Ocean Park Master Redevelopment Project

Quarterly Environmental Monitoring & Audit Report – from January 2009 to March 2009

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EXECUTIVE SUMMARY

This is the eighth 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 January 2009 and 25 March 2009.

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	44 sessions for AM1 44 sessions for AM2 44 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	10 sessions for all stations
Holiday daytime noise monitoring	0 sessions for all stations
Terrestrial ecology monitoring	0 session
Coral monitoring	1 session for Site 1-5 and Control Station C
Environmental site inspection	13 sessions (include IEC audit)

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 and evening time were below the Action and Limited levels in the reporting quarter.

Terrestrial Ecology

Terrestrial ecology monitoring had ceased since September 2008. Hence, terrestrial ecology monitoring was not required in the reporting quarter. Please note that all the terrestrial ecology monitoring have been completed in August 2008 according to the requirement under the EM&A Manual.

Coral Monitoring

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

Environmental Complaints and Prosecutions

No complaint, summon or prosecution related to environmental issues was made against the Project within the 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.

Table 1.1 Details of the Contracts

Contract No.	Contract Title	Contractor	Construction Commencement
CI-05	Site Formation, Funicular Tunnel and Miscellaneous Works	Dragages-Bouygues JV	12 March 2007
CW-02	Astounding Asia	W. Hing Construction Co. Ltd.	1 August 2007
CI07	Entry Plaza, Aqua City and Grand Aquarium	Leighton Construction (Asia) Limited	15 August 2008

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 quarterly EM&A for the whole project. This is the combined quarterly EM&A Report including the IEC audit findings, CI05, CW02 and CI07 EM&A Works. This report presents the results of EM&A works conducted in the reporting quarter from 26 January 2009 to 25 March 2009.

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

Item	Work Activity	Month		
		Jan 09	Feb 09	Mar 09
Waterfront (CI-05)				
1.	Waterfront Terminus Construction (e.g. Retaining Wall, Base Slab, Column, Platform Slab, Track and Pad Footing, E&M and Finishing Works.	✓	✓	✓
2.	External U/G Drainage & Utilities and Road Works	✓	✓	✓
Summit (CI-05)				

Item	Work Activity	Month		
		Jan 09	Feb 09	Mar 09
1.	Tunnel internal structure (e.g. wall and upper slab, cable trench, walkway slab, air duct and etc.)	✓	✓	
2.	Tunnel E&M	✓	✓	✓
3.	Drill & Blast for Summit Site Formation	✓		
4.	Summit Terminus and FS Tank Building (e.g. Superstructure Works)	✓	✓	✓
5.	Soil Nail Works at North Haul Road			✓
6.	EVA Road Construction	✓	✓	✓
Tai Shue Wan (CI-05)				
1.	Site Clearance Works	✓	✓	✓
Government Entrusted Works (CI05)				
1.	Excavation	✓	✓	✓
2.	Trial Pit Excavation		✓	✓
3.	Construction of Manhole	✓	✓	✓
4.	Laying of sewer & OPC water main	✓	✓	✓
5.	Road Surface Reinstatement	✓	✓	✓
6.	Backfilling	✓	✓	✓
Vet Hospital (CS-01), Construction phase has ceased in mid-October 2008				
1.	N/A	-	-	-
Astounding Asia (CW-02)				
1.	Building services works at Astounding Asia Restaurant and New Panda Habitat.	✓	✓	
2.	Builder's works and E&M works at New Bird Theatre.	✓	✓	✓
3.	Formation works, drain works, E&M works, landscaping works and irrigating works at external area.	✓	✓	✓
Entry Plaza, Aqua City and Grand Aquarium (CI-07)				
1.	Wall construction (G/F to 1/F construction at Grand Aquarium	✓	✓	✓
2.	Rock filling, excavation, sheet piling and backfilling at Entry Plaza	✓	✓	✓
3.	Footing and column construction at Entry Plaza	✓	✓	✓
4.	Retaining wall construction	✓	✓	✓
5.	Road works at New Access Road	✓	✓	

1.6 A layout plan of the Project is provided in **Figure 1.2** to **Figure 1.3, Figure 1.4 and Figure 1.5**. Figure 1.2 and 1.3 shows the layout plan of CI-05 waterfront work site and CI05 Summit work site. Figure 1.4 shows the layout plan of CW-02 Astounding Asia. Figure 1.5 shows the layout plan of CI-07 Entry

Plaza, Aqua City and Grand Aquarium.

1.7 The status of submissions until 25 March 2009 as specified in the Environmental Permit No. EP-249/2006/A is presented in **Table 1.3**.

Table 1.3 Statuses of Environmental Submissions

EP-249/2006/A Condition	Submission	Revision	Status
Contract CI05			
1.12	Notification of Commencement Date of construction stage	Dated 14 February 2007	Submitted to EPD on 15 February 2007
2.3	Management Organization	Dated 15 December 2006	Submitted to the EPD on 29 December 2006.
2.4	Construction Programme	2 Dated 14 February 2007	Submitted to the EPD on 15 February 2007
2.13	Drainage Proposal	A2 Dated 26 April 2007	Placed in EIAO Register Office for public information on 30 May 2007
2.14	Silt Curtain Proposal	B Dated 30 January 2007	Placed in EIAO Register Office for public information on 1 March 2007
2.18	As-built Drawing for Enhancement Works for Pond 35	A Dated 17 July 2007	Placed in EIAO Register Office for public information on 7 August 2007
2.20a	Transplantation Proposal for Uncommon Plant Species	D Dated 27 August 2007	Placed in EIAO Register Office for public information on 25 September 2007
2.20b	Detailed Compensatory Planting As-built Drawing	A Dated 4 October 2007	Placed in EIAO Register Office for public information on 30 October 2007
2.21	Waste Management Plan	D Dated 27 August 2007	Placed in EIAO Register Office for public information on 25 September 2007
3.3	Baseline Air Quality and Noise Monitoring Report	B Dated 28 February 2007	Submitted to the EPD on 5 March 2007
3.3	Baseline Coral Survey Report	A Dated 13 June 2007	Submitted to the EPD on 18 June 2007
All Contract (including CI05, CW02 and CI07)			
3.1 and under Section 13.14 of EM&A Manual	Quarterly EM&A Report for October to December 2008	A Dated 22 January 2009	Submitted to the EPD on 23 January 2009
3.4	Monthly EM&A Report for January 2009	A Dated 10 February 2009	Submitted to the EPD on 11 February 2000
3.4	Monthly EM&A Report for February 2009	A Dated 12 March 2009	Submitted to the EPD on 12 March 2009
3.4	Monthly EM&A Report for March 2009	A Dated 9 April 2009	Submitted to the EPD on 15 April 2009
CityBus Limited			
2.5	Written Notice on	Dated 17	Submitted to the EPD on 22

EP-249/2006/A Condition	Submission	Revision	Status
	Completion of Total Petroleum Hydrocarbon (TPH) Contaminated Soil Disposal	January 2007	January 2007
2.6	Written Notice on Completion of Solidification Treatment of Heavy Metals Contaminated Soil	Dated 17 January 2007	Submitted to the EPD on 22 January 2007.
2.8	As-built Remediation Plan	3 Dated 14 March 2007	Submitted to the EPD on 16 March 2007
Hong Kong School 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 1.6** and **Figure 1.7**. **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) and evening time (1900 -2300) at four stations in the reporting quarter. No night time and holiday noise monitoring was scheduled in the reporting quarter. Graphical presentations of the noise monitoring results are provided in **Appendix F**.

3.3 All measured noise levels during daytime and evening time were below the AL levels in the reporting quarter.

Terrestrial Ecology

3.4 According to the requirement in the EM&A Manual, the monitoring of transplanted plants at the receptor has been completed in August 2008. No further monitoring is recommended and regular inspection would be carried out.

Marine Ecology

3.5 The subtidal monitoring was conducted in the reporting quarter and 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 eighth quarter of Ocean Park Master Redevelopment Project including Contract CI05, CW02 and CI07. 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 23 January 2009, 20 February 2009 and 20 March 2009). No non-compliance was issued for CI05, CW02 and CI07. 5 observations were recorded for CI05 during the reporting quarter, 6 and 5 observations were recorded for CW02 and CI07 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 Accumulation of construction waste was observed at Waterfront and Summit.

4.5 Stockpile of excavated materials were not covered.

4.6 Haul road at Summit was dry.

4.7 An oil tank was observed placed on bare ground at Summit.

4.8 General refuse and construction waste was accumulated at Summit

CS01 (Construction phase had ceased in mid-October 2008)

CW02

4.9 A stockpile of construction materials was not covered.

4.10 General refuse was accumulated on the slope surface.

4.11 Some general refuses were scattered on site.

4.12 Over 20 cement bags were placed on bare ground without cover to suppress dust.

4.13 Stockpiles of dusty construction materials were not covered by any means.

4.14 Oil drums were placed on bare ground without drip trays.

CI07

4.15 Stockpiles of excavated materials were not covered.

4.16 Mud was accumulated in the wheel wash bay.

4.17 Haul roads and unpaved areas were dry and dusty.

4.18 An oil drum was placed on bare ground.

4.19 Stockpiles of excavated material were not provided with water spray.

Status of Environmental Licensing and Permitting

4.20 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

4.21 **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:

- 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.
- NW-SW (Swire Sita), the soil materials were reused as the topsoil of landfill. This would be delivered by trucks to subcontractor's barges at Yau Tong. The delivery was started in September 2007 and excavated materials were delivered to the site within the reporting period.

Table 4.1 Estimated Amounts of Different Types of Materials Generation from January 2009 to March 2009.

Materials Type	Estimated Amount (tones)			Disposal Locations
	Jan 09	Feb 09	Mar 09	
C&D waste	322.51 tones	260.14 tones	323.11 tones	SENT Landfill
	498.27 tones	445.78 tones	765.68 tones	TKOSF
	6.76 tones	--	--	TMSF
Excavated Material (mainly soil)	32,932.61 tones	10,509.09 tones	27,558.48 tones	QBBP / CWPFBP
	122.96 tones	186.04 tones	132.43 tones	TKOFB
	790.28 tones	1,725.33 tones	1,502.33 tones	Swire Sita
	1,575.21 tones	--	--	Central Reclamation Phase III
	17,035.14 tones	--	--	Internal transfer to CI07
Chemical waste	--	--	--	Collected by licensed collector
General waste	83.5 m^3	76.22 m^3	65.0 m^3	Collected by licensed collector

Notes: All figures are in tones 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, terrestrial ecology monitoring events and 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, no complaint received.

Complaints Handling Procedure

6.2 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, daytime and evening time noise monitoring were recorded in the reporting quarter.

8.4 The subtidal monitoring was scheduled in the reporting quarter and the results showed that there was no exceedance of Action and Limit Levels.

8.5 During this quarter, no complaint was received.

8.6 No summons and prosecutions related to environmental issues were made against the Project in the reporting quarter.

Appendix A

APPENDIX A – CONTACTS OF KEY ENVIRONMENTAL PERSONNEL

Company	Contact Person	Position	Telephone No.
Ocean Park Corporation	Arthur Wong	Project Director	29103106
Maunsell Consultants Asia Ltd	Ernest Torbet	Project Manager Representative (PMR)	28715888
	KC Chan	Safety and Environmental Manager	29103151
Mott MacDonald Hong Kong Ltd	Dr. Anne Kerr	Independent Environmental Checker	28285757
Dragages-Bouygues J.V. (for Contract CI05)	YT So	Project QSE Manager	25554110
	Schroeder Tam	Contractor's ETL	25554113
W. Hing Construction Co., Ltd. (for Contract CW02)	Billy Lee	Contractor's Project Manager	61934096
Cinotech Consultant Ltd. (for Contract CW02)	Dr. Priscilla Choy	Contractor's ETL	21512089
Leighton Contractors (Asia) Ltd (for Contract CI07)	Thomas Lee	Contractor's Environmental Coordinator	36652609

Appendix B

APPENDIX B – ENVIRONMENTAL MONITORING PROGRAMME

From 26 December 2008 to 25 March 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
December 2008						
					26	27
28	29 1-hrTSP NM (D)	30 1-hr TSP 24-hr TSP NM (E)	31 1-hr TSP			
January 2009						
				1	2 1-hr TSP	3
4	5 1-hr TSP 24-hr TSP NM (D)	6	7 1-hr TSP NM (E)	8	9 1-hr TSP	10 1-hr TSP 24-hr TSP
11	12 1-hr TSP NM (E)	13	14 1-hr TSP NM (E)	15	16 1-hr TSP 24-hr TSP	17
18	19 1-hr TSP NM (D)	20	21 1-hr TSP NM (E)	22 1-hr TSP 24-hr TSP	23 1-hr TSP	24 1-hr TSP
25	26 CNY Holiday	27 CNY Holiday	28 CNY Holiday	29 1-hr TSP 24-hr TSP NM (D)	30 1-hr TSP NM (E)	31
February 2009						
1	2 1-hr TSP NM (D)	3	4 1-hr TSP 24-hr TSP NM (E)	5	6 1-hr TSP	7
8 SM (Sites 1 to 5 and Control Station C)	9 1-hr TSP NM (D)	10	11	12	13 1-hr TSP	14

APPENDIX B – ENVIRONMENTAL MONITORING PROGRAMME

From 26 December 2008 to 25 March 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
February 2009						
15	16 1-hr TSP 24-hr TSP NM (D)	17	18 1-hr TSP	19	20 1-hr TSP	21 1-hr TSP 24-hr TSP
22	23 1-hr TSP NM (D)	24	25 1-hr TSP	26	27 1-hr TSP 24-hr TSP	28
March 2009						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25			

Notes: NM (D) denotes Daytime Noise Monitoring.

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

SM denotes Subtidal Monitoring.

Any update / change in the schedule due to weather or other safety factors will be reported in the monthly EM&A report.

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Contract No.: C107
Ocean Park Redevelopment Project – Entry Plaza, Aqua City & Grand Aquarium – Environmental Monitoring

Time Schedule for Impact 1-hour TSP Monitoring (1-TSP), Impact 24-hour TSP Monitoring (24-TSP) and Impact Daytime Noise Monitoring (NM-Daytime)

March 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 1-TSP **NM - Daytime**	3	4 1-TSP	5 1-TSP 24-TSP	6 1-TSP	7
8	9 1-TSP **NM - Daytime**	10	11 1-TSP 24-TSP	12	13 1-TSP	14
15	16 1-TSP **NM - Daytime**	17 1-TSP 24-TSP	18 1-TSP	19	20 1-TSP	21
22	23 1-TSP 24-TSP **NM - Daytime**	24	25 1-TSP	26	27 1-TSP	28 1-TSP 24-TSP
29	30 1-TSP **NM - Daytime**	31				

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Contract No.: C107
Ocean Park Redevelopment Project – Entry Plaza, Aqua City & Grand Aquarium – Environmental Monitoring

Preliminary Time Schedule for Impact Evening Noise Monitoring (NM- Evening)

March 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 NM - Evening	3	4	5	6	7
8	9 NM - Evening	10	11	12	13	14
15	16 NM - Evening	17	18	19	20	21
22	23 NM - Evening	24	25	26	27	28
29	30 NM - Evening	31				

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	05 January 2009 & 05 March 2009	05 January 2009 & 05 March 2009	05 January 2009 & 05 March 2009
Calibration Due Date	04 March 2009 & 04 May 2009	04 March 2009 & 04 May 2009	04 March 2009 & 04 May 2009
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.	00773032
Date of Calibration	26 November 2007
Calibration Due Date	25 November 2009
Result	Good

Appendix D

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

Monitoring Location	24-hr TSP ($\mu g/m^3$)		1-hr TSP ($\mu g/m^3$)	
	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 B.2 Action and Limit Levels for Daytime, Evening & Night-time Noise Monitoring

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received from any one of the sensitive receivers	75 dB(A) *
1900-2300 hrs on normal weekdays; and 0700-1900 hrs on holidays		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

Appendix E

Figure E.1 1-hr TSP monitoring results of Monitoring Station AM1

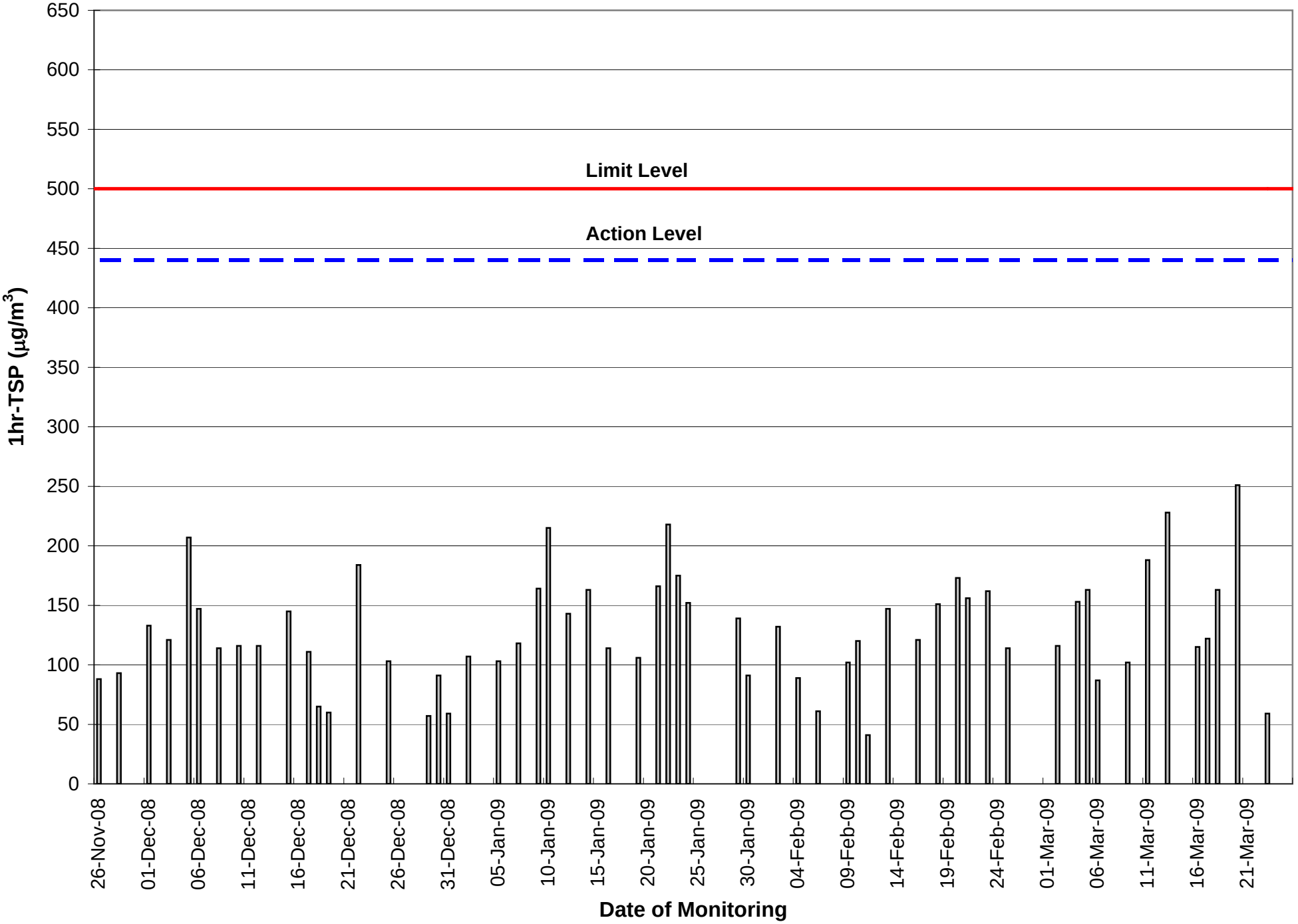


Figure E.2 1-hr TSP monitoring results of Monitoring Station AM2

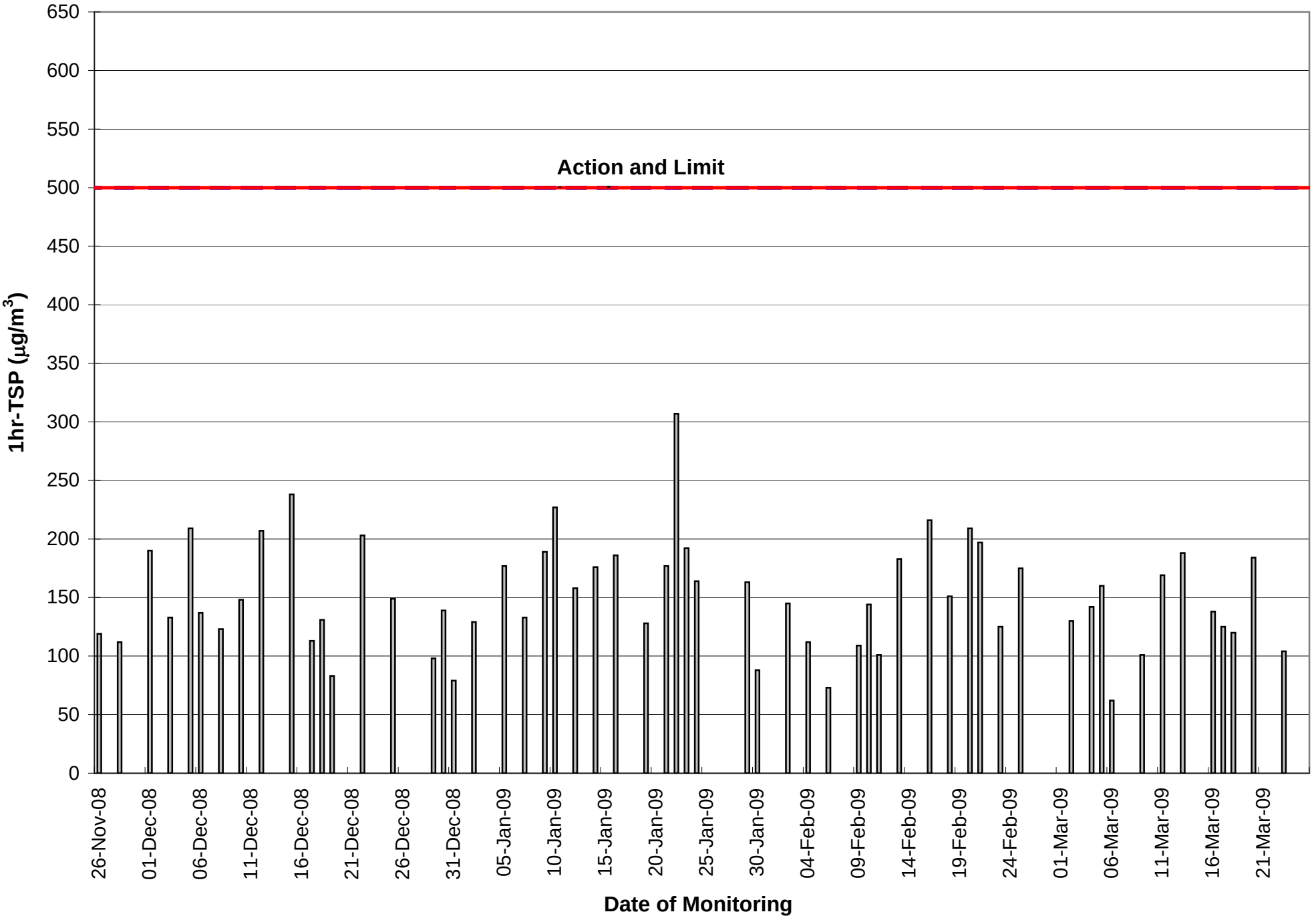


Figure E.3 1-hr TSP monitoring results of Monitoring Station AM3A

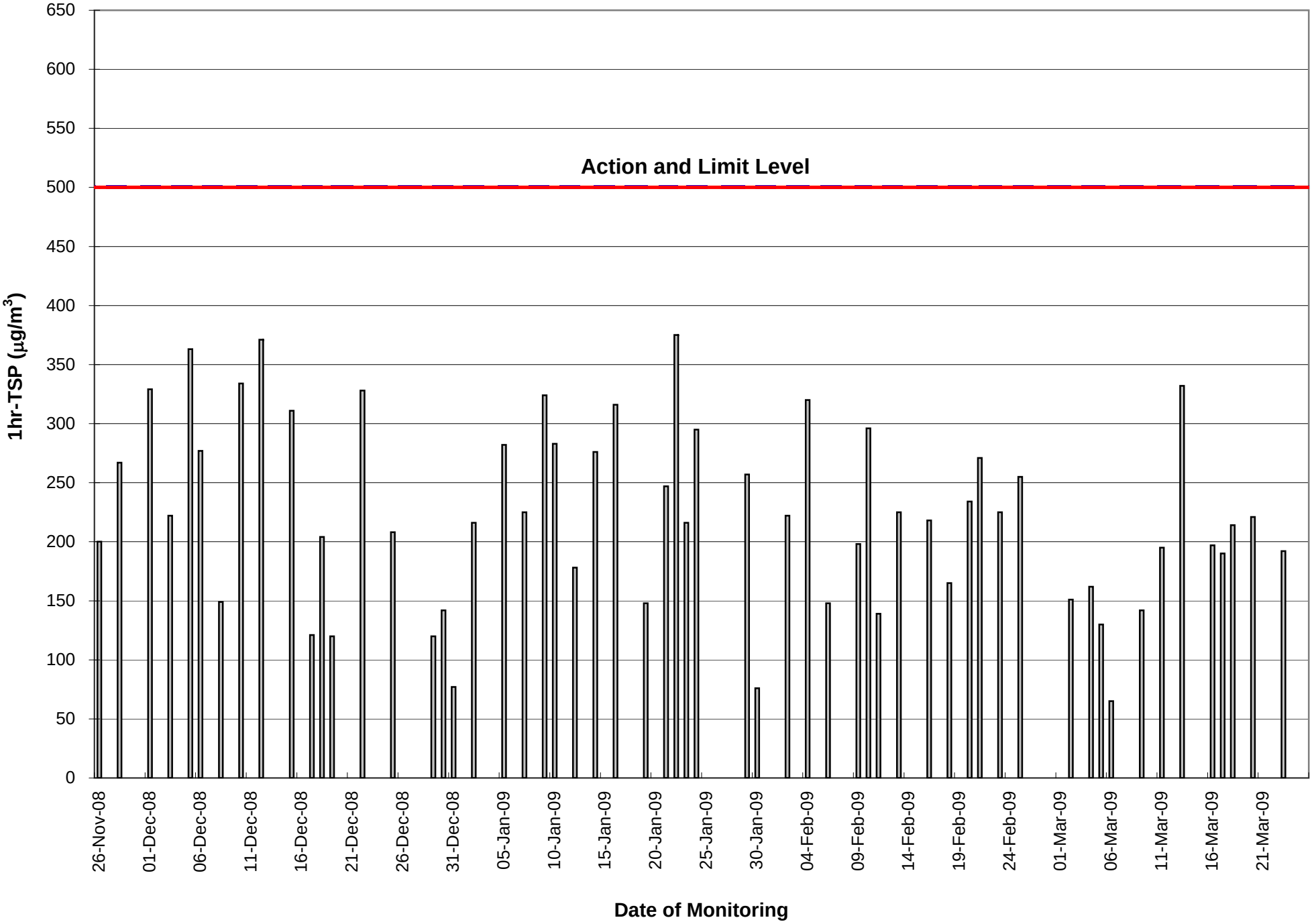
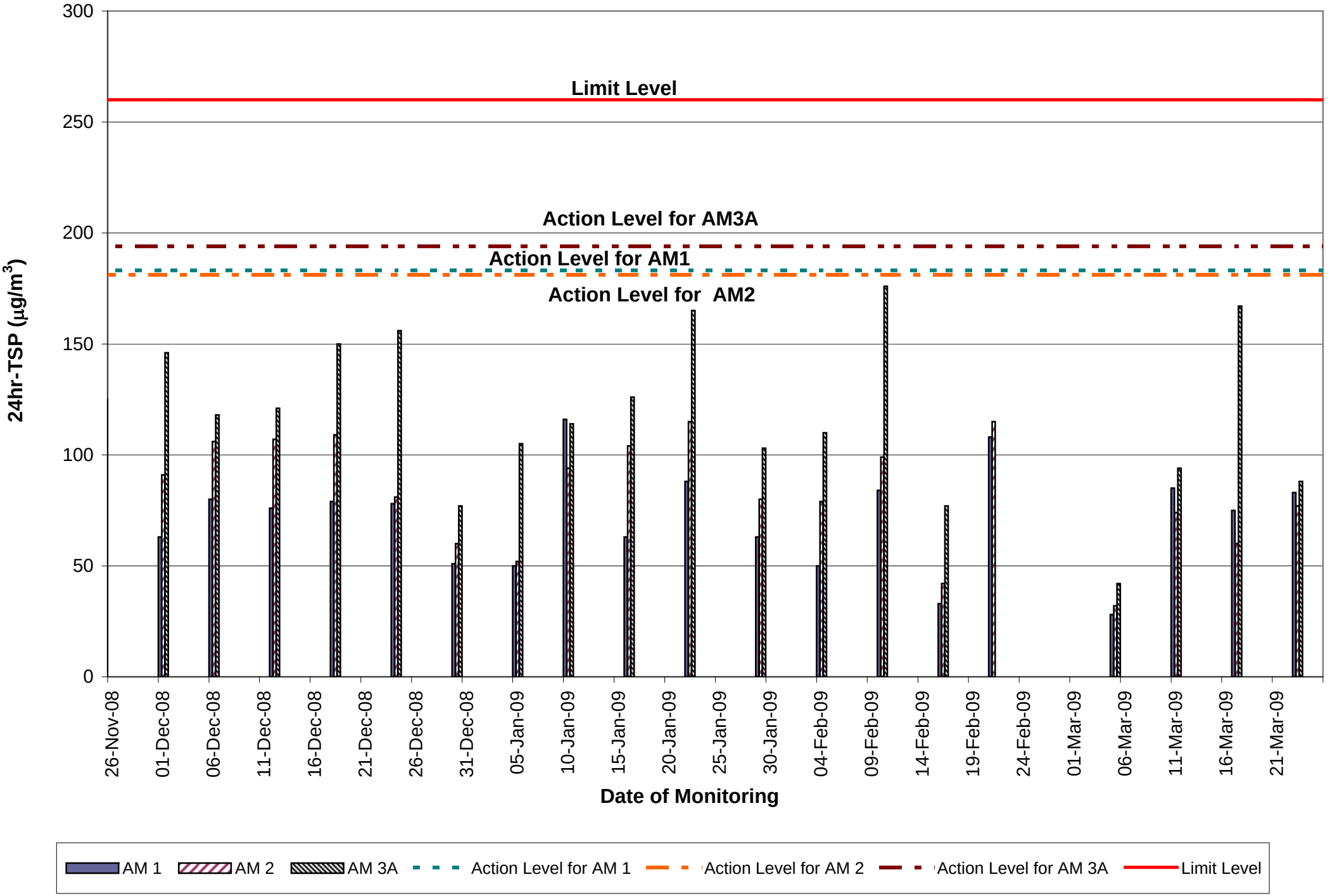


Figure E.4 24-hr TSP monitoring results of Monitoring Station AM1, AM2 & AM3A



Appendix F

Fig F.1 - Daytime Noise Monitoring Results of Monitoring Stations CN1, CN2, CN3 & CN4

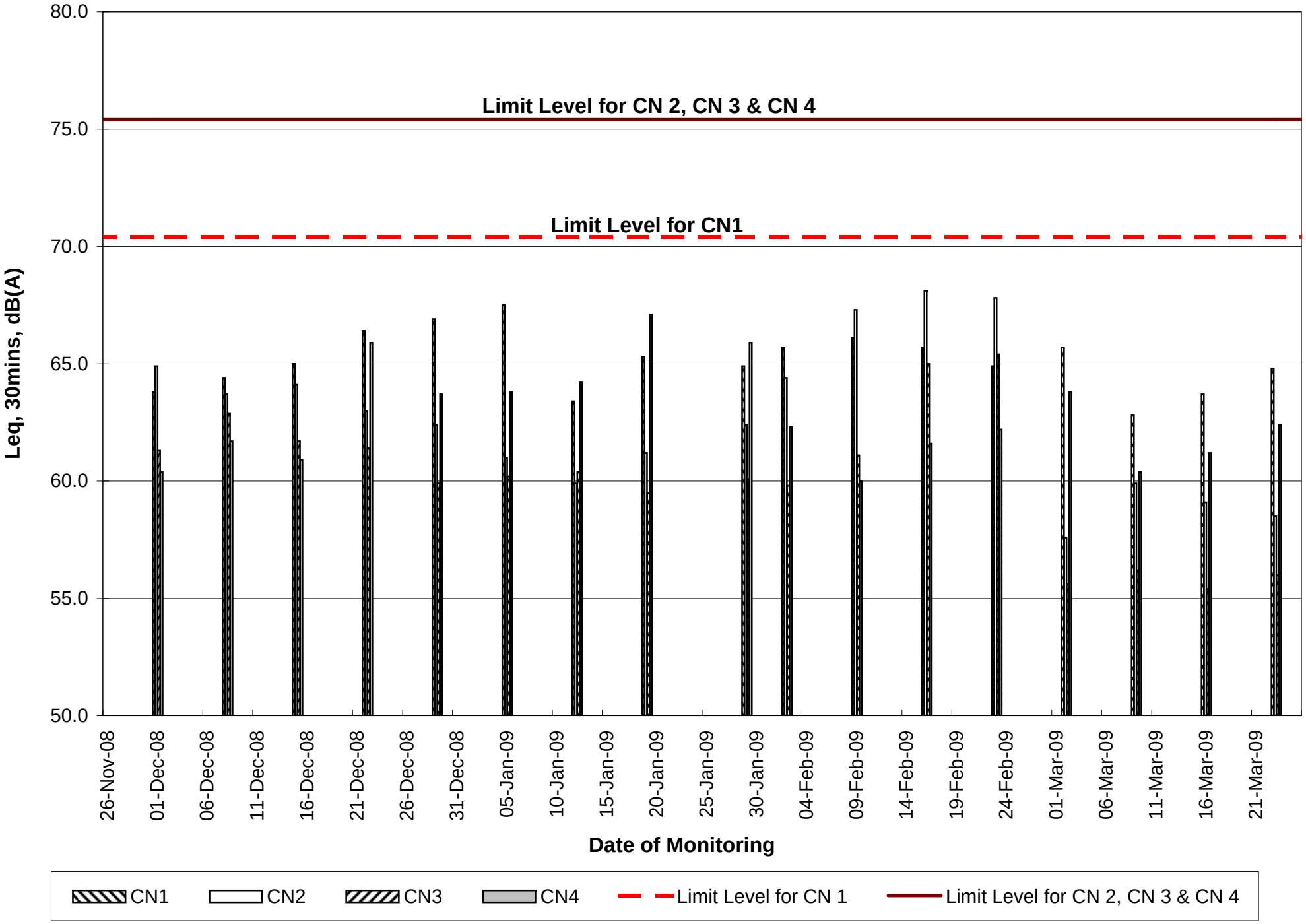
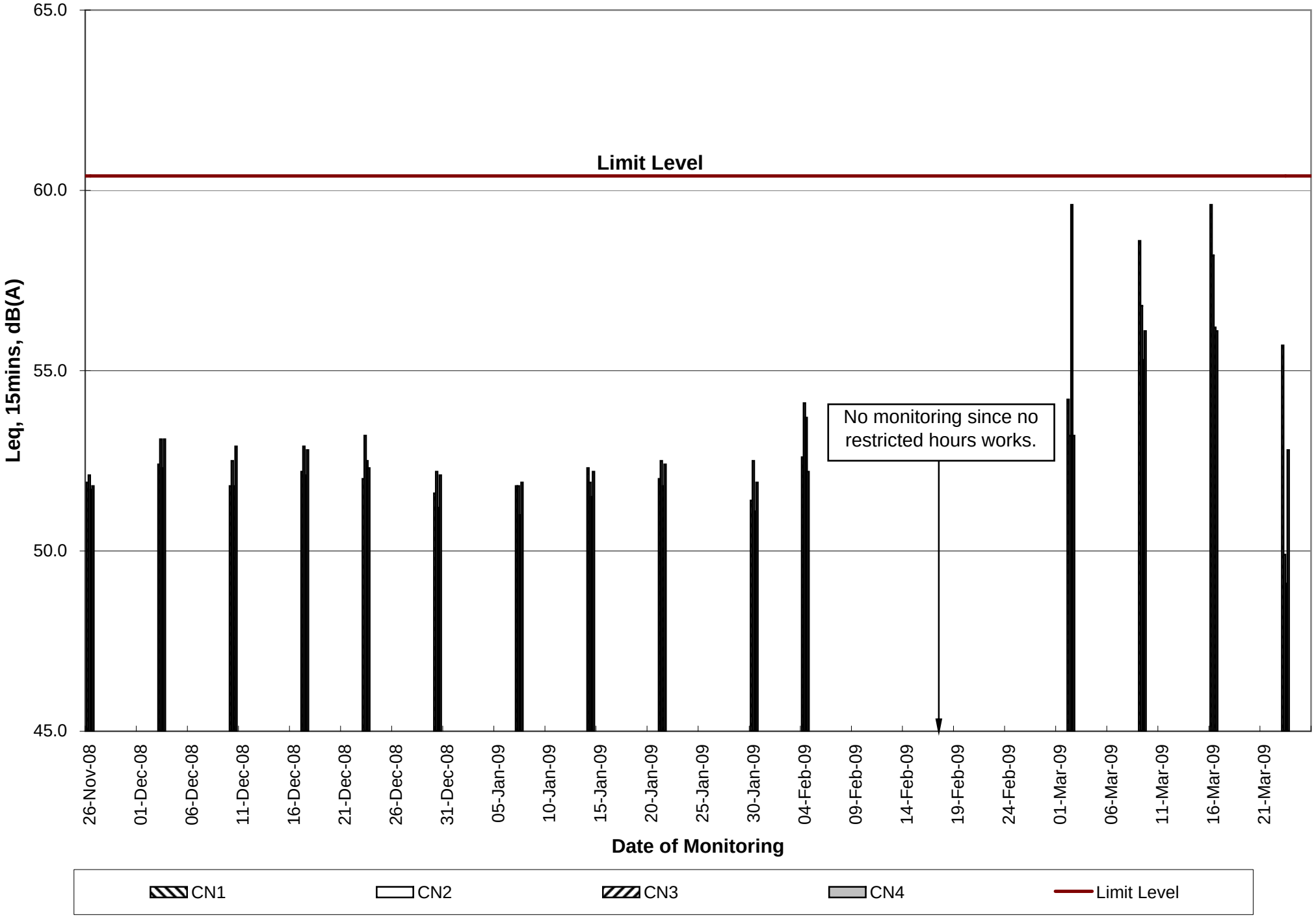


Fig F.2 - Evening Noise Monitoring Results of Monitoring Stations CN1, CN2, CN3 & CN4



Appendix G

Environmental Mitigation Implementation Schedule - Air Emission

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
1		yes	Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.	Superintendent/ Supervisor/Foremen	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK
2		yes	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.	Superintendent/ Supervisor/Foremen	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK
3		yes	Use of frequent watering for particularly dusty construction areas, temporary stockpiles and areas close to ASRs.	Superintendent/ Supervisor/Foremen	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK
4		yes	Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK
5		yes	Restricting heights from which materials are dropped, as far as practicable to minimise the fugitive dust arising from unloading/loading.	Superintendent/ Supervisor/Foremen Subcontractor		08/08 - 11/10	OK
6		yes	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK
7		yes	Use of vehicle wheel and body washing facilities at the exit points of the site.	Superintendent/ Supervisor/Foremen Project Environmental Co-ordinator Subcontractor	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK
8		yes	Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit.	Superintendent/ Supervisor/Foremen Project Environmental Co-ordinator		08/08 - 11/10	OK

Environmental Mitigation Implementation Schedule - Air Emission

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
9		yes	Dusty activities should be re-scheduled if high-wind conditions are encountered.	Superintendent/ Supervisor/Foremen Project Environmental Co-ordinator		08/08 - 11/10	OK
10		yes	Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.	Superintendent/ Supervisor/Foremen Project Environmental Co-ordinator		08/08 - 11/10	OK
11		yes	Implementation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	Project Environmental Co-ordinator		08/08 - 11/10	N.A.
12		yes	The works areas shall be fenced off with hoarding. The height of hoarding should not be less than 2.4 m from ground level	Superintendent/ Supervisor/Foremen	Weekly Environmental Inspection Checklist	08/08 - 11/10	OK

Environmental Mitigation Implementation Schedule - Noise

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
1		yes	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program	Superintendent/ Supervisor/Foremen Project Environmental Coordinator Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
2		yes	Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	N.A.
3		yes	Mobile plant, if any, should be sited as far from NSRs as possible	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
4		yes	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	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
5		yes	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	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
6		yes	Quiet Plant considered for at Entry Plaza construction for Site Clearance, Demolition, Realignment of Ocean Park Road, Drainage Diversion, Sewerage Diversion, Site Formation & Excavation, Piling Works and Superstructure Construction where calculated noise levels exceed limits	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
7		yes	Quiet Plant considered for Aqua City construction during - Site Clearance, Demolition, Slopeworks, Site Formation & Excavation, Piling Works and Superstructure Construction where calculated noise levels exceed limits	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
8		yes	Moveable noise barriers considered for at Entry Plaza construction for Site Clearance, Demolition, Realignment of Ocean Park Road, Drainage Diversion, Sewerage Diversion, Site Formation & Excavation, Piling Works and Superstructure Construction where calculated noise levels exceed limits	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	N.A.
9		yes	Moveable barriers considered for Aqua City construction during - Site Clearance, Demolition, Slopeworks, Site Formation & Excavation, Piling Works and Superstructure Construction where calculated noise levels exceed limits	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	N.A.

Environmental Mitigation Implementation Schedule - Water

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
1		Yes	Before commencing any site formation work, all sewer and drainage connections should be sealed to prevent debris, soil, sand etc. from entering public sewers/drains.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 09/08	OK
2		Yes	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.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
3		Yes	Boundaries of earthworks should be marked and surrounded by dykes or embankments for flood protection, as necessary.	Superintendent/ Supervisor/Foremen land surveyor		08/08 to 11/10	OK
4		Yes	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.	Superintendent/ Supervisor/Foremen project environmental co-ordinator	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
5		Yes	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.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
6		Yes	Exposed soil surfaces should be covered,	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
7		Yes	Water pumped out from foundation excavations should be discharged into silt removal facilities.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK

Environmental Mitigation Implementation Schedule - Water

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
8		Yes	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 inplace 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.	Superintendent/ Supervisor/Foremen project environmental co-ordiantor Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	N.A.
9		Yes	Exposed soil areas should be minimized to reduce potential for increased siltation and contamination of runoff.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
10		Yes	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.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
11		Yes	Open stockpiles of construction materials or construction wastes on-site of more than $50m^3$ should be covered with tarpaulin or similar fabric during rainstorms	Superintendent/ Supervisor/Foremen Subcontractor		08/08 to 11/10	OK
12		Yes	Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby water bodies and public drainage system. Stockpiles of cement and other construction materials should be kept covered when not being used.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK
13		Yes	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.	Superintendent/ Supervisor/Foremen project environmental co-ordinator Subcontractor	Weekly Environmental Inspection Checklist	08/08 to 11/10	OK

Environmental Mitigation Implementation Schedule - Ecological Resources

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
1		Yes	All excavation works carried out close to water bodies shall be carefully controlled to avoid runoff entering watercourses, especially during periods of heavy rain.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	N.A.
2		Yes	Site runoff shall be directed towards regularly cleaned and maintained silt traps and where appropriate, oil/grease separators to minimise risk of sedimentation and pollution.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
3		Yes	Suitable size / capacity silt traps and oil/grease interceptors shall be used.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	N.A.
4		Yes	Coral monitoring shall be implemented (by others)	Project Environmental Coordinator		08/08-11/10	N.A.
5		Yes	Noise mitigation measures including the use of quiet excavation methods, quiet construction plant and temporary noise barriers shall be implemented to minimise disturbance to habitats adjacent to the works areas	Superintendent/ Supervisor/Foremen Project Environmental Coordinator/ Engineer Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
6		Yes	Vegetation survey and subsequent transplantation of locally uncommon or restricted species (i.e. Long Tentacle Orchid, Sword-leaved Orchid, Green-flowered Rattlesnake-Plantain, Cycad-fern Balloon Flower and Chinese Lily) shall be carried out to determine the feasibility and suitability of individual plants for transplantation to protect plant species of conservation interest	Project Environmental Coordinator/ Engineer		08/08-11/10	OK
7		Yes	Receptor sites shall be identified.	Superintendent/ Supervisor/Foremen Project Environmental Coordinator		08/08-11/10	OK
8		Yes	Transplantation shall be supervised by a suitably qualified botanist/ horticulturist to protect plant species of conservation interest	Project Environmental Coordinator		08/08-11/10	OK
9		Yes	A detailed transplantation methodology shall be formulated during the detailed design stage based on the information collected during the detailed vegetation survey to protect plant species of conservation interest				N.A.

Environmental Mitigation Implementation Schedule - Ecological Resources

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
10		Yes	Equipment or stockpile shall only be in designated works areas wherever practicable.	Superintendent/ Supervisor/Foremen		08/08-11/10	OK
11		Yes	Access routes shall be selected as far as practicable on existing disturbed land.	Superintendent/ Supervisor/Foremen Project Environmental Coordinator Subcontractor		08/08-11/10	N.A.
12		Yes	Construction activities shall be restricted to designated works areas.	Superintendent/ Supervisor/Foremen	Weekly Environmental Inspection Checklist	08/08-11/10	OK
13		Yes	The works areas shall be reinstated immediately after completion of works.	Superintendent/ Supervisor/Foremen Subcontractor		08/08-11/10	OK
14		Yes	Waste skips shall be provided to collect general refuse and construction wastes.	Superintendent/ Supervisor/Foremen Project Environmental Coordinator	Weekly Environmental Inspection Checklist	08/08-11/10	OK
15		Yes	The wastes shall be disposed of timely and properly off-site.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
16		Yes	Drainage arrangements shall include sediment traps to collect and control construction run-off	Superintendent/ Supervisor/Foremen Engineer	Weekly Environmental Inspection Checklist	08/08-11/10	OK
17		Yes	Open burning on works sites is illegal, and shall be strictly enforced.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK

Environmental Mitigation Implementation Schedule - Archaeological and Historical Resources

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
1		Yes	If any works are planned within one metre of the grave, a one metre buffer zone will be provided around the grave, demarcated by a temporary fence.	Superintendent/ Supervisor/Foremen		08/08-11/10	N.A.

Environmental Mitigation Implementation Schedule - Waste Management

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
1		Yes	Nomination of an approved person, 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 (Good site practices)	Superintendent/ project environmental coordinator		08/08-11/10	OK
2		Yes	Training of site personnel in proper waste management and chemical handling procedures	project environmental coordinator		08/08-11/10	OK
3		Yes	Provision of sufficient waste disposal points and regular collection of waste	Site supervisor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
4		Yes	Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
5		Yes	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	project environmental coordinator	EMP	08/08-11/10	OK
6		Yes	Waste reduction measures: Sort C&D waste from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals	Superintendent/ Supervisor/Foremen project environmental coordinator Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
7		Yes	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	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
8		Yes	Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	Superintendent/ Supervisor/Foremen project environmental coordinator Subcontractor		08/08-11/10	OK
9		Yes	Proper storage and site practices to minimise the potential for damage or contamination of construction materials	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
10		Yes	Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	Superintendent/ Supervisor/Foremen Subcontractor		08/08-11/10	OK

Environmental Mitigation Implementation Schedule - Waste Management

ID No	Environmental Aspect (not required for actions specifically recommended in Environmental Impact Assessment)	Specifically Recommeded in Environmental Impact Assessment?	Actions Required These actions can be amended if necessary to suit particular needs unless they are in response to a specified legal requirements	Action party(s)	Additional Control/monitoring and measurement procedures/ methods (if necessary)	Scheduled months	Status
11		Yes	General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material	Superintendent/ Supervisor/Foremen project environmental coordinator Subcontractor		08/08-11/10	OK
12		Yes	In order to minimise impacts resulting from collection and transportation of C&D material for off-site disposal, the excavated materials arising from site formation should be reused on-site as backfilling material and for landscaping works as far as practicable. In addition, volcanic rock generated from the tunnelling works should be subject to beneficial re-use. Other mitigation requirements are listed below: - A Waste Management Plan should be prepared - A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used - In order to monitor the disposal of C&D and solid wastes at public filling facilities and landfills, and to control fly-tipping, trip ticket systems will be adopted.	Engineer project environmental coordinator	Weekly Environmental Inspection Checklist	08/08-11/10	OK
13		Yes	Chemical waste: 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* .	project environmental coordinator	Weekly Environmental Inspection Checklist	08/08-11/10	OK
14		Yes	Chemical waste: 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 waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.	Superintendent/ Supervisor/Foremen Subcontractor	Weekly Environmental Inspection Checklist	08/08-11/10	OK
15		Yes	Chemical waste:The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, either to the approved Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation	Superintendent/ Supervisor/Foremen		08/08-11/10	OK

APPENDIX D – SUMMARY OF ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
Air Quality								
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.	✓			✓	
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.	✓		✓	✓	
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)(l)	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.		✓	✓	✓	
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.	✓		✓	✓	
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.		✓	✓	✓	
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.		✓	✓	✓	
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.	✓			✓	

APPENDIX D – SUMMARY OF ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
Air Quality								
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.	✓		✓	✓	
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 m^3 should be enclosed or covered and water applied twice per day during dry or windy conditions.	✓		✓	✓	

APPENDIX D – SUMMARY OF ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
Air Quality								
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.	✓		✓	✓	
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.	✓	✓		✓	
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.	✓	✓		✓	
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.	✓	✓		✓	
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.	✓	✓	✓	✓	

APPENDIX D – SUMMARY OF ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
Air Quality								
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.	✓	✓	✓	✓	
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.	✓	✓	✓	✓	
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.	✓		✓	✓	

APPENDIX D – SUMMARY OF ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
Air Quality								
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.	✓		✓	An owner, who operates any plant in such a manner that any dark smoke is emitted for more than 6 minutes in any period of 4 hours or for more than 3 minutes continuously at any one time, commits an offence.	
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.	✓			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/Vibration								
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).		✓	✓	✓	
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.	✓		✓	✓	

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				Site Installation	Method Statement	Toolbox Talk		
Noise/Vibration								
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)	If the work causing serious noise pollution impacts or reached the Target Limit as stated in the Contractor's EM&A Manual, the Contractor shall provide the following proposed remedial measures: • Change of construction equipment location and scheduling of activities; • Change of construction equipment location and scheduling of activities; • Installation of construction equipment soundproofing; • Provision of alternative Contractor's equipment; • Erection of sound barriers around the part of the Site or the location of the construction noise source; or • Any other measures that may be effective in reducing noise.	 ✓ ✓ ✓ 	 ✓ ✓	 ✓ ✓ ✓ ✓ ✓	 ✓ ✓ ✓ ✓ ✓	
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.	✓	✓	✓	✓	

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				Site Installation	Method Statement	Toolbox Talk		
Noise/Vibration								
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.	✓		✓	✓	
Water Quality (Refer to Drainage Management Plan as stated in PS 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 • Adequate maintenance of drainage systems to prevent flooding and overflow.	✓	✓	✓ ✓	✓ ✓	
WQ05	Flooding and wastewater including surface runoff discharges from the construction site/work to inland coastal waters, communal sewers and drains	PS 26.12 (2)	Exposed areas should be minimised to reduce the potential for increased siltation, runoff contamination, and erosion.	✓	✓	✓	✓	
WQ06		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.	✓	✓	✓	✓	

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				Site Installation	Method Statement	Toolbox Talk		
Water Quality (Refer to Drainage Management Plan as stated in PS 26.17(7))								
WQ07	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(6)(ii)	The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94.	✓	✓		✓	
WQ08		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.	✓		✓	✓	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.		✓	✓	✓	
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.	✓	✓	✓	✓	
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.	✓		✓	✓	
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.	✓	✓		✓	Silt curtain proposal was deposited in the EIAO Register Office for public inspection.

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Water Quality (Refer to Drainage Management Plan as stated in PS 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.	✓			✓	
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.			✓	✓	
WQ18		PS 26.12	Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	✓			✓	
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.	✓			✓	
WQ21		PS 26.12	Open stockpiles of construction materials of more than $50m^3$ should be covered with tarpaulin or similar fabric.			✓	✓	
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.	✓			✓	

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				Site Installation	Method Statement	Toolbox Talk		
Drainage and Sewage (Refer to Drainage Management Plan as stated in PS 26.17(7) and Drainage Proposals as stated 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 and Sewage (Refer to Drainage Management Plan as stated in PS 26.17(7) and Drainage Proposals as stated 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.	✓		✓	✓	
DS05	Polluted water from the plant yard	WMP	Plant maintenance areas to be enclosed.	✓			✓	
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.	✓			✓	

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No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
Drainage and Sewage (Refer to Drainage Management Plan as stated in PS 26.17(7) and Drainage Proposals as stated in EP Clause 2.13)								
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.	✓			✓	
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.	✓			✓	
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.	✓		✓	✓	
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 Management (Refer to Waste Management 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).	✓		✓	✓	

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				Site Installation	Method Statement	Toolbox Talk		
Waste Management (Refer to Waste Management 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.			✓	✓	
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.	✓		✓	✓	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 shall be reused or recycled.	✓	✓	✓	✓	
WM07	Disposal of waste (general)	WMP; PS 26.18	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.			✓	✓	

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				Site Installation	Method Statement	Toolbox Talk		
Waste Management (Refer to Waste Management 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.			✓	✓	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.	✓		✓	✓	
WM12	Disposal of waste (general)	WMP	Obtain the necessary permits and licenses with regards to the waste management from the appropriate authorities wherever necessary, in accordance with • The Waste Disposal Ordinance (Cap 354), • Waste Disposal (Chemical Waste)(General) Regulation (Cap 354), • The Crown Land Ordinance (Cap 28), and • Dumping at Sea Ordinance (Cap 466)			✓	✓	
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.			✓	✓	
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	✓	✓		✓	

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Waste Management (Refer to Waste Management 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.				✓	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.	✓		✓	✓	

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				Site Installation	Method Statement	Toolbox Talk		
Waste Management (Refer to Waste Management 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.	✓		✓	✓	
			• 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	✓		✓	✓	
			• 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)	✓		✓	✓	
			• 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.	✓		✓	✓	
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.			✓	✓	

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Waste Management (Refer to Waste Management 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.	✓		✓	✓	
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.	✓		✓	✓	
Ecology								
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.	✓		✓	✓	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.	✓	✓	✓	✓	

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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.	✓	✓	✓	✓	
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.	✓	✓	✓	✓	
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;	✓			✓	
			• Designation of "no-intrusion zones" and to record any trespass, including the damage to the existing vegetation;			✓	✓	
			• Hill fire prevention;			✓	✓	
			• Dust and erosion control for exposed soil; and	✓		✓	✓	
			• Well-planned irrigation networks throughout the establishment period.	✓	✓	✓	✓	
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;		✓		Uncommon or restricted species including Long Tentacle Orchid, Sword-leaved Orchid, Green-flowered Rattlesnake-Plantain, Cycad-fern, Balloon Flower and Chinese Lily	

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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;	✓		✓	✓	
			• Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimize disturbance to natural habitats;			✓	✓	
			• Construction activities shall be restricted to the works areas that would be clearly demarcated;	✓		✓	✓	
			• The work areas shall be reinstated immediately after the completion of works;	✓			✓	
			• 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.	✓	✓	✓	✓	
Landscape 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.	✓			✓	
			• 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	

APPENDIX D – SUMMARY OF ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

No.	Environmental Aspect	Requirement (Classification)	Aspect Mitigation	Delivery Method			Status	Other / Remarks
				Site Installation	Method Statement	Toolbox Talk		
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.	✓			✓	
Cultural and 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.

Appendix C - 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.	*
	• Use of frequent watering for particularly dusty construction areas, temporary stockpiles and areas close to ASRs.	*
	• 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.	^
	• 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	
	• The conveyors would be placed within a totally enclosed structure	N/A
	• Profiled steel cladding would be provided at two sides of loading point.	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 excavated materials/rocks transported into the barge.	N/A
	• 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.	N/A
Construction Noise	*Construction Phase*	
	• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme	^
	• 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	^
	• 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	^
	• 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	^

Types of Impacts	Mitigation Measures	Status
	Use of Movable Noise Barrier	
	• 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.	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
Ecology	*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.	^
	• 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.	N/A
	• Suitable size / capacity silt traps and oil/grease interceptors shall be used.	N/A
	• 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.	N/A
	• Trees located within the works areas shall be preserved as far as practicable.	*
	• Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats	^
	• 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	*Construction Runoff and Drainage*	
	• Before commencing any site formation work, all sewer and drainage connections should be sealed to prevent 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.	^
	• Boundaries of earthworks should be marked and surrounded by dykes or embankments for flood protection, as necessary.	^
	• 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.	^
	• 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.	^
	• 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.	^
	• Exposed soil areas should be minimized to reduce potential for increased siltation and contamination of runoff.	^
	• 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 $50m^3$ should be covered with tarpaulin or similar fabric during rainstorms	N/A
	General Construction Activities	
	• Debris and refuse generated on-site should be collected	^
	• 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	^
	Sewage from Construction Workforce	
	• 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	^
Waste / Chemical	*Good Site Practice*	
	• 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	*
	• regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors	N/A
	• training of site personnel in proper waste management and chemical handling procedures	^
	• 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	^
	Waste Reduction Measures	
	• sort C&D waste from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals	^
	• 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
	General Refuse • General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	^
	Construction and Demolition Material • A Waste Management Plan should be prepared. • In order to monitor the disposal of C&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. • A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed.	^ ^ ^
	Chemical Waste • 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	^

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

Appendix H Licenses and Permits

CNP

Permit number	Starting Date	Expired Date	Valid Time	Location	Contract No.	Status
CI05 - DBJV						
GW-RS0682-08	15-Oct-08	14-Apr-09	*Concrete lorry mixer; Poker, vibrating, hand-held (electric); and Crane, tower*		CI05	Expired
GW-RS0750-08	1-Nov-08	30-Apr-09	*Crane, mobile (500 tonnes); Crane mobile (300 toones); Crane mobile (90 tonnes); Crane mobile (50 tonnes); and Lorry, with crane, 5.5 tonnes < gross vehicle weight < 38 tonnes*		CI05	Valid
GW-RS0752-08	1-Nov-08	30-Apr-09	*Crane, mobile (500 tonnes); Crane mobile (300 toones); Crane mobile (90 tonnes); Crane mobile (50 tonnes); and Lorry, with crane, 5.5 tonnes < gross vehicle weight < 38 tonnes*		CI05	Valid
GW-RS0001-09	2-Jan-09	1-Jun-09	*Light Tower, Excavator, tracked; Dump truck, 5.5 tonens < gross vehicle weight < 38 tonnes*		CI05	Valid
GW-RS0103-09	28-Feb-09	27-Aug-09	*Breaker, mini-robot mounted; Excavator, tracked; Light goods vehicle, gross vehicle weight < 5.5 tonnes; Breaker, hand-held, mass > 10 kg and < 20 kg; Road miller; Asphalt paver; Road roller; Dump truck, 5.5 tonnes < gross vehicle weight < 38 tonnes*	Nam Long Shan Road	CI05	Valid
CW-02 (W. Hing)						
GW-RS0163-09	1-Mar-09	31-Aug-09	19:00 - 23:00 hours (Not being a general holidays) 07:00 - 19:00 hours (General holidays)	Ocean Park, Wong Chuk Hang	CW-02	Valid
CI07 (LCAL)						
GW-RS0791-08	10-Nov-08	9-Apr-09	*For water pumps, generator and wastewater treatment plant operation from 19:00 to 23:00 (any day not being a general holiday and 07:00 to 23:00 (general holiday including Sunday)*	Ocean Park, Wong Chuk Hang	CI07	Expired
GW-RS0906-08	17-Dec-08	14-Jun-09	*Fro water pump and wastewater treatment plant operation for any day 23:00 to 07:00 on next day*	Ocean Park, Wong Chuk Hang	CI07	Valid
PP-RS0035-08	12-Dec-08	11-Jun-08	*For drop hammer driving steel sheet pile from 07:00 to 19:00 hours on all days expect general holidays (including Sundays)*	Ocean Park, Wong Chuk Hang	CI07	Valid

Appendix H Licenses and Permits

Other Permits & Licenses

CI05

Permit /Ref/ No	Valid Period		Section	Status
Notification of Construction Work under 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 License				
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 Chemical Waste Producer				
WPN5213-199-D2373-01	7-May-07	-	For disposal of chemical wastes, mainly spent lubricants	Registered
Construction Waste Disposal Charging Scheme				
7004888	-	-	Waterfront + Summit	Issued

CW02

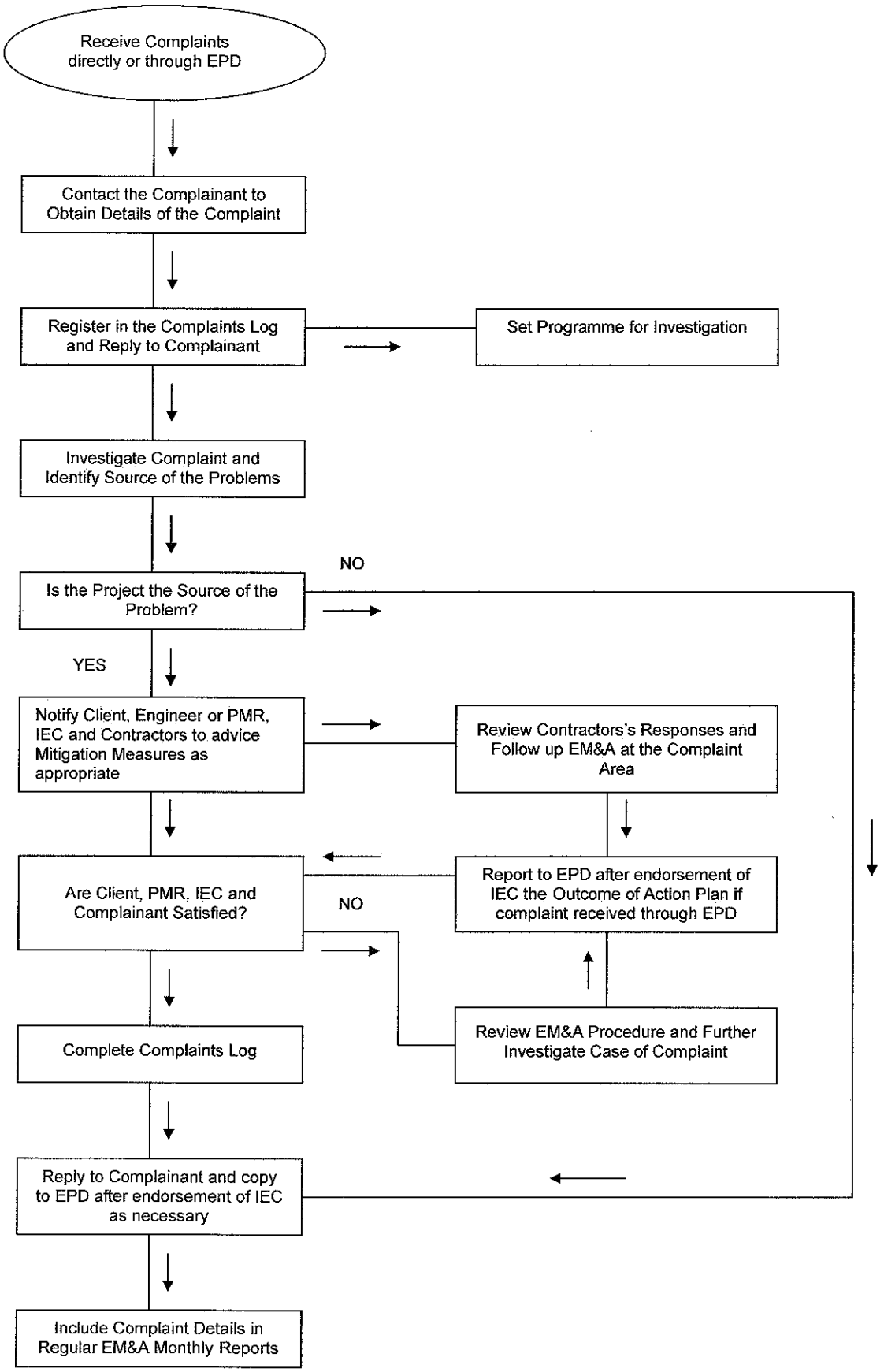
Permit/Ref/No	Valid Period		Section	Status
Notification of Construction Work under APCO				
001022480	11 July 07	-	Astounding Asia	Notified
Effluent Discharge License				
EP820/W9/XW240	12 Oct 07	31 Oct 12	Astounding Asia	Valid
Registration as Chemical Waste Producer				
5213-199-W2894-18	20 Aug 07	-	Form Oil, Lubricant oil, paint, solvent and diesel.	Registered
Construction Waste Disposal Charging Scheme				
7005864	-	-	Astounding Asia	Issued

CI07

Permit/Ref/No	Valid Period		Section	Status
Notification of Construction Work under APCO				
001032366	-	-	Entry Plaza	Notified
Effluent Discharge License				
EP820/W2/XW246	5 Sep 08	30 Sep 13	Entry Plaza	Valid
Registration as Chemical Waste Producer				
5213-199-L2174-28	22 Sep 08	-	Form Oil, Lubricant oil, paint, solvent and diesel.	Registered
Construction Waste Disposal Charging Scheme				
7007576	-	-	Entry Plaza	Issued

Appendix I

APPENDIX F – 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.
OPE/DBJV/PROJ/QSE/ECR/002	09-Jan-08	Public thro' OPC	The complainant claimed that noise nuisance was heard from the Ocean Park construction sites during the restricted hours	CI05	Justified	Under investigation, the noise nuisance was concluded from the soft ground tunnel support work adjacent to GPH. Rock breaking had to be carried out within the tunnel works areas due to safety and emergency in order to prevent the collapse of the ground support structure. With regards to the complaints, immediate action was taken and summarized as follows: • The enclosure and the acoustic doors have been built and completed on 21-Jan-08; and • Surveillance was stepped up in order to ensure that timely actions could be taken to rectify any complaints.
OPE/DBJV/PROJ/QSE/ECR/003						
OPE/DBJV/PROJ/QSE/ECR/004	13-Feb-08	Public thro' EPD	The complainant claimed that noise nuisance was heard from the Ocean Park construction sites during the restricted hours at Tai Shue Wan	CI05	Justified	With regards to the complaints, immediate action was taken and summarized as follows: • Additional noise control measures, including noise enclosure at the junction of the conveyors at Tai Shue Wan; and • Well manage the working sequence in order to minimize the impacts to the vicinity.
OPE/DBJV/PROJ/QSE/ECR/005	12-Mar-08	Public thro' EPD	The resident from Broadview Court claimed that noise nuisance from the night works at Nam Long Shan Road	CI05	Justified	With regards to the complaint, investigation has conducted and the findings and action to be taken were summarized as follows: • Movable noise panels and the noise shield have been used during the breaking works. The potential cause of the noise nuisance might be the panels were not placed properly and the noise emitted from the gap. The in-charge foreman has been reminded to place the panels properly in order to minimize the noise nuisance to the vicinity.

Record ID	Date Received	Type (PMR / EPD / Public / Others, please specify)	Description	Responsible Project	Justified complaint?	Status (Open / Closed)
OPE/DBJV/PROJ/QSE/ECR/006	13-Mar-08	Public thro' EPD	The complainant claimed that noise nuisance from the night works at Nam Long Shan Road	CI05	Justified	Please refer to the findings of Record ID No. OPE/DBJV/PROJ/QSE/ECR/005
OPE/DBJV/PROJ/QSE/ECR/007	20-Mar-08	Public thro' EPD	The complainant claimed that noise nuisance from the night works at Nam Long Shan Road	CI05	Justified	With regards to the complaint, investigation has conducted and the findings could not made any conclusions. In this context, the in-charge engineer/foreman of each CNP has notified and reminded that all requirements under the CNP should be complied with all the times.
OPE/DBJV/PROJ/QSE/ECR/008	15-Mar-08	Public thro' EPD	The complainant claimed that dust nuisance from the crusher, Nam Long Shan Road	CI05	Justified	With regards to the complaint, action was taken as follows: • Enhance the water spraying, especially the frequency, in order to minimize the dust nuisance to the vicinity. Besides, the length of dust screen was extended to increase the coverage area of stockpile to minimize the dust nuisance due to strong wind.
OPE/DBJV/PROJ/QSE/ECR/009	19-Mar-08	Public thro' EPD	The complainant claimed that noise from the temporary steel plates over trenches at Nam Long Shan Road	CI05	Justified	With regards to the complaint, immediate action was taken and summarized as follows: • Inform the in-charge foreman to provide sufficient sandbags or rubber pad before placing the temporary steel plates back to cover the trench.
OPE/DBJV/PROJ/QSE/ECR/010	25-Mar-08	Public thro' EPD	Police Training School claimed that dust nuisance from CI12C to the school	CI05	Justified	With regards to the complaint, immediate action was taken and summarized as follows: • Inform the in-charge foreman to increase the frequency of water spraying of the exposed areas.

Record ID	Date Received	Type (PMR / EPD / Public / Others, please specify)	Description	Responsible Project	Justified complaint?	Status (Open / Closed)
OPE/DBJV/PROJ/QSE/ECR/011	23-May-08	Public thro' EPD	The complainant claimed that noise from the temporary steel plates over trenches at Nam Long Shan Road	CI05	Justified	With regards to the complaint, immediate action was taken and summarized as follows: • Inform the in-charge foreman to ensure that the temporary steel plates should be placed tight without loose and gap before leaving. • Inform the heavy vehicle drivers try to not step on the metal plate when driving thro' the metal plates and reduce the speed.
OPE/DBJV/PROJ/QSE/ECR/012	18-Jul-08	Public thro' EPD	The complainant concerning the export of excavated materials originated from Ocean Park to the Mainland China.	CI05	Justified	With regards to the complaint, relevant documents have been provided to EPD to justify the procedures of import and export of excavated materials are fully followed.
OPE/DBJV/PROJ/QSE/ECR/013	05-Aug-08	Public thro' DSD and EPD	The complainant mentioned that there was muddy water at the Wong Chuk Hang Nullah (opposite to Aberdeen Sport Ground).	N/A	Not justified	With regards to the complaint, a joint site inspection has been conducted with DSD, EPD, SDC, PMR, DBJV and WH. Conclusion has been made that DBJV was responsible to clean the portion of nullah near the construction sites and the cleaning works has completed in the following week after the inspection.
OPE/DBJV/PROJ/QSE/ECR/014	02-Sep-08	Public thro' EPD	The complainant claimed that dust nuisance from the barging point at Tai Shue Wan.	CI05	Not justified	With regards to the complaint, a joint site inspection has been conducted with EPD, PMR and DBJV. Conclusion has been made that it was suspected that the complainant saw the misty vapour and claimed as dust since the water spray in misty form has been in use during the operation all the times.
OPE/DBJV/PROJ/QSE/ECR/015	30-Sep-08	Public thro' EPD	The complainant claimed that noise from the temporary steel plates over trenches and the smell of bitumen during the road paving at Nam Long Shan Road.	CI05	Justified	With regards to the complaint, EPD visited our site on 30-Sep-08 and made some advice as follows: • Strengthen the cushion media underneath the steel plate. • Further remind all DBJV vehicles to reduce the speed during passing on the steel plate.

Record ID	Date Received	Type (PMR / EPD / Public / Others, please specify)	Description	Responsible Project	Justified complaint?	Status (Open / Closed)
						• Give advance notice to the tenants when there is a bitumen paving.
OPE/DBJV/PROJ/QSE/ECR/016	14-Nov-08	Public thro' EPD	The complainant claimed that noise nuisance from the pipe repair works adjacent to South Wave Court on 10-Nov-08.	CI05	Not justified	The unavoidable noise nuisance was came from the repair works which undertaken by WSD due to emergency. As the water could not suspended due to the pipe leakage incident around 18:30.
OPE/DBJV/PROJ/QSE/ECR/017	19-Nov-08	Public thro' EPD	The complainant claimed that noise nuisance from the activities at Nam Long Shan Road.	CI05	Justified	With regards to the complaint, relevant information has been provided to EPD to justify the case with the complainant.

Appendix J

Appendix J Coral Monitoring Results for the Reporting Quarter

Results for January 2009

No impact coral monitoring was conducted within January 2009. It was because the monitoring frequency was changed to quarterly until the end of construction works as recommended in approved EM&A Manual.

Results for February 2009

Site 1

Code	Coral Species	Area (cm^2)	Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
			Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09
A01	*Platygyra carnosus*	1000	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	**6** ▲	**6** ▲	**6** ▲
A02	*Platygyra carnosus*	2000	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	**1** ▲	**1** ▲
A03	*Favites pentagona*	200	0, 0	**5**, 1▲	**3**, 1▲	**1**, 1▲	0	0	0	0	0	**3** ▲	**3** ▲	**3** ▲
A04	*Leptastrea pruinosa*	400	5, 1	5, 1	**3**, 1▼	5, 1	0	0	0	0	0	0	0	0
A05	*Platygyra carnosus*	1200	0, 0	**2**, 1▲	**4**, 1▲	**2**, 1▲	0	0	0	0	5	5	5	5
A06	*Platygyra carnosus*	1600	0, 0	**3**, 1▲	**1**, 1▲	0, 0	0	0	0	0	0	0	0	0
A07	*Favia rotumana*	800	5,1	**2**, 1▼	**4**, 1▼	**4**, 1▼	0	0	0	0	0	0	0	0
A08	*Platygyra carnosus*	1000	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	0	0
A09	*Platygyra carnosus*	350	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	0	0
A10	*Platygyra carnosus*	700	0, 0	0, 0	**2**, 1▲	**1**, 1▲	0	0	0	0	0	0	0	0

Site 2

Code	Coral Species	Area (cm^2)	Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
			Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09
B01	*Platygyra carnosus*	450	0, 0	**2**, 1▲	**1**, 1▲	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	1 ▲	1 ▲
B03	*Psammocora superficialis*	1000	5, 1	5, 1	5, 1	**3**, 1▼	0	0	0	0	0	2 ▲	2 ▲	2 ▲
B04	*Favia speciosa*	300	4, 1	**5**, 1▲	4, 1	4, 1	0	0	0	0	0	0	0	0
B05	*Plesiastrea versipora*	900	3, 1	**2**, 1▼	**2**, 1▼	**1**, 1▼	0	0	0	0	0	0	0	0
B06	*Platygyra carnosus*	600	0, 0	**4**, 1▲	**5**, 1▲	**2**, 1▲	0	0	0	0	0	0	0	0
B07	*Cyphastrea serailia*	700	0, 0	**2**, 1▲	**4**, 1▲	**5**, 1▲	0	0	0	0	0	0	0	0
B08	*Plesiastrea versipora*	1200	0, 0	**5**, 1▲	**3**, 1▲	**1**, 1▲	0	0	0	0	0	0	0	0
B09	*Favites pentagona*	600	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	0	0
B10	*Favites pentagona*	400	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	2 ▲	2 ▲	2 ▲

Site 3

Code	Coral Species	Area (cm^2)	Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
			Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09
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	2▲	2▲
C03	*Porites sp.*	400	5, 1	**3**, 1▼	**4**, 1▼	5, 1	0	0	0	0	1	5 ▲	5 ▲	5 ▲
C04	*Cyphastrea serailia*	600	4, 1	4, 1	**4**, 1	**4**, 1	0	0	0	0	0	0	0	0
C05	*Pavona decussata*	600	0, 0	**4**, 1▲	**4**, 1▲	**2**, 1▲	0	0	0	0	0	0	0	0
C06	*Pavona decussata*	1200	0, 0	**2**, 1▲	**1**, 1▲	**3**, 1▲	0	0	0	0	0	0	0	0
C07	*Montipora cf. turgescens*	200	2, 1	2, 1	2, 1	2, 1	0	0	0	0	0	0	0	0
C08	*Favia favus*	600	4, 1	4, 1	**2**, 1▼	4, 1	0	0	0	0	4	4	4	4
C09	*Favites pentagona*	150	1, 1	**4**, 1▲	**2**, 1▲	**2**, 1▲	0	0	0	0	0	5 ▲	5 ▲	5 ▲
C10	*Montipora peltiformis*	300	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	0	0

Site 4

Code	Coral Species	Area (cm^2)	Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
			Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09
E01	*Goniopora stutchburyi*	300	0, 0	**2**, 1▲	0, 0	0, 0	0	0	0	0	0	0	0	0
E02	*Goniopora stutchburyi*	200	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	0	0
E03	*Goniopora stutchburyi*	150	0, 0	**3**, 1▲	**1**, 1▲	**2**, 1▲	0	0	0	0	0	0	0	0
E04	*Porites sp.*	400	5, 1	**2**, 1▼	**3**, 1▼	**1**, 1▼	0	0	0	0	0	5 ▲	5 ▲	5 ▲
E05	*Goniopora stutchburyi*	300	0, 0	**2**, 1▲	0, 0	0, 0	0	0	0	0	0	0	0	0
E06	*Goniopora stutchburyi*	450	0, 0	**2**, 1▲	0, 0	0, 0	0	0	0	0	0	0	0	0
E07	*Favia speciosa*	600	10, 1	**2**, 1▼	**5**, 1▼	**3**, 1▼	0	0	0	0	0	0	0	0
E08	*Porites sp.*	150	0, 0	**2**, 1▲	0, 0	0, 0	0	0	0	0	4	4	4	4
E09	*Porites sp.*	200	8, 1	**2**, 1▼	**5**, 1▼	**3**, 1▼	0	0	0	0	4	4	8 ▲	8 ▲
E10	*Porites sp.*	500	0, 0	**2**, 1▲	0, 0	0, 0	3	3	0	0	0	4 ▲	4 ▲	4 ▲

Site 5

Code	Coral Species	Area (cm^2)	Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
			Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09
D01	*Psammocora* sp.	600	10, 1	**6**, 1▼	**3**, 1▼	**4**, 1▼	0	0	0	0	0	2 ▲	2 ▲	2 ▲
D02	*Montipora cf. turgescens*	100	6, 1	**2**, 1▼	**4**, 1▼	**2**, 1▼	0	0	0	0	0	0	0	0
D03	*Goniopora stutchburyi*	400	0, 0	0, 0	0, 0	0, 0	0	0	0	0	0	0	0	0
D04	*Leptastrea pruinosa*	500	4, 1	**3**, 1 ▼	**3**, 1 ▼	**2**, 1 ▼	0	0	0	0	0	5 ▲	5 ▲	5 ▲
D05	*Porites* sp.	400	5, 1	**0**, 0 ▼	5, 1	5, 1	1	0	0	0	4	4	4	4
D06	*Plesiastrea versipora*	1000	0, 0	**3**, 1 ▲	**7**, 1 ▲	**5**, 1 ▲	0	0	0	0	5	5	5	5
D07	*Leptastrea pruinosa*	800	0, 0	**3**, 1 ▲	**2**, 1 ▲	0, 0	0	0	0	0	0	0	0	0
D08	*Plesiastrea versipora*	100	0, 0	**2**, 1 ▲	**4**, 1 ▲	**2**, 1 ▲	0	0	0	0	0	0	0	0
D09	*Leptastrea pruinosa*	150	5, 1	**0**, 0 ▼	5, 1	5, 1	0	0	0	0	0	0	0	0
D10	*Montipora cf. turgescens*	200	0, 0	0, 0	**5**, 1▲	0, 0	0	0	0	0	0	0	0	0

Control Site C

Code	Coral Species	Area (cm^2)	Sedimentation (%, mm)				Bleaching (%)				Mortality (%)			
			Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09	Apr 07 (baseline)	16 Aug 08	10 Nov 08	08 Feb 09
F01	*Favia speciosa*	900	0, 0	**2**, 1 ▲	**5**, 1 ▲	**3**, 1 ▲	0	0	0	0	0	0	0	0
F02	*Favites pentagona*	1000	4, 1	**10**, 1▲	**6**, 1▲	**2**, 1▼	0	0	0	0	0	**3** ▲	**3** ▲	**3** ▲
F03	*Favites pentagona*	800	0, 0	**5**, 1 ▲	**4**, 1 ▲	**2**, 1 ▲	0	0	0	0	0	**2** ▲	**2** ▲	**8** ▲
F04	*Porites sp.*	800	5, 1	**10**, 1▲	**7**, 1▲	5, 1	4	**0**▼	**0**▼	**0**▼	4	**5** ▲	**5** ▲	**5** ▲
F05	*Cyphastrea serailia*	800	4, 1	4, 1	**3**, 1▼	**3**, 1▼	0	**2**▲	0	0	1	1	1	**6** ▲
F06	*Psammocora sp.*	1800	0, 0	**8**, 1 ▲	**5**, 1 ▲	**5**, 1 ▲	0	0	0	0	0	**5** ▲	**5** ▲	**5** ▲
F07	*Plesiastrea versipora*	3000	0, 0	0, 0	0, 0	0, 0	0	**2**▲	0	0	0	**2**▲	**2**▲	**2**▲
F08a	*Favia speciosa*	150	0, 0	**2**, 1 ▲	0, 0	0, 0	0	0	0	0	0	0	0	0
F08b	*Goniastrea favulus*	300	0, 0	**2**, 1 ▲	0, 0	0, 0	0	0	0	0	0	0	0	0
F09	*Favites pentagona*	1800	10, 1	10, 1	5, 1 ▼	6, 1 ▼	0	0	0	0	0	**3** ▲	**3** ▲	**12** ▲
F10	*Platygyra carnosus*	2800	0, 0	**2**, 1 ▲	0, 0	0, 0	0	0	0	0	0	0	0	0

In the monitoring surveys conducted in February 2009, sedimentation on the tagged colonies from all the 5 Monitoring Sites 1 to 5 and the Control Site C increased by 1 to 5% (total 15 colonies with 3 from the Control Site C) and deceased by 1 to 7% (total 11 colonies with 3 from the Control Site C) when compared with the Initial Survey conducted on 7 to 12 April 2007. There was no blenching in all the 5 monitoring Sites and the Control Site C. Partial mortality increased in 21 colonies by 1 to 12% with 7 from the Control Site C.

In all the 5 Monitoring Sites and 1 control site, level of sedimentation on the tagged corals varied within a small range (≤10%) without an observable trend. The variation was believed to be resulted from combined environmental factors such as monsoonal wind, tidal current, peripheral transports, substratum type, etc. The low level of increment in bleaching and partial mortality suggested minor adverse effect was caused by the observed sedimentation.

The data from this monitoring survey showed no significant enhancement in sedimentation, bleached or mortality in all the 5 monitoring sites 1 to 5 when compared with the Control Site C. Hence, no adverse impact by the construction activity on the coral community was evidenced.

Results for March 2009

No impact coral monitoring was conducted within January 2009. It was because the monitoring frequency was changed to quarterly until the end of construction works as recommended in approved EM&A Manual. The next scheduled monitoring should be in May 2009.

Figure 1.1

Figure 1.1 Management Organization

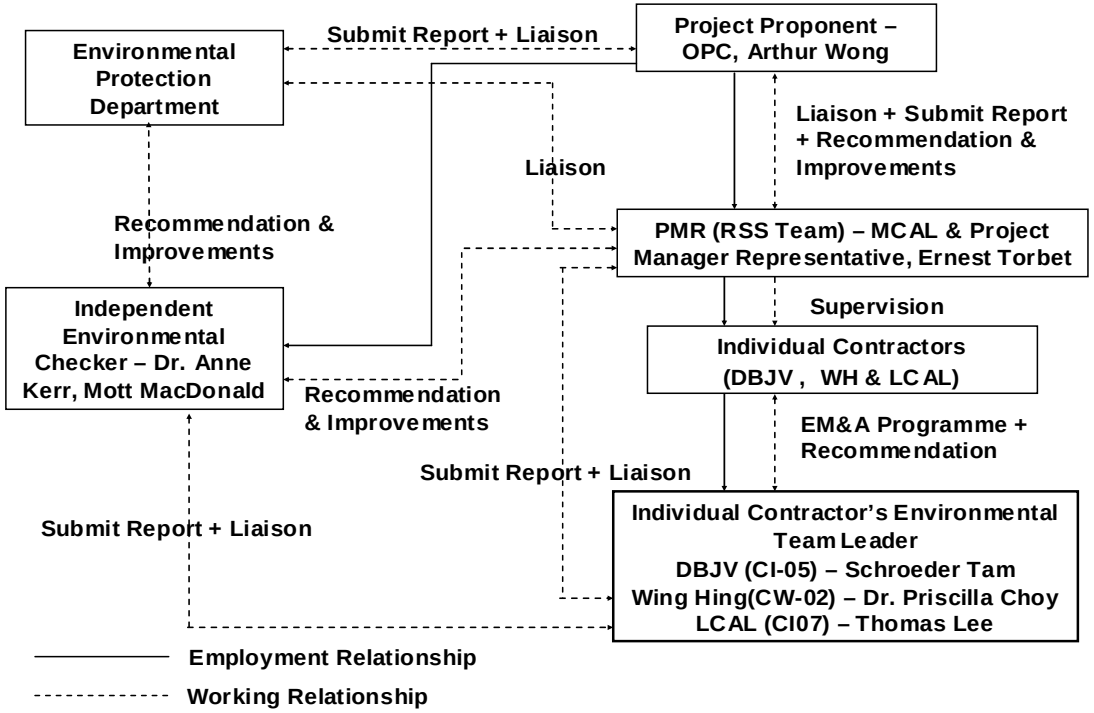
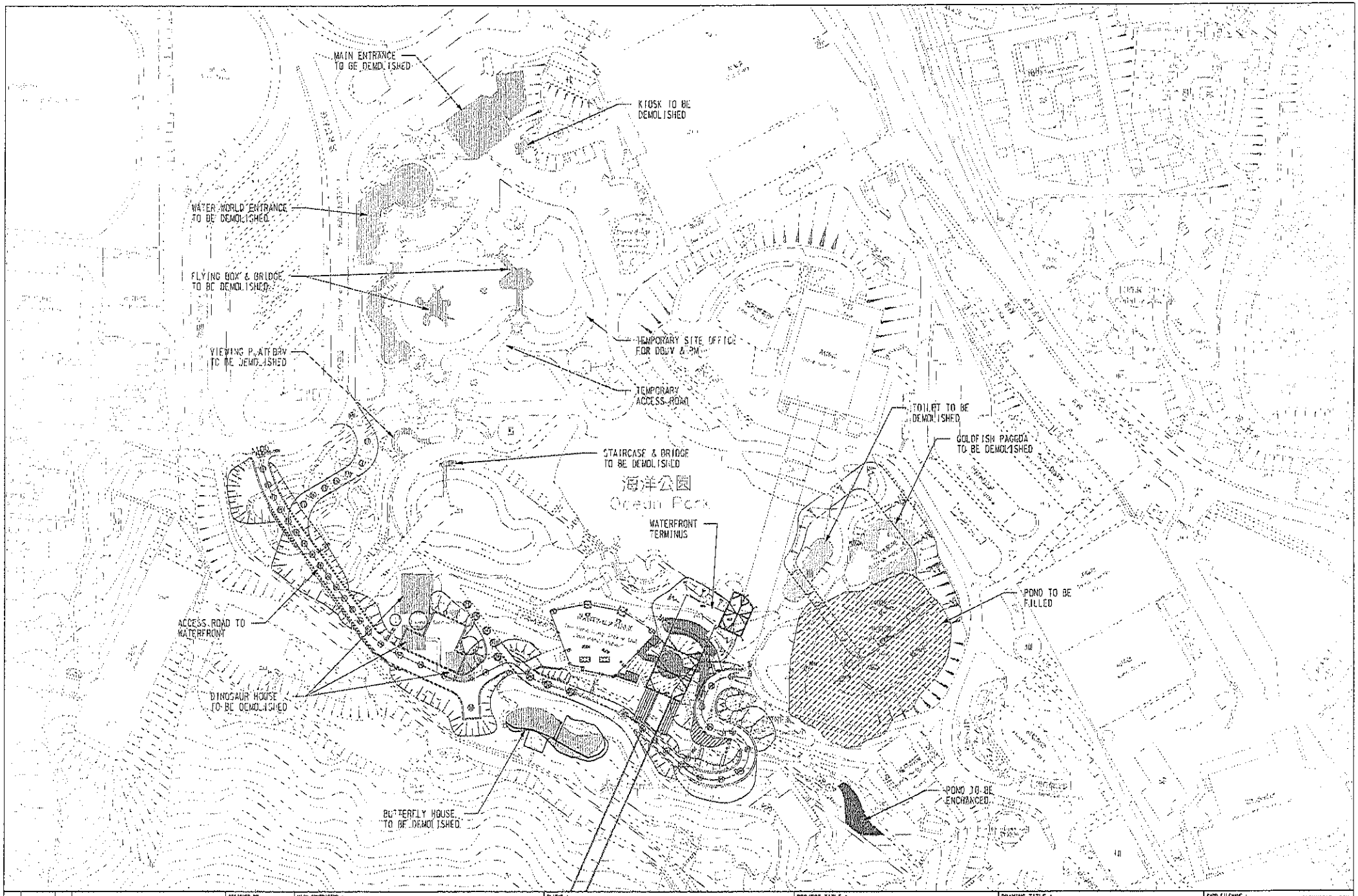


Figure 1.2



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A	02APR2007	GCh	FIRST ISSUE

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DRAWN BY	BLo
CHECKED BY	GCh
IN CHARGE	DNG
DATE	02APR2007

MAIN CONTRACTOR :
Dragages-Bouygues JV 實嘉-布依格聯營

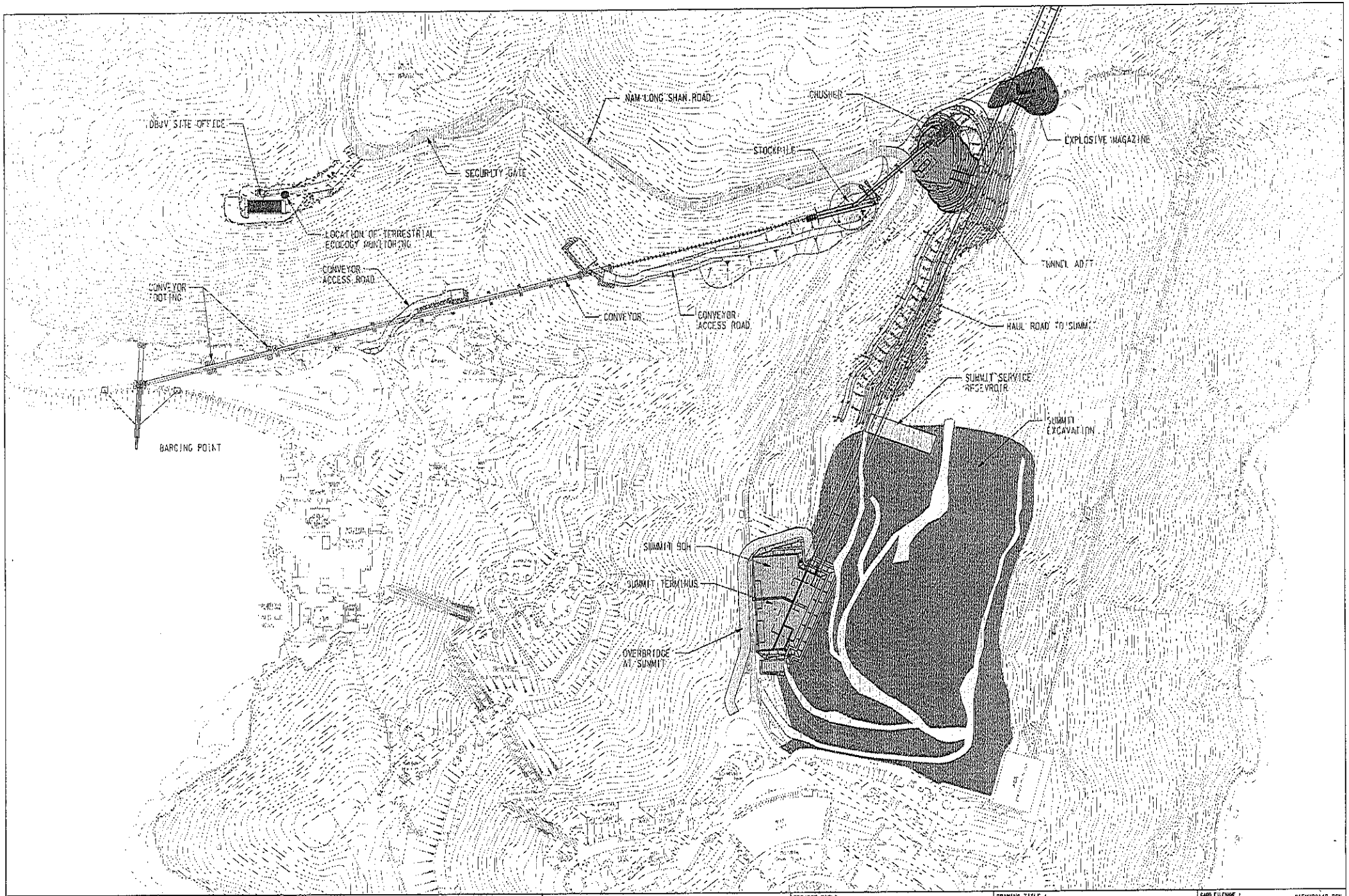
CLIENT :
西港海洋公園
OCEAN PARK HONG KONG

PROJECT TITLE :
OCEAN PARK REDEVELOPMENT
Contract No. CI05
Site Formation, Funicular Tunnel and Miscellaneous Works

DRAWING TITLE :
FIGURE 1.2
LAYOUT OF WORK SITE
(WATERFRONT)

CADD FILENAME :	01ENV0013A.DGN
DATE :	02APR2007
SCALE :	1 : 1500 @ A3
DRAWING NUMBER :	DBJV/CI05/01/ENV/0013
REV.	A

Figure 1.3



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B	20AUG2007	GCD	FIRST ISSUE
A	02AUG2007	GCD	FIRST ISSUE

DESIGNED BY BLO
DRAWN BY BLO
CHECKED BY GCD
QA CHARGE DBJV
DATE 02AUG2007

MAIN CONTRACTOR : Dragages-Bouygues JV 實嘉-布依格聯營

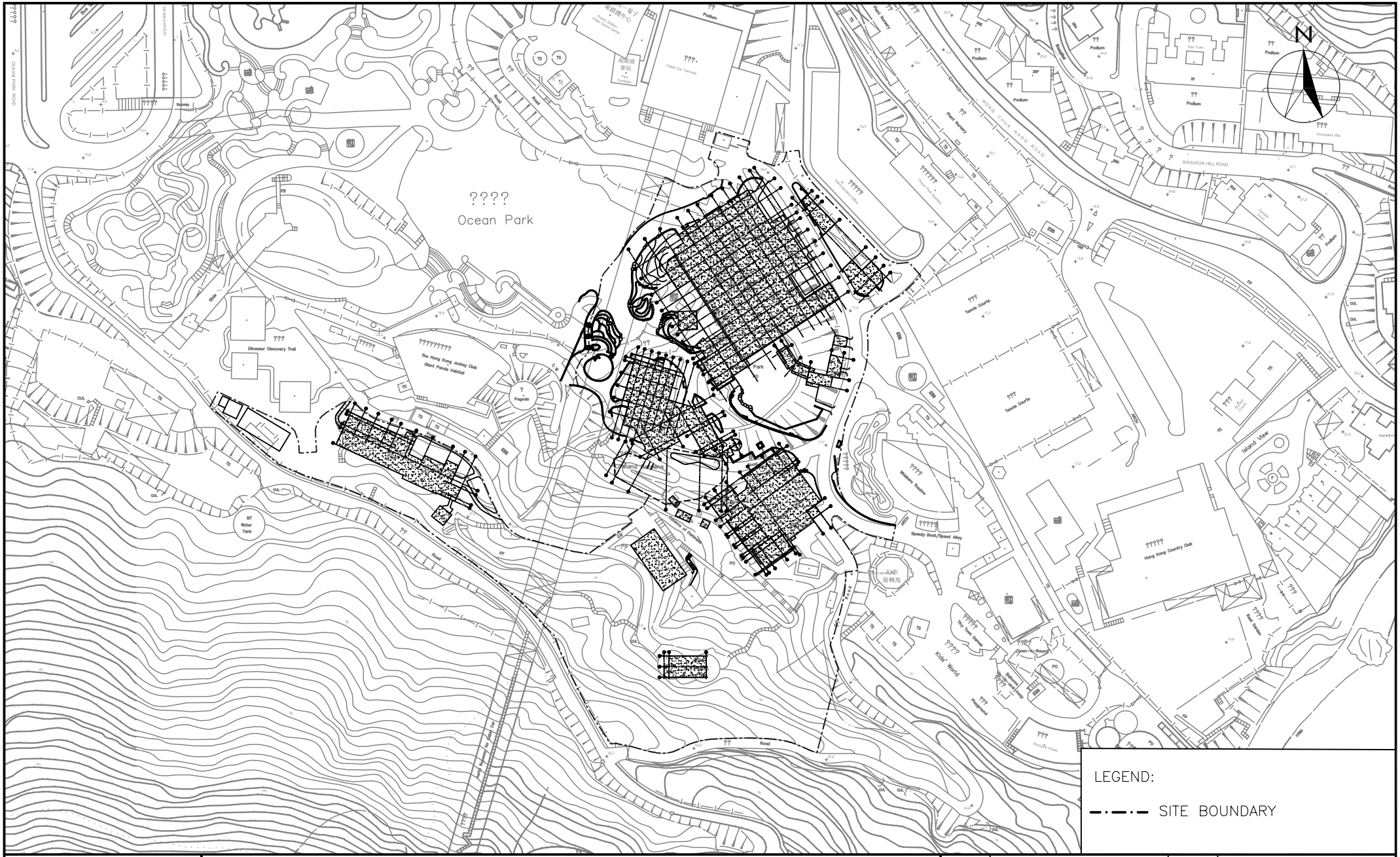
CLIENT : 香港海洋公園 OCEAN PARK HONG KONG

PROJECT TITLE : OCEAN PARK REDEVELOPMENT
Contract No. C105
Site Formation, Funicular Tunnel and Miscellaneous Works

DRAWING TITLE : FIGURE 1.3
LAYOUT OF WORK SITE (SUMMIT) AND LOCATION OF TERRESTRIAL ECOLOGY MONITORING

CADS FILENAME : DJENV0014B.DGN
DATE : 20AUG2007
SCALE : 1 : 2500 @ A3
DRAWING NUMBER : DBJV/C105/Q1/ENV/0014
REV. : B

Figure 1.4



CINOTECH
Cinotech Consultants Limited

CONTRACT NO. CW02
OCEAN PARK REDEVELOPMENT PROJECT – ASTOUNDING ASIA

SITE LAYOUT PLAN

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JOB No.	MA7025	DRAWING No. 1.1	REV –

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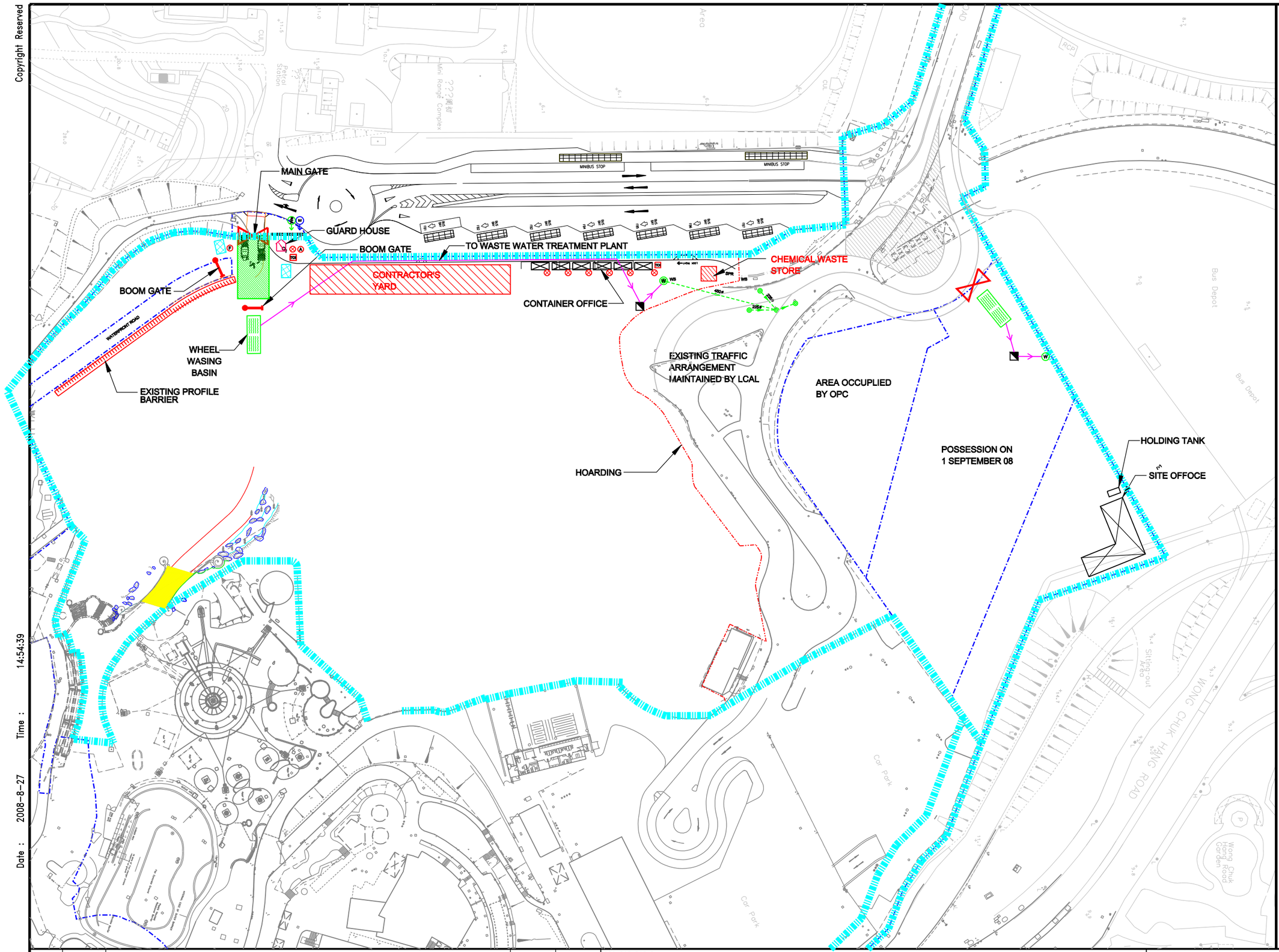
Figure 1.5



LEGENDS :

- CI07 SITE BOUNDARY
- WHEEL WASING BASIN
- GUARD HOUSE
- MAIN GATE
- BOOM GATE
- BUFFER ZONE FOR SECURITY CHECK & TURN AROUND AREA
- FIRE EXTINGUISHER
- HELMET STORAGE AREA
- (A) FIRST AID CENTRE
- NOTICE BOARD (INCLUDING EMERGENCY TELEPHONE LIST)
- (W) WASTE WATER DISCHARGE POINT
- WASTE WATER TREATMENT POINT (AQUASED)
- U-CHANNEL / DRAIN
- EVA TO BE KEPT CLEAR
- (Wa) TEMPORARY WATER SUPPLY
- (E) TEMPORARY ELECTRICITY SUPPLY
- (F) FLAGMAN LOCATION
- TOI TOILET
- ACCESS GIVEN
- ACCESS DENIED
- CHEMICAL WASTE STORE

REVISION	DATE	DESCRIPTION	CHK. BY	AUTH. BY
A	27-8-08	CONTRACTOR'S YARD & CHEMICAL WASTE STORE ADDED		

PROJECT TITLE
OCEAN PARK REDEVELOPMENT
CONTRACT No. CI07
ENTRY PLAZA, AQUA CITY & GRAND AQUARIUM

DRAWING TITLE
PROPOSED SITE ACCESS / SECURITY ARRANGEMENT

DESIGNED BY
DRAWN BY
CHECKED BY
SCALE @ A3 1 : 1250

LEIGHTON 禮頓

DRAWING NO. H2458/E/4003

DATE 12-8-2008

REV. A

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Date : 2008-8-27
Time : 14:54:39
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Figure 1.6

REV.	DESCRIPTION	DATE

海洋公園 OCEAN PARK HONG KONG

OCEAN PARK REDEVELOPMENT

CONTRACT NO.C107
ENTRY PLAZA,AQUA CITY & GRAND AQUARIUM

AIR QUALITY AND NOISE MONITORING STATIONS LOCATION PLAN

CONSULTANT

MAUNSELL | AECOM

Maunsell Consultants Asia Ltd.
茂盛(亞洲)工程顧問有限公司
In association with :
AEDAS EDAW LEVETT & BAILEY

LEIGHTON CONTRACTORS (ASIA) LTD.

SCALE	DATE
N.T.S.	27/03/2009
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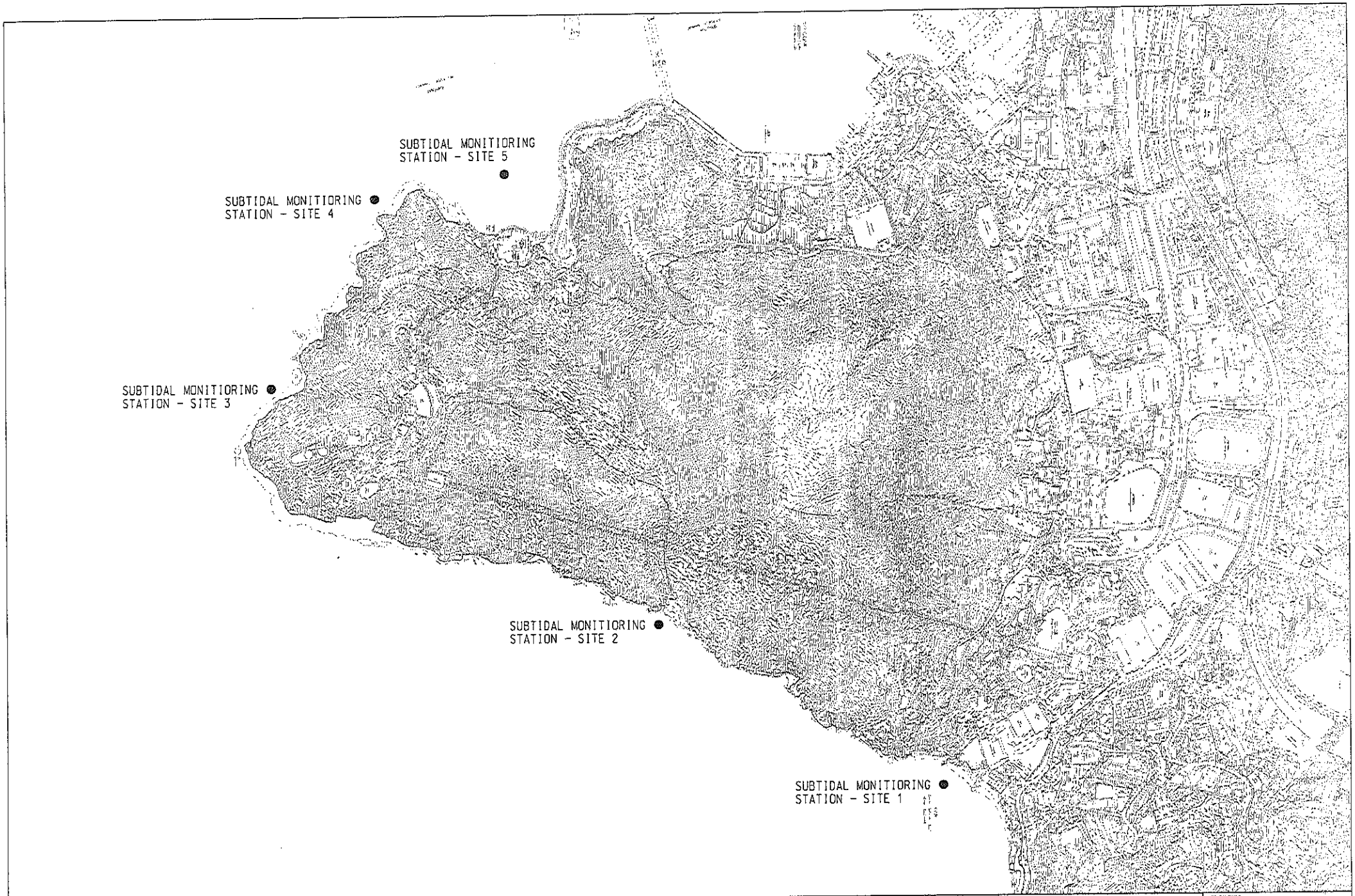
Figure 1.7



REV.	DATE	BY	DESCRIPTION
A	02APR2007	STG	FIRST ISSUE

DESIGNED BY STG
DRAWN BY GLO
CHECKED BY STG
IN CHARGE YTS
DATE 02APR2007

MAIN CONTRACTOR : Dragages-Bouygues JV 實嘉-布依格聯營

CLIENT : 香港海洋公園 OCEAN PARK HONG KONG

PROJECT TITLE :
OCEAN PARK REDEVELOPMENT
Contract No. C105
Site Formation, Funicular Tunnel and Miscellaneous Works

DRAWING TITLE :
FIGURE 5.1
LOCATIONS OF
SUBTIDAL MONITORING STATION

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DATE : 02APR2007
SCALE : 1 : 7500 @ A3
DRAWING NUMBER : DBJV/C105/01/ENV/0016
REV. A