MTR Corporation Limited

Shatin to Central Link –
Hung Hom to Admiralty Section

Monthly EM&A Report No. 3

[Period from 1 to 31 July 2014]

(August 2014)

Verified by: Fredrick Leong

Position: Independent Environmental Checker

Date: 13 August 2014

MTR Corporation Limited

Shatin to Central Link –
Hung Hom to Admiralty Section

Monthly EM&A Report No. 3

[Period from 1 to 31 July 2014]

(August 2014)

Certified by: Richard Kwan

Position: Environmental Team Leader

Date: 14 August 2014

AECOM

MTR Corporation Limited

Consultancy Agreements
No. C11033B

Shatin to Central Link - Hung Hom to Admiralty Section

Monthly EM&A Report No. 3

[Period from 1 to 31 July 2014]

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1 INTRODUCTION

1.1 Background

1.1.1 The Shatin to Central Link (SCL) is a 17km extension of the existing Ma On Shan Line (MOL) and East Rail Line (EAL) comprising (i) The East-West Corridor which extends the MOL from Tai Wai to Hung Hom via East Kowloon to connect with the West Rail Line (WRL) at Hung Hom Station (HUH) and Stabling Sidings at Hung Hom Freight Yard (HHS); and (ii) The North-South Corridor which is an extension of the East Rail Line (EAL) at Hung Hom across the harbour to Admiralty Station (ADM).

1.1.2 Shatin to Central Link – Hung Hom to Admiralty Section [SCL (HUH – ADM)] (hereafter referred to as "the Project") is part of the SCL.

1.1.3 The Environmental Impact Assessment (EIA) Report for SCL (HUH-ADM) (Register No.: AEIAR-166/2012) was approved on 17 February 2012 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) (EP No.: EP-436/2012) was granted on 22 March 2012 for construction and operation. Variations of environmental permit (VEP) was subsequently applied for EP-436/2012 and the latest Environmental Permit (EP No: EP-436/2012/A) was issued by Director of Environmental Protection (DEP) on 30 April 2014.

1.2 Project Programme

1.2.1 Three civil construction works contracts of the Project have been awarded since January 2014. The construction of the Project commenced in May 2014 and is expected to complete in 2020. The Project will have to interface with other infrastructure projects, including Wan Chai Development Phase II and Central-Wan Chai Bypass,. **Table 1.1** summarises the information of the awarded Works Contracts.

Table 1.1 Summary of Awarded Works Contracts

Works Contract	Description	Construction Start Date	Contractor	Environmental Team
1126	Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool	July 2014	Kaden Leader JV	Cinotech Consultants Ltd. (Cinotech)
1129	SCL – Advance Works for NSL	May 2014	Hsin Chong Construction Co. Ltd.	AECOM Asia Co. Ltd.
11227	Advance Works for NSL Cross Harbour Tunnels	To be constructed (tentatively in 3rd/4th Q* 2014)	Concentric-Hong Kong River Joint Venture	Cinotech Consultants Ltd. (Cinotech)

Note:
* Works and associated water quality monitoring in Shek O and Victoria Harbour would commence tentatively in Aug & Sep 2014 respectively.

1.3 Purpose of the Report

1.3.1 The Environmental Monitoring and Audit (EM&A) programme for the Project commenced in May 2014. This is the third EM&A Report for the Project which summarises the EM&A works undertaken by the respective Contractor's ETs during the period from 1 to 31 July 2014.

2 ENVIRONMENTAL MONITORING AND AUDIT

2.1 EM&A Results

2.1.1 The EM&A Report for Works Contract 1129 and 1126 prepared by the respective Contractor's ETs are provided in **Appendices A** and **B** respectively. The EM&A Reports provide details of the project information, EM&A requirements, impact monitoring and audit results for the corresponding Contracts.

2.1.2 A summary of the major construction activities undertaken by the respective Contractors of various Works Contracts during the reporting period are presented in **Table 2.1**.

Table 2.1 Summary of Major Construction Activities in the Reporting Period

Works Contract	Site	Construction Activities
1126	Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool	• Construction of Fitness Room and Kiosk; • Construction of Male Changing Room with HR Pump Room and Store Room; • Construction of Marshall Seats; • Construction of Weightlifting Room; • Landscaping and external works; and • Demolition of part of the existing spectator stand.
1129	Area W1	• Instrumentation Installation; • Covered Walkway Installation; • Pile Installation for Load Test; • Backfilling of Existing Pile Cap; • H-pile Removal; • Hoarding Erection at W1C; • Removal of Asbestos Containing Material; • Pre-bored H-pile; • Diversion of Utilities; • Pedestrian Diversion and Covered Walkway Installation; and • Open Excavation for Underpinning Work.
	Area W2	• ELS Works; • Excavation; • Pre-boring; • Sheet-pile Installation; and • Diversion of Utilities.
	Area W3	• Remove Concrete Barrier and Plant Set up; and • Dig Trial Trench for Sheetpiling.

2.1.3 During the reporting month, impact monitoring for air quality and construction noise were conducted in accordance with the EM&A Manual. Continuous noise monitoring was not required in the reporting period according to the Continuous Noise Monitoring Plan (CNMP). No exceedance of the Action/Limit Levels of 24-hr TSP and construction noise due to the Project construction were recorded. The air quality and construction noise monitoring results are summarised in **Table 2.2** and **2.3**. Details of the monitoring requirements, locations, equipment and methodology are presented in the EM&A Reports as provided in **Appendices A** and **B**.

Table 2.2 Summary of 24-Hour TSP Monitoring Results in the Reporting Period

Monitoring Station ID[1]	Location	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)	Exceedance due to the Project Construction (Yes/No)
Works Contract 1126					
AM2	Wan Chai Sports Ground[1]	43.0 – 107.0	160	260	No
AM3	Existing Harbour Road Sports Centre	33.5 – 80.4	169	260	No
Works Contract 1129[2]					

Note:
(1) The spectator stand at Wan Chai Sports Ground was not available for impact dust monitoring, therefore impact monitoring was conducted at the existing water pump room area at Wan Chai Sports Ground.
(2) No TSP monitoring is required under Works Contract 1129.

Table 2.3 Summary of Construction Noise Monitoring Results in the Reporting Period

Monitoring Station ID	Location	Noise Level ($L_{Aeq,30mins}$, dB(A))			Limit Level (dB(A))	Exceedance due to the Project Construction (Yes/No)
		Measured	Baseline	Corrected[1]		
Works Contract 1126						
NM2[2]	Walkway across Harbour Road (1/F)	72.4 – 74.3	NA	NA	75	No
Works Contract 1129						
NM1	Hoi Kung Court	70.6 – 73.1	71	< Baseline – 68.9	75	No

Note:
(1) The measured noise levels are corrected against the corresponding baseline noise levels.
(2) Access to the designated monitoring location NM1 (i.e. Block A, Causeway Centre) was denied before the commencement of impact monitoring. An alternative monitoring location at Walkway across Harbour Road was proposed and was approved by the Engineer's Representative (ER) and Independent Environmental Checker (IEC). Agreement on the alternative monitoring location from the EPD is being sought.
NA Not applicable

2.1.4 No environmental complaints, notification of summons and successful prosecutions were received in the reporting period. Cumulative log for environmental complaints, notification of summons and successful prosecutions is provided in **Table 2.4**.

Table 2.4 Cumulative Log for Environmental Complaints, Notification of Summons and Successful Prosecutions

Works Contract	Environmental Complaints		Notification of Summons		Successful Prosecutions	
	Reporting Month	Cumulative Number	Reporting Month	Cumulative Number	Reporting Month	Cumulative Number
1126	0	0	0	0	0	0
1129	0	0	0	0	0	0

2.1.5 Regular site inspections were conducted by the Contractor's ET on a weekly basis to check the implementation of environmental pollution control and mitigation measures for the Project. No non-conformance was identified in the reporting period.

3 IMPLEMENTATION STATUS ON THE ENVIRONMENTAL PROTECTION REQUIREMENTS

3.1.1 The respective Contractors have implemented all mitigation measures and requirements as stated in the EIA Report, EM&A Manual and EP (EP-436/2012/A). The status of required submissions under the EP as of the reporting period are summarised in **Table 3.1**.

Table 3.1 Summary of EP Submissions Status

EP Condition (EP-436/2012/A)	Submission	Submission date
Condition 1.11	Notification of Commencement Date of Construction of the Project	19 Dec 2012
Condition 2.3	Notification of Information of Community Liaison Groups	17 Mar 2014
Condition 2.5	Management Organisation of Main Construction Companies	4 Apr 2014
Condition 2.6	Construction Programme and EP Submission Schedule	19 Dec 2012
Condition 2.7	Construction Noise Mitigation Measures Plan (CNMMP)	9 Jun 2014 (1st Submission)
Condition 2.8	Continuous Noise Monitoring Plan (CNMP)	9 Jun 2014 (1st Submission)
Condition 2.9	Construction and Demolition Materials Management Plan (C&DMMP)	6 Jul 2012 (1st Submission) 12 Sept 2012 (2nd Submission) 15 Oct 2012 (approved)
Condition 2.12	Sediment Management Plan	6 Jul 2012 (1st Submission) 12 Sept 2012 (2nd Submission) 15 Oct 2012 (approved) 3 Jul 2014 (3rd submission)
Condition 2.14	Visual, Landscape, Tree Planting & Tree Protection Plan	14 Nov 2012 (1st Submission) 15 Feb 2013 (2nd Submission) 3 Dec 2013 (3rd Submission)
Condition 2.24	Contamination Assessment Plan (CAP) and Contamination Assessment Report (CAR)Remedial Action Plan (RAP) for the above-ground diesel tanks for Wan Chai Swimming Pool	CAP: 25 Sept 2012 (1st Submission) 12 Nov 2012 (2nd Submission) 22 Nov 2012 (approved) CAR: 19 Mar 2013 (1st Submission) 16 Apr 2013 (2nd Submission) 21 May 2013 (3rd Submission) 7 Jun 2013 (approved)
Condition 2.31.1	Silt Curtain Deployment Plan for Temporary Marine Works at Shek O Casting Basin	30 Jun 2014
Condition 3.3	Baseline Monitoring Report (for noise and air quality)	4 Dec 2013 (1st Submission) 5 Feb 2014 (2nd Submission)
	Baseline Water Quality Monitoring Report for Temporary Marine Works at Shek O Casting Basin	8 Jul 2014 (1st Submission)
Condition 3.4	Monthly EM&A Report No.1 Monthly EM&A Report No.2	13 Jun 2014 11 Jul 2014

Appendix A

3rd Monthly EM&A Report for Works Contract 1129 – SCL – Advance Works for NSL

AECOM

Hsin Chong Construction Co. Ltd.

Shatin to Central Link -
Hung Hom to Admiralty Section

Works Contract 1129 -
Advance Works for NSL

Monthly EM&A Report for
July 2014

August 2014

	Name	Signature
Prepared & Checked:	Lemon Lam	
Reviewed, Approved & Certified:	Y T Tang (Contractor's Environmental Team Leader)	

Version: 0	Date: 11 August 2014

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EXECUTIVE SUMMARY

Shatin to Central Link Contract 1129 – Advance Works for North South Link (NSL) (hereafter called "the Project") covers part of the construction of the Shatin to Central Link (SCL) which aimed to comprises advance works for NSL – the extension of the existing East Rail Line (EAL) to Hong Kong Island.

The Project covers construction activities at Percival Street Footbridge, Causeway Flyover, Tunnel Approach Rest Garden (TARG) and demolition works at existing abandoned culvert near Wan Shing Street.

The EM&A programme commenced on 2 May 2014.The impact EM&A for the Project includes noise monitoring.

This report documents the findings of EM&A works conducted in the period between 1 and 31 July 2014. As informed by the Contractor, major activities in the reporting period were:

Area W1
- Instrumentation Installation;
- Covered Walkway Installation;
- Pile Installation for Load Test;
- Backfilling of Existing Pile Cap;
- H-pile Removal;
- Hoarding Erection at W1C;
- Removal of Asbestos Containing Material;
- Pre-bored H-pile;
- Diversion of Utilities;
- Pedestrian Diversion and Covered Walkway Installation; and
- Open Excavation for Underpinning Work.

Area W2
- ELS Works;
- Excavation;
- Pre-boring;
- Sheet-pile Installation; and
- Diversion of Utilities.

Area W3
- Remove Concrete Barrier and Plant Set up; and
- Dig Trial Trench for Sheetpiling.

Breaches of Action and Limit Levels for Noise

No Action Level exceedance was recorded since no noise related complaint was received in the reporting month.

No exceedance of Limit Level of noise was recorded in the reporting month.

Complaint, Notification of Summons and Successful Prosecution

No environmental complaint and no notification of summons and successful prosecution were received in the reporting month.

Reporting Changes

There was no reporting change in the reporting month.

Future Key Issues

Key issues to be considered in the coming month included:-

Area W1
- H-pile Removal;
- Pre-bored H-pile;
- Open Excavation for Underpinning Work; and
- Pre-drilling.

Area W2
- Excavation; and
- Grouting at the Western Corner.

Area W3
- Dig Trial Trench; and
- Installation of Sheetpile.

Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, water quality and waste management.

1 INTRODUCTION

Hsin Chong Construction Co. Ltd (HC) was commissioned by MTR as the Civil Contractor for Works Contract 1129. AECOM Asia Company Limited (AECOM) was appointed by HC as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme during construction phase of the Project.

1.1 Purpose of the Report

1.1.1 This is the third monthly EM&A Report which summaries the impact monitoring results and audit findings for the Project during the reporting period from 1 to 31 July 2014.

1.2 Report Structure

1.2.1 This monthly EM&A Report is orgainised as follows:

- Section 1: Introduction
- Section 2: Project Information
- Section 3: Environmental Monitoring Requirement
- Section 4: Implementation Status of Environmental Mitigation Measures
- Section 5: Monitoring Results
- Section 6: Environmental Site Inspection and Audit
- Section 7: Environmental Non-conformance
- Section 8: Future Key Issues
- Section 9: Conclusions and Recommendations

2 PROJECT INFORMATION

2.1 Background

2.1.1 The Shatin to Central Link (SCL) is a 17km extension of the existing Ma On Shan Line (MOL) and East Rail Line (EAL) comprising (i) The East-West Corridor which extends the MOL from Tai Wai via East Kowloon to connect with the West Rail Line (WRL) at Hung Hom Station (HUH); and (ii) The North-South Corridor which is an extension of the East Rail Line (EAL) at Hung Hom across the harbour to Admiralty Station (ADM).

2.1.2 The Environmental Impact Assessment (EIA) Reports for SCL – Hung Hom to Admiralty Section [SCL (HUH-ADM)] (Register No.: AEIAR-166/2012) was approved on 17 February 2012 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, an Environmental Permit (EP) was granted on 22 March 2012, which covers SCL (HUH-ADM) EP No.: EP-436/2012), for the construction and operation. Variation of EP (VEP) (VEP-433/2014) was applied on 2 April 2014 and the latest EP (EP No. EP-436/2012/A) was issued by the Director of Environmental Protection (DEP) on 30 April 2014.

2.1.3 The construction of the SCL is divided into different civil construction works contracts and the Project covers construction activities at Percival Street Footbridge, Causeway Flyover, TARG and demolition works at existing abandoned culvert near Wan Shing Street under the EP. The works areas and site location of the Project is shown in **Figure 1.1**.

2.2 Site Description

2.2.1 The major construction activities under Works Contract 1129 include:

(a) Removal of 10 nos. of abandoned steel H-piles, provision of temporary staircase and diversion of pedestrians at Percival Street Footbridge; (Works Area W1)

(b) Underpinning of Pier A5 of Causeway Flyover including installation of 6 nos. 600mm diameter concrete bored piles and construction of pile cap; (Works Area W1)

(c) Site clearance, temporary take-up, storage and handover of feature stone at existing TARG, tree removal and utility diversions. Construction of temporary box culvert (in dry/wet season) without breakthrough of existing culvert at TARG; (Area W2) and

(d) Diversion and temporary support of utilities to facilitate pile extraction works at existing abandoned culvert near Wan Shing Street. Demolition on part of the abandoned culvert and removal of 6 nos. of 18” concrete square driven piles. Construction of minor slip road to facilitate road diversion. (Works Area W3)

2.3 Construction Programme and Activities

2.3.1 The major construction activities undertaken in the reporting month are summarised below:

Area W1
- Instrumentation Installation;
- Covered Walkway Installation;
- Pile Installation for Load Test;
- Backfilling of Existing Pile Cap;
- H-pile Removal;
- Hoarding Erection at W1C;
- Removal of Asbestos Containing Material;
- Pre-bored H-pile;
- Diversion of Utilities;
- Pedestrian Diversion and Covered Walkway Installation; and
- Open Excavation for Underpinning Work.

Area W2
- ELS Works;
- Excavation;

- Pre-boring;
- Sheet-pile Installation; and
- Diversion of Utilities.

Area W3
- Remove Concrete Barrier and Plant Set up; and
- Dig Trial Trench for Sheetpiling.

2.3.2 The construction programme is presented in **Appendix A**.

2.4 Project Organisation

2.4.1 The project organization structure is shown in **Appendix B**. The key personnel contact names and numbers for the Project are summarised in **Table 2.1.**

Table 2.1 Contact Information of Key Personnel

Party	Role	Position	Name	Telephone	Fax
MTR	Residential Engineer (ER)	Construction Manager	Mr. T.C. Lam	3143 9129	3127 6424
		SCL Project Environmental Team Leader	Mr. Richard Kwan	2688 1283	2993 7577
Meinhardt	Independent Environmental Checker	Independent Environmental Checker	Mr. Fredrick Leong	2859 1739	2540 1580
HC	Contractor	Project Manager	Mr. Alan Sit	2360 0720	2774 9322
		Assistant Environmental Manager	Mr. Andy Leung	9489 0035	
AECOM	Contractor's Environmental Team (ET)	ET Leader	Mr. Y T Tang	3922 9393	2317 7609

2.5 Status of Environmental Licences, Notification and Permits

2.5.1 Relevant environmental licenses, permits and/or notifications on environmental protection for this Project and valid in the reporting month are summarized in **Table 2.2**.

Table 2.2 Status of Environmental Licenses, Notifications and Permits

Permit / License No. / Notification/ Reference No.	Valid Period		Status	Remarks
	From	To		
Environmental Permit				
EP-436/2012	22 Mar 2012	-	Superseded by EP-436/2012/A on 30 Apr 2014	-
EP-436/2012/A	30 Apr 2014	-	Valid	-
Construction Noise Permit				
GW-RS0527-14	31 May 2014	27 Jul 2014	Valid	Applied for road marking
GW-RS0540-14	29 May 2014	27 Jul 2014	Valid	Applied for temporary carriageway for W3
GW-RS0617-14	20 Jun 2014	19 Sep 2014	Valid	Applied for plant mobilization

Permit / License No. / Notification/ Reference No.	Valid Period		Status	Remarks
	From	To		
Wastewater Discharge License				
WT00018771-2014	4 Apr 2014	30 Apr 2019	Valid	-
Chemical Waste Producer Registration				
WPN5213-135-H3563-01	26 Feb 2014	End of Contract	Valid	For Hung Hing Flyover & Percival Street (Area W1)
WPN5213-135-H3564-01	26 Feb 2014	End of Contract	Valid	For Canal Road Flyover & Tunnel Approach Rest Garden (Area W2)
WPN5213-134-H3565-01	26 Feb 2014	End of Contract	Valid	For Tunnel Approach Road & Wan Shing Footbridge (Area W3)
Billing Account for Construction Waste Disposal				
7019335	13 Feb 2014	End of Contract	Valid	-
Notification Under Air Pollution Control (Construction Dust) Regulation				
370021	28 Jan 2014	End of Contract	Valid	-

3 ENVIRONMENTAL MONITORING REQUIREMENTS

3.1 Construction Noise Monitoring

Monitoring Requirements

3.1.1 In accordance with the EM&A Manual, impact noise monitoring should be conducted for at least once a week during the construction phase of the Project. **Table 3.1** summarises the monitoring parameters, frequency and duration of impact noise monitoring. The Action and Limit level of the noise monitoring is provided in **Appendix D**.

Table 3.1 Noise Monitoring Parameters, Frequency and Duration

Parameter and Duration	Frequency
30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays. Leq, L_{10} and L_{90} would be recorded.	At least once per week

Monitoring Equipment

3.1.2 Noise monitoring was performed using sound level meter at each designated monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in **Table 3.2**.

Table 3.2 Noise Monitoring Equipment for Regular Noise Monitoring

Equipment	Brand and Model
Integrated Sound Level Meter	Rion (Model No. NL-31 (S/N: 00320528)) and B&K (Model No. 2238 (S/N: 2285692))
Acoustic Calibrator	Rion (Model No. NC-73 (S/N: 10307223))

Monitoring Locations

3.1.3 The monitoring station for construction noise monitoring pertinent to the Project has been identified based on the approved EM&A Manuals for SCL (HUH-ADM) of the Project. Location of the noise monitoring station is summarised in **Table 3.3** and shown in **Figure 3.1**.

Table 3.3 Noise Monitoring Stations during Construction Phase

Identification No.	Noise Sensitive Receiver (NSR) ID in EIA Report	Noise Monitoring Station
NM1	CH2	Hoi Kung Court

Monitoring Methodology

3.1.4 Monitoring Procedure

(a) Façade measurement was made at NM1.

(b) The battery condition was checked to ensure the correct functioning of the meter.

(c) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

(i) frequency weighting: A
(ii) time weighting: Fast
(iii) time measurement: $L_{eq(30\text{-minutes})}$ during non-restricted hours i.e. 0700 – 1900 on normal weekdays.

(d) Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator for 94 dB(A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1 dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

(e) During the monitoring period, the L_{eq}, L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.

(f) Noise measurement was paused during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible. Observations were recorded when intrusive noise was unavoidable.

(g) Noise monitoring was cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10m/s.

3.1.5 Maintenance and Calibration

(a) The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.

(b) The meter and calibrator were sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.

(c) Calibration certificates of the sound level meters and acoustic calibrators are provided in **Appendix E**.

Monitoring Schedule for the Reporting Month

3.1.6 The schedule for environmental monitoring in July 2014 is provided in **Appendix F**.

3.2 Landscape and Visual

3.2.1 As per the EM&A Manuals, the landscape and visual mitigation measures shall be implemented and site inspections should be undertaken once every two weeks during the construction period. A summary of the implementation status is presented in **Section 6.**

4 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and EM&A Manuals. The implementation status of the environmental mitigation measures during the reporting period is summarized in **Appendix C**. Status of required submissions under the EP during the reporting period is summarised in **Table 4.1**.

Table 4.1 Status of Required Submission under Environmental Permit

EP Condition	Submission	Submission Date
Condition 2.12 (EP-436/2012/A)	Sediment Management Plan	3 July 2014
Condition 3.4 (EP-436/2012/A)	Monthly EM&A Report for June 2014	11 July 2014

5 MONITORING RESULTS

5.1 Construction Noise Monitoring

5.1.1 The monitoring results for noise are summarized in **Table 5.1** and the monitoring data is provided in **Appendix G**.

Table 5.1 Summary of Construction Noise Monitoring Results in the Reporting Period

ID	Range, dB(A), $L_{eq\ (30\ mins)}$	Limit Level, dB(A), $L_{eq\ (30\ mins)}$
NM1 (*)	<Baseline – 68.9	75

(*) Baseline correction will be made to the measured L_{eq} when the measured noise level exceeded the corresponding baseline noise level and presented in the table.

5.1.2 No noise complaint was received in the reporting month; hence, no Action Level exceedance was recorded.

5.1.3 No Limit Level exceedance of noise was recorded at all monitoring stations in the reporting month.

5.1.4 The event and action plan is annexed in **Appendix H**.

5.1.5 Major noise sources during the monitoring included construction noise from the Project site, nearby traffic noise and the community.

5.2 Waste Management

5.2.1 C&D materials and wastes sorting were carried out on site. Receptacles were available for C&D wastes and general refuse collection.

5.2.2 As advised by the Contractor, 779m^3 of inert C&D material was generated (663m^3 was disposed as public fills at CWPFBR and 116m^3 was disposed as fill bank at TKO137) in the reporting month. 4.4m^3 of general refuse was generated in the reporting month. No metals, no paper/cardboard packaging material and no plastic was collected by recycling contractor in the reporting month. No inert C&D materials were reused on site. No chemical waste was collected by licensed contractor in the reporting period. The waste flow table is annexed in **Appendix J.**

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

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

5.3 Landscape and Visual

5.3.1 Bi-weekly inspection of the implementation of landscape and visual mitigation measures were conducted on 10 and 24 July 2014. A summary of the site inspection is provided in **Appendix C**. The observations and recommendations made during the site inspections are presented in **Table 6.1**.

6 ENVIRONMENTAL SITE INSPECTION AND AUDIT

6.1.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. A summary of the mitigation measures implementation schedule is provided in **Appendix C**.

6.1.2 In the reporting month, 5 site inspections were carried out on 3, 10, 17, 24 and 31 July 2014. The one held on 10 July 2014 was a joint inspection with the IEC, ER, the Contractor and the ET. No site inspection was conducted by EPD during the reporting month. No non-compliance was recorded during the site inspections. Details of observations recorded during the site inspections are presented in **Table 6.1**.

Table 6.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	17 July 2014	• Open stockpile was observed at Area W1. The Contractor was reminded to cover the stockpile entirely as dust suppression measure.	The item was rectified by the Contractor on 21 July 2014.
	24 July 2014	• Reminder: The Contractor was reminded to provide coverage or watering the stockpile properly and timely.	The item was rectified by the Contractor on 30 July 2014.
	31 July 2014	• Dry open site area was observed at Area W2 and W3. The Contractor should provide frequent spraying of water and/or sufficient dust suppression measure to the works area.	The item was rectified by the Contractor on 1 August 2014.
		• Reminder: The Contractor was reminded that cement mixing processes shall be carried out in an area sheltered on the top and the 3-sides.	The item was rectified by the Contractor on 1 August 2014.
Noise	N/A	N/A	N/A
Water Quality	17 July 2014	• Reminder: The Contractor was reminded to review and ensure the drainage system's effectiveness at Area W2.	The item was rectified by the Contractor on 21 July 2014.
Waste/ Chemical Management	3 July 2014	• Reminder: The Contractor was reminded to clean up the waste skips regularly.	The item was rectified by the Contractor on 4 July 2014.
	10 July 2014	• Improper labeling of chemical waste storage area was observed at Area W2. The Contractor was reminded to label the storage area properly.	The item was rectified by the Contractor on 14 July 2014.
	17 July 2014	• Open hold on drip tray was not covered and oil stain was observed next to the drip tray at Area W1. The Contractor was reminded to clean up the oil stain and cover/seal the open hole properly.	The item was rectified by the Contractor on 21 July 2014.
		• Improper storage of general waste and C&D waste was observed at Area W3. The Contractor was reminded to separate general waste from C&D waste properly.	The item was rectified by the Contractor on 21 July 2014.
Landscape & Visual	N/A	N/A	N/A
Permits/ Licenses	N/A	N/A	N/A

6.1.3 All the follow-up actions requested by Contractor's ET and IEC during the site inspection were undertaken as reported by the Contractor and confirmed into the following weekly site inspection conducted during the reporting period.

7 ENVIRONMENTAL NON-CONFORMANCE

7.1 Summary of Monitoring Exceedances

7.1.1 No noise complaint was received in the reporting month; hence, no Action Level exceedance was recorded.

7.1.2 No Limit Level exceedance for noise was recorded at all monitoring stations in the reporting month.

7.2 Summary of Environmental Non-Compliance

7.2.1 No environmental non-compliance was recorded in the reporting month.

7.3 Summary of Environmental Complaints

7.3.1 No environmental related complaint was received in the reporting month. Cumulative statistics on environmental complaints is provided in **Appendix I**.

7.4 Summary of Environmental Summon and Successful Prosecutions

7.4.1 No environmental related prosecution or notification of summons was received in the reporting month. Cumulative statistics on notification of summons and successful prosecutions is provided in **Appendix I**.

8 FUTURE KEY ISSUES

8.1 Construction Programme for the Next Two Month

8.1.1 The major construction works in August and September 2014 will be:

Area W1
- H-pile Removal; Pre-bored H-pile;
- Open Excavation for Underpinning Work
- Pre-drilling; and
- Construct East Pile Cap.

Area W2
- Excavation;
- Grouting at the Western Corner;
- Lagging Installation for Existing Drains;
- Fix Steel Plate; and
- Case Base Slab.

Area W3
- Dig Trial Trench;
- Installation of Sheetpile;
- Sheet Pile Installation; and
- Temp Diversion of Fresh Water Main to Southern Sheet Pile.

8.2 Key Issues for the Coming Month

8.2.1 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, water quality and waste management.

8.3 Monitoring Schedule for the Next Month

8.3.1 The tentative schedule for environmental monitoring in August 2014 is provided in **Appendix F**.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

9.1.1 Noise monitoring was carried out in the reporting month.

9.1.2 No noise complaint was received in the reporting month. Hence, no Action Level exceedance was recorded.

9.1.3 No Limit Level exceedance for noise was recorded at all monitoring stations in the reporting month.

9.1.4 5 nos. of environmental site inspections were carried out in July 2014. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audit.

9.1.5 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting month.

9.2 Recommendations

9.2.1 According to the environmental site inspections performed in the reporting month, the following recommendations were provided:-

Air Quality Impact

- Implement effective measures to avoid dust impact.

Construction Noise Impact

- No specific observation was identified in the reporting month.

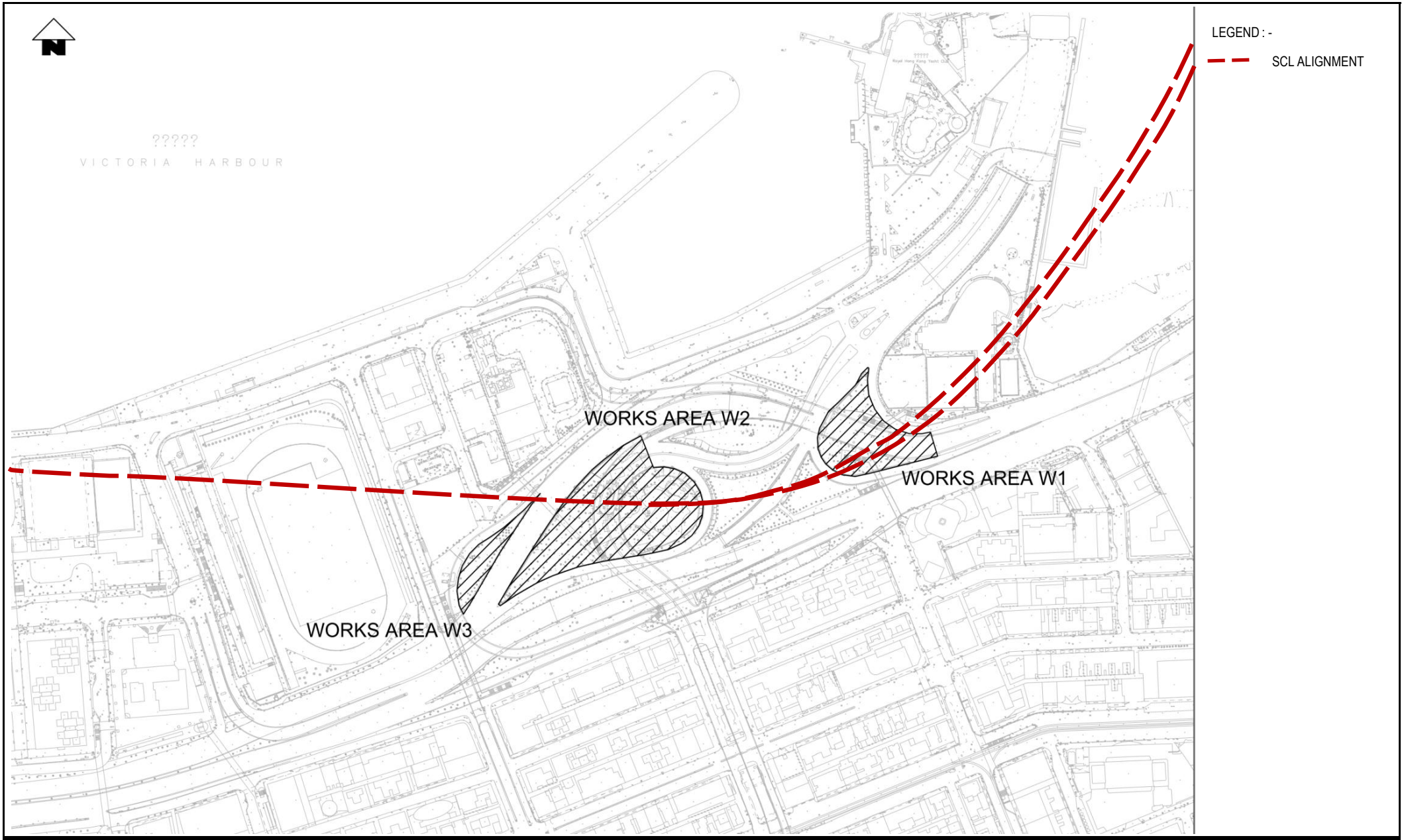
Water Quality Impact

- Implement effective measures to avoid surface runoff into the drainage system.

Chemical and Waste Management

- Provide proper chemical and construction waste management.

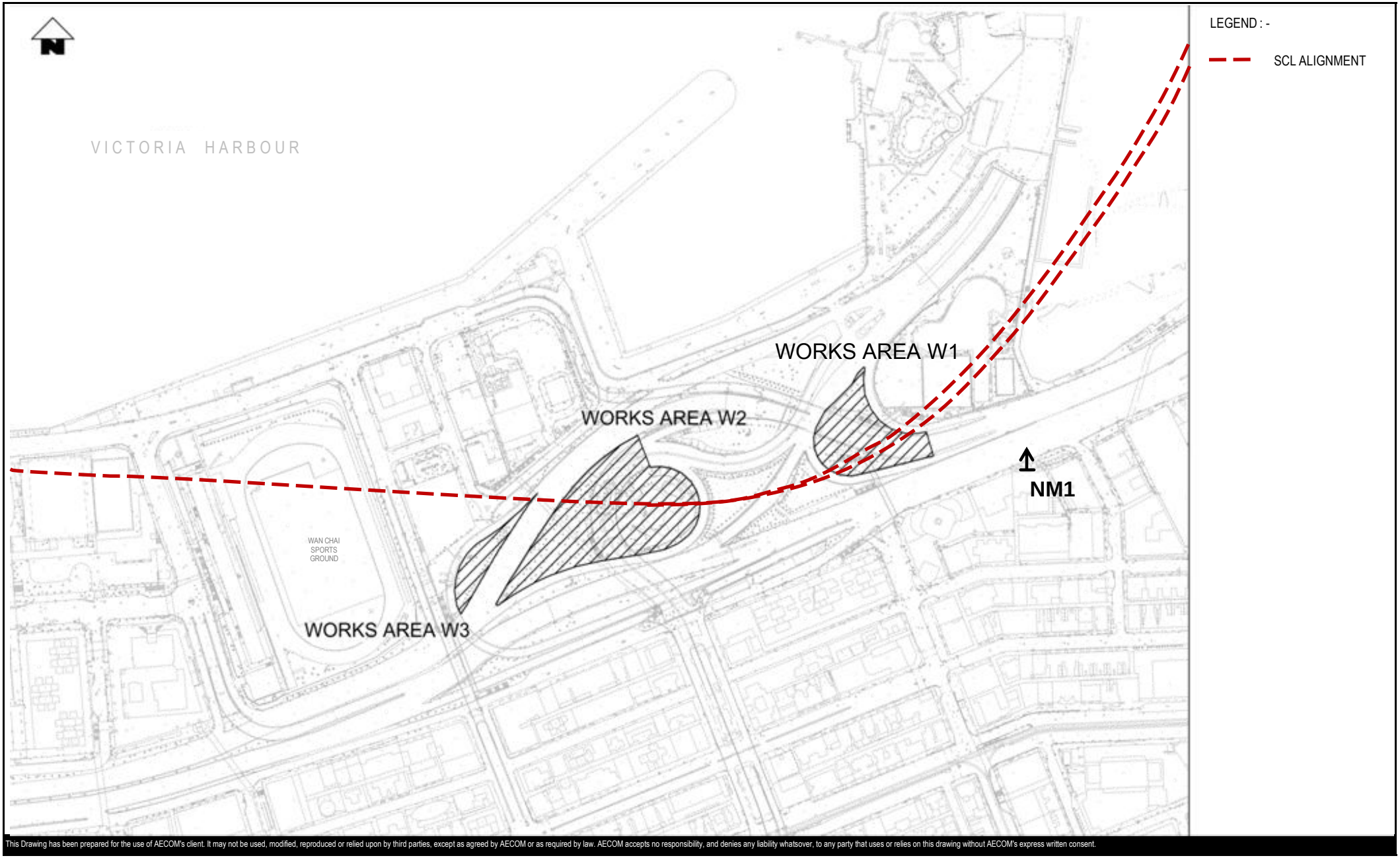
FIGURES



CONTRACT 1129
ADVANCED WORKS FOR NSL

WORKS AREA AND SITE LOCATION OF SCL1129

Project No.: - **Date: June 2014** **Figure 1.1**



CONTRACT 1129
ADVANCED WORKS FOR NSL

LOCATION OF AIR-BORNE NOISE SENSITIVE RECEIVER NM1

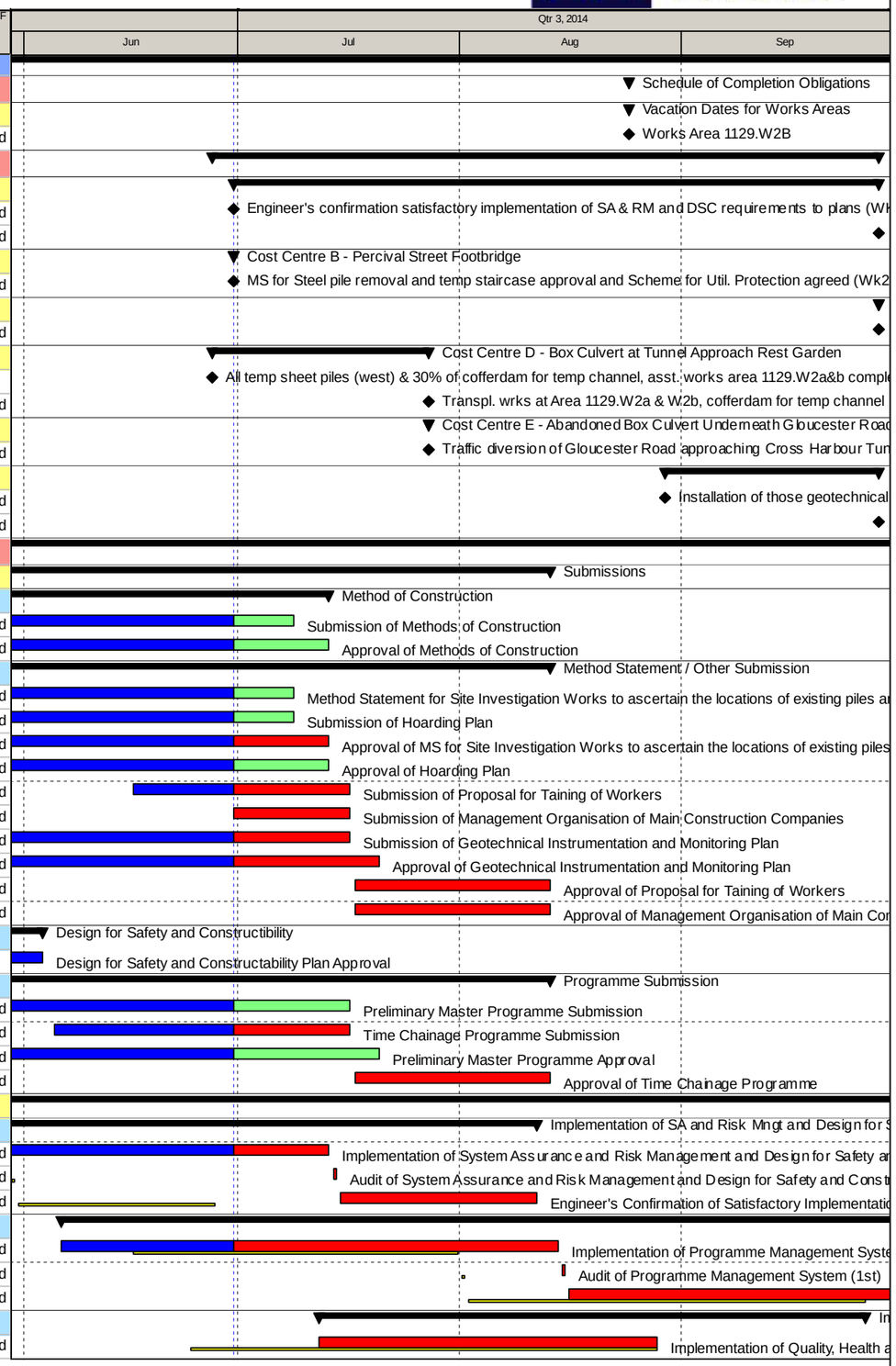
Project No.: - **Date: June 2014** **Figure 3.1**

APPENDIX A

Construction Programme

CONTRACT 1129 - ADVANCE WORK FOR NSL

Activity ID	Activity Name	Duration	Start	Finish	TF
MTRC-1129 - Advance Work for NSL 3MR					
Schedule of Completion Obligations					
Vacation Dates for Works Areas					
01129.VD1100	Works Area 1129.W2B	0.00d		24-Aug-14 18:00*	0.00d
Schedule of Milestones					
Cost Centre A - Preliminaries					
01129.MSA02	Engineer's confirmation satisfactory implementation of SA & RM and DSC requirements to plans (WK26/14)	0.00d		30-Jun-14 08:00*	0.00d
01129.MSA03	Engineer's confirmation of satisfactory implementation of PMS, QHSE management requirements (Wk39/14)	0.00d		28-Sep-14 18:00*	0.00d
Cost Centre B - Percival Street Footbridge					
01129.MSB01	MS for Steel pile removal and temp staircase approval and Scheme for Util. Protection agreed (Wk21/14)	0.00d		30-Jun-14 08:00*	-59.00d
Cost Centre C - Causeway Flyover & Hung Hing Flyover					
01129.MSC02	All piling works for Pier A5 completed and all relevant tests accepted. (Wk39/14)	0.00d		28-Sep-14 18:00*	0.00d
Cost Centre D - Box Culvert at Tunnel Approach Rest Garden					
01129.MSD01	All temp sheet piles (west) & 30% of cofferdam for temp channel, asst. works area 1129.W2a&b completed	0.00d		27-Jun-14 08:00 A	
01129.MSD02	Transpl. wrks at Area 1129.W2a & W2b, cofferdam for temp channel & 70% of bulk excav'n by volume completed (Wk 3(	0.00d		27-Jul-14 18:00*	0.00d
Cost Centre E - Abandoned Box Culvert Underneath Gloucester Road					
01129.MSE02	Traffic diversion of Gloucester Road approaching Cross Harbour Tunnel implemented and MS for SI works approved (Wl	0.00d		27-Jul-14 18:00*	0.00d
Cost Centre F - Associated Works					
01129.MSF01	Installation of those geotechnical instrumentations within Works areas completed. (Wk13/14)	0.00d		29-Aug-14 18:00*	-152.00d
01129.MSF02	50%tree compensation works at various areas in Wan Chai district completed including associated instrumentaion (WK3!	0.00d		28-Sep-14 18:00*	0.00d
Preliminaries and General Requirements					
Submissions					
Method of Construction					
01129.PG1040	Submission of Methods of Construction	45.00d	14-Apr-14 08:00 A	08-Jul-14 18:00	51.00d
01129.PG1050	Approval of Methods of Construction	28.00d	29-Apr-14 08:00 A	13-Jul-14 18:00	54.00d
Method Statement / Other Submission					
01129.PG1350	Method Statement for Site Investigation Works to ascertain the locations of existing piles and utilities submission	40.00d	22-Apr-14 08:00 A	08-Jul-14 18:00	833.00d
01129.PG1590	Submission of Hoarding Plan	28.00d	07-Feb-14 08:00 A	08-Jul-14 18:00	833.00d
01129.PG1360	Approval of MS for Site Investigation Works to ascertain the locations of existing piles and utilities approved	28.00d	12-May-14 08:00 A	13-Jul-14 18:00	-18.00d
01129.PG1600	Approval of Hoarding Plan	28.00d	08-Apr-14 08:00 A	13-Jul-14 18:00	203.00d
01129.PG1370	Submission of Proposal for Taining of Workers	72.00d	16-Jun-14 08:00 A	16-Jul-14 18:00*	-70.00d
01129.PG1410	Submission of Management Organisation of Main Construction Companies	14.00d	30-Jun-14 08:00	16-Jul-14 18:00	-128.00d
01129.PG1610	Submission of Geotechnical Instrumentation and Monitoring Plan	56.00d	20-Mar-14 08:00 A	16-Jul-14 18:00	-85.00d
01129.PG1620	Approval of Geotechnical Instrumentation and Monitoring Plan	28.00d	28-Mar-14 08:00 A	20-Jul-14 18:00	-113.00d
01129.PG1380	Approval of Proposal for Taining of Workers	28.00d	17-Jul-14 08:00	13-Aug-14 18:00*	-90.00d
01129.PG1420	Approval of Management Organisation of Main Construction Companies	28.00d	17-Jul-14 08:00	13-Aug-14 18:00*	-159.00d
Design for Safety and Constructibility					
01129.PG1110	Design for Safety and Constructability Plan Approval	28.00d	08-May-14 08:00 A	03-Jun-14 18:00 A	
Programme Submission					
01129.PG1120	Preliminary Master Programme Submission	45.00d	17-Mar-14 08:00 A	16-Jul-14 18:00	13.00d
01129.PG1493	Time Chainage Programme Submission	45.00d	05-Jun-14 08:00 A	16-Jul-14 18:00	-97.00d
01129.PG1130	Preliminary Master Programme Approval	28.00d	29-May-14 08:00 A	20-Jul-14 18:00	11.00d
01129.PG1494	Approval of Time Chainage Programme	28.00d	17-Jul-14 08:00	13-Aug-14 18:00*	-122.00d
Implementation					
Implementation of SA and Risk Mngt and Design for Safety and Constructibility					
01129.PG1200	Implementation of System Assurance and Risk Management and Design for Safety and Constructability Req'ts	46.00d	08-May-14 08:00 A	13-Jul-14 18:00	-45.00d
01129.PG1260	Audit of System Assurance and Risk Management and Design for Safety and Constructability Risk Register	1.00d	14-Jul-14 08:00	14-Jul-14 18:00	-36.00d
01129.PG1210	Engineer's Confirmation of Satisfactory Implementation	28.00d	15-Jul-14 08:00	11-Aug-14 18:00*	-45.00d
Implementation of Programme Mngt System					
01129.PG1220	Implementation of Programme Management System (1st)	46.00d	06-Jun-14 08:00 A	14-Aug-14 18:00	-14.00d
01129.PG1270	Audit of Programme Management System (1st)	1.00d	15-Aug-14 08:00	15-Aug-14 18:00	-12.00d
01129.PG1230	Engineer's Confirmation of Satisfactory Implementation (1st) (26-Sep-14)	56.00d	16-Aug-14 08:00	10-Oct-14 18:00*	-14.00d
Implementation of Quality, Health and Safety and Env't Mngt					
01129.PG1240	Implementation of Quality, Health and Safety and Environmental Management Requirements	48.00d	12-Jul-14 08:00	28-Aug-14 18:00	0.00d

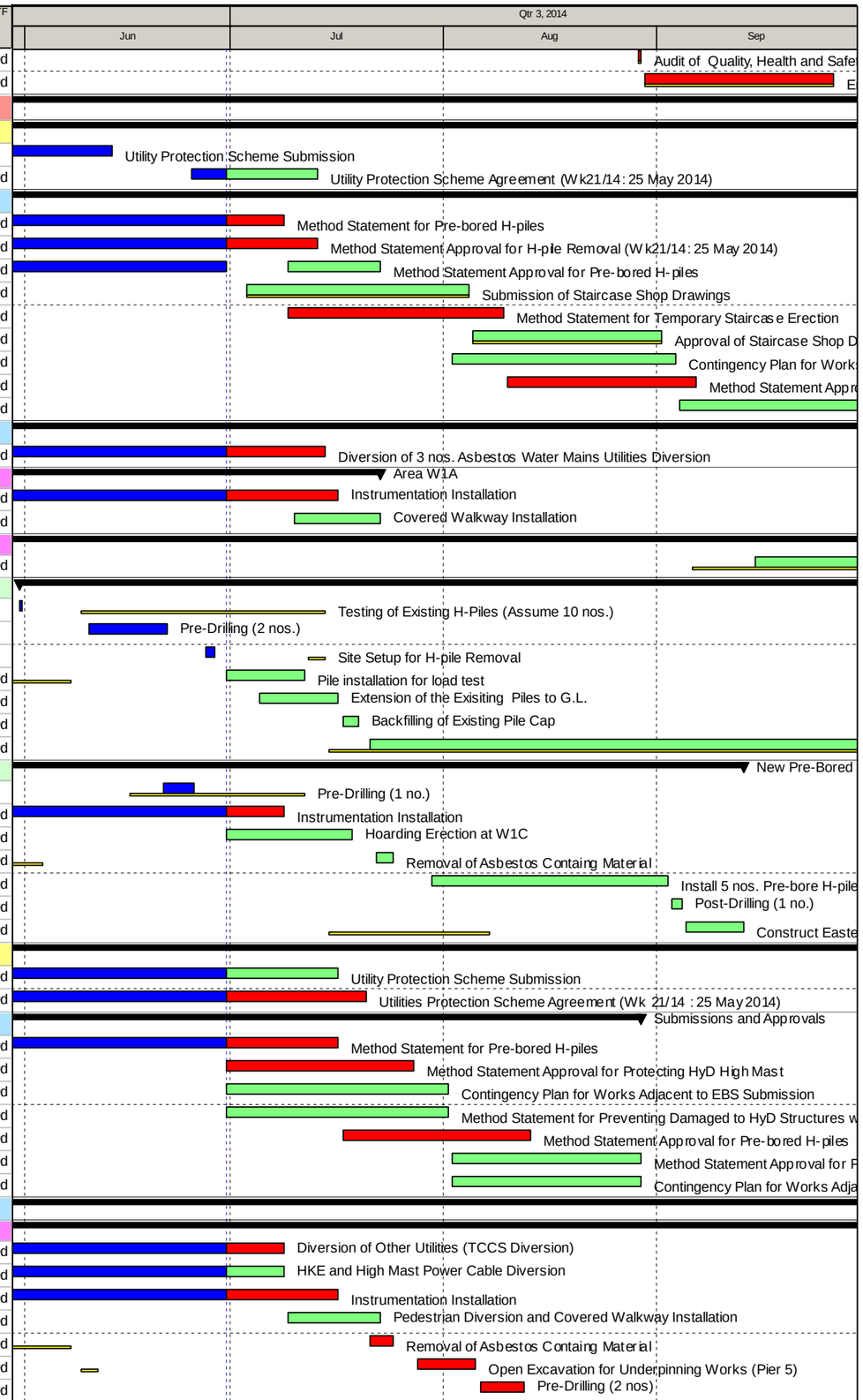


Actual Level of Effort | Remaining Work | Summary
Primary Baseline | Critical Remaining Work
Actual Work | Milestone

3-MONTH-ROLLING PROGRAMME (JUNE 2014)

Date	Revision	Checked	Approved
30-Jun-14 00:00	Rev.-	AB	AS

Activity ID	Activity Name	Duration	Start	Finish	TF
01129.PG1280	Audit of Quality, Health and Safety and Environmental Management	1.00d	29-Aug-14 08:00	29-Aug-14 18:00	0.00d
01129.PG1250	Engineer's Confirmation of Satisfactory Implementation (27-Sep-15)	28.00d	30-Aug-14 08:00	26-Sep-14 18:00*	0.00d
Construction Works					
Contract Work 1 - H-Pile Removal & Percival Street Footbridge Modification					
01129.CW11020B	Utility Protection Scheme Submission	35.00d	23-May-14 08:00 A	13-Jun-14 18:00 A	
01129.CW11030B	Utility Protection Scheme Agreement (Wk21/14: 25 May 2014)	28.00d	25-Jun-14 08:00 A	13-Jul-14 18:00	42.00d
Submissions and Approvals					
01129.CW11012B	Method Statement for Pre-bored H-piles	28.00d	29-Apr-14 08:00 A	08-Jul-14 18:00	-91.00d
01129.CW11042B	Method Statement Approval for H-pile Removal (Wk21/14: 25 May 2014)	28.00d	30-Apr-14 08:00 A	13-Jul-14 18:00*	-59.00d
01129.CW11022B	Method Statement Approval for Pre-bored H-piles	28.00d	20-May-14 08:00 A	22-Jul-14 18:00	33.00d
01129.CW11210B10	Submission of Staircase Shop Drawings	28.00d	03-Jul-14 08:00	04-Aug-14 18:00	34.00d
01129.CW11170B	Method Statement for Temporary Staircase Erection	28.00d	09-Jul-14 08:00	09-Aug-14 18:00	-91.00d
01129.CW11210B20	Approval of Staircase Shop Drawings	28.00d	05-Aug-14 08:00	01-Sep-14 18:00	41.00d
01129.CW11002Ba	Contingency Plan for Works Adjacent to EBS Submission	28.00d	02-Aug-14 08:00	03-Sep-14 18:00	23.00d
01129.CW11180B	Method Statement Approval for Temporary Staircase Erection (Wk21/14: 25 May 2014)	28.00d	10-Aug-14 08:00	06-Sep-14 18:00*	-114.00d
01129.CW11003Ba	Contingency Plan for Works Adjacent to EBS Approval	28.00d	04-Sep-14 08:00	01-Oct-14 18:00	30.00d
Site Construction					
01129.CW11051B	Diversion of 3 nos. Asbestos Water Mains Utilities Diversion	18.00d	14-Apr-14 08:00 A	14-Jul-14 18:00	-24.00d
Area W1A					
01129.CW11050B1	Instrumentation Installation	63.00d	05-Mar-14 08:00 A	16-Jul-14 18:00	-85.00d
01129.CW11060B	Covered Walkway Installation	11.00d	10-Jul-14 08:00	22-Jul-14 18:00	22.00d
Area W1C					
01129.CW11210B	Staircase Off-site Fabrication	90.00d	15-Sep-14 08:00	02-Jan-15 18:00	22.00d
Existing Pile Cap and Piles Removal					
01129.CW11146B	Testing of Existing H-Piles (Assume 10 nos.)	5.00d	31-May-14 08:00 A	31-May-14 18:00 A	
01129.CW11072B	Pre-Drilling (2 nos.)	8.00d	10-Jun-14 08:00 A	21-Jun-14 18:00 A	
01129.CW11082B	Site Setup for H-pile Removal	2.00d	27-Jun-14 08:00 A	28-Jun-14 18:00 A	
01129.CW11140B	Pile installation for load test	10.00d	30-Jun-14 08:00	11-Jul-14 18:00	1.00d
01129.CW11072B	Extension of the Exisiting Piles to G.L.	10.00d	05-Jul-14 08:00	16-Jul-14 18:00	2.00d
01129.CW11072B	Backfilling of Existing Pile Cap	3.00d	17-Jul-14 08:00	19-Jul-14 18:00	2.00d
01129.CW11091B	Remove 7 Southern H-piles (43/14 : 26 Oct 2014)	84.00d	21-Jul-14 08:00	29-Oct-14 18:00	2.00d
New Pre-Bored H-Piles and Pile Cap (East)					
01129.CW11072B	Pre-Drilling (1 no.)	3.00d	21-Jun-14 08:00 A	25-Jun-14 18:00 A	
01129.CW11050B	Instrumentation Installation	7.00d	26-Apr-14 08:00 A	08-Jul-14 18:00	-78.00d
01129.CW11041Bc	Hoarding Erection at W1C	16.00d	30-Jun-14 08:00	18-Jul-14 18:00	61.00d
01129.CW11051Ba	Removal of Asbestos Containg Material	3.00d	22-Jul-14 08:00	24-Jul-14 18:00	56.00d
01129.CW11120B	Install 5 nos. Pre-bore H-piles	30.00d	30-Jul-14 08:00	02-Sep-14 18:00	22.00d
01129.CW11141B:	Post-Drilling (1 no.)	2.00d	03-Sep-14 08:00	04-Sep-14 18:00	22.00d
01129.CW11142B	Construct Eastern Pile Cap	7.00d	05-Sep-14 08:00	13-Sep-14 18:00	22.00d
Contract Work 2 - Causeway Flyover Underpinning					
01129.CW21020C	Utility Protection Scheme Submission	35.00d	23-May-14 08:00 A	16-Jul-14 18:00	826.00d
01129.CW21021C	Utilities Protection Scheme Agreement (Wk 21/14 : 25 May 2014)	28.00d	23-May-14 08:00 A	20-Jul-14 18:00	-30.00d
Submissions and Approvals					
01129.CW21330C	Method Statement for Pre-bored H-piles	28.00d	29-Apr-14 08:00 A	16-Jul-14 18:00	-26.00d
01129.CW21007C	Method Statement Approval for Protecting HyD High Mast	28.00d	30-Jun-14 08:00	27-Jul-14 18:00	-32.00d
01129.CW21002Ba	Contingency Plan for Works Adjacent to EBS Submission	28.00d	30-Jun-14 08:00	01-Aug-14 18:00	23.00d
01129.CW21008C	Method Statement for Preventing Damaged to HyD Structures within Low Headroom	28.00d	30-Jun-14 08:00	01-Aug-14 18:00	51.00d
01129.CW21340C	Method Statement Approval for Pre-bored H-piles	28.00d	17-Jul-14 08:00	13-Aug-14 18:00	-31.00d
01129.CW21009C	Method Statement Approval for Preventing Damaged to HyD Structures within Low Headroom	28.00d	02-Aug-14 08:00	29-Aug-14 18:00	63.00d
01129.CW21003Ba	Contingency Plan for Works Adjacent to EBS Approval	28.00d	02-Aug-14 08:00	29-Aug-14 18:00	63.00d
Site Construction					
Area W1B					
01129.CW21052B	Diversion of Other Utilities (TCCS Diversion)	24.00d	23-Apr-14 08:00 A	08-Jul-14 18:00	-10.00d
01129.CW21060B2	HKE and High Mast Power Cable Diversion	4.00d	12-May-14 08:00 A	08-Jul-14 18:00	56.00d
01129.CW21040C	Instrumentation Installation	63.00d	23-Apr-14 08:00 A	16-Jul-14 18:00	-17.00d
01129.CW21060B1	Pedestrian Diversion and Covered Walkway Installation	12.00d	09-Jul-14 08:00	22-Jul-14 18:00	56.00d
01129.CW21041C2	Removal of Asbestos Containg Material	4.00d	21-Jul-14 08:00	24-Jul-14 18:00	-24.00d
01129.CW21050C	Open Excavation for Underpinning Works (Pier 5)	8.00d	28-Jul-14 08:00	05-Aug-14 18:00	-26.00d
01129.CW21072B2	Pre-Drilling (2 nos)	6.00d	06-Aug-14 08:00	12-Aug-14 18:00	-26.00d

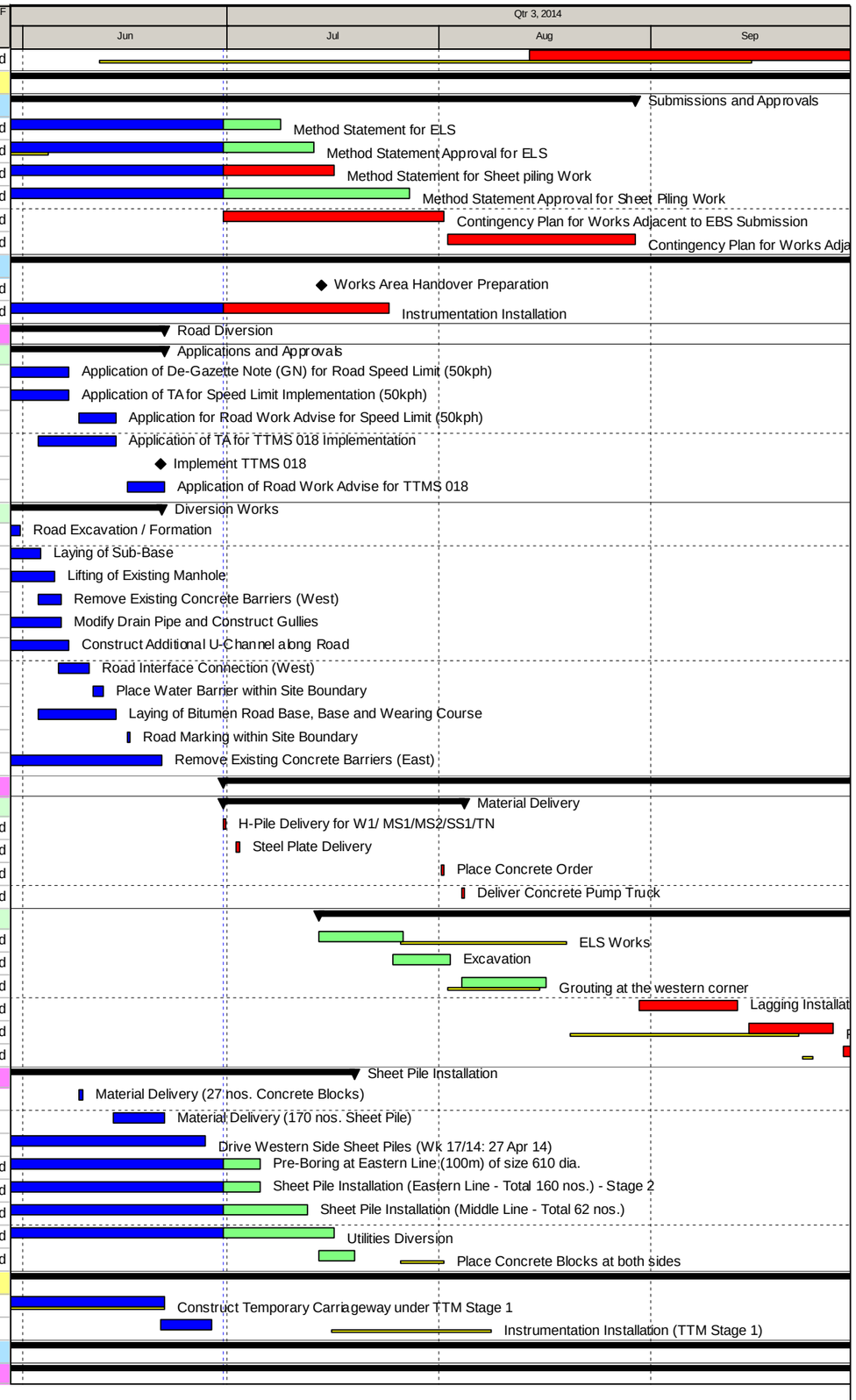


Actual Level of Effort
Actual Work
Remaining Work
Primary Baseline
Critical Remaining Work
Summary
Milestone

3-MONTH-ROLLING PROGRAMME (JUNE 2014)

Date	Revision	Checked	Approved
30-Jun-14 00:00	Rev.-	AB	AS

Activity ID	Activity Name	Duration	Start	Finish	TF
01129.CW21051C	Install 6 Pre-bored H-piles within low headroom	54.00d	14-Aug-14 08:00	18-Oct-14 18:00	-27.00d
Contract Work 3 - Box Culvert Diversion					
Submissions and Approvals					
01129.CW31140D	Method Statement for ELS	28.00d	20-Mar-14 08:00 A	08-Jul-14 18:00	32.00d
01129.CW31150D	Method Statement Approval for ELS	28.00d	30-Apr-14 08:00 A	13-Jul-14 18:00	32.00d
01129.CW31120D	Method Statement for Sheet piling Work	28.00d	17-Mar-14 08:00 A	16-Jul-14 18:00	-5.00d
01129.CW31130D	Method Statement Approval for Sheet Piling Work	28.00d	13-May-14 08:00 A	27-Jul-14 18:00	45.00d
01129.CW31002Ba	Contingency Plan for Works Adjacent to EBS Submission	28.00d	30-Jun-14 08:00	01-Aug-14 18:00	-5.00d
01129.CW31003Ba	Contingency Plan for Works Adjacent to EBS Approval	28.00d	02-Aug-14 08:00	29-Aug-14 18:00	-5.00d
Site Construction					
01129.CW31161B	Works Area Handover Preparation	0.00d		14-Jul-14 18:00	10.00d
01129.CW31160D	Instrumentation Installation	45.00d	05-May-14 08:00 A	24-Jul-14 18:00	-92.00d
Road Diversion					
Applications and Approvals					
01129.CW3AA103	Application of De-Gazette Note (GN) for Road Speed Limit (50kph)	6.00d	26-May-14 08:00 A	07-Jun-14 18:00 A	
01129.CW3AA104	Application of TA for Speed Limit Implementation (50kph)	6.00d	26-May-14 08:00 A	07-Jun-14 18:00 A	
01129.CW3AA105	Application for Road Work Advise for Speed Limit (50kph)	6.00d	09-Jun-14 08:00 A	14-Jun-14 18:00 A	
01129.CW3AA106	Application of TA for TTMS 018 Implementation	11.00d	03-Jun-14 08:00 A	14-Jun-14 18:00 A	
01129.CW3AA108	Implement TTMS 018	0.00d		21-Jun-14 08:00 A	
01129.CW3AA107	Application of Road Work Advise for TTMS 018	6.00d	16-Jun-14 08:00 A	21-Jun-14 18:00 A	
Diversion Works					
01129.CW3DW10	Road Excavation / Formation	14.00d	12-May-14 08:00 A	31-May-14 18:00 A	
01129.CW3DW10	Laying of Sub-Base	8.00d	22-May-14 08:00 A	03-Jun-14 18:00 A	
01129.CW3DW10	Lifting of Existing Manhole	4.00d	30-May-14 08:00 A	05-Jun-14 18:00 A	
01129.CW3DW11	Remove Existing Concrete Barriers (West)	4.00d	03-Jun-14 08:00 A	06-Jun-14 18:00 A	
01129.CW3DW10	Modify Drain Pipe and Construct Gullies	5.00d	29-May-14 08:00 A	06-Jun-14 18:00 A	
01129.CW3DW10	Construct Additional U-Channel along Road	8.00d	27-May-14 08:00 A	07-Jun-14 18:00 A	
01129.CW3DW11	Road Interface Connection (West)	4.00d	06-Jun-14 08:00 A	10-Jun-14 18:00 A	
01129.CW3DW11	Place Water Barrier within Site Boundary	2.00d	11-Jun-14 08:00 A	12-Jun-14 18:00 A	
01129.CW3DW10	Laying of Bitumen Road Base, Base and Wearing Course	11.00d	03-Jun-14 08:00 A	14-Jun-14 18:00 A	
01129.CW3DW11	Road Marking within Site Boundary	1.00d	16-Jun-14 08:00 A	16-Jun-14 18:00 A	
01129.CW3DW10	Remove Existing Concrete Barriers (East)	3.00d	19-May-14 08:00 A	21-Jun-14 12:00 A	
ELS Installation					
Material Delivery					
01129.CW3MD10	H-Pile Delivery for W1/ MS1/MS2/SS1/TN	1.00d	30-Jun-14 08:00*	30-Jun-14 18:00	-12.00d
01129.CW3MD10	Steel Plate Delivery	1.00d	02-Jul-14 08:00*	02-Jul-14 18:00	0.00d
01129.CW3MD10	Place Concrete Order	1.00d	01-Aug-14 08:00*	01-Aug-14 18:00	0.00d
01129.CW3MD10	Deliver Concrete Pump Truck	1.00d	04-Aug-14 08:00*	04-Aug-14 18:00	0.00d
Site Construction					
01129.CW31220D	ELS Works	12.00d	14-Jul-14 08:00	26-Jul-14 18:00	28.00d
01129.CW31220D	Excavation	8.00d	25-Jul-14 08:00	02-Aug-14 18:00	21.00d
01129.CW31181D	Grouting at the western corner	12.00d	04-Aug-14 08:00	16-Aug-14 18:00	47.00d
01129.CW31220D	Lagging Installation for Existing Drains	12.00d	30-Aug-14 08:00	13-Sep-14 18:00	-5.00d
01129.CW31190D	Fix Steel Plates	12.00d	15-Sep-14 08:00	27-Sep-14 18:00	-5.00d
01129.CW31190D	Cast Base Slab (Wk39/14: 28 Sep 14)	2.00d	29-Sep-14 08:00	30-Sep-14 18:00*	-5.00d
Sheet Pile Installation					
01129.CW31180D2	Material Delivery (27 nos. Concrete Blocks)	1.00d	09-Jun-14 08:00 A	09-Jun-14 18:00 A	
01129.CW31180D1	Material Delivery (170 nos. Sheet Pile)	1.00d	14-Jun-14 08:00 A	21-Jun-14 18:00 A	
01129.CW31180D	Drive Western Side Sheet Piles (Wk 17/14: 27 Apr 14)	18.00d	29-Apr-14 08:00 A	27-Jun-14 18:00 A	
01129.CW31180D3	Pre-Boring at Eastern Line (100m) of size 610 dia.	30.00d	29-May-14 08:00 A	05-Jul-14 18:00	829.00d
01129.CW31210D1	Sheet Pile Installation (Eastern Line - Total 160 nos.) - Stage 2	34.00d	19-May-14 08:00 A	05-Jul-14 18:00	39.00d
01129.CW31210D2	Sheet Pile Installation (Middle Line - Total 62 nos.)	28.00d	23-May-14 08:00 A	12-Jul-14 18:00	823.00d
01129.CW31170D	Utilities Diversion	21.00d	11-May-14 08:00 A	16-Jul-14 18:00	823.00d
01129.CW31220D1	Place Concrete Blocks at both sides	6.00d	14-Jul-14 08:00	19-Jul-14 18:00	823.00d
Contract Work 4 - Pile Removal at Tunnel Approach Road					
01129.CW41100E	Construct Temporary Carriageway under TTM Stage 1	45.00d	28-Apr-14 08:00 A	21-Jun-14 18:00 A	
01129.CW41151E	Instrumentation Installation (TTM Stage 1)	21.00d	21-Jun-14 08:00 A	28-Jun-14 18:00 A	
Submissions and Approvals					
Method Statements					

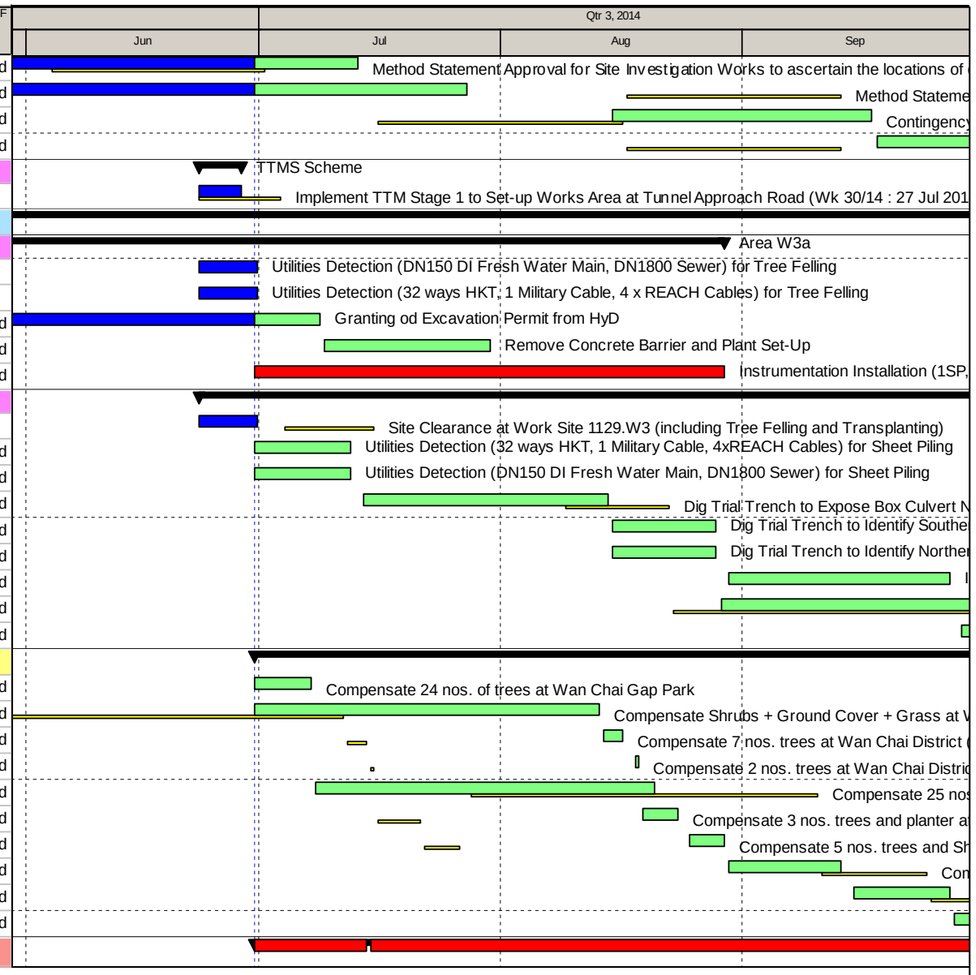


Actual Level of Effort | Remaining Work | Summary
Primary Baseline | Critical Remaining Work
Actual Work | Milestone

3-MONTH-ROLLING PROGRAMME (JUNE 2014)

Date	Revision	Checked	Approved
30-Jun-14 00:00	Rev.-	AB	AS

Activity ID	Activity Name	Duration	Start	Finish	TF
01129.CW41122E	Method Statement Approval for Site Investigation Works to ascertain the locations of existing piles and utilities	28.00d	23-Apr-14 08:00 A	13-Jul-14 18:00	8.00d
01129.CW41160E	Method Statement Approval for Concrete Piles Removal Work	28.00d	30-Apr-14 08:00 A	27-Jul-14 18:00	189.00d
01129.CW41002Ba	Contingency Plan for Works Adjacent to EBS Submission	28.00d	15-Aug-14 08:00	17-Sep-14 18:00	60.00d
01129.CW41003Ba	Contingency Plan for Works Adjacent to EBS Approval	28.00d	18-Sep-14 08:00	15-Oct-14 18:00	72.00d
TTMS Scheme					
01129.CW41120E	Implement TTM Stage 1 to Set-up Works Area at Tunnel Approach Road (Wk 30/14 : 27 Jul 2014)	2.00d	23-Jun-14 08:00 A	28-Jun-14 18:00 A	
Site Construction					
Area W3a					
01129.CW3a1020	Utilities Detection (DN150 DI Fresh Water Main, DN1800 Sewer) for Tree Felling	18.00d	23-Jun-14 08:00 A	30-Jun-14 18:00 A	
01129.CW3a1010	Utilities Detection (32 ways HKT, 1 Military Cable, 4 x REACH Cables) for Tree Felling	18.00d	23-Jun-14 08:00 A	30-Jun-14 18:00 A	
01129.CW3a1060	Granting od Excavation Permit from HyD	7.00d	12-May-14 08:00 A	08-Jul-14 18:00	82.00d
01129.CW3a1050	Remove Concrete Barrier and Plant Set-Up	19.00d	09-Jul-14 08:00	30-Jul-14 18:00	82.00d
01129.CW3a1040	Instrumentation Installation (1SP, 3UMP, 3GMS) within Site Boundary	52.00d	30-Jun-14 08:00	29-Aug-14 18:00	-123.00d
Area W3b					
01129.CW41130E	Site Clearance at Work Site 1129.W3 (including Tree Felling and Transplanting)	10.00d	23-Jun-14 08:00 A	30-Jun-14 18:00 A	
01129.CW41130E1	Utilities Detection (32 ways HKT, 1 Military Cable, 4xREACH Cables) for Sheet Piling	11.00d	30-Jun-14 08:00	12-Jul-14 18:00	7.00d
01129.CW41130E2	Utilities Detection (DN150 DI Fresh Water Main, DN1800 Sewer) for Sheet Piling	11.00d	30-Jun-14 08:00	12-Jul-14 18:00	7.00d
01129.CW41260E	Dig Trial Trench to Expose Box Culvert Northern MJ for Pile Location Indentification	28.00d	14-Jul-14 08:00	14-Aug-14 18:00	7.00d
01129.CW41260E1	Dig Trial Trench to Identify Southern Utilities Alignment for Sheet Piling Installation	12.00d	15-Aug-14 08:00	28-Aug-14 18:00	7.00d
01129.CW41260E2	Dig Trial Trench to Identify Northern Utilities Alignment for Sheet Piling Installation	12.00d	15-Aug-14 08:00	28-Aug-14 18:00	7.00d
01129.CW41171E1	Installation of Sheet Sheet Pile (Southern)	24.00d	30-Aug-14 08:00	27-Sep-14 18:00	6.00d
01129.CW41170E	Cable Slewing, Disconnection, Protection Measures for sheet piling installation	45.00d	29-Aug-14 08:00	23-Oct-14 18:00	7.00d
01129.CW41172E	Temp Diversion of DN150DI Fresh Water Main to Southern Sheet Pile	45.00d	29-Sep-14 08:00	21-Nov-14 18:00	6.00d
Associated Works					
01129.AW1010F	Compensate 24 nos. of trees at Wan Chai Gap Park	6.00d	30-Jun-14 08:00	07-Jul-14 18:00	13.00d
01129.AW1009F	Compensate Shrubs + Ground Cover + Grass at Wan Chai Gap Park	38.00d	30-Jun-14 08:00	13-Aug-14 18:00	13.00d
01129.AW1001F	Compensate 7 nos. trees at Wan Chai District (Tai Wo Street Playground)	3.00d	14-Aug-14 08:00	16-Aug-14 18:00	15.00d
01129.AW1004F	Compensate 2 nos. trees at Wan Chai District (Tai Tam Reservoir Road Sitting-out Area)	1.00d	18-Aug-14 08:00	18-Aug-14 18:00	12.00d
01129.AW1007F	Compensate 25 nos. trees + Ground Cover + Grass at Tung Lo Wan Garden	38.00d	08-Jul-14 08:00	20-Aug-14 18:00	20.00d
01129.AW1003F	Compensate 3 nos. trees and planter at Wan Chai District (Hong Kong Tennis Centre)	5.00d	19-Aug-14 08:00	23-Aug-14 18:00	12.00d
01129.AW1005F	Compensate 5 nos. trees and Shrub at Wan Chai District (Lockhart Road Playground)	5.00d	25-Aug-14 08:00	29-Aug-14 18:00	12.00d
01129.AW1008F	Compensate 5 nos. + Grass at Tai Hang Road Children Playground (Wk39/14 : 28 Sep 2014)	12.00d	30-Aug-14 08:00	13-Sep-14 18:00*	12.00d
01129.AW1006F	TTM Submission for tree compensation at Victoria Road	12.00d	15-Sep-14 08:00	27-Sep-14 18:00	300.00d
01129.AW1020F	TTM Approval for tree compensation at Victoria Road	45.00d	28-Sep-14 08:00	11-Nov-14 18:00	371.00d
Optional Construction Works					



Actual Level of Effort
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

3-MONTH-ROLLING PROGRAMME (JUNE 2014)

Date	Revision	Checked	Approved
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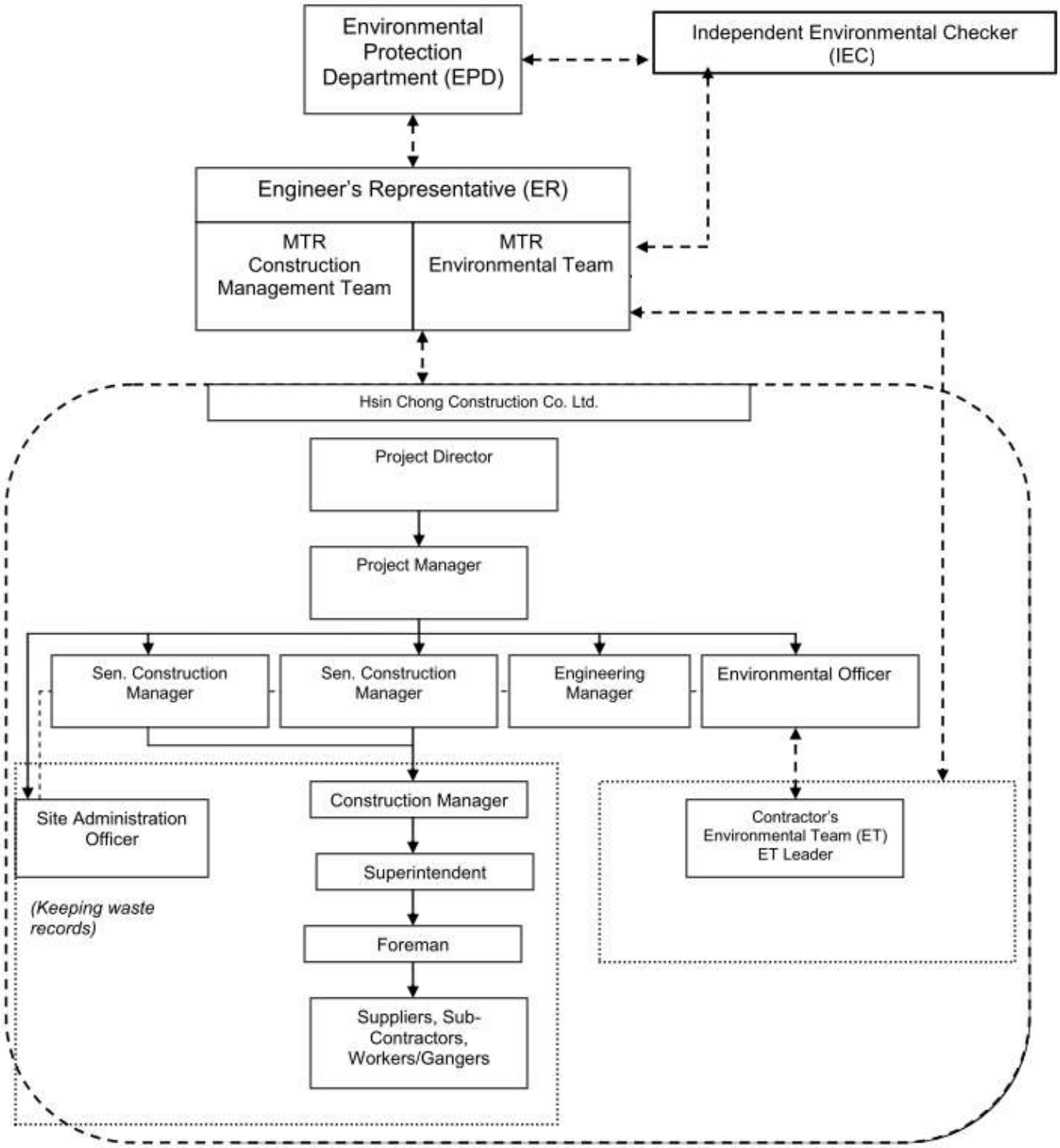
APPENDIX B

Project Organization Structure

Appendix B Project Organisation Structure



APPENDIX C

Environmental Mitigation Measures Implementation Schedule

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
Cultural Heritage Impact						
S4.93 & Table 4.2	Erection of decorative and sensibly designed hoarding along the boundary of the works area	To mitigate the temporary visual impact due to surface works.	Contractor	Works Areas in Causeway Bay and Wan Chai, and Works Shaft in Admiralty	Construction Phase	V
Ecological Impact						
S5.134	Accidental chemical spillage and construction site run-off to the receiving water bodies, mitigation measures such as removing the pollutants before discharge into storm drain and paving the section of construction road between the wheel washing bay and the public road as suggested in Sections 11.216 and 11.219 to 11.256 of the EIA Report shall be adopted.	To minimize the contamination of wastewater discharge	Contractor	All land based works areas	Construction Phase	V
Landscape and Visual Impact						
Construction Phase						
Table 7.9	CM1 - Trees unavoidably affected by the works shall be transplanted as far as possible in accordance with ETWB TC(W) 3/2006 – Tree Preservation.	Transplanting and reuse of affected trees.	MTR	Works Sites	Construction Phase	V
Table 7.9	CM2a - Compensatory tree planting shall be provided in accordance with ETWB TC(W) 3/2006 – Tree Preservation to compensate for felled trees and maintained until end of the establishment period.	Compensation for the removal of existing trees due to the Project.	MTR	Works Sites	Construction Phase	N/A
Table 7.9	CM2b - Compensatory shrub planting shall be provided to compensate for the loss of shrub planting in amenity areas.	Compensation for the removal of existing shrub planting due to the Project.	MTR	Works Sites	Construction Phase	N/A
Table 7.9	CM3 - Control of night-time lighting glare	Minimize the night time glare due to the Project during construction phase	MTR	Works Sites	Construction Phase	N/A
Table 7.9	CM4 - Erection of decorative screen hoarding compatible with the surrounding setting.	Minimize the visual impact of the Project during construction phase	MTR	Works Sites	Construction Phase	N/A
Table 7.9	CM5 - Management of facilities on work sites which give control on the height and disposition/arrangement of all facilities on the works site to minimize visual impact to adjacent VSRs	Control of height and deposition/ arrangement of temporary facilities in works areas	MTR	Works Sites	Construction Phase	N/A
Table 7.9	CM6 - All hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like-to-like basis to the satisfaction of the relevant Government Departments.	Reinstatement of temporary works areas.	MTR	Works Sites	Construction Phase	N/A

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Air Quality						
/	Emission from Vehicles and Plants • All vehicles shall be shut down in intermittent use. • Only well-maintained plant should be operated on-site and plant should be serviced regularly to avoid emission of black smoke. • All diesel fuelled construction plant within the works areas shall be powered by ultra low sulphur diesel fuel (ULSD)	Reduce air pollution emission from construction vehicles and plants	Contractor	Works areas	Construction phase	V
Construction Dust Impact						
S8.89	Watering once every working hour on active works areas, exposed areas and paved haul roads to reduce dust emission by 91.7%. This dust suppression efficiency is derived based on the average haul road traffic, average evaporation rate and an assumed application intensity of 1.7 L/m2 for Kowloon side and 1.0 L/m2 for Hong Kong side once every working hour. Any potential dust impact and watering mitigation would be subject to the actual site condition. For example, a construction activity that produces inherently wet conditions or in cases under rainy weather, the above water application intensity may not be unreservedly applied. While the above watering frequency is to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 for Kowloon side and 1.0 L/m2 for Hong Kong side to achieve the removal efficiency. The dust levels would be monitored and managed under an EM&A programme as specified in the EM&A Manual.	To minimize dust impact	Contractor	Works areas	Construction Phase	@
S8.90	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices: • Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. • Use of frequent watering for particularly dusty construction areas and areas close to ASRs. • Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. • Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. • Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. • Provision of not less than 2.4m high hoarding from ground level along site	To minimize dust impacts	Contractor	Works areas	Construction phase	@

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. • Imposition of speed controls for vehicles on site haul roads. • Where possible, routing of vehicles and positioning of construction plant shall be at the maximum possible distance from ASRs. • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. • Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise					
Airborne Noise Impact						
Construction Phase						
S9.55	The following good site practices shall be implemented: • Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program • Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program • Mobile plant, if any, shall be sited as far from NSRs as possible • Machines and plant (such as trucks) that may be in intermittent use shall be shut down between work periods or shall be throttled down to a minimum • Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs • Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities	To minimize construction noise impact	Contractor	Works areas	Construction phase	V
S9.56 & Table 9.16	The following quiet PME shall be used: • Crane lorry, mobile • Crane, mobile • Asphalt paver • Backhoe with hydraulic breaker • Breaker, excavator mounted (hydraulic) • Hydraulic breaker • Concrete lorry mixer • Poker, vibrator, hand-held • Concrete pump • Crawler crane, mobile • Mobile crane • Dump truck • Excavator • Truck • Rock drill	To minimize construction noise impact	Contractor	Works areas at: • Hung Hom • Cross Harbour section up to Breakwater of CBTS • Breakwater of CBTS to SOV • SOV to EXH • EXH • EXH to open space at the junction of Expo Drive and Convention Avenue • Open space at the junction of Expo Drive and Convention Avenue	Construction phase	V

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	• Lorry • Wheel loader • Roller vibratory			to north of ADM • South of ADM to Overrun Tunnel		
S9.58 – S9.59 & Table 9.17	Movable noise barrier shall be used for the following PME: • Air compressor • Asphalt paver • Backhoe with hydraulic breaker • Bar bender • Bar bender and cutter (electric) • Breaker, excavator mounted • Concrete pump • Concrete pump, stationary/lorry mounted • Excavator • Generator • Grout pump • Hand held breaker • Hydraulic breaker • Saw, concrete	To minimize construction noise impact	Contractor	Works areas at: • Cross Harbour section up to Breakwater of CBTS • Breakwater of CBTS to SOV • SOV to EXH • EXH • EXH to open space at the junction of Expo Drive and Convention Avenue • Open space at the junction of Expo Drive and Convention Avenue to north of ADM • South of ADM to Overrun Tunnel	Construction phase	V
Water Quality Impact						
Construction Phase						
S11.222 to 11.245	The site practices outlined in ProPECC PN 1/94 “Construction Site Drainage” shall be followed where practicable. <u>Surface Run-off</u> • Surface run-off from construction sites shall be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels or earth bunds or sand bag barriers shall be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries shall be provided where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks. • Silt removal facilities, channels and manholes shall be maintained and the deposited silt and grit shall be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Any practical options for the diversion and re-alignment of drainage shall comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains. Minimum distances of 100 m shall be maintained between the discharge points of construction site runoff and the existing saltwater intakes. • Construction works shall be programmed to minimize soil excavation works in rainy	To minimize water quality impacts from construction site runoff and general construction activities	Contractor	Works areas	Construction Phase	@

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EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces shall be covered e.g. by tarpaulin, and temporary access roads shall be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels shall be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements shall always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. • Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels shall be provided where necessary. • Measures shall be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they shall be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations shall be discharged into storm drains via silt removal facilities. • Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites shall be covered with tarpaulin or similar fabric during rainstorms. • Manholes (including newly constructed ones) shall always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system. • Good site practices shall be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis. <u>Boring and Drilling Water</u> • Water used in ground boring and drilling for site investigation or rock / soil anchoring shall as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater shall be discharged into storm drains via silt removal facilities. <u>Wheel Washing Water</u> • All vehicles and plant shall be cleaned before they leave a construction site to minimize the deposition of earth, mud, debris on roads. A wheel washing bay shall be provided at every site exit if practicable and wash-water shall have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road shall be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. <u>Bentonite Slurries</u> • Bentonite slurries used in diaphragm wall and bore-pile construction shall be reconditioned and used again wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the bentonite slurries shall either be d ewatered or mixed with inert fill material for disposal to a public filling area. • If the used bentonite slurry is intended to be disposed of through the public					

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EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	drainage system, it shall be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the TM-DSS. <u>Water for Testing & Sterilization of Water Retaining Structures and Water Pipes</u> • Water used in water testing to check leakage of structures and pipes shall be used for other purposes as far as practicable. Surplus unpolluted water will be discharged into storm drains. • Sterilization is commonly accomplished by chlorination. Specific advice from EPD shall be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water shall be used again wherever practicable. <u>Acid Cleaning, Etching and Pickling Wastewater</u> • Acidic wastewater generated from acid cleaning, etching, pickling and similar activities shall be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater shall be tankered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters. <u>Wastewater from Site Facilities</u> • Wastewater collected from any temporary canteen kitchens, including that from basins, sinks and floor drains, shall be discharged into foul sewer via grease traps. In case connection to the public foul sewer is not feasible, wastewater generated from kitchens or canteen, if any, shall be collected in a temporary storage tank. A licensed waste collector shall be deployed to clean the temporary storage tank on a regular basis. • Drainage serving an open oil filling point shall be connected to storm drains via petrol interceptors with peak storm bypass. • Vehicle and plant servicing areas, vehicle wash bays and lubrication bays shall as far as possible be located within roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor. Oil leakage or spillage shall be contained and cleaned up immediately. Waste oil shall be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.					
S11.246 & 11.247	Construction work force sewage discharges on site are expected to be discharged to the nearby existing trunk sewer or sewage treatment facilities. If disposal of sewage to public sewerage system is not feasible, appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment. The Contractor shall also be responsible for waste disposal and maintenance practices. Notices shall be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	To minimize water quality impacts due to sewage generated from construction workforce	Contractor	Works areas	Construction Phase	V
S11.248	In case seepage of uncontaminated groundwater occurs, groundwater shall be pumped out from the works areas and discharged into the storm system via silt removal facilities. Uncontaminated groundwater from dewatering process shall also be discharged into the storm system via silt traps.	To minimize impact from discharge of uncontaminated groundwater	Contractor	Works areas	Construction Phase	V
S11.249	If land contaminated site is identified from the Stage 2 SI work (refer to Sections 11.188 to 11.191 of the EIA Report), the following mitigation measures shall be	To control site run-off generated from any	Contractor	Any potential contaminated areas to	Construction Phase	N/A

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	implemented for the identified contaminated area. Any transient pile of contaminated soil / material shall be minimized and shall be bottom-lined, bunded and covered with impervious membrane during rain event to avoid generation of contaminated runoff. Appropriate intercepting channels and partial shelters shall be provided where necessary to prevent rainwater from collecting within trenches or footing excavations. Any contaminated water and wastewater generated from the decontamination process shall not be directly discharged to public sewers or site drainage. They shall be treated or tanked away as necessary for proper disposal in compliance with the TM-DSS.	potential contaminated works areas.		be identified from the Stage 2 SI		
S11.250 & S11.251	No direct discharge of groundwater from contaminated areas shall be adopted. If land contamination impact and generation of contaminated groundwater is identified from the Stage 2 SI works (refer to **Sections 11.189 to 11.192** of the EIA Report), the following mitigation measures shall be adopted. Any contaminated groundwater shall be either properly treated in compliance with the requirements of the TM-DSS or properly recharged into the ground. If wastewater treatment is deployed for treating the contaminated groundwater, the wastewater treatment unit shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as TPH) to an undetectable range. All treated effluent from the wastewater treatment plant shall meet the requirements as stated in TM-DSS and shall be discharged into the foul sewers. If groundwater recharging wells are deployed, the recharging wells shall be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells shall be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in Section 2.3 of the TM-DSS. The baseline groundwater quality shall be determined prior to the selection of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, any prohibited substance such as TPH products shall be removed as necessary by installing the petrol interceptor. The Contractor shall apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater recharge operation or discharge of treated groundwater.	To minimize potential water quality impact from discharge of contaminated groundwater	Contractor	Any potential contaminated areas to be identified from the Stage 2 SI	Construction Phase	N/A
S11.253	There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas shall be treated so that it satisfies all the standards listed in the TM-DSS. Minimum distances of 100 m shall be maintained between the discharge points of construction site effluent and the existing seawater intakes. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If	To minimize water quality impact from effluent discharges from construction sites	Contractor	All construction works areas	Construction Phase	V

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	monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring shall be carried out in accordance with the WPCO license which is under the ambit of Regional Office (RO) of EPD.					
S11.254	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation shall be observed and complied with for control of chemical wastes.	To minimize water quality impact from accidental spillage of chemical	Contractor	All construction works areas	Construction Phase	V
S11.255	Any service shop and maintenance facilities shall be located on hard standings within a bunded area, and sumps and oil interceptors shall be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage shall only be undertaken within the areas appropriately equipped to control these discharges.	To minimize water quality impact from accidental spillage of chemical	Contractor	All construction works areas	Construction Phase	V
S11.256	Disposal of chemical wastes shall be carried out in compliance with the Waste Disposal Ordinance. The “Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes” published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers shall be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area shall be selected at a safe location on site and adequate space shall be allocated to the storage area.	To minimize water quality impact from accidental spillage of chemical	Contractor	All construction works areas	Construction Phase	V
Waste Management Implications						
Construction Phase						
S12.75	***Good Site Practices and Waste Reduction Measures*** • Prepare a Waste Management Plan (WMP) approved by the Engineer/Supervising Officer of the Project based on current practices on construction sites; • Training of site personnel in, site cleanliness, proper waste management and chemical handling procedures; • Provision of sufficient waste disposal points and regular collection of waste; • Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and • Separation of chemical wastes for special handling and appropriate treatment.	To reduce waste management impacts	Contractor	All Work Sites	Construction Phase	V

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
S12.76	***Good Site Practices and Waste Reduction Measures (con't)*** • Sorting of demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.); • 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 aluminum cans by providing separate labeled bins to enable this waste to be segregated from other general refuse generated by the workforce; • Proper storage and site practices to minimize the potential for damage or contamination of construction materials; • Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; and • Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	To achieve waste reduction	Contractor	All Work Sites	Construction Phase	@
S12.77	***Good Site Practices and Waste Reduction Measures (con't)*** The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan shall incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP shall be submitted to the Engineer for approval. The Contractor shall implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP shall be reviewed regularly and updated by the Contractor, preferably in a monthly basis.	To achieve waste reduction	Contractor	All Work Sites	Construction Phase	V
S12.78	***Good Site Practices and Waste Reduction Measures (con't)*** C&D materials would be reused in other local concurrent projects as far as possible. If all reuse outlets are exhausted during the construction phase, the C&D materials would be disposed of at Taishan, China as a last resort.	To achieve waste reduction	Contractor	All Work Sites	Construction Phase	N/A
S12.79	***Storage, Collection and Transportation of Waste*** Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include: • Waste, such as soil, shall be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; • Maintain and clean storage areas routinely; • Stockpiling area shall be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and • Different locations shall be designated to stockpile each material to enhance reuse.	To minimize potential adverse environmental impacts arising from waste storage	Contractor	Work Sites	Construction Phase	V
S12.80	***Storage, Collection and Transportation of Waste (con't)*** Waste haulier with appropriate permits shall be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal	To minimize potential adverse environmental	Contractor	Work Sites	Construction Phase	V

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	outlets. The following suggestions shall be enforced to minimize the potential adverse impacts: • Remove waste in timely manner • Waste collectors shall only collect wastes prescribed by their permits • Impacts during transportation, such as dust and odour, shall be mitigated by the use of covered trucks or in enclosed containers • Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28) • Waste shall be disposed of at licensed waste disposal facilities • Maintain records of quantities of waste generated, recycled and disposed	impacts arising from waste collection and disposal				
S12.81	***Storage, Collection and Transportation of Waste (con't)*** • Implementation of trip ticket system with reference to DevB TC(W) No.6/2010 to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) shall be proposed.	To minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	Work Sites	Construction Phase	V
S12.83 – 12.86	***Sorting of C&D Materials*** • Sorting to be performed to recover the inert materials, reusable and recyclable materials before disposal off-site. • Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials. • The C&D materials shall at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled as far as practicable before delivery to PFRFs as mentioned for beneficial use in other projects. While opportunities for reusing the non-inert portion shall be investigated before disposal of at designated landfills. • Possibility of reusing the spoil in the Project will be continuously investigated in the detailed design and construction stages, it includes backfilling to cut and cover construction works for the Hung Hom south and north approach tunnels.	To minimize potential adverse environmental impacts during the handling, transportation and disposal of C&D materials	Contractor	Work Sites	Construction Phase	V
S12.88	***Sediments*** • The basic requirements and procedures for excavated / dredged sediment disposal specified under ETWB TC(W) No. 34/2002 shall be followed. MFC is managing the disposal facilities in Hong Kong for the dredged and excavated sediment, while EPD is the authority of issuing marine dumping permit under the Dumping at Sea Ordinance.	To ensure the sediment to be disposed of in an authorized and least impacted way	Contractor	All works areas with sediments concern	Construction Phase	N/A
S12.89	***Sediments (con't)*** • The contractor for the excavation / dredging works shall apply for the site allocations of marine sediment disposal based on the prior agreement with MFC/CEDD. A request for reservation of sediment disposal space have been submitted to MFC for onward discussions of disposal approach and feasible disposal sites and the letter is attached in Appendix 12.6. The Project	To determine the best handling and disposal option of the sediments	MTR / Contractor	All works areas with sediments concern	Detailed Design Stage and Construction Phase	N/A

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	proponent shall also be responsible for the application of all necessary permits from relevant authorities, including the dumping permit as required under DASO from EPD, for the disposal of dredged and excavated sediment prior to the commencement of the excavation works.					
S12.91 – 12.94	***Sediments (con't)*** • Stockpiling of contaminated sediments shall be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment shall be covered by tarpaulin and the area shall be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and/or surrounding water bodies. The stockpiling areas shall be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas shall be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, shall be collected and discharged according to the Water Pollution Control Ordinance (WPCO). • In order to minimise the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments shall be wetted during excavation / material handling and shall be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. • The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP. • In order to minimise the exposure to contaminated materials, workers shall, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site.	To ensure handling of sediments are in accordance to statutory requirements	Contractor	Work Sites, Sediment disposal sites	Construction Phase	N/A
S12.95	***Sediments (con't)*** • A possible arrangement for Type 3 disposal is by geosynthetic containment. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal. The technology is readily available for the manufacture of the geosynthetic containers to the project-specific requirements. Similar disposal methods have been used for projects in Europe, the USA and Japan and the issues of	To ensure handling of sediments are in accordance to statutory requirements	Contractor	Work Sites, Sediment disposal sites	Construction Phase	N/A

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
	fill retention by the geosynthetic fabrics, possible rupture of the containers and sediment loss due to impact of the container on the seabed have been addressed.					
/	***Accidental spillage*** To prevent accidental spillage of chemicals, the following is recommended: • Proper storage and handling facilities will be provided. • All the tanks, containers, storage area will be bunded and the locations will be locked as far as possible from the sensitive watercourse and stormwater drains. • The contractor will register as a chemical waste producer if chemical wastes would be generated. Storage of chemical waste arising from the construction activities will be stored with suitable labels and warnings. • Disposal of chemical wastes will be conducted in compliance with the requirements as stated in the Waste disposal (Chemical Waste) (General) Regulation.	To minimize potential adverse environmental impacts arising from accidental spillage	Contractor	Work Sites	Construction Phase	@
S12.97	***Containers for Storage of Chemical Waste*** The Contractor shall register with EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Containers used for storage of chemical waste shall: • Be compatible with the chemical wastes being stored, maintained in good condition and securely sealed; • Have a capacity of less than 450 litters unless the specifications have been approved by EPD; and • Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation.	To register with EPD as a Chemical waste producer and store chemical waste in appropriate containers	Contractor	Work Sites	Construction Phase	V
S12.98	***Chemical Waste Storage Area*** • Be clearly labeled to indicate corresponding chemical characteristics of the chemical waste and used for storage of chemical waste only; • Be enclosed on at least 3 sides; • Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest; • Have adequate ventilation; • Be covered to prevent rainfall from entering; and • Be properly arranged so that incompatible materials are adequately separated.	To prepare appropriate storage areas for chemical waste at works areas	Contractor	Work Sites	Construction Phase	@
S12.99	***Chemical Waste*** • Lubricants, waste oils and other chemical wastes would be generated during the maintenance of vehicles and mechanical equipments. Used lubricants shall be collected and stored in individual containers which are fully labelled in English and Chinese and stored in a designated secure place.	To clearly label the chemical waste at works areas	Contractor	Work Sites	Construction Phase	V

Appendix C – Environmental Mitigation Implementation Schedule

EIA Ref. / EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	Implementation Status
S12.100	***Collection and Disposal of Chemical Waste*** ***A trip-ticket system shall be operated in accordance with the Waste Disposal*** *(Chemical Waste) (General) Regulation* to monitor all movements of chemical waste. The Contractor shall employ a licensed collector to transport and dispose of the chemical wastes, to either the approved CWTC at Tsing Yi, or another licensed facility, in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation*.	To monitor the generation, reuse and disposal of chemical waste	Contractor	Work Sites	Construction Phase	V
S12.101	***General Refuse*** General refuse shall be stored in enclosed bins or compaction units separate from C&D materials and chemical waste. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D materials and chemical wastes. Preferably, an enclosed and covered area shall be provided to reduce the occurrence of wind-blown light material.	To properly store and separate from other C&D materials for subsequent collection and disposal	Contractor	Work Sites	Construction Phase	@
S12.102	***General Refuse (con't)*** The recyclable component of general refuse, such as aluminum cans, paper and cleansed plastic containers shall be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste shall be set up by the Contractor. The Contractor shall also be responsible for arranging recycling companies to collect these materials.	To facilitate recycling of recyclable portions of refuse	Contractor	Work Sites	Construction Phase	V
S12.103	***General Refuse (con't)*** The Contractor shall carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins shall also be provided in the sites as reminders.	To raise workers' awareness on recycling issue	Contractor	Work Sites	Construction Phase	V

Legend: V = implemented;
x = not implemented;
@ = partially implemented;
N/A = not applicable

APPENDIX D

Summary of Action and Limit Levels

Appendix D – Summary of Action and Limit Levels

Action and Limit Levels for Construction Noise
(0700 – 1900 hrs of normal weekdays)

ID	Location	Action Level	Limit Level
NM1	Hoi Kung Court	When one documented complaint is received	75 dB(A)

APPENDIX E

Calibration Certificates of Equipments

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. Tel : (852) 2873 6860
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓 Fax : (852) 2555 7533
E-mail: smec@cigismec.com Website: www.cigismec.com
HOKLAS 028

CERTIFICATE OF CALIBRATION

Certificate No.: 13CA1107 01-01 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	Rion Co., Ltd.	,	Rion Co., Ltd.
Type/Model No.:	NL-31	,	UC-53A
Serial/Equipment No.:	00320528 / N.007.03A	,	90565
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	07-Nov-2013

Date of test: 08-Nov-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	22-Jun-2014	CIGISMEC
Signal generator	DS 360	33873	15-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1000 ± 10 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 11-Nov-2013 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533
HOKLAS 028

CERTIFICATE OF CALIBRATION

Certificate No.: 14CA0305 06-01 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	B & K	,	B & K
Type/Model No.:	2238	,	4188
Serial/Equipment No.:	2285692 N.009.04	,	2250420
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO. LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	05-Mar-2014

Date of test: 07-Mar-2014

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	22-Jun-2014	CIGISMEC
Signal generator	DS 360	33873	15-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1000 ± 10 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 12-Mar-2014 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533
HOKLAS 028

CERTIFICATE OF CALIBRATION

Certificate No.: 13CA1107 01-02 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Rion Co., Ltd.
Type/Model No.:	NC-73
Serial/Equipment No.:	10307223 / N.004.08
Adaptors used:	-

Item submitted by

Curstomer:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	07-Nov-2013

Date of test: 08-Nov-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	17-Apr-2014	SCL
Preamplifier	B&K 2673	2239857	16-Apr-2014	CEPREI
Measuring amplifier	B&K 2610	2346941	24-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI
Digital multi-meter	34401A	US36087050	10-Dec-2013	CEPREI
Audio analyzer	8903B	GB41300350	15-Apr-2014	CEPREI
Universal counter	53132A	MY40003662	15-Apr-2014	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1000 ± 10 hPa

Test specifications

1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.

2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.

3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 11-Nov-2013 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the conditon of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

APPENDIX F

EM&A Monitoring Schedules

Shatin to Central Link Contract 1129 - Advance Works for NSL
Impact Environmental Monitoring Schedule for July 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Jul	2-Jul	3-Jul	4-Jul	5-Jul
6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul
					Noise (NM1)	
13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul
					Noise (NM1)	
20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul
				Noise (NM1)		
27-Jul	28-Jul	29-Jul	30-Jul	31-Jul		
			Noise (NM1)			

Noise Monitoring Station
NM1 Hoi Kung Court

Monitoring Frequency
Once per week

Shatin to Central Link Contract 1129 - Advance Works for NSL
Tentative Impact Environmental Monitoring Schedule for August 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Jun					1-Aug	2-Aug
3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug
	Noise (NM1)					
10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug
	Noise (NM1)					
17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug
	Noise (NM1)					
24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug
				Noise (NM1)		
31-Aug						

The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)

Noise Monitoring Station
NM1 Hoi Kung Court

Monitoring Frequency
Once per week

APPENDIX G

Noise Monitoring Results and their Graphical Presentations

Appendix G - Impact Daytime Construction Noise Monitoring Results

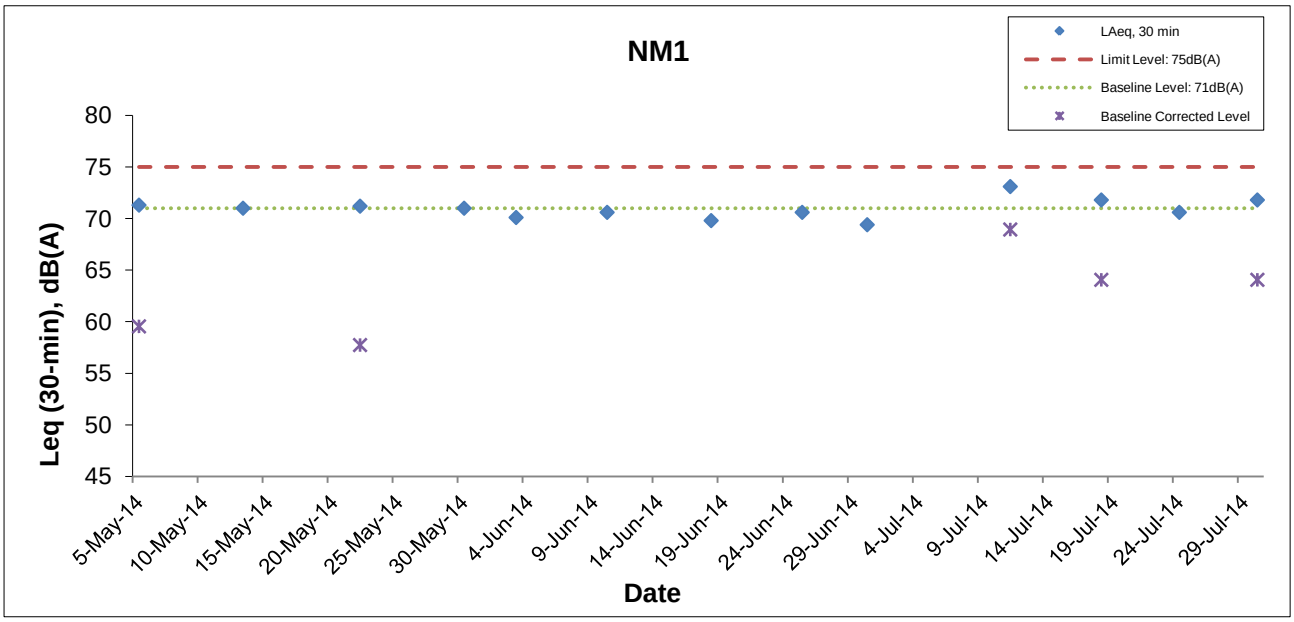
Daytime Noise Monitoring Results at Station NM1 - Hoi Kung Court, Rooftop-20/F

Date	Weather Condition	Noise Level for 30-min, dB(A)*				Baseline Corrected Level, dB(A) #	Baseline Noise Level, dB(A)	Limit Level, dB(A)	Exceedance (Y/N)
		Time	L90	L10	Leq				
11-Jul-14	Sunny	11:21	71.6	74.5	73.1	68.9	71	75	N
18-Jul-14	Fine	15:12	69.5	73.1	71.8	64.1	71	75	N
24-Jul-14	Sunny	16:25	68.1	72.3	70.6	<Baseline Level	71	75	N
30-Jul-14	Sunny	14:00	70.3	73.0	71.8	64.1	71	75	N

Remark:

* Façade measurement.

-The measured Leq is corrected against the corresponding Baseline Level.



Shatin Central Link
Contract No. 1129
Advance Works for NSL

Graphical Presentation of Impact Daytime Construction Noise Monitoring Results

Date: August 2014

Appendix G

APPENDIX H

Event Action Plan

Appendix H Event Action Plan

Event and Action Plan for Construction Noise Monitoring

EVENT	ACTION			
	ET	IEC	ER	Contractor
Exceedance of Action Level	1. Notify the Contractor, IEC and ER; 2. Discuss with the ER, IEC and Contractor on the remedial measures required; and 3. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the contractor; and 2. Review and advise the ET and ER on the effectiveness of the remedial measures proposed by the Contractor.	1. Confirm receipt of notification of complaint in writing; 2. Review and agree on the remedial measures proposed by the Contractor; and 3. Supervise implementation of remedial measures.	1. Investigate the complaint and propose remedial measures; 2. Report the results of investigation to the IEC, ET and ER; 3. Submit noise mitigation proposals to the ER with copy to the IEC and ET within 3 working days of notification; and 4. Implement noise mitigation proposals.
Exceedance of Limit Level	1. Notify the Contractor, IEC, EPD and ER ; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency; 4. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 5. Arrange meeting with the IEC and ER to discuss the remedial measures to be taken; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Review the effectiveness of Contractor's remedial measures and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with the ER, ET and Contractor on the potential remedial measures; and 4. Review and advise the ET and ER on the effectiveness of the remedial measures proposed by the Contractor.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with copy to the IEC and ET within 3 working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

APPENDIX I

Cumulative Statistics of Complaints, Notification of Summons and Successful Prosecutions

Appendix I

Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. received in this month	Total no. received since project commencement
Environmental complaints	-	-	-	0	0
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0

APPENDIX J

Waste Flow Table

SCL Contract 1129 Advance Works For NSL **Monthly Summary C&D Material Flow Table for 2014**

updated to 31 July 2014

Latest Programme for Generation & Import of Materials in each Reporting Period	Quantity for off-site disposal of Inert C&D materials (m^3)					Quantity for off-site disposal of Non-inert C&D materials					
	Inert C&D material (m^3)					Metals (kg)	Paper / Cardboard (kg)	Plastics (kg)	Chemical Waste (kg)	General Waste (m^3)	Sediment (m^3)
	CWPFBP(1)	TKO137FB(2)	TKO137SF(3)	^Other Site	**Total (m^3)**	Total	Total		Total	Total	Total
2014/01 (Actual)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2014/02 (Actual)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2014/03 (Actual)	*305*	*0*	*0*	*0*	*305*	*0*	*0*	*0*	*0*	*0*	*0*
2014/04 (Actual)	*308*	*75*	*0*	*0*	*382*	*0*	*0*	*0*	*0*	*0*	*0*
2014/05 (Actual)	*1,258*	*7*	*0*	*0*	*1,266*	*0*	*0*	*0*	*0*	5.0	*0*
2014/06 (Actual)	*63*	*19*	*0*	*0*	*82*	*4,210*	*0*	*0*	*0*	4.9	*0*
Sub-total	**1,934**	**101**	**0**	**0**	**2,035**	**4,210**	**0**	**0**	**0**	**9.9**	**0**
2014/07 (Actual)	***663***	***116***	***0***	***0***	***779***	***0***	***0***	***0***	***0***	**4.4**	***0***
2014/08 (Actual)											
2014/09 (Actual)											
2014/10 (Actual)											
2014/11 (Actual)											
2014/12 (Actual)											
Sub-total	**663**	**116**	**0**	**0**	**779**	**0**	**0**	**0**	**0**	**4.4**	**0**
Total					**2,813**	**4,210**	**0**	**0**	**0**	**14.3**	**0**

Remark: ***Assume the density is 2 tonnes per cubic metre**

^Required to be approved by EPD and MTR

1 CWPFBR Chai Wan Public Fill Barging Point

2 TKO137FB Fill Bank at Tseung Kwan O Area 137

3 TKO137SF Sorting Facilities at Tseung Kwan O Area 137

Appendix B

1st Monthly EM&A Report for Works Contract 1126 – SCL – Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool

MTR Corporation Limited

Shatin to Central Link –
Hung Hom to Admiralty Section

Monthly EM&A Report No.1

[Period from 9 to 31 July 2014]

Works Contract 1126 – Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool

(August 2014)

Certified by: Dr. Priscilla Choy

Position: Environmental Team Leader

Date: 13th August 2014

Kaden – Leader Joint Venture

Shatin to Central Link – Contract 1126 Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool

Monthly Environmental Monitoring and Audit Report For July 2014

(Version 3.0)

Certified By

Dr. Priscilla Choy
(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.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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EXECUTIVE SUMMARY

Introduction

1. This is the 1st monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for **MTR Shatin to Central Link (SCL) Works Contract 1126 –Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool**. This report documents the findings of EM&A Works conducted from 9 to 31 July 2014.

Summary of Construction Works undertaken during Reporting Month

2. The major site activities undertaken in the reporting month include:

- Construction of Fitness Room and Kiosk;
- Construction of Male Changing Room with HR Pump Room and Store Room;
- Construction of Marshall Seats;
- Construction of Weightlifting Room;
- Landscaping and external works; and
- Demolition of part of the existing spectator stand.

Environmental Monitoring and Audit Progress

3. A summary of the monitoring activities in this reporting period is listed below:

Regular Construction Noise and Construction Dust Monitoring

- Regular construction noise monitoring during normal working hours
  Noise Monitoring Station ID
  - NM2(1)(3) (Walkway across Harbour Road) 3 times
- Construction Dust (24-hour TSP) Monitoring
  Dust Monitoring Station ID
  - AM2(1)(2) (Wan Chai Sports Ground) 4 times
  - AM3(1) (Existing Harbour Road Sports Centre) 4 times

Remarks:
(1) Station ID as identified in approved EM&A Manual for SCL(HUH-ADM).
(2) The spectator stand at Wan Chai Sports Ground was not available for impact dust monitoring, therefore impact monitoring was conducted at the existing water pump room area at Wan Chai Sports Ground.
(3) Access to the monitoring location at Block A, Causeway Centre (originally proposed in the approved EM&A Manual) was denied before the commencement of impact monitoring. An alternative location (Walkway across Harbour Road) was proposed and approved by the ER and agreed by the IEC. Agreement is pending from the EPD.

Waste Management

4. Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Details of waste management data is presented in Section 5 and **Appendix K**.

Landscape and Visual

5. Bi-weekly inspection of the implementation of landscape and visual mitigation measures was conducted on 9 and 23 July 2014. Most of the necessary mitigation

measures have been implemented and recommended follow-up actions have been discharged by the Contractor. Details of the audit findings and implementation status are presented in Section 6.

Environmental Site Inspection

6. Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Contractor's ET on 9, 16, 23 and 30 July 2014. The representative of the IEC joined the site inspection on 9 July 2014. Details of the audit findings and implementation status are presented in Section 6.

Environmental Exceedance/Non-conformance/Complaint/Summons and Successful Prosecution

7. No exceedance of the Action and Limit Levels of regular construction noise monitoring and 24-hour TSP monitoring was recorded during the reporting period.

8. No non-compliance event was recorded during the reporting period.

9. No Project related environmental complaint and notification of summons/successful prosecutions were received in this reporting period.

Reporting Changes

10. N/A

Future Key Issues

11. Major site activities for the coming reporting month will include:

- Construction of Fitness Room and Kiosk;
- Construction of Male Changing Room with HR Pump Room and Store Room;
- Construction of Marshall Seats;
- Construction of Weightlifting Room;
- Landscaping and external works; and
- Demolition of part of the existing spectator stand.

12. Key environmental impacts to be considered in the coming month include:

- Dust impact from demolition works;
- Wastewater from surface runoff;
- Waste management;
- Preservation and protection of retained and transplanted trees; and
- Noise impact from construction and demolition works.

1 INTRODUCTION

1.1 Cinotech Consultants Limited (Cinotech) was appointed by Kaden – Leader Joint Venture (KLJV) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme during construction phase of the MTR Shatin to Central Link (SCL)Works Contract 1126 –Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool (hereafter referred to as the Project).

Purpose of the Report

1.2 This is the 1st EM&A report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 9 to 31 July 2014. The major construction works for Contract 1126 commenced on 9 July 2014.

Structure of the Report

1.3 The structure of the report is as follows:

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

Section 2: **Project Information** - summarises background and scope of the project, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3: **Environmental Monitoring Requirement -** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, Event / Action Plans, environmental mitigation measures as recommended in the EIA report and relevant environmental requirements.

Section 4: **Implementation Status on Environmental Mitigation Measures -** summarises the implementation of environmental protection measures during the reporting period.

Section 5: **Monitoring Results** - summarises the monitoring results obtained in the reporting period.

Section 6: **Environmental Site Inspection -** summarises the audit findings of the weekly site inspections undertaken within the reporting period.

Section 7: **Environmental Non-conformance -** summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

Section 8: **Future Key Issues -** summarises the impact forecast and monitoring schedule for the next three months.

Section 9: **Conclusions and Recommendations**

2 PROJECT INFORMATION

Background

2.1 The Shatin to Central Link – Hung Hom to Admiralty Section (hereafter referred to as SCL (HUH-ADM)) is an approximately 6km extension of the East Rail Line including a rail harbor crossing from Hung Hom across the harbor to Admiralty on Hong Kong Island. It is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO).

2.2 The Environmental Impact Assessment (EIA) Report for SCL – Hung Hom to Admiralty Section [SCL (HUH-ADM)] (Register No.: AEIAR-166/2012) was approved on 17 February 2012 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Report, Environmental Permits (EP) (EP No: EP-436/2012) was granted on 22 March 2012 for their construction and operation. Variations of environmental permit (VEP) was subsequently applied for EP-436/2012 and the latest Environmental Permit (EP No: EP-436/2012/A) was issued by Director of Environmental Protection (DEP) on 30 April 2014.

2.3 The construction of the SCL (HUH-ADM) has been divided into a series of civil construction Works Contracts and this Works Contract 1126 comprises of the Permanent Works and the Temporary Works for the re-provisioning of Harbour Road Sports Centre (HRSC) and Wan Chai Swimming Pool (WCSP). The major construction works for Contract 1126 commenced on 9 July 2014.

General Site Description

2.4 The major works of this Project that was classified as Designated Project under the EIAO include the demolition of grandstand superstructure and water pump room of WCSG. The alignment and works area for the Works Contract 1126 are shown in **Figure 1**.

Construction Programme and Activities

2.5 A summary of the major construction activities undertaken in this reporting period is shown as follows. The tentative construction programme is presented in **Appendix A**.

- Construction of Fitness Room and Kiosk;
- Construction of Male Changing Room with HR Pump Room and Store Room;
- Construction of Marshall Seats;
- Construction of Weightlifting Room;
- Landscaping and external works; and
- Demolition of part of the existing spectator stand.

Project Organisation

2.6 The project organizational chart and contact details are shown in **Figure 4.**

Status of Environmental Licences, Notification and Permits

2.7 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 2.1**.

Table 2.1 Summary of the Status of Environmental Licences, Notification and Permits

Permit / License No.	Valid Period		Status
	From	To	
Environmental Permit (EP)			
EP-436/2012/A	30/04/2014	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation			
Ref no.: 370563	14/02/2014	N/A	Valid
Billing Account for Construction Waste Disposal			
Account No.7019324	10/02/2014	N/A	Valid
Registration of Chemical Waste Producer			
5213-135-K3101-01	14/05/2014	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance			
WT00019352-2014	17/06/2014	30/06/2019	Valid
Construction Noise Permit (CNP)			
GW-RS0470-14	19/05/2014	30/10/2014	Valid

Summary of EM&A Requirements

2.8 The EM&A programme under Works Contract 1126 require regular dust and noise monitoring as well as environmental site audits. The EM&A requirements 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 Project EIA study final report; and
- Environmental requirements in contract documents.

2.9 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 6 of this report.

2.10 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely construction noise & dust monitoring as well as audit works for the Project in the reporting month.

3 ENVIRONMENTAL MONITORING REQUIREMENTS

Regular Construction Noise Monitoring

3.1 In accordance with the EM&A Manual, monitoring of construction noise impact should be conducted at the designated monitoring stations. Since access to the original baseline monitoring locations was rejected; alternative locations were proposed and agreed by the ER (Engineer's Representative) and IEC (Independent Environmental Checker). Agreement is pending from the EPD (Environmental Protection Department). The construction noise monitoring location is listed in **Table 3.1** and shown in **Figure 2**.

Table 3.1 Regular Construction Noise Monitoring Location

Regular Construction Noise Monitoring Location	Description	Type of Measurement
NM2[(1) (2)]	Walkway across Harbour Road (1/F)	Façade

Note:
(1) NSR ID as identified in approved EM&A Manual / EIA Report for SCL(HUH-ADM).
(2) Access to the monitoring location at Causeway Centre, Block A (originally proposed in the approved EM&A Manual) was denied before the commencement of impact monitoring.. An alternative location (Walkway across Harbour Road) was proposed and approved by the ER and agreed by the IEC. Agreement is pending from the EPD.

Monitoring Parameter and Frequency

3.2 Weekly construction noise monitoring was conducted in accordance with the requirements stipulated in the EM&A Manual. If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed. The monitoring schedule for this reporting period is shown in **Appendix D**.

3.3 The construction noise levels were measured in terms of the A-weighted equivalent continuous sound pressure level (L_{Aeq}) in decibels dB(A). L_{Aeq} (30min) (one set of 30-minute measurement) was used as the monitoring metric for the time period between 0700 – 1900 hours on normal weekdays.

Monitoring Equipment and Methodology

Field Monitoring

3.4 The monitoring procedures are as follows:

- The microphone head of the sound level meter was positioned 1m exterior of the noise sensitive facade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
- The battery condition was checked to ensure good 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
  - measurement time : 30 minutes (one set of 30-minute measurement of a $L_{eq,30}$

$_{min}$ reading)

- Prior to and after noise measurement, the meter was calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- The wind speed at the monitoring station was checked with the portable wind meter. 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.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- At the end of the monitoring period, the L_{eq}, L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- A façade correction of +3dB(A) shall be made to the noise parameter obtained by free field measurement.

Monitoring Equipment

3.5 The sound level meters and calibrator used for the noise measurement, as listed in **Table 3.2**, compile with the IEC 651: 1979 and 804:1985 (Type 1) specification. The calibration certificates of the sound level meters are included in **Appendix C**.

Table 3.2 Noise Monitoring Equipment

Monitoring Equipment	Model (Serial no.)
Sound Level Meter	SVAN 955 (Serial no.: 14303) SVAN 957 (Serial no.: 21460 and 23853)
Calibrator	SV30A (Serial no.: 24791, 24803 and 24780)

Maintenance and Calibration

3.6 Maintenance and Calibration procedures were as follows:

- The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator were checked and calibrated at yearly intervals. Copies of calibration certificates are attached in **Appendix C**.

Action & Limit Level for Construction Noise Monitoring

3.7 The Action and Limit Levels are presented in **Appendix B** and the Event / Action Plan (EAP) for noise monitoring is presented in **Appendix I.**

Continuous Noise Monitoring

3.8 With reference to the latest Continuous Noise Monitoring Plan (CNMP) and Construction Noise Mitigation Measures Plan (CNMMP) prepared submitted under EP Condition 2.8 and Condition 2.7 respectively, it is predicted that no residual air-borne construction noise impacts exceeding the relevant noise criteria is anticipated. Therefore, no continuous noise monitoring is required during the construction of the SCL (HUH-ADM) under Works Contract 1126.

Regular Construction Dust Monitoring

3.9 The proposed dust monitoring stations for the construction phase of the Project, as recommended in the approved EM&A Manual, are listed in **Table 3.3** and shown in **Figure 3**. The proposed locations have been agreed with the ER, EPD and IEC.

Table 3.3 Dust Monitoring Location

Regular Dust Monitoring Location	Description
AM2[(1)(2)]	Wan Chai Sports Ground
AM3[(1)]	Existing Harbour Road Sports Centre

Note:
(1) ASR ID as identified in approved EM&A Manual / EIA Report for SCL(HUH-ADM).
(2) The spectator stand at Wan Chai Sports Ground was not available for impact dust monitoring, therefore impact monitoring was conducted at the existing water pump room area at Wan Chai Sports Ground.

Monitoring Parameter and Frequency

3.10 The dust monitoring (in terms of Total Suspended Particulates (TSP)) was conducted at the designated monitoring stations in accordance with the requirements stipulated in the EM&A Manual. The 24-hour TSP levels were monitored at the frequency and duration stated in **Table 3.4**. The TSP monitoring at two monitoring locations was conducted as per the schedule presented in **Appendix D**.

Table 3.4 Dust Monitoring Parameters and Frequency

Monitoring Period	Duration	Parameter	Frequency
Impact Monitoring[(1)]	Throughout the construction period	24-hour TSP	Once per 6 days

Note:
(1) 1- hour TSP shall be conducted when one documented valid complaint is received.

Monitoring Equipment

3.11 **Table 3.5** summarizes the equipment used for the dust monitoring.

Table 3.5 Dust Monitoring Equipment

Equipment	Model and Make	Qty.
HVS	Tisch Environmental, Inc.; Model no. TE-5170, Serial no.: 1535, 5280	2
Calibration Orifice	Tisch Environmental, Inc.; Model no. TE – 5025A Orifice ID: 0993	1

Instrumentation

3.12 High Volume Samplers (HVS) connected with appropriate sampling inlets were employed for air quality monitoring. Each sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 Appendix B (Part 50).

HVS Installation

3.13 The following guidelines were adopted during the installation of HVS:

- A horizontal platform with appropriate support to secure the samplers against gusty wind should be provided;
- Two samplers should not be placed less than 2m apart;
- The distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;
- A minimum of 2m separation from walls, parapets and penthouses is required for rooftops samplers;
- A minimum of 2m separation from any supporting structure, measures horizontally is required;
- No furnace or incinerator flue is located nearby the samplers;
- Airflow around the sampler is unrestricted;
- The sampler is more than 20m from the dripline;
- Any wire fence and gate to protect the sampler, should not cause any obstruction during monitoring;
- Permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
- A secured supply of electricity is needed to operate the samplers.

Filters Preparation

3.14 Fiberglass filters were used which have a collection efficiency of larger than 99% for particles of 0.3 μm diameter. A HOKLAS accredited laboratory, Wellab Ltd. (HOKLAS Registration No. 083), was responsible for the preparation of pre-weighed filter papers for Cinotech's monitoring team.

3.15 All filters, which were prepared by Wellab Ltd., were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±5%. A convenient working RH was 40%.

3.16 Wellab Ltd. has a comprehensive quality assurance and quality control programmes.

Operating/Analytical Procedures

3.17 Operating/analytical procedures for the TSP monitoring were highlighted as follows:

- Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard.
- The power supply was checked to ensure the sampler worked properly.
- The filter holding frame and the area surrounding the filter were cleaned.
- On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the air quality monitoring station.
- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen.
- 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 to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- A new flow rate record chart was set into the flow recorder.
- 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).
- The flow rate of the HVS sampler would be verified to be constant and recorded on the data sheet before and after sampling.
- The elapsed time and other relevant information was recorded. After sampling, the sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
- It was then placed in a clean plastic envelope and sealed and sent to the Wellab Ltd. for weighing.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment should be between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%. Weighing results were returned to Cinotech for further analysis of TSP concentrations collected by each filter.

Maintenance/Calibration

3.18 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.
- Calibration of the HVS (five point calibration) using Calibration Kit was carried out every two months. Copies of calibration certificates are attached in **Appendix C**.
- The HVS calibration orifice will be calibrated annually.

Action and Limit Levels for Dust Monitoring

3.19 The Action and Limit levels have been established and are presented in **Appendix B** and the Event / Action Plan (EAP) for dust monitoring is presented in **Appendix I.**

Landscape and Visual

3.20 In accordance with the EM&A Manual, the landscape and visual mitigation measures shall be implemented and a site inspection shall be conducted once every two weeks throughout the construction period. The implementation status is given in **Appendix J**.

4 IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

4.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Report, the Environmental Permit and EM&A Manual. The implementation status of the environmental mitigation measures of the reporting period is summarized in **Appendix J**. Status of required submissions under the Environmental Permit (EP) of the reporting period is presented in **Table 4.1**.

Table 4.1 Status of Required Submissions under EP

EP Condition	Submission	Submission Date
Condition 2.7	Construction Noise Mitigation Measures Plan	9th June 2014
Condition 2.8	Continuous Noise Monitoring Plan	9th June 2014

5 MONITORING RESULTS

Regular Construction Noise Monitoring

5.1 A total of 3 sets of 30-minute construction noise measurements were carried out at the monitoring stations during normal weekdays of the reporting period by ET of SCL Works Contract 1126. No exceedance of the limit level was recorded at designated monitoring stations.

5.2 Based on observation during the on-site monitoring, road traffic nearby is considered as a potential noise source other than construction works of the Project that affects the monitoring results of the reporting month.

5.3 The noise monitoring results together with their graphical presentations are presented in **Appendix F** and a summary of the noise monitoring results in this reporting month is given in **Table 5.1**.

Table 5.1 Summary Table of Noise Monitoring Results during the reporting month

Parameter	Range, dB(A), $L_{eq\ (30\ mins)}$	Limit Level, dB(A), $L_{eq\ (30\ mins)}$
Noise (NM2) (1)	72.4 – 74.3	75

Remarks:
(1) Station ID as identified in approved EM&A Manual / EIA Report for SCL(HUH-ADM).

5.4 No exceedance of the Action and Limit Levels of construction noise due to the Project was recorded during the reporting period.

Regular Dust Monitoring

5.5 8 sets of 24-hour TSP monitoring were carried out at the designated monitoring stations during normal weekdays of the reporting period by ET of SCL Works Contract 1126. The monitoring results together with their graphical presentations are presented in **Appendix E** and a summary of the dust monitoring results in this reporting month is given in **Table 5.2**.

Table 5.2 Summary Table of Dust Monitoring Results during the reporting month

Parameter	**Minimum µg/m³**	**Maximum µg/m³**	**Average µg/m³**	**Action Level, µg/m³**	**Limit Level, µg/m³**
24-hr TSP (AM2(1))	43.0	107.0	70.4	160	260
24-hr TSP (AM3(1))	33.5	80.4	53.1	169	260

Remarks:
(1) Station ID as identified in approved EM&A Manual / EIA Report for SCL(HUH-ADM).

5.6 Based on observation during the on-site monitoring, road traffic emission nearby is considered as a potential dust source other than construction works of the Project that affects the monitoring results of the reporting month.

5.7 Wind monitoring data were obtained from Star Ferry Meteorological Station of Hong Kong Observatory and shown on **Appendix E**.

5.8 No exceedance of the Action and Limit Levels of the 24-hour TSP was recorded during the reporting period.

Waste Management

5.9 Waste generated from this Project includes inert construction and demolition (C&D) materials and non-inert C&D materials. Non-inert C&D materials are made up of general refuse and recyclable wastes like plastics and paper/cardboard packaging materials. Steel materials generated from the project are also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in **Table 5.3**. Details of waste management data is presented in **Appendix K**. 0 m^3 of inert C&D material was re-used on-site and by other projects.

Table 5.3 Quantities of Waste Generated from the Project

Reporting Month	Quantity					
	C&D Materials (inert) [(a)]	C&D Materials (non-inert) [(b)]				
		General Refuse	Chemical Waste	Recycled materials		
				Paper/ cardboard	Plastics	Metals
July 2014	*37 m^3*	*20 m^3*	*0 kg*	*0 kg*	*0kg*	*3,780 kg*

Notes:
(a) Inert C&D materials include bricks, concrete, building debris, rubble and excavated soil,
(b) Non-inert C&D materials include steel, paper/cardboard packaging waste, plastics and other wastes such as general refuse and vegetative wastes. Steel materials generated from the project are grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials.

Landscape and Visual

5.10 Bi-weekly inspection of the implementation of landscape and visual mitigation measures was conducted on 9 and 23 July 2014. The observations and recommendations made during the audit sessions are summarized in **Table 6.1**.

6 ENVIRONMENTAL SITE INSPECTION

Site Audit

6.1 Site audit was carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audit are attached in **Appendix H**.

6.2 Site audits were conducted on 9, 16, 23 and 30 July 2014 by ET. A joint site audit with the representative with IEC, ER, the Contractor and the ET was carried out on 9 July 2014. No site inspection was conducted by EPD during the reporting month. The details of observations during site audit can refer to **Table 6.1**.

Implementation Status of Environmental Mitigation Measures

6.3 According to the EIA Study Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix J**.

6.4 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarized in **Table 6.1**.

Table 6.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	16 Jul 2014	Tyre marks observed at the site entrance at the WCSG. The Contractor is reminded to provide wheel washing facility to the site entrance.	The observation was observed to be improved/rectified by the Contractor during the audit session on 30 July 2014.
	16 Jul 2014	Reminder: Remove the construction material in the sedimentation tank at WCSG.	The observation was observed to be improved/rectified by the Contractor during the audit session on 23 July 2014.
	23 Jul 2014	Silty tyre marks observed near the two site entrances at WCSG. The contractor is reminded to provide wheel washing facility to the two site entrances.	The observation was observed to be improved/rectified by the Contractor during the audit session on 30 July 2014.
Noise	--	--	--
Landscape and Visual	9 Jul 2014	To properly maintain the tree protection zone near the site entrance of WCSG and remove the construction materials inside it.	The observation was observed to be improved/rectified by the Contractor during the audit session on 16 July 2014.
Air Quality	9 Jul 2014	To provide water spray for exposed areas in WCSG to prevent dust generation.	The observation was observed to be improved/rectified by the Contractor during the audit session on 16 July 2014.
	9 Jul 2014	To properly provide wheel washing for vehicles exiting from WCSG and clear the tyre marks at the site entrance.	The observation was observed to be improved/rectified by the Contractor during the audit session on 30 July 2014.
	16 Jul 2014	Tyre marks observed at the site entrance at the WCSG. The Contractor is reminded to provide wheel washing facility to the site entrance.	The observation was observed to be improved/rectified by the Contractor during the

Parameters	Date	Observations and Recommendations	Follow-up
			audit session on 30 July 2014.
	23 Jul 2014	Silty tyre marks observed near the two site entrances at WCSG. The contractor is reminded to provide wheel washing facility to the two site entrances.	The observation was observed to be improved/rectified by the Contractor during the audit session on 30 July 2014.
	30 Jul 2014	Works area observed dry at WCSG. The Contractor is reminded to provide water spray to works area to avoid dust generation.	Follow up action will be reported in next reporting month.
	30 Jul 2014	Reminder: Cover the stockpile of cement bags properly by impervious material at WCSG.	Follow up action will be reported in next reporting month.
Waste / Chemical Management	16 Jul 2014	Reminder: Remove the accumulation of general refuse and properly sort the construction waste at WCSG.	The observation was observed to be improved/rectified by the Contractor during the audit session on 23 July 2014.
	23 Jul 2014	Reminder: Provide drip tray to chemical container near site entrance at WCSG.	The observation was observed to be improved/rectified by the Contractor during the audit session on 30 July 2014.
Permits/ Licenses	--	--	--

7 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

7.1 No exceedance of the Action and Limit Levels of regular construction noise monitoring and 24-hour TSP monitoring was recorded during the reporting period. The summary of exceedance is provided in **Appendix G**.

Summary of Environmental Non-Compliance

7.2 No environmental non-compliance was recorded in the reporting month.

Summary of Environmental Complaint

7.3 No environmental Project-related complaint was received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix L**.

Summary of Environmental Summon and Successful Prosecution

7.4 There was no successful environmental prosecution or notification of summons received since the Project commencement. The Cumulative Log for environmental summon and successful prosecution since the commencement of the Project is presented in **Appendix L**.

8 FUTURE KEY ISSUES

Construction Programme for the Next Month

8.1 A tentative construction programme is provided in **Appendix A**. The major construction activities in the coming month will include:

- Construction of Fitness Room and Kiosk;
- Construction of Male Changing Room with HR Pump Room and Store Room;
- Construction of Marshall Seats;
- Construction of Weightlifting Room;
- Landscaping and external works; and
- Demolition of part of the existing spectator stand.

Key Issues in the Next Month

8.2 Key issues to be considered in the coming month include:

- Dust impact from demolition works;
- Wastewater from surface runoff;
- Waste management;
- Preservation and protection of retained and transplanted trees; and
- Noise impact from construction and demolition works.

Monitoring Schedule in the Next Month

8.3 The tentative schedule of regular construction noise monitoring and 24-hour TSP monitoring at all the monitoring locations in the next reporting period is presented in **Appendix D**. The regular construction noise monitoring and 24-hour TSP monitoring will be conducted at the same monitoring locations in the next reporting period.

9 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

9.1 The Environmental Monitoring and Audit (EM&A) Report presents the EM&A works undertaken during the period from 9 to 31 July 2014 in accordance with EM&A Manual and the requirement under EP.

9.2 No exceedance of the Action and Limit Levels of regular construction noise and 24-hour TSP monitoring was recorded at the designated monitoring stations during the reporting month.

9.3 4 times of joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Contractor's ET and 2 times of bi-weekly inspection of the implementation of landscape and visual mitigation measures were conducted during the reporting period.

9.4 There was no Project related environmental complaint, successful prosecution or notification of summons received during the reporting month.

9.5 The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Recommendations

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

Water Quality

- The contractor is reminded to provide wheel washing facility to the two site entrances at WCSG.

Landscape and Visual

- To properly maintain the tree protection zone near the site entrance of WCSG and remove the construction materials inside it.

Noise

- N/A

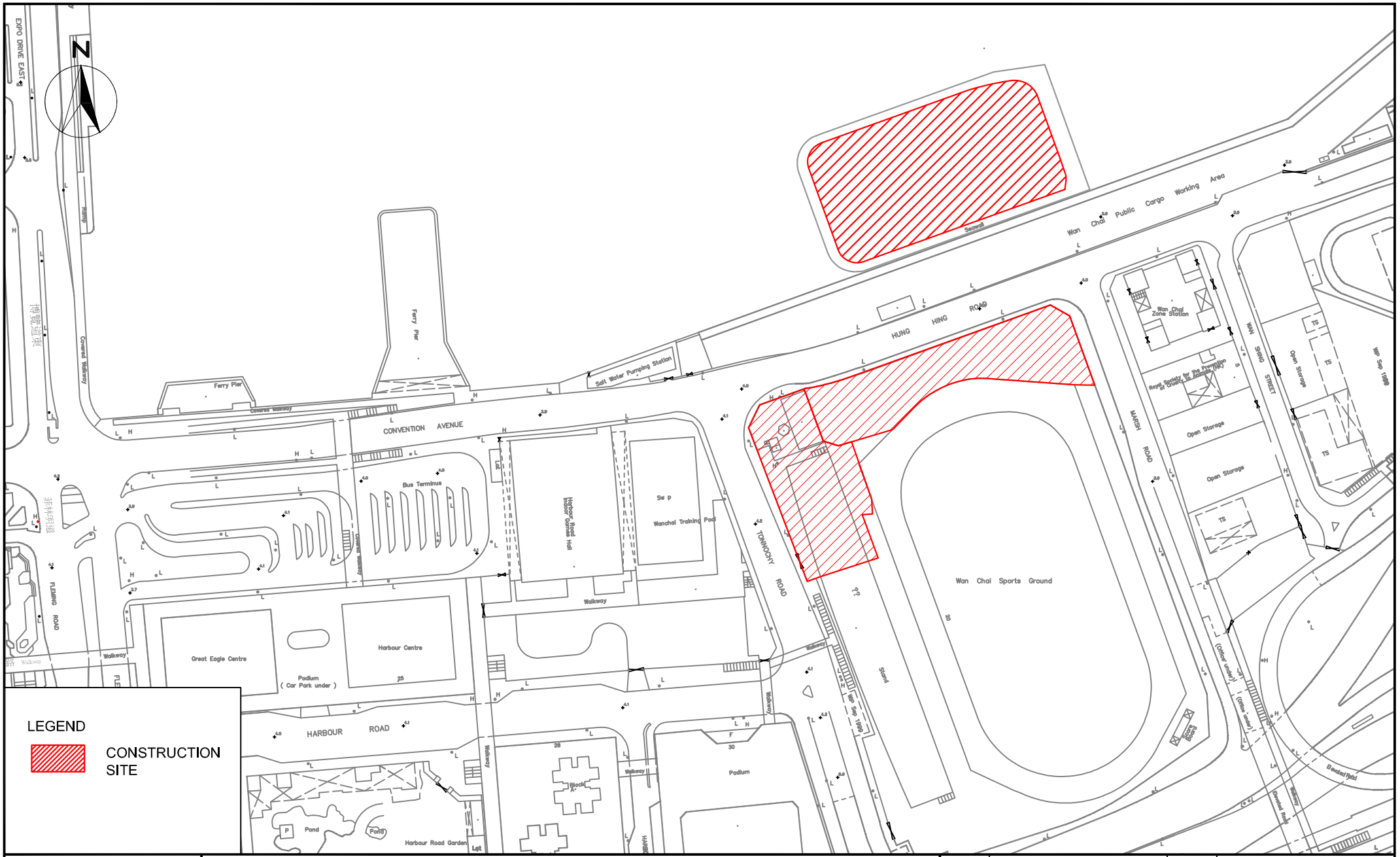
Air Quality

- The contractor is reminded to provide wheel washing facility to the two site entrances at WCSG.
- To provide water spray for exposed areas in WCSG to prevent dust generation.
- To cover the stockpile of cement bags properly by impervious material at WCSG.

Waste/Chemical Management

- To remove the accumulation of general refuse and properly sort the construction waste at WCSG.
- To provide drip tray to chemical container near site entrance at WCSG.

FIGURES



LEGEND

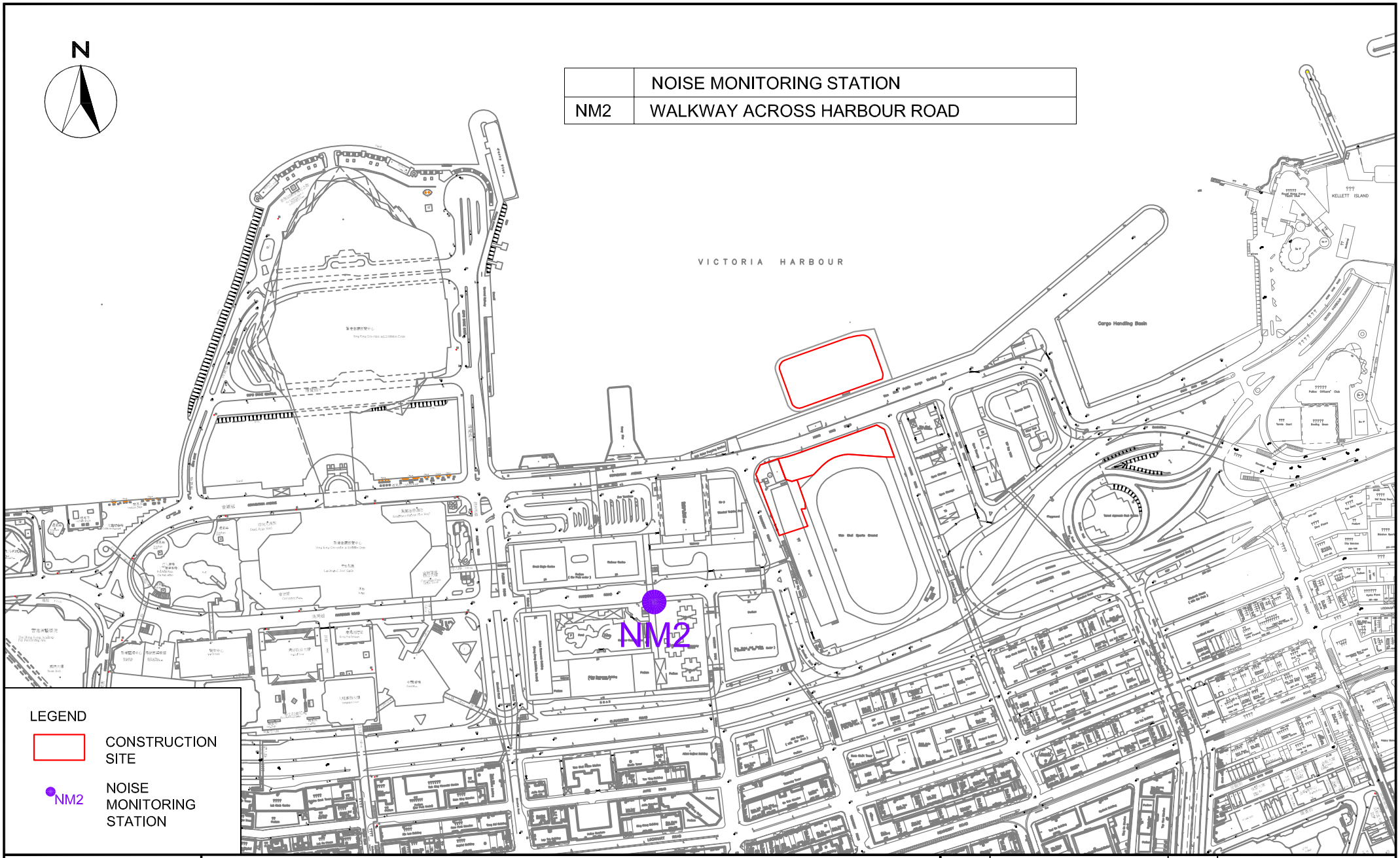
CONSTRUCTION SITE

CINOTECH
Cinotech Consultants Limited

MTR 1126 REPROVISIONING OF HARBOUR ROAD SPORTS CENTRE AND WAN CHAI SWIMMING POOL

SITE LAYOUT PLAN OF WORKS CONTRACT 1126

SCALE	1:2000 @ A4	DATE	JUN 2014
CHECK	JF	DRAWN	JW
JOB No.	MA14009	FIGURE NO. 1	REV -

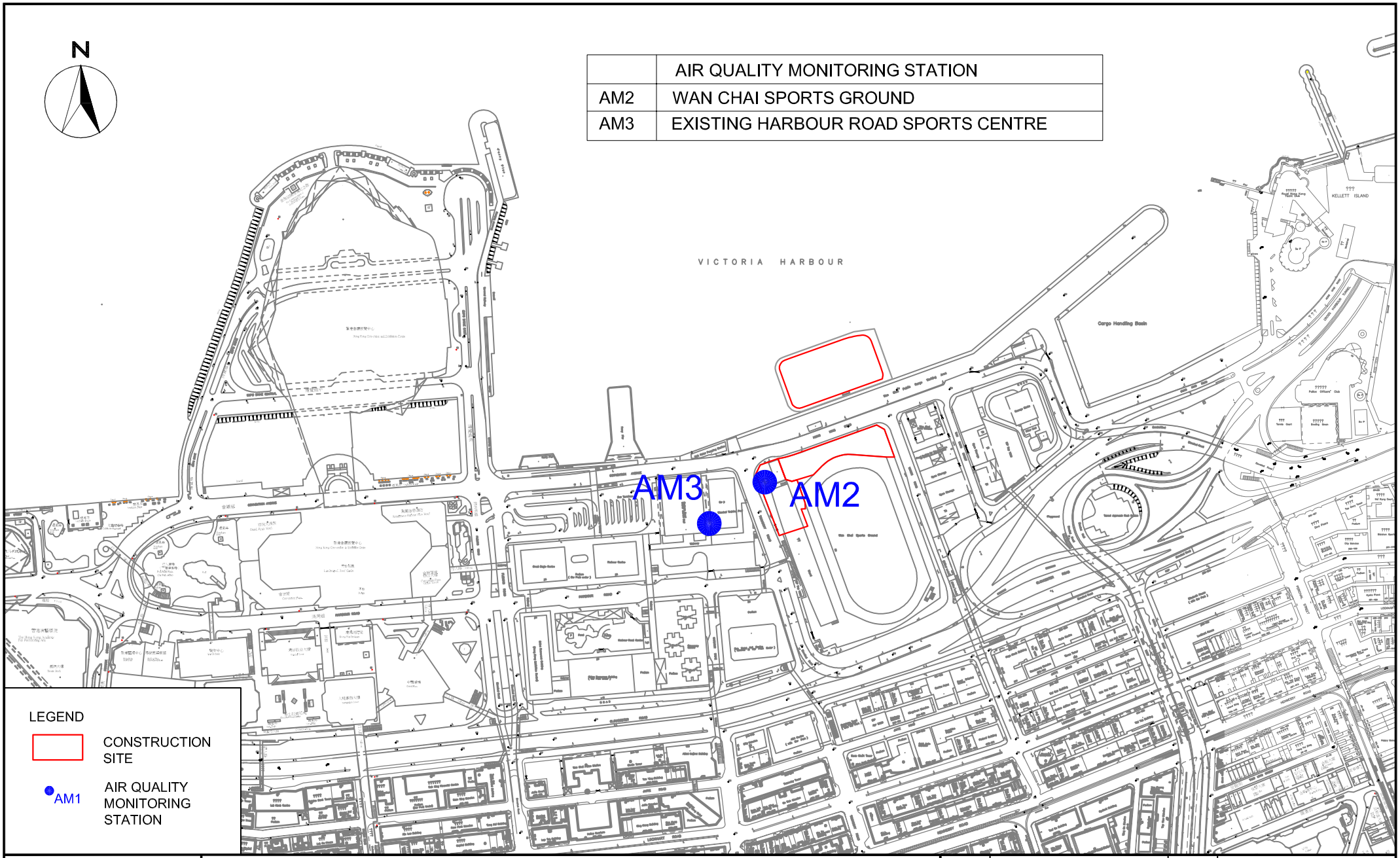


CINOTECH
Cinotech Consultants Limited

MTR 1126 REPROVISIONING OF HARBOUR ROAD SPORTS CENTRE AND WAN CHAI SWIMMING POOL

LOCATION OF NOISE MONITORING STATION

SCALE	1:5000 @ A4	DATE	JUL 2014
CHECK	JF	DRAWN	JW
JOB No.	MA14009	FIGURE NO. 2	REV -

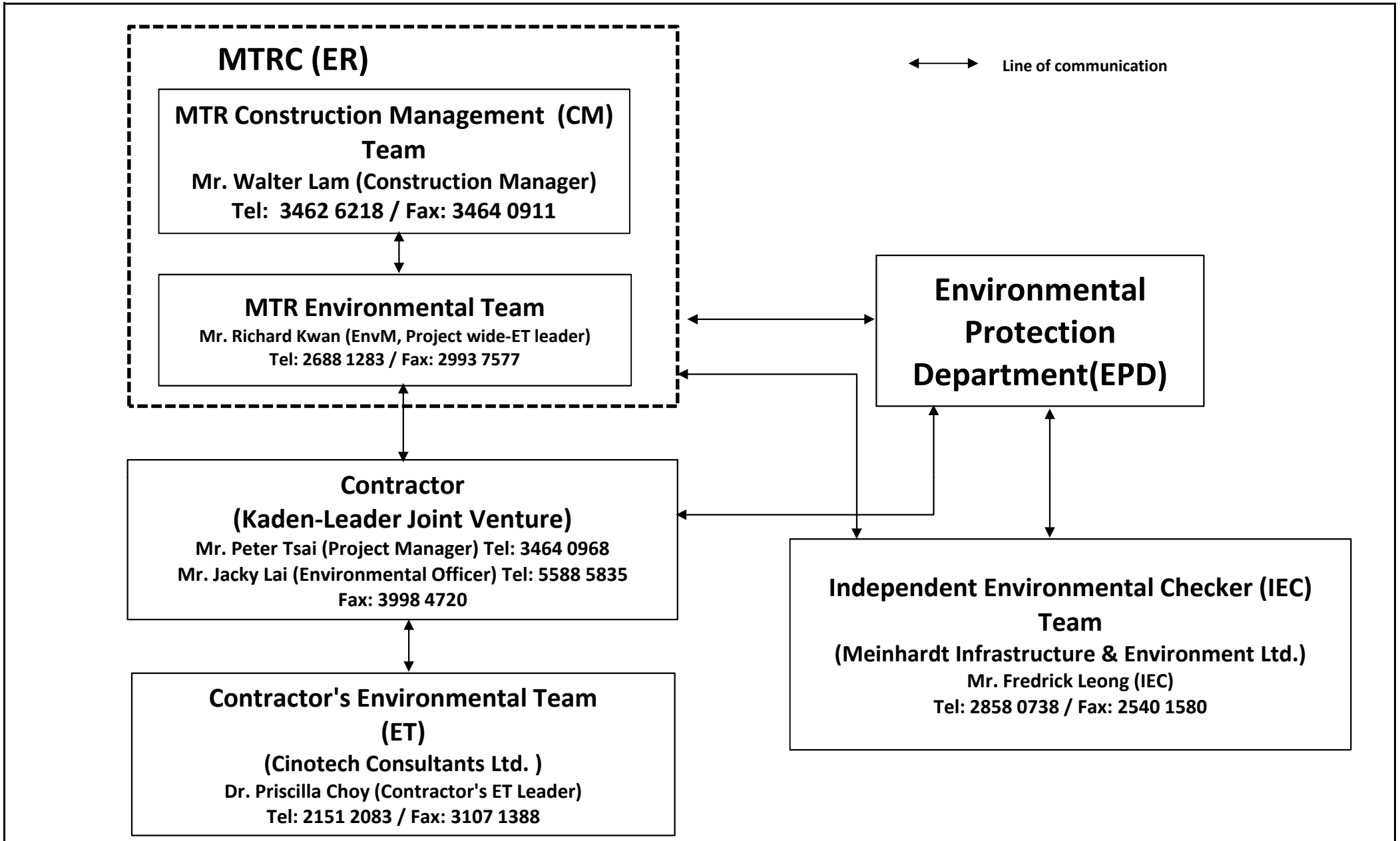


CINOTECH
Cinotech Consultants Limited

MTR 1126 REPROVISIONING OF HARBOUR ROAD SPORTS CENTRE AND WAN CHAI SWIMMING POOL

LOCATION OF AIR QUALITY MONITORING STATIONS

SCALE	1:5000 @ A4	DATE	JUN 2014
CHECK	JF	DRAWN	JW
JOB No.	MA14009	FIGURE NO. 3	REV -

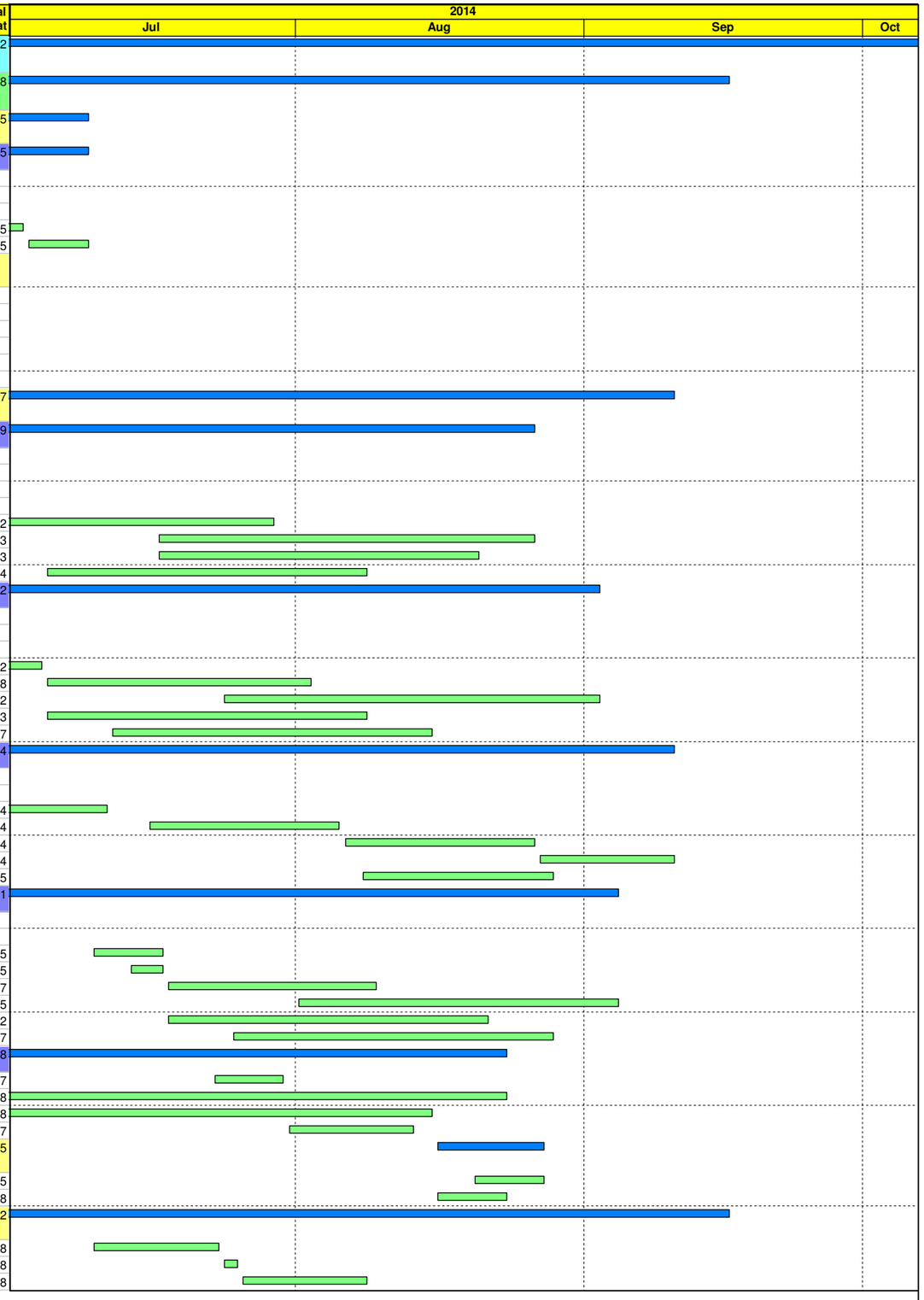


Title	Scale	Proposa
SCL Contract 1126 The Shatin to Central Link - Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool Project Organisation for Environmental Works	N.T.S	No. MA14009
	Date Jul-14	Figure 4

CINOTECH

APPENDIX A
TENTATIVE CONSTRCUTION PROGRAMME

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
SCL1126 - Reprovisioning of HRSC & WCSP (20 Jan 2014) _ Rev		216	28-Apr-14 A	16-Feb-15	672
Cost Centre E - Temporary Reprovisioning Works at WCSG		90	28-Apr-14 A	16-Sep-14	798
Design & Shop Drawing		32	28-Apr-14 A	09-Jul-14	65
Weight Lifting Room		32	28-Apr-14 A	09-Jul-14	65
A5840	Weight Lifting Room - Prepare & Submit - 1st Round	12	28-Apr-14 A	10-May-14 A	
A5850	Weight Lifting Room - Comment & Approval - 1st Round	6	11-May-14 A	22-May-14 A	
A5860	Weight Lifting Room - Prepare & Submit - 2nd Round	5	23-May-14 A	28-May-14 A	
A5870	Weight Lifting Room - Comment & Approval - 2nd Round	6	29-May-14 A	02-Jul-14	65
A7120	Weight Lifting Room - ICC Submission & Approval	6	03-Jul-14	09-Jul-14	65
Site Preparation		24	30-Apr-14 A	13-Jun-14 A	
A3755	Site Procession	0	03-Jun-14 A	03-Jun-14 A	
A3760	Erection of covered hoarding outside Sports Ground	24	30-Apr-14 A	31-May-14 A	
A3770	Erection of protective barrier inside Sports Ground	3	03-Jun-14 A	05-Jun-14 A	
A3780	Diversion of existing irrigation pipes	7	04-Jun-14 A	12-Jun-14 A	
A3790	Tree felling (32nos), transplantion (5nos) and tree protection	10	03-Jun-14 A	13-Jun-14 A	
A3800	Transport and storage the existing fitness / weight lifting equipments	5	03-Jun-14 A	05-Jun-14 A	
Site Works		73	05-Jun-14 A	10-Sep-14	67
Fitness Room and Kiosk		61	05-Jun-14 A	26-Aug-14	79
A3840	Earthworks and excavation for footing construction	7	05-Jun-14 A	07-Jun-14 A	
A3850	Construction of footing	7	09-Jun-14 A	12-Jun-14 A	
A3860	Constrcution of column & wall	7	13-Jun-14 A	25-Jun-14 A	
A3870	Construction of Roof slab & beam	6	24-Jun-14 A	27-Jun-14 A	
A3880	Roof finish - Waterproof / thermal insulation / floor finish / surface channel / fall arrest / etc.	25	30-Jun-14	29-Jul-14	92
A3890	Internal finish for wall, floor & ceiling - screed/skirt/tile/paint/rubber sheet with carpet cover/signage/etc.	35	17-Jul-14	26-Aug-14	73
A3900	External finish for wall - plaster / paint / metal works	30	17-Jul-14	20-Aug-14	73
A3920	Building Service - MVAC, electrical, fire service, plumbing & drainage	30	05-Jul-14	08-Aug-14	94
Male Changing Room with HR Pump Room and Store room		67	09-Jun-14 A	02-Sep-14	62
A3930	Earthworks and excavation for footing construction	7	09-Jun-14 A	11-Jun-14 A	
A3940	Construction of footing	7	12-Jun-14 A	14-Jun-14 A	
A3950	Constrcution of column & wall	7	16-Jun-14 A	24-Jun-14 A	
A3960	Construction of Roof slab & beam	7	23-Jun-14 A	04-Jul-14	62
A3970	Roof finish - Waterproof / thermal insulation / floor finish / surface channel / fall arrest / etc.	25	05-Jul-14	02-Aug-14	88
A3980	Internal finish for wall, floor & ceiling - block wall/screed/skirt/tile/paint/minor/locker/toilet cubicle/signa	35	24-Jul-14	02-Sep-14	62
A3990	External finish for wall - plaster / paint / metal works	30	05-Jul-14	08-Aug-14	83
A4010	Building Service - MVAC, electrical, fire service, plumbing & drainage	30	12-Jul-14	15-Aug-14	77
Marshall Seats		66	09-Jun-14 A	10-Sep-14	64
A4020	Earthworks and excavation for footing construction	5	09-Jun-14 A	13-Jun-14 A	
A4030	Construction of footing	7	14-Jun-14 A	21-Jun-14 A	
A4040	Constrcution of column / wall / beam / slab	7	23-Jun-14 A	11-Jul-14	64
A4050	Erection of structural steel roof including cladding & corrugated sheet	18	16-Jul-14	05-Aug-14	64
A4060	Metal Works - zinc gutter / grating / downpipe / balustrade / railing	18	06-Aug-14	26-Aug-14	64
A4070	Furnitures & finish - mass concrete fill / screed / stadium plastic seat	12	27-Aug-14	10-Sep-14	64
A4080	Building Service - electrical, fire service, PA system	18	08-Aug-14	28-Aug-14	65
Weightlifing Room		62	16-Jun-14 A	04-Sep-14	71
A4090	Earthworks and excavation for footing construction	7	16-Jun-14 A	23-Jun-14 A	
A4100	Construction of footing	7	24-Jun-14 A	27-Jun-14 A	
A4110	Constrcution of column & wall	7	10-Jul-14	17-Jul-14	65
A4120	Construction of Roof slab & beam	4	14-Jul-14	17-Jul-14	65
A4130	Roof finish - Waterproof / thermal insulation / floor finish / surface channel / fall arrest / etc.	20	18-Jul-14	09-Aug-14	87
A4140	Internal finish for wall, floor & ceiling - screed / skirt / tile / paint / signage / etc.	30	01-Aug-14	04-Sep-14	65
A4150	External finish for wall - plaster / paint / metal works	30	18-Jul-14	21-Aug-14	72
A4170	Building Service - MVAC, electrical, fire service	30	25-Jul-14	28-Aug-14	77
Landscaping & External Work		44	16-Jun-14 A	23-Aug-14	78
A4180	Demolition of existing warn up track for temporary reprovisioning works	7	23-Jul-14	30-Jul-14	87
A4190	Footway / drainage / U-channel / paving / drainage pipe / etc.	42	16-Jun-14 A	23-Aug-14	68
A4200	Building Service - Lamp pole / floodlight / street hydant / earthing tap / irrigation system / etc.	40	30-Jun-14	15-Aug-14	68
A5570	Extension of warm up track - floor finish	12	31-Jul-14	13-Aug-14	87
Testing & Commisioning		10	16-Aug-14	27-Aug-14	65
A4210	Internal - MVAC / Electrical / FS / P&D	7	20-Aug-14	27-Aug-14	65
A4220	External - Irrigation / Lighting / FS / P&D	7	16-Aug-14	23-Aug-14	68
Statutory Inspection and Approval		66	30-Jun-14	16-Sep-14	62
A4221	Form WWO46 Part IV Submission to WSD	12	10-Jul-14	23-Jul-14	88
A4222	WSD Inspection	2	24-Jul-14	25-Jul-14	88
A4223	Issue WWO46 Part V Certificate	12	26-Jul-14	08-Aug-14	88

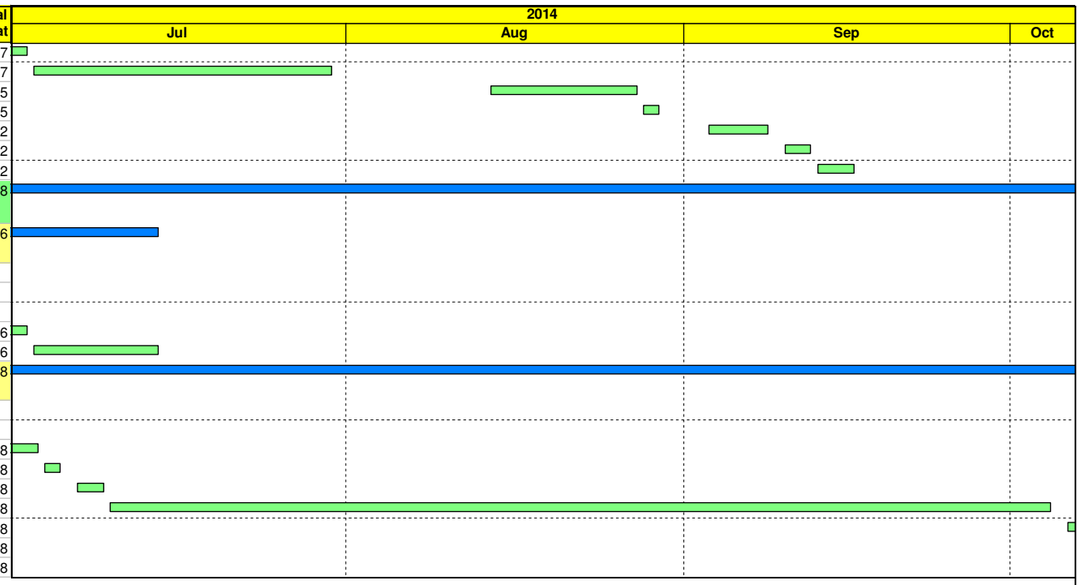


Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

SCL1126 - Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool

Programme for Wan Chai Sports Ground (Jul 2014 ~ Sep 2014??

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
A4224	Submission of Final Amendment to FSD	2	30-Jun-14	02-Jul-14	77
A4225	Approval of Final Amendment from FSD	24	03-Jul-14	30-Jul-14	77
A4230	Submit Forms FS 314 & FS 501	12	14-Aug-14	27-Aug-14	65
A4240	FS Inspection	2	28-Aug-14	29-Aug-14	65
A4250	Obtain FS Certificate & OP	5	03-Sep-14	08-Sep-14	62
A5590	Cleaning and Pre-handover to LCSD	3	10-Sep-14	12-Sep-14	62
A5600	Site handover to LCSD (New Provisions)	3	13-Sep-14	16-Sep-14	62
Cost Centre F - Demolition Works at WCSG		216	12-May-14 A	16-Feb-15	8
Demolition Plan		36	12-May-14 A	14-Jul-14	76
A9560	Demolition Plan - Prepare & Submit - 1st Round	6	12-May-14 A	16-May-14 A	
A9570	Demolition Plan - Comment & Approval - 1st Round	6	17-May-14 A	23-May-14 A	
A9580	Demolition Plan - Prepare & Submit - 2nd Round	6	24-May-14 A	12-Jun-14 A	
A9590	Demolition Plan - Comment & Approval - 2nd Round	6	13-Jun-14 A	02-Jul-14	76
A9600	Demolition Plan - ICC Submission & Approval	10	03-Jul-14	14-Jul-14	76
Demolition Works		204	03-Jun-14 A	16-Feb-15	8
A9610	Site Procession	0	03-Jun-14 A	03-Jun-14 A	
A9620	Erection of covered hoarding and temp. staircase outside Sport Ground	12	03-Jun-14 A	16-Jun-14 A	
A9630	Erection of covered hoarding and temp. staircase inside Sport Ground	6	16-Jun-14 A	03-Jul-14	8
A9640	Temporary works / precaution measures for demolition works	6	14-Jun-14 A	05-Jul-14	8
A9650	Joint site inspection and obtain approval by ICC prior to actual demolition	3	07-Jul-14	09-Jul-14	8
A9660	Demolition works	72	10-Jul-14	04-Oct-14	8
A9670	Ground formation	26	06-Oct-14	04-Nov-14	8
A9680	Site cleaning and touch up	26	05-Nov-14	04-Dec-14	8
A9690	Ready for site handover and Handover	60	05-Dec-14	16-Feb-15	8



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

SCL1126 - Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool

Programme for Wan Chai Sports Ground (Jul 2014 ~ Sep 2014??

APPENDIX B
ACTION AND LIMIT LEVELS

APPENDIX B – Action and Limit Levels

24-Hour TSP

Regular Dust Monitoring Location	Description	Action Level, µg/m^3	Limit Level, µg/m^3
AM2[(1)(2)]	Wan Chai Sports Ground	160	260
AM3[(1)]	Existing Harbour Road Sports Centre	169	260

Note:
(1) ASR ID as identified in approved EM&A Manual / EIA Report for SCL(HUH-ADM).
(2) The spectator stand at Wan Chai Sports Ground was not available for impact dust monitoring, therefore impact monitoring was conducted at the existing water pump room area at Wan Chai Sports Ground.

Construction Noise

Regular Construction Noise Monitoring Location[(1)]	Description	Time Period	Action Level	Limit Level
NM2[(1)(2)]	Walkway across Harbour Road (1/F)	0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)

Note:
(1) NSR ID as identified in approved EM&A Manual / EIA Report for SCL(HUH-ADM).
(2) Access to the monitoring location at Causeway Centre, Block A (originally proposed in the approved EM&A Manual) was denied before the commencement of impact monitoring.. An alternative location (Walkway across Harbour Road) was proposed and approved by the ER and agreed by the IEC. Agreement is pending from the EPD.

APPENDIX C
CALIBRATION CERTIFICATES FOR MONITORING EQUIPEMENT

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA14009/53/0001

Station: AM2 - Wan Chai Sports Ground | Operator: WK

Date: 5-Jun-14 | Next Due Date: 4-Aug-14

Equipment No.: A-01-53 | Serial No. 1535

Ambient Condition			
Temperature, Ta (K)	303.3	Pressure, Pa (mmHg)	754.1

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0588	Intercept, bc	-0.0461
Last Calibration Date:	30-Sep-13	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	29-Sep-14	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	11.5	3.35	57.73	6.7	2.56
2	9.1	2.98	51.44	5.4	2.29
3	7.4	2.69	46.46	4.4	2.07
4	4.5	2.09	36.41	2.8	1.65
5	3.0	1.71	29.87	1.7	1.29

By Linear Regression of Y on X

Slope , mw = 0.0449 **Intercept, bw =** -0.0220

Correlation coefficient* = 0.9986

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.74**

Remarks:

Conducted by: WK Tang Signature: Kwai Date: 5/6/14

Checked by: Signature: Date: 5 June 2014

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA14009/41/0001

Station: AM3 - Existing Harbour Road Sports Centre Operator: WK

Date: 5-Jun-14 Next Due Date: 4-Aug-14

Equipment No.: A-01-41 Serial No. 5280

Ambient Condition			
Temperature, Ta (K)	303.5	Pressure, Pa (mmHg)	754.2

Orifice Transfer Standard Information					
Equipment No.:	A-04-04	Slope, mc	0.0588	Intercept, bc	-0.0461
Last Calibration Date:	30-Sep-13	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	29-Sep-14	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	10.1	3.14	54.14	6.9	2.59
2	8.2	2.83	48.86	5.5	2.31
3	6.1	2.44	42.25	4.2	2.02
4	4.0	1.97	34.36	2.8	1.65
5	2.2	1.46	25.68	1.9	1.36

By Linear Regression of Y on X

Slope , mw = **0.0435** **Intercept, bw =** **0.2011**

Correlation coefficient* = **0.9972**

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.41**

Remarks:

Conducted by: WK Tang Signature: Kwai Date: 5/6/14

Checked by: LA Signature: Date: 5 June 2014

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

Description	Calibration Orifice	**Manufacturer**	TISCH
Serial No.	0993	**Temperature,Ta (K)**	300.8
Model No.	TE-5025A	**Pressure, Pa (mmHg)**	759.3
Date	30 September 2013	**Equipment No.:**	A-04-04

Plate	Diff.Vol (m^3)	Diff.Time (min)	Diff.Hg (mm)	Diff.H_2O (in.)
1	1.00	1.4103	3.4	2.00
2	1.00	0.9980	6.8	4.00
3	1.00	0.8970	8.5	5.00
4	1.00	0.8540	9.4	5.50
5	1.00	0.7060	13.6	8.00

DATA TABULATION

Vstd	(X axis) Qstd	(Y axis)
0.9853	0.6986	1.4069
0.9808	0.9828	1.9897
0.9786	1.0910	2.2245
0.9775	1.1446	2.3331
0.9720	1.3768	2.8138

Y axis= SQRT[H_2O(Pa/760)(298/Ta)]

Qstd Slope (m) = 2.07768
Intercept (b) = -0.04613
Coefficient (r) = 0.99997

Va	(X axis) Qa	(Y axis)
0.9955	0.7059	0.8901
0.9910	0.9930	1.2589
0.9888	1.1023	1.4074
0.9876	1.1565	1.4761
0.9821	1.3911	1.7803

Y axis= SQRT[H_2O(Ta/Pa)]

Qa Slope (m) = 1.30101
Intercept (b) = -0.02919
Coefficient (r) = 0.99997

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=I/m{[SQRT(H_2O(Pa/760)(298/Ta))]-b}
Qa=I/m{[SQRT H_2O(Ta/Pa)]-b}

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力 Testing & Research

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Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	C/N/140104
Date of Issue:	2014-01-05
Date Received:	2014-01-04
Date Tested:	2014-01-04
Date Completed:	2014-01-05
Next Due Date:	2015-01-04

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 Temperatre	: 19 degree Celsius
Relative Humidity	: 52%

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

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	C/N/130830/3
Date of Issue:	2013-08-31
Date Received:	2013-08-30
Date Tested:	2013-08-30
Date Completed:	2013-08-31
Next Due Date:	2014-08-30

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.	: 21460
Microphone No.	: 43679
Equipment No.	: N-08-09

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 69%

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
PATRICK TSE
Laboratory Manager

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	C/N/131129/1
Date of Issue:	2013-11-30
Date Received:	2013-11-29
Date Tested:	2013-11-29
Date Completed:	2013-11-30
Next Due Date:	2014-11-29

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 Temperatre	: 19 degree Celsius
Relative Humidity	: 57%

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

WELLAB 匯力 Testing & Research

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	C/N/131004/1
Date of Issue:	2013-10-05
Date Received:	2013-10-04
Date Tested:	2013-10-04
Date Completed:	2013-10-05
Next Due Date:	2014-10-04
Page:	1 of 1

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

Item for calibration:

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

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 57%

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

PATRICK TSE
Laboratory Manager

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	C/N/131004/2
Date of Issue:	2013-10-05
Date Received:	2013-10-04
Date Tested:	2013-10-04
Date Completed:	2013-10-05
Next Due Date:	2014-10-04
Page:	1 of 1

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

Item for calibration:

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

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 57%

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

WELLAB LIMITED
Rms 816, 1516 & 1701, Technology Park,
18 On Lai Street, Shatin, N.T, Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

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

Test Report No.:	C/N/131004/3
Date of Issue:	2013-10-05
Date Received:	2013-10-04
Date Tested:	2013-10-04
Date Completed:	2013-10-05
Next Due Date:	2014-10-04
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 Temperatre	: 21 degree Celsius
Relative Humidity	: 57%

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

APPENDIX D
IMPACT MONITORING SCHEDULE

Shatin to Central Link – Contract 1126 Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool
Environmental Monitoring Schedule for July 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Jul	2-Jul	3-Jul	4-Jul	5-Jul
6-Jul	7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul
			24 hr TSP			
13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul
		Noise Monitoring 24 hr TSP				
20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul
	24 hr TSP	Noise Monitoring				24 hr TSP
27-Jul	28-Jul	29-Jul	30-Jul	31-Jul		
		Noise Monitoring				

Noise Monitoring Station

NM2: Walkway across Harbour Road

Air Quality Monitoring Station

AM2: Wan Chai Sports Ground
AM3: Existing Harbour Road Sports Centre

Shatin to Central Link – Contract 1126 Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool
Tentative Environmental Monitoring Schedule for August 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Aug	2-Aug
					24 hr TSP	
3-Aug	4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug
	Noise Monitoring			24 hr TSP		
10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug
	Noise Monitoring		24 hr TSP		Noise Monitoring	
17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug
		24 hr TSP	Noise Monitoring			
24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug
	24 hr TSP	Noise Monitoring			24 hr TSP	

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

Noise Monitoring Station

NM2: Walkway across Harbour Road

Air Quality Monitoring Station

AM2: Wan Chai Sports Ground
AM3: Existing Harbour Road Sports Centre

APPENDIX E
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATIONIS

Appendix E - 24-hour TSP Monitoring Results

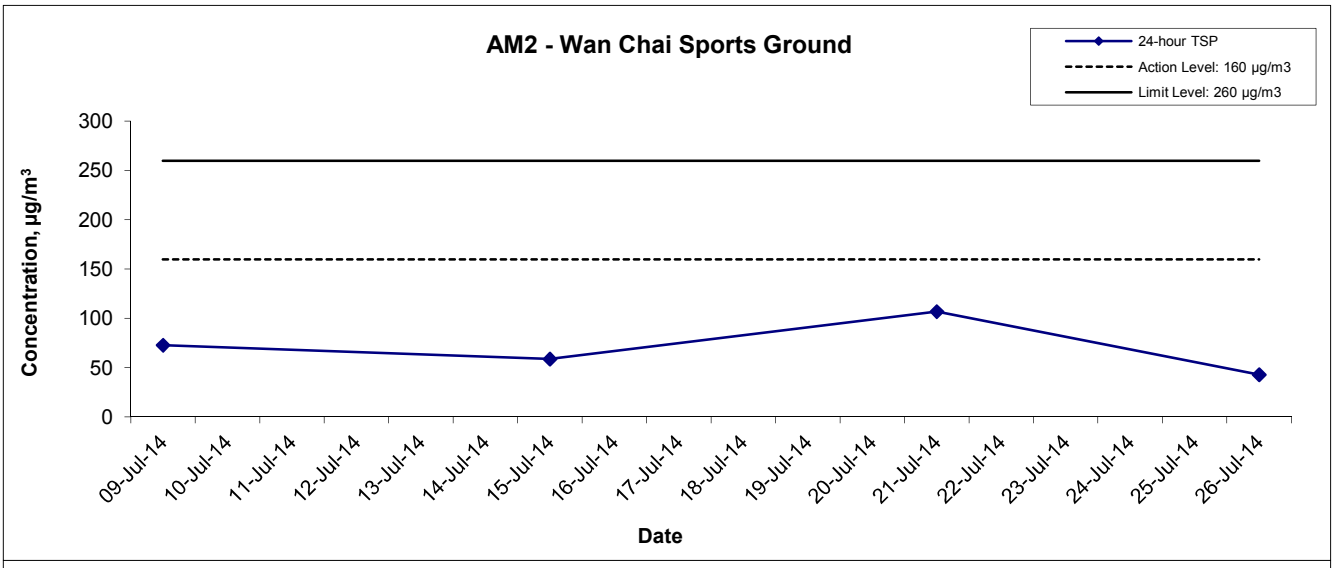
Location AM2 - Wan Chai Sports Ground

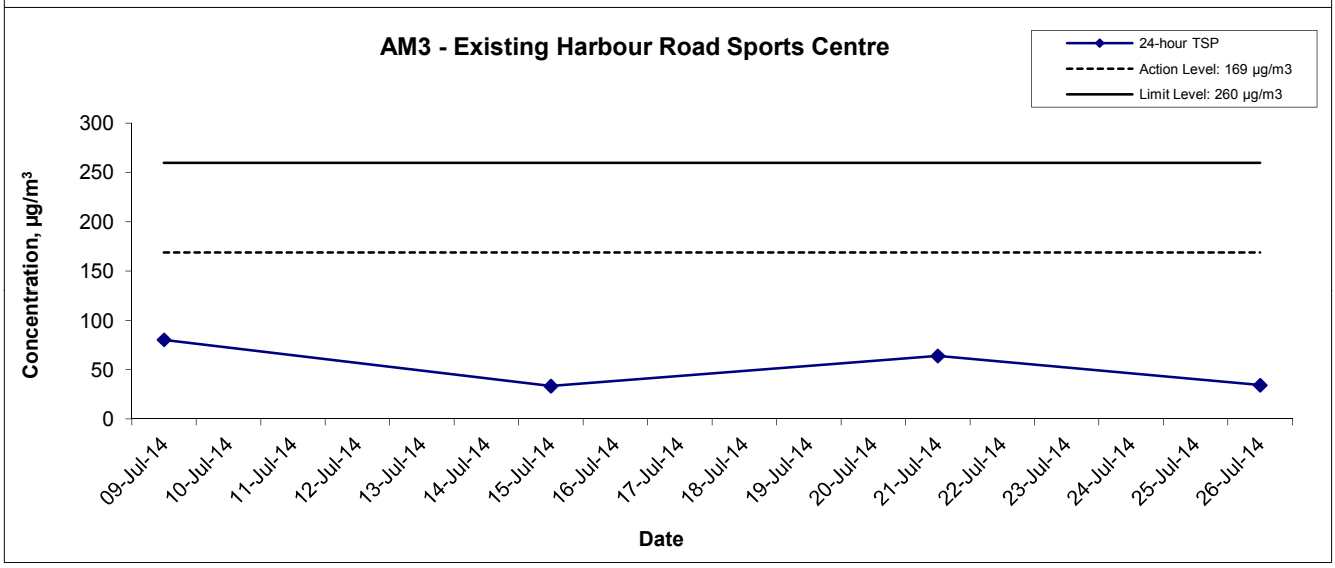
Sampling Date	Start Time	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. (µg/m^3)
					Initial	Final		Initial	Final		Initial	Final			
9-Jul-14	09:00	Sunny	303.1	754.3	3.2194	3.3466	0.1272	5658.4	5682.4	24.0	1.21	1.21	1.21	1744.5	72.9
15-Jul-14	09:00	Sunny	302.2	758.3	3.2470	3.3500	0.1030	5682.4	5706.4	24.0	1.22	1.22	1.22	1751.7	58.8
21-Jul-14	09:00	Sunny	301.5	757.0	3.2487	3.4362	0.1875	5706.4	5730.4	24.0	1.22	1.22	1.22	1752.2	107.0
26-Jul-14	09:00	Sunny	300.6	759.3	3.3122	3.3877	0.0755	5730.4	5754.4	24.0	1.22	1.22	1.22	1757.4	43.0
														Min	43.0
														Max	107.0
														Average	70.4

Location AM3 - Existing Harbour Road Sports Centre

Sampling Date	Start Time	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. (µg/m^3)
					Initial	Final		Initial	Final		Initial	Final			
9-Jul-14	09:00	Sunny	302.6	754.3	3.2290	3.3701	0.1411	3319.3	3343.3	24.0	1.22	1.22	1.22	1754.4	80.4
15-Jul-14	09:00	Sunny	302.2	758.3	3.2435	3.3024	0.0589	3343.3	3367.3	24.0	1.22	1.22	1.22	1760.8	33.5
21-Jul-14	09:00	Sunny	301.5	757.0	3.2144	3.3272	0.1128	3367.3	3391.3	24.0	1.22	1.22	1.22	1761.4	64.0
26-Jul-14	09:00	Sunny	300.6	759.3	3.2895	3.3503	0.0608	3391.3	3415.3	24.0	1.23	1.23	1.23	1767.2	34.4
														Min	33.5
														Max	80.4
														Average	53.1

24-hour TSP Concentration Levels

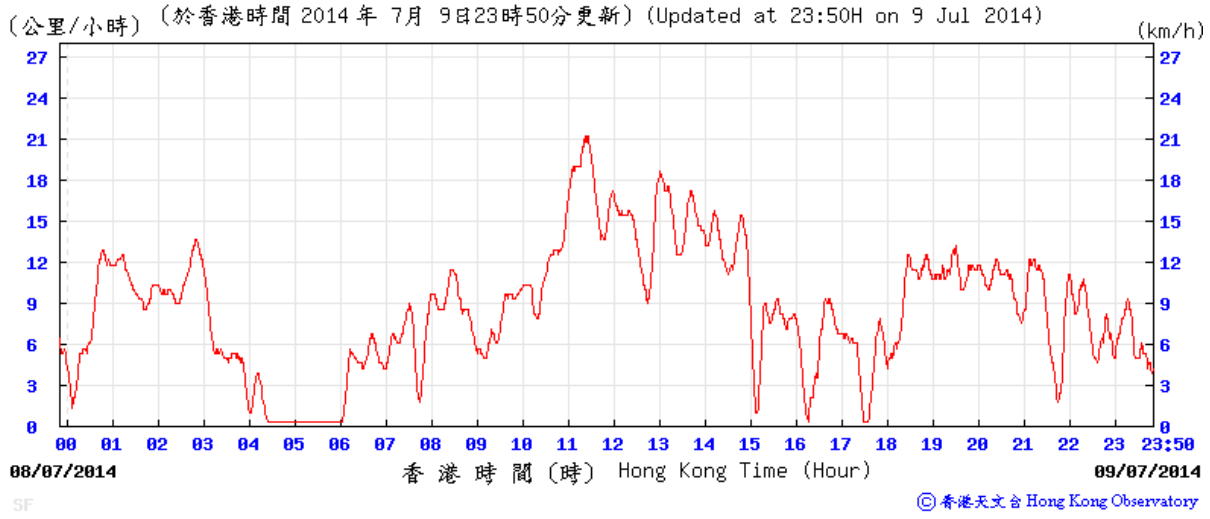


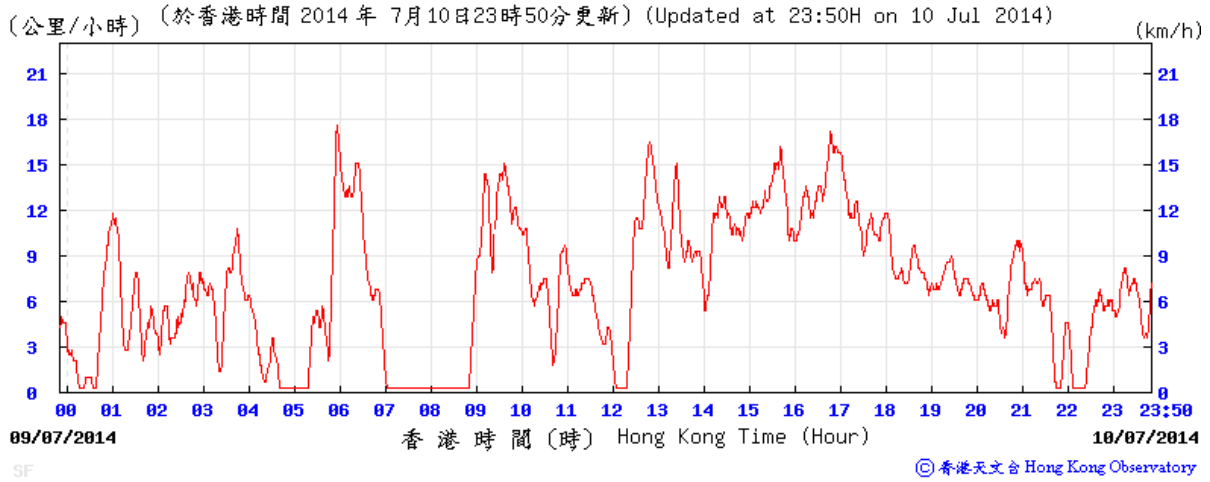


Title: Shatin to Central Link – Contract 1126 Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S	Project No.: MA14009	CINOTECH
	Date: Jul 14	Appendix: E	

Average wind speed obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

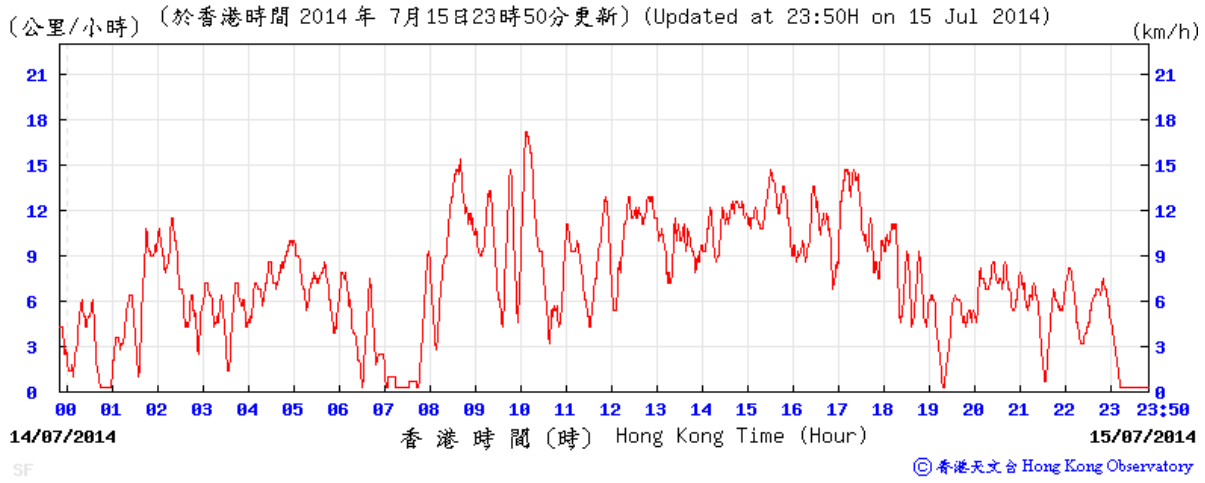
9-10 July 2014

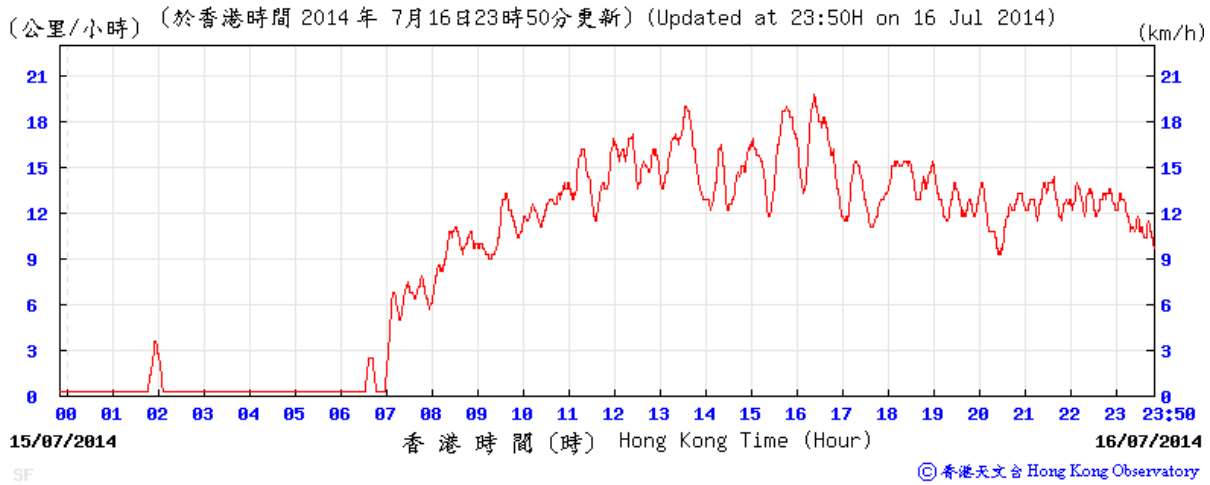




Average wind speed obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

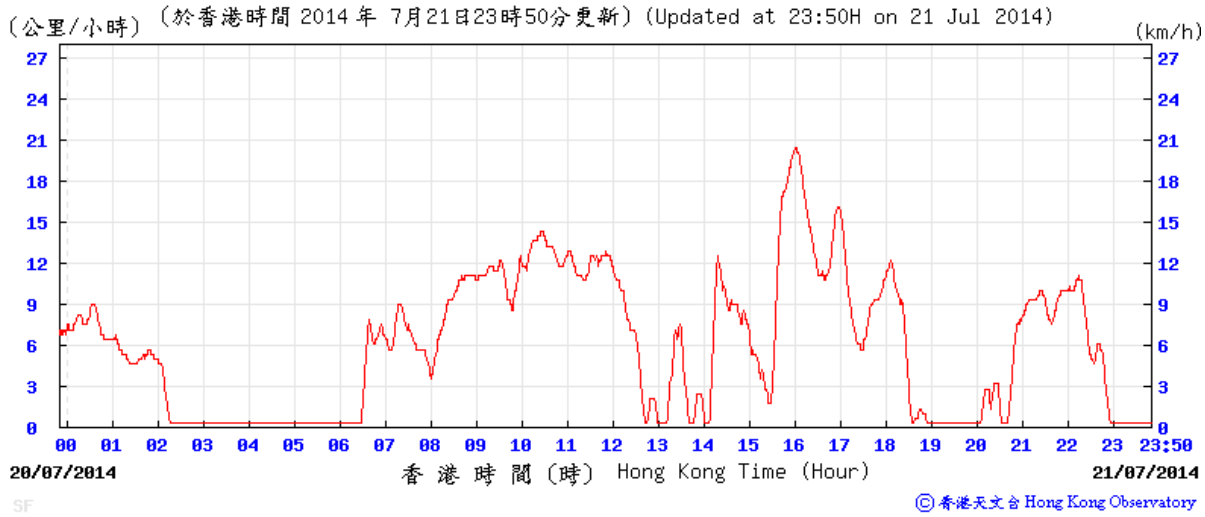
15 – 16 July 2014

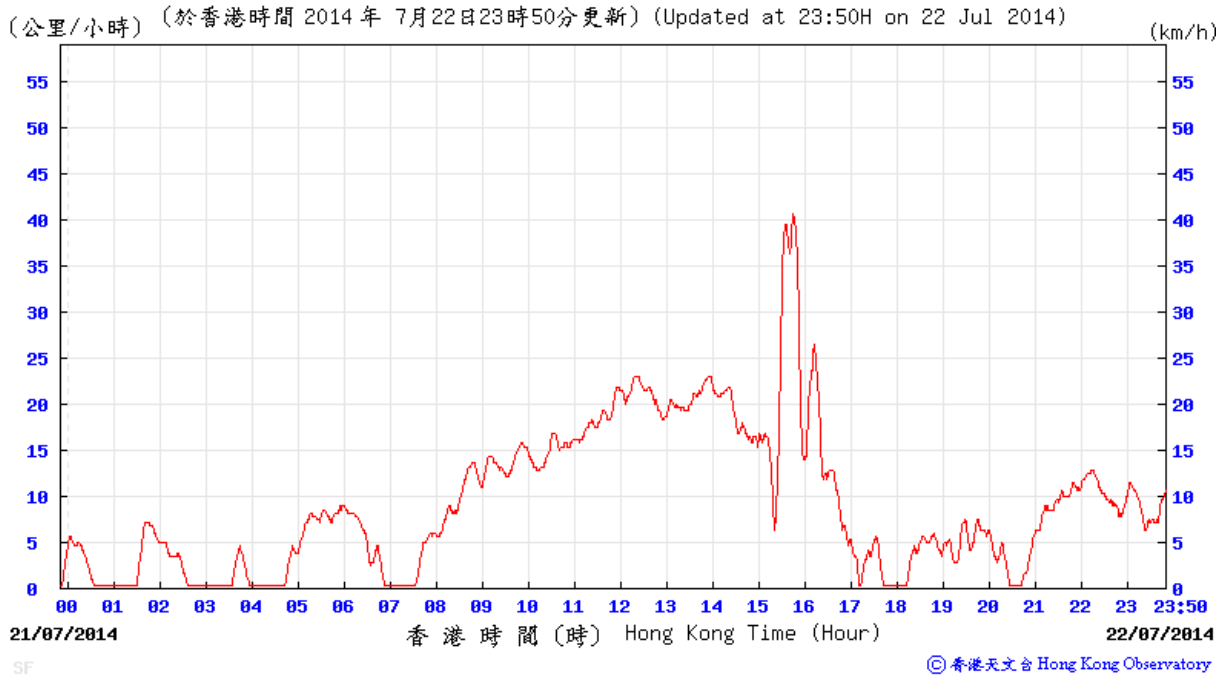




Average wind speed obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

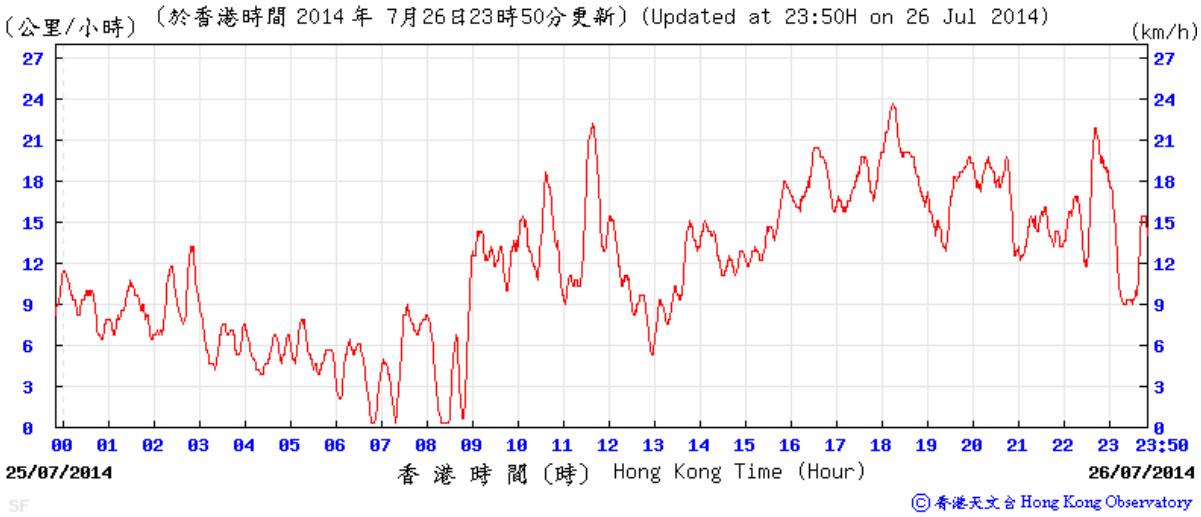
21-22 July 2014

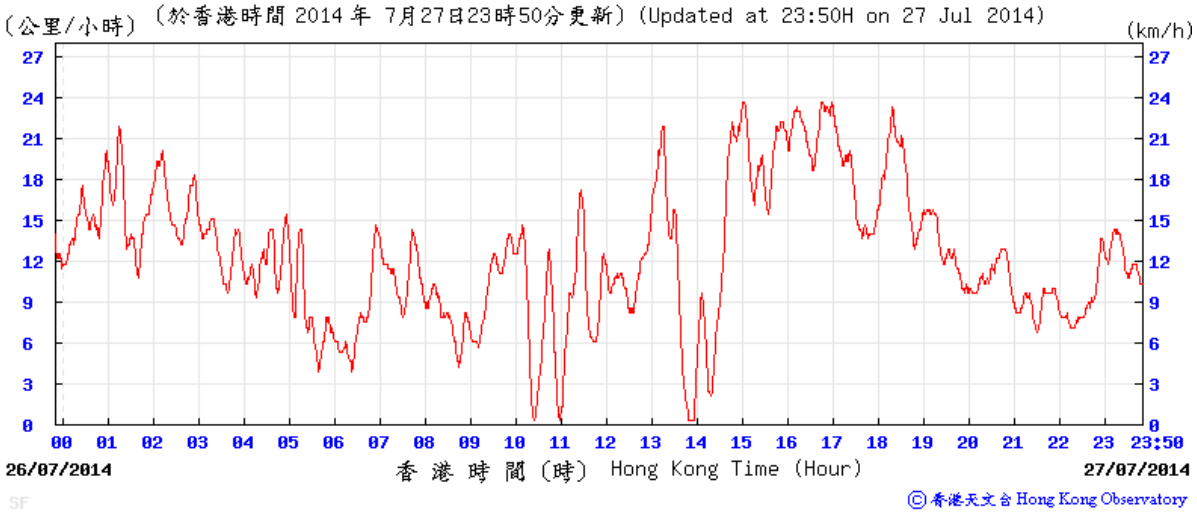




Average wind speed obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

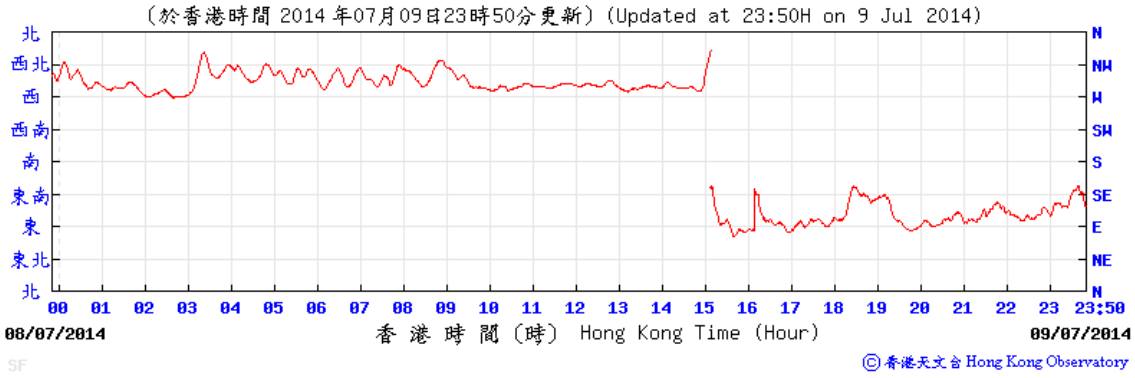
26-27 July 2014

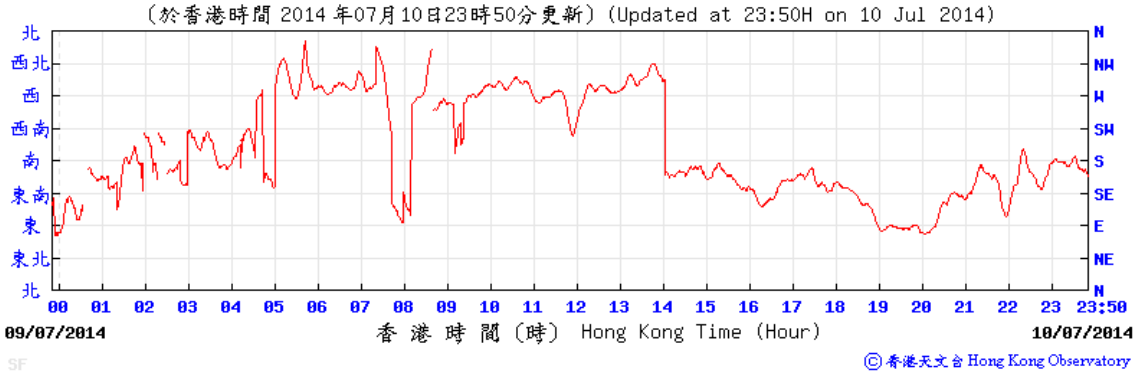




Wind direction obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

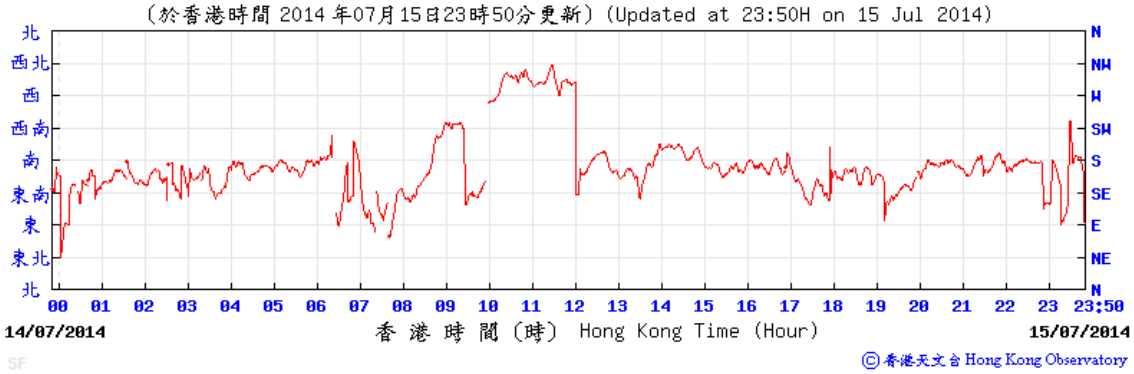
9-10 July 2014

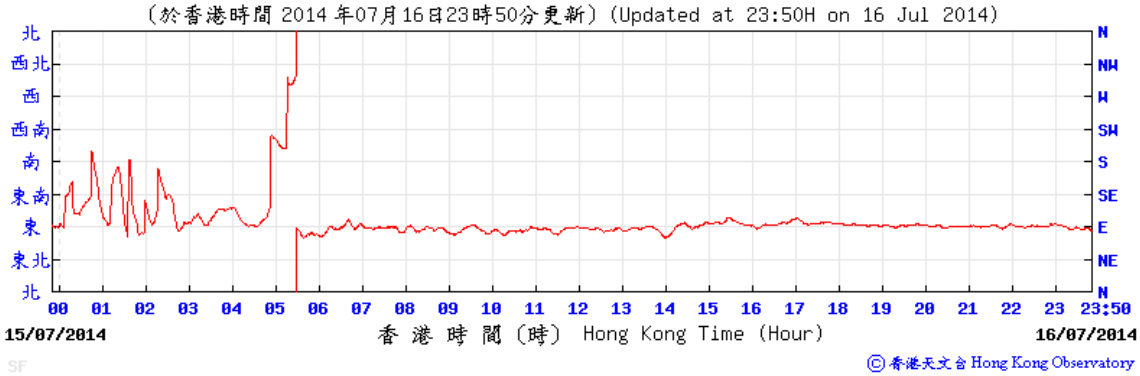




Wind direction obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

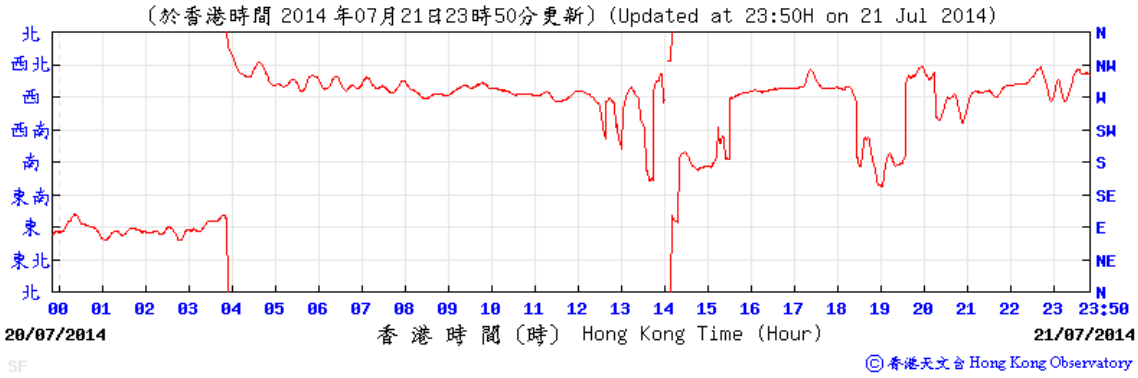
15 – 16 July 2014

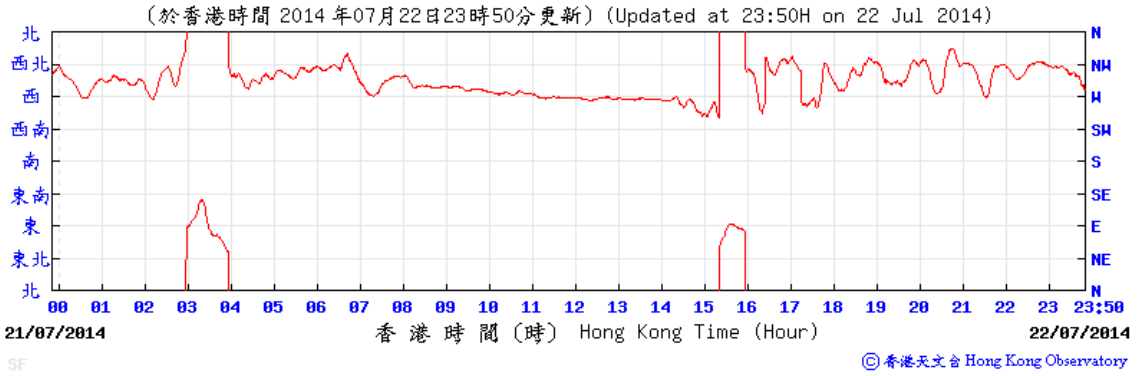




Wind direction obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

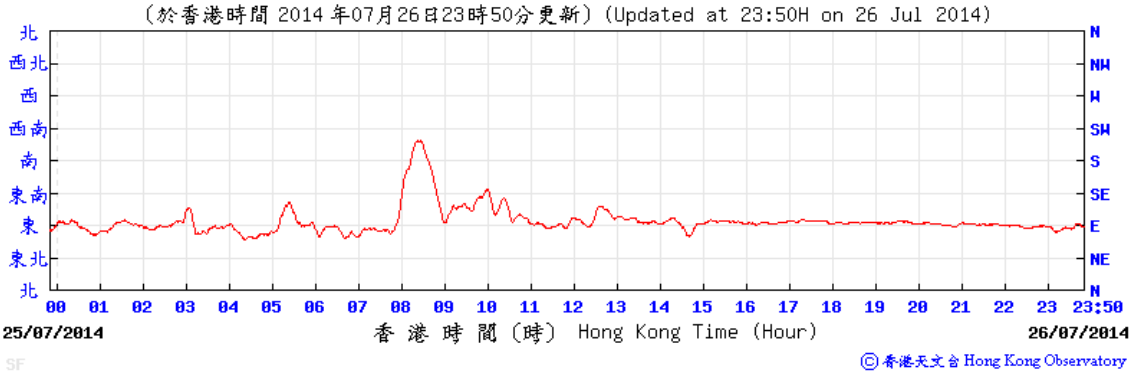
21-22 July 2014

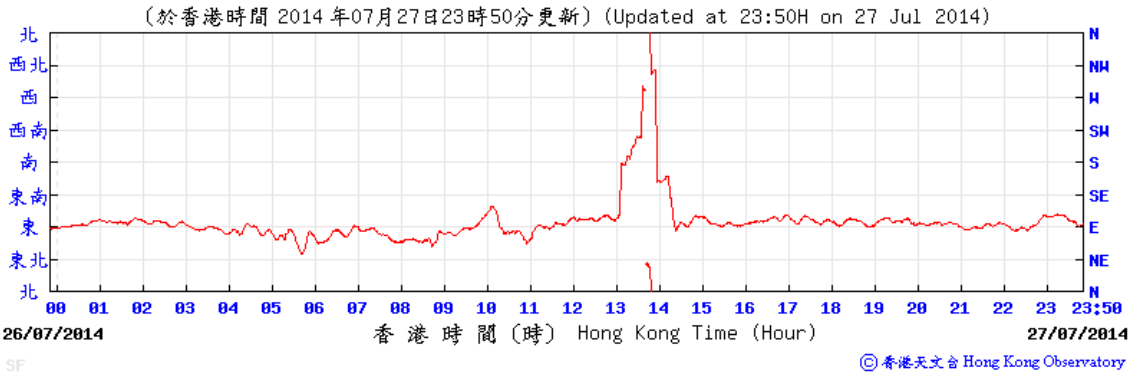




Wind direction obtained from the meteorological station at Star Ferry from the Hong Kong Observatory (HKO)

26-27 July 2014



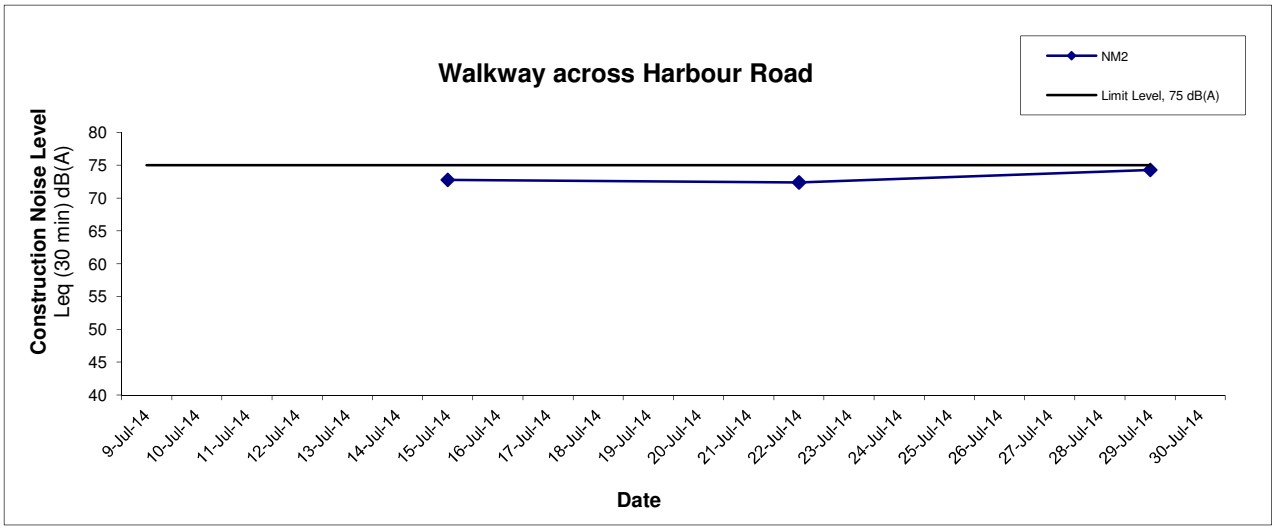


APPENDIX F
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Noise Monitoring Results

Walkway between Sun Hung Kai Centre and Causeway Centre					
Date	Time	Weather	Unit: dB (A) (30-min)		
			Measured Noise Level		
			L_{eq}	L_{10}	L_{90}
15-Jul-14	14:00	Sunny	72.8	75.0	68.7
22-Jul-14	13:00	Cloudy	72.4	74.0	69.2
29-Jul-14	14:30	Sunny	74.3	76.6	69.1

Noise Levels



Title	Shatin to Central Link - Contract 1126 Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA14009	CINOTECH
		Date Jul 14	Appendix F	

APPENDIX G
SUMMARY OF EXCEEDANCE

APPENIDX G – SUMMARY OF EXCEEDANCE

Reporting Month: July 2014

a) Exceedance Report for Dust Monitoring (NIL)

b) Exceedance Report for Noise Monitoring (NIL)

APPENDIX H
SITE AUDIT SUMMARY

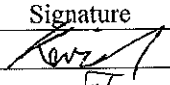
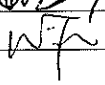
Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140709
Date	9 July 2014 (Wednesday)
Time	10:00 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	Part B – Water Quality • No environmental deficiency was identified during the site inspection.	
140709-O03	***Part C – Landscape & Visual*** • To properly maintain the tree protection zone near the site entrance of WCSG and remove the construction materials inside it.	C 2, 3
140709-O01	***Part D – Air Quality*** • To provide water spray for exposed areas in both WCSP and WCSG to prevent dust generation.	D 5
140709-O02	• To properly provide wheel washing for vehicles exiting from WCSG and clear the tie marks at the site entrance.	D 3, 7
	Part E - Construction Noise Impact • No environmental deficiency was identified during the site inspection.	
	Part F – Waste/Chemical Management • No environmental deficiency was identified during the site inspection.	
	Part G – Permits/Licenses • No environmental deficiency was identified during the site inspection.	
	Part H - Others • Follow-up on previous audit section (Ref. No.:140702), all environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kevin Lam		11 July 2014
Checked by	Dr. Priscilla Choy		11 July 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140716
Date	16 July 2014 (Wednesday)
Time	10:00 – 11:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	Part B – Water Quality	
140716-O01	• Tyre marks observed at the site entrance at the WCSG. The Contractor is reminded to provide wheel washing facility to the site entrance.	B 13
140716-R02	• Remove the construction material in the sedimentation tank at WCSG.	B 6ii
	Part C – Landscape & Visual	
	• No environmental deficiency was identified during the site inspection.	
	Part D – Air Quality	
140716-O01	• Tyre marks observed at the site entrance at the WCSG. The Contractor is reminded to provide wheel washing facility to the site entrance.	D 3
	Part E - Construction Noise Impact	
	• No environmental deficiency was identified during the site inspection.	
	Part F – Waste/Chemical Management	
140716-R03	• Remove the accumulation of general refuse and properly sort the construction waste at WCSG.	F1i, 1iii, 1iv
	Part G – Permits/Licenses	
	• No environmental deficiency was identified during the site inspection.	
	Part H - Others	
	• Follow-up on previous audit section (Ref. No.:140709), follow up action is needed to be reviewed for item 140709-O02.	

	Name	Signature	Date
Recorded by	Johnny Fung		16 July 2014
Checked by	Dr. Priscilla Choy		16 July 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140723
Date	23 July 2014 (Wednesday)
Time	10:00 – 11:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
170723-O01	***Part B – Water Quality*** • Silty tyre marks observed near the two site entrances at WCSG. The contractor is reminded to provide wheel washing facility to the two site entrances. . ***Part C – Landscape & Visual*** • No environmental deficiency was identified during the site inspection.	B 13
140723-O01	***Part D – Air Quality*** • Silty tyre marks observed near the two site entrances at WCSG. The contractor is reminded to provide wheel washing facility to the two site entrances. ***Part E - Construction Noise Impact*** • No environmental deficiency was identified during the site inspection.	D 3
140723-R02	***Part F – Waste/Chemical Management*** • Provide drip tray to chemical container near site entrance at WCSG. ***Part G – Permits/Licenses*** • No environmental deficiency was identified during the site inspection. ***Part H - Others*** • Follow-up on previous audit section (Ref. No.:140716), follow up action is needed to be reviewed for item 140716-O01.	F 10

	Name	Signature	Date
Recorded by	Johnny Fung		23 July 2014
Checked by	Dr. Priscilla Choy		23 July 2014

Record Summary of Environmental Site Inspection

Inspection Information

Checklist Reference Number	140730
Date	30 July 2014 (Wednesday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	Part B – Water Quality • No environmental deficiency was identified during the site inspection. ***Part C – Landscape & Visual*** • No environmental deficiency was identified during the site inspection. ***Part D – Air Quality***	
140730-O01	• Works area observed dry at WCSG. The Contractor is reminded to provide water spray to works area to avoid dust generation.	D 5
140730-R02	• Cover the stockpile of cement bags properly by impervious material at WCSG.	D 16
	Part E - Construction Noise Impact • No environmental deficiency was identified during the site inspection. ***Part F – Waste/Chemical Management*** • No environmental deficiency was identified during the site inspection. ***Part G – Permits/Licenses*** • No environmental deficiency was identified during the site inspection. ***Part H - Others*** • Follow-up on previous audit section (Ref. No.:140723), all environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Johnny Fung		30 July 2014
Checked by	Ivy Tam		30 July 2014

APPENDIX I
EVENT AND ACTION PLANS

Appendix I - Event and Action Plan for Construction Noise Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify the Contractor, IEC and ER 2. Discuss with the ER and Contractor on the remedial measures required; and 3. Increase monitoring frequency to check mitigation effectiveness	1. Review the investigation results submitted by the contractor; 2. Review and advise the ET and ER on the effectiveness of the remedial measures proposed by the Contractor. .	1. Confirm receipt of notification of complaint in writing; 2. Review and agree on the remedial measures proposed by the Contractor; and 3. Supervise implementation of remedial measures.	1. Investigate the complaint and propose remedial measures ; 2. Report the results of investigation to the IEC, ET and ER; 3. Submit noise mitigation proposals to the ER with copy to the IEC and ET within 3 working days of notification.; and 4. Implement noise mitigation proposals.
Limit Level	1. Notify the Contractor, IEC, EPD and ER; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency; 4. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 5. Arrange meeting with the IEC, and ER to discuss the remedial measures to be taken; 6. Review the effectiveness of	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with the ER, ET and Contractor on the potential remedial measures ; and 4. Review and advise the ET and ER on the effectiveness of the remedial measures proposed by the Contractor.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the	1. Identify source and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with copy to the IEC and ET within 3 working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and

Appendix I - Event and Action Plan for Construction Noise Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	Contractor's remedial measures and keep IEC, EPD and ER informed of the results; and 7. If exceedance stops, cease additional monitoring the results.		exceedance is abated	6. Stop the relevant portion of works as determined by the ER until the exceedance is abated

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
ACTION LEVEL				
1. Exceedance for one sample	1. Inform the Contractor, IEC and ER; 2. Discuss with the Contractor on the remedial measures required; 3. Repeat measurement to confirm findings; and 4. Increase monitoring frequency	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing;	1. Identify source(s), investigate the causes of exceedance and propose remedial measures; 2. Implement remedial measures; and 3. Amend working methods agreed with the ER as appropriate.
2.Exceedance for two or more consecutive samples	1. Inform the Contractor, IEC and ER; 2. Discuss with the ER and Contractor on the remedial measures required; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. If exceedance continues, arrange meeting with the IEC, ER and Contractor; and 6. If exceedance stops, cease additional monitoring	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Review and agree on the remedial measures proposed by the Contractor; and 3. Supervise Implementation of remedial measures.	1. Identify source and investigate the causes of exceedance; 2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal as appropriate.

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
LIMIT LEVEL				
1.Exceedance for one sample	1. Inform the Contractor, IEC, EPD and ER; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency to daily; and 4. Discuss with the ER, IEC and contractor on the remedial measures and assess the effectiveness.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with the ET, ER and Contractor on possible remedial measures; and 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Review and agree on the remedial measures proposed by the Contractor; and 3. Supervise implementation of remedial measures.	1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification; 4. Implement the agreed proposals; 5. Amend proposal if appropriate.

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
LIMIT LEVEL				
2.Exceedance for two or more consecutive samples	1. Notify Contractor, IEC EPD and ER; 2. Repeat measurement to confirm findings; 3. Increase monitoring frequency to daily; 4. Carry out analysis of the Contractor's working procedures with the ER to determine possible mitigation to be implemented; 5. Arrange meeting with the IEC and ER to discuss the remedial measures to be taken; 6. Review the effectiveness of the Contractor's remedial measures and keep IEC, EPD and ER informed of the results; and 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with ET, ER, and Contractor on the potential remedial measures; and 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

APPENDIX J
UPDATED ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

SCL Works Contract 1126 - Environmental Mitigation Implementation Schedule

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
Ecology (Construction Phase)							
S5.134	Accidental chemical spillage and construction site run-off to the receiving water bodies, mitigation measures such as removing the pollutants before discharge into storm drain and paving the section of construction road between the wheel washing bay and the public road as suggested in Sections 11.216and 11.219 to 11.256 of the EIA Report shall be adopted	Minimise the contamination of wastewater discharge	Contractor	All land based works areas	Construction phase	• EIAO-TM	^
Landscape & Visual (Construction Phase)							
Table 7.9	CM1 - Trees unavoidably affected by the works shall be transplanted as far as possible in accordance with ETWB TC(W) 3/2006 – Tree Preservation	Transplanting and reuse of affected trees	MTR	All works sites	Construction phase	• EIAO-TM • ETWB TC(W) 3/2006	^
Table 7.9	CM2a - Compensatory tree planting shall be provided in accordance with ETWB TC(W) 3/2006 – Tree Preservation to compensate for felled trees and maintained until end of the establishment period.	Compensation for the removal of existing trees due to the Project.	MTR	All works sites	Construction phase	• EIAO-TM • ETWB TC(W) 3/2006	^
	CM2b - Compensatory shrub planting shall be provided to compensate for the loss of shrub planting in amenity areas.	Compensation for the removal of existing shrub planting due to the Project.	MTR	All works sites	Construction phase	• EIAO-TM	^

SCL Works Contract 1126 - Environmental Mitigation Implementation Schedule

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
Table 7.9	CM3 - Control of night-time lighting glare	Minimize the night time glare due to the Project during construction phase	MTR	All works sites	Construction phase	• EIAO-TM	^
Table 7.9	CM4 - Erection of decorative screen hoarding compatible with the surrounding setting.	Minimize the visual impact of the Project during construction phase	MTR	All works sites	Construction phase	• EIAO-TM	^
Table 7.9	CM5 - Management of facilities on work sites which give control on the height and disposition/arrangement of all facilities on the works site to minimize visual impact to adjacent VSRs.	Control of height and deposition/arrangement of temporary facilities in works areas	MTR	All works sites	Construction phase	• EIAO-TM	^
Table 7.9	CM6 - All hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like to-like basis to the satisfaction of the relevant Government Departments	Reinstatement of temporary works areas	MTR	All works sites	Construction phase	• EIAO-TM	^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
S7.126	The following good site practice measures shall also be incorporated in the construction phase of the project: • Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works. • Existing trees to be retained on site shall be carefully protected during construction.	Minimize landscape and visual impact	Contractor	All works areas	Construction phase	• EIAO-TM	N/A *
Construction Dust Impact							
S8.89	Watering once every working hour on active works areas, exposed areas and paved haul roads to reduce dust emission by 91.7%. This suppression efficiency is derived based on the average haul road traffic, average evaporation rate and an assumed application intensity of 1.0 L/m^2 for Hong Kong side once every working hour. Any potential dust impact and watering mitigation would be subject to the actual site condition. For example, a construction activity that produces inherently wet conditions or in cases under rainy weather, the above water application intensity may not be unreservedly applied. While the above watering frequency is to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.0 L/m^2 for Hong Kong side to achieve the removal efficiency. The dust levels would be monitored and managed under an EM&A	Minimize dust impact	Contractor	All works areas	Construction phase	• APCO	*

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	programme as specified in the EM&A Manual.						
S8.90	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices: • Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. • Use of frequent watering for particularly dusty construction areas and areas close to ASRs • Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. • Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. • Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in	Minimize dust impact	All works areas	Construction phase	• APCO • Air Pollution Control (Construction dust) Regulation	All works areas	* ^ ^ ^ ^ * ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	dry seasons/ periods. ・Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. ・Imposition of speed controls for vehicles on site haul roads. ・Where possible, routing of vehicles and positioning of construction plant shall be at the maximum possible distance from ASRs. ・Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. ・Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.						^ ^ ^ * ^
Construction Noise (Airborne)							
S9.55	The following good site practices shall be implemented: ・Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program ・Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program ・Mobile plant, if any, shall be sited as far from NSRs as possible	Minimize construction noise impact	Contractor	All works areas	Construction phase	・ EIAO-TM	^ ^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	・Machines and plant (such as trucks) that may be in intermittent use shall be shut down between work periods or shall be throttled down to a minimum ・Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs ・Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.						^ ^ ^
S9.56 & Table 9.16	The following quiet PME shall be used: • Crane lorry, mobile • Crane, mobile • Asphalt paver • Backhoe with hydraulic breaker • Breaker, excavator mounted (hydraulic) • Hydraulic breaker • Concrete lorry mixer • Poker, vibrator, hand-held • Concrete pump • Crawler crane, mobile • Mobile crane	To minimize construction noise impact	Contractor	Works areas under this Contract	Construction phase	・ EIAO-TM	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	• Dump truck • Excavator • Truck • Rock drill • Lorry • Wheel loader • Roller vibratory						N/A N/A N/A N/A N/A N/A N/A
S9.58 – S9.59 & Table 9.17	Movable noise barrier shall be used for the following PME: • Air compressor • Asphalt paver • Backhoe with hydraulic breaker • Bar bender • Bar bender and cutter (electric) • Breaker, excavator mounted • Concrete pump • Concrete pump, stationary/lorry • Excavator • Generator • Grout pump • Hand held breaker • Hydraulic breaker	Minimize construction noise impact	Contractor	Works areas under this Contract	Construction phase	• EIAO-TM	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	• Saw, concrete						N/A
S9.60 & Table 9.17	Noise insulating fabric shall be used for • Drill rig, rotary type • Piling, diaphragm wall, bentonite filtering plant • Piling, diaphragm wall, grab and chisel • Piling, diaphragm wall, hydraulic extractor • Piling, large diameter bored, grab and chisel • Piling, hydraulic extractor • Piling, earth auger, auger • Rock drill, crawler mounted (pneumatic)	Minimize construction noise impact	Contractor	Works areas under this Contract	Construction phase	• EIAO-TM	 N/A N/A N/A N/A N/A N/A N/A N/A
Water Quality (Construction Phase)							
S11.216	The following mitigation measures are proposed to minimize the potential water quality impacts from the construction works at or close to the seafront: • Temporary storage of construction materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction and demolition materials shall be located well away from the seawater front and storm drainage during carrying out of the works. • Stockpiling of construction and demolition materials and dusty materials shall be covered and located away from the seawater front	minimize release of construction wastes from construction works at or close to the seafront	Contractor	Construction works at or close to the seafront	Construction phase	• EIAO-TM • WPCO	 ^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	and storm drainage. ・Construction debris and spoil shall be covered up and/or disposed of as soon as possible to avoid being washed into the nearby receiving waters.						^
S11.222 to 11.245	The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" shall be followed where practicable. <u>Surface Run-off</u> ・ Surface run-off from construction sites shall be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels or earth bunds or sand bag barriers shall be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries shall be provided where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks. ・ Silt removal facilities, channels and manholes shall be maintained and the deposited silt and grit shall be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Any	minimize water quality impact from construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction phase	・EIAO-TM ・WPCO ・TM-DSS ・WDO ・ProPECC PN 1/94	^ *

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	practical options for the diversion and re-alignment of drainage shall comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains. Minimum distances of 100 m shall be maintained between the discharge points of construction site runoff and the existing saltwater intakes. • Construction works shall be programmed to minimize soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces shall be covered e.g. by tarpaulin, and temporary access roads shall be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels shall be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements shall always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. • Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent						^ N/A

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	erosion caused by rainstorms. Appropriate drainage like intercepting channels shall be provided where necessary. • Measures shall be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they shall be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations shall be discharged into storm drains via silt removal facilities. • Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites shall be covered with tarpaulin or similar fabric during rainstorms. • Manholes (including newly constructed ones) shall always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system. • Good site practices shall be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.						^ ^ ^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	Boring and Drilling Water • Water used in ground boring and drilling for site investigation or rock / soil anchoring shall as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater shall be discharged into storm drains via silt removal facilities. Wheel Washing Water • All vehicles and plant shall be cleaned before they leave a construction site to minimize the deposition of earth, mud, debris on roads. A wheel washing bay shall be provided at every site exit if practicable and wash-water shall have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road shall be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. Bentonite Slurries • Bentonite slurries used in diaphragm wall and bore-pile construction shall be reconditioned and used again wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the bentonite slurries shall either be dewatered or mixed with inert fill material for disposal to a public filling area.						N/A * N/A

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	• If the used bentonite slurry is intended to be disposed of through the public drainage system, it shall be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the TM-DSS. <u>Water for Testing & Sterilization of Water Retaining Structures and Water Pipes</u> • Water used in water testing to check leakage of structures and pipes shall be used for other purposes as far as practicable. Surplus unpolluted water will be discharged into storm drains. • Sterilization is commonly accomplished by chlorination. Specific advice from EPD shall be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water shall be used again wherever practicable. <u>Wastewater from Building Construction</u> • Before commencing any demolition works, all sewer and drainage connections shall be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains. • Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities shall not be discharged into the						N/A ^ N/A ^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	stormwater drainage system. If the wastewater is to be discharged into foul sewers, it shall undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary. <u>Acid Cleaning, Etching and Pickling Wastewater</u> • Acidic wastewater generated from acid cleaning, etching, pickling and similar activities shall be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater shall be tankered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters. <u>Wastewater from Site Facilities</u> • Wastewater collected from any temporary canteen kitchens, including that from basins, sinks and floor drains, shall be discharged into foul sewer via grease traps. In case connection to the public foul sewer is not feasible, wastewater generated from kitchens or canteen, if any, shall be collected in a temporary storage tank. A licensed waste collector shall be deployed to clean the temporary storage tank on a regular basis. • Drainage serving an open oil filling point shall be connected to storm drains via petrol interceptors with peak storm bypass.						^ ^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	• Vehicle and plant servicing areas, vehicle wash bays and lubrication bays shall as far as possible be located within roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor. Oil leakage or spillage shall be contained and cleaned up immediately. Waste oil shall be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.						^
S11.246 & 11.247	Construction work force sewage discharges on site are expected to be discharged to the nearby existing trunk sewer or sewage treatment facilities. If disposal of sewage to public sewerage system is not feasible, appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment. The Contractor shall also be responsible for waste disposal and maintenance practices. Notices shall be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment.	minimize water quality impacts due to sewage generated from construction workforce	Contractor	All works areas	Construction phase	• EIAO-TM • WPCO • TM-DSS • WDO	^
S11.248	In case seepage of uncontaminated groundwater occurs, groundwater shall be pumped out from the works areas and discharged into the storm system via silt removal facilities. Uncontaminated groundwater from dewatering process shall also be	minimize impact from discharge of uncontaminated groundwater	Contractor	All works areas	Construction phase	• EIAO-TM • WPCO • TM-DSS	^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	discharged into the storm system via silt traps						
S11. 253	There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas shall be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring shall be carried out in accordance with the WPCO license which is under the ambit of Regional Office (RO) of EPD.	minimize water quality impact from effluent discharges from construction sites	Contractor	All construction works areas	Construction phase	• EIAO-TM • WPCO • TM-DSS	*
S11.254	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation shall be observed and complied with for control of chemical wastes.	minimize water quality impact from accidental spillage of chemical	Contractor	All construction works areas	Construction phase	• EIAO-TM • WPCO • TM-DSS • WDO	^
S11.255	Any service shop and maintenance facilities shall be located on hard standings within a bunded area, and sumps and oil interceptors shall	minimize water quality impact from accidental	Contractor	All construction works areas	Construction phase	• EIAO-TM • WPCO	*

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage shall only be undertaken within the areas appropriately equipped to control these discharges.	spillage of chemical				• TM-DSS • WDO	
S11.256	Disposal of chemical wastes shall be carried out in compliance with the Waste Disposal Ordinance. The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: • Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers shall be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area shall be selected at a safe location on site and adequate space shall be allocated to the storage area.	minimize water quality impact from accidental spillage of chemical	Contractor	All construction works areas	Construction phase	• EIAO-TM • WPCO • TM-DSS • WDO	^ ^ ^
Waste Management (Construction Waste)							
S12.75	***Good Site Practices and Waste Reduction Measures*** - Prepare a Waste Management Plan (WMP) approved by the Engineer/Supervising Officer of the Project based on current practices on construction sites; - Training of site personnel in, site cleanliness, proper waste	reduce waste management impacts	Contractor	All works sites	Construction phase	• Waste Disposal Ordinance (Cap. 354) • Land (Miscellaneous	^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	management and chemical handling procedures; - Provision of sufficient waste disposal points and regular collection of waste; - Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; - Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and - Separation of chemical wastes for special handling and appropriate treatment.					Provisions) Ordinance (Cap. 28) ・DEVB TCW No. 6/2010	^ ^ ^ ^
S12.76	***Good Site Practices and Waste Reduction Measures (Con't)*** - Sorting of demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.); - 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 aluminum cans by providing separate labeled bins to enable this waste to be segregated from other general refuse generated by the workforce; - Proper storage and site practices to minimize the potential for	achieve waste reduction	Contractor	All works sites	Construction phase	・Waste Disposal Ordinance (Cap. 354) ・ Land (Miscellaneous Provisions) Ordinance (Cap. 28)	^ ^ ^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	damage or contamination of construction materials; - Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; and - Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.						^ ^
S12.77	***Good Site Practices and Waste Reduction Measures (Con't)*** - The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWBTCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan shall incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP shall be submitted to the Engineer for approval. The Contractor shall implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP shall be reviewed regularly and updated by the Contractor,	achieve waste reduction	Contractor	All works sites	Construction phase	• ETWB TCW No. 19/2005	^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	preferably in a monthly basis.						
S12.78	C&D materials would be reused in other local concurrent projects as far as possible. If all reuse outlets are exhausted during the construction phase, the C&D materials would be disposed of at Taishan, China as a last resort.	achieve waste reduction	Contractor	All works sites	Construction phase	• ETWB TCW No. 19/2005	^
S12.79	***Storage, Collection and Transportation of Waste*** Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include: - Waste, such as soil, shall be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; - Maintain and clean storage areas routinely; - Stockpiling area shall be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and - Different locations shall be designated to stockpile each material to enhance reuse	minimize potential adverse environmental impacts arising from waste storage	Contractor	All works sites	Construction phase	- ETWB TCW No. 19/2005	^ ^ ^ ^
S12.80	***Storage, Collection and Transportation of Waste (Con't)*** Waste haulier with appropriate permits shall be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets. The following suggestions shall be enforced to minimize the potential adverse impacts:	minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All works sites	Construction phase	- ETWB TCW No. 19/2005	

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	- Remove waste in timely manner - Waste collectors shall only collect wastes prescribed by their permits - Impacts during transportation, such as dust and odour, shall be mitigated by the use of covered trucks or in enclosed containers - Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28) - Waste shall be disposed of at licensed waste disposal facilities - Maintain records of quantities of waste generated, recycled and disposed						^ ^ ^ ^ ^ ^
S12.81	***Storage, Collection and Transportation of Waste (Con't)*** - Implementation of trip ticket system with reference to DevB TC(W) No.6/2010 to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) shall be proposed	minimize potential adverse environmental impacts arising from waste collection and disposal	Contractor	All works sites	Construction phase	• DEVB TCW No. 6/2010	^
S12.83 – 12.86	***Sorting of C&D Materials*** - Sorting to be performed to recover the inert materials, reusable	minimize potential adverse environmental	Contractor	All works sites	Construction phase	• DEVB TCW No. 6/2010	^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	and recyclable materials before disposal off-site. - Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials. - The C&D materials shall at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled as far as practicable before delivery to PFRFs as mentioned for beneficial use in other projects. While opportunities for reusing the non-inert portion shall be investigated before disposal of at designated landfills. - Possibility of reusing the spoil in the Project will be continuously investigated in the detailed design and construction stages, it includes backfilling to cut and cover construction works for the Hung Hom south and north approach	impacts during the handling, transportation and disposal of C&D materials				・ETWB TCW No. 33/2002 ・ETWB TCW No. 19/2005	^ ^ ^
S12.97	***Containers for Storage of Chemical Waste*** The Contractor shall register with EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Containers used for storage of chemical waste shall: - Be compatible with the chemical wastes being stored, maintained in good condition and securely sealed; - Have a capacity of less than 450 litters unless the specifications	register with EPD as a Chemical waste producer and store chemical waste in appropriate containers	Contractor	All works sites	Construction phase	・Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	^ ^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	have been approved by EPD; and - Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation						^
S12.98	***Chemical Waste Storage Area*** - Be clearly labeled to indicate corresponding chemical characteristics of the chemical waste and used for storage of chemical waste only; - Be enclosed on at least 3 sides; - Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest; - Have adequate ventilation; - Be covered to prevent rainfall from entering; and - Be properly arranged so that incompatible materials are adequately separated.	prepare appropriate storage areas for chemical waste at works areas	Contractor	All works sites	Construction phase	• Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	^ ^ ^ ^ ^ ^
S12.98	***Chemical Waste*** - Lubricants, waste oils and other chemical wastes would be generated during the maintenance of vehicles and mechanical equipments. Used lubricants shall be collected and stored in	clearly label the chemical waste at works areas	Contractor	All works sites	Construction phase	• Code of Practice on the Packaging, Labelling and	^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	individual containers which are fully labelled in English and Chinese and stored in a designated secure place.					Storage of Chemical Wastes	
S12.100	***Collection and Disposal of Chemical Waste*** A trip-ticket system shall be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation to monitor all movements of chemical waste. The Contractor shall employ a licensed collector to transport and dispose of the chemical wastes, to either the approved CWTC at Tsing Yi, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation	To monitor the generation, reuse and disposal of chemical waste	Contractor	All works sites	Construction phase	• Waste Disposal (Chemical Waste) (General) Regulation	^
S12.101	***General Refuse*** General refuse shall be stored in enclosed bins or compaction units separate from C&D materials and chemical waste. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D materials and chemical wastes. Preferably, an enclosed and covered area shall be provided to reduce the occurrence of wind-blown light material.	properly store and separate from other C&D materials for subsequent collection and disposal	Contractor	All works sites	Construction phase	- Public Health and Municipal Services Ordinance (Cap. 132)	*
S12.102	***General Refuse (Con't)*** The recyclable component of general refuse, such as aluminum cans, paper and cleansed plastic containers shall be separated from other waste. Provision and collection of recycling bins for different types of	facilitate recycling of recyclable portions of refuse	Contractor	All works sites	Construction phase	- Public Health and Municipal Services Ordinance (Cap.	^

EIA Ref.	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	What requirements or standards for the measures to achieve?	Status
	recyclable waste shall be set up by the Contractor. The Contractor shall also be responsible for arranging recycling companies to collect these materials.					132)	
S12.102	***General Refuse (Con't)*** The Contractor shall carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins shall also be provided in the sites as reminders	raise workers' awareness on recycling issue	Contractor	All works sites	Construction phase	- Public Health and Municipal Services Ordinance (Cap. 132)	^

Remarks: ^ Compliance of mitigation measure X Non-compliance of mitigation measure

• Non-compliance but rectified by the contractor

* Observation/reminder was made during site audit but improved/rectified by the contractor.

N/A Not Applicable

APPENDIX K
WASTE GENERATION IN THE REPORTING MONTH

Contract No: **MTR SCL 1126 - Reprovisioning of Harbour Road Sports Centre and Wan Chai Swimming Pool**
Date of Report: **July, 2014**

Monthly Summary Waste Flow Table for 2014 at Wan Chai Sports Ground

Monthly	Actual Quantities of C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly					Remarks
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse (see Note 3)	
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)	
Jul	0.037	0.000	0.000	0.000	0.037	0.000	3.780	0.000	0.000	0.000	0.020	
Aug												
Sept												
Oct												
Nov												
Dec												
Total	0.037	0.000	0.000	0.000	0.037	0.000	3.780	0.000	0.000	0.000	0.020	

Notes:

1) The waste flow table shall also include C&D mateials that are specified in the contract to be imported for use at the site.
2) Plastic refer to plastic bottle/ containers, plastic sheets/ foam from packaging material.
3) The general refuse with non-recyclable materials were disposed to Landfill.
   Assume the densities of Rock, Soil, Mix Rock and Soil, are Regular Spoil to be 2.0 tonnes/m^3. Assumption the densities of general refuse is 1.0 tonnes/m^3

APPENDIX L
CUMULATIVE LOG FOR COMPLAINT LOGS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

Appendix L - Cumulative Log for Complaints, Notifications of Summons and Successful Prosecutions

Cumulative Complaint Log

Log Ref.	Date/Location	Complainant/ Date of Contact	Details of Complaint	Investigation/ Mitigation Action	File Closed
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Cumulative Log for Notifications of Summons

Log Ref.	Date/Location	Subject	Status	Total no. Received in this reporting month	Total no. Received since project commencement
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Cumulative Log for Successful Prosecutions

Log Ref.	Date/Location	Subject	Status	Total no. Received in this reporting month	Total no. Received since the commencement of the project
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