



Our Ref. : TEEM/TM334/16/049

Date : 15 April 2016

By Hand

Environmental Protection Department
Environmental Assessment Division
Metro Assessment Group
Kowloon Section (2)
27/F Southorn Centre
130 Hennessy Road
Wan Chai
Hong Kong

Attn: Ms. Kwok Wing Chi, Winnie

Dear Madam,

RE: Contract No. SS D505
Environmental Permit No. EP-454/2013
Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle
Depot at Yen Ming Road, West Kowloon Reclamation Area
Submission of Environmental Impact Monitoring Report

We are writing, on behalf of Environmental Permit Holder, Food and Environmental Hygiene Department, to provide four hard copies and one electronic copy of Environmental Impact Monitoring report for your record in accordance with Condition 3.3 of EP-454/2013.

Should you have any questions, please do not hesitate to contact the undersigned at (852) 3610 8777 or our Mr. Jason Lau at (852) 3610 8713. Thank you.

Yours faithfully,

For and on behalf of
Telemax Environmental and Energy Management Limited



Ir Eagle Mo
Managing Director



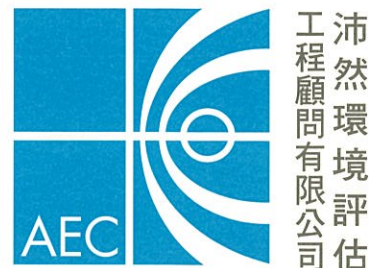
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Encl.

- cc. ArchSD – Mr. WAN Kook Piu, Dick (by hand)
FEHD – Ms. May NG (by hand)
PTA – Ms. Clara PANG / Mr. Jess YEUNG (by email)
AEC – Ms. Grace KWOK / Mr. HO Tin Kit (by email)
CRBC – Mr. Vincent CHUNG / Mr. FU Kwok Kwan (by email)

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
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Our Ref: 1330/16-0010

15 April 2016

By Email

**Food and Environmental Hygiene Department
Planning & Development Section**

Room 101,
1/F, New Wan Chai Market
258 Queen's Road East, Wan Chai,
Hong Kong

Attn: Ms. Lorraine Lo

Dear Madam,

**Contract No. SS D505
Environmental Permit No. EP-454/2013
Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle
Depot at Yen Ming Road, West Kowloon Reclamation Area
Independent Environmental Checker for Construction Phase
Condition 3.4 – Submission of Monthly EM&A Report for March 2016 (Issue 5)**

Further to the receipt from Environmental Team (ET) of the captioned Monthly EM&A Report on 6, 11, 14 and 15 April 2016 via email, pursuant to Condition 3.4 of Environmental Permit, I hereby verify the captioned report (Issue 5).

Yours faithfully,
For ALLIED ENVIRONMENTAL CONSULTANTS LIMITED

Grace Kwok
Independent Environmental Checker
GK/jn

c.c.		
FEHD	Ms. May NG, ASO(P)4/ Mr. Vincent TAM, CTSO(Ops)2	Email
ArchSD	Mr. Shing-hin SAT, Saadullah, SPM335 / Mr. WAN Koon Piu, Dick, PM342	Email
PTA	Ms. Clara PANG / Mr. Jess YEUNG	Email
TEEM (ET Leader)	Mr. Jason LAU	Email
CRBC (Main Contractor)	Mr. Vincent CHEUNG, Project Manager / Mr. KK FU, Site Agent	Email





FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

Environmental Monitoring and Audit Report

Prepared by: Telexmax Environmental and Energy Management Limited

Prepared by: Renan Xu 15 April 2016
TELEXMAX Date

Certified by: [Signature] 15 April 2016
ENVIRONMENTAL TEAM LEADER Date

Verified by: [Signature] 15 April 2016
Grace Kowk INDEPENDENT ENVIRONMENTAL CHECKER Date



Issue	Date	Prepared by	Checked by	Approved by	Remark
1	6 th April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	--
2	11 th April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated AEC's comment
3	13 th April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated AEC's comment
4	14 th April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated AEC's comment
5	15 th April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated AEC's comment



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1.0 Executive Summary

- 1.1 In December 2015, Telex Environmental and Energy Management Limited (TEEM) was appointed to conduct an environmental monitoring and audit (EM&A) program for the proposed reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area (FEHD). The site clearance and tree felling works were undertaken during the period from 10th December 2015 to 7th February 2016. The construction works were commenced on 29th February 2016 and all EM&A works were undertaken in accordance with the EM&A Manual and the requirements under the environmental permit EP-454/2013. This report is the first monthly EM&A report, which detailed the environmental monitoring and audit results recorded during the period from 29th February 2016 to 31st March 2016.

Reporting Change

- 1.2 There was no reporting change required in the reporting month.

Breaches of Action and Limit Levels for Noise

- 1.3 A noise complaints related to 0700-1900 hours on normal weekdays was received and followed by Environmental Team in the reporting month. Investigation report is attached in **Appendix M**.
- 1.4 No Limit Level exceedance of construction noise was recorded in the reporting month.

Record of Complaints

- 1.5 One environmental complaint regarding construction noise was recorded in the reporting month.

Record of Notification of Summons and Successful Prosecution

- 1.6 No notification of summons and successful prosecution was received in the reporting month.



Future Key Issues

1.7 Key issues to be considered in the coming three months included:

- Properly store and label oils and chemicals on site;
- Chemical, chemical waste and waste management;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Properly maintain all drainage facilities and wheel washing facilities on site;
- Generation of dust from construction works;
- Noise impact from operation equipment and machinery on site;
- Generation of site surface runoffs and wastewater from activities on site; and
- Tree protective measures for all retained trees should be well maintained.



2.0 Project Information

Background

- 2.1 The project proponent is the reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area (FEHD) and the Works Agent is the Architectural Services Department (ArchSD).
- 2.2 The proposed office-cum-vehicle depot building will be a five-story building comprising various facilities for vehicle washing and repair operation, parking of vehicles as well as offices. It will occupy a site area of about 8,278 m².
- 2.3 The FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot is categorized as a designated project under the Environmental Impact Assessment Ordinance (EIAO) and therefore a detailed Environmental Impact Assessment (EIA-216/2013) has been conducted in year 2013 and an Environmental Permit number EP-454/2013 was issued by Environmental Protection Department on November 2013.
- 2.4 The subject site is located at Yen Ming Road, West Kowloon Reclamation Area given in *Appendix H*. The subject site is bounded to the north by Nam Cheong Station, to the east by CLP Tak Kok Tsui Substation, to the south by Yuen Fat Building, and to the west by Cheung Sha Wan Wholesales Fish and Food Markets. Sir Ellis Kadorie Secondary School (West Kowloon) and Fu Cheong Estate Fu Yuen House, being the nearest educational and residential establishment, are located at around 100m and 270m from the site boundary respectively.
- 2.5 Key personnel and contact particulars are summarized in *Table 1*.

Table 1 Contact Details of Key Personnel

Role	Department / Company	Names	Contact Number
Project Proponent	Food and Environmental Hygiene Department	Ms. Lorraine Lo	3141 1227
Works Agent	Architectural Services Department	Mr. Sing-hin Sat	2867 3843
Architect's representative	P&T Architects and Engineers (Architectural)	Mr. Jess Yeung	2832 7410
Main Contractor	China Road and Bridge Corporation	Mr. Vincent Chung	2283 1688
Environmental Team Leader	Telex Environmental and Energy Management Ltd.	Mr. Jason Lau	3610 8713
Independent Environmental Checker	Allied Environmental Consultants Ltd.	Ms. Grace Kwok	2815 7028



2.6 The construction programme is referred to **Appendix A** and the management structure is given in Appendix B.

2.7 The major works undertaken and/or completed during the reporting month are listed as below:

- Setting up of CRBC's site office
- Preparation of steel material for hoarding
- Hoarding construction
- Checking and maintenance of pilling plant
- Setting out of pile
- Hacking of existing ground surface
- Painting to hoarding
- Site clearance
- Trial pipe work
- Installation of working pile

3.0 Environmental Status

Status of the Statutory Environmental Compliance

3.1 The EM&A Works follow the EP conditions under the Environmental Impact Assessment Ordinance (EIAO) and a summary of the submission under the EP for this project up to the reporting month is presented in **Table 2 & Table 3** below:

Table 2 Status of Licenses and Permits

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
EIAO	Environmental Permit	EP-454/2013	12-Nov-13	N/A	FEHD	-
WPCO	Discharge License (Site)	WT00023331-2015	22-Jan-16	31-Jan-21	CRBC	Discharge of Industrial Trade Effluent in Contract No. SS D505 was approved on 22 Jan 2016.
WDO	Chemical Waste Producer Registration	5213-269-C1232-18	15-Jan-16	N/A	CRBC	Chemical waste produced in Contract No. SS D505. The application was approved on 15 Jan 2016.
WDO	Billing Account for Disposal of Construction Waste	7024032	21-Dec-15	N/A	CRBC	Waste disposal in Contract No. SS D505. The application was approved on 21 Dec 2015.
NCO	Construction Noise Permit	PP-RE0070-15	2-Jan-16	30-June-16	CRBC	Carrying out of percussive piling (0700 to 1900 hours on all days except general holidays, including Sundays). The permit was approved on 29 Dec 2015.

Table 3 Summary of the Submission under the EP

EP-454/2013 Clause No.	Submission Status
1.12	Notification of commencement date of construction on 15 th January 2016
2.4	Landscape and Visual Mitigation Plan submitted on 27 th January 2016
3.3	Baseline monitoring report submitted on 15 th February 2016
4.2 & 4.3	Preparation of dedicated web site set up

Mitigation Measures for Construction Works

3.2 According to the basic project information, the major construction works undertaken during the reporting month are listed in **Table 4**, showing the interrelationship between construction activities and environmental mitigation measures for the reporting month. In order to indicate the project site, an illustrative drawing is provided in **Appendix I** to demonstrate the location of works, the project area, environmental sensitive receivers and locations of the monitoring and control stations.

Table 4 Interrelationship between Construction Activities and Mitigation Measures

Construction Works	Major Environmental Impact	Mitigation Measures
<ol style="list-style-type: none"> 1. Setting up of CRBC's site office 2. Preparation of steel material for hoarding 3. Hoarding construction 4. Checking and maintenance of piling plant 5. Setting out of pile 6. Hacking of existing ground surface 7. Painting to hoarding 8. Site clearance 9. Trial pipe work 10. Installation of working pile 	<p>Construction dust, construction noise and waste management</p>	<ol style="list-style-type: none"> 1. Tarpaulin cover shall be provided to minimize potential for damage or contamination of construction materials; 2. Watering and imperious sheeting was provided to dusty materials; 3. Water spraying should be provide to haul road and excavation works; 4. Well-maintained and quiet plants were used; 5. Proper waste storage and sorting was applied; 6. Trip record was maintained properly; and 7. Noise barrier was implemented during piling activities.

4.0 Summary of EM&A Requirement

- 4.1 According to the environmental findings detailed in the Environmental Impact Assessment (EIA) report and the EM&A Manual of the Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area Project ("the Project"), the EM&A requirements of the noise, air quality, water quality, waste management, landscape and visual and environmental audit are summarized as follows:

Noise

- 4.2 The construction noise level should be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). The Leq (30min) should be used as the monitoring parameter for the time period from 0700 to 1900 hours on normal weekdays. The supplementary information for data auditing and statistical results, such as L10 and L90, should be should be obtained and recorded for reference.

Environmental Audit

- 4.3 Site inspections should be conducted regularly to ensure that appropriate environmental protection and pollution control mitigation measures for noise, air quality, water quality, waste management and landscape and visual aspects are properly implemented for the construction works activities associated with the Project, as they are one of the most effective tools to enforce the environmental protection requirements at the works sites and works areas.
- 4.4 Regular site inspections should be carried out and led by the Architect's Representative and attended by the Contractor and ET at least once every week. The areas of inspection should not be limited to the environmental conditions, pollution control and mitigation measures within the works sites and works areas. It should also review the environmental conditions of that location that are beyond the boundary of the works sites and works areas likely to be affected directly or indirectly by the construction site activities. The ET Leader should make reference to the following information when conducting site inspection:
- The EIA and EM&A recommendations on the environmental protection and pollution control mitigation measures;



- On-going results of the EM&A programme;
- The works progress and programme;
- Proposals of individual works methodologies (which should include the proposal of the associated pollution control measures);
- Contract specifications on environmental protection and pollution prevention control;
- The relevant environmental protection and pollution control legislation; and
- Previous site inspection findings that were undertaken by the ET and/or others.

4.5 The Contractor should keep the Architect’s Representative and ET updated with all the relevant environmental related information on the construction contract to carry out the site inspections. The inspection findings and associated recommendations for improvements to the environmental protection and pollution control and outcome of the improvement should be recorded and followed up by the Contractor in an agreed timeframe.

4.6 The Architect’s Representative, ET and Contractor should also carry out ad hoc site inspections if significant environmental problems are identified. Inspections may also be required subsequent to the receipt of environmental complaints, or as part of the investigation work, as specified in the Event and Action Plans for the EM&A programme.

Action and Limit Level

4.7 Accordingly to the EM&A requirement only noise impact of the construction stage requires impact monitoring. Corresponding action and limit level is set up to provide an appropriate framework for the interpretation of monitoring results. The noise impact monitoring data shall be checked against the Action and Limit Levels as listed in **Table 5**.

Table 5 Action and Limit Levels for Construction Noising Monitoring

Time Period	Action Level	Limit Level, L_{eq} 30mins, dB(A)
0700-1900 hours on normal weekdays	When one documented complaint is received	70 dB(A) for school
		65 dB(A) during examination period.
		75 dB(A) for residential premises





Event and Action Plans

- 4.8 In case of non-compliance with the construction noise criteria, the contractor shall undertake corresponding actions in accordance with the Event and Action Plan given in EM&A Manual and shown in **Table 6**.



Table 6 Event and Action Plan for Construction Noise Monitoring

Event	Action			
	ET	IEC	Architect's Representative	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify the IEC and Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC and Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the Architect's Representative 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 the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to the IEC. 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Notify the IEC, Architect's Representative, EPD and Contractor. 2. Identify sources. 3. Repeat measurements to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform the IEC, Architect's Representative and EPD the causes and action taken for the exceedances. 7. Assess the effectiveness of the Contractor's remedial action and keep the IEC, EPD and Architect's Representative informed of the results. 8. If exceedance stops, crease additional monitoring 	<ol style="list-style-type: none"> 1. Discuss amongst the Architect's Representative, ET and Contractor on the potential remedial action. 2. Review the Contractor's remedial action whenever necessary to assure their effectiveness and advise the Architect's Representative 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 the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what portion of work is responsible and instruct the Contractor to stop that portion of works until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial action to the IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problems still not under control. 5. Stop the relevant portion of works as determined by the Architect's Representative until the exceedance is abated.

Note (1): ET – Environmental Team, IEC – Independent Environmental Checker; (2) Each step of action should be undertaken within 1 working day unless otherwise specified.



5.0 Implementation Status of Environmental Mitigation Measures

5.1 During reporting month, major works undertaken and/or completed during the reporting month are listed as below:

- Setting up of CRBC's site office
- Preparation of steel material for hoarding
- Hoarding construction
- Checking and maintenance of piling plant
- Setting out of pile
- Hacking of existing ground surface
- Painting to hoarding
- Site clearance
- Trial pipe work
- Installation of working pile

5.2 The relevant parties have implemented mitigation measures which include, but not limited to the following:

- Tarpaulin cover shall be provided to minimize potential for damage or contamination of construction materials;
- Watering and imperious sheeting was provided to dusty materials;
- Water spraying should be provide to haul road and excavation works;
- Well-maintained and quiet plants were used;
- Proper waste storage and sorting was applied;
- Trip record was maintained properly; and
- Noise barrier was implemented during piling activities.

5.3 A total of 5 site inspections were conducted by the Environmental Team (ET) in this reporting period. Major observation by the ET, actions by the Contractor and outcome are summarized in *Table 7*.

Table 7 Summary of Site Inspections

Date	Non-compliances / Observations / Reminders	Action taken by Contractor	Outcome
2 nd March 2016	Reminder 1: The contractor was reminded to revise tree tag of the retained tree on site.	Contractor was required to provide the tree tag of the retained tree.	The tree tag was provided as observed on 17 th March 2016.
	Reminder 2: The contractor was reminded to follow up with the installation of wheel washing machine.	Vehicle washing facilities shall be provided.	Vehicle washing facilities is ordering and as a temporary measures water jet was provided onsite and observed on 9 th March 2016.
	Reminder 3: The contractor was reminded to provide a vehicle speed control signage of 8 km/hr.	Contractor was required to provide a signage of vehicle speed control at the site entrance as a reminder.	Contractor ordered the signature accordingly.
	Reminder 4: The contractor was reminded to provide waste water treatment to make sure the treated discharge water meet relevant license standards.	The contractor shall provide waste water treatment system and keep no discharge before such implementation.	Wastewater treatment facility will be installed in April or May.
	Reminder 5: The contractor was reminded to provide aesthetic treatment for hoarding.	The contractor shall provide aesthetic treatment to hoarding.	Proposal of aesthetic treatment shall be provided in April 2016.
	Reminder 6: The contractor was reminded to avoid possible oil spill and regular remove any stain from equipment.	The contractor shall avoid possible oil spill and regular remove any stain from equipment.	Oil spill and stain was regularly checked and removed from equipment as observed on 9 th March 2016.
	Reminder 7: The contractor was reminded to provide Chinese and English labels indicating chemical in use and waste.	Both Chinese and English label shall be provided as indication for the chemical in use and waste storage.	The label & indication in Chinese and English was provide as observed on 17 th March 2016.
9 th March 2016	Reminder 1: The contractor was reminded to provide a vehicle speed control signage of 8 km/hr.	Contractor was required to provide a signage of vehicle speed control at the site entrance as a reminder.	The signage was provide as observed on 17 th March 2016.
	Reminder 2: The contractor was reminded to provide chemical and waste storage labels & identifications in Chines & English.	Contractor has replaced those chemical and waste storage labels & identifications into Chines & English.	The label changing was observed on 17 th March 2016.
	Reminder 3: The contractor was reminded to provide aesthetic treatment for hoarding.	The contractor shall provide aesthetic treatment to hoarding.	Proposal of aesthetic treatment shall be provided in April 2016.
	Reminder 4: The contractor was reminded to provide waste water treatment to make sure the treated discharge water meet	The contractor shall provide waste water treatment system as soon as possible.	Wastewater treatment facility will be installed in April or May.



	relevant license standards.		
	Reminder 5: The contractor was reminded to provide C&D waste area modification.	The contractor was required to modify the C&D waste collection area.	The situation was rectified on 17 th March 2016.
17 th March 2016	Reminder 1: The contractor was reminded to provide aesthetic treatment for hoarding.	The contractor shall provide aesthetic treatment to hoarding.	Proposal of aesthetic treatment shall be provided in April 2016.
	Reminder 2: The contractor was reminded to provide waste water treatment to make sure the treated discharge water meet relevant license standards.	The contractor shall provide waste water treatment system as soon as possible.	Wastewater treatment facility will be installed in April or May.
	Reminder 3: The contractor was reminded to provide a larger storage tanks for chemical waste.	The contractor shall provide a larger storage tanks for chemical waste.	Larger storage tank is ordering.
	Reminder 4: The contractor was reminded to provide mulching to the retained tree.	The contractor shall provide mulching to the retained tree.	Mulching is provided and observed on 29 th March 2016.
	Reminder 5: The contractor was reminded to provide green roof for site office to be set up at the next stage.	The contractor shall provide green roof for site office to be set up at the next stage.	Site office is under construction, green roof will be provided afterwards.
	Reminder 6: The contractor was reminded to provide sufficient cover to prevent rainfall entering waste. For chemical waste, enclosed container shall be provided.	Tarpaulin sheets shall be provided as covering at waste storage area. For chemical waste, enclosed container shall be provided.	More covering, larger chemical storage tank are ordering and will be delivered on site by the end of April.
	Reminder 7: The contractor was reminded to provide wheel washing facilities for vehicles	Vehicle washing facilities shall be provided.	Temporary water jet was provided onsite and observed on 17 th March 2016.
23 rd March 2016	Reminder 1: The contractor was reminded to provide wheel washing facilities for vehicles	Vehicle washing facilities shall be provided.	Temporary water jet was provided onsite and observed on 23 rd March 2016.
	Reminder 2: The contractor was reminded to provide aesthetic treatment for hoarding.	The contractor shall provide aesthetic treatment to hoarding.	Proposal of aesthetic treatment shall be provided in April 2016.
	Reminder 3: The contractor was reminded to provide waste water treatment to make sure the treated discharge water meet relevant license standards.	The contractor shall provide waste water treatment system as soon as possible.	Wastewater treatment facility will be installed in April or May.
	Reminder 4: The contractor was reminded to provide a larger storage tanks for chemical waste.	The contractor shall provide a larger storage tanks for chemical waste.	Larger storage tank is ordering.
	Reminder 5: The contractor was reminded to provide mulching to the retained tree.	The contractor shall provide mulching to the retained tree.	Mulching is provided and observed on 29 th March 2016.
	Reminder 6: A complaint from Hampton Place was referred by EPD on 21 st March 2016. The	The contractor shall consider using the noise barrier for piling all the time instead of only when it is deemed as noisy in	Visit to the management company was conducted on 23 rd March 2016 for investigation and report



	Contractor was required to investigate and rectified this problem.	order to minimize subjectively negative opinions.	was submitted on 1 st April 2016.
29 th March 2016	Reminder 1: The contractor was reminded to provide wheel washing facility to be placed closer to site exit.	The contractor shall provide wheel washing facility to be placed closer to site exit.	Vehicle washing facilities is ordering and as a temporary measures water jet was provided onsite and observed on 29 th March 2016. Wheel washing facility was delivered on site and waiting installation.
	Reminder 2: The contractor was reminded to provide aesthetic treatment for hoarding.	The contractor shall provide aesthetic treatment to hoarding.	Proposal of aesthetic treatment shall be provided in April 2016.
	Reminder 3: The contractor was reminded to build up more noise barrier face to NSR1 (school).	The contractor shall install noise barrier face to NSR1 (school).	Noise barrier was implemented during piling activities and observed on 29 th March and 6 th April 2016.
	Observation 1: The contractor was observed that the waste water treatment facility shall be installed as soon as possible.	The contractor shall install waste water treatment facility as soon as possible.	Wastewater treatment facility will be installed in April or May.
	Observation 2: The contractor was reminded that the chemical labels with specific name shall be provided.	The contractor shall provide chemical labels with specific name accordingly.	Label was provided onsite and observed on 6 th April 2016.
	Observation 3: The contractor was reminded to provide a larger storage tanks for chemical waste.	The contractor shall provide a larger storage tanks for chemical waste.	Larger storage tanks are ordering.

5.4 During site inspection in the reporting month, reminder and suggestion are made to the Contractor and corresponding environmental mitigation measures was observed. The implementation of environmental mitigation measures for construction stages stated in approved EIA Report, EM&A Manual and Environmental Permit were carried out properly as shown in Appendix C.



6.0 Monitoring Methodology

Monitoring Parameter

- 6.1 Impact noise monitoring was conducted at the designated noise monitoring location between 0700-1900 hours using a sound level meter which complies with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1).
- 6.2 Monitoring of $L_{eq(30min)}$ should be carried out at each station at 0700-1900 hours on normal weekdays at a frequency of once a week when construction are underway. The L_{eq} , L_{10} and L_{90} should be recorded at the specified intervals. The meter shall be mounted on a tripod at a height of 1.2m above ground with the microphone positioned at G/F adjacent the NSRs facing the works area.
- 6.3 Noise measurements shall not be made in the presence of fog, rain, and wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed will be checked with a portable anemometer capable of measuring the wind speed in m/s. Noise measurements shall be made when construction activities are underway.

Calibration and Maintenance

- 6.4 The calibration of the sound level meter and their respective calibrators shall be carried out according to the manufacturer's requirements. The sound level meter and the calibrator shall be calibrated at an accredited laboratory to ensure their performance and accuracy meet manufacturer's specifications.
- 6.5 Maintenance and calibration procedures are as follows:
- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
 - The sound level meter and calibrator should be calibrated annually

- 6.6 Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using the acoustic calibrator. Measurements shall be valid only if the calibration level, before and after the noise measurement, agree to within 1.0 dB.
- 6.7 The equipment shall be stored properly and well-maintained with regard to the manufacturer's recommendations. Noise instrumentation details are given in **Table 8** and the Calibration Certificates for the sound level meter and calibrator are given in **Appendix D**.

Table 8 Noise Monitoring Equipment

Item	Equipment	Model Number	Serial Number
1	Integrating Sound Level Meter	AWA5661	301134
2	Integrating Sound Level Meter	AWA5661	301135
3	Calibrator	Pulsar 101	028358

Monitoring Locations

- 6.8 The designated locations for the construction noise monitoring are listed in **Table 9** and shown in **Appendix I**.

Table 9 Representative Noise Sensitive Receivers Identified for Construction

NSR ID	Location	NSR Type
NSR1	Sir Ellis Kadorie Secondary School (West Kowloon)	Educational Premises
NSR7	Fu Cheong Estate Fu Yuen House	Residential Premises

*NSR = Noise Sensitive Receivers

7.0 Monitoring Results

7.1 Impact noise monitoring was conducted at Sir Ellis Kadorie Secondary School (NSR1) and Fu Cheong Estate Fu Yuen House (NSR7) on 2nd, 7th, 12th, 18th, 24th and 30th March 2016.

7.2 Noise monitoring results in terms of $L_{eq(30min)}$, $L_{10(30min)}$ and $L_{90(30min)}$ measured at Sir Ellis Kadorie Secondary School (NSR1) and Fu Cheong Estate Fu Yuen House (NSR7) are summarized in **Table 10** and **Table 11** respectively and the corresponding graphical plot and field record sheet are given in Appendix E. The field record sheets record the measured noise levels according to façade measurements. L_{10} and L_{90} represent sound levels that are exceeded 10% and 90% of the time respectively. Normally, L_{10} measurements can be considered as the average peak levels, whilst L_{90} levels can be considered as the average background noise levels.

Table 10 Noise Monitoring Results at NSR1

NSR1	Sir Ellis Kadorie Secondary School (West Kowloon)				
Date	Weather Condition	Wind Speed (m/s)	$L_{eq(30 min)}$	$L_{10(30 min)}$	$L_{90(30 min)}$
2 nd March 2016	Fine	<5	64.8	67.3	63.8
7 th March 2016	Fine	<5	64.5	67.0	63.5
12 th March 2016	Fine	<5	67.7	71.5	66.9
18 th March 2016	Fine	<5	67.5	71.3	66.7
24 th March 2016	Cloudy	<5	67.2	71.2	66.7
30 th March 2016	Fine	<5	62.6	64.7	56.0
<i>Average $L_{eq(30 min)}$</i>			66.1		

Table 11 Noise Monitoring Results at NSR7

NSR7	Fu Cheong Estate Fu Yuen House				
Date	Weather Condition	Wind Speed (m/s)	$L_{eq(30 min)}$	$L_{10(30 min)}$	$L_{90(30 min)}$
2 nd March 2016	Fine	<5	72.1	74.6	71.1
7 th March 2016	Fine	<5	71.5	74.0	70.5
12 th March 2016	Fine	<5	71.9	74.4	70.9
18 th March 2016	Fine	<5	72.1	74.6	71.2
24 th March 2016	Cloudy	<5	72.0	74.4	70.9
30 th March 2016	Fine	<5	71.2	73.5	66.5
<i>Average $L_{eq(30 min)}$</i>			71.8		



- 7.3 The minimum and maximum noise level measure in a single 30-min period at Sir Ellis Kadorie Secondary School (NSR1) was 59.1 $L_{eq(30min)}$ and 69.9 $L_{eq(30min)}$ respectively with an average of 66.1 dB(A) $L_{eq(30min)}$. The minimum and maximum noise level measure in a single 30-min period at the Fu Cheong Estate Fu Yuen House (NSR7) was 64.0 $L_{eq(30min)}$ and 74.9 $L_{eq(30min)}$ respectively with an average of 71.8 dB(A) $L_{eq(30min)}$. Therefore, the results were not considered as exceedance.
- 7.4 Piling work was undertaken on-site and this was identified as the major influencing factors affecting the monitoring results



8.0 Non-compliance, Complaints, Notifications of Summons and Status of Prosecutions

Record on Non-compliance of Action and Limit Levels

- 8.1 For this reporting month, there was one action level breached which was a noise complaint referred from EPD and no breach of Limit Level for noise impact monitoring in the reporting month.

Record on Environmental Complaints Received

- 8.2 For this reporting month, one environmental complaint was referred from EPD on 17th March 2016 regarding the piling noise from the abovementioned construction project. There is a total of 1 environmental complaint since commencement of the construction. The complaints were handled in accordance to the EM&A Manual and relevant parties including the Architect's Representative and IEC were informed of the complaint. The complaint handling procedures in accordance with the EM&A Manual has been taken.
- 8.3 The investigation on 23 March 2016 and additional noise monitoring at Hampton Place has been conducted since the start of piling work and the $L_{eq(30\text{ min})}$ measured was 66.1-67.9 dB(A). No exceedance was recorded. It was observed that the noise levels monitored at Hampton Place during the complaint receipted period were within the required levels. All piling works were scheduled within the periods allowed in the permit. Noise barriers were applied during piling works in order to effectively lower the noise levels. During the investigation, it was found that a mis-communication occurred due to the change of management company in February 2016.
- 8.4 Mitigation measures are recommended. Barriers should be considered to be applied during the entire piling process. All Powered Mechanical Equipment (PME) should be regularly checked with proper maintenance procedure to ensure the sound pressure levels are within the specified limits. The contractor was recommended to send a new notification letter regarding the piling works (including copies of relevant permits and piling schedule) to new management company immediately so that residents at Hampton Place get notified with details.

8.5 The cumulative statistics on complaints were provided in **Appendix K**.

Record on Notifications of Summons and Successful Prosecution

8.6 No notifications of summons or successful prosecution were received this month. The cumulative statistics on notifications of summons and successful prosecutions were provided in **Appendix K**.

Review of Reasons for and Implications of Non-compliance, Complaints, Summons and Prosecutions

8.7 As no notifications of summons or successful prosecution were received, the associated review was not required.

Follow-up Actions Taken

8.8 As no notifications of summons or successful prosecution were received, the associated follow-up actions were not required.

9.0 Forecast of Works Programme and Future Key Issues

9.1 The major site work scheduled to be commissioned in the coming three months include:

- Installation of trial pile
- Installation of working pile
- Setting up and dismantle of tower crane
- Construction of pile caps
- Backfilling works

9.2 Key issues to be considered in the coming three months include:

- Properly store and label oils and chemicals on site;
- Chemical, chemical waste and waste management;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Properly maintain all drainage facilities and wheel washing facilities on site;
- Generation of dust from construction works;
- Noise impact from operation equipment and machinery on site;
- Generation of site surface runoffs and wastewater from activities on site; and
- Tree protective measures for all retained trees should be well maintained.

9.3 The environmental site inspection and environmental monitoring will be continues in the coming month. Impact monitoring for noise in accordance with the approved EM&A Manual has commenced since 29th February 2016. The tentative monitoring schedule is appended in *Appendix G*.

10.0 Solid and Liquid Waste Management Status

- 10.1 The contractor has registered as chemical waste producers for the Contract. C&D material sorting was carried out on site. Sufficient numbers of receptacles were available for general refuse collection.
- 10.2 As advised by the Contractor, 33.9 tons of inert C&D materials was disposals as public fill to Tuen Mun 38 (of which 0 tons was broken concrete), while 2 tons of general refuse was disposed at NENT landfill. 0 tons of paper/cardboard packaging, 0 tons of plastics and 2.58 tons of metals were collected by recycling contractor in the reporting month. 0 tons of inert C&D materials were reused on site and reused in NENT for backfilling purpose respectively. 0 tons of chemical waste was collected by licensed contractor in the reporting period. Monthly Waste Flow Table is given in *Appendix L*.
- 10.3 The Contractor was advised to maintain on site waste sorting and recording system and maximize reused / recycle of C&D wastes.

11.0 Comments, Recommendations and Conclusions

11.1 Environmental impact monitoring had been carried out for FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area.

11.2 The recommended mitigation measures are summarized as below:

Chemical waste and Waste Management

- C&D material should be sorted and removed timely.
- All plants on site should be properly maintained to prevent oil leakage.
- General refuse and construction waste shall be sorted, recycled, stored and disposed properly and record shall be kept.
- Larger chemical waste storage tanks shall be provided.

Water Quality Impact

- All drainage facilities on site shall be properly maintained
- Wastewater treatment system shall be set up once proposal approved.

Air Quality Impact

- All vehicle should be washed to remove any dusty.
- Haul roads should be sufficiently dampened to minimize fugitive dust generation.
- Wheel washing facilities shall be installed since water jet is implemented as temporary measures.

Construction Noise Impact

- Noisy operations should be oriented to a direction away from sensitive receivers as far as possible.
- Noise barrier should be properly implemented during piling work.
- Generation of site surface runoffs and wastewater from activities on site.

Landscape and Visual Impact

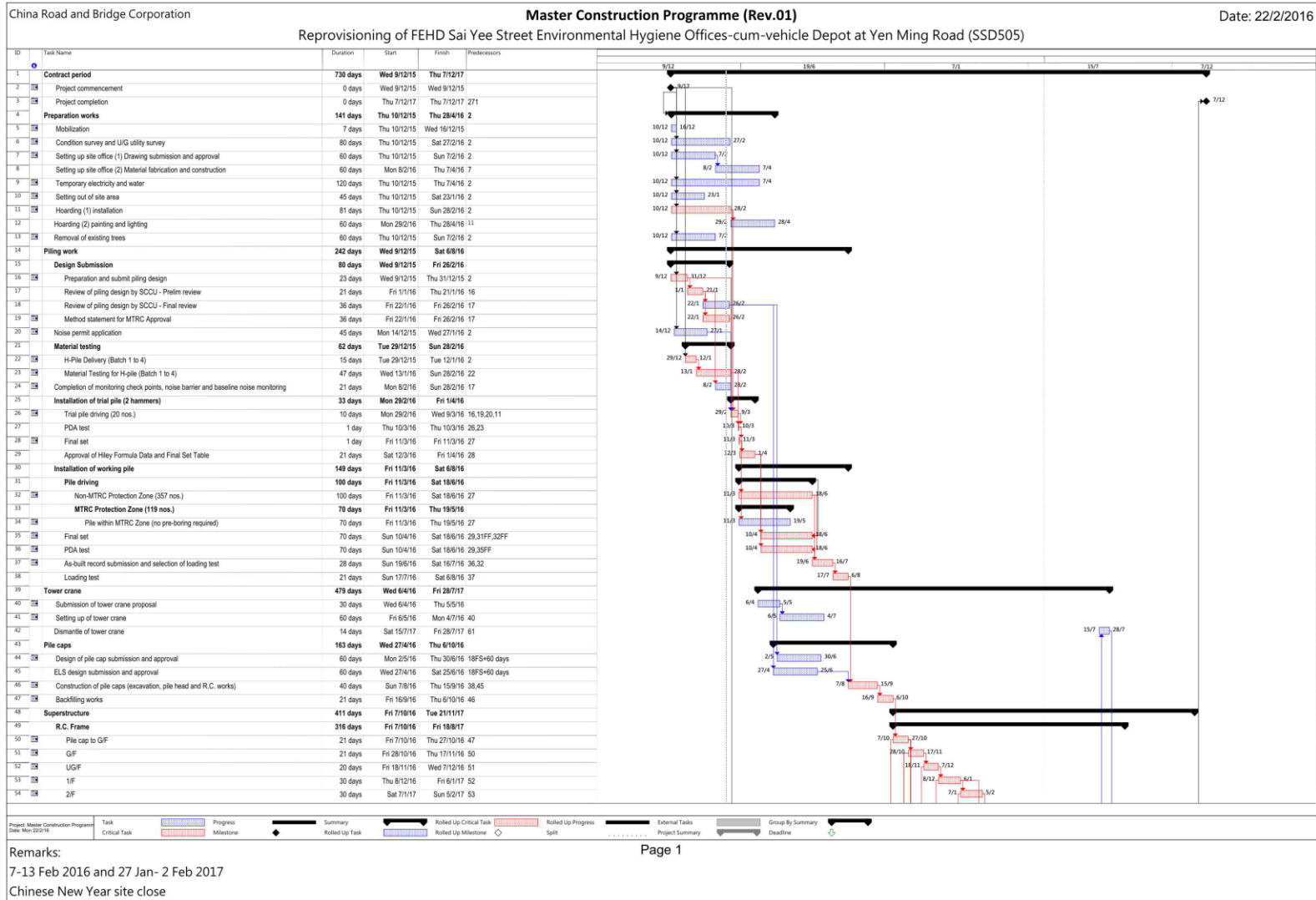
- Retained tree should be properly fenced off and the working area.
 - Mulching shall be provided to the retained tree.
 - Green roof of site office shall be provide once construction is finished.
- 11.3 The mitigation measures had been implemented to minimize the environmental impacts due to the construction of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area. The recommended mitigation measures in the EIA process and the EM&A programme were effective in protecting the environment. As such, the environmental performance during the construction phase was considered acceptable.
- 11.4 Impact noise monitoring was conducted at Sir Ellis Kadorie Secondary School (NSR1) and the Fu Cheong Estate Fu Yuen House (NSR7) on 2nd, 7th, 12th, 18th, 24th and 30th March 2016.
- 11.5 The minimum and maximum noise level measure in a single 30-min period at Sir Ellis Kadorie Secondary School (NSR1) was 59.1 $L_{eq(30min)}$ and 69.9 $L_{eq(30min)}$ respectively with an average of 66.1 dB(A) $L_{eq(30min)}$. The minimum and maximum noise level measure in a single 30-min period at the Fu Cheong Estate Fu Yuen House (NSR7) was 64.0 $L_{eq(30min)}$ and 74.9 $L_{eq(30min)}$ respectively with an average of 71.8 dB(A) $L_{eq(30min)}$. Therefore, the results were not considered as exceedance.
- 11.6 Piling work was undertaken on-site and this was identified as the major influencing factors affecting the monitoring results.
- 11.7 In the reporting period, one environmental complaint and no notifications of summons or successful prosecution were received.

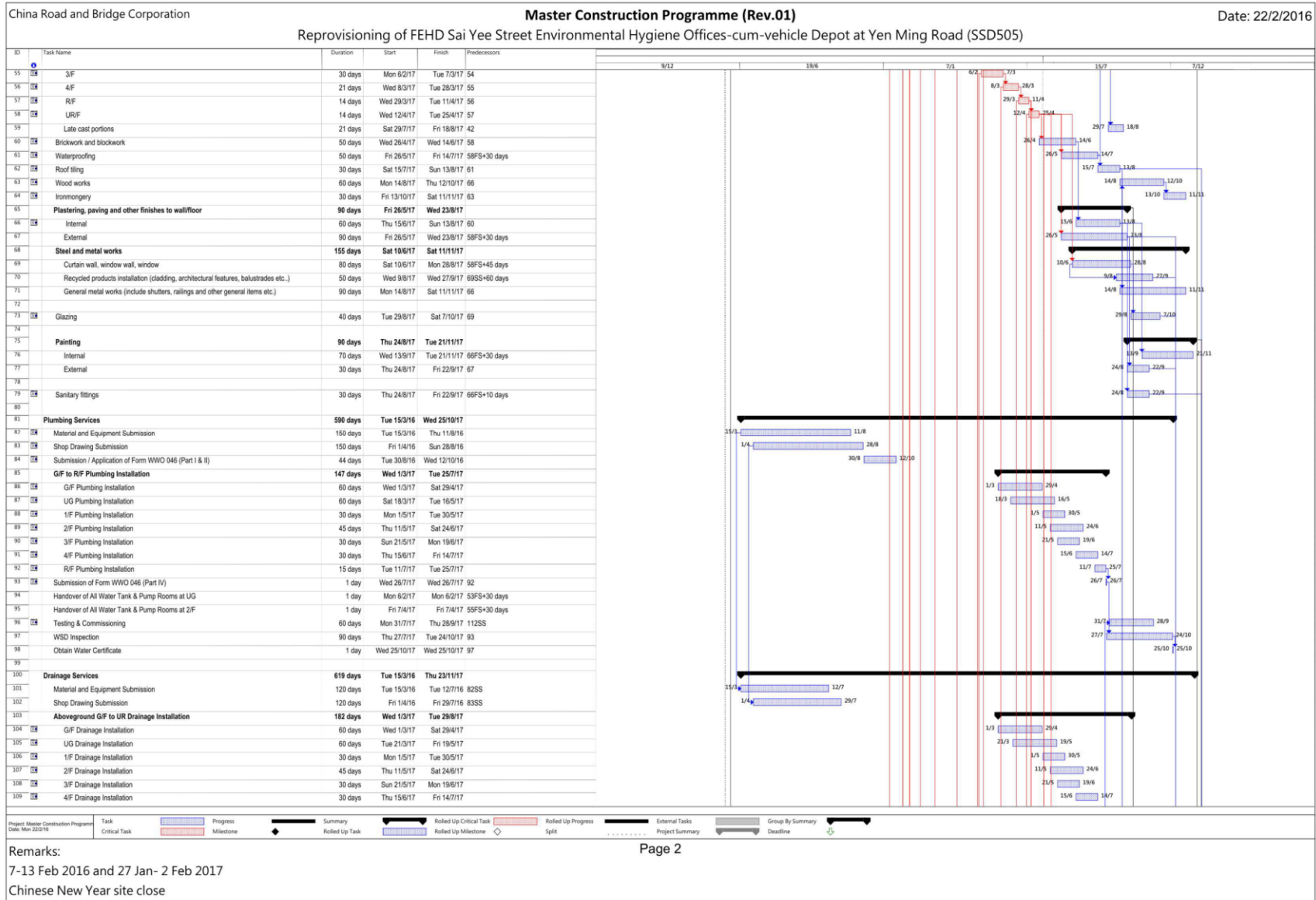


- 11.8 Weekly construction phase site inspections and landscape and visual impact inspections were conducted during the reporting month as required. The monitoring results and statistics of non-compliance indicated that the EIA process with its recommended mitigation and EM&A programme were effective for protection of the environment and there was no significantly unacceptable environmental impact posed by the Project.
- 11.9 In the reporting month, a total of 33.9 tons of inert C&D materials was disposed as public fill to Tuen Mun 38, while 2 tons of general refuse was disposed at NENT landfill and 2.58 tons of metals were collected by recycling contractor. 0 tons of paper/cardboard packaging, 0 tons of plastics was disposed of.
- 11.10 Construction activities to be undertaken in the next three months include installation of trial pile and working pile, setting up and dismantle of tower crane, construction of pile caps and backfilling works. Potential environmental impacts include generation of various wastes including oil and chemical wastes, general refuse and construction waste, maintenance work to all drainage facilities and wheel washing facility, dust from construction works, waste water from surface runoff, drainage facilities and wheel washing facilities noise from operation equipment and machinery, tree protective measures shall be carried for tree retained.
- 11.11 The Contractor should properly implement environmental mitigation measures as per the implementation schedule in the EM&A manual to ensure no adverse environmental impacts to be arisen from the construction works. The Contractor is also reminded to maintain good housekeeping at the site.



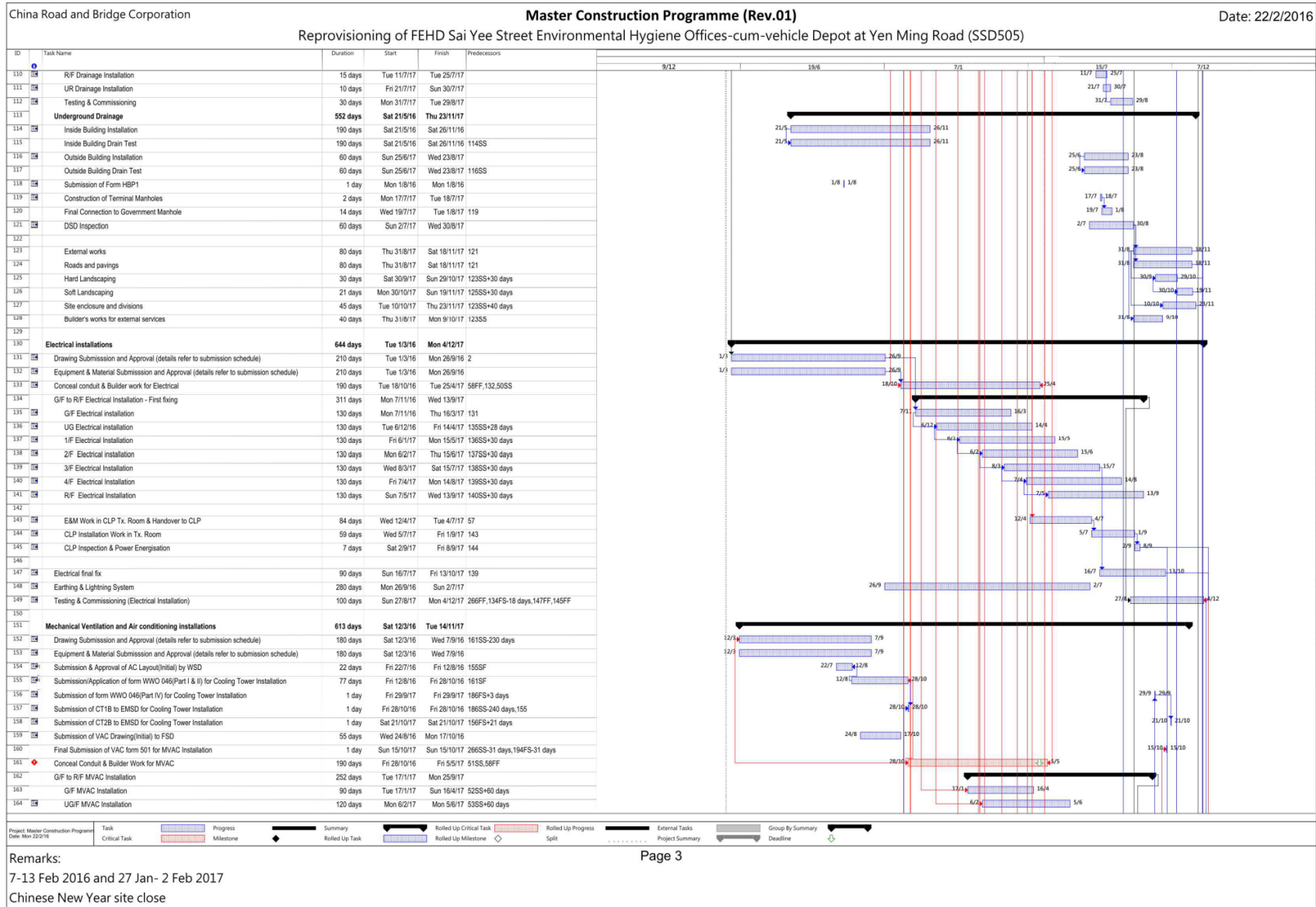
Appendix A Master Programme

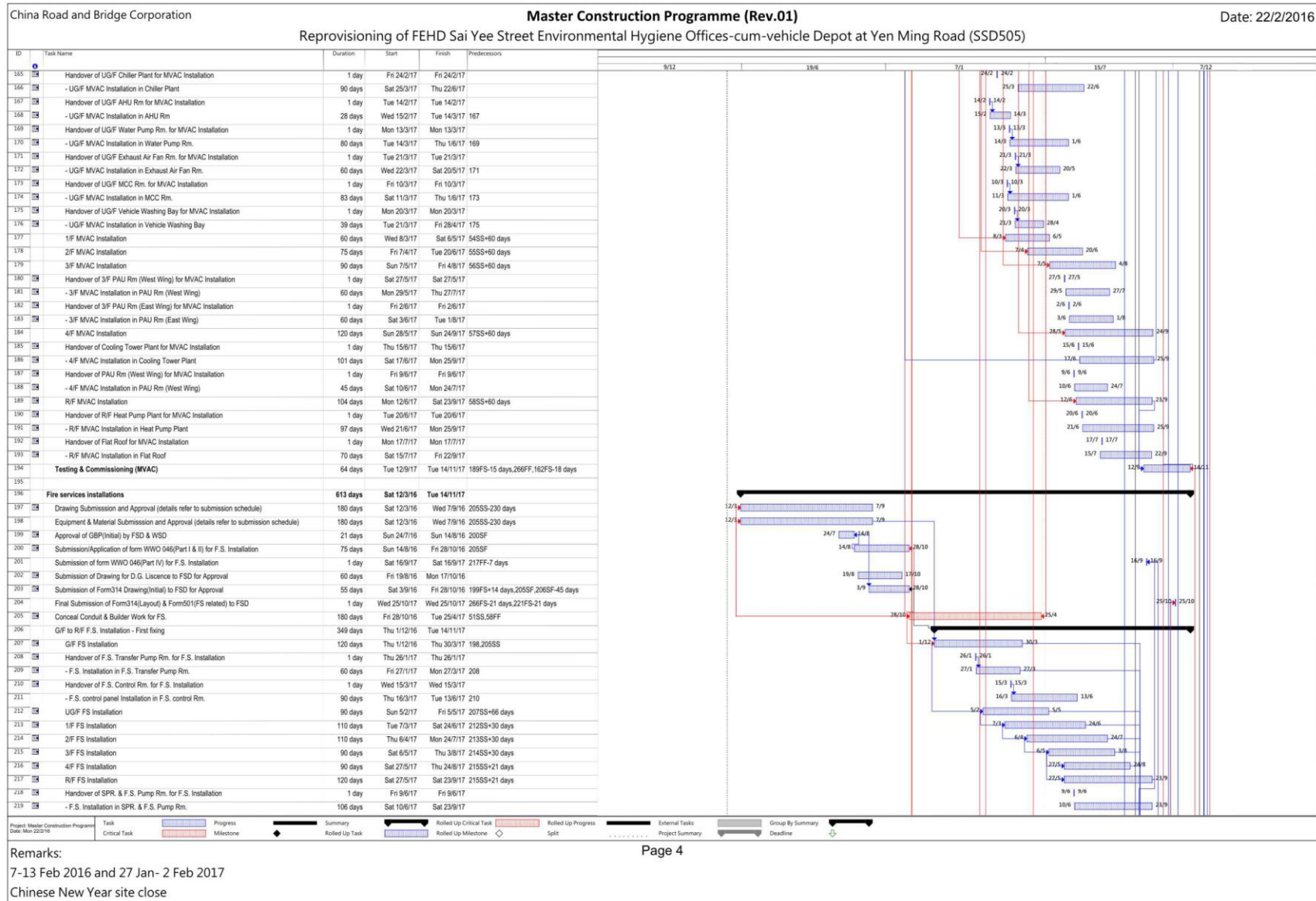


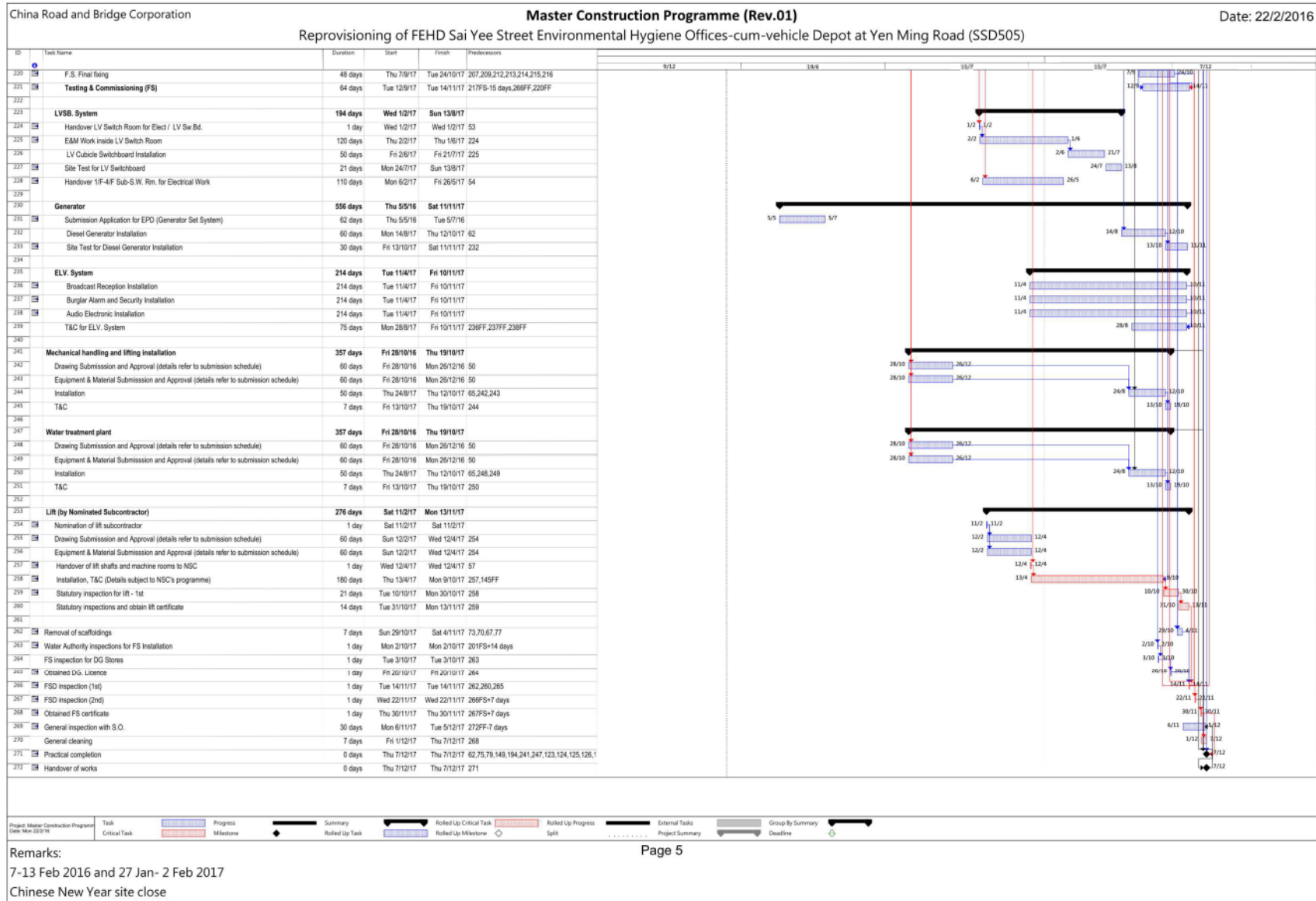


Remarks:
7-13 Feb 2016 and 27 Jan- 2 Feb 2017
Chinese New Year site close



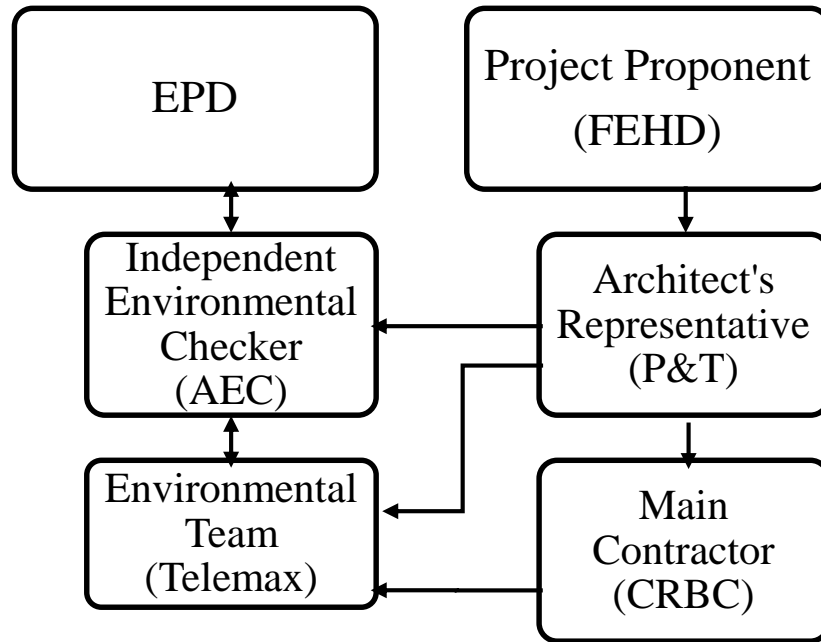








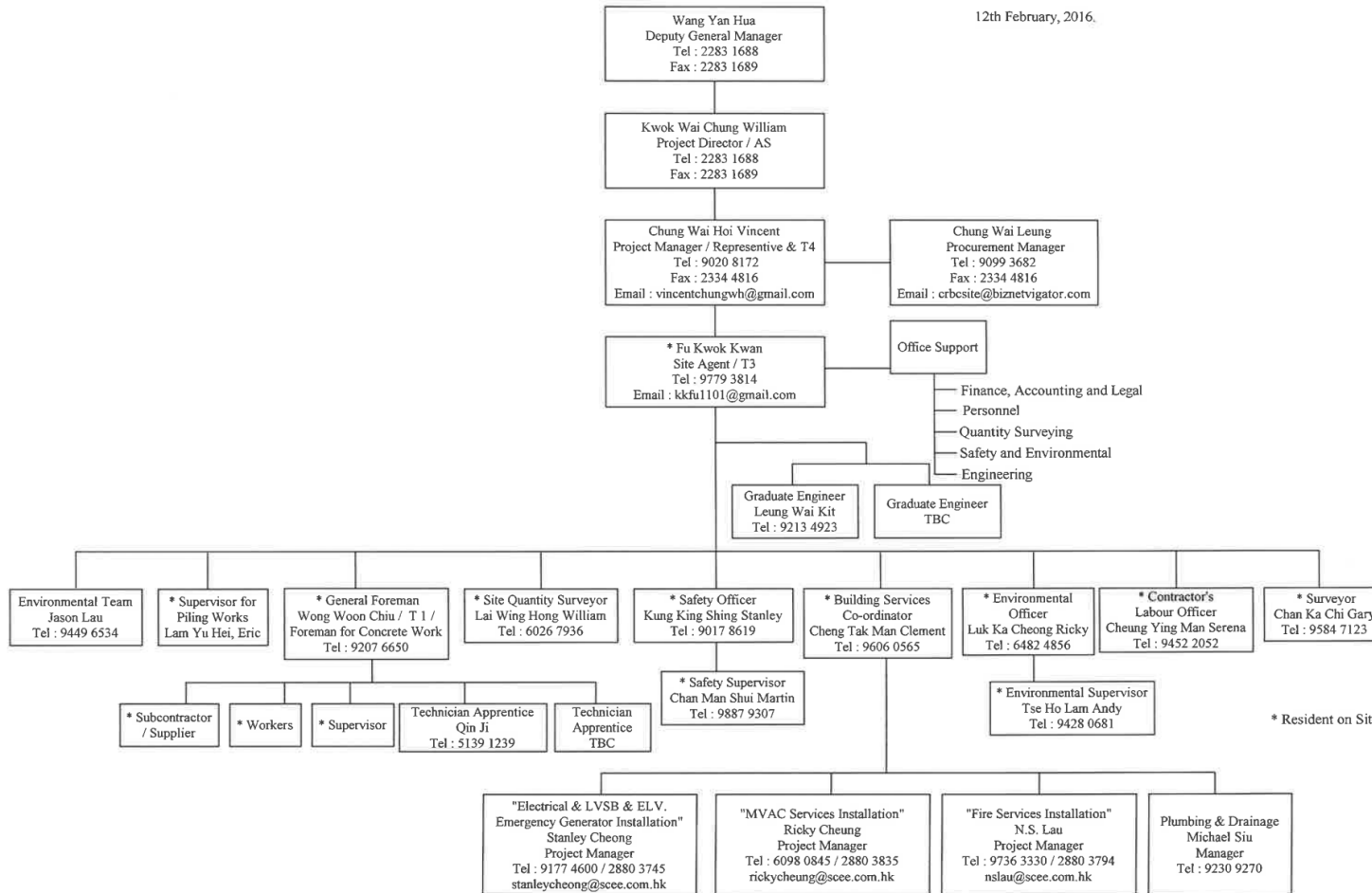
Appendix B Organization Chart





Organization Chart for EPD Submission
Reprovisioning of FEHD Sai Yee Street Environmental
Hygiene Offices-cum-Vehicle Depot at Yen Ming Road,
West Kowloon Reclamation Area
Contract No.: SS D505 (Programme No. 182GK)

12th February, 2016.



Appendix C Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Air Quality (Construction)					
• Use of regular watering, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;	All areas	✓			
• Use of frequent watering for particularly dusty construction areas close to ASRs	All areas	✓			
• Side enclosure and covering of any practicable owing to frequent usage, watering should be applied to aggregate fines;	All areas	✓			
• Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage piles near ASRs;	All areas	✓			
• Tarpaulin covering of all dust vehicle loads transported to, from and between site locations;	All areas				✓
• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;	All areas		✓		
• Imposition of speed controls for vehicle on unpaved site roads. 8 km/hr is the recommended limit;	All areas	✓			
• Routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs;	All areas	✓			
• Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) , if applicable, should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3-sides; and	All areas				✓
• Loading, unloading, transfer, handling or storage of large amount of cement or dry PFA should be carried out in a totally enclosed system or facility, and may vent or exhaust should be fitted with the an effective fabric filter or equivalent air pollution control system.	All areas				✓
• 3-sides enclosed washing bays and maintenance workshops, served with mechanical ventilations to maintain all the time with proper negative air pressure.	Washing bays & maintenance workshops				✓
• Deodorization system such as active carbon filters or chemical scrubber (or equivalent) will be applied at the ventilation duct prior to discharging to the atmosphere, having odor removal efficiency of 85% or above at normal operation, and under regular and proper maintenance and replacement.	Washing bays & maintenance workshops				✓
• Commissioning test requirement should be incorporated in the specification during commissioning period order to ensure the odor removal efficiency (at least 85%) of the proposed odor removal unit.	Washing bays & maintenance workshops				✓
• Monitoring test on odor removal efficiency of the odor removal unit should be carried out quarterly in the first year of operation. Development of monitoring and investigation plan, as well as work procedure, prior to operation of the unit is recommended.	Washing bays & maintenance workshops				✓



Noise – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
• Carefully arrange the timing and sequencing of the various construction activities according to the actual site work situation;	All areas	✓			
• Limit the quantity of PME to be operated concurrently and their proportion of usage were recommended in the Project and incorporated in the Noise Impact Assessment;	All areas	✓			
• The proposed quantity of PMEs and their proportion of usage should be confirmed feasible by the Engineer;	All areas	✓			
• In the case during school examination, more stringent construction noise criteria should be imposed, the potentially most disruptive construction activities should be avoided, and arranged to be conducted during school holidays as far as practicable.	All areas	✓			
• The use of Sound Power Levels (SWLs) for typical PME provided in the GWTM and that for equivalent “quiet” plants: <ul style="list-style-type: none"> ■ Loader, wheeled (Back-hoe)Excavator, Tracked Generator ■ Mobile Crane 	All areas	✓			
• The use of temporary noise barriers if applicable: <ul style="list-style-type: none"> ■ Movable barriers with skid footing and a small cantilevered upper portion ■ Noise jacket/muffler ■ Applicable PME with temporary noise barriers: excavator and mobile crane ■ Selection of insulation material: acoustic mats 	All areas	✓			
• The use of temporary noise barriers if applicable <ul style="list-style-type: none"> ■ Movable barriers with skid footing and a small cantilevered upper portion ■ Noise jacket/muffler ■ Applicable PME with temporary noise barriers: excavator and mobile crane ■ Selection of insulation material: acoustic mats 	All areas	✓			
• Only well-maintained plant should be operated on-site and plants should be operated on-site and plants should be serviced regularly during the construction period;	All areas	✓			
• Mobile plant, if any, should be sited as far from NSRs as possible;	All areas	✓			
• Plant known to emit noise strongly in one direction should, wherever possible, be properly oriented so that the noise is directed away from the nearby NSRs;	All areas	✓			
• Use of site hoarding as a noise barrier to screen noise at low level NSRs;	All areas	✓			
• Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum;	All areas	✓			
• Any material stockpiles and other structures should be effectively utilised, wherever practicable, to screen the noise from on-site construction activities	All areas	✓			
• The Workshop Vehicle Repair Activities should be carried out under the covered area of the Transport Workshop Section on the G/F as the building of FEHD Depot itself provides screening effect to the NSRs	Transport Workshop Section				✓
• The workshop vehicle repair activities should not be carried out during night-time period	Transport Workshop Section				✓
• Acoustic treatment, such as acoustic louvres, silencers, enclosures could be applied to achieve noise attenuation on the use of MVAC and other Building Service Equipment so that the SWL of the equipment shall not exceed the specified “maximum allowable SWL” in various plant rooms.	Transport Workshop Section				✓



Water Quality – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Water Quality and Sewerage					
<ul style="list-style-type: none"> At the establishment of works site, perimeter cut-off drains to direct offsite water around the Site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels) both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided to divert the stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction; 	All areas		✓		
<ul style="list-style-type: none"> Dikes or embankments for flood protection should be implemented around the boundaries of earthworks areas. Temporary ditches should be provided to facilitate the run-off discharge into an appropriate watercourse, through a silt / sediment trap. Silt / sediment traps should also be incorporated in the permanent drainage channels to enhance deposition rates; 	All areas		✓		
<ul style="list-style-type: none"> The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt / sand traps should be 5 minutes under maximum flow conditions. The sizes may vary depending upon the flow rate, but for a flow rate of 0.1m³/s, a sedimentation basin of 30m³ would be required and for a flow rate of 0.5m³/s the basin would be 150m³. The detailed design of the sand / silt traps should be undertaken by the Contractor prior to the commencement of construction; 	All areas				✓
<ul style="list-style-type: none"> The construction works should be programmed to minimize surface excavation works during rainy seasons (April to September), as soon as possible after the earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means; 	All areas				✓
<ul style="list-style-type: none"> The overall slope of works sites should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads should be protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during the prolonged periods of inclement weather and the reduction of surface sheet flows; 	All areas	✓			
<ul style="list-style-type: none"> All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure their proper and efficient operation at all times particularly following rainstorms. Deposited silts and grits should be removed regularly and disposed of by spreading evenly over stable, vegetated areas; 	All areas		✓		
<ul style="list-style-type: none"> Measures should be taken to minimize the ingress of site drainage into excavations. If the excavation of trenches in wet season is inevitable, they should be dug and backfilled in short sections wherever practicable. The water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities; 	All areas		✓		
<ul style="list-style-type: none"> All open stockpiles of construction materials (for example, aggregates, sand and fill material should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silts or debris into any drainage system; 	All areas				✓
<ul style="list-style-type: none"> Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm run-off being directed into foul sewers; 	All areas	✓			
<ul style="list-style-type: none"> Precautions to be taken at any time of the year when rainstorms are likely actions to be taken when a rainstorm is imminent or forecasted and during or after rainstorms, are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface run-off during storm events; 	All areas				✓
<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving the Site to ensure no earth, mud, debris and the like is 	All areas		✓		



deposited by them on roads.					
• Oil interceptors should be provided in the drainage system downstream of any oil / fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain;	All areas		✓		
• Oil interceptors should be provided in the drainage system downstream of any oil / fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain;	All areas		✓		
• All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching the nearby WSRs.	All areas		✓		
• Application to the EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence.	All areas	✓			
• All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the Technical Memorandum.	All areas		✓		
• Minimum distance of 100m should be maintained between the discharge points of construction site effluent and the existing seawater intakes.	All areas	✓			
• No new effluent discharges in nearby typhoon shelters should be allowed.	All areas	✓			
• The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., would minimise water consumption and reduce the effluent discharge volume.	All areas	✓			
• Portable chemical toilets and sewage holding tanks are recommended for the handling of the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	All areas	✓			
• Any maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	All areas	✓			
• All sewage arising from the Project should be collected and diverted to the public sewerage system via proper connections to minimise water quality impact from the operation of the Project and ensure compliance with Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Water under the WPCO.	The Office-cum-Vehicle Depot				✓
• To prevent the potential contaminated wastewater from entering the existing public sewerage systems, run-offs from the covered areas including the vehicle washing bays and vehicle parking space will be properly treated prior to the discharge into the sewerage system. The treated effluent from discharging into the public sewerage system should comply with the effluent standards as stated in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under the WPCO.	The Office-cum-Vehicle Depot				✓
• There is a need to apply to the EPD for a discharge licence for discharge of the operational effluent from the Project under the WPCO. The discharge quality must meet the requirements specified in the discharge licence.	The Office-cum-Vehicle Depot				✓





Waste – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Waste Management and Land Contamination					
<ul style="list-style-type: none"> The requirements as stipulated in the ETWB TC(W) No. 19/2005 “Environmental Management on Construction Sites” and the other relevant guidelines should be included in the Particular Specification for the Contractor as appropriate. Contractor should be required to implement the recommended waste management measures through establishing a Waste Management Plan (WMP) in accordance with the ETWB TC(W) No.19/2005 so as to provide an overall framework of waste management and reduction. The WMP should be submitted to the Project/Site Engineer prior to the construction commencement of the Project for approval and include the followings: <ul style="list-style-type: none"> Waste management policy; Record of generated waste; Waste reduction target; Waste reduction programme; Role and responsibility of waste management team; Benefit of waste management; Analysis of waste materials; Reuse, recycling and disposal plans; Transportation process of waste products; and Monitoring and action plan. The waste management hierarchy below should be strictly followed. This hierarchy should be adopted to evaluate the waste management options in order to maximise the extent of waste reduction and cost reduction. The records of quantities of waste generated, recycled and disposed (location) should be properly documented 	All areas	✓			
<ul style="list-style-type: none"> Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D Materials arising. The use of more durable formwork or plastic facing for construction works should also be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should be carefully planned in order to avoid over-ordering and wastage. The Contractor should recycle as many C&D materials as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities. 	All areas	✓			
<ul style="list-style-type: none"> A recording system for the amount of waste generated, recycled and disposed (locations) should be established. The future Contractor should also provide proper training to workers regarding the appropriate concepts of site cleanliness and waste management procedures, e.g. waste reduction, reuse and recycling all the time. 	All areas	✓			
<ul style="list-style-type: none"> All waste containers shall be in a secure area on hardstanding. 	All areas	✓			
<ul style="list-style-type: none"> Training of site personnel in, site cleanliness, proper waste management and chemical handling procedures. 	All areas	✓			
<ul style="list-style-type: none"> Provision of sufficient waste disposal points and regular collection of waste. 	All areas	✓			
<ul style="list-style-type: none"> Appropriate of sufficient waste disposal points and regular collection of waste by either covering trucks or by transporting wastes in enclosed containers. 	All areas	✓			
<ul style="list-style-type: none"> Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. 	All areas	✓			
<ul style="list-style-type: none"> Separation of chemical wastes for special handling and appropriate treatment. 	All areas	✓			
<ul style="list-style-type: none"> The site and surroundings shall be kept tidy and litter free. 	All areas	✓			





• No waste shall be burnt on-site	All areas	✓			
• Make provisions in contract documents to allow and promote the use of recycled aggregates where appropriate.	All areas	✓			
• Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	All areas		✓		
• Sorting of demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.).	All areas				✓
• Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	All areas	✓			
• Encourage collection of aluminum cans by providing separate labeled bins to enable this waste to be segregated from other general refuse generated by the workforce.	All areas	✓			
• Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	All areas	✓			
• Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.	All areas	✓			
• Waste haulier must hold a valid permit for the collection of waste as stipulated in their permits, Removal of waste should be done in a timely manner.	All areas	✓			
• Register as a Chemical Waste Producers to the EPD	All areas	✓			
• Suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed;	All areas	✓			
• Having a capacity of <450L unless the specifications have been approved by the EPD;	All areas	✓			
• Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations;	All areas	✓			
• Clearly labelled and used solely for the storage of chemical wastes;	All areas	✓			
• Enclosed with at least 3 sides;	All areas	✓			
• Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container of 20% by volume of the chemical waste stored in the area, whichever is greatest;	All areas	✓			
• Adequate ventilation;	All areas	✓			
• Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary);	All areas		✓		
• Incompatible materials are adequately separated.	All areas	✓			
• Adequate numbers of portable toilet should be provide for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilizing them. Night soil should be regularly collected by licensed collectors.	All areas	✓			





Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Landscape and Visual					
• Cautiously arrangement of the operation or placement of the construction plant and machinery, and the transportation or storage of material to reduce and confined the potential adverse impacts in certain areas in the Site	All areas	✓			
• Minimise the height of temporary structures such as hoardings and site offices, and restore the temporary construction site locally to the existing condition in order to minimise any negative impacts and associated uncomfortable views.	All areas	✓			
• Check the site boundaries regularly to ensure the working area does not exceed and causes further damage to the surrounding area.	All areas	✓			
• In case of nighttime construction is conducted, control of nighttime lighting on the works areas to prevent undesired light pollution to the surrounding area, such as viewers from roads, should be implemented.	All areas				✓
• Provision of temporary landscape treatment during construction phase, such as temporary planting around the site office, applying aesthetic treatments on site hoardings and/or façade of site office	All areas		✓		
• Provision of green roof of site office	All areas		✓		
• Erection of fencing around the trees	All areas	✓			
• Avoidance of placing any construction materials close to the trees	All areas	✓			
• Apply mulching beyond root collar	All areas	✓			
• Conduct visual checking/monitoring in regular basis	All areas	✓			
• Proper arrangement of materials for operational activities, including vehicle repair, maintenance, operation and parking, carried out within the office-cumvehicle depot building.	All areas				✓






Retain Tree Survey



T21



Appendix D Calibration Certificates




深圳中航技术检测所
SHENZHEN METROLOGY & MEASUREMENT INSTITUTE OF AVIC
中国航空工业深圳特区计量测试站
SHENZHEN METROLOGY & MEASUREMENT STATION OF CHINA AVIATION INDUSTRY
国防科技工业第一计量测试研究中心深圳计量检测站
SHENZHEN METROLOGY & MEASUREMENT STATION OF CIMM

校准证书

CALIBRATION CERTIFICATE

证书编号 Certificate No.	LX15022785156	 LX15022785156
委托单位 Client	上峰检测认证有限公司	
地址 Address	香港新界荃湾沙咀道66A号豪力中心19楼1905室	
器具名称 Description	声级计/Sound level meter	
器具用途 Usage	/	
规格型号 Model/Type	AWA5661	
制造单位 Manufacturer	杭州爱华仪器有限公司	
器具编号 Serial No.	301134	
结论 Conclusion	见校准结果/Calibration	

(证书专用章)

批准人
Approved by

邵汝况 邵汝况


审核员
Checked by

邵汝况 邵汝况

校准员
Calibrated by

李威锦 李威锦

委托日期 Received Date	2015 年	11 月	23 日	Year	Month	Day
校准日期 Calibration Date	2015 年	11 月	23 日	Year	Month	Day


ZH1504852-003

计量校准机构备案号: [2013]粤量校S007号
 地址: 广东省深圳市福田区车公庙泰然四路劲松大厦9A、9B、1B
 ADD: 9A-9B-1B, Jingsong Building, Tairan 4th Road, Chegongmiao, Futian District, Shenzhen, Guangdong, China
 电话 (TEL): 0755-83890620 83890591 传真 (FAX): 0755-83890704 邮政编码 (POST NO.): 518040
 网址: http://www.szcatci.com E-mail: market@szcatci.com a83890591@126.com

第 1 页 共 4 页 Page 1 of 4

说 明

Directions

1. 深圳中航技术检测所是国家法定计量检定机构, 其管理体系按照JJF 1069-2012法定计量机构考核规范、ISO/IEC 17025:2005和CNAS相关要求运行。The laboratory is the Service of Legal Metrological Verification. The laboratory has implemented management system in accordance with JJF 1069-2012 Rules for the Examination of the Service of Legal Metrological Verification, ISO/IEC 17025:2005 and CNAS related requirements.
2. 本次测量结果仅对被测件有效, 所出具的数据均可溯源到国家或国际计量基准。
The measurement results relate only to the unit under test. All data issued by the laboratory are traceable to the national or international primary standards of measurement.
3. 测量结果所陈述的测量不确定度为包含因子 $k=2$ 的扩展不确定度, 当不报告测量不确定度时, 表示测量标准的不确定度小于被测量误差极限的 $1/3$ 。
The uncertainty reported in this document is the expanded uncertainty with a coverage factor $k=2$, when no uncertainty reported, the test uncertainty ratio (TUR) is less $1/3$.
4. 测量结果未给出与被测件运输、使用等有关的不确定度; 如需要, 由用户考虑。
The quoted uncertainty does not include the uncertainty introduced by use and transport of the calibrated items.
5. 未经本所书面批准, 不得部分复制此证书。
This certificate shall not be reproduced without the written approval of the issuing laboratory except in full.
6. 对本次测量若有异议, 委托方应于收到被测件之日起十五日内向本所提出。
If there is any objection concerning the measurement, the client should inform the issuing laboratory within 15 days from the date of the unit under test return to the client.
7. 本次测量的技术依据 (Reference documents for the measurement):
JJG188-2002《声级计检定规程》JJG188-2002《V. R. of Sound Level Meters》(JJG188-2002《V. R. of Sound Level Meters》)

8. 地点及环境条件 (Place and environmental condition):

地点 (Place)	温度 (Temperature)	相对湿度 (Relative Humidity)
本所/Lab	22.0 °C	60 %

9. 本次测量所使用的主要计量标准器具 (Major standards of measurement used in the measurement):

器具名称 Description	编号 Serial No.	有效期 Due Date	计量特性 Metrological Characteristic
可变阻抗衰减器 AUDIO CALIBRATOR	230060	2016-04-03	U=0.20dB (k=2)
声校准器 MICROPHONE	2292007	2016-11-04	1级
传声器	2172118	2016-11-04	U=0.3dB (k=2)
函数信号发生器	430778	2015-12-01	MPE: $\pm 5E-6$
猝发音发生器	123249	2016-05-09	频率MPE: $\pm 0.1\%$ 衰减MPE: $\pm 0.4\text{dB}$
测量放大器	123220	2016-06-29	U=0.20dB (k=2)

深圳中航技术检测所

证书编号/Certificate NO.: LX15022785156

1、外观及功能正常性检查/Appearance and function check: 正常/Pass.

2、声级计指示声级/Level Calibration:

校准前示值/Indication before Calibrated: 94.0dB

校准后示值/Indication After Adjusted: 94.0dB

3、频率计权/Frequency weightings:

标称频率 Nominal frequency (Hz)	允许下限 Lower Limit (dB)	A计权 A-weighting (dB)	允许上限 Upper Limit (dB)	结论 Fail/Pass
31.5	-42.9	-39.6	-35.9	合格/Pass
63	-28.7	-26.3	-23.7	合格/Pass
125	-18.1	-16.2	-14.1	合格/Pass
250	-10.5	-8.4	-6.7	合格/Pass
500	-5.1	-3.1	-1.3	合格/Pass
1000 (ref.)	-1.4	0.0	+1.4	合格/Pass
2000	-1.4	+1.1	+3.8	合格/Pass
4000	-2.5	+0.9	+4.6	合格/Pass

标称频率 Nominal frequency (Hz)	允许下限 Lower Limit (dB)	C计权 C-weighting (dB)	允许上限 Upper Limit (dB)	结论 Fail/Pass
31.5	-6.5	-3.0	+0.5	合格/Pass
63	-3.3	-0.9	+1.7	合格/Pass
125	-2.2	-0.4	+1.8	合格/Pass
250	-1.9	-0.2	+1.9	合格/Pass
500	-1.9	-0.1	+1.9	合格/Pass
1000 (ref.)	-1.4	0.0	+1.4	合格/Pass
2000	-2.8	-0.2	+2.4	合格/Pass
4000	-4.4	-0.8	+2.8	合格/Pass

4、级线性(参考频率 1kHz)/Level linearity error(Reference frequency 1kHz):

4.1、级程变化误差(量程40dB-100dB; 参考频率: 1000Hz):

Level Change Error (Range40dB~100dB;Reference frequency:1000Hz)

第 3 页 共 4 页 Page 3 of 4



深圳中航技术检测所

证书编号/Certificate NO.: LX15022785156

标称值 Nominal Value	允许下限 Lower Limit	误差 Error	允许上限 Upper Limit	结论 Fail/Pass
(dB)	(dB)	(dB)	(dB)	
40	-1.0	+0.2	+1.0	合格/Pass
50	-1.0	+0.2	+1.0	合格/Pass
60	-1.0	+0.1	+1.0	合格/Pass
70	-1.0	+0.1	+1.0	合格/Pass
80	-1.0	0.0	+1.0	合格/Pass
90 (ref.)	-----	0.0	-----	-----
100	-1.0	0.0	+1.0	合格/Pass

- 附注:
- ◇ 关于测量结果不确定度的说明:
 - ◇ Directions of uncertainty in the calibration
 - 1. 依据文件: JJF1059.1-2012测量不确定度评定与表示;
 - 1. According to JJF1059.1-2012 Evaluation and Expression of Uncertainty in Measurement;
 - 2. 本次测量结果的扩展不确定度/Expanded uncertainty of measured results: $U=0.4\text{dB}\sim 1.0\text{dB}$ ($k=2$)
 - ◇ 技术要求参照同类产品给出;
 - ◇ MPE according related user manual;
 - ◇ 参考IEC61672-1-2002标准/Reference standard: IEC61672-1-2002
 - ◇ 溯源计量标准信息/Measurement Standard: 电声标准装置 [2013]深量标深企证字第045号 有效期: 2017-02-04 Electro-acoustic Measurement Standard
 - ◇ 建议下次送校日期/Due to data: 2016-11-22

以下空白/End of data



中航工业		深圳中航技术检测所 SHENZHEN METROLOGY & MEASUREMENT INSTITUTE OF AVIC 中国航空工业深圳特区计量测试站 SHENZHEN METROLOGY & MEASUREMENT STATION OF CHINA AVIATION INDUSTRY 国防科技工业第一计量测试研究中心深圳计量检测站 SHENZHEN METROLOGY & MEASUREMENT STATION OF CIMM		
<h1>校准证书</h1> <h2>CALIBRATION CERTIFICATE</h2>				
证书编号 Certificate No.	LX15022784156	 LX15022784156		
委托单位 Client	上峰检测认证有限公司			
地址 Address	香港新界荃湾沙咀道66A号豪力中心19楼1905室			
器具名称 Description	声级计/Sound level meter			
器具用途 Usage	/			
规格型号 Model/Type	AWA5661			
制造单位 Manufacturer	杭州爱华仪器有限公司			
器具编号 Serial No.	301135			
结论 Conclusion	见校准结果/Calibration			
(证书专用章)		批准人 Approved by	邵洁沉	
		审核员 Checked by	邵洁沉	
		校准员 Calibrated by	李威锦	
委托日期 Received Date	2015 年 11 月 23 日	 ZH1504952-002		
校准日期 Calibration Date	2015 年 11 月 23 日			
计量校准机构备案号: [2013]粤量校S007号 地址: 广东省深圳市福田区车公庙泰然四路劲松大厦9A、9B、1B ADD: 9A-9B-1B, Jingsong Building, Tairan 4th Road, Chegongmiao, Futian District, Shenzhen, Guangdong, China 电话 (TEL): 0755-83890620 83890591 传真 (FAX): 0755-83890704 邮政编码 (POST NO.): 518040 网址: http://www.szcctci.com E-mail: market@szcctci.com a83890591@126.com				
第 1 页 共 4 页 Page 1 of 4				

说 明

Directions

1. 深圳中航技术检测所是国家法定计量检定机构, 其管理体系按照JJF 1069-2012法定计量机构考核规范、ISO/IEC 17025:2005和CNAS相关要求运行。The laboratory is the Service of Legal Metrological Verification. The laboratory has implemented management system in accordance with JJF 1069-2012 Rules for the Examination of the Service of Legal Metrological Verification, ISO/IEC 17025:2005 and CNAS related requirements.
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The measurement results relate only to the unit under test. All data issued by the laboratory are traceable to the national or international primary standards of measurement.
3. 测量结果所陈述的测量不确定度为包含因子k=2的扩展不确定度, 当不报告测量不确定度时, 表示测量标准的不确定度小于被测量误差极限的1/3。
The uncertainty reported in this document is the expanded uncertainty with a coverage factor k=2, when no uncertainty reported, the test uncertainty ratio (TUR) is less 1/3.
4. 测量结果未给出与被测件运输、使用等有关的不确定度; 如需要, 由用户考虑。
The quoted uncertainty does not include the uncertainty introduced by use and transport of the calibrated items.
5. 未经本所书面批准, 不得部分复制此证书。
This certificate shall not be reproduced without the written approval of the issuing laboratory except in full.
6. 对本次测量若有异议, 委托方应于收到被测件之日起十五日内向本所提出。
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8. 地点及环境条件(Place and environmental condition):

地点(Place)	温度(Temperature)	相对湿度(Relative Humidity)
本所/Lab	22.0 °C	60 %

9. 本次测量所使用的主要计量标准器具(Major standards of measurement used in the measurement):

器具名称 Description	编号 Serial No.	有效期 Due Date	计量特性 Metrological Characteristic
可变阻抗衰减器	230060	2016-04-03	U=0.20dB (k=2)
AUDIO CALIBRATOR声校准器	2292007	2016-11-04	1级
MICROPHONE传声器	2172118	2016-11-04	U=0.3dB (k=2)
函数信号发生器	430778	2015-12-01	MPE: ±5E-6
猝发音发生器	123249	2016-05-09	频率MPE: ±0.1% 衰减MPE: ±0.4dB
测量放大器	123220	2016-06-29	U=0.20dB (k=2)

深圳中航技术检测所

证书编号/Certificate NO.: LX15022784156

1、外观及功能正常性检查/Appearance and function check: 正常/Pass。

2、声级计指示声级/Level Calibration:

校准前示值/Indication before Calibrated: 94.0dB

校准后示值/Indication After Adjusted: 94.0dB

3、频率计权/Frequency weightings:

标称频率 Nominal frequency (Hz)	允许下限 Lower Limit (dB)	A计权 A-weighting (dB)	允许上限 Upper Limit (dB)	结论 Fail/Pass
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250	-10.5	-8.6	-6.7	合格/Pass
500	-5.1	-3.1	-1.3	合格/Pass
1000 (ref.)	-1.4	0.0	+1.4	合格/Pass
2000	-1.4	+1.1	+3.8	合格/Pass
4000	-2.5	+1.2	+4.6	合格/Pass

标称频率 Nominal frequency (Hz)	允许下限 Lower Limit (dB)	C计权 C-weighting (dB)	允许上限 Upper Limit (dB)	结论 Fail/Pass
31.5	-6.5	-3.0	+0.5	合格/Pass
63	-3.3	-0.8	+1.7	合格/Pass
125	-2.2	-0.3	+1.8	合格/Pass
250	-1.9	-0.2	+1.9	合格/Pass
500	-1.9	-0.1	+1.9	合格/Pass
1000 (ref.)	-1.4	0.0	+1.4	合格/Pass
2000	-2.8	-0.1	+2.4	合格/Pass
4000	-4.4	-0.9	+2.8	合格/Pass

4、级线性(参考频率 1kHz)/Level linearity error(Reference frequency 1kHz) :

4.1、级程变化误差 (量程40dB-100dB; 参考频率: 1000Hz) :

Level Change Error (Range40dB~100dB;Reference frequency:1000Hz)

第 3 页 共 4 页 Page 3 of 4



深圳中航技术检测所

证书编号/Certificate NO.: LX15022784156

标称值 Nominal Value (dB)	允许下限 Lower Limit (dB)	误差 Error (dB)	允许上限 Upper Limit (dB)	结论 Fail/Pass
40	-1.0	+0.1	+1.0	合格/Pass
50	-1.0	+0.2	+1.0	合格/Pass
60	-1.0	+0.2	+1.0	合格/Pass
70	-1.0	+0.2	+1.0	合格/Pass
80	-1.0	0.0	+1.0	合格/Pass
90 (ref.)	-----	0.0	-----	-----
100	-1.0	-0.1	+1.0	合格/Pass

附注: ◇ 关于测量结果不确定度的说明:

◇ Directions of uncertainty in the calibration

1. 依据文件: JJF1059.1-2012测量不确定度评定与表示;

1. According to

JJF1059.1-2012 Evaluation and Expression of Uncertainty in Measurement;

2. 本次测量结果的扩展不确定度/Expanded uncertainty of measured results: $U=0.4\text{dB}\sim 1.0\text{dB}$ ($k=2$)

◇ 技术要求参照同类产品给出;

◇ MPE according related user manual;

◇ 参考IEC61672-1-2002标准/Reference standard: IEC61672-1-2002

◇ 溯源计量标准信息/Measurement Standard:

电声标准装置 [2013]深量标深企证字第045号 有效期: 2017-02-04

Electro-acoustic Measurement Standard

◇ 建议下次送校日期/Due to data: 2016-11-22

以下空白/End of data





**华南国家计量测试中心
广东省计量科学研究院**
SOUTH CHINA NATIONAL CENTER OF METROLOGY
GUANGDONG INSTITUTE OF METROLOGY



校准证书

CALIBRATION CERTIFICATE

证书编号 SSS201504817
Certificate No.

第 1 页, 共 4 页
Page of

委托方 Apex Testing & Certification Ltd 上峰检测认证有限公司
Client

委托方地址 Room 1905, 19/F Ho Lik Centre, 66A Sha Tsui
Add. of Client Road, Tsuen Wan, New Territories, H. K.

计量器具名称 Sound Level Calibrator
Description

型号规格 101
Model/Type

制造厂 Pulsar
Manufacturer

出厂编号 028358
Serial No.

设备编号 _____
Equipment No.

接收日期 2015 年 08 月 03 日
Date of Receipt Y M D

结论 符合JJG 176-2005中1级技术要求
Conclusion

校准日期 2015 年 08 月 04 日
Date of Calibration Y M D

批准人
Approved Signatory

李江

核 验
Checked by

杨德坤

校 准
Calibrated by

何卓斌

证书专用章
Stamp



本中心地址: 中国广州市广园中路松柏东街30号 邮政编码: 510405
电话: (8620)86594172 传真: (8620)86590743 投诉电话: (8620)26296063 E-mail: scm@scm.com.cn
Add: No.30, Songbaidong Street, Guangyuanzhong Road, Guangzhou, P. R. China
Post Code: 510405 Tel: (8620)86594172 Fax: (8620)86590743 Complaint Tel: (8620)26296063
证书真伪查询: www.scm.com.cn; www.mtsp.com.cn Certificate AuthenticityIdentify: www.scm.com.cn; www.mtsp.com.cn

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**华南国家计量测试中心
广东省计量科学研究院**
SOUTH CHINA NATIONAL CENTER OF METROLOGY
GUANGDONG INSTITUTE OF METROLOGY



说 明

证书编号 SSD201504817
Certificate No.

DIRECTIONS

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Page of

1. 本中心是国家质量监督检验检疫总局在华南地区设立的国家法定计量检定机构, 计量授权证书号是: (国) 法计 (2012) 01043号、(国) 法计 (2012) 01032号。本中心质量管理体系符合 ISO/IEC 17025:2005 标准的要求。

This laboratory is the National Legal Metrological Verification Institution in southern China set up by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ) under authorization certificates No.(2012)01043 & (2012)01032. The quality system is in accordance with ISO/IEC 17025:2005.

2. 本中心所出具的数据均可溯源至国家计量基准和国际单位制(SI)。

All data issued by this laboratory are traceable to national primary standards and International System of Units (SI).

3. 本次校准的技术依据:

Reference documents for the calibration:

JJG 176-2005 声校准器检定规程 V. R. of Sound Calibrators

4. 本次校准所使用的主要计量标准器具:

Major standards of measurement used in the calibration:

设备名称/型号 Name of Equipment /Model	编号 Serial No.	证书号/有效期 Certificate No. /Due Date	计量特性 Metrological Characteristic
测量放大器 Measuring Amplifier /2636	2160821	SSD201500612 /2016-01-27	1 级 Grade 1
声校准器 Sound Calibrator /4231	2713562	SSD201503065 /2016-05-25	1 级 Grade 1

5. 校准地点、环境条件:

Place and environmental conditions of the calibration:

地点 声学/振动实验室 Acoustics/Vibration Lab. 温度 (23±3) °C 相对湿度 (50~60) %
Place Temperature R.H.

6. 被校准仪器限制使用条件:

Limiting condition of the instrument calibrated:

注: 1. 本证书校准结果只与受校准仪器有关。

2. 未经本机构书面批准, 不得部分复制此证书。

Note: 1. The results relate only to the items calibrated.

2. This certificate shall not be reproduced except in full, without the written approval of our laboratory.





**华南国家计量测试中心
广东省计量科学研究院**
SOUTH CHINA NATIONAL CENTER OF METROLOGY
GUANGDONG INSTITUTE OF METROLOGY



校准结果

RESULTS OF CALIBRATION

证书编号: SSD201504817
Certification No.

原始记录编号: 2201504817
Record No.

第 3 页, 共 4 页
Page of

1 外观: 合格

Apparent inspection: Pass

2 声压级 (dB): 见表1

Sound Pressure Level: Showed in table 1

表1 Table 1

标称值 (dB) Nominal Value	实测值 (dB) Measured Value	允差 (dB) Tolerance	结论 Conclusion	稳定度 (dB) Stabilization	稳定度允差 (dB) Stabilization Tolerance	结论 Conclusion
94	93.86	±0.40	合格(Pass)	0.01	≤0.10	合格(Pass)
104	103.83	±0.40	合格(Pass)	0.01	≤0.10	合格(Pass)

3 频率: 见表2

Frequency: Showed in table 2

表2 Table 2

标称值 (Hz) Nominal Value	实测值 (Hz) Measured Value	允差 (%) Tolerance	结论 Conclusion
1000	1004.5	±1.0	合格(Pass)

4 总失真: 见表3

Total harmonic distortion: Showed in table 3

表3 Table 3

频率 (Hz) Frequency	声压级 (dB) Sound Pressure Level	总失真 (%) Total Harmonic Distortion	允差 (%) Tolerance	结论 Conclusion
1000	94	1.1	≤3	合格(Pass)
1000	104	1.0	≤3	合格(Pass)



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校准结果

RESULTS OF CALIBRATION

证书编号: SSD201504817
Certification No.

原始记录编号: 2201504817
Record No.

第 4 页, 共 4 页
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说明(Note):

1 测量结果扩展不确定度:

Expanded uncertainty of measurement:

声压级: $U=0.15$ dB, $k=2$

Sound Pressure Level Calibration

频率: $U_{rel}=0.1\%$, $k=2$

Frequency

失真度: $U_{rel}=1.4\%$, $k=2$

Harmonic distortion

(依据JJF 1059.1-2012 测量不确定度评定与表示)

(According to JJF 1059.1-2012 Evaluation and Expression of Uncertainty in Measurement)

2 建议校准周期不超过1年。

The interval of calibration advised within one year.





Appendix E Impact Monitoring Data of Noise

Noise Monitoring Record Sheet

Contract No: SS D505
Contract Title: Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum- Vehicle Depot at Yen Ming Road, West Kowloon Reclamation

Data of Monitoring		2/3/2016																							
Monitoring Location		NSR1 (EP)																							
Description of the Location		Sir Ellis Kadoone Sec School																							
Sound Level Method (Model and Serial No.)		Sound level meter : AWA5661 S/N301134 Calibrator: Pulsar 101 S/N028358																							
Weather Condition	Status	Fine																							
Wind Strength (m/s)		<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	
Time of Monitoring	Start	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30
	Finish	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30	19:00
Measured Noise Level (dB(A))	L10 dB(A)	64.7	66.0	66.3	66.8	67.9	66.6	67.7	66.9	67.9	67.9	68.1	67.4	68.2	67.9	68.2	66.7	69.1	69.3	68.3	66.8	66.4	66.3	66.6	64.8
	L90 dB(A)	61.2	62.5	62.7	63.5	64.5	63.4	64.1	63.4	64.3	64.5	64.7	63.6	64.4	64.3	64.7	63.2	65.3	65.9	65.0	63.2	62.7	62.5	63.0	61.5
	Leq dB(A)	62.2	63.4	63.6	64.5	65.4	64.3	65.1	64.6	65.3	65.3	65.6	64.8	65.5	65.4	65.7	64.2	66.5	66.9	65.9	64.3	63.8	63.7	64.2	62.4
	L10 (Average)	67.3																							
	L90 (Average)	63.8																							
Leq (30 min)	64.8																								
Noise Limit Level, Leq, (dB(A))	70dB(A)																								
Site Construction Activities	Piling Works																								
Other Noise Sources During Measurement	Human Activities and Vehicle																								

	Name	Signature	Date
Recorded by	Mary Yiu		31/3/2016
Checked by	Calvin Lui		31/3/2016

Noise Monitoring Record Sheet

Contract No: SS D505
Contract Title: Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum- Vehicle Depot at Yen Ming Road, West Kowloon Reclamation

Data of Monitoring		2/3/2016																							
Monitoring Location		NSR7 (EP)																							
Description of the Location		Fu Yun House																							
Sound Level Method (Model and Serial No.)		Sound level meter : AWA5661 S/N301135 Calibrator: Pulsar 101 S/N028358																							
Weather Condition	Status	Fine																							
Wind Strength (m/s)		<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	
Time of Monitoring	Start	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30
	Finish	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30	19:00
Measured Noise Level (dB(A))	L10 dB(A)	68.8	72.3	73.9	74.0	74.0	74.1	74.4	76.2	76.0	74.7	74.1	75.1	74.7	76.2	75.0	74.9	75.2	74.8	74.5	74.6	74.4	74.7	74.6	74.3
	L90 dB(A)	65.0	68.9	70.3	70.3	70.5	70.4	70.8	72.5	72.6	71.3	70.7	71.4	71.3	72.5	71.8	71.5	71.8	71.2	71.0	71.2	70.8	71.0	70.9	71.0
	Leq dB(A)	66.2	69.9	71.5	71.3	71.4	71.5	71.8	73.5	73.6	72.3	71.8	72.4	72.3	73.6	72.7	72.5	72.7	72.3	72.0	72.1	71.9	72.0	72.1	71.9
	L10 (Average)	74.6																							
	L90 (Average)	71.1																							
Leq (30 min)	72.1																								
Noise Limit Level, Leq, (dB(A))	75dB(A)																								
Site Construction Activities	Piling Works																								
Other Noise Sources During Measurement	Human Activities and Vehicle																								

	Name	Signature	Date
Recorded by	Mary Yiu		31/3/2016
Checked by	Calvin Lui		31/3/2016



Telex Environmental and Energy Management Limited

Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telexeem.com



Noise Monitoring Record Sheet

Contract No: SS D505
 Contract Title: Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum- Vehicle Depot at Yen Ming Road, West Kowloon Reclamation

Data of Monitoring		18/3/2016																								
Monitoring Location		NSR1 (EP)																								
Description of the Location		Sir Ellis Kadoone Sec School																								
Sound Level Method (Model and Serial No.)		Sound level meter : AWA5661 S/N301134 Calibrator: Pulsar 101 S/N028358																								
Weather Status		Fine																								
Condition		Wind Strength (m/s)																								
		<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	
Time of Monitoring		Start	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30
		Finish	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30	19:00
Measured Noise Level (dB(A))		L10 dB(A)	63.6	65.2	65.5	66.7	68.3	68.5	69.0	69.7	69.8	71.5	71.6	70.9	70.5	71.8	69.8	71.3	68.4	72.3	75.0	74.8	74.6	74.8	74.8	68.9
		L90 dB(A)	60.2	61.8	62.1	63.4	64.8	65.1	65.8	66.2	66.0	66.2	66.1	65.5	67.1	68.5	66.4	67.7	65.2	69.3	68.5	69.0	68.5	69.0	69.3	65.4
		Leg dB(A)	61.2	62.8	63.0	64.3	65.6	66.2	66.7	67.3	67.1	66.9	66.9	66.2	68.1	69.5	67.2	68.8	66.1	69.8	69.3	69.5	69.3	69.9	69.8	66.2
		L10 (Average)	71.3																							
		L90 (Average)	66.7																							
		Leg (30 min)	67.5																							
Noise Limit Level, Leg, (dB(A))		70dB(A)																								
Site Construction Activities		Piling Works																								
Other Noise Sources During Measurement		Human Activities and Vehicle																								

	Name	Signature	Date
Recorded by	Mary Yiu		31/3/2016
Checked by	Calvin Lui		31/3/2016

Noise Monitoring Record Sheet

Contract No: SS D505
 Contract Title: Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum- Vehicle Depot at Yen Ming Road, West Kowloon Reclamation

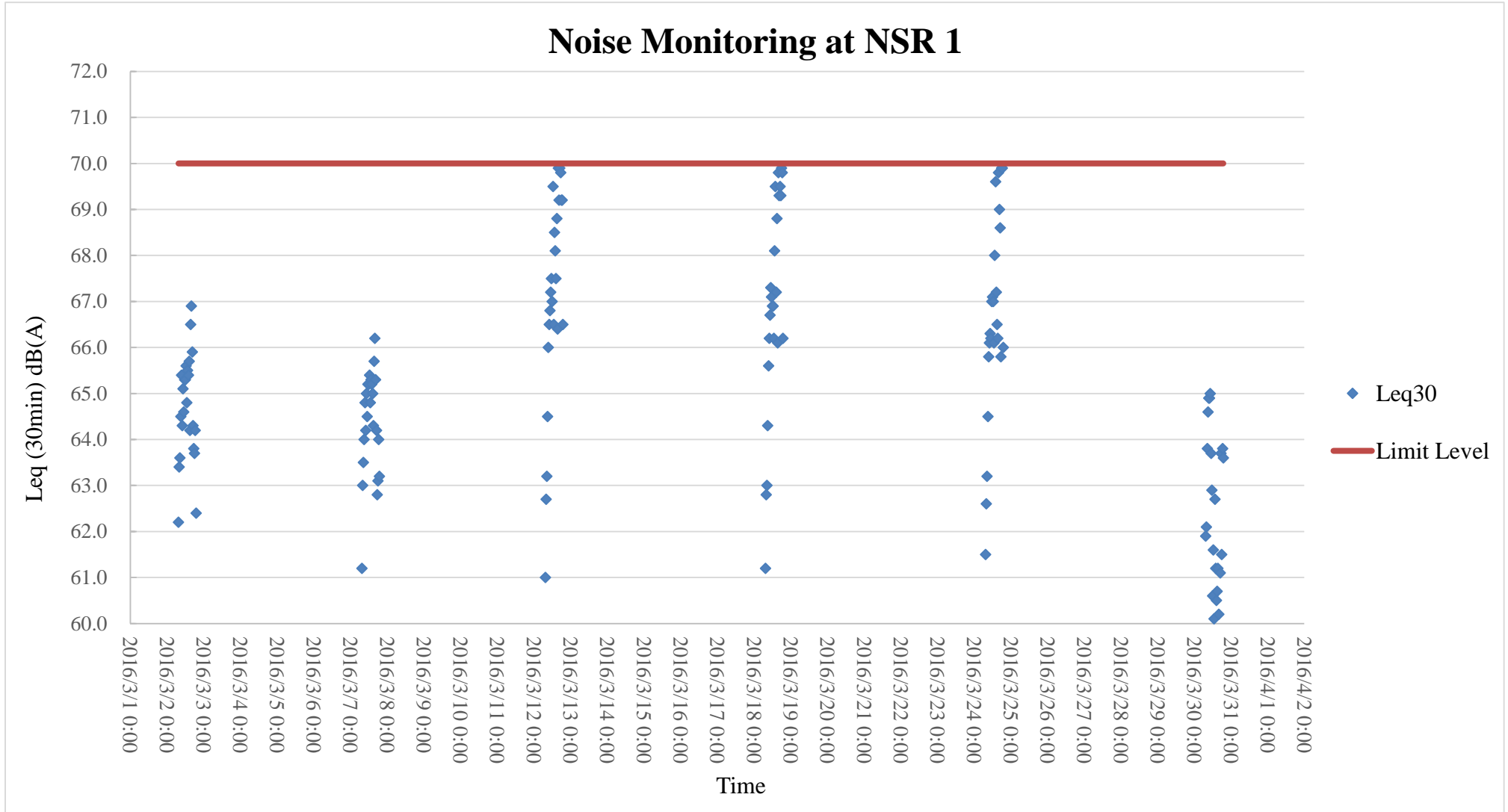
Data of Monitoring		18/3/2016																								
Monitoring Location		NSR7 (EP)																								
Description of the Location		Fu Yun House																								
Sound Level Method (Model and Serial No.)		Sound level meter : AWA5661 S/N301135 Calibrator: Pulsar 101 S/N028358																								
Weather Status		Fine																								
Condition		Wind Strength (m/s)																								
		<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	<5(E)	
Time of Monitoring		Start	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30
		Finish	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30	19:00
Measured Noise Level (dB(A))		L10 dB(A)	67.6	71.6	74.3	74.2	73.8	74.2	74.5	76.4	75.8	74.5	74.8	75.2	75.2	76.8	75.7	75.6	75.5	74.4	74.0	74.1	74.4	74.1	74.6	73.6
		L90 dB(A)	64.2	68.3	71	70.8	70.3	70.7	71.2	72.7	72.2	71.0	71.3	71.9	71.6	73.2	72.1	72.0	71.8	71.0	70.9	70.6	71.1	71.0	70.8	70.2
		Leg dB(A)	65.2	69.2	71.9	71.8	71.2	71.6	72.0	73.9	73.4	72.0	72.1	72.8	72.5	74.2	73.3	73.1	72.8	71.9	71.7	71.9	71.8	71.9	71.8	71.2
		L10 (Average)	74.6																							
		L90 (Average)	71.2																							
		Leg (30 min)	72.1																							
Noise Limit Level, Leg, (dB(A))		75dB(A)																								
Site Construction Activities		Piling Works																								
Other Noise Sources During Measurement		Human Activities and Vehicle																								

	Name	Signature	Date
Recorded by	Mary Yiu		31/3/2016
Checked by	Calvin Lui		31/3/2016



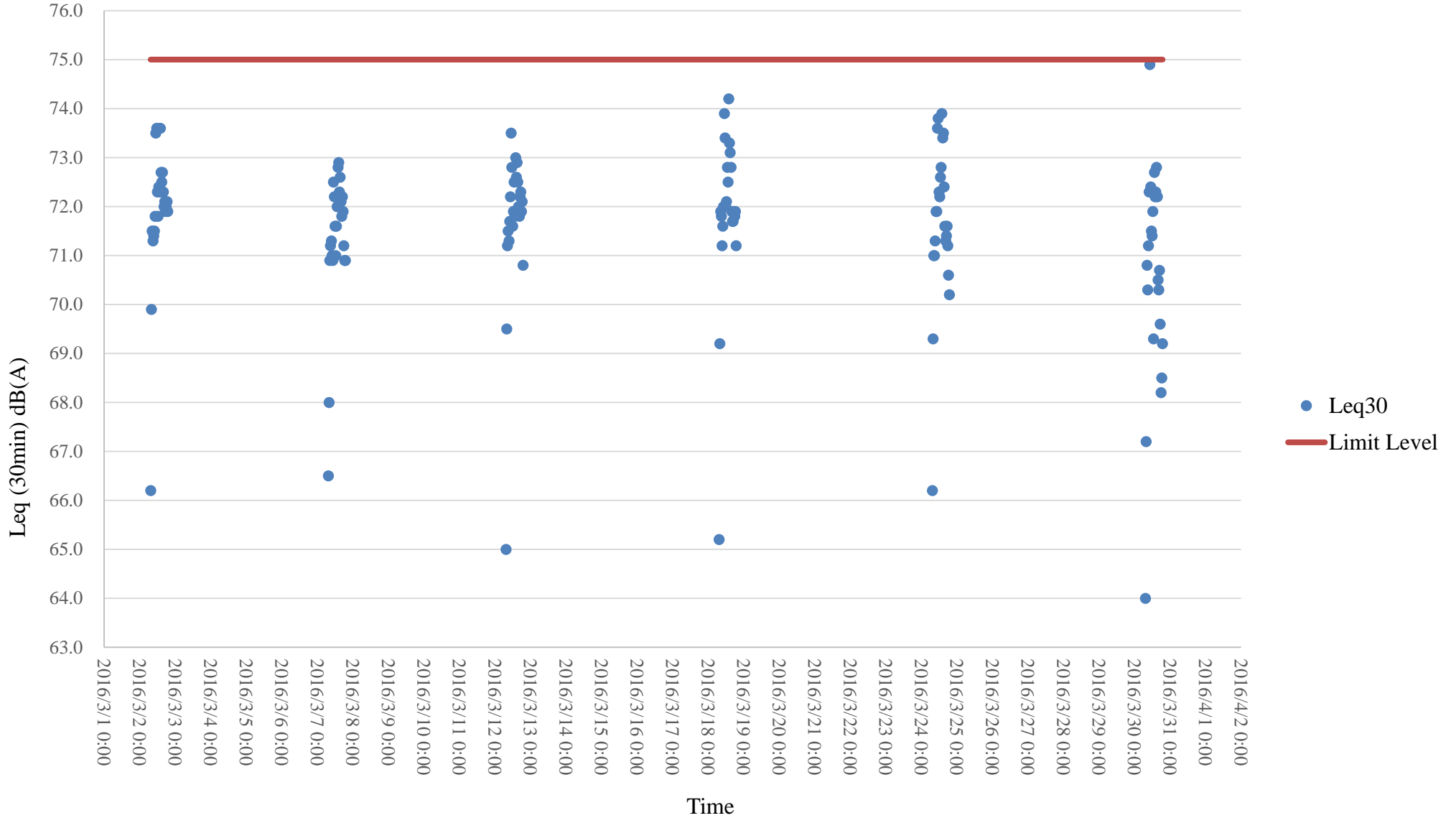


Appendix F Graphical Plot of Leq (30 min)





Noise Monitoring at NSR 7





Appendix G Monitoring Schedule

Impact Monitoring Schedule (March 2016)

March 2016						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	3	4	5
6	7 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	8	9	10	11	12 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900
13	14	15	16	17	18 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	19
20	21	22	23	24 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	25	26
27	28	29	30 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	31		

Remarks: IN – Impact Noise Monitoring

NSR 1 –Sir Ellis Kadorie Secondary School (West Kowloon)

NSR 7 - Fu Cheong Estate Fu Yuen House





Impact Monitoring Schedule (April 2016)

May 2016						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	6	7	8	9
10	11 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	12	13	14	15	16 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900
17	18	19	20	21	22 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	23
24	25	26	27	28 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	29	30

Remarks: IN – Impact Noise Monitoring

NSR 1 –Sir Ellis Kadorie Secondary School (West Kowloon)

NSR 7 - Fu Cheong Estate Fu Yuen House





Impact Monitoring Schedule (May 2016)

April 2016						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	5	6	7
8	9	10 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	11	12	13	14
15	16 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	17	18	19	20	21 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900
22	23	24	25	26	27 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	28
29	30	31				

Remarks: IN – Impact Noise Monitoring

NSR 1 –Sir Ellis Kadorie Secondary School (West Kowloon)

NSR 7 - Fu Cheong Estate Fu Yuen House





Impact Monitoring Schedule (June 2016)

June 2016						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	3	4
5	6	7	8 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	9	10	11
12	13	14 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	15	16	17	18
19	20 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900	21	22	23	24	25 IN - NSR 1 & NSR 7 NSR 1: 0700 -1900 NSR 7: 0700 -1900
26	27	28	29	30		

Remarks: IN – Impact Noise Monitoring

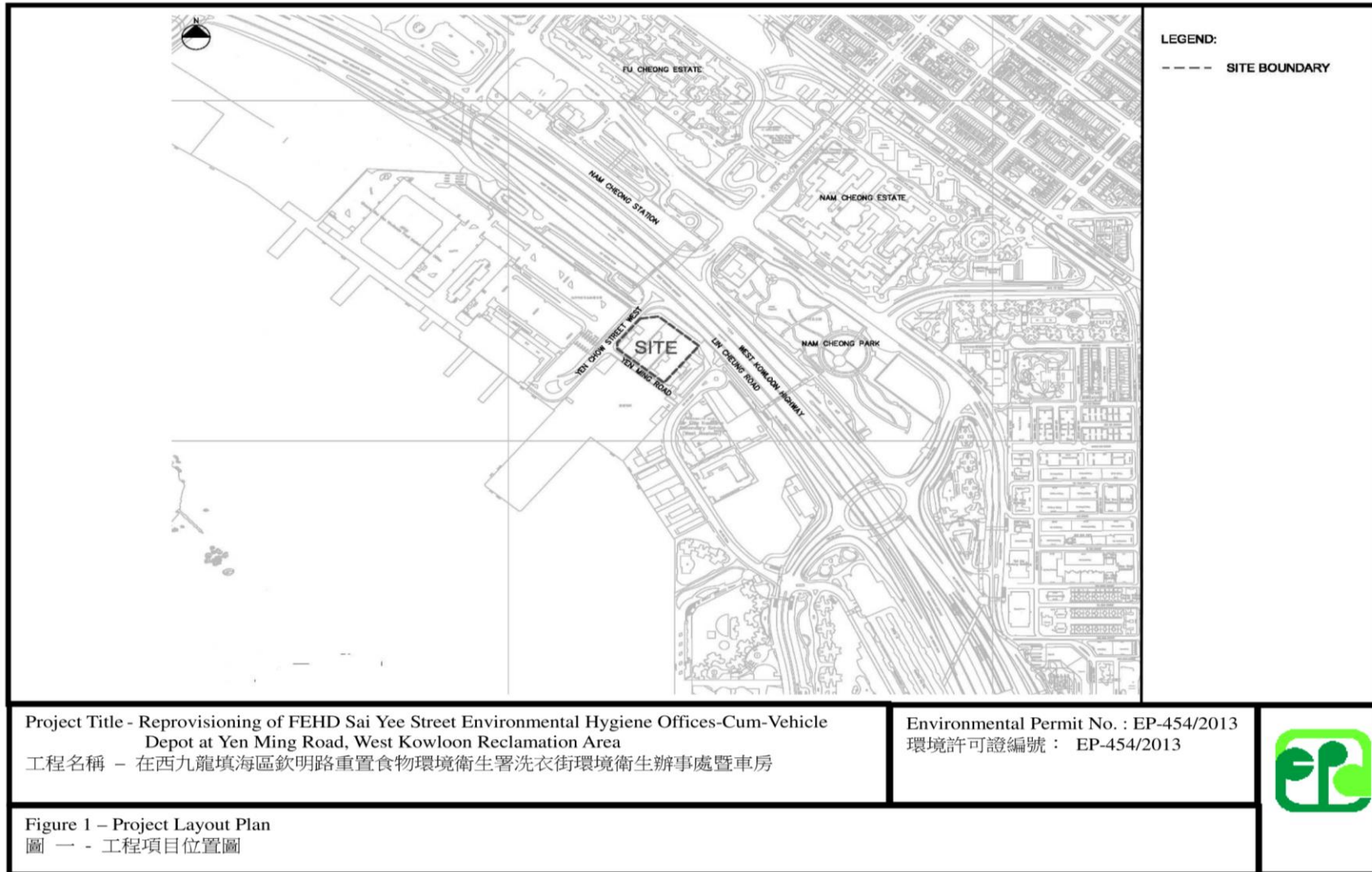
NSR 1 –Sir Ellis Kadorie Secondary School (West Kowloon)

NSR 7 - Fu Cheong Estate Fu Yuen House



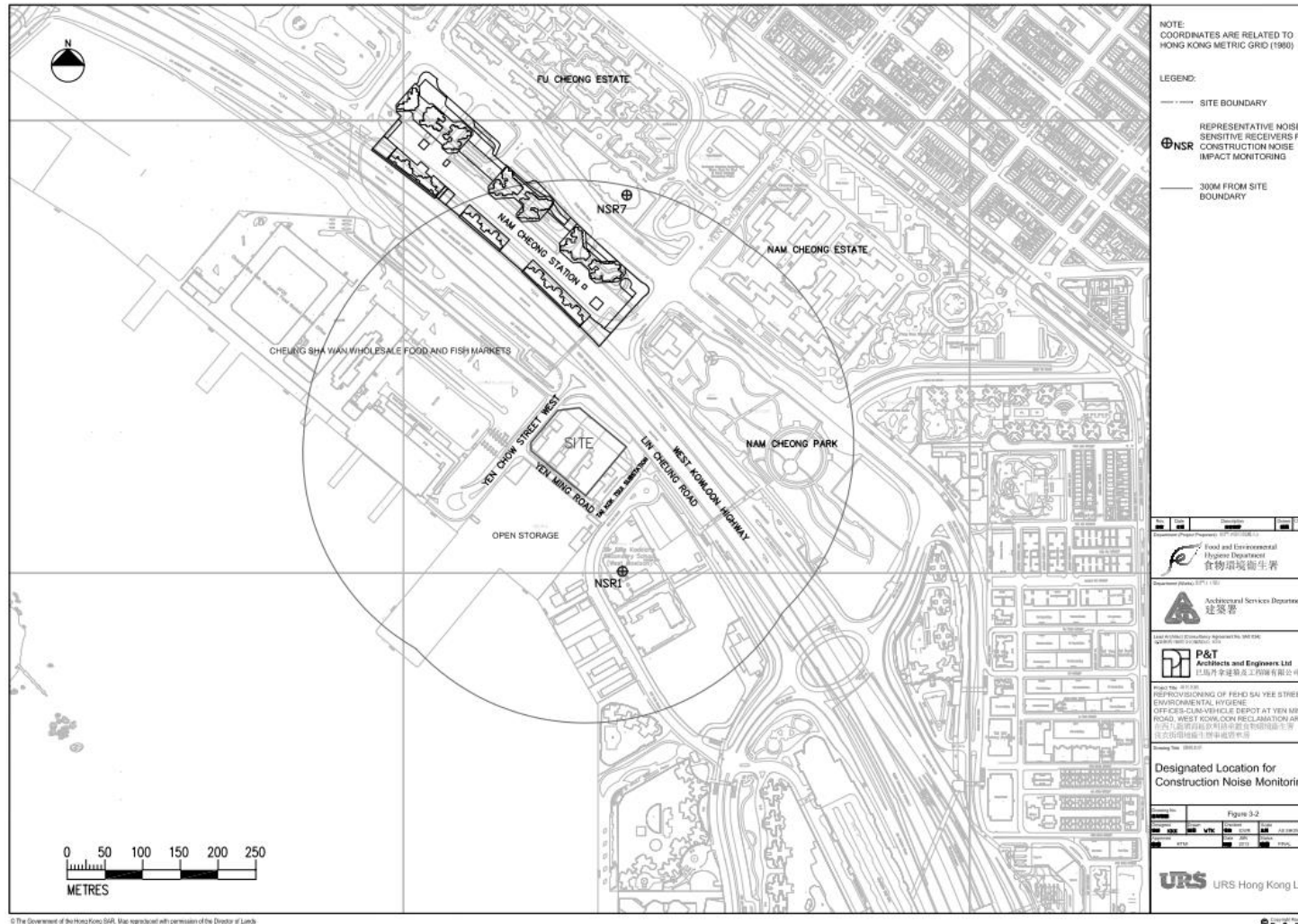


Appendix H Project Layout





Appendix I Location of the Impact Monitoring Locations



Appendix J Photo Records of Monitoring

Photo Records of Noise Monitoring in Daytime



NSR 1 - Sir Ellis Kadorie Secondary School (West Kowloon)



NSR 7 - Fu Cheong Estate Fu Yuen House



Appendix K Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 29 February 2016) to the end of the reporting month and are summarized in the Table L-1 below.

Table L1 Statistics for complaints, notifications of summons and successful prosecutions

Reporting Period	Received Date	Cumulative Statistics				
		Complaints	Notifications of summons	Successful prosecutions	Type	Status
This reporting month	17 th March 2016	1	0	0	Piling noise from construction site	Investigation was carried out and noise mitigation measures were implemented accordingly.
From 29 February 2016 to end of the reporting month		1	0	0		

*Remark:





Appendix M Noise Complaint Investigation Report





Our Ref: : SSD505/SL/PTA/0062

Date: : 12 April 2016

P&T Architects and Engineers Ltd.
33/F, 633 Kings Road, North Point, Kong Kong

Attn: Ms Clara Pang

Dear Madam,

Noise Complaint Investigation Report (17/3/2016)

(Contract No. SSD505)

Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road

1. Further to a complaint from Hampton Place made on 17/3/2016, enclosed please find the formal Noise Complaint Investigation Report prepared by M/S Telex Environmental and Energy Management Ltd (E.T.) for your perusal.
2. By copy of this letter, would Telex please also help to forward the report to EPD for their reference.
3. Should you have any queries, please feel free to contact me at 97793814.

Yours faithfully,

For and on behalf of
China Road and Bridge Corporation

K K Fu (Site Agent)

c.c

(X)	ArchSD (SPM) – Mr Saadullah Sat	w/o Encl., E-mail
(X)	ArchSD (PM) – Mr Dick Wan	w/o Encl., E-mail + Hard copy
(X)	ArchSD (COW) – Mr C P Tang	w/o Encl., E-mail
()	ArchSD (ER-BSI) – Mr W. K. Cheng	w/o Encl., E-mail
(X)	ArchSD (TA) – Mr Charles Tang	w/o Encl., E-mail
(X)	PTS Group e-mail	w/o Encl., E-mail
()	PTME Group e-mail	w/o Encl., E-mail
()	AECOM (CDM/SRM) Mr Rodney Ip	w/o Encl., E-mail

(X)	AECOM (BEAM) Mr Felix Wong	With Encl., E-mail
(X)	L&S Group e-mail	With Encl., E-mail
(X)	AEC – Mr Ho Tin Kit	With Encl., E-mail
(X)	PTS – R.E. Mr. Alvin Lam	With Encl., E-mail
(X)	COW – Mr Marco Leung	With Encl., E-mail
(X)	BSI – Mr Stanley Lam	With Encl., E-mail
(X)	CRBC – Head Office	With Encl., E-mail
(X)	CRBC – Site Office	With Encl., E-mail





FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

Noise Complaint Investigation Report

Issue	Date	Prepared by	Checked by	Approved by	Remark
0	24 th March 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	--
1	30 th March 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated IEC's & Architect's Comments
2	1 st April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated IEC's Comments
3	7 th April 2016	Rena Xu (Consultant)	Jason Lau (Chief Consultant)	Eagle Mo (Managing Director)	Incorporated ASD's Comments

Certified by: _____

ENVIRONMENTAL TEAM LEADER

12 APRIL 2016

Date



Table of Contents

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2	Complaint Response Procedures	4
3	Investigation Approach and Results	5
4	Conclusion.....	10





1 Background

Telex Environmental and Energy Management Limited (TEEM), as the Environmental Team (ET) of the project Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area, received a letter (ref: (2) in EP3/K03/RE/00006227-16) from Environmental Protection Department (EPD) on 21 March 2016 (Appendix C), referring a complaint made by Guardian Property Management Limited, the management agent of Hampton Place, on 17 March 2016 regarding the piling noise from the abovementioned construction project. Project site layout plan and the distance between Hampton Place and the project site are indicated in Appendix A.

With reference to Environmental Permit (EP) No. EP-454/2013 and Section 3.4.8 and Appendix 7-1 of the supporting Environmental Monitoring and Audit (EM&A) Manual, an investigation was carried out by the ET upon receipt of the complaint.

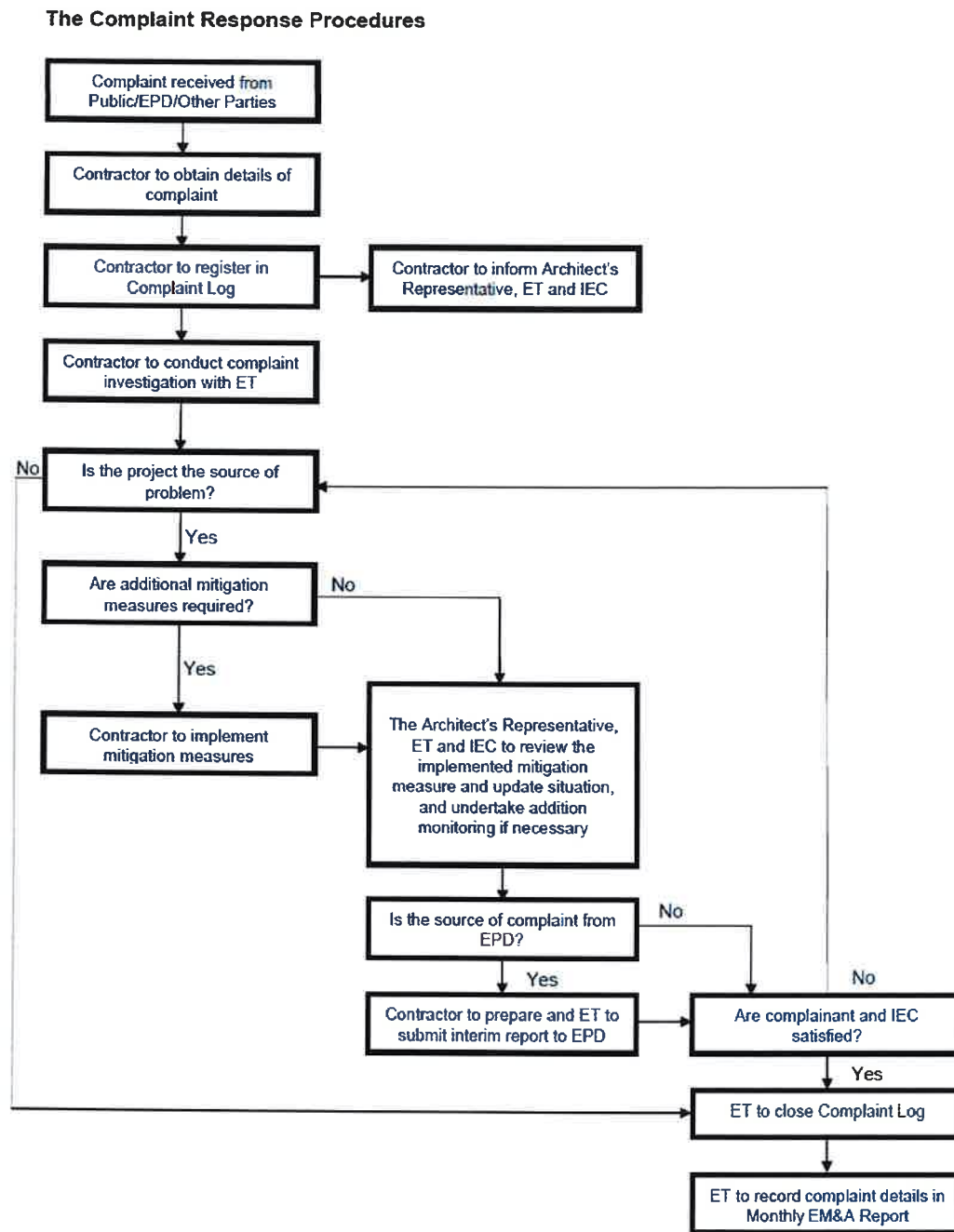
Investigation results and recommendations are detailed in the following sections.

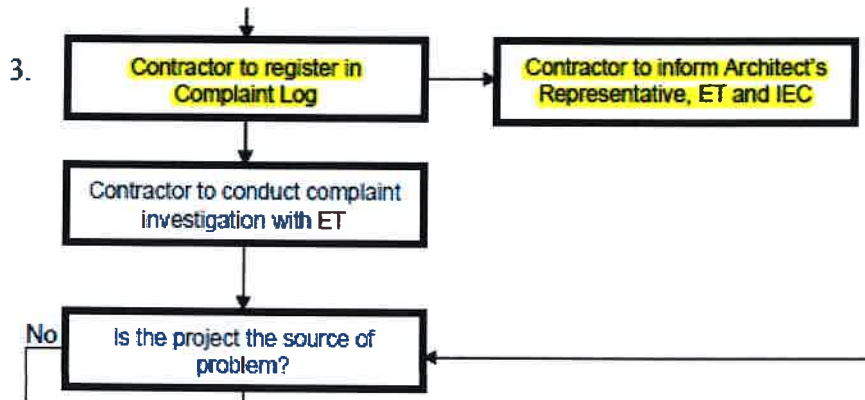




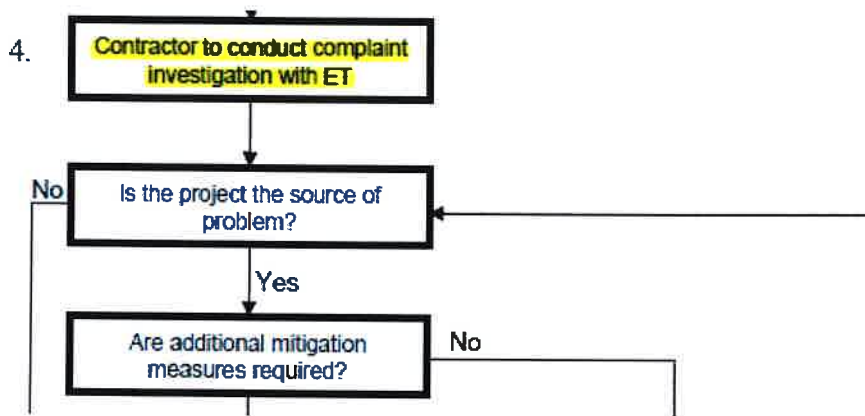
2 Complaint Response Procedures

Upon receipt of a complaint under the control of the aforesaid EP and Section 3.4.8 and Appendix 7-1 of the EM&A Manual, the complaint response procedures are as below:



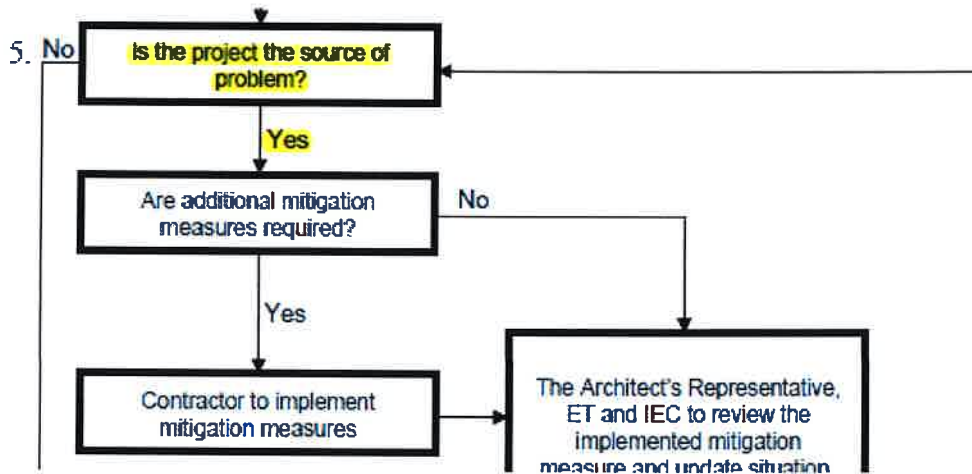


3.3 Contractor registered the case in their complaint log (Appendix B). Independent Environmental Checker (IEC) and Architect's Representative were notified by ET Leader on 22 March 2016.

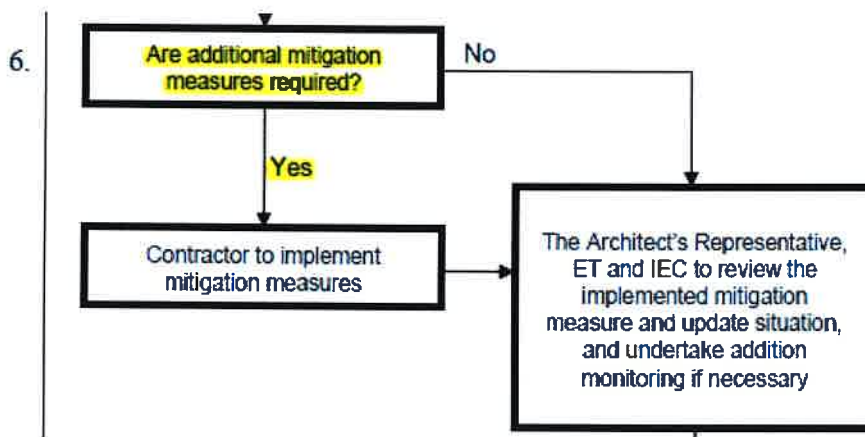


3.4 Complaint investigation was conducted by ET and contractor. Piling permit, noise monitoring records, on-site mitigation measures including appropriate noise barriers and their applications, site event situations and piling schedule were checked and analyzed by ET. Ad hoc site inspection with checking on application of noise barriers, piling schedule, machine maintenance and daily construction work was conducted on 23 March 2016 and a visit was made to the complainant, Hampton Place, on the same day with representatives of ET, main contractor and piling sub-contractor. Discussion was held among the abovementioned parties, Guardian Property Management Limited and the Chairman of the Incorporated Owners of Hampton Place in order to identify any problems.





3.5 It was observed that there is another construction site nearby, as shown in Appendix A. However, that construction site is not under piling stage current and it is in a longer distance to Hampton Place compared with the project site. The project is more likely the source of the complaint.

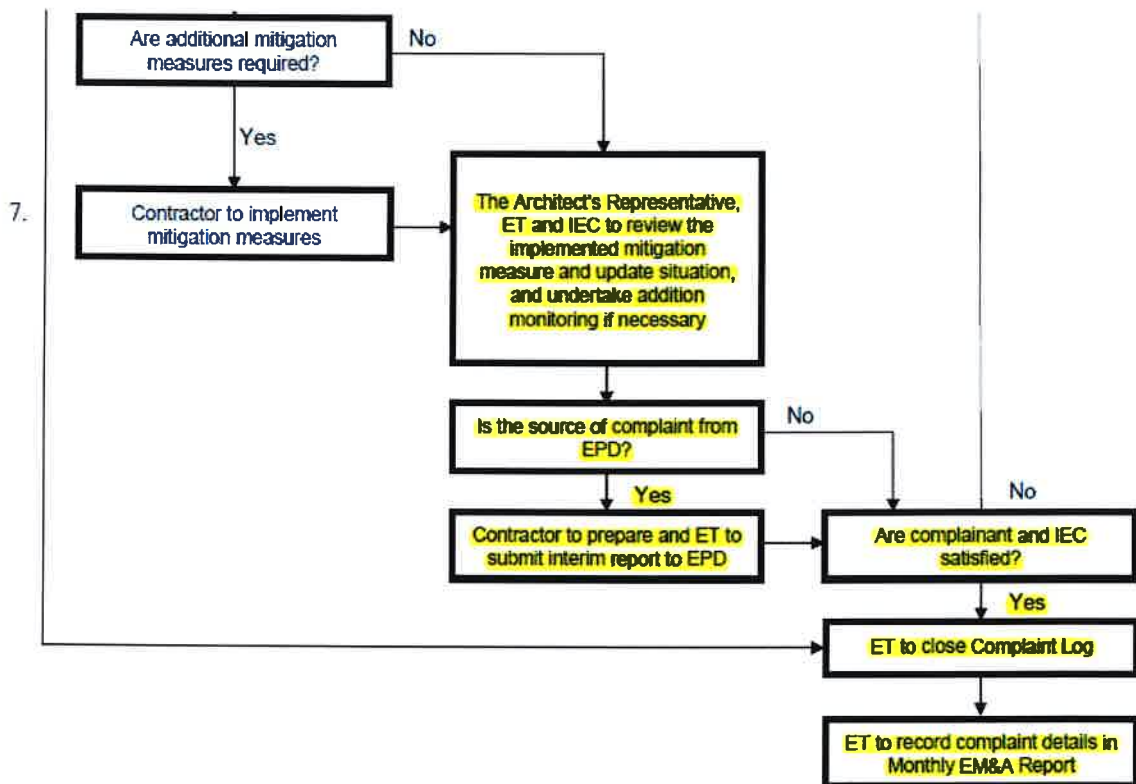


3.6 Having the project being the source of the complaint, mitigation requirement was studied. In order to control noise impact, additional noise monitoring at certain areas out of the recommendation given in the EM&A manual, including Hampton Place, has been conducted since the start of piling work. The noise levels monitored at Hampton Place (Appendix D) during the complaint receipt period suggested, as a reference, that compliance to the required levels could be met. No piling works were scheduled in the first allowed period (07:30 to 08:15) while afternoon piling works were all scheduled in the second and third allowed periods of 12:25 to 13:40 and 15:30 to 18:30. Contractor's piling schedule and piling periods allowed in the





Construction noise Permit (CNP) are shown in Appendix E and Appendix F, respectively. Noise barriers were applied during piling works in order to effectively lower the noise levels (Appendix G). During the investigation, it was also found that a miscommunication occurred due to the change of management company from Goodwell Property Management co. Limited (Goodwell) to Guardian Property Management Limited (Guardian) in February 2016. In order to further minimize the noise levels at nearby sensitive receivers, the following mitigation measures are suggested. Noise barriers should be suitably applied. All Powered Mechanical Equipment (PME) should be regularly checked with proper maintenance procedures to ensure the sound pressure levels are within the specified limits. The main contractor was also recommended to send a new notification letter regarding the piling works (including copies of relevant permits and piling schedule) to Guardian immediately so that residents at Hampton Place get notified.



3.7 With the present report prepared, the case would be reviewed by ET, Architect's Representative and IEC. A reference Leq (30 mins) noise monitoring was





conducted at a nearby sensitive receiver, Sir Ellis Kadoone Secondary School, as shown in Appendix A, from 7:00am to 7:00pm on 30 March 2016 while the recommended mitigation measures have been implemented. Measurement results as indicated in Appendix I suggested that the noise levels complied with the required standard. In order to better verify the effectiveness of the mitigation measures, an additional monitoring of Leq (5 mins) and Leq (30 mins) has been conducted at Hampton Place during piling period on 5 April 2016 afternoon. The results, as a reference, suggested a compliance with the required standards. Detailed data can be shown in Appendix J.





4 Conclusion

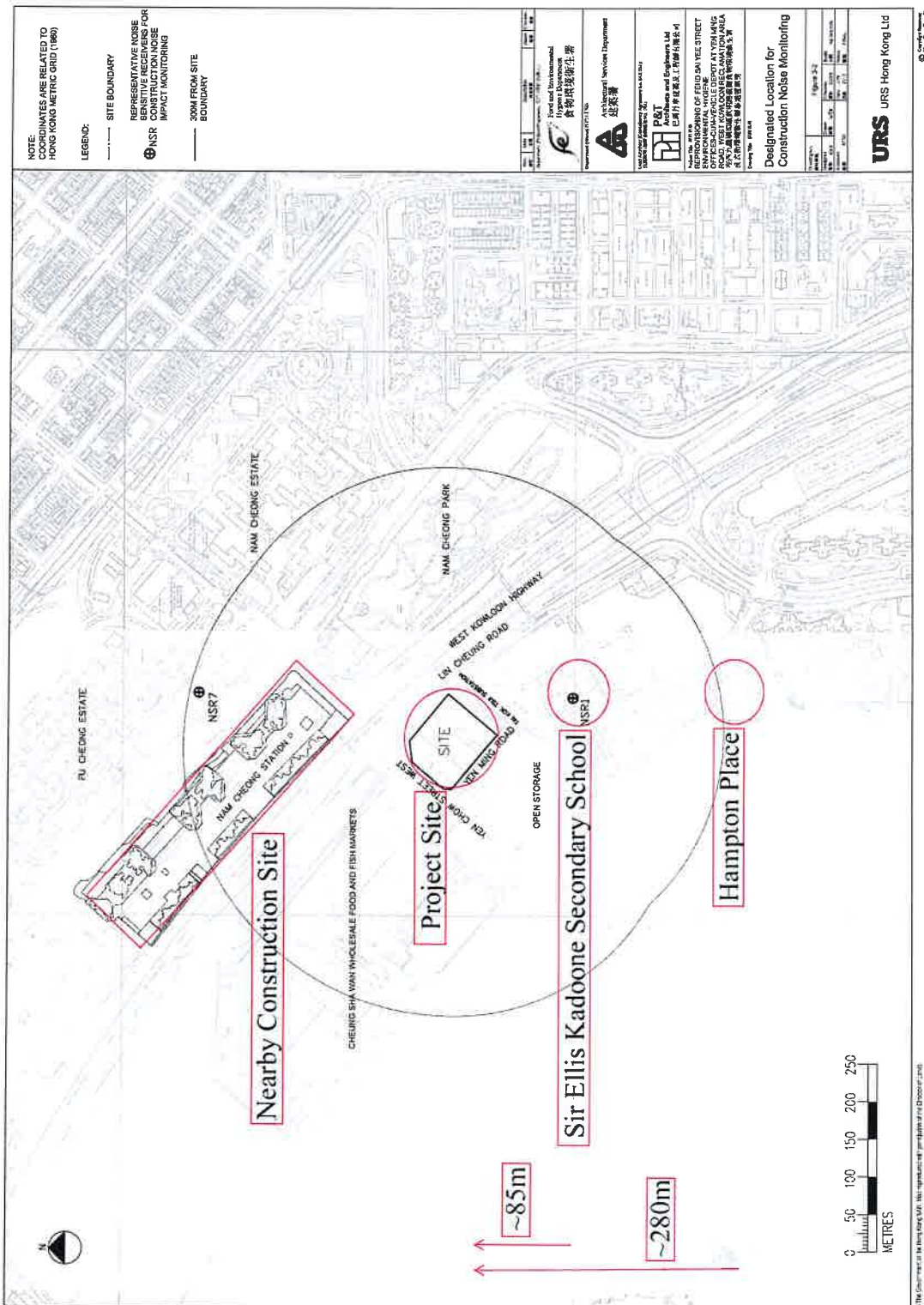
Telemax Environmental and Energy Management Limited (TEEM), as the Environmental Team (ET) of the project Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area, received a letter (ref: (2) in EP3/K03/RE/00006227-16) from Environmental Protection Department (EPD) on 21 March 2016, referring a complaint made by Guardian Property Management Limited, the management agent of Hampton Place, on 17 March 2016 regarding the piling noise from the abovementioned construction project.

With reference to Environmental Permit (EP) No. EP-454/2013 and Section 3.4.8 and Appendix 7-1 of the supporting Environmental Monitoring and Audit (EM&A) Manual, an investigation was carried out by the ET upon receipt of the complaint.

Having the complaint received, investigation was conducted by ET. According to subsequent analysis made in Section 3 of the present report, in order to further minimize the noise levels at nearby sensitive receivers, the following mitigation measures are suggested. Noise barriers should be suitably applied. All Powered Mechanical Equipment (PME) should be regularly checked with proper maintenance procedures to ensure the sound pressure levels are within the specified limits. The main contractor was also recommended to send a new notification letter regarding the piling works (including copies of relevant permits and piling schedule) to Guardian immediately so that residents at Hampton Place get notified. In order to better verify the effectiveness of the mitigation measures, an additional monitoring of Leq (5 mins) and Leq (30 mins) has also been conducted at Hampton Place during piling period on 5 April 2016 afternoon. The results, as a reference, suggested a compliance with the required standards.



Appendix A – Site Layout Plan





Appendix B – Complaint Log

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
The reporting month (29 February 2016 to 31 March 2015)	1	0	0
From Construction Work Commencement (29 February 2016) to end of the reporting month (31 March 2016)	1	0	0





Appendix C – Letter ref (2) in EP3/K03/RE/00006227-16 from EPD

10' d 71101

RECEIVED 21 MAR 2016

本署接獲
OUR REF: (2) in EP3/K03/RE/00006227-16
來函編號
YOUR REF:
電話
TEL NO: 2150 8020
傳真號碼
FAX NO: 2402 8275
網址
HOME PAGE: http://www.epd.gov.hk/

**Environmental Protection Department
Environmental Compliance Division
Regional Office (East)**
8/F., Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road
Kowloon



環境保護署
環保法規管理科
區域辦事處(東)
九龍長沙灣道303號
長沙灣政府合署8樓

21 March 2016

Mr. Jason LAU
Telex Environmental and Energy Management Limited
Unit 9-10, 16/F, Shatin Galleria,
No. 18-24 Shan Mei Street,
Fo Tan, Shatin, N.T., Hong Kong
Fax No. 3563 7018

Dear Mr. LAU,

**Complaint about Piling Noise from Construction Site of
Designated Project under the Environmental Impact Assessment Ordinance
– FEHD Depot at Yen Ming Road, West Kowloon Reclamation Area**

On 17 March 2016, this Department received a complaint against piling noise from the subject construction site affecting Hampton Place. The complainant, Ms. LAW of Guardian Property Management Ltd. (the management agent of Hampton Place), has agreed to pass her contact details to you, as the Environmental Team Leader of the subject designated project, for the purpose of investigating into her complaint. Ms. LAW's contact phone no. is 3165 1227 and her email address is hamptonplace@savillsguardian.com.hk.

According to our records, the said construction works are covered by Environmental Permit No. EP-454/2013. According to the conditions of the permit, an Environmental Monitoring and Audit Programme shall be implemented which includes monitoring of daytime construction noise levels and handling noise complaints from the public. In this connection, I should be grateful if you would investigate into this complaint case and implement noise mitigation measures as necessary. If you give your reply to the complainant in writing, grateful if you would furnish this department with a copy of it for record purpose.

If you have any queries on the above, please contact our Mr. Lawrence LAW at 2150 8014 or the undersigned.

Yours faithfully,

(Johnny C.Y. WONG)
for Director of Environmental Protection



852 2402 8275 + P. 01

EPD CSW60 21-MAR-2016 15:23





Appendix D – Noise Monitoring Results on 17 March 2016

Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle Depot at Yen Ming Road West Kowloon Reclamation

Driven Pile Impact Noise Worksheet

NSR	Location	Dated		12-Mar-2016			17-Mar-2016				Impact & Baseline Different
		Started Time	Completed Time	Baseline		Impact					
				Leq (5min) dB(A)	Free Field + 3dB(A)	After Correction	Started Time	Completed Time	Leq (5min) dB(A)	After Correction	
NSR3	Hampton Place	9:33	9:38	64.9	3	67.9	16:01	16:06	63.1	66.1	-1.8

Appendix E – Piling Schedule from 14 to 19 March 2016

Date	(-)	(>)	(=)	(D)	(E)	(2)
	14/3	15/3	16/3	17/3	18/3	19/3
12:25 }	Full	Full	Full	Full	Full	Full
13:40						
Noise permit {	15:30	15:30	15:30	15:30	15:30	15:30
	}	}	}	}	}	}
	18:30	17:30	17:30	17:30	17:45	18:00





Appendix F – Construction Noise Permit

FORM 4
NOISE CONTROL ORDINANCE
(Chapter 400)
SECTION 8(9)

**CONSTRUCTION NOISE PERMIT FOR THE
CARRYING OUT OF PERCUSSIVE PILING**

CONSTRUCTION NOISE PERMIT NO. PP-RE0070-15

To: TYSAN FOUNDATION LIMITED

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the carrying out of percussive piling, subject to the conditions set out below. The carrying out of percussive piling otherwise than in accordance with the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where percussive piling may be carried out:

Full street address: Construction site at the junction of Yen Chow Street West and Yen Ming Road, West Kowloon Reclamation Area, Tai Kok Tsui, Kowloon. Lot No.: ---

The piling zone, that is, the area within which percussive piling may take place is delineated on the attached plan which forms part of this construction noise permit.

2. Percussive piling method and pile type which may be used in the piling zone:

<i>Piling method and pile type</i>	<i>No. of units</i>
Hydraulic hammer (single acting) driving steel pile	Four

3. Validity of the construction noise permit:

Date of commencement: 02 January 2016

Days and hours: 0700-1900 hours on all days except general holidays (including Sundays) [but note "Other Conditions" below for the operating hours within which the carrying out of the above listed percussive piling is allowed].

This permit expires on: 30 June 2016

4. This construction noise permit or a copy thereof must be displayed on the construction site at all vehicular site entrances/exits for public information.

Other Conditions

5. The above listed percussive piling method and pile type shall only be used during the hours shown below:

Any day not being a general holiday	0730 hours to 0815 hours AND
	1225 hours to 1340 hours AND
	1530 hours to 1830 hours

Dated this 29th day of December 2015

Signed: _____

(NG Ping Sum)
for Authority

EPD 77(s)



Appendix G – Photo Record of Noise Barriers Applied on 17 March 2016



Appendix H – Construction Site Nearby





中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

Our Ref: : SSD505/SL/HP/0001

Date: : 12 April 2016

The Incorporated Owners of Hampton Place,
 11 Hoi Fan Road, Tai Kok Tsui, West Kowloon, Kowloon

Attn: Mr Leung

c/o

Guardian Property Management Ltd.

Attn: Ms Law (E-mail: hamptonplace@savillsguardian.com.hk)

Dear Sir/Madam,

Piling works arrangement

(Contract No. SSD505)

Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road

1. We refer to the discussion among your office and our Mr Ricky Luk, Mr Jason Lau, Mr C K Lee, Ms Y F Chan on 23 March 2016.
2. Please be informed that the bulk piling work in the captioned project is now in progress, and will last for about 3 months. The piling work periods according to the Noise Permit are listed as follows for your reference:

Monday to Saturday (except General Holidays)	
Morning	07:30 to 08:15
Noon	12:25 to 13:40
Afternoon	15:30 to 18:30

3. Should you have any queries, please feel free to contact our Environmental Office Mr Ricky Luk at 64824856 or the undersigned at 97793814.

Yours faithfully,

For and on behalf of

China Road and Bridge Corporation

K K Fu (Site Agent)

c.c. Head Office

