


# Civil Engineering and Development Department

## Contract No. KLN/2013/16 Environmental Monitoring Works at Kai Tak Development

Monthly EM&A Report

March 2015

(Version 1.3)

Approved By   
(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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## EXECUTIVE SUMMARY

### Introduction

1. This is the 13<sup>th</sup> Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Contract No. KLN/2013/16 - Environmental Monitoring Works for Kai Tak Development” (hereinafter called “the Project”). This report documents the findings of EM&A Works conducted in March 2015.
2. During the reporting month, the following works contracts were undertaken within Kai Tak Site:
  - 1020EM12A - District Cooling System (DCS) at Kai Tak Development (KTD) Phase III (Package A)-Chilled Water Pipe Laying Works
  - 1107 - MTR Shatin to Central Link: Diamond Hill to Kai Tak Tunnels
  - 1108 - MTR Shatin to Central Link: Kai Tak Station and Associated Tunnels
  - 1108A - MTR Shatin to Central Link: Kai Tak Barging Point Facilities
  - 1109 - MTR Shatin to Central Link: Ma Tau Wai and To Kwa Wan Stations and Tunnels
  - 20140264 - Foundation for Home Ownership Scheme Development at Kai Tak 1G1(B)
  - 3/WSD/08, 6/WSD/08, 7/WSD/08 & 8/WSD/08 - Replacement and Rehabilitation of Water Mains Stages 2 & 3
  - CKL-KCT circuit 1&2 - CLPP (132/11kV and LV cable installation)
  - CV/2013/02 - Dredging at Kai Tak Cruise Terminal Stage 2
  - DC/2010/03 - Kai Tak Nullah Improvement Works at Prince Edward Road East
  - DC/2011/04 - Reconstruction, Improvement and Rehabilitation of Kai Tak River from Wong Tai Sin Police Station to Tung Tau
  - KL/2010/02 - Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
  - KL/2010/03 - Kai Tak Development - Stage 2 Infrastructure Works at North Apron Area of Kai Tak Airport for Residential Development and Government Facilities)
  - KL/2011/01 - Kai Tak Development - Reconstruction and Upgrading of Kai Tak Nullah
  - KL/2012/02 - Kai Tak Development - Stage 3A Infrastructure at Former North Apron Area
  - KL/2012/03 - Kai Tak Development - Stage 4 Infrastructure at Former North Apron Area
  - New Kowloon Inland Lot No. 6515 - Kai Tak Flat-For-Flat Development
  - New Kowloon Inland Lot No. 6516 & 6517 - Proposed Residential Development
  - SS A501 - Design and Construction of Centre of Excellence in Paediatrics
  - SS B507 - Construction of Two 30-classroom Primary Schools at Site 1A-3 and Site 1A-4, Kai Tak Development
  - SS W304 - Design and Construction of Trade and Industry Tower in Kai Tak Development Area
  - TC Y305 - Demolition of ex-Government Flying Service (GFS) Building
3. Stockpiling of excavated & construction materials, storage of equipments, business in the recovery and recycling and car parks, etc are the major activities for short term tenancy (STT) / temporary government land allocation (TGLA).

**Environmental Monitoring Works**

4. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
5. Summary of the non-compliance in the reporting month for the Project is tabulated in Table I.

**Table I Non-compliance Record for the Project in the Reporting Month**

Parameter	No. of Exceedance		Action Taken
	Action Level	Limit Level	
1-hr TSP	0	0	N/A
24-hr TSP	0	0	N/A
Noise	2	0	N/A

*1-hour & 24-hour TSP Monitoring*

6. All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
7. All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

*Construction Noise*

8. All construction noise monitoring was conducted as scheduled in the reporting month. 2 Action level exceedances were recorded due to complaint cases notified by EPD on 12 March 2015. No Limit Level exceedance was recorded.

**Key Information in the Reporting Month**

9. Summary of key information in the reporting month is tabulated in Table II.

**Table II Summary Table for Key Information in the Reporting Month**

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	3	Construction Dust and Noise	Complaint referred to the Contractor	Closed	---
Reporting Changes	0	---	N/A	N/A	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---

**Future Key Issues**

10. The future key environmental issues in the coming month include:

- Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Watering for dust generating activity and on haul road;
- Proper storage of construction materials on site;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation of general and construction waste on site;
- Noise from operation of the equipment, especially for rock-breaking activities, piling works and machinery on-site;
- Runoff from exposed slope;
- Wastewater and runoff discharge from site;
- Regular removal of silt, mud and sand along u-channels and sedimentation tanks; and
- Review and implementation of temporary drainage system for the surface runoff.

## 1. INTRODUCTION

### Background

- 1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. It covers a land area of about 328 hectares. The Project also covers Kowloon Bay and Kwun Tong Typhoon Shelter and the adjacent water bodies. The general layout of the Project is shown in **Figure 1**.
- 1.2 Civil Engineering and Development Department (CEDD) had completed an Environmental Impact Assessment (EIA) study for KTD under Agreement No. CE 35/2006(CE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction (hereafter called “Schedule 3 EIA Report”). The Schedule 3 EIA Report was approved under Environmental Impact Assessment Ordinance (EIAO) in March 2009.
- 1.3 As recommended in the Schedule 3 EIA Report, EM&A programme shall be required for different phases of the KTD as a whole. In August 2010, Cinotech Consultants Limited was commissioned by CEDD to undertake the Environmental Monitoring and Audit (EM&A) works for KTD. Under the Contract, Environmental Team (ET(KTD)) shall oversee all the environmental issues within the Kai Tak Development (KTD), including but not limit to the Schedule 2 Designated Projects and other work contracts.
- 1.4 The Contract KLN/2010/04 was superseded by Contract No. KLN/2013/16 on 12 February 2014. EM&A Works for Kai Tak Development shall continue and reported under the new Contract.
- 1.5 Cinotech Consultants Limited was commissioned by CEDD to undertake the Environmental Monitoring and Audit (EM&A) works for KTD Contract No. KLN/2013/16. This is the 13<sup>th</sup> Monthly EM&A report summarizing the EM&A works for the Project in March 2015.

### Project Organizations

- 1.6 Different parties with different levels of involvement in the project organization include:
- Environmental Protection Department (The Authority)
  - Project Proponent – Civil Engineering and Development Department (CEDD)
  - The Engineer and the Engineer’s Representative (ER) – Black & Veatch (BV)
  - Environmental Team (ET(KTD)) – Cinotech Consultants Limited (CCL)
  - Independent Environmental Checker (IEC(KTD)) – Mott MacDonald Hong Kong Limited (MMHK)



1.7 The key contacts of the Project are shown in Table 1.1.

**Table 1.1 Key Project Contacts**

Party	Role	Contact Person	Phone No.	Fax No.
CEDD	Project Proponent	Mr. Mike CHO	2301 1465	2301 1277
		Mr. Romeo CHUNG	2301 1449	2301 1277
BV	Engineer's Representative	Ms. Esther TONG	2608 7379	2601 3988
Cinotech	Environmental Team (KTD)	Dr. Priscilla Choy	2151 2089	3107 1388
		Ms. Ivy Tam	2151 2090	
Mott MacDonald	Independent Environmental Checker (KTD)	Mr. Terence Kong	2828 5919	2827 1823

#### Construction Activities undertaken during the Reporting Month

- 1.8 There are several works contracts undertaken within KTD during the reporting month. In order to collect relevant environmental information from the work contracts and incorporate into this monthly monitoring report, a survey form for monthly environmental performance records was sent to all work contracts/tenants within KTD on 31 March 2015. The survey form shall be returned by 5th each month to provide the environmental monthly information of respective work contracts within KTD.
- 1.9 Based on the returned survey form from work contracts and site observation for short term tenancy (STT) / temporary government land allocation (TGLA) during the weekly site inspection, the major site activities undertaken within Kai Tak Development (KTD) in the reporting month are summarized in Table 1.2:

**Table 1.2 Summary Table for Major Site Activities undertaken within KTD in the Reporting Month**

#### KDO, CEDD projects

Contract No.	Project Title	Site Activities
CV/2013/02	Maintenance Contract for Seawall and Navigation Channels (2013-2016) - Dredging at Kai Tak Cruise Terminal Stage 2	1) Water quality monitoring
KL/2010/02	Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)	1) Water quality monitoring for bioremediation

KL/2010/03	Kai Tak Development Stage 2 Infrastructure Works at North Apron Area	<ol style="list-style-type: none"> <li>1) Site clearance</li> <li>2) Road works</li> <li>3) Road drainage construction</li> <li>4) Box culvert construction</li> <li>5) Sewage pumping station construction</li> <li>6) Landscaping works</li> </ol>
KL/2011/01	Kai Tak Development – Reconstruction and Upgrading of Kai Tak Nullah	<ol style="list-style-type: none"> <li>1) Pre-drilling works at desilting compound</li> <li>2) Construction for desilting compound</li> <li>3) Construction for box culvert and open channel</li> <li>4) TTA at Kai Fuk Road</li> <li>5) Settlement monitoring</li> <li>6) Drainage diversion works at Kai Tak</li> <li>7) ELS works for box culvert and open channel</li> <li>8) Seawall reinstatement works and construction of decked channel</li> </ol>
KL/2012/02	Kai Tak Development - Stage 3A Infrastructure at Former North Apron Area	<ol style="list-style-type: none"> <li>1) Site clearance</li> <li>2) Trial pit excavation for SW3</li> <li>3) Erection of site boundary fencing</li> <li>4) Sheet piling and earthworks for VT1</li> <li>5) Roadworks at Portion F2</li> <li>6) Drainage works at Portion F2,G &amp; B6</li> <li>7) Ground investigation</li> <li>8) PERE stage 1 works</li> <li>9) RC works for VT1 at Portion G</li> </ol>
KL/2012/03	Kai Tak Development Stage 4 Infrastructure at Former North Apron Area	<ol style="list-style-type: none"> <li>1) Construction of walls for Pumping Station PS2</li> <li>2) Trench excavation and installation of box culvert B6</li> <li>3) Construction of sewerage works at Road D2</li> <li>4) Road widening works at Sung Wong Toi Road</li> <li>5) Construction of pits for pipe jacking works at TKW area</li> <li>6) Construction of drainage and sewerage works at Road L19</li> <li>7) Construction of walls for NPS</li> <li>8) Excavation, lateral support and pipe laying works for DCS</li> <li>9) Construction of drainage and sewerage works at Road L6</li> <li>10) Backfilling at box culvert B5</li> </ol>

**DSD projects**

Contract No.	Project Title	Site Activities
DC/2010/03	Kai Tak Nullah Improvement Works at Prince Edward Road East	<ol style="list-style-type: none"> <li>1) Maintain Engineer's Principal Office</li> <li>2) Maintain Contractor's Site Office and Site Compound</li> <li>3) Stockpile excavated C&amp;D waste material of Prince Edward Road East</li> </ol>
DC/2011/04	Reconstruction, Improvement and Rehabilitation of Kai Tak River from Wong Tai Sin Police Station to Tung Tau	<ol style="list-style-type: none"> <li>1) Maintain of the access road, Engineer's Principal Office and Contractor's Site Office</li> </ol>

**WSD projects**

Contract No.	Project Title	Site Activities
3/WSD/08	Replacement and Rehabilitation of Water Mains Stages 2 & 3	1) Storage of water works material
6/WSD/08		1) Construction material storage (Portion 2-3)
7/WSD/08		1) Site Office of the Contractor 2) Storage of water works material 3) Storage and sorting of C&D materials
8/WSD/08		1) Pipe materials storage (Kai Tak - Portion 1-2)

**ArchSD projects**

Contract No.	Project Title	Site Activities
SS A501	Design and Construction of Centre of Excellence in Paediatrics	1) Sheet piling 2) Piling works 3) Hoarding amendment 4) Loading test 5) King post installation
SS B507	Construction of Two 30-classroom Primary Schools at Site 1A-3 and Site 1A-4, Kai Tak Development	1) Site clearance and establishment 2) Backfilling and compaction 3) Excavation and Lateral Support 4) Trial wall panel construction 5) Drainage Work 6) Superstructure 7) Construction of transformer room
SS W304	Design and Construction of Trade and Industry Tower in Kai Tak Development Area	1) Curtain wall installation 2) Interior renovation 3) Soil backfilling and planting 4) Hoarding dismantle 5) Planting
TC Y305	Demolition of ex-GFS building	1) Demolition of long span beam 2) Demolition of reinforced concrete structure

**CLP projects**

Contract No.	Project Title	Site Activities
	CLP Kai Tak Cable Tunnel	1) ELS works 2) Sheet pile installation 3) Open cut excavation 4) Concreting works 5) Steel rebar fixing 6) Miscellaneous works 7) Welding steel members 8) Formwork 9) Marine sediment disposal
CLP Cabling Work in Kai Tak Area	132/11kV & LV Cable Installation	1) 11kV & LV cable laying and jointing 2) 132kV cable shifting

**EMSD projects**

Contract No.	Project Title	Site Activities
1020EM12A	District Cooling System (DCS) at Kai Tak Development (KTD) Phase III (Package A)-Chilled Water Pipe Laying Works	<ol style="list-style-type: none"> <li>1) Excavation</li> <li>2) Install and remove sheet pile</li> <li>3) Pile laying</li> <li>4) Grouting</li> <li>5) TBM tunneling</li> <li>6) Ground investigation</li> </ol>

**MTR projects**

Contract No.	Project Title	Site Activities
1107	Diamond Hill to Kai Tak Tunnels	<ol style="list-style-type: none"> <li>1) Tunnels construction at Cut and Cover section</li> <li>2) Investigation and removal of old foundation works</li> <li>3) Grouting Works</li> <li>4) Site preparation works</li> <li>5) TBM excavation</li> </ol>
1108	Kai Tak Station and Associated Tunnels	<ol style="list-style-type: none"> <li>1) Open Cut Tunnel: shotcreting to excavated slope down to formation level, excavation and boulder breaking, wall and roof formwork erection</li> <li>2) Cut and Cover Tunnel: waterproof spray to wall, falsework erection, case concrete</li> <li>3) Package 4.5: excavation, base slab cast, rebar fixing, formwork erection, wall and top slab cast</li> <li>4) Station structure: wall concreting, backfilling, sheetpiling for entrance A</li> <li>5) Launching Shaft: strut installation</li> <li>6) Receiving Shaft: waler construction, rock breaking</li> </ol>
1108A	Kai Tak Barging Point Facilities	<ol style="list-style-type: none"> <li>1) Spoil Disposal</li> <li>2) Watering of Site</li> </ol>
1109	Shatin to Central Link: Ma Tau Wai and To Kwa Wan Stations and Tunnels	<ol style="list-style-type: none"> <li>1) Proof-drilling</li> <li>2) Bulk Excavation</li> <li>3) TBM Set up works</li> <li>4) Traffic Diversion</li> <li>5) Socketted H Piling</li> <li>6) Strut Installation</li> <li>7) Sheet Piling</li> <li>8) TAM Grouting</li> <li>9) Pipe Piling</li> </ol>

**HKHA projects**

Contract No.	Project Title	Site Activities
20140264	Foundation for Home Ownership Scheme Development at Kai Tak 1G1(B)	<ol style="list-style-type: none"> <li>1) Site office setup</li> <li>2) Works for driven pile</li> </ol>

**URA projects**

<b>Contract No.</b>	<b>Project Title</b>	<b>Site Activities</b>
New Kowloon Inland Lot No. 6515	Kai Tak Flat-For-Flat Development	1) Environmental Monitoring Work 2) H1 Block external wall tile cleaning works 3) H2 Block external wall tile cleaning works 4) H3 Block external wall tile cleaning works 5) L1 Block external wall tile works 6) Retail Block roof floor planter wall construction 7) Brown area construction of fence wall 8) Basement plastering and planting

**COHL projects**

<b>Contract No.</b>	<b>Project Title</b>	<b>Site Activities</b>
New Kowloon Inland Lot No. 6516 & 6517	New Kowloon Inland Lot No. 6516 & 6517 - Proposed Residential Development	1) H- Pile installation 2) Excavation and Lateral Support Works 3) Installation of Temporary Work Platform

**List of Temporary Government Land Allocations (TGLAs)**

Item No.	Allocation No.	Name of Occupants	Site Activities
T1	GLA-TNK 1671 (Site 1)	Civil Engineering & Development Department	Works Area for Stage 1 Infrastructure Works for Public Housing Sites and Government Offices
	GLA-TNK 2031 (Site 4)	Civil Engineering & Development Department	Works Area for Stage 3A Infrastructure at North Apron Area
T2	GLA-TRD 65 (2 sites)	RDO of Highways Department	Works Area in connection with SCL
T3	GLA-TNK 1571	Architectural Services Department	Temporary Works Area (Kai Tak Government Offices)
T4	GLA-TRD 115	RDO of Highways Department	Works Area for Temporary Storage of Precast Segments and Construction Material
T5	GLA-TNK 2031 (Site 3)	Civil Engineering & Development Department	Works Area for Stage 3A Infrastructure at North Apron Area
	GLA-TRD 72 (4 sites)	RDO of Highways Department	Works Area in connection with SCL
T6	GLA-TNK 1850 (Site 1)	PM(K), Civil Engineering & Development Department	Works Area for Stage 2 Infrastructure at North Apron Area
T7	GLA-TNK 2031 (Site 2)	Civil Engineering & Development Department	Works Area for Stage 3A Infrastructure at North Apron Area
T8	GLA-TNK 1801	Housing Department	Works and storage area (Site 1B3)
T9	GLA-TNK 1862	Drainage Services Department	Works Area – Reconstruction & Improvement of Kai Tak Nullah (Choi Hung Road Section)
T10	GLA-TNK 2031 (Site 1)	Civil Engineering & Development Department	Works Area for Stage 3A Infrastructure at North Apron Area
T11	GLA-TNK 1288	Drainage Services Department	Sewage Pumping Station (Kai Tak No.1 DWFI)
T12	GLA-TRD 109	RDO of Highways Department	Works Area in connection with SCL
T13	GLA-TNK 1850 (Site 3)	PM(K), Civil Engineering & Development Department	Works Area for Stage 2 Infrastructure at North Apron Area
	GLA-TNK 2031 (Site 5)	Civil Engineering & Development Department	Works Area for Stage 3A Infrastructure at North Apron Area
T14	GLA-TNK 2057	PM(K), Civil Engineering & Development Department	Works Area for Stage 4 Infrastructure at North Apron Area
T15	GLA-TNK 1966	PM(K), Civil Engineering & Development Department	Works Area for Kai Tak Nullah Modification Works under Contract No. KL/2011/01
T16	GLA-TNK 1997	Drainage Services Department	Site Office and Storage Area – Reconstruction & Improvement of Kai Tak Nullah (Choi Hung Road Section)
T17	GLA-TNK 2095	PM(K), Civil Engineering & Development Department	Works Area for Stockpiling Area in connection with Kai Tak Nullah Modification Works under Contract No. KL/2011/01
T18	GLA-TNK 2044 (2 sites)	Water Supplies Department	Works Area for Replacement and Rehabilitation of Water Mains Stage 3 Mains in Kowloon - Investigation Design and Construction
T19	GLA-TRD 51	RDO of Highways Department	Tree Nursery at Sung Wong Toi area in connection with SCL

T20	GLA-TRD 104	RDO of Highways Department	Works Area for Temporary Storage of Excavated and Construction Material at Sung Wong Toi Area in connection with SCL
T21	GLA-TNK 2018	HK Police Force	Demolition of Existing Structure
T22	GLA-TRD 108	RDO of Highways Department	Works Area in connection with SCL
T23	GLA-TNK 2031 (Site 6)	Civil Engineering & Development Department	Works Area for Stage 3A Infrastructure at North Apron Area
T24	GLA-TNK 1759	Civil Engineering & Development Department	Works Area (Ttrunk Road T2 Project)
T25	GLA-TNK 1823 (2 sites)	PM(K), Civil Engineering & Development Department	Works Area for Kai Tai Approach Channel and Kwun Tong Typhoon Shelter
T26	GLA-TNK 1692	Drainage Supplies Department	Works Area (Control of Water Pollution at Jordan Valley Box Culvert)
T27	GLA-TNK 1675	PM(K), Civil Engineering & Development Department	Works Area in connection with Stage 1 Advance Infrastructure Works at Southern Part of Former Runway
T28	GLA-TNK 1977 (2 sites)	Electrical and Mechanical Services Department	Works Area for DCS Phase III (Package A) Works
	GLA-TNK 2104	Architectural Services Department	Erection of Hoarding
T29	GLA-TNK 1934	CPM 202, Architectural Services Department	Works Area for Establishment of Centre of Excellence in Paediatrics
T30	GLA-TNK 2158	CE/PW, Civil Engineering and Development Department	Works Area for Maintenance of Piers for Contract No. CV/2013/07
T31	GLA-TNK 2037	Highways Department	Maintenance Depot
T32	GLA-TRD 36 (3 sites)	RDO of Highways Department	Works Area for barging facilities in connection with SCL
	GLA-TRD 085	RDO of Highways Department	Works Area for delivery of tunnel boring machine in connection with SCL
T33	GLA-TNK 1717	Electrical and Mechanical Services Department	Works Area for DCS
T34	GLA-TNK 2061	Civil Engineering & Development Department	Barging Point for Government Projects
T35	GLA-TNK 1707	Civil Engineering & Development Department	Works Area for Site Formation Works for Cruise Terminal
T36	GLA-TNK 1191	Hong Kong Observatory	Automatic Weather Station
T37	GLA-TNK 1693	Architectural Services Department	Works Area for Cruise Terminal Building
T38	GLA-TNK 1542	Hong Kong Observatory	Weather Station

**List of Short Term Tenancy (STT)**

Item No.	STT No.	Name of Occupants	Site Activities
S1	KX2688	Goldway Parking Ltd.	Car-park
S2	KX2915	Goldway Parking Ltd.	Car-park
S3	KX2940	Goldway Parking Ltd.	Car-park
S4	KX2939	Goldway Parking Ltd.	Car-park
S5	SCL001	MTRC	Works area in connection with SCL
S6	KX2261	Hong Kong Aviation Club Ltd.	Training for air traffic controllers
S7	KX2881	Graceful Ocean Development Ltd.	Car-park
S8	KX2882	Skye Parking Ltd.	Car-park
S9	KX2574	Future Chinese Limited	Car-park
S10	KX2575	Nanjing Limited	Car-park
S11	KX2877	CLP Power Hong Kong Limited	Constructing, maintaining and operating the Underground Cable Tunnel
S12	KX2675	Wang Lee Building Materials Trading Ltd.	Operation of business in the recovery and recycling
S13	KX2676	Ga Shing Transport Co.	Operation of business in the recovery and recycling
S14	KX2677	Chuen Kee Metal Trading Co Ltd.	Operation of business in the recovery and recycling
S15	KX2678	Kin Xun Environment Recycle Ltd	Operation of business in the recovery and recycling
S16	KX2935	Architectural Services Department	Works area and /or storage area in connection with construction of Centre of Excellence in Paediatrics
S17	KX2641	Citybus Limited	Parking of buses
S18	KX2569	Sureguard Logistics Limited	Open storage of goods and dangerous goods
S19	KX2616	CLP Power Hong Kong Limited	Constructing, maintaining and operating Underground Strata I and II and The Pink Edged Red Area



- 1.10 The construction programme showing the inter-relationship with environmental protection/mitigation measures are presented in Table 1.3.

**Table 1.3 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures**

Construction Works	Major Environmental Impact	Control Measures
As mentioned in Table 1.2	Noise, dust impact, water quality and waste generation	<ul style="list-style-type: none"> <li>• Sufficient watering of the works site with active dust emitting activities</li> <li>• Properly cover the stockpiles</li> <li>• On-site waste sorting and implementation of trip ticket system</li> <li>• Appropriate desilting/sedimentation devices provided on site for treatment before discharge</li> <li>• Use of quiet plant and well-maintained construction plant</li> <li>• Provide movable noise barrier</li> <li>• Provide sufficient mitigation measures as recommended in Approved EIA Report/Lease requirement</li> </ul>

#### Summary of EM&A Requirements

- 1.11 The EM&A programme requires construction noise monitoring, air quality monitoring, landscape and visual monitoring and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
- All monitoring parameters;
  - Action and Limit levels for all environmental parameters;
  - Event Action Plans;
  - Environmental mitigation measures, as recommended in the Schedule 3 EIA Report; and
  - Environmental requirements in contract documents under Contract No. KLN/2013/16.
- 1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 6 of this report.
- 1.13 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely air quality and noise levels and audit works for the Project in March 2015.

**2. AIR QUALITY****Monitoring Requirements**

- 2.1 According to EM&A Manual of the Kai Tak Development EIA Study and contract requirement under Contract No. KLN/2013/16, 1-hour and 24-hour TSP monitoring were conducted to monitor the air quality for KTD. For regular impact monitoring, a sampling frequency of at least once in every six days at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

**Monitoring Locations**

- 2.2 Eight designated monitoring stations were selected for air quality monitoring programme. Impact dust monitoring was conducted at seven air quality monitoring stations, namely, Contractor Site Office of KL/2012/02 (AM1(B)), Lee Kau Yan Memorial School (AM2), Holy Trinity Bradbury Centre (AM3(A)), EMSD Workshops (AM4(A)), Po Leung Kuk Ngan Po Ling College (AM5(A)), Ching Long Shopping Centre (AA1) and Tak Long Estate (AA2) in the reporting month. Table 2.1 describes the air quality monitoring locations, which are also depicted in **Figure 2**.

**Table 2.1 Locations for Air Quality Monitoring**

Monitoring Stations	Locations	Location of Measurement
AM1(B)	Contractor Site Office (KL/2012/02)	Ground Floor Area
AM2	Lee Kau Yan Memorial School	Rooftop (about 8/F) Area
AM3(A)	Holy Trinity Bradbury Centre	Rooftop (about 8/F) Area
AM4(A)	EMSD Workshops	Rooftop (about 6/F) Area
AM5(A)	Po Leung Kuk Ngan Po Ling College	Rooftop (about 10/F) Area
#AM6	PA 15	Site 1B4 (Planned)
^AA1	Ching Long Shopping Centre	Rooftop (about 3/F) Area
^AA2	Tak Long Estate	Rooftop (about 3/F) Area

Remarks: # Baseline/Impact monitoring will be conducted when the premise is occupied or instructed by Engineer.

^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16. Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

### Monitoring Equipment

- 2.3 Table 2.2 summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates are attached in **Appendix B**.

**Table 2.2 Air Quality Monitoring Equipment**

Equipment	Model and Make	Quantity
Calibrator	TISCH TE-5025A	1
1-hour TSP Dust Meter	Sibata Model LD-3 & LD-3B	7
	Met One Instruments Model AEROCET-531	1
HVS Sampler	GMWS 2310 c/w of TSP sampling inlet	7
Wind Anemometer	Davis Weather Monitor II, Model no. 7440	1

### Monitoring Parameters, Frequency and Duration

- 2.4 Table 2.3 summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting month is shown in **Appendix D**.

**Table 2.3 Impact Dust Monitoring Parameters, Frequency and Duration**

Parameters	Frequency
1-hr TSP	Three times / 6 days
24-hr TSP	Once / 6 days

### Monitoring Methodology and QA/QC Procedure

#### *1-hour TSP Monitoring*

#### Measuring Procedures

- 2.5 The measuring procedures of the 1-hour dust meters were in accordance with the Manufacturer's Instruction Manual as follows:
- The 1-hour dust meter is placed at least 1.3 meters above ground.
  - Set POWER to "ON" and make sure that the battery level was not flash or in low level.
  - Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
  - Push the knob at MEASURE position.
  - Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
  - Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
  - Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

Maintenance/Calibration

- 2.6 The following maintenance/calibration was required for the direct dust meters:
- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

*24-hour TSP Monitoring*Instrumentation

- 2.7 High volume (HVS) samplers (Model GMWS-2310 Accu-Vol) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50). Moreover, the HVS also met all the requirements in section 2.5 of the updated EM&A Manual.

Operating/Analytical Procedures

- 2.8 Operating/analytical procedures for the operation of HVS were as follows:
- A horizontal platform was provided with appropriate support to secure the samplers against gusty wind.
  - No two samplers were placed less than 2 meters apart.
  - The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
  - A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
  - A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
  - No furnaces or incineration flues were nearby.
  - Airflow around the sampler was unrestricted.
  - The sampler was more than 20 meters from the drip line.
  - Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- 2.9 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m<sup>3</sup>/min. and 1.4 m<sup>3</sup>/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- 2.10 For TSP sampling, fiberglass filters have a collection efficiency of > 99% for particles of 0.3 µm diameter were used.
- 2.11 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.

- 2.12 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.13 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- 2.14 The shelter lid was closed and secured with the aluminum strip.
- 2.15 The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 2.16 After sampling, the filter was removed and sent to the HOKLAS laboratory (Wellab Ltd.) for weighing. The elapsed time was also recorded.
- 2.17 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than  $\pm 3^\circ\text{C}$ ; the relative humidity (RH) should be  $< 50\%$  and not vary by more than  $\pm 5\%$ . A convenient working RH is 40%.

#### Maintenance/Calibration

- 2.18 The following maintenance/calibration was required for the HVS:
- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
  - High volume samplers were calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

#### **Results and Observations**

- 2.19 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 2.20 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 2.21 The air temperature, precipitation and the relative humidity data was obtained from Hong Kong Observatory where the wind speed and wind direction were recorded by the installed Wind Anemometer, which was relocated from rooftop of Kai Tak Operational Base to rooftop (about 8/F) of Lee Kau Yan Memorial School since 25 April 2013. The location is shown in **Figure 4**. This weather information for the reporting month is summarized in **Appendix C**.
- 2.22 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendices E and F** respectively.

- 2.23 The summary of exceedance record in reporting month is shown in **Appendix H**. No exceedance was recorded for the air quality monitoring.
- 2.24 According to our field observations, the major dust source identified at the designated air quality monitoring stations are as follows:

Station	Major Dust Source
AM1(B) - Contractor Site Office (KL/2012/02)	Road traffic dust Site vehicle movement
AM2 – Lee Kau Yan Memorial School	Road traffic dust Exposed site area and open stockpiles Site vehicle movement
AM3(A) – Holy Trinity Bradbury Centre	Road traffic dust Exposed site area Excavation works Site vehicle movement
AM4(A) – EMSD Workshops	Recycling company Site vehicle movement
AM5(A) – Po Leung Kuk Ngan Po Ling College	Road traffic dust Excavation works at the site (Contract No.: 1/WSD/14(K)) facing Po Leung Kuk Ngan Po Ling College
^AA1 – Ching Long Shopping Centre	Road Traffic Dust Exposed site area Excavation works Site vehicle movement
^AA2 – Tak Long Estate	Road Traffic Dust Exposed site area Excavation works Site vehicle movement

Remarks: ^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16.  
Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

### 3. NOISE

#### Monitoring Requirements

- 3.1 According to EM&A Manual of the Kai Tak Development EIA Study and contract requirement under Contract No. KLN/2013/16, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities within KTD. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

#### Monitoring Locations

- 3.2 Eleven designated monitoring stations were selected for noise monitoring programme as stipulated in the EM&A Manual. One supplementary construction noise monitoring station at Ching Long Shopping Centre was selected according to contract requirement under Contract No. KLN/2013/16.
- 3.3 Noise monitoring was conducted at 11 designated monitoring stations (M1, M2, M3, M4, M5, M6(A), M7(A), M8, M9, M10 and MA1) in the reporting month. **Figure 3** shows the locations of these stations.

**Table 3.1 Noise Monitoring Stations**

Monitoring Stations	Locations	Location of Measurement
M1	Buddhist Chi King Primary School	7/F Sport Area
M2	S.K.H. Kowloon Bay Kei Lok Primary School	7/F Podium
M3	Rhythm Garden	1/F Podium
M4	Cognitio College	Rooftop (about 6/F) Area
M5	Lee Kau Yan Memorial School	Rooftop (about 7/F) Area
M6(A)	Kowloon City District Kaifong Association	Rooftop (about 6/F) Area
M7(A)	Oblate Primary School	Rooftop (about 7/F) Area
M8	CCC Kei To Secondary School	Rooftop (about 8/F) Area
M9	Po Leung Kuk Ngan Po Ling College	Staircase Area (about 9/F)
M10	Tak Long Estate	2/F Podium
^MA1	Ching Long Shopping Centre	Rooftop (about 3/F) Area
#M11	Site 1B4 (Planned)	-

Remarks: \* Noise monitoring at station M7 was rejected by the premise owner on 6 October 2014. The monitoring works was relocated to an alternative monitoring station M7(A) since 10 October 2014.

^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16.

Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

# Baseline/Impact monitoring will be conducted when the premise is occupied or instructed by Engineer.

### Monitoring Equipment

- 3.4 Table 3.2 summarizes the noise monitoring equipment. Copies of calibration certificates are provided in **Appendix B**.

**Table 3.2 Noise Monitoring Equipment**

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	SVAN 955 and 957	7
Calibrator	SVAN 30A, Brüel & Kjær 4231	5

### Monitoring Parameters, Frequency and Duration

- 3.5 Table 3.3 summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

**Table 3.3 Noise Monitoring Parameters, Frequency and Duration**

Monitoring Stations	Parameter	Period	Frequency	Measurement
M1 M2 M3 M4 M5 M6(A) M8 M9 M10	L <sub>10</sub> (30 min.) dB(A) L <sub>90</sub> (30 min.) dB(A) L <sub>eq</sub> (30 min.) dB(A)	0700-1900 hrs on normal weekdays	Once per week	Façade
M7(A) ^MA1				Free Field

Remarks: ^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16.  
Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

### Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was set on a tripod at a height of 1.2 m above the ground.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - time measurement : 30 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the L<sub>eq</sub>, L<sub>90</sub> and L<sub>10</sub> were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused temporarily during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.



**Maintenance and Calibration**

- 3.6 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 3.7 The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 3.8 Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

**Results and Observations**

- 3.9 All construction noise monitoring was conducted as scheduled in the reporting month. 2 Action level exceedances were recorded due to complaint cases notified by EPD on 12 March 2015. No Limit Level exceedance was recorded.
- 3.10 The summary of exceedance record in the reporting month is shown in **Appendix H**.
- 3.11 All the Corrected Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured Leq – Baseline Leq = CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in Table 3.4.
- 3.12 Noise monitoring results and graphical presentations are shown in **Appendix G**.

3.13 The major noise source identified at the designated noise monitoring stations are as follows:

Monitoring Stations	Locations	Major Noise Source
M1	Buddhist Chi King Primary School	Traffic Noise Site vehicle movement
M2	S.K.H. Kowloon Bay Kei Lok Primary School	
M3	Rhythm Garden	Traffic Noise
M4	Cognitio College	Traffic Noise Piling works
M5	Lee Kau Yan Memorial School	Traffic Noise Site vehicle movement Piling works
M6(A)	Kowloon City District Kaifong Association	Traffic Noise Site vehicle movement
M7(A)	Oblate Primary School	Road and marine traffic Noise
M8	CCC Kei To Secondary School	Road and marine traffic Noise Excavation works at the site (Contract No.: 1/WSD/14(K)) facing Po Leung Kuk Ngan Po Ling College Noise generated from other buildings construction site nearby
M9	Po Leung Kuk Ngan Po Ling College	
M10	Tak Long Estate	Traffic Noise Site vehicle movement Piling works
MA1	Ching Long Shopping Centre	

**Table 3.4 Baseline Noise Level and Noise Limit Level for Monitoring Stations**

Station	Baseline Noise Level, dB (A)	Noise Limit Level, dB (A)
M1	64.4 (at 0700 – 1900 hrs on normal weekdays)	70* (at 0700 – 1900 hrs on normal weekdays)
M2	61.3 (at 0700 – 1900 hrs on normal weekdays)	
M3	76.3 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
M4	78.6 (at 0700 – 1900 hrs on normal weekdays)	70* (at 0700 – 1900 hrs on normal weekdays)
M5	76.7 (at 0700 – 1900 hrs on normal weekdays)	
M6(A)	70.5 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
M7(A)	63.9 (at 0700 – 1900 hrs on normal weekdays)	70* (at 0700 – 1900 hrs on normal weekdays)
M8	68.7 (at 0700 – 1900 hrs on normal weekdays)	
M9	61.9 (at 0700 – 1900 hrs on normal weekdays)	
M10	59.9 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
MA1	65.9 (at 0700 – 1900 hrs on normal weekdays)	

(\*) Noise Limit Level is 65 dB(A) during school examination periods.

**4. COMPARISON OF EM&A RESULTS WITH EIA PREDICTIONS**

4.1 The EM&amp;A data was compared with the EIA predictions as summarized in 4.1 to 4.3.

**Table 4.1 Comparison of 1-hr TSP data with EIA predictions**

Station	Predicted 1-hr TSP conc.		
	Scenario1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	Reporting Month (March 15), $\mu\text{g}/\text{m}^3$
AM1(B) - Contractor's Site Office of KL/2012/02	192	298	173
AM2 – Lee Kau Yan Memorial School	290	312	180
AM3(A) - Holy Trinity Bradbury Centre (Alternative station for Sky Tower)	217	247	182
AM4(A) – EMSD Workshops (Alternative station for Grand Waterfront)	246	258	185
AM5(A) – Po Leung Kuk Ngan Po Ling College (Alternative station for CCC Kei To Secondary School)	159	221	190
^AA1 – Ching Long Shopping Centre	-	-	186
^AA2 – Tak Long Estate	-	-	180

Remarks: ^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16.  
Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

**Table 4.2 Comparison of 24-hr TSP data with EIA predictions**

Station	Predicted 24-hr TSP conc.		
	Scenario1 (Mid 2009 to Mid 2013), $\mu\text{g}/\text{m}^3$	Scenario2 (Mid 2013 to Late 2016), $\mu\text{g}/\text{m}^3$	Reporting Month (March 15), $\mu\text{g}/\text{m}^3$
AM1(B) - Contractor's Site Office of KL/2012/02	121	156	75
AM2 – Lee Kau Yan Memorial School	145	169	111
AM3(A) - Holy Trinity Bradbury Centre (Alternative station for Sky Tower)	106	138	82
AM4(A) – EMSD Workshops (Alternative station for Grand Waterfront)	143	152	130
AM5(A) – Po Leung Kuk Ngan Po Ling College (Alternative station for CCC Kei To Secondary School)	103	128	48
^AA1 – Ching Long Shopping Centre	-	-	65
^AA2 – Tak Long Estate	-	-	64

Remarks: ^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16.  
Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

**Table 4.3 Comparison of Noise Monitoring Data with EIA predictions**

Stations	Predicted Mitigated Construction Noise Levels during Normal Working Hour ( $L_{eq(30min)}$ dB(A))	Reporting Month (March 15), $L_{eq(30min)}$ dB(A)
M1 - Buddhist Chi King Primary School	51 – 68	57 – 65
M2 - S.K.H. Kowloon Bay Kei Lok Primary School	51 – 70	62 – 66
M3 – Rhythm Garden	45 – 75	71 – 76 ✓
M4- Cognitio College	47 – 75	63 – 79 ✓
M5 - Lee Kau Yan Memorial School	47 – 74	73 – 74
M6(A) - Kowloon City District Kaifong Association (Alternative station for South Mansion)	47 – 78	69 – 71
M7(A) - Oblate Primary School	-	52 – 67
M8 - CCC Kei To Secondary School	45 – 68	60 – 65
M9 - Po Leung Kuk Ngan Po Ling College	44 – 70	58 – 67
M10 - Tak Long Estate	-	58 – 68
^MA1 – Ching Long Shopping Centre	-	63 – 70

Remarks: ^ Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16.  
Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

4.2 The 1-hour TSP and 24-hour TSP concentrations in the reporting month were recorded lower than the prediction in the approved Environmental Impact Assessment (EIA) Report.

4.3 The noise monitoring results in the reporting month at monitoring station M3 and M4 were recorded higher than the predicted mitigated construction noise levels in the EIA report and lower than the referencing baseline and background level. This was due to the major noise source during monitoring, i.e. background road traffic noise at the monitoring station.

## 5. LANDSCAPE OF VISUAL MONITORING REQUIREMENTS

- 5.1 According to EM&A Manual of the Kai Tak Development EIA Study and contract requirement under Contract No. KLN/2013/16, ET(KTD) shall monitor and audit the contractor's operation during the construction period on a weekly basis, and to report on the contractor's compliance.

### Results and Observations

- 5.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures within KTD. The summaries of site audits and photographic record of observations are attached in **Appendix I**.
- 5.3 No non-compliance of the landscape and visual impact was recorded in the reporting month. ✓
- 5.4 Should non-compliance of the landscape and visual impact occur, action in accordance with the action plan presented in **Appendix J** shall be performed.

## 6. ENVIRONMENTAL AUDIT

### Site Audits

- 6.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix I**.
- 6.2 Site audits were conducted on 6<sup>th</sup>, 13<sup>th</sup>, 20<sup>th</sup> and 27<sup>th</sup> March 2015 in the reporting month. Monthly joint site inspection with IEC and the Engineer's Representative was conducted on 27<sup>th</sup> March 2015.

### Review of Environmental Monitoring Procedures

- 6.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

#### *Air Quality Monitoring*

- The monitoring team recorded all observations around the monitoring stations within and outside the construction site.
- The monitoring team recorded the temperature and weather conditions on the monitoring days.

#### *Noise Monitoring*

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

### Status of Waste Management

- 6.4 The amount of wastes generated by the major site activities of the work contracts within KTD during the reporting month is shown in **Appendix M**.
- 6.5 In respect of the dump truck cover, the Contractor of Work Contracts within KTD is advised to take record photos and inspection to ensure that all dump trucks have fully covered the skip before leaving the site.

### Implementation Status of Environmental Mitigation Measures

- 6.6 ET (KTD) weekly site inspections were carried out during the reporting month and the observations of respective works within KTD are shown in **Appendix I**.
- 6.7 Based on the major observations recorded during the regular site audit in the reporting month, the Contractor was advised:
- To implement dust suppression measures on all haul roads, stockpiles, dry surfaces and dust generation works.
  - To check for any accumulation of waste materials or rubbish on site.
  - To ensure the performance of sorting of C&D materials at source



### **Summary of Mitigation Measures Implemented**

- 6.8 An updated summary of the EMIS is provided in **Appendix K**.

### **Implementation Status of Event Action Plans**

- 6.9 The Event Action Plans for air quality, noise and landscape and visual are presented in **Appendix J**.

#### 1-hr TSP Monitoring

- 6.10 No Action/Limit Level exceedance was recorded in the reporting month.

#### 24-hr TSP Monitoring

- 6.11 No Action/Limit Level exceedance was recorded in the reporting month.

#### Construction Noise

- 6.12 2 Action level exceedances were recorded due to complaint cases notified by EPD on 12 March 2015. No Limit Level exceedance was recorded.

#### Landscape and visual

- 6.13 No non-compliance was recorded in the reporting month.

### **Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution**

- 6.14 3 cases of complaint were reported from EPD concerning construction dust and noise in Kai Tak Development Area in the reporting month. The complaint case was referred to the Contractor and investigation conducted.
- 6.15 Details of the complaint cases and investigation results were presented in **Appendix L**.
- 6.16 No environmental prosecutions on site activities within KTD were received in the reporting month.
- 6.17 The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix L**.

**7. FUTURE KEY ISSUES**

7.1 Major site activities undertaken within (KTD) for the coming two month are summarized in Table 7.1:

**Table 7.1 Summary Table for Site Activities undertaken within KTD for Coming Two Months**

**KDO, CEDD projects**

Contract No.	Project Title	Site Activities
		April and May 2015
CV/2013/02	Maintenance Contract for Seawall and Navigation Channels (2013-2016) - Dredging at Kai Tak Cruise Terminal Stage 2	1) Water quality monitoring
KL/2010/02	Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)	1) Water quality monitoring for bioremediation 2) Demolition and reinstatement works at Work Areas W1 and W2
KL/2010/03	Kai Tak Development Stage 2 Infrastructure Works at North Apron Area	1) Site clearance 2) Road works 3) Road drainage construction 4) Box culvert construction 5) Sewage pumping station construction 6) Landscaping works
KL/2011/01	Kai Tak Development – Reconstruction and Upgrading of Kai Tak Nullah	1) Construction for desilting compound 2) ELS works for box culvert 3) Construction of box culverts, open channel and transition chamber 4) TTA near Kai Fuk Road 5) Settlement monitoring 6) Drainage diversion works at Kai Tak Nullah 7) Construction of decked channel 8) Piling for desilting compound
KL/2012/02	Kai Tak Development - Stage 3A Infrastructure at Former North Apron Area	1) Site clearance for all possessed portion 2) ELS for VT1 at Portion G 3) Sheet piling and earthworks for VT1 4) Tree transplanting 5) Drainage works at Portion F2,G &B6 6) PERE Stage 3 works 7) Ground Investigation and predrilling works at Portion C, B5 & B6 8) Sheet piling for SW2 and SW3 9) RC works for VT1 at Portion G 10) Waterworks at Portions G and B6

KL/2012/03	Kai Tak Development Stage 4 Infrastructure at Former North Apron Area	<ol style="list-style-type: none"> <li>1) Construction of walls for Pumping Station PS2</li> <li>2) Trench excavation and installation of box culvert B6</li> <li>3) Construction of sewerage works at Road D2</li> <li>4) Road widening works at Sung Wong Toi Road</li> <li>5) Construction of pits and pipe jacking works at TKW area</li> <li>6) Construction of drainage and sewerage works at Road L19</li> <li>7) Construction of walls for Pumping Station NPS</li> <li>8) Excavation, lateral support and pipe laying works for DCS</li> <li>9) Construction of drainage and sewerage works at Road L6</li> <li>10) Backfilling at box culvert B5</li> </ol>
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**DSD projects**

Contract No.	Project Title	Site Activities
		April and May 2015
DC/2010/03	Kai Tak Nullah Improvement Works at Prince Edward Road East	<ol style="list-style-type: none"> <li>1) Maintain Engineer's Principal Office</li> <li>2) Maintain Contractor's Site Office and Site Compound</li> <li>3) Stockpile excavated C&amp;D waste material of Prince Edward Road East</li> <li>4) Carriage Reinstatement at Prince Edward Road East</li> </ol>
DC/2011/04	Reconstruction, Improvement and Rehabilitation of Kai Tak River from Wong Tai Sin Police Station to Tung Tau	<ol style="list-style-type: none"> <li>1) Maintain of the access road, Engineer's Principal Office and Contractor's Site Office</li> </ol>

**WSD projects**

Contract No.	Project Title	Site Activities
		April and May 2015
3/WSD/08	Replacement and Rehabilitation of Water Mains Stages 2 & 3	1) Storage of water works material
6/WSD/08		1) Construction material storage (Portion 2-3)
7/WSD/08		<ol style="list-style-type: none"> <li>1) Site Office of the Contractor</li> <li>2) Storage of water works material</li> <li>3) Storage and sorting of C&amp;D materials</li> </ol>
8/WSD/08		1) Pipe materials storage (Kai Tak - Portion 1-2)

**ArchSD projects**

Contract No.	Project Title	Site Activities
		April and May 2015
SS A501	Design and Construction of Centre of Excellence in Paediatrics	1) Sheet piling 2) Piling works 3) Hoarding amendment 4) Loading test 5) King post installation 6) Excavation
SS B507	Construction of Two 30-classroom Primary Schools at Site 1A-3 and Site 1A-4, Kai Tak Development	1) Site clearance and establishment 2) Backfilling and compaction 3) Superstructure 4) Trial wall panel construction 5) Drainage Work 6) Construction of transformer room
SS W304	Design and Construction of Trade and Industry Tower in Kai Tak Development Area	1) Interior renovation 2) Planting 3) Curtain wall installation
TC Y305	Demolition of ex-GFS building	1) Demolition of reinforced concrete structure

**CLP projects**

Contract No.	Project Title	Site Activities
		April and May 2015
	Kai Tak Cable Tunnel	1) ELS works 2) Sheet pile installation 3) Open cut excavation 4) Concreting works 5) Steel rebar fixing 6) Miscellaneous works 7) Welding steel members 8) Formwork 9) Marine sediment disposal
CLP Cabling Work in Kai Tak Area	132/11kV & LV Cable Installation	1) 11kV & LV cable laying and jointing 2) 132kV cable shifting

**EMSD projects**

Contract No.	Project Title	Site Activities
		April and May 2015
1020EM12A	District Cooling System (DCS) at Kai Tak Development (KTD) Phase III (Package A)-Chilled Water Pipe Laying Works	1) Excavation 2) Install and remove sheet pile 3) Pile laying 4) Grouting 5) TBM tunneling 6) Ground investigation

**MTR projects**

Contract No.	Project Title	Site Activities
		April and May 2015
1107	Diamond Hill to Kai Tak Tunnels	<ol style="list-style-type: none"> <li>1) Removal of old foundation works</li> <li>2) Tunnel construction at cut and cover section</li> <li>3) Site preparation works</li> <li>4) TBM excavation</li> </ol>
1108	Kai Tak Station and Associated Tunnels	<ol style="list-style-type: none"> <li>1) Open cut tunnel: shotcreting, excavation and boulder breaking, formwork erection, steel fixing, wall and roof cast concrete;</li> <li>2) Cut and cover tunnel: uptrack and downtrack steel fixing;</li> <li>3) Package 4.5: excavation, concreting for base slab</li> <li>4) Station: concreting, backfilling, sheetpiling for entrance A;</li> <li>5) Mined tunnel: excavation, portal frame</li> </ol>
1108A	Kai Tak Barging Point Facilities	<ol style="list-style-type: none"> <li>1) Spoil disposal</li> <li>2) Watering of site</li> </ol>
1109	Shatin to Central Link: Ma Tau Wai and To Kwa Wan Stations and Tunnels	<ol style="list-style-type: none"> <li>1) Pile Load Test</li> <li>2) Bulk Excavation</li> <li>3) TBM Set up works</li> <li>4) Traffic Diversion</li> <li>5) Socketted H Piling</li> <li>6) Strut Installation</li> <li>7) Sheet Piling</li> <li>8) TAM Grouting</li> <li>9) Pipe Piling</li> </ol>

**HKHA projects**

Contract No.	Project Title	Site Activities
		April and May 2015
20140264	Foundation for Public Rental Housing Development at Ex-Kwai Chung Police Married Quarters (Kai Tak 1G1(B) Site)	<ol style="list-style-type: none"> <li>1) Driven pile</li> <li>2) ELS works</li> </ol>

**URA projects**

Contract No.	Project Title	Site Activities
		April and May 2015
New Kowloon Inland Lot No. 6515	Kai Tak Flat-For-Flat Development	1) Environmental Monitoring Work 2) H1 Block roof floor cladding feature and glass balustrade construction 3) H2 Block roof floor cladding feature and glass balustrade construction 4) H3 Block roof floor cladding feature and glass balustrade construction 5) L1 Block roof floor cladding feature and glass balustrade construction 6) Retail Block roof floor and glass balustrade construction

**COHL projects**

Contract No.	Project Title	Site Activities
		April and May 2015
New Kowloon Inland Lot No. 6516 & 6517	New Kowloon Inland Lot No. 6516 & 6517 - Proposed Residential Development	1) H- Pile installation 2) Excavation and Lateral Support Works 3) Installation of Temporary Work Platform

### Key Issues for the Coming Month

7.2 Key environmental issues in the coming month include:

- Dust generation from stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Watering for dust generating activity and on haul road;
- Proper storage of construction materials on site;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation of general and construction waste on site;
- Runoff from exposed slope;
- Wastewater and runoff discharge from site;
- Regular removal of silt, mud and sand along U-channels and sedimentation tanks;
- Review and implementation of temporary drainage system for the surface runoff;
- Noise from operation of the equipment, especially for rock-breaking activities, piling works and machinery on-site.

7.3 The tentative program of major site activities and the impact prediction and control measures for the coming two months, i.e. April and May 2015 are summarized as follows:

Construction Works	Major Impact Prediction	Control Measures
As mentioned in Table 7.1	Air quality impact (dust)	a) Frequent watering of haul road and unpaved/exposed areas; b) Frequent watering or covering stockpiles with tarpaulin or similar means; and c) Watering of any earth moving activities.
	Water quality impact	d) Diversion of the collected effluent to de-silting facilities for treatment prior to discharge to public storm water drains; e) Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge; f) Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and g) Provision of measures to prevent discharge into the stream;
	Noise Impact	i) Scheduling of noisy construction activities if necessary to avoid persistent noisy operation; j) Controlling the number of plants use on site; k) Regular maintenance of machines; and l) Use of acoustic barriers if necessary.

### Monitoring Schedule for the Next Month

7.4 The tentative environmental monitoring schedules for the next month are shown in **Appendix D**.

## 8. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 8.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.

#### 1-hr TSP Monitoring

- 8.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

#### 24-hr TSP Monitoring

- 8.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

#### Construction Noise Monitoring

- 8.4 All construction noise monitoring was conducted as scheduled in the reporting month. 2 Action level exceedances were recorded due to complaint cases notified by EPD on 12 March 2015. No Limit Level exceedance was recorded.

#### Landscape and visual

- 8.5 No non-compliance was recorded in the reporting month.

#### Complaint and Prosecution

- 8.6 3 cases of complaint were reported from EPD concerning construction dust and noise in Kai Tak Development Area in the reporting month. The complaint case was referred to the Contractor and investigation conducted.
- 8.7 Details of the complaint cases and investigation results were presented in **Appendix L**.
- 8.8 No environmental prosecutions were received in the reporting month.



## Recommendations

- 8.9 According to the environmental audit performed in the reporting month, the following recommendations were made:

### *Air Quality Impact*

- To prohibit any open burning on site.
- To regularly maintain the quality of machinery and vehicles on site.
- To implement dust suppression measures on all haul roads, stockpiles, dry surfaces and excavation works.
- To provide hoarding along the entire length of that portion of the site boundary.

### *Noise Impact*

- To inspect the noise sources inside the site.
- To space out noisy equipment and position the equipment as far away as possible from sensitive receivers.
- To provide temporary noise barriers for operations of noisy equipment near the noise sensitive receivers in an appropriate location.

### *Water Impact*

- To prevent any surface runoff discharge into any stream course.
- To review and implement temporary drainage system.
- To identify any wastewater discharges from site.
- To ensure properly maintenance for de-silting facilities.
- To clear the silt and sediment in the sedimentation tanks.
- To review the capacity of de-silting facilities for discharge.
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge.
- To avoid accumulation of stagnant and ponding water on site.

### *Waste/Chemical Management*

- To check for any accumulation of waste materials or rubbish on site.
- To ensure the performance of sorting of C&D materials at source (during generation);
- To carry out inspection of dump truck at site exit to ensure inert and non-inert C&D materials are properly segregated before removing off site.
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the site.
- To avoid improper handling or storage of oil drum on site.

### *Landscape and Visual*

- To protect the existing trees to be retained.
- To transplant the trees unavoidably affected by the works.
- To control of night-time lighting.
- To provide decorative screen hoarding.
- To complete landscape works at site area as early as possible.



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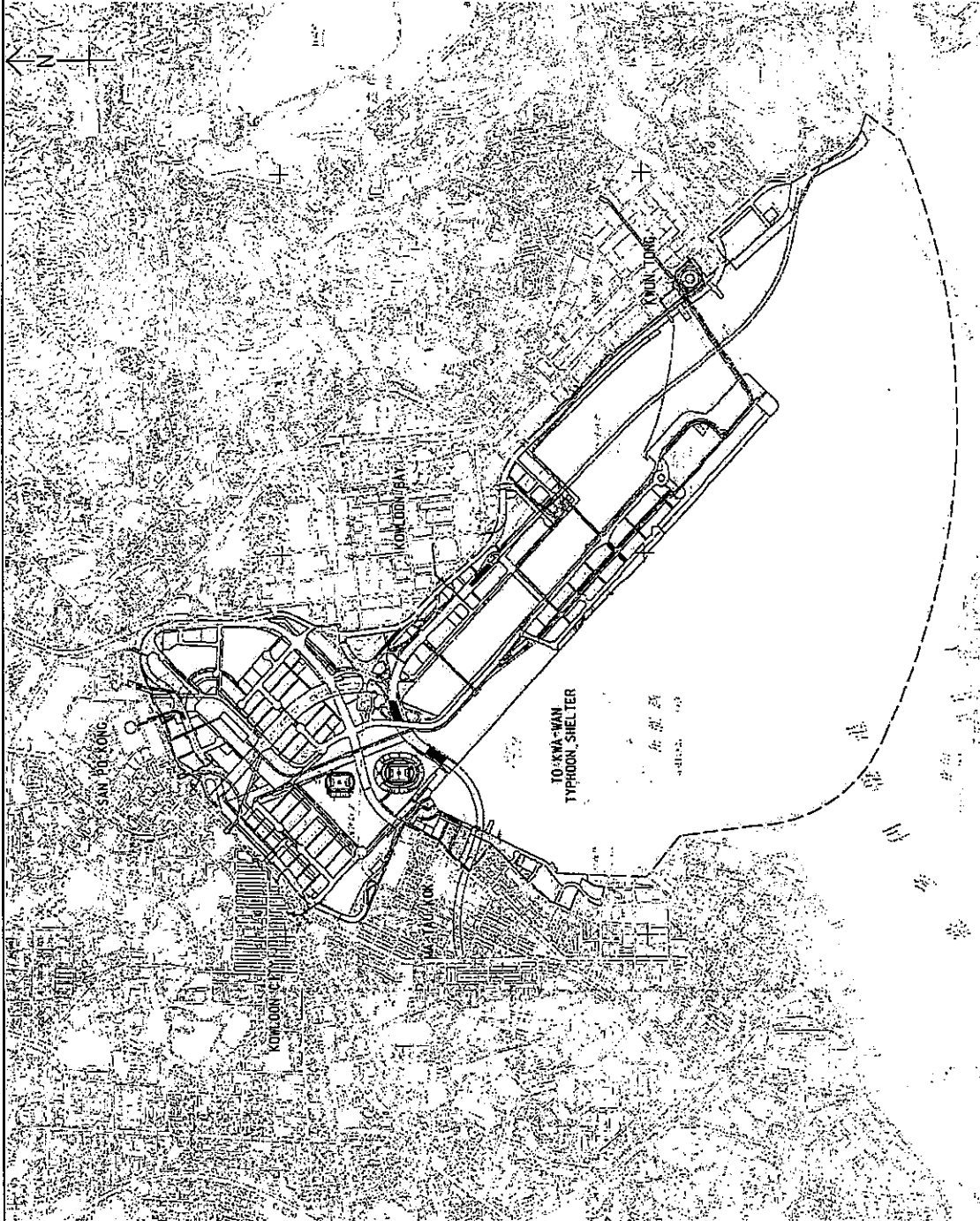
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FIGURES

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Scale

N.T.S

Project No. MA14008

Date

Jan-14

Figure

1

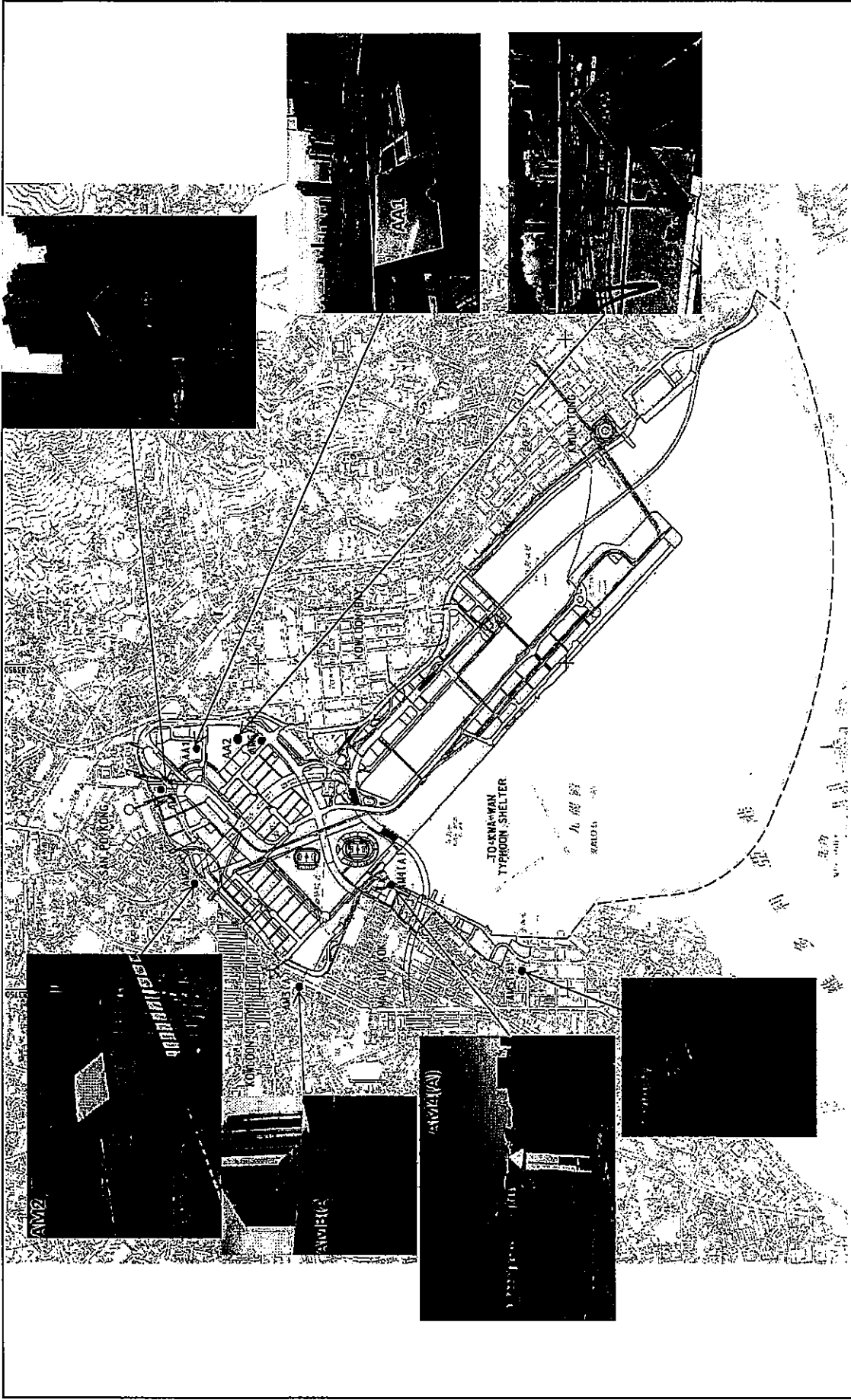
Contract No. KLN/2013/16

Environmental Monitoring Works for Kai Tak Development

Site Layout Plan

Title





Title

Contract No. KLN/2013/16  
 Environmental Monitoring Works for Kai Tak Development  
 Location of Air Quality Monitoring Stations

Scale	N.T.S	Project No.	MA14008
Date	Aug-14	Figure	2









Title

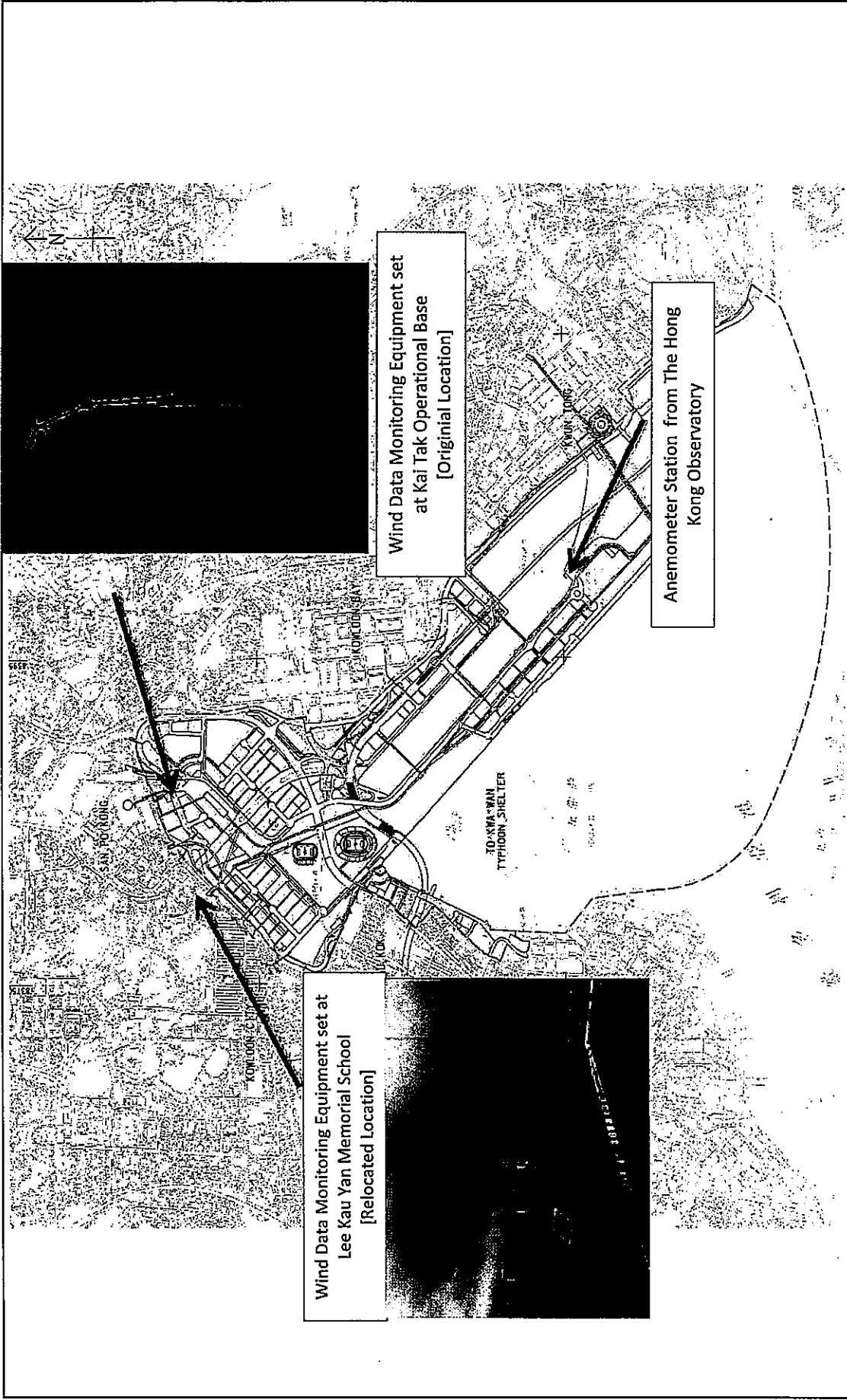
Contract No. KLN/2013/16  
 Environmental Monitoring Works for Kai Tak Development

Location of Noise Monitoring Stations

Scale	N.T.S	Project No.	MA14008
Date	Nov-14	Figure	3

CINOTECH





Title	Contract No. KLN/2013/16		
	Environmental Monitoring Works for Kai Tak Development		
Scale	Location of Wind Data Monitoring Equipment		
	N.T.S	Project No.	MA14008
Date	Jan-14	Figure	4





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**APPENDIX A  
ACTION AND LIMIT LEVELS**

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## Appendix A - Action and Limit Levels

**Table A-1 Action and Limit Levels for 1-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1(A)	342	500
AM2	346	
AM3(A)	351	
AM4(A)	371	
AM5(A)	345	
^AA1	307	
^AA2	312	

Remarks: (^) Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16. Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

**Table A-2 Action and Limit Levels for 24-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1(A)	159	260
AM2	157	
AM3(A)	167	
AM4(A)	187	
AM5(A)	156	
^AA1	156	
^AA2	156	

Remarks: (^) Supplementary monitoring station under contract requirement of Contract No. KLN/2013/16. Impact monitoring not required in the EM&A Manual of the Kai Tak Development EIA Study.

**Table A-3 Action and Limit Levels for Construction Noise**

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) 70dB(A)/65dB(A)*

Remarks: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed. \*70dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods, respectively.





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**APPENDIX B  
COPIES OF CALIBRATION  
CERTIFICATES**

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# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/58/0026

Station AM1(B) - Outside RLJV site office (KL/2008/09) Operator: WK  
 Date: 18-Feb-15 Next Due Date: 17-Apr-15  
 Equipment No.: A-01-58 Serial No. 2357

Ambient Condition			
Temperature, Ta (K)	290.4	Pressure, Pa (mmHg)	768.5

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0593	Intercept, bc	-0.0218
Last Calibration Date:	4-Feb-15	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	3-Feb-16	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.7	3.48	59.13	8.2	2.92
2	9.6	3.16	53.59	6.4	2.58
3	7.4	2.77	47.10	5.2	2.32
4	5.1	2.30	39.16	3.3	1.85
5	3.4	1.88	32.04	2.2	1.51

By Linear Regression of Y on X

Slope, mw = 0.0516 Intercept, bw = -0.1484

Correlation coefficient\* = 0.9984

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  4.13

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature: [Signature]  
 Checked by: [Signature] Signature: \_\_\_\_\_

Date: 18/2/15  
 Date: 18 February 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/59/0028

Station AM2 - Lee Kau Yan Memorial School Operator: WK  
 Date: 18-Feb-15 Next Due Date: 17-Apr-15  
 Equipment No.: A-01-59 Serial No. 2354

Ambient Condition			
Temperature, Ta (K)	291.5	Pressure, Pa (mmHg)	767.9

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0593	Intercept, bc	-0.0218
Last Calibration Date:	4-Feb-15	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	3-Feb-16	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.9	3.51	59.49	8.1	2.89
2	9.6	3.15	53.47	6.7	2.63
3	7.4	2.76	46.99	5.2	2.32
4	5.1	2.30	39.07	3.3	1.85
5	3.4	1.87	31.97	2.1	1.47

By Linear Regression of Y on X

Slope, mw = 0.0523 Intercept, bw = -0.1857  
 Correlation coefficient\* = 0.9985

\*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 43 CFM	
From the Regression Equation, the "Y" value according to	
$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$	
Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>4.13</u>	

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature: [Signature]  
 Checked by: [Signature] Signature: [Signature]

Date: 18/2/15  
 Date: 18 February 2015

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/49/0027

Station AM3(A) - Holy Trinity Bradbury Centre Operator: WK  
 Date: 18-Feb-15 Next Due Date: 17-Apr-15  
 Equipment No.: A-01-49 Serial No. 1793

Ambient Condition			
Temperature, Ta (K)	290.6	Pressure, Pa (mmHg)	768.1

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0593	Intercept, bc	-0.0218
Last Calibration Date:	4-Feb-15	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	3-Feb-16	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.7	3.48	59.09	7.9	2.86
2	9.8	3.19	54.11	6.5	2.60
3	7.5	2.79	47.38	5.0	2.28
4	5.2	2.32	39.52	3.3	1.85
5	3.3	1.85	31.55	2.1	1.48

By Linear Regression of Y on X  
 Slope, mw = 0.0505 Intercept, bw = -0.1271  
 Correlation coefficient\* = 0.9997

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM  
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point;  $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  4.03

Remarks: \_\_\_\_\_

Conducted by: W.K. Tang Signature: Kwai Date: 18/2/15  
 Checked by: [Signature] Signature: \_\_\_\_\_ Date: 18 February 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/62/0027

Station AM4(A) - EMSD Workshops Operator: WK  
 Date: 18-Feb-15 Next Due Date: 17-Apr-15  
 Equipment No.: A-01-62 Serial No. 2351

Ambient Condition			
Temperature, Ta (K)	290.9	Pressure, Pa (mmHg)	768.4

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0593	Intercept, bc	-0.0218
Last Calibration Date:	4-Feb-15	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	3-Feb-16	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X-axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.0	3.53	59.82	7.8	2.84
2	9.8	3.19	54.09	6.5	2.59
3	7.6	2.81	47.68	4.9	2.25
4	5.0	2.28	38.74	3.2	1.82
5	3.1	1.79	30.58	1.9	1.40

By Linear Regression of Y on X  
 Slope, mw = 0.0495 Intercept, bw = -0.1053  
 Correlation coefficient\* = 0.9997  
 \*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take Qstd = 43 CFM  
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.96

Remarks: \_\_\_\_\_

Conducted by: Wk. Tang Signature: Kwan  
 Checked by: AS Signature: \_\_\_\_\_

Date: 18/2/15  
 Date: 18 February 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/60/0028

Station AM5(A) - Po Leung Kuk Ngan Po Ling College Operator: WK  
 Date: 18-Feb-15 Next Due Date: 17-Apr-15  
 Equipment No.: A-01-60 Serial No. 2358

Ambient Condition			
Temperature, Ta (K)	291.5	Pressure, Pa (mmHg)	768.4

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0593	Intercept, bc	-0.0218
Last Calibration Date:	4-Feb-15	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	3-Feb-16	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.9	3.51	59.51	8.1	2.89
2	9.7	3.17	53.76	6.8	2.65
3	7.6	2.80	47.63	5.0	2.27
4	5.2	2.32	39.46	3.3	1.85
5	3.3	1.85	31.51	2.0	1.44

By Linear Regression of Y on X

Slope, mw = 0.0529 Intercept, bw = -0.2321

Correlation coefficient\* = 0.9992

\*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 43 CFM	
From the Regression Equation, the "Y" value according to	
$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$	
Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>4.03</u>	

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature: [Signature]  
 Checked by: AY Signature: [Signature]

Date: 18/2/15  
 Date: 18 February 2015

# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/71/0005

Project No. AA1 - Ching Long Shopping Centre Operator: WK  
 Date: 3-Feb-15 Next Due Date: 2-Apr-15  
 Equipment No.: A-01-71 Serial No. 3220

Ambient Condition			
Temperature, Ta (K)	289.8	Pressure, Pa (mmHg)	772.4

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0582	Intercept, bc	-0.0249
Last Calibration Date:	27-Sep-14	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	26-Sep-15	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X-axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.8	3.51	60.77	8.2	2.93
2	9.6	3.17	54.85	6.8	2.67
3	7.5	2.80	48.53	5.1	2.31
4	5.1	2.31	40.10	3.4	1.89
5	3.1	1.80	31.35	2.0	1.45

By Linear Regression of Y on X  
 Slope,  $mw =$  0.0509 Intercept,  $bw =$  -0.1518  
 Correlation coefficient\* = 0.9997  
 \*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

From the TSP Field Calibration Curve, take  $Qstd = 43$  CFM  
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point;  $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.97

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature: [Signature] Date: 3/2/15  
 Checked by: [Signature] Signature: [Signature] Date: 3 February 2015



# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA14008/51/0005

Station AA2 - Tak Long Estate Operator: WK  
 Date: 3-Feb-15 Next Due Date: 2-Apr-15  
 Equipment No.: A-01-51 Serial No. 1790

Ambient Condition			
Temperature, Ta (K)	289.1	Pressure, Pa (mmHg)	772

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0582	Intercept, bc	-0.0249
Last Calibration Date:	27-Sep-14	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	26-Sep-15	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X-axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	11.9	3.53	61.08	6.5	2.61
2	9.7	3.19	55.19	5.4	2.38
3	7.4	2.78	48.26	4.1	2.07
4	5.3	2.36	40.90	3.2	1.83
5	3.3	1.86	32.37	2.0	1.45

By Linear Regression of Y on X  
 Slope, mw = 0.0401 Intercept, bw = 0.1622  
 Correlation coefficient\* = 0.9990  
 \*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 43 CFM	
From the Regression Equation, the "Y" value according to	
$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$	
Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>3.39</u>	

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature: Kwai Date: 3/2/15  
 Checked by: Ar Signature: \_\_\_\_\_ Date: 3 February 2015

**TEST REPORT**

Description	Calibration Orifice	Manufacturer	TISCH
Serial No.	0993	Temperature, Ta (K)	299
Model No.	TE-5025A	Pressure, Pa (mmHg)	761.8
Date	27 September 2014	Equipment No.:	A-04-04

Plate	Diff.Vol (m <sup>3</sup> )	Diff.Time (min)	Diff.Hg (mm)	Diff.H <sub>2</sub> O (in.)
1	1.00	1.4230	3.3	2.00
2	1.00	1.0050	6.5	4.00
3	1.00	0.8950	8.2	5.00
4	1.00	0.8570	9.0	5.50
5	1.00	0.7080	13.0	8.00

**DATA TABULATION**

Vstd	(X axis) Qstd	(Y axis)
0.9947	0.6990	1.4135
0.9905	0.9856	1.9990
0.9883	1.1042	2.2350
0.9872	1.1519	2.3441
0.9820	1.3870	2.8270

Y axis= SQRT[H<sub>2</sub>O(Pa/760)(298/Ta)]  
Qstd Slope ( m ) = 2.05398  
Intercept ( b ) = -0.02487  
Coefficient ( r ) = 0.99996

Va	(X axis) Qa	(Y axis)
0.9957	0.6997	0.8860
0.9915	0.9865	1.2530
0.9892	1.1053	1.4009
0.9882	1.1531	1.4693
0.9829	1.3883	1.7720

Y axis= SQRT[H<sub>2</sub>O(Ta/Pa)]  
Qa Slope ( m ) = 1.28617  
Intercept ( b ) = -0.01559  
Coefficient ( r ) = 0.99996

**CALCULATIONS**

Vstd=Diff. Vol/[(Pa-Diff.Hg)/760](298/Ta)  
Qstd=Vstd/Time  
Va=Diff.Vol/[(Pa-Diff.Hg)/Pa]  
Qa=Va/Time

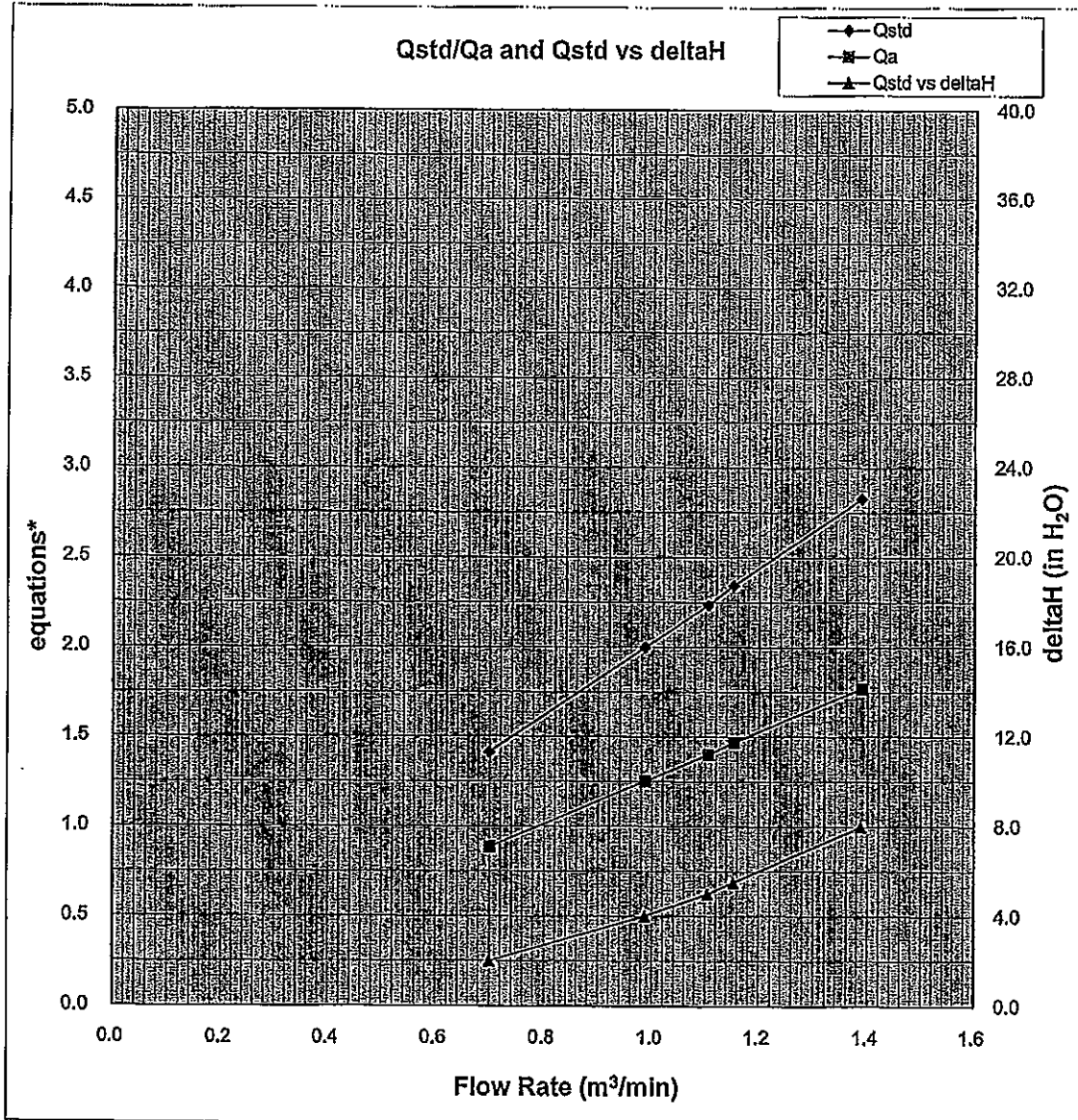
For subsequent flow rate calculations:  
Qstd=l/m{[SQRT(H<sub>2</sub>O(Pa/760)(298/Ta))]-b}  
Qa=l/m{[SQRT H<sub>2</sub>O(Ta/Pa)]-b}

PREPARED AND CHECKED BY:  
For and On Behalf of WELLAB Ltd.

*Patrick Tse*

**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**



Y-axis equations:

Qstd series:  $\text{SQRT}[\Delta H(Pa/Pstd)(Tstd/Ta)]$

Qa series:  $\text{SQRT}[\Delta H(Ta/Pa)]$



Equipment No. A-04-06

TISCH ENVIRONMENTAL, INC.  
 145 SOUTH MIAMI AVE  
 VILLAGE OF CLEVELAND, OH  
 45002  
 513.467.9000  
 877.263.7610 TOLL FREE  
 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Feb 04, 2015 Rootmeter S/N 0438320 Ta (K) - 293  
 Operator Tisch Orifice I.D. - 2896 Pa (mm) - 756.92

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4590	3.2	2.00
2	NA	NA	1.00	1.0330	6.4	4.00
3	NA	NA	1.00	0.9250	7.9	5.00
4	NA	NA	1.00	0.8800	8.8	5.50
5	NA	NA	1.00	0.7260	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0086	0.6913	1.4233	0.9958	0.6825	0.8799
1.0044	0.9723	2.0129	0.9916	0.9599	1.2443
1.0023	1.0835	2.2505	0.9895	1.0697	1.3912
1.0011	1.1377	2.3603	0.9884	1.1231	1.4591
0.9959	1.3718	2.8467	0.9832	1.3542	1.7598
Qstd slope (m) = 2.09317			Qa slope (m) = 1.31071		
intercept (b) = 0.02195			intercept (b) = -0.01357		
coefficient (r) = 0.99997			coefficient (r) = 0.99997		
y axis = SQRT[H2O(Pa/760)(298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)  
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]  
 Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{ [SQRT (H2O (Pa/760) (298/Ta))] - b }  
 Qa = 1/m{ [SQRT H2O (Ta/Pa)] - b }

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/141011A
Date of Issue:	2014-10-11
Date Received:	2014-10-11
Date Tested:	2014-10-11
Date Completed:	2014-10-11
Next Due Date:	2015-04-10

**ATTN:** Mr. W.K. Tang

Page: 1 of 2

#### Certificate of Calibration

**Item for calibration:**

Description : Weather Monitor II  
Manufacturer : Davis Instruments  
Model No. : 7440  
Serial No. : MC20813A11

**Test conditions:**

Room Temperature : 22 degree Celsius  
Relative Humidity : 54%

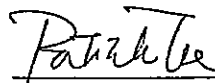
**Test Specifications:**

1. Performance check of anemometer
2. Performance check of wind direction sensor

**Methodology:**

In-house method with reference anemometer (RS232 Integral Vane Digital Anemometer)

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
*Laboratory Manager*

## TEST REPORT

Test Report No.:	C/141011A
Date of Issue:	2014-10-11
Date Received:	2014-10-11
Date Tested:	2014-10-11
Date Completed:	2014-10-11
Next Due Date:	2015-04-10

Page: 2 of 2

### Results:

#### 1. Performance check of anemometer

Air Velocity, m/s		Difference D (m/s)
Instrument Reading (V1)	Reference Value (V1)	D = V1 - V2
2.00	2.00	0.00

#### 2. Performance check of wind direction sensor

Wind Direction (°)		Difference D (°)
Instrument Reading (W1)	Reference Value (W2)	D = W1 - W2
0	0	0
45.1	45	0.1
90.3	90.5	-0.2
134.8	135	-0.2
180.1	180	0.1
225.2	225	0.2
270.2	270	0.2
315	315	0
359.8	360	-0.2

\*\*\*\*\*END OF REPORT\*\*\*\*\*

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/150228/1
Date of Issue:	2015-03-02
Date Received:	2015-02-28
Date Tested:	2015-02-28
Date Completed:	2015-03-02
Next Due Date:	2015-05-01

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

<b>Certificate of Calibration</b>
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**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3
Serial No.	: 251634
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 550 CPM
Equipment No.	: A-02-01

**Test Conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 64%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0032
-------------------------	--------

\*\*\*\*\*

**PREPARED AND CHECKED BY:**

For and On Behalf of WELLAB Ltd.

  
\_\_\_\_\_  
**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/150228/2
Date of Issue:	2015-03-02
Date Received:	2015-02-28
Date Tested:	2015-02-28
Date Completed:	2015-03-02
Next Due Date:	2015-05-01

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 853944
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 685 CPM
Equipment No.	: A-02-04

**Test Conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 64%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0031
-------------------------	--------

\*\*\*\*\*

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager



**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/150218/1
Date of Issue:	2015-02-23
Date Received:	2015-02-18
Date Tested:	2015-02-18
Date Completed:	2015-02-23
Next Due Date:	2015-04-22

**ATTN:** Mr. WK Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 954253
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 772 CPM
Equipment No.	: A-02-05

**Test Conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 64%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0030
-------------------------	--------

\*\*\*\*\*

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**

  
\_\_\_\_\_  
**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/150228/3
Date of Issue:	2015-03-02
Date Received:	2015-02-28
Date Tested:	2015-02-28
Date Completed:	2015-03-02
Next Due Date:	2015-05-01

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

<b>Certificate of Calibration</b>
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**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 014750
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 790 CPM
Equipment No.	: A-02-06

**Test Conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 64%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0030
-------------------------	--------

\*\*\*\*\*

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/141231/1
Date of Issue:	2015-03-02
Date Received:	2015-02-27
Date Tested:	2015-02-27
Date Completed:	2015-03-02
Next Due Date:	2015-05-01

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 095039
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 764 CPM
Equipment No.	: A-02-08

**Test Conditions:**

Room Temperature	: 23 degree Celsius
Relative Humidity	: 61%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0032
-------------------------	--------

\*\*\*\*\*

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
*Laboratory Manager*

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/141231/2
Date of Issue:	2015-03-02
Date Received:	2015-02-27
Date Tested:	2015-02-27
Date Completed:	2015-03-02
Next Due Date:	2015-05-01

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 095050
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 577 CPM
Equipment No.	: A-02-09

**Test Conditions:**

Room Temperature	: 23 degree Celsius
Relative Humidity	: 61%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0032
-------------------------	--------

\*\*\*\*\*

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**

*Patrick Tse*

**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/141231/3
Date of Issue:	2015-03-02
Date Received:	2015-02-27
Date Tested:	2015-02-27
Date Completed:	2015-03-02
Next Due Date:	2015-05-01

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description	: Laser Dust Monitor
Manufacturer	: Sibata
Model No.	: LD-3B
Serial No.	: 095029
Sensitivity (K) 1 CPM	: 0.001 mg/m <sup>3</sup>
Sen. Adjustment Scale Setting	: 551 CPM
Equipment No.	: A-02-10

**Test Conditions:**

Room Temperature	: 23 degree Celsius
Relative Humidity	: 61%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	0.0031
-------------------------	--------

\*\*\*\*\*

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/150213/2
Date of Issue:	2015-02-16
Date Received:	2015-02-13
Date Tested:	2015-02-13
Date Completed:	2015-02-16
Next Due Date:	2015-04-15

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for Calibration:**

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-531
Serial No.	: N6733
Flow rate	: 0.1 cfm
Zero Count Test	: 0 mg (The result of the 2-minute sample)
Equipment No.	: A-02-12

**Test Conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 62%

**Test Specifications & Methodology:**

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Results:**

Correlation Factor (CF)	1.044
-------------------------	-------

\*\*\*\*\*

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
 Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/140919/1
Date of Issue:	2014-09-21
Date Received:	2014-09-19
Date Tested:	2014-09-21
Date Completed:	2014-09-21
Next Due Date:	2015-09-20

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 955
Serial No.	: 12553
Microphone No.	: 35222
Equipment No.	: N-08-02

**Test conditions:**

Room Temperature	: 23 degree Celsius
Relative Humidity	: 55%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.: C/N/150103  
Date of Issue: 2015-01-05  
Date Received: 2015-01-03  
Date Tested: 2015-01-03  
Date Completed: 2015-01-05  
Next Due Date: 2016-01-04

**ATTN:** Mr. W. K. Tang

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description : 'SVANTEK' Integrating Sound Level Meter  
Manufacturer : SVANTEK  
Model No. : SVAN 955  
Serial No. : 14303  
Microphone No. : 35222  
Equipment No. : N-08-05

**Test conditions:**

Room Temperature : 20 degree Celsius  
Relative Humidity : 54%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

Remark: 1) This report supersedes the one dated 2012/01/21 with certificate number C/N/120120/1.

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager



### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/140822/2
Date of Issue:	2014-08-25
Date Received:	2014-08-22
Date Tested:	2014-08-22
Date Completed:	2014-08-25
Next Due Date:	2015-08-24

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 955
Serial No.	: 21139
Microphone No.	: 43690
Equipment No.	: N-08-06

**Test conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 55 %

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/140829/1
Date of Issue:	2014-09-01
Date Received:	2014-08-29
Date Tested:	2014-08-29
Date Completed:	2014-09-01
Next Due Date:	2015-08-31

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for calibration:**

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 21455
Microphone No.	: 43730
Equipment No.	: N-08-07

**Test conditions:**

Room Temperature	: 24 degree Celsius
Relative Humidity	: 60%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**


In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/140822/3
Date of Issue:	2014-08-25
Date Received:	2014-08-22
Date Tested:	2014-08-22
Date Completed:	2014-08-25
Next Due Date:	2015-08-24

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description : 'SVANTEK' Integrating Sound Level Meter  
Manufacturer : SVANTEK  
Model No. : SVAN 957  
Serial No. : 21459  
Microphone No. : 43676  
Equipment No. : N-08-08

**Test conditions:**

Room Temperatre : 22 degree Celsius  
Relative Humidity : 55%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**

Laboratory Manager

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/141129/1_v1
Date of Issue:	2014-12-01
Date Received:	2014-11-29
Date Tested:	2014-11-29
Date Completed:	2014-12-01
Next Due Date:	2015-11-30

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for calibration:**

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 23853
Microphone No.	: 48530
Equipment No.	: N-08-10

**Test conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 64%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/141129/3
Date of Issue:	2014-12-01
Date Received:	2014-11-29
Date Tested:	2014-11-29
Date Completed:	2014-12-01
Next Due Date:	2015-11-30

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 23851
Microphone No.	: 48532
Equipment No.	: N-08-12

**Test conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 64%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

**PREPARED AND CHECKED BY:**

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/141101/1
Date of Issue:	2014-11-03
Date Received:	2014-11-01
Date Tested:	2014-11-01
Date Completed:	2014-11-03
Next Due Date:	2015-11-02

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 10965
Equipment No.	: N-09-02

**Test conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 55%


**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/141003/1
Date of Issue:	2014-10-04
Date Received:	2014-10-03
Date Tested:	2014-10-03
Date Completed:	2014-10-04
Next Due Date:	2015-10-03

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24803
Equipment No.	: N-09-03

**Test conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 56%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
\_\_\_\_\_  
**PATRICK TSE**  
Laboratory Manager

### TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/141003/2
Date of Issue:	2014-10-04
Date Received:	2014-10-03
Date Tested:	2014-10-03
Date Completed:	2014-10-04
Next Due Date:	2015-10-03

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24791
Equipment No.	: N-09-04

**Test conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 56%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
*Laboratory Manager*



**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/141003/3
Date of Issue:	2014-10-04
Date Received:	2014-10-03
Date Tested:	2014-10-03
Date Completed:	2014-10-04
Next Due Date:	2015-10-03

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24780
Equipment No.	: N-09-05

**Test conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 56%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

*PREPARED AND CHECKED BY:*  
For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
*Laboratory Manager*

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/140822/2
Date of Issue:	2014-08-25
Date Received:	2014-08-22
Date Tested:	2014-08-22
Date Completed:	2014-08-25
Next Due Date:	2015-08-24

**ATTN:** Mr. W.K. Tang

Page: 1 of 1

**Certificate of Calibration**

**Item for calibration:**

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2412367
Equipment No.	: N-02-03

**Test conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 64%

**Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

**PREPARED AND CHECKED BY:**  
For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Laboratory Manager

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**APPENDIX C**  
**WEATHER INFORMATION**

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**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**I. General Information**

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
1 March 2015	17.6 – 20.4	59 – 92	Trace
2 March 2015	17.1 – 18.2	78 – 91	Trace
3 March 2015	17.0 – 22.5	80 – 95	0.2
4 March 2015	16.3 – 18.7	88 – 96	0.2
5 March 2015	15.7 – 16.6	89 – 97	4.8
6 March 2015	16.4 – 17.4	92 – 95	0.1
7 March 2015	16.6 – 18.4	86 – 94	0.2
8 March 2015	16.8 – 20.3	80 – 91	Trace
9 March 2015	18.1 – 25.1	70 – 94	Trace
10 March 2015	16.1 – 19.4	63 – 84	Trace
11 March 2015	15.5 – 17.6	73 – 92	0.3
12 March 2015	14.8 – 16.5	85 – 96	3.7
13 March 2015	15.8 – 18.3	71 – 83	0
14 March 2015	18.0 – 20.3	74 – 89	Trace
15 March 2015	19.6 – 22.5	89 – 97	0
16 March 2015	20.4 – 23.7	86 – 97	Trace
17 March 2015	20.7 – 24.6	81 – 97	0
18 March 2015	21.0 – 26.0	84 – 97	0
19 March 2015	22.3 – 26.4	79 – 96	0

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**I. General Information**

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
20 March 2015	22.1 – 28.3	66 – 95	0
21 March 2015	21.0 – 25.5	75 – 94	0
22 March 2015	19.9 – 22.3	69 – 92	0.1
23 March 2015	19.2 – 24.5	52 – 80	Trace
24 March 2015	18.4 – 22.3	66 – 83	0
25 March 2015	17.7 – 19.1	73 – 81	Trace
26 March 2015	17.4 – 20.5	72 – 96	4.2
27 March 2015	17.9 – 23.7	75 – 97	14.6
28 March 2015	19.7 – 24.8	65 – 93	0
29 March 2015	20.1 – 26.7	63 – 89	0
30 March 2015	21.5 – 25.2	80 – 93	0
31 March 2015	21.9 – 25.6	82 – 95	Trace

\* The above information was extracted from the daily weather summary by Hong Kong Observatory.

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

<b>Date</b>	<b>Time</b>	<b>Wind Speed m/s</b>	<b>Direction</b>
1-Mar-2015	00:00	0.7	WSW
1-Mar-2015	01:00	0.4	W
1-Mar-2015	02:00	0.3	WNW
1-Mar-2015	03:00	0.3	WNW
1-Mar-2015	04:00	0.6	SSW
1-Mar-2015	05:00	0.6	WSW
1-Mar-2015	06:00	0.7	W
1-Mar-2015	07:00	0.7	W
1-Mar-2015	08:00	1	W
1-Mar-2015	09:00	1.3	SSW
1-Mar-2015	10:00	1.8	SW
1-Mar-2015	11:00	2.8	SW
1-Mar-2015	12:00	3.6	SW
1-Mar-2015	13:00	3.6	SW
1-Mar-2015	14:00	3.6	S
1-Mar-2015	15:00	4	S
1-Mar-2015	16:00	3.1	NE
1-Mar-2015	17:00	2.8	NE
1-Mar-2015	18:00	2.2	ENE
1-Mar-2015	19:00	1.6	ENE
1-Mar-2015	20:00	1.3	ENE
1-Mar-2015	21:00	1.3	ENE
1-Mar-2015	22:00	1.6	NNE
1-Mar-2015	23:00	1.3	N
2-Mar-2015	00:00	1.3	WSW
2-Mar-2015	01:00	1.8	ENE
2-Mar-2015	02:00	1.6	ENE
2-Mar-2015	03:00	2.2	E
2-Mar-2015	04:00	1.8	W
2-Mar-2015	05:00	2.1	SSW
2-Mar-2015	06:00	1.9	W
2-Mar-2015	07:00	1.8	WNW
2-Mar-2015	08:00	1.8	SSW
2-Mar-2015	09:00	2.1	SW
2-Mar-2015	10:00	2.7	SW
2-Mar-2015	11:00	3.3	WSW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

2-Mar-2015	12:00	3	WSW
2-Mar-2015	13:00	3	W
2-Mar-2015	14:00	2.4	W
2-Mar-2015	15:00	1.9	WSW
2-Mar-2015	16:00	2.2	W
2-Mar-2015	17:00	2.4	W
2-Mar-2015	18:00	1.3	W
2-Mar-2015	19:00	1.3	WNW
2-Mar-2015	20:00	1.2	WNW
2-Mar-2015	21:00	1	N
2-Mar-2015	22:00	0.7	N
2-Mar-2015	23:00	1	NNE
3-Mar-2015	00:00	1.2	ENE
3-Mar-2015	01:00	1	ENE
3-Mar-2015	02:00	1.6	ENE
3-Mar-2015	03:00	1.2	E
3-Mar-2015	04:00	1.5	E
3-Mar-2015	05:00	2.2	NNE
3-Mar-2015	06:00	1.9	NNE
3-Mar-2015	07:00	1.9	NNE
3-Mar-2015	08:00	2.2	NE
3-Mar-2015	09:00	2.4	ENE
3-Mar-2015	10:00	2.1	ENE
3-Mar-2015	11:00	3	ENE
3-Mar-2015	12:00	3.9	ENE
3-Mar-2015	13:00	4.2	ENE
3-Mar-2015	14:00	2.1	N
3-Mar-2015	15:00	2.1	N
3-Mar-2015	16:00	1.2	NE
3-Mar-2015	17:00	1.5	NE
3-Mar-2015	18:00	1.2	ENE
3-Mar-2015	19:00	1.3	ENE
3-Mar-2015	20:00	0.7	ENE
3-Mar-2015	21:00	1.2	ENE
3-Mar-2015	22:00	1.9	ENE
3-Mar-2015	23:00	1.8	ENE
4-Mar-2015	00:00	1	ENE



**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

4-Mar-2015	01:00	1	ENE
4-Mar-2015	02:00	0.3	NNE
4-Mar-2015	03:00	0.3	NNE
4-Mar-2015	04:00	0.1	N
4-Mar-2015	05:00	0.1	ENE
4-Mar-2015	06:00	0.1	ENE
4-Mar-2015	07:00	0.9	E
4-Mar-2015	08:00	0.4	ENE
4-Mar-2015	09:00	1.3	NNE
4-Mar-2015	10:00	1.9	N
4-Mar-2015	11:00	2.1	NNE
4-Mar-2015	12:00	2.7	NE
4-Mar-2015	13:00	2.5	NE
4-Mar-2015	14:00	2.4	NNE
4-Mar-2015	15:00	2.1	E
4-Mar-2015	16:00	2.4	NNE
4-Mar-2015	17:00	1.9	ENE
4-Mar-2015	18:00	1.8	SSW
4-Mar-2015	19:00	2.2	SSW
4-Mar-2015	20:00	2.1	ENE
4-Mar-2015	21:00	1.2	NNE
4-Mar-2015	22:00	1.8	WNW
4-Mar-2015	23:00	1.6	W
5-Mar-2015	00:00	1.3	W
5-Mar-2015	01:00	1.8	N
5-Mar-2015	02:00	1.8	ENE
5-Mar-2015	03:00	1.6	N
5-Mar-2015	04:00	1.9	N
5-Mar-2015	05:00	1.3	ESE
5-Mar-2015	06:00	0.9	S
5-Mar-2015	07:00	1.2	W
5-Mar-2015	08:00	1	W
5-Mar-2015	09:00	1.2	W
5-Mar-2015	10:00	0.9	SSE
5-Mar-2015	11:00	1.6	SW
5-Mar-2015	12:00	1.5	SW
5-Mar-2015	13:00	1.9	WNW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

5-Mar-2015	14:00	2.2	W
5-Mar-2015	15:00	2.7	WNW
5-Mar-2015	16:00	1	WNW
5-Mar-2015	17:00	1.2	W
5-Mar-2015	18:00	0.6	N
5-Mar-2015	19:00	0.9	ENE
5-Mar-2015	20:00	0.6	E
5-Mar-2015	21:00	0.6	NE
5-Mar-2015	22:00	0.6	NE
5-Mar-2015	23:00	0.7	NE
6-Mar-2015	00:00	0.9	NE
6-Mar-2015	01:00	1	NE
6-Mar-2015	02:00	1.3	NE
6-Mar-2015	03:00	0.9	W
6-Mar-2015	04:00	0.9	WNW
6-Mar-2015	05:00	0.7	NW
6-Mar-2015	06:00	0.7	WNW
6-Mar-2015	07:00	0.3	W
6-Mar-2015	08:00	0.4	W
6-Mar-2015	09:00	1	W
6-Mar-2015	10:00	1.5	WNW
6-Mar-2015	11:00	2.2	W
6-Mar-2015	12:00	3	WNW
6-Mar-2015	13:00	3	WNW
6-Mar-2015	14:00	2.8	WNW
6-Mar-2015	15:00	2.7	WNW
6-Mar-2015	16:00	3.1	W
6-Mar-2015	17:00	2.7	W
6-Mar-2015	18:00	2.2	SW
6-Mar-2015	19:00	1.9	SW
6-Mar-2015	20:00	1.3	WSW
6-Mar-2015	21:00	1.2	W
6-Mar-2015	22:00	1.2	W
6-Mar-2015	23:00	0.9	W
7-Mar-2015	00:00	1.2	W
7-Mar-2015	01:00	1.5	WNW
7-Mar-2015	02:00	1.8	WNW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

7-Mar-2015	03:00	1.8	WNW
7-Mar-2015	04:00	1.8	WNW
7-Mar-2015	05:00	2.1	WNW
7-Mar-2015	06:00	2.1	WNW
7-Mar-2015	07:00	2.2	W
7-Mar-2015	08:00	1.2	W
7-Mar-2015	09:00	1.8	W
7-Mar-2015	10:00	1.9	WSW
7-Mar-2015	11:00	1.9	WSW
7-Mar-2015	12:00	2.8	SSW
7-Mar-2015	13:00	2.7	SW
7-Mar-2015	14:00	3	SW
7-Mar-2015	15:00	2.5	SW
7-Mar-2015	16:00	2.7	SSW
7-Mar-2015	17:00	1.8	SSW
7-Mar-2015	18:00	1.5	SW
7-Mar-2015	19:00	0.9	W
7-Mar-2015	20:00	0.9	SW
7-Mar-2015	21:00	1.2	W
7-Mar-2015	22:00	1.5	W
7-Mar-2015	23:00	1.5	W
8-Mar-2015	00:00	1.9	W
8-Mar-2015	01:00	1.5	W
8-Mar-2015	02:00	1.3	W
8-Mar-2015	03:00	1.3	W
8-Mar-2015	04:00	1.2	SW
8-Mar-2015	05:00	1.2	WSW
8-Mar-2015	06:00	1.5	W
8-Mar-2015	07:00	0.6	WSW
8-Mar-2015	08:00	1.8	WSW
8-Mar-2015	09:00	2.2	W
8-Mar-2015	10:00	1.9	WNW
8-Mar-2015	11:00	1.9	W
8-Mar-2015	12:00	1.8	W
8-Mar-2015	13:00	1.5	ENE
8-Mar-2015	14:00	1.2	WSW
8-Mar-2015	15:00	1.5	SW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

8-Mar-2015	16:00	1.5	SW
8-Mar-2015	17:00	1.5	SW
8-Mar-2015	18:00	1.5	WSW
8-Mar-2015	19:00	1.3	WSW
8-Mar-2015	20:00	1.6	WSW
8-Mar-2015	21:00	1.3	WSW
8-Mar-2015	22:00	1.5	WSW
8-Mar-2015	23:00	1.2	WSW
9-Mar-2015	00:00	1	WSW
9-Mar-2015	01:00	1.2	WSW
9-Mar-2015	02:00	1.2	SW
9-Mar-2015	03:00	1.9	SSW
9-Mar-2015	04:00	2.4	WSW
9-Mar-2015	05:00	2.2	WSW
9-Mar-2015	06:00	2.5	W
9-Mar-2015	07:00	3	WSW
9-Mar-2015	08:00	3.1	WSW
9-Mar-2015	09:00	3.6	NNE
9-Mar-2015	10:00	3.6	WNW
9-Mar-2015	11:00	3.6	SW
9-Mar-2015	12:00	4	SSE
9-Mar-2015	13:00	3.7	SSW
9-Mar-2015	14:00	4.2	W
9-Mar-2015	15:00	3.6	W
9-Mar-2015	16:00	3.4	WSW
9-Mar-2015	17:00	3	SSW
9-Mar-2015	18:00	3	SSW
9-Mar-2015	19:00	2.5	SW
9-Mar-2015	20:00	2.8	SW
9-Mar-2015	21:00	3.1	SW
9-Mar-2015	22:00	3.1	SW
9-Mar-2015	23:00	2.8	WSW
10-Mar-2015	00:00	2.5	SSW
10-Mar-2015	01:00	3.3	SW
10-Mar-2015	02:00	3.6	WSW
10-Mar-2015	03:00	3.7	S
10-Mar-2015	04:00	3.3	SSE

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

10-Mar-2015	05:00	3.7	SSE
10-Mar-2015	06:00	3.7	W
10-Mar-2015	07:00	3.1	WNW
10-Mar-2015	08:00	4	NW
10-Mar-2015	09:00	3.3	WNW
10-Mar-2015	10:00	4.2	W
10-Mar-2015	11:00	4	WSW
10-Mar-2015	12:00	4.3	WSW
10-Mar-2015	13:00	3.9	W
10-Mar-2015	14:00	3.7	WSW
10-Mar-2015	15:00	3.6	W
10-Mar-2015	16:00	3.3	WSW
10-Mar-2015	17:00	2.5	WSW
10-Mar-2015	18:00	2.2	W
10-Mar-2015	19:00	2.4	W
10-Mar-2015	20:00	2.4	WNW
10-Mar-2015	21:00	2.5	WNW
10-Mar-2015	22:00	2.4	W
10-Mar-2015	23:00	2.4	W
11-Mar-2015	00:00	2.1	WSW
11-Mar-2015	01:00	2.2	W
11-Mar-2015	02:00	2.2	NNE
11-Mar-2015	03:00	1.8	WNW
11-Mar-2015	04:00	2.1	S
11-Mar-2015	05:00	1.6	WSW
11-Mar-2015	06:00	2.1	WSW
11-Mar-2015	07:00	2.2	SSW
11-Mar-2015	08:00	3.3	S
11-Mar-2015	09:00	3.9	SSW
11-Mar-2015	10:00	4.6	N
11-Mar-2015	11:00	4.5	NE
11-Mar-2015	12:00	4.5	ENE
11-Mar-2015	13:00	3.9	W
11-Mar-2015	14:00	3.6	NNE
11-Mar-2015	15:00	3	WSW
11-Mar-2015	16:00	3.1	WNW
11-Mar-2015	17:00	3.4	WSW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

11-Mar-2015	18:00	2.5	WNW
11-Mar-2015	19:00	2.4	W
11-Mar-2015	20:00	2.5	WSW
11-Mar-2015	21:00	2.4	WSW
11-Mar-2015	22:00	2.8	SW
11-Mar-2015	23:00	2.8	SW
12-Mar-2015	00:00	2.8	SSW
12-Mar-2015	01:00	3.1	W
12-Mar-2015	02:00	2.5	S
12-Mar-2015	03:00	2.2	WNW
12-Mar-2015	04:00	2.5	SW
12-Mar-2015	05:00	2.7	SW
12-Mar-2015	06:00	3.1	WSW
12-Mar-2015	07:00	2.7	SW
12-Mar-2015	08:00	2.8	WSW
12-Mar-2015	09:00	3.1	SW
12-Mar-2015	10:00	3.3	WSW
12-Mar-2015	11:00	2.7	SW
12-Mar-2015	12:00	2.8	W
12-Mar-2015	13:00	1.9	W
12-Mar-2015	14:00	2.1	W
12-Mar-2015	15:00	3	WNW
12-Mar-2015	16:00	2.1	WNW
12-Mar-2015	17:00	2.7	NNE
12-Mar-2015	18:00	2.2	NNE
12-Mar-2015	19:00	2.4	NNE
12-Mar-2015	20:00	2.1	W
12-Mar-2015	21:00	1.8	N
12-Mar-2015	22:00	2.1	N
12-Mar-2015	23:00	1.8	N
13-Mar-2015	00:00	2.2	ENE
13-Mar-2015	01:00	2.2	W
13-Mar-2015	02:00	2.4	ENE
13-Mar-2015	03:00	1.9	ENE
13-Mar-2015	04:00	2.7	ENE
13-Mar-2015	05:00	3.4	N
13-Mar-2015	06:00	3.3	N

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

13-Mar-2015	07:00	2.8	NNE
13-Mar-2015	08:00	3	NE
13-Mar-2015	09:00	2.5	NE
13-Mar-2015	10:00	3.4	NW
13-Mar-2015	11:00	2.7	NE
13-Mar-2015	12:00	2.8	ENE
13-Mar-2015	13:00	3.1	NE
13-Mar-2015	14:00	2.5	ENE
13-Mar-2015	15:00	2.4	E
13-Mar-2015	16:00	2.4	E
13-Mar-2015	17:00	2.2	ENE
13-Mar-2015	18:00	2.1	ENE
13-Mar-2015	19:00	1.8	ENE
13-Mar-2015	20:00	1.9	NNE
13-Mar-2015	21:00	1.8	NE
13-Mar-2015	22:00	1.9	NNE
13-Mar-2015	23:00	1.9	NNE
14-Mar-2015	00:00	1.8	NE
14-Mar-2015	01:00	2.2	NNE
14-Mar-2015	02:00	2.2	NE
14-Mar-2015	03:00	2.1	N
14-Mar-2015	04:00	2.4	NE
14-Mar-2015	05:00	2.4	NE
14-Mar-2015	06:00	2.4	NE
14-Mar-2015	07:00	2.8	NE
14-Mar-2015	08:00	3	W
14-Mar-2015	09:00	3	W
14-Mar-2015	10:00	2.1	W
14-Mar-2015	11:00	2.7	WNW
14-Mar-2015	12:00	2.8	W
14-Mar-2015	13:00	2.8	WSW
14-Mar-2015	14:00	2.7	W
14-Mar-2015	15:00	2.5	W
14-Mar-2015	16:00	2.4	WSW
14-Mar-2015	17:00	2.2	WSW
14-Mar-2015	18:00	1.8	WSW
14-Mar-2015	19:00	1.5	WSW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

14-Mar-2015	20:00	1.2	W
14-Mar-2015	21:00	0.7	WSW
14-Mar-2015	22:00	0.7	WSW
14-Mar-2015	23:00	0.9	WSW
15-Mar-2015	00:00	0.7	W
15-Mar-2015	01:00	0.7	W
15-Mar-2015	02:00	0.7	W
15-Mar-2015	03:00	1.5	W
15-Mar-2015	04:00	1.3	W
15-Mar-2015	05:00	1.6	W
15-Mar-2015	06:00	1.6	W
15-Mar-2015	07:00	1.5	W
15-Mar-2015	08:00	1.8	W
15-Mar-2015	09:00	1.9	W
15-Mar-2015	10:00	2.4	W
15-Mar-2015	11:00	1.8	SSW
15-Mar-2015	12:00	1.9	W
15-Mar-2015	13:00	1.3	WNW
15-Mar-2015	14:00	1.6	WSW
15-Mar-2015	15:00	1.5	NNE
15-Mar-2015	16:00	1.5	W
15-Mar-2015	17:00	0.9	W
15-Mar-2015	18:00	0.7	W
15-Mar-2015	19:00	0.4	N
15-Mar-2015	20:00	0.6	NNE
15-Mar-2015	21:00	0.9	NNE
15-Mar-2015	22:00	0.7	NNE
15-Mar-2015	23:00	0.3	SSW
16-Mar-2015	00:00	0.7	SSW
16-Mar-2015	01:00	0.9	NNE
16-Mar-2015	02:00	0.6	N
16-Mar-2015	03:00	0.9	N
16-Mar-2015	04:00	0.7	ENE
16-Mar-2015	05:00	0.9	E
16-Mar-2015	06:00	1.3	E
16-Mar-2015	07:00	1.2	ENE
16-Mar-2015	08:00	1.6	ENE



**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

16-Mar-2015	09:00	1.8	ENE
16-Mar-2015	10:00	2.2	N
16-Mar-2015	11:00	2.7	NE
16-Mar-2015	12:00	2.5	N
16-Mar-2015	13:00	2.8	ENE
16-Mar-2015	14:00	2.2	ENE
16-Mar-2015	15:00	1.5	ENE
16-Mar-2015	16:00	1.5	E
16-Mar-2015	17:00	1.5	ENE
16-Mar-2015	18:00	1.5	SW
16-Mar-2015	19:00	1	NE
16-Mar-2015	20:00	0.6	NNE
16-Mar-2015	21:00	0.7	NNE
16-Mar-2015	22:00	1	N
16-Mar-2015	23:00	1.3	NNE
17-Mar-2015	00:00	1	E
17-Mar-2015	01:00	1.6	ESE
17-Mar-2015	02:00	1	NE
17-Mar-2015	03:00	1	ENE
17-Mar-2015	04:00	0.9	SW
17-Mar-2015	05:00	0.7	SW
17-Mar-2015	06:00	1.2	W
17-Mar-2015	07:00	1	W
17-Mar-2015	08:00	1	W
17-Mar-2015	09:00	1.3	WSW
17-Mar-2015	10:00	1.8	WSW
17-Mar-2015	11:00	2.1	SW
17-Mar-2015	12:00	2.8	SW
17-Mar-2015	13:00	2.5	SW
17-Mar-2015	14:00	2.7	W
17-Mar-2015	15:00	2.5	WSW
17-Mar-2015	16:00	2.5	SW
17-Mar-2015	17:00	2.7	SW
17-Mar-2015	18:00	2.8	WSW
17-Mar-2015	19:00	3.1	W
17-Mar-2015	20:00	3	W
17-Mar-2015	21:00	3	W

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

17-Mar-2015	22:00	2.8	W
17-Mar-2015	23:00	2.4	W
18-Mar-2015	00:00	2.4	W
18-Mar-2015	01:00	1.8	SW
18-Mar-2015	02:00	1.8	SSW
18-Mar-2015	03:00	1.6	SSW
18-Mar-2015	04:00	1.9	WNW
18-Mar-2015	05:00	1.6	WSW
18-Mar-2015	06:00	2.1	WSW
18-Mar-2015	07:00	1.9	W
18-Mar-2015	08:00	2.1	WNW
18-Mar-2015	09:00	2.2	WNW
18-Mar-2015	10:00	2.7	W
18-Mar-2015	11:00	2.1	SW
18-Mar-2015	12:00	2.2	W
18-Mar-2015	13:00	1.9	W
18-Mar-2015	14:00	2.1	W
18-Mar-2015	15:00	2.1	W
18-Mar-2015	16:00	2.1	NW
18-Mar-2015	17:00	2.2	WNW
18-Mar-2015	18:00	1.5	W
18-Mar-2015	19:00	1.2	S
18-Mar-2015	20:00	0.6	W
18-Mar-2015	21:00	0.6	WSW
18-Mar-2015	22:00	1	WSW
18-Mar-2015	23:00	1	WSW
19-Mar-2015	00:00	0.9	SW
19-Mar-2015	01:00	0.9	W
19-Mar-2015	02:00	1	WNW
19-Mar-2015	03:00	1.2	W
19-Mar-2015	04:00	1.8	WNW
19-Mar-2015	05:00	1.2	W
19-Mar-2015	06:00	0.9	E
19-Mar-2015	07:00	0.7	SW
19-Mar-2015	08:00	0.9	S
19-Mar-2015	09:00	2.4	W
19-Mar-2015	10:00	2.4	WNW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

19-Mar-2015	11:00	2.7	N
19-Mar-2015	12:00	2.7	NNE
19-Mar-2015	13:00	3	W
19-Mar-2015	14:00	3.1	N
19-Mar-2015	15:00	3.3	NNE
19-Mar-2015	16:00	3	NNE
19-Mar-2015	17:00	2.5	SW
19-Mar-2015	18:00	2.2	SW
19-Mar-2015	19:00	2.1	W
19-Mar-2015	20:00	1.3	W
19-Mar-2015	21:00	0.7	WNW
19-Mar-2015	22:00	0.9	S
19-Mar-2015	23:00	0.9	S
20-Mar-2015	00:00	1	WSW
20-Mar-2015	01:00	0.7	W
20-Mar-2015	02:00	1	W
20-Mar-2015	03:00	1.2	WNW
20-Mar-2015	04:00	1.6	WNW
20-Mar-2015	05:00	1.8	NW
20-Mar-2015	06:00	1.3	WNW
20-Mar-2015	07:00	1.2	W
20-Mar-2015	08:00	1.6	W
20-Mar-2015	09:00	2.5	W
20-Mar-2015	10:00	2.8	W
20-Mar-2015	11:00	3.1	W
20-Mar-2015	12:00	3.6	W
20-Mar-2015	13:00	4	W
20-Mar-2015	14:00	3.9	W
20-Mar-2015	15:00	3.9	W
20-Mar-2015	16:00	3.4	W
20-Mar-2015	17:00	2.7	W
20-Mar-2015	18:00	2.4	W
20-Mar-2015	19:00	1.6	W
20-Mar-2015	20:00	1.2	W
20-Mar-2015	21:00	1	W
20-Mar-2015	22:00	0.7	WNW
20-Mar-2015	23:00	0.6	W

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

21-Mar-2015	00:00	0.7	WSW
21-Mar-2015	01:00	1.5	WSW
21-Mar-2015	02:00	1.6	WSW
21-Mar-2015	03:00	1	W
21-Mar-2015	04:00	1.5	N
21-Mar-2015	05:00	1.5	WNW
21-Mar-2015	06:00	1.2	N
21-Mar-2015	07:00	1.6	WNW
21-Mar-2015	08:00	1.5	SW
21-Mar-2015	09:00	1.9	W
21-Mar-2015	10:00	1.8	W
21-Mar-2015	11:00	2.2	N
21-Mar-2015	12:00	2.4	N
21-Mar-2015	13:00	2.2	SSE
21-Mar-2015	14:00	2.7	W
21-Mar-2015	15:00	2.2	W
21-Mar-2015	16:00	1.9	SW
21-Mar-2015	17:00	1.6	SW
21-Mar-2015	18:00	1	W
21-Mar-2015	19:00	0.7	W
21-Mar-2015	20:00	0.9	WNW
21-Mar-2015	21:00	0.9	WNW
21-Mar-2015	22:00	1.2	W
21-Mar-2015	23:00	1.3	W
22-Mar-2015	00:00	1.3	W
22-Mar-2015	01:00	1.5	W
22-Mar-2015	02:00	1.9	W
22-Mar-2015	03:00	1.9	W
22-Mar-2015	04:00	1.9	SW
22-Mar-2015	05:00	2.2	W
22-Mar-2015	06:00	2.5	WSW
22-Mar-2015	07:00	2.5	NW
22-Mar-2015	08:00	1.5	W
22-Mar-2015	09:00	1.6	W
22-Mar-2015	10:00	1.8	NE
22-Mar-2015	11:00	1.8	SW
22-Mar-2015	12:00	2.2	W

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WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

22-Mar-2015	13:00	2.4	SW
22-Mar-2015	14:00	2.8	SW
22-Mar-2015	15:00	3.1	SW
22-Mar-2015	16:00	3	W
22-Mar-2015	17:00	2.4	W
22-Mar-2015	18:00	1.9	WSW
22-Mar-2015	19:00	1.2	SW
22-Mar-2015	20:00	0.9	SW
22-Mar-2015	21:00	0.9	SW
22-Mar-2015	22:00	0.7	W
22-Mar-2015	23:00	0.4	W
23-Mar-2015	00:00	0.4	SW
23-Mar-2015	01:00	0.6	SSW
23-Mar-2015	02:00	0.9	SW
23-Mar-2015	03:00	0.7	W
23-Mar-2015	04:00	1	W
23-Mar-2015	05:00	0.9	SW
23-Mar-2015	06:00	1.2	SW
23-Mar-2015	07:00	1.8	W
23-Mar-2015	08:00	2.2	W
23-Mar-2015	09:00	1.9	WNW
23-Mar-2015	10:00	2.4	SW
23-Mar-2015	11:00	2.4	W
23-Mar-2015	12:00	3.4	S
23-Mar-2015	13:00	3.7	SSW
23-Mar-2015	14:00	3.3	SW
23-Mar-2015	15:00	3.6	SW
23-Mar-2015	16:00	3.4	SW
23-Mar-2015	17:00	2.4	W
23-Mar-2015	18:00	2.8	W
23-Mar-2015	19:00	2.8	W
23-Mar-2015	20:00	2.4	WSW
23-Mar-2015	21:00	1.8	SW
23-Mar-2015	22:00	1.5	SW
23-Mar-2015	23:00	1.8	WSW
24-Mar-2015	00:00	1.3	SSW
24-Mar-2015	01:00	1.6	NNE

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WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

24-Mar-2015	02:00	1.9	NNE
24-Mar-2015	03:00	1.6	S
24-Mar-2015	04:00	0.7	NNE
24-Mar-2015	05:00	0.7	WSW
24-Mar-2015	06:00	0.4	SW
24-Mar-2015	07:00	0.4	WNW
24-Mar-2015	08:00	1.5	W
24-Mar-2015	09:00	2.5	W
24-Mar-2015	10:00	2.5	N
24-Mar-2015	11:00	2.7	N
24-Mar-2015	12:00	3.1	NE
24-Mar-2015	13:00	3.1	WNW
24-Mar-2015	14:00	2.8	WNW
24-Mar-2015	15:00	2.5	W
24-Mar-2015	16:00	2.4	W
24-Mar-2015	17:00	1.9	WNW
24-Mar-2015	18:00	1.9	SW
24-Mar-2015	19:00	1.9	W
24-Mar-2015	20:00	1.8	W
24-Mar-2015	21:00	1.9	SSE
24-Mar-2015	22:00	1.6	WSW
24-Mar-2015	23:00	2.1	SW
25-Mar-2015	00:00	1.8	SSW
25-Mar-2015	01:00	1.5	W
25-Mar-2015	02:00	1.2	WSW
25-Mar-2015	03:00	1.3	W
25-Mar-2015	04:00	1.5	S
25-Mar-2015	05:00	1.9	S
25-Mar-2015	06:00	1.6	SSE
25-Mar-2015	07:00	1.6	WSW
25-Mar-2015	08:00	2.2	SW
25-Mar-2015	09:00	2.1	WSW
25-Mar-2015	10:00	2.4	ESE
25-Mar-2015	11:00	2.1	WSW
25-Mar-2015	12:00	2.1	SSW
25-Mar-2015	13:00	2.2	W
25-Mar-2015	14:00	1.9	SSW

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WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

25-Mar-2015	15:00	2.8	W
25-Mar-2015	16:00	2.2	WNW
25-Mar-2015	17:00	2.2	W
25-Mar-2015	18:00	2.5	WNW
25-Mar-2015	19:00	2.2	W
25-Mar-2015	20:00	1.8	NNW
25-Mar-2015	21:00	1.8	NW
25-Mar-2015	22:00	1.2	W
25-Mar-2015	23:00	1.5	SSE
26-Mar-2015	00:00	1.3	W
26-Mar-2015	01:00	1.8	WNW
26-Mar-2015	02:00	1.5	WNW
26-Mar-2015	03:00	1	W
26-Mar-2015	04:00	1.2	W
26-Mar-2015	05:00	1.5	WNW
26-Mar-2015	06:00	0.7	W
26-Mar-2015	07:00	0.6	W
26-Mar-2015	08:00	1.5	WSW
26-Mar-2015	09:00	2.4	SSW
26-Mar-2015	10:00	2.7	W
26-Mar-2015	11:00	2.7	NW
26-Mar-2015	12:00	3	WNW
26-Mar-2015	13:00	2.7	WNW
26-Mar-2015	14:00	2.7	W
26-Mar-2015	15:00	2.2	WNW
26-Mar-2015	16:00	2.5	WNW
26-Mar-2015	17:00	2.1	WNW
26-Mar-2015	18:00	1.8	NW
26-Mar-2015	19:00	1.9	W
26-Mar-2015	20:00	1.6	W
26-Mar-2015	21:00	2.1	WSW
26-Mar-2015	22:00	1.8	W
26-Mar-2015	23:00	1.5	W
27-Mar-2015	00:00	1	W
27-Mar-2015	01:00	1.2	WNW
27-Mar-2015	02:00	1.6	WNW
27-Mar-2015	03:00	1.9	WNW

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WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

27-Mar-2015	04:00	1.6	WSW
27-Mar-2015	05:00	1.9	W
27-Mar-2015	06:00	1.8	W
27-Mar-2015	07:00	1.3	W
27-Mar-2015	08:00	0.7	WNW
27-Mar-2015	09:00	0.6	WNW
27-Mar-2015	10:00	1.2	NW
27-Mar-2015	11:00	2.1	W
27-Mar-2015	12:00	2.7	WSW
27-Mar-2015	13:00	3.1	WSW
27-Mar-2015	14:00	2.8	W
27-Mar-2015	15:00	3.6	N
27-Mar-2015	16:00	3.1	SSW
27-Mar-2015	17:00	3	W
27-Mar-2015	18:00	2.1	W
27-Mar-2015	19:00	1.5	WNW
27-Mar-2015	20:00	1.2	WNW
27-Mar-2015	21:00	1	WNW
27-Mar-2015	22:00	1.9	SW
27-Mar-2015	23:00	1.3	W
28-Mar-2015	00:00	1.5	NNW
28-Mar-2015	01:00	1.6	W
28-Mar-2015	02:00	1.6	W
28-Mar-2015	03:00	1.5	W
28-Mar-2015	04:00	1.8	W
28-Mar-2015	05:00	1.3	WSW
28-Mar-2015	06:00	1.3	WNW
28-Mar-2015	07:00	1.5	W
28-Mar-2015	08:00	1.3	WNW
28-Mar-2015	09:00	1.9	WNW
28-Mar-2015	10:00	2.2	W
28-Mar-2015	11:00	2.4	W
28-Mar-2015	12:00	2.8	SSW
28-Mar-2015	13:00	2.4	W
28-Mar-2015	14:00	2.7	W
28-Mar-2015	15:00	2.1	WSW
28-Mar-2015	16:00	1.9	WNW



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WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

28-Mar-2015	17:00	2.2	W
28-Mar-2015	18:00	2.2	WNW
28-Mar-2015	19:00	1.5	W
28-Mar-2015	20:00	1.6	WNW
28-Mar-2015	21:00	1.2	WNW
28-Mar-2015	22:00	1.5	W
28-Mar-2015	23:00	1.6	SW
29-Mar-2015	00:00	1.5	SW
29-Mar-2015	01:00	1.6	WSW
29-Mar-2015	02:00	1.8	WSW
29-Mar-2015	03:00	1.8	SW
29-Mar-2015	04:00	2.2	WSW
29-Mar-2015	05:00	2.4	WNW
29-Mar-2015	06:00	1.5	WSW
29-Mar-2015	07:00	2.1	WSW
29-Mar-2015	08:00	1.9	W
29-Mar-2015	09:00	1.3	WNW
29-Mar-2015	10:00	2.2	WNW
29-Mar-2015	11:00	3.1	WNW
29-Mar-2015	12:00	3.1	WSW
29-Mar-2015	13:00	3.4	W
29-Mar-2015	14:00	2.8	W
29-Mar-2015	15:00	3.1	W
29-Mar-2015	16:00	3.3	W
29-Mar-2015	17:00	3.3	W
29-Mar-2015	18:00	3.1	WSW
29-Mar-2015	19:00	2.7	SW
29-Mar-2015	20:00	2.8	SW
29-Mar-2015	21:00	2.7	WSW
29-Mar-2015	22:00	1.9	W
29-Mar-2015	23:00	1.9	W
30-Mar-2015	00:00	2.1	W
30-Mar-2015	01:00	1.9	W
30-Mar-2015	02:00	1.8	WNW
30-Mar-2015	03:00	2.4	W
30-Mar-2015	04:00	2.4	W
30-Mar-2015	05:00	1.9	WNW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

30-Mar-2015	06:00	2.1	WNW
30-Mar-2015	07:00	1.6	W
30-Mar-2015	08:00	1.8	W
30-Mar-2015	09:00	2.2	WNW
30-Mar-2015	10:00	3	W
30-Mar-2015	11:00	2.4	W
30-Mar-2015	12:00	2.2	W
30-Mar-2015	13:00	2.8	W
30-Mar-2015	14:00	3	SSW
30-Mar-2015	15:00	2.7	NE
30-Mar-2015	16:00	2.7	NE
30-Mar-2015	17:00	2.5	NE
30-Mar-2015	18:00	1.8	E
30-Mar-2015	19:00	2.1	E
30-Mar-2015	20:00	2.1	NE
30-Mar-2015	21:00	1.5	NE
30-Mar-2015	22:00	1.8	ESE
30-Mar-2015	23:00	1.3	NE
31-Mar-2015	00:00	1.8	ENE
31-Mar-2015	01:00	1.6	WSW
31-Mar-2015	02:00	1.3	W
31-Mar-2015	03:00	0.9	W
31-Mar-2015	04:00	1	W
31-Mar-2015	05:00	1.3	W
31-Mar-2015	06:00	1.5	W
31-Mar-2015	07:00	1.2	WSW
31-Mar-2015	08:00	1.3	WSW
31-Mar-2015	09:00	2.1	WSW
31-Mar-2015	10:00	2.5	WSW
31-Mar-2015	11:00	3.3	WSW
31-Mar-2015	12:00	3.1	W
31-Mar-2015	13:00	3.1	W
31-Mar-2015	14:00	2.5	WSW
31-Mar-2015	15:00	2.8	WSW
31-Mar-2015	16:00	2.8	WNW
31-Mar-2015	17:00	2.2	W
31-Mar-2015	18:00	1.3	SW

**APPENDIX C –  
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

**II. Mean Wind Speed and Wind Direction**

31-Mar-2015	19:00	1.3	W
31-Mar-2015	20:00	0.9	W
31-Mar-2015	21:00	0.4	SW
31-Mar-2015	22:00	0.9	W
31-Mar-2015	23:00	0.7	WNW



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**APPENDIX D  
ENVIRONMENTAL MONITORING  
SCHEDULES**

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**Contract No. KLN/2013/16  
Environmental Monitoring Works at Kai Tak Development  
Impact Air and Noise Monitoring Schedule for March 2015**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Mar	2-Mar	3-Mar	4-Mar	5-Mar	6-Mar	7-Mar
	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)	Noise (M1, M2, M6(A), M7(A), M8)	1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)	
8-Mar	9-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar
		Noise (M1, M2, M6(A), M7(A), M8)	1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)		
15-Mar	16-Mar	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar
	Noise (M1, M2, M6(A), M7(A), M8)	1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)			
22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
	1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)		Noise (M1, M2, M6(A), M7(A), M8)	1 hr TSP X3 (AA1 & AA2)  24 hr TSP	
29-Mar	30-Mar	31-Mar				
	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)					

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

**Air Quality Monitoring Station**

- AM1(B) - Boundary of KTID/Outside Contractor's site office of Contract KL/2012/02
- AM2 - Lee Kau Yan Memorial School
- AM3(A) - Holy Trinity Bradbury Centre
- AM4(A) - EMSD Workshops
- AM5(A) - Po Leung Kuk Ngan Po Ling College
- AA1 - Ching Long Shopping Centre
- AA2 - Tak Long Estate

**Noise Monitoring Station**

- M1 - Buddhist Chi King Primary School
- M2 - S.K.H. Kowloon Bay Kai Lok Primary School
- M3 - Rhythm Garden
- M4 - Cognito College
- M5 - Lee Kau Yan Memorial School
- M6(A) - Kowloon City District Kaifong Association
- M7(A) - Oblate Primary School
- M8 - CCC Kai To Secondary School
- M9 - Po Leung Kuk Ngan Po Ling College
- M10 - Tak Long Estate
- MA1 - Ching Long Shopping Centre

**Contract No. KLN/2013/16  
Environmental Monitoring Works at Kai Tak Development  
Tentative Impact Air and Noise Monitoring Schedule for April 2015**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5-Apr	6-Apr	7-Apr	8-Apr	9-Apr	10-Apr	11-Apr
			Noise (M1, M2, M6(A), M7(A), M8) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A), AM5(A), AA1 & AA2 Noise (MA1 & M10)		
			1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A), AM5(A), AA1 & AA2 Noise (M3, M4, M5, M9, MA1 & M10)		Noise (M1, M2, M6(A), M7(A), M8)	
12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
					1 hr TSP X3 (AA1 & AA2)	
			1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) Noise (MA1 & M10) 24 hr TSP			
			1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) Noise (M3, M4, M5 & M9)		1 hr TSP X3 (AA1 & AA2)	
19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr
					24 hr TSP	
			Noise (M1, M2, M6(A), M7(A), M8)	1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A)	
26-Apr	27-Apr	28-Apr	29-Apr	30-Apr		
			1 hr TSP X3 (AA1 & AA2) Noise (MA1 & M10) 24 hr TSP	1 hr TSP X3 AM1(B), AM2, AM3(A), AM4(A) & AM5(A) Noise (M3, M4, M5 & M9)		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

**Air Quality Monitoring Station**

- AM1(B) - Boundary of KTD/Outside Contractor's site office of Contract: KL/2012/02
- AM2 - Lee Kau Yan Memorial School
- AM3(A) - Holy Trinity Bradbury Centre
- AM4(A) - EMSD Workshops
- AM5(A) - Po Leung Kuk Ngan Po Ling College
- AA1 - Ching Long Shopping Centre
- AA2 - Tak Long Estate

**Noise Monitoring Station**

- M1 - Buddhist Chi King Primary School
- M2 - S.K.H. Kowloon Bay Kei Lok Primary School
- M3 - Rhythm Garden
- M4 - Cognitio College
- M5 - Lee Kau Yan Memorial School
- M6(A) - Kowloon City District Kaifong Association
- M7(A) - Oblate Primary School
- M8 - CCC Kci To Secondary School
- M9 - Po Leung Kuk Ngan Po Ling College
- M10 - Tak Long Estate
- MA1 - Ching Long Shopping Centre



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**APPENDIX E  
1-HOUR TSP MONITORING RESULTS  
AND GRAPHICAL PRESENTATION**

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## Appendix E - 1-hour TSP Monitoring Results

Location AM1(B) - Outside RLJV Site Office			
Date	Time	Weather	Particulate Concentration ( µg/m3)
2-Mar-15	13:00	Cloudy	200.0
2-Mar-15	14:00	Cloudy	203.5
2-Mar-15	15:00	Cloudy	207.8
6-Mar-15	9:00	Cloudy	186.8
6-Mar-15	10:00	Cloudy	171.1
6-Mar-15	11:00	Cloudy	177.2
12-Mar-15	13:05	Cloudy	58.7
12-Mar-15	14:05	Cloudy	59.3
12-Mar-15	15:05	Cloudy	59.8
18-Mar-15	13:00	Cloudy	209.2
18-Mar-15	14:00	Cloudy	214.7
18-Mar-15	15:00	Cloudy	211.9
24-Mar-15	13:00	Sunny	135.4
24-Mar-15	14:00	Sunny	142.7
24-Mar-15	15:00	Sunny	143.4
30-Mar-15	13:10	Cloudy	241.9
30-Mar-15	14:10	Cloudy	241.0
30-Mar-15	15:10	Cloudy	248.2
		Average	172.9
		Maximum	248.2
		Minimum	58.7

Location AM2 - Lee Kau Yan Memorial School			
Date	Time	Weather	Particulate Concentration ( µg/m3)
2-Mar-15	13:00	Cloudy	231.5
2-Mar-15	14:00	Cloudy	235.5
2-Mar-15	15:00	Cloudy	239.6
6-Mar-15	13:00	Windy	204.8
6-Mar-15	14:00	Windy	229.7
6-Mar-15	15:00	Windy	221.4
12-Mar-15	13:00	Cloudy	51.7
12-Mar-15	14:00	Cloudy	50.6
12-Mar-15	15:00	Cloudy	55.4
18-Mar-15	9:00	Cloudy	194.0
18-Mar-15	10:00	Cloudy	186.1
18-Mar-15	11:00	Cloudy	194.9
24-Mar-15	13:20	Sunny	163.0
24-Mar-15	14:20	Sunny	141.5
24-Mar-15	15:20	Sunny	125.6
30-Mar-15	13:00	Cloudy	231.7
30-Mar-15	14:00	Cloudy	235.6
30-Mar-15	15:00	Cloudy	240.4
		Average	179.6
		Maximum	240.4
		Minimum	50.6

## Appendix E - 1-hour TSP Monitoring Results

Location AM3(A) - Holy Trinity Bradbury Centre			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
2-Mar-15	9:00	Cloudy	188.1
2-Mar-15	10:00	Cloudy	192.1
2-Mar-15	11:00	Cloudy	194.9
6-Mar-15	9:00	Cloudy	226.0
6-Mar-15	10:00	Cloudy	256.5
6-Mar-15	11:00	Cloudy	229.9
12-Mar-15	8:25	Cloudy	50.6
12-Mar-15	9:25	Cloudy	49.4
12-Mar-15	10:25	Cloudy	52.4
18-Mar-15	9:00	Cloudy	185.1
18-Mar-15	10:00	Cloudy	186.9
18-Mar-15	11:00	Cloudy	187.1
24-Mar-15	9:00	Sunny	160.6
24-Mar-15	10:00	Sunny	165.7
24-Mar-15	11:00	Sunny	164.9
30-Mar-15	8:55	Cloudy	262.8
30-Mar-15	9:55	Cloudy	263.9
30-Mar-15	10:55	Cloudy	259.4
		Average	182.0
		Maximum	263.9
		Minimum	49.4

Location AM4(A) - EMSD Workshops			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
2-Mar-15	9:00	Cloudy	217.7
2-Mar-15	10:00	Cloudy	220.4
2-Mar-15	11:00	Cloudy	226.2
6-Mar-15	9:00	Cloudy	221.8
6-Mar-15	10:00	Cloudy	229.7
6-Mar-15	11:00	Cloudy	228.9
12-Mar-15	9:00	Cloudy	43.4
12-Mar-15	10:00	Cloudy	55.3
12-Mar-15	11:00	Cloudy	61.6
18-Mar-15	13:00	Cloudy	195.4
18-Mar-15	14:00	Cloudy	198.6
18-Mar-15	15:00	Cloudy	195.0
24-Mar-15	13:10	Sunny	165.8
24-Mar-15	14:10	Sunny	165.2
24-Mar-15	15:10	Sunny	169.1
30-Mar-15	8:30	Cloudy	249.2
30-Mar-15	9:30	Cloudy	241.1
30-Mar-15	10:30	Cloudy	241.9
		Average	184.8
		Maximum	249.2
		Minimum	43.4

## Appendix E - 1-hour TSP Monitoring Results

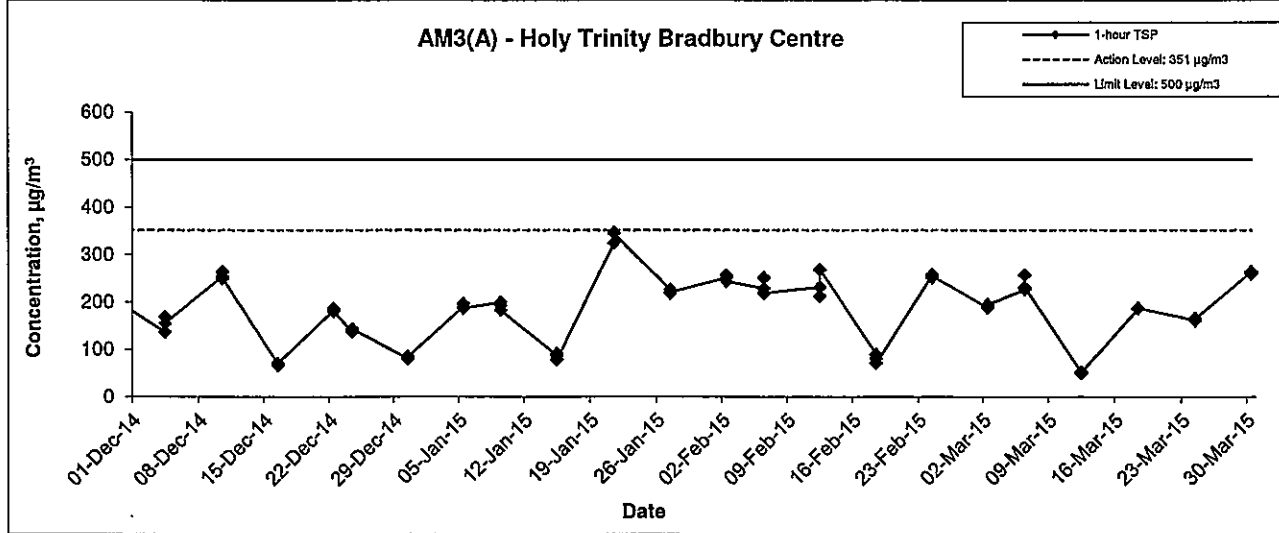
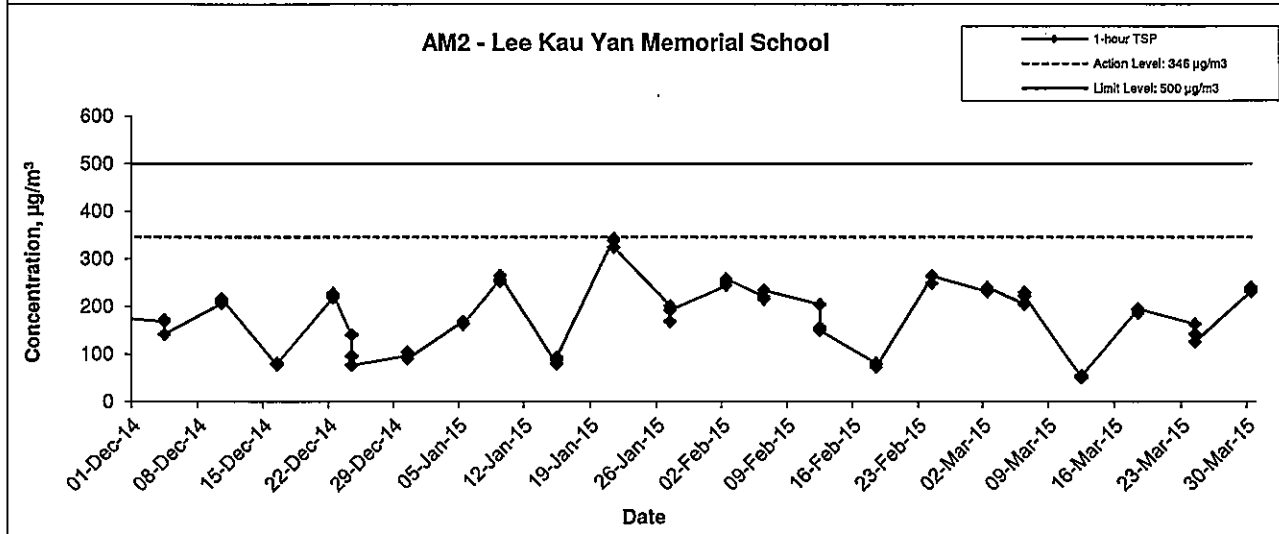
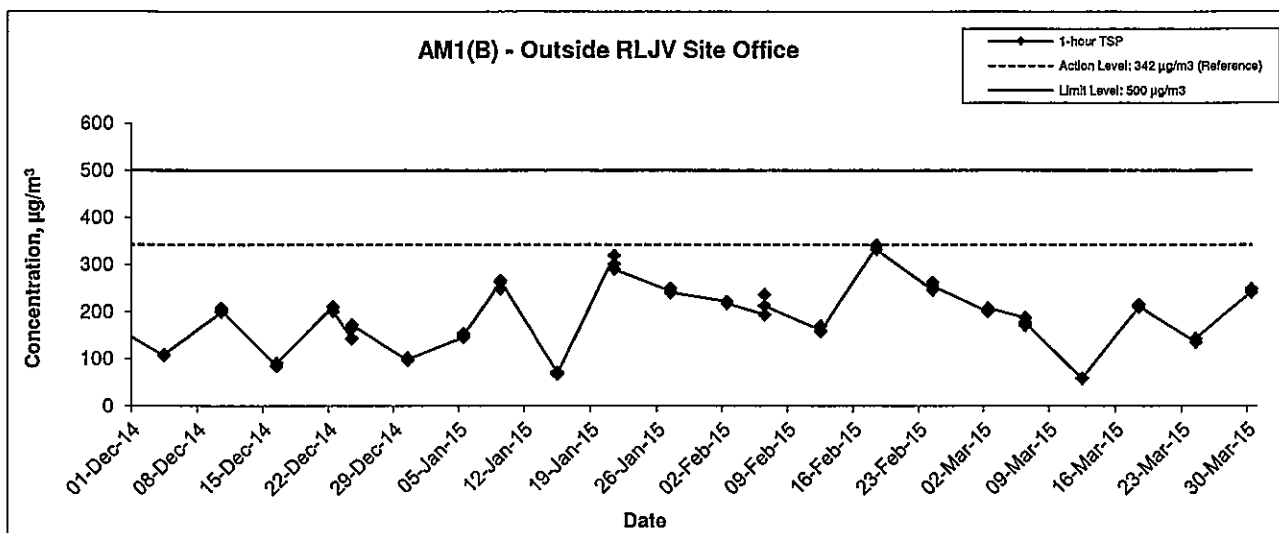
Location AM5(A) - Po Leung Kuk Ngan Po Ling College			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
2-Mar-15	8:40	Cloudy	218.9
2-Mar-15	9:40	Cloudy	224.9
2-Mar-15	10:40	Cloudy	228.7
6-Mar-15	13:34	Cloudy	240.1
6-Mar-15	14:34	Cloudy	266.0
6-Mar-15	15:34	Cloudy	258.8
12-Mar-15	13:15	Cloudy	39.6
12-Mar-15	14:15	Cloudy	44.6
12-Mar-15	15:15	Cloudy	43.0
18-Mar-15	9:00	Cloudy	187.4
18-Mar-15	10:00	Cloudy	190.8
18-Mar-15	11:00	Cloudy	189.7
24-Mar-15	9:00	Cloudy	162.6
24-Mar-15	10:00	Cloudy	163.5
24-Mar-15	11:00	Cloudy	169.2
30-Mar-15	8:30	Cloudy	259.9
30-Mar-15	9:30	Cloudy	262.6
30-Mar-15	10:30	Cloudy	260.6
Average			189.5
Maximum			266.0
Minimum			39.6

Location AA1 - Ching Long Shopping Centre			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
5-Mar-15	13:00	Cloudy	250.0
5-Mar-15	14:00	Cloudy	251.3
5-Mar-15	15:00	Cloudy	253.2
11-Mar-15	8:35	Fine	247.0
11-Mar-15	9:35	Fine	249.6
11-Mar-15	10:35	Fine	252.8
17-Mar-15	9:00	Cloudy	257.8
17-Mar-15	10:00	Cloudy	262.4
17-Mar-15	11:00	Cloudy	266.7
23-Mar-15	11:00	Sunny	145.5
23-Mar-15	13:00	Sunny	147.6
23-Mar-15	14:00	Sunny	144.9
27-Mar-15	13:00	Fine	30.3
27-Mar-15	14:00	Fine	11.5
27-Mar-15	15:00	Fine	13.6
Average			185.6
Maximum			266.7
Minimum			11.5

## Appendix E - 1-hour TSP Monitoring Results

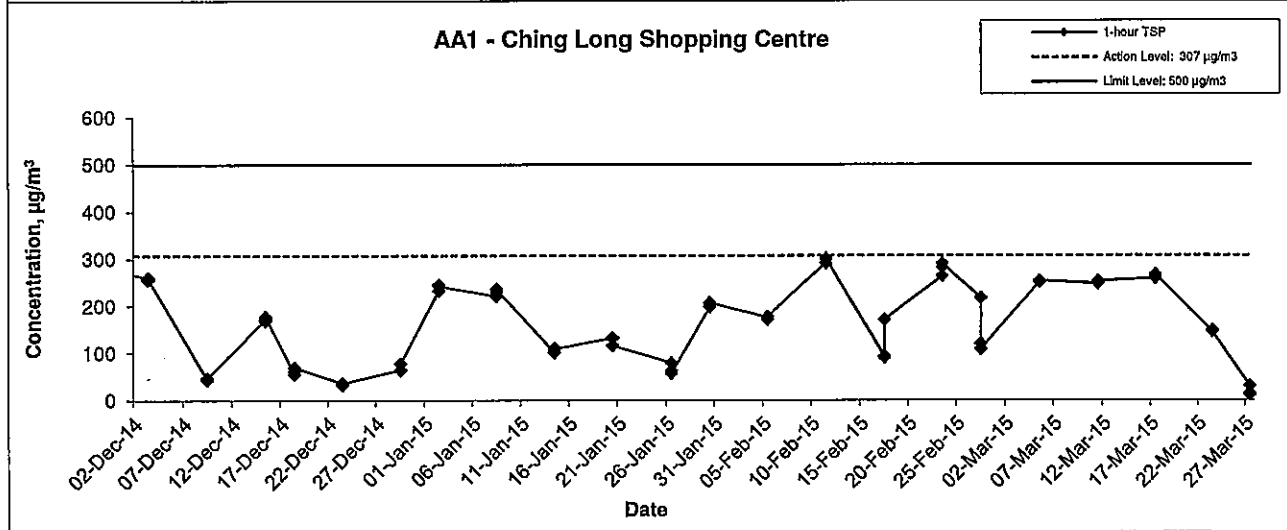
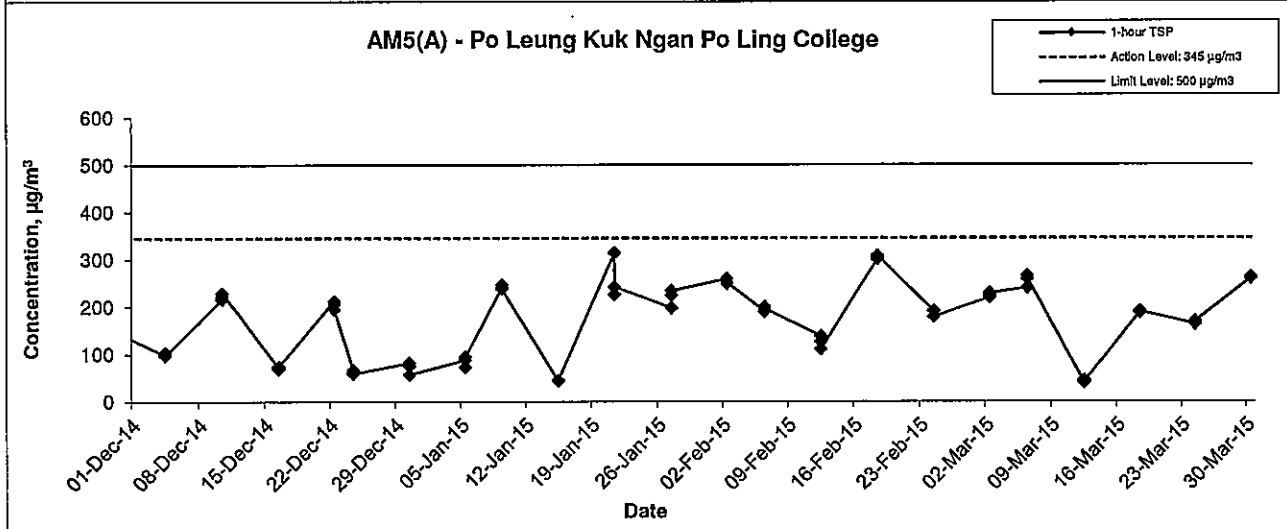
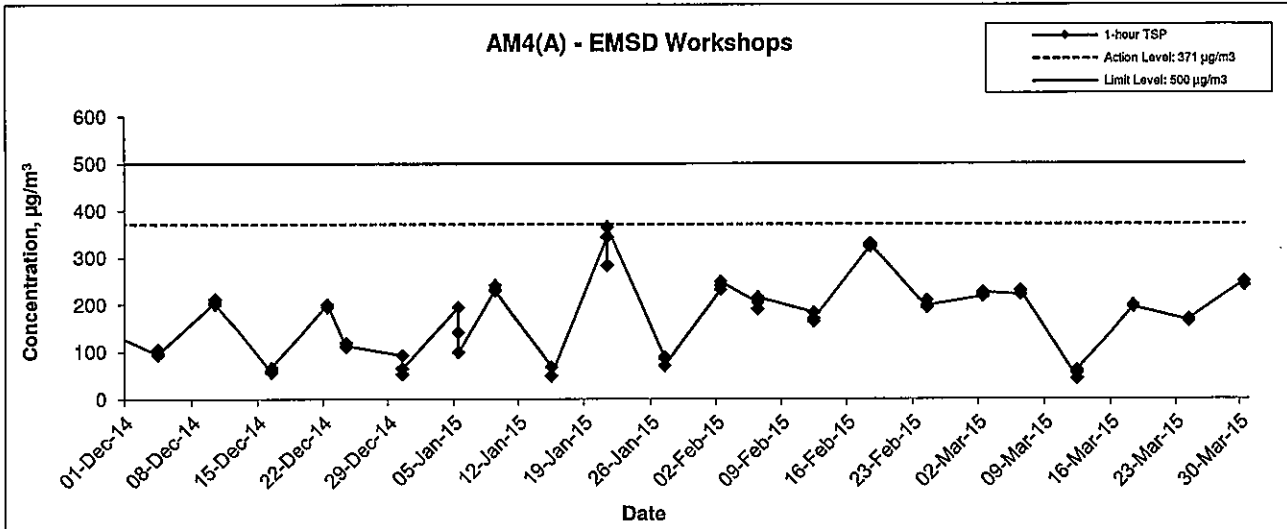
Location AA2 - Tak Long Estate			
Date	Time	Weather	Particulate Concentration ( $\mu\text{g}/\text{m}^3$ )
5-Mar-15	13:00	Cloudy	261.0
5-Mar-15	14:00	Cloudy	259.6
5-Mar-15	15:00	Cloudy	251.5
11-Mar-15	8:15	Fine	247.0
11-Mar-15	9:15	Fine	251.3
11-Mar-15	10:15	Fine	255.4
17-Mar-15	13:00	Cloudy	265.4
17-Mar-15	14:00	Cloudy	256.5
17-Mar-15	15:00	Cloudy	263.3
23-Mar-15	9:00	Sunny	96.0
23-Mar-15	10:00	Sunny	107.5
23-Mar-15	11:00	Sunny	102.3
27-Mar-15	9:00	Cloudy	29.2
27-Mar-15	10:00	Cloudy	26.1
27-Mar-15	11:00	Cloudy	29.2
		Average	180.1
		Maximum	265.4
		Minimum	26.1

### 1-hr TSP Concentration Levels



Title Contract No. KLN/2013/16 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of 1-hour TSP Monitoring Results	Scale	Project	CINOTECH
	Date	No.	
	Mar 15	MA14008 Appendix E	

### 1-hr TSP Concentration Levels



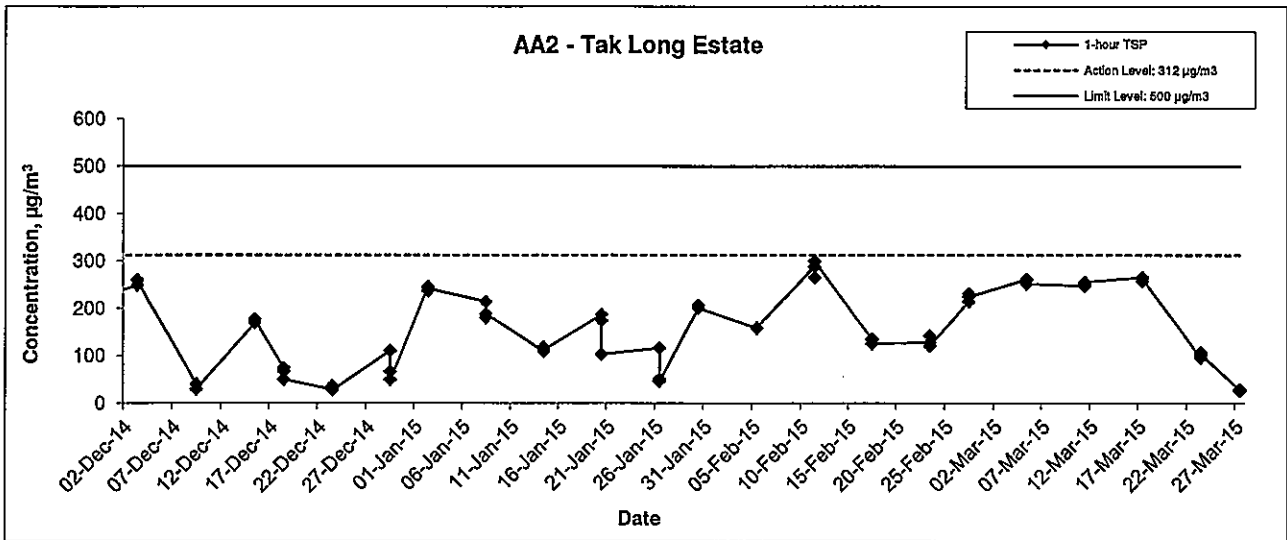
Title Contract No. KLN/2013/16  
 Environmental Monitoring Works for Kai Tak Development  
 Graphical Presentation of 1-hour TSP Monitoring Results

Scale N.T.S  
 Date Mar 15  
 Project No. MA14008  
 Appendix E





### 1-hr TSP Concentration Levels



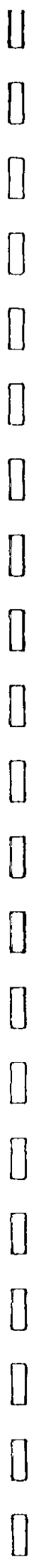
Title Contract No. KLN/2013/16 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. MA14008	<b>CINOTECH</b>
	Date Mar 15	Appendix E	



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**APPENDIX F  
24-HOUR TSP MONITORING RESULTS  
AND GRAPHICAL PRESENTATION**

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Appendix F - 24-hour TSP Monitoring Results

Location AM1(B) - Outside RLJV site office (KL/2012/02)

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	289.0	766.5	3.3379	3.4187	0.0808	4428.5	4452.5	24.0	1.21	1.21	1.21	1747.9	46.2
11-Mar-15	Cloudy	289.0	770.3	3.2722	3.3716	0.0994	4452.5	4476.5	24.0	1.22	1.22	1.22	1752.0	56.7
17-Mar-15	Cloudy	294.1	763.7	3.2897	3.4174	0.1277	4476.5	4500.5	24.0	1.20	1.20	1.20	1730.8	73.8
23-Mar-15	Cloudy	293.1	767.5	3.2606	3.4822	0.2216	4500.5	4524.5	24.0	1.21	1.21	1.21	1737.6	127.5
27-Mar-15	Cloudy	291.5	770.7	3.2600	3.3946	0.1246	4524.5	4548.5	24.0	1.21	1.21	1.21	1745.4	71.4
													Min	46.2
													Max	127.5
													Average	75.1

Location AM2 - Lee Kau Yan Memorial School

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	288.7	766.6	3.3213	3.4263	0.1050	14472.4	14496.4	24.0	1.22	1.22	1.22	1754.6	59.8
11-Mar-15	Cloudy	289.7	770.0	3.1598	3.3459	0.1861	14496.4	14520.4	24.0	1.22	1.22	1.22	1755.4	106.0
17-Mar-15	Cloudy	294.7	763.4	3.2772	3.5060	0.2288	14520.4	14544.4	24.0	1.20	1.20	1.20	1734.8	131.9
23-Mar-15	Cloudy	293.7	767.3	3.3087	3.5461	0.2374	14544.4	14568.4	24.0	1.21	1.21	1.21	1741.6	136.3
27-Mar-15	Cloudy	292.5	770.1	3.2151	3.4258	0.2107	14568.4	14592.4	24.0	1.21	1.21	1.21	1747.8	120.5
													Min	59.8
													Max	136.3
													Average	110.9

Location AM3(A) - Holy Trinity Bradbury Centre

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	289.8	766.2	3.2491	3.3273	0.0782	7185.8	7209.8	24.0	1.21	1.21	1.21	1745.8	44.8
11-Mar-15	Cloudy	289.5	769.7	3.2010	3.3622	0.1612	7209.8	7233.8	24.0	1.22	1.22	1.22	1750.4	92.1
17-Mar-15	Cloudy	294.9	763.4	3.2706	3.3936	0.1230	7233.8	7257.8	24.0	1.20	1.20	1.20	1728.6	71.2
23-Mar-15	Cloudy	293.8	767.2	3.2584	3.4319	0.1795	7257.8	7281.8	24.0	1.21	1.21	1.21	1735.7	100.0
27-Mar-15	Cloudy	291.6	770.3	3.1596	3.3415	0.1819	7281.8	7305.8	24.0	1.21	1.21	1.21	1745.1	104.2
													Min	44.8
													Max	104.2
													Average	82.4

Location AM4(A) - EMSD Workshops

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	289.3	766.7	3.2649	3.4488	0.1839	5421.6	5445.6	24.0	1.23	1.23	1.23	1765.2	104.2
11-Mar-15	Cloudy	288.8	769.6	3.2301	3.4786	0.2485	5445.6	5469.6	24.0	1.23	1.23	1.23	1769.7	140.4
17-Mar-15	Cloudy	294.8	763.5	3.2752	3.4843	0.2091	5469.6	5493.6	24.0	1.21	1.21	1.21	1746.0	119.8
23-Mar-15	Cloudy	293.5	767.7	3.2893	3.5416	0.2523	5493.6	5517.6	24.0	1.22	1.22	1.22	1754.2	143.8
27-Mar-15	Cloudy	292.5	770.3	3.2077	3.4546	0.2469	5517.6	5541.6	24.0	1.22	1.22	1.22	1759.9	140.3
													Min	104.2
													Max	143.8
													Average	129.7

Appendix F - 24-hour TSP Monitoring Results

Location AM5(A) - Po Leung Kuk Ngan Po Ling College

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mm-Hg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	288.7	766.4	3.2418	3.3152	0.0734	4383.6	4387.6	24.0	1.22	1.22	1.22	1750.7	41.9
11-Mar-15	Cloudy	289.4	770.3	3.2018	3.2673	0.0655	4387.6	4411.6	24.0	1.22	1.22	1.22	1752.8	37.4
17-Mar-15	Cloudy	294.6	763.7	3.2712	3.3309	0.0597	4411.6	4495.6	24.0	1.20	1.20	1.20	1732.2	34.5
23-Mar-15	Cloudy	294.1	767.0	3.2558	3.4116	0.1558	4435.6	4459.6	24.0	1.21	1.21	1.21	1736.8	89.7
27-Mar-15	Cloudy	291.8	770.5	3.1751	3.2381	0.0630	4459.6	4483.6	24.0	1.21	1.21	1.21	1746.5	36.1
													Min	34.5
													Max	89.7
													Average	47.9

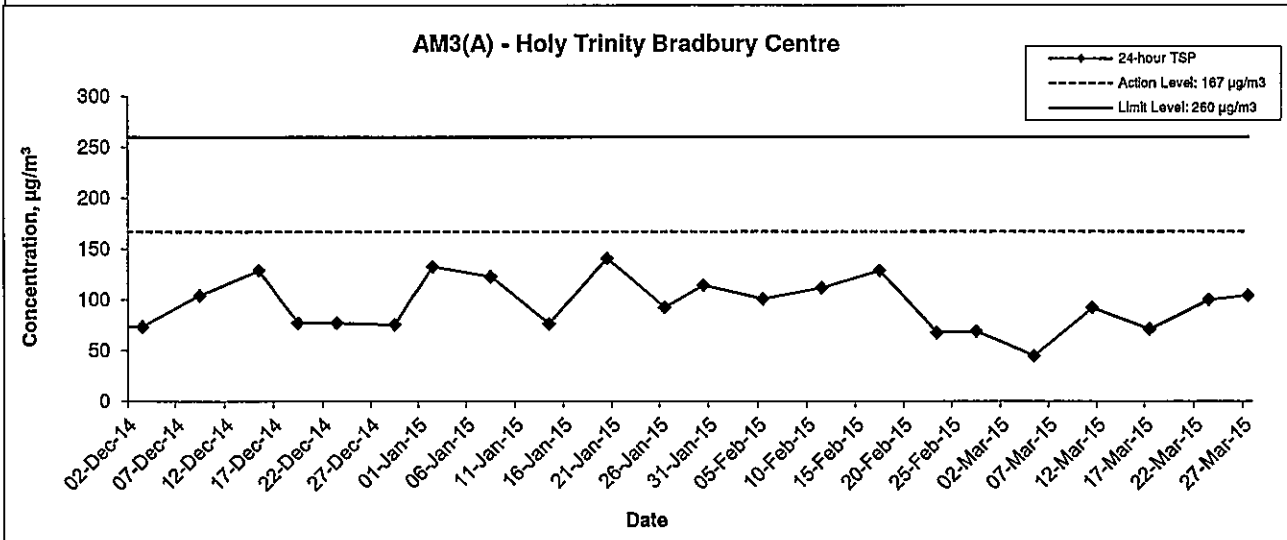
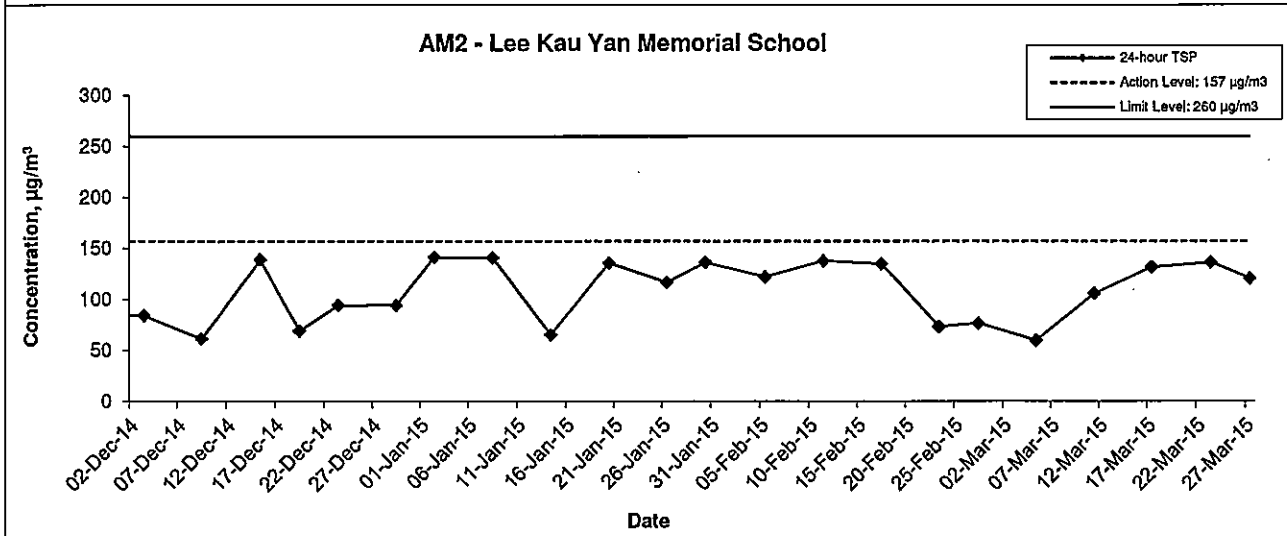
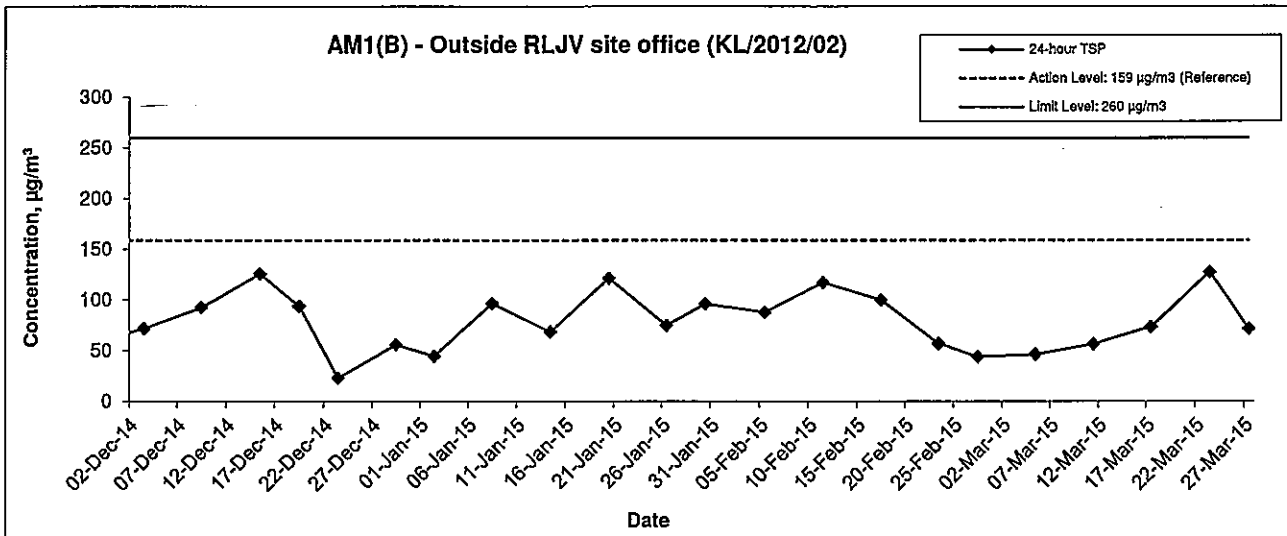
Location AA1 - Ching Long Shopping Centre

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mm-Hg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	288.5	766.0	3.2355	3.3085	0.0730	2654.1	2678.1	24.0	1.22	1.22	1.22	1755.4	41.6
11-Mar-15	Cloudy	289.5	770.5	3.2566	3.3510	0.0944	2678.1	2702.1	24.0	1.22	1.22	1.22	1757.3	53.7
17-Mar-15	Cloudy	295.0	763.1	3.2675	3.3721	0.1046	2702.1	2726.1	24.0	1.20	1.20	1.20	1734.1	60.3
23-Mar-15	Cloudy	293.5	767.4	3.2415	3.4408	0.1993	2726.1	2750.1	24.0	1.21	1.21	1.21	1742.9	114.4
27-Mar-15	Cloudy	291.6	770.5	3.1924	3.2897	0.0973	2750.1	2774.1	24.0	1.22	1.22	1.22	1751.4	55.6
													Min	41.6
													Max	114.4
													Average	65.1

Location AA2 - Tak Long Estate

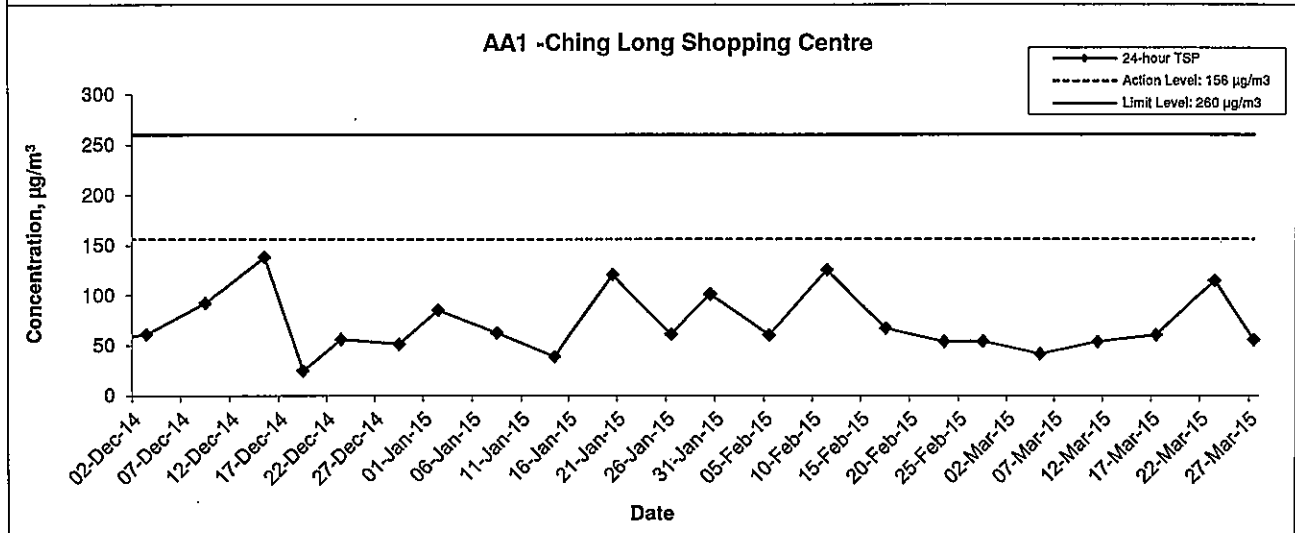
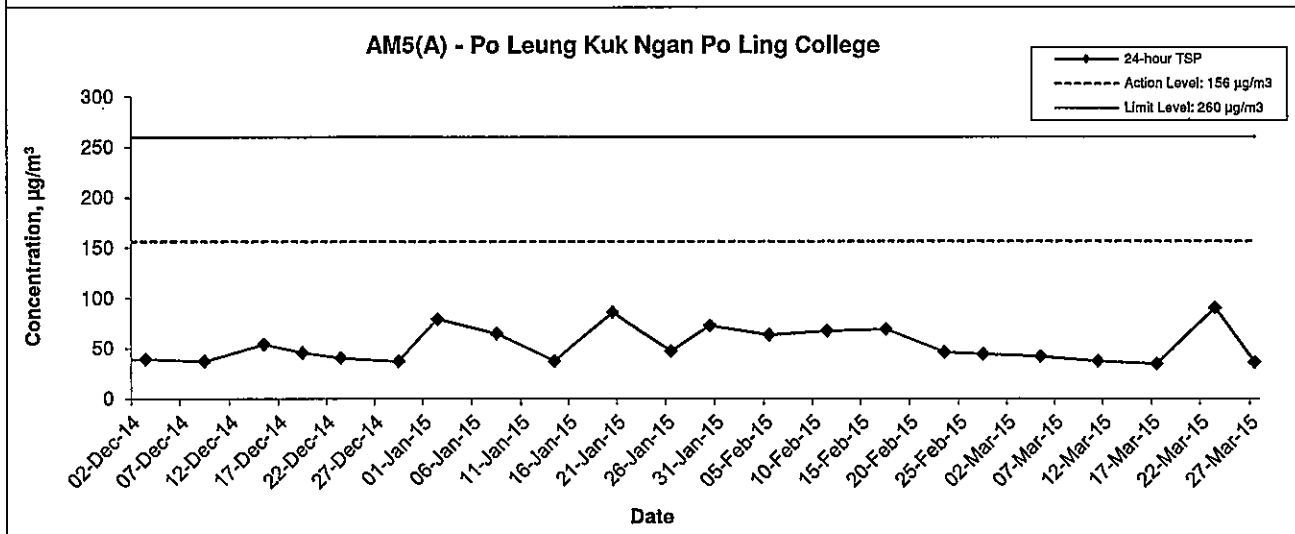
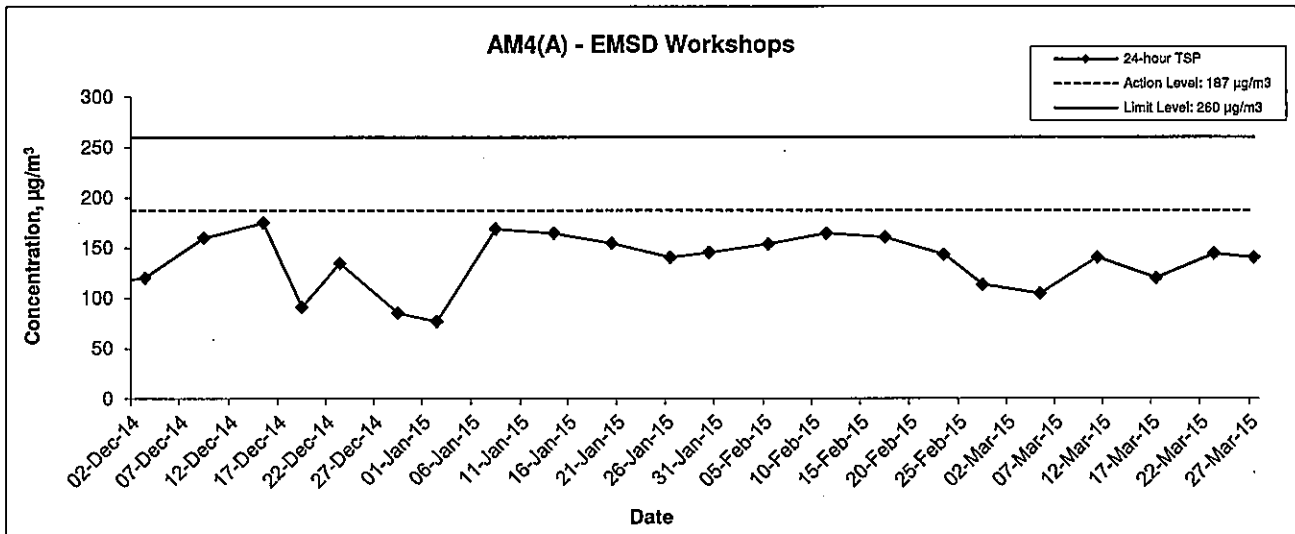
Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mm-Hg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time (hrs.)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Conc. (µg/m <sup>3</sup> )
				Initial	Final		Initial	Final		Initial	Final			
5-Mar-15	Cloudy	288.4	766.1	3.2270	3.3215	0.0945	7356.2	7380.2	24.0	1.21	1.21	1.21	1747.6	54.1
11-Mar-15	Cloudy	289.5	770.4	3.1938	3.2810	0.0872	7380.2	7404.2	24.0	1.22	1.22	1.21	1749.3	49.8
17-Mar-15	Cloudy	294.3	763.6	3.2546	3.3625	0.1079	7404.2	7428.2	24.0	1.20	1.20	1.20	1725.3	62.5
23-Mar-15	Cloudy	293.6	767.5	3.2945	3.5003	0.2058	7428.2	7452.2	24.0	1.20	1.20	1.20	1732.3	118.8
27-Mar-15	Cloudy	291.8	770.4	3.1683	3.2243	0.0560	7452.2	7476.2	24.0	1.21	1.21	1.21	1741.8	32.2
													Min	32.2
													Max	118.8
													Average	63.5

### 24-hr TSP Concentration Levels



Title Contract No. KLN/2013/16 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of 24-hour TSP Monitoring Results	Scale	N.T.S	Project No.	MA14008	CINOTECH
	Date	Mar 15	Appendix	F	

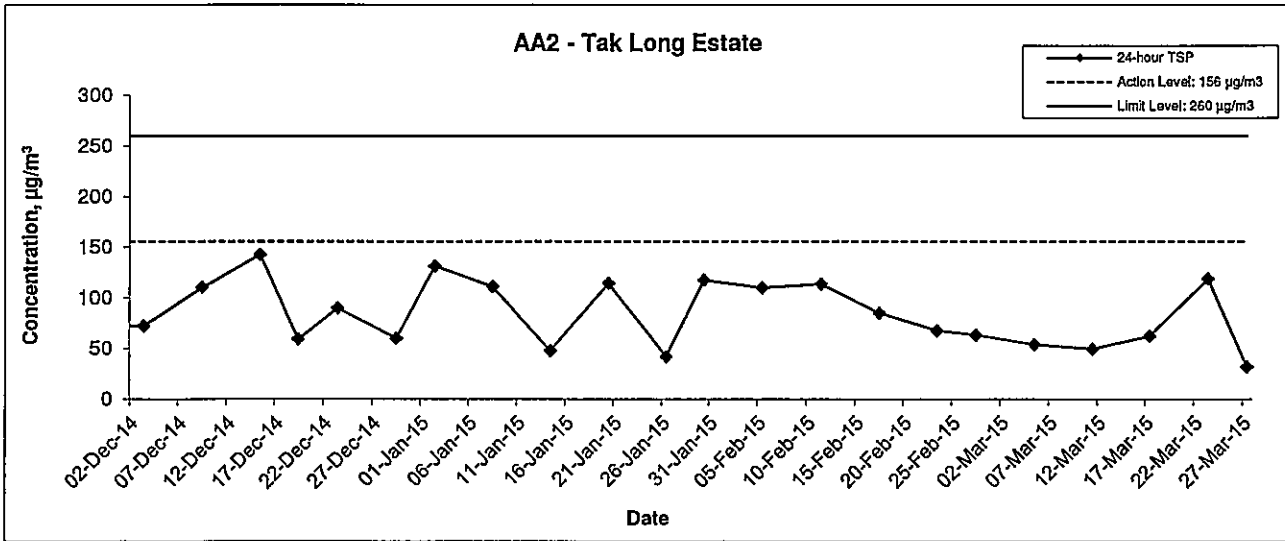
### 24-hr TSP Concentration Levels



Title Contract No. KLN/2013/16 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of 24-hour TSP Monitoring Results	Scale	N.T.S	Project No.	MA14008	CINOTECH
	Date	Feb 15	Appendix	F	



### 24-hr TSP Concentration Levels



Title Contract No. KLN/2013/16 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of 24-hour TSP Monitoring Results	Scale	N.T.S	Project No.	MA14008	CINOTECH
	Date	Mar 15	Appendix	F	



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**APPENDIX G  
NOISE MONITORING RESULTS AND  
GRAPHICAL PRESENTATION**

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2

**Appendix G - Noise Monitoring Results**

Location M1 - Buddhist Chi King Primary School							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
3-Mar-15	13:50	Cloudy	67.9	70.1	65.6	64.4	65.3
10-Mar-15	15:05	Cloudy	65.1	67.5	62.4		56.8
16-Mar-15	14:59	Cloudy	65.6	67.8	62.1		59.4
26-Mar-15	13:15	Cloudy	65.6	67.7	62.2		59.4

Location M2 - S.K.H. Kowloon Bay Kei Lok Primary School							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
3-Mar-15	13:00	Cloudy	64.4	66.3	61.9	61.3	61.5
10-Mar-15	15:45	Cloudy	67.2	68.8	65.3		65.9
16-Mar-15	15:43	Cloudy	67.1	69.0	64.3		65.8
26-Mar-15	14:00	Cloudy	66.8	68.6	64.4		65.4

Location M3 - Rhythm Garden							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
2-Mar-15	13:10	Cloudy	76.3	80.1	73.5	76.3	76.3 Measured ≤ Baseline
12-Mar-15	13:30	Cloudy	74.7	77.3	71.8		74.7 Measured ≤ Baseline
18-Mar-15	13:30	Cloudy	77.7	79.8	73.7		72.1
24-Mar-15	15:00	Sunny	77.7	79.2	75.7		72.1
30-Mar-15	14:05	Cloudy	77.4	78.3	73.1		70.9

Location M4 - Cognitio College							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Background Noise	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
2-Mar-15	15:00	Cloudy	78.5	79.8	76.9	78.3	65.0
12-Mar-15	15:00	Cloudy	79.7	81.5	77.4	79.5	66.2
18-Mar-15	15:00	Cloudy	79.4	80.6	77.8	79.3	63.0
24-Mar-15	14:20	Sunny	79.4	80.8	77.1	79.9	79.4 Measured ≤ Background
30-Mar-15	15:05	Cloudy	78.3	79.9	73.1	78.4	78.3 Measured ≤ Background

Location M5 - Lee Kau Yan Memorial School							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
2-Mar-15	13:30	Cloudy	74.0	75.3	71.8	76.7	74.0 Measured ≤ Baseline
12-Mar-15	13:00	Cloudy	74.2	75.4	72.5		74.2 Measured ≤ Baseline
18-Mar-15	9:00	Cloudy	72.6	73.9	70.8		72.6 Measured ≤ Baseline
24-Mar-15	13:20	Sunny	74.2	75.6	72.0		74.2 Measured ≤ Baseline
30-Mar-15	13:05	Cloudy	73.7	75.2	71.2		73.7 Measured ≤ Baseline

Location M6(A) - Kowloon City District Kaifong Association							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
3-Mar-15	9:15	Cloudy	72.8	75.3	72.2	70.5	68.9
10-Mar-15	11:20	Cloudy	74.0	75.3	72.1		71.4
16-Mar-15	10:45	Cloudy	73.6	75.0	71.6		70.7
26-Mar-15	9:15	Cloudy	69.8	71.0	67.7		69.8 Measured ≤ Baseline

**Appendix G - Noise Monitoring Results**

<b>Location M7(A) - Oblate Primary School</b>							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
3-Mar-15	11:30	Cloudy	68.6	71.3	63.2	63.9	66.8
10-Mar-15	14:20	Cloudy	67.3	69.9	63.0		64.6
16-Mar-15	13:00	Cloudy	64.8	67.1	61.0		57.5
26-Mar-15	10:15	Cloudy	64.2	67.3	58.5		52.4

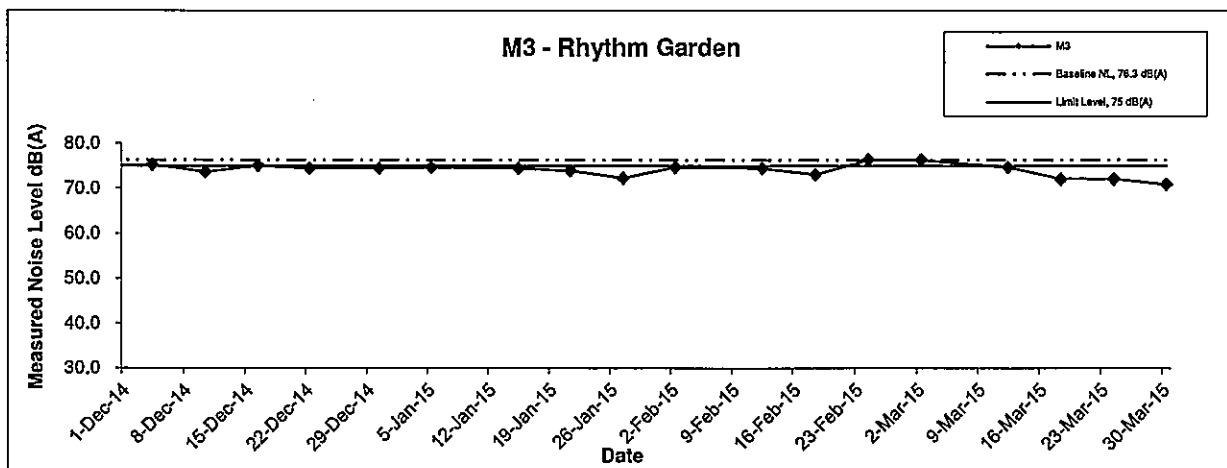
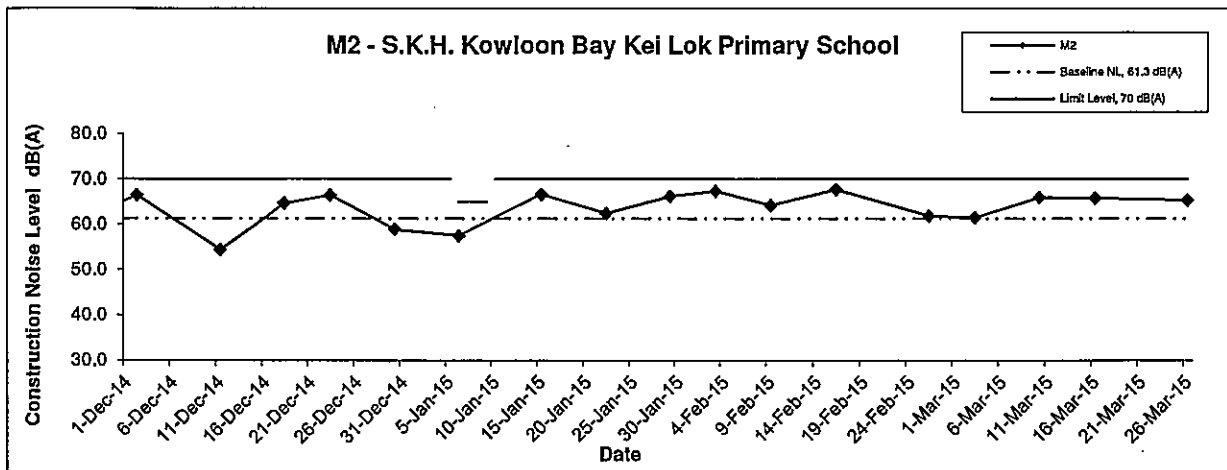
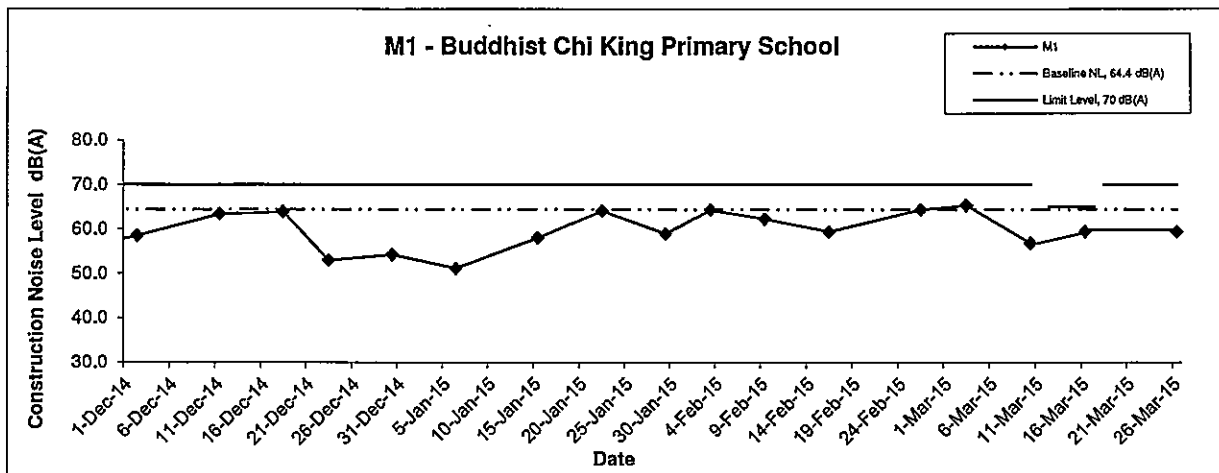
<b>Location M8 - CCC Kel To Secondary School</b>							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
3-Mar-15	10:30	Cloudy	60.4	62.1	57.6	68.7	60.4 Measured ≤ Baseline
10-Mar-15	13:10	Cloudy	62.4	64.7	58.6		62.4 Measured ≤ Baseline
16-Mar-15	13:57	Cloudy	64.3	67.3	58.9		64.3 Measured ≤ Baseline
26-Mar-15	11:00	Cloudy	64.6	69.2	60.8		64.6 Measured ≤ Baseline

<b>Location M9 - Po Leung Kuk Ngan Po Ling College</b>							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
2-Mar-15	9:30	Cloudy	68.5	70.8	64.2	61.9	67.4
12-Mar-15	13:15	Cloudy	66.5	68.5	62.6		64.7
18-Mar-15	9:00	Cloudy	67.2	69.7	61.5		65.7
24-Mar-15	9:20	Cloudy	63.4	65.5	60.1		58.1
30-Mar-15	8:30	Cloudy	66.1	67.1	62.3		64.0

<b>Location M10 - Tak Long Estate</b>							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5-Mar-15	13:05	Cloudy	64.3	65.8	60.7	59.9	62.3
11-Mar-15	10:30	Cloudy	62.1	63.4	59.6		58.1
17-Mar-15	13:15	Cloudy	68.9	69.7	65.4		68.3
23-Mar-15	15:15	Sunny	65.0	67.3	60.8		63.4

<b>Location MA1 - Ching Long Shopping Centre</b>							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
5-Mar-15	13:15	Cloudy	68.7	70.0	65.9	65.9	65.5
11-Mar-15	9:00	Cloudy	69.2	72.4	60.5		66.5
17-Mar-15	9:10	Cloudy	71.3	73.0	67.9		69.8
23-Mar-15	11:00	Sunny	63.0	65.6	61.1		63.0 Measured ≤ Baseline

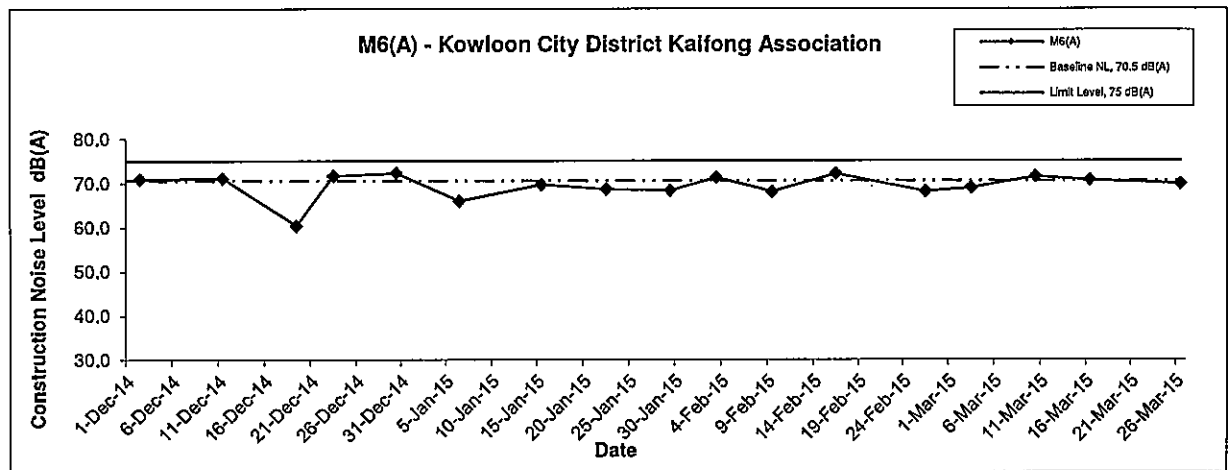
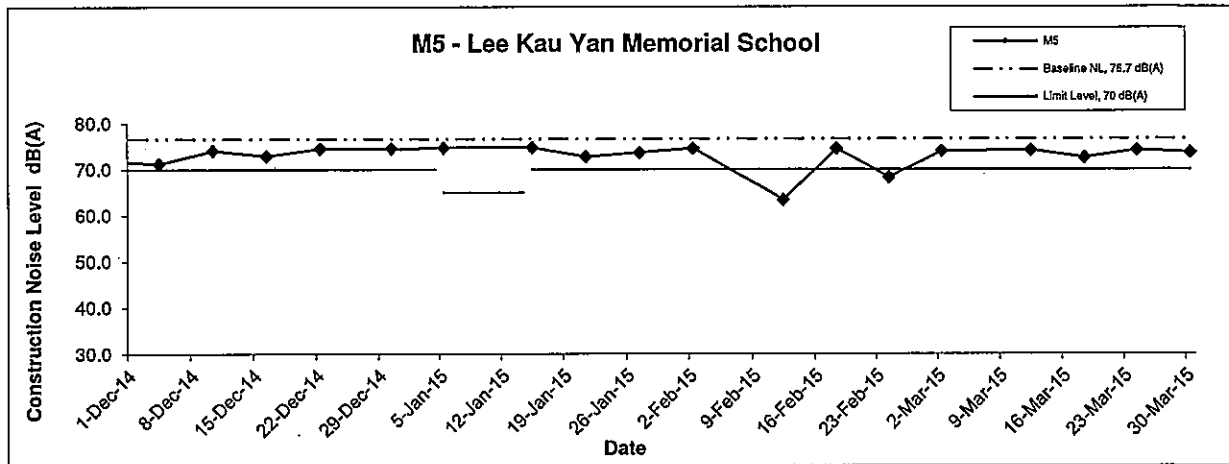
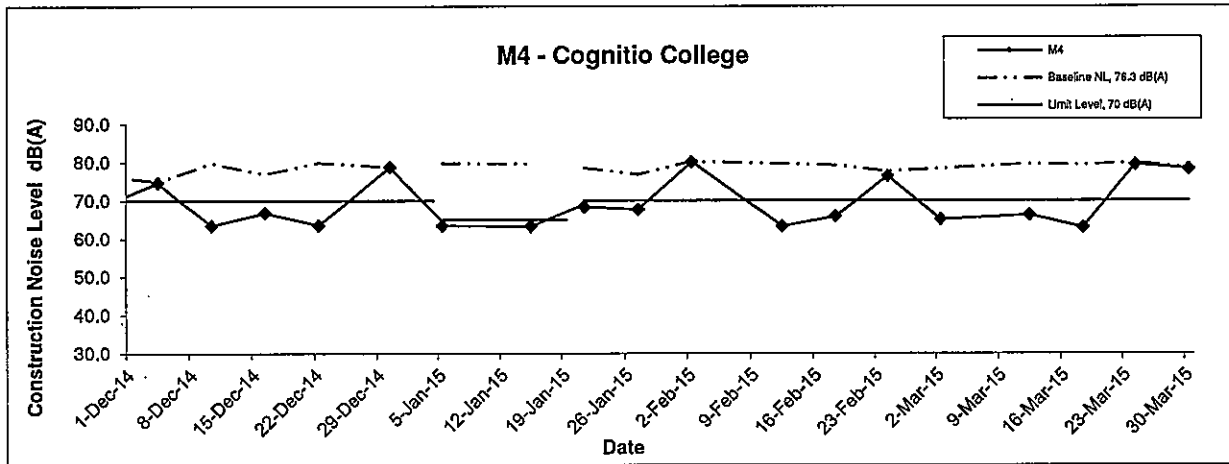
## Noise Levels



Remarks: M1 and M2: The construction noise levels in the Tables in Appendix G were adopted for plotting the graphs  
 M3: The measured noise levels in the Table in Appendix G were adopted for plotting the graphs

Title Contract No. KLN/2010/04 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA14008	CINOTECH
	Date Mar 15	Appendix G	

### Noise Levels

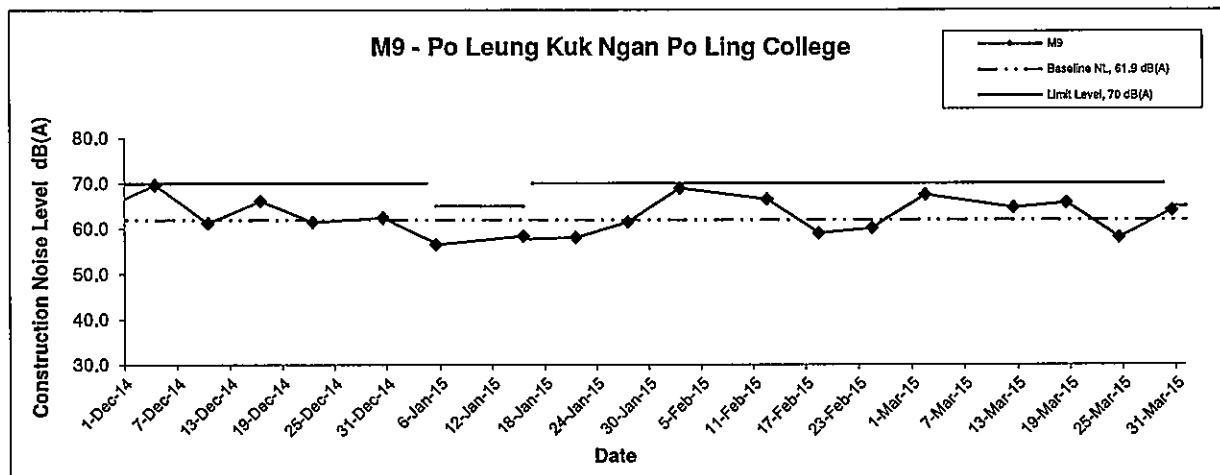
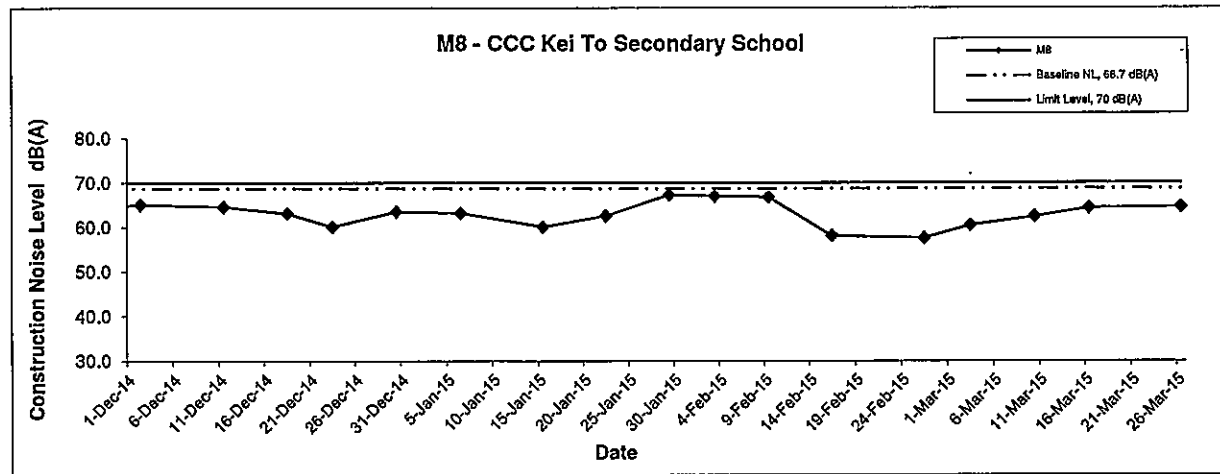
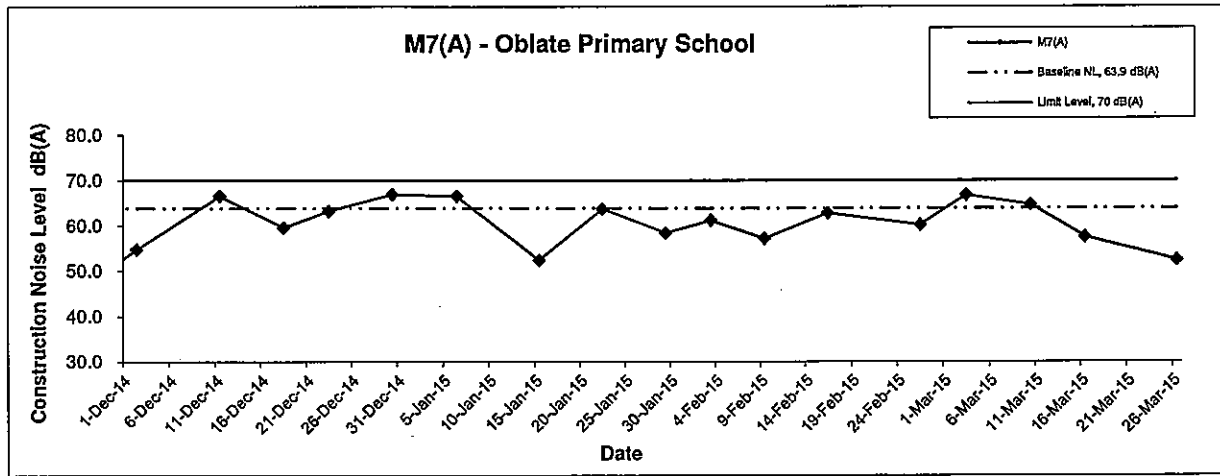


Remarks: The construction noise levels in the Tables in Appendix G were adopted for plotting the graphs

Title Contract No. KLN/2010/04 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of Construction Noise Monitoring Results	Scale	N.T.S	Project No.	MA14008	CINOTECH
	Date	Mar 15	Appendix	G	



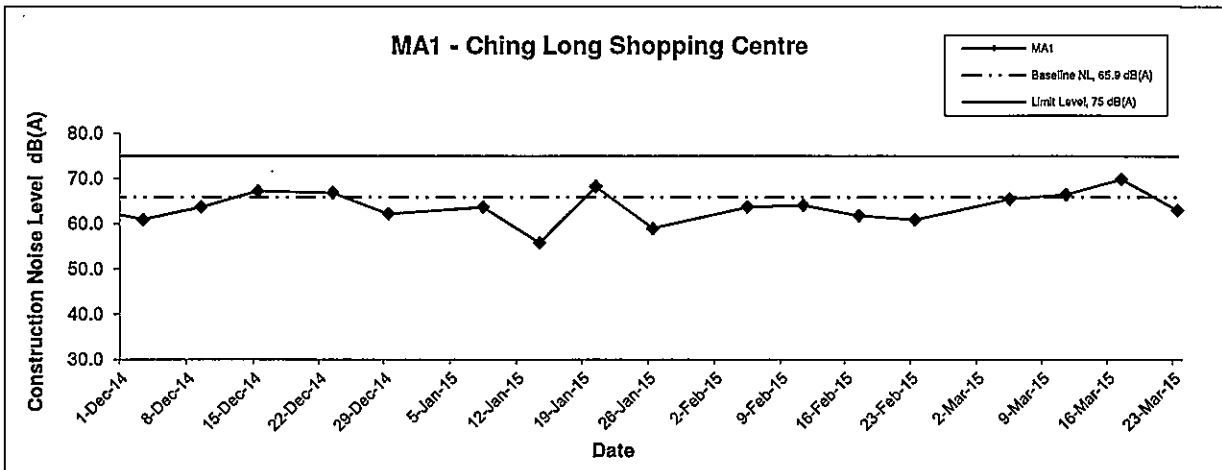
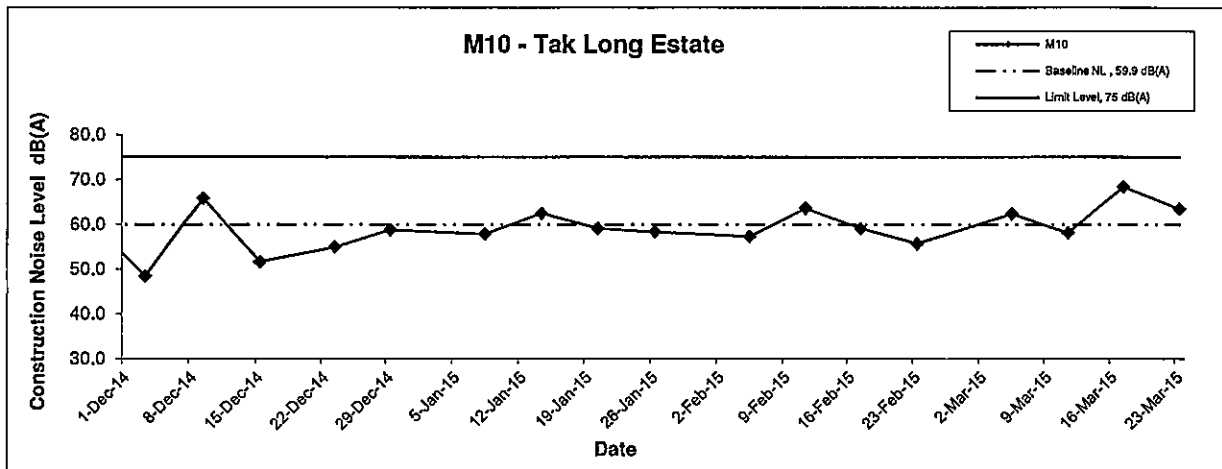
## Noise Levels



Remarks: The construction noise levels in the Tables in Appendix G were adopted for plotting the graphs

Title Contract No. KLN/2010/04 Environmental Monitoring Works for Kai Tak Development Graphical Presentation of Construction Noise Monitoring Results	Scale	Project No.	CINOTECH
	Date	Appendix	
	N.T.S	MA14008	
	Mar 15	G	

### Noise Levels



Remarks: The construction noise levels in the Tables in Appendix G were adopted for plotting the graphs

Title	Contract No. KLN/2013/16 Environmental Monitoring Works for Kai Tak Development	Scale N.T.S	Project No. MA14008	<b>CINOTECH</b>
	Graphical Presentation of Construction Noise Monitoring Results	Date Mar 15	Appendix G	

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**APPENDIX H**  
**SUMMARY OF EXCEEDANCE**

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**Contract No. KLN/2013/16**  
**Environmental Monitoring Works for Kai Tak Development**

**Appendix H – Summary of Exceedance**

**Exceedance Report for Contract No. KLN/2013/16**

**(A) Exceedance Report for Air Quality**  
**(NIL in the reporting month)**

**(B) Exceedance Report for Construction Noise**

- 2 Action level exceedances were recorded due to complaint cases notified by EPD on 12 March 2015. The complainant cases involved Contract No. KL/2011/01, KL/2012/02, 1020EM12A, SS W304, SCL1107, SCL1108 and SCL1108A. Complaint investigation was conducted by the Contractor. Details of the complaint case and investigation results were presented in **Appendix L**.
  
- No Limit Level exceedance was recorded.

**(C) Exceedance Report for Landscape and Visual**  
**(NIL in the reporting month)**



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**APPENDIX I  
SITE AUDIT SUMMARY AND  
PHOTOGRAPHIC RECORD FOR  
OBSERVATION DURING THE SITE  
INSPECTION**

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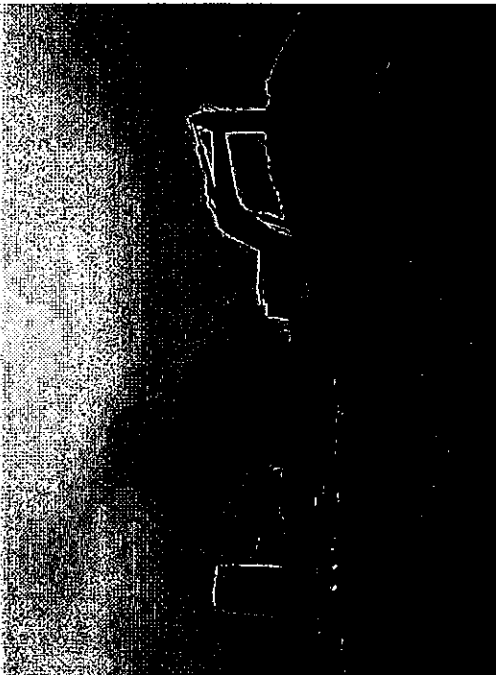






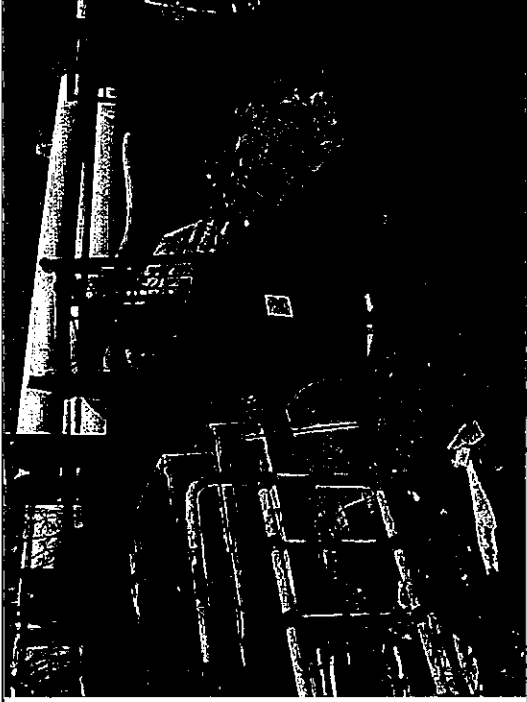




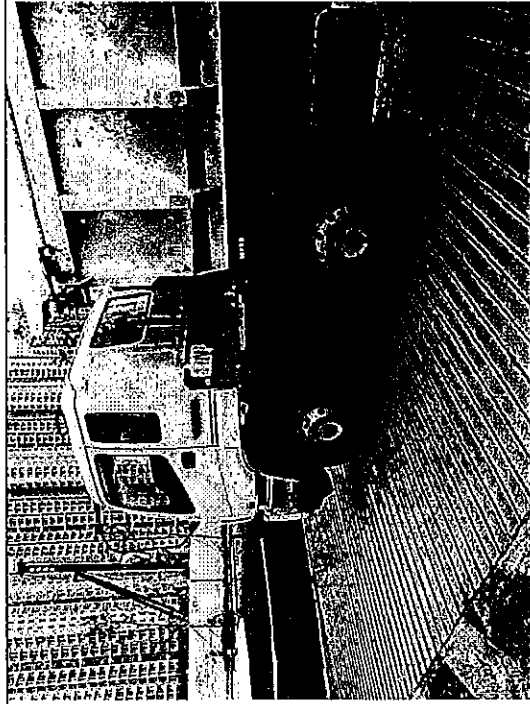
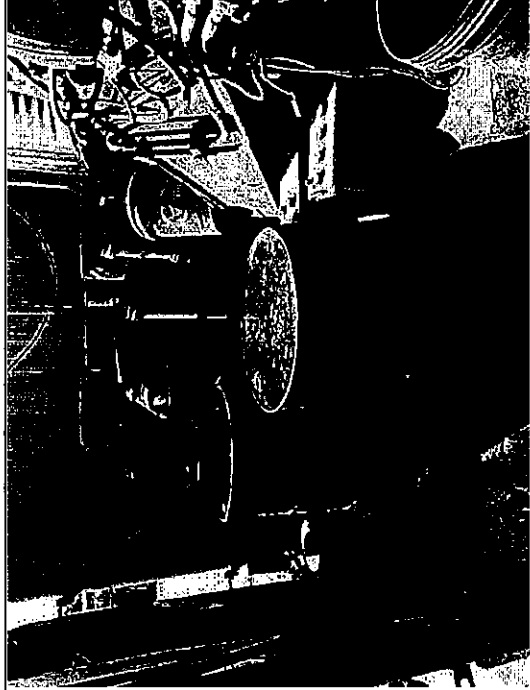
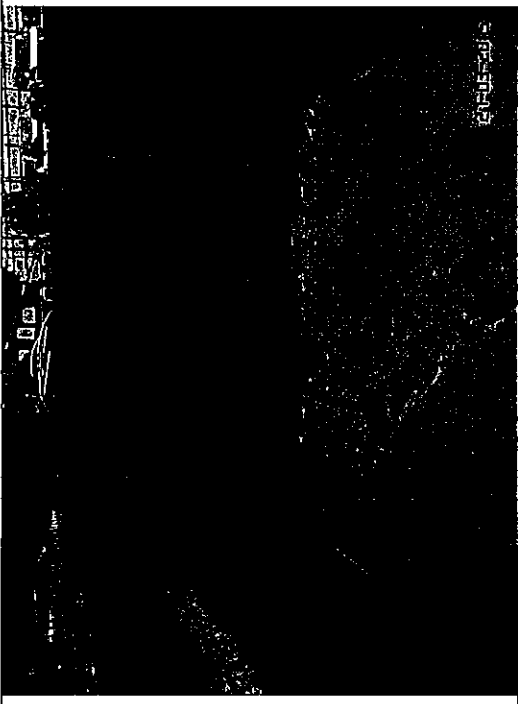
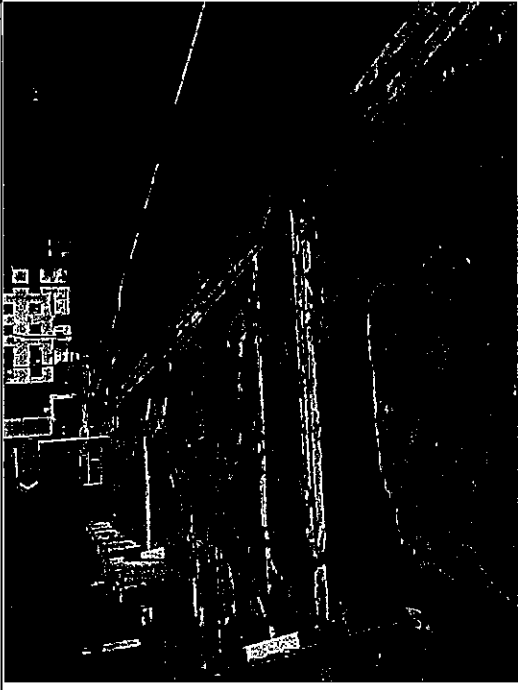
Appendix I - Summary of Site Audit


Date	Contract No.	Observation	Follow-up
6/3/2015	KL/2011/01	Black smoke was observed emitting from excavator. The Contractor was reminded to provide maintenance properly for the concerned excavator.	Rectification/improvement was observed during the site inspection on 13 March 2015.
13/3/2015	DC/2011/04	To provide drip tray for chemical containers.	Rectification/improvement was observed during the site inspection on 17 April 2015.
20/3/2015	NKIL6515	To provide proper wheel washing for vehicles leaving the site.	Rectification/improvement was observed during the site inspection on 27 March 2015.
20/3/2015	1020EM12A	Sedimentation tank should be de-silted regularly.	Rectification/improvement was observed during the site inspection on 2 April 2015.
20/3/2015	TC Y305	Dust control should be carried out regularly.	Rectification/improvement was observed during the site inspection on 27 March 2015.
20/3/2015	DC/2011/04	To provide drip tray to chemical container.	Rectification/improvement was observed during the site inspection on 17 April 2015.
27/3/2015	SS B507	To properly provide waste sorting and segregation for non-inert waste.	Rectification/improvement was observed during the site inspection on 2 April 2015.
27/3/2015	20140264	To properly provide wheel washing for vehicles leaving the site.	Rectification/improvement was observed during the site inspection on 2 April 2015.
27/3/2015	NKIL6516&6517	To properly provide wheel washing for vehicles leaving the site.	Rectification/improvement was observed during the site inspection on 2 April 2015.
27/3/2015	KL/2011/01	To provide drip trays for oil and chemical containers and store it properly in the workshop area.	Rectification/improvement was observed during the site inspection on 2 April 2015.
27/3/2015	1020EM12A	To clear the mud accumulated in the sedimentation tank.	Rectification/improvement was observed during the site inspection on 2 April 2015.
27/3/2015	TC Y305	To clear the muddy water near site entrance.	Rectification/improvement was observed during the site inspection on 10 April 2015.
27/3/2015	DC/2011/04	Drip tray should be provided for chemical containers.	Rectification/improvement was observed during the site inspection on 17 April 2015.

Appendix I – Photographic Record for Observations during the Site Inspection

	
<p>Date: 6/3/2015</p>	<p>Date: 13/3/2015</p>
<p>Contract: KL/2011/01</p>	<p>Contract: DC/2011/04</p>
<p>Observation:                  Black smoke was observed emitting from excavator. The Contractor was reminded to provide maintenance properly for the concerned excavator.</p>	<p>Observation:                  To provide drip tray for chemical containers.</p>
	
<p>Date: 20/3/2015</p>	<p>Date: 20/3/2015</p>
<p>Contract: NKIL6515</p>	<p>Contract: 1020EM12A</p>
<p>Observation:                  To provide proper wheel washing for vehicles leaving the site.</p>	<p>Observation:                  Sedimentation tank should be de-silted regularly.</p>

	
<p>Date: 20/3/2015</p>	<p>Date: 20/3/2015</p>
<p>Contract: TC Y305</p>	<p>Contract: DC/2011/04</p>
<p>Observation: Dust control should be carried out regularly.</p>	<p>Observation: To provide drip tray to chemical container.</p>
	
<p>Date: 27/3/2015</p>	<p>Date: 27/3/2015</p>
<p>Contract: SS B507</p>	<p>Contract: 20140264</p>
<p>Observation: To properly provide waste sorting and segregation for non-inert waste.</p>	<p>Observation: To properly provide wheel washing for vehicles leaving the site.</p>

	
<p>Date: 27/3/2015                  Contract: NKII.6516&amp;6517</p> <p>Observation:                  To properly provide wheel washing for vehicles leaving the site.</p>	<p>Date: 27/3/2015                  Contract: KI/2011/01</p> <p>Observation:                  To provide drip trays for oil and chemical containers and store it properly in the workshop area.</p>
	
<p>Date: 27/3/2015                  Contract: 1020EM12A</p> <p>Observation:                  To clear the mud accumulated in the sedimentation tank.</p>	<p>Date: 27/3/2015                  Contract: TC.Y305</p> <p>Observation:                  To clear the muddy water near site entrance.</p>

	Date: 27/3/2015	Contract: DC/2011/04
Observation: Drip tray should be provided for chemical containers.		



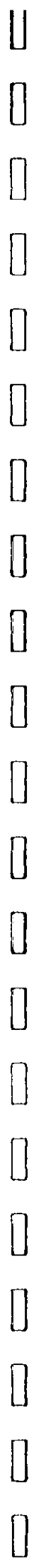
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**APPENDIX J**  
**EVENT ACTION PLANS**

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## Appendix J - Event Action Plans

### Event/Action Plan for Air Quality

EVENT		ACTION			CONTRACTOR
EVENT	ET	IEC	ER	CONTRACTOR	
Action Level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Repeat measurement to confirm finding.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice;</li> <li>2. Amend working methods if appropriate.</li> </ol>	
Action Level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Increase monitoring frequency to daily;</li> <li>4. Discuss with IEC and Contractor on remedial actions required;</li> <li>5. Assess the effectiveness of Contractor's remedial actions;</li> <li>6. If exceedance continues, arrange meeting with IEC and ER;</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise implementation of remedial measures;</li> <li>5. Conduct meeting with ET and IEC if exceedance continues.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and IEC on proper remedial actions;</li> <li>2. Submit proposals for remedial actions to ER and IEC within three working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol>	
Limit Level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Assess effectiveness of Contractor's remedial actions and keep</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Discuss with ET and IEC on proper remedial actions;</li> <li>3. Submit proposals for remedial actions to ER and IEC within three</li> </ol>	

## Appendix J - Event Action Plans

	EPD, IEC and ER informed of the results.	4. Advise the ER on the effectiveness of the proposed remedial measures.	implemented; 4. Supervise implementation of remedial measures; 5. Conduct meeting with ET and IEC if exceedance continues.	working days of notification; 4. Implement the agreed proposals.
Limit Level being exceeded by two or more consecutive sampling	<p>1. Notify IEC, ER, Contractor and EPD;</p> <p>2. Repeat measurement to confirm findings;</p> <p>3. Carry out analysis of Contractor's working procedures to identify source and investigate the causes of exceedance;</p> <p>4. Increase monitoring frequency to daily;</p> <p>5. Arrange meeting with IEC, ER and Contractor to discuss the remedial actions to be taken;</p> <p>6. Assess effectiveness of Contractor's remedial actions and keep EPD, IEC and ER informed of the results;</p> <p>7. If exceedance stops, cease additional monitoring.</p>	<p>1. Check monitoring data submitted by ET;</p> <p>2. Check Contractor's working method;</p> <p>3. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</p> <p>4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.</p>	<p>1. Confirm receipt of notification of exceedance in writing;</p> <p>2. Notify Contractor;</p> <p>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</p> <p>4. Supervise implementation of remedial measures;</p> <p>5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.</p>	<p>1. Take immediate action to avoid further exceedance;</p> <p>2. Discuss with ET, ER and IEC on proper remedial actions;</p> <p>3. Submit proposals for remedial actions to IEC within three working days of notification;</p> <p>4. Implement the agreed proposals;</p> <p>5. Submit further remedial actions if problem still not under control;</p> <p>6. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.</p>

## Appendix J - Event Action Plans

### Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	<ol style="list-style-type: none"> <li>1. Notify ER, IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the IEC and Contractor on remedial measures required;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the investigation results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>3. Advise the ER on the effectiveness of the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise the implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC and ER;</li> <li>2. Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>
Limit Level being exceeded	<ol style="list-style-type: none"> <li>1. Inform IEC, ER, Contractor and EPD;</li> <li>2. Repeat measurements to confirm findings;</li> <li>3. Increase monitoring frequency;</li> <li>4. Identify source and investigate the cause of exceedance;</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> </ol>

## Appendix J - Event Action Plans

	<p>5. Carry out analysis of Contractor's working procedures;</p> <p>6. Discuss with the IEC, Contractor and ER on remedial measures required;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<p>measures to be implemented;</p> <p>4. Supervise the implementation of remedial measures;</p> <p>5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.</p> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<p>4. Submit further proposal if problem still not under control;</p> <p>5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.</p> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>
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## Appendix J - Event Action Plans

### Event/Action Plan for Landscape and Visual

EVENT ACTION LEVEL	ACTION				CONTRACTOR
	ET	IEC	ER		
Design Check	1. Check final design conforms to the requirements of EP and prepare report.	1. Check report. 2. Recommend remedial design if necessary	1. Undertake remedial design if necessary		
Non-conformity on one occasion	1. Identify Source 2. Inform IEC and ER 3. Discuss remedial actions with IEC, ER and Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Check Contractor's working method 3. Discuss with ET and Contractor on possible remedial measures 4. Advise ER on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures.	1. Notify Contractor 2. Ensure remedial measures are properly implemented		1. Amend working methods 2. Rectify damage and undertake any necessary replacement
Repeated Non-conformity	1. Identify Source Inform IEC and	1. Check monitoring report	1. Notify Contractor 2. Ensure remedial measures are properly		1. Amend working methods 2. Rectify damage and

## Appendix J - Event Action Plans

	<p>ER</p> <ol style="list-style-type: none"> <li>2. Increase monitoring frequency</li> <li>3. Discuss remedial actions with IEC, ER and Contractor</li> <li>4. Monitor remedial actions until rectification has been completed</li> <li>5. If non-conformity stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>2. Check Contractor's working method</li> <li>3. Discuss with ET and Contractor on possible remedial measures</li> <li>4. Advise ER on effectiveness of proposed remedial measures</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<p>implemented</p>	<p>undertake any necessary replacement</p>
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**APPENDIX K  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

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Appendix K - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

Types of Impacts	Mitigation Measures	Status
<p>Construction Dust</p>	<p>8 times daily watering of the work site with active dust emitting activities.</p> <p>Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimize cumulative dust impacts.</p> <ul style="list-style-type: none"> <li>• Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.</li> <li>• Misting for the dusty material should be carried out before being loaded into the vehicle.</li> <li>• Any vehicle with an open load carrying area should have properly fitted side and tail boards.</li> <li>• Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.</li> <li>• The tarpaulin should be properly secured and should extend at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before transportation.</li> <li>• The vehicles should be restricted to maximum speed of 10 km per hour and confined haulage and delivery vehicle to designated roadways inside the site. On-site unpaved roads should be compacted and kept free of loose materials.</li> <li>• Vehicle washing facilities should be provided at every</li> </ul>	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>*</p>

vehicle exit point.

- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.
- Every main haul road should be sealed with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.
- Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides.
- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.
- DWFI compound for JVBC: a DWFI compound is proposed at the downstream of JVC to contain pollution in drainage systems entering the KIAC and KTIS by interception facilities until the ultimate removal of the pollution sources. Tidal barriers and desilting facilities will form part of the compounds to prevent any accumulation of sediment within the downstream section of JVBC and hence fully mitigate the potential odour emissions from the headspace of JVBC near the existing discharge locations. The odour generating operations within the proposed desilting compound will be fully enclosed and the odorous air will be collected and treated by high

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N/A

efficiency deodorizers before discharge to the atmosphere.

- Desilting compound for KTN: Two desilting compounds are proposed for KTN (at Site 1D6 and Site 1P1) to contain pollution in drainage systems entering the KTAC and KTIS by interception facilities until the ultimate removal of the pollution sources. Tidal barriers and desilting facilities will form part of the compounds to prevent any accumulation of sediment within the downstream section of KTN and hence fully mitigate the potential odour emissions from the headspace of KTN near the existing discharge locations. The odour generating operations within the proposed desilting compound will be fully enclosed and the odorous air will be collected and treated by high efficiency deodorizers before discharge to the atmosphere.

- Decking or reconstruction of KTN within apron area: It is proposed to deck the KTN or reconstruct the KTN within the former Apron area into Kai Tak River from the south of Road D1 to the north of Road D2 along the existing alignment of KTN. The Kai Tak River will compose of a number of channels flowing with non-odorous fresh water and THEES effluent. The channel flowing with THEES effluent will be designed with the width of water surface of not more than 16m.

N/A

N/A

<p>N/A(1)</p>	<ul style="list-style-type: none"> <li>• <u>Localised maintenance dredging:</u> Localised maintenance dredging should be conducted to provide water depth of not less than 3.5m over the whole of KTAC and KTTS. With reference to the water depth data recorded during the odour survey, only some of the areas in the northern part of KTAC (i.e. to the north of taxiway bridge) including the area near the northern edge of KTAC, the area near western bank of KTAC, and the area near the JVC discharge have water depths shallower than 3.5m. The area involved would be about 40% of the northern KTAC and the dredging depth required would be from about 2.7m to less than 1m. The maintenance dredging to be carried out prior to the occupation of any new development in the immediate vicinity of KTAC to avoid potential localized odour impacts at the future ASRs during the maintenance dredging operation.</li> <li>• <u>Improvement of water circulation in KTAC and KTTS:</u> 600m gap opening at the northern part of the former Kai Tak runway, the water circulation in KTAC and KTTS would be substantially improved. Together with the improvement in water circulation, the DO level in KTAC and KTTS would also be increased.</li> <li>• <u>In-situ sediment treatment by bioremediation:</u> Bioremediation would be applied to the entire KTAC and KTTS.</li> </ul>
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N/A

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Use of quiet PME, movable barriers barrier for Asphalt Paver, Breaker, Excavator and Hand-held breaker and full enclosure for Air Compressor, Bar Bender, Concrete Pump, Generator and Water Pump

**Good Site Practice:**

- Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.
- Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.
- Mobile plant, if any, should be sited as far away from NSRs as possible.
- Machines and plant (such as trucks) that may be in intermittent use should be shut down between works 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.

Scheduling of Construction Works during School Examination Period

(i) Provision of low noise surfacing in a section of Road L2, and

(ii) Provision of structural fins

**Construction Noise**

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N/A(1)		
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N/A		
N/A		

<p>(i) Avoid the sensitive façade of class room facing Road L2 and L4; and</p>		N/A
<p>(ii) Provision of low noise surfacing in a section of Road L2 &amp; L4</p>		N/A
<p>(i) Provision of low noise surfacing in a section of Road L4 before occupation of Site 111; and</p>		N/A
<p>(ii) Setback of building about 5m from site boundary.</p>		N/A
<p>Setback of building about 35m to the northwest direction at L3 and 5m at Site 1L2.</p>		N/A
<p>(i) avoid any sensitive façades with openable window facing the existing Kowloon City Road network; and</p>		N/A
<p>(ii) for the sensitive façades facing the To Kwa Wan direction, either setback the façades by about 5m to the northeast direction or do not provide the façades with openable window.</p>		N/A
<p>(i) avoid any sensitive façades with openable window facing the existing To Kwa Wan Road or</p>		N/A
<p>(ii) provision of 17.5m high noise tolerant building fronting To Kwa Wan Road and restrict the height of the residential block(s) located at less than 55m away from To Kwa Wan Road to no more than 25m above ground.</p>		N/A
<p>(i) avoid any sensitive façades with openable window facing the slip road connecting Prince Edward Road East and San Po Kong or other alternative</p>		N/A
<p>(ii) mitigation measures and at-source mitigation measures for the surrounding new local roads to minimise the potential traffic noise impacts from the slip road</p>		N/A

	<p>All the ventilation fans installed in the below will be provided with silencers or acoustics treatment.</p> <ul style="list-style-type: none"> <li>(i) SPS</li> <li>(ii) ESS</li> <li>(iii) Tunnel Ventilation Shaft</li> <li>(iv) EFTS depot</li> </ul> <p>Installation of retractable roof or other equivalent measures</p>	<p>N/A N/A N/A N/A  N/A</p>
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<p style="text-align: center;"><b>Construction Water Quality</b></p>	<p>The following mitigation measures are proposed to be incorporated in the design of the SPS at KID, including:</p> <ul style="list-style-type: none"> <li>• Dual power supply or emergency generator should be provided at all the SPSs to secure electrical power supply;</li> <li>• Standby pumps should be provided at all SPSs to ensure smooth operation of the SPS during maintenance of the duty pumps;</li> <li>• An alarm should be installed to signal emergency high water level in the wet well at all SPSs; and</li> <li>• For all unmanned SPSs, a remote monitor system connecting SPSs with the control station through telemetry system should be provided so that swift actions could be taken in case of malfunction of unmanned facilities.</li> </ul> <p><u>Construction Phase</u> <u>Marine-based Construction</u></p> <p><i>Capital and Maintenance Dredging for Cruise Terminal</i></p> <p>Mitigation measures for construction of the proposed cruise terminal should follow those recommended in the approved EIA for C.T. Dredging.</p>	<p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p>
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**Fireboat Berth, Runway Opening and Road T2**

Silt curtains should be deployed around the close grab dredger to minimize release of sediment and other contaminants for any dredging and filling activities in open water.

Dredging at and near the seawall area for construction of the public landing steps cum fireboat berth should be carried out at a maximum production rate of 1,000m<sup>3</sup> per day using one grab dredger.

The proposed construction method for runway opening should adopt an approach where the existing seawall at the runway will not be removed until completion of all excavation and dredging works for demolition of the runway. Thus, excavation of bulk fill and majority of the dredging works will be carried out behind the existing seawall, and the sediment plume can be effectively contained within the works area. As there is likely some accumulation of sediments alongside the runway, there will be a need to dredge the existing seabed after completion of all the demolition works. Dredging alongside the 600m opening should be carried out at a maximum production rate of 2,000m<sup>3</sup> per day using one grab dredger.

Dredging for Road T2 should be conducted at a maximum rate of 8,000m<sup>3</sup> per day (using four grab dredgers) whereas the sand filling should be conducted at a maximum rate of 2,000m<sup>3</sup> per day (using two grab dredgers).

Silt screens shall be applied to seawater intakes at WSD seawater intake.

N/A

N/A

N/A

N/A

N/A

Land-based Construction

*Construction Runoff*

Exposed soil areas should be minimized to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:

- use of sediment traps
- adequate maintenance of drainage systems to prevent flooding and overflow

Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.

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Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). 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. 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.

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Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m<sup>3</sup> capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.

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Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m<sup>3</sup> should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.

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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 into foul sewers.

Precautions to 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 summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.

Oil interceptors should be provided in the drainage system and 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.

All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. 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. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.

#### *Drainage*

It is recommended that on-site drainage systems should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.

All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.

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 the coastal waters of the Victoria Harbour WCZ.

#### *Sewage Effluent*

Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.

#### *Stormwater Discharges*

Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes.

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**Debris and Litter**

In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required under conditions of contract to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur.

**Construction Works at or in Close Proximity of Storm Culvert or Seafront**

The proposed works should preferably be carried out within the dry season where the flow in the drainage channel/storm culvert/nullah is low.

The use of less or smaller construction plants may be specified to reduce the disturbance to the bottom sediment at the drainage channel/storm culvert/nullah.

Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works.

Stockpiling of construction materials and dusty materials should be covered and located away from any water courses.

Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.

Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable.

Mitigation measures to control site runoff from entering the nearby water environment should be implemented to minimize water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the runoff.

Construction effluent, site run-off and sewage should be properly collected and/or treated.

Any works site inside the storm water courses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the storm water quality.

Silt curtain may be installed around the construction activities at the seafront to minimize the potential impacts due to accidental spillage of construction materials.

Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert/drainage channel/sea.

Supervisory staff should be assigned to station on site to closely supervise and monitor the works.

Marine water quality monitoring and audit programme shall be implemented for the proposed sediment treatment operation.

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**Good Site Practices**

It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during construction activities include:

- 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
- Training of site personnel in proper waste management and chemical waste 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
- A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites)

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**Waste Reduction Measures**

Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:

- Sort C&D waste from demolition of the remaining structures 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
- Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force
- Any unused chemicals or those with remaining functional capacity should be recycled
- Proper storage and site practices to minimise the potential for damage or contamination of construction materials

**Dredged Marine Sediment**

The basic requirements and procedures for dredged mud disposal are specified under the ETWB TCW No. 34/2002. The management of the dredging, use and disposal of marine mud is monitored by the MFC, while the licensing of marine dumping is required under the Dumping at Sea Ordinance and is the responsibility of the Director of Environmental Protection (DEP).

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N/A

The dredged marine sediments would be loaded onto barges and transported to the designated disposal sites allocated by the MFC depending on their level of contamination. Sediment classified as Category 1 would be suitable for Type 1 - Open Sea Disposal. Contaminated sediment would require either Type 1 - Open Sea Disposal (Dedicated Sites), Type 2 - Confined Marine Disposal, or Type 3 - Special Treatment/ Disposal and must be dredged and transported with great care in accordance with ETWB TCW No. 34/2002. Subject to the final allocation of the disposal sites by MFC, the dredged contaminated sediment must be effectively isolated from the environment and disposed properly at the designated disposal site.

N/A

It will be the responsibility of the contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, prior to the dredging works being tendered. The contractor for the dredging works should apply for allocation of marine disposal sites and all necessary permits from relevant authorities for the disposal of dredged sediment. During transportation and disposal of the dredged marine sediments requiring Type 1, Type 2, or Type 3 disposal, the following measures should be taken to minimise potential impacts on water quality:

- Bottom opening of barges should be fitted with tight fitting seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved
- Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels should be equipped with automatic self-monitoring devices as required under the Dumping at Sea Ordinance and as specified by the DEP
- Barges or hopper barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation

N/A(1)

N/A(1)

N/A(1)

**Construction and Demolition Material**

Mitigation measures and good site practices should be incorporated into contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include:

- Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles should be located away from waterfront or storm drains as far as possible
- Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric
- Skip hoist for material transport should be totally enclosed by impervious sheeting
- Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site
- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores
- The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle
- All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet
- The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading

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When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 3/2004 "Trip Ticket System for Disposal of Construction and Demolition Materials" should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.

#### Chemical Waste

After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation*

#### General Refuse

General refuse should be stored in enclosed bins or compaction units, separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem

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<p>Landscape and Visual</p>	<p>CM1: All existing trees should be carefully protected during construction.</p> <p>CM2: Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>CM3: Control of night-time lighting.</p> <p>CM4: Erection of decorative screen hoarding.</p>	<p>^</p> <p>^</p> <p>N/A(1)</p> <p>^</p>
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Remarks:	^	<p>Compliance of mitigation measure;</p> <p>Not Applicable at this stage;</p> <p>N/A(1) Not observed;</p> <p>* Recommendation was made during site audit but improved/rectified by the contractor.</p>	<p>X</p> <p>• Non-compliance but rectified by the contractor;</p>	<p>Non-compliance of mitigation measure;</p> <p>Non-compliance but rectified by the contractor;</p>
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APPENDIX L  
SUMMARIES OF ENVIRONMENTAL  
COMPLAINT, WARNING, SUMMON  
AND NOTIFICATION OF SUCCESSFUL  
PROSECUTION

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Contract No. KLN/2013/16

Environmental Monitoring Works for Kai Tak Development

Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

Reporting Month: March 2015

Contract No. KLN/2013/16

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A	N/A

Works Contract within KTD

KDO, CEDD projects

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
CV/2013/02	No	No	No
KL/2010/02	No	No	No
KL/2010/03	No	No	No
KL/2011/01	Yes	No	No
KL/2012/02	Yes	No	No
KL/2012/03	No	No	No

DSD projects

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
DC/2010/03	No	No	No
DC/2011/04	No	No	No

WSD project

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
3/WSD/08	No	No	No
6/WSD/08	No	No	No
7/WSD/08	No	No	No
8/WSD/08	No	No	No

ArchSD projects

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
SS A501	No	No	No
SS B507	No	No	No
SS W304	Yes	No	No
TC Y305	No	No	No

**Contract No. KLN/2013/16**  
**Environmental Monitoring Works for Kai Tak Development**

**Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution**

**CLP projects**

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
Kai Tak Cruise Terminal Cable Tunnel	No	No	No
CLPP (132kV cable installation)	No	No	No

**EMSD projects**

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
1020EM12A	Yes	No	No

**MTR projects**

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
1107	Yes	No	No
1108	Yes	No	No
1108A	Yes	No	No
1109	No	No	No

**HKHA projects**

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions(Yes/No)
20140264	No	No	No

**URA projects**

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
New Kowloon Inland Lot No. 6515	Yes	No	No

**COHL projects**

Contract No.	Record of Complaint (Yes/No)	Record of Warning (Yes/No)	Notification of Summons and Successful Prosecutions (Yes/No)
New Kowloon Inland Lot No. 6516 & 6517	No	No	No

Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development

Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

Cumulative Statistics on Complaints, Notification of Summons and Successful Prosecutions

Works Contract / TGLA / STT	Record of Complaint	Record of Warning	Notification of Summons and Successful Prosecutions
Contract No. KLN/2013/16	0	0	0
Works Contract within KTD	15	0	1
TGLA / STT	1	0	0

Complaint Log

EPD Complaint Ref No.	Date of Complaint	Contract Involved	Contractor	Complaint Details	Investigation / Mitigation Action	Status
14-29958	1/12/2014			Complainant said some abnormal machine noise was heard from the said construction site at night.	A complaint regarding noise emitted from submersible pump during restricted hours was referred by EPD on 15 Jan 15 (complaint case ref: no.:14-29958). Investigation was conducted by the Contract ET. In spite operation of submersible pump was covered by valid CNP, CSJV agreed to remove the concerned submersible pump to avoid nuisance to the nearby residents. The complaint case was found to be project-related.	
14-31154	15/12/2014	MTR Contract No. 1107	CW-SELL JV	Complainant said abnormal noise was heard from the said construction site and she said dust emission was observed.	Investigation was conducted by the Contract ET. Findings from the investigation showed the alarm noise was suspected to be produced from the drop bar of the site ingress. Therefore CSJV agreed to on it the alarm system to minimize noise nuisance to the nearby residents. For this dust issue although there was no exceedance from impact air quality monitoring at the nearest monitoring station but still CSJV was reminded to maintain good site practice for dust suppression (i.e.: water spraying, covering to earthy stockpile, vehicle washing, etc.) The complaint case was found to be project-related.	Closed

**Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development**

**Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution**

14-30598	8/12/2014		Complainant said the dust emission was observed during loading and unloading the cement.	<p>Complaint cases referred to the Contractor. Investigation was conducted by the Contract ET and the findings shown that insufficient wheel washing was provided at Gate 1 during peak hours.</p> <p>The following mitigation measures were implemented by the Contractor.</p> <ul style="list-style-type: none"> <li>- Site hoarding was erected along the site boundary adjacent to Concorde Road;</li> <li>- The main haul road leading to the site exit at Concorde Road was paved with concrete;</li> <li>- Wheel washing bay and high pressure water jets were provided at Gate 1 for washing off the soil and dirt from the vehicles and wheels before leaving the site;</li> <li>- The wastewater in the bay was collected by suction truck;</li> <li>- Water truck was assigned for cleaning and wetting the haul road;</li> <li>- General worker was assigned for cleaning the dirt near the site exit at Concorde road;</li> <li>- The load of dump trucks was covered with tarpaulin before leaving the site</li> </ul> <p>The complaint case was found to be project-related.</p>	Closed
14-31762	22/12/2014	MTR Contract No. 1108	Complainant said the dust emission was observed near Concorde Road due to not sufficient water spraying activities inside the site. The dump truck leaving the site was not clean enough.	<p>Kaden-CW JV</p>	

**Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development**

**Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution**

14-31933	23/12/2014	MTR Contract No. 1109	Samsung-Hsin Chong JV	Complainant said the hoarding of the construction site was not found/below standard. Dust emission and noise nuisance was found at the nearby area.	Complaint cases referred to the Contractor. Investigation was conducted by the Contract ET and site hoarding of not less than 2.4 m tall was observed during site inspection on 29 December 2014. The impact noise and dust data recorded adjacent to Sung Wong Toi works area on 24 and 30 December 2014 have been reviewed and no action/limit level was triggered. The complaint case was found to be non-project-related.	Closed
14-32138	29/12/2014			Complaint about the dust emission from the nearby construction site and enquiry about the concrete batching plant inside Kai Tak Area.	Complaint cases referred to the Contractor. Investigation was conducted by the Contract ET at the construction site (including the concrete batching plant) on 29 December 2014. No adverse observation on dust aspect was recorded. The impact noise and dust data recorded adjacent to Sung Wong Toi works area on 24 and 30 December 2014 have been reviewed and no action/limit level was triggered. The complaint case was found to be non-project-related.	Closed
14-31762	8/12/2014	CEDD Contract No. KL/2012/02	Kaden Construction Limited	Complainant said the dust emission was observed near Concorde Road due to not sufficient water spraying activities inside the site. The dump truck leaving the site was not clean enough.	Complaint case referred to the Contractor. The source of construction dust was found coming from the vehicles leaving Gate 1 (Managed by MTRC 1108 construction site). Follow up actions referred to MTRC Contract 1108. The complaint case was found to be project-related.	Closed

Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development

Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

14-30597	22/12/2014			Complainant said the soil/ muddy water was found around the Concorde Road.	Complaint case referred to the Contractor. The source of the mud was found coming from the vehicles leaving Gate 1 (Managed by MTRC 1108 construction site). Follow up actions referred to MTRC Contract 1108. The complaint case was found to be project-related.		Closed
14-31547	18/12/2014	Site 111 was handed over from CEDD Contract No. KL/2010/03 to DLO on 9 December 2013 and therefore the captioned case is not related to CEDD Contract No. KL/2010/03.	AP and the developer	Playing the R/C vehicles inside the Site 111 construction site generate noise.	According to the investigation by the Engineering team, some general public had gained access to Site 111 through the man gate located at Muk On Street (public road) and played remote control cars at Site 111. As the Site 111 has been handed over from CEDD Contract No. KL/2010/03 to DLO on 9 December 2013 and therefore the captioned case is not related to CEDD Contract No. KL/2010/03. CEDD has been referred this case to the AP and the developer for follow-up. The complaint case was found to be non-project related.		Closed
14-30297	3/12/2014	STT No. KX2575	Gee Lee Transportation Co	Complaint of construction activity after 7:00pm during weekdays and morning on Sunday.	The noise source in concern was from the warehouse / car park in Kai Tak (KX2575). The premise owner clarified that no construction activities were conducted after 7:00pm during weekdays and on Sunday. Advice was given to the said premises. The complaint case was found to be non-project-related.		Closed
15-00506	7/1/2015	MTR Contract No. 1108	Kaden-CW JV	Complainant alleged that sand and mud were brought to the road surface by the construction vehicles left from gate 1 of the construction sites.	Complaint case referred to the Contractor. Investigation was conducted by the Contract ET and the findings shown that insufficient wheel washing was provided at Gate 1 during peak hours.		Closed

Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development

Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution

15-01573	20/1/2015			<p>The following mitigation measures were implemented by the Contractor.</p> <ul style="list-style-type: none"> <li>- The time for wheel washing was extended for more thorough cleaning;</li> <li>- Staffs were further instructed to ensure all vehicles were thoroughly cleaned and the load of dump trucks were properly covered before leaving the site;</li> <li>- A penalty mechanism was adapted to prevent unwashed dump trucks leaving the site;</li> <li>- Improvement work for the wheel washing bay at Gate 1 was carried out.</li> </ul>	<p>The complaint case was found to be project-related.</p> <p>The complaint was referred to the Contractor. The Contractor clarified that all piling works were conducted within the time periods stated in the CNP. Noise barriers were erected along the site boundary and membranes were provided to driving hammers to mitigate the noise impact. No breach of CNP conditions was identified. Regular noise monitoring will be carried out around the site during construction period (12:00-14:00 &amp; 15:30-18:30) to monitor the noise nuisance from construction works and ensure compliance with CNP conditions. The complaint case was found to be project-related.</p>	Closed
15-04114	16/2/2015	HKHA Contract No. 20140264	Tysan Foundation Limited	<p>Complainant alleged that sand and mud were brought to the road surface by the construction vehicles left from gate 1 of the construction sites.</p>	<p>Complainant alleged that loud percussive piling noise from the construction site affecting his daily life.</p>	

**Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development**

**Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution**

15-04622	26/2/2015	CEDD Contract No. KL/2011/01	Chit Cheung Construction Co Ltd	<p>The complainant case was referred to the Contractor. The Contractor has been replied the complaint to EPD on 12 March 2015. According to the Contractor's investigation, the percussive works had been finished in late January 2015 and there was no percussive piling works in February 2015. Regarding to the said percussive piling works, the Contractor has obtained the CNP (PP-RE0074-14) for percussive piling works from 20 December 2014 to 15 June 2015. Regarding to the dust issue, the two stockpiles were well covered by dust screen and provided with automatic water sprinklers system, which can mitigate any dust emission nuisance in the vicinity.</p>	Closed
		Complainant alleged that the noise from the construction site affecting his/her daily life.	Complainant also alleged that dust emission from the construction site affecting his/her daily life.	<p>The complaint case was found to be project-related.</p> <p>The complaint case was referred to the Contractor. Investigation was conducted by the Contractor. According to the investigation results, 95% of the construction activities have been E&amp;M services installation and interior renovations since February 2015, which are confined inside the building. They have been fully enclosed by curtain walls of the building tower. No dust and noise nuisance to the public was expected to be resulted from these activities.</p>	Closed
			Dragages HK Ltd	<p>The complaint case was found to be project-related.</p>	
		ASD Contract No. SS W304			



**Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development**

**Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution**

<p>Complaint cases referred to the Contractor. Investigation was conducted by the Contract ET. According to investigation results, no major dusty works were conducted on the complaint date and proper mitigation measures were implemented. The construction work under Contract no. 1107 complied with CNP conditions (Permit No.: GW-RE1496-14; GW-RE0085-15; GE-RE0158-15).</p>	<p>Closed</p>
<p>Regular air quality monitoring was conducted in February 2015. No Limit Level exceedance for the air quality and noise monitoring result was recorded in February 2015.</p>	<p>The complaint case was found to be project-related.</p>
<p>The complaint case was referred to the Contractor. Investigation was carried out by the Contract ET. No major noise source was identified. Cement mixing was identified as the major dust source. Proper dust mitigation measures for cement mixing and exposed stockpiles were implemented. The Contractor was reminded to keep up the mitigation measures.</p>	<p>The complaint case was found to be project-related.</p>
<p>Complaint case referred to the Contractor. Investigation was conducted by the Contract ET. According to investigation results, major construction activities conducted in late February 2015 include:</p> <ul style="list-style-type: none"> <li>- Road and drainage work in San Po Kong;</li> <li>- Road surfacing at Concorde Road;</li> </ul>	<p>Closed</p>
<p>MTR Contract No. 1107</p>	<p>CW-SELI JV</p>
<p>MTR Contract No. 1108</p>	<p>Kaden-CW JV</p>
<p>CEDD Contract No. KL/2012/02</p>	<p>CW-SELI JV</p>

**Contract No. KLN/2013/16  
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**Appendix L – Summary of environmental complaint, warning, summon and notification of successful prosecution**

				<ul style="list-style-type: none"> <li>- Soft landscaping works in Kai Tak Area; and</li> <li>- Excavation at Prince Edward Road East VTI.</li> </ul> <p>Construction noise and dust emission from the above construction activities was expected to be minimal with implemented air quality and noise mitigation measures.</p> <p>Air quality and noise monitoring was conducted at nearby ASRs and NSRks as stipulated in the EM&amp;A manual during February 2015. No exceedance of Action/Limit Level for the air quality and no Limit Level exceedance for noise monitoring result was recorded in February 2015.</p> <p>The complaint case was found to be project-related.</p>	
		<p>EMS Contract No. 1020EM12A</p>	<p>Wo Hing Construction Co Ltd</p>	<p>Complaint cases referred to the Contractor. Investigation conducted by the Contractor. Construction works under Contract no. 1020EM12A in the complaint period was reviewed and no major dusty works were identified. Major noise source was identified as generators and crane lorries which would not affect daily life of residents nearby.</p> <p>The complaint case was found to be project-related.</p>	<p align="center">Closed</p>

Contract No. KLN/2013/16  
Environmental Monitoring Works for Kai Tak Development

Appendix L -- Summary of environmental complaint, warning, summon and notification of successful prosecution

15-05127	3/3/2015	MTR Contract No. 1108A	Concentric - Hong Kong River JV	Complainant quoted that <sup>noise</sup> generated from the construction work at the barge point affecting his/her health.	Complaint case referred to the Contractor. Investigation was conducted by the Contract ET. Investigation results shown that no major construction works under Contract 1108A was conducted during the complaint date except normal operation of barge facilities. The barging operation complied with CNP conditions (Permit No.: GW-RE1017-14) and no construction activity was carried out within the site area after 11:00 pm since the commencement of the project.	Closed
15-06697	22/3/2015	URA Contract No. NKIL6515	Bordon Construction Co Ltd	Complainant alleged that there had some noise from the construction sites affecting his/her daily life on Sunday.	The environmental conditions of the site and effectiveness of the implementation of mitigation measures will be continuously reviewed and monitored by the Resident Site Staff and the Contract ET.  The complaint case was found to be project-related.	Closed
					Complaint case referred to the Contractor. Investigation was conducted by the Contractor. The results showed that no PME and prescribed construction activities were conducted on the date of complaint. Sub-contractors are required to apply for working permit if they have to work during restricted hours. Foremen and safety practitioners have site inspection and take records every 2 hours to monitor the noise condition on general holidays.  Weekly noise control records were checked and no non-compliances were recorded.  The complaint case was found to be non-project-related.	



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**APPENDIX M**  
**WASTE GENERATED QUANTITY**

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**Contract No. KLN/2013/16****Environmental Monitoring Works for Kai Tak Development****Appendix M – Summary of Waste Generation and Disposal Records****KDO, CEDD projects**

<b>Contract No.</b>	<b>Overloading record in the reporting month (Yes/No)</b>	<b>Waste flow table/Disposal Records Yes(as attached)/No</b>
CV/2013/02	No	No
KL/2010/02	No	Yes
KL/2010/03	No	No
KL/2011/01	No	Yes
KL/2012/02	No	No
KL/2012/03	No	No

**DSD projects**

<b>Contract No.</b>	<b>Overloading record in the reporting month (Yes/No)</b>	<b>Waste flow table/Disposal Records Yes(as attached)/No</b>
DC/2010/03	No	Yes
DC/2011/04	No	No

**WSD projects**

<b>Contract No.</b>	<b>Overloading record in the reporting month (Yes/No)</b>	<b>Waste flow table/Disposal Records Yes(as attached)/No</b>
3/WSD/08	No	Yes
6/WSD/08	No	Yes
7/WSD/08	No	Yes
8/WSD/08	No	Yes

**ArchSD projects**

<b>Contract No.</b>	<b>Overloading record in the reporting month (Yes/No)</b>	<b>Waste flow table/Disposal Records Yes(as attached)/No</b>
SS A501	No	No
SS B507	No	Yes
SS W304	No	Yes
TC Y305	No	Yes

**CLP projects**

<b>Contract No.</b>	<b>Overloading record in the reporting month (Yes/No)</b>	<b>Waste flow table/Disposal Records Yes(as attached)/No</b>
CLP Kai Tak Cable Tunnel	No	No
CLPP (132/11kV and LV cable installation)	No	No

**EMSD projects**

<b>Contract No.</b>	<b>Overloading record in the reporting month (Yes/No)</b>	<b>Waste flow table/Disposal Records Yes(as attached)/No</b>
1020EM12A	No	No

**Contract No. KLN/2013/16**  
**Environmental Monitoring Works for Kai Tak Development**

**Appendix M – Summary of Waste Generation and Disposal Records**

MTR projects

Contract No.	Overloading record in the reporting month (Yes/No)	Waste flow table/Disposal Records Yes(as attached)/No
1107	No	No
1108	No	Yes
1108A	No	No
1109	No	No

HKHA projects

Contract No.	Overloading record in the reporting month (Yes/No)	Waste flow table/Disposal Records Yes(as attached)/No
20140264	No	No

URA projects

Contract No.	Overloading record in the reporting month (Yes/No)	Waste flow table/Disposal Records Yes(as attached)/No
New Kowloon Inland Lot No. 6515	No	Yes

COHL projects

Contract No.	Overloading record in the reporting month (Yes/No)	Waste flow table/Disposal Records Yes(as attached)/No
New Kowloon Inland Lot No. 6516 & 6517	No	No



KL/2010/02 Kai Tak development - Kai Tak approach channel and Kwun Tong Typhoon shelter improvement works (Phase 1)

Latest Programme for Generation of Materials in each Reporting Period	Programmed Quantity for Generation of Surplus C & D Materials										Programmed Quantity for Imported of Fill			
	Inert C & D Materials (Soft Public Fill)	Good Quality Rock (with break - down)	Low Quality Rock	Broken Concrete	Bituminous Material	C & D Waste	Inert C & D Materials (Soft Public Fill)	Rock	Sand Fill					
										(t)	(t)			
Density (t/m <sup>3</sup> )	2	2.5	2.5	2.5	(t)	(t)	1.8	2	2	(t)	(t)			
2011/07 (Actual)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
2011/08 (Actual)	0.00	0.00	0.00	0.00	0.00	88.60	0.00	0.00	0.00	0.00	0.00			
2011/09 (Actual)	0.00	0.00	0.00	0.00	0.00	9.37	0.00	0.00	0.00	0.00	0.00			
2011/10 (Actual)	0.00	0.00	0.00	0.00	0.00	12.71	0.00	0.00	0.00	0.00	0.00			
2011/11 (Actual)	0.00	0.00	0.00	0.00	0.00	39.15	0.00	0.00	0.00	0.00	0.00			
2011/12 (Actual)	0.00	0.00	0.00	0.00	0.00	29.39	0.00	0.00	0.00	0.00	0.00			
2012/01 (Actual)	0.00	0.00	0.00	0.00	0.00	20.30	0.00	0.00	0.00	0.00	0.00			
2012/02 (Actual)	0.00	0.00	0.00	0.00	0.00	20.11	0.00	0.00	0.00	0.00	0.00			
2012/03 (Actual)	0.00	0.00	0.00	0.00	0.00	6.47	0.00	0.00	0.00	0.00	0.00			
2012/04 (Actual)	0.00	0.00	0.00	0.00	0.00	15.79	0.00	0.00	0.00	0.00	0.00			
2012/05 (Actual)	0.00	0.00	0.00	646.00	0.00	14.86	0.00	0.00	0.00	0.00	0.00			
2012/06 (Actual)	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00			
2012/07 (Actual)	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	0.00	0.00			
2012/08 (Actual)	0.00	0.00	0.00	0.00	0.00	3.27	0.00	0.00	0.00	0.00	0.00			
2012/09 (Actual)	0.00	0.00	0.00	0.00	0.00	66.36	0.00	0.00	0.00	0.00	0.00			
2012/10 (Actual)	0.00	0.00	0.00	0.00	0.00	65.63	0.00	0.00	0.00	0.00	0.00			
2012/11 (Actual)	0.00	0.00	0.00	0.00	0.00	7.21	0.00	0.00	0.00	0.00	0.00			
2013/01 (Actual)	0.00	0.00	0.00	0.00	0.00	21.72	0.00	0.00	0.00	0.00	0.00			
2013/02 (Actual)	0.00	0.00	0.00	0.00	0.00	89.34	0.00	0.00	0.00	0.00	0.00			
2013/03 (Actual)	0.00	0.00	0.00	0.00	0.00	4.34	0.00	0.00	0.00	0.00	0.00			
2013/04 (Actual)	0.00	0.00	0.00	0.00	0.00	8.18	0.00	0.00	0.00	0.00	0.00			
2013/05 (Actual)	0.00	0.00	0.00	0.00	0.00	7.13	0.00	0.00	0.00	0.00	0.00			
2013/06 (Actual)	0.00	0.00	0.00	0.00	0.00	8.99	0.00	0.00	0.00	0.00	0.00			
2013/07 (Actual)	0.00	0.00	0.00	0.00	0.00	7.96	0.00	0.00	0.00	0.00	0.00			
2013/08 (Actual)	0.00	0.00	0.00	0.00	0.00	5.30	0.00	0.00	0.00	0.00	0.00			
2013/09 (Actual)	0.00	0.00	0.00	0.00	0.00	4.88	0.00	0.00	0.00	0.00	0.00			
2013/10 (Actual)	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.00	0.00	0.00	0.00			
2013/11 (Actual)	0.00	0.00	0.00	0.00	0.00	3.05	0.00	0.00	0.00	0.00	0.00			
2013/12 (Actual)	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00			
2014/01 (Actual)	0.00	0.00	0.00	0.00	0.00	1.27	0.00	0.00	0.00	0.00	0.00			
2014/02 (Actual)	0.00	0.00	0.00	0.00	0.00	7.71	0.00	0.00	0.00	0.00	0.00			
2014/03 (Actual)	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00			
2014/04 (Actual)	0.00	0.00	0.00	0.00	0.00	18.25	0.00	0.00	0.00	0.00	0.00			
2014/05 (Actual)	0.00	0.00	0.00	0.00	0.00	14.89	0.00	0.00	0.00	0.00	0.00			
2014/06 (Actual)	0.00	0.00	0.00	0.00	0.00	6.19	0.00	0.00	0.00	0.00	0.00			
2014/07 (Actual)	0.00	0.00	0.00	0.00	0.00	2.07	0.00	0.00	0.00	0.00	0.00			
2014/08 (Actual)	0.00	0.00	0.00	0.00	0.00	2.86	0.00	0.00	0.00	0.00	0.00			
2014/09 (Actual)	0.00	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00			
2014/10 (Actual)	0.00	0.00	0.00	0.00	0.00	4.48	0.00	0.00	0.00	0.00	0.00			
2014/11 (Actual)	0.00	0.00	0.00	0.00	0.00	2.36	0.00	0.00	0.00	0.00	0.00			
2014/12 (Actual)	0.00	0.00	0.00	0.00	0.00	3.09	0.00	0.00	0.00	0.00	0.00			
2015/01 (Actual)	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00			
2015/02 (Actual)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
2015/03 (Actual)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Overall Total (t)	0.00	0.00	0.00	646.00	0.00	642.25	0.00	0.00	0.00	0.00	0.00			
Overall Total (m <sup>3</sup> )	0.00	0.00	0.00	258.40	0.00	2509.00	0.00	0.00	0.00	0.00	0.00			

Monthly Summary Waste Flow Table for 2015

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly						
	Total Quantity Generated (in'000m <sup>3</sup> )	Hard Rock and Large Broken Concrete (in'000m <sup>3</sup> )	Reused in Contract (in'000m <sup>3</sup> )	Reused in other Projects (in'000m <sup>3</sup> )	Disposed as Public Fill (in'000m <sup>3</sup> )	Imported Fill (in'000m <sup>3</sup> )	Metals (in'000 kg)	Paper/ cardboard packaging (in'000 kg)	Plastics(see Note3) (in'000 kg)	Chemical Waste (in'000 kg)	Others,e.g. general refuse (in'000m <sup>3</sup> )			
Jan	1.24	0	0	0	0.0009	0	0	0	0	0	0.0009			
Feb	15.29	0	0	3.57	11.72	0	0	0	0	0	0.002			
Mar	13.72	0	0	3.6	10.12	0	0	0	0	0	0.002			
Apr														
May														
June														
Sub-Total	30.25	0	0	7.17	21.8409	0	0	0	0	0	0.0049			
July														
Aug														
Sept														
Oct														
Nov														
Dec														
Total	30.25	0	0	7.17	21.8409	0	0	0	0	0	0.0049			

Name of Department : Drainage Services DepartmentContract No.: DC/2010/03Contract Title: Kai Tak Nullah Improvement Works at Prince Edward Road EastMonthly Summary Waste Flow Table for 2015 (Year)

Month	Actual Quantities of Inert C & D Materials Generated Monthly						Actual Quantities of C & D Wastes Generated Monthly					
	Total Quantity Generated (in '000m <sup>3</sup> )	Hard Rock and Large Broken Concrete (in '000m <sup>3</sup> )	Reused in the Contract (in '000m <sup>3</sup> )	Reused in other Projects (in '000m <sup>3</sup> )	Disposed as Public Fill (in '000m <sup>3</sup> )	Imported Fill (in '000m <sup>3</sup> )	Metals (in '000 kg)	Paper/cardboard packaging (in '000 kg)	Plastics (see note 3) (in '000 kg)	Chemical Waste (in '000 kg)	Others, e.g. general refuse (in '000m <sup>3</sup> )	
Jan	0.01470	0	0	0	0.01470	0	0	0	0	0.041185		
Feb	0.00000	0	0	0	0.00000	0	0	0	0	0.012835		
Mar	0.00361	0	0	0	0.00361	0	0	0	0	0.0112		
Apr												
May												
June												
July												
Aug												
Sept												
Oct												
Nov												
Dec												

Notes: (1) The waste flow table shall also include C &amp; D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material.

(3) Broken Concrete for recycling into aggregates

Assumption :

Density of Rock and Soil = 2.25 tons / m<sup>3</sup>Density of General refuse = 2.0 tons / m<sup>3</sup>















香港  
Dragages  
Hong Kong



Bouygues Construction Group

Design and Construction of Trade and  
Industry Tower in Kai Tak Development Area  
Contract No. SSW304 – P109KA

Architectural Services Department

Form No. D/OL.03/09.002

Contract No. / Works Order No.: -

SS W304

**Monthly Summary Waste Flow Table for 2015** [year] [to be submitted not later than the 15<sup>th</sup> day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				Disposed of as Public-Fill (in '000m <sup>3</sup> )
	(a)+(b)+(c)+(e) Total Quantity Generated (in '000m <sup>3</sup> )	(b) Broken Concrete (see Note 4) (in '000m <sup>3</sup> )	(c) Reused in the Contract (in '000m <sup>3</sup> )	(d) Reused in other Projects (in '000m <sup>3</sup> )	
Jan	0.546	0.000	0.000	0.000	0.546
Feb	0.202	0.000	0.000	0.000	0.202
Mar	0.046	0.000	0.000	0.000	0.046
Apr					
May					
Jun					
Sub-total					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Total	0.794	0.000	0.000	0.000	0.794



香港嘉  
Dragages  
HongKong



Beoygues Construction group

Design and Construction of Trade and  
Industry Tower in Kai Tak Development Area  
Contract No. SSW304 - P109KA

Architectural Services Department

Form No. D/OI:03/09:002

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly													
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials (pls. specify)		General Refuse disposed of at Landfill	
	(in '000kg) generated	recycled	(in '000kg) generated	recycled	(in '000kg) generated	recycled	(in '000kg) generated	recycled	(in '000kg) generated	recycled	(in '000kg) generated	recycled	(in '000m <sup>2</sup> ) generated	
Jan.	0.000	0.000	27.830	27.508	3.800	3.600	0.030	0.008	0.000	0.000	0.015	0.015	0.208	
Feb.	0.000	0.000	3.100	3.058	1.700	0.950	0.040	0.005	0.000	0.000	0.015	0.015	0.137	
Mar.	0.000	0.000	0.100	0.044	1.650	0.990	0.060	0.026	0.000	0.000	0.020	0.020	0.169	
Apr.														
May														
Jun														
Sub-total														
Jul.														
Aug.														
Sep.														
Oct.														
Nov.														
Dec.														
Total	0.000	0.000	31.030	30.610	7.150	5.540	0.130	0.039	0.000	0.000	0.050	0.050	0.514	

**Contract No. TC Y305 - Demolition of Ex-Government Flying Service Building  
Monthly Summary Waste Flow Table**

Month	Accumulated Quantities of Inert C&D Materials Generated Monthly					Accumulated Quantities of Non-Inert C&D Wastes Generated Monthly							Calculated Waste Recycling Rate		
	(a) Hard Rocks or Broken Concrete Recycled (in '000kg)	(b) Hard Rocks or Broken Concrete Disposed as Public Fill (in '000kg)	(c) Excavated Materials Reused in this Project (in '000kg)	(d) Excavated Materials Reused in other Projects (in '000kg)	(e) Excavated Materials Disposed as Public Fill (in '000kg)	(f) Imported Fill (in '000kg)	(g) Mixed Wastes Disposed at Sorting Facility (in '000kg)	(h) Metals Recycled (in '000kg)	(i) Paper/Cardboard/Packaging Recycled (in '000kg)	(j) Timber Recycled (in '000kg)	(k) Plastics Recycled (in '000kg)	(l) Chemical Waste Collected (in '000kg)	(m) Others, e.g. General Refuse Disposed at Landfill (in '000kg)	(n) Total Recycled or Reused Wastes (in '000kg)	(o) Total Amount of Wastes (in '000kg)
Sep-14	0	303.62	0	0	0	0	160.03	0	0	0	0	62.5	160.03	526.15	30.4%
Oct-14	0	389.64	0	0	0	0	54.5	0	0	0	0	148.98	54.5	593.12	9.2%
Nov-14	0	7.53	0	0	0	0	0	0	0	0	0	3.64	0	11.17	0.0%
Dec-14	0	0	0	0	0	0	63.78	0	0	0	0	92.21	63.78	155.99	40.9%
Jan-15	0	353.52	0	0	0	0	47.02	0	0	0	0	9.35	47.02	410.09	11.5%
Feb-15	0	2242.06	0	0	0	0	82.23	0	0	0	0	0	82.23	2324.29	3.5%
Mar-15	0	4885.27	0	0	0	0	144.14	0	0	0	0	0	144.14	5029.41	2.9%
Apr-15															
May-15															
June-15															
<b>Total</b>															

**Note:**

For BEAM Plus certification scheme, excavated materials are excluded from the calculation of the waste recycling rate.

Recycled or Reused Wastes = (a) + (b) + (c) + (d) + (f) + (i)

Total Amount of Wastes = (a) + (b) + (g) + (h) + (j) + (k) + (m)

Waste Flow Table – SCL 1108

Monthly Summary Waste Flow Table for 2015 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Materials Generated Monthly						
	Total Quantity Generated (in '000m <sup>3</sup> )	Hard Rocks & Broken Concrete (in '000m <sup>3</sup> )	Reused in the Contract (in '000m <sup>3</sup> )	Reused in other Projects (in '000m <sup>3</sup> )	Disposed as Public Fill		Metals (in '000kg)	Paper/ cardboard packaging (in '000kg)	Plastics (in '000kg)	Chemical waste (in '000kg)	Others (general refuse) (in '000m <sup>3</sup> )			
					1108A* (in '000m <sup>3</sup> )	CEDD# (in '000m <sup>3</sup> )								
Jan	21.421	0.000	21.421	0.000	0.000	0.000	18.530	0.075	0.000	0.640	0.203			
Feb	32.137	0.000	31.290	0.000	0.847	0.000	15.590	0.060	0.006	0.000	0.136			
Mar	31.149	0.000	28.783	0.000	2.366	0.000	36.260	0.072	0.009	0.000	0.186			
Apr														
May														
Jun														
Sub-total	84.707	0.000	81.494	0.000	3.213	0.000	70.380	0.207	0.015	0.640	0.525			
July														
August														
September														
October														
November														
December														
Total	84.707	0.000	81.494	0.000	3.213	0.000	70.380	0.207	0.015	0.640	0.525			
Year 2013	144.512	0.000	0.000	0.000	144.512		93.330	0.030	0.000	0.480	2.568			
Year 2014	311.876	0.000	39.476	0.000	272.400		103.280	0.855	0.056	1.540	1.484			
Grand Total	541.095	0.000	120.970	0.000	420.125		266.990	1.092	0.071	2.660	4.577			

Notes: \* MTR SCL Contract 1108A barging point.

# Government (CEDD) Public Fill Reception Facilities

Project: NKIL6515  
 Record by: Shirley Man  
 Year of Record: 2015

Waste Flow Table

Month	Total Quantity Generated (Excluded Excavated Material)		Actual Quantities of Inert C&D Materials Generated Monthly				Actual Quantities of C&D Materials Generated Monthly				Other, e.g. general refuse		
	(in '000kg)	a2	Excavated Materials	Broken Concrete of Construction Waste Collected by Recycled Company	Reused in the Contract Projects	Disposed in other Public Fill	Disposed in Sorting Facilities	Metals (steel bar / metal strip) (1)	Metals (aluminum can) (1)	Paper / cardboard packaging (1)		Plastics (1)(4)	Chemical waste (wasted lubricant oil/oil container)
	a1	b	c	d	e	f	g	h	i	j	k	l	m
May-13	3123.32	20.02	3103.30	0.00	0.00	12.10	0.00	7.92	0.00	0.00	0.00	0.00	0.00
Jun-13	8993.91	104.97	8478.54	0.00	0.00	0.00	17.00	84.50	0.00	0.00	0.00	0.00	3.47
Jul-13	3151.42	53.07	3098.35	0.00	0.00	0.00	0.00	46.51	0.00	0.00	0.00	0.00	6.56
Aug-13	19.25	0.00	0.00	0.00	0.00	0.00	0.00	8.63	0.00	0.00	0.00	0.00	10.62
Sep-13	124.13	38.64	85.49	0.00	0.00	0.00	17.57	3.89	0.253	0.00	0.00	0.00	16.83
Oct-13	246.67	51.87	194.80	0.00	0.00	0.00	0.00	39.18	0.00	0.00	0.00	0.00	12.69
Nov-13	67.82	0.00	0.00	0.00	0.00	0.00	0.00	42.42	0.0056	0.00	0.00	0.00	25.39
Dec-13	52.45	0.00	0.00	0.00	0.00	0.00	0.00	22.77	0.00	0.00	0.00	0.00	29.68
Jan-14	55.97	0.00	0.00	0.00	0.00	0.00	0.00	23.10	0.30	0.00	0.00	0.00	32.57
Feb-14	47.55	39.92	7.63	0.00	0.00	0.00	0.00	22.27	0.0084	0.012	0.028	0.00	17.60
Mar-14	454.30	52.20	402.10	0.00	0.00	0.00	5.91	12.41	0.00	0.00	0.00	0.00	33.88
Apr-14	191.74	62.80	128.94	0.00	0.00	0.00	11.44	10.55	0.01008	0.035	0.00784	0.00	40.86
May-14	95.14	88.09	7.05	0.00	0.00	0.00	0.00	23.15	0.00	0.00	0.00	0.00	53.69
Jun-14	304.91	169.94	134.97	0.00	0.00	0.00	57.31	21.49	0.0616	0.11	0.0308	0.00	90.94
Jul-14	235.99	226.77	9.22	0.00	0.00	0.00	121.98	19.72	0.00	0.00	0.00	0.00	85.07
Aug-14	219.55	219.55	0.00	0.00	0.00	0.00	151.74	11.36	0.00	0.00	0.00	0.00	56.45
Sep-14	271.64	221.24	50.40	0.00	0.00	0.00	105.47	6.03	0.00	0.00	0.00	0.00	109.74
Oct-14	525.92	246.68	279.24	0.00	0.00	0.00	140.22	0.00	0.07	0.11	0.03	0.00	106.26
Nov-14	546.55	317.35	229.20	0.00	0.00	0.00	256.40	0.00	0.00	0.00	0.00	0.00	60.95
Dec-14	719.80	373.81	345.98	0.00	0.00	0.00	292.87	0.00	0.00	0.00	0.00	0.00	80.94
Jan-15	793.71	408.36	325.35	0.00	0.00	0.00	348.79	0.00	0.00	0.00	0.00	0.00	59.57
Feb-15	366.28	247.21	119.07	0.00	0.00	0.00	182.94	0.00	0.00	0.00	0.00	0.00	64.27
Mar-15	1065.35	353.50	711.85	0.00	0.00	0.00	250.04	0.00	0.00	0.00	0.00	0.00	103.46
Total	21209.98	3491.59	17717.39	0.00	0.00	12.10	1970.93	405.90	0.71	0.27	0.09	0.00	1101.59

Total C&D waste generated 21209.98 tonnes  
 Total C&D waste generated (excluded excavated materials) 3491.59 tonnes  
 Total recycled C&D waste 406.97 tonnes  
 % of recycled C&D waste for BEAM Plus MA11 11.66 %  
 a1=b+c+d+e+f+g+h+i+j+k+l+m  
 a2=c+d+e+f+g+h+i+j+k+l+m  
 a3=c+g+e+h+i+j+k  
 a4=a3/a2 x 100%

- Notes:
- (1) metal, paper & plastic were collected by recycler
  - (2) The performance target is at least 30% waste recycled by weight.
  - (3) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
  - (4) Plastics refer to plastic bottles/ containers, plastic/ foam from packaging material.
  - (5) Broken concrete for recycling into aggregates.
  - (6) Excavated materials/waste will NOT be considered as part of construction waste. It should be excluded in the calculation.
  - (7) Disposal of inert waste to public fill or sorting facilities will NOT be considered as recycled waste.

