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

QUARTERLY ENVIRONMENTAL MONITORING AND AUDIT REPORT

- MAY 2019 TO JULY 2019 -

CLIENTS:

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CHECKED BY:

Raymond Dai

Environmental Team Leader

DATE:

23 September 2019



Ref.: AACWBIECEM00 0 11654L.19

23 September 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 Ng

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)

Quarterly Environmental Monitoring and Audit Report (May 2019 to July 2019) for EP-376/2009

Reference is made to the Environmental Team's submission of the captioned Quarterly Environmental Monitoring and Audit (EM&A) Report received by e-mail on 23 September 2019 for our review and comment.

Please be informed that we have no adverse comment on the captioned submission.

Thank you 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. Jimmy Ling

by fax: 2369 4980

Lam

Attn: Mr. Raymond Dai

by fax: 2882 3331

AECOM

Attn: Ms. Gloria Tang

by fax: 2587 1877

AECOM

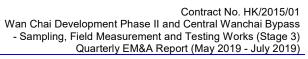
Attn: Mr. Francis Leong/ Stephen Lai by fax: 2691 2649

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EXECUTIVE SUMMARY

This is the Quarterly Environmental Monitoring and Audit (EM&A) Report – May 2019 to July 2019 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 and audit findings and information during the period from 27th April 2019 to 26th July 2019. The cut-off date of reporting is at 26th of each reporting period

Construction Activities for the Reported Period

ii. During this reporting period, the principle 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</u>

Wan Chai West

Table 1 Principal Work Activities in the reporting period

May	June	July
Landscaping	Landscaping	Landscaping

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.
- 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. With respect to WDII RSS confirmed that the remaining works under HK/2012/08 would be tree planting works at EP-376/2009 area only, considered that no adverse noise impact would be contributed by the tree planting works, the respective noise monitoring at noise monitoring station M1a Footbridge at EX-Wanchai Harbour Road Sports Centre was temporary suspended from 27 March 2019 onwards.

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. With respect to WDII RSS confirmed that the remaining works under HK/2012/08 would be tree planting works at EP-376/2009 area only, considered that no adverse air quality impact would be contributed by the tree planting works, the respective air quality monitoring at

Contract No. HK/2015/01 Wan Chai Development Phase II and Central Wanchai Bypass - Sampling, Field Measurement and Testing Works (Stage 3) Quarterly EM&A Report (May 2019 - July 2019)

monitoring stations CMA5b – Pedestrian Plaza and CMA6a – Contractor HK/2012/08 Site Office, were temporary suspended from 27 March 2019 onwards.

Complaints, Notifications of Summons and Successful Prosecutions

ix. There was no environmental complaint recorded in this reporting quarter.

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-125/2008).

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 27th April 2019 to 26th July 2019. The cut-off date of reporting is the 26th of each reporting period.

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 *Monitoring Requirements* – summarizes all monitoring parameters, monitoring locations, monitoring frequency, duration and action plan.

Section 4 *Monitoring Results* – summarizes the monitoring results obtained in the reporting period.

Section 5 Compliance Audit – summarizes the auditing of monitoring results, all exceedances environmental parameters.

Section 6 Complaints, Notification of summons and Prosecution – summarizes the cumulative statistics on complaints, notification of summons and prosecution

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 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

lt	tem	Designated Project	EIAO Reference	
D)P2	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-Build King Joint Venture HK/2012/08 – 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 EP-376/2009 by 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 *Figure 2.2*. 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
China State- Build King	Contractor under Contract	Project Director	C. N. LAI	9106 5806	2877 1522
Joint Venture	/enture 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

2.4 Principal Work and Activities

2.4.1 During this reporting period, the principle 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>

Table 2.3 Principal Work Activities in the reporting period



Lam Geotechnics Limited

Contract No. HK/2015/01 Wan Chai Development Phase II and Central Wanchai Bypass - Sampling, Field Measurement and Testing Works (Stage 3) Quarterly EM&A Report (May 2019 - July 2019)

May	June	July
Landscaping	Landscaping	Landscaping

2.4.2 Implementation status of the recommended mitigation measures during this reporting period is presented in *Appendix 2.1*.



3. MONITORING REQUIREMENTS

3.1. Noise Monitoring

NOISE MONITORING STATION

3.1.1. The noise monitoring station for the Project is listed and shown in *Table 3.1* and *Figure 3.1*.
Appendix 3.1 shows the established Action/Limit Levels for the monitoring works.

Table 3.1 Noise Monitoring Station

District	Station	Description
Wan Chai	М1а	Footbridge for Ex-Harbour Road Sports Centre

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 3.1.2. 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.
- 3.1.3. 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

- 3.1.4. 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.
- 3.1.5. 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.

3.2. Air Quality Monitoring

AIR QUALITY MONITORING STATIONS

3.2.1. The air monitoring stations for the Project are listed and shown in *Table 3.2* and *Figure 3.1*. *Appendix 3.1* shows the established Action/Limit Levels for the monitoring works.

Table 3.2 Air Quality Monitoring Stations

Station ID	Monitoring Location	
CMA5b	Pedestrian Plaza	
CMA6a	WDII PRE Site Office	

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 3.2.2. 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.
- 3.2.3. 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.
- 3.2.4. 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

- 3.2.5. 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.
- 3.2.6. 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

- 3.2.7. 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.
- 3.2.8. 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.
- 3.2.9. 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.
- 3.2.10. All the collected samples shall be kept in a good condition for 6 months before disposal.

4. MONITORING RESULTS

- 4.0.1. The environmental monitoring will be implemented based on the division of works areas of the designed project managed under the contract with FEP applied by contractor. Overall layout showing work areas of various contracts, latest status of work commencement and monitoring stations is shown in *Figure 2.1* and *Figure 3.1*. The monitoring results are presented in according to the Individual Contract(s).
- 4.0.2. In the reporting period, the concurrent contract is:
 - Contract no. HK/2012/08 Wan Chai Development Phase II Central Wan Chai Bypass at Wan Chai West.

4.1. Noise Monitoring Results

- 4.1.1 Noise monitoring for project works under EP-376/2009 was commenced on 19 May 2015.
- 4.1.2 The proposed division of noise monitoring station is summarized in *Table 4.1* below.

Table 4.1 Noise Monitoring Station for Contract no. HK/2012/08

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

- 4.1.3 With respect to WDII RSS confirmed that the remaining works under HK/2012/08 would be tree planting works at EP-376/2009 area only, considered that no adverse noise impact would be contributed by the tree planting works, the respective noise monitoring at noise monitoring station M1a Footbridge at EX-Wanchai Harbour Road Sports Centre was temporary suspended from 27 March 2019 onwards.
- 4.1.4 The noise monitoring results measured in the past reporting period are reviewed and summarized. Details of continuous noise monitoring results and graphical presentation can be referred to *Appendix 4.1*

4.2. Air Quality Monitoring Results

- 4.2.1 Air Quality monitoring for project works under EP-376/2009 was commenced on 16 May 2015.
- 4.2.2 The proposed division of air quality monitoring stations are summarized in *Table 4.2* below.

Table 4.2 Air Quality Monitoring Station for Contract no. HK/2012/08

Station	Description	
CMA5b	Pedestrian Plaza	
CMA6a	WDII PRE Site Office	

- 4.2.3 With respect to WDII RSS confirmed that the remaining works under HK/2012/08 would be tree planting works at EP-376/2009 area only, considered that no adverse air quality impact would be contributed by the tree planting works, the respective air quality monitoring at air quality monitoring stations CMA5b Pedestrian Plaza and CMA6a Contractor HK/2012/08 Site Office were temporary suspended from 27 March 2019 onwards.
- 4.2.4 The air quality monitoring results measured in the past reporting period are reviewed and summarized. Details of air quality monitoring results and graphical presentation can be referred in *Appendix 4.2*.

4.3. Waste Monitoring Results

4.3.1 No Inert and Non-inert C&D wastes disposed in this reporting period. Details of the waste flow table are summarized in *Table 4.3*.

Table 4.3 Details of Waste Disposal for Contract no. HK/2012/08

Waste Type	Quantity this quarter	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



5. COMPLIANCE AUDIT

5.0.1. The Event Action Plan for construction noise and air quality are presented in *Appendix 5.1*.

5.1. Noise Monitoring

5.1.1 With respect to WDII RSS confirmed that the remaining works under HK/2012/08 would be tree planting works at EP-376/2009 area only, considered that no adverse noise impact would be contributed by the tree planting works, the respective noise monitoring at noise monitoring station M1a - Footbridge at EX-Wanchai Harbour Road Sports Centre was temporary suspended from 27 March 2019 onwards.

5.2. Air Quality Monitoring

5.2.1 With respect to WDII RSS confirmed that the remaining works under HK/2012/08 would be tree planting works at EP-376/2009 area only, considered that no adverse air quality impact would likely be contributed by the tree planting works, the respective air quality monitoring at air quality monitoring stations CMA5b – Pedestrian Plaza and CMA6a – Contractor HK/2012/08 Site Office were temporary suspended from 27 March 2019 onwards.

5.3. Site Audit

5.3.1 There was no non-compliance from the site audits in the reporting period. During environmental site inspections conducted during the reporting period, minor deficiencies were noted.

5.4. Review of the Reasons for and the Implications of Non-compliance

5.4.1 There was no non-compliance from the site audits in the reporting period.

5.5. Summary of action taken in the event of and follow-up on non-compliance

5.5.1 There was no particular action taken since no project-related non-compliance was recorded from the site audits and environmental monitoring in the reporting period.

5.6. Mitigation measures implemented to prevent muddy discharge and surface runoff

5.6.1 With a view to ensure the adequacy and effectiveness of measures to prevent the discharge of muddy water, including surface run-off, from construction works during wet season, the following mitigation measures were implemented by Contractor(s) in the reporting period:

Contract No.	Mitigation Measures implemented				
	Deployment of embankment along seawall				
	Regular cleaning the sand / silt / mud sitting along the seawall				
HK/2012/08	Hard paved the area along seafront				
HK/2012/00	Cover the stockpile material to avoid excessive surface runoff				
	Regular review and maintenance of the site drainage system				
	Discharge of wastewater via wastewater treatment plant if necessary				

6. COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

- 6.0.1. No environmental complaint received in this reporting quarter.
- 6.0.2. The details of cumulative complaint log and summary of complaints are presented in *Appendix* 6.1.
- 6.0.3. No notification of summons or prosecution was received in the reporting period. Cumulative statistic on complaints and successful prosecutions are summarized in *Table 6.1* and *Table 6.2* respectively.

Table 6.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Commencement works (May 2015) to last reporting quarter	0
May 2019 to July 2019	0
Project-to-Date	0

Table 6.2 Cumulative Statistics on Successful Prosecutions

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



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 period.
- 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, seawall coping, dismantling of temporary landing steps and junction modification were performed in July 2019 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 trimming work at WCR4 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; seabed reinstatement at Causeway Bay; road works, drainage improvement work, utility diversion works and landscape works at Victoria Park; bridge noise enclosure installation works, 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.

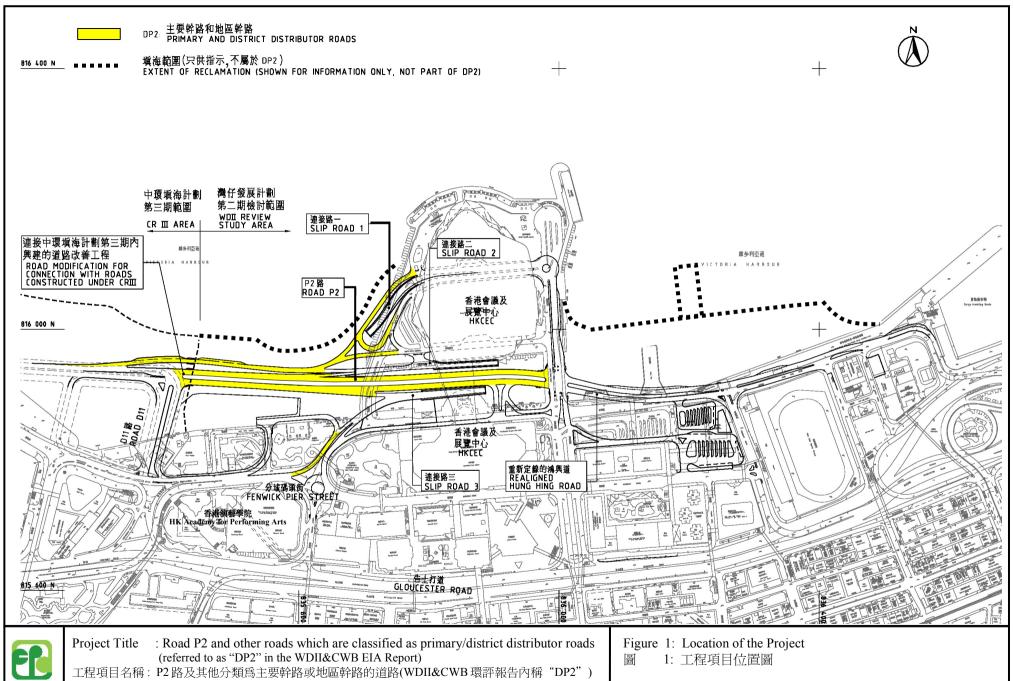


8. CONCLUSION

- 8.0.1. 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.
- 8.0.2. No non-compliance and no prosecutions were received during the reporting period.
- 8.0.3. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor in this reporting period. Environmental site audit was conducted by the Environmental Team and the Independent Environmental Checker and no cumulative environmental impact was identified in the reporting period. Hence, the EM&A programme was considered effective and shall be maintained.
- 8.0.4. The construction programmes of individual contracts are provided in *Appendix 8.1*.

Figure 2.1

Project Layout



Environmental Permit No.: EP-376/2009 環境許可證編號 : EP-376/2009 (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

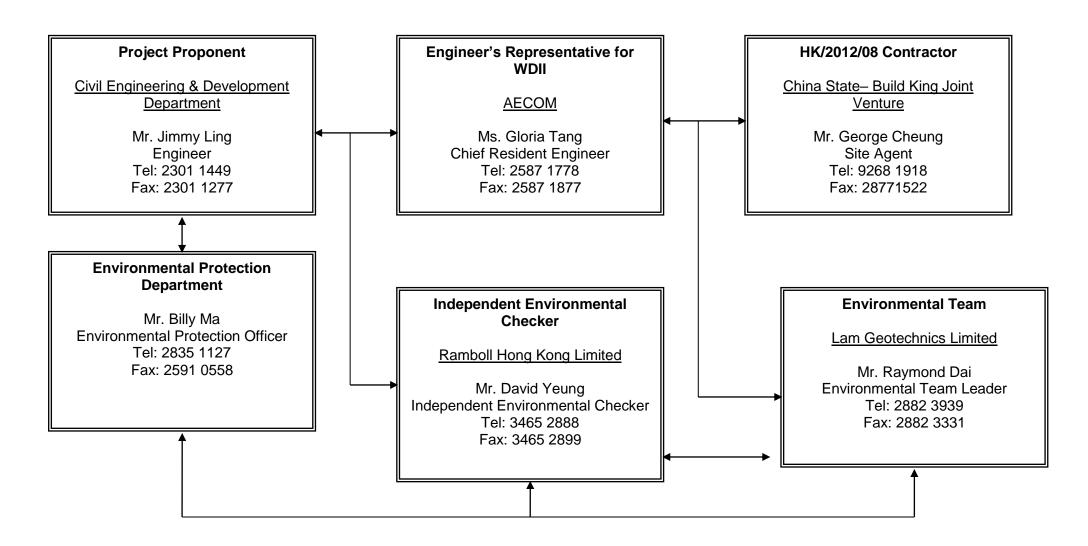
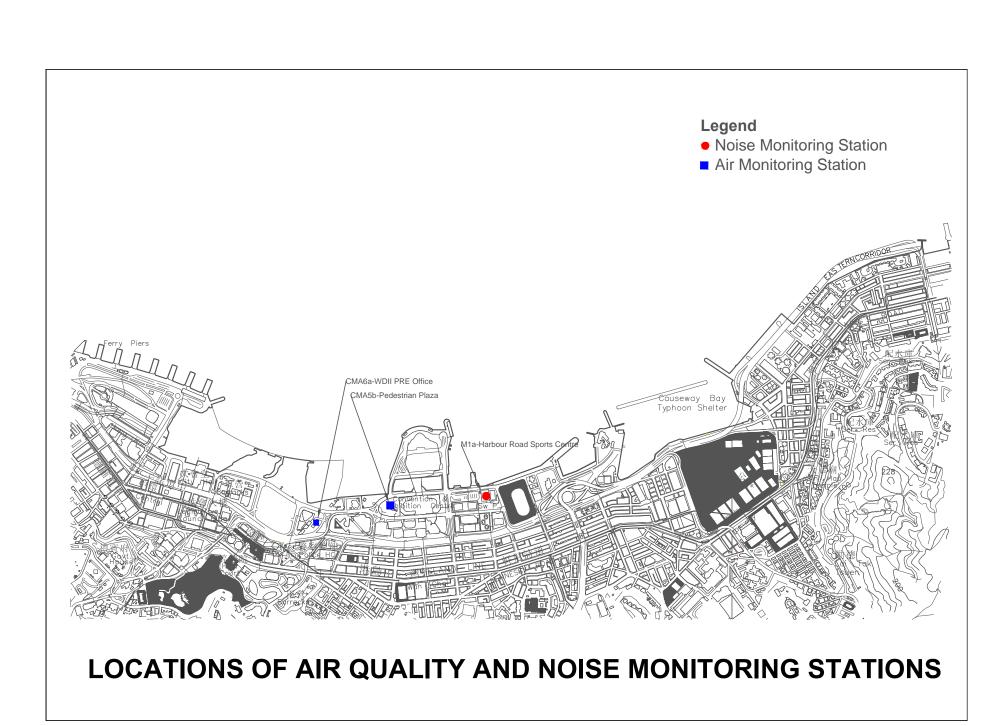
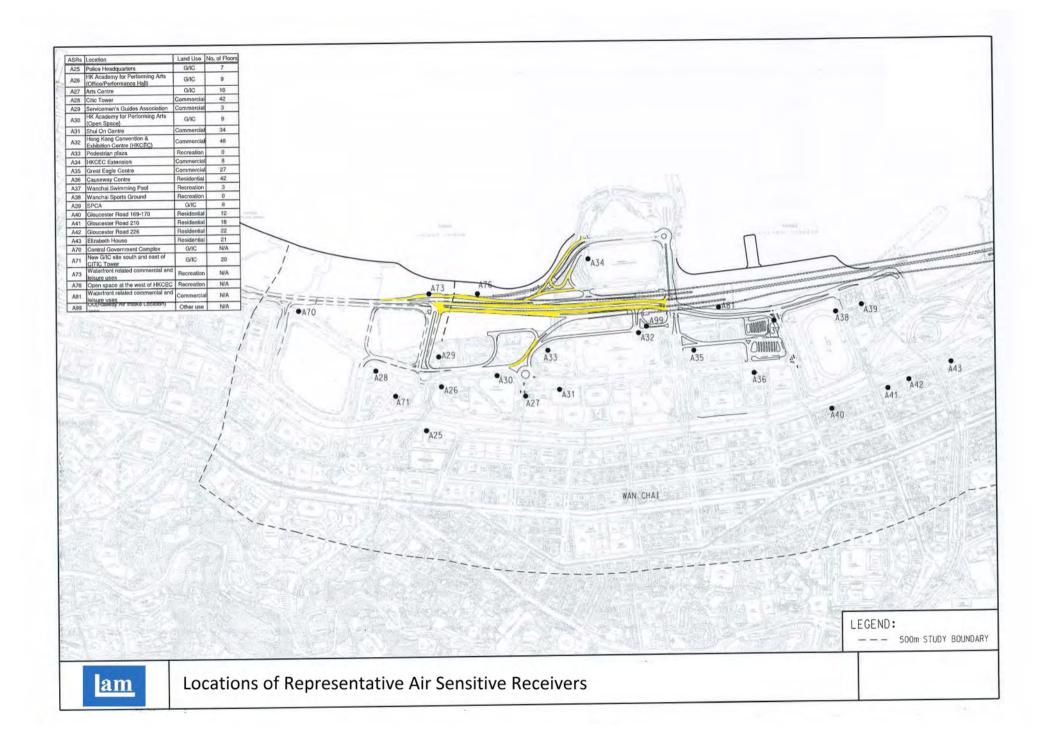
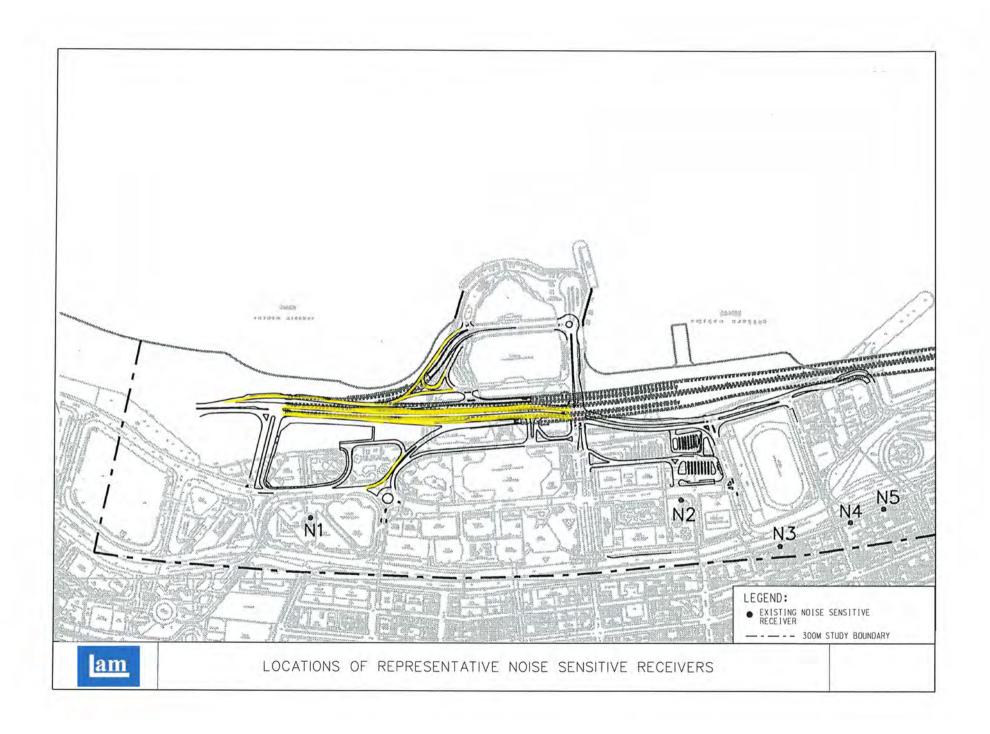


Figure 3.1

Locations of Environmental Monitoring Stations and Sensitive Recievers







Appendix 2.1

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 /	Location / Timing	Implementation	Implementation Status	Relevant Legislation
	Mitigation Measures		Agent		and Guidelines
Construction	on Phase				
For the Wh	ole Project				
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor	Implemented during Construction Stage	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	Work site / during construction	Contractor	Implemented during Construction Stage	
	loads transported to, from and between site locations.				

Table A13.2 Implementation Schedule for Noise Control

EIA Ref	Environmental Protection Measures /	Location / Timing	Implementation	Implementation Status	Relevant Legislation
	Mitigation Measures		Agent		and Guidelines
Constructi	on Phase				
	ole Project				
S4.9.4	Good Site Practice:	Work site / during	Contractor	Implemented during	EIAO-TM, NCO
	 Only well-maintained plant shall be 	construction		Construction Stage	
	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				
E D.D.	construction activities.				
	WDII Major Roads (Road P2)		Ι α	I	TYLO THE MICH
S4.8.3 –	Use of quiet powered mechanical equipment,	Work site / during	Contractor	Implemented during	EIAO-TM, NCO
S4.8.4	movable noise	construction		Construction Stage	
	barrier and temporary noise barrier for the				
	following tasks:				
	Temporary road diversion				
	Resurfacing				
	 At-grade roadwork 				

Table A13.3 Implementation Schedule for Water Quality Control

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
Construction		I.	8		
For the Who					
S5.8	Construction Runoff and Drainage use of sediment traps, wheel washing facilities for vehicles leaving the site, and adequate maintenance of drainage systems to prevent flooding and overflow; Permanent drainage channels shall incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94; a sediment tank constructed from preformed individual cells of approximately 6 - 8 m3 capacity can be used for settling ground water prior to disposal; Oil interceptors shall be provided in the drainage system for the tunnels and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor shall have a bypass to prevent flushing during periods of heavy rain; precautions and actions to be taken when a rainstorm is imminent or forecast, and during or after rainstorms. Particular attention shall be paid to the control of any silty surface runoff during storm events; On-site drainage system shall be installed prior to the commencement of other construction activities. Sediment traps shall be	Work site / during construction	Contractor	Implemented during Construction Stage	ProPECC PN 1/94; WPCO (TM-DSS)

	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 and the existing or planned WSD flushing water intakes during construction phase.				
S5.8	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	Implemented during Construction Stage	ProPECC PN 1/94; WPCO (TM-DSS)

S5.8	Floating Debris and Refuse	Work site and	Contractor	Implemented during	WPCO
	Collection and removal of floating refuse shall	adjacent water /		Construction Stage	
	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	Implemented during	WPCO
	Minimum distances of 100 m shall be	adjacent water		Construction Stage	
	maintained between the existing or planned	/ During the design			
	stormwater discharges and the existing or	and construction			
	planned WSD flushing water intakes.	period.			

Table A13.4 Implementation Schedule for Waste Management

EIA Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
Constructio			Agent		and Guidennes
For the Who					
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	Implemented during Construction Stage	
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 recyclable portions such as metals. 	Work site / During planning and design stage, and construction stage	Contractor	Implemented during Construction Stage	

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	 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. 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.	Work site / During the construction period	Contractor	Implemented during Construction Stage	Public Health and Municipal Services Ordinance (Cap. 132)

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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	Implemented during Construction Stage	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. 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.	Work site / During the construction period	Contractor and Independent Environmental Checker	Implemented during Construction Stage	DEVB TCW No.6/2010; ETWB TCW No. 33/2002; ETWB TCW No. 19/2005
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	Implemented during Construction Stage	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.

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Table A13.7 Implementation Schedule for Landscape and Visual

EIA Ref	Environmental Protection Measures /	Location / Timing	Implementation	Implementation Status	Relevant Legislation and Guidelines
Construction	Mitigation Measures		Agent		and Guidennes
For the Who					
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
	soft landscape works, where practical.				
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
For DP2 – W	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	Implemented during Construction Stage	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	Implemented during Construction Stage	EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor	Implemented during Construction Stage	EIAO TM

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Operation Pl	nase				
For DP2 – W	DII Major Roads (Road P2)				
Table 10.6,	OM1 Aesthetic design of buildings and road-	Work site / During	CEDD/HyD	To be implemented	ETWB TCW 2/2004
Figure	related structures,	Design Stage and		during Operation Stage	
10.5.1-	including viaducts, vent buildings, subways,	Operation Phases			
10.5.5	footbridges				
	and noise barriers and enclosure.				
Table 10.6,	OM3 Buffer Tree and Shrub Planting to screen	Work site / During	CEDD/HyD	To be implemented	ETWB TCW 2/2004
Figure	proposed roads	Design Stage and		during Operation Stage	
10.5.1-	and associated structures.	Operation Phases			
10.5.5					
Table 10.6,	OM5 Aesthetic streetscape design.	Work site / During	CEDD/HyD	To be implemented	ETWB TCW 2/2004
Figure		Design Stage and		during Operation Stage	
10.5.1-		Operation Phases			
10.5.5					
Table 10.6,	OM6 Aesthetic design of roadside amenity areas	Work site / During	CEDD/HyD	To be implemented	ETWB TCW 2/2004
Figure		Design Stage and		during Operation Stage	
10.5.1-		Operation Phases			
10.5.5					

Appendix 3.1

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 Le	vel 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

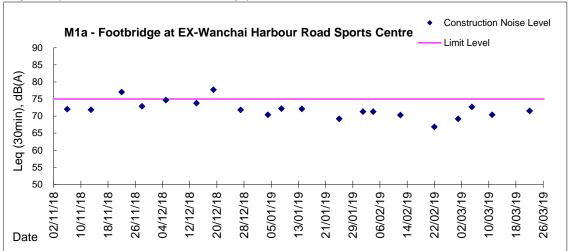
Appendix 4.1

Noise Monitoring Graphical Presentations



Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)



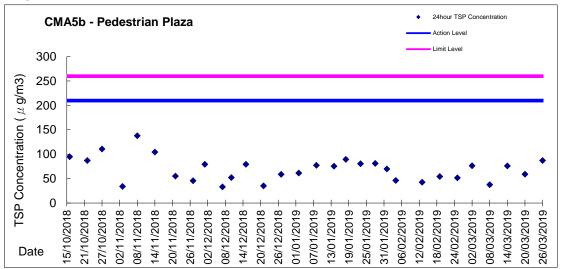
Appendix 4.2

Air Quality Monitoring Graphical Presentations

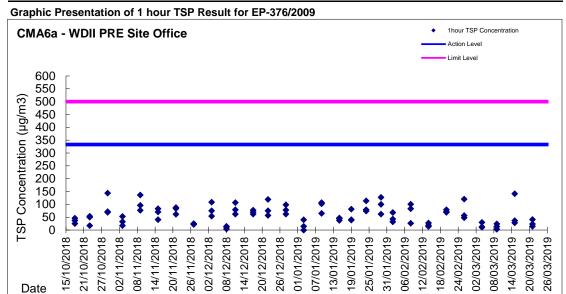


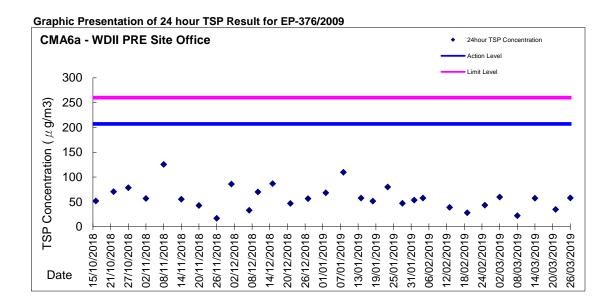
Graphic Presentation of 1 hour TSP Result for EP-376/2009 1hour TSP Concentration CMA5b - Pedestrian Plaza Limit Level 600 550 TSP Concentration (µg/m3) 500 450 • 400 350 300 250 200 150 100 50 08/12/2018 02/03/2019 15/10/2018 21/10/2018 08/11/2018 14/11/2018 20/11/2018 26/11/2018 02/12/2018 14/12/2018 20/12/2018 26/12/2018 01/01/2019 07/01/2019 19/01/2019 25/01/2019 06/02/2019 12/02/2019 18/02/2019 24/02/2019 08/03/2019 14/03/2019 20/03/2019 26/03/2019 27/10/2018 02/11/2018 13/01/2019 31/01/2019 Date

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









Appendix 5.1

Event Action Plans

Event/Action Plan for Construction Noise

EVENT		A	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)	of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures;	 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		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)

Appendix 6.1

Complaint Log

Environmental Complaints Log

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

Appendix 8.1

Construction Programme of Individual Contracts

	14.88.9								Centr	Wan	Chai	Devel	No. H opmer pass a	nt Ph	ase II	i Wes	t							Pa	ge:1/7		
tivity ID	Activity Name	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	oui	Aug	Зер	Oct P
	nd Milestone Dates Vorks Completion (Included Not Granted EOT Enti																										
KD10840	Completion of Section IIIA	trement of 1	ne Contracto		201																						
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 16	0 70				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 2 as	Progr of 20	amm Febr	ne Re urary	v.12 2018	3)						Dat 20-Feb		Revision 2	Chec	cked		Approv	ed	

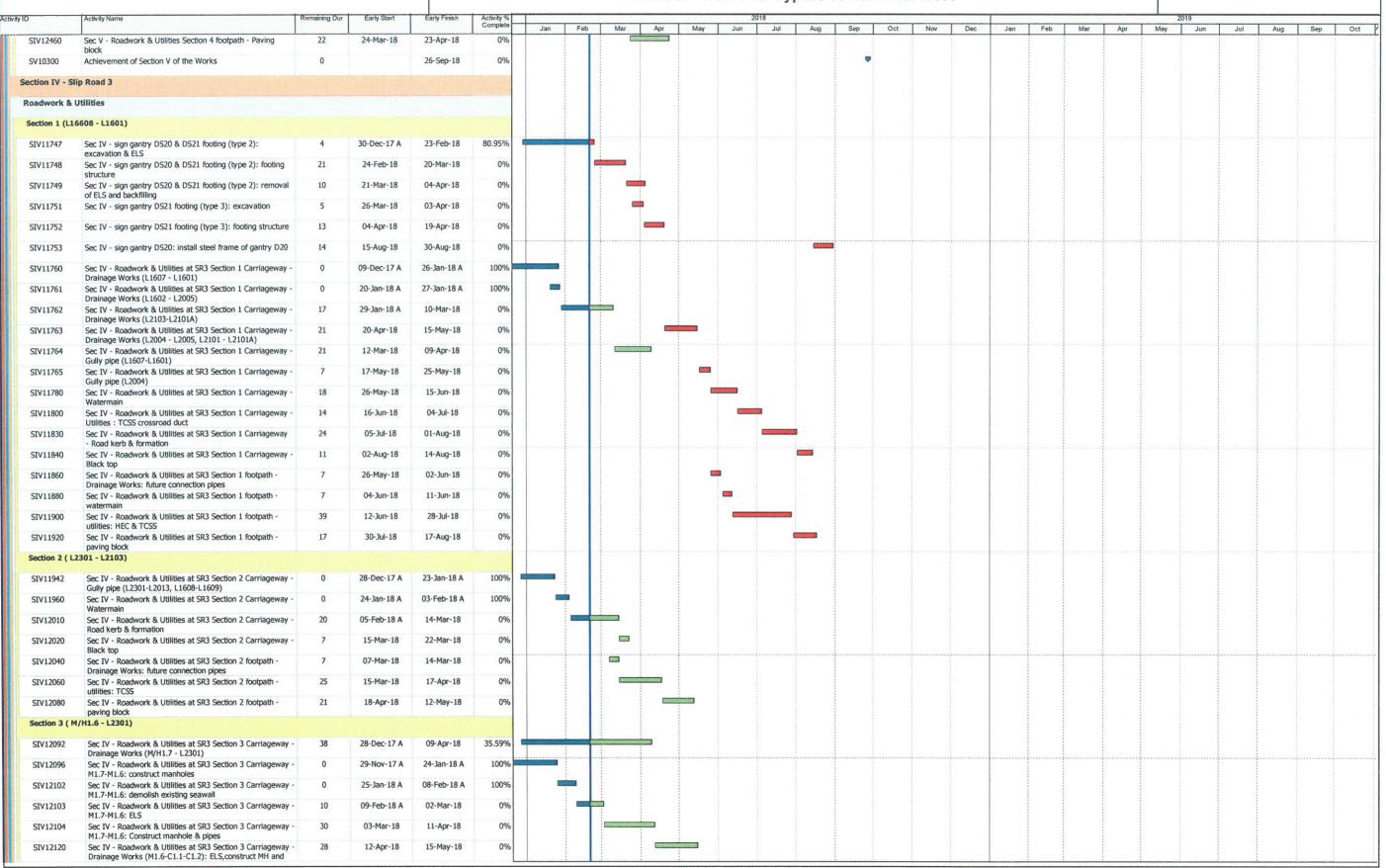
Page: 2/7

vity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Activity %							2018											2019	63233			
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	
SIIIA10293	Sc to F8B (night time): construct sewerage pipe Sec III A - section 1 carriageway - sewerage pipe from M/H	6	05-Feb-18 A																								
	F8B - F8A (night time)	0		26-Feb-18	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%	100000																					
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%																ļļ			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%																						
	at-grade road- remove sheetpile at U-trough west	21						_																			
SIIIA10310d	at-grade road -remove temp. road access bay 5 of SR1	21	24-Mar-18	21-Apr-18	0%																						
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 utitites 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 -	12	27-Apr-18	11-May-18	0%				1																		
SIIIA10313	Drainage works (L1805-1807) Sec III A - roadwork and utilities section 1 carriageway -	14	07-May-18	23-May-18	0%			1	-						†												
SIIIA10320	gully pipe (L1807 - L1801) 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 utities section 1 carriageway -	14	01-Jun-18	16-Jun-18	0%	1																					
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%																						
	U-turn at Expo Drive)	10										_															
SIIIA10440	Sec III A - roadwork and utitites section 1 carriageway : breaking existing asphalt	10	16-Jul-18	26-Jul-18	0%																						
SIIIA10460	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%								1000														
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)																				İ						
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 -	17	08-Feb-18 A	10-Mar-18	0%		-																				
SIIIA12810	road kerb & formation Sec III A - roadwork and utilities section 3 carriageway -	7	12-Mar-18	19-Mar-18	0%								<u>.</u>										į				-
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%																						
	watermain (road crossing)	13						1																			
SIIIA13445	Sec III A - roadwork and utilities section 6 carriageway - utilities: crossed duct(HEC , HGC, PCCW)	13	05-Feb-18 A	06-Mar-18	0%			1																			

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ity ID	Activity Name	1 Bamainina Dur	Fach Start		A -45-76 - 0/	
ity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Activity % Complete	2018 2019 2019 2019
SIIIA13450	Sec III A - roadwork and utilities section 6 carriageway - road kerb & formation	18	07-Mar-18	27-Mar-18	0%	
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	emaining 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	10	24-Jul-18	03-Aug-18	0%	
SV12520	kerb & formation Sec V - Roadwork & Utilities Section 1 Carriageway - Black	7	04-Aug-18	11-Aug-18	0%	
SV12522	Sec V - Section 1 - Implementation of TTA for road closure	3	13-Aug-18	15-Aug-18	0%	
SV12524	of northbound and southbound of Expo Drive Sec V - Section 1 - Northbound & Southbound of Expo Drive :	14	16-Aug-18	31-Aug-18	0%	
SV12526	breaking asphalt Sec V - Section 1 - Northbound & Southbound of Expo Drive:	14	01-Sep-18	17-Sep-18	0%	
SV12528	road kerb & formation 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:	1510 - 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	L106 - Culvert L)					
SIV12282	Sec V - Roadwork & Utilities Section 4 Carriageway - Drainage Works (L1311 - Culvert L, L1201 - Culvert L)	10	20-Feb-18	02-Mar-18	0%	
SIV12300	Sec V - Roadwork & Utilities Section 4 Carriageway - Gully pipe (L1301 - Culvert L, L1201 - Culvert L)	7	03-Mar-18	10-Mar-18	0%	
SIV12302	Sec V - Roadwork & Utilities Section 4 Carriageway - watermain	6	12-Mar-18	17-Mar-18	0%	
SIV12305	Sec V - Roadwork & Utilities Section 4 Carriageway - utilities : cross road duct	7	19-Mar-18	26-Mar-18	0%	
SIV12310	Sec V - Roadwork & Utilities Section 4 Carriageway - Road kerb & formation : between culvert K and culvert L	15	27-Mar-18	17-Apr-18	0%	
SIV12320	Sec V - Roadwork & Utilities Section 4 Carriageway - Black top : between culvert K and culvert L	10	18-Apr-18	28-Apr-18	0%	
SIV12340	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 : HGC & PCCW	8	15-Mar-18	23-Mar-18	0%	

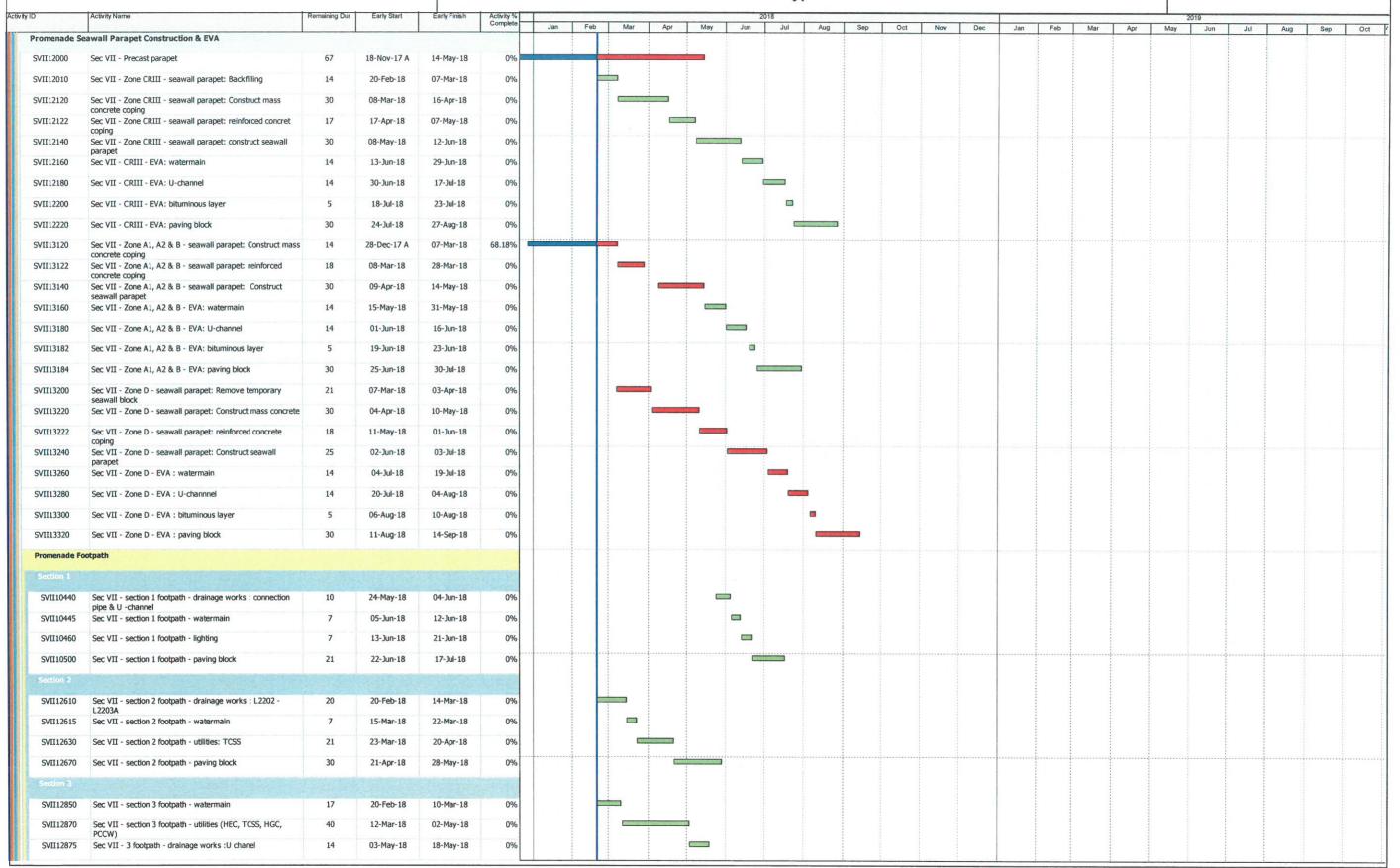
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vity ID	Activity Name	Remaining Dur	Early Start	Early Finish	Activity % Complete							2018		2001 200		100				1700			2019				
SIV12121	Sec IV - Roadwork & Utilities at SR3 Section 3 Carriageway -	6	16-May-18	23-May-18	O%	Jan	Feb	Mar	Apr	May	Jun	Jul	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	10-May-18	04-Jun-18	0%																						
SIV12180	Utilities: TCSS Sec IV - Roadwork & Utilities at SR3 Section 3 footpath - U	10	05-Jun-18	15-Jun-18	0%						_																
SIV12220	channel 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%								•														
	Remainder Works																							·			
	nage 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 : traffic diversion at Lung King Street	3	21-Apr-18	24-Apr-18	0%																						
SVII11640	Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway - Gully pipe (Culvert L -MH1.7)	27	25-Apr-18	28-May-18	0%																						
SVII11650	Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway - TCSS duct	7	29-May-18	05-Jun-18	0%																						-
SVII11654	Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway - road kerb & formation	14	06-Jun-18	22-Jun-18	0%																						
SVII11660	Sec IV - Roadwork & Utilities at SR3 Section 4 Carriageway - Black top	6	23-Jun-18	29-Jun-18	0%																						
SVII11680	Sec IV - Roadwork & Utilities at SR3 Section 4 footpath - U channel	14	29-May-18	13-Jun-18	0%																						
SVII11700	Sec IV - Roadwork & Utilities at SR3 Section 4 footpath - utilities: TCSS	14	14-Jun-18	30-Jun-18	0%																						
SVII11720	Sec TV - Roadwork & Utilities at SR3 Section 4 footpath - paying block	14	03-Jul-18	18-Jul-18	0%																						-
Retaining Wa	III RW5 Construction				2018																						
SVII10660	Sec VII - Retaining Wall RW5 (bay 1) - construct base slab	22	20-Mar-18	18-Apr-18	0%																						
SVII10680	and wall Sec VII - Retaining wall RW5 (bay 2) - construct base slab	22	19-Apr-18	15-May-18	0%																						
SVII10800	and wall Sec VII - Retaining wall RW5 (bay 3) - construct base slab	22	20-Mar-18	18-Apr-18	0%																						
SVII10820	and wall Sec VII - Retaining wall RW5 (bay 4) - construct base slab	22	19-Apr-18	15-May-18	0%																						
SVII10860	and wall Sec VII - Retaining wall RW5 - curing, removal formwork	8	16-May-18	25-May-18	0%																						
Landing Step	s Construction																										
Landing Step	os BSW13																										
SVII10900	Sec VII - Landing steps (BSW13) - install vertical fender /	15	15-May-18	01-Jun-18	0%																						
SVII10920	step fender Sec VII - Landing steps (BSW13) - install s.s. handrail /	25	02-Jun-18	03-Jul-18	0%																						
Landing Step	tactile / sign board / bollard			55 55. 15	0,0																						
SVII10980	Sec VII - Landing steps (BSW4) - install vertical fender / step	15	20-Jun-18	07-1-1-19	00/							_															
SVII10000	fender Sec VII - Landing steps (BSW4) - install vertical fender / step fender	25		07-Jul-18	0%								_														
Landing Step	/ sign board / bollard	23	09-Jul-18	06-Aug-18	0%								-														
						ļ		ļ					<u></u>														
SVII11060	Sec VII - Landing steps (BSW5) - install vertical fender / step fender		25-Jul-18	10-Aug-18	0%																						
SVII11080	Sec VII - Landing steps (BSW5) - install s.s. handrail / tactile / sign board / bollard	25	11-Aug-18	08-Sep-18	0%									-													
Landing Step																											
SVII11140	Sec \mbox{VII} - Landing steps (BSW9) - install vertical fender / step fender	15	13-Jun-18	30-Jun-18	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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