



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-122/2002/E

**QUARTERLY ENVIRONMENTAL MONITORING
AND AUDIT REPORT**

- NOVEMBER 2018 TO JANUARY 2019 -

CLIENTS:

**Civil Engineering and Development
Department**

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DATE:

27 February 2019



Ref.: AACWBIECEM00_0_11080L.19

27 February 2019

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By Post and Fax (2691 2649)

Attention: Mr. Conrad Ng

Dear Mr. Ng,

**Re: Wan Chai Development Phase II and Central-Wan Chai Bypass
Quarterly Environmental Monitoring and Audit Report (November 2018 -
January 2019) for EP-122/2002/E**

Reference is made to the Environmental Team's submission of the captioned Quarterly Environmental Monitoring and Audit (EM&A) Report for November 2018 - January 2019 received by e-mail on 20 February 2019.

Please be informed that we have no adverse comment on the captioned submission. We write to verify the captioned submission.

Please do not hesitate to contact the undersigned should you have any queries.

Yours faithfully,

David Yeung
Independent Environmental Checker

| | | | |
|------|-------|-------------------------------------|-------------------|
| c.c. | CEDD | Mr. Jason Cheung | by fax: 2577 5040 |
| | AECOM | Mr. Francis Leong / Mr. Stephen Lai | by fax: 2691 2649 |
| | Lam | Mr. Raymond Dai | by fax: 2882 3331 |

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EXECUTIVE SUMMARY

- i. This is the Quarterly Environmental Monitoring and Audit (EM&A) Report – **November 2018** to **January 2019** specific for Environmental Permit no. EP-122/2002/E. 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 **1st November 2018** to **31st January 2019**.
- ii. The implementation of the Environmental Monitoring and Audit Programme for the Wan Chai Development phase II and Central-Wan Chai Bypass Project has been taken over by the Lam Geotechnics Limited (LGL) under Contract HK/2015/01 – Wan Chai Development Phase II and Central Wanchai Bypass – Sampling, Field Measurement and Testing Works (Stage 3) from 27 December 2015 in continuation of the previous Environmental Team employed under Contact HK/2011/07 – Wan Chai Development Phase II and Central Wanchai Bypass – Sampling, Field Measurement and Testing Works (Stage 2).

Construction Activities for the Reported Period

- iii. During this reporting period, the principle work activities of the contracts are included as follows:

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

Table 1.1 Principal Work Activities in the reporting period for Contract no. HK/2012/08

| November 2018 | December 2018 | January 2019 |
|---|---|---|
| <ul style="list-style-type: none"> • Roadworks • Drainage • Seawall coping | <ul style="list-style-type: none"> • Roadworks • Drainage • Seawall coping | <ul style="list-style-type: none"> • Roadworks • Drainage • Seawall coping |

Contract no. HY/2010/08 – Central- Wan Chai Bypass(CWB) – Tunnel (Slip Road 8)

Table 1.2 Principal Work Activities in the reporting period for Contract no. HY/2010/08

| November 2018 | December 2018 | January 2019 |
|---|---|---|
| <ul style="list-style-type: none"> • Junction modification | <ul style="list-style-type: none"> • Junction modification | <ul style="list-style-type: none"> • Junction modification |

Noise Monitoring

- iv. Continuous noise monitoring was conducted at ACL3 – City Hall.
- v. Due to safety concerned, the location of the continuous noise monitoring station at City Hall was finely adjusted to the roof of the City Hall, Low Block on 1 May 2013.

- vi. Limit level exceedances were recorded at ACL3 – City Hall on 2, 10 and 17 November 2018 during daytime in November 2018 reporting period. After investigation, the exceedances were considered as non-project related.
- vii. No action or limit level exceedance was recorded in December 2018 reporting period.
- viii. Limit level exceedances were recorded on 5, 14 and 19 January in January 2019 reporting period. After investigation, the exceedances were not related to Project.

Air Quality Monitoring

- ix. No action or limit level exceedance was recorded at ACL1 – City Hall and ACL2a – Contractor HK/2012/08 Site office in this reporting quarter.
- x. Due to the defective electricity supply found at monitoring station ACL1 and the advice from City Hall Building Management, the air monitoring station ACL1 – City Hall was finely adjusted on 28 Feb 2014 to an alternate electricity supply.
- xi. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted at ACL1 – City Hall and ACL2 – PLA Barracks (ACL2a Contractor HK/2012/08 Site Office since 7 December 2013) on every six days basis.
- xii. Due to the large scale renovation works at People’s Liberation Army Headquarter, a Proposal for Relocation of Air Quality Monitoring Station at People’s Liberation Army Headquarter (ACL2) was formally submitted to EPD on 4th November, 2013.
- xiii. Air Quality Monitoring at ACL2 was temporarily suspended during the period from 14th November, 2013 to 3rd December, 2013.
- xiv. The Proposal for Relocation of Air Quality Monitoring Station at People’s Liberation Army Headquarter (ACL2) was approved by EPD on 27 November 2013.
- xv. According to the approved proposal for relocation of Air Quality Monitoring station, the action and limit levels of ACL2a shall adopt the reference monitoring result from the baseline air quality monitoring report for EP/364/2009 in 22 April 2010 in which approved by EPD.
- xvi. The air quality monitoring at ACL2a – Contractor HK/2012/08 Site Office was commenced on 7 December 2013.

Water Quality Monitoring

- xvii. As confirmed by WDII RSS, the dredging works, seawall modification works and other associated works undertaken at Central Reclamation Phase III by Contractor HK/2012/08 was commenced in late September 2014. According to the approved EM&A manual under EP-122/2002/E, water quality monitoring shall be implemented at the Central Reclamation Phase III works area accordingly to assess any potential water quality impact during the construction period.
- xviii. Water quality monitoring at M5B and Culvert J were conducted three days per weeks during the reporting period starting from 26 September 2014.

- xix. Due to the hoisting of Tropical Storm Signal No.3 and safety consideration under adverse weather condition, the water quality monitoring event on 1 November 2018 during flood tide was cancelled.
- xx. One limit level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 5 November 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- xxi. One action level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 5 November 2018 during flood tide. After investigation, the exceedance was concluded as non-project related.
- xxii. One action level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 7 November 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- xxiii. One action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 23 November 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- xxiv. Two action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 17 December 2018 during flood tide and 19 December 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- xxv. No action or limit level exceedance was recorded in January 2019 reporting period.

Complaints, Notifications of Summons and Successful Prosecutions

- xxvi. No environmental complaint was received in this reporting quarter.

1. INTRODUCTION

1.1 Scope of the Report

1.1.1. Lam Geotechnics Limited (LGL) has been appointed to work as the Environmental Team (ET) under Environmental Permit no. EP-122/2002/E 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 Central Reclamation Phase III - Studies, Site Investigation, Design and Construction (Register No.: AEIAR-040/2001) since 1 May 2013.

1.1.2. This report documents the finding of EM&A works for Environmental Permit (EP) no. EP-122/2002/E, during the period from **1st November 2018** to **31st January 2019**.

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 Central Reclamation Phase III - Studies, Site Investigation, Design and Construction (hereafter called “the Project”) are Designated Project (DP) under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). The Environmental Impact Assessment (EIA) Reports for Central Reclamation Phase III - Studies, Site Investigation, Design and Construction (Register No. AEIAR-040/2001) has been approved on 31 August 2001.

2.2 Scope of the Project and Site Description

2.2.1. The design and construction of Central Reclamation Phase III involves the permanent reclamation and construction and operation of a trunk road and its road tunnel that is shown at [Figure 2.1](#).

2.2.2. The key purpose of the study area encompasses the area of Victoria Harbour to the southeast of the new Outlying Islands Ferry Piers and north of Edinburgh Place and Lung Wui Road. The area extends eastward to Fenwick Pier Street and the Fleet Arcade, and includes the existing GPO, Star Ferry Piers, Queens Pier, City Hall, PLA Headquarters, Hong Kong Red Cross Headquarters building and the Tamar Site. The scope of the Central Reclamation, Phase III includes:

- Reclamation and seawalls, roads and associated services, North Island Line Protection Works and Advance Trunk Road Tunnel (ATRT) for the CWB;
- Re provisioning of Star Ferry Pier, public landing steps, wallah wallah moorings, and motor boat/launch operators' kiosks;
- External cooling water systems which consist of the cooling water pumping shells for future developments, and the re provisioning of existing cooling water pumping stations and associated pipework systems and E&M works;
- Re provisioning of existing Leisure and Cultural Services Department (LCSD)'s facilities;
- Provision of a flood relief path, stormwater culvert extensions, upgrading of hinterland stormwater drainage resulting from the reclamation, demolition of the existing waterfront structures and necessary landscaping;
- The Hong Kong Station Extended Overrun Tunnel (EOT) and associated ventilation structures entrusted for construction within the CR III works;
- Re provisioning of the Government Heliport at the Wan Chai PCWA and re provisioning of the Wan Chai PCWA at Chai Wan Basin.

2.2.3. The project also contains various Schedule 2 DPs 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 four individual DPs under this Project. **Figure 2.1** shows the locations of these Schedule 2 DPs.

Table 2.1 Schedule 2 Designated Projects under this Project

| Item | Designated Project | EIAO Reference |
|------|--|-------------------------|
| DP1 | Reclamation works | Schedule 2, Part I, A.7 |
| DP2 | Road P2 and other roads which are classified as primary/district distributor roads | Schedule 2, Part I, A.1 |
| DP3 | Central-Wanchai bypass (CWB) | Schedule 2, Part I, C.1 |
| DP4 | The North Island Line (NIL) Protection Works within CR III | Schedule 2, Part I, A.7 |

2.2.4. Contract HK/2012/08 – Wan Chai Development Phase II – Central-Wan Chai Bypass at Wan Chai West as part of the Project works by Civil Engineering and Development Department (CEDD) is associated with Designated Project 1 (DP1) and Designated Project 2 (DP2).

2.2.5. Contract HY/2010/08 – Central Wanchai Bypass – Tunnel as part of the Project works by the Highways Department (HyD) is associated with Designated Project 2 (DP2).

2.3 Project Organization and Contact Personnel

2.3.1 Civil Engineering and Development Department is the overall project controllers for the Central Reclamation Phase III Project. 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 |
| | Engineer's Representative for CWB | Principal Resident Engineer | Mr. Peter Poon | 3922 3388 | 3912 3010 |
| China State-Leader JV | Contractor under Contract no. HK/2012/08 | Project Director | C. N. LAI | 9106 5806 | 2877 1522 |
| | | Site Agent | Mr. George Cheung | 9268 1918 | |
| | | Environmental Officer | Mr. James Ma | 9130 9549 | |
| | | Environmental Supervisor | Mr. Y. L. Ho | 9856 5669 | |
| China State | Contractor under Contract no. HY/2010/08 | Project Director | Mr. Chris Leung | 3467 4299 | 2566 8061 |
| | | Project Manager | Mr. Chan Ying Lun | 3418 3001 | |
| | | Site Agent | Mr. Thomas Lui | 3557 6452 | |
| | | Marine Manager | Mr. Nickael Chan | 3557 6333 | |
| | | Construction Manager | Mr. Tom Tong | 3557 6367 | |
| | | Environmental Officer | Mr. Gabriel Wong | 3557 6466 | |
| Ramboll Hong Kong Limited | Independent Environmental Checker (IEC) | Independent Environmental Checker (IEC) | Mr. David Yeung | 3465 2888 | 3465 2899 |



| Party | Role | Post | Name | Contact No. | Contact Fax |
|--|-------------------------|---------------------------------|-----------------|-------------|-------------|
| Lam Geotechnics Limited (For Enquiry) | 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 contracts are included as follows:

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

Table 2.3 Principal Work Activities in the reporting period for HK/2012/08

| November 2018 | December 2018 | January 2019 |
|---|---|---|
| <ul style="list-style-type: none"> • Roadworks • Drainage • Seawall coping | <ul style="list-style-type: none"> • Roadworks • Drainage • Seawall coping | <ul style="list-style-type: none"> • Roadworks • Drainage • Seawall coping |

Contract no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

Table 2.4 Principal Work Activities in the reporting period for Contract no. HY/2010/08

| November 2018 | December 2018 | January 2019 |
|---|---|---|
| <ul style="list-style-type: none"> • Junction modification | <ul style="list-style-type: none"> • Junction modification | <ul style="list-style-type: none"> • Junction modification |

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 STATIONS

- 3.1.1. The continuous 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 Continuous Noise Monitoring Stations

| District | Station | Description |
|----------|---------|-------------|
| Central | ACL3 | City Hall |

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 3.1.2. Continuous 24-hour noise monitoring shall be carried out at the designated monitoring stations. The following is an initial guide on the regular monitoring frequency for each station on a 24 hours daily basis when noise generating activities are underway:
- One set of measurements between 0700 and 1900 hours on normal weekdays.
 - One set of measurements between 1900 and 2300 hours on normal weekdays and 0700 and 2300 hours on public holidays.
 - One set of measurements between 2300 and 0700 hours on next day on everyday.
- 3.1.3. If construction works are extended to include works during the hours of 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring shall be carried out during respective restricted hours periods. Applicable permits under NCO shall be obtained by the Contractor.

MONITORING EQUIPMENT

- 3.1.4. As referred to in the Technical Memorandum TM 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.

- 3.1.6. The sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency before deployment to the site and during each site visit. Measurements will be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.

3.2. Air Quality Monitoring

AIR QUALITY MONITORING STATIONS

- 3.2.1. The air quality 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 |
|------------|-----------------------------------|
| ACL1 | City Hall |
| ACL2a | Contractor HK/2012/08 Site Office |

AIR QUALITY 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.

3.3. Water Quality Monitoring

WATER QUALITY MONITORING STATIONS

3.3.1 The water quality monitoring stations for the Project are listed and shown in **Table 3.3** and **Figure 3.1**. **Appendix 3.1** shows the established Action/Limit Levels for the monitoring works.

Table 3.3 Water Quality Monitoring Stations

| Station ID | Description | Easting | Northing |
|-------------------------------------|---|---------|----------|
| Cooling Water Intakes | | | |
| M5B | Swire / Government Headquarters/ Tamar Development/ MTRCL and HSBC Headquarters | 835169 | 816052 |
| Culverts (Reference Station) | | | |
| Culvert J | Culvert J Outfall Location | 835082 | 816071 |

WATER QUALITY PARAMETERS

- 3.3.2 Monitoring of dissolved oxygen (DO), turbidity and suspended solids (SS) shall be carried out at WSD flushing water intakes and cooling water intakes. DO and Turbidity are measured in-situ while SS is determined in laboratory.
- 3.3.3 In association with the water quality parameters, other relevant data shall also be measured, such as monitoring location/position, time, sampling depth, water temperature, pH, salinity, dissolved oxygen (DO) saturation, weather conditions, sea conditions, tidal stage, and any special phenomena and work underway at the construction site etc.

SAMPLING PROCEDURES AND MONITORING EQUIPMENT

3.3.4 The interval between two sets of monitoring should not be less than 36 hours except where there are exceedances of Action and/or Limit Levels, in which case the monitoring frequency will be increased. **Table 3.4** shows the proposed monitoring frequency and water quality parameters. Duplicate in-situ measurements and water sampling should be carried out in each sampling event. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides should be not less than 0.5m.

Table 3.4 Marine Water Quality Monitoring Frequency and Parameters

| Activities | Monitoring Frequency ¹ | Parameters ² |
|--|---|--|
| During the 4-week baseline monitoring period | Three days per week, at mid-flood and mid-ebb tides | Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity |
| During marine construction works | Three days per week, at mid-flood and mid-ebb tides | Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity |

| Activities | Monitoring Frequency ¹ | Parameters ² |
|---|---|--|
| After completion of marine construction works | Three days per week, at mid-flood and mid-ebb tides | Turbidity, Suspended Solids (SS), Dissolved Oxygen (DO), pH, Temperature, Salinity |

Notes:

1. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides should be not less than 0.5m.
2. Turbidity should be measured in situ whereas SS should be determined by laboratory.

DISSOLVED OXYGEN AND TEMPERATURE MEASURING EQUIPMENT

3.3.5 The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:

- a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
- a temperature of 0-45 degree Celsius

3.3.6 It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).

3.3.7 Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

TURBIDITY MEASUREMENT INSTRUMENT

3.3.8 The instrument should be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment should use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU (e.g. Hach model 2100P or an approved similar instrument).

SAMPLER

3.3.9 A water sampler comprises a transparent PVC cylinder, with a capacity of not less than 2 litres, and can be effectively sealed with latex cups at both ends. The sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth (e.g. Kahlsico Water Sampler or an approved similar instrument).

SAMPLE CONTAINER AND STORAGE

3.3.10 Water samples for suspended solids measurement should be collected in high-density polythene bottles, packed in ice (cooled to 4°C without being frozen), and delivered to ALS Technichem (HK) Pty Ltd. as soon as possible after collection for analysis.

WATER DEPTH DETECTOR

- 3.3.11 A portable, battery-operated echo sounder shall be used for the determination of water depth at each designated monitoring station. This unit can either be handheld or affixed to the bottom of the workboat, if the same vessel is to be used throughout the monitoring programme.

SALINITY

- 3.3.12 A portable salinometer capable of measuring salinity in the range of 0-40 ppt shall be provided for measuring salinity of the water at each of monitoring location.

MONITORING POSITION EQUIPMENT

- 3.3.13 A hand-held or boat-fixed type digital Global Positioning System (GPS) with waypoint bearing indication or other equivalent instrument of similar accuracy shall be provided and used during monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

CALIBRATION OF IN-SITU INSTRUMENTS

- 3.3.14 All in-situ monitoring instrument shall be checked, calibrated and certified by a laboratory accredited under HOKLAS or equivalent before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes should be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.
- 3.3.15 For the on site calibration of field equipment by the ET, the BS 127:1993, "Guide to Field and on-site test methods for the analysis of waters" should be observed.
- 3.3.16 Sufficient stocks of spare parts should be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.

LABORATORY MEASUREMENT / ANALYSIS

- 3.3.17 Analysis of suspended solids has been carried out in a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd. Water samples of about 1L shall be collected at the monitoring stations for carrying out the laboratory SS determination. The SS determination work shall start within 24 hours after collection of the water samples. The SS determination shall follow APHA 19ed or equivalent methods subject to the approval of IEC and EPD.

4. MONITORING RESULTS

4.0.1. The environmental monitoring will be implemented based on the division of works areas of each designed project managed under different contracts with separate 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 3.1**. The monitoring results are presented in according to the Individual Contract(s).

4.0.2. In the reporting period, the concurrent contracts are:

- Contract no. HK/2012/08 – Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West.
- Contractor no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

4.1. Noise Monitoring Results

4.1.1 Due to safety concerned, the location of the continuous noise monitoring station at City Hall was finely adjusted to the roof of the City Hall, Low Block on 1 May 2013.

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

The proposed division of noise monitoring station is summarized in **Table 4.1** below.

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

| Location ID | District | Description |
|-------------|----------|-------------|
| ACL3 | Central | City Hall |

Remarks: Continuous noise monitoring results and graphical presentation for ACL3 during restricted hours and night time period are for information only.

4.1.2 Limit level exceedances were recorded at ACL3 – City Hall on 2, 10 and 17 November 2018 during daytime in November 2018 reporting period.

After the investigation, no construction works was conducted by Contractor HK/2012/08 at CRIII area on 2 November 2018. Traffic noise was considered as the major noise contribution. As such, the exceedance was considered as non-project related.

After the investigation, no construction works was conducted by Contractor HK/2012/08 at CRIII area on 10 November 2018 while music event was held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.

After the investigation, no construction works was conducted by Contractor HK/2012/08 at CRIII area on 17 November 2018. Meanwhile, public event was held at area opposite to the

monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.

4.1.3 No action or limit level exceedances were recorded at ACL3 – City Hall in December 2018 reporting period.

4.1.4 Limit level exceedances were recorded on 5, 14 and 19 January in January 2019 reporting period. After the investigation, no construction works was conducted by Contractor HK/2012/08 at CRIII area on 5, 14 and 19 January 2019. Meanwhile, public events were held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedances were considered as non-project related.

Contract no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

4.1.5 As confirmed with CWB RSS, junction modification works in Central area would be conducted by Contract HY/2010/08 starting from July 2018 and tentatively completed in September 2018. The continuous noise monitoring station ACL3 located at City Hall would tentatively associated with Contract HY/2010/08.

4.1.6 The proposed division of noise monitoring stations is summarized in **Table 4.2** below.

Table 4.2 Continuous Noise Monitoring Stations for Contract no. HY/2010/08

| Location ID | District | Description |
|-------------|----------|-------------|
| ACL3 | Central | City Hall |

Remarks: Continuous noise monitoring results and graphical presentation for ACL3 during restricted hours and night time period are for information only.

4.1.7 Limit level exceedances were recorded at ACL3 – City Hall on 2, 10 and 17 November 2018 during daytime in November 2018 reporting period.

After the investigation, no construction works was conducted by Contractor HY/2010/08 at CRIII area on 2 November 2018. Traffic noise was considered as the major noise contribution. As such, the exceedance was considered as non-project related.

After the investigation, no construction works was conducted by Contractor HK/2012/08 at CRIII area on 10 November 2018 while music event was held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.

After the investigation, no construction works was conducted by Contractor HK/2012/08 at CRIII area on 17 November 2018. Meanwhile, public event was held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.

- 4.1.8 No action or limit level exceedances were recorded at ACL3 – City Hall in December 2018 reporting period.
- 4.1.9 Limit level exceedances were recorded on 5, 14 and 19 January in January 2019 reporting period. After the investigation, no construction works was conducted by Contractor HY/2010/08 at CRIII area on 5, 14 and 19 January 2019. Meanwhile, public events were held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedances were considered as non-project related.
- 4.1.10 Continuous noise monitoring results measured in this 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 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring were conducted at ACL1 – City Hall and ACL2 – PLA Barracks (ACL2a Contractor HK/2012/08 Site Office since 7 December 2013) on every six days basis.
- 4.2.2 Due to the large scale renovation works at People’s Liberation Army Headquarter, a Proposal for Relocation of Air Quality Monitoring Station at People’s Liberation Army Headquarter (ACL2) was formally submitted to EPD on 4th November, 2013.
- 4.2.3 Air Quality Monitoring at ACL2 was temporarily suspended during the period from 14th November, 2013 to 3rd December, 2013.
- 4.2.4 The Proposal for Relocation of Air Quality Monitoring Station at People’s Liberation Army Headquarter (ACL2) was approved by EPD on 27 November 2013.
- 4.2.5 According to the approved proposal for relocation of Air Quality Monitoring station, the action and limit levels of ACL2a shall adopt the reference monitoring result from the baseline air monitoring report for EP/364/2009 in 22 April 2010 in which approved by EPD.
- 4.2.6 The air quality monitoring at ACL2a – Contractor HK/2012/08 Site Office was commenced on 7 December 2013.

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

- 4.2.7 The proposed division of air quality monitoring stations are summarized in **Table 4.3** below.

Table 4.3 Air Quality Monitoring Stations for Contract no. HK/2012/08

| Station | Description |
|---------|-------------|
| ACL1 | City Hall |

| | |
|-------|-----------------------------------|
| ACL2a | Contractor HK/2012/08 Site Office |
|-------|-----------------------------------|

4.2.8 No action or limit level exceedance was recorded at ACL1 – City Hall and ACL2a – Contractor HK/2012/08 Site Office in this reporting quarter.

Contract no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

4.2.9 As confirmed with CWB RSS, junction modification works in Central area would be conducted by Contract HY/2010/08 starting from July 2018 and tentatively completed in September 2018. The air quality monitoring station ACL1 located at City Hall would tentatively associated with Contract HY/2010/08.

4.2.10 The proposed division of air quality monitoring stations are summarized in **Table 4.4** below.

Table 4.4 Air Quality Monitoring Station for Contract no. HY/2010/08

| Station | Description |
|---------|-------------|
| ACL1 | City Hall |

4.2.11 No action or limit level exceedance was recorded at ACL1 – City Hall in this reporting quarter.

4.2.12 The air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in [Appendix 4.2](#).

4.3. Water Quality Monitoring Results

4.3.1 The proposed division of water quality monitoring stations are summarized in **Table 4.5** below.

Table 4.5 Water Quality Monitoring Station for Contract no. HK/2012/08

| Station ID | Description |
|-------------------------------------|---|
| Cooling Water Intakes | |
| M5B | Swire / Government Headquarters/ Tamar Development/ MTRCL and HSBC Headquarters |
| Culverts (Reference Station) | |
| Culvert J | Culvert J Outfall Location |

4.3.2 Water quality monitoring results measured in this reporting period are reviewed and summarized. Detail of water quality monitoring results and graphical presentation can be referred in **Table 4.6** and [Appendix 4.3](#)

4.3.3 Water quality monitoring at M5B and Culvert J were conducted three days per week during reporting period starting from 26 September 2014.

4.3.4 Due to the hoisting of Tropical Storm Signal No.3 and safety consideration under adverse weather condition, the water quality monitoring event on 1 November 2018 during flood tide was cancelled.

4.3.5 One limit level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 5 November 2018 during ebb tide.

After investigation, no marine construction activity was conducted under Contract HK/2012/08 was conducted on the monitoring date while the location of the construction area was at downstream of monitoring station M5B during monitoring period. In addition, it is understood that Drainage Service Department sewage bypass due to maintenance work was conducted from 5 to 16 November 2018. In view of the above, it is considered that the exceedance was not related to Project works.

4.3.6 One action level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 5 November 2018 during flood tide.

After investigation, no marine construction activity was conducted under Contract HK/2012/08 was conducted on the monitoring date and it is understood that Drainage Service Department sewage bypass due to maintenance work was conducted from 5 to 16 November 2018. In view of the above, it is considered that the exceedance was not related to Project works.

4.3.7 One action level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 7 November 2018 during ebb tide.

After investigation, no marine construction activity was conducted under Contract HK/2012/08 was conducted on the monitoring date while the location of the construction area was at downstream of monitoring station M5B during monitoring period. In addition, it is understood that Drainage Service Department sewage bypass due to maintenance work was conducted from 5 to 16 November 2018. In view of the above, it is considered that the exceedance was not related to Project works. No exceedance was recorded in the subsequent monitoring on 7 November 2018 flood tide.

4.3.8 One action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 23 November 2018 during ebb tide.

After investigation, no marine construction activity was conducted under Contract HK/2012/08 was conducted on the monitoring date while nearby culvert discharge was observed and the location of the construction area was at downstream of monitoring station M5B during monitoring period. In view of the above, it is considered that the exceedance was not related to Project works. No exceedance was recorded in the subsequent monitoring on 23 November 2018 flood tide.

4.3.9 One action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 17 December 2018 during flood tide in the reporting period.

No marine construction activity was conducted under Contract HK/2012/08 was conducted on the monitoring date. In view of no marine construction activity conducted on the monitoring date, it is considered that the exceedance was not related to Project works.

4.3.10 One action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 19 December 2018 during ebb tide in the reporting period.

No marine construction activity was conducted under Contract HK/2012/08 was conducted on the monitoring date while nearby culvert discharge was observed and the location of the construction area was at downstream of monitoring station M5B during monitoring period. In view of the above, it is considered that the exceedance was not related to Project works. No exceedance was recorded in the subsequent monitoring on 19 December 2018 flood tide.

4.3.11 No action or limit level exceedance was recorded in January 2019 reporting period.

Table 4.6 Summary of Water Quality Monitoring Exceedance in Reporting Period

| Contract No. | Water quality monitoring station | Mid-flood | | | | Mid-ebb | | | |
|--------------|----------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| | | DO | | SS | | DO | | SS | |
| | | AL | LL | AL | LL | AL | LL | AL | LL |
| HK/2012/08 | M5B ² | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 1 |
| | Culvert J ¹ | - | - | - | - | - | - | - | - |
| Total | | 2 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |

Remarks¹: Action or limit level are not applicable to reference station Culvert J.

Remarks²: Turbidity measurement are reported as reference.

4.4. Waste Monitoring Results

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

4.4.1 No Inert and Non-inert C&D wastes were disposed in this reporting period. Details of the waste flow table are summarized in **Table 4.7**

Table 4.7 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 | 0 | 8005 | TM38 |
| | 0 | 51779 | TKO137 |
| Inert C&D materials recycled, m3 | NIL | NIL | NIL |
| Non-inert C&D materials disposed, m3 | 0 | 1925 | SENT Landfill |
| Non-inert C&D materials recycled, m3 | NIL | NIL | NIL |
| Chemical waste disposed, kg | NIL | NIL | NIL |

Contract no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

4.4.2 No Inert and non-inert C&D wastes were disposed in this reporting month. Details of the waste flow table are summarized in **Table 4.8**

Table 4.8 Details of Waste Disposal for Contract no. HY/2010/08

| 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

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

5.1.1 Limit level exceedances were recorded at ACL3 – City Hall on 2, 10 and 17 November 2018 during daytime in November 2018 reporting period. After investigation, the exceedances were considered as non-project related.

5.1.2 No action or limit level exceedance was recorded in December 2018 reporting period.

5.1.3 Limit level exceedances were recorded on 5, 14 and 19 January in January 2019 reporting period. After investigation, the exceedances were not related to Project

Contract Contract no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

5.1.4 Limit level exceedances were recorded at ACL3 – City Hall on 2, 10 and 17 November 2018 during daytime in November 2018 reporting period. After investigation, the exceedances were considered as non-project related.

5.1.5 No action or limit level exceedance was recorded in December 2018 reporting period.

5.1.6 Limit level exceedances were recorded on 5, 14 and 19 January in January 2019 reporting period. After investigation, the exceedances were not related to Project

5.2. Air Quality Monitoring

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

5.2.1 No action or limit level exceedance was recorded at ACL1 – City Hall and ACL2a Contractor HK/2012/08 Site Office in this reporting quarter.

Contract Contract no. HY/2010/08 – Central- Wan Chai Bypass (CWB) – Tunnel (Slip Road 8)

5.2.2 No action or limit level exceedance was recorded at ACL1 – City Hall and ACL2a – Contractor HK/2012/08 Site Office in this reporting quarter.

5.3. Water Quality Monitoring

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

- 5.3.1 Due to the hoisting of Tropical Storm Signal No.3 and safety consideration under adverse weather condition, the water quality monitoring event on 1 November 2018 during flood tide was cancelled.
- 5.3.2 One limit level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 5 November 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- 5.3.3 One action level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 5 November 2018 during flood tide. After investigation, the exceedance was concluded as non-project related.
- 5.3.4 One action level exceedance of suspended solid was recorded at M5B – Central Cooling Intake on 7 November 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- 5.3.5 One action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 23 November 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- 5.3.6 Two action level exceedance of dissolved oxygen was recorded at M5B – Central Cooling Intake on 17 December 2018 during flood tide and 19 December 2018 during ebb tide. After investigation, the exceedance was concluded as non-project related.
- 5.3.7 No action or limit level exceedance was recorded in January 2019 reporting period.

5.4. Site Audit

- 5.4.1 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.

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

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

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

- 5.6.1 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.

6. COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

- 6.0.1. No environmental complaint was 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 to last reporting quarter | 5 |
| November 2018 – January 2019 | 0 |
| Project-to-Date | 5 |

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. 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 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 seabed profile 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, 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.
- 7.0.4. The major environmental impacts generated from tunnel works at Central and tunnel works at Wan Chai East, IECL and Causeway Bay Typhoon Shelter were undertaken in the reporting period. With mitigation measures, no significant air impact from construction activities was anticipated in the reporting period. Besides, no project-related exceedances were recorded during the water, air and noise environmental monitoring events in the reporting period. Thus, it is evaluated that the cumulative construction impact from the concurrent projects including Wan Chai Development Phase II was insignificant.

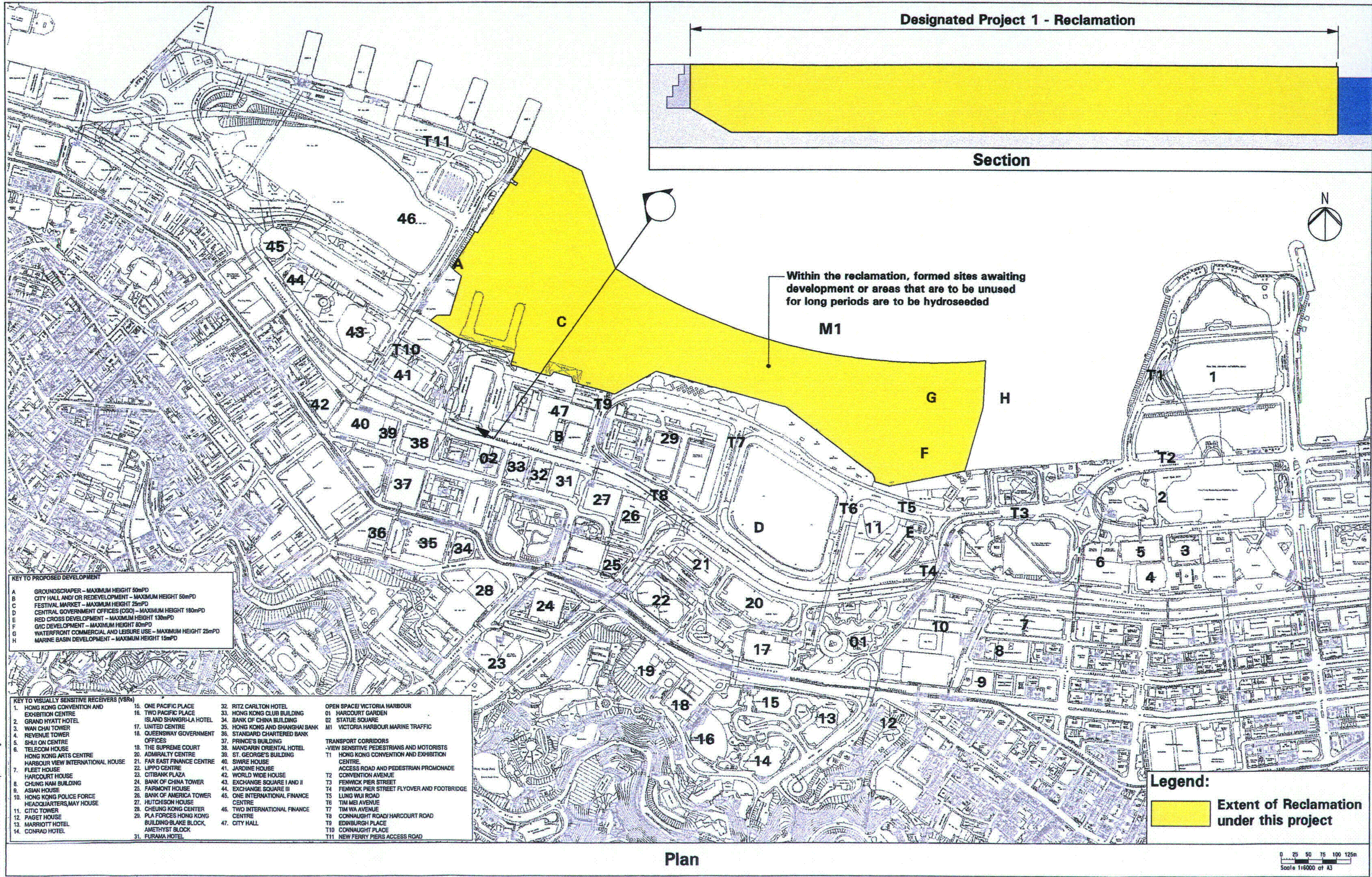
8. CONCLUSION

- 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-compliances were noted 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



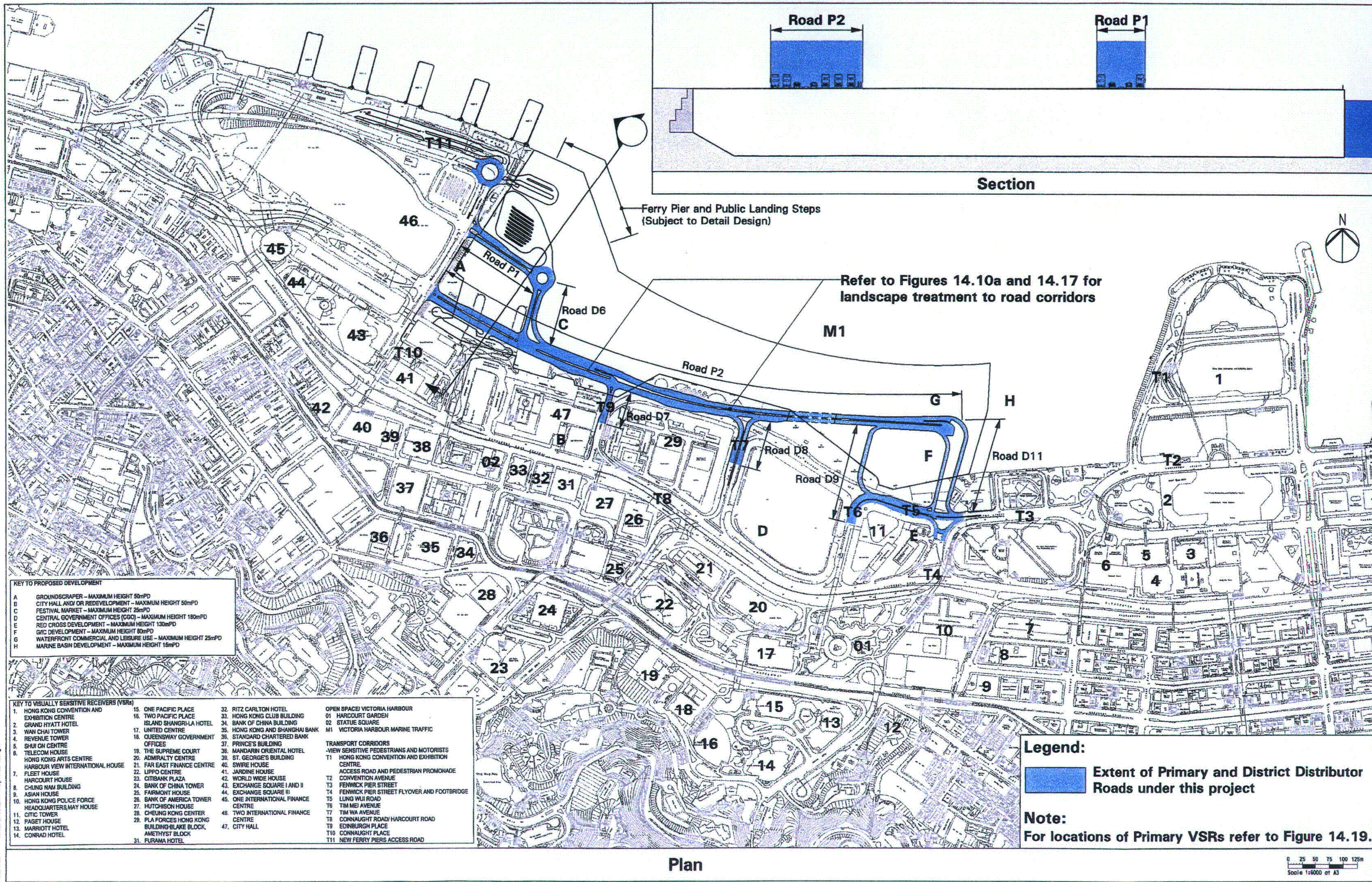
KEY TO PROPOSED DEVELOPMENT

| | |
|---|--|
| A | GROUNDSCRAPER - MAXIMUM HEIGHT 50mPD |
| B | CITY HALL AND/OR REDEVELOPMENT - MAXIMUM HEIGHT 50mPD |
| C | FESTIVAL MARKET - MAXIMUM HEIGHT 25mPD |
| D | CENTRAL GOVERNMENT OFFICES (CGO) - MAXIMUM HEIGHT 180mPD |
| E | RED CROSS DEVELOPMENT - MAXIMUM HEIGHT 130mPD |
| F | G/C DEVELOPMENT - MAXIMUM HEIGHT 80mPD |
| G | WATERFRONT COMMERCIAL AND LEISURE USE - MAXIMUM HEIGHT 25mPD |
| H | MARINE BASIN DEVELOPMENT - MAXIMUM HEIGHT 15mPD |

KEY TO VISUALLY SENSITIVE RECEIVERS (VSRs)

| | | | | | | |
|-----|--|-----|---|-----|----------------------------------|---|
| 1. | HONG KONG CONVENTION AND EXHIBITION CENTRE | 15. | ONE PACIFIC PLACE | 32. | RITZ CARLTON HOTEL | OPEN SPACE/ VICTORIA HARBOUR |
| 2. | GRAND HYATT HOTEL | 16. | TWO PACIFIC PLACE | 33. | HONG KONG CLUB BUILDING | 01 HARDCOURT GARDEN |
| 3. | WAN CHAI TOWER | 17. | UNITED CENTRE | 34. | BANK OF CHINA BUILDING | 02 STATUE SQUARE |
| 4. | REVENUE TOWER | 18. | QUEENSWAY GOVERNMENT OFFICES | 35. | HONG KONG AND SHANGHAI BANK | M1 VICTORIA HARBOUR MARINE TRAFFIC |
| 5. | SHUI ON CENTRE | 19. | THE SUPREME COURT | 36. | STANDARD CHARTERED BANK | TRANSPORT CORRIDORS |
| 6. | TELECOM HOUSE | 20. | ADMIRALTY CENTRE | 37. | PRINCE'S BUILDING | -VIEW SENSITIVE PEDESTRIANS AND MOTORISTS |
| 7. | HONG KONG ARTS CENTRE | 21. | FAR EAST FINANCE CENTRE | 38. | MANDARIN ORIENTAL HOTEL | T1 HONG KONG CONVENTION AND EXHIBITION CENTRE |
| 8. | HARBOUR VIEW INTERNATIONAL HOUSE | 22. | LIPPO CENTRE | 39. | ST. GEORGE'S BUILDING | ACCESS ROAD AND PEDESTRIAN PROMONADE |
| 9. | FLEET HOUSE | 23. | CITIBANK PLAZA | 40. | SWIRE HOUSE | T2 CONVENTION AVENUE |
| 10. | HARDCOURT HOUSE | 24. | BANK OF CHINA TOWER | 41. | JARDINE HOUSE | T3 FENWICK PIER STREET |
| 11. | CHUNG NAM BUILDING | 25. | FAIRMONT HOUSE | 42. | WORLD WIDE HOUSE | T4 FENWICK PIER STREET FLYOVER AND FOOTBRIDGE |
| 12. | ASIAN HOUSE | 26. | BANK OF AMERICA TOWER | 43. | EXCHANGE SQUARE I AND II | T5 LUNG WUI ROAD |
| 13. | HONG KONG POLICE FORCE HEADQUARTERS, MAY HOUSE | 27. | HUTCHISON HOUSE | 44. | EXCHANGE SQUARE III | T6 TIM MEI AVENUE |
| 14. | CITIC TOWER | 28. | CHEUNG KONG CENTER | 45. | ONE INTERNATIONAL FINANCE CENTRE | T7 TIM WA AVENUE |
| | | 29. | PLA FORCES HONG KONG BUILDING-BLAKE BLOCK, AMETHYST BLOCK | 46. | TWO INTERNATIONAL FINANCE CENTRE | T8 CONNAUGHT ROAD/ HARDCOURT ROAD |
| | | 30. | FURAMA HOTEL | 47. | CITY HALL | T9 EDINBURGH PLACE |
| | | | | | | T10 CONNAUGHT PLACE |
| | | | | | | T11 NEW FERRY PIERS ACCESS ROAD |

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KEY TO PROPOSED DEVELOPMENT

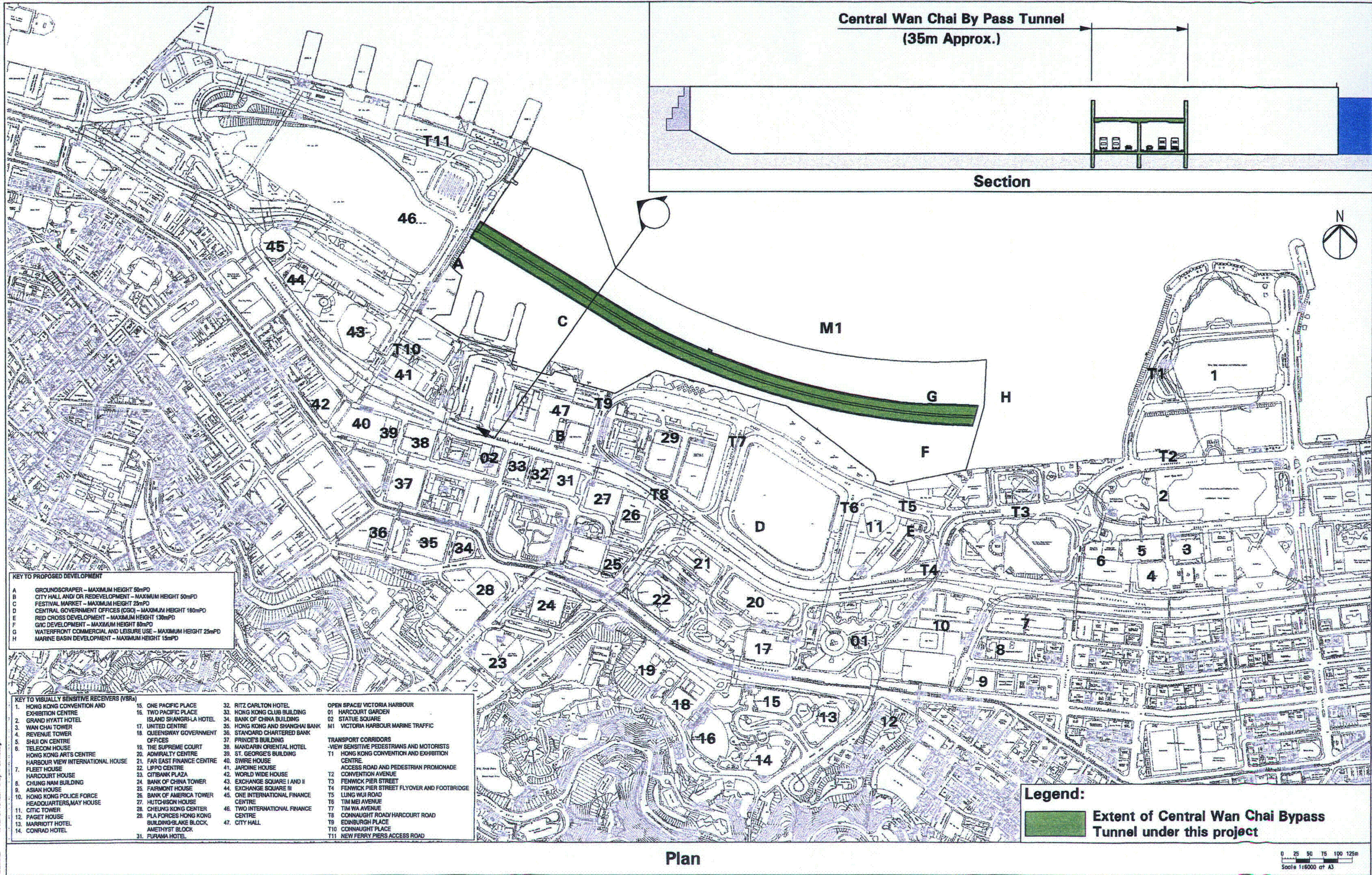
| | |
|---|--|
| A | GROUNDSCRAPER - MAXIMUM HEIGHT 50mPD |
| B | CITY HALL AND/OR REDEVELOPMENT - MAXIMUM HEIGHT 50mPD |
| C | FESTIVAL MARKET - MAXIMUM HEIGHT 25mPD |
| D | CENTRAL GOVERNMENT OFFICES (CGO) - MAXIMUM HEIGHT 180mPD |
| E | RED CROSS DEVELOPMENT - MAXIMUM HEIGHT 130mPD |
| F | GIC DEVELOPMENT - MAXIMUM HEIGHT 80mPD |
| G | WATERFRONT COMMERCIAL AND LEISURE USE - MAXIMUM HEIGHT 25mPD |
| H | MARINE BASIN DEVELOPMENT - MAXIMUM HEIGHT 15mPD |

KEY TO VISUALLY SENSITIVE RECEIVERS (VSRs)

| | | | |
|--|---|--------------------------------------|--|
| 1. HONG KONG CONVENTION AND EXHIBITION CENTRE | 15. ONE PACIFIC PLACE | 32. RITZ CARLTON HOTEL | OPEN SPACE/ VICTORIA HARBOUR |
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| 4. REVENUE TOWER | 18. QUEENSWAY GOVERNMENT OFFICES | 35. HONG KONG AND SHANGHAI BANK | M1. VICTORIA HARBOUR MARINE TRAFFIC |
| 5. SHUI ON CENTRE | 19. THE SUPREME COURT | 36. STANDARD CHARTERED BANK | TRANSPORT CORRIDORS |
| 6. TELECOM HOUSE | 20. ADMIRALTY CENTRE | 37. PRINCE'S BUILDING | -VIEW SENSITIVE PEDESTRIANS AND MOTORISTS |
| 7. HONG KONG ARTS CENTRE | 21. FAR EAST FINANCE CENTRE | 38. MANDARIN ORIENTAL HOTEL | T1. HONG KONG CONVENTION AND EXHIBITION CENTRE |
| 8. HARBOUR VIEW INTERNATIONAL HOUSE | 22. LIPPO CENTRE | 39. ST. GEORGE'S BUILDING | ACCESS ROAD AND PEDESTRIAN PROMONADE |
| 9. FLEET HOUSE | 23. CITIBANK PLAZA | 40. SWIRE HOUSE | T2. CONVENTION AVENUE |
| 10. HARCOURT HOUSE | 24. BANK OF CHINA TOWER | 41. JARDINE HOUSE | T3. FENWICK PIER STREET |
| 11. CHUNG NAM BUILDING | 25. FAIRMONT HOUSE | 42. WORLD WIDE HOUSE | T4. FENWICK PIER STREET FLYOVER AND FOOTBRIDGE |
| 12. ASIAN HOUSE | 26. BANK OF AMERICA TOWER | 43. EXCHANGE SQUARE I AND II | T5. LUNG WUI ROAD |
| 13. HONG KONG POLICE FORCE HEADQUARTERS, MAY HOUSE | 27. HUTCHISON HOUSE | 44. EXCHANGE SQUARE III | T6. TIM MEI AVENUE |
| 14. CITIC TOWER | 28. CHEUNG KONG CENTER | 45. ONE INTERNATIONAL FINANCE CENTRE | T7. TIM WA AVENUE |
| 15. PAGET HOUSE | 29. PLA FORCES HONG KONG BUILDING-BLAKE BLOCK, AMETHYST BLOCK | 46. TWO INTERNATIONAL FINANCE CENTRE | T8. CONNAUGHT ROAD/ HARCOURT ROAD |
| 16. MARRIOTT HOTEL | 30. FLURAMA HOTEL | 47. CITY HALL | T9. EDINBURGH PLACE |
| 17. CONRAD HOTEL | | | T10. CONNAUGHT PLACE |
| | | | T11. NEW FERRY PIERS ACCESS ROAD |

Designated Project 2 - Primary and District Distributor Roads Layout Plan and Section

Figure 14.10



KEY TO PROPOSED DEVELOPMENT

| | |
|---|--|
| A | GROUNDSCRAPER - MAXIMUM HEIGHT 50mPD |
| B | CITY HALL AND/OR REDEVELOPMENT - MAXIMUM HEIGHT 50mPD |
| C | FESTIVAL MARKET - MAXIMUM HEIGHT 25mPD |
| D | CENTRAL GOVERNMENT OFFICES (CGO) - MAXIMUM HEIGHT 180mPD |
| E | RED CROSS DEVELOPMENT - MAXIMUM HEIGHT 130mPD |
| F | G/VIC DEVELOPMENT - MAXIMUM HEIGHT 80mPD |
| G | WATERFRONT COMMERCIAL AND LEISURE USE - MAXIMUM HEIGHT 25mPD |
| H | MARINE BASIN DEVELOPMENT - MAXIMUM HEIGHT 15mPD |

KEY TO VISUALLY SENSITIVE RECEIVERS (VSRs)

| | | | |
|--|---|--------------------------------------|--|
| 1. HONG KONG CONVENTION AND EXHIBITION CENTRE | 15. ONE PACIFIC PLACE | 32. RITZ CARLTON HOTEL | OPEN SPACE/ VICTORIA HARBOUR |
| 2. GRAND HYATT HOTEL | 16. TWO PACIFIC PLACE | 33. HONG KONG CLUB BUILDING | 01 HARCOURT GARDEN |
| 3. WAN CHAI TOWER | 17. UNITED CENTRE | 34. BANK OF CHINA BUILDING | 02 STATUE SQUARE |
| 4. REVENUE TOWER | 18. QUEENSWAY GOVERNMENT OFFICES | 35. HONG KONG AND SHANGHAI BANK | M1 VICTORIA HARBOUR MARINE TRAFFIC |
| 5. SHUI ON CENTRE | 19. THE SUPREME COURT | 36. STANDARD CHARTERED BANK | TRANSPORT CORRIDORS |
| 6. TELECOM HOUSE | 20. ADMIRALTY CENTRE | 37. PRINCE'S BUILDING | -VIEW SENSITIVE PEDESTRIANS AND MOTORISTS |
| 7. FLEET HOUSE | 21. FAR EAST FINANCE CENTRE | 38. MANDARIN ORIENTAL HOTEL | T1 HONG KONG CONVENTION AND EXHIBITION CENTRE |
| 8. HARCOURT HOUSE | 22. LIPPO CENTRE | 39. ST. GEORGE'S BUILDING | ACCESS ROAD AND PEDESTRIAN PROMENADE CONVENTION AVENUE |
| 9. ASIAN HOUSE | 23. CITIBANK PLAZA | 40. SWIRE HOUSE | T2 |
| 10. HONG KONG POLICE FORCE HEADQUARTERS, MAY HOUSE | 24. BANK OF CHINA TOWER | 41. JAPANESE HOUSE | T3 |
| 11. CITIC TOWER | 25. FAIRMONT HOUSE | 42. WORLD WIDE HOUSE | T4 FENWICK PIER STREET FLYOVER AND FOOTBRIDGE |
| 12. PAGET HOUSE | 26. BANK OF AMERICA TOWER CENTRE | 43. EXCHANGE SQUARE I AND II | T5 LUNG WUI ROAD |
| 13. MARRIOTT HOTEL | 27. HUTCHISON HOUSE | 44. EXCHANGE SQUARE III | T6 TIM MEI AVENUE |
| 14. CONRAD HOTEL | 28. CHEUNG KONG CENTER | 45. ONE INTERNATIONAL FINANCE CENTRE | T7 TIM WA AVENUE |
| | 29. PLA FORCES HONG KONG BUILDING-SLAKE BLOCK, AMETHYST BLOCK | 46. TWO INTERNATIONAL FINANCE CENTRE | T8 CONNAUGHT ROAD/ HARCOURT ROAD |
| | 31. PURANA HOTEL | 47. CITY HALL | T9 EDINBURGH PLACE |
| | | | T10 CONNAUGHT PLACE |
| | | | T11 NEW FERRY PIERS ACCESS ROAD |

Legend:

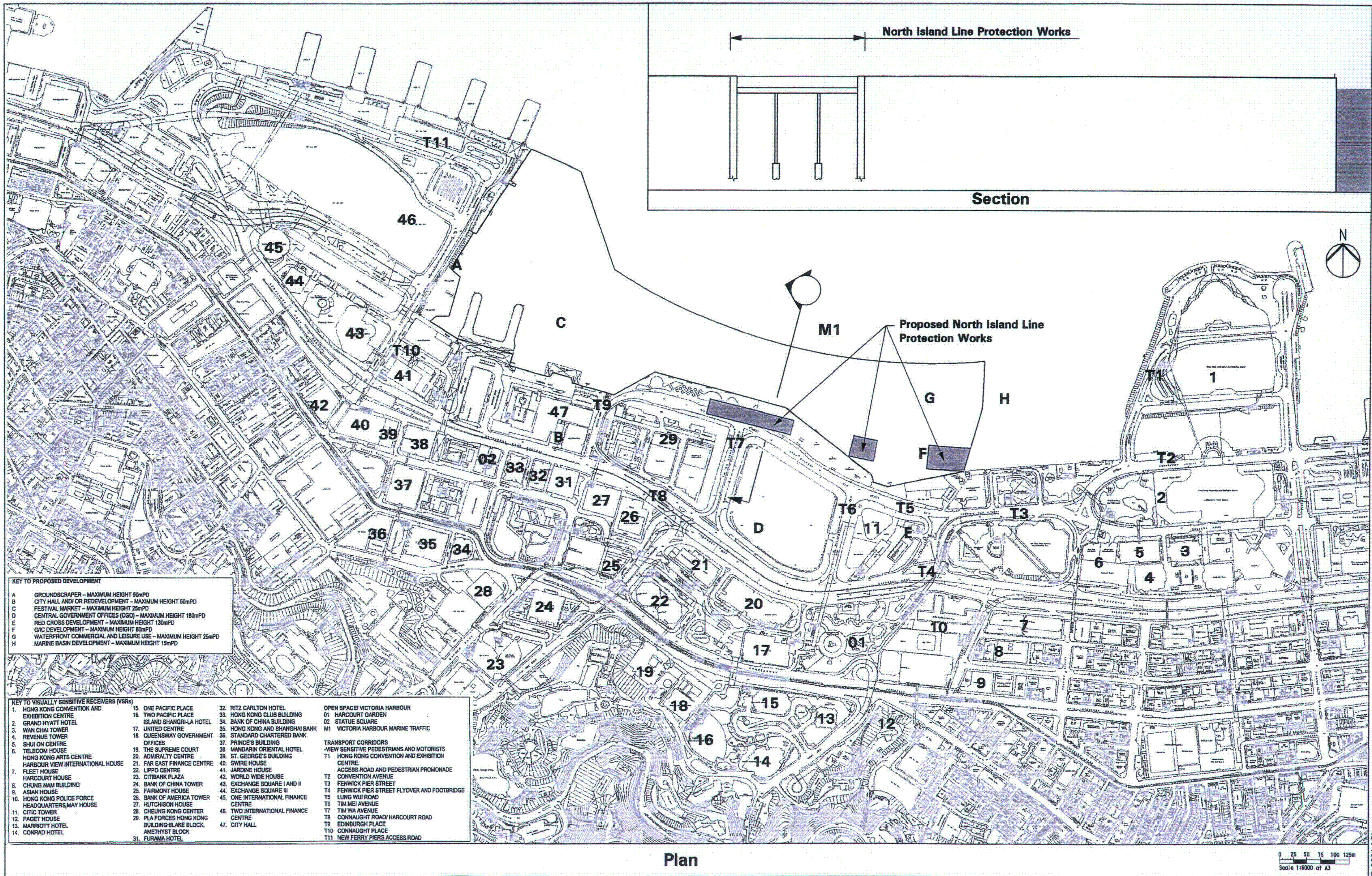
Extent of Central Wan Chai Bypass Tunnel under this project

Designated Project 3 - Central Wan Chai Bypass Tunnel
Layout Plan and Section

Figure 14.11

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KEY TO PROPOSED DEVELOPMENT

| | |
|---|--|
| A | GROUNDSCRAPER - MAXIMUM HEIGHT 50mPD |
| B | CITY HALL AND/OR REDEVELOPMENT - MAXIMUM HEIGHT 50mPD |
| C | FESTIVAL MARKET - MAXIMUM HEIGHT 25mPD |
| D | CENTRAL GOVERNMENT OFFICES (CGO) - MAXIMUM HEIGHT 180mPD |
| E | RED CROSS DEVELOPMENT - MAXIMUM HEIGHT 130mPD |
| F | GIC DEVELOPMENT - MAXIMUM HEIGHT 80mPD |
| G | WATERFRONT COMMERCIAL AND LEISURE USE - MAXIMUM HEIGHT 25mPD |
| H | MARINE BASIN DEVELOPMENT - MAXIMUM HEIGHT 15mPD |

KEY TO VISUALLY SENSITIVE RECEIVERS (VSRs)

| | | | |
|--|---|--------------------------------------|---|
| 1. HONG KONG CONVENTION AND EXHIBITION CENTRE | 15. ONE PACIFIC PLACE | 32. RITZ CARLTON HOTEL | OPEN SPACE/ VICTORIA HARBOUR |
| 2. GRAND HYATT HOTEL | 16. TWO PACIFIC PLACE | 33. HONG KONG CLUB BUILDING | 01. HARCOURT GARDEN |
| 3. WAN CHAI TOWER | 17. ISLAND SHANGRI-LA HOTEL | 34. BANK OF CHINA BUILDING | 02. STATUE SQUARE |
| 4. REVENUE TOWER | 18. UNITED CENTRE | 35. HONG KONG AND SHANGHAI BANK | M1 VICTORIA HARBOUR MARINE TRAFFIC |
| 5. SHUI ON CENTRE | 19. QUEENSWAY GOVERNMENT OFFICES | 36. STANDARD CHARTERED BANK | TRANSPORT CORRIDORS |
| 6. TELECOM HOUSE | 20. ADMIRALTY CENTRE | 37. PRINCE'S BUILDING | -VIEW SENSITIVE PEDESTRIANS AND MOTORISTS |
| 7. HONG KONG ARTS CENTRE | 21. FAR EAST FINANCE CENTRE | 38. MANDARIN ORIENTAL HOTEL | T1 HONG KONG CONVENTION AND EXHIBITION CENTRE |
| 8. HARBOUR VIEW INTERNATIONAL HOUSE | 22. LIPPO CENTRE | 39. ST. GEORGE'S BUILDING | ACCESS ROAD AND PEDESTRIAN PROMENADE |
| 9. FLEET HOUSE | 23. CITIBANK PLAZA | 40. SWIRE HOUSE | T2 |
| 10. HARCOURT HOUSE | 24. BANK OF CHINA TOWER | 41. JARDINE HOUSE | T3 |
| 11. CHUNG NAM BUILDING | 25. FAIRMONT HOUSE | 42. WORLD WIDE HOUSE | T4 |
| 12. ASIAN HOUSE | 26. BANK OF AMERICA TOWER | 43. EXCHANGE SQUARE I AND II | T5 |
| 13. HONG KONG POLICE FORCE HEADQUARTERS, MAY HOUSE | 27. HUTCHISON HOUSE | 44. EXCHANGE SQUARE III | T6 |
| 14. CITIC TOWER | 28. CHEUNG KONG CENTER | 45. ONE INTERNATIONAL FINANCE CENTRE | T7 |
| 15. PAGET HOUSE | 29. PLA FORCES HONG KONG BUILDING-BLAKE BLOCK | 46. TWO INTERNATIONAL FINANCE CENTRE | T8 |
| 16. MARRIOTT HOTEL | 30. AMETHYST BLOCK | 47. CITY HALL | T9 |
| 17. CONRAD HOTEL | 31. FURAMA HOTEL | | T10 |
| | | | T11 |

Designated Project 4 - North Island Line Protection Works
Layout Plan and Section

Figure 14.12



Figure 2.2

Project Organization Chart

Project Organization Chart

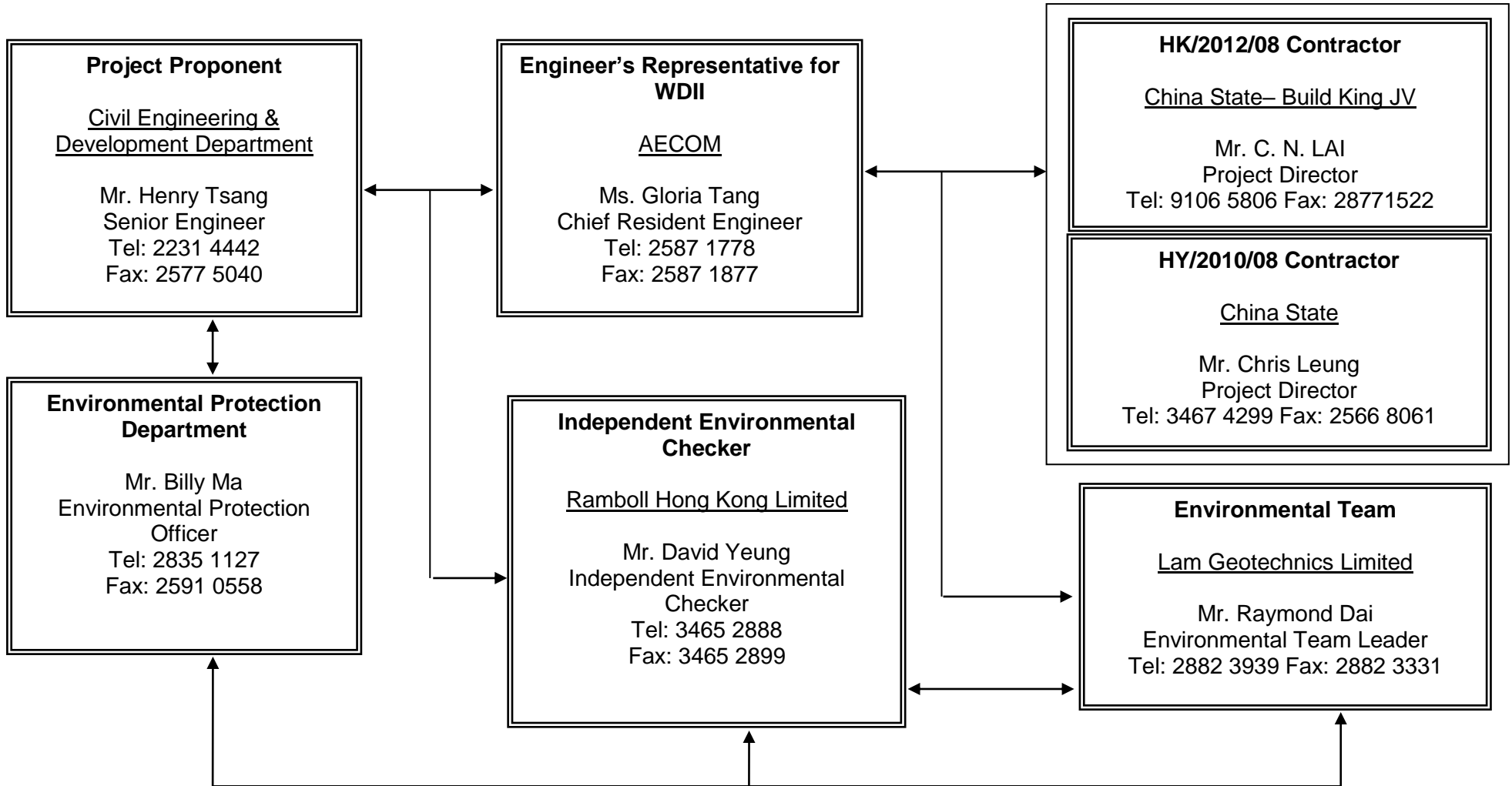


Figure 2.2



Figure 3.1

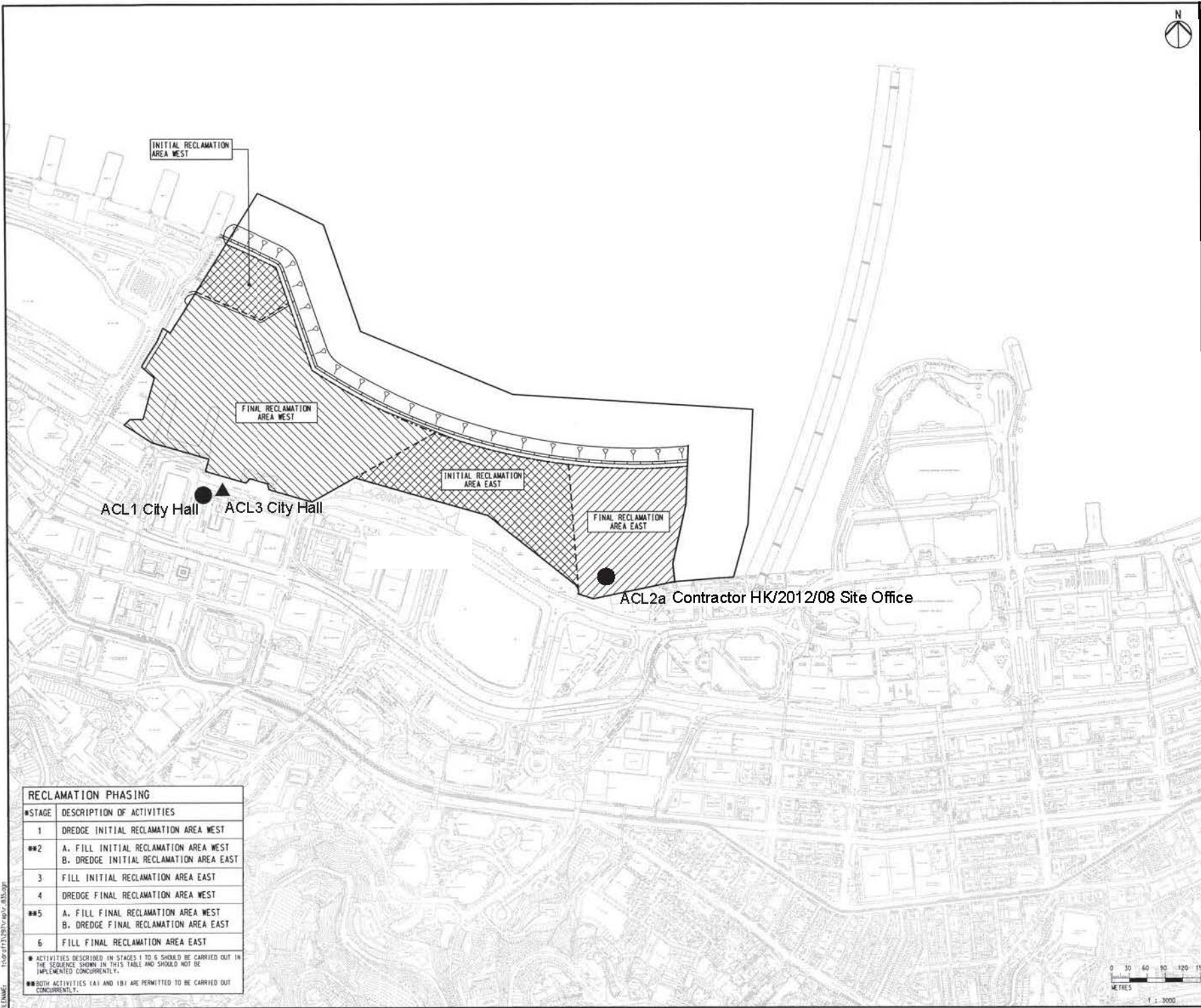
Locations of Environmental Monitoring Stations



DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE

LEGEND:

- DUST MONITORING STATIONS
- ▲ NOISE MONITORING STATION



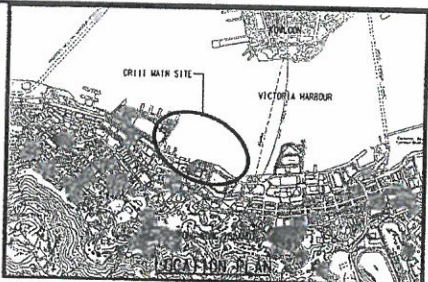
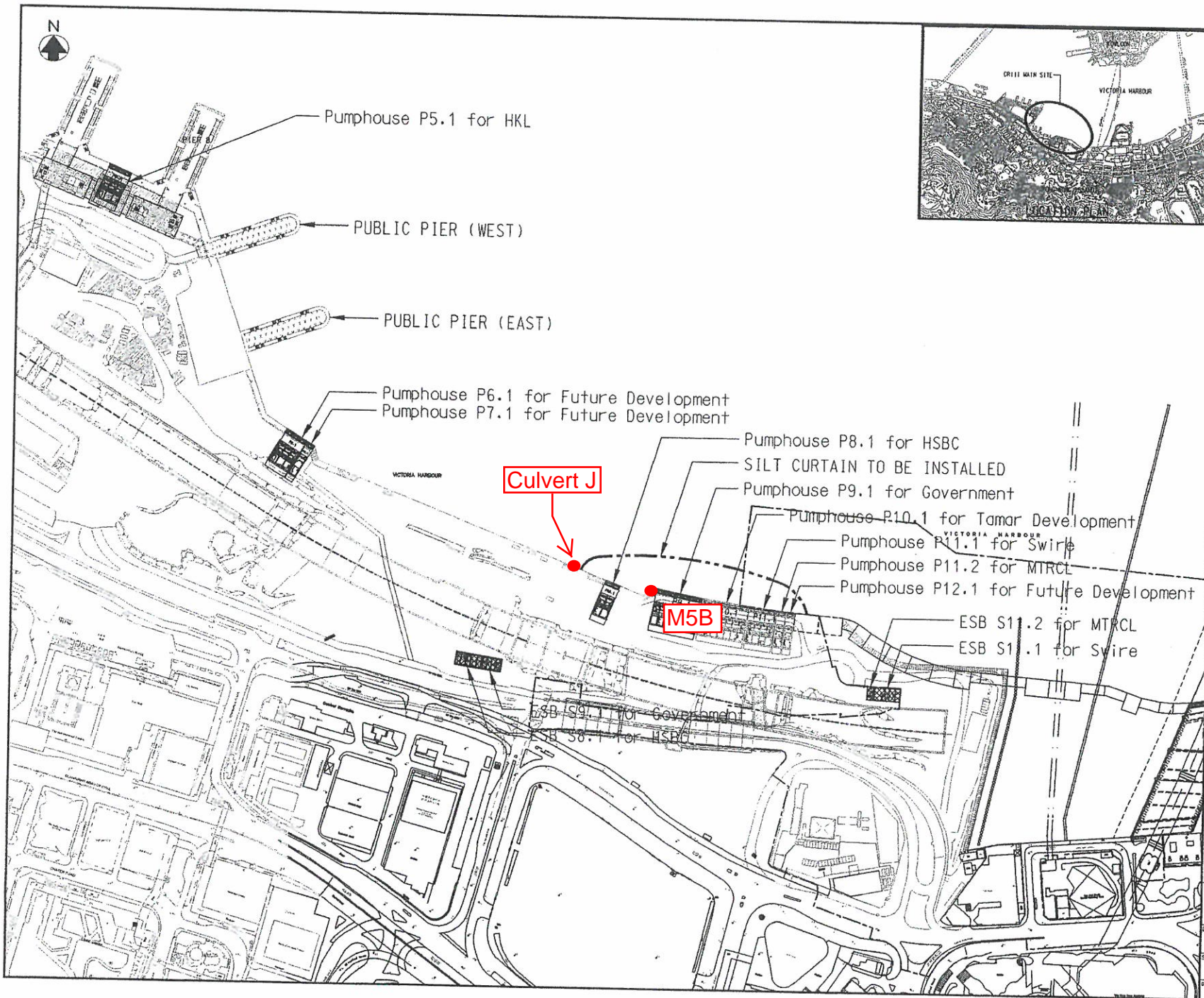
| RECLAMATION PHASING | |
|---------------------|--|
| #STAGE | DESCRIPTION OF ACTIVITIES |
| 1 | DREDGE INITIAL RECLAMATION AREA WEST |
| **2 | A. FILL INITIAL RECLAMATION AREA WEST B. DREDGE INITIAL RECLAMATION AREA EAST |
| 3 | FILL INITIAL RECLAMATION AREA EAST |
| 4 | DREDGE FINAL RECLAMATION AREA WEST |
| **5 | A. FILL FINAL RECLAMATION AREA WEST B. DREDGE FINAL RECLAMATION AREA EAST |
| 6 | FILL FINAL RECLAMATION AREA EAST |

● ACTIVITIES DESCRIBED IN STAGES 1 TO 6 SHOULD BE CARRIED OUT IN THE SEQUENCE SHOWN IN THIS TABLE AND SHOULD NOT BE IMPLEMENTED CONCURRENTLY.
 ● BOTH ACTIVITIES (A) AND (B) ARE PERMITTED TO BE CARRIED OUT CONCURRENTLY.



Fig 4.1 Location of monitoring stations

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NOTES :
 1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.

LEGENDS :
 - - - - - SILT CURTAIN

CONTRACT NO. HK/2012/08
 WAN CHAI DEVELOPMENT PHASE II -
 CENTRAL - WAN CHAI BYPASS AT
 WAN CHAI WEST

TITLE
 PUMP HOUSES AND ESBs
 LOCATION PLAN WITH INSTALLED
 SILT CURTAIN

中環建策 - 利達聯泰
 CHINA STATE - LEADER JOINT VENTURE

DRG. NO.
 HK_2012_08/CDB/S/SK/071

SCALE
 A3 1:3000 DATE OF BRINGING INTO
 8-AUG-2013

DRAWING ARE IN METRES COPYRIGHT RESERVED



Appendix 2.1

Environmental Mitigation Implementation Schedule

IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES

| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------------------------------|---|-----------------------------------|---|--|-------------------------------|---------------------------------|
| 1 | Operational Traffic Noise* | The openings of ventilation buildings or ventilation shafts should be placed carefully and ideally should be such that they are not facing directly onto any NSR. | Various | Area Wide, Proposals at design stage for Implementation during construction | To be implemented at the operation stage | N/A | -- |
| 2 | Operational Air Quality | Air intakes for commercial/G/IC buildings should be placed such that they are at locations where contours indicate AQOs are met. | ArchSD/Private sector + | CRIII During development of sites Completion of CRIII | To be implemented at the operation stage | Carry forward to design stage | 6 |
| 3 | Operational Water Quality | Provision of grit traps for surface drainage | TDD's Contractor | New roads and paved areas During construction End of construction | Implemented during Construction Stage | P, R, A, C | 7 |
| 4 | Operational Landscape and Visual | Operational stage landscape and visual mitigation measures should include + <ul style="list-style-type: none"> · Implementation of the Waterfront Promenade, Statue Square Corridor, Historic Corridor, Civic Corridor, Arts and Entertainment Corridor, Streetscape Network, Landscape Decks, and Supplementary Landscape Spaces; · provision of a legible, integrated pedestrian circulation system linking major activity nodes, reinforcing links with adjoining areas, and providing an international quality hard and soft landscape treatment; · provision of a grade separated pedestrian system to minimise vehicular/ pedestrian conflict; · provision of an integrated network of local and regional open spaces for passive and active recreation; · preservation of selected architectural features; | Various | Area wide, proposals at design stage for implementation during construction | To be implemented at the operation stage | P | -- |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|---|--|-----------------------------------|---|--|----------------------------|---------------------------------|
| | | <ul style="list-style-type: none"> · preservation insitu of existing significant vegetation, principally the two Banyan Trees flanking the Tamar Site; · new roads to incorporate suitable streetscape amenity and landscape planting to minimise visual and environmental impacts; · existing roads upgraded to 'marry' with the proposed landscape framework; · Hydroseeding of reclamation if there is no immediate use of the site, periphery of the reclamation; · Designated service corridors beneath footpaths to prevent potential impacts upon vegetation during services maintenance; · Sensitively designed colour themes to footpath paving areas; and · Sensitively designed seawall to enhance the recreational value of the future promenade can be included. | Various | Area wide, proposals at design stage for implementation during construction | To be implemented at the operation stage | P | -- |
| 5 | Construction Noise Control Requirements | Use of the following quiet mechanical equipment for construction works : ·air compressor; paver; hand held breaker; breaker, excavator mounted; bulldozer; concrete lorry mixer; concrete pump; crane; dump truck; excavator/ loader; grader; lorry ; poker; road roller; vibratory roller; | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P, R, A, C | - |
| | | Use of noise barriers (in the form if purpose built site hoarding of 3 - 5 m height and surface density of at least 7 kgm ² with cranked top) for the following works: · Hong Kong Station Extended Overrun Tunnels to north of Central Barracks. · North Island Line Protection Works to north of Central Barracks; · Road/Drainage Works to north of Central Barracks; · Culvert F Piling Works to north of City Hall. | TDD's Contractor | Work Sites as stated Start of activity stated End of activity stated | Implemented during Construction Stage | P, A | |
| | | · Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 4 |
| | | · Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction | P,R,A,C | 4 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------|---|-----------------------------------|--|---------------------------------------|----------------------------|---------------------------------|
| | | | | | Stage | | |
| | | · Mobile plant, if any, should be sited as far away from noise sensitive facilities as possible. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 4 |
| | | · Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 4 |
| | | · Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from nearby noise sensitive facilities. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 4 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|---|---|-----------------------------------|--|---------------------------------------|----------------------------|---------------------------------|
| 6 | Construction Air Quality Control Requirements | · Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 4 |
| | | · Strictly limit truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 6,7 |
| | | · Twice daily watering of the site with active operations when the weather and the work site are dry. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 6,7 |
| | | · Watering during excavation and material handling. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 6,7 |
| | | · Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 6,7 |
| | | · Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 6,7 |
| | | · Covers for dusty stockpiles | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction Stage | P,R,A,C | 6 |
| | | · All plant shall be maintained to prevent any undue air emissions | TDD's Contractor | Works Area During construction End of construction | Implemented during Construction | P,R,A,C | 6 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|---|---|-----------------------------------|--|---------------------------------------|----------------------------|---------------------------------|
| | | | | | Stage | | |
| 7 | Construction Water Quality Control Requirements | <p>Specific Measures Associated with Dredging Works</p> <ul style="list-style-type: none"> the use of closed clamshell (water-tight) grab dredgers to remove seriously contaminated material such that the amount of SS and other pollutants released from the marine mud and pore water can be minimised; the prohibition of stockpiling of any moderately or seriously contaminated marine sediment, and careful control of stockpiling of any uncontaminated sediment to prevent runoff, resuspension and odour nuisances; and the control of dredging and bulk reclamation filling rates within acceptable limits. Based upon the construction sequence developed for this study the maximum dredging and filling rates adopted for Final Reclamation Area East were : <ul style="list-style-type: none"> Maximum Dredging Rate : 184 m²/hour Maximum Daily Filling Rate : 17,727 m³/day (for bulk reclamation filling) <p>Maximum dredging and filling rates for other reclamation sites should take account of information contained in Table 10.14 of the EIA Report and envisaged construction sequence.</p> <ul style="list-style-type: none"> no dredging should take place under very bad weather conditions. | TDD's Contractor | Whole reclamation area During reclamation works End of reclamation works | Implemented during Construction Stage | R | 7 |
| | | <ul style="list-style-type: none"> silt curtain around dredging sites to be provided as necessary. <p>Specific Measure for Marine Disposal of Dredged Materials and Maine Sand Filling Works</p> <ul style="list-style-type: none"> all vessels should be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; all hopper barges and dredgers should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; loading of hopper barges should be controlled to prevent splashing of dredged or filling | TDD's Contractor | Whole reclamation area During reclamation works End of reclamation works | Implemented during Construction Stage | R | 7 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------|---|-----------------------------------|--|---------------------------------------|----------------------------|---------------------------------|
| | | material to the surrounding water, and barges or hoppers should not be filled to a level which will cause the overflow of materials or polluted water during loading or transportation; | | | | | |
| | | <ul style="list-style-type: none"> · the works should cause no visible foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; · bulk filling should be carried out, where feasible, behind completed seawall to above high water mark. In general and where physically practical, filling should not be carried out without the seawall having been substantially completed for a distance of 100m – 200m ahead of filling; and · fill materials should comply with technical specification requirements and be taken from approved sources only. The maximum fines content of marine sand should be limited to 5% as assumed in the water quality assessments. · transport of contaminated mud (or filling material) to the marine disposal site (or works site) should, wherever possible, be by split barge of not less than 750 m³ capacity, well maintained and capable of rapid opening and discharge at the disposal site; · the dredged material should be disposed in the pit by bottom dumping, at a location within the pit specified by the MFC; · discharge should be undertaken rapidly and the hoppers should then immediately be closed. Material adhering to the sides of the hopper should not be washed out of the hopper and the hopper should remain closed until the barge next return to the disposal site; · the dumping vessel is not required to station but will be guided by the site staff managing the disposal facility. The vessel crew should be familiar with such operational procedures; · monitoring of the barge loading to ensure that loss of material does not take place during transportation; and · Transport barges or vessels shall be equipped with automatic self-monitoring devices. | TDD's Contractor | Whole reclamation area During reclamation works End of reclamation works | Implemented during Construction Stage | R | 7 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------|---|-----------------------------------|---|---------------------------------------|----------------------------|---------------------------------|
| | | <p>Specific Measures Associated with Dredging and Filling Works when CRIII Dredging and Filling Works are being constructed concurrently with WDII Dredging and Filling Works</p> <ul style="list-style-type: none"> · deployment of silt curtains around the dredging and fill release points to contain SS within the construction site during dredging and filling; · deployment of silt screens at the cooling water intakes and WSD salt water intakes to further minimise the intake of SS within the sea water. | TDD's Contractor | <p>Reclamation Areas as appropriate</p> <p>When CRIII and WDII - Dredging and Filling Works occur concurrently</p> <p>End of Concurrent Works</p> | Implemented during Construction Stage | R | - |
| | | <p>Specific Measures Associated with Floating Debris</p> <p>The result of the floating debris simulation has shown that the intermediate layout of the proposed reclamation has potential to trap floating rubbish. Monitoring and control of the construction activities should be taken to prevent the release of construction waste and rubbish from the construction site. Collection of floating debris should be carried out at least once every day by the CRIII Contractor, and more frequently (two or three times per day) at the water body south of the Initial Reclamation Area West and near the cooling water intakes where large substances could block the screens and filter pipes of the intakes and reduce their efficiency. Debris should be collected and taken to landfill sites for disposal.</p> | TDD's Contractor | <p>Whole reclamation area</p> <p>During construction</p> <p>At end of construction</p> | Implemented during Construction Stage | R | - |
| | | <p>Specific Measures for Dealing with Culvert L Outfall at Completion of CRIII Eastern Seawall</p> <p>As a mitigation measure, to avoid the accumulation of water borne pollutants within a temporary embayment to the east of CRIII, an impermeable barrier, suspended from a floating boom on the water surface and extending down to the seabed, will be erected by the CRIII Contractor on completion of the CRIII eastern seawall. The barrier will channel the stormwater discharge flows from Culvert L to the outside of the embayment. The CRIII Contractor will maintain this barrier until the WDII Contractor takes possession of this site, whereupon the WDII Contractor will takeover the maintenance of this barrier until the reclamation works in this area are carried out and the new Culvert L extension is constructed.</p> | TDD's Consultant | <p>Culvert L Outfall</p> <p>During Construction</p> <p>To handover to WDII Contractor</p> | Implemented during Construction Stage | R | -- |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------|---|-----------------------------------|---|--|----------------------------|---------------------------------|
| | | <p>Construction Run-off and Drainage</p> <ul style="list-style-type: none"> - Control of Site Surface Runoff: - Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks. - Silt removal facilities, channels and manholes should be maintained. - Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided, temporarily exposed slope surfaces should be covered and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided. - Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage such as intercepting channels should be provided where necessary. - Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. - Open stockpiles of construction materials should be covered. - Manholes should be adequately covered and temporarily sealed. | TDD's Contractor | <p>Works Area During construction End of construction</p> | <p>Implemented during Construction Stage</p> | P,R,A,C | 7 |
| | | <ul style="list-style-type: none"> - Groundwater - Groundwater pumped out of tunnels or caverns should be discharged into storm drains after the removal of silt. | | | | | |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------|---|-----------------------------------|--|---------------------------------------|----------------------------|---------------------------------|
| | | <ul style="list-style-type: none"> - Boring and Drilling Water - Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be recirculated after sedimentation. Wastewater should be discharged into storm drains via silt removal facilities. - Wastewater from Concrete Batching and Precast Concrete Casting - Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum. - To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an on-line standby pump of adequate capacity and with automatic alternating devices. - Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment. <p>Surface run-off should be segregated from the concrete mixing and casting yard area as much as possible, and diverted to the stormwater drainage system. Surface run-off contaminated by materials in a concrete mixing area or casting yard should be adequately treated before disposal into stormwater drains.</p> | TDD's Contractor | <p>Work Area</p> <p>During construction</p> <p>End of construction</p> | Implemented during Construction Stage | P,R,A,C | 7 |
| | | <ul style="list-style-type: none"> - Wheel Washing Water - All vehicles and plant should be cleaned before they leave the construction site. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. - Bentonite Slurries - Bentonite slurries should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil site 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 | TDD's Contractor | <p>Work Area</p> <p>During construction</p> <p>End of construction</p> | Implemented during Construction Stage | P,R,A,C | 7 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|----------|--|-----------------------------------|--|-----------------------|----------------------------|---------------------------------|
| | | system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards. | | | | | |
| | | <ul style="list-style-type: none"> - Wastewater from Building Construction - Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains. - Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary. | | | | | |
| | | <ul style="list-style-type: none"> -Licensing of Construction Site Discharges within Water Control Zones -All discharges into any drainage or sewerage systems, or inland or coastal waters, or into the ground (e.g. from septic tanks) within a Water Control Zone are controlled under the Water Pollution control Ordinance (WPCO), except the discharge of domestic sewage into foul sewers or the discharge of unpolluted water into storm drains or into the waters of Hong Kong. Construction site discharges are controlled under the WPCO. -Discharges controlled under the WPCO must comply with the terms and conditions of a valid WPCO licence. | | | | | |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|---|---|-----------------------------------|---|---------------------------------------|----------------------------|---------------------------------|
| 8. | Construction Waste Control Requirements | <p>Specific Measures Associated with Marine sediments</p> <p>In accordance with the WBTC No. 3/2000, the seriously contaminated material must be dredged and transported with great care. Mitigation measures, including the use of close-grab dredgers, shall be incorporated.</p> <p>The dredged contaminated sediment must be effectively isolated from the environment upon final disposal and shall be disposed of at the East Sha Chau Contaminated Mud Pits.</p> | TDD's Contractor | Whole Reclamation Area During Reclamation Works End of Reclamation Work | Implemented during Construction Stage | R | 7 |
| | | <p>Segregation and Disposal of Wastes</p> <ul style="list-style-type: none"> · inert demolition/construction waste material when deemed suitable for reclamation or land formation should be re-used on-site; · non-inert demolition / construction waste material should be disposed of at landfills; · chemical waste as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be stored in accordance with approved methods defined in the Regulation and Code of Practice and the chemical waste disposed of at the Chemical Waste Treatment Facility located at Tsing Yi or an approved recycler; · general refuse should be recycled where possible or disposed of at public landfill. | TDD's Contractor | Works Areas During Construction End of Construction | Implemented during Construction Stage | P, R, A, C | 1,8, 9 |
| | | <p>Storage, Collection and Transport of Waste</p> <ul style="list-style-type: none"> · wastes should be handled and stored in a manner which ensures that they are held securely without loss or leakage thereby minimising the potential for pollution. Release of these potential pollutants into marine waters during storage, handling or barge transportation should not be permitted as introduction of polluted waters is likely to have detrimental effects on water quality and water sensitive receivers; · only reputable waste hauliers authorised to collect the specific category of waste concerned should be employed; · appropriate measures should be employed to minimise windblown litter and dust during transportation by using enclosed bins, covering trucks or transporting wastes in enclosed containers; · the necessary waste disposal permits and registrations should be obtained from the appropriate authorities, if they are required, in accordance with the Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354) | TDD's Contractor | Works Areas During Construction End of Construction | Implemented during Construction Stage | P, R, A, C | 1, 8, 9 |



| No. | Activity | Mitigation/EIA Recommendations | Responsibility for Implementation | Location Duration completion of measures | Implementation Status | Permit Conditions apply to | Relevant Guidelines Legislation |
|-----|--|---|--|--|--|------------------------------|---------------------------------|
| | | and the Crown Land Ordinance; <ul style="list-style-type: none"> · collection of general refuse should be carried out frequently, preferably daily; · waste should only be disposed of at licensed sites and the civil engineering contractor should develop procedures to ensure that illegal disposal of wastes does not occur; · waste storage areas should be well maintained and cleaned regularly; · records should be maintained of the quantities of wastes generated, recycled and disposed, determined by weighing each load or other method; and · A "trip ticket" system should be implemented, if required by Government. | | | | | |
| 9 | Construction Landscape and Visual Control Requirements | Construction stage landscape and visual mitigation measures should include : <ul style="list-style-type: none"> · Minimising contractors accesses and working areas as far as possible; · Protection and retention of existing vegetation where possible in accordance with the Hong Kong Government "A Guide to Tree Planting and Maintenance in Urban Hong Kong, Section 5" Care of Trees on Development Sites' and the Country Parks Ordinance · Transplanting of trees where appropriate; · Advance planting and visual screening; · Conservation of top soil; · Design of the temporary works areas so as to optimise eventual use as promenade and public open space; and · Sensitively designed site hoarding. | TDD's design consultant | Area wide during design and contract preparation | Implemented during Design Stage | P, R, A, C | 11, 12, 13,14 |
| 10 | Monitoring and Audit | To be carried out in accordance with the Schedule in the EM and A Manual | TDD*/Contractor/RSS TDD's design consultant | Works areas During construction End of construction and within one year of operational phase Area wide during design and contract preparation | Implemented during Construction Stage Implemented during Design Stage | P, R, A, C P, R, A, C | 1 11,12,13,14 |



Relevant Guidelines Legislation

1. Environmental Impact Assessment Ordinance Technical Memorandum (EIAO)
2. HKPSG
3. ExCo Criteria for ITR
4. Noise Control Ordinance
5. The ProPECC Note PN2/93 (Construction Noise daytime limits)
6. Air Pollution Control Ordinance (APCO)
7. Water Pollution Control Ordinance (WPCO)(Cap. 358)
8. Waste Disposal Ordinance (Cap 354)
9. Waste Disposal (Chemical Waste)(General) Regulation (Cap 354)
10. Land Ordinance (Cap 28)
11. WBTC 25/92 Allocation of Space for Urban Trees
12. WBTC 25/93 Control of Visual Impact of Slopes
13. WBTC 18/94 Management and Maintenance of both Natural Vegetation and Landscape Works
14. WBTC 24/94 and PELBTC 3/94 "Tree Preservation"
15. Antiquities and Monuments Ordinance (Cap 53)

Permit Conditions apply to

- P Primary and District Distributor Roads
- R Reclamation
- A North Island Line Protection Works
- C Central and Wanchai Bypass

+ These items should be excluded from any Environmental Permit conditions as these refer to future development of the area (which is not designated under the EIAO), and are not related to reclamation and dredging activities which are designated, and can hence be controlled through EP conditions.

* Normally undertaken by a specialist monitoring team employed directly by the proponent and audited by the Environmental Works Checker.



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. | 70 dB(A) |

Action and Limit Level for Air Monitoring

| Monitoring Locations | 1-hour TSP Level in $\mu\text{g}/\text{m}^3$ | | 24-hour TSP Level in $\mu\text{g}/\text{m}^3$ | |
|---|--|-------------|---|-------------|
| | Action Level | Limit Level | Action Level | Limit Level |
| ACL1 - City Hall | 460 | 500 | 163 | 260 |
| ACL2a - Contractor HK/2012/08 Site Office | 300.1 | 500 | 187.3 | 260 |

Action and Limit Level for Water Quality Monitoring

| Parameters | Action Level | Limit Level |
|---|--------------|-------------|
| M5B – Central Cooling Water Intake Group | | |
| SS in mg/L | 12.00 | 17.00 |
| DO in mg/L | 4.60 | 3.00 |



Appendix 4.1

Noise Monitoring Graphical Presentations

Continuous Noise Monitoring Data ACL3 (City Hall)

Normal Day 07:00-19:00

Table with 2 columns: Date/Time and Noise Level. Rows range from 1/11/2018 07:01 to 6/11/2018 12:31.

Table with 2 columns: Date/Time and Noise Level. Rows range from 12/11/2018 07:31 to 16/11/2018 13:31.

Table with 2 columns: Date/Time and Noise Level. Rows range from 16/11/2018 14:01 to 22/11/2018 08:01.

Table with 2 columns: Date/Time and Noise Level. Rows range from 22/11/2018 08:31 to 27/11/2018 14:31.

Table with 2 columns: Date/Time and Noise Level. Rows range from 27/11/2018 15:01 to 1/11/2018 21:01.

Normal Day 19:00-23:00 Sunday & Holiday 07:00-23:00

Table with 2 columns: Date/Time and Noise Level. Rows range from 1/11/2018 19:01 to 1/11/2018 21:01.

Continuous Noise Monitoring Data ACL3 (City Hall)

| | | |
|---------------------|---------------------|---------------------|
| 27/11/2018 23:26 60 | 29/11/2018 00:31 59 | 30/11/2018 01:36 56 |
| 27/11/2018 23:31 59 | 29/11/2018 00:36 60 | 30/11/2018 01:41 56 |
| 27/11/2018 23:36 59 | 29/11/2018 00:41 59 | 30/11/2018 01:46 56 |
| 27/11/2018 23:41 59 | 29/11/2018 00:46 58 | 30/11/2018 01:51 56 |
| 27/11/2018 23:46 59 | 29/11/2018 00:51 58 | 30/11/2018 01:56 56 |
| 27/11/2018 23:51 60 | 29/11/2018 00:56 58 | 30/11/2018 02:01 56 |
| 27/11/2018 23:56 59 | 29/11/2018 01:01 57 | 30/11/2018 02:06 56 |
| 28/11/2018 00:01 58 | 29/11/2018 01:06 58 | 30/11/2018 02:11 57 |
| 28/11/2018 00:06 60 | 29/11/2018 01:11 57 | 30/11/2018 02:16 56 |
| 28/11/2018 00:11 58 | 29/11/2018 01:16 58 | 30/11/2018 02:21 56 |
| 28/11/2018 00:16 58 | 29/11/2018 01:21 58 | 30/11/2018 02:26 57 |
| 28/11/2018 00:21 58 | 29/11/2018 01:26 57 | 30/11/2018 02:31 58 |
| 28/11/2018 00:26 60 | 29/11/2018 01:31 58 | 30/11/2018 02:36 59 |
| 28/11/2018 00:31 59 | 29/11/2018 01:36 58 | 30/11/2018 02:41 57 |
| 28/11/2018 00:36 57 | 29/11/2018 01:41 58 | 30/11/2018 02:46 57 |
| 28/11/2018 00:41 58 | 29/11/2018 01:46 57 | 30/11/2018 02:51 58 |
| 28/11/2018 00:46 57 | 29/11/2018 01:51 58 | 30/11/2018 02:56 58 |
| 28/11/2018 00:51 58 | 29/11/2018 01:56 71 | 30/11/2018 03:01 58 |
| 28/11/2018 00:56 57 | 29/11/2018 02:01 65 | 30/11/2018 03:06 59 |
| 28/11/2018 01:01 57 | 29/11/2018 02:06 62 | 30/11/2018 03:11 59 |
| 28/11/2018 01:06 57 | 29/11/2018 02:11 60 | 30/11/2018 03:16 60 |
| 28/11/2018 01:11 57 | 29/11/2018 02:16 58 | 30/11/2018 03:21 59 |
| 28/11/2018 01:16 59 | 29/11/2018 02:21 66 | 30/11/2018 03:26 49 |
| 28/11/2018 01:21 56 | 29/11/2018 02:26 63 | 30/11/2018 03:31 54 |
| 28/11/2018 01:26 57 | 29/11/2018 02:31 54 | 30/11/2018 03:36 50 |
| 28/11/2018 01:31 58 | 29/11/2018 02:36 56 | 30/11/2018 03:41 62 |
| 28/11/2018 01:36 59 | 29/11/2018 02:41 58 | 30/11/2018 03:46 61 |
| 28/11/2018 01:41 57 | 29/11/2018 02:46 57 | 30/11/2018 03:51 60 |
| 28/11/2018 01:46 56 | 29/11/2018 02:51 59 | 30/11/2018 03:56 60 |
| 28/11/2018 01:51 57 | 29/11/2018 02:56 58 | 30/11/2018 04:01 60 |
| 28/11/2018 01:56 56 | 29/11/2018 03:01 60 | 30/11/2018 04:06 58 |
| 28/11/2018 02:01 56 | 29/11/2018 03:06 65 | 30/11/2018 04:11 57 |
| 28/11/2018 02:06 57 | 29/11/2018 03:11 56 | 30/11/2018 04:16 59 |
| 28/11/2018 02:11 59 | 29/11/2018 03:16 58 | 30/11/2018 04:21 58 |
| 28/11/2018 02:16 57 | 29/11/2018 03:21 56 | 30/11/2018 04:26 58 |
| 28/11/2018 02:21 56 | 29/11/2018 03:26 58 | 30/11/2018 04:31 57 |
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| 28/11/2018 02:31 54 | 29/11/2018 03:36 55 | 30/11/2018 04:41 57 |
| 28/11/2018 02:36 55 | 29/11/2018 03:41 56 | 30/11/2018 04:46 58 |
| 28/11/2018 02:41 56 | 29/11/2018 03:46 56 | 30/11/2018 04:51 57 |
| 28/11/2018 02:46 56 | 29/11/2018 03:51 57 | 30/11/2018 04:56 60 |
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| 28/11/2018 02:56 55 | 29/11/2018 04:01 57 | 30/11/2018 05:06 57 |
| 28/11/2018 03:01 55 | 29/11/2018 04:06 56 | 30/11/2018 05:11 57 |
| 28/11/2018 03:06 55 | 29/11/2018 04:11 57 | 30/11/2018 05:16 58 |
| 28/11/2018 03:11 55 | 29/11/2018 04:16 57 | 30/11/2018 05:21 60 |
| 28/11/2018 03:16 56 | 29/11/2018 04:21 57 | 30/11/2018 05:26 59 |
| 28/11/2018 03:21 54 | 29/11/2018 04:26 57 | 30/11/2018 05:31 59 |
| 28/11/2018 03:26 55 | 29/11/2018 04:31 57 | 30/11/2018 05:36 59 |
| 28/11/2018 03:31 55 | 29/11/2018 04:36 57 | 30/11/2018 05:41 59 |
| 28/11/2018 03:36 57 | 29/11/2018 04:41 57 | 30/11/2018 05:46 59 |
| 28/11/2018 03:41 57 | 29/11/2018 04:46 57 | 30/11/2018 05:51 59 |
| 28/11/2018 03:46 57 | 29/11/2018 04:51 57 | 30/11/2018 05:56 59 |
| 28/11/2018 03:51 57 | 29/11/2018 04:56 58 | 30/11/2018 06:01 59 |
| 28/11/2018 03:56 57 | 29/11/2018 05:01 58 | 30/11/2018 06:06 58 |
| 28/11/2018 04:01 57 | 29/11/2018 05:06 56 | 30/11/2018 06:11 60 |
| 28/11/2018 04:06 57 | 29/11/2018 05:11 57 | 30/11/2018 06:16 62 |
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| 28/11/2018 04:21 58 | 29/11/2018 05:26 39 | 30/11/2018 06:31 60 |
| 28/11/2018 04:26 58 | 29/11/2018 05:31 59 | 30/11/2018 06:36 60 |
| 28/11/2018 04:31 58 | 29/11/2018 05:36 58 | 30/11/2018 06:41 60 |
| 28/11/2018 04:36 57 | 29/11/2018 05:41 60 | 30/11/2018 06:46 52 |
| 28/11/2018 04:41 57 | 29/11/2018 05:46 51 | 30/11/2018 06:51 50 |
| 28/11/2018 04:46 58 | 29/11/2018 05:51 60 | 30/11/2018 06:56 53 |
| 28/11/2018 04:51 58 | 29/11/2018 05:56 58 | 30/11/2018 23:01 58 |
| 28/11/2018 04:56 58 | 29/11/2018 06:01 59 | 30/11/2018 23:06 61 |
| 28/11/2018 05:01 58 | 29/11/2018 06:06 59 | 30/11/2018 23:11 56 |
| 28/11/2018 05:06 58 | 29/11/2018 06:11 59 | 30/11/2018 23:16 60 |
| 28/11/2018 05:11 58 | 29/11/2018 06:16 59 | 30/11/2018 23:21 61 |
| 28/11/2018 05:16 58 | 29/11/2018 06:21 59 | 30/11/2018 23:26 61 |
| 28/11/2018 05:21 58 | 29/11/2018 06:26 60 | 30/11/2018 23:31 56 |
| 28/11/2018 05:26 58 | 29/11/2018 06:31 59 | 30/11/2018 23:36 56 |
| 28/11/2018 05:31 58 | 29/11/2018 06:36 60 | 30/11/2018 23:41 55 |
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| 28/11/2018 05:41 58 | 29/11/2018 06:46 56 | 30/11/2018 23:51 58 |
| 28/11/2018 05:46 58 | 29/11/2018 06:51 56 | 30/11/2018 23:56 55 |
| 28/11/2018 05:51 58 | 29/11/2018 06:56 53 | |
| 28/11/2018 05:56 60 | 29/11/2018 23:01 62 | |
| 28/11/2018 06:01 59 | 29/11/2018 23:06 58 | |
| 28/11/2018 06:06 60 | 29/11/2018 23:11 53 | |
| 28/11/2018 06:11 60 | 29/11/2018 23:16 57 | |
| 28/11/2018 06:16 60 | 29/11/2018 23:21 63 | |
| 28/11/2018 06:21 60 | 29/11/2018 23:26 60 | |
| 28/11/2018 06:26 60 | 29/11/2018 23:31 42 | |
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| 28/11/2018 06:36 60 | 29/11/2018 23:41 59 | |
| 28/11/2018 06:41 34 | 29/11/2018 23:46 64 | |
| 28/11/2018 06:46 47 | 29/11/2018 23:51 63 | |
| 28/11/2018 06:51 55 | 29/11/2018 23:56 55 | |
| 28/11/2018 06:56 58 | 30/11/2018 00:01 56 | |
| 28/11/2018 23:01 64 | 30/11/2018 00:06 51 | |
| 28/11/2018 23:06 63 | 30/11/2018 00:11 58 | |
| 28/11/2018 23:11 64 | 30/11/2018 00:16 58 | |
| 28/11/2018 23:16 61 | 30/11/2018 00:21 59 | |
| 28/11/2018 23:21 66 | 30/11/2018 00:26 58 | |
| 28/11/2018 23:26 59 | 30/11/2018 00:31 57 | |
| 28/11/2018 23:31 63 | 30/11/2018 00:36 57 | |
| 28/11/2018 23:36 65 | 30/11/2018 00:41 59 | |
| 28/11/2018 23:41 70 | 30/11/2018 00:46 58 | |
| 28/11/2018 23:46 69 | 30/11/2018 00:51 57 | |
| 28/11/2018 23:51 74 | 30/11/2018 00:56 56 | |
| 28/11/2018 23:56 74 | 30/11/2018 01:01 64 | |
| 29/11/2018 00:01 69 | 30/11/2018 01:06 56 | |
| 29/11/2018 00:06 64 | 30/11/2018 01:11 58 | |
| 29/11/2018 00:11 70 | 30/11/2018 01:16 58 | |
| 29/11/2018 00:16 59 | 30/11/2018 01:21 57 | |
| 29/11/2018 00:21 59 | 30/11/2018 01:26 58 | |
| 29/11/2018 00:26 59 | 30/11/2018 01:31 58 | |

Continuous Noise Monitoring Data ACL3 (City Hall)

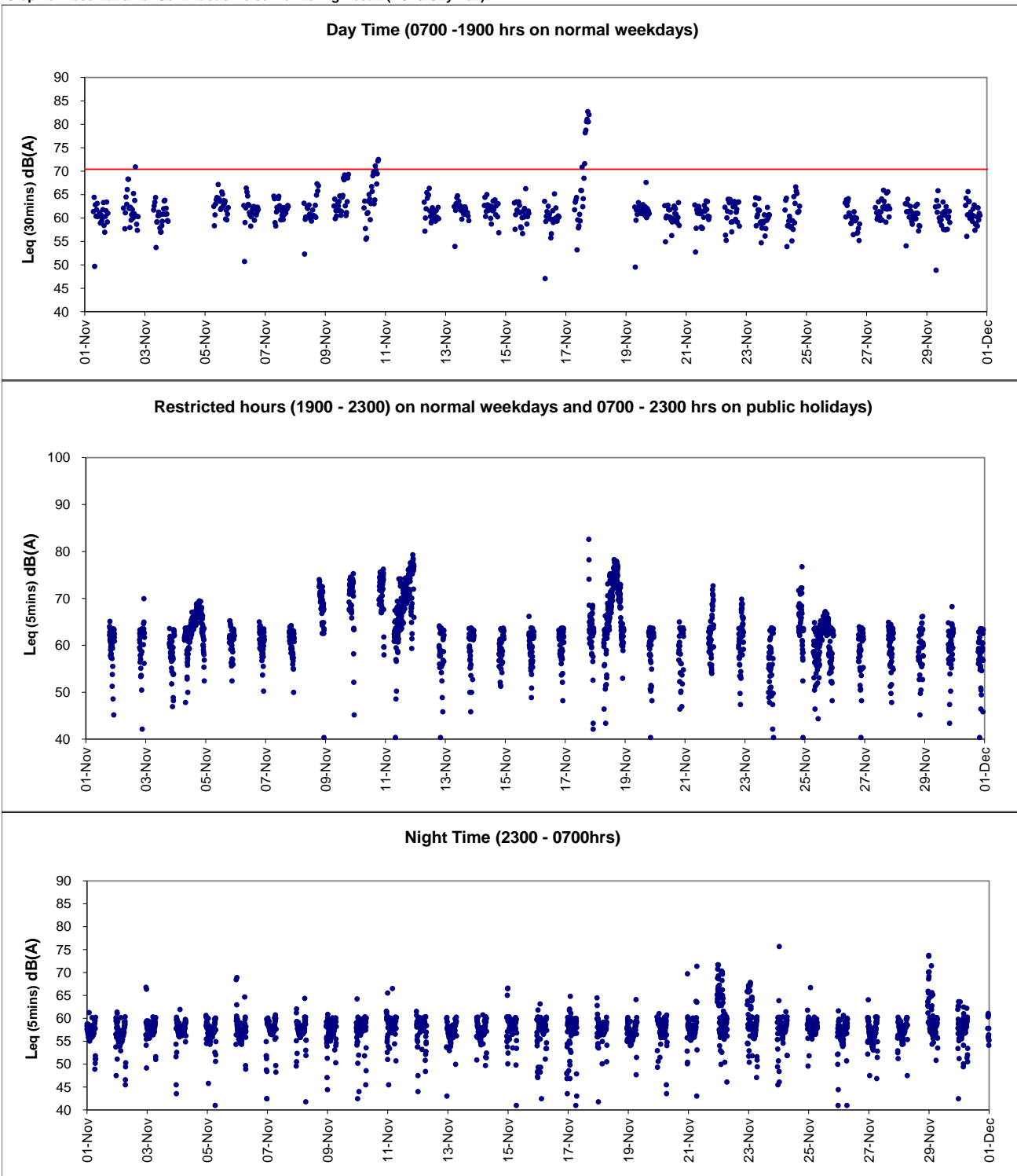
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| 29/12/2018 00:01 59 | 30/12/2018 01:06 58 | 31/12/2018 02:11 55 |
| 29/12/2018 00:06 59 | 30/12/2018 01:11 58 | 31/12/2018 02:16 55 |
| 29/12/2018 00:11 55 | 30/12/2018 01:16 58 | 31/12/2018 02:21 55 |
| 29/12/2018 00:16 58 | 30/12/2018 01:21 58 | 31/12/2018 02:26 54 |
| 29/12/2018 00:21 59 | 30/12/2018 01:26 59 | 31/12/2018 02:31 55 |
| 29/12/2018 00:26 58 | 30/12/2018 01:31 58 | 31/12/2018 02:36 54 |
| 29/12/2018 00:31 68 | 30/12/2018 01:36 58 | 31/12/2018 02:41 54 |
| 29/12/2018 00:36 58 | 30/12/2018 01:41 59 | 31/12/2018 02:46 55 |
| 29/12/2018 00:41 54 | 30/12/2018 01:46 58 | 31/12/2018 02:51 55 |
| 29/12/2018 00:46 59 | 30/12/2018 01:51 60 | 31/12/2018 02:56 54 |
| 29/12/2018 00:51 54 | 30/12/2018 01:56 57 | 31/12/2018 03:01 55 |
| 29/12/2018 00:56 59 | 30/12/2018 02:01 56 | 31/12/2018 03:06 54 |
| 29/12/2018 01:01 58 | 30/12/2018 02:06 57 | 31/12/2018 03:11 54 |
| 29/12/2018 01:06 58 | 30/12/2018 02:11 57 | 31/12/2018 03:16 56 |
| 29/12/2018 01:11 48 | 30/12/2018 02:16 56 | 31/12/2018 03:21 54 |
| 29/12/2018 01:16 58 | 30/12/2018 02:21 57 | 31/12/2018 03:26 55 |
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| 29/12/2018 01:26 57 | 30/12/2018 02:31 57 | 31/12/2018 03:36 54 |
| 29/12/2018 01:31 60 | 30/12/2018 02:36 57 | 31/12/2018 03:41 54 |
| 29/12/2018 01:36 55 | 30/12/2018 02:41 58 | 31/12/2018 03:46 55 |
| 29/12/2018 01:41 58 | 30/12/2018 02:46 57 | 31/12/2018 03:51 54 |
| 29/12/2018 01:46 59 | 30/12/2018 02:51 57 | 31/12/2018 03:56 54 |
| 29/12/2018 01:51 63 | 30/12/2018 02:56 56 | 31/12/2018 04:01 54 |
| 29/12/2018 01:56 58 | 30/12/2018 03:01 57 | 31/12/2018 04:06 54 |
| 29/12/2018 02:01 64 | 30/12/2018 03:06 57 | 31/12/2018 04:11 55 |
| 29/12/2018 02:06 55 | 30/12/2018 03:11 55 | 31/12/2018 04:16 57 |
| 29/12/2018 02:11 58 | 30/12/2018 03:16 56 | 31/12/2018 04:21 56 |
| 29/12/2018 02:16 34 | 30/12/2018 03:21 57 | 31/12/2018 04:26 56 |
| 29/12/2018 02:21 57 | 30/12/2018 03:26 57 | 31/12/2018 04:31 56 |
| 29/12/2018 02:26 58 | 30/12/2018 03:31 57 | 31/12/2018 04:36 56 |
| 29/12/2018 02:31 56 | 30/12/2018 03:36 56 | 31/12/2018 04:41 56 |
| 29/12/2018 02:36 57 | 30/12/2018 03:41 56 | 31/12/2018 04:46 57 |
| 29/12/2018 02:41 56 | 30/12/2018 03:46 56 | 31/12/2018 04:51 56 |
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| 29/12/2018 02:51 58 | 30/12/2018 03:56 57 | 31/12/2018 05:01 56 |
| 29/12/2018 02:56 61 | 30/12/2018 04:01 56 | 31/12/2018 05:06 56 |
| 29/12/2018 03:01 57 | 30/12/2018 04:06 57 | 31/12/2018 05:11 56 |
| 29/12/2018 03:06 58 | 30/12/2018 04:11 56 | 31/12/2018 05:16 57 |
| 29/12/2018 03:11 60 | 30/12/2018 04:16 56 | 31/12/2018 05:21 57 |
| 29/12/2018 03:16 57 | 30/12/2018 04:21 56 | 31/12/2018 05:26 58 |
| 29/12/2018 03:21 57 | 30/12/2018 04:26 57 | 31/12/2018 05:31 57 |
| 29/12/2018 03:26 56 | 30/12/2018 04:31 58 | 31/12/2018 05:36 57 |
| 29/12/2018 03:31 47 | 30/12/2018 04:36 56 | 31/12/2018 05:41 57 |
| 29/12/2018 03:36 59 | 30/12/2018 04:41 57 | 31/12/2018 05:46 59 |
| 29/12/2018 03:41 57 | 30/12/2018 04:46 56 | 31/12/2018 05:51 58 |
| 29/12/2018 03:46 57 | 30/12/2018 04:51 57 | 31/12/2018 05:56 57 |
| 29/12/2018 03:51 57 | 30/12/2018 04:56 56 | 31/12/2018 06:01 59 |
| 29/12/2018 03:56 56 | 30/12/2018 05:01 55 | 31/12/2018 06:06 59 |
| 29/12/2018 04:01 57 | 30/12/2018 05:06 57 | 31/12/2018 06:11 59 |
| 29/12/2018 04:06 57 | 30/12/2018 05:11 55 | 31/12/2018 06:16 60 |
| 29/12/2018 04:11 56 | 30/12/2018 05:16 56 | 31/12/2018 06:21 59 |
| 29/12/2018 04:16 57 | 30/12/2018 05:21 57 | 31/12/2018 06:26 58 |
| 29/12/2018 04:21 58 | 30/12/2018 05:26 57 | 31/12/2018 06:31 58 |
| 29/12/2018 04:26 69 | 30/12/2018 05:31 56 | 31/12/2018 06:36 59 |
| 29/12/2018 04:31 56 | 30/12/2018 05:36 57 | 31/12/2018 06:41 59 |
| 29/12/2018 04:36 56 | 30/12/2018 05:41 56 | 31/12/2018 06:46 59 |
| 29/12/2018 04:41 56 | 30/12/2018 05:46 56 | 31/12/2018 06:51 60 |
| 29/12/2018 04:46 57 | 30/12/2018 05:51 57 | 31/12/2018 06:56 60 |
| 29/12/2018 04:51 57 | 30/12/2018 05:56 57 | 31/12/2018 23:01 75 |
| 29/12/2018 04:56 57 | 30/12/2018 06:01 58 | 31/12/2018 23:06 75 |
| 29/12/2018 05:01 56 | 30/12/2018 06:06 59 | 31/12/2018 23:11 73 |
| 29/12/2018 05:06 57 | 30/12/2018 06:11 58 | 31/12/2018 23:16 72 |
| 29/12/2018 05:11 57 | 30/12/2018 06:16 59 | 31/12/2018 23:21 71 |
| 29/12/2018 05:16 57 | 30/12/2018 06:21 58 | 31/12/2018 23:26 71 |
| 29/12/2018 05:21 57 | 30/12/2018 06:26 58 | 31/12/2018 23:31 74 |
| 29/12/2018 05:26 56 | 30/12/2018 06:31 58 | 31/12/2018 23:36 71 |
| 29/12/2018 05:31 57 | 30/12/2018 06:36 59 | 31/12/2018 23:41 72 |
| 29/12/2018 05:36 57 | 30/12/2018 06:41 58 | 31/12/2018 23:46 71 |
| 29/12/2018 05:41 57 | 30/12/2018 06:46 59 | 31/12/2018 23:51 75 |
| 29/12/2018 05:46 58 | 30/12/2018 06:51 59 | 31/12/2018 23:56 76 |
| 29/12/2018 05:51 58 | 30/12/2018 06:56 59 | |
| 29/12/2018 05:56 58 | 30/12/2018 23:01 63 | |
| 29/12/2018 06:01 58 | 30/12/2018 23:06 60 | |
| 29/12/2018 06:06 58 | 30/12/2018 23:11 57 | |
| 29/12/2018 06:11 58 | 30/12/2018 23:16 59 | |
| 29/12/2018 06:16 58 | 30/12/2018 23:21 53 | |
| 29/12/2018 06:21 58 | 30/12/2018 23:26 56 | |
| 29/12/2018 06:26 58 | 30/12/2018 23:31 57 | |
| 29/12/2018 06:31 58 | 30/12/2018 23:36 51 | |
| 29/12/2018 06:36 59 | 30/12/2018 23:41 59 | |
| 29/12/2018 06:41 59 | 30/12/2018 23:46 54 | |
| 29/12/2018 06:46 59 | 30/12/2018 23:51 59 | |
| 29/12/2018 06:51 59 | 30/12/2018 23:56 59 | |
| 29/12/2018 06:56 60 | 31/12/2018 00:01 59 | |
| 29/12/2018 23:01 64 | 31/12/2018 00:06 59 | |
| 29/12/2018 23:06 58 | 31/12/2018 00:11 58 | |
| 29/12/2018 23:11 57 | 31/12/2018 00:16 56 | |
| 29/12/2018 23:16 59 | 31/12/2018 00:21 57 | |
| 29/12/2018 23:21 58 | 31/12/2018 00:26 58 | |
| 29/12/2018 23:26 59 | 31/12/2018 00:31 57 | |
| 29/12/2018 23:31 54 | 31/12/2018 00:36 57 | |
| 29/12/2018 23:36 49 | 31/12/2018 00:41 55 | |
| 29/12/2018 23:41 60 | 31/12/2018 00:46 56 | |
| 29/12/2018 23:46 59 | 31/12/2018 00:51 57 | |
| 29/12/2018 23:51 60 | 31/12/2018 00:56 56 | |
| 29/12/2018 23:56 50 | 31/12/2018 01:01 56 | |
| 30/12/2018 00:01 60 | 31/12/2018 01:06 55 | |
| 30/12/2018 00:06 59 | 31/12/2018 01:11 57 | |
| 30/12/2018 00:11 59 | 31/12/2018 01:16 56 | |
| 30/12/2018 00:16 59 | 31/12/2018 01:21 56 | |
| 30/12/2018 00:21 60 | 31/12/2018 01:26 56 | |
| 30/12/2018 00:26 60 | 31/12/2018 01:31 56 | |
| 30/12/2018 00:31 60 | 31/12/2018 01:36 59 | |
| 30/12/2018 00:36 60 | 31/12/2018 01:41 56 | |
| 30/12/2018 00:41 59 | 31/12/2018 01:46 55 | |
| 30/12/2018 00:46 59 | 31/12/2018 01:51 56 | |
| 30/12/2018 00:51 58 | 31/12/2018 01:56 56 | |
| 30/12/2018 00:56 58 | 31/12/2018 02:01 56 | |

Continuous Noise Monitoring Data

ACL3 (City Hall)

Table with 12 columns of date-time, location, and numerical data. Columns 1-2: 5/1/2019 03:56 to 6/1/2019 04:56. Columns 3-4: 6/1/2019 05:01 to 7/1/2019 06:06. Columns 5-6: 7/1/2019 06:11 to 8/1/2019 07:16. Columns 7-8: 8/1/2019 23:11 to 10/1/2019 00:16. Columns 9-10: 10/1/2019 00:21 to 11/1/2019 01:26. Columns 11-12: 11/1/2019 01:31 to 12/1/2019 02:26.

Graphic Presentation of Continuous Noise Monitoring Result (ACL3-City Hall)

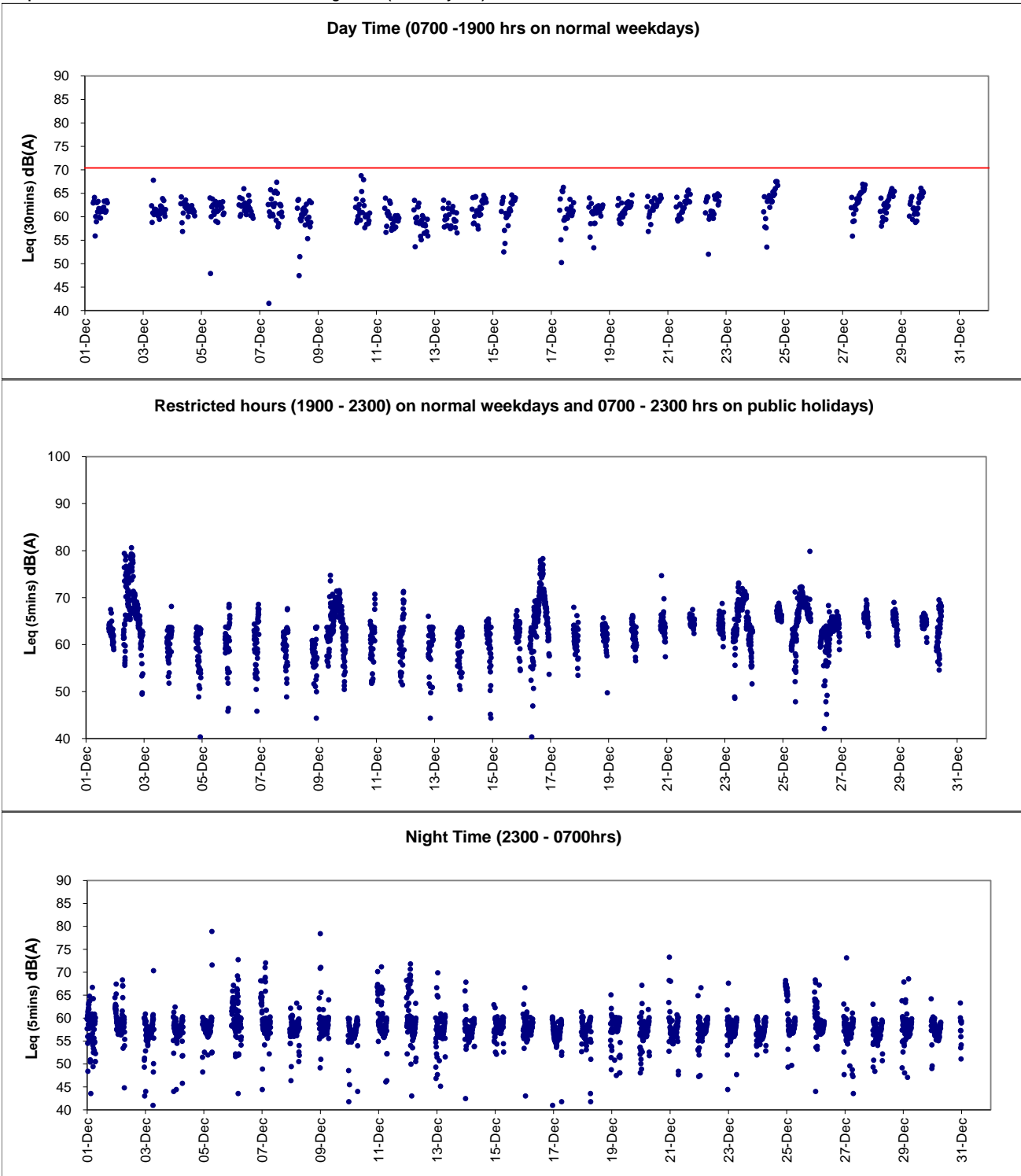


After the investigation, no construction works was conducted by Contractor HK/2012/08 and HY/2010/08 at CRIII area on 2 November 2018. Traffic noise was considered as the major noise contribution. As such, the exceedance was considered as non-project related.

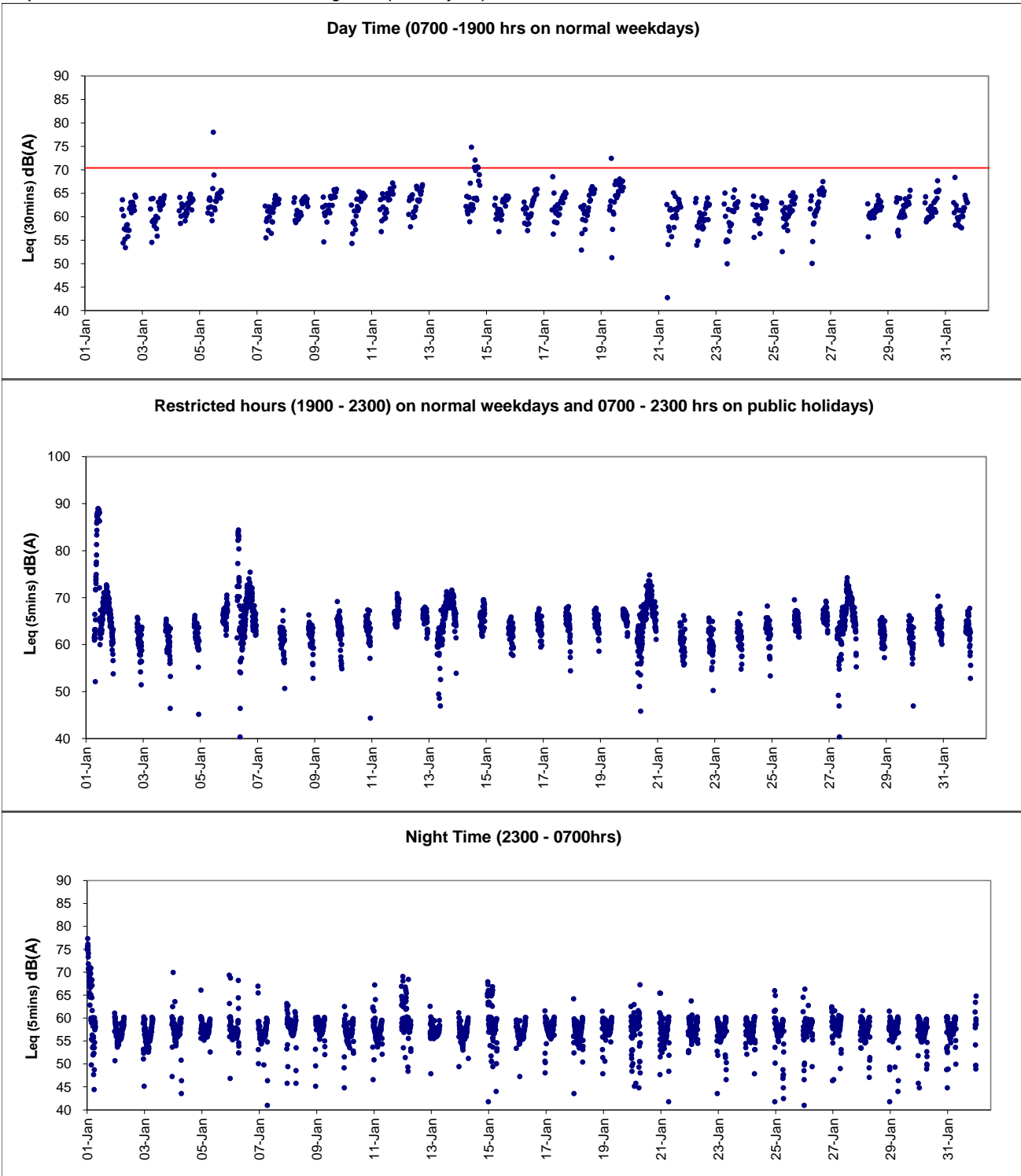
After the investigation, no construction works was conducted by Contractor HK/2012/08 and general formwork erection by hand tools was conducted by HY/2010/08 at CRIII area on 10 November 2018 while music event was held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.

After the investigation, no construction works was conducted by Contractor HK/2012/08 and HY/2010/08 at CRIII area on 17 November 2018. Meanwhile, public event was held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.

Graphic Presentation of Continuous Noise Monitoring Result (ACL3-City Hall)



Graphic Presentation of Continuous Noise Monitoring Result (ACL3-City Hall)



After the investigation, no construction works was conducted by Contractor HK/2012/08 and HY/2010/08 at CRIII area on 5, 14 and 19 January 2019. Meanwhile, public events were held at area opposite to the monitoring station during the concerned period and considered as the major noise contribution. As such, the exceedance was considered as non-project related.



Appendix 4.2

Air Quality Monitoring Graphical Presentations



Location: ACL1 - City Hall

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 163

Limit Level ($\mu\text{g}/\text{m}^3$) - 260

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 02-Nov-18 | 8:00 | Cloudy | 28003 | 2.6866 | 2.7519 | 4604.36 | 4628.36 | 24.00 | 0.89 | 0.89 | 0.89 | 1280 | 51.0 |
| 08-Nov-18 | 8:00 | Cloudy | 27129 | 2.6723 | 2.8401 | 4631.36 | 4655.36 | 24.00 | 0.79 | 0.79 | 0.79 | 1132 | 148.2 |
| 14-Nov-18 | 8:00 | Cloudy | 28098 | 2.7275 | 2.8254 | 4658.36 | 4682.36 | 24.00 | 0.79 | 0.79 | 0.79 | 1135 | 86.2 |
| 20-Nov-18 | 8:00 | Cloudy | 28238 | 2.6839 | 2.7570 | 4685.36 | 4709.36 | 24.00 | 0.79 | 0.79 | 0.79 | 1136 | 64.4 |
| 26-Nov-18 | 8:00 | Cloudy | 28339 | 2.6653 | 2.7000 | 4712.36 | 4736.36 | 24.00 | 0.80 | 0.79 | 0.80 | 1146 | 30.3 |

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 460

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 03-Nov-18 | 8:15 | Cloudy | 27153 | 2.6829 | 2.6844 | 4628.36 | 4629.36 | 1.00 | 0.89 | 0.89 | 0.89 | 54 | 28.0 |
| 03-Nov-18 | 9:45 | Cloudy | 27972 | 2.7272 | 2.7283 | 4629.36 | 4630.36 | 1.00 | 0.89 | 0.89 | 0.89 | 54 | 20.6 |
| 03-Nov-18 | 13:00 | Cloudy | 27970 | 2.6788 | 2.6805 | 4630.36 | 4631.36 | 1.00 | 0.89 | 0.89 | 0.89 | 54 | 31.8 |
| 09-Nov-18 | 8:25 | Cloudy | 28103 | 2.7092 | 2.7147 | 4655.36 | 4656.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 116.6 |
| 09-Nov-18 | 9:29 | Cloudy | 27124 | 2.6923 | 2.6962 | 4656.36 | 4657.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 82.7 |
| 09-Nov-18 | 10:32 | Cloudy | 28101 | 2.7118 | 2.7166 | 4657.36 | 4658.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 101.7 |
| 15-Nov-18 | 8:30 | Cloudy | 28208 | 2.6870 | 2.6899 | 4682.36 | 4683.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 61.2 |
| 15-Nov-18 | 10:25 | Cloudy | 28217 | 2.6864 | 2.6909 | 4683.36 | 4684.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 95.0 |
| 15-Nov-18 | 13:00 | Cloudy | 28227 | 2.7006 | 2.7060 | 4684.36 | 4685.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 114.0 |
| 21-Nov-18 | 8:59 | Cloudy | 28094 | 2.7210 | 2.7256 | 4709.36 | 4710.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 97.4 |
| 21-Nov-18 | 10:03 | Cloudy | 28090 | 2.6976 | 2.7026 | 4710.36 | 4711.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 105.8 |
| 21-Nov-18 | 13:00 | Cloudy | 28337 | 2.6725 | 2.6809 | 4711.36 | 4712.36 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 177.8 |
| 27-Nov-18 | 9:27 | Cloudy | 28328 | 2.6949 | 2.6960 | 4736.36 | 4737.36 | 1.00 | 0.79 | 0.79 | 0.79 | 48 | 23.1 |
| 27-Nov-18 | 10:35 | Cloudy | 28325 | 2.6835 | 2.6846 | 4737.36 | 4738.36 | 1.00 | 0.79 | 0.79 | 0.79 | 48 | 23.1 |
| 27-Nov-18 | 13:00 | Cloudy | 28344 | 2.6311 | 2.6407 | 4738.36 | 4739.36 | 1.00 | 0.79 | 0.79 | 0.79 | 48 | 201.5 |



Location: ACL2a - Contractor HK/2012/08 Site office

Report on 24-hour TSP monitoring
 Action Level ($\mu\text{g}/\text{m}^3$) - 187.3
 Limit Level ($\mu\text{g}/\text{m}^3$) - 260

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 02-Nov-18 | 8:00 | Cloudy | 27968 | 2.6947 | 2.7737 | 9804.91 | 9828.91 | 24.00 | 1.09 | 1.09 | 1.09 | 1570 | 50.3 |
| 08-Nov-18 | 8:00 | Cloudy | 27875 | 2.6841 | 2.7789 | 9831.91 | 9855.91 | 24.00 | 1.12 | 1.12 | 1.12 | 1613 | 58.8 |
| 14-Nov-18 | 8:00 | Cloudy | 28178 | 2.7129 | 2.7904 | 9858.91 | 9882.91 | 24.00 | 1.12 | 1.12 | 1.12 | 1616 | 48.0 |
| 20-Nov-18 | 8:00 | Cloudy | 28239 | 2.6621 | 2.7455 | 9885.91 | 9909.91 | 24.00 | 1.12 | 1.12 | 1.12 | 1616 | 51.6 |
| 26-Nov-18 | 8:00 | Cloudy | 28331 | 2.6753 | 2.7088 | 9912.91 | 9936.91 | 24.00 | 1.13 | 1.13 | 1.13 | 1626 | 20.6 |

Report on 1-hour TSP monitoring
 Action Level ($\mu\text{g}/\text{m}^3$) - 300.1
 Limit Level ($\mu\text{g}/\text{m}^3$) - 500

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 03-Nov-18 | 9:50 | Cloudy | 27949 | 2.6846 | 2.6870 | 9828.91 | 9829.91 | 1.00 | 1.09 | 1.09 | 1.09 | 65 | 36.7 |
| 03-Nov-18 | 10:58 | Cloudy | 27133 | 2.6693 | 2.6732 | 9829.91 | 9830.91 | 1.00 | 1.09 | 1.09 | 1.09 | 65 | 59.6 |
| 03-Nov-18 | 13:00 | Cloudy | 27130 | 2.6877 | 2.6919 | 9830.91 | 9831.91 | 1.00 | 1.09 | 1.09 | 1.09 | 65 | 64.2 |
| 09-Nov-18 | 8:09 | Cloudy | 28104 | 2.7116 | 2.7153 | 9855.91 | 9856.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 55.0 |
| 09-Nov-18 | 9:45 | Cloudy | 28150 | 2.6679 | 2.6732 | 9856.91 | 9857.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 78.8 |
| 09-Nov-18 | 10:46 | Cloudy | 28196 | 2.6888 | 2.6967 | 9857.91 | 9858.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 117.5 |
| 15-Nov-18 | 8:15 | Cloudy | 28265 | 2.6587 | 2.6624 | 9882.91 | 9883.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 54.9 |
| 15-Nov-18 | 10:05 | Cloudy | 28264 | 2.6620 | 2.6666 | 9883.91 | 9884.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 68.3 |
| 15-Nov-18 | 13:00 | Cloudy | 28223 | 2.7275 | 2.7319 | 9884.91 | 9885.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 65.3 |
| 21-Nov-18 | 8:05 | Cloudy | 28162 | 2.6741 | 2.6772 | 9909.91 | 9910.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 46.1 |
| 21-Nov-18 | 9:50 | Cloudy | 28258 | 2.6837 | 2.6874 | 9910.91 | 9911.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 55.0 |
| 21-Nov-18 | 13:10 | Cloudy | 28305 | 2.6876 | 2.6925 | 9911.91 | 9912.91 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 72.8 |
| 27-Dec-18 | 8:05 | Cloudy | 28365 | 2.6331 | 2.6342 | 9936.91 | 9937.91 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 16.3 |
| 27-Dec-18 | 9:30 | Cloudy | 28410 | 2.6428 | 2.6438 | 9937.91 | 9938.91 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 14.8 |
| 27-Nov-18 | 13:00 | Cloudy | 28378 | 2.6709 | 2.6726 | 9938.91 | 9939.91 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 25.1 |



Location: ACL1 - City Hall

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 163

Limit Level ($\mu\text{g}/\text{m}^3$) - 260

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 3-Dec-18 | 16:00 | Cloudy | ACL1_24hr 28445 | 2.6876 | 2.7542 | 4742.71 | 4766.71 | 24.00 | 0.82 | 0.81 | 0.82 | 1174 | 56.7 |
| 7-Dec-18 | 8:00 | Cloudy | ACL1_24hr 206687 | 2.6581 | 2.7010 | 4766.71 | 4790.71 | 24.00 | 0.82 | 0.83 | 0.83 | 1189 | 36.1 |
| 10-Dec-18 | 8:00 | Fine | ACL1_24hr 206693 | 2.6367 | 2.7124 | 4793.74 | 4817.74 | 24.00 | 0.80 | 0.80 | 0.80 | 1153 | 65.7 |
| 15-Dec-18 | 8:00 | Fine | ACL1_24hr 140036 | 2.6680 | 2.7692 | 4820.74 | 4844.74 | 24.00 | 0.80 | 0.80 | 0.80 | 1151 | 87.9 |
| 21-Dec-18 | 8:00 | Fine | ACL1_24hr 140087 | 2.6634 | 2.7197 | 4847.74 | 4871.74 | 24.00 | 0.80 | 0.80 | 0.80 | 1152 | 48.9 |
| 27-Dec-18 | 8:00 | Cloudy | ACL1_24hr 140123 | 2.6454 | 2.7172 | 4874.75 | 4898.75 | 24.00 | 0.80 | 0.81 | 0.81 | 1161 | 61.9 |

Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 1 December 2018 to 3 December 2018.

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 460

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|-------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 3-Dec-18 | 8:15 | Cloudy | ACL1_1hr_1 28422 | 2.7027 | 2.7065 | 4739.71 | 4740.71 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 80.4 |
| 3-Dec-18 | 10:00 | Cloudy | ACL1_1hr_2 28458 | 2.6799 | 2.6835 | 4740.71 | 4741.71 | 1.00 | 0.79 | 0.79 | 0.79 | 47 | 76.1 |
| 3-Dec-18 | 13:30 | Cloudy | ACL1_1hr_3 28441 | 2.7027 | 2.7070 | 4741.71 | 4742.71 | 1.00 | 0.87 | 0.87 | 0.87 | 52 | 82.2 |
| 8-Dec-18 | 9:32 | Cloudy | ACL1_1hr_1 28341 | 2.6669 | 2.6689 | 4790.73 | 4791.73 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 41.6 |
| 8-Dec-18 | 10:38 | Cloudy | ACL1_1hr_2 206689 | 2.6562 | 2.6586 | 4791.73 | 4792.73 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 50.0 |
| 8-Dec-18 | 13:00 | Cloudy | ACL1_1hr_3 206692 | 2.6642 | 2.6647 | 4792.73 | 4793.73 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 10.4 |
| 11-Dec-18 | 9:12 | Fine | ACL1_1hr_1 140016 | 2.6782 | 2.6802 | 4817.74 | 4818.74 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 41.7 |
| 11-Dec-18 | 10:20 | Fine | ACL1_1hr_2 140027 | 2.6750 | 2.6764 | 4818.74 | 4819.74 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 29.2 |
| 11-Dec-18 | 13:00 | Fine | ACL1_1hr_3 140025 | 2.6888 | 2.6925 | 4819.74 | 4820.74 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 77.1 |
| 17-Dec-18 | 8:15 | Fine | ACL1_1hr_1 140075 | 2.6798 | 2.6804 | 4844.74 | 4845.74 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 12.5 |
| 17-Dec-18 | 9:18 | Fine | ACL1_1hr_2 140078 | 2.6492 | 2.6505 | 4845.74 | 4846.74 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 27.1 |
| 17-Dec-18 | 10:22 | Fine | ACL1_1hr_3 140081 | 2.7043 | 2.7052 | 4846.74 | 4847.74 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 18.7 |
| 22-Dec-18 | 9:00 | Fine | ACL1_1hr_1 140194 | 2.6510 | 2.6560 | 4871.75 | 4872.75 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 104.2 |
| 22-Dec-18 | 11:00 | Fine | ACL1_1hr_2 140108 | 2.6641 | 2.6669 | 4872.75 | 4873.75 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 58.3 |
| 22-Dec-18 | 13:00 | Fine | ACL1_1hr_3 140118 | 2.6543 | 2.6570 | 4873.75 | 4874.75 | 1.00 | 0.80 | 0.80 | 0.80 | 48 | 56.3 |
| 28-Dec-18 | 9:09 | Cloudy | ACL1_1hr_1 140129 | 2.6858 | 2.6887 | 4898.75 | 4899.75 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 59.7 |
| 28-Dec-18 | 10:18 | Cloudy | ACL1_1hr_2 140132 | 2.6662 | 2.6704 | 4899.75 | 4900.75 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 86.4 |
| 28-Dec-18 | 13:00 | Cloudy | ACL1_1hr_3 140135 | 2.6462 | 2.6540 | 4900.75 | 4901.75 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 160.4 |



Location: ACL2a - Contractor HK/2012/08 Site office

Report on 24-hour TSP monitoring
Action Level ($\mu\text{g}/\text{m}^3$) - 187.3
Limit Level ($\mu\text{g}/\text{m}^3$) - 260

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|-------------------|------------------|--------|-----------------|----------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 1-Dec-18 | 8:00 | Cloudy | ACL2a_24hr 28386 | 2.6749 | 2.7972 | 9939.44 | 9963.44 | 24.00 | 1.13 | 1.12 | 1.13 | 1620 | 75.5 |
| 7-Dec-18 | 8:00 | Cloudy | ACL2a_24hr 206744 | 2.6808 | 2.7294 | 9966.45 | 9990.45 | 24.00 | 1.13 | 1.13 | 1.13 | 1628 | 29.8 |
| 10-Dec-18 | 8:00 | Fine | ACL2a_24hr 206732 | 2.6852 | 2.7656 | 9993.47 | 10017.47 | 24.00 | 1.13 | 1.13 | 1.13 | 1633 | 49.2 |
| 15-Dec-18 | 8:00 | Fine | ACL2a_24hr 140008 | 2.6810 | 2.7715 | 10020.48 | 10044.48 | 24.00 | 1.13 | 1.13 | 1.13 | 1631 | 55.5 |
| 21-Dec-18 | 8:00 | Fine | ACL2a_24hr 140062 | 2.6625 | 2.7267 | 10047.49 | 10071.49 | 24.00 | 0.88 | 0.88 | 0.88 | 1268 | 50.6 |
| 27-Dec-18 | 8:00 | Cloudy | ACL2a_24hr 140119 | 2.6467 | 2.7208 | 10074.49 | 10098.49 | 24.00 | 0.88 | 0.89 | 0.89 | 1277 | 58.0 |

Report on 1-hour TSP monitoring
Action Level ($\mu\text{g}/\text{m}^3$) - 300.1
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|--------------------|------------------|--------|-----------------|----------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 3-Dec-18 | 8:05 | Cloudy | ACL2a_1hr_1 28388 | 2.6872 | 2.6886 | 9963.45 | 9964.45 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 20.8 |
| 3-Dec-18 | 9:40 | Cloudy | ACL2a_1hr_2 28457 | 2.6618 | 2.6642 | 9964.45 | 9965.45 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 35.7 |
| 3-Dec-18 | 13:00 | Cloudy | ACL2a_1hr_3 28449 | 2.6891 | 2.6923 | 9965.45 | 9966.45 | 1.00 | 1.12 | 1.12 | 1.12 | 67 | 47.5 |
| 8-Dec-18 | 8:05 | Cloudy | ACL2a_1hr_1 206713 | 2.6782 | 2.6793 | 9990.47 | 9991.47 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 16.2 |
| 8-Dec-18 | 9:17 | Cloudy | ACL2a_1hr_2 206719 | 2.6808 | 2.6824 | 9991.47 | 9992.47 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 23.5 |
| 8-Dec-18 | 10:21 | Cloudy | ACL2a_1hr_3 206726 | 2.6764 | 2.6779 | 9992.47 | 9993.47 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 22.0 |
| 11-Dec-18 | 13:00 | Fine | ACL2a_1hr_1 140023 | 2.6636 | 2.6684 | 10017.48 | 10018.48 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 70.6 |
| 11-Dec-18 | 14:20 | Fine | ACL2a_1hr_2 140002 | 2.6813 | 2.6895 | 10018.48 | 10019.48 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 120.6 |
| 11-Dec-18 | 15:30 | Fine | ACL2a_1hr_3 140005 | 2.7258 | 2.7330 | 10019.48 | 10020.48 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 105.9 |
| 17-Dec-18 | 10:30 | Fine | ACL2a_1hr_1 140082 | 2.6647 | 2.6659 | 10044.48 | 10045.48 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 17.6 |
| 17-Dec-18 | 13:00 | Fine | ACL2a_1hr_2 140089 | 2.6483 | 2.6489 | 10045.48 | 10046.48 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 8.8 |
| 17-Dec-18 | 14:03 | Fine | ACL2a_1hr_3 140093 | 2.6607 | 2.6626 | 10046.48 | 10047.48 | 1.00 | 1.13 | 1.13 | 1.13 | 68 | 27.9 |
| 22-Dec-18 | 8:50 | Fine | ACL2a_1hr_1 140198 | 2.6452 | 2.6492 | 10071.49 | 10072.49 | 1.00 | 0.88 | 0.88 | 0.88 | 53 | 75.7 |
| 22-Dec-18 | 10:20 | Fine | ACL2a_1hr_2 140103 | 2.6557 | 2.6593 | 10072.49 | 10073.49 | 1.00 | 0.88 | 0.88 | 0.88 | 53 | 68.1 |
| 22-Dec-18 | 13:00 | Fine | ACL2a_1hr_3 140109 | 2.6517 | 2.6545 | 10073.49 | 10074.49 | 1.00 | 0.88 | 0.88 | 0.88 | 53 | 53.0 |
| 28-Dec-18 | 13:01 | Cloudy | ACL2a_1hr_1 140138 | 2.6681 | 2.6715 | 10098.49 | 10099.49 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 63.6 |
| 28-Dec-18 | 14:24 | Cloudy | ACL2a_1hr_2 140139 | 2.6452 | 2.6488 | 10099.49 | 10100.49 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 67.4 |
| 28-Dec-18 | 15:36 | Cloudy | ACL2a_1hr_3 140153 | 2.6756 | 2.6793 | 10100.49 | 10101.49 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 69.2 |



Location: ACL1 - City Hall

Report on 24-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 163
 Limit Level ($\mu\text{g}/\text{m}^3$) - 260

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 02-Jan-19 | 08:00 | Cloudy | ACL1_24hr 140159 | 2.6491 | 2.7315 | 4901.75 | 4925.75 | 24.00 | 0.82 | 0.82 | 0.82 | 1176 | 70.1 |
| 08-Jan-19 | 08:00 | Fine | ACL1_24hr 140165 | 2.6293 | 2.7648 | 4928.75 | 4952.75 | 24.00 | 0.81 | 0.81 | 0.81 | 1165 | 116.3 |
| 14-Jan-19 | 08:00 | Cloudy | ACL1_24hr 140244 | 2.6589 | 2.7352 | 4955.75 | 4979.75 | 24.00 | 0.81 | 0.81 | 0.81 | 1162 | 65.7 |
| 18-Jan-19 | 08:00 | Fine | ACL1_24hr 140282 | 2.6811 | 2.7816 | 4982.75 | 5006.75 | 24.00 | 0.81 | 0.81 | 0.81 | 1166 | 86.2 |
| 23-Jan-19 | 08:00 | Fine | ACL1_24hr 140388 | 2.6491 | 2.7684 | 5009.77 | 5033.77 | 24.00 | 0.81 | 0.81 | 0.81 | 1170 | 102.0 |
| 28-Jan-19 | 08:00 | Fine | ACL1_24hr 140339 | 2.6676 | 2.7194 | 5036.77 | 5060.77 | 24.00 | 0.81 | 0.81 | 0.81 | 1165 | 44.5 |

Report on 1-hour TSP monitoring

Action Level ($\mu\text{g}/\text{m}^3$) - 460
 Limit Level ($\mu\text{g}/\text{m}^3$) - 500

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|-------------------|------------------|--------|-----------------|---------|-------------------|------------------------------------|-----------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{si} | Final, Q_{sf} | Average | | |
| 03-Jan-19 | 09:30 | Cloudy | ACL1_1hr_1 140173 | 2.6350 | 2.6377 | 4925.75 | 4926.75 | 1.00 | 0.82 | 0.82 | 0.82 | 49 | 55.2 |
| 03-Jan-19 | 10:55 | Cloudy | ACL1_1hr_2 206805 | 2.7224 | 2.7236 | 4926.75 | 4927.75 | 1.00 | 0.82 | 0.82 | 0.82 | 49 | 24.5 |
| 03-Jan-19 | 13:00 | Cloudy | ACL1_1hr_3 206810 | 2.6900 | 2.6910 | 4927.75 | 4928.75 | 1.00 | 0.82 | 0.82 | 0.82 | 49 | 20.4 |
| 09-Jan-19 | 08:25 | Fine | ACL1_1hr_1 140213 | 2.6644 | 2.6684 | 4952.75 | 4953.75 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 82.3 |
| 09-Jan-19 | 10:10 | Fine | ACL1_1hr_2 140223 | 2.6606 | 2.6639 | 4953.75 | 4954.75 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 67.9 |
| 09-Jan-19 | 13:00 | Fine | ACL1_1hr_3 140207 | 2.6530 | 2.6600 | 4954.75 | 4955.75 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 144.0 |
| 15-Jan-19 | 09:55 | Cloudy | ACL1_1hr_1 140247 | 2.6700 | 2.6734 | 4979.75 | 4980.75 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 70.2 |
| 15-Jan-19 | 11:00 | Cloudy | ACL1_1hr_2 140250 | 2.6716 | 2.6747 | 4980.75 | 4981.75 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 64.1 |
| 15-Jan-19 | 13:00 | Cloudy | ACL1_1hr_3 140253 | 2.6808 | 2.6857 | 4981.75 | 4982.75 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 101.2 |
| 19-Jan-19 | 09:02 | Fine | ACL1_1hr_1 140255 | 2.6753 | 2.6778 | 5006.76 | 5007.76 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 51.6 |
| 19-Jan-19 | 10:42 | Fine | ACL1_1hr_2 140307 | 2.6536 | 2.6560 | 5007.76 | 5008.76 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 49.6 |
| 19-Jan-19 | 13:00 | Fine | ACL1_1hr_3 140391 | 2.6610 | 2.6629 | 5008.76 | 5009.76 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 39.2 |
| 24-Jan-19 | 08:13 | Fine | ACL1_1hr_1 140321 | 2.6570 | 2.6635 | 5033.77 | 5034.77 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 133.6 |
| 24-Jan-19 | 10:01 | Fine | ACL1_1hr_2 140323 | 2.6418 | 2.6472 | 5034.77 | 5035.77 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 111.0 |
| 24-Jan-19 | 13:14 | Fine | ACL1_1hr_3 140347 | 2.6591 | 2.6617 | 5035.77 | 5036.77 | 1.00 | 0.81 | 0.81 | 0.81 | 49 | 53.4 |
| 29-Jan-19 | 09:35 | Fine | ACL1_1hr_1 140360 | 2.6477 | 2.6511 | 5060.77 | 5061.77 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 70.1 |
| 29-Jan-19 | 10:55 | Fine | ACL1_1hr_2 140368 | 2.6675 | 2.6717 | 5061.77 | 5062.77 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 86.7 |
| 29-Jan-19 | 14:30 | Fine | ACL1_1hr_3 140408 | 2.6839 | 2.6876 | 5062.77 | 5063.77 | 1.00 | 0.81 | 0.81 | 0.81 | 48 | 76.3 |



Location: ACL2a - Contractor HK/2012/08 Site office

Report on 24-hour TSP monitoring
Action Level ($\mu\text{g}/\text{m}^3$) - 187.3
Limit Level ($\mu\text{g}/\text{m}^3$) - 260

| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|-------------------|------------------|--------|-----------------|----------|-------------------|------------------------------------|------------------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{st} | Final, Q_{st} | Average | | |
| 03-Jan-19 | 14:30 | Cloudy | ACL2a_24hr 206811 | 2.6875 | 2.7559 | 10128.50 | 10152.50 | 24.00 | 0.90 | 0.90 | 0.90 | 1291 | 53.0 |
| 08-Jan-19 | 08:00 | Fine | ACL2a_24hr 140170 | 2.6689 | 2.8016 | 10152.50 | 10176.50 | 24.00 | 0.89 | 0.89 | 0.89 | 1281 | 103.6 |
| 14-Jan-19 | 08:00 | Cloudy | ACL2a_24hr 140236 | 2.6681 | 2.7581 | 10179.51 | 10203.51 | 24.00 | 0.89 | 0.89 | 0.89 | 1277 | 70.5 |
| 18-Jan-19 | 08:00 | Fine | ACL2a_24hr 140284 | 2.6782 | 2.7838 | 10206.51 | 10230.51 | 24.00 | 0.89 | 0.89 | 0.89 | 1282 | 82.4 |
| 23-Jan-19 | 08:00 | Fine | ACL2a_24hr 140387 | 2.6547 | 2.7959 | 10233.51 | 10257.51 | 24.00 | 0.89 | 0.89 | 0.89 | 1285 | 109.9 |
| 28-Jan-19 | 08:00 | Fine | ACL2a_24hr 140344 | 2.6569 | 2.7267 | 10260.51 | 10284.51 | 24.00 | 0.89 | 0.89 | 0.89 | 1281 | 54.5 |

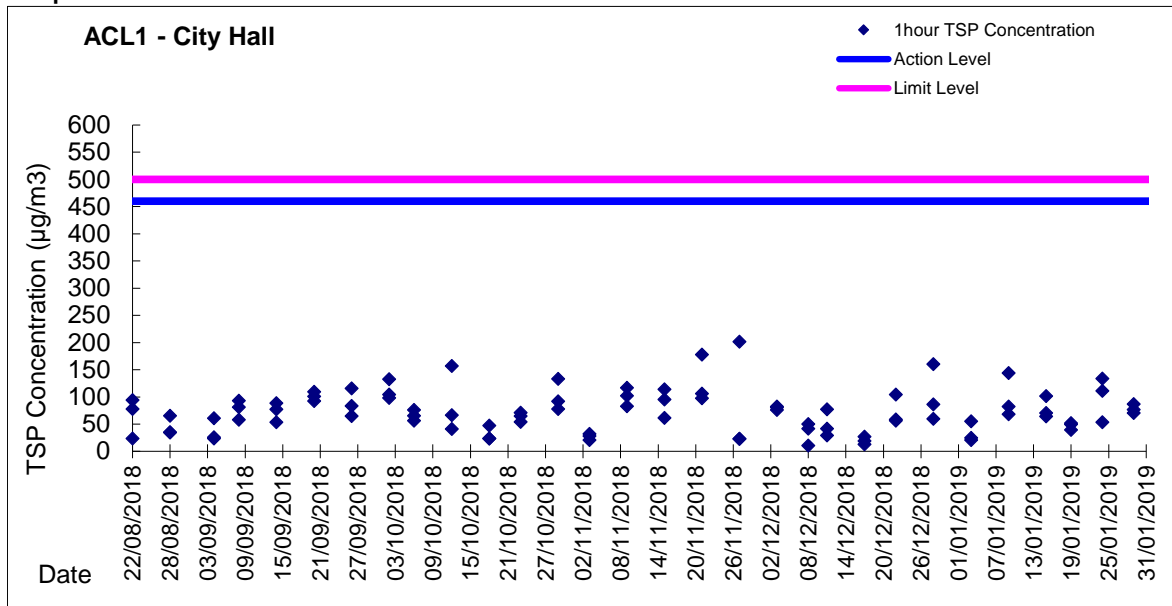
Remarks: Due to interruption of electricity, the 24hr TSP was rescheduled from 2 January 2019 to 3 January 2019.

Report on 1-hour TSP monitoring
Action Level ($\mu\text{g}/\text{m}^3$) - 300.1
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

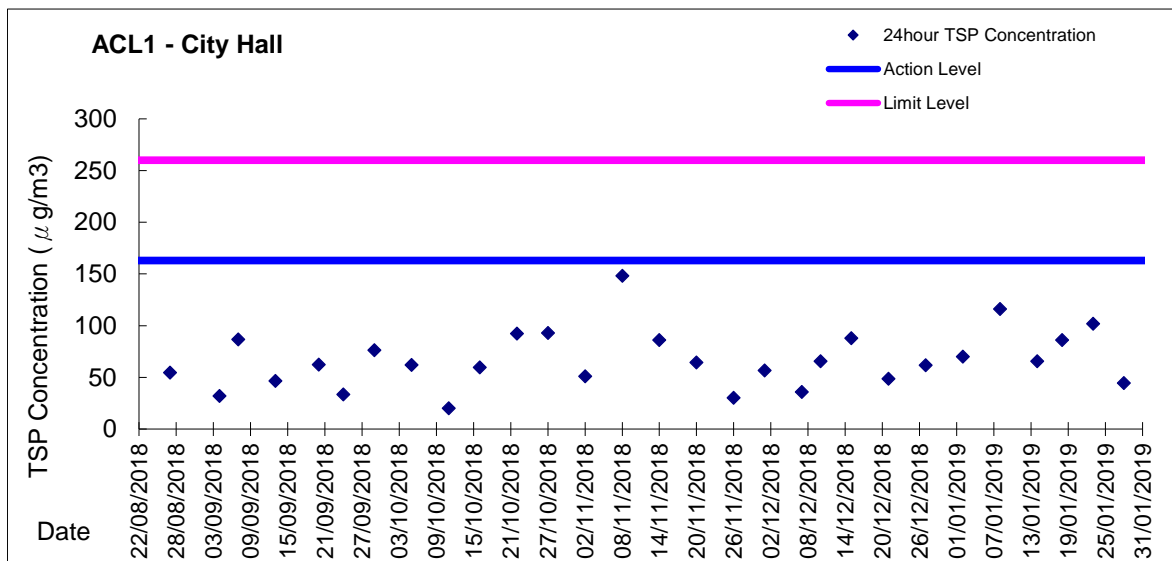
| Date | Sampling Time | Weather Condition | Filter paper no. | Filter Weight, g | | Elapse Time, hr | | Sampling Time, hr | Flow Rate, m^3/min | | | Total Volume, m^3 | TSP Level, $\mu\text{g}/\text{m}^3$ |
|-----------|---------------|-------------------|--------------------|------------------|--------|-----------------|----------|-------------------|------------------------------------|------------------------|---------|----------------------------|-------------------------------------|
| | | | | Initial | Final | Initial | Final | | Initial, Q_{st} | Final, Q_{st} | Average | | |
| 03-Jan-19 | 08:55 | Cloudy | ACL2a_1hr_1 140176 | 2.6938 | 2.6975 | 10125.50 | 10126.50 | 1.00 | 0.90 | 0.90 | 0.90 | 54 | 68.9 |
| 03-Jan-19 | 10:50 | Cloudy | ACL2a_1hr_2 206801 | 2.7156 | 2.7160 | 10126.50 | 10127.50 | 1.00 | 0.90 | 0.90 | 0.90 | 54 | 7.4 |
| 03-Jan-19 | 13:00 | Cloudy | ACL2a_1hr_3 206766 | 2.6967 | 2.6973 | 10127.50 | 10128.50 | 1.00 | 0.90 | 0.90 | 0.90 | 54 | 11.2 |
| 09-Jan-19 | 08:10 | Fine | ACL2a_1hr_1 140209 | 2.6710 | 2.6757 | 10176.50 | 10177.50 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 88.0 |
| 09-Jan-19 | 10:00 | Fine | ACL2a_1hr_2 140219 | 2.6632 | 2.6685 | 10177.50 | 10178.50 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 99.2 |
| 09-Jan-19 | 13:00 | Fine | ACL2a_1hr_3 140229 | 2.6699 | 2.6770 | 10178.50 | 10179.50 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 132.9 |
| 15-Jan-19 | 09:27 | Cloudy | ACL2a_1hr_1 140262 | 2.6759 | 2.6790 | 10203.51 | 10204.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 58.2 |
| 15-Jan-19 | 10:46 | Cloudy | ACL2a_1hr_2 140270 | 2.6741 | 2.6775 | 10204.51 | 10205.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 63.9 |
| 15-Jan-19 | 13:00 | Cloudy | ACL2a_1hr_3 140278 | 2.6779 | 2.6836 | 10205.51 | 10206.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 107.1 |
| 19-Jan-19 | 08:45 | Fine | ACL2a_1hr_1 140293 | 2.6766 | 2.6814 | 10230.51 | 10231.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 90.1 |
| 19-Jan-19 | 10:22 | Fine | ACL2a_1hr_2 140303 | 2.6789 | 2.6829 | 10231.51 | 10232.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 75.1 |
| 19-Jan-19 | 13:00 | Fine | ACL2a_1hr_3 140395 | 2.6678 | 2.6711 | 10232.51 | 10233.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 62.0 |
| 24-Jan-19 | 08:04 | Fine | ACL2a_1hr_1 140315 | 2.6746 | 2.6804 | 10257.51 | 10258.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 108.5 |
| 24-Jan-19 | 09:50 | Fine | ACL2a_1hr_2 140320 | 2.6577 | 2.6638 | 10258.51 | 10259.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 114.1 |
| 24-Jan-19 | 13:00 | Fine | ACL2a_1hr_3 140331 | 2.6571 | 2.6615 | 10259.51 | 10260.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 82.3 |
| 29-Jan-19 | 09:25 | Fine | ACL2a_1hr_1 140357 | 2.6472 | 2.6514 | 10284.51 | 10285.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 78.8 |
| 29-Jan-19 | 13:00 | Fine | ACL2a_1hr_2 140369 | 2.6320 | 2.6363 | 10285.51 | 10286.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 80.7 |
| 29-Jan-19 | 14:30 | Fine | ACL2a_1hr_3 140401 | 2.6738 | 2.6775 | 10286.51 | 10287.51 | 1.00 | 0.89 | 0.89 | 0.89 | 53 | 69.4 |



Graphic Presentation of 1 hour TSP Result

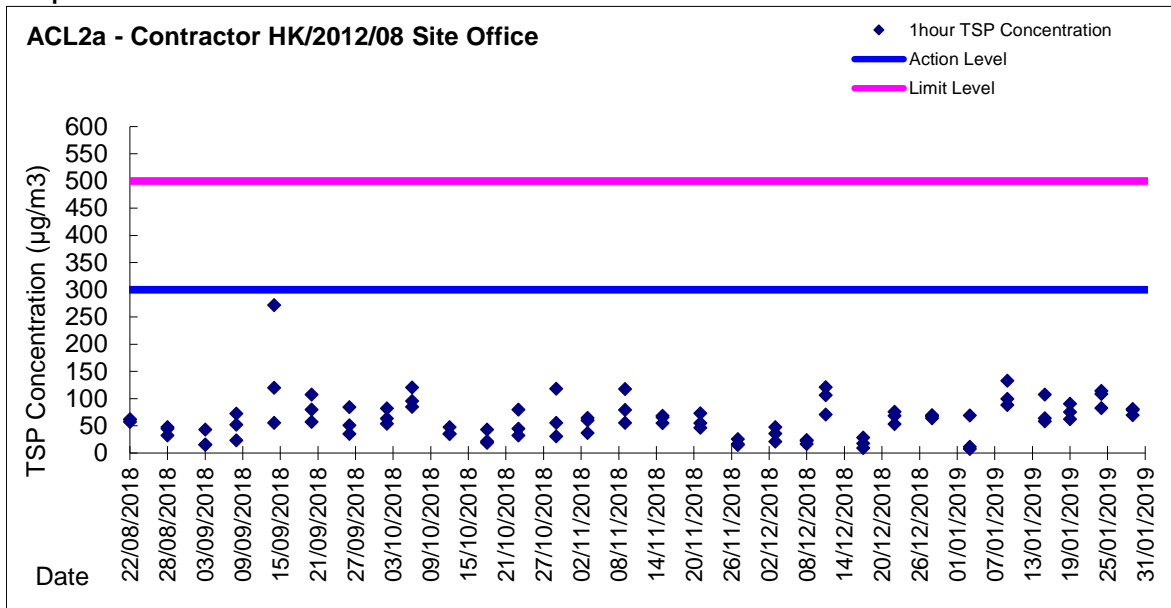


Graphic Presentation of 24 hour TSP Result

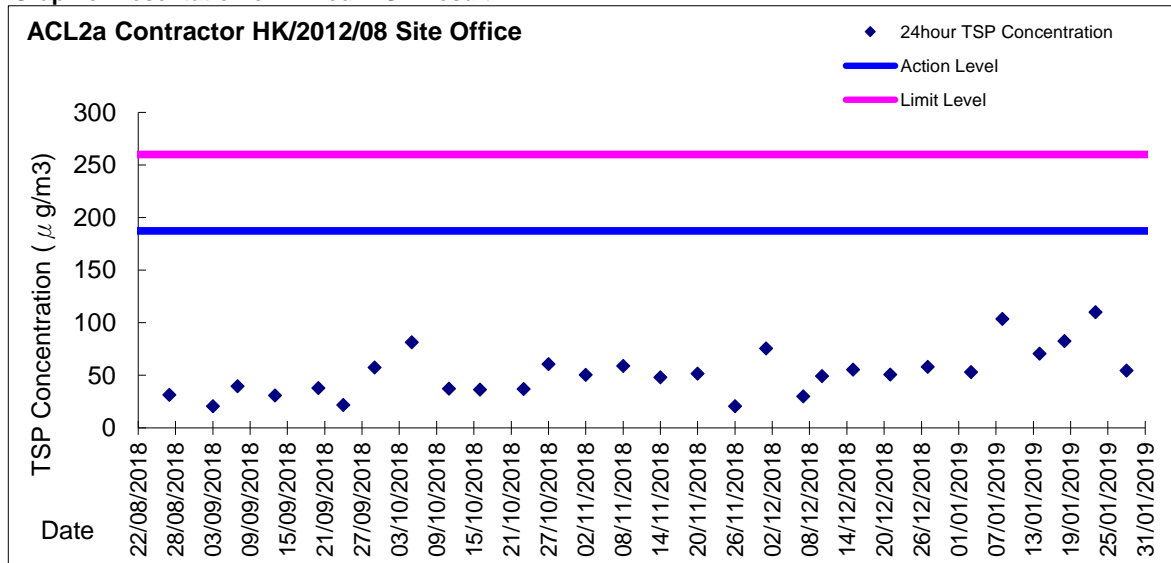




Graphic Presentation of 1 hour TSP Result



Graphic Presentation of 24 hour TSP Result





Appendix 4.3

Water Quality Monitoring Graphical Presentations



**Water Monitoring Result at M5B - Central Cooling Water Intake Group
Mid-Flood Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|------------|-------|----------------------|----------------|-----|-------------------|---------|-------|-------|---------|------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|-------|---------|----|--------------|
| | | | | | °C | | | - | | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | |
| | | | | | Value | Average | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | |
| 01/11/2018 | - | Typhoon Signal No. 3 | Middle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| | - | | Middle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| 03/11/2018 | 14:05 | Cloudy | Middle | 3.5 | 24.50 | 24.50 | 24.50 | 7.94 | 7.94 | 7.95 | 33.22 | 33.22 | 33.22 | 80.8 | 82.2 | 81.3 | 5.51 | 5.67 | 5.59 | 5.09 | 5.09 | 5.10 | 7 | 6.50 |
| | 14:07 | | Middle | 3.5 | 24.50 | 24.50 | 24.50 | 7.96 | 7.96 | 7.95 | 33.22 | 33.22 | 33.22 | 81.0 | 81.0 | 81.3 | 5.58 | 5.58 | 5.59 | 5.11 | 5.12 | 5.10 | 6 | 6.50 |
| 05/11/2018 | 15:05 | Fine | Middle | 4.0 | 25.50 | 25.50 | 25.55 | 7.89 | 7.89 | 7.90 | 33.35 | 33.35 | 33.35 | 83.4 | 83.4 | 82.8 | 5.64 | 5.64 | 5.61 | 5.84 | 5.81 | 5.82 | 14 | <u>14.00</u> |
| | 15:07 | | Middle | 4.0 | 25.60 | 25.60 | 25.55 | 7.90 | 7.90 | 7.90 | 33.34 | 33.34 | 33.35 | 82.0 | 82.5 | 82.8 | 5.55 | 5.60 | 5.61 | 5.83 | 5.79 | 5.82 | 14 | <u>14.00</u> |
| 07/11/2018 | 16:15 | Fine | Middle | 4.0 | 25.10 | 25.10 | 25.15 | 7.84 | 7.84 | 7.85 | 33.27 | 33.27 | 33.27 | 82.4 | 81.3 | 81.7 | 5.62 | 5.54 | 5.57 | 7.93 | 7.99 | 7.97 | 11 | 10.50 |
| | 16:17 | | Middle | 4.0 | 25.20 | 25.20 | 25.15 | 7.85 | 7.85 | 7.85 | 33.26 | 33.27 | 33.27 | 81.6 | 81.5 | 81.7 | 5.56 | 5.55 | 5.57 | 7.98 | 7.97 | 7.97 | 10 | 10.50 |
| 09/11/2018 | 20:21 | Cloudy | Middle | 3.0 | 25.00 | 25.00 | 25.00 | 8.22 | 8.22 | 8.22 | 32.68 | 32.68 | 32.68 | 74.9 | 78.0 | 76.9 | 5.15 | 5.36 | 5.28 | 6.41 | 6.82 | 6.45 | 6 | 6.00 |
| | 20:22 | | Middle | 3.0 | 25.00 | 25.00 | 25.00 | 8.22 | 8.22 | 8.22 | 32.68 | 32.68 | 32.68 | 76.8 | 77.7 | 76.9 | 5.27 | 5.34 | 5.28 | 6.28 | 6.27 | 6.45 | 6 | 6.00 |
| 12/11/2018 | 11:45 | Cloudy | Middle | 4.0 | 25.00 | 25.00 | 25.05 | 7.80 | 7.80 | 7.80 | 33.01 | 33.01 | 33.01 | 80.3 | 80.8 | 80.6 | 5.49 | 5.53 | 5.51 | 6.52 | 6.49 | 6.49 | 9 | 8.50 |
| | 11:47 | | Middle | 4.0 | 25.10 | 25.10 | 25.05 | 7.80 | 7.80 | 7.80 | 33.01 | 33.01 | 33.01 | 80.6 | 80.5 | 80.6 | 5.51 | 5.50 | 5.51 | 6.47 | 6.47 | 6.49 | 8 | 8.50 |
| 14/11/2018 | 16:50 | Cloudy | Middle | 4.0 | 24.10 | 24.10 | 24.15 | 7.74 | 7.74 | 7.75 | 32.83 | 32.83 | 32.83 | 80.8 | 80.6 | 81.3 | 5.62 | 5.60 | 5.65 | 3.77 | 3.69 | 3.71 | 10 | 10.00 |
| | 16:52 | | Middle | 4.0 | 24.20 | 24.20 | 24.15 | 7.76 | 7.76 | 7.75 | 32.83 | 32.83 | 32.83 | 81.7 | 82.0 | 81.3 | 5.69 | 5.70 | 5.65 | 3.62 | 3.76 | 3.71 | 10 | 10.00 |
| 16/11/2018 | 13:35 | Cloudy | Middle | 4.0 | 24.40 | 24.40 | 24.45 | 7.63 | 7.60 | 7.63 | 33.13 | 33.13 | 33.13 | 78.7 | 79.0 | 79.0 | 5.49 | 5.46 | 5.47 | 3.37 | 3.37 | 3.38 | 5 | 5.50 |
| | 13:37 | | Middle | 4.0 | 24.50 | 24.50 | 24.45 | 7.65 | 7.65 | 7.63 | 33.13 | 33.13 | 33.13 | 78.9 | 79.2 | 79.0 | 5.45 | 5.47 | 5.47 | 3.38 | 3.38 | 3.38 | 6 | 5.50 |
| 19/11/2018 | 12:55 | Fine | Middle | 4.0 | 24.70 | 24.70 | 24.70 | 7.74 | 7.74 | 7.74 | 33.18 | 33.18 | 33.18 | 77.1 | 77.8 | 78.0 | 5.30 | 5.36 | 5.37 | 5.43 | 5.56 | 5.41 | 5 | 5.00 |
| | 12:57 | | Middle | 4.0 | 24.70 | 24.70 | 24.70 | 7.74 | 7.74 | 7.74 | 33.18 | 33.18 | 33.18 | 78.5 | 78.6 | 78.0 | 5.40 | 5.41 | 5.37 | 5.22 | 5.44 | 5.41 | 5 | 5.00 |
| 21/11/2018 | 16:55 | Fine | Middle | 4.0 | 24.60 | 24.60 | 24.65 | 7.74 | 7.74 | 7.75 | 33.30 | 33.30 | 33.30 | 72.9 | 73.4 | 73.5 | 5.01 | 5.05 | 5.06 | 3.37 | 4.91 | 4.56 | 6 | 6.50 |
| | 16:57 | | Middle | 4.0 | 24.70 | 24.70 | 24.65 | 7.76 | 7.76 | 7.75 | 33.29 | 33.29 | 33.30 | 74.2 | 73.5 | 73.5 | 5.10 | 5.07 | 5.06 | 5.10 | 4.87 | 4.56 | 7 | 6.50 |
| 23/11/2018 | 18:25 | Fine | Middle | 4.0 | 23.10 | 23.10 | 23.10 | 7.66 | 7.66 | 7.66 | 33.32 | 33.32 | 33.32 | 76.8 | 76.4 | 77.7 | 5.42 | 5.54 | 5.55 | 4.52 | 4.47 | 4.47 | 4 | 4.00 |
| | 18:27 | | Middle | 4.0 | 23.10 | 23.10 | 23.10 | 7.66 | 7.66 | 7.66 | 33.32 | 33.32 | 33.32 | 78.7 | 78.8 | 77.7 | 5.56 | 5.67 | 5.55 | 4.46 | 4.44 | 4.47 | 4 | 4.00 |
| 26/11/2018 | 07:55 | Cloudy | Middle | 4.0 | 22.10 | 22.10 | 22.05 | 7.48 | 7.48 | 7.48 | 32.69 | 32.69 | 32.70 | 71.5 | 71.7 | 71.6 | 5.17 | 5.19 | 5.18 | 4.32 | 4.32 | 4.33 | 6 | 6.50 |
| | 07:57 | | Middle | 4.0 | 22.00 | 22.00 | 22.05 | 7.48 | 7.48 | 7.48 | 32.70 | 32.70 | 32.70 | 71.8 | 71.4 | 71.6 | 5.20 | 5.17 | 5.18 | 4.33 | 4.35 | 4.33 | 7 | 6.50 |
| 28/11/2018 | 13:55 | Cloudy | Middle | 4.0 | 22.80 | 22.80 | 22.80 | 7.53 | 7.53 | 7.53 | 32.95 | 32.95 | 32.95 | 78.8 | 79.0 | 78.5 | 5.61 | 5.62 | 5.59 | 5.82 | 5.78 | 5.77 | 6 | 6.00 |
| | 13:57 | | Middle | 4.0 | 22.80 | 22.80 | 22.80 | 7.53 | 7.53 | 7.53 | 32.95 | 32.95 | 32.95 | 78.2 | 77.8 | 78.5 | 5.57 | 5.54 | 5.59 | 5.74 | 5.73 | 5.77 | 6 | 6.00 |
| 30/11/2018 | 13:20 | Fine | Middle | 4.0 | 23.40 | 23.40 | 23.45 | 7.23 | 7.23 | 7.24 | 32.93 | 32.93 | 32.93 | 72.3 | 72.4 | 72.7 | 5.09 | 5.09 | 5.11 | 6.21 | 6.21 | 6.22 | 8 | 8.00 |
| | 13:22 | | Middle | 4.0 | 23.50 | 23.50 | 23.45 | 7.25 | 7.25 | 7.24 | 32.93 | 32.93 | 32.93 | 73.0 | 73.0 | 72.7 | 5.13 | 5.13 | 5.11 | 6.23 | 6.24 | 6.22 | 8 | 8.00 |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at Culvert J - Reference Station
Mid-Flood Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | | |
|------------|-------|----------------------|----------------|-----|-------------------|---------|-------|-------|---------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|-------|---------|-------|----|-------|
| | | | | | °C | | | - | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | | |
| | | | | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | |
| 01/11/2018 | - | Typhoon Signal No. 3 | Middle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | - | | Middle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| 03/11/2018 | 14:10 | Cloudy | Middle | 3.5 | 24.40 | 24.40 | 24.40 | 7.98 | 7.98 | 7.99 | 33.21 | 33.21 | 33.21 | 81.4 | 80.4 | 81.3 | 5.60 | 5.55 | 5.63 | 5.22 | 5.24 | 5.24 | 11 | 10.50 |
| | 14:12 | | Middle | 3.5 | 24.40 | 24.40 | 24.40 | 7.99 | 7.99 | 7.99 | 33.21 | 33.21 | 33.21 | 81.0 | 82.2 | 81.3 | 5.67 | 5.68 | 5.63 | 5.24 | 5.25 | 5.24 | 10 | 10.50 |
| 05/11/2018 | 15:10 | Fine | Middle | 4.0 | 25.30 | 25.30 | 25.35 | 7.94 | 7.94 | 7.95 | 33.15 | 33.15 | 33.15 | 78.7 | 79.3 | 79.1 | 5.35 | 5.38 | 5.38 | 5.70 | 5.71 | 5.71 | 16 | 15.50 |
| | 15:12 | | Middle | 4.0 | 25.40 | 25.40 | 25.35 | 7.95 | 7.95 | 7.95 | 33.15 | 33.15 | 33.15 | 79.2 | 79.2 | 79.1 | 5.39 | 5.39 | 5.38 | 5.71 | 5.71 | 5.71 | 15 | 15.50 |
| 07/11/2018 | 16:10 | Fine | Middle | 4.0 | 25.20 | 25.20 | 25.25 | 7.79 | 7.79 | 7.80 | 33.01 | 33.01 | 33.01 | 77.2 | 77.2 | 77.4 | 5.26 | 5.26 | 5.27 | 9.28 | 9.18 | 9.22 | 14 | 14.50 |
| | 16:10 | | Middle | 4.0 | 25.30 | 25.30 | 25.25 | 7.81 | 7.81 | 7.80 | 33.01 | 33.01 | 33.01 | 77.4 | 77.6 | 77.4 | 5.28 | 5.29 | 5.27 | 9.19 | 9.24 | 9.22 | 15 | 14.50 |
| 09/11/2018 | 20:28 | Cloudy | Middle | 2.5 | 24.90 | 24.90 | 24.90 | 8.23 | 8.23 | 8.23 | 31.43 | 31.43 | 31.43 | 68.8 | 71.3 | 71.4 | 4.76 | 4.94 | 4.94 | 12.31 | 11.82 | 12.07 | 9 | 9.00 |
| | 20:29 | | Middle | 2.5 | 24.90 | 24.90 | 24.90 | 8.23 | 8.23 | 8.23 | 31.43 | 31.43 | 31.43 | 72.8 | 72.5 | 71.4 | 5.04 | 5.02 | 4.94 | 12.21 | 11.92 | 12.07 | 9 | 9.00 |
| 12/11/2018 | 11:40 | Cloudy | Middle | 3.5 | 25.20 | 25.20 | 25.25 | 7.77 | 7.77 | 7.78 | 32.61 | 32.61 | 32.62 | 75.7 | 75.5 | 75.1 | 5.16 | 5.16 | 5.13 | 6.90 | 6.90 | 6.87 | 9 | 9.00 |
| | 11:42 | | Middle | 3.5 | 25.30 | 25.30 | 25.25 | 7.78 | 7.78 | 7.78 | 32.62 | 32.62 | 32.62 | 74.6 | 74.6 | 75.1 | 5.09 | 5.10 | 5.13 | 6.86 | 6.82 | 6.87 | 9 | 9.00 |
| 14/11/2018 | 16:45 | Cloudy | Middle | 4.0 | 24.40 | 24.40 | 24.40 | 7.73 | 7.73 | 7.72 | 28.59 | 28.59 | 28.59 | 64.3 | 64.4 | 64.7 | 4.56 | 4.57 | 4.59 | 9.51 | 9.48 | 9.48 | 13 | 13.00 |
| | 16:47 | | Middle | 4.0 | 24.40 | 24.40 | 24.40 | 7.71 | 7.71 | 7.72 | 28.59 | 28.59 | 28.59 | 65.2 | 65.0 | 64.7 | 4.61 | 4.61 | 4.59 | 9.46 | 9.45 | 9.48 | 13 | 13.00 |
| 16/11/2018 | 13:30 | Cloudy | Middle | 3.5 | 24.60 | 24.60 | 24.65 | 7.56 | 7.56 | 7.58 | 31.74 | 31.74 | 31.75 | 69.8 | 70.3 | 69.6 | 4.84 | 4.88 | 4.83 | 7.72 | 7.74 | 7.75 | 8 | 7.50 |
| | 13:32 | | Middle | 3.5 | 24.70 | 24.70 | 24.65 | 7.59 | 7.59 | 7.58 | 31.75 | 31.75 | 31.75 | 69.1 | 69.3 | 69.6 | 4.79 | 4.81 | 4.83 | 7.76 | 7.76 | 7.75 | 7 | 7.50 |
| 19/11/2018 | 12:50 | Fine | Middle | 3.5 | 25.00 | 25.00 | 25.00 | 7.72 | 7.72 | 7.73 | 33.24 | 33.24 | 33.25 | 71.7 | 71.8 | 71.8 | 4.91 | 4.91 | 4.91 | 3.85 | 3.57 | 3.40 | 4 | 4.00 |
| | 12:52 | | Middle | 3.5 | 25.00 | 25.00 | 25.00 | 7.73 | 7.73 | 7.73 | 33.25 | 33.25 | 33.25 | 71.9 | 71.8 | 71.8 | 4.92 | 4.91 | 4.91 | 3.19 | 2.98 | 3.40 | 4 | 4.00 |
| 21/11/2018 | 16:50 | Fine | Middle | 3.5 | 24.90 | 24.90 | 24.95 | 7.69 | 7.69 | 7.70 | 33.26 | 33.26 | 33.27 | 69.8 | 69.9 | 70.4 | 4.79 | 4.80 | 4.83 | 5.13 | 4.67 | 4.77 | 6 | 6.00 |
| | 16:52 | | Middle | 3.5 | 25.00 | 25.00 | 24.95 | 7.70 | 7.70 | 7.70 | 33.27 | 33.27 | 33.27 | 70.8 | 70.9 | 70.4 | 4.85 | 4.86 | 4.83 | 4.73 | 4.53 | 4.77 | 6 | 6.00 |
| 23/11/2018 | 18:20 | Fine | Middle | 3.5 | 23.40 | 23.40 | 23.40 | 7.63 | 7.63 | 7.64 | 33.37 | 33.37 | 33.38 | 74.5 | 74.5 | 74.5 | 5.23 | 5.23 | 5.24 | 4.75 | 4.80 | 4.75 | 4 | 4.00 |
| | 18:22 | | Middle | 3.5 | 23.40 | 23.40 | 23.40 | 7.64 | 7.64 | 7.64 | 33.38 | 33.38 | 33.38 | 74.4 | 74.6 | 74.5 | 5.23 | 5.25 | 5.24 | 4.70 | 4.76 | 4.75 | 4 | 4.00 |
| 26/11/2018 | 07:50 | Cloudy | Middle | 3.5 | 21.80 | 21.80 | 21.75 | 7.46 | 7.46 | 7.47 | 32.57 | 32.57 | 32.57 | 65.7 | 66.4 | 66.1 | 4.78 | 4.84 | 4.81 | 4.49 | 4.45 | 4.44 | 5 | 4.50 |
| | 07:52 | | Middle | 3.5 | 21.70 | 21.70 | 21.75 | 7.47 | 7.47 | 7.47 | 32.57 | 32.57 | 32.57 | 66.1 | 66.0 | 66.1 | 4.82 | 4.81 | 4.81 | 4.42 | 4.39 | 4.44 | 4 | 4.50 |
| 28/11/2018 | 13:50 | Cloudy | Middle | 3.5 | 22.80 | 22.80 | 22.80 | 7.52 | 7.52 | 7.53 | 32.93 | 32.93 | 32.93 | 73.8 | 74.0 | 74.1 | 5.26 | 5.27 | 5.28 | 7.31 | 7.26 | 7.28 | 7 | 7.00 |
| | 13:52 | | Middle | 3.5 | 22.80 | 22.80 | 22.80 | 7.53 | 7.53 | 7.53 | 32.93 | 32.93 | 32.93 | 74.3 | 74.1 | 74.1 | 5.29 | 5.28 | 5.28 | 7.27 | 7.29 | 7.28 | 7 | 7.00 |
| 30/11/2018 | 13:15 | Fine | Middle | 3.5 | 23.70 | 23.70 | 23.75 | 7.15 | 7.15 | 7.17 | 32.55 | 32.55 | 32.55 | 66.9 | 67.6 | 67.8 | 4.69 | 4.74 | 4.75 | 7.17 | 7.14 | 7.14 | 8 | 7.50 |
| | 13:17 | | Middle | 3.5 | 23.80 | 23.80 | 23.75 | 7.18 | 7.18 | 7.17 | 32.55 | 32.55 | 32.55 | 68.2 | 68.3 | 67.8 | 4.78 | 4.78 | 4.75 | 7.13 | 7.13 | 7.14 | 7 | 7.50 |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at M5B - Central Colling Water Intake Group
Mid-Ebb Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|------------|-------|-------------------|----------------|-----|-------------------|---------|-------|-------|---------|------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|-------|-------|-------------|--------------|
| | | | | | °C | | | - | | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | |
| | | | | | Value | Average | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 01/11/2018 | 03:30 | Cloudy | Middle | 3.5 | 23.60 | 23.60 | 23.60 | 8.41 | 8.41 | 8.41 | 29.47 | 29.47 | 29.47 | 71.5 | 72.1 | 71.5 | 5.13 | 5.17 | 5.13 | 11.72 | 12.61 | 11.80 | 4 | 4.50 |
| | 03:31 | | Middle | 3.5 | 23.60 | 23.60 | | 8.41 | 8.40 | | 8.41 | 29.47 | | 29.47 | 71.7 | | 70.5 | 71.5 | | 5.14 | 5.06 | | 5.13 | |
| 03/11/2018 | 08:00 | Cloudy | Middle | 3.5 | 23.80 | 23.80 | 23.80 | 8.02 | 8.02 | 8.04 | 33.35 | 33.35 | 33.35 | 85.2 | 85.5 | 85.3 | 5.95 | 5.97 | 5.96 | 6.48 | 6.47 | 6.47 | 9 | 9.50 |
| | 08:02 | | Middle | 3.5 | 23.80 | 23.80 | | 8.05 | 8.05 | | 8.04 | 33.35 | | 33.35 | 85.2 | | 85.1 | 85.3 | | 5.96 | 5.95 | | 5.96 | |
| 05/11/2018 | 12:05 | Fine | Middle | 3.5 | 25.20 | 25.20 | 25.20 | 7.92 | 7.92 | 7.93 | 33.23 | 33.23 | 33.23 | 86.6 | 87.1 | 86.3 | 5.91 | 5.94 | 5.88 | 8.94 | 8.99 | 8.98 | 19 | <u>19.50</u> |
| | 12:07 | | Middle | 3.5 | 25.20 | 25.20 | | 7.94 | 7.94 | | 7.93 | 33.23 | | 33.23 | 85.9 | | 85.6 | 86.3 | | 5.85 | 5.83 | | 5.88 | |
| 07/11/2018 | 14:00 | Fine | Middle | 3.5 | 25.20 | 25.20 | 25.30 | 7.74 | 7.74 | 7.74 | 33.28 | 33.28 | 33.28 | 78.1 | 78.9 | 79.0 | 5.31 | 5.38 | 5.37 | 6.32 | 6.37 | 6.35 | 13 | <u>12.50</u> |
| | 14:02 | | Middle | 3.5 | 25.40 | 25.40 | | 7.73 | 7.73 | | 7.74 | 33.27 | | 33.27 | 79.6 | | 79.5 | 79.0 | | 5.40 | 5.40 | | 5.37 | |
| 09/11/2018 | 12:25 | Fine | Middle | 4.0 | 25.00 | 25.00 | 25.05 | 7.84 | 7.84 | 7.85 | 33.12 | 33.12 | 33.12 | 77.5 | 78.4 | 78.5 | 5.30 | 5.36 | 5.36 | 4.10 | 4.09 | 4.08 | 7 | 7.00 |
| | 12:27 | | Middle | 4.0 | 25.10 | 25.10 | | 7.85 | 7.85 | | 7.85 | 33.12 | | 33.12 | 78.9 | | 79.0 | 78.5 | | 5.39 | 5.40 | | 5.36 | |
| 12/11/2018 | 02:37 | Cloudy | Middle | 3.5 | 23.50 | 23.50 | 23.50 | 8.12 | 8.12 | 8.12 | 31.83 | 31.83 | 31.83 | 74.7 | 72.9 | 73.6 | 5.28 | 5.16 | 5.20 | 3.59 | 3.52 | 3.42 | 5 | 5.50 |
| | 02:38 | | Middle | 3.5 | 23.50 | 23.50 | | 8.12 | 8.12 | | 8.12 | 31.83 | | 31.83 | 72.5 | | 74.1 | 73.6 | | 5.12 | 5.24 | | 5.20 | |
| 14/11/2018 | 03:18 | Cloudy | Middle | 3.5 | 23.40 | 23.40 | 23.40 | 8.23 | 8.23 | 8.23 | 32.64 | 32.64 | 32.64 | 76.0 | 77.7 | 77.0 | 5.36 | 5.48 | 5.43 | 2.37 | 2.07 | 2.20 | 7 | 7.50 |
| | 03:19 | | Middle | 3.5 | 23.40 | 23.40 | | 8.23 | 8.23 | | 8.23 | 32.64 | | 32.64 | 78.0 | | 76.2 | 77.0 | | 5.50 | 5.38 | | 5.43 | |
| 16/11/2018 | 05:02 | Cloudy | Middle | 3.5 | 23.70 | 23.70 | 23.70 | 8.16 | 8.16 | 8.16 | 32.93 | 32.93 | 32.93 | 77.2 | 77.9 | 77.8 | 5.41 | 5.47 | 5.46 | 4.86 | 4.49 | 4.58 | 3 | 3.00 |
| | 05:03 | | Middle | 3.5 | 23.70 | 23.70 | | 8.16 | 8.16 | | 8.16 | 32.93 | | 32.93 | 78.0 | | 78.0 | 77.8 | | 5.47 | 5.47 | | 5.46 | |
| 19/11/2018 | 09:25 | Fine | Middle | 4.0 | 24.20 | 24.20 | 24.20 | 7.68 | 7.68 | 7.69 | 33.24 | 33.24 | 33.25 | 73.5 | 73.8 | 73.8 | 5.10 | 5.12 | 5.12 | 3.69 | 3.56 | 3.57 | 4 | 4.50 |
| | 09:27 | | Middle | 4.0 | 24.20 | 24.20 | | 7.70 | 7.70 | | 7.69 | 33.25 | | 33.25 | 73.9 | | 73.9 | 73.8 | | 5.12 | 5.13 | | 5.12 | |
| 21/11/2018 | 12:10 | Fine | Middle | 3.5 | 24.60 | 24.60 | 24.65 | 7.72 | 7.72 | 7.73 | 33.32 | 33.32 | 33.32 | 80.0 | 80.9 | 80.8 | 5.50 | 5.57 | 5.56 | 4.29 | 4.05 | 3.96 | 7 | 6.50 |
| | 12:12 | | Middle | 3.5 | 24.70 | 24.70 | | 7.74 | 7.74 | | 7.73 | 33.32 | | 33.32 | 81.1 | | 81.0 | 80.8 | | 5.58 | 5.57 | | 5.56 | |
| 23/11/2018 | 14:13 | Fine | Middle | 3.5 | 24.00 | 24.00 | 24.05 | 7.57 | 7.57 | 7.58 | 33.17 | 33.17 | 33.16 | 64.7 | 63.0 | 62.5 | 4.50 | 4.38 | <u>4.35</u> | 7.01 | 6.93 | 6.73 | 6 | 6.00 |
| | 14:15 | | Middle | 3.5 | 24.10 | 24.10 | | 7.59 | 7.59 | | 7.58 | 33.14 | | 33.14 | 61.8 | | 60.6 | 62.5 | | 4.29 | 4.22 | | <u>4.35</u> | |
| 26/11/2018 | 03:43 | Cloudy | Middle | 3.5 | 20.90 | 20.90 | 20.90 | 8.21 | 8.21 | 8.21 | 31.70 | 31.70 | 31.70 | 73.5 | 73.7 | 73.3 | 5.47 | 5.48 | 5.45 | 2.06 | 1.75 | 1.93 | 4 | 4.50 |
| | 03:44 | | Middle | 3.5 | 20.90 | 20.90 | | 8.21 | 8.21 | | 8.21 | 31.70 | | 31.70 | 73.1 | | 72.8 | 73.3 | | 5.44 | 5.42 | | 5.45 | |
| 28/11/2018 | 03:20 | Cloudy | Middle | 3.5 | 21.20 | 21.20 | 21.20 | 8.24 | 8.24 | 8.24 | 31.33 | 31.33 | 31.33 | 74.0 | 75.7 | 75.0 | 5.47 | 5.59 | 5.54 | 1.21 | 1.30 | 1.26 | 3 | 6.00 |
| | 03:21 | | Middle | 3.5 | 21.20 | 21.20 | | 8.24 | 8.24 | | 8.24 | 31.33 | | 31.33 | 75.1 | | 75.0 | 75.0 | | 5.55 | 5.54 | | 5.54 | |
| 30/11/2018 | 03:25 | Cloudy | Middle | 3.5 | 20.80 | 20.80 | 20.80 | 8.16 | 8.16 | 8.16 | 32.53 | 32.53 | 32.53 | 77.7 | 78.2 | 77.5 | 5.75 | 5.78 | 5.73 | 1.44 | 1.52 | 1.47 | 3 | 3.00 |
| | 03:26 | | Middle | 3.5 | 20.80 | 20.80 | | 8.16 | 8.16 | | 8.16 | 32.53 | | 32.53 | 75.4 | | 78.6 | 77.5 | | 5.57 | 5.81 | | 5.73 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at Culvert J - Reference Station
Mid-Ebb Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|------------|-------|-------------------|----------------|---|-------------------|---------|-------|-------|---------|------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|------|------|----|-------|
| | | | | | °C | | | - | | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | |
| | | | | | Value | Average | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 01/11/2018 | 03:38 | Cloudy | Middle | 3 | 24.10 | 24.10 | 24.10 | 8.37 | 8.37 | 8.37 | 29.63 | 29.63 | 29.63 | 65.5 | 66.2 | 65.7 | 4.65 | 4.71 | 4.67 | 7.10 | 6.83 | 6.77 | 4 | 4.00 |
| | 03:39 | | Middle | 3 | 24.10 | 24.10 | | 8.37 | 8.37 | | 29.63 | 29.63 | | 65.1 | 65.9 | | 4.63 | 4.69 | | 6.44 | 6.72 | | 4 | |
| 03/11/2018 | 08:05 | Cloudy | Middle | 4 | 23.60 | 23.60 | 23.60 | 8.04 | 8.04 | 8.04 | 30.51 | 30.51 | 30.51 | 81.2 | 81.2 | 81.1 | 5.79 | 5.79 | 5.78 | 5.36 | 5.37 | 5.33 | 7 | 6.50 |
| | 08:07 | | Middle | 4 | 23.60 | 23.60 | | 8.04 | 8.04 | | 30.50 | 30.50 | | 81.1 | 80.7 | | 5.78 | 5.75 | | 5.30 | 5.29 | | 6 | |
| 05/11/2018 | 12:10 | Fine | Middle | 4 | 25.30 | 25.30 | 25.35 | 7.88 | 7.88 | 7.89 | 31.72 | 31.72 | 31.72 | 77.7 | 77.5 | 77.4 | 5.33 | 5.32 | 5.31 | 9.27 | 9.26 | 9.30 | 13 | 13.50 |
| | 12:12 | | Middle | 4 | 25.40 | 25.40 | | 7.89 | 7.89 | | 31.72 | 31.72 | | 77.2 | 77.2 | | 5.29 | 5.29 | | 9.29 | 9.36 | | 14 | |
| 07/11/2018 | 13:55 | Fine | Middle | 4 | 26.10 | 26.10 | 26.15 | 7.70 | 7.70 | 7.71 | 33.20 | 33.20 | 33.20 | 78.6 | 78.0 | 78.3 | 5.27 | 5.23 | 5.26 | 9.58 | 9.54 | 9.56 | 18 | 18.50 |
| | 13:57 | | Middle | 4 | 26.20 | 26.20 | | 7.71 | 7.71 | | 33.20 | 33.20 | | 78.2 | 78.4 | | 5.29 | 5.23 | | 9.57 | 9.56 | | 19 | |
| 09/11/2018 | 12:20 | Fine | Middle | 4 | 25.30 | 25.30 | 25.35 | 7.79 | 7.79 | 7.80 | 33.16 | 33.16 | 33.16 | 74.1 | 74.5 | 74.2 | 5.03 | 5.06 | 5.04 | 4.28 | 4.31 | 4.29 | 7 | 7.50 |
| | 12:22 | | Middle | 4 | 25.40 | 25.40 | | 7.81 | 7.81 | | 33.16 | 33.16 | | 74.3 | 73.8 | | 5.04 | 5.01 | | 4.28 | 4.29 | | 8 | |
| 12/11/2018 | 02:43 | Cloudy | Middle | 3 | 23.70 | 23.70 | 23.70 | 8.12 | 8.12 | 8.12 | 29.35 | 29.35 | 29.35 | 69.3 | 61.8 | 65.3 | 4.46 | 4.43 | 4.51 | 4.18 | 4.24 | 4.19 | 6 | 6.50 |
| | 02:44 | | Middle | 3 | 23.70 | 23.70 | | 8.12 | 8.12 | | 29.35 | 29.35 | | 66.2 | 63.7 | | 4.47 | 4.66 | | 4.22 | 4.13 | | 7 | |
| 14/11/2018 | 03:23 | Cloudy | Middle | 3 | 23.70 | 23.70 | 23.70 | 8.24 | 8.24 | 8.24 | 27.39 | 27.39 | 27.39 | 62.2 | 63.9 | 63.6 | 4.51 | 4.63 | 4.60 | 4.81 | 5.02 | 4.81 | 11 | 10.50 |
| | 03:24 | | Middle | 3 | 23.70 | 23.70 | | 8.24 | 8.24 | | 27.39 | 27.39 | | 63.9 | 64.2 | | 4.62 | 4.65 | | 4.57 | 4.85 | | 10 | |
| 16/11/2018 | 05:10 | Cloudy | Middle | 3 | 23.70 | 23.70 | 23.70 | 8.20 | 8.20 | 8.20 | 29.69 | 29.69 | 29.69 | 67.3 | 69.9 | 69.2 | 4.81 | 4.98 | 4.94 | 5.68 | 5.30 | 5.37 | 4 | 4.00 |
| | 05:11 | | Middle | 3 | 23.70 | 23.70 | | 8.20 | 8.20 | | 29.69 | 29.69 | | 69.5 | 70.0 | | 4.97 | 5.00 | | 5.27 | 5.22 | | 4 | |
| 19/11/2018 | 09:20 | Fine | Middle | 4 | 24.50 | 24.50 | 24.55 | 7.65 | 7.65 | 7.66 | 33.30 | 33.30 | 33.30 | 67.7 | 68.0 | 68.2 | 4.67 | 4.68 | 4.70 | 4.78 | 4.74 | 4.79 | 4 | 4.00 |
| | 09:22 | | Middle | 4 | 24.60 | 24.60 | | 7.66 | 7.66 | | 33.30 | 33.30 | | 68.5 | 68.5 | | 4.72 | 4.72 | | 4.81 | 4.83 | | 4 | |
| 21/11/2018 | 12:05 | Fine | Middle | 4 | 24.80 | 24.80 | 24.85 | 7.69 | 7.69 | 7.70 | 32.91 | 32.91 | 32.68 | 70.7 | 70.9 | 70.1 | 4.86 | 4.87 | 4.81 | 4.55 | 4.75 | 4.54 | 5 | 5.50 |
| | 12:07 | | Middle | 4 | 24.90 | 24.90 | | 7.70 | 7.70 | | 32.00 | 32.90 | | 69.2 | 69.6 | | 4.75 | 4.77 | | 4.43 | 4.44 | | 6 | |
| 23/11/2018 | 14:09 | Fine | Middle | 4 | 24.40 | 24.40 | 24.40 | 7.53 | 7.53 | 7.55 | 33.28 | 33.28 | 33.30 | 56.6 | 57.0 | 56.7 | 3.91 | 3.94 | 3.92 | 5.21 | 5.20 | 5.21 | 3 | 3.00 |
| | 14:11 | | Middle | 4 | 24.40 | 24.40 | | 7.56 | 7.56 | | 33.31 | 33.31 | | 56.6 | 56.7 | | 3.92 | 3.92 | | 5.21 | 5.21 | | 3 | |
| 26/11/2018 | 03:59 | Cloudy | Middle | 3 | 21.00 | 21.00 | 21.00 | 8.24 | 8.24 | 8.24 | 29.18 | 29.18 | 29.18 | 70.1 | 74.0 | 73.1 | 5.28 | 5.58 | 5.51 | 3.37 | 3.34 | 3.45 | 10 | 10.00 |
| | 04:00 | | Middle | 3 | 21.00 | 21.00 | | 8.24 | 8.24 | | 29.18 | 29.18 | | 73.6 | 74.6 | | 5.55 | 5.62 | | 3.38 | 3.72 | | 10 | |
| 28/11/2018 | 03:27 | Cloudy | Middle | 3 | 21.40 | 21.40 | 21.40 | 8.25 | 8.25 | 8.25 | 30.47 | 30.47 | 30.47 | 72.2 | 71.8 | 72.9 | 5.34 | 5.32 | 5.40 | 1.34 | 1.36 | 1.37 | 3 | 4.00 |
| | 03:28 | | Middle | 3 | 21.40 | 21.40 | | 8.25 | 8.25 | | 30.47 | 30.47 | | 73.5 | 73.9 | | 5.45 | 5.48 | | 1.40 | 1.38 | | 5 | |
| 30/11/2018 | 03:31 | Cloudy | Middle | 3 | 20.90 | 20.90 | 20.90 | 8.19 | 8.19 | 8.19 | 32.15 | 32.15 | 32.15 | 78.1 | 79.5 | 78.6 | 5.79 | 5.89 | 5.83 | 1.63 | 1.70 | 1.69 | 3 | 3.00 |
| | 03:32 | | Middle | 3 | 20.90 | 20.90 | | 8.19 | 8.19 | | 32.15 | 32.15 | | 78.4 | 78.3 | | 5.81 | 5.81 | | 1.69 | 1.75 | | 3 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at M5B - Central Cooling Water Intake Group
Mid-Flood Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|----------|-------|-------------------|----------------|-----|-------------------|---------|-------|-------|---------|------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|------|------|---|------|
| | | | | | °C | | | - | | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | |
| | | | | | Value | Average | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 3/12/18 | 14:25 | Fine | Middle | 4.0 | 23.90 | 23.90 | 23.95 | 7.53 | 7.53 | 7.54 | 33.13 | 33.13 | 33.13 | 79.9 | 79.9 | 80.0 | 5.57 | 5.57 | 5.57 | 4.10 | 4.08 | 4.07 | 8 | 8.00 |
| | 14:27 | | Middle | 4.0 | 24.00 | 24.00 | | 7.54 | 7.54 | | 33.12 | 33.12 | | 80.0 | 80.0 | | 5.57 | 5.57 | | 4.06 | 4.02 | | 8 | |
| 5/12/18 | 15:05 | Cloudy | Middle | 4.0 | 23.20 | 23.20 | 23.20 | 7.72 | 7.72 | 7.72 | 32.90 | 32.90 | 32.91 | 75.9 | 76.3 | 76.4 | 5.36 | 5.40 | 5.40 | 4.34 | 4.41 | 4.39 | 4 | 4.00 |
| | 15:07 | | Middle | 4.0 | 23.20 | 23.20 | | 7.72 | 7.72 | | 32.91 | 32.91 | | 76.5 | 76.8 | | 5.41 | 5.43 | | 4.41 | 4.40 | | 4 | |
| 7/12/18 | 18:15 | Cloudy | Middle | 4.0 | 22.40 | 22.40 | 22.40 | 7.80 | 7.80 | 7.80 | 33.31 | 33.31 | 33.31 | 77.8 | 78.2 | 78.0 | 5.57 | 5.60 | 5.59 | 5.70 | 5.64 | 5.67 | 4 | 4.00 |
| | 18:17 | | Middle | 4.0 | 22.40 | 22.40 | | 7.80 | 7.80 | | 33.31 | 33.31 | | 77.9 | 77.9 | | 5.58 | 5.59 | | 5.66 | 5.66 | | 4 | |
| 10/12/18 | 9:20 | Cloudy | Middle | 4.0 | 21.10 | 21.10 | 20.95 | 7.26 | 7.26 | 7.28 | 33.63 | 33.63 | 33.64 | 71.2 | 71.1 | 71.1 | 5.21 | 5.21 | 5.21 | 5.88 | 5.85 | 5.85 | 6 | 6.00 |
| | 9:22 | | Middle | 4.0 | 20.80 | 20.80 | | 7.30 | 7.30 | | 33.64 | 33.64 | | 71.1 | 71.0 | | 5.22 | 5.21 | | 5.83 | 5.83 | | 6 | |
| 12/12/18 | 11:10 | Fine | Middle | 4.0 | 20.70 | 20.70 | 20.60 | 7.35 | 7.35 | 7.37 | 33.54 | 33.54 | 33.54 | 73.7 | 74.6 | 74.8 | 5.45 | 5.52 | 5.54 | 5.80 | 5.82 | 5.82 | 6 | 6.50 |
| | 11:12 | | Middle | 4.0 | 20.50 | 20.50 | | 7.38 | 7.38 | | 33.54 | 33.54 | | 75.4 | 75.5 | | 5.58 | 5.59 | | 5.83 | 5.82 | | 7 | |
| 14/12/18 | 16:35 | Cloudy | Middle | 4.0 | 19.90 | 19.80 | 19.88 | 7.12 | 7.12 | 7.13 | 33.10 | 33.10 | 33.09 | 79.0 | 79.1 | 78.8 | 5.92 | 5.93 | 5.90 | 4.55 | 4.56 | 4.57 | 4 | 4.00 |
| | 16:37 | | Middle | 4.0 | 19.90 | 19.90 | | 7.13 | 7.13 | | 33.08 | 33.08 | | 78.2 | 78.7 | | 5.86 | 5.87 | | 4.57 | 4.59 | | 4 | |
| 17/12/18 | 13:23 | Fine | Middle | 3.5 | 21.40 | 21.40 | 21.40 | 7.25 | 7.25 | 7.26 | 33.81 | 33.81 | 33.81 | 57.2 | 57.3 | 56.9 | 4.15 | 4.15 | <u>4.13</u> | 4.77 | 4.77 | 4.77 | 4 | 4.00 |
| | 13:25 | | Middle | 3.5 | 21.40 | 21.40 | | 7.26 | 7.26 | | 33.81 | 33.81 | | 57.0 | 56.2 | | 4.13 | 4.08 | | 4.77 | 4.77 | | 4 | |
| 19/12/18 | 14:44 | Fine | Middle | 3.5 | 21.30 | 21.30 | 21.30 | 7.31 | 7.31 | 7.32 | 33.87 | 33.87 | 33.86 | 63.9 | 63.4 | 64.0 | 4.65 | 4.61 | 4.65 | 4.06 | 4.07 | 4.06 | 3 | 3.00 |
| | 14:46 | | Middle | 3.5 | 21.30 | 21.30 | | 7.33 | 7.33 | | 33.84 | 33.84 | | 64.3 | 64.3 | | 4.67 | 4.67 | | 4.09 | 4.00 | | 3 | |
| 21/12/18 | 15:55 | Fine | Middle | 4.0 | 22.10 | 22.10 | 22.15 | 7.41 | 7.41 | 7.42 | 33.78 | 33.78 | 33.78 | 79.7 | 80.3 | 80.3 | 5.71 | 5.75 | 5.75 | 4.54 | 4.55 | 4.59 | 4 | 4.00 |
| | 15:57 | | Middle | 4.0 | 22.20 | 22.20 | | 7.42 | 7.42 | | 33.78 | 33.78 | | 80.5 | 80.5 | | 5.77 | 5.77 | | 4.61 | 4.66 | | 4 | |
| 24/12/18 | 8:10 | Cloudy | Middle | 4.0 | 20.20 | 20.20 | 20.20 | 7.35 | 7.35 | 7.35 | 33.59 | 33.59 | 33.60 | 70.5 | 71.0 | 71.4 | 5.24 | 5.28 | 5.31 | 5.98 | 5.66 | 5.90 | 7 | 7.00 |
| | 8:12 | | Middle | 4.0 | 20.20 | 20.20 | | 7.35 | 7.35 | | 33.60 | 33.60 | | 71.8 | 72.2 | | 5.34 | 5.37 | | 5.97 | 5.97 | | 7 | |
| 27/12/18 | 10:00 | Cloudy | Middle | 4.0 | 20.90 | 20.90 | 20.90 | 7.22 | 7.22 | 7.23 | 33.35 | 33.35 | 33.35 | 67.0 | 67.5 | 67.5 | 4.93 | 4.96 | 4.96 | 6.27 | 6.24 | 6.26 | 8 | 8.00 |
| | 10:02 | | Middle | 4.0 | 20.90 | 20.90 | | 7.23 | 7.23 | | 33.35 | 33.35 | | 67.7 | 67.8 | | 4.98 | 4.98 | | 6.28 | 6.26 | | 8 | |
| 29/12/18 | 13:05 | Fine | Middle | 4.0 | 19.70 | 19.70 | 19.65 | 7.29 | 7.29 | 7.30 | 33.64 | 33.64 | 33.65 | 77.5 | 77.7 | 78.4 | 5.81 | 5.83 | 5.88 | 4.33 | 4.33 | 4.32 | 3 | 3.50 |
| | 13:07 | | Middle | 4.0 | 19.60 | 19.60 | | 7.30 | 7.30 | | 33.65 | 33.65 | | 79.2 | 79.1 | | 5.95 | 5.94 | | 4.32 | 4.31 | | 4 | |
| 31/12/18 | 14:15 | Fine | Middle | 4.0 | 19.20 | 19.20 | 19.15 | 6.69 | 6.69 | 6.70 | 33.04 | 33.04 | 33.05 | 77.8 | 77.9 | 78.1 | 5.91 | 5.93 | 5.94 | 4.78 | 4.77 | 4.75 | 3 | 3.00 |
| | 14:17 | | Middle | 4.0 | 19.10 | 19.10 | | 6.71 | 6.72 | | 33.06 | 33.06 | | 78.2 | 78.6 | | 5.95 | 5.98 | | 4.72 | 4.74 | | 3 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at Culvert J - Reference Station
Mid-Flood Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|----------|-------|-------------------|----------------|-----|-------------------|---------|-------|---------|-------|---------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|------|------|------|---|------|
| | | | m | | °C | | - | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | | | |
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | | | |
| 3/12/18 | 14:20 | Fine | Middle | 3.5 | 24.20 | 24.20 | 24.25 | 7.50 | 7.50 | 7.51 | 33.02 | 33.02 | 33.02 | 78.5 | 78.4 | 78.4 | 5.45 | 5.44 | 5.44 | 4.38 | 4.36 | 4.37 | 8 | 8.50 |
| | 14:22 | | Middle | 3.5 | 24.30 | 24.30 | | 7.52 | 7.52 | | 33.02 | 33.02 | | 78.2 | 78.6 | | 5.42 | 5.44 | | 4.36 | 4.36 | | 9 | |
| 5/12/18 | 15:00 | Cloudy | Middle | 3.5 | 23.40 | 23.40 | 23.40 | 7.70 | 7.70 | 7.71 | 32.93 | 32.93 | 32.93 | 72.0 | 72.9 | 72.9 | 5.07 | 5.13 | 5.13 | 4.11 | 4.11 | 4.11 | 5 | 5.50 |
| | 15:02 | | Middle | 3.5 | 23.40 | 23.40 | | 7.71 | 7.71 | | 32.93 | 32.93 | | 73.3 | 73.3 | | 5.16 | 5.16 | | 4.10 | 4.10 | | 6 | |
| 7/12/18 | 18:10 | Cloudy | Middle | 3.5 | 22.10 | 22.10 | 22.10 | 7.76 | 7.76 | 7.77 | 33.29 | 33.29 | 33.29 | 76.2 | 76.8 | 76.5 | 5.48 | 5.52 | 5.50 | 5.95 | 5.87 | 5.90 | 4 | 4.00 |
| | 18:12 | | Middle | 3.5 | 22.10 | 22.10 | | 7.78 | 7.78 | | 33.29 | 33.29 | | 76.5 | 76.3 | | 5.50 | 5.49 | | 5.88 | 5.88 | | 4 | |
| 10/12/18 | 9:15 | Cloudy | Middle | 3.5 | 21.00 | 21.00 | 20.95 | 7.29 | 7.29 | 7.29 | 33.58 | 33.58 | 33.59 | 68.8 | 69.7 | 69.7 | 5.04 | 5.11 | 5.11 | 6.12 | 6.14 | 6.15 | 7 | 6.50 |
| | 9:17 | | Middle | 3.5 | 20.90 | 20.90 | | 7.29 | 7.29 | | 33.59 | 33.59 | | 70.2 | 70.2 | | 5.15 | 5.15 | | 6.17 | 6.17 | | 6 | |
| 12/12/18 | 11:05 | Fine | Middle | 3.5 | 20.40 | 20.40 | 20.30 | 7.25 | 7.25 | 7.29 | 33.58 | 33.58 | 33.59 | 80.1 | 80.0 | 79.5 | 5.91 | 5.90 | 5.86 | 5.90 | 5.93 | 5.89 | 4 | 4.00 |
| | 11:07 | | Middle | 3.5 | 20.20 | 20.20 | | 7.32 | 7.32 | | 33.59 | 33.59 | | 78.9 | 78.8 | | 5.81 | 5.80 | | 5.88 | 5.85 | | 4 | |
| 14/12/18 | 16:30 | Cloudy | Middle | 4.0 | 20.30 | 20.30 | 20.35 | 7.07 | 7.07 | 7.09 | 33.17 | 33.17 | 33.18 | 80.5 | 81.2 | 81.0 | 5.97 | 6.03 | 6.02 | 4.77 | 4.77 | 4.77 | 5 | 4.50 |
| | 16:32 | | Middle | 4.0 | 20.40 | 20.40 | | 7.10 | 7.10 | | 33.18 | 33.18 | | 81.1 | 81.3 | | 6.04 | 6.03 | | 4.76 | 4.77 | | 4 | |
| 17/12/18 | 13:19 | Fine | Middle | 3.5 | 21.30 | 21.30 | 21.30 | 7.26 | 7.26 | 7.26 | 33.59 | 33.59 | 33.59 | 56.5 | 56.4 | 56.5 | 4.12 | 4.11 | 4.12 | 5.22 | 5.24 | 5.23 | 5 | 4.50 |
| | 13:21 | | Middle | 3.5 | 21.30 | 21.30 | | 7.26 | 7.26 | | 33.58 | 33.58 | | 56.5 | 56.7 | | 4.12 | 4.13 | | 5.23 | 5.21 | | 4 | |
| 19/12/18 | 14:40 | Fine | Middle | 3.5 | 21.60 | 21.60 | 21.65 | 7.29 | 7.29 | 7.30 | 33.72 | 33.72 | 33.75 | 58.1 | 58.5 | 58.6 | 4.20 | 4.23 | 4.23 | 4.55 | 4.54 | 4.57 | 3 | 3.50 |
| | 14:42 | | Middle | 3.5 | 21.70 | 21.70 | | 7.31 | 7.31 | | 33.78 | 33.78 | | 58.8 | 58.8 | | 4.25 | 4.25 | | 4.60 | 4.57 | | 4 | |
| 21/12/18 | 15:50 | Fine | Middle | 3.5 | 22.50 | 22.50 | 22.60 | 7.31 | 7.31 | 7.35 | 33.71 | 33.71 | 33.71 | 78.9 | 77.9 | 78.2 | 5.61 | 5.52 | 5.55 | 4.55 | 4.54 | 4.50 | 5 | 5.00 |
| | 15:52 | | Middle | 3.5 | 22.70 | 22.70 | | 7.39 | 7.39 | | 33.71 | 33.71 | | 78.1 | 78.0 | | 5.55 | 5.53 | | 4.45 | 4.47 | | 5 | |
| 24/12/18 | 8:00 | Cloudy | Middle | 3.5 | 20.20 | 20.20 | 20.15 | 7.32 | 7.32 | 7.33 | 33.59 | 33.59 | 33.59 | 63.8 | 64.5 | 64.7 | 4.75 | 4.80 | 4.81 | 6.37 | 6.38 | 6.38 | 6 | 5.00 |
| | 8:02 | | Middle | 3.5 | 20.10 | 20.10 | | 7.34 | 7.34 | | 33.59 | 33.59 | | 65.1 | 65.3 | | 4.84 | 4.86 | | 6.38 | 6.37 | | 4 | |
| 27/12/18 | 9:55 | Cloudy | Middle | 3.5 | 21.00 | 21.00 | 21.00 | 7.19 | 7.19 | 7.20 | 33.22 | 33.22 | 33.22 | 61.6 | 61.9 | 62.6 | 4.52 | 4.54 | 4.59 | 6.37 | 6.37 | 6.38 | 5 | 5.00 |
| | 9:57 | | Middle | 3.5 | 21.00 | 21.00 | | 7.20 | 7.20 | | 33.22 | 33.22 | | 63.3 | 63.6 | | 4.65 | 4.66 | | 6.38 | 6.38 | | 5 | |
| 29/12/18 | 13:00 | Fine | Middle | 3.5 | 19.30 | 19.30 | 19.25 | 7.16 | 7.16 | 7.22 | 33.48 | 33.48 | 33.57 | 80.0 | 79.1 | 79.0 | 6.06 | 5.99 | 5.99 | 3.94 | 3.92 | 3.93 | 4 | 3.50 |
| | 13:02 | | Middle | 3.5 | 19.20 | 19.20 | | 7.27 | 7.27 | | 33.66 | 33.66 | | 78.5 | 78.4 | | 5.95 | 5.94 | | 3.93 | 3.93 | | 3 | |
| 31/12/18 | 14:10 | Fine | Middle | 3.5 | 19.20 | 19.20 | 19.20 | 6.77 | 6.77 | 6.77 | 33.43 | 33.43 | 33.43 | 74.0 | 74.1 | 74.1 | 5.61 | 5.62 | 5.62 | 4.91 | 4.93 | 4.92 | 2 | 2.50 |
| | 14:12 | | Middle | 3.5 | 19.20 | 19.20 | | 6.77 | 6.77 | | 33.43 | 33.43 | | 74.1 | 74.1 | | 5.62 | 5.62 | | 4.92 | 4.91 | | 3 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at M5B - Central Colling Water Intake Group
Mid-Ebb Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | |
|----------|-------|-------------------|----------------|-----|-------------------|---------|-------|---------|-------|---------|----------|---------|-------|---------------|-------|---------|-------|-----------|-------------|------------------|------|------|----|------|
| | | | | | °C | | - | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | | | |
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 3/12/18 | 10:30 | Fine | Middle | 3.5 | 23.80 | 23.80 | 23.80 | 7.48 | 7.48 | 7.48 | 33.11 | 33.11 | 33.11 | 74.9 | 75.2 | 75.4 | 5.22 | 5.24 | 5.25 | 3.37 | 3.37 | 3.37 | 5 | 5.00 |
| | 10:32 | | Middle | 3.5 | 23.80 | 23.80 | | 7.47 | 7.47 | | 33.11 | 33.11 | | 75.7 | 75.8 | | 5.27 | 5.28 | | 3.36 | 3.36 | | 5 | |
| 5/12/18 | 9:35 | Fine | Middle | 4.0 | 23.40 | 23.40 | 23.45 | 7.59 | 7.59 | 7.60 | 32.92 | 32.92 | 32.92 | 75.0 | 75.5 | 75.3 | 5.27 | 5.31 | 5.30 | 4.29 | 4.26 | 4.26 | 5 | 5.00 |
| | 9:37 | | Middle | 4.0 | 23.50 | 23.50 | | 7.60 | 7.60 | | 32.92 | 32.92 | | 75.4 | 75.4 | | 5.30 | 5.30 | | 4.23 | 4.26 | | 5 | |
| 7/12/18 | 11:40 | Fine | Middle | 4.0 | 22.80 | 22.80 | 22.80 | 7.60 | 7.60 | 7.61 | 33.23 | 33.23 | 33.24 | 75.9 | 76.0 | 76.1 | 5.40 | 5.40 | 5.41 | 5.28 | 5.28 | 5.31 | 6 | 6.00 |
| | 11:42 | | Middle | 4.0 | 22.80 | 22.80 | | 7.62 | 7.62 | | 33.24 | 33.24 | | 76.1 | 76.3 | | 5.41 | 5.43 | | 5.29 | 5.38 | | 6 | |
| 10/12/18 | 1:32 | Cloudy | Middle | 3.5 | 19.60 | 19.60 | 19.60 | 8.13 | 8.13 | 8.13 | 33.01 | 33.01 | 33.01 | 77.1 | 77.3 | 78.5 | 5.81 | 5.83 | 5.92 | 1.24 | 1.26 | 1.27 | 4 | 4.50 |
| | 1:33 | | Middle | 3.5 | 19.60 | 19.60 | | 8.13 | 8.13 | | 33.01 | 33.01 | | 79.8 | 79.7 | | 6.02 | 6.01 | | 1.31 | 1.28 | | 5 | |
| 12/12/18 | 2:27 | Cloudy | Middle | 3.5 | 18.40 | 18.40 | 18.40 | 8.30 | 8.30 | 8.30 | 31.59 | 31.59 | 31.59 | 79.2 | 80.4 | 79.7 | 6.16 | 6.27 | 6.21 | 1.13 | 1.10 | 1.09 | 5 | 4.50 |
| | 2:28 | | Middle | 3.5 | 18.40 | 18.40 | | 8.30 | 8.30 | | 31.59 | 31.59 | | 80.5 | 78.6 | | 6.27 | 6.12 | | 1.07 | 1.05 | | 4 | |
| 14/12/18 | 3:32 | Cloudy | Middle | 3.5 | 19.10 | 19.10 | 19.10 | 8.23 | 8.23 | 8.23 | 33.45 | 33.46 | 33.44 | 80.2 | 80.5 | 80.2 | 6.10 | 6.13 | 6.10 | 1.36 | 1.44 | 1.38 | 5 | 5.00 |
| | 3:33 | | Middle | 3.5 | 19.10 | 19.10 | | 8.23 | 8.23 | | 33.46 | 33.40 | | 80.7 | 79.4 | | 6.14 | 6.04 | | 1.40 | 1.32 | | 5 | |
| 17/12/18 | 4:50 | Cloudy | Middle | 3.5 | 18.80 | 18.80 | 18.80 | 8.15 | 8.15 | 8.15 | 32.41 | 32.41 | 32.41 | 79.6 | 80.6 | 80.5 | 6.12 | 6.19 | 6.19 | 1.31 | 1.38 | 1.37 | 4 | 4.00 |
| | 4:51 | | Middle | 3.5 | 18.80 | 18.80 | | 8.15 | 8.15 | | 32.41 | 32.41 | | 80.8 | 80.8 | | 6.22 | 6.22 | | 1.34 | 1.44 | | 4 | |
| 19/12/18 | 9:27 | Fine | Middle | 3.5 | 20.40 | 20.40 | 20.45 | 7.34 | 7.34 | 7.35 | 33.80 | 33.80 | 33.81 | 59.9 | 59.9 | 59.6 | 4.43 | 4.43 | <u>4.41</u> | 4.76 | 4.81 | 4.82 | 4 | 4.00 |
| | 9:29 | | Middle | 3.5 | 20.50 | 20.50 | | 7.35 | 7.35 | | 33.81 | 33.81 | | 59.7 | 59.0 | | 4.41 | 4.36 | | 4.86 | 4.86 | | 4 | |
| 21/12/18 | 1:24 | Cloudy | Middle | 3.0 | 20.90 | 20.90 | 20.90 | 8.07 | 8.07 | 8.07 | 33.25 | 33.25 | 33.25 | 79.2 | 79.9 | 79.4 | 5.83 | 5.88 | 5.84 | 1.69 | 1.72 | 1.70 | 4 | 3.50 |
| | 1:25 | | Middle | 3.0 | 20.90 | 20.90 | | 8.07 | 8.07 | | 33.25 | 33.25 | | 79.1 | 79.2 | | 5.82 | 5.83 | | 1.77 | 1.62 | | 3 | |
| 24/12/18 | 1:45 | Cloudy | Middle | 3.5 | 19.70 | 19.70 | 19.70 | 8.01 | 8.01 | 8.01 | 30.42 | 30.43 | 30.43 | 77.4 | 78.4 | 79.0 | 5.91 | 5.99 | 6.04 | 1.51 | 1.55 | 1.53 | <2 | <2 |
| | 1:46 | | Middle | 3.5 | 19.70 | 19.70 | | 8.01 | 8.01 | | 30.43 | 30.43 | | 80.1 | 80.2 | | 6.12 | 6.12 | | 1.58 | 1.49 | | <2 | |
| 27/12/18 | 3:35 | Cloudy | Middle | 3.5 | 20.00 | 20.00 | 20.00 | 8.14 | 8.14 | 8.14 | 33.01 | 33.01 | 33.01 | 79.2 | 79.8 | 80.3 | 5.86 | 5.91 | 5.95 | 1.21 | 1.27 | 1.28 | 5 | 4.50 |
| | 3:36 | | Middle | 3.5 | 20.00 | 20.00 | | 8.14 | 8.14 | | 33.01 | 33.01 | | 80.9 | 81.4 | | 5.99 | 6.02 | | 1.31 | 1.33 | | 4 | |
| 29/12/18 | 3:23 | Cloudy | Middle | 3.5 | 17.90 | 17.90 | 17.90 | 8.10 | 8.10 | 8.10 | 31.67 | 31.67 | 31.67 | 79.7 | 79.6 | 79.2 | 6.26 | 6.15 | 6.20 | 1.11 | 1.18 | 1.18 | 5 | 4.50 |
| | 3:24 | | Middle | 3.5 | 17.90 | 17.90 | | 8.10 | 8.10 | | 31.67 | 31.67 | | 78.8 | 78.6 | | 6.19 | 6.18 | | 1.21 | 1.23 | | 4 | |
| 31/12/18 | 5:45 | Cloudy | Middle | 3.5 | 16.40 | 16.40 | 16.40 | 8.12 | 8.12 | 8.12 | 32.94 | 32.94 | 32.94 | 77.1 | 77.8 | 77.6 | 6.19 | 6.24 | 6.24 | 1.36 | 1.32 | 1.28 | <2 | 2.00 |
| | 5:46 | | Middle | 3.5 | 16.40 | 16.40 | | 8.12 | 8.12 | | 32.94 | 32.94 | | 78.1 | 77.3 | | 6.27 | 6.25 | | 1.26 | 1.18 | | 2 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at Culvert J - Reference Station
Mid-Ebb Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|----------|-------|-------------------|----------------|---|-------------------|---------|-------|---------|-------|---------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|------|------|----|------|
| | | | | | °C | | - | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | | | |
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 3/12/18 | 10:35 | Fine | Middle | 4 | 23.80 | 23.80 | 23.80 | 7.48 | 7.48 | 7.49 | 33.08 | 33.08 | 33.09 | 73.1 | 73.5 | 74.4 | 5.11 | 5.13 | 5.20 | 3.68 | 3.71 | 3.71 | 5 | 5.00 |
| | 10:37 | | Middle | 4 | 23.80 | 23.80 | | 7.49 | 7.49 | | 33.09 | 33.09 | | 75.4 | 75.5 | | 5.27 | 5.27 | | 3.70 | 3.73 | | 5 | |
| 5/12/18 | 9:30 | Fine | Middle | 4 | 23.70 | 23.70 | 23.80 | 7.57 | 7.57 | 7.57 | 32.74 | 32.74 | 32.75 | 71.8 | 72.2 | 72.2 | 5.02 | 5.05 | 5.05 | 4.23 | 4.21 | 4.19 | 3 | 3.00 |
| | 9:32 | | Middle | 4 | 23.90 | 23.90 | | 7.57 | 7.57 | | 32.75 | 32.75 | | 72.3 | 72.6 | | 5.05 | 5.07 | | 4.15 | 4.16 | | 3 | |
| 7/12/18 | 11:35 | Fine | Middle | 4 | 22.70 | 22.70 | 22.70 | 7.54 | 7.54 | 7.56 | 33.02 | 33.02 | 33.02 | 71.8 | 71.9 | 72.0 | 5.12 | 5.13 | 5.14 | 5.43 | 5.43 | 5.43 | 3 | 3.50 |
| | 11:36 | | Middle | 4 | 22.70 | 22.70 | | 7.57 | 7.57 | | 33.01 | 33.01 | | 72.1 | 72.2 | | 5.15 | 5.15 | | 5.42 | 5.43 | | 4 | |
| 10/12/18 | 1:39 | Cloudy | Middle | 3 | 19.40 | 19.40 | 19.40 | 8.19 | 8.19 | 8.19 | 33.16 | 33.16 | 33.16 | 79.0 | 78.9 | 79.3 | 5.97 | 5.98 | 5.99 | 1.46 | 1.53 | 1.47 | 4 | 4.00 |
| | 1:40 | | Middle | 3 | 19.40 | 19.40 | | 8.19 | 8.19 | | 33.16 | 33.16 | | 79.9 | 79.2 | | 6.04 | 5.98 | | 1.42 | 1.48 | | 4 | |
| 12/12/18 | 2:34 | Cloudy | Middle | 3 | 18.60 | 18.60 | 18.60 | 8.34 | 8.34 | 8.34 | 32.76 | 32.76 | 32.76 | 78.4 | 78.3 | 78.7 | 6.03 | 6.03 | 6.06 | 1.17 | 1.21 | 1.23 | 4 | 4.00 |
| | 2:35 | | Middle | 3 | 18.60 | 18.60 | | 8.34 | 8.34 | | 32.76 | 32.76 | | 79.2 | 79.0 | | 6.10 | 6.08 | | 1.24 | 1.29 | | 4 | |
| 14/12/18 | 3:39 | Cloudy | Middle | 3 | 19.30 | 19.30 | 19.30 | 8.31 | 8.31 | 8.31 | 31.45 | 31.45 | 31.45 | 79.1 | 79.8 | 79.8 | 6.06 | 6.12 | 6.12 | 1.53 | 1.59 | 1.61 | 4 | 4.00 |
| | 3:04 | | Middle | 3 | 19.30 | 19.30 | | 8.31 | 8.31 | | 31.45 | 31.45 | | 80.1 | 80.2 | | 6.14 | 6.15 | | 1.64 | 1.68 | | 4 | |
| 17/12/18 | 5:00 | Cloudy | Middle | 3 | 18.90 | 18.90 | 18.85 | 8.21 | 8.21 | 8.21 | 33.16 | 33.17 | 33.17 | 78.9 | 80.4 | 79.6 | 6.02 | 6.10 | 6.07 | 1.52 | 1.55 | 1.57 | 5 | 4.50 |
| | 5:01 | | Middle | 3 | 18.80 | 18.80 | | 8.21 | 8.21 | | 33.17 | 33.17 | | 79.6 | 79.6 | | 6.08 | 6.08 | | 1.60 | 1.62 | | 4 | |
| 19/12/18 | 9:23 | Fine | Middle | 4 | 20.20 | 20.20 | 20.25 | 7.30 | 7.30 | 7.31 | 33.66 | 33.66 | 33.66 | 55.9 | 55.7 | 55.7 | 4.15 | 4.13 | 4.12 | 4.70 | 4.67 | 4.68 | 4 | 3.50 |
| | 9:25 | | Middle | 4 | 20.30 | 20.30 | | 7.32 | 7.32 | | 33.65 | 33.65 | | 55.9 | 55.2 | | 4.11 | 4.10 | | 4.66 | 4.67 | | 3 | |
| 21/12/18 | 1:33 | Cloudy | Middle | 3 | 20.80 | 20.80 | 20.80 | 8.11 | 8.11 | 8.11 | 33.28 | 33.28 | 33.28 | 77.9 | 76.7 | 77.4 | 5.70 | 5.65 | 5.69 | 1.82 | 1.88 | 1.76 | 4 | 4.50 |
| | 1:34 | | Middle | 3 | 20.80 | 20.80 | | 8.11 | 8.11 | | 33.28 | 33.28 | | 78.0 | 76.8 | | 5.74 | 5.66 | | 1.64 | 1.71 | | 5 | |
| 24/12/18 | 1:51 | Cloudy | Middle | 3 | 19.80 | 19.80 | 19.80 | 8.05 | 8.05 | 8.05 | 32.03 | 32.03 | 32.03 | 79.5 | 80.0 | 79.9 | 6.00 | 6.04 | 6.03 | 1.67 | 1.70 | 1.66 | 5 | 5.50 |
| | 1:52 | | Middle | 3 | 19.80 | 19.80 | | 8.05 | 8.05 | | 32.03 | 32.03 | | 80.0 | 79.9 | | 6.04 | 6.04 | | 1.62 | 1.64 | | 6 | |
| 27/12/18 | 3:42 | Cloudy | Middle | 3 | 20.60 | 20.60 | 20.60 | 8.17 | 8.17 | 8.17 | 32.64 | 32.64 | 32.64 | 77.0 | 77.4 | 77.7 | 5.71 | 5.74 | 5.76 | 1.39 | 1.42 | 1.47 | 8 | 8.00 |
| | 3:43 | | Middle | 3 | 20.60 | 20.60 | | 8.17 | 8.17 | | 32.64 | 32.64 | | 78.1 | 78.2 | | 5.79 | 5.80 | | 1.53 | 1.54 | | 8 | |
| 29/12/18 | 3:29 | Cloudy | Middle | 3 | 18.30 | 18.30 | 18.30 | 8.14 | 8.14 | 8.14 | 32.88 | 32.88 | 32.88 | 78.4 | 78.5 | 78.1 | 6.07 | 6.08 | 6.05 | 1.31 | 1.34 | 1.28 | 4 | 3.50 |
| | 3:30 | | Middle | 3 | 18.30 | 18.30 | | 8.14 | 8.14 | | 32.88 | 32.88 | | 77.4 | 77.9 | | 6.00 | 6.05 | | 1.26 | 1.22 | | 3 | |
| 31/12/18 | 5:50 | Cloudy | Middle | 3 | 16.50 | 16.50 | 16.50 | 8.17 | 8.17 | 8.17 | 33.29 | 33.29 | 33.29 | 76.1 | 77.8 | 77.8 | 6.08 | 6.22 | 6.22 | 1.29 | 1.41 | 1.28 | <2 | <2 |
| | 5:51 | | Middle | 3 | 16.50 | 16.50 | | 8.17 | 8.17 | | 33.29 | 33.29 | | 78.7 | 78.7 | | 6.29 | 6.28 | | 1.18 | 1.22 | | <2 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at M5B - Central Cooling Water Intake Group
Mid-Flood Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | pH | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | | | |
|------------|-------|-------------------|----------------|-------|-------------------|-------|---------|-------|----------|-------|---------------|-------|---------|-------|-----------|-------|------------------|-------|---------|------|------|------|----|------|
| | | | | | °C | | - | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | | | |
| | | | m | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | | |
| 02/01/2019 | 12:40 | Cloudy | Middle | 4.0 | 18.20 | 18.20 | 18.20 | 6.83 | 6.83 | 6.83 | 33.42 | 33.42 | 33.42 | 80.4 | 80.7 | 80.9 | 6.20 | 6.23 | 6.24 | 7.66 | 7.66 | 7.67 | 9 | 9.50 |
| | 12:42 | | Middle | 4.0 | 18.20 | 18.20 | 18.20 | 6.83 | 6.83 | 6.83 | 33.42 | 33.42 | 33.42 | 81.2 | 81.2 | 80.9 | 6.27 | 6.27 | 6.24 | 7.66 | 7.68 | 7.67 | 10 | |
| 04/01/2019 | 14:25 | Fine | Middle | 4.0 | 19.50 | 19.50 | 19.50 | 7.66 | 7.66 | 7.67 | 33.65 | 33.65 | 33.65 | 92.3 | 92.3 | 92.2 | 6.94 | 6.95 | 6.94 | 5.70 | 5.80 | 5.78 | 5 | 4.50 |
| | 14:27 | | Middle | 4.0 | 19.50 | 19.50 | 19.50 | 7.68 | 7.68 | 7.67 | 33.64 | 33.64 | 33.65 | 92.1 | 92.0 | 92.2 | 6.93 | 6.92 | 6.94 | 5.82 | 5.81 | 5.78 | 4 | |
| 07/01/2019 | 09:55 | Cloudy | Middle | 4.0 | 18.80 | 18.80 | 18.80 | 8.11 | 8.11 | 8.11 | 33.49 | 33.49 | 33.49 | 92.4 | 92.6 | 92.1 | 7.04 | 7.06 | 7.02 | 4.41 | 4.42 | 4.42 | 4 | 4.00 |
| | 09:57 | | Middle | 4.0 | 18.80 | 18.80 | 18.80 | 8.11 | 8.11 | 8.11 | 33.49 | 33.49 | 33.49 | 91.6 | 91.9 | 92.1 | 6.99 | 7.00 | 7.02 | 4.42 | 4.43 | 4.42 | 4 | |
| 09/01/2019 | 09:05 | Cloudy | Middle | 4.0 | 18.80 | 18.80 | 18.80 | 8.02 | 8.02 | 8.03 | 33.33 | 33.33 | 33.33 | 90.4 | 90.5 | 90.3 | 6.90 | 6.91 | 6.90 | 5.59 | 5.58 | 5.57 | 4 | 4.00 |
| | 09:07 | | Middle | 4.0 | 18.80 | 18.80 | 18.80 | 8.03 | 8.03 | 8.03 | 33.33 | 33.33 | 33.33 | 90.3 | 90.1 | 90.3 | 6.90 | 6.88 | 6.90 | 5.56 | 5.56 | 5.57 | 4 | |
| 11/01/2019 | 12:30 | Cloudy | Middle | 4.0 | 20.00 | 20.00 | 20.05 | 8.18 | 8.18 | 8.20 | 32.72 | 32.72 | 32.72 | 101.2 | 101.1 | 100.5 | 7.50 | 7.56 | 7.50 | 8.41 | 8.40 | 8.41 | 3 | 3.00 |
| | 12:32 | | Middle | 4.0 | 20.10 | 20.10 | 20.05 | 8.21 | 8.21 | 8.20 | 32.72 | 32.72 | 32.72 | 99.8 | 99.9 | 100.5 | 7.46 | 7.46 | 7.50 | 8.40 | 8.42 | 8.41 | 3 | |
| 14/01/2019 | 12:25 | Cloudy | Middle | 4.0 | 19.20 | 19.20 | 19.20 | 8.62 | 8.62 | 8.62 | 32.25 | 32.25 | 32.25 | 94.3 | 94.4 | 93.9 | 7.19 | 7.20 | 7.16 | 1.80 | 1.80 | 1.81 | 3 | 3.00 |
| | 12:27 | | Middle | 4.0 | 19.20 | 19.20 | 19.20 | 8.63 | 8.60 | 8.62 | 32.25 | 32.25 | 32.25 | 93.3 | 93.4 | 93.9 | 7.12 | 7.13 | 7.16 | 1.81 | 1.82 | 1.81 | 3 | |
| 16/01/2019 | 14:20 | Cloudy | Middle | 4.0 | 18.60 | 18.60 | 18.60 | 8.69 | 8.68 | 8.69 | 31.96 | 31.96 | 31.96 | 98.7 | 98.7 | 98.5 | 7.63 | 7.61 | 7.61 | 1.65 | 1.58 | 1.61 | 3 | 3.50 |
| | 14:22 | | Middle | 4.0 | 18.60 | 18.60 | 18.60 | 8.69 | 8.69 | 8.69 | 31.96 | 31.96 | 31.96 | 98.3 | 98.2 | 98.5 | 7.60 | 7.59 | 7.61 | 1.57 | 1.62 | 1.61 | 4 | |
| 18/01/2019 | 15:45 | Cloudy | Middle | 4.0 | 19.00 | 19.00 | 19.00 | 7.61 | 7.61 | 7.62 | 31.25 | 31.25 | 31.25 | 94.8 | 95.2 | 95.1 | 7.26 | 7.30 | 7.29 | 0.68 | 0.68 | 0.68 | 3 | 3.50 |
| | 15:47 | | Middle | 4.0 | 19.00 | 19.00 | 19.00 | 7.61 | 7.63 | 7.62 | 31.25 | 31.25 | 31.25 | 95.2 | 95.1 | 95.1 | 7.29 | 7.29 | 7.29 | 0.68 | 0.68 | 0.68 | 4 | |
| 21/01/2019 | 04:31 | Cloudy | Middle | 3.0 | 17.80 | 17.80 | 17.80 | 7.81 | 7.81 | 7.81 | 31.99 | 31.99 | 31.99 | 87.8 | 83.6 | 84.8 | 6.49 | 6.56 | 6.55 | 3.51 | 3.34 | 3.30 | 10 | 9.50 |
| | 04:32 | | Middle | 3.0 | 17.80 | 17.80 | 17.80 | 7.81 | 7.81 | 7.81 | 31.99 | 31.99 | 31.99 | 84.2 | 83.7 | 84.8 | 6.60 | 6.56 | 6.55 | 3.21 | 3.13 | 3.30 | 9 | |
| 23/01/2019 | 08:20 | Fine | Middle | 4.0 | 16.90 | 16.90 | 16.90 | 8.16 | 8.16 | 8.18 | 31.22 | 31.22 | 31.22 | 95.9 | 96.1 | 96.1 | 7.70 | 7.72 | 7.72 | 2.75 | 2.75 | 2.75 | 6 | 5.50 |
| | 08:22 | | Middle | 4.0 | 16.90 | 16.90 | 16.90 | 8.19 | 8.19 | 8.18 | 31.22 | 31.22 | 31.22 | 96.3 | 96.2 | 96.1 | 7.73 | 7.72 | 7.72 | 2.75 | 2.74 | 2.75 | 5 | |
| 25/01/2019 | 16:05 | Fine | Middle | 4.0 | 19.70 | 19.70 | 19.75 | 8.14 | 8.14 | 8.15 | 30.98 | 30.98 | 30.98 | 97.8 | 97.9 | 98.1 | 7.44 | 7.45 | 7.46 | 2.44 | 2.43 | 2.43 | 9 | 9.00 |
| | 16:07 | | Middle | 4.0 | 19.80 | 19.80 | 19.75 | 8.15 | 8.15 | 8.15 | 30.98 | 30.98 | 30.98 | 98.2 | 98.3 | 98.1 | 7.48 | 7.48 | 7.46 | 2.42 | 2.42 | 2.43 | 9 | |
| 28/01/2019 | 14:25 | Fine | Middle | 4.0 | 18.60 | 18.60 | 18.60 | 8.27 | 8.27 | 8.28 | 31.09 | 31.09 | 31.09 | 103.2 | 103.4 | 103.3 | 8.02 | 8.04 | 7.99 | 3.74 | 3.75 | 3.75 | 7 | 7.50 |
| | 14:27 | | Middle | 4.0 | 18.60 | 18.60 | 18.60 | 8.28 | 8.28 | 8.28 | 31.09 | 31.09 | 31.09 | 103.0 | 103.7 | 103.3 | 8.00 | 7.89 | 7.99 | 3.76 | 3.76 | 3.75 | 8 | |
| 30/01/2019 | 14:05 | Fine | Middle | 4.0 | 18.90 | 18.90 | 18.95 | 8.26 | 8.26 | 8.27 | 31.01 | 31.01 | 31.01 | 107.6 | 107.5 | 107.4 | 8.31 | 8.29 | 8.29 | 2.13 | 2.13 | 2.14 | 4 | 4.00 |
| | 14:07 | | Middle | 4.0 | 19.00 | 19.00 | 18.95 | 8.28 | 8.28 | 8.27 | 31.01 | 31.01 | 31.01 | 107.4 | 107.2 | 107.4 | 8.28 | 8.27 | 8.29 | 2.14 | 2.17 | 2.14 | 4 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at Culvert J - Reference Station
Mid-Flood Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | | DO Saturation | | | DO | | | Turbidity | | | Suspended Solids | |
|------------|-------|-------------------|----------------|-----|-------------------|---------|-------|---------|-------|---------|----------|---------|-------|---------------|-------|---------|-------|---------|-------|-----------|------|------|------------------|-------|
| | | | m | | °C | | - | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | | | |
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 02/01/2019 | 12:35 | Cloudy | Middle | 3.5 | 18.30 | 18.30 | 18.25 | 6.82 | 6.82 | 6.83 | 33.68 | 33.68 | 33.68 | 78.1 | 78.2 | 78.8 | 6.01 | 6.05 | 6.08 | 4.24 | 4.25 | 4.27 | 4 | 4.00 |
| | 12:37 | | Middle | 3.5 | 18.20 | 18.20 | | 6.83 | 6.83 | | 33.68 | 33.68 | | 79.4 | 79.6 | | 6.12 | 6.13 | | 4.29 | 4.30 | | 4 | |
| 04/01/2019 | 14:20 | Fine | Middle | 3.5 | 19.90 | 19.90 | 19.90 | 7.64 | 7.64 | 7.65 | 31.55 | 31.55 | 31.55 | 88.3 | 88.4 | 87.4 | 6.67 | 6.68 | 6.60 | 7.15 | 7.14 | 7.17 | 4 | 4.50 |
| | 14:22 | | Middle | 3.5 | 19.90 | 19.90 | | 7.66 | 7.66 | | 31.55 | 31.55 | | 87.0 | 85.9 | | 6.57 | 6.49 | | 7.17 | 7.21 | | 5 | |
| 07/01/2019 | 09:50 | Cloudy | Middle | 3.5 | 18.90 | 18.90 | 18.90 | 8.09 | 8.09 | 8.10 | 33.22 | 33.22 | 32.73 | 92.1 | 92.6 | 92.3 | 7.03 | 7.07 | 7.05 | 4.43 | 4.43 | 4.43 | 4 | 3.50 |
| | 09:52 | | Middle | 3.5 | 18.90 | 18.90 | | 8.10 | 8.10 | | 32.23 | 32.23 | | 92.2 | 92.2 | | 7.04 | 7.04 | | 4.43 | 4.41 | | 3 | |
| 09/01/2019 | 09:00 | Cloudy | Middle | 3.5 | 18.70 | 18.70 | 18.70 | 7.89 | 7.89 | 7.91 | 33.23 | 33.23 | 33.24 | 95.8 | 96.1 | 94.7 | 7.33 | 7.36 | 7.25 | 5.75 | 5.72 | 5.73 | 4 | 4.50 |
| | 09:02 | | Middle | 3.5 | 18.70 | 18.70 | | 7.93 | 7.93 | | 33.25 | 33.25 | | 93.2 | 93.5 | | 7.13 | 7.17 | | 5.72 | 5.74 | | 5 | |
| 11/01/2019 | 12:25 | Cloudy | Middle | 4.0 | 20.00 | 20.00 | 20.05 | 8.26 | 8.26 | 8.27 | 31.32 | 31.32 | 31.32 | 97.7 | 99.2 | 98.7 | 7.38 | 7.49 | 7.46 | 8.66 | 8.67 | 8.67 | 4 | 3.50 |
| | 12:27 | | Middle | 4.0 | 20.10 | 20.10 | | 8.27 | 8.27 | | 31.31 | 31.31 | | 99.0 | 99.0 | | 7.48 | 7.48 | | 8.68 | 8.68 | | 3 | |
| 14/01/2019 | 12:20 | Cloudy | Middle | 3.5 | 19.20 | 19.20 | 19.25 | 8.59 | 8.59 | 8.60 | 31.95 | 31.95 | 31.95 | 95.5 | 94.7 | 94.3 | 7.30 | 7.23 | 7.20 | 1.96 | 1.97 | 1.97 | 4 | 4.00 |
| | 12:22 | | Middle | 3.5 | 19.30 | 19.30 | | 8.60 | 8.60 | | 31.95 | 31.95 | | 93.5 | 93.3 | | 7.13 | 7.12 | | 1.97 | 1.96 | | 4 | |
| 16/01/2019 | 14:15 | Cloudy | Middle | 4.0 | 18.70 | 18.70 | 18.75 | 8.67 | 8.67 | 8.68 | 31.92 | 31.92 | 31.92 | 101.9 | 101.6 | 100.6 | 7.85 | 7.87 | 7.76 | 1.27 | 1.27 | 1.26 | 6 | 5.50 |
| | 14:17 | | Middle | 4.0 | 18.80 | 18.80 | | 8.68 | 8.68 | | 31.92 | 31.92 | | 99.5 | 99.2 | | 7.68 | 7.64 | | 1.24 | 1.24 | | 5 | |
| 18/01/2019 | 15:40 | Cloudy | Middle | 4.0 | 18.20 | 18.20 | 18.30 | 7.89 | 7.89 | 7.89 | 31.69 | 31.69 | 31.69 | 107.4 | 108.0 | 106.9 | 8.35 | 8.38 | 8.32 | 1.49 | 1.49 | 1.49 | 5 | 4.50 |
| | 15:42 | | Middle | 4.0 | 18.40 | 18.40 | | 7.88 | 7.88 | | 31.68 | 31.68 | | 106.0 | 106.1 | | 8.26 | 8.27 | | 1.48 | 1.49 | | 4 | |
| 21/01/2019 | 04:39 | Cloudy | Middle | 2.5 | 17.80 | 17.80 | 17.85 | 7.82 | 7.82 | 7.82 | 31.49 | 31.49 | 31.49 | 82.4 | 82.8 | 82.6 | 6.47 | 6.50 | 6.47 | 3.99 | 3.66 | 3.84 | 4 | 4.50 |
| | 04:40 | | Middle | 2.5 | 17.90 | 17.90 | | 7.82 | 7.82 | | 31.49 | 31.49 | | 83.5 | 81.7 | | 6.48 | 6.41 | | 3.83 | 3.86 | | 5 | |
| 23/01/2019 | 08:15 | Fine | Middle | 4.0 | 16.90 | 16.90 | 16.90 | 8.05 | 8.05 | 8.07 | 31.04 | 31.04 | 31.04 | 96.4 | 96.0 | 96.2 | 7.73 | 7.70 | 7.72 | 3.08 | 3.11 | 3.11 | 5 | 4.50 |
| | 08:17 | | Middle | 4.0 | 16.90 | 16.90 | | 8.09 | 8.09 | | 31.04 | 31.04 | | 96.1 | 96.2 | | 7.72 | 7.72 | | 3.12 | 3.11 | | 4 | |
| 25/01/2019 | 16:00 | Fine | Middle | 3.5 | 19.80 | 19.80 | 19.80 | 8.11 | 8.11 | 8.12 | 30.79 | 30.79 | 30.79 | 97.3 | 98.2 | 98.1 | 7.39 | 7.45 | 7.44 | 2.83 | 2.82 | 2.85 | 12 | 10.00 |
| | 16:02 | | Middle | 3.5 | 19.80 | 19.80 | | 8.13 | 8.13 | | 30.78 | 30.78 | | 98.4 | 98.5 | | 7.46 | 7.46 | | 2.88 | 2.88 | | 8 | |
| 28/01/2019 | 14:20 | Fine | Middle | 4.0 | 19.00 | 19.00 | 19.05 | 8.22 | 8.22 | 8.23 | 30.78 | 30.78 | 30.77 | 103.3 | 103.2 | 102.9 | 7.94 | 7.93 | 7.92 | 2.84 | 2.91 | 2.99 | 6 | 5.50 |
| | 14:22 | | Middle | 4.0 | 19.10 | 19.10 | | 8.24 | 8.24 | | 30.76 | 30.76 | | 102.7 | 102.5 | | 7.92 | 7.90 | | 3.11 | 3.09 | | 5 | |
| 30/01/2019 | 14:00 | Fine | Middle | 4.0 | 19.50 | 19.50 | 19.55 | 8.17 | 8.17 | 8.19 | 30.82 | 30.82 | 30.82 | 107.0 | 107.0 | 106.7 | 8.19 | 8.19 | 8.16 | 2.51 | 2.68 | 2.54 | 4 | 3.50 |
| | 14:02 | | Middle | 4.0 | 19.60 | 19.60 | | 8.21 | 8.21 | | 30.82 | 30.82 | | 106.2 | 106.4 | | 8.12 | 8.13 | | 2.51 | 2.45 | | 3 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



**Water Monitoring Result at M5B - Central Colling Water Intake Group
Mid-Ebb Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|------------|-------|-------------------|----------------|-----|-------------------|---------|-------|-------|---------|------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|------|------|---|------|
| | | | | | °C | | | - | | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | |
| | | | | | Value | Average | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 02/01/2019 | 23:45 | Cloudy | Middle | 3.0 | 17.60 | 17.60 | 17.60 | 8.48 | 8.51 | 8.50 | 29.83 | 29.83 | 29.83 | 85.3 | 86.2 | 85.2 | 6.82 | 6.89 | 6.82 | 5.32 | 5.23 | 5.23 | 5 | 5.00 |
| | 23:46 | | Middle | 3.0 | 17.60 | 17.60 | | 8.51 | 8.51 | | 29.83 | 29.83 | | 85.1 | 84.3 | | 6.81 | 6.74 | | 5.20 | 5.17 | | 5 | |
| 04/01/2019 | 01:19 | Cloudy | Middle | 3.0 | 19.30 | 19.30 | 19.30 | 8.57 | 8.57 | 8.57 | 32.19 | 32.19 | 32.19 | 87.6 | 88.3 | 88.0 | 6.66 | 6.72 | 6.69 | 5.18 | 5.21 | 5.14 | 2 | 2.50 |
| | 01:20 | | Middle | 3.0 | 19.30 | 19.30 | | 8.57 | 8.57 | | 32.19 | 32.19 | | 88.1 | 87.9 | | 6.70 | 6.68 | | 5.01 | 5.16 | | 3 | |
| 07/01/2019 | 01:32 | Cloudy | Middle | 3.0 | 18.20 | 18.20 | 18.20 | 8.63 | 8.63 | 8.63 | 32.86 | 32.86 | 32.86 | 84.0 | 86.4 | 86.1 | 6.51 | 6.70 | 6.67 | 4.83 | 4.81 | 4.92 | 4 | 3.50 |
| | 01:33 | | Middle | 3.0 | 18.20 | 18.20 | | 8.63 | 8.63 | | 32.86 | 32.86 | | 87.5 | 86.3 | | 6.78 | 6.69 | | 5.07 | 4.98 | | 3 | |
| 09/01/2019 | 02:51 | Cloudy | Middle | 3.5 | 18.40 | 18.40 | 18.40 | 8.50 | 8.50 | 8.50 | 32.55 | 32.55 | 32.55 | 88.0 | 89.5 | 89.2 | 6.68 | 6.80 | 6.78 | 4.35 | 4.27 | 4.21 | 2 | 3.00 |
| | 02:52 | | Middle | 3.5 | 18.40 | 18.40 | | 8.50 | 8.50 | | 32.55 | 32.55 | | 89.9 | 89.5 | | 6.83 | 6.80 | | 4.07 | 4.14 | | 4 | |
| 11/01/2019 | 03:40 | Cloudy | Middle | 3.5 | 18.70 | 18.70 | 18.70 | 8.68 | 8.68 | 8.68 | 32.42 | 32.42 | 32.42 | 93.1 | 93.2 | 93.4 | 7.17 | 7.18 | 7.19 | 5.25 | 5.22 | 5.17 | 4 | 3.00 |
| | 03:41 | | Middle | 3.5 | 18.70 | 18.70 | | 8.68 | 8.68 | | 32.42 | 32.42 | | 93.8 | 93.4 | | 7.22 | 7.19 | | 5.14 | 5.08 | | 2 | |
| 14/01/2019 | 02:32 | Cloudy | Middle | 3.5 | 18.70 | 18.70 | 18.70 | 8.55 | 8.55 | 8.55 | 32.29 | 32.29 | 32.29 | 92.2 | 93.3 | 92.2 | 7.09 | 7.18 | 7.09 | 1.23 | 1.14 | 1.14 | 3 | 3.00 |
| | 02:33 | | Middle | 3.5 | 18.70 | 18.70 | | 8.55 | 8.55 | | 32.29 | 32.29 | | 91.7 | 91.4 | | 7.06 | 7.04 | | 1.11 | 1.07 | | 3 | |
| 16/01/2019 | 21:24 | Cloudy | Middle | 3.5 | 17.80 | 17.80 | 17.80 | 8.64 | 8.64 | 8.64 | 31.11 | 31.11 | 31.11 | 90.1 | 89.4 | 89.6 | 7.10 | 7.04 | 7.06 | 2.24 | 2.11 | 2.12 | 4 | 4.00 |
| | 21:25 | | Middle | 3.5 | 17.80 | 17.80 | | 8.64 | 8.64 | | 31.11 | 31.11 | | 89.6 | 89.3 | | 7.06 | 7.04 | | 2.04 | 2.08 | | 4 | |
| 18/01/2019 | 21:18 | Cloudy | Middle | 3.5 | 18.80 | 18.80 | 18.80 | 7.79 | 7.79 | 7.79 | 32.17 | 32.17 | 32.17 | 85.5 | 87.2 | 86.9 | 6.45 | 6.56 | 6.55 | 1.77 | 1.60 | 1.61 | 5 | 4.50 |
| | 21:19 | | Middle | 3.5 | 18.80 | 18.80 | | 7.79 | 7.79 | | 32.17 | 32.17 | | 87.3 | 87.6 | | 6.59 | 6.61 | | 1.56 | 1.50 | | 4 | |
| 21/01/2019 | 00:27 | Cloudy | Middle | 3.5 | 17.80 | 17.80 | 17.80 | 7.79 | 7.79 | 7.79 | 31.95 | 31.95 | 31.95 | 82.5 | 84.4 | 83.6 | 6.47 | 6.62 | 6.56 | 1.87 | 1.91 | 1.81 | 4 | 3.50 |
| | 00:28 | | Middle | 3.5 | 17.80 | 17.80 | | 7.79 | 7.79 | | 31.95 | 31.95 | | 83.8 | 83.5 | | 6.58 | 6.55 | | 1.83 | 1.63 | | 3 | |
| 23/01/2019 | 02:23 | Cloudy | Middle | 3.5 | 16.00 | 16.00 | 16.00 | 8.13 | 8.13 | 8.13 | 30.05 | 30.05 | 30.05 | 86.8 | 88.8 | 88.3 | 7.13 | 7.30 | 7.26 | 2.48 | 2.51 | 2.52 | 2 | 2.00 |
| | 02:24 | | Middle | 3.5 | 16.00 | 16.00 | | 8.13 | 8.13 | | 30.05 | 30.05 | | 89.0 | 88.5 | | 7.32 | 7.28 | | 2.53 | 2.56 | | 2 | |
| 25/01/2019 | 11:45 | Fine | Middle | 4.0 | 19.10 | 19.10 | 19.15 | 8.19 | 0.18 | 6.19 | 31.12 | 31.12 | 31.13 | 99.7 | 99.8 | 99.6 | 7.66 | 7.67 | 7.65 | 3.50 | 3.44 | 3.45 | 7 | 7.50 |
| | 11:47 | | Middle | 4.0 | 19.20 | 19.20 | | 8.19 | 8.19 | | 31.13 | 31.13 | | 99.4 | 99.3 | | 7.64 | 7.63 | | 3.41 | 3.46 | | 8 | |
| 28/01/2019 | 20:18 | Cloudy | Middle | 3.5 | 17.30 | 17.30 | 17.30 | 8.41 | 8.41 | 8.41 | 31.09 | 31.09 | 31.09 | 85.5 | 84.7 | 88.0 | 6.82 | 6.75 | 7.01 | 3.54 | 3.19 | 3.27 | 6 | 6.00 |
| | 20:19 | | Middle | 3.5 | 17.30 | 17.30 | | 8.41 | 8.41 | | 31.09 | 31.09 | | 89.7 | 91.9 | | 7.14 | 7.32 | | 3.14 | 3.21 | | 6 | |
| 30/01/2019 | 22:37 | Cloudy | Middle | 3.0 | 18.90 | 18.90 | 18.90 | 8.28 | 8.28 | 8.28 | 31.05 | 31.05 | 31.05 | 87.9 | 91.6 | 90.4 | 6.43 | 6.69 | 6.61 | 1.65 | 1.62 | 1.67 | 4 | 3.00 |
| | 22:38 | | Middle | 3.0 | 18.90 | 18.90 | | 8.28 | 8.28 | | 31.05 | 31.05 | | 93.4 | 88.6 | | 6.83 | 6.47 | | 1.75 | 1.67 | | 2 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.



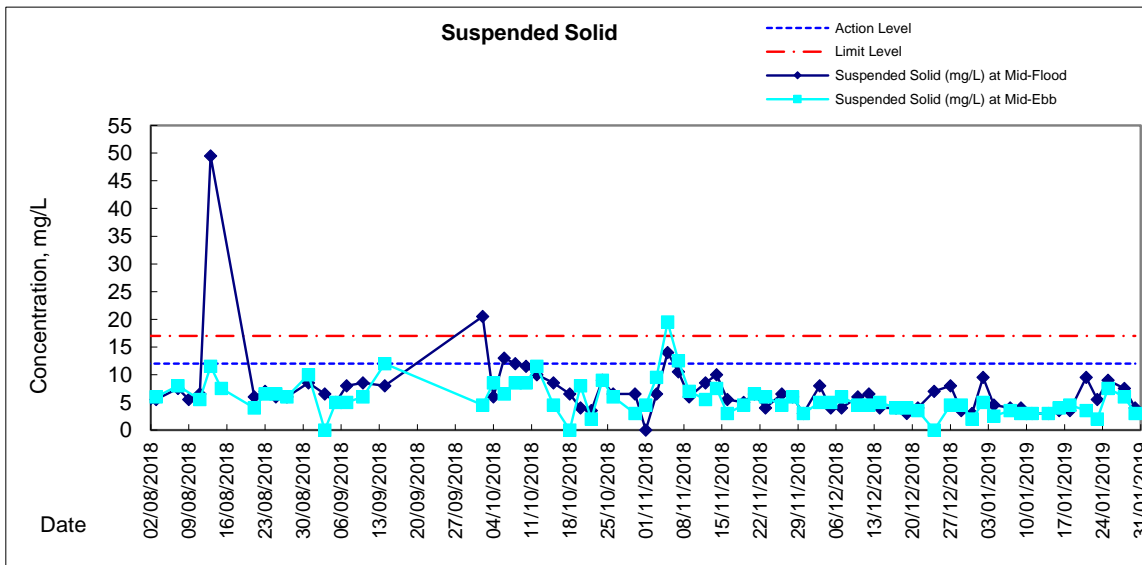
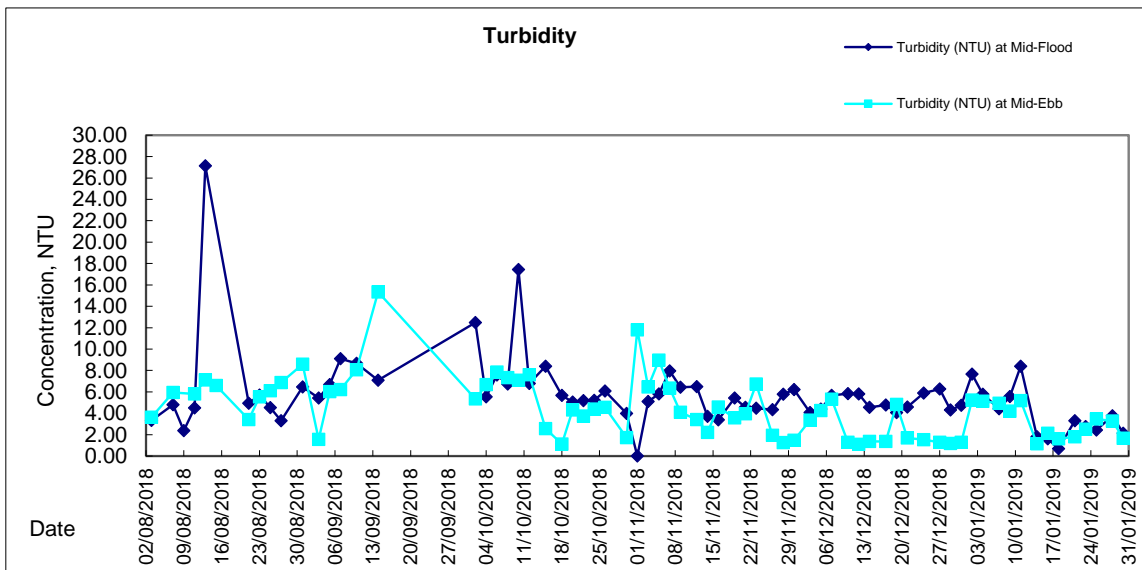
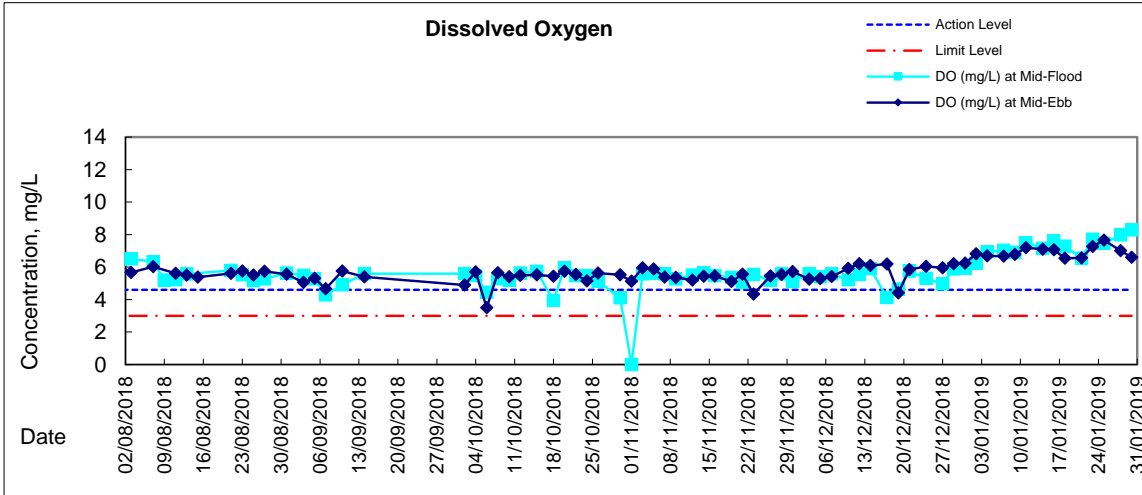
**Water Monitoring Result at Culvert J - Reference Station
Mid-Ebb Tide**

| Date | Time | Weather Condition | Sampling Depth | | Water Temperature | | | pH | | | Salinity | | DO Saturation | | DO | | Turbidity | | Suspended Solids | | | | | |
|------------|-------|-------------------|----------------|---|-------------------|---------|-------|-------|---------|------|----------|---------|---------------|---------|-------|---------|-----------|---------|------------------|---------|------|------|---|------|
| | | | | | °C | | | - | | | ppt | | % | | mg/L | | NTU | | mg/L | | | | | |
| | | | | | Value | Average | | Value | Average | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | | | | |
| 02/01/2019 | 23:54 | Cloudy | Middle | 3 | 17.50 | 17.50 | 17.50 | 8.57 | 8.57 | 8.57 | 32.82 | 32.82 | 32.82 | 85.9 | 86.5 | 86.4 | 6.75 | 6.78 | 6.78 | 4.38 | 4.30 | 4.28 | 4 | 4.00 |
| | 23:55 | | Middle | 3 | 17.50 | 17.50 | | 8.57 | 8.57 | | 32.82 | 32.82 | | 86.7 | 86.5 | | 6.80 | 6.79 | | 4.19 | 4.23 | | 4 | |
| 04/01/2019 | 01:30 | Cloudy | Middle | 3 | 19.30 | 19.30 | 19.30 | 8.58 | 8.58 | 8.58 | 30.24 | 30.24 | 30.24 | 81.0 | 81.6 | 81.4 | 6.24 | 6.29 | 6.28 | 7.28 | 7.24 | 7.20 | 3 | 3.50 |
| | 01:31 | | Middle | 3 | 19.30 | 19.30 | | 8.58 | 8.58 | | 30.24 | 30.24 | | 82.0 | 81.1 | | 6.32 | 6.25 | | 7.16 | 7.12 | | 4 | |
| 07/01/2019 | 01:38 | Cloudy | Middle | 3 | 18.10 | 18.10 | 18.10 | 8.65 | 8.65 | 8.65 | 32.58 | 32.58 | 32.58 | 84.4 | 86.4 | 86.1 | 6.57 | 6.72 | 6.70 | 4.83 | 4.96 | 4.95 | 4 | 4.00 |
| | 01:39 | | Middle | 3 | 18.10 | 18.10 | | 8.65 | 8.65 | | 32.58 | 32.58 | | 87.0 | 86.7 | | 6.77 | 6.75 | | 4.99 | 5.02 | | 4 | |
| 09/01/2019 | 03:00 | Cloudy | Middle | 3 | 18.20 | 18.20 | 18.20 | 8.54 | 8.54 | 8.54 | 31.23 | 31.23 | 31.23 | 87.8 | 88.9 | 88.4 | 6.79 | 6.88 | 6.83 | 4.13 | 4.23 | 4.17 | 3 | 3.00 |
| | 03:01 | | Middle | 3 | 18.20 | 18.20 | | 8.54 | 8.54 | | 31.23 | 31.23 | | 88.2 | 88.5 | | 6.82 | 6.84 | | 4.10 | 4.20 | | 3 | |
| 11/01/2019 | 03:47 | Cloudy | Middle | 3 | 18.70 | 18.70 | 18.70 | 8.66 | 8.66 | 8.66 | 31.39 | 31.39 | 31.39 | 88.6 | 89.9 | 89.1 | 6.85 | 6.96 | 6.90 | 6.40 | 6.34 | 6.27 | 4 | 4.00 |
| | 03:48 | | Middle | 3 | 18.70 | 18.70 | | 8.66 | 8.66 | | 31.38 | 31.38 | | 89.7 | 88.3 | | 6.94 | 6.83 | | 6.15 | 6.19 | | 4 | |
| 14/01/2019 | 02:41 | Cloudy | Middle | 3 | 18.70 | 18.70 | 18.70 | 8.58 | 8.58 | 8.58 | 32.00 | 32.00 | 32.00 | 90.6 | 91.8 | 91.3 | 6.98 | 7.08 | 7.04 | 2.27 | 2.15 | 2.17 | 3 | 3.00 |
| | 02:42 | | Middle | 3 | 18.70 | 18.70 | | 8.58 | 8.58 | | 32.00 | 32.00 | | 91.6 | 91.2 | | 7.06 | 7.03 | | 2.17 | 2.08 | | 3 | |
| 16/01/2019 | 21:32 | Cloudy | Middle | 3 | 17.70 | 17.70 | 17.70 | 8.65 | 8.65 | 8.65 | 28.33 | 28.33 | 28.32 | 78.4 | 81.8 | 80.6 | 6.30 | 6.58 | 6.48 | 4.72 | 4.47 | 4.47 | 3 | 3.00 |
| | 21:33 | | Middle | 3 | 17.70 | 17.70 | | 8.65 | 8.65 | | 28.33 | 28.30 | | 81.4 | 80.7 | | 6.54 | 6.49 | | 4.34 | 4.36 | | 3 | |
| 18/01/2019 | 21:27 | Cloudy | Middle | 3 | 18.90 | 18.90 | 18.90 | 7.77 | 7.77 | 7.77 | 31.33 | 31.33 | 31.33 | 89.0 | 88.5 | 88.4 | 6.74 | 6.71 | 6.70 | 1.88 | 1.91 | 1.92 | 2 | 2.50 |
| | 21:28 | | Middle | 3 | 18.90 | 18.90 | | 7.77 | 7.77 | | 31.33 | 31.33 | | 88.9 | 87.3 | | 6.73 | 6.61 | | 1.94 | 1.96 | | 3 | |
| 21/01/2019 | 00:34 | Cloudy | Middle | 3 | 17.80 | 17.80 | 17.80 | 7.81 | 7.81 | 7.81 | 31.50 | 31.50 | 31.50 | 82.3 | 82.4 | 82.1 | 6.47 | 6.48 | 6.45 | 1.96 | 2.02 | 2.04 | 6 | 5.50 |
| | 00:35 | | Middle | 3 | 17.80 | 17.80 | | 7.81 | 7.81 | | 31.50 | 31.50 | | 82.3 | 81.3 | | 6.47 | 6.39 | | 2.06 | 2.11 | | 5 | |
| 23/01/2019 | 02:31 | Cloudy | Middle | 3 | 16.20 | 16.20 | 16.20 | 8.15 | 8.15 | 8.15 | 29.80 | 29.80 | 29.80 | 82.6 | 83.8 | 83.8 | 6.77 | 6.87 | 6.87 | 3.53 | 3.57 | 3.59 | 3 | 3.00 |
| | 02:32 | | Middle | 3 | 16.20 | 16.20 | | 8.15 | 8.15 | | 29.80 | 29.80 | | 84.8 | 83.8 | | 6.95 | 6.87 | | 3.61 | 3.63 | | 3 | |
| 25/01/2019 | 11:40 | Fine | Middle | 4 | 19.40 | 19.40 | 19.45 | 8.13 | 8.13 | 8.15 | 31.07 | 31.07 | 31.07 | 99.7 | 99.4 | 99.2 | 7.62 | 7.60 | 7.59 | 3.58 | 3.59 | 3.57 | 8 | 7.50 |
| | 11:42 | | Middle | 4 | 19.50 | 19.50 | | 8.16 | 8.16 | | 31.07 | 31.07 | | 99.0 | 98.6 | | 7.58 | 7.54 | | 3.56 | 3.56 | | 7 | |
| 28/01/2019 | 20:23 | Cloudy | Middle | 3 | 17.40 | 17.40 | 17.40 | 8.38 | 8.38 | 8.38 | 30.23 | 30.23 | 30.23 | 87.1 | 86.2 | 87.0 | 6.96 | 6.89 | 6.95 | 2.62 | 2.40 | 2.50 | 6 | 6.50 |
| | 20:24 | | Middle | 3 | 17.40 | 17.40 | | 8.38 | 8.38 | | 30.23 | 30.23 | | 87.0 | 87.7 | | 6.95 | 6.99 | | 2.44 | 2.54 | | 7 | |
| 30/01/2019 | 22:46 | Cloudy | Middle | 3 | 18.50 | 18.50 | 18.50 | 8.29 | 8.29 | 8.29 | 30.68 | 30.68 | 30.68 | 92.8 | 94.3 | 94.1 | 6.84 | 6.95 | 6.93 | 1.89 | 1.86 | 1.82 | 3 | 3.00 |
| | 22:47 | | Middle | 3 | 18.50 | 18.50 | | 8.29 | 8.29 | | 30.68 | 30.68 | | 95.3 | 93.9 | | 7.02 | 6.92 | | 1.78 | 1.73 | | 3 | |

Remarks:
Single underline denotes exceedance over Action Level.
Double underline denotes exceedance over Limit Level.

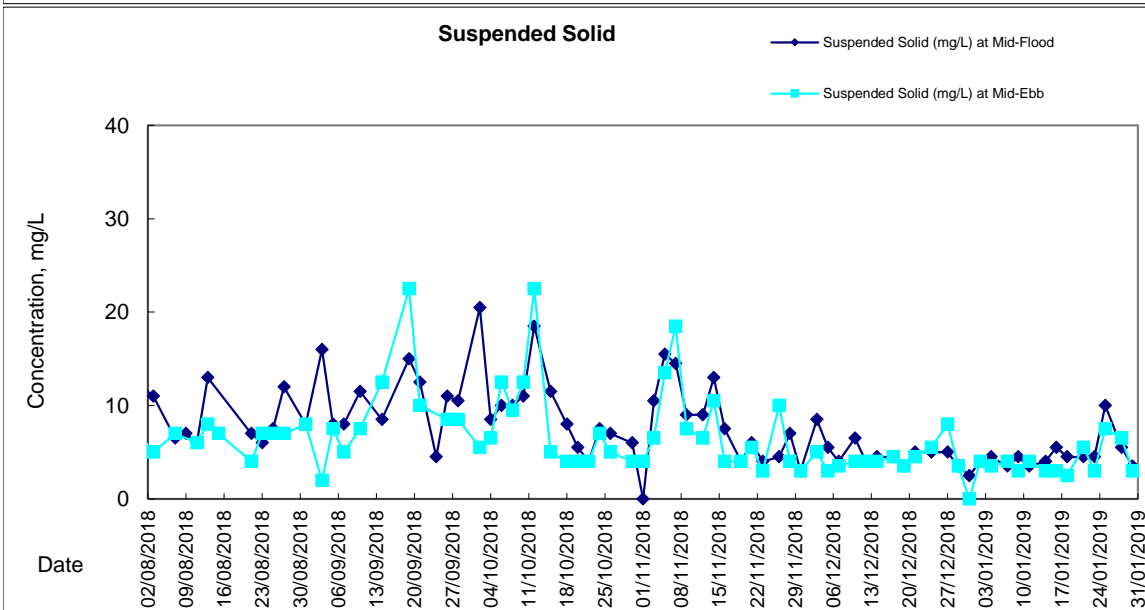
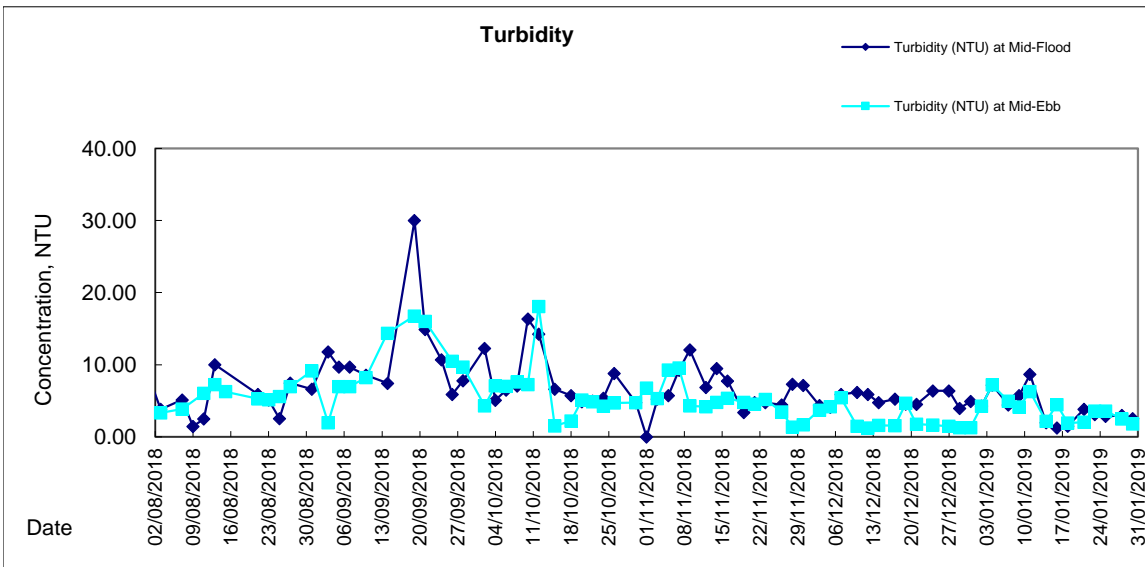
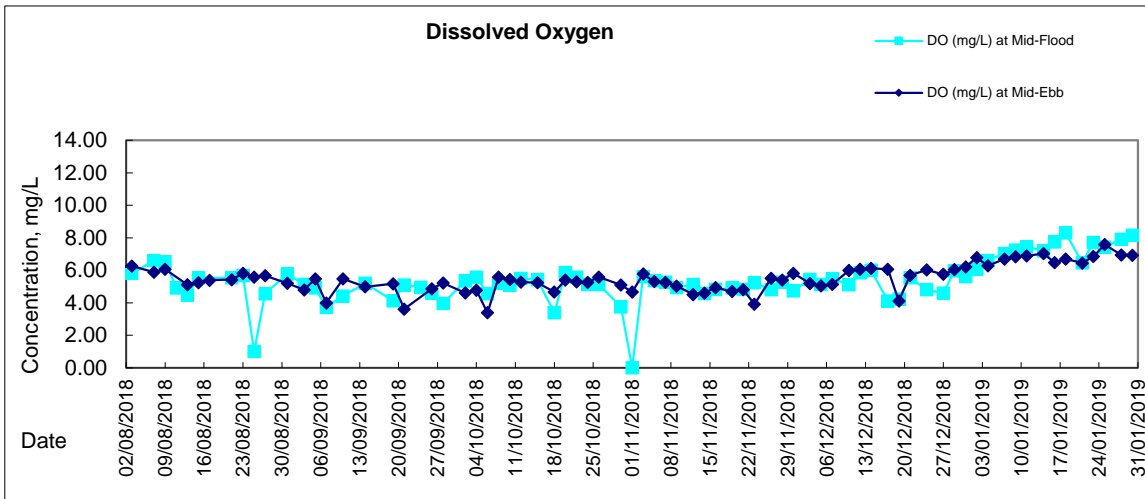


Graphic Presentation of Water Quality Result of M5B - Central Cooling Water Intake Groups





Graphic Presentation of Water Quality Result of Culvert J - Reference Station





Appendix 5.1

Event Action Plans

Central Reclamation Phase III : Environmental Monitoring and Audit - Event and Action Plan for Air and Noise Quality

| Event and Action Plan for Air Quality | | | | |
|---|---|---|--|---|
| Event | Action | | | |
| | ET Leader | IC(E) | ER | Contractor |
| Action Level - Exceedance for one sample | <ol style="list-style-type: none"> Identify source Inform IC(E) and ER Repeat measurement to confirm finding Increase monitoring frequency to daily | <ol style="list-style-type: none"> Check monitoring data submitted by ET Check Contractor's working method | <ol style="list-style-type: none"> Notify Contractor | <ol style="list-style-type: none"> Rectify any unacceptable practice Amend working methods if appropriate |
| Action Level - Exceedance for two or more consecutive samples | <ol style="list-style-type: none"> Identify source Inform IC(E) and ER Repeat measurement to confirm finding Increase monitoring frequency to daily Discuss with IC(E) and Contractor on remedial actions If exceedance continues, arrange meeting with IC(E) and ER If exceedance stops cease additional monitoring | <ol style="list-style-type: none"> 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 the implementation of remedial measures | <ol style="list-style-type: none"> Confirm receipt of notification of failure in writing Notify Contractor Ensure remedial measures properly implemented | <ol style="list-style-type: none"> Submit proposals for remedial actions to IC(E) within 3 working days of notification Implement the agreed proposals Amend proposal if appropriate |
| Limit Level - Exceedance for one sample | <ol style="list-style-type: none"> Identify source Inform ER and EPD Repeat measurement to confirm findings Increase monitoring frequency to daily Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results | <ol style="list-style-type: none"> 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 the implementation of remedial measures | <ol style="list-style-type: none"> Confirm receipt of notification of failure in writing Notify Contractor Ensure remedial measures properly implemented | <ol style="list-style-type: none"> Take immediate action to avoid further exceedance Submit proposal for remedial actions to IC(E) within 3 working days of notification Implement the agreed measures |
| Limit Level - Exceedance for two or more consecutive samples | <ol style="list-style-type: none"> Notify IC(E), ER, Contractor and EPD Identify source Repeat measurements 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 IC(E) and ER to discuss the remedial actions to be taken Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results If exceedance stops, cease additional monitoring | <ol style="list-style-type: none"> 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 | <ol style="list-style-type: none"> Confirm receipt of notification of failure in writing Notify Contractor In consultation with the IC(E), 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 | <ol style="list-style-type: none"> Take immediate action to avoid further exceedance Submit proposals for remedial actions to IC(E) within 3 working days of notification 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 |

Central Reclamation Phase III : Environmental Monitoring and Audit - Event and Action Plan for Air and Noise Quality

| Event and Action Plan for Noise Quality | | | | |
|---|--|--|---|--|
| Event | Action | | | |
| | ET Leader | IC(E) | ER | Contractor |
| Action Level is reached | <ol style="list-style-type: none"> 1. Notify IC(E) and Contractor 2. Carry out investigation 3. Report the results of the investigation to the IC(E) and Contractor 4. Discuss with the Contractor and formulate remedial measures | <ol style="list-style-type: none"> 1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures | <ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented | <ol style="list-style-type: none"> 1. Submit noise mitigation proposal to IC(E) 2. Implement noise mitigation proposals |
| Limit Level is reached | <ol style="list-style-type: none"> 1. Notify IC(E), ER, EPD and Contractor 2. Identify source 3. Repeat measurement to confirm findings 4. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 5. Inform IC(E), ER and EPD the causes & actions taken for the exceedances 6. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results 7. If exceedance stops cease additional monitoring | <ol style="list-style-type: none"> 1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures | <ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analyzed noise problem 4. Ensure remedial measures are properly implemented 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion or work until the exceedance is abated | <ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IC(E) within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated |



Central Reclamation Phase III: Environmental Monitoring and Audit - Event and Action Plan for 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 agreed 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) |



Central Reclamation Phase III: Environmental Monitoring and Audit - Event and Action Plan for Water Quality

| Event | 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) |



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 |
|-------------------|-------------------|---|---|--|---|--------|
| 150211 | 21/1/2015 | EPD complaint (EPD Ref.: H04/RS/000171 6-15) received by ET on 11 February 2015 | Construction site opposite to CITIC Tower | Construction dust was emitted from a construction site opposite to CITIC Tower | <p>According to the relevant site records, trench grabbing for D-wall construction and socket H-pile construction were conducted at the concerned location on 21 January 2015. Dust screen for socket H-pile construction, maintenance of site haul road in wet condition and water spraying at vehicle entrance/exit points of HK/2012/08 Contractor site office and Portion I were implemented by the Contractor of HK/2012/08 near the concerned location on 21 January 2015.</p> <p>In addition, no environmental deficiency related to dust mitigation was identified at the concerned location during weekly environmental inspections conducted on 27 Jan, 3 and 10 Feb 2015 and dust mitigation measures including water spraying for dusty haul road and provision of wheel washing were in place and no dust related impact from the construction works at the concerned location was observed.</p> <p>Meanwhile, the Air Quality Health Index (AQHI) recorded by EPD across Western District and Eastern District on 21 January 2015 was ranged from 4 to 10+ indicating a severely high concentration of ambient air pollutants.</p> <p>Based on reviewing relevant impact monitoring data, elevated TSP were recorded at monitoring stations across Central to Wan Chai West area despite a non-Project related exceedance was recorded at nearby monitoring station ACL2a (Contractor HK/2012/08 Site Office) on 21 January 2015 and was considered to be contributed by ambient air pollutant.</p> <p>The site condition under Contract HK/2012/08 at the concerned location was considered to be generally satisfactory and no non-conformity related to cumulative air quality impact was observed at the concerned location.</p> <p>Nevertheless, in view of the public concern, the contractor was reminded to enhance the dust mitigation measures implemented to minimize potential nuisance to nearby public.</p> | Closed |



| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|-------------------|-------------------|--|--|---|---|--------|
| 150703 | 3/7/2015 | EPD complaint (EPD Ref.: H05/RS/000162 15-15) received by ET on 03 July 2015 | West of HKCEC outside Lung King Street | Dark smoke was observed from a derrick barge in yellow color for reclamation work at location to the west of HKCEC outside Lung King Street | <p>According to the relevant site records under Contract HK/2012/08, one derrick barge (Chang Sheng 306) in yellow color was conducting material transfer at a near shore location opposite to Fleet Arcade on 30 June 2015 around noon-time under HK/2012/08 and the concerned derrick barge was towed away for maintenance on the same date.</p> <p>Follow-up inspection was conducted during weekly environmental inspection on 7 July 2015, no dark smoke was observed from the concerned derrick barge (Chang Sheng 306). Nevertheless, the Contractor was reminded to conduct regular checking on the condition of the all derrick barges deployed on site to ensure only well maintained equipment are used to avoid potential dark smoke emission affecting nearby public.</p> <p>Based on the review on relevant record and follow up site inspection, the condition of the concerned derrick barge was considered generally in order and no dark smoke was observed. In view of the public concern, the Contractor was reminded to conduct regular checking on the condition of derrick barges deployed on site to ensure only well maintained equipment are used on site to avoid potential dark smoke emission affecting nearby public.</p> | Closed |



| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|-------------------|-------------------|--|---|---|---|--------|
| 150917 | 17/9/2015 | A public complaint regarding water quality referred by EPD was received by ET on 17 September 2015 | Central and Wan Chai Reclamation coastline (between LUNG WUI ROAD to LUNG WO ROAD, Central & Wan Chai, Hong Kong) | Silt from Central and Wan Chai Reclamation was spotted along the coastline (between LUNG WUI ROAD to LUNG WO ROAD, Central & Wan Chai, Hong Kong) | <p>Based on the site records confirmed by RSS, removal of seawall blocks by derrick barge was undertaken by Contract HK/2012/08 at Central Reclamation Phase III works area while mitigation measures including provision of silt curtain implemented by the Contractor of HK/2012/08 during the seawall block removal works. According to relevant record, muddy dispersion at HKCEC2W (area opposite to Lung King Street) was observed by the Environmental Team on 14 September 2015 afternoon. The muddy patch was observed dispersing outside the outer layer silt curtain deployed by the Contractor of HK/2012/08 towards the Central Reclamation Phase III area while the outer layer silt curtain was observed partially opened.</p> <p>In view of the above observations, the Contractor was advised to rectify any environmental deficiencies such that adequate protection such as silt curtain shall be provided for exposed soil slope to mitigate for potential runoff related water quality impact to the surrounding waters; outer layer silt curtain deployed shall be entirely closed during works to safeguard the surrounding water quality. Any opening for marine vessel shall be closed promptly after passage and localized silt curtain deployed on site shall be properly maintained to avoid any gap or opening to effectively safeguard the nearby waters.</p> | Closed |



| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|-------------------|-------------------|---|---|---|--|---------|
| 160804 | 4/8/2016 | A public complaint referred by EPD was received by ET on 04 August 2016 (Case Ref.: H05/RS/0001 9364-16). | Temporary Barging Facility outside Lung Wo Road | Muddy water discharge was found at the temporary barging facility outside Lung Wo Road on 03 August 2016. | Based on the site records confirmed by RSS, the concerned temporary barging facility outside Lung Wo Road was maintained and operated by non- WDII Project and no construction activity was conducted by the Contractor of HK/2012/08 at the location around the concerned temporary barging facility on 03 August 2016. Nevertheless, in view of the public concern, the Contractor of HK/2012/08 was reminded to maintain the bunding along site boundary for protection against potential surface runoff and maintain proper site drainage collection of construction effluent to avoid any potential water quality concern. | Closed. |



| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|-------------------|-------------------|--|---------------------------|--|---|---------|
| 180625 | 5/6/2018 | A public complaint referred by EPD was received by ET on 25 June 2018 (Case Ref.: H05/RS/0000 15459-18). | Site outside Lung Wo Road | Muddy water discharge was found at the site outside Lung Wo Road on 5 June 2018 afternoon. | <p>Based on the site records confirmed by RSS, installation of metal formwork at seawall was carried out on 5 June 2018 afternoon and mitigation measure including placing rock fill material on slope surface was implemented at the concerned location to reduce surface runoff.</p> <p>Follow up site inspection was conducted by the Environmental Team on 26 June 2018, no muddy water discharge or surface runoff related water quality impact was observed at construction area under HK/2012/08 near the concerned area</p> <p>Nevertheless, in view of the public concern, the Contractor of HK/2012/08 was reminded to provide addition tarpaulin covering to the slope surface along the seawall around the concerned location to reduce the potential surface runoff and maintain regular checking on the embankment condition to ensure no gap / void to avoid potential seepage / surface runoff to nearby water.</p> | Closed. |



Appendix 8.1

Construction Programme of Individual Contracts

**CEDD Contract No. HK/2012/08
Wan Chai Development Phase II
Central - Wan Chai Bypass at Wan Chai West**

| Activity ID | Activity Name | Remaining Dur | Early Start | Early Finish | Activity % Complete | 2018 | | | | | | | | | | | | 2019 | | | | | | | |
|--|---|---------------|-------------|--------------|---------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
| HK/2012/08 Revised Works Programme Rev.12.0(DD 20 November 2017) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Key Dates and Milestone Dates | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sections of Works Completion (Included Not Granted EOT Entitlement of The Contractor) | | | | | | | | | | | | | | | | | | | | | | | | | |
| KD10840 | Completion of Section IIIA | 0 | | 08-Sep-18* | 0% | | | | | | | | | | | | | | | | | | | | |
| KD10860 | Completion of Section IV | 0 | | 30-Aug-18* | 0% | | | | | | | | | | | | | | | | | | | | |
| KD10880 | Completion of Section V | 0 | | 26-Sep-18* | 0% | | | | | | | | | | | | | | | | | | | | |
| KD11010 | Completion of Section VII | 0 | | 14-Sep-18* | 0% | | | | | | | | | | | | | | | | | | | | |
| KD11020 | Completion of Section VIII | 0 | | 21-Sep-18* | 0% | | | | | | | | | | | | | | | | | | | | |
| KD11040 | Completion of Section IX | 0 | | 21-Sep-19* | 0% | | | | | | | | | | | | | | | | | | | | |
| KD11060 | Completion of Section X | 0 | | 21-Sep-18* | 0% | | | | | | | | | | | | | | | | | | | | |
| Planned Sections of Works Completion | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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% | | | | | | | | | | | | | | | | | | | | |
| 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 Reclamation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marine Work Construction | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone CRIII | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seawall Construction - Zone CRIII | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone CRIII Seawall- 2nd Stage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seawall 2 & 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seawall Construction - Zone D | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seawall 10 & 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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% | | | ■ | | | | | | | | | | | | | | | | | |
| Works for Section Completion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction | | | | | | | | | | | | | | | | | | | | | | | | | |
| Section III A - Road A2, A4 & A5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roadwork & Utilities - Section 1 (L1806 - L1801) | | | | | | | | | | | | | | | | | | | | | | | | | |

Data Date: 20-Feb-18

- ◆ Current Milestone
- Actual Work
- Critical Remaining Work
- Remaining Work
- Remaining Level of Effort

**Updated Works Programme Rev.12
(Ref. to Rev.12 as of 20 February 2018)**

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-18 | 12 | | |
| | | | |
| | | | |

**CEDD Contract No. HK/2012/08
Wan Chai Development Phase II
Central - Wan Chai Bypass at Wan Chai West**

| Activity ID | Activity Name | Remaining Dur | Early Start | Early Finish | Activity % Complete | 2018 | | | | | | | | | | | | 2019 | | | | | | | | | | | |
|---|---|---------------|-------------|--------------|---------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | | |
| SIIIA10279c | Sec III A - section 1 carriageway - sewerage pipe from M/H 8C to F8B (night time): construct sewerage pipe | 0 | 02-Jan-18 A | 03-Feb-18 A | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10293 | Sec III A - section 1 carriageway - sewerage pipe from M/H F8B - F8A (night time) | 6 | 05-Feb-18 A | 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% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10295 | Sec III A - carriageway - works prior 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 prior TTA stage 5: road kerb | 5 | 28-Feb-18 | 05-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10301 | Sec III A - section 1 carriageway - works prior TTA stage 5: road formation | 2 | 06-Mar-18 | 07-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10302 | Sec III A - section 1 carriageway - works prior TTA stage 5: laying asphalt | 5 | 08-Mar-18 | 13-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10303 | Sec III A - section 1 carriageway - works prior TTA stage 5: road marking & preparation works | 3 | 14-Mar-18 | 16-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10310 | Sec III A - section 1 carriageway - TTA stage 5: Implementation of TTA Stage 5 | 1 | 17-Mar-18 | 17-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10310a | Sec III A - section 1 carriageway - TTA stage 5: remaining sewerage pipe for M/H F8A - M/H F8 | 12 | 19-Mar-18 | 04-Apr-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10310b | Sec III A - section 1 carriageway - TTA stage 5: remaining sewerage pipe for M/H F8A - M/H F8B | 18 | 06-Apr-18 | 26-Apr-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10310c | Sec III A - section 1 carriageway - TTA stage 5: SR1 at-grade road- remove sheetpile at U-trough west | 5 | 19-Mar-18 | 23-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10310d | Sec III A - section 1 carriageway - TTA stage 5: SR1 at-grade road -remove temp. road access bay 5 of SR1 | 21 | 24-Mar-18 | 21-Apr-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10310e | Sec III A - section 1 carriageway - TTA stage 5: SR1 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 - fresh watermain | 7 | 24-May-18 | 31-May-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10340 | Sec III A - roadwork and utilities section 1 carriageway - utilities: HEC (80m) along carriageway | 14 | 01-Jun-18 | 16-Jun-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10360 | Sec III A - roadwork and utilities section 1 carriageway - road kerb & formation | 14 | 19-Jun-18 | 05-Jul-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10400 | Sec III A - roadwork and utilities section 1 carriageway - black top | 7 | 06-Jul-18 | 13-Jul-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10420 | Sec III A - Implementation of TTA Stage 7P (Closure of U-turn at Expo Drive) | 1 | 14-Jul-18 | 14-Jul-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA10440 | Sec III A - roadwork and utilities 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% | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 - black top | 7 | 12-Mar-18 | 19-Mar-18 | 0% | | | | | | | | | | | | | | | | | | | | | | | | |
| Roadwork & Utilities - Section 6 (L1102 - L1411) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA13399 | Sec III A - roadwork and utilities section 6 carriageway - gully pipe (L1101 -L1102) | 0 | 12-Jan-18 A | 26-Jan-18 A | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| SIIIA13444 | Sec III A - roadwork and utilities section 6 carriageway - watermain (road crossing) | 0 | 27-Jan-18 A | 03-Feb-18 A | 100% | | | | | | | | | | | | | | | | | | | | | | | | |
| 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% | | | | | | | | | | | | | | | | | | | | | | | | |

Contract No. HY/2010/08
Three Months Rolling Program

| Activity Name | Start | Finish | 2018 | | |
|-----------------------------|----------|------------|---------|----------|----------|
| | | | October | November | December |
| Junction Modification Works | 1/6/2018 | 30/12/2018 | | | |

Contract No. HY/2010/08
Three Months Rolling Program

| Activity Name | Start | Finish | 2019 | | |
|-----------------------------|----------|------------|---------|----------|-------|
| | | | January | February | March |
| Junction Modification Works | 1/6/2018 | 31/03/2019 | | | |