Minimize the impact due to construction on the existing surrounding vegetation by:					
			• Set up of temporary tree nurseries;	✓			✓	
			<ul> <li>Designation of "no-intrusion zones" and to record any trespass, including the damage to the existing vegetation;</li> </ul>			✓	✓	
			• Hill fire prevention;			✓	✓	
			• Dust and erosion control for exposed soil; and	✓		✓	×	
			• Well-planned irrigation networks throughout the establishment period.	$\checkmark$	$\checkmark$	✓	~	
EC08	Disturbance the ecological sensitive receivers	EM&A section 7.17 & EIA section 5.138	Minimize the impact due to construction on the uncommon plant species by:					
			• Vegetation survey and subsequent transplantation of locally uncommon or restricted species as far as practicable;		1		including Long Te leaved Orchie Rattlesnake-Pl	r restricted species entacle Orchid, Sword- d, Green-flowered antain, Cycad-fern, er and Chinese Lily

					Delivery Method			
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Ecology							-	
EC08 (cont'd)	Disturbance the ecological sensitive receivers	EM&A section 7.17 & EIA section 5.138	• Trees located within the works areas shall be preserved as far as practicable;	✓		<ul> <li>✓</li> </ul>	✓	
			<ul> <li>Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimize disturbance to natural habitats;</li> </ul>			~	~	
			• Construction activities shall be restricted to the works areas that would be clearly demarcated;	✓		~	$\checkmark$	
			• The work areas shall be reinstated immediately after the completion of works;	~			1	
			• Landscaping works on newly formed land shall as far as possible make use of native plant species.	✓			✓	
Hazard to	Life							
HL01	Hazard to life due to blasting activities	EM&A section 11.3 & EIA Section 12.15	The blasting activities shall be inspected and audited at practical intervals to ensure that the assumptions and recommendations from the Quantitative Risk Assessment (QRA) study are implemented.	~	✓	~	~	
HL02			The recommendations from the systematic hazard identification are consistently implemented in accordance with the intent of the hazard to life assessment.	~	✓	~	1	
Landscape	e and Visual							
LV01	Visual and Appearance considerations	EM&A Section 6.2.5	Minimize the visual and appearance impact by:	✓				
			• careful choice between 'impermeable' and 'permeable' hoardings.	v			v	
			• control over the appearance of construction workers, construction plants/ machines.			✓	~	
			• proper screening and careful alignment of the temporary barging point and conveyor system.	~			In the design	

				Delivery Method			_	
No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Site Installation	Method Statement	Toolbox Talk	Status	Other / Remarks
Landscape	Landscape and Visual							
LV01 (cont'd)	Visual and Appearance considerations	EM&A Section 6.2.5	• careful selection of security floodlights to avoid light pollution.	$\checkmark$			$\checkmark$	
Cultural a	nd Heritage Impact							
CH01	Cultural and Heritage Impact	EP clause 2.22	To preserve the grave G1, no works shall be allowed within one metre from the vicinity of such grave.	✓		~	~	Note requirement

Notes: EP denotes the Environmental Permit No. 249/2006 and its subsequent permits.

EM&A Manual denotes the Contractor specific EM&A Manual.

WMP denotes the Waste Management Plan.

EIA denotes the Final EIA Report No. AEIAR-101/2006.

PS denotes the Particular Specification of the Project.

✓ denotes implemented.

**O** denotes to be implemented.

	Location / Timing	Implementatio	n Implem	entation	Stages**	Relevant Legislation	
Environmental Protection Measures*		Agent	D	С	0	Guidelines	
			_				
	Work Site /						
Noise Militation Measures	during	O a set tra a tra s		V			
Noise Mitigation Measures a) Use of Powered Mechanical Equipment in restricted hours without a valid	construction	Contractor		Х		PN 2/93 & EIAO	
Construction Noise Permit (CNP) in restricted hours is prohibited, i.e. 7pm and 7am or							
at any time on general holiday including Sunday							
b) If CNP is grant, construction works shall accord with conditions of CNP							
c) Every air compressor shall be fitted with a noise emission label issued in respect of							
hat air compressor.							
d) Every hand held percussive breaker shall be fitted with a noise emission label issued							
n respect of that hand held percussive breaker.							
<ul> <li>Noise barrier should be provided for site which have sufficient space for installation.</li> </ul>							
) Idle equipment should be turned-off or throttled down. Noisy equipment should be							
properly maintained and used no more often than is necessary.							
a) Noisy equipment and activities should be sited by the Contractor as far from close-							
proximity sensitive receivers as practical.							
n) Idle equipment should be turned-off or throttled down. Noisy equipment should be							
properly maintained and used no more often than is necessary.							
) Construction plant should be properly maintained and operated.							
	Made Office (						
	Work Site /					Air Pollution Control	
Air Mitigation Measures	during construction	Contractor		x		Ordinance,	
All Miligation Measures	construction	Contractor		^		Air Pollution Control	
a) For Breaking, Excavation or earth moving, the working area shall be sprayed with						(Construction Dust)	
water to maintain the entire surface wet.						Regulation,	
b) Any debris shall be covered or stored in sheltered area and before debris is dumped							
nto a chute, it is to be sprayed with water.							
) For use of vehicles, load of dusty materials shall be covered entirely							
I) Open burning is prohibited.							
e) A stockpile of dusty materials shall not extend beyond the pedestrian barriers, fencing							
or traffic cones.							
) Vehicle washing facilities shall be provided at every exit point.	1		1				
) Main haul road shall be sprayed with water.							
,,		1		1			

	Location /	Implementation	Implem	Implementation Stages**		Relevant Legislation &
Environmental Protection Measures*	Timing	Agent	D	С	0	Guidelines
	Work Site /					
Water Mitigation Magguroo	during construction	Contractor		х		ETWB TCW No. 5/2005 and DSD TC No. 2/2004
<u>Water Mitigation Measures</u> a) Temporary drainage system (U-channel) and the sedimentation tank should be	construction	Contractor		^		and DSD 10 No. 2/2004
installed and maintained frequently to prevent adverse impacts on the stream water						
b) The slope should be covered up to avoid being washed into nearby stream by rain						
and local runoff.						
c) Any discharges into drainage or sewage systems, inland or coastal waters, or into the						
ground (e.g. from septic tanks) are required a valid discharge licence, except the discharge of domestic sewage into foul sewers or the discharge of unpolluted water.						
d) The terms and conditions of a discharge licence shall be complied						
e) Manholes should always be adequately covered and temporarily sealed						
e) Mannoles should always be adequately covered and temporarily sealed						
	Work Site /					Waste Disposal (Chemical
	during					Waste) (General)
Chemical Mitigation Measures	construction	Contractor		х		Regulation
						Code of Practice on the
a) Chemical waste should be packed and stored in suitable containers in the Chemical						Packaging Labelling and
Waste Store						Storage of Chemical
<ul> <li>b) There is displayed on every container of chemical waste a label</li> <li>c) Chemical waste store shall not be used for any purpose other than the storage of</li> </ul>						
chemical waste						
d) Chemical waste store shall be enclosed on at least 3 sides by a wall, partition fence						
or a similar device, which shall not be less than the height of the tallest container						
e) Chemical waste store shall not have any connection to any surface water drains or						
foul sewers						
f) Chemical waste store shall be kept clean and dry						
covering						
accommodate						
i) Every storage area where chemical waste is stored displays a warning panel, notice or						
marking at or near the entrance or the opening, indicate in bold legible red English words and Chinese characters not less than 6 cm in height on a white background						
j) Chemical waste stored shall be properly located and easily accessed						
k) Chemical should be properly stored in suitable containers						
I) Chemical should be properly stored and sited on sealed areas to prevent leakage						
leakage						

	Location /	Implementation	Implementation Stages*			Relevant Legislation &	
Environmental Protection Measures*	Timing	Agent	D	С	0	Guidelines	
	Work Site /					Waste Disposal	
	during	_				Ordinance ETWB TCW	
Waste Mitigation Measures	construction	Contractor		Х		No. 31/2004	
a) The proposals in the waste management plan are able to meet the target of							
avoidance, minimization, recycling and reuse of C&D material with particular reference							
to the nature of the Contract							
b) Trip-ticket system shall been properly implemented							
c) Waste disposal points shall be provided and regular collection for disposal to keep the							
site tidy							
d) Adequate and proper records with respect to waste management shall be kept							
	Work Site /						
	during					EP-249/2006/A, Clause	
Ecological Mitigation Measures	construction	Contractor		Х		2.12, 2.15 & 2.17	
a) Trees adjacent to or within the construction site area shall be protected							
b) To conserve the marine ecological resources in the vicinity of this Contract, no							
marine-based construction works shall be allowed for this Contract.							
c) Site inspection had been carried out before site clearance to ensure no nesting							
activities of Black Kites at locations of this Contact.							
d) To avoid impacts on coral communities in the marine water of this Contract,							
temporary drainage system (U-channel) and the sedimentation tank should be installed.							
In addition, all water mitigation measures will be followed.							

# CW02 - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
Construction Dust	• Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.	٨
	• Use of frequent watering for particularly dusty construction areas, temporary stockpiles and areas close to ASRs.	٨
	• Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.	N/A
	• Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.	*
	• Restricting heights from which materials are dropped, as far as practicable to minimise the fugitive dust arising from unloading/ loading.	^
	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	^
	• Use of vehicle wheel and body washing facilities at the exit points of the site.	^
	• Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.	N/A
	• Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.	N/A
	Dusty activities should be re-scheduled if high-wind conditions are encountered.	N/A
	• Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	N/A
	• Suitable buffer zone should be provided and the works areas should be fenced off with hoarding. The height of hoarding should not be less than 2.4m from ground level.	N/A
	Crushing Plant	
	• Water sprays on the crusher.	N/A
	Fabric filters installed for the crushing plant.	N/A
	• When transferring materials from crusher to the conveyors, chutes or dust curtains would be used for controlling dust.	N/A

Types of Impacts	Mitigation Measures	Status
	Barging Point & Conveyor Belt System	
	<ul><li>The conveyors would be placed within a totally enclosed structure</li><li>Profiled steel cladding would be provided at two sides of loading point.</li></ul>	N/A N/A
	• Dust suppression sprays would be installed and operated in strategic locations at the feeding inlet and outlet.	N/A
	• The barging point would be placed within a totally enclosed structure incorporating an enclosed chute for material transfer to the barge. Flexible curtain would be hanged on the enclosed chute prevent dust emission when	N/A
	<ul> <li>excavated materials/rocks transported into the barge.</li> <li>Some areas of the Park would remain open for visitors during the construction period. Therefore, suitable buffer zones from major construction activities should be provided where practical and the works areas should be fenced off with hoarding during the construction phase. It is recommended to erect hoarding of a height not less than 2.4m from ground level.</li> </ul>	Λ
Construction	Construction Phase	
Noise	• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme	۸
	• Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction programme	N/A
	• Mobile plant, if any, should be sited as far from NSRs as possible.	N/A
	• Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum	٨
	• Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs	٨
	• Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities	N/A
	Adoption of Quieter Plant	
	• In order to reduce the excessive noise impacts at the affected NSRs at the Waterfront during normal daytime working hours, quieter plants are recommended. The Contractors do not have to use specific items of quiet plant adopted in this assessment. The Contractors may use other type of quiet plant, which have the same total SWL, to meet their needs	Λ

Types of Impacts	Mitigation Measures	Status
	<ul> <li>Use of Movable Noise Barrier</li> <li>The use of movable barrier for certain PME could further alleviate the construction noise impacts. In general, 5dB (A) reduction for movable PME and 10dB (A) for stationary PME can be achieved depending on the actual design of movable noise barrier.</li> </ul>	N/A
	• The Contractor should be responsible for designing of the movable noise barrier with due consideration given to the size of the PME and the requirement of intercepting the line of sight between the NSRs and PME. Barrier material of surface mass in excess of 7kg/m2 is recommended to achieve the predicted screening effect.	N/A
	• Exceedance of up to 5dB (A) would be predicted at the Police Training School (NSR PTS) during the examination periods. Early liaison with the principal of this impacted school is recommended to plan for the construction programme. Noisy construction activities should be avoided during the examination period as far as practicable so as to reduce the potential noise impact at the school to comply with the noise criterion of 65dB(A).	N/A
	Construction Phase	
	• All excavation works carried out close to water bodies shall be carefully controlled to avoid runoff entering watercourses, especially during periods of heavy rain.	٨
	<ul> <li>Site runoff shall be directed towards regularly cleaned and maintained silt traps and where appropriate, oil/grease separators to minimize risk of sedimentation and pollution.</li> </ul>	N/A
	• Suitable size / capacity silt traps and oil/grease interceptors shall be used.	N/A
	<ul> <li>Noise mitigation measures including the use of quiet construction plant and movable noise barriers shall be implemented to minimize disturbance to habitats adjacent to the work areas.</li> <li>Trees located within the works areas shall be preserved as far as practicable.</li> </ul>	N/A ^
Ecology	<ul> <li>Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats</li> </ul>	^
	Construction activities shall be restricted to the work areas that would be clearly demarcated	^
	• The work areas shall be reinstated immediately after completion of the works	^
	• Waste skips shall be provided to collect general refuse and construction wastes. The wastes would be disposed of timely and properly off-site.	N/A
	Drainage arrangements shall include sediment traps to collect and control construction run-off	^
	• Open burning on works sites is illegal, and shall be strictly enforced	^
	• Landscaping works on newly formed land shall as far as possible make use of native plant species	^

Types of Impacts	Mitigation Measures	Status
Water Quality	<ul> <li>Construction Runoff and Drainage</li> <li>Before commencing any site formation work, all sewer and drainage connections should be sealed to prevent</li> </ul>	
	debris, soil, sand etc. from entering public sewers/drains.	^
	• Temporary ditches should be provided to facilitate run-off discharge into appropriate watercourses, via appropriately sized/ designed silt retention pond or similar structure. No site run-off should enter artificial ponds. Cut-off ditches should be provided for all major site clearance/ excavation works where soils would be exposed so that instances of uncontrolled run-off from exposed areas would be minimized. As well as channels, earth/ concrete bunds and/ or sand bags, as appropriate, should be deployed to direct surface run-off towards channels. Catchpits and perimeter channels should be constructed in advance of relevant site formation works.	۸
	<ul> <li>Boundaries of earthworks should be marked and surrounded by dykes or embankments for flood protection, as necessary.</li> </ul>	^
	• Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the Water Pollution Control Ordinance. The design of silt removal facilities should be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures should be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms.	۸
	• Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	٨
	• Exposed soil surfaces should be covered.	^
	• Water pumped out from foundation excavations should be discharged into silt removal facilities.	^
	• If excavation cannot be avoided during rainy seasons, temporarily exposed slope/soil surfaces should be covered by a tarpaulin or other means, as far as practicable, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Interceptiong channels should be provided (e.g. along the crest/ edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94.	۸
	<ul> <li>Exposed soil areas should be minimized to reduce potential for increased siltation and contamination of runoff.</li> </ul>	^
	• Earthwork final surfaces should be well compacted and subsequent permanent work or surface protection should	
	be immediately performed. Appropriate intercepting channels should be provided where necessary. Rainwater pumped out from trenches or excavations should be directed to silt removal facilities before discharge.	^

Types of Impacts	Mitigation Measures	Status
	• Open stockpiles of construction materials or construction wastes on-site of more than 50m <sup>3</sup> should be covered with tarpaulin or similar fabric during rainstorms	N/A
	<ul> <li>General Construction Activities</li> <li>Debris and refuse generated on-site should be collected</li> </ul>	*
	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to nearby water bodies and public drains	^
	<ul> <li>Sewage from Construction Workforce</li> <li>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor would be responsible for appropriate disposal of waste matter and maintenance of these facilities</li> </ul>	^
Waste / Chemical	<ul> <li>Good Site Practice</li> <li>nomination of an approved personnel, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site</li> <li>regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors</li> </ul>	^
	<ul> <li>training of site personnel in proper waste management and chemical handling procedures</li> </ul>	N/A ^
	• provision of sufficient waste disposal points and regular collection for disposal	*
	• appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	٨
	<ul> <li>Waste Reduction Measures</li> <li>sort C&amp;D waste from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals</li> </ul>	^
	• segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	^
	• proper storage and site practices to minimise the potential for damage or contamination of construction materials	^
	• to encourage collection of aluminium cans by individual collectors, separate labelled bins shall be provided to segregate this waste from other general refuse generated by the work force.	^
	• plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	^

Types of Impacts	Mitigation Measures	Status							
	<ul> <li>General Refuse</li> <li>General refuse should be stored in enclosed bins or compaction units separate from C&amp;D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&amp;D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</li> </ul>	۸							
	<ul> <li>Construction and Demolition Material</li> <li>A Waste Management Plan should be prepared.</li> </ul>								
	<ul> <li>In order to monitor the disposal of C&amp;D and solid wastes at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be included. One may make reference to ETWB TCW No.31/2004 for details.</li> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed.</li> </ul>								
	<ul> <li>Chemical Waste</li> <li>If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation</li> </ul>	۸							
Remarks:	^       Compliance of mitigation measure;       X       Non-compliance of mitigation measure;         N/A       Not Applicable;       •       Non-compliance but rectified by the contractor;         *       Recommendation was made during site audit but improved/rectified by the contractor.       •								

Appendix H

CNP Permit number	Starting Date	Expired Date	Valid Time	Location	Contract No.	Status
CI-05 (DBJV)				1		
GW-RS0434-07	16-Jul-07	10-Dec-07	PME19:00 - 23:00 hours (Not being a general holiday)09:00 -19:00 hours (general holidays)PCW19:00-23:00 hours (Not being a general holidays)09:00-19:00 hours (general holidays)09:00-19:00 hours (general holidays)	Waterfront (Panda Access Ramp)	CI-05	Expired
GW-RS0448-07	20-Jul-07	20-Jan-08	PME 19:00 - 23:00 hours (Not being a general holidays) 09:00 - 19:00 hours (General holidays)	Entry Plaza (Hong Kong School of Motoring)	CI-05	Cancellec
GW-RS0530-07	23-Aug-07	21-Oct-07	PME           00:00         -         24:00 hours (General Holiday)           00:00         -         07:00 & 19:00 -         24:00 hours (Not being a general holidays)	Summit (At the top of Nam Long Shan Road)	CI-05	Expired
GW-RS0542-07	01-Sep-07	30-Nov-07	PME 19:00 - 23:00 hours (Not being a general holidays) 09:00 - 19:00 hours (General Holidays)	Summit (At the top of Nam Long Shan Road)	CI-05	Cancellec
GW-RS0548-07	04-Sep-07	20-Feb-08	PME00:00 - 07:00 hours & 19:00 -24:00 hours (Not being a general holidays)07:00 - 23:00 hours (general holidays)PCW00:00 - 07:00 hours & 19:00 -24:00 hours (Not being a general holidays)07:00 - 23:00 hours (General holidays)07:00 - 23:00 hours (General holidays)07:00 - 23:00 hours (General holidays)00:00 - 07:00 hours (General holidays)07:00 - 23:00 hours (General holidays)00:00 - 07:00 hours (General holidays)00:00 - 07:00 hours (General holidays)00:00 - 07:00 hours (General holidays)00:00 - 07:00 hours (General holidays)	Summit (At the top of Nam Long Shan Road)	CI-05	Valid
GW-RS0666-07	18-Oct-07	17-Apr-07	PME19:00 - 23:00 hours (not being a general holidays)09:00 - 19:00 hours (General holidays)PCW19:00 - 23:00 hours (Not being a general holidays)09:00 - 19:00 hours (General holidays)One group of equipment shall be allowed in above time	Summit (At the top of Nam Long Shan Road)	CI-05	Cancellec

Permit number	Starting Date	Expired Date	Valid Time	Location	Contract No.	Status
CI-05 (DBJV)		I	•			
GW-RS0768-07	30-Nov-07	29-May-08	PME19:00 - 23:00 hours (not being a general holidays)07:00 - 19:00 (General holidays)PCW19:00 - 23:00 hour (Not being a general holidays)07:00 - 19:00 hours (General holidays)One group of equipment shall be allowed in above time	Upper portion of Nam Long Shan Hill Road	CI-05	Valid
GW-RS0780-07	11-Dec-07	06-Jun-08	PME19:00 - 23:00 hours (Not being a general holdiays)07:00 - 23:00 (General holidays)PCW19:00 - 23:00 hours (Not being a general holiday)07:00 - 23:00 (general holidays)	Crusher, Conveyor and Barging Point	CI-05	Valid
GW-RS0786-07	11-Dec-07	10-Jun-08	PME19:00 - 23:00 hours (not being a general holidays)09:00 - 19:00 (General holidays)PCW19:00 - 23:00 hour (Not being a general holidays)09:00 - 19:00 (General holidays)One group of equipment shall be allowed in above time	Waterfront (Panda Access Ramp)	CI-05	Valid
GW-RS0787-07	11-Dec-07	10-Jun-08	PME00:00 - 07:00 hours & 19:00 -24:00 hours (Not being a general holidays)00:00 - 24:00 (general holidays)PCW00:00 - 07:00 hours & 19:00 -24:00 hours (Not being a general holidays)00:00 - 24:00 hours (General holidays)00:00 - 24:00 hours (General holidays)00:00 - 24:00 hours (General holidays)00:00 - 24:00 hours (General holidays)00:00 - 24:00 hours (General 	Main tunnel excavation	CI-05	Valid

Permit number	Starting Date	Expired Date	Valid Time	Location	Contract No.	Status
CS-01 (KAJV)	•		•		•	•
GW-RS0321-07	1-Jun-07	30-Nov-07	PME 19:00-23:00 hours (Not being a general holiday) 07:00-23:00 hours (general holiday)	Summit (At top of Nam Long Shan Road)	CS-01	Expired
GW-RS0695-07	holiday) 695-07 29-Oct-07 9-Apr-08 <i>PME</i> 19:00 - 23:00 hours (Not bein a general holdiays) 07:00 - 19:00 hours (General holidays) <i>PCW</i> 19:00 - 21:00 hours (Not bein a general holidays) 08:00 - 17:00 hours (General holidays) One group of equipment sha		19:00 - 23:00 hours (Not being a general holdiays) 07:00 - 19:00 hours (General holidays) <i>PCW</i> 19:00 - 21:00 hours (Not being a general holidays) 08:00 - 17:00 hours (General	Summit (At top of Nam Long Shan Road)	CS-01	Valid
CW-02 (Wing Hing		4.14 00			014/ 00	
GW-RS0488-07	1-Sep-07	1-Mar-08	PME 19:00-23:00 (Not being a general holiday) 07:00-19:00 (general holiday)	Ocean Park, Wong Chuk Hang	CW-02	Valid

# **Other Permits & Licenses**

## <u>CI-05</u>

Permit /Ref/ No	Valid Period		Section	Status					
Notification of Construct	tion Work under	r APCO							
001017998	-	-	Waterfront	Notified					
001018054	-	-	Summit	Notified					
Effluent Discharge License									
EP820/W9/XW232	20 Jun 07	30 Jun 12	Summit	Valid					
EP820/W9/XW234	13 Jul 07	31 Jul 12	Waterfront	Valid					
Specific Process Licens	е								
L-11-044 (1)	20-Sep-07	19-Sep-12	Conduct Specified Process in the premises at Ocean Park MRP Contract CI-05 (at top of Nam Long Shan Road)	Valid					
Registration as Chemica	al Waste Produc	er							
WPN5213-199-D2373- 01	7-May-07	-	For disposal of chemical wastes, mainly spent lubricants	Registered					
Construction Waste Dis	posal Charging	Scheme							
7004888	-	-	Waterfront + Summit	lssued					

# <u>CS-01</u>

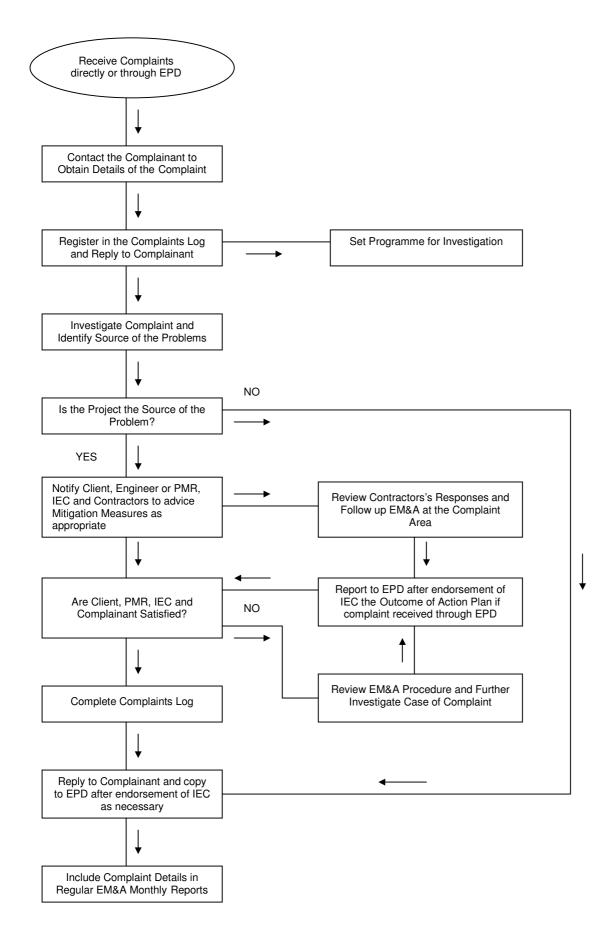
Permit/Ref/No	Valid Period		Section	Status
Notification of Constru	ction Work un	der APCO		
001018953	-	-	Vet Hospital	Notified
Effluent Discharge Lice	ense			
EP820/W2/XC041	31 May 07	30 Jun 12	Vet Hospital	Valid
<b>Registration as Chemi</b>	cal Waste Prod	ucer		
WPN5213-199-K2880- 01	19 Mar 07	-	Used battery, used lubricating oil and lubricating oil / gasoline / diesel contaminated soil.	Registered
Construction Waste Di	sposal Chargir	ng Scheme		
7005185	-	-	Vet Hospital	Issued

# <u>CW-02</u>

Permit/Ref/No	Valid Period							
Notification of Cons	struction Work under	APCO						
001022480	11 July 07	-	Astounding Asia	Notified				
Effluent Discharge	License							
EP820/W9/XW240	12 Oct 07	31 Oct 12	Astounding Asia	Valid				
<b>Registration as Che</b>	mical Waste Produce	er						
5213-199-W2894-	20 Aug 07	-	Form Oil, Lubricant oil, paint,	ed				
18	-		solvent and diesel.					
<b>Construction Waste</b>	Disposal Charging S	Scheme	-					
7005864	-	-	Astounding Asia	Issued				

Appendix I

## APPENDIX I - COMPLAINT FLOW DIAGRAM AND COMPLAINT LOG



Record ID	Date Received	Type (PMR / EPD / Public / Others, please specify)	Description	Responsible Project	Justified complaint?	Status (Open / Closed)
OPE/DBJV/PROJ/QSE/ECR/001	05-Nov-07	Public thro' EPD	The complainant claimed that dust nuisance was observed at Tai Shue Wan on 03-Nov-07	CI05	N/A	The inspector of EPD came to the scene on 05-Nov-07 and no significant observation was made, hence the complaint was closed.

Appendix J

#### Appendix J Coral Monitoring Results for the reporting quarter

### **Results for October 2007**

Site 5

		Area (cm²)	s	edimentati	on (%, mu	1)	Bleaching (%)				Mortality (%)			
Code	Coral Species		Apr 07 (baseline)	19 Aug 07	08 Sep 07	14 Oct 07	Apr 07 (baseline)	19 Aug 07	08 Sep 07	14 Oct 07	Apr 07 (baseline)	19 Aug 07	08 Sep 07	14 Oct 07
D01	Psammocora sp.	600	10, 1	1,1 🔻	6,1▼	б, 1 🔻	0	0	0	0	0	0	0	0
D02	Montipora cf. turgescens	100	6, 1	1,1 🔻	4,1 ▼	5,1 ▼	0	0	0	2 🔺	0	0	0	0
D03	Goniopora stutchouryi	400	0,0	0, 0	0,0	5,1▲	0	0	0	0	0	0	0	0
D04	Leptastrea pruinosa	500	4, 1	10, 1 🔺	8,1▲	8,1 ▲	0	0	0	0	0	5▲	5▲	5▲
D05	Porites sp.	400	5,1	1,1 🔻	3,1 🔻	3,1 ▼	1	3 🛦	2 🔺	3 ▲	4	4	4	4
D06	Plesiastrea versipora	1000	0,0	2,1 🛦	1,1 🛦	1,1 🔺	0	0	0	0	5	5	5	5
D07	Leptastrea pruinosa	\$00	0,0	8,1 ▲	5,1▲	3,1 ▲	0	0	0	0	0	0	0	0
D08	Plesiastrea versipora	100	0,0	2,1 🛦	0,0	2,0 🔺	0	0	0	0	0	0	0	0
D09	Leptastrea pruinosa	150	5,1	1,1 🔻	2,1 🔻	0,0 🔻	0	0	0	0	0	0	0	0
D10	Montipora cf. turgescens	200	0,0	1,1 🛦	1,1 🛦	2,1 🔺	0	1 🔺	0	0	0	0	0	0

### Control Site C

			Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
Code	Coral Species	Area (cm²)	Apr 07 (baseline)	19 Aug 07	9 Aug 07 08 Sep 07 14	14 Oct 07	Apr 07 (baseline)	19 Aug 07	08 Sep 07	14 Oct 07	Apr 07 (baseline)	19 Aug 07	08 Sep 07	14 Oct 07
F01	Favia speciosa	900	0,0	1,1 🛦	2, 1 🛦	5,1▲	0	0	0	0	0	0	0	0
F02	Favites pentagona	1000	4,1	0,0▼	8,1▲	15, 1 🛦	0	0	0	0	0	1 🛦	1 🛦	3▲
F03	Favites pentagona	800	0,0	1,1 🛦	1,1▲	5,1 ▲	0	0	0	0	0	0	0	2 🔺
F04	Porites sp.	800	5,1	5,1	7,1 🛦	7,1 🛦	4	2 🔻	17	3▼	4	4	4	4
F05	Cyphastrea serailia	800	4,1	1,1 🔻	1,1 V	1,1 🔻	0	0	0	0	1	1	1	1
F06	Psammocora sp.	1800	0,0	2,1 🛦	3,1▲	3,1 ▲	0	1 🛦	1 🔺	1 🛦	0	0	0	0
F07	Plesiastrea versipora	3000	0,0	1,1 🛦	0,0	2,1 🛦	0	0	0	0	0	0	0	0
F0.8a	Favia speciosa	150	0,0	2,1 🛦	1,1▲	2,1 🔺	0	0	0	0	0	0	0	0
FOSb	Goniastrea favulus	300	0,0	1,1 🛦	2,1 🛦	7,1▲	0	0	0	0	0	0	0	0
F09	Favites pentagona	1800	10,1	1,1 🔻	4,1▼	5,1▼	0	0	0	0	0	1 🛦	1 🛦	1 🛦
F10	Platygyra carnosus	2800	0,0	0,0	0,0	0,0	0	0	0	0	0	0	0	0

# **Results for November 2007**

Site 1 Bleaching (%) Mortality (%) Sedimentation (%, mm) Code Coral Species Area (cm²) Apr 07 Apr 07 Apr 07 16 Jun 07 21 Jul 07 10 Nov 07 16 Jun 07 21 Jul 07 10 Nov 07 16 Jun 07 21 Jul 07 10 Nov 07 (baseline) (baseline) (baseline) 
 A01
 Platygyra carnosus

 A02
 Platygyra carnosus

 A03
 Favites pentagona

 A04
 Leptastrea pruinosa

 A05
 Platygyra carnosus

 A06
 Platygyra carnosus

 A07
 Favia rotumana

 A08
 Platygra carnosus
 0, 0 0, 0 4, 1▼ 0, 0 3, 1▲ 8, 1▲  $\begin{array}{c} 0, 0 \\ 0, 0 \\ \hline 2, 1 \blacktriangle \\ 4, 1 \lor \\ 0, 0 \\ \hline 0, 0 \\ \hline 5, 1 \\ 0, 0 \\ \hline 0, 0 \\ \hline 2, 1 \blacktriangle \end{array}$ 0, 0 0, 0 1,1▲ 0,0 1000 2000 400 1200 1600 800 1000 350 700 0 0 0 0 0 0 0 0 0 0 0,0 0,0▼ 0, 0 0 0 0 0 0 0 0 5, 1 0, 0 0, 0 5,1 0, 0 0, 0 0, 0 0 0 0 0,0 0,0 1,1▼ 4,1▲ 0,0 9,1▲ 0 0 0 0 0 1▲ 0 0 0 0 0 A08 A09 A10 Platygyra carnosus Platygyra carnosus Platygyra carnosus 0, 0 0, 0 0, 0 0 1▲ 0 0 0 0

Site 2														
			Sedimentation (%, mm)					Bleach	ing (%)		Mortality (%)			
Code	Coral Species	Area (cm²)	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07
B01	Platygyra carnosus	450	0, 0	0,0	0,0	0,0	0	0	0	0	0	0	0	0
B02	Plesiastrea versipora	300	0, 0	0, 0	0,0	0,0	0	0	0	0	0	0	0	0
B03	Psammocora superficialis	1000	5, 1	5,1	3,1▼	3,1▼	0	0	0	0	0	0	0	0
B04	Favia speciosa	300	4, 1	7,1▲	2,1▼	8,1 🛦	0	0	0	0	0	0	0	0
B05	Plesiastrea versipora	900	3, 1	5,1▲	3, 1	2,1 🔻	0	0	0	0	0	0	0	0
B06	Platygyra carnosus	600	0, 0	0, 0	1,1 🛦	1,1 🛦	0	0	0	0	0	0	0	0
B07	Cyphastrea serailia	700	0, 0	1,1	0,0	3,1 🛦	0	0	0	0	0	0	0	0
B08	Plesiastrea versipora	1200	0, 0	0,0	1,1 🛦	5,1▲	0	0	0	0	0	0	0	0
B09	Favites pentagona	600	0, 0	0,0	1,1▲	1,1 🛦	0	0	0	0	0	0	0	0
B10	Favites pentagona	400	0, 0	30, 2▲	3,1▲	0,0	0	0	2▲	2▲	0	0	0	0

Site 3														
			Sedimentation (%, mm)			Bleaching (%)			Mortality (%)					
Code	Coral Species	Area (cm²)	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07
C01	Platygyra acuta	2000	0,0	0,0	0,0	0,0	0	0	0	0	0	0	0	0
C02	Platygyra carnosus	1000	0,0	0,0	0,0	0,0	0	0	0	0	0	0	0	0
C03	Porites sp.	400	5,1	6,1▲	10,1 🛦	5,1	0	0	0	0	1	1	1	1
C04	Cyphastrea serailia	600	4,1	5,1 🛦	5,1 🛦	5,1▲	0	0	0	0	0	0	0	0
C05	Pavona decussata	600	0,0	0,0	0,0	0,0	0	0	0	0	0	0	0	0
C06	Pavona decussata	1200	0,0	0,0	0,0	0,0	0	0	0	0	0	0	0	0
C07	Montipora cf. turgescens	200	2, 1	6,1▲	1,1 🔻	0,0▼	0	3 ▲	0	0	0	0	0	0
C08	Favia favus	600	4.1	2,1 🔻	5,1▲	5,1▲	0	0	0	0	4	4	4	4
C09	Favites pentagona	150	1,1	1, 1	1, 1	1, 1	0	0	0	0	0	0	0	0
C10	Montipora peltiformis	300	0,0	0, 0	0, 0	0,0	0	5▲	5▲	2 🔺	0	0	0	0

Site 4

			Sedimentation (%, mm)			Bleaching (%)				Mortality (%)				
Code	Coral Species	Area (cm²)	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07	Apr 07 (baseline)	16 Jun 07	21 Jul 07	10 Nov 07
E01	Goniopora stutchburyi	300	0,0	4,1▲	5,1▲	3,1▲	0	0	0	0	0	0	0	0
E02	Goniopora stutchburyi	200	0,0	2, 1 🛦	2, 1 🛦	0,0	0	0	0	0	0	0	0	0
E03	Goniopora stutchburyi	150	0,0	2, 1 🔺	2, 1 🛦	0,0	0	0	0	0	0	0	0	0
E04	Porites sp.	400	5.1	5,1	2,1 🔻	2,1 🔻	0	0	0	0	0	0	0	0
E05	Goniopora stutchburyi	300	0.0	3,1 🛦	5,1▲	5,1▲	0	0	0	0	0	0	0	0
E06	Goniopora stutchburyi	450	0.0	0.0	0,0	0,0	0	0	0	0	0	0	0	0
E07	Favia speciosa	600	10,1	3, 1 🔻	2, 1 🔻	1,1 🔻	0	0	0	0	0	0	0	0
E08	Porites sp.	150	0,0	0,0	0,0	0,0	0	0	0	0	4	4	4	4
E09	Porites sp.	200	8,1	6,1▼	4,1▼	4,1▼	0	0	2▲	2 🔺	4	4	4	4
E10	Porites sp.	500	0,0	0,0	2, 1 🛦	0,0	3	3	3	3	0	0	0	0

Site 5														
			Sedimentation (%, mm)			Bleaching (%)				Mortality (%)				
Code	Coral Species	Area (cm²)	Apr 07 (baseline)	08 Sep 07	14 Oct 07	10 Nov 07	Apr 07 (baseline)	08 Sep 07	14 Oct 07	10 Nov 07	Apr 07 (baseline)	08 Sep 07	14 Oct 07	10 Nov 07
D01	Psammocora sp.	600	10, 1	6,1 🔻	6,1 🔻	8,1 ▼	0	0	0	0	0	0	0	0
D02	Montipora cf. turgescens	100	6, 1	4,1 ▼	5,1 ▼	5,1 ▼	0	0	2 🔺	2 🔺	0	0	0	0
D03	Goniopora stutchburyi	400	0,0	0,0	5,1▲	2,1 🛦	0	0	0	0	0	0	0	0
D04	Leptastrea pruinosa	500	4, 1	8,1 🛦	8,1 🛦	1,1 🔻	0	0	0	0	0	5 🛦	5 🛦	5 ▲
D05	Porites sp.	400	5,1	3,1 🔻	3,1 ▼	0,0 🔻	1	2 🔺	3 🛦	3 🛦	4	4	4	4
D06	Plesiastrea versipora	1000	0,0	1,1 🛦	1,1 🛦	0,0	0	0	0	0	5	5	5	5
D07	Leptastrea pruinosa	800	0,0	5,1 🛦	3,1 🛦	5,1 🛦	0	0	0	0	0	0	0	0
D08	Plesiastrea versipora	100	0,0	0,0	2,0 ▲	0,0	0	0	0	0	0	0	0	0
D09	Leptastrea pruinosa	150	5,1	2,1 🔻	0,0 🔻	5,1	0	0	0	0	0	0	0	0
D10	Montipora cf. turgescens	200	0,0	1,1 🛦	2,1 🛦	2,1 🔺	0	0	0	0	0	0	0	0

Control	Site C	-	-				_							
			Sedimentation (%, mm)			Bleaching (%)			Mortality (%)					
Code	Coral Species	Area (cm²)	Apr 07 (baseline)	08 Sep 07	14 Oct 07	10 Nov 07	Apr 07 (baseline)	08 Sep 07	14 Oct 07	10 Nov 07	Apr 07 (baseline)	08 Sep 07	14 Oct 07	10 Nov 07
F01	Favia speciosa	900	0,0	2, 1 🛦	5,1 ▲	0, 0	0	0	0	0	0	0	0	0
F02	Favites pentagona	1000	4, 1	8,1 🛦	15, 1 🛦	2,1 🔻	0	0	0	0	0	1 🛦	3 🛦	3 🛦
F03	Favites pentagona	800	0, 0	1,1 🛦	5,1 🛦	2,1 🔺	0	0	0	2 🔺	0	0	2 🔺	2 🔺
F04	Porites sp.	800	5, 1	7,1 🛦	7,1 🛦	5, 1	4	1 🗸	3▼	3▼	4	4	4	4
F05	Cyphastrea serailia	800	4, 1	1,1 ▼	1,1 ▼	3,1 ▼	0	0	0	0	1	1	1	1
F06	Psammocora sp.	1800	0,0	3,1 🛦	3,1 🛦	6,1 🛦	0	1 🛦	1 🛦	1 🛦	0	0	0	0
F07	Plesiastrea versipora	3000	0,0	0,0	2,1 🛦	0, 0	0	0	0	0	0	0	0	0
F08a	Favia speciosa	150	0,0	1,1 🛦	2,1 🛦	1, 1 🛦	0	0	0	0	0	0	0	0
F08b	Goniastrea favulus	300	0,0	2,1 🛦	7,1 🛦	3,1 🛦	0	0	0	0	0	0	0	0
F09	Favites pentagona	1800	10, 1	4,1 ▼	5,1 ▼	2,1 🔻	0	0	0	0	0	1 🛦	1 🛦	1 🛦
F10	Platygyra carnosus	2800	0,0	0,0	0,0	1,1 🛦	0	0	0	0	0	0	0	0

### **Results for December 2007**

No impact coral monitoring was conducted within the reporting period. It was because no exceedance was recorded at all monitoring stations and control site in the past six months, therefore the monitoring frequency would be changed to quarterly until the end of construction works as recommended in approved EM&A Manual.

Appendix K

# Appendix K

## Results from October 2007

Year	Month	Common name of plant	No. of plant transplanted	No. of Survived	Survival rate	Remarks
2007	October	Balloon Flower	30	29	96.7%	
		Chinese Lily	25	the plant	above grou t withered and the ui live.	due to
		Sword-leaved Orchid	45	45	100%	

# **Results from November 2007**

Year	Month	Common name of plant			Survival rate	Remarks
2007	November	Balloon Flower	30	N/A	N/A	Seasonal shrunken
		Chinese Lily	nese Lily 25 Note: The above grou the plant withered seasonality and the un roots are alive.			
		Sword-leaved Orchid	45	45	100%	

## **Results from December 2007**

Year	Month	Common name of plant	No. of plant transplanted	No. of Survived	Survival rate	Remarks	
2007	December	Balloon Flower	30	N/A	N/A	Seasonal shrunken	
		Chinese Lily	hinese Lily 25 Note: The above g the plant wither seasonality and the roots are alive.				
		Sword-leaved Orchid	45	45	100%		