CONTRACT NO: HK/2015/01

WANCHAI DEVELOPMENT PHASE II AND CENTRAL WANCHAI BYPASS SAMPLING, FIELD MEASUREMENT AND TESTING WORK (STAGE 3)

ENVIRONMENTAL PERMIT NO. EP-376/2009, FURTHER ENVIRONMENTAL PERMITS NO. FEP-01/376/2009 AND FEP-02/376/2009

MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT

- DECEMBER 2018 -

CLIENTS:

Civil Engineering and Development Department

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CERTIFIED BY:

Raymond Dai

Environmental Team Leader

DATE:

January 2019



Ref.: AACWBIECEM00 0 10965L.19

9 January 2019

By Post and Fax (2691 2649)

AECOM Asia Company Limited 11/F Tower 2 Grand Central Plaza 138 Shatin Rural Committee Road Shatin New Territories Hong Kong

Attention: Mr. Conrad Na

Dear Mr. Ng,

Re: Contract No. HK/2015/01

Wan Chai Development Phase II - Central-Wan Chai Bypass Sampling, Field Measurement and Testing Works (Stage 3)

Monthly Environmental Monitoring and Audit Report (December 2018) for EP-376/2009, FEP-01/376/2009 and FEP-02/376/2009

Reference is made to the Environmental Team's submission of the captioned Monthly Environmental Monitoring and Audit (EM&A) Report for December 2018 received by e-mail on 7 January 2019 for our review and comment.

Please be informed that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 3.4 in the captioned Environmental Permit.

Thank you very much for your attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

David Yeung

Independent Environmental Checker

C.C.

CEDD

Attn: Mr. Henry Tsang

by fax: 2577 5040

Lam

Attn: Mr. Raymond Dai

by fax: 2882 3331

AECOM

Attn: Mr. Francis Leong/ Stephen Lai by fax: 2691 2649

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EXECUTIVE SUMMARY

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report December 2018 specific for Environmental Permit no. EP-376/2009 and Further Environmental Permits no. FEP-01/376/2009 and FEP-02/376/2009. The EM&A report is prepared by the Environmental Team (ET) employed under Contract No. HK/2015/01 Wan Chai Development Phase II and Central Wanchai Bypass Sampling, Field Measurement and Testing Works (Stage 3). This report presents the environmental monitoring findings and information recorded during the period of 27th November 2018 to 26th December 2018. The cut-off date of reporting is at 26th of each reporting month.
- ii. In the reporting month, the principal work activities of the contract are included as follows:
 Contract no. HK/2012/08 Wan Chai Development Phase II Central- Wan Chai Bypass at Wan Chai West
 - Drainage
 - Roadworks

Noise Monitoring

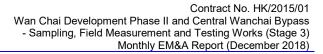
- iii. Noise monitoring was conducted at M1a Harbour Road Sports Centre.
- iv. With respect to the shift in major construction site portions at Wan Chai North, the noise monitoring station M1a – Harbour Road Sports Centre was finely adjusted from East of Harbour Road Sports Centre to West of Harbour Road Sports Centre on 21 June 2016.
- v. With respect to the demolition of Ex-Harbour Road Sports Centre, the respective noise monitoring station M1a Harbour Road Sports Centre were finely adjusted on 16 and 25 May 2017 and thereafter to the Footbridge for Harbour Road Sports for noise monitoring.
- vi. One limit level exceedance was recorded on 19 December 2018 in this reporting month. After investigation, the exceedance was considered as non-project related.

Air Quality Monitoring

- vii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted on every six days basis at CMA5b Pedestrian Plaza and CMA6a Contractor HK/2012/08 Site Office.
- viii. No action or limit level exceedance was recorded in this reporting month.

Complaints, Notifications of Summons and Successful Prosecutions

- ix. No environmental complaint was received in this reporting month.
 - Site Inspections and Audit
- x. The Environmental Team (ET) conducted weekly site inspection for Contract no. HK/2012/08 in this reporting period. The Contractors rectified major observations and recommendations made during the audit sessions. No non-conformance was identified during the site inspections.





Future Key Issues

xi. In the coming reporting month, the principal work activities of the contract is anticipated as follows:

<u>Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West</u>

- Drainage
- Roadworks



1 INTRODUCTION

1.1 Scope of the Report

1.1.1. Lam Geotechnics Limited (LGL) has been appointed take up the role as the Environmental Team (ET) under Environmental Permit no. EP-376/2009 and Further Environmental Permits no. FEP-01/376/2009 and FEP-02/376/2009 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for Wan Chai Development Phase II and Central-Wan Chai Bypass (Register No.: AEIAR-458/2008).

This report documents the finding of EM&A works for Environmental Permit (EP) no. EP-376/2009 and Further Environmental Permits no. FEP-01/376/2009 and FEP-02/376/2009, during the period of 27th November 2018 to 26th December 2018. The cut-off date of reporting is the 26th of each reporting month.

1.2 Structure of the Report

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

Section 2 Project Background – summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.

Section 3 Status of Regulatory Compliance – summarizes the status of valid Environmental Permits / Licenses during the reporting period.

Section 4 *Monitoring Requirements* – summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.

Section 5 *Monitoring Results* – summarizes the monitoring results obtained in the reporting period.

Section 6 Compliance Audit – summarizes the auditing of monitoring results, all exceedances environmental parameters.

Section 7 Cumulative Construction Impact due to the Concurrent Projects – summarizes the relevant cumulative construction impact due to the concurrent activities of the concurrent Projects.



Section 8	Environmental Site Audit - summarizes the findings of weekly site
	inspections undertaken within the reporting period, with a review of any
	relevant follow-up actions within the reporting period.

Section 9 Complaints, Notification of summons and Prosecution – summarizes the cumulative statistics on complaints, notification of summons and prosecution

Section 10 Conclusion

2 PROJECT BACKGROUND

2.1 Background

2.1.1 Wan Chai Development phase II and Central-Wan Chai Bypass (hereafter called "the Project") are Designated Project (DP) under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). The Environmental Impact Assessment (EIA) Report for Wan Chai Development phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008) has been approved on 11 December 2008.

2.2 Scope of the Project and Site Description

- 2.2.1. The design and construction of Wan Chai Development Phase II and Central Wanchai Bypass involves the construction and operation of primary and district distributor roads that is shown at *Figure 2.1*.
- 2.2.2. The key purpose of the study area encompasses the Wan Chai harbourfront area. The area starts at the boundary of Central Reclamation Phase III (CRIII) at the west and connects to the existing Hung Hing Road at the east. The scope of the project includes:
 - A dual 2-lane primary distributor road, Road P2, approximately 0.6km in length; and
 - Other new primary and district distributor roads connecting to the slip roads of the Central-Wan Chai Bypass with a total length of approximately 0.7km.
- 2.2.3. The project also contains various Schedule 2 DP that, under the EIAO, require Environmental Permits (EPs) to be granted by the DEP before they may be either constructed or operated.
 Table 2.1 summarises the DP under this Project. <u>Figure 2.1</u> shows the locations of these Schedule 2 DP.

Table 2.1 Schedule 2 Designated Project under this Project

Item	Designated Project	EIAO Reference	
DP2	Road P2 and other roads which are classified as	Schedule 2, Part I, A.1	
	primary/district distributor roads		

2.2.4. The designated project work II (DP2) was awarded to China State-Leader Joint Venture HK/2012/08 (Contract Title: Wan Chai Development Phase II Central – Wan Chai Bypass at Wan Chai West) as part of the Project works by the Civil Engineering and Development Department (CEDD). The construction work under Contract no. HK/2012/08 was commenced on 13 May 2015.



2.3 Project Organization and Contact Personnel

- 2.3.1 Civil Engineering and Development Department and Highway Department are the overall project controllers for the Wan Chai Development Phase II and Central-Wan Chai Bypass respectively. For the construction phase of the Project, Project Engineer, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.
- 2.3.2 The proposed project organization and lines of communication with respect to environmental protection works are shown in <u>Figure 2.2.</u> Key personnel and contact particulars are summarized in *Table 2.2*:

Table 2.2 Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.	Contact Fax
AECOM	Engineer's Representative for WDII	Chief Resident Engineer	Ms. Gloria Tang	2587 1778	2587 1877
	Engineer's Representative for CWB	Principal Resident Engineer	Mr. Peter Poon	3922 3388	3912 3010
China State- Build King	Contractor under Contract	Project Director	C. N. LAI	9106 5806	2877 1522
Joint Venture	no. HK/2012/08	Site Agent	Mr. George Cheung	9268 1918	
		Environmental Officer	Mr. James Ma	9130 9549	
		Environmental Supervisor	Mr. Y.L. Ho	9856 5669	
Ramboll Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. David Yeung	3465 2888	3465 2899
Lam Geotechnics Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939	2882 3331

- 2.3.3 In this reporting month, the principal work activities of the contract is included as follows:

 <u>Contract no. HK/2012/08 Wan Chai Development Phase II Central- Wan Chai Bypass at Wan Chai West</u>
 - Drainage
 - Roadworks
- 2.3.4 In coming reporting month, the principal work activities of the contract is anticipated as follows:

<u>Contract no. HK/2012/08 – Wan Chai Development Phase II – Central- Wan Chai Bypass at Wan Chai West</u>

- Drainage
- Roadworks



3 STATUS OF REGULATORY COMPLIANCE

3.1 Status of Environmental Licensing and Permitting under the Project

3.1.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in *Table 3.1*.

Table 3.1 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project

Permits and/or Licences	Reference No.	Issued Date	Status
Environmental Permit	EP-376/2009	13 Nov 2009	Valid
Further Environmental Permit	FEP-01/376/2009	31 Mar 2015	Valid
Further Environmental Permit	FEP-02/376/2009	1 Aug 2016	Valid

3.1.2. The current status on licences and/or permits on environmental protection pertinent for contract no. HK/2012/08 under FEP-02/376/2009 showed in *Table 3.2*. and *Table 3.3*

Table 3.2 Cumulative Summary of Valid Licences and Permits under Contract no. HK/2012/08

Permits and/or Licences	Reference No.	Issued Date	Valid Period/ Expiry Date	Status
Further Environmental Permit	FEP-01/376/2009	31 Mar 2015	N/A	Valid
Turtier Environmental Termit	FEP-02/376/2009	1 Aug 2016	N/A	Valid
Notification of Works Under APCO	355439	4 Feb 2013	N/A	Valid
Registration as a Chemical Waste Producer	5213-134-C3790-01	30 Jun 2016	N/A	Valid
Billing Account under Waste Disposal Ordinance	7016883	18 Feb 2013	N/A	Valid
Water Discharge Licence	WT00018470-2014	6 Mar 2014	31 Mar 2019	Valid
Construction Noise Permit	GW-RS0602-18	10 Jul 2018	13 Jul 2018 to 12 Jan 2019	Valid
Construction 1 chill	GW-RS0913-18	4 Oct 2018	5 Oct 2018 to 4 Apr 2019	Valid



Table 3.3 Summary of submission status under FEP-01/376/2009 Condition

EP Condition	Submission	Date of Submission
Condition 2.9	Noise Management Plan (Rev. 2)	Generally in order as commented by EPD on 27 Oct 2015
Condition 2.10	Landscape Plan (Rev. 0)	Generally in order as commented by EPD on 5 Aug 2015

3.1.3. Implementation status of the recommended mitigation measures during this reporting month is presented in *Appendix 3.1*.



4 MONITORING REQUIREMENTS

4.1 Noise Monitoring

NOISE MONITORING STATION

4.1.1. The noise monitoring station for the Project is listed and shown in *Table 4.1* and *Figure 4.1*.

Appendix 4.1 shows the established Action/Limit Levels for the monitoring works.

Table 4.1 Noise Monitoring Station

District	Station	Description
Wan Chai	M1a	Footbridge for Ex-Harbour Road Sports Centre

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.1.2. The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). Leq (30 minutes) shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods, Leq (5 minutes) shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. Supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.
- 4.1.3. Noise monitoring shall be carried out at all the designated monitoring stations. The monitoring frequency shall depend on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities are underway:
 - One set of measurements between 0700 and 1900 hours on normal weekdays.

MONITORING EQUIPMENT

- 4.1.4. As referred to in the Technical Memorandum ™ issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.
- 4.1.5. Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

4.2 Air Quality Monitoring

AIR QUALITY MONITORING STATIONS

4.2.1. The air quality monitoring stations for the Project are listed and shown in *Table 4.2* and *Figure*4.1. Appendix 4.1 shows the established Action/Limit Levels for the monitoring works.

Table 4.2 Air Quality Monitoring Stations

Station ID	Description
CMA5b	Pedestrian Plaza
CMA6a	WDII PRE Site Office

AIR QUALITY MONITORING PARAMETERS, FREQUENCY AND DURATION

- 4.2.2. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality. The 24-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.
- 4.2.3. All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any other local atmospheric factors affecting or affected by site conditions, etc., shall be recorded down in detail.
- 4.2.4. For regular impact monitoring, the sampling frequency of at least once in every six-days, shall be strictly observed at all the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

- 4.2.5. High volume samplers (HVSs) in compliance with the following specifications shall be used for carrying out the 1-hour and 24-hour TSP monitoring:
 - 0.6 1.7 m³ per minute adjustable flow range;
 - Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
 - Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
 - Capable of providing a minimum exposed area of 406 cm2;
 - Flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
 - Equipped with a shelter to protect the filter and sampler;
 - Incorporated with an electronic mass flow rate controller or other equivalent devices;
 - Equipped with a flow recorder for continuous monitoring;



- Provided with a peaked roof inlet;
- Incorporated with a manometer;
- Able to hold and seal the filter paper to the sampler housing at horizontal position;
- · Easily changeable filter; and
- Capable of operating continuously for a 24-hour period.
- 4.2.6. Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. The concern parties such as IEC shall properly document the calibration data for future reference. All the data should be converted into standard temperature and pressure condition.

LABORATORY MEASUREMENT / ANALYSIS

- 4.2.7. A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.
- 4.2.8. Filter paper of size 8" x 10" shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24-hours and be pre-weighed before use for the sampling.
- 4.2.9. After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.
- 4.2.10. All the collected samples shall be kept in a good condition for 6 months before disposal.
- 4.2.11. Current calibration certificates of equipment are presented in *Appendix 4.2*.

5 MONITORING RESULTS

- 5.0.1. The environmental monitoring will be implemented based on the division of works areas of the designated project managed under the contract with FEP applied by individual contractors. Overall layout showing work areas of various contracts, latest status of work commencement and monitoring stations is shown in Figure 2.1 and Figure 4.1. The monitoring results are presented in according to the Individual Contract(s).
- 5.0.2. In the reporting month, the concurrent contract is:
 - Contract no. HK/2012/08 Wan Chai Development Phase II Central Wan Chai Bypass at Wan Chai West.
- 5.0.3. The environment monitoring schedules for reporting month and coming month are presented in *Appendix 5.1*.

5.1 Noise Monitoring Results

5.1.1 The proposed division of noise monitoring station is summarized in *Table 5.1* below.

Table 5.1 Noise Monitoring Station for Contract no. HK/2012/08

Location ID	District	Description
M1a	Wan Chai	Footbridge for Ex-Harbour Road Sports Centre

- 5.1.2 One limit level exceedance was recorded on 19 December 2018 in this reporting month. After investigation, no construction work under EP-376/2009 was conducted by Contract HK/2012/08 around the concerned location during the time of measurement while breaking works next to the monitoring station under non-WDII-CWB contractor was observed as the major noise contribution during monitoring. As such, the exceedance was considered as non-Project related under Contract HK/2012/08.
- 5.1.3 The noise monitoring results measured in this reporting period are reviewed and summarized.

 Details of the noise monitoring results and graphical presentation can be referred to <u>Appendix</u>

 5.2.



5.2 Air Quality Monitoring Results

5.2.1 The proposed division of air quality monitoring stations are summarized in *Table 5.2* below.

Table 5.2 Air Quality Monitoring Station for Contract no. HK/2012/08

Station	Description
CMA5b	Pedestrian Plaza
CMA6a	WDII PRE Site Office

- 5.2.2 No action or limit level exceedance was recorded in this reporting month.
- 5.2.3 The air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air quality monitoring results and graphical presentation can be referred in *Appendix 5.3*.

5.3 WASTE MONITORING RESULTS

5.3.1 No Inert and non-inert C&D wastes disposed in this reporting month. Details of the waste flow table are summarized in *Table 5.3*.

Table 5.3 Details of Waste Disposal for Contract no. HK/2012/08

Waste Type	Quantity this month	Cumulative Quantity- to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m3	NIL	NIL	NIL
Inert C&D materials recycled, m3	NIL	NIL	NIL
Non-inert C&D materials disposed, m3	NIL	NIL	NIL
Non-inert C&D materials recycled, m3	NIL	NIL	NIL
Chemical waste disposed, kg	NIL	NIL	NIL



6 COMPLIANCE AUDIT

6.0.1. The Event Action Plan for construction noise and air quality are presented in Appendix 6.1.

6.1 Noise Monitoring

6.1.1 One limit level exceedance was recorded on 19 December 2018 in this reporting month. After investigation, the exceedance was considered as non-project.

6.2 Air Quality Monitoring

6.2.1 No action or limit level exceedance was recorded in this reporting month.

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

- 6.3.1 There was no non-compliance from the site audits in the reporting period. The observations and recommendations made in each individual site audit session were presented in Section 8.
- 6.4 Summary of action taken in the event of and follow-up on non-compliance
- 6.4.1 There was no particular action taken since no non-compliance was recorded from the site audits in the reporting period.



7 CUMULATIVE CONSTRUCTION IMPACT DUE TO THE CONCURRENT PROJECTS

- 7.0.1. According to the Condition 3.4 of the EP-376/2009, this section addresses the relevant cumulative construction impact due to the concurrent activities of the current projects including the Central Reclamation Phase III (CRIII), Wan Chai Development Phase II (WDII), Central-WanChai Bypass (CWB), Island Eastern Corridor Link projects (IECL) and Wan Chai Development Phase II Central Wan Chai Bypass at Wan Chai East (CWB Tunnel).
- 7.0.2. According to the Final EM&A report of Central Reclamation Phase III (CRIII) for Contract HK 12/02, the major construction activities were completed by end of January 2014 and no construction activities were undertaken thereafter and the water quality monitoring was completed in October 2011. As such, it is considered that there were no cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) undertaken by contractor HK12/02 in the reporting month.
- 7.0.3. According to the construction programme of Central-Wanchai Bypass at Wanchai West at the Central Reclamation Phase III area include roadworks, drainage and seawall coping were performed in December 2018 reporting period. As no project related exceedance were recorded during the reporting period, cumulative construction impact due to the concurrent activities of the current projects with the Central Reclamation Phase III (CRIII) was considered as insignificant.
- 7.0.4. According to the construction programme of Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects, the major construction activities under Wan Chai Development Phase II were road and drains construction and removal of temporary reclamation at Wan Chai. The major construction activities under Central-Wan Chai Bypass and Island Eastern Corridor Link Projects were ventilation building ABWF works and junction modification at Central; road works and landscape works at Victoria Park; bridge barrier installation, road works, drainage works, soft landscape works and ventilation building ABWF work at North Point area in the reporting period. In addition, other non-Wan Chai Development Phase II, Central-Wan Chai Bypass and Island Eastern Corridor Link projects were observed undertaken at Wan Chai North and North Point area.
- 7.0.5. No significant air impact from construction activities was anticipated in the reporting month. Besides, no project related exceedance was recorded during the water, air and noise environmental monitoring events in the reporting month. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Central Reclamation Phase III (CRIII), Wan Chai Development Phase II (WDII), Central-WanChai Bypass (CWB), Island Eastern Corridor Link projects (IECL) was insignificant.

8 ENVIRONMENTAL SITE AUDIT

8.0.1. Five site inspections for Contract no. HK/2012/08 were carried out on 27 November, 4, 11, 18 and 24 December 2018 in this reporting period. The results of inspection and outcome are summarized in *Table 8.1.*

Table 8.1 Summary of Environmental Inspections for Contract no. HK/2012/08

Item	Date	Observations	Action taken by Contractor	Outcome
181211_1	11-Dec-18	Contractor shall keep the public road clean. (Expo Drive)	Cleaning was provided to public road	Completion as observed on 18 December 2018
181218_1	18-Dec-18	Silt / sand deposit around site exit shall clean regularly	The sand was cleaned.	Completion as observed on 24 December 2018



9 COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

- 9.0.1. No environmental complaint was received in the reporting period.
- 9.0.2. The details of cumulative complaint log and updated summary of complaints are presented in <u>Appendix 9.1</u>
- 9.0.3. Cumulative statistic on complaints and successful prosecutions are summarized in *Table 9.1* and *Table 9.2* respectively.

Table 9.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works (May 2015) to last reporting month	0
December 2018	0
Total	0

Table 9.2 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

10 CONCLUSION

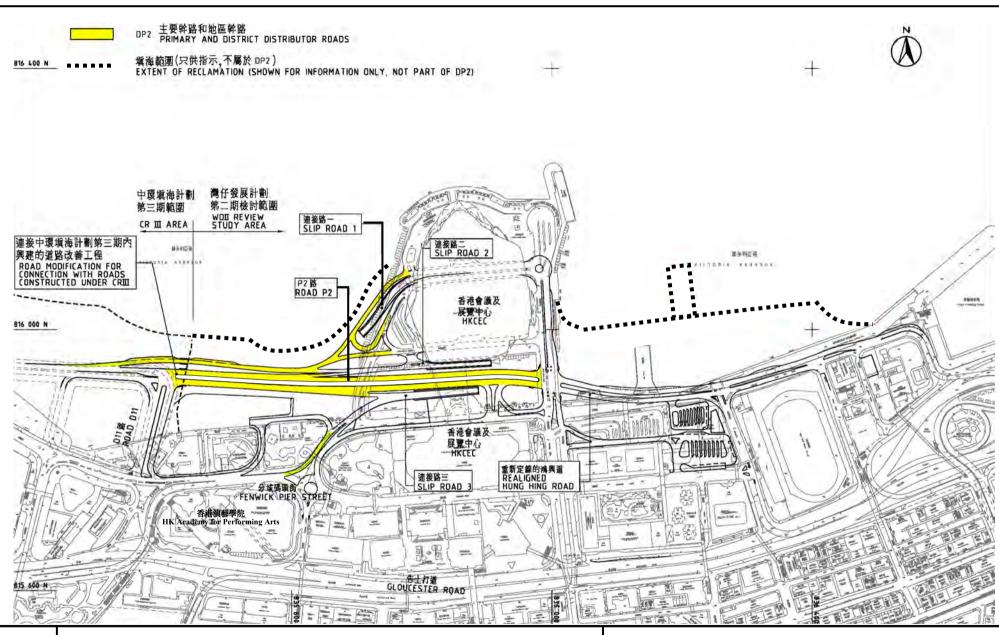
- 10.0.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 10.0.2. The scheduled construction activities and the recommended mitigation measures for the coming month are listed in *Table 10.1*. The construction programmes of individual contracts are provided in *Appendix 10.1*.

Table 10.1 Summary of Key Construction Activities of Individual Contract(s) to be commenced in Coming Reporting Month

Contract No.	Key Construction Works	Recommended Mitigation Measures
HK/2012/08	DrainageRoadworks	 Dust control during dust generating works; Implementation of proper noise pollution control; and Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system

Figure 2.1

Project Layout





Project Title : Road P2 and other roads which are classified as primary/district distributor roads (referred to as "DP2" in the WDII&CWB EIA Report)

工程項目名稱: P2 路及其他分類爲主要幹路或地區幹路的道路(WDII&CWB 環評報告內稱 "DP2")

Environmental Permit No.: EP-376/2009 環境許可證編號 : EP-376/2009 Figure 1: Location of the Project

圖 1: 工程項目位置圖

(This figure was prepared based on Figure 1.2b of the WDII&CWB EIA report (Register No.: AEIAR-125/2008)) (本圖是根據 WDII&CWB 環評報告(登記冊編號 AEIAR-125/2008)圖 1.2b 編制)

Figure 2.2

Project Organization Chart

Project Organization Chart

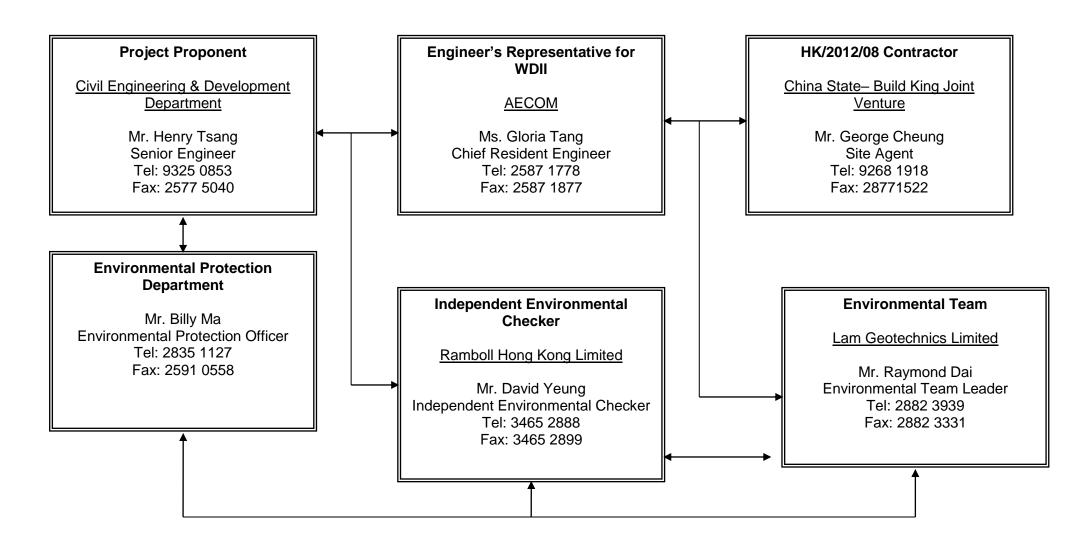
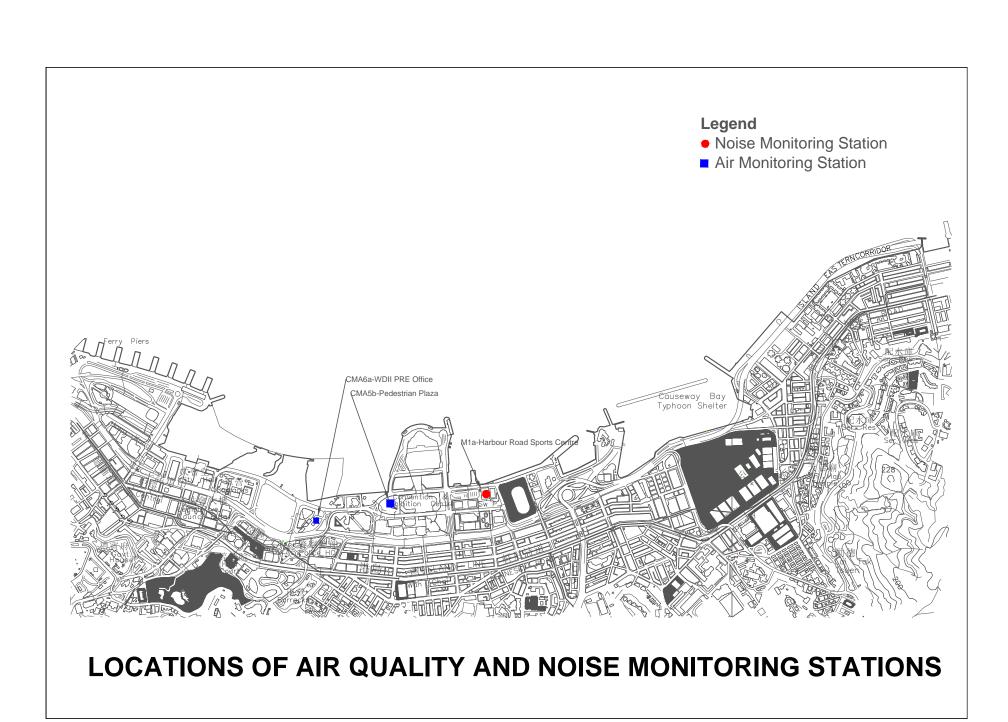


Figure 4.1

Locations of Monitoring Stations



Appendix 3.1

Environmental Mitigation Implementation Schedule

Appendix A

Table A13.1 Implementation Schedule for Air Quality Control

Table A13.2 Implementation Schedule for Noise Control

Table A13.3 Implementation Schedule for Water Quality Control

Table A13.4 Implementation Schedule for Waste Management

Table A13.7 Implementation Schedule for Landscape and Visual

IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

Table A13.1 Implementation Schedule for Air Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Impl	ement	ation	stage	Relevant Legislation
				Des	C	О	Dec	and Guidelines
Constructio	n Phase							
For the Who	ole Project							
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		1			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition; Watering during excavation and material handling; Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.	Work site / during construction	Contractor		V			

Des - Design, C - Construction, O - Operation, and Dec - Decommissioning

Table A13.2 Implementation Schedule for Noise Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation stage				Relevant Legislation
				Des	C	О	Dec	and Guidelines
Constructio	n Phase		L			<u> </u>		
For the Who	ole Project							
S4.9.4	Good Site Practice: 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 away from NSRs as possible. Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works 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 onsite construction activities.	Work site / during construction	Contractor		V			EIAO-TM, NCO
S4.8.3 – S4.8.4	Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the	Work site / during construction	Contractor		V			EIAO-TM, NCO
	following tasks: Temporary road diversion Resurfacing At-grade roadwork							

[•] Des - Design, C - Construction, O – Operation, and Dec – Decommissioning

Table A13.3 Implementation Schedule for Water Quality Control

	installed in order to minimise the sediment loading of the effluent prior to discharge; All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge shall be adequately designed for the controlled release of storm flows. All sediment control measures shall be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage shall be reinstated to its original condition when the construction work is finished or the temporary diversion is no longer required. All fuel tanks and store areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity. Minimum distances of 100 m shall be maintained between the storm water discharges				
S5.8	and the existing or planned WSD flushing water intakes during construction phase. Sewage from Construction Work Force Construction work force sewage discharges on site shall be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage shall be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Work site / during construction	Contractor	N	ProPECC PN 1/94; WPCO (TM-DSS)

<u>EP-376/2009</u> EM&A Manual

S5.8	Floating Debris and Refuse	Work site and	Contractor			WPCO
	Collection and removal of floating refuse shall	adjacent water /				
	be performed at regular intervals on a daily	During the				
	basis. The contractor shall be responsible for	construction period.				
	keeping the water within the site boundary and					
	the neighbouring water free from rubbish.					
S5.8	Storm Water Discharges	Work site and	Contractor	 		WPCO
	Minimum distances of 100 m shall be	adjacent water				
	maintained between the existing or planned	/ During the design				
	stormwater discharges and the existing or	and construction				
	planned WSD flushing water intakes.	period.				

• Des - Design, C - Construction, O – Operation, and Dec – Decommissioning

Table A13.4 Implementation Schedule for Waste Management

EIA Ref	Environmental Protection Measures /	Location / Timing	Implementation	Imp	lement	tation	stage	Relevant Legislation
	Mitigation Measures		Agent	Des	C	О	Dec	and Guidelines
Construction	on Phase	<u>l</u>	<u>l</u>		1			<u> </u>
For the Who	ole Project							
S6.7.7	Good Site Practices Recommendations for good site practices during the construction activities include: nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; training of site personnel in proper waste management and chemical waste handling procedures; provision of sufficient waste disposal points and regular collection for disposal; appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and a recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	Work site / During planning and design stage, and construction stage	Contractor		V			
S.6.7.8	Waste Reduction Measures Recommendations to achieve waste reduction include: • Sort C&D waste from demolition of the existing waterfront structures to recover	Work site / During planning and design stage, and construction stage	Contractor	V	V			

	 recyclable portions such as metals. Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force. Any unused chemicals or those with remaining functional capacity shall be recycled. Use of reusable non-timber formwork, such as in casting the tunnel box sections, to reduce the amount of C&D material. Proper storage and site practices to minimise the potential for damage or contamination of construction materials. Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. 				
S6.7.10	General Refuse General refuse shall be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D material.	Work site / During the construction period	Contractor	1	Public Health and Municipal Services Ordinance (Cap. 132)
	A collection area shall be provided where wastes can be stored and loaded prior to removal from site. An enclosed and covered area is recommended to reduce the occurrence of 'wind blow' light material.				

S6.7.11	Chemical Wastes After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals shall be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work site / During the construction period	Contractor	V	Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
S6.7.12 – S6.7.13	Construction and Demolition Material C&D material shall be sorted on-site into inert C&D material (that is, public fill) and C&D waste. All the suitable inert C&D material shall be broken down to 250 mm in size for reuse as public fill in the WDII reclamation. C&D waste, such as wood, glass, plastic, steel and other metals shall be reused or recycled and, as a last resort, disposed of to landfill. A suitable area shall be designated to facilitate the sorting process and a temporary stockpiling area will be required for the separated materials.	Work site / During the construction period	Contractor and Independent Environmental Checker	V	DEVB TCW No.6/2010; ETWB TCW No. 33/2002; ETWB TCW No. 19/2005
	In order to monitor the disposal of public fill and C&D waste at public fill reception facilities and landfills, respectively, and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team undertaking the environmental monitoring and audit work. An Independent Environment Checker shall be responsible for auditing the results of the system.				
S6.7.14	Bentonite Slurry The disposal of residual used bentonite slurry shall follow the good practice guidelines stated	Work site / During the construction period	Contractor	V	ProPECC PN 1/94

EP-376/2009 EM&A Manual in ProPECC PN 1/94 "Construction Site Drainage" and listed as follows: If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis. 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 sewers, storm drains or the receiving waters as set out in the Technical Memorandum of Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters. If the used bentonite slurry is intended to be disposed to public fill reception facilities, it will be mixed with dry soil on site before disposal.

• Des - Design, C - Construction, O – Operation, and Dec – Decommissioning

Table A13.7 Implementation Schedule for Landscape and Visual

EIA Ref	Environmental Protection Measures /	Location / Timing	Implementation	Imp	lemen	tation	stage	Relevant Legislation
	Mitigation Measures		Agent	Des	C	О	Dec	and Guidelines
Construction	n Phase	l	<u>l</u>	1				<u> </u>
For the Who	le Project							
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	V	1			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	V	V			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	1	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	1	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		1			EIAO TM
For DP2 - V	VDII Major Roads (Road P2)							
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	$\sqrt{}$	1			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	V	V			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	1	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	1	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		$\sqrt{}$			EIAO TM

Operation Pl	nase					
•	DII Major Roads (Road P2)					
Table 10.6, Figure	OM1 Aesthetic design of buildings and road- related structures,	Work site / During Design Stage and	CEDD/HyD	V	1	ETWB TCW 2/2004
10.5.1-	including viaducts, vent buildings, subways,	Operation Phases				
10.5.5	footbridges					
Table 10.6,	and noise barriers and enclosure. OM3 Buffer Tree and Shrub Planting to screen	Work site / During	CEDD/HyD	\ \ \	1	ETWB TCW 2/2004
Figure	proposed roads	Design Stage and			'	
10.5.1-	and associated structures.	Operation Phases				
10.5.5 Table 10.6.	OM5 Aesthetic streetscape design.	Work site / During	CEDD/HyD	1 1	1	ETWB TCW 2/2004
Figure		Design Stage and		'	'	
10.5.1- 10.5.5		Operation Phases				
Table 10.6,	OM6 Aesthetic design of roadside amenity areas	Work site / During	CEDD/HyD	1 1	1	ETWB TCW 2/2004
Figure		Design Stage and			'	
10.5.1-		Operation Phases				
10.5.5						

[•] Des - Design, C - Construction, O – Operation, and Dec – Decommissioning

Appendix 4.1

Action and Limit Level

Action and Limit Level

Action and Limit Level for Noise Monitoring

Time Period	Action Level	Limit Level
07:00 - 19:00 hours on normal weekdays	When one documented complaint is received.	75 dB(A)

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

Action and Limit Level for Air Monitoring

Monitoring Locations	1-hour TSP Level inµg/m3		24-hour TSP L	evel inµg/m3
	Action Level	Limit Level	Action Level	Limit Level
CMA5b Pedestrian Plaza	339.7	500	209.9	260
CMA6a WDII PRE Site Office	333.0	500	207.1	260

Appendix 4.2

Copies of Calibration Certificates



RECALIBRATION DUE DATE:

January 24, 2019

Certificate of Calibration

Calibration Certification Information

Cal. Date: January 24, 2018

Rootsmeter S/N: 438320

Ta: 293 Pa: 756.9 °K

Operator: Jim Tisch

Calibration Model #: TE-5025A

Calibrator S/N: 3166

mm Hg

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4430	3.2	2.00
2	3	4	1	1.0270	6.4	4.00
3	5	6	1	0.9220	7.9	5.00
4	7	8	1	0.8780	8.7	5.50
5	9	10	1	0.7270	12.6	8.00

		Data Tabulat	ion		
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	√∆H(Ta/Pa)
1.0087	0.6990	1.4233	0.9958	0.6901	0.8799
1.0044	0.9780	2.0129	0.9915	0.9655	1.2443
1.0024	1.0872	2.2505	0.9896	1.0733	1.3912
1.0013	1.1404	2.3603	0.9885	1.1259	1.4591
0.9961	1.3701	2.8467	0.9834	1.3526	1.7598
CARGON 1/2-1	m=	2.12231		m=	1.32895
QSTD	b=	-0.06016	QA	b=	-0.03719
	r=	0.99999	~ .	r=	0.99999

	Calculation	ns	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/∆Time	Qa=	Va/ΔTime
	For subsequent flow ra	te calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-t\right)$

	Standard Conditions
Tstd:	298.15 °K
Pstd:	760 mm Hg
	Key
ΔH: calibrator	manometer reading (in H2O)
ΔP: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric pressure (mm Hg)
b: intercept	
m: slope	

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



TESTINS	Calibr	ation D	ata for i	High Vol	ume Sar	npler (1	SP Sample	r)	
Location		CMA5b				Calibra	ation Date	13	19-Oct-18
Equipment no.	HVS010			Calibration Due Date			ation Due Date	==	19-Dec-18
CALIBRATION OF CONTIL	NUOUS FL	OW RECO	RDER						
4				Ambient C	Condition				
Temperature, T _a		297.	2	Kelvin	Pressure, P			1017	mmHg
Laborate 1			Orifice	Transfer Sta	ndard Inform	nation			
Equipment No.		Ori002		Slope, m _e	2.122	231	Intercept, bo		-0.08016
Last Calibration Date	-	19-Jan-1	3		(F	IXP.	1013.3 x 298/	Ta) 1/2	2
Next Calibration Date		19-Jan-1	9		10400	m	$x Q_{std} + b_c$		
				Calibratio	n of TSP				
Calibration	Ma	nometer Re	ading	Q see Cont		Continuous Flow		IC .	
Point	н	inches of v	vater)	(m ⁹ / min.)		R	ecorder, W	(WIP)	1013.3×298/T ₄)*I/35.31)
	(up)	(down)	(difference)	Х-	axis		(CFM)		Y-axis
1	1.3	1.3	2.6	0.7	7906 33		33		33.1079
2	2.0	2.0	4.0	0.5	7738		38		38.1243
3	3.2	3.2	6.4	363	2243		45		45.1472
4	4.2	4.2	8.4	1.3	1984		50		50.1635
5	5.3	5.3	10.6	1.5	674		55		55.1799
By Linear Regression of Y	on X								
	Slope, m	170	28.	3797	In	tercept, b	= 10	0.5471	
Correlation C	Coefficient*	=	0.9	1999					
Calibration	Accepted		Yes	No"					
* if Correlation Coefficient <	0.990, ahe	eck and rec	alibration aga	sin.					
** Delete as appropriate.									
Remarks : As per client's	s provided	information,	the equipme	ent reference	no. of the ca	librated Hig	h Volume Sample	r has bee	n
re-assigned for	rom EL222	to HVS010	with respect	to the update	e in quality ma	anagement	system.		
Calibrated by		Ray Lee				Check	ed by	101	Pualine Wong
Date		9-Oct-18				Date		8	19-Oct-18

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA5b	Calbration Date	:	19-Dec-18	
Equipment no.	: _	HVS010	Calbration Due Date	:	18-Feb-19	_

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition							
Temperature, T _a	293	Kelvin	Pressure, P _a	1020	mmHg		

Orifice Transfer Standard Information								
Equipment No. Ori3166 Slope, m _c 2.12231 Intercept, bc -0.06016								
Last Calibration Date	24-Jan-18	(HxP _a /1013.3 x 298/T _a) ^{1/2}						
Next Calibration Date	lext Calibration Date 24-Jan-19 = $m_c \times Q_{std} + b_c$							

	Calibration of TSP									
Calibration	Manometer Reading		Q _{std}	Continuous Flow	IC					
Point	H (inches of water)		f water) (m ³ / min.)		Recorder, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)				
	(up)	(down)	difference	X-axis	(CFM)	Y-axis				
1	1.5	1.5	3.0	0.8541	25	25.2956				
2	2.8	2.8	5.6	1.1566	34	34.4020				
3	3.6	3.6	7.2	1.3076	38	38.4493				
4	4.8	4.8	9.6	1.5055	46	46.5439				
5	6.0	6.0	12.0	1.6799	54	54.6385				

By Linear Regression of Y on X

Slope, m = 35.1088 Intercept, b = -5.8015

Correlation Coefficient* = 0.9935

Calibration Accepted = Yes/Ne**

Remarks :			
·			•
_			

Calibrated by : Henry Lau Checked by : Chan Ka Chun

^{*} if Correlation Coefficient < 0.990, check and recalibration again.

^{**} Delete as appropriate.



Calibration Data for High Volume Sampler (TSP Sampler)

Location		CMA6a				Calibration Date	: 19-Oct-18
Equipment no.		HVS013				Calibration Due Date	19-Dec-18
CALIBRATION OF CONTIN	IUOUS FL	OW RECO	RDER				
				Ambient C	Condition		
Temperature, T _a		297.	2	Kelvin	Pressure, P.		1017 mmHg
5:	W	3-1-	Orifice	Transfer Sta	andard Information	1	
Equipment No.		Ori002		Slope, m.	2.12231	Intercept, bc	-0.06016
Last Calibration Date		19-Jan-1	8		(HxF	4 / 1013.3 x 298 /	T _a) 1/2
Next Calibration Date		19-Jan-1	9		10)	$m_c \times Q_{std} + b_c$	2589
				Calibratio	on of TSP		
Calibration	Ma	nometer R	eading	c) ate	Continuous Flow	IC
Point	н	inches of	water)	(m ³ / min.)		Recorder, W	(W(P _a /1013.3x298/T _a) ¹⁰ /35.31)
600004645	(up)	(dawn)	(difference)	x-	axis	(CFM)	Y-axis
1	1.4	1.4	2.8	0.0	8194	30	30.0981
2	2.3	2.3	4.6	1.0	0422	36	36.1177
3	3.7	3.7	7.4	1.5	3143	44	44.1439
4	4.8	4.8	9.6	1.0	4930	48	48.1570
5	6.1	6.1	12.2	1.6	6795	54	54.1766
By Linear Regression of Y	on X						
	Slope, m		27.	7403	Interce	pt, b = 7	.3172
Correlation C	coefficient*		0.9	9992		8	
Calibration	Accepted	=	Yes	/No**			
* If Correlation Coefficient <	0.990, ch	eck and rec	alibration ag	ain.			
** Delete as appropriate.							
Remarks : As per client's	s provided	information	, the equipme	ant reference	no, of the calibrat	ed High Volume Sample	r has been
re-assigned fr	rom EL551	to HVS01	3 with respect	to the updat	te in quality manag	ement system.	
Calibrated by		Ray Lee				Checked by	: Pualine Wong
Date :	9	19-Oct-18			10	Date	: 19-Oct-18

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA6a	Calbration Date	:	19-Dec-18
Equipment no.	:	HVS013	Calbration Due Date	:	18-Feb-19

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition						
Temperature, T _a	293	Kelvin	Pressure, P _a	1020	mmHg	

Orifice Transfer Standard Information								
Equipment No. Ori3166 Slope, m _c 2.12231 Intercept, bc -0.06016								
Last Calibration Date	24-Jan-18	(HxP _a /1013.3 x 298/T _a) ^{1/2}						
Next Calibration Date	24-Jan-19	$= m_c \times Q_{std} + b_c$						

	Calibration of TSP									
Calibration	Manometer Reading		Q _{std}	Continuous Flow	IC					
Point	H (inches of water)		(m ³ / min.)	Recorder, W	(W(P _a /1013.3x298/T _a) ^{1/2} /35.31)					
	(up)	(down)	(difference	X-axis	(CFM)	Y-axis				
1	1.4	1.4	2.8	0.8261	28	28.3311				
2	2.3	2.3	4.6	1.0509	33	33.3902				
3	3.7	3.7	7.4	1.3253	41	41.4848				
4	4.8	4.8	9.6	1.5055	46	46.5439				
5	6.0	6.0	12.0	1.6799	54	54.6385				

By Linear Regression of Y on X

Slope, m = 30.1687 Intercept, b = 2.3363

Correlation Coefficient* = 0.9927

Calibration Accepted = Yes/No**

Remarks:			

Calibrated by : Henry Lau Checked by : Chan Ka Chun

^{*} if Correlation Coefficient < 0.990, check and recalibration again.

^{**} Delete as appropriate.



綜合試驗有限公司 SOILS & MATERIALS ENGINEERING CO., LTD.

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Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

18CA0322 01

Page

of

2

Item tested

Description:

Sound Level Meter (Type 1)

Microphone

Manufacturer:

Larson Davis

PCB

Type/Model No .: Serial/Equipment No.: LxT1

377B02 171529

Adaptors used:

0003737

Item submitted by

Customer Name:

Lam Geotechnics Ltd.

Address of Customer:

Request No. Date of receipt:

22-Mar-2018

Date of test:

28-Mar-2018

Reference equipment used in the calibration

Description:

Multi function sound calibrator

Model:

Serial No.

Expiry Date:

Traceable to:

Signal generator

B&K 4226 DS 360

2288444 61227

08-Sep-2018 01-Apr-2018

CIGISMEC CEPREI

Ambient conditions

Temperature:

21 ± 1 °C

Relative humidity: Air pressure:

50 ± 10 % 1005 ± 5 hPa

Test specifications

The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 1, 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.

Feng Jun Qi

Actual Measurement data are documented on worksheets

Approved Signatory:

Date:

06-Apr-2018

Company Chop:

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.

C Soils & Materials Engineering Co., Ltd

Form No CARP152-1/Issue 1/Rev C/01/02/2007



綜合試驗有限公司 SOILS & MATERIALS ENGINEERING CO., LTD.

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CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

18CA0322 01

Page

2

1, **Electrical Tests**

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertanity (dB)	Coverage Factor
Self-generated noise	Α	Pass	0.3	
	С	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	Α	Pass	0.3	
	С	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	N/A	N/A	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/103 at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/104 at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertanity (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz Weighting A at 8000 Hz	Pass Pass	0.3 0.5	

3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated

Calibrated by:

End

Checked by:

Lam Tze Wai

Fung Chi Yip Date: 28-Mar-2018

Date:

06-Apr-2018

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

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Form No CARP152-2/Issue 1/Rev C/01/02/2007

Calibration Certificate

Certificate Number 2018010851

Customer: LAM Environmental Services Ltd 11/F Centre Point 181-185 Gloucester Road Wanchai, , Hong Kong

CAL200 Model Number 13098 Serial Number Pass Test Results

Inoperable Initial Condition

Description Larson Davis CAL200 Acoustic Calibrator Procedure Number D0001.8386 Scott Montgomery Technician Calibration Date 29 Oct 2018

Calibration Due 23 Temperature 34 Humidity 101.2 kPa Static Pressure

°C ±0.3°C %RH ±3 %RH ± 1 kPa

Evaluation Method The data is aguired by the insert voltage calibration method using the reference microphone's open circuit sensitivity. Data reported in dB re 20 µPa.

Compliant to Manufacturer Specifications per D0001.8190 and the following standards: Compliance Standards

ANSI \$1.40-2006 IEC 60942:2017

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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	Standards Used	1		
Description	Cal Date	Cal Due	Cal Standard	
Agilent 34401A DMM	09/06/2018	09/06/2019	001021	
Larson Davis Model 2900 Real Time Analyzer	04/10/2018	04/10/2019	001051	
Microphone Calibration System	03/07/2018	03/07/2019	005446	
1/2" Preamplifier	09/20/2018	09/20/2019	006506	
Larson Davis 1/2" Preamplifier 7-pin LEMO	08/07/2018	08/07/2019	006507	
1/2 inch Microphone - RI - 200V	05/10/2018	05/10/2019	006510	
Pressure Transducer	07/18/2018	07/18/2019	007368	





Appendix 5.1

Monitoring Schedules for Reporting Month and Coming Reporting Month

Contract No. HK/2015/01 Wan Chai Development Phase II and Central-Wan Chai Bypass Sampling, Field Measurement and Testing Works (Stage 3)

Environmental Monitoring Schedule December 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			28-Nov	29-Nov	30-Nov	01-Dec
			Noise (daytime)			
			Noise (daytime)			24hr TSP
02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec
	1hr TSP				24hr TSP	1hr TSP
			Noise (daytime)			
09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec
					Noise (daytime)	
	24hr TSP	1hr TSP				24hr TSP
16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec
					24hr TSP	1hr TSP
			Noise (daytime)			
20.5	04.5	0	200			
23-Dec	24-Dec	25-Dec	26-Dec			

Contract No. HK/2015/01 Wan Chai Development Phase II and Central-Wan Chai Bypass Sampling, Field Measurement and Testing Works (Stage 3)

Tentative Environmental Monitoring Schedule January 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Juliuay	Worlday	Tuesday	Wednesday	27-Dec	28-Dec	29-Dec
				24hr TSP Noise (daytime)	1hr TSP	
30-Dec	31-Dec	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan
	Noise (daytime)		24hr TSP Noise (daytime)	1hr TSP		
06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan
	Noise (daytime)	24hr TSP Noise (daytime)	1hr TSP			
13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
	24hr TSP Noise (daytime)	1hr TSP Noise (daytime)			24hr TSP	1hr TSP
20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan
	Noise (daytime)	Noise (daytime)	24hr TSP	1hr TSP		

Appendix 5.2

Noise Monitoring Results and Graphical Presentations

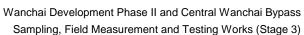


Noise Monitoring Result for EP-376/2009

Day Time (0700 - 1900hrs on normal weekdays)

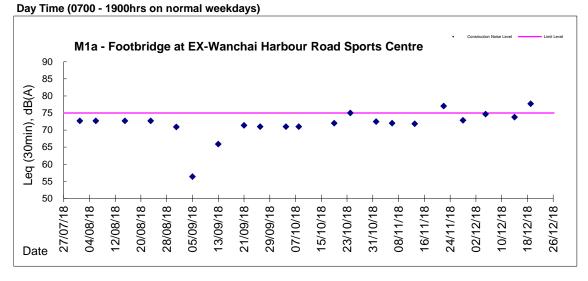
Location: M1a - Footbridge at EX-Wanchai Harbour Road Sports Centre

			Measur	ement Noi	se Level	Baseline Level	Construction Noise Level	Limit Level
Date	Time	Weather	Leq	L10	L90	Leq	Leq	Leq
						Unit: dE	8(A), (30-min)	•
28/11/2018	10:43	Cloudy	75.8	80.0	69.3	73	73	75
05/12/2018	10:00	Fine	76.8	79.6	71.5	73	75	75
14/12/2018	15:40	Fine	76.3	78.5	70.6	73	74	75
19/12/2018	15:35	Cloudy	78.9	81.2	74.0	73	78	75





Graphic Presentation of Noise Monitoring Result



Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations



Location: CMA5b - Pedestrian Plaza

Report on 24-hour TSP monitoring for EP-376/2009 Action Level - 209.9 μ g/m3 Limit Level - 260 μ g/m3

Date	Sampling	Weather	Filter paper no.	Filter Weig	ht, g	Elapse Tim	e, hr	Sampling	Flo	w Rate, m ³ /ı	min	Total	TSP Level,
	Time	Condition		Initial	Final	Initial	Final	Time, hr	Initial, Q_{si}	Final, Q _{sf}	Average	Volume, m ³	μg/m³
01-Dec-18	08:00	Cloudy	CMA5b_24hr 28469	2.7033	2.8089	11244.87	11268.87	24.00	0.92	0.92	0.92	1329	79.5
07-Dec-18	08:00	Cloudy	CMA5b_24hr 206746	2.6853	2.7300	11271.88	11295.88	24.00	0.93	0.94	0.94	1347	33.2
10-Dec-18	08:00	Fine	CMA5b_24hr 206731	2.6685	2.7386	11298.89	11322.89	24.00	0.94	0.93	0.93	1345	52.1
15-Dec-18	08:00	Fine	CMA5b_24hr 140009	2.6812	2.7877	11325.90	11349.90	24.00	0.93	0.93	0.93	1343	79.3
21-Dec-18	08:00	Fine	CMA5b_24hr 140063	2.6644	2.7256	11352.91	11376.91	24.00	1.21	1.21	1.21	1744	35.1

Report on 1-hour TSP monitoring for EP-376/2009 Action Level - 339.7 μ g/m3 Limit Level - 500 μ g/m3

Date	Sampling	Weather	Filter paper no.	Filter Weigh	nt, g	Elapse Time	e, hr	Sampling	Flo	w Rate, m ³ /	min	Total	TSP Level,
	Time	Condition		Initial	Final	Initial	Final	Time, hr	Initial, Q _{si}	Final, Q _{sf}	Average	Volume, m ³	μg/m³
03-Dec-18	08:02	Cloudy	CMA5b_1hr_1 28421	2.6904	2.6926	11268.87	11269.87	1.00	0.92	0.92	0.92	55	39.9
03-Dec-18	09:33	Cloudy	CMA5b_1hr_2 28456	2.6863	2.6887	11269.87	11270.87	1.00	0.92	0.92	0.92	55	43.5
03-Dec-18	13:00	Cloudy	CMA5b_1hr_3 28450	2.6807	2.6851	11270.87	11271.87	1.00	0.92	0.92	0.92	55	79.8
08-Dec-18	08:04	Cloudy	CMA5b_1hr_1 206712	2.6796	2.6810	11295.89	11296.89	1.00	0.94	0.94	0.94	56	24.9
08-Dec-18	09:10	Cloudy	CMA5b_1hr_2 206718	2.6737	2.6764	11296.89	11297.89	1.00	0.94	0.94	0.94	56	48.1
08-Dec-18	10:13	Cloudy	CMA5b_1hr_3 206725	2.6726	2.6750	11297.89	11298.89	1.00	0.94	0.94	0.94	56	42.7
11-Dec-18	13:00	Fine	CMA5b_1hr_1 140022	2.6628	2.6659	11322.90	11323.90	1.00	0.93	0.93	0.93	56	55.4
11-Dec-18	14:31	Fine	CMA5b_1hr_2 140003	2.6790	2.6837	11323.90	11324.90	1.00	0.93	0.93	0.93	56	84.0
11-Dec-18	15:48	Fine	CMA5b_1hr_3 140006	2.6996	2.7041	11324.90	11325.90	1.00	0.93	0.93	0.93	56	80.4
17-Dec-18	10:50	Fine	CMA5b_1hr_1 140084	2.6655	2.6661	11349.90	11350.90	1.00	0.93	0.93	0.93	56	10.7
17-Dec-18	13:00	Fine	CMA5b_1hr_2 140088	2.6744	2.6757	11350.90	11351.90	1.00	0.93	0.93	0.93	56	23.2
17-Dec-18	14:15	Fine	CMA5b_1hr_3 140094	2.6581	2.6602	11351.90	11352.90	1.00	0.93	0.93	0.93	56	37.5
22-Dec-18	08:35	Fine	CMA5b_1hr_1 140199	2.6580	2.6657	11376.91	11377.91	1.00	1.21	1.21	1.21	73	105.9
22-Dec-18	10:25	Fine	CMA5b_1hr_2 140104	2.6525	2.6608	11377.91	11378.91	1.00	1.24	1.24	1.24	74	111.6
22-Dec-18	13:00	Fine	CMA5b_1hr_3 140112	2.6463	2.6506	11378.91	11379.91	1.00	1.27	1.27	1.27	76	56.6



Location: CMA6a - WDII PRE Office

Report on 24-hour TSP monitoring for EP-376/2009

Action Level - 207.1 μ g/m3 Limit Level - 260 μ g/m3

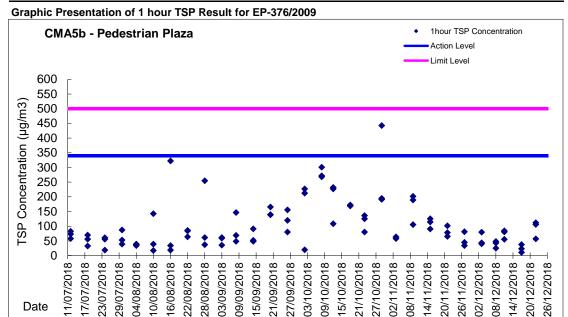
Date	Sampling	Weather	Filter paper no.	Filter Weigh	nt, g	Elapse Tim	e, hr	Sampling	Flo	w Rate, m ³ /ı	min	Total	TSP Level,
	Time	Condition		Initial	Final	Initial	Final	Time, hr	Initial, Q _{si}	Final, Q _{sf}	Average	Volume, m ³	μg/m³
01-Dec-18	08:00	Cloudy	CMA6a_24hr 28387	2.6519	2.7831	4909.73	4933.73	24.00	1.06	1.06	1.06	1527	85.9
07-Dec-18	08:00	Cloudy	CMA6a_24hr 206745	2.6772	2.7286	4936.75	4960.75	24.00	1.07	1.07	1.07	1545	33.3
10-Dec-18	08:00	Fine	CMA6a_24hr 206733	2.6970	2.8125	4963.76	4987.76	24.00	1.14	1.14	1.14	1645	70.2
15-Dec-18	08:00	Fine	CMA6a_24hr 140007	2.7062	2.8400	4990.78	5014.78	24.00	1.07	1.07	1.07	1542	86.8
21-Dec-18	08:00	Fine	CMA6a_24hr 140061	2.6995	2.7765	5018.81	5042.81	24.00	1.14	1.14	1.14	1642	46.9

Report on 1-hour TSP monitoring for EP-376/2009

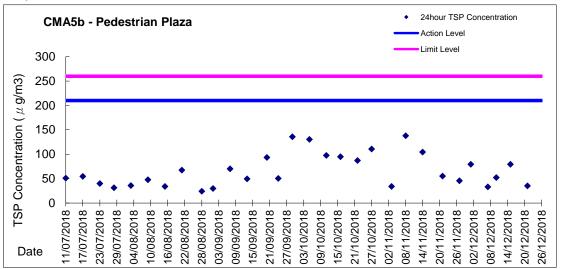
Action Level - 333 μg/m3 Limit Level - 500 μg/m3

Date	Sampling	Weather	Filter paper no.	Filter Weigl	nt, g	Elapse Tim	e, hr	Sampling	Flo	w Rate, m ³ /ı	min	Total	TSP Level,
	Time	Condition		Initial	Final	Initial	Final	Time, hr	Initial, Q _{si}	Final, Q _{sf}	Average	Volume, m ³	μg/m³
03-Dec-18	08:10	Cloudy	CMA6a_1hr_1 28389	2.6786	2.6855	4933.73	4934.73	1.00	1.06	1.06	1.06	63	108.9
03-Dec-18	09:45	Cloudy	CMA6a_1hr_2 28455	2.6999	2.7050	4934.73	4935.73	1.00	1.13	1.13	1.13	68	75.5
03-Dec-18	13:00	Cloudy	CMA6a_1hr_3 28448	2.6852	2.6891	4935.73	4936.73	1.00	1.20	1.20	1.20	72	54.4
08-Dec-18	08:05	Cloudy	CMA6a_1hr_1 206714	2.6758	2.6767	4960.76	4961.76	1.00	1.22	1.22	1.22	73	12.3
08-Dec-18	09:15	Cloudy	CMA6a_1hr_2 206720	2.6861	2.6864	4961.76	4962.76	1.00	1.07	1.07	1.07	64	4.7
08-Dec-18	10:17	Cloudy	CMA6a_1hr_3 206742	2.6678	2.6688	4962.76	4963.76	1.00	1.14	1.14	1.14	69	14.6
11-Dec-18	13:00	Fine	CMA6a_1hr_1 140020	2.6786	2.6837	4987.77	4988.77	1.00	1.07	1.07	1.07	64	79.4
11-Dec-18	14:13	Fine	CMA6a_1hr_2 140001	2.6959	2.6999	4988.77	4989.77	1.00	1.07	1.07	1.07	64	62.3
11-Dec-18	15:23	Fine	CMA6a_1hr_3 140004	2.6769	2.6838	4989.77	4990.77	1.00	1.07	1.07	1.07	64	107.4
17-Dec-18	14:03	Fine	CMA6a_1hr_1 140091	2.6532	2.6577	5015.80	5016.80	1.00	1.07	1.07	1.07	64	70.0
17-Dec-18	15:41	Fine	CMA6a_1hr_2 140090	2.6600	2.6650	5016.80	5017.80	1.00	1.07	1.07	1.07	64	77.7
17-Dec-18	16:53	Fine	CMA6a_1hr_3 140092	2.6672	2.6712	5017.80	5018.80	1.00	1.07	1.07	1.07	64	62.2
22-Dec-18	08:50	Fine	CMA6a_1hr_1 140197	2.6574	2.6656	5042.82	5043.82	1.00	1.14	1.14	1.14	68	119.9
22-Dec-18	10:15	Fine	CMA6a_1hr_2 140102	2.6274	2.6327	5043.82	5044.82	1.00	1.14	1.20	1.17	70	75.3
22-Dec-18	13:00	Fine	CMA6a_1hr_3 140110	2.6583	2.6622	5044.82	5045.82	1.00	1.14	1.14	1.14	68	57.0

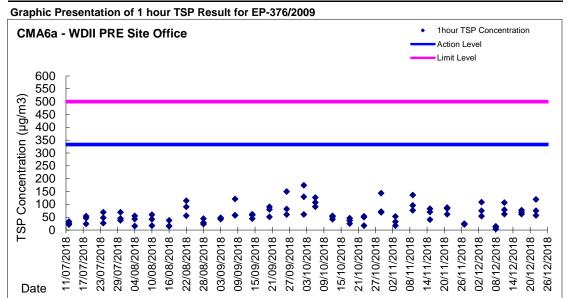


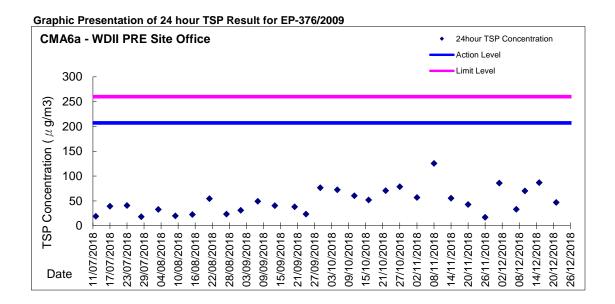


Graphic Presentation of 24 hour TSP Result for EP-376/2009









Appendix 6.1

Event Action Plans

Event/Action Plan for Construction Noise

EVENT		AC	CTION	
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	 Notify ER, IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, ER and Contractor; Discuss with the IEC and Contractor on remedial measures required; Increase monitoring frequency to check mitigation effectiveness. (The above actions should be taken within 2 working days after the exceedance is identified) 	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	 Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Supervise the implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified) 	Submit noise mitigation proposals to IEC and ER; Implement noise mitigation proposals. (The above actions should be taken within 2 working days after the exceedance is identified)



EVENT		AC	CTION	
	ET	IEC	ER	CONTRACTOR
Limit Level being exceeded	 Inform IEC, ER, Contractor and EPD; Repeat measurements to confirm findings; Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified) 	Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly. (The above actions should be taken within 2 working days after the exceedance is identified)	 Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Supervise the implementation of remedial measures; If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. The above actions should be taken within 2 working days after the exceedance is identified) 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC and ER within 3 working days of notification; Implement the agreed proposals; Submit further proposal if problem still not under control; Stop the relevant portion of works as instructed by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)

Event / Action Dian for Construction Air Quality

FVENT	Plan for Construction Air Quality ACTION			
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. (The above actions should be taken within 2 working days after the exceedance is identified)	Check monitoring data submitted by ET; Check Contractor's working method. (The above actions should be taken within 2 working days after the exceedance is identified)	Notify Contractor. (The above actions should be taken within 2 working days after the exceedance is identified)	Rectify any unacceptable practice; Amend working methods if appropriate (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring. (The above actions should be taken within 2 working days after the exceedance is identified)	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
LIMIT LEVEL				
Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. (The above actions should be taken within 2 working days after the exceedance is identified)	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. (The above actions should be taken within 2 working days after the exceedance is identified)	Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. (The above actions should be taken within 2 working days after the exceedance is identified)	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals; Amend proposal if appropriate. (The above actions should be taken within 2 working days after the exceedance is identified)
Exceedance for two or more consecutive samples	Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring, (The above actions should be taken within 2 working days after the exceedance is identified)	Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; 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. (The above actions should be taken within 2 working days after the exceedance is identified)	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)



Event and Action Dian for Marine Water Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; (The above actions should be taken within 1 working day after the exceedance is identified) Repeat measurement on next day of exceedance.	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and ER; Implement the agree mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)
Action level being exceeded by more than one consecutive sampling days	Identify source(s) of impact; Inform IEC and Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; (The above actions should be taken within 1 working day after the exceedance is identified) Repeat measurement on next working day of exceedance.	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)

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EVENT	/ENT ACTION			
	ET	IEC	ER	CONTRACTOR
Limit level being exceeded by one sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform IEC, contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; Implement the agreed mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)
Limit level being exceeded by more than one consecutive sampling days	Identify source(s) of impact; Inform IEC, contractor and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. (The above actions should be taken within 1 working day after the exceedance is identified)	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. (The above actions should be taken within 1 working day after the exceedance is identified)	Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3working days; Implement the agreed mitigation measures; As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities. (The above actions should be taken within 1 working day after the exceedance is identified)

Event and Action Plan for Odour Patrol

Event	ACTION		
	Person-in-charge of Odour Monitoring	Implementation Agent Identified by CEDD	
Action Level			
Exceedance of Action Level	Identify source/reason of exceedance; Repeat odour patrol to confirm finding.	 Carry out investigation to identify the source/reason of exceedance; Rectify any unacceptable practice Implement more mitigation measures if necessary; Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris. 	
Limit Level	·		
Exceedance of Limit Level	Identify source / reason of exceedance; Repeat odour patrol to confirm findings; Increase odour patrol frequency; If exceedance stops, cease additional odour patrol.	 Carry out investigation to identify the source/reason of exceedance. Investigation shall be completed within 2 weeks; Rectify any unacceptable practice; Formulate remedial actions; Ensure remedial actions properly implemented; If exceedance continues, consider what more/enhanced mitigation measures shall be implemented; Inform EPD or MD if exceedance is considered to be caused by expedient connections or floating debris. 	

Appendix 6.2

Summary for Notification of Exceedance

Ref. No.	Date	Time	Location	Construction Noise Level, dB(A)	Parameter	Action Level	Limit Level dB(A)	Follow-up action	
X_18N0 ⁻	8 19-Dec-18	15:35	M1a-Footbridge at Ex Harbour Road Sports Centre	78	Leq(30min)	when one documented complaint was received.	75	Possible reason: Action taken / to be taken: Remarks / Other Obs:	Non WDII-CWB breaking work immeidately next to the monitoring station was observed as the major noise contribution during monitoring. A repeat measurement was conducted to confirm result and reviewed the trend of previous noise monitoring and Contractor's working procedure. No construction work under EP-376/2009 was conducted by Contract HK/2012/08 around the concerned location during the time of measurement while breaking works next to the monitoring station under non-WDII-CWB contractor was observed as the major noise contribution during monitoring. As such, the exceedance was considered as non-Project related under Contract HK/2012/08.

Appendix 9.1

Complaint Log

Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					ł	

Appendix 10.1

Construction Programme of Individual Contracts

CEDD Contract No. HK/2012/08 Wan Chai Development Phase II Central - Wan Chai Bypass at Wan Chai												i Wes	t						Page : 1 / 7								
		Remaining Dur	Early Start	Early Finish	Activity % Complete	Jan	Feb	Mar	Apr	May	Jun 2	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	2019 Jun	Jul	Aug	Sep	Oct /
	Revised Works Programme Rev.12.0(DD 20 No	ovember 20	017)																			,	Jun	our	Aug	Зер	Oct P
	nd Milestone Dates Vorks Completion (Included Not Granted EOT Enti																										
KD10840	Completion of Section IIIA	trement of 1	ne Contracto		004																						
KD10860	Complection of Section IV	0		08-Sep-18*	0%									•													
KD10880	Completion of Section V	0		30-Aug-18* 26-Sep-18*	0%																						
KD11010	Completion of Section VII	0			0%									_													
KD11020	Completion of Section VIII	0		14-Sep-18* 21-Sep-18*	0%									•										•			
KD11040	Completion of Section IX	0		21-Sep-19*	0%									•													
KD11060	Completion of Section X	0		21-Sep-19*	0%									_												•	
	tions of Works Completion			21 Sep 10	0 76				ļ					· ·													
KD10080	Planned Section IIIA Completion - Road A2,A4, A5	0		08-Sep-18	0%									_													
KD10100	Planned Section IV Completion - Slip Road 3	0		30-Aug-18	0%									Ť													
KD10140	Planned Section V Completion - Remaining At-Grade Road	0		26-Sep-18	0%									_													
KD10280	Planned Section VII Completion - Remainder Works	0		14-Sep-18	0%																						
KD10300	Planned Section VIII Completion - Landscape Softwork	0		21-Sep-18	0%																						
KD10320	Planned Section IX Completion - Establishment Works	0		21-Sep-19	0%																						
KD10340	Planned Section X Completion - Tree Protection & Preservation	0		21-Sep-18	0%									•												•	
Dredging and	d Reclamation																										
Marine Work	Construction																										
Zone CRIII																											
Seawall Cons	truction - Zone CRIII																										
	eawall- 2nd Stage																										
Seawalf 2 &																											
MAR21371	Zone CRIII - seawall 2 & 12 - Backfilling remaining portion (type A, geotextile and filter)	0	19-Jan-18 A	27-Jan-18 A	100%																						
Zone D																											
	truction - Zone D																										
Seawall 10 &																											
MAR20630	Zone D - Seawall 10 & 11: Install remaining seawall block	14	20-Feb-18*	05-Mar-18	0%																						
MAR20650	Zone D - Seawall 10 & 11: Backfill Type A	7	06-Mar-18	12-Mar-18	0%																						
MAR20670	Zone D - Seawall 10 & 11: Lay geotextile and filter	7	13-Mar-18	19-Mar-18	0%																						
	ction Completion																										
Construction	Road A2, A4 & A5																										
NOGUWOFK &	Utilities - Section 1 (L1806 - L1801)																										
ata Date: 0-Feb-18	Current Milestone Actual Work Critical Remaining Work Remaining Work Remaining Level of Effort				Up (Ref	dated to R	d Wo	orks I 2 as	Progr of 20	amm Febr	ne Re urary	v.12 2018	3)						Dat 20-Feb		Revision 2	Chec	cked		Approv	ed	

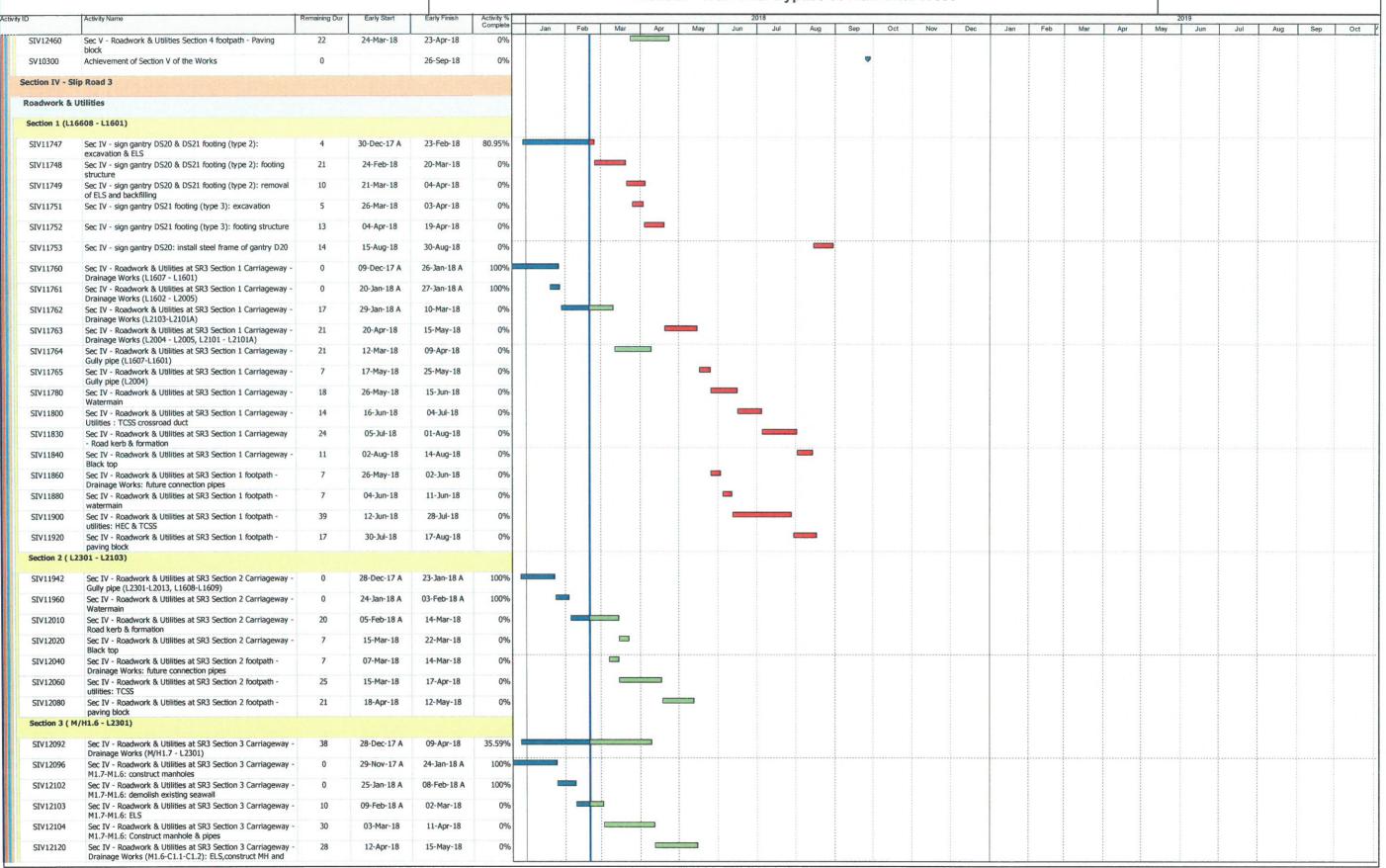
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vity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Activity %							2018	100000										2019	6 1 2 1 1			
SIIIA10279c	Sec III A - section 1 carriageway - sewerage pipe from M/H	0	02-Jan-18 A	03-Feb-18 A	Complete 100%	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
SIIIA10279C	8C to F8B (night time): construct sewerage pipe Sec III A - section 1 carriageway - sewerage pipe Sec III A - section 1 carriageway - sewerage pipe from M/H	6	05-Feb-18 A	26-Feb-18	0%																						
	F8B - F8A (night time)	0																									
SIIIA10294	Sec III A - section 1 carriageway - sewerage pipe from M/H F8A - F8	8	17-Jan-18 A	28-Feb-18	27.27%	1																					
SIIIA10295	Sec III A - carriageway - works prrior TTA stage 5: excavation and duct laying of TCSS and public lighting	7	18-Jan-18 A	27-Feb-18	0%																						
SIIIA10298	Sec III A - section 1 carriageway - works prrior TTA stage 5: road kerb	5	28-Feb-18	05-Mar-18	0%																						
SIIIA10301	Sec III A - section 1 carriageway - works prrior TTA stage 5: road formation	2	06-Mar-18	07-Mar-18	0%			1		-																	
SIIIA10302	Sec III A - section 1 carriageway - works prrior TTA stage	5	08-Mar-18	13-Mar-18	0%			•																			
SIIIA10303	5: laying asphalt Sec III A - section 1 carriageway - works prrior TTA stage	3	14-Mar-18	16-Mar-18	0%																						
SIIIA10310	5: road marking & preparation works Sec III A - section 1 carriageway - TTA stage 5:	1	17-Mar-18	17-Mar-18	0%			1																			
SIIIA10310a	Implementation of TTA Stage 5 Sec III A - section 1 carriageway - TTA stage 5: remaining	12	19-Mar-18	04-Apr-18	0%																						
SIIIA10310b	sewerage pipe for M/H F8A - M/H F8 Sec III A - section 1 carriageway - TTA stage 5: remaining	18	06-Apr-18	26-Apr-18	0%									·							ļ			ļ			
SIIIA10310c	sewerage pipe for M/H F8A - M/H F8B Sec III A - section 1 carriageway - TTA stage 5: SR1	5	19-Mar-18	23-Mar-18	0%																						
SIIIA10310d	at-grade road- remove sheetpile at U-trough west	21	24-Mar-18	21-Apr-18	0%																				; ; ;		
	at-grade road -remove temp. road access bay 5 of SR1																										
SIIIA10310e	at-grade road -construct upstand wall above Dwall	25	23-Apr-18	23-May-18	0%																						
SIIIA10310f	Sec III A - section 1 carriageway - TTA stage 5: SR1 at-grade road - roadside barrier	14	24-May-18	08-Jun-18	0%																						
SIIIA10310g	Sec III A - section 1 carriageway - TTA stage 5: SR1 at-grade road - road formation	7	09-Jun-18	16-Jun-18	0%						-																
SIIIA10310h	Sec III A - section 1 carriageway - TTA stage 5: SR1 at-grade road - laying asphalt with transition slab	14	19-Jun-18	05-Jul-18	0%																						
SIIIA10312	Sec III A - roadwork and utilities section 1 carriageway - Drainage works (L2202 - L2201)	15	19-Mar-18	09-Apr-18	0%																						
SIIIA10312a	Sec III A - roadwork and utilities section 1 carriageway - Drainage works (L1805 - L1801)	15	10-Apr-18	26-Apr-18	0%																						
SIIIA10312b	Sec III A - roadwork and utilities section 1 carriageway - Drainage works (L1805-1807)	12	27-Apr-18	11-May-18	0%																						
SIIIA10313	Sec III A - roadwork and utilities section 1 carriageway - gully pipe (L1807 - L1801)	14	07-May-18	23-May-18	0%										†												
SIIIA10320	Sec III A - roadwork and utilities section 1 carriageway -	7	24-May-18	31-May-18	0%					-	•																
SIIIA10340	fresh watermain Sec III A - roadwork and utilities section 1 carriageway -	14	01-Jun-18	16-Jun-18	0%																						
SIIIA10360	utilities: HEC (80m) along carriageway Sec III A - roadwork and utilities section 1 carriageway -	14	19-Jun-18	05-Jul-18	0%																						
SIIIA10400	road kerb & formation Sec III A - roadwork and utilities section 1 carriageway -	7	06-Jul-18	13-Jul-18	0%							_															
SIIIA10420	black top Sec III A - Implementation of TTA Stage 7P (Closure of	1	14-Jul-18	14-Jul-18	0%							1															
SIIIA10440	U-turn at Expo Drive) Sec III A - roadwork and utilities section 1 carriageway :	10	16-Jul-18	26-Jul-18	0%																						
SIIIA10460	breaking existing asphalt Sec III A - roadwork and utilities section 1 carriageway: road																										
	kerb and formation	14	27-Jul-18	11-Aug-18	0%																						
SIIIA10480	Sec III A - roadwork and utilities section 1 carriageway : black top	10	13-Aug-18	23-Aug-18	0%																						
SIIIA10500	Sec III A - roadwork and utilities section 1 carriageway : roadmarking and road furniture	14	24-Aug-18	08-Sep-18	0%																						
Roadwork &	Utilities - Section 2 (L1810 - L1807)																										
SIIIA12590	Sec III A - roadwork and utilities section 2 carriageway - black top	0	20-Jan-18 A	27-Jan-18 A	100%																						
Roadwork &	Utilities - Section 3 (L1808 - L1102)																										
SIIIA12770	Sec III A - roadwork and utilities section 3 carriageway - utilities: HEC ducting (60m) & crossroad duct (PCCW & HGC)	0	20-Jan-18 A	07-Feb-18 A	100%																						
SIIIA12790	Sec III A - roadwork and utilities section 3 carriageway - road kerb & formation	17	08-Feb-18 A	10-Mar-18	0%		-	-																			
SIIIA12810	Sec III A - roadwork and utilities section 3 carriageway -	7	12-Mar-18	19-Mar-18	0%								<u> </u>														-
Roadwork &	black top Utilities - Section 6 (L1102 - L1411)																										
SIIIA13399	Sec III A - roadwork and utilities section 6 carriageway -	0	12-Jan-18 A	26-Jan-18 A	100%																						
SIIIA13444	gully pipe (L1101 -L1102) Sec III A - roadwork and utilities section 6 carriageway -	0	27-Jan-18 A	03-Feb-18 A	100%																						
SIIIA13445	watermain (road crossing) Sec III A - roadwork and utilities section 6 carriageway -	13		06-Mar-18	0%																						
SILIAL SH45	utilities: crossed duct(HEC , HGC, PCCW)	15	05-Feb-18 A	00-Mat-18	0%			Ī																			

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a. 10	LActivity Name	Domeining Dur	Early Chart		1 1-5-2-0/	
ity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Activity % Complete	2018
SIIIA13450	Sec III A - roadwork and utilities section 6 carriageway - road kerb & formation	18	07-Mar-18	27-Mar-18	0%	The state of the s
SIIIA13470	Sec III A - roadwork and utilities section 6 carriageway - black top	7	28-Mar-18	09-Apr-18	0%	
SIIIA13570	Achievement of Section IIIA of the Works	0		08-Sep-18	0%	
Section V - Re	maining At-Grade Road & Road P2					
Roadwork &	Utilities					
Section 1 (L1	504 - L1900)					
SV12456	Sec V-Roadwork & Utilities Section 1 - implementation of	0	20-Feb-18*	20-Feb-18	0%	
SV12460	TTA stage 5E (closure of slow lane at northbound of Expo Sec V - Roadwork & Utilities Section 1 - drinage works	15	20-Feb-18	08-Mar-18	0%	
SV12462	(L1902 - L1900) Sec V - Roadwork & Utilities Section 1 - gully pipe (L1902 -	6	09-Mar-18	15-Mar-18	0%	
SV12464	L1900) Sec V - Roadwork & Utilities Section 1 - temp. reinstatement	14	16-Mar-18	04-Apr-18	0%	
SV12466	to match with existing Expo Drive Sec V - Section 1 - Modification to 2nd stage ITA (V.O. 50) :	1	14-Jul-18	14-Jul-18	0%	
SV12468	closure of northbound and maintain one lane at southbound Sec V - Roadwork & Utilities Section 1 Carriageway -	7	16-Jul-18	23-Jul-18	0%	
SV12490	breaking existing asphalt Sec V - Roadwork & Utilities Section 1 Carriageway - Road kerb & formation	10	24-Jul-18	03-Aug-18	0%	
SV12520	Ker V - Roadwork & Utilities Section 1 Carriageway - Black top	7	04-Aug-18	11-Aug-18	0%	
SV12522	Sec V - Section 1 - Implementation of TTA for road closure of northbound and southbound of Expo Drive	3	13-Aug-18	15-Aug-18	0%	
SV12524	Sec V - Section 1 - Northbound & Southbound of Expo Drive : breaking asphalt	14	16-Aug-18	31-Aug-18	0%	
SV12526	Sec V - Section 1 - Northbound & Southbound of Expo Drive : road kerb & formation	14	01-Sep-18	17-Sep-18	0%	
SV12528	Sec V - Section 1 - Northbound & Southbound of Expo Drive : black top	7	18-Sep-18	26-Sep-18	0%	
SV12570	Sec V - Roadwork & Utilities Section 1 footpath - utilities:TCSS	12	29-Dec-17 A	05-Mar-18	60%	
SV12580	Sec V - Roadwork & Utilities Section 1 footpath - paving block	29	06-Mar-18	12-Apr-18	0%	
Section 2 (L.	510 - L1504)					
SV12624	Sec V - Roadwork & Utilities Section 1 Carriageway - road kerb & formation	0	04-Jan-18 A	30-Jan-18 A	100%	
SV12626	Sec V - Roadwork & Utilities Section 1 Carriageway - black top	13	31-Jan-18 A	06-Mar-18	0%	
SV12692	Sec V - Roadwork & Utilities Section 2 footpath - U channel	11	17-Jan-18 A	03-Mar-18	21.43%	
SV12695	Sec V - Roadwork & Utilities Section 2 footpath - Watermain	13	05-Mar-18	19-Mar-18	0%	
SV12700	Sec V - Roadwork & Utilities Section 2 footpath - utilities: TCSS	16	20-Mar-18	11-Apr-18	0%	
SV12740	Sec V - Roadwork & Utilities Section 2 footpath - paving block	18	12-Apr-18	03-May-18	0%	
Section 3 (C	ulvert L - L1510)					
SIV12860	Sec V - Roadwork & Utilities Section 3 footpath - Utilities: TCSS, HGC, PCCW)	30	16-Jan-18 A	26-Mar-18	11.76%	
SIV12880	Sec V - Roadwork & Utilities Section 3 footpath - Paving block	21	27-Mar-18	24-Apr-18	0%	
Section 4 (K1	106 - Culvert L)					
SIV12282	Sec V - Roadwork & Utilities Section 4 Carriageway -	10	20-Feb-18	02-Mar-18	0%	
SIV12300	Drainage Works (L1311 - Culvert L, L1201 - Culvert L) Sec V - Roadwork & Utilities Section 4 Carriageway - Gully	7	03-Mar-18	10-Mar-18	0%	
SIV12302	pipe (L1301 - Culvert L, L1201 - Culvert L) Sec V - Roadwork & Utilities Section 4 Carriageway -	6	12-Mar-18	17-Mar-18	0%	
SIV12305	watermain Sec V - Roadwork & Utilities Section 4 Carriageway - utilities	7	19-Mar-18	26-Mar-18	0%	
SIV12310	: cross road duct Sec V - Roadwork & Utilities Section 4 Carriageway - Road kerh & formation : between culvert K and culvert I	15	27-Mar-18	17-Apr-18	0%	
SIV12320	kerb & formation : between culvert K and culvert L Sec V - Roadwork & Utilities Section 4 Carriageway - Black	10	18-Apr-18	28-Apr-18	0%	
SIV12340	top: between culvert K and culvert L Sec V - Roadwork & Utilities Section 4 Carriageway - Black top: at west of culvert K	7	20-Feb-18	27-Feb-18	0%	
SIV12422	Sec V - Roadwork & Utilities Section 4 footpath - Utilities : TCSS	20	20-Feb-18	14-Mar-18	0%	
SIV12440	Sec V - Roadwork & Utilities Section 4 footpath - Utilities :	8	15-Mar-18	23-Mar-18	0%	

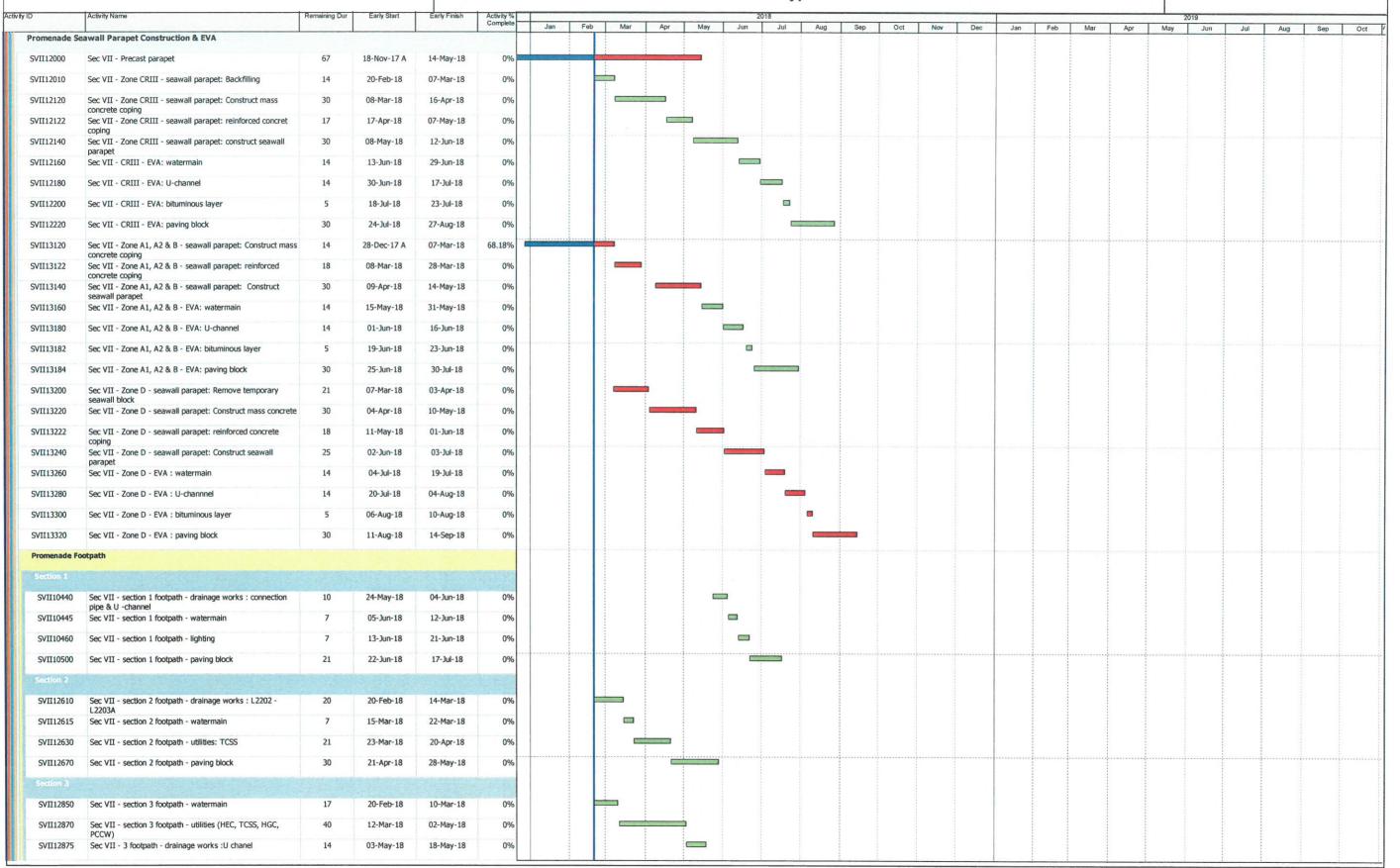
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vity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Activity % Complete							2018		Contract of		100000				- 400			2019				
SIV12121	Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	6	16-May-18	23-May-18	O%	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
SIV12122	Drainage Works (M1.6-C1.1-C1.2): Backfilling & shift lane Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	5	24-May-18	29-May-18	0%						1																
SIV12140	Drainage Works (M1.6-C1.1-C1.2): Construct MH C1.2 Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	32	10-Apr-18	17-May-18	0%																						
SIV12150	Gully pipe (M/H 1.7 - L2301) Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	14	18-May-18	04-Jun-18	0%																						
SIV12155	Road kerb Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	10	05-Jun-18	15-Jun-18	0%																						
SIV12160	formation Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	7	16-Jun-18	25-Jun-18	0%																						
SIV12170	Black top Sec IV - Roadwork & Utilities at SR3 Section 3 footpath -	21									1																
	Utilities: TCSS	21	10-May-18	04-Jun-18	0%																						
SIV12180	Sec IV - Roadwork & Utilities at SR3 Section 3 footpath - U channel	10	05-Jun-18	15-Jun-18	0%																						
SIV12220	Sec IV - Roadwork & Utilities at SR3 Section 3 footpath - Paving block	25	16-Jun-18	17-Jul-18	0%																						
SIV12222	Achievement of Section IV of the Works	0		30-Aug-18	0%								•														
Section VII - R	emainder Works																							÷	·	ļ	
Road & Draina	ge Works (Culvert L - M/H1.7, Adjacent to SR3)																			: : : :							
SVII11600	Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway - Drainage Works (Culvert L -MH1.7)	48	08-Jan-18 A	20-Apr-18	18.64%																						
SVII11620	Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway :	3	21-Apr-18	24-Apr-18	0%															1 4 4 6 6							
SVII11640	traffic diversion at Lung King Street Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway - Gully ping (Culture L. MUL 7)	27	25-Apr-18	28-May-18	0%				0													1 0 0 1 1					
SVII11650	Gully pipe (Culvert L -MH1.7) Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway -	7	29-May-18	05-Jun-18	0%	-				1											ļ						
SVII11654	TCSS duct Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway -	14	06-Jun-18	22-Jun-18	0%																						
SVII11660	road kerb & formation Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway -	6	23-Jun-18	29-Jun-18	0%																						
SVII11680	Black top Sec IV - Roadwork & Utilities at SR3 Section 4 footpath - U	14	29-May-18	13-Jun-18	0%																						
SVII11700	channel Sec IV - Roadwork & Utilities at SR3 Section 4 footpath -	14	14-Jun-18	30-Jun-18	0%																						
SVII11720	utilities: TCSS Sec IV - Roadwork & Utilities at SR3 Section 4 footpath -	14	03-Jul-18	18-Jul-18	0%																						
	paving block RW5 Construction			10 30. 10	0.0																						
SVII10660	Sec VII - Retaining Wall RW5 (bay 1) - construct base slab	22	20-Mar-18	10 4 10	000																						
SVII10680	and wall Sec VII - Retaining wall RW5 (bay 2) - construct base slab			18-Apr-18	0%																						
SVII10800	and wall	22	19-Apr-18	15-May-18	0%																						
	Sec VII - Retaining wall RW5 (bay 3) - construct base slab and wall	22	20-Mar-18	18-Apr-18	0%																						
SVII10820	Sec VII - Retaining wall RW5 (bay 4) - construct base slab and wall	22	19-Apr-18	15-May-18	0%																						
SVII10860	Sec VII - Retaining wall RW5 - curing, removal formwork	8	16-May-18	25-May-18	0%																						
Landing Steps	Construction																										
Landing Steps	BSW13																										
SVII10900	Sec VII - Landing steps (BSW13) - install vertical fender / step fender	15	15-May-18	01-Jun-18	0%						1																
SVII10920	Sec VII - Landing steps (BSW13) - install s.s. handrail / tactile / sign board / bollard	25	02-Jun-18	03-Jul-18	0%							i											 !				
Landing Steps																											
SVII10980	Sec VII - Landing steps (BSW4) - install vertical fender / step fender	15	20-Jun-18	07-Jul-18	0%							=															
SVII11000	Sec VII - Landing steps (BSW4) - install s.s. handrail / tactile	25	09-Jul-18	06-Aug-18	0%								-														
Landing Steps	/ sign board / bollard BSW5																										
SVII11060	Sec VII - Landing steps (BSW5) - install vertical fender / step	15	25-Jul-18	10-Aug-18	0%	ļ																			ļ		
SVII11080	fender Sec VII - Landing steps (BSW5) - install s.s. handrail / tactile	25	11-Aug-18	08-Sep-18	0%																						
Landing Steps	/ sign board / bollard			oop 10	0,70					1																	
SVII11140	Sec VII - Landing steps (BSW9) - Install vertical fender / step	15	13-Jun-18	30-Jun-18	00/																						
	fender				0%																						
SVII11160	Sec VII - Landing steps (BSW9) - install s.s. handrail / tactile / sign board / bollard	25	03-Jul-18	31-Jul-18	0%					:																	

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