MONTHLY ENVIRONMENTAL
MONITORING & AUDIT REPORT

Hongkong International Theme Parks Ltd

Environmental Monitoring and Audit for the Operation of The Hong Kong Disneyland Resort: *Monthly Environmental Monitoring and Audit Report for 73rd Operating Month (12 September 2011 – 11 October 2011)*

October 2011

Environmental Resources Management
21/F Lincoln House
979 King's Road
Taikoo Place
Island East, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
http://www.erm.com

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October 2011

Reference 0055800

For and on behalf of
ERM-Hong Kong, Limited

Approved by: Robin Kennish

Signed:

Position: Director

Certified by:
(Environmental Team Leader - Winnie Ko)

Date: 26 October 2011

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EXECUTIVE SUMMARY

Hongkong International Theme Parks Ltd (HKITP) started the operation of the Hong Kong Disneyland Resort on 12 September 2005. This is the seventy-third monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A work carried out during the period from 12 September 2011 to 11 October 2011 in accordance with the Operational EM&A Plan approved under EP-01/059/2000/B.

Summary of Major Activities during Reporting Period

The major activities undertaken in the Theme Park were operation of theme attractions, rides, fireworks displays, ancillary restaurants, retail shops and servicing facilities. Office work and regular maintenance of machinery within the Theme Park were also undertaken in the Back-of-House Area.

Changes Identified in this Reporting Period

There were no changes in the provision of service and environmental condition.

Summary of Breaches of A/L Levels

No exceedance of Action and Limit Levels for fireworks noise and fixed plant noise monitoring were recorded during this reporting period.

Waste Management

HKITP has followed the approved Operational Waste Management Plan (OWMP) for handling of municipal solid waste, chemical waste, grease trap waste, food waste, green waste and fireworks waste. A recycling programme has been implemented to collect various types of recyclables. HKITP has also implemented different waste minimisation measures for preventing waste generation at source.

Environmental Site Inspection

A joint environmental site inspection was carried out by the representatives of the HKITP and ET in this reporting period. The environmental performance for the different environmental issues (including air, water, noise, ecology and waste/chemical waste management) complied with environmental requirements and all necessary mitigation measures are properly implemented. No non-compliance in relation to the EIA recommendations was identified during the site inspection in this reporting period.

Environmental Complaint

No environmental complaint was received in this reporting period.

Environmental Non-compliance

No non-compliance associated with the operation of the resort was recorded in this reporting period.

No environmental summons was received in this reporting period.

Future Key Issues

Entertainment facilities and associated services within the Theme Park that will be provided in the coming monitoring period are the same as that provided in this reporting period. No potential environmental impacts are anticipated in the coming monitoring period.

1 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This is the Seventy-third Environmental Monitoring and Audit (EM&A) report which summarizes the monitoring results and audit findings for the EM&A programme for the operation of the Hong Kong Disneyland Resort (the Resort) during the reporting period from **12 September 2011** to **11 October 2011**.

1.2 PROJECT INFORMATION

The project background, duration, site description and management structure are all detailed in Section 2 of the first Monthly EM&A Report, and the organization and lines of communication with respect to environmental matter are shown in Section 1 of the fourteenth Monthly EM&A Report.

1.3 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : **Introduction**
details the scope and structure of the report.

Section 2 : **Environmental Monitoring Requirement**
summarizes the monitoring parameters, locations, dates, times, frequencies and durations, monitoring methodology in accordance with the requirement stipulated in the EIA report and Operational EM&A Plan.

Section 3 : **Monitoring Results**
summarizes the monitoring results, weather conditions, QA/QC results and the data analysis for this reporting period.

Section 4 : **Environmental Site Inspection**
summarizes the audit findings of the monthly site inspection undertaken within this reporting period and future key issues.

Section 5 : **Environmental Non-conformance**
summarizes any monitoring exceedance, non-compliances, environmental complaints and environmental summons within this reporting period.

Section 6 : **Conclusions and Recommendations**

2 ENVIRONMENTAL MONITORING REQUIREMENT

It was recommended in the Environmental Impact Assessment for "*Construction of an International Theme Park in Penny's Bay of North Lantau and its Essential Associated Infrastructures*" (EIA Report) and stated in the Operational EM&A Plan (Revision F) that operation monitoring associated with Resort operation should be conducted for the following parameters:

- Fireworks Air Quality for the first year of the operation
- Fireworks Noise and Fixed Plant Noise from Resort
- Waste Management
- Terrestrial Ecology (White Bellied Sea Eagles) for a 2–year period when the Theme Park Phase II fireworks displays are launched

The EM&A requirements for these parameters are summarised in this section.

2.1 *FIREWORKS AIR QUALITY*

Air quality monitoring during the first operational year was conducted once every 2 weeks in the first 2 months of operation and once every three months thereafter. Samples for RSP, barium, copper, and dioxins were collected over a 24-hour period, the same as in the baseline sampling. A total of eight sets of air monitoring were conducted in the first year of operation and the monitoring results are available on the Operational EM&A web-site for the Resort (http://www.themeparkatpennysbay-op.com.hk/). As recommended in the EIA Report, future monitoring programme after the first operational year should be developed based on the monitoring results in the first year of operation.

The Annual Review Report for the first year of operation with respect to air quality and the proposal of the monitoring program for the second year of operation was submitted to the Environmental Protection Department (EPD) on 21 November 2006, and the revised Operational EM&A Plan (Revision B) was approved by the EPD on 26 January 2007. Air quality monitoring during the third year of operation has been reviewed and the revised Operational EM&A Plan (Revision C) was approved by the EPD on 19 December 2007.

The air quality monitoring on the rooftop of Peng Lai Court, Peng Chau previously conducted in accordance with the approved EM&A Plan (Revision C) could no longer be carried out as the Owner's Corporation of Peng Lai Court refused the ET to conduct any air quality monitoring at the property. The rooftop of Peng Chau Fire Station was identified as the only suitable location for the air quality monitoring but the proposal was rejected by the Fire Services Department. With suitable monitoring locations in Peng Chau exhausted, only the air quality monitoring location at Discovery Bay would

remain. As a result of the above, the location for air quality monitoring in the EM&A programme was reviewed. EPD confirmed in its letter of 11 August 2008 that the department had no objection to the termination of air quality monitoring at Peng Lai Court as proposed in the revised Operational EM&A Plan (Revision D). Operational EM&A Plan (Revision E) was subsequently approved by the EPD on 21 November 2008. The latest Operational EM&A Plan (Revision F) was submitted on 27 October 2009 for EPD's approval, and was approved on 9 November 2009. The following sections describe the proposed monitoring programme for air quality during the sixth operational year of the Resort.

2.1.1 Monitoring Locations

The designated air quality monitoring locations are described in ***Table 2.1***.

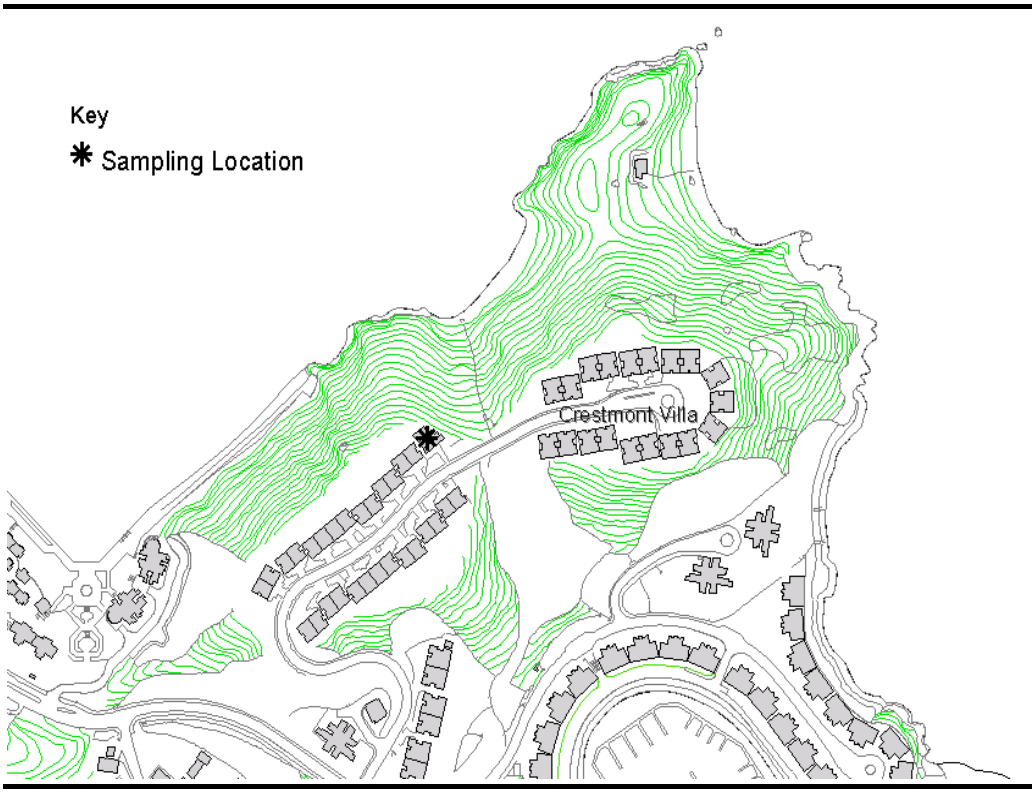
Table 2.1 Air Quality Monitoring Location

Station ID	Description
AM1	Rooftop of Crestmont Villa Management Office, Discovery Bay

AM1 - Crestmont Villa Management Office, Discovery Bay

Crestmont Villa Management Office (AM1) is a single storey high building, located approximately 2.7 km from the main launch area. The monitoring location was set at the rooftop approximately 5 m above the ground level, as shown in ***Figure 2.1***.

Figure 2.1 AM1 - Air Quality Monitoring Location at Discovery Bay



2.1.2 Monitoring Parameter and Equipment

Respirable Suspended Particulates

24-hour Respirable Suspended Particulates (RSP) monitoring was performed using an Anderson High Volume Sampler (HVS) equipment with PM_{10} inlet located at the designated monitoring location in Discovery Bay.

2.1.3 Monitoring Frequency and Duration

Sample for RSP was collected over a 24-hour period in accordance with the schedule as presented in ***Table 2.2***.

Table 2.2 Sampling Schedule for Air Quality Monitoring

Parameters	Sampling Time (hours)	Methodology	Frequency	Locations
RSP	24	USEPA Method IO-2.1	Once every three months throughout the sixth year of operation	AM1

2.1.4 RSP Sampling and Analytical Method

The measurement of RSP was conducted in accordance with USEPA method IO-2.1 (1). Air sample was drawn through an 8 x 10 inch glass fibre filter with measured flow rate over duration of 24 hours. The net weight of RSP collected by particulate filter was determined by gravimetric analysis. The level of RSP in μgm^{-3} was determined by dividing the total weight of particulate matters collected with the total standard volume of air sample.

A High Volume Sampler (HVS) was calibrated with a certified orifice type calibration kit. The filter was properly labeled and then sent to the laboratory of the Hong Kong Productivity Council (HKPC). The filter was equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3°C; the relative humidity (RH) was < 50% and not variable by more than ± 5%. A convenient working RH was 40%. Glass fibre filter was conditioned prior to the initial and final weighing.

2.2 COMPLIANCE ASSESSMENT

The Action and Limit levels for 24-hour RSP monitoring are presented in ***Table 2.3***.

(1) Reference to http://www.epa.gov/ttn/amtic/files/ambient/inorganic/mthd-2-1.pdf

Table 2.3 Action and Limit Levels for Air Quality Monitoring

Monitoring Station	24-hour RSP (μg/m³)	
	Action Level	Limit Level
AM1	106	180

2.3 FIREWORKS NOISE AND FIXED PLANT NOISE

During the operational phase, it is recommended that noise monitoring is undertaken at one on-site location and two off-site locations in order to assess fixed plant noise and noise from the fireworks displays respectively. The following sections describe the requirements for noise monitoring during the operational phase of the park.

2.3.1 Monitoring Locations

The noise monitoring locations are summarised in ***Table 2.4***.

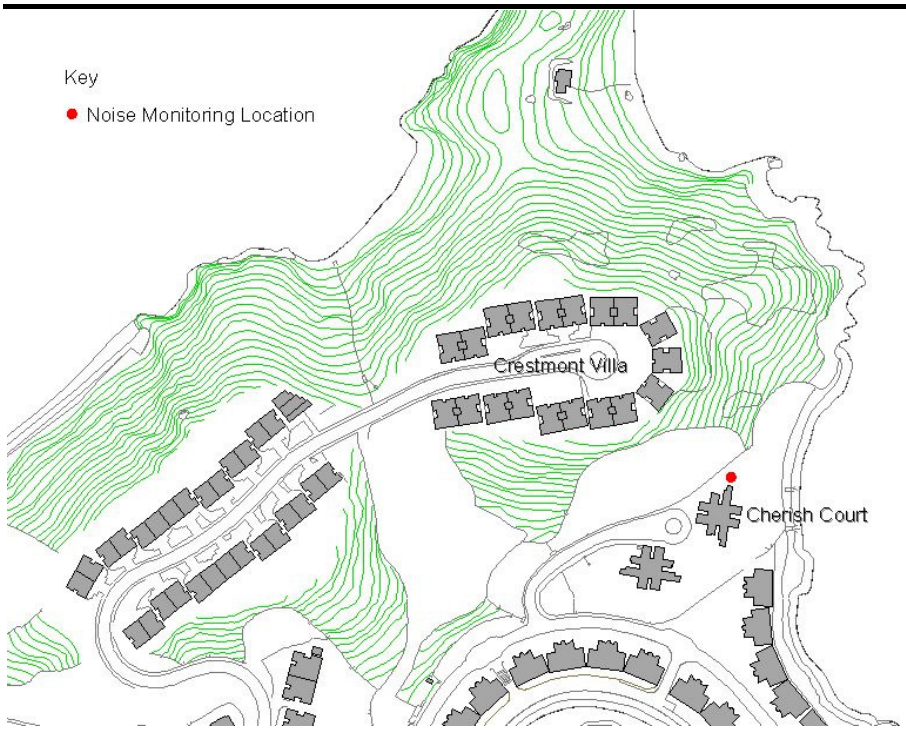
Table 2.4 Noise Monitoring Station

NSR No.	Identity/Description	Parameters
NM1	Rooftop of Cherish Court, Discovery Bay	Noise from Fireworks
NM2	Tai Lei, Peng Chau	Noise from Fireworks
NM4	Rooftop of the Central Maintenance Building	Fixed plant noise

NM1 - Rooftop of Cherish Court, Discovery Bay

Cherish Court is located approximately 2.4 km from the main launch area. The façade measurement location was set at rooftop of Cherish Court approximately 53 m above the ground level, with an unobstructed view over looking HKDL. The monitoring location of the equipment set up is presented in ***Figure 2.2***.

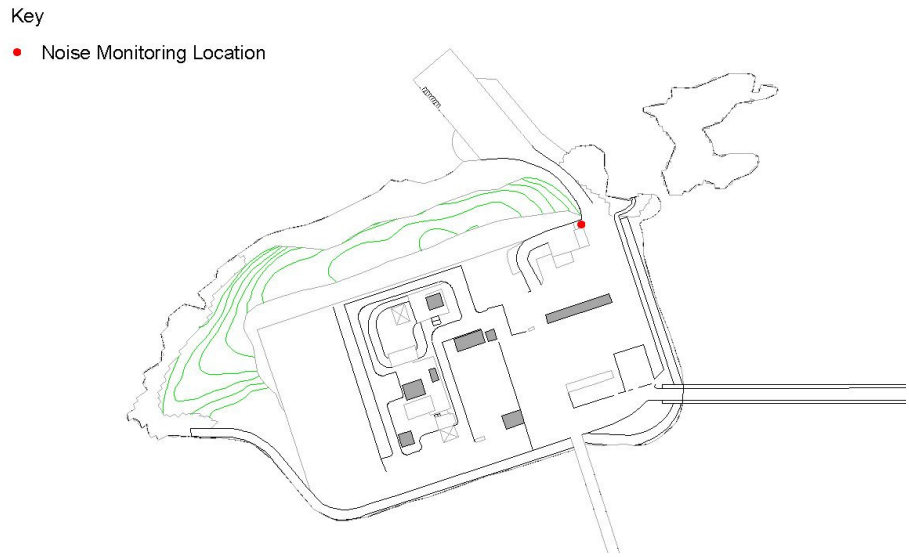
Figure 2.2 ***NM1 – Rooftop of Cherish Court, Discovery Bay***



NM2 - Tai Lei, Peng Chau

The Tai Lei, Peng Chau is located approximately 2.7 km from the main launch area. The facade measurement location was set at 1.2 m above the ground level with a direct view over looking HKDL. The monitoring location of the equipment set up is presented in ***Figure 2.3***.

Figure 2.3 ***NM2 – Tai Lei, Peng Chau***



NM4 – Rooftop of the Central Maintenance Building

The rooftop of the Central Maintenance Building is about 9m above ground levels and will have an unshielded position overlooking the Resort. The monitoring location of the equipment set up is presented in ***Figure 2.4***.

Figure 2.4 NM4 – Rooftop of Central Maintenance Building

2.3.2 *Monitoring Parameters*

Fixed Plant Noise

For fixed plant noise, six consecutive monitoring of $L_{Aeq, 5\ min}$ reading were carried out to calculate the $L_{Aeq, 30\ min}$ noise level.

Fireworks Noise

For fireworks noise, a $L_{Aeq, 15min}$ measurement was taken for the 15 minutes timeframe that included all fireworks noise levels. Any significant influences on the measured noise levels were taken into account in accordance with standard acoustical principles and practices. The Corrected Noise Level created by the fireworks was computed based on the Background Noise Level and Measured Noise Level.

2.3.3 Monitoring Frequency and Duration

Following any significant changes to the park's operations or fireworks displays (such as the introduction of a new ride or a change in the type or number of fireworks included within the display), fixed plant noise and fireworks noise monitoring will be undertaken once every six days for one month to ensure compliance with the noise criteria. At all other times, noise monitoring of fixed plant and fireworks noise will be undertaken once a month.

The monitoring programme is presented in ***Table 2.5***.

Table 2.5 Sampling Schedule for Noise Monitoring

Parameters	Sampling Time	Methodology	Frequency	Locations
Firework Noise	$L_{Aeq, 15min}$ before, during and after the firework show within the period of 19:00 to 21:30	IEC 651:1979 and 804:1985 (Type 1)	• once every 6 days for the first month of operation, thereafter once every month throughout the operation. • monitoring will be undertaken once every six days for one month when there is a new ride or a change in the type or number of fireworks included within the display	NM1 & NM2
Fixed Plant Noise	6 consecutive monitoring of $L_{Aeq, 5 min}$ before 19:00	IEC 651:1979 and 804:1985 (Type 1)		NM4

2.3.4 Monitoring Methodology

Facade noise measurements were carried out at NM1 and NM2. The sound level meters and calibrator used for the noise monitoring, as listed in ***Table 2.6*** below, complies with IEC 651: 1979 and 804:1985 (Type 1) specification. Both microphones were positioned at 1m from a facade, which have a direct line of sight to the Resort perimeter.

Fixed plant noise monitoring was conducted within non-fireworks hours in accordance with the methodology stated in the Operational EM&A Plan (Revision F).

Table 2.6 Noise Measurement Equipments

Monitoring Location		Monitoring Equipment
NM1	Cherish Court, Discovery Bay	Solo 01 Premium Sound Level Meter SVAN SV30A calibrator
NM2	Tai Lei, Peng Chau	Black solo 01 integrator sound level meter 01dB-Metravlb Cal 21 calibrator
NM4	Central Maintenance Building	Solo 01 Premium Sound Level Meter SVAN SV30A calibrator

Noise monitoring was conducted with reference to the calibration and measurement procedures as stated in the *Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM)*. Immediately prior to and following each noise measurement the accuracy of the monitoring equipments was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were accepted as the calibration level from before and after the noise measurement agree to within 1.0 dB.

The sound level meters and acoustic calibrator were calibrated by a HOKLAS accredited laboratory at the frequency of every two years. The relevant calibration certificates are presented in ***Annex A***.

Noise measurements were made without the presence of fog and rain, and with steady wind speed and gusts not exceeding 5ms^{-1} and 10 ms^{-1}, respectively in accordance with international standards and practices [1]. Broadband measurement of L_{Aeq}, L_{10}, L_{90}, L_{max} and L_{min} has been recorded at 100ms interval.

2.3.5 Compliance Assessment

Fireworks Displays

During monitoring, a detailed log of noise event was undertaken to record down any significant extraneous noise activities. The noise measurement was conducted in accordance with the agreed monitoring methodology which was adopted in the monitoring during trial fireworks displays. Any significant influences on the measured noise levels were taken into account in accordance with standard acoustical principles and practices. The corrected noise level, which will be the noise level generated by the Fireworks Show at HKDL, will then be compared against the maximum noise level of $L_{eq,\ 15\ min}$ 55dB(A) at NM1 and NM2 as recommended in the EIA and stated in the Operational EM&A Plan (Revision F). HKITP will adopt $L_{eq,\ 15\ min}$ 55dB(A) as the Limit Level.

Fixed Plant Noise

As recommended in the EIA and stated in the Operational EM&A Plan (Revision F), HKITP will adopt the maximum fixed plant site perimeter noise level (ie Limit Level) of $L_{eq(30\ minute)}$ 75 dB(A) at the perimeter of the Resort (NM4). HKITP will follow the Action and Limit (A/L) Levels as recommended in EIA which are summarised in ***Table 2.7***.

[1] ISO 11819-1:1997 and ISO/FDIS 13472-1:2001

Table 2.7 Action and Limit Levels for Fixed Plant Noise Monitoring

Parameter	Action Level	Limit Level
Fixed Plant Noise	When one documented complaint is received from any one of the sensitive receivers	$L_{eq\ (30\ min)}$ 75 dB(A)

2.4 WASTE MANAGEMENT

The potential environmental impacts associated with the handling and disposal of waste arising from the resort operations have been assessed in the EIA. In accordance with the requirement stipulated in Condition 3.21 of the EP-01/059/2000/B, an Operation Waste Management Plan (OWMP) shall be submitted to EPD for approval at least one month before the Project commences operation. The OWMP was prepared by the HKITP and submitted to EPD and obtained approval on 12 August 2005. The OWMP included waste avoidance measures, material recovery and recycling programme and waste management audit framework. With the implementation of the OWMP, the EIA has concluded that minimal environmental impacts are anticipated for the handling, storage, treatment and disposal of waste arising from the Resort operations.

2.4.1 *Monitoring and Audit on the Implementation of Mitigation Measures*

It is recommended that auditing of each waste stream should be carried out periodically to determine if wastes are being managed in accordance with the approved OWMP. The objectives of the waste management monitoring and audit are:

- to ensure the wastes are handled, collected, stored and transferred and disposed of in compliance with the Waste Disposal Ordinance and the relevant regulations, and
- to ensure the waste management plan, in particular the environmental mitigation measures, is implemented properly and effectively.

The monitoring and audit covered the waste handling, recycling and disposal procedures within the Resort, as well as off-site sorting facility and the composting facility. Records identifying the waste arisings, the nature and composition of materials, the quantities of materials reduced, reused, recycled and otherwise recovered were kept for monitoring to check the effectiveness of waste reduction measures implemented. Summary of the waste monitoring and audit results for this reporting period is given in *Section 3.3*.

2.5 TERRESTRIAL ECOLOGY

The EIA summarised that during the operational phase there exists the potential for the White-bellied Sea Eagles to abandon their nesting site due to noise from the laser shows (which will not be undertaken on opening day program) and the fireworks shows. The EIA also stated that "human

interference impact identified may be mitigated by the further prohibition of human access during Project operation by secure fencing of the site". It was also recommended to extend the monitoring programme to monitor the reaction of these birds to the fireworks shows.

It was agreed between HKITP, CEDD and EPD that monitoring of White-bellied Sea Eagle would be conducted by CEDD and the monitoring results will be distributed to HKITP until completion of Government's works in the Penny's Bay Development Area. Construction works for Penny's Bay Reclamation Stage 2 were completed in February 2008. Monthly terrestrial ecological monitoring by CEDD was terminated after February 2008 with the approval from EPD. The need for the monitoring of White-bellied Sea Eagles by HKITP after completion of CEDD's works was agreed with EPD on 27 June 2008, and the monitoring of White-bellied Sea Eagles will be conducted for a 2-year period when the Theme Park Phase II fireworks displays are launched.

2.6 MARINE ECOLOGY

The EIA concluded that operational impacts to marine ecological resources may occur through disturbances to water quality due to changes in the hydrodynamic regime (note however that the water quality assessment in the EIA predicted "no adverse impacts"). It was also predicted in the EIA that there will be an increase in the number of vessels travelling between Victoria Harbour and Penny's Bay. The EIA concluded that these vessels will not be travelling at high speed and as the area is not identified as critical habitat to the Indo-Pacific Humpback Dolphin, unacceptable impacts are not predicted with the implementation of mitigation measures.

The EIA proposed a construction/operation dolphin/porpoise monitoring programme be established to evaluate whether the works had any effect on the mammals. It has been agreed between HKITP, CEDD and EPD that monitoring of dolphin/porpoise will be conducted by CEDD and the monitoring results will be distributed to HKITP until completion of Government's works in the Penny's Bay Development Area. Dredging activities for Penny's Bay Reclamation Stage 2 was completed in December 2005. Filling of sand and sorted public fill was also completed on 30 July 2007 and 13 June 2007 respectively. Monthly marine ecological monitoring by CEDD was terminated after December 2007 with the approval from EPD. The need for continued monitoring of marine mammals by HKITP after the completion of CEDD's works was agreed with EPD on 27 June 2008, and further monitoring of marine ecology (dolphin/porpoise) would be continued for one year starting from the 35th reporting period to the 46th reporting period (inclusive). HKITP has proposed, in consultation with AFCD, to terminate the monitoring of marine mammals after July 2009. The proposal was submitted on 6 August 2009 for EPD's approval. The Operational EM&A Plan (Revision F) was submitted on 27 October 2009 to EPD for approval, and was approved on 9 November 2009.

3 MONITORING RESULTS

3.1 AIR QUALITY

No air quality monitoring was scheduled during this reporting month. The trend of monitoring results since the operation of the Hong Kong Disneyland Resort is plotted in ***Annex B***.

3.2 FIREWORKS NOISE AND FIXED PLANT NOISE

In accordance with the sampling schedule for noise monitoring as prsented in ***Table 2.5***, one round of fireworks noise monitoring and fixed plant noise monitoring was conducted during this reporting period. The fireworks and fixed plant noise levels at the monitoring locations are given in ***Tables 3.1*** and ***3.2*** and graphically presented in ***Annexes C*** and ***D*** respectively.

No exceedance of the Action and Limit Level of fireworks noise and fixed plant noise was recorded at the monitoring stations during this reporting period.

Table 3.1 Fireworks Noise Monitoring Results

Location	Date	Time Period, hrs	$L_{eq\ 15mins}$, dB(A) - ambient before	$L_{eq\ 15mins}$, dB(A) - ambient after	$L_{eq\ 15mins}$, dB(A) - average ambient	$L_{eq\ 15mins}$, dB(A) – Measured noise level	$L_{eq\ 15mins}$, Corrected noise levels
NM1 - Cherish Court, Discovery Bay	20 September 2011	19:19:00 - 20:03:59	53.6	53.9	53.7	57.7	55.4
NM2 - Tai Lei, Peng Chau	20 September 2011	19:18:20 – 20:03:19	52.6	52.5	52.5	53.1	44.5

Table 3.2 Fixed Plant Noise Monitoring Results

Location	Date	Time Period, hrs	Measured Noise Levels, dB(A)				
			L_{eq}	L_{min}	L_{max}	L_{90}	L_{10}
NM4 - Central Maintenance Building	6 October 2011	14:53:23 – 15:23:22	67.9	63.7	70.4	85.9	61.0

3.3 WASTE MONITORING

HKITP has followed the approved Operational Waste Management Plan (OWMP) on procedures for handling of municipal solid waste, chemical waste, grease trap waste, food waste, green waste and fireworks waste.

Reference has been made to the waste flow tables prepared by waste collectors and the quantities of different wastes collected, disposed of or recycled are summarized in ***Table 3.3***.

Apart from the above quantities of waste recycled, HKITP has implemented various waste minimisation measures from the start of operation, which prevented waste generation at source. These contributed to the overall amount of waste "diverted" from landfill disposal. These measures include use of reusable utensils, tableware & trays instead of disposables in some of the fast-food outlets; use of fast-action hand dryers in lieu of paper towels in most public wash room facilities; use of reusable delivery cages, totes and wagons as opposed to wooden pallets and paper cardboard box for distribution of merchandise and food materials from the central distribution center to various outlets within the Theme Park; use of rechargeable batteries rather than disposable ones wherever possible; and recycle used rechargeable batteries; etc.

Table 3.3 Quantities of Different Waste

	Quantity, tonnes / kg				
Month / Year	Municipal Solid Waste [a]	Recyclable Materials [b]	Food Wastes collected / Waste collected for Composting [c]	Wastes Avoided [d]	Chemical Waste [e]
29 Aug 11– 25 Sept 11	394.5 tons	51.4 tons	10.1 tons	8.2 tons	117.6 kg

Notes:

(a) Waste disposal reports dated between 29 August 2011 – 25 September 2011 was provided by HKITP's waste management vendor on bi-weekly basis.

(b) Recyclable materials (paper, cardboard, plastics, metals, used kitchen oil, toner cartridges, electronic wastes and glass beverage bottles) were collected by third party recyclers. 463 pieces of toner was recycled in the quarter between July 2011 and September 2011 in addition to 54.1 tons of recyclable materials collected.

(c) 9.5 tons of food waste was collected by recycler during 29 August 2011 – 25 September 2011 and 0.6 tons of green waste was collected for composting.

(d) The quantity of wastes avoided in this reporting period is estimated based on a few selected representative measures being implemented which include: the use of reusable containers instead of disposables in the fast food outlets; minimisation of packaging provided for the merchandise items; and the provision of electric hand dryers instead of paper towels in washrooms in the theme park.

(e) A registered chemical waste collector has been engaged for the collection of chemical wastes for disposal or recycling at licensed facilities.

3.4 TERRESTRIAL ECOLOGY

The need for the monitoring of White-bellied Sea Eagles by HKITP after completion of CEDD's works has been agreed with EPD on 27 June 2008, and the monitoring of White-bellied Sea Eagles will be conducted for a 2-year period when the Theme Park Phase II fireworks displays are launched.

No White-bellied Sea Eagle monitoring was conducted during the reporting month.

3.5 MARINE ECOLOGY

The need for continued monitoring of marine mammals by HKITP after the completion of CEDD's works was agreed with EPD on 27 June 2008, and the monitoring of dolphin/porpoise would be continued twice per month for one

year starting from the 35th reporting period to the 46th reporting period (inclusive) following the monitoring methodology adopted by CEDD. HKITP has proposed, in consultation with AFCD, to terminate the monitoring of marine mammals after July 2009. The proposal was submitted on 6 August 2009 for EPD's approval. The Operational EM&A Plan (Revision F) was submitted on 27 October 2009 to EPD for approval, and was approved on 9 November 2009.

No marine mammal monitoring was conducted during the reporting month.

4 ENVIRONMENTAL SITE INSPECTION

Based on the Operational EM&A Plan (Revision F), site inspection is to be carried out by the ET once per reporting period. A joint environmental site inspection was, therefore, carried out by the representatives of the HKITP and ET on 61 October 2011.

The major activities undertaken in the Theme Park are the operation of theme park attractions, rides, fireworks displays, ancillary restaurants, retail shops and servicing facilities. Office work and regular maintenance of machinery within the Theme Park is also undertaken in the Back-of-House Area.

The environmental performance for the different environmental issues (including air, water, noise, ecology and waste/chemical waste management) complied with environmental requirements and all necessary mitigation measures were properly implemented. The HKITP has implemented environmental mitigation measures and requirements as stated in the EIA Report, the Environmental Permit and Operational EM&A Plan (Revision F). The implementation status of recommended mitigation measures under the EP during this reporting period is summarized in ***Annex E***.

The main observations during the site inspection are summarized as follows:

- Kitchens of selected restaurants within the Theme Park were audited. Special containers were provided for the collection of food wastes and other recyclable materials. The food wastes were collected and delivered to the off-site recycling facility for recycling.

No non-compliance in relation to the EIA recommendations was identified during the site inspection in this reporting period and therefore no further actions are required. The ET will keep track of the EM&A programme to check compliance with environmental requirements and the proper implementation of all necessary mitigation measures.

4.1 FUTURE KEY ISSUES

Entertainment facilities and associated services within the Hong Kong Disneyland Resort to be provided in the coming monitoring period will be the same as that provided in this reporting period. No potential environmental impacts are anticipated in the next monitoring period.

5 ENVIRONMENTAL NON-CONFORMANCE

5.1 SUMMARY OF MONITORING EXCEEDANCE

No monitoring exceedance was recorded in this reporting period.

5.2 SUMMARY OF ENVIRONMENTAL COMPLAINT

No environmental complaint was received in this reporting period.

5.3 SUMMARY OF ENVIRONMENTAL SUMMONS AND SUCCESSFUL PROSECUTION

No summons was received in this reporting period.

6 CONCLUSIONS

This Environmental Monitoring and Audit (EM&A) Report presents the EM&A work undertaken during the period from 12 September2011 to 11 October 2011 in accordance with Operational EM&A Plan (Revision F) and the requirement under Environmental Permit EP-01/059/2000/B.

Monitoring of firework noise and fixed plant noise was carried out at designated monitoring stations during this reporting period and there were no monitoring exceedances recorded in this reporting period.

Waste management procedures recommended in the approved Operational Waste Management Plan (OWMP) were implemented.

The environmental performance for the different environmental issues (including air, water, noise, ecology and waste/chemical waste management) complied with environmental requirements and all necessary mitigation measures were properly implemented. No non-compliance in relation to the EIA recommendations was identified during the site inspection in this reporting period. No complaint or summons was received during this reporting period.

Annex A

Calibration Certificates for Sound Level Meters

AREVA

CERTIFICAT DE CONFORMITE
CONFORMITY CERTIFICATE

Nous, fabricant
We, manufacturer

01dB-Metravib
200, Chemin des Ormeaux
F 69578 LIMONEST Cedex- FRANCE

déclarons sous notre seule responsabilité que le produit suivant :
declare under our own responsibility that the following equipment :

Désignation : *Designation :*	**Sonomètre** ***Sound-level meter***
Référence : *Reference :*	BLACK SOLO 01
Numéro de série : *Sérial Number :*	65225

est conforme aux dispositions des normes suivantes :
complies with the requirements of the following standards :

	Norme *Standard*	Classe *Class*	Edition du *Edition of*
Sonomètre : ***Sound-level meter :***	IEC 60651	1	10-2000
	IEC 60804	1	10-2000
	IEC 61672-1	1	05-2002
	IEC 1260	1	07-1995
	ANSI S1.11		2004
	ANSI S1.4	1	2001

et répond en tout point, après vérification et essais, aux exigences spécifiées, aux normes et règlements applicables, sauf exceptions, réserves ou dérogations énumérées dans la présente déclaration de conformité.

After testing and verification, this device satisfies all specified requirements and applicable standards and regulations barring exceptions, reservations, or exemptions listed in this certificate of conformity.

Date
Date

03/05/11

Responsable métrologique du laboratoire
The metrological head of the laboratory

Philippe POURTAU

AREVA

CONSTAT DE VERIFICATION
VERIFICATION CERTIFICATE

N° CV-DTE-T-11-PVE-54040

ENVIRONMENTAL RESOURCE MANAGEMENT

DELIVRE A :
ISSUED FOR :

INSTRUMENT VERIFIE
CHECKING INSTRUMENT

Désignation : *Designation :*	Sonomètre Intégrateur *Integrator Sound Level Meter*		
Constructeur : *Manufacturer :*	01dB-Metravib		
Type : *Type :*	BLACK SOLO 01	N° de serie : *Serial number :*	65225
		N° d'identification : *Identification number*	
		Date d'émission :	03/05/11

Ce constat comprend 6 pages
This certificate includes *pages*

LE RESPONSABLE METROLOGIQUE
DU LABORATOIRE
THE METROLOGICAL HEAD OF THE LABORATORY

Philippe POURTAU

01dB-Metravib
Siège social : 200, Chemin des Ormeaux • F - 69578 Limonest Cedex
Tel.+33 (0)4 72 52 48 00 • Fax.+33 (0)4 72 52 47 47
www.01db-metravib.com
SAS au capital de 3 915 810€ - SIRET 400 869 708 00019 - 400 869 708 RCS Lyon - APE 742 D - TVA FR 82 400 869 708

IDENTIFICATION:
IDENTIFICATION

	Sonomètre *Sound level meter*	Préamplificateur *Preamplifier*	Microphone *Microphone*
Constructeur : *Manufacturer*	01dB-Metravib	01dB-Metravib	01dB-Metravib
Type : *Type*	BLACK SOLO 01	PRE 21 S	MCE 212
Numéro de série : *Serial number*	65225	15657	43849

PROGRAMME DE VERIFICATION :
CHECKING PROGRAM

Ce Sonomètre a été vérifié sur les caractéristiques suivantes :

- Réponse en fréquence du sonomètre seul en champ libre
- Linéarité
- Pondérations fréquentielles A-B-C-Z
- Bruit de fond
- Indicateur de surcharge
- Filtre 1/1 et 1/3 octave

The Sound level meter has been checking on different caracteristic:

- *Free field frequency response of the sound level meter*
- *Linearity*
- *A-B-C-Z Weighting*
- *Background noise*
- *Overload indicator*
- *1/1 and 1/3 Octave filter*

METHODE DE VERIFICATION :
CHECKING METHOD

L'appareil est vérifié dans une salle climatisée à 23°C +/- 5°C. Les autres caractéristiques sont étalonnées avec un multimètre et un générateur étalonnés en amplitude et en fréquence.

The instrument is checked in a air conditionning room at 23 °C +/- 5°C.
The others caracteristics are checked with multimeter and generator calibrated in amplitude and in frequency.

CONDITIONS DE VERIFICATION :
CHECKING CONDITIONS

Date de l'étalonnage : *Date of Calibration*	03/05/2011
Nom de l'opérateur : *Operator Name*	Olivier Hiesse
Instruction d'étalonnage : *Calibration instruction*	P118-NOT-01-02.doc
Pression atmosphérique : *Static pressure*	98,83 kPa
Température : *Temperature*	24 °C
Taux d'humidité relative : *Relative humidity*	49,6 %HR

MOYENS DE MESURES UTILISES POUR LA VERIFICATION:
INSTRUMENTS USED FOR CHECKING

Désignation *Designation*	Constructeur *Manufacturer*	Type *Type*	N° de série *Serial number*	N° d'identification *Identification number*
Générateur de fonction / Waveform generator	Hewlett-Packard	HP 33120 A	US 36045991	1162
Calibreur acoustique / Calibrator	01 dB-Metravib	CAL21	50442122	1431
Atténuateur / Attenuator	01 dB-Metravib	---	---	1267
Atténuateur / Attenuator	01 dB-Metravib	---	---	1114
Multimètre / Multimeter	Hewlett-Packard	HP 34401 A	3146A24774	1407
Multimètre / Multimeter	Hewlett-Packard	HP 34401 A	US36138775	1160
Microphone / Microphone	Aksud	3201	49435	1119
Préamplificateur / Preamplifier	01 dB-Metravib	PRE 12 H	20453	1435
Amplificateur / Amplifier	Gras	12AA	---	1494
Chambre sourde / Anechoic chamber	01 dB-Metravib	---	---	1080
Calibreur acoustique / Calibrator	AKSUD	5117	---	1130
Générateur de fonction / Waveform generator	Philips	PM 5191	NC 9445 05191001 NO	1001

Tous les moyens de mesure utilisés sont raccordés aux étalons de référence de la société 01dB. Les étalons de référence de la société 01dB sont raccordés aux étalons nationaux par un étalonnage COFRAC. La liste de ces étalons est disponible sur simple demande auprès du responsable métrologique du laboratoire.

All the measuring instruments are calibrated to the 01dB reference standard. 01dB reference standard are calibrated to national standard with COFRAC certificate of calibration. The reference standard list is available on simple request to the metrological head of the laboratory.

RESULTATS :
RESULTS

Le jugement de conformité de chaque test est établi suivant les tolérances données dans les normes suivantes :
Conformity decision has been taken with the tolerances descriptions in the following standards :

IEC 60651 (10/2000) classe 1
IEC 60804 (10/2000) classe 1
IEC 1260 (07/1995) classe 1

Réponse en fréquence du sonomètre seul en champ libre
Free field frequency response of the sound level meter

Description *Description*	Résultat *Result*
Réponse en champ libre du sonomètre *Free field frequency response of the sound level meter*	Conforme *Conform*

Linéarité
Linearity

Description *Description*	Résultat *Result*
Linéarité *Linearity*	Conforme *Conform*

Pondérations fréquentielles A-B-C-Z
A-B-C-Z Weighting

Description *Description*	Résultat *Result*
Pondération fréquentielle A-B-C-Z *A-B-C-Z Frequency weighting*	Conforme *Conform*

Bruit de fond
Background noise

Description *Description*	Résultat *Result*
Bruit de fond *Noise level*	Conforme *Conform*

Description *Description*	Résultat *Result*
Bruit de fond filtre 1/1 Octave *1/1 Octave filter Noise level*	Conforme *Conform*

Description *Description*	Résultat *Result*
Bruit de fond filtre 1/3 Octave *1/3 Octave filter Noise level*	Conforme *Conform*

Indicateur de surcharge
Overload indicator

Description *Description*	Résultat *Result*
Indicateur de surcharge *Overload Indocator*	Conforme *Conform*

Filtre d'octave
1/1 Octave filter

Description *Description*	Résultat *Result*
Fréquence centrale filtre 1/1 octave *1/1 Octave filter central frequency attenuation*	Conforme *Conform*

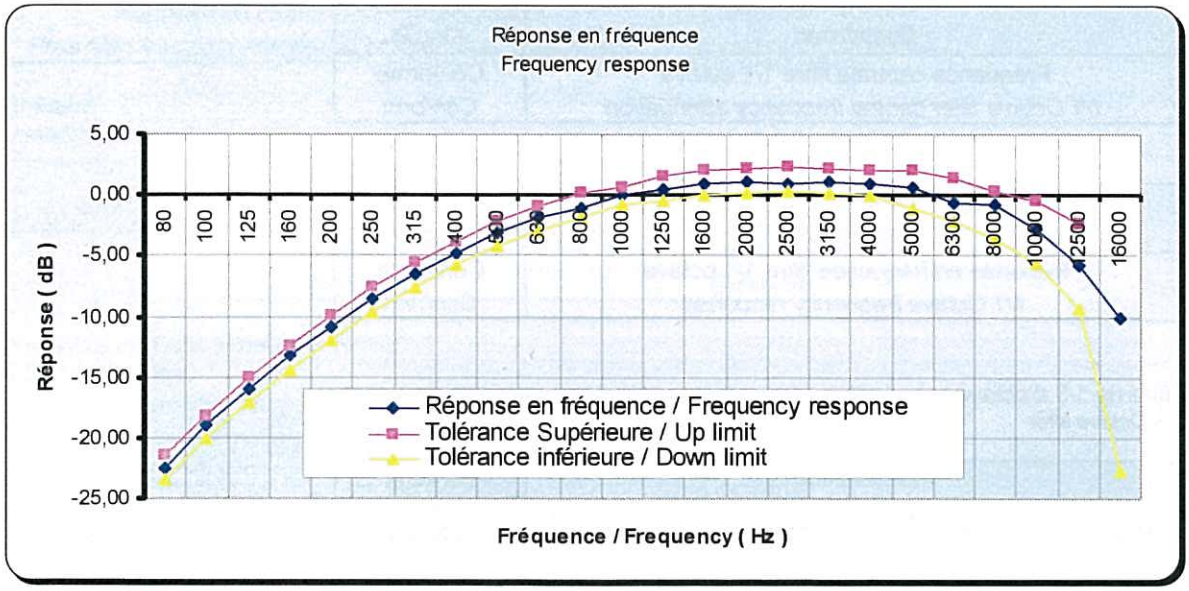
Description *Description*	Résultat *Result*
Réponse en fréquence filtre 1/1 octave *1/1 Octave frequency response*	Conforme *Conform*

Filtre de 1/3 d'octave
1/3 Octave filter

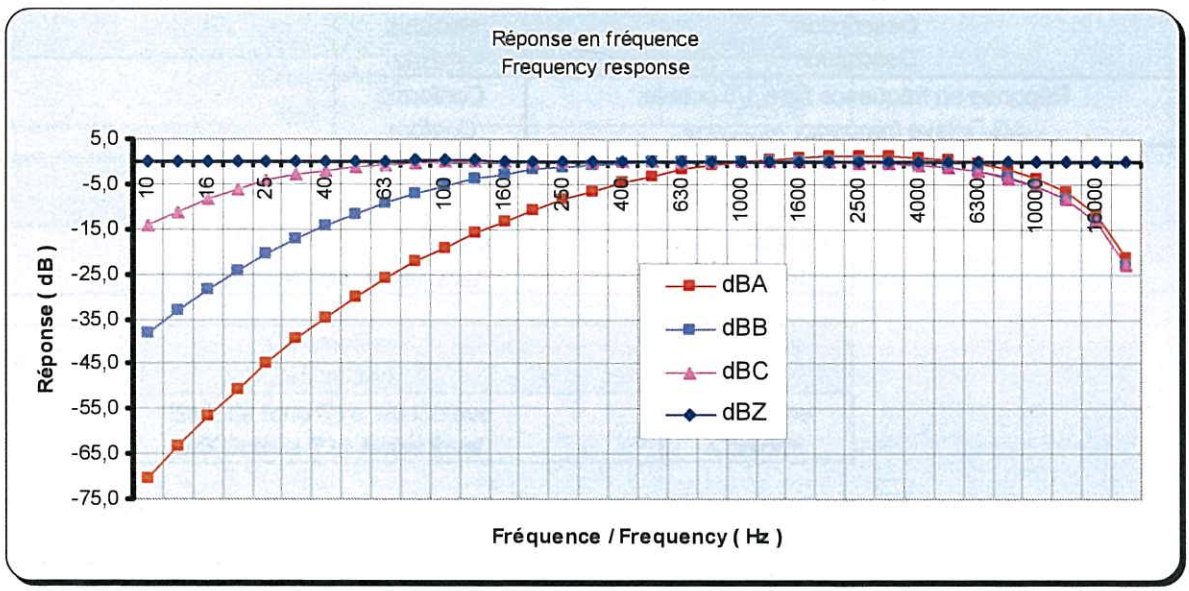
Description *Description*	Résultat *Result*
Fréquence centrale filtre 1/3 octave *1/3 Octave filter central frequency attenuation*	Conforme *Conform*

Description *Description*	Résultat *Result*
Réponse en fréquence filtre 1/3 octave *1/3 Octave frequency response*	Conforme *Conform*

Annexe
Annex



Réponse électrique du sonomètre en dBA avec tolérances de la Classe 1
Electrical frequency response dBA of the sound level meter with tolerances Class



Réponse en fréquence du sonomètre en électrique avec pondérations A-B-C-Z
Electrical frequency response of the sound level meter with A-B-C-Z weightings

Certificat de conformité **Calibreurs**
Conformity certificate **Calibrators**

Nous, fabricant :
We, manufacturer

01dB-Metravib
200, Chemin des Ormeaux
F 69578 LIMONEST Cedex- FRANCE

déclarons sous notre seule responsabilité que le produit suivant :
declare under our own responsibility that the following equipment

Désignation : Calibreur acoustique
Designation *Sound calibrator*

Référence : 34113607
Reference

est conforme aux dispositions des normes suivantes :
is complies with the requirements of the following standards

	Norme *Standard*	Classe *Class*	Edition du : *Edition of*
Calibreur acoustique	CEI IEC 60942	1	2003
Sound calibrator	ANSI S1.40		2006
Compatibilité électromagnétique*:*	CEI IEC 61000 6-1 à 6-4		2002 - 2006

Et répond en tout point, après vérification et essais, aux exigences spécifiées, aux normes et règlements applicables, sauf exceptions, réserves ou dérogations énumérées dans la présente déclaration de conformité.

After testing and verification, this device satisfies all specified requirements and applicable standards and regulations barring exceptions, reservations, or exemptions listed in this certificate of conformity.

Date : 25/03/11
Date

Responsable métrologique du laboratoire
The metrological head of the laboratory

Philippe POURTAU

01dB-Metravib
200, Chemin des Ormeaux
F-69578 Limonest Cedex
Tél. : 04 72 52 48 00
Fax. : 04 72 52 47 47
environment@01db-metravib.com
www.01db.com

Constat de vérification **Calibreurs**
Verification certificate **Calibrators**

N° CV-DTE-T-11-PVE-53172

DELIVRE A :
ISSUED FOR :

ENVIRONMENTAL RESOURCE MANAGEMENT

INSTRUMENT VERIFIE
INSTRUMENT CHECKED

Désignation: **Calibreur**
Designation ***Calibrator***

Constructeur: **01dB-Metravib**
Manufacturer

Type: **Cal 21**
Type

N° de serie: **34113606**
Serial number

Identification:
Identification number

Date d'émission: **25/03/11**
Issued on

Ce constat comprend 3 Pages
This report includes *pages*

LE RESPONSABLE METROLOGIQUE
DU LABORATOIRE
THE METROLOGICAL HEAD OF THE LABORATORY

Philippe Pourtau

01dB-Metravib
200, Chemin des Ormeaux
F-69578 Limonest Cedex
Tél. : 04 72 52 48 00
Fax. : 04 72 52 47 47
environment@01db-metravib.com
www.01db.com

IDENTIFICATION :
IDENTIFICATION

Calibreur acoustique *Sound calibrator*	
Constructeur : *Manufacturer*	01dB-Metravib
Type : *Type*	Cal 21
Numéro de série : *Serial number*	34113606

PROGRAMME DE VERIFICATION :
CHECKING PROGRAM

Ce calibreur a été vérifié sur les caractéristiques suivantes :

- Niveau de pression acoustique
- Fréquence du signal acoustique
- Distorsion du signal acoustique

This calibrator was checked for different characteristics:

- *Acoustic pressure level*
- *Acoustic signal frequency*
- *Acoustic signal distortion*

METHODE DE VERIFICATION :
CHECKING METHOD

Préalablement à la vérification, l'appareil est resté dans une salle climatisée à 23°C +/- 3°C.
Le niveau de pression acoustique est mesuré sur une chaîne étalonnée en sensibilité. Les autres caractéristiques sont étalonnées avec un multimètre et un distorsiomètre étalonnés en amplitude et en fréquence.

Prior to verification, the instrument was left in an air-conditioned room at 23 °C +/- 3°C.
Acoustic pressure level is measured on a measuring chain calibrated in sensitivity. The other characteristics were checked with a multimeter and a distortiometer calibrated in amplitude and in frequency.

CONDITIONS DE VERIFICATION :
CHECKING CONDITIONS

Date de l'étalonnage: *Date of Calibration*	25/03/11
Nom de l'opérateur: *Operator Name*	Olivier Hiesse
Instruction d'étalonnage: *Calibration instruction*	P118-NOT-01-02.doc
Pression atmosphérique: *Static pressure*	99,82 kPa
Température: *Temperature*	23,2 °C
Taux d'humidité relative: *Relative humidity*	33,2 %HR

MOYENS DE MESURES UTILISES POUR LA VERIFICATION:
INSTRUMENTS USED FOR CHECKING

Désignation *Designation*	Constructeur *Manufacturer*	Type *Type*	N° de série *Serial number*	N° d'identification *Identification number*
Préamplificateur / Preamplifier	01 dB-Metravib	PRE 12 H	011203	1180
Amplificateur de mesure / Measuring amplifier	Bruel & Kjaer	2636	1369303	1007
Multimètre/multimeter	HP	34401 A	US36079042	1109
Microphone / Microphone	01dB-Metravib	1/2"	XX02	1237
Distorsiomètre/ Distorsiometer	PROMAX	DA 523	981134140021	1131

Tous les moyens de mesure utilisés sont raccordés aux étalons de référence de la société 01dB-Metravib. Les étalons de référence de la société 01dB-Metravib sont raccordés aux étalons nationaux par un étalonnage COFRAC. La liste de ces étalons est disponible sur simple demande auprès du responsable métrologique du laboratoire.

All the measuring instruments are calibrated to the 01dB-Metravib reference standards. 01dB-Metravib reference standards are calibrated to national standard with COFRAC certificate of calibration. The reference standards list is available on simple request to the metrological head of the laboratory.

RESULTATS :
RESULTS

Le jugement de conformité de chaque test est établi suivant les tolérances données par la norme suivante : *Conformity decision is granted according to tolerance descriptions of the following standards :*	IEC 60942: 2003 Classe/class	1

JUGEMENT DE CONFORMITE:
CONFORMITY JUDGEMENT

Description *Description*	Résultat	Result
Niveau de pression acoustique / Acoustic pressure level - 94 dB	Conforme	Conform
Frequence / Frequency - 94 dB	Conforme	Conform
Distorsion / Distortion - 94 dB	Conforme	Conform

Fin du constat.
End of certificate.

01dB-Metravib
200, Chemin des Ormeaux
F-69578 Limonest Cedex
Tél. : 04 72 52 48 00
Fax. : 04 72 52 47 47
environment@01db-metravib.com
www.01db.com

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. **01506** Page 1 of 2 Pages

Customer : Environmental Resources Management

Address : 21/F, Lincoln House, 979 King's Road, Taikoo Place, Island East, Hong Kong.

Order No. : Q00573 **Date of receipt :** 29-Mar-10

Item Tested

Description : Sound Level Calibrator

Manufacturer : Svantek

Model : SV30A **Serial No. :** 7971

Test Conditions

Date of Test : 30-Mar-10 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the IEC 942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S014	Spectrum Analyzer	93091	18-Jun-10	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	93758	16-Jul-10	NIM-PRC & SCL-HKSAR
S041	Universal Counter	94005	6-Aug-10	SCL-HKSAR
S206	Sound Level Meter	93966	5-Aug-10	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : P.F. Wong

Approved by : Dorothy Cheuk

Date: 31-Mar-10

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

Calibration Certificate

Results :

1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	94.23	± 0.3 dB
114	114.28	

Uncertainty : ± 0.2 dB

2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	1.001 kHz	± 2 %

Uncertainty : $\pm 3.6 \times 10^{-6}$

3. Level Stability : 0.0 dB
IEC 942 Class 1 Spec. : ± 0.1 dB
Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.4 %
IEC 942 Class 1 Spec. : < 3 %
Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test
2. The above measured values are the mean of 3 measurements.
3. The uncertainty claimed is for a confidence probability of not less than 95%.
4. Atmospheric Pressure : 1 002 hPa.

---------- END ----------

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. **83494** Page 1 of 3 Pages

Customer : Environmental Resources Management

Address : 21/F, Lincoln House, 979 King's Road, Taikoo Place, Island East, Hong Kong.

Order No. : Q81363 **Date of receipt :** 28-Jul-08

Item Tested

Description : Sound Level Meter

Manufacturer : 01dB-Stell

Model : Solo **Serial No. :** 10896

Test Conditions

Date of Test : 30-Jul-08 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Calibration procedure : Z01.

Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S017A	Multi-Function Generator	75932	6-Dec-08	SCL-HKSAR
S024	Sound Level Calibrator	82926	16-Jul-09	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : P.F. Wong **Approved by :** Dorothy Cheuk

Date: 1-Aug-08

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

Calibration Certificate

Results :

1. Accuracy Check

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Range (dB)	Response	Weighting		
20 - 140	Fast	L_A	94.03	94.0
	Slow			94.0
	Fast	L_C		94.0
	Slow			94.0
	Fast	L_A	113.97	113.9
	Slow			113.9
	Fast	L_C		113.8
	Slow			113.8

IEC 651 Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.01 dB

3. Linearity

Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
20 ~ 140	114.0	114.0	0.0	± 0.7 dB
	104.0	104.0	0.0	
	94.0	94.0 (Ref.)	- -	
	84.0	84.0	0.0	
	74.0	74.2	0.0	
	64.0	64.3	0.0	
	54.0	54.3	0.0	

Uncertainty : ± 0.1 dB

Calibration Certificate

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	- 39.3	- 39.4 dB, ± 1.5 dB
63 Hz	- 26.1	- 26.2 dB, ± 1.5 dB
125 Hz	- 16.1	- 16.1 dB, ± 1 dB
250 Hz	- 8.6	- 8.6 dB, ± 1 dB
500 Hz	- 3.2	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+ 1.4	+ 1.2 dB, ± 1 dB
5 kHz	+ 1.1	+ 1.0 dB ,± 1 dB
8 kHz	- 1.5	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	- 11.9	- 6.6 dB, + 3 dB ~- ∞

Uncertainty : ± 0.1 dB

3. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	- -	--
1/10	40.0	40.1	± 0.5 dB
$1/10^2$	40.0	39.8	
$1/10^3$	40.0	40.0	± 1.0 dB
$1/10^4$	40.0	39.8	

Uncertainty : ± 0.1 dB

Remarks : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 992 hPa.

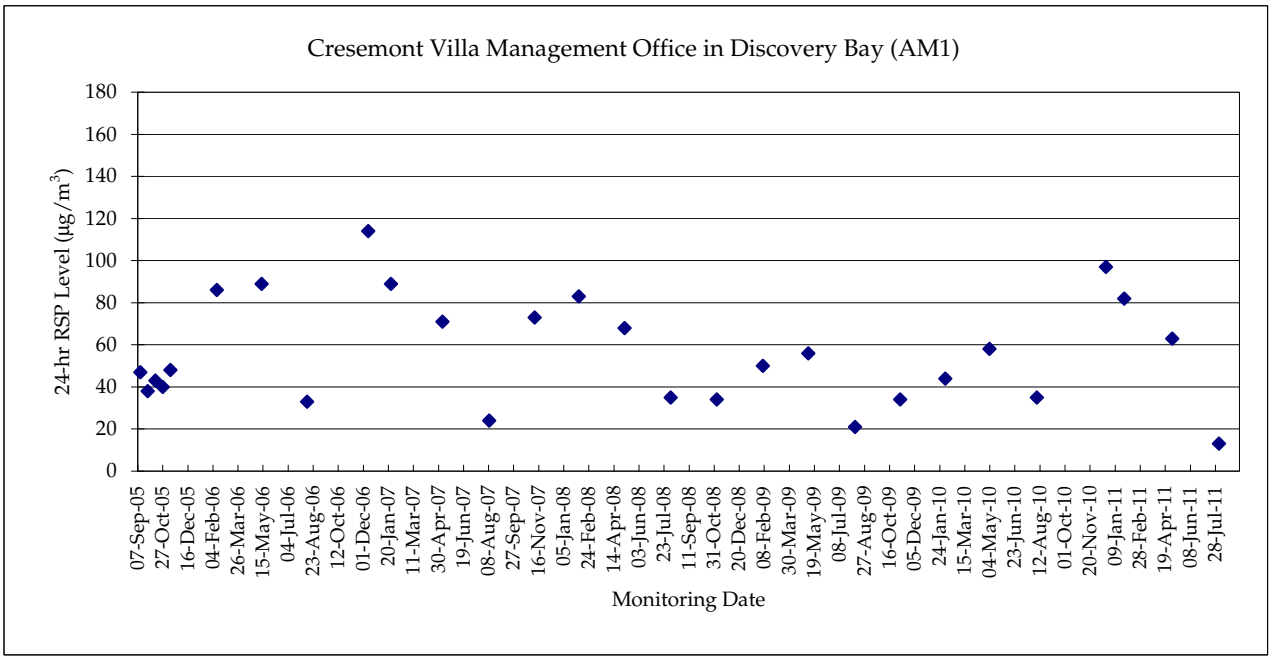
---------- END ----------

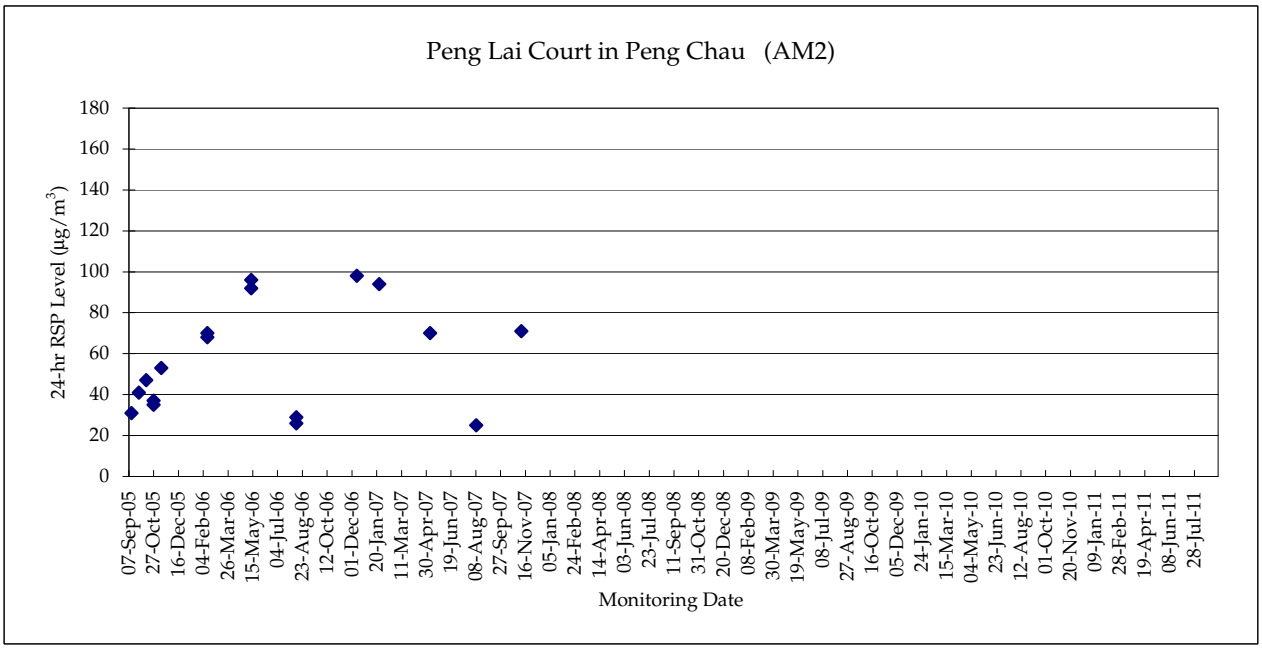
Annex B

Graphical Presentation of the Air Quality Monitoring Results

Annex B - Trend of Air Monitoring Results at Discovery Bay and Peng Chau

24-hr RSP Monitoring





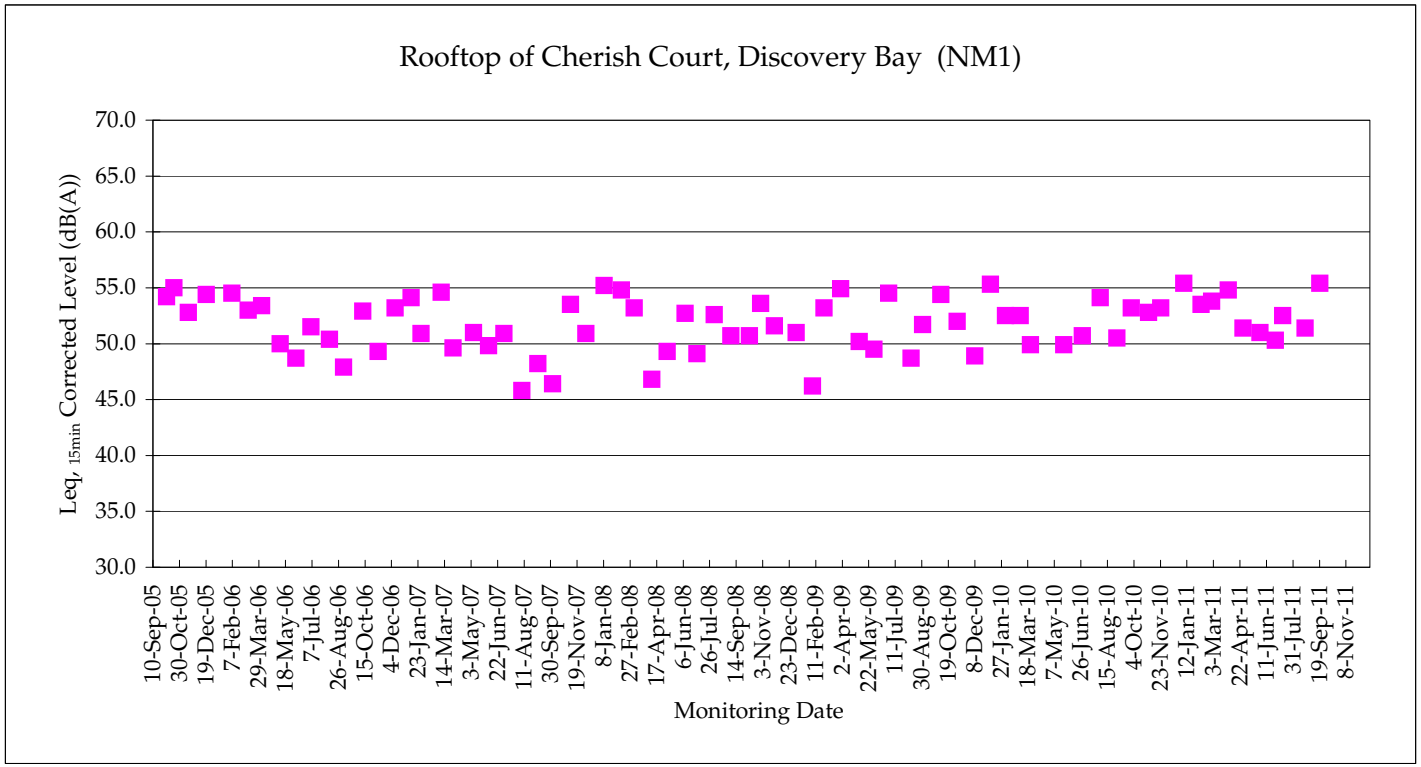
Remark:

1) Field duplicate was taken at Peng Lai Court (AM2) on 27 Oct 2005.
2) Field blank was taken at Peng Lai Court (AM2) on 11 Nov 2005.
3) Field blank and field duplicate were taken at Peng Lai Court (AM2) on 12 Feb, 12 May & 11 August 2006.
4) Only AM1 is identified as air quality monitoring station in the revised Operational EM&A plan (Revision F).

Annex C

Graphical Presentation of the Fireworks Noise Monitoring Results

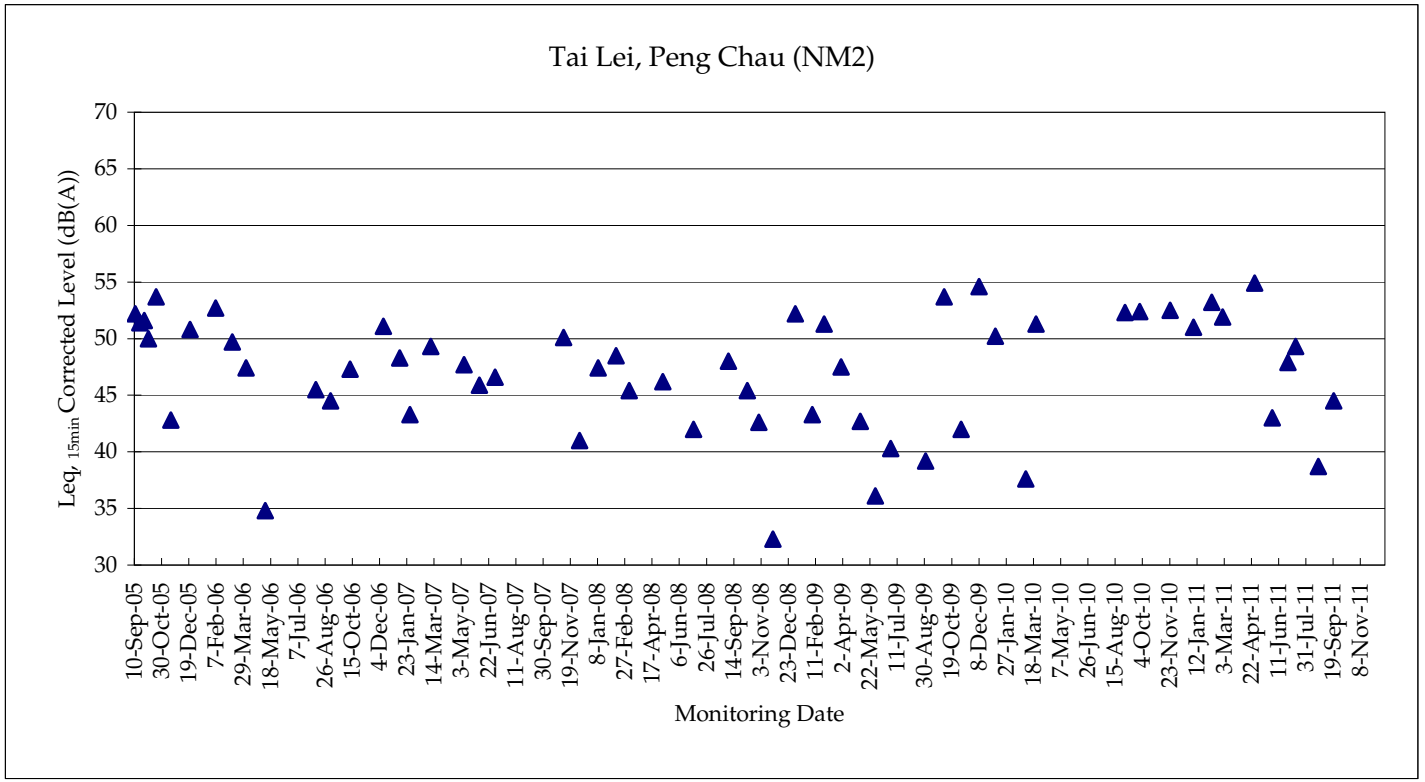
Annex C1 - Fireworks Noise Monitoring at Discovery Bay and Peng Chau



Remark:

(1) Measured Firework noise levels at Cherish Court (NM1) and Tai Lei (NM2) on 30 September 2005 and 11 May 2006 are less than 30dB(A) and therefore the results are not shown in the graph.

Annex C2 - Fireworks Noise Monitoring at Discovery Bay and Peng Chau



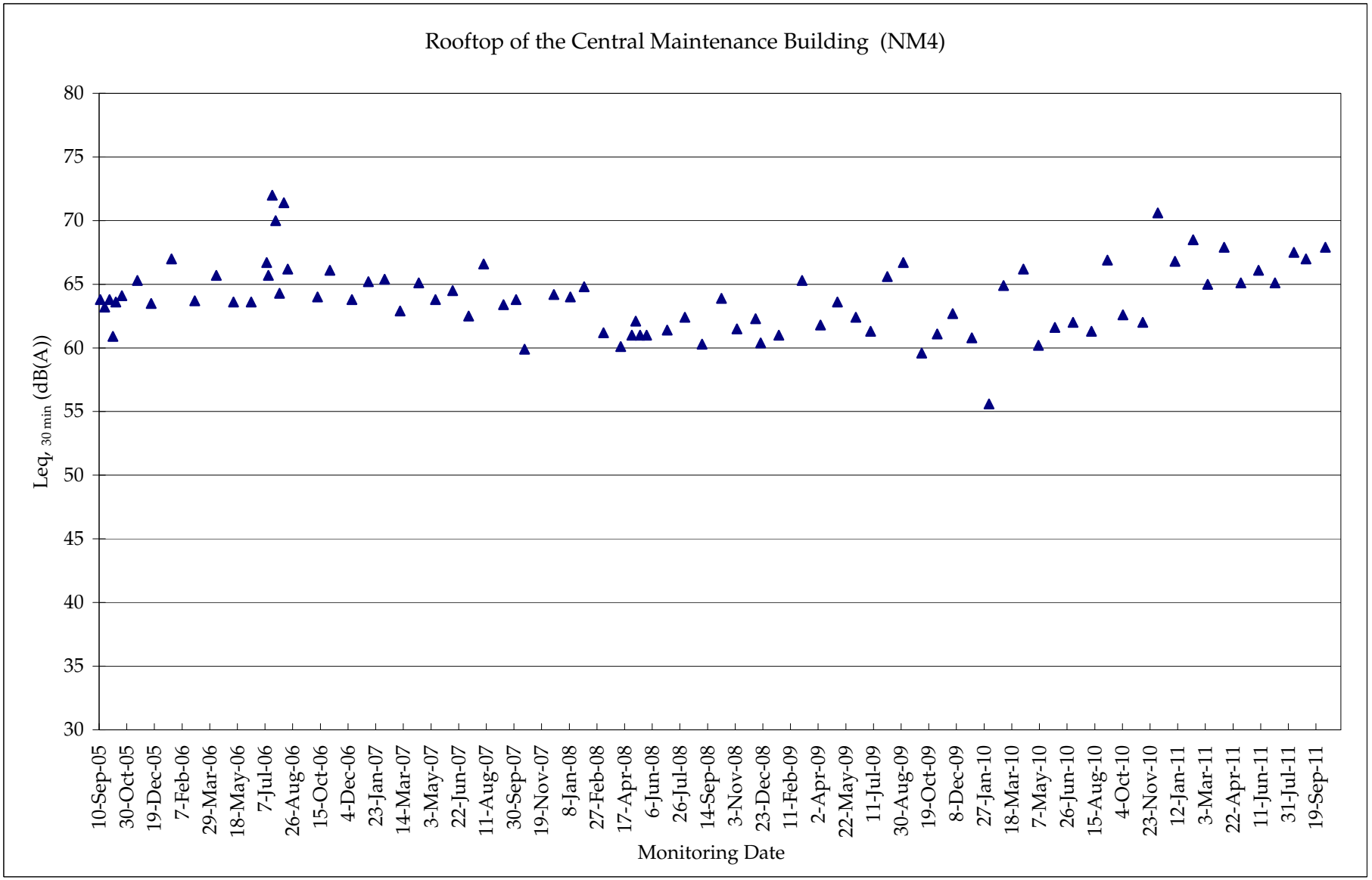
Remark:

(1) Measured Firework noise levels at Tai Lei (NM2) on 7 June, 5 July and 9 Nov 2006, 30 Mar, 7 Aug, 6 Sept, 4 Oct 2007, 8 Apr 2008, 4 Aug 2008, 10 Aug 2009, 25 May 2010, 29 Jun 2010, 2 Aug 2010, 1 Nov 2010 and 31 March 2011 are less than 30dB(A) or undertermined, and therefore the result is not shown in the

Annex D

Graphical Presentation of the Fixed Plant Noise Monitoring Results

Annex D - Fixed Plant Noise Monitoring at the Central Maintenance Building (Disney)



Annex E

Summary of Implementation Status

APPENDIX E – MEASURES RECOMMENDED IN THE EP AND EIA THAT ARE APPLICABLE TO THE OPERATION OF THE THEME PARK

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
AIR QUALITY - Operational Phase				
3.5	A3	Pyrotechnics or fireworks that contain chromium, lead, mercury, arsenic, manganese, nickel or zinc shall not be used for any display in the theme park.	Fireworks launching site / during fireworks display	Pyrotechnics or fireworks that contain chromium, lead, mercury, arsenic, manganese, nickel or zinc are not used for any display in the Resort.
3.6	-	Before the operation of the Project, the Permit Holder shall deposit with the Director the details and design of the fireworks displays for the Theme Park. Any changes to the details or design of the fireworks displays shall be reviewed by the ET Leader and deposited with the Director.	Fireworks launching site / prior to the commencement of operations at the Theme Park, and deposit the details when there are any changes to the details of design of the fireworks displays	HKITP submitted the details and design of the fireworks displays to EPD on 6 September 2005.
3.7	-	To mitigate air quality impacts, fireworks displays shall be designed and conducted to achieve the air quality criteria adopted in the EIA Report.	Fireworks launching site / during fireworks display	Both results of the Trial Fireworks Displays conducted in May 2005 and in August 2005 demonstrated compliance.
3.8	A1	The Permit Holder shall not operate diesel- or petrol-powered vehicles for internal traffic solely within the Theme Park area, except provided herein or otherwise approved by the Director under this condition. The Permit Holder shall provide written notice at least 24 hours in advance to the Director whenever a diesel- or petrol-powered vehicle is placed into operation, state the application for which that vehicle was placed into operation, and why a compressed natural gas (CNG), liquefied petroleum gas (LPG), electric or other clean fuel vehicle was not practicable for that particular application. This condition shall not apply to emergency vehicles, and shall not apply to vehicles not operated by the Permit Holder.	Within the Theme Park for the full duration of its operating lifetime.	Written notice was submitted to the EPD on 6 September 2005 for the unleaded gasoline-powered vehicles to be operated within the Resort.
3.9	A2	To mitigate the air quality impacts from the Penny's Bay Gas Turbine Plant (GTP), building height within the Theme Park shall be restricted at 50 metres above ground within 500 metres from the chimneys of the GTP and restricted at 100 metres above ground between 500 metres and 1,000 metres from the chimneys of the GTP, unless the Permit Holder can demonstrate to the Director's satisfaction that the buildings shall not affect the dispersion of the emissions from the GTP and shall not cause adverse air quality impacts.	Within the Theme Park for the full duration of its operating lifetime.	The mitigation measures were implemented during the design and construction of the Resort.

* Ref. to EP-01/059/2000/B. The EP takes precedence whenever there is a similar requirement listed in both the EP and the EIA implementation schedule.

† Ref. to Table 16.1p of the EIA report.

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
NOISE - Operational Phase				
3.10	B7	The bursting height of fireworks displays within the Theme Park shall not exceed 150 meters above Principal Datum.	Fireworks launching site / during fireworks display	All manufacturers supplying fireworks product to HKITP complied with the 150m requirement and field measurement methodology of the bursting height of fireworks displays was developed and agreed with the Commissioner of Mines (CoM) of the Civil Engineering and Development Department (CEDD).
3.11	B5	Hotels within the Project shall not rely on openable windows for ventilation.	At the resort hotels / throughout the operation of the hotels.	The ventilation systems of the hotels have been designed and constructed to not rely on openable windows for ventilation.
Fixed Plant noise from Theme Park operation				
-	B1	5 m to 9 m earth berm encircling the Theme Park. (*Figure 2.7b* in EIA Report refers)	Encircling the Theme Park / throughout the operation of the Theme Park.	Berms of 5m to 9m height were constructed.
-	B2	A reference noise source level of 75 dB(A) at the Theme Park perimeter	At unshielded position along the top of the 9 m high perimeter earth berm / throughout the operation of the Theme Park.	Noise monitoring was conducted to monitor the fixed plant noise from Resort operation and results demonstrated compliance.
WATER QUALITY- Operational Phase				
Marine Water Quality				
3.13	C1	All storm water shall flow through silt traps within the Project prior to entering the stormwater system.	To be implemented throughout the full operational lifetime of the Theme Park	Silt traps were constructed and all storm water will flow through silt traps prior to entering the stormwater system.
3.14	C2	Spent fireworks shall be collected immediately after the completion of the firework displays. The collection and disposal of spent fireworks shall be in accordance with the waste management plan for the operational stage approved under Condition 3.21 of this Permit.	To be undertaken after all fireworks displays throughout the full operational lifetime of the Theme Park	Spent fireworks are collected in accordance with the approved Operational Waste Management Plan.
3.15	C3	Monitoring of residual chlorine concentration in disinfected water shall be conducted prior to discharge of the disinfected water. No discharge of any water with chlorine concentration higher than 0.01 mg L^{-1} shall be allowed.	To be implemented throughout the full operational lifetime of the Theme Park	Monitoring will be conducted prior to discharge of the disinfected water.
3.16	C7	Pesticides and herbicides used in the Project shall be biodegradable and with half-lives of three days or less, or approved by the Director.	To be implemented throughout the full operational lifetime of the Theme Park	Pesticides and herbicides with half-lives of three days or more has not been used in the landscaped areas within the Resort. Variation of this condition was submitted to the EPD

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
				and EP-01/059/2000/B was issued on 19 October 2005. The condition was changed to "Pesticides and herbicides used in the Project shall be biodegradable and with half-lives of three days or less, or approved by the Director".
3.17	C8	A log book shall be kept in the Theme Park to record the application of any pesticides or herbicides, date and time, location of application, quantities applied, pesticide/herbicide used and weather conditions. The logbook shall always be readily available for inspection by the Director throughout the operation stage.	Prior to and throughout the use of pesticides and herbicides	A log book was kept in the Resort to record the application of any pesticides or herbicides, date and time, location of application, quantities applied, pesticide/herbicide used and weather conditions.
WASTE - Operational Phase				
Waste Management Plan				
3.21	E1	Three sets of waste management plan for the operational phase of the Project shall be submitted to the Director for approval at least one month before the Project commences operation. The plan shall be certified by the IEC as having regard to Section 6.7 and Section 16 of the EIA Report. The plan shall include details of how the mitigation measures of operational waste management will be implemented, together with the arrangements for avoidance, minimization, material recovery/recycling, collection, transportation and disposal of various types of waste generated during the operation of the Theme Park.	To be produced prior to the commencement of operations at the Theme Park, and to be implemented throughout the full operational life-time of the Theme Park	Operational Waste Management Plan (OWMP) has been submitted to the EPD and approved in September 2005.
Waste Avoidance Measures				
	E3	The Theme Park Operator shall implement a waste avoidance programme to minimise the production of waste. The waste avoidance programme may consist of the following components:	To be developed prior to the commencement of operations at the Theme Park, and to be implemented throughout the full operational life-time of the Theme Park	Operational Waste Management Plan included waste minimization measures and HKITP has incorporated the proposed waste minimization measures as far as practicable.
		• electronic communications (ie voice mail and email); message boards, routing slips and double-sided copying will be used, as far as practical, to reduce the quantities of paper that otherwise would require disposal at landfill;		
		• worn linens to the maximum extent feasible based upon available markets and third-party recycling facilities be used to make scarves and aprons for cast members;		
		• soft drinks to the maximum extent feasible based upon available markets and third-party recycling facilities be served in souvenir cups that are taken home by guests for reuse as opposed to being discarded at the Theme Park as waste, appropriate recycling bins should be set up to recover these cups for reuse or recycling if the visitors choose not to take them home;		
		• hamburgers will be wrapped in paper or equally environmentally acceptable material instead of in polystyrene clamshells;		

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
		• unused prepared food will be sent to a food bank, and distributed to the needy, to the maximum extent feasible based upon available markets and third-party recycling facilities; • excess water-based paints will be reused as far as practical; • plastic drink cup lids will be supplied to guests upon their request when purchasing beverages; • fast-food service trays in selected locations will be washed and reused (instead of using disposable cardboard carry-out trays); and • souvenir, booklets, dining-ware, etc. which are recyclable should have appropriate instruction and signs printed on the surface;		
		• waste recycling bins for paper, aluminium cans, plastic bottles, etc. should be provided throughout the Theme Park to promote waste separation at source; • all products sold in the Theme Park should be packed in minimal amount of packaging materials; • pallets made of more durable and reusable materials plastics than wood should be used in transportation of food, drinks, etc;		
		• the distribution centre of the Theme Park will utilise reusable shipping containers as far as practical instead of cardboard boxes for internal routing' • fabric fender instead of tropical hardwood fender should be used at the proposed piers; and • the hoarding of the proposed piers should be metal (aluminium, alloy etc) instead of wood.		
Materials Recovery and Recycling Programme				
		The Theme Park Operator shall implement a Materials Recovery and Recycling Programme which shall include the following aspects:		Waste minimization measures have been implemented in accordance with the OWMP.
	E4	*Papers*: Recycling bins will be provided at shops and food service locations to collect cardboard containers. Personnel in every office will be provided with individual bins to recycle office paper. Large containers for recycling paper will be placed next to photocopy machines. The collected paper will be transported to RCPs at the back of house for sorting and baling.	To be implemented throughout the full operational life-time of the Theme Park	
	E5	*Glass Bottles and Glass Jars*: Recycling bins will be placed in the service areas next to the restaurants. The collected glass bottles and jars will be transported to the RCP for processing and recycling.	To be implemented throughout the full operational life-time of the Theme Park	
	E6	*Aluminium Cans*: Aluminium can recycling bins will be placed at all break areas and pantries. The collected aluminium cans will be transferred to the RCP for baling.	To be implemented throughout the full operational life-time of the Theme Park	
	E7	*Plastics*: The Theme Park will implement a source separating programme for polyethylene terapthalate (PET), high-density and low-density polyethylene (HDPE & LDPE). The PET and HDPE bottles collected will be transferred to the RCPs for collection by the recyclers. LDPE will also be recycled. Shrink wrap will be recovered and delivered to the RCPs. Once sufficient material is accumulated to fill a truck, the recycler will be called in	To be implemented throughout the full operational life-time of the Theme Park	

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
		to collect the material. The recycling programme may extend to cover other types of plastics or to recycle mixed plastic if the technology is available to make the plastic recycling programme more efficient and cost-effective.		
	E8	*Kitchen Grease*: Should there be a market for kitchen grease in Hong Kong, the Theme Park Operator will consider establishing a kitchen grease recycling programme in Hong Kong.	To be implemented throughout the full operational life-time of the Theme Park	
	E9	*Scrap Metal*: Scrap metal will be generated and separated at the machine, welding, automotive and sheet metal shops. Scrap metal will also be collected, when feasible, on construction and demolition and rehabilitation projects. Scrap metal will be placed in roll on/off containers. Once the containers is full, the recycler will be called in to remove the loaded container and return an empty one.	To be implemented throughout the full operational life-time of the Theme Park	
	E10	*Laser Printer Toner Cartridges*: The Theme Park will make arrangements with the toner cartridge suppliers to collect and recycle all the used toner cartridges for laser printers and avoid disposal of the cartridges at the WENT landfill as far as practical.	To be implemented throughout the full operational life-time of the Theme Park	
	E11	*Green Waste*: As the handling capacity of the existing Sha Ling composting facility is limited (about 15 to 20 tpd) and is unlikely to be able to handle the additional green waste generated from the Theme Park. Should there be a market or facility which could process the green waste arising from the Theme Park, HKITP will consider establishing a recycling programme for green waste.	To be implemented throughout the full operational life-time of the Theme Park	
	E12	*Scrap Lumber*: Broken pallets, wooden scrap and lumber from demolition projects will be collected and recycled as far as practical. Currently, there is a market for scrap lumber and it is anticipated that the scrap lumber generated from the Theme Park could be adsorbed by the local market.	To be implemented throughout the full operational life-time of the Theme Park	
	E13	*Asphalt*: The Theme Park will require contractors to reuse and recycle as much as practical of the used asphalt generated from the construction and rehabilitation of asphalt roadways and parking lots. Any surplus used asphalt will be delivered to public filling facilities instead of landfill.	To be implemented throughout the full operational life-time of the Theme Park	
Chemical Waste				
	E14	Wherever practicable, processes which generate reduced quantities or no chemical waste, or less dangerous types of chemical waste, shall be used.	To be implemented prior to and throughout the full operational life-time of the Theme Park	Chemical Waste Store was constructed in accordance with the *Code of Practice on the Packaging, Labelling and Storage of Chemical Waste*. The temporary storage of the chemical wastes was also provided in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste.
	E15	Containers used for storage of chemical wastes shall: • be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; • have a capacity of less than 450 L unless the specifications have been approved by the EPD; and • display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.	To be implemented prior to and throughout the full operational life-time of the Theme Park	
	E16	The storage area for chemical wastes should be: • by clearly labelled and used solely for the storage of chemical waste;	To be implemented prior to and throughout the full operational life-time of the Theme	

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
		• be enclosed on at least 3 sides; • have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest; • have adequate ventilation; • be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); and • be arranged so that incompatible materials are adequately separated.	Park	
	E17	Disposal of chemical waste shall: • be via a licensed waste collector; • be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a re-user of the waste, under approval from the EPD.	To be implemented prior to and throughout the full operational life-time of the Theme Park	*Waste Disposal Ordinance* *Code of Practice on the Packaging, Handling and Storage of Chemical Wastes* Waste Disposal (Chemical Waste) (General) Regulation
TERRESTRIAL ECOLOGY - Operational Phase				
3.18	F1	To minimize the disturbance to the White-bellied Sea Eagles at Pa Tau Kwu, no fireworks shall be launched within 800 metres from the Pai Tau Kwu headland, unless otherwise approved by the Director.	Within Theme Park prior to and during the fireworks and laser show for the full operational period of the Theme Park	No fireworks were launched within 800 metres from the Pai Tau Kwu headland.
3.19	F2	To protect the White-bellied Sea Eagles, laser effects used in the Project shall utilize lasers of power range not greater than 30 Watt and any laser beam shall not be directed towards the Pa Tau Kwu area. All laser effects shall be terminated against fixed, non-reflective objects within the Project to prevent any impacts on people and terrestrial faunal species.	Within Theme Park prior to and during the fireworks and laser show for the full operational period of the Theme Park	No laser is planned to be used for the opening day configuration of the Resort.
	F3	Fence off the public land access from the Theme Park to prevent human disturbance to the White-bellied Sea Eagle.	North side of the Theme Park close to Pa Tau Kwu secondary woodland, during and throughout the operational period of the Theme Park	Public land access from the Theme Park was fenced off.
MARINE ECOLOGY AND FISHERIES - Operational Phase				
Marine Ecological Resources: Marine Mammals				
3.20	G1	The speed of ferries and vessels of the Theme Park shall not exceed 10 knots when passing through an area within 500 metres from the reclamation limit.	During and throughout the operational period of the Theme Park	Not applicable. No ferries and vessels are currently operated by HKITP.
	G1	The following mitigation measures shall be implemented to minimize potential operational impacts on dolphins and porpoises:		
		1. The vessel operators shall be required to use predefined and regular routes, as these will become known to dolphins and porpoises using these waters;	During and throughout the operational period of the Theme Park	Not applicable. No ferries and vessels are currently operated by HKITP.
		2. The vessel operators shall be required to control and manage all effluent from vessels;	During and throughout the operational period of the Theme Park	Not applicable. No ferries and vessels are currently operated by HKITP.

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
		3. Operation-phase dolphin/porpoise monitoring shall be conducted by a qualified research team, to evaluate whether there have been any effects on the animals. The resulting data should be compatible with, and should be made available for, long-term studies of small cetacean ecology in Hong Kong.	During the operational period of the Theme Park	Monitoring of dolphin/porpoise monitoring has been conducted for one year (2008-2009). HKITP has proposed, in consultation with AFCD, to terminate the monitoring of marine mammals after July 2009. Proposal for termination of dolphin/porpoise monitoring was submitted to EPD and AFCD on 6 August 2009.
HAZARD - Operational Phase				
3.12		The Hazard Management Plan as submitted on 14 July 2000 shall be fully implemented.		The Hazard Management Plan has been reviewed in the EIA Review Report which was submitted to EPD in June 2005.
Fireworks Storage, Transport & Display				
	H1	The fireworks store will be constructed in accordance with the requirements specified in the Dangerous Goods Regulations, CAP 295 and any additional requirements as specified by the Commissioner of Mines and the Director of Fire Services. Such requirements include for example, separation distance of 101m to spectator areas within the Theme Park, 101m to buildings and high occupancy sites outside the Theme Park and 50m to public roads and low occupancy areas outside the Theme Park.	During design	The fireworks store has been constructed in accordance with the stipulated requirements.
	H2	The fireworks display including mid-level shows, low-level shows and stage shows shall be designed and conducted in accordance with the requirements of NFPA 1123 and 1126. This may include for example, separation distance of 107m from the firing site (for mid-level show) to public areas (both Theme Park visitors and off-site public) and separation distance of 214m from the firing site to other dangerous goods stores. Any additional requirements on fireworks display as specified by the Secretary of Home Affairs, Fire Services Department, Commissioner of the Television and Entertainment Licensing Authority will also be adopted. The specific distances above may vary based on maximum shell size as the distances above assume five inch (125 millimetre) shells.	During design and operation	The fireworks display including mid-level shows, low-level shows and stage shows have been designed and conducted in accordance with the requirements of NFPA 1123 and 1126.
	H4	A chain link fence will be installed around the firing site as a ballistic barricade to catch and deflect low trajectory shells (typically less than 15 degrees from horizontal and which have potential to burst near spectators under normal burst times) fired from a disrupted mortar such that they cannot travel towards spectators or members of the public.	During design	A chain link fence has been installed.
	H5	The launch system (for mid-level display) will be designed such that mortars will remain in upright position following the failure of any given mortar or even otherwise.	During design	The proposed launch system has been designed and constructed.
	H6	Identify agencies to be contacted and establish mechanisms for reporting incidents of non-recoverable load in the event of load fall into sea while unloading at the jetty.	During operation	Agency has been identified for reporting incidents.
	H7	Mobile phones, walkie-talkies should not be carried by persons handling fireworks.	During operation	Procedures have been developed and are implemented by Firework Team.

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
	H8	Fireworks store should be kept closed during fireworks display.	During operation	Procedures have been developed and are implemented by Firework Team.
	H9	Ensure igniters are not stored with the bulk of fireworks/pyrotechnics.	During design and operation	Igniters are not stored with the bulk of fireworks/pyrotechnics.
	H10	The site for manipulation of fireworks need to be identified. The site shall be located at adequate safety distance from the store and public areas.	During design and operation	It is not required to manipulate the fireworks on-site.
	H11	Procedures to be developed to minimise unnecessary handling/sorting of products for fireworks show inside the store. This should include adequate labelling of both outer packaging and product to aid easy identification.	During operation	Procedures have been developed and are implemented by Firework Team.
	H12	If vehicles such as fork lift trucks are used for transfer of goods from store to pre-rigging area or display site, it should meet appropriate specifications as identified by the Division of Mines. When feasible, forklifts shall operate in reverse when carrying fireworks.	During design and operation	Procedures have been developed and are implemented by Firework Team.
	H14	Disney's vendor supply of 4" and 5" shells must ensure items destined for other Disney locations are not delivered by error to this site unless conforming to requirements of this site.	During operation	Not applicable. No 4" and 5" shells are currently used in the fireworks show.
	H15	Procedures to be developed if trailers are to be used for mortar installation.	During operation	Mortars have been permanently installed.
	H16	Any mechanical system designed for varying mortar orientation should be such that it does not result in mortars orientated towards spectators.	During design and operation	Mortars have been permanently installed.
	H17	Use of permanently installed mortars or other similar or safer alternatives to be considered.	During design and operation	Mortars have been permanently installed.
	H18	Design and position of fence to ensure containment of low trajectory shells towards spectators as well as road (off-site).	During design and operation	Position of fence has been properly designed and constructed.
	H19	The weather conditions under which fireworks display need to be moderated should be identified in procedures based on site layout and weather data. The procedures should also identify persons responsible for making such decisions.	During operation	Procedures have been developed and are implemented by Firework Team.
	H20	Procedures for safe handling and disposal of unfired and misfired items to be developed.	During operation	Procedures have been developed and are implemented by Firework Team.
	H21	Procedures to be established for sweeping site after display.	During operation	Procedures have been developed and are implemented by Firework Team.
	H22	Separation distances as specified in NFPA 1123 and 1126 for 'other fireworks items' (ie, other than aerial shells) used for mid-level, low-level and stage shows will be adopted.	During operation	Procedures have been developed and are implemented by Firework Team.
	H23	Members of the audience will not be invited on stage during the course of discharge of fireworks or pyrotechnics.	During operation	Audiences were not invited on stage during the course of discharge of fireworks or pyrotechnics.
	H25	Quality control measures to ensure that offspec. fireworks items are not received/used at displays/shows.	During operation	Procedures have been developed and are implemented by Firework Team.
EM&A REQUIREMENTS - Operational Phase				
Air Quality and Noise				
3.1		Before the operation of the Project, the Permit Holder shall carry out trial firework displays	During trial fireworks displays only	Trial firework displays and

Permit Ref.*	EM&A Log Ref†	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Remarks
		and associated air quality and noise monitoring. The details of the trial and monitoring programme shall be submitted to the Director for agreement at least one month prior to the trial fireworks displays. The results of the trial fireworks displays shall be submitted to the Director for agreement prior to the operation of the Project. The results of the trial tests and associated air quality data shall be provided to the Advisory Council on the Environment for consultation, as directed by the Director.		associated air quality and noise monitoring have been conducted. Results of the Trial Fireworks Displays were submitted to EPD and provided to ACE for consultation. .
3.2		No later than one month before the operation of the Project, the Permit Holder shall submit for the Director's approval an Operational Environmental Monitoring and Audit (EM&A) Plan for the operation of the Project. Before the submission to the Director, the EM&A Plan shall be certified by the IEC as having regard to Annex N of the EIA Report. All measures recommended in the approved EM&A Plan shall be fully and properly implemented in accordance with the requirements and time schedule(s) set out in the EM&A Plan. The Operational Environmental Monitoring and Audit Plan approved under this condition shall hereinafter be referred to as the "EM&A Plan".	To be produced prior to the commencement of operations at the Theme Park, and to be implemented throughout the full operational life-time of the Theme Park	EM&A Plan (Revision B) was approved by the EPD on 26 January 2007.
3.3		Air quality and noise monitoring on fireworks displays, including monitoring stations to be located at Discovery Bay and Peng Chau and to be agreed with by the Director, shall be conducted during the operation of the Project. On the basis of such findings, mitigation measures, if needed, shall be implemented to the satisfaction of the Director. The details of the monitoring shall be included in the EM&A Plan.	At specified air and noise monitoring locations for the 1st operational year and throughout the duration of the operational phase respectively	Air quality and noise monitoring should be conducted in accordance with the requirement specified in the approved EM&A Plan.
Terrestrial Ecology - White-bellied Sea Eagle				
3.4		Monitoring of the White-bellied Sea Eagles (WBSE) at Pa Tau Kwu shall be carried out for a period of two years during the operational phase of the Theme Park. The two years monitoring period shall commence at the time when all reclamation works under the Environmental Permit No. VEP-18/2000/A/EP-054 are completed. The details of the monitoring shall be included in the EM&A Plan.	The two years monitoring period shall commence prior to the operation of Phase II fireworks displays.	Monitoring of WBSE will be conducted for a 2-year period when the Theme Park Phase II fireworks displays are launched. The monitoring requirements for WBSE will be proposed by the ET and agreed with AFCD prior to the commencement of Theme Park Phase II fireworks displays.
Marine Ecology				
	J4	Subject to the Environmental Protection Department's (EPD's) agreement, operational phase monitoring of the dolphin/porpoise population shall be conducted by a qualified research team in accordance with the recommendations of Section 10 of the EM&A Manual.	During the operational period of the Theme Park	Monitoring of dolphin/porpoise monitoring has been conducted for one year (2008-2009). HKITP has proposed, in consultation with AFCD, to terminate the monitoring of marine mammals after July 2009. Proposal for termination of dolphin/porpoise monitoring was submitted to EPD and AFCD on 6 August 2009.