

香港電燈有限公司
The Hongkong Electric Co., Ltd.



**Lamma Power Station Extension
Construction Phase
Monthly Environmental Monitoring & Audit Report**

October 2022

香港電燈有限公司
The Hongkong Electric Co., Ltd.



ENVIRONMENTAL IMPACT ASSESSMENT (EIA) ORDINANCE, CAP. 499

ENVIRONMENTAL PERMIT NO. EP-071/2000/D

**LAMMA POWER STATION EXTENSION
ENVIRONMENTAL MONITORING & AUDIT PROGRAMME
AT CONSTRUCTION PHASE**



| | |
|--------------|---|
| Report Title | Lamma Power Station Extension – Unit L12 Monthly EM&A Report (October 2022) |
| Date | 14 November 2022 |
| Certified by |  (Mr. CHAN Hon Yeung, Environmental Team Leader) |
| Verified by |  Mr. Y T Tang (AECOM Asia Company Limited, Independent Environmental Checker) |

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EXECUTIVE SUMMARY

This is the 150th monthly Environmental Monitoring and Audit (EM&A) report for the Project “Construction of Lamma Power Station Extension” prepared by the Environmental Team (ET). This report presents the results of impact monitoring on air quality and noise for the said project in October 2022.

The reclamation and submarine pipeline works were completed with the first gas-fired combined cycle unit (viz. Unit L9) commissioned in October 2006, working currently on base load operation. To cope with the scheduled retirement of the existing units at Lamma Power Station, the second gas-fired combined cycle unit (viz. Unit L10) L10 was commissioned for reliable operation in February 2020.

In September 2016, the Government approved HK Electric to construct the third combined cycle gas-fired generating unit (Unit L11) to implement the 2020 Fuel Mix Target. L11 was commissioned for reliable operation effective in May 2022. The operational EM&A work for L9, L10 and L11 is recorded in the separate monthly EM&A report for the Project “Operation of Lamma Power Station Extension”.

With the Government’s approval to build the fourth combined cycle gas-fired generating unit (L12) in July 2018, the associated construction work commenced in April 2019. When L12 is commissioned in 2023, the total gas-fired electricity generation will further rise to reach about 70% of our total output.

Air and noise monitoring were performed. The results were checked against the established Action/Limit (AL) levels. An on-site audit was conducted once per week. The implementation status of the environmental mitigation measures, Event/Action Plan and environmental complaint handling procedures were also checked.

Construction Activities Undertaken

Construction activities for Lamma Extension during the reporting month are tabulated as follows:

| Item | Construction Activities |
|---|---|
| Unit L12 Civil and Building Works | Construction of Main Station Building, construction of No. 5 Chimney, construction of L12 GRS, construction of superstructure and cable trench works for ACB, construction of cable trench and installation of precast parapet for Cable Bridge (North & South), construction of superstructure for shunt reactor compound extension and construction of external wall of intake chamber and installation of pre-cast unit for No. 5 C.W. Intake. |
| Unit L12 Mechanical Erection | Condenser installation, HRSG installation and turbine block installation |
| Unit L12 Electrical, Instrumentation & Control Erection | Cable installation |

Environmental Monitoring Works

All monitoring work at designated stations was performed as scheduled satisfactorily.

Air Quality

No exceedance of Action/Limit levels on 1-hour TSP and 24-hour TSP for air quality was recorded in the month.

Noise

No exceedance of Action and Limit levels for noise arising from the construction of Lamma Extension was recorded in the month.

Site Environmental Audit

EPD officials from Regional Office (South) visited Lamma Power Station on 13/10/2022. There was no adverse comment from EPD regarding the construction site.

Site audits were carried out on a weekly basis to monitor environmental issues on the construction site. The site conditions were generally satisfactory.

Environmental Licensing and Permitting

| Description | Permit No. | Valid Period | | Issued To | Date of Issuance |
|---|----------------------|--------------|----------|-------------|------------------|
| | | From | To | | |
| Varied Environmental Permit | EP-071/2000/D | 28/09/20 | - | HK Electric | 28/09/20 |
| Construction Noise Permit | GW-RS0222-22 | 13/04/22 | 12/10/22 | Contractor | 11/04/22 |
| Construction Noise Permit | GW-RS0551-22 | 10/07/22 | 07/01/23 | Contractor | 08/07/22 |
| Construction Noise Permit | GW-RS0613-22 | 29/07/22 | 27/01/23 | Contractor | 27/07/22 |
| Construction Noise Permit | GW-RS0674-22 | 01/09/22 | 28/02/23 | Contractor | 17/08/22 |
| WPCO Discharge Licence | WT00037613-2021 | 15/04/21 | 30/04/26 | Contractor | 15/04/21 |
| WPCO Discharge Licence | WT00037665-2021 | 06/05/21 | 31/05/26 | Contractor | 06/05/21 |
| Registration of Chemical Waste Producer | WPN5213-912-P2781-22 | 22/02/16 | - | Contractor | 22/02/16 |
| Registration of Chemical Waste Producer | WPN5517-912-T2007-02 | 17/03/05 | - | Contractor | 17/03/05 |
| Waste Disposal Billing Account | Account No.: 7038672 | 27/10/20 | - | Contractor | 27/10/20 |
| Waste Disposal Billing Account | Account No.: 7039272 | 08/01/21 | - | Contractor | 08/01/21 |
| Waste Disposal Billing Account | Account No.: 7041942 | 21/10/21 | - | Contractor | 21/10/21 |

Implementation Status of Environmental Mitigation Measures

Environmental mitigation measures for the construction activities as recommended in the EM&A manual were implemented in the reporting month.

Environmental Complaints

No complaint in relation to the environmental impact of the construction activities was received in the reporting month.

Future Key Issues

The future key issues to be considered in the coming month are as follows:

Unit L12 Civil and Building Works

- to continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary;
- to treat wastewater in sedimentation pit and tanks before discharge and to ensure compliance with the WPCO discharge licence already obtained;

Unit L12 Mechanical Erection

- to continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained;
- to continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

Unit L12 Electrical, Instrumentation & Control Erection

- to continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained;
- to continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

Concluding Remarks

The environmental performance of the project was generally satisfactory.

1. INTRODUCTION

1.1 Background

The Environmental Team (hereinafter called the “ET”) was formed within the Hongkong Electric Co. Ltd (HEC) to undertake Environmental Monitoring and Audit for “Construction of Lamma Power Station Extension” (hereinafter called the “Project”). Under the requirements of Section 6 of Environmental Permit EP-071/2000/D, an EM&A programme for impact environmental monitoring set out in the EM&A Manual (Construction Phase) is required to be implemented. In accordance with the EM&A Manual, environmental monitoring of air quality, noise and water quality and regular environmental audits are required for the Project. With the completion of reclamation and submarine pipeline works, no further marine water quality monitoring would be required.

The Project involves the construction of a gas-fired power station employing combined cycled gas turbine technology, forming an extension to the existing Lamma Power Station. The key elements of the Project including the construction activities associated with the transmission system and submarine gas pipeline are outlined as follows.

- dredging and reclamation to form approximately 22 hectares of usable area;
- construction of six 300MW class gas-fired combined cycle units;
- construction of a gas receiving station;
- construction of a transmission system linking the Lamma Extension to load centres on Hong Kong Island;
- laying of a gas pipeline for the supply of natural gas to the new power station

This report summarizes the environmental monitoring and audit work for the Project for the month of October 2022.

1.2 Project Organisation

An Environmental Management Committee (EMC) has been set up in HEC to oversee the Project. The management structure includes the following:

- Environmental Protection Department (The Authority);
- Environmental Manager (The Chairman of the Environmental Management Committee);
- Engineer;
- Independent Environmental Checker (IEC);
- Environmental Team (ET);
- Contractor.

The project organisation chart for the construction EM&A programme is shown in [Appendix A](#).

1.3 Construction Works undertaken during the Reporting Month

Construction activities for Unit L12 civil and building works were, construction of Main Station Building, construction of No.5 Chimney, construction of L12 GRS, construction of superstructure and cable trench works for ACB, and construction of cable trench and installation of precast parapet for Cable Bridge (North & South), construction of superstructure for shunt reactor compound extension, construction of external wall of intake chamber and installation of pre-cast unit for No. 5 C.W. Intake. Construction activities for Unit L12 mechanical erection

were condenser installation, HRSG installation and turbine block installation. Construction activity for Unit L12 electrical, instrumentation & control erection was cable installation. Layout plan for construction site is shown in [Figure 1.1](#).

The main construction activities carried out during the reporting month and the corresponding environmental mitigation measures are summarized in [Table 1.1](#). The implementation of major mitigation measures in the month is provided in [Appendix I](#).

Table 1.1 Construction Activities and Their Corresponding Environmental Mitigation Measures

| Item | Construction Activities | Environmental Mitigation Measures |
|-----------------------------------|--|---|
| Unit L12 Civil and Building Works | | |
| 1. | <p><u>Construction of Main Station Building</u></p> <p>Construction of No.5 Chimney</p> <p>Construction of L12 GRS</p> <p><u>ACB</u></p> <p>Construction of superstructure</p> <p>Cable trench works</p> | <p>Air</p> <ul style="list-style-type: none"> - All regulated machine attached with valid exception/approval NRMM labels. - Water truck and water sprinkler system would be used. - Water spraying for concrete breaking works. - Soil stock would be covered with cement or tarpaulin or keep the entire surface wet. <p>Wheel washing facility was provided.</p> <p>Noise</p> <ul style="list-style-type: none"> - Works conducted during restricted hours should comply with the valid CNP. - Noise emission label was provided for air compressor. <p>Wastewater</p> <ul style="list-style-type: none"> - Wastewater should be treated in desilting pit and tanks before discharge. Solution should be added to speed up the sedimentation process. Sediment in pit and tanks must be removed regularly. The frequency would be in weekly basis depends on the volume of sediment accumulated in order to maintain sufficient volume for wastewater treatment. - <p>Waste Management</p> <ul style="list-style-type: none"> - Excavated soil was temporary stored for backfilling and reuse in other projects. - Scrape metal would be recycled. - Chemical waste should be collected by licensed collector. |
| 2. | <p><u>Cable Bridge (North & South):</u></p> | <p>Air</p> <ul style="list-style-type: none"> - All regulated machine attached with valid |

| Item | Construction Activities | Environmental Mitigation Measures |
|---|---|---|
| | Construction of cable trench and installation of precast parapet <u>Shunt Reactor Compound Extension</u> Construction of superstructure <u>No. 5 C.W. Intake</u> Construction of external wall of intake chamber of installation of pre-cast unit | exception/approval NRMM labels. – Water truck, water sprinkler system and mist cannon were used. – Excavated soil slop covered with tarpaulin. – Wheel washing facilities was provided. – Water spraying on haul road and during concrete breaking. Noise – Noise emission label was provided for air compressor. – Works conducted during restricted hours should comply with the valid CNP. Waste Management – Excavated soil would be transferred to other projects for reuse. – Scrape metal will be recycled. Wastewater - Wastewater would be treated in desilting tanks or wastewater treatment facility before discharge. - |
| Unit L12 Mechanical Erection | | |
| 3. | Condenser installation HRSG installation Turbine block installation | Air – Dust suppression measures implemented according to the EMP. Noise – General noise mitigation measures employed at all work sites throughout the construction phase. Waste Management – Waste Management Plan submitted and implemented |
| Unit L12 Electrical, Instrumentation & Control Erection | | |
| 4. | Cable installation | Air – Dust suppression measures implemented according to the EMP. Noise – General noise mitigation measures employed at all work sites throughout the construction phase. |

| Item | Construction Activities | Environmental Mitigation Measures |
|-------------|--------------------------------|---|
| | | Waste Management – Waste Management Plan submitted and implemented. |

1.4 Summary of EM&A Requirements

The detailed EM&A monitoring work for air quality and noise are described in Sections 2 and 3 respectively. Regular environmental site audits for air quality, noise, water quality and waste management were carried out.

The following environmental audits are summarized in Section 4 of this report:

- Environmental monitoring results;
- Waste Management Records;
- Weekly site audit results;
- The status of environmental licensing and permits for the Project;
- The implementation status of environmental protection and pollution control/ mitigation measures.

Future key issues will be reported in Section 5 of this report.

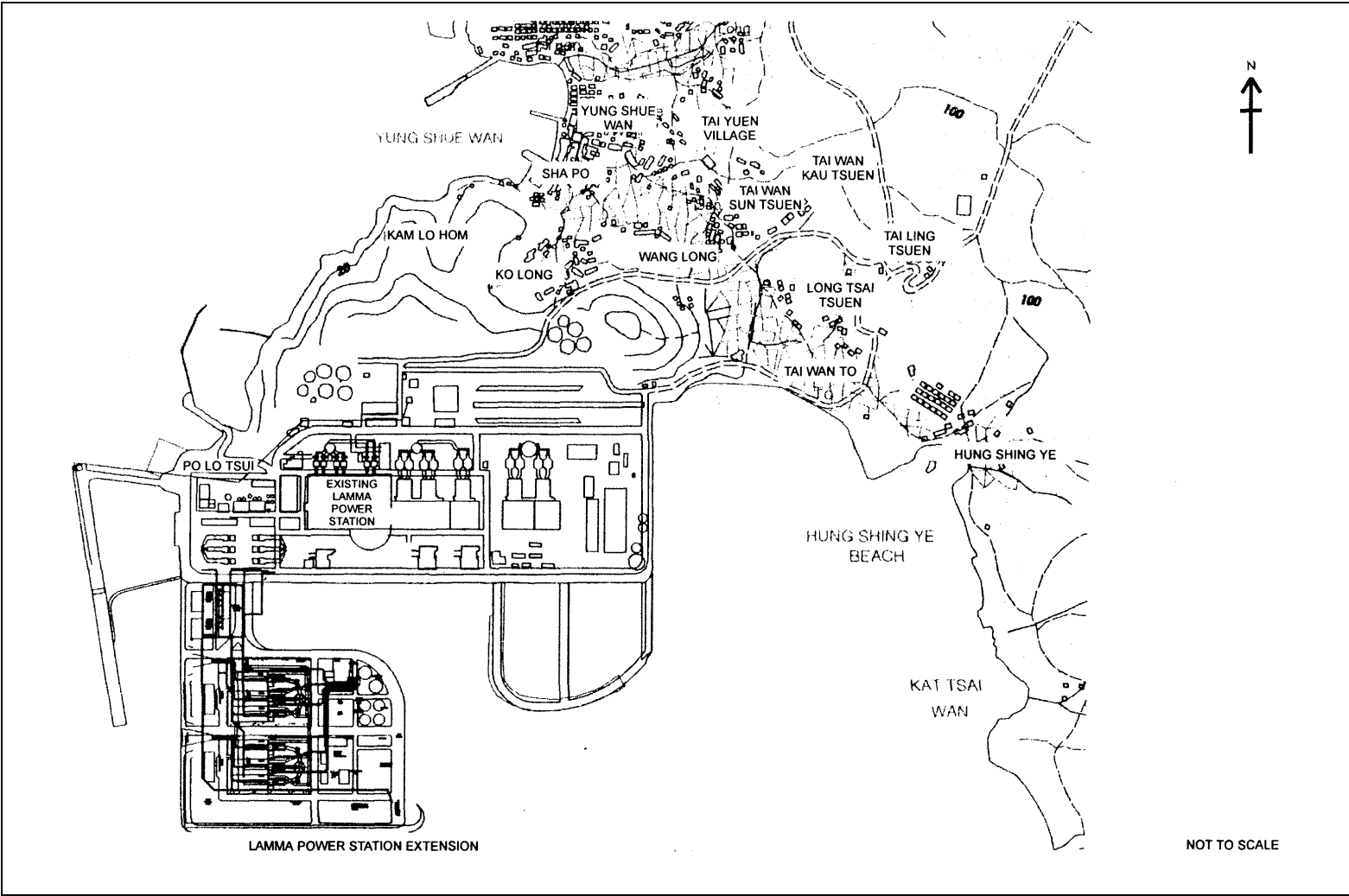


Figure 1.1 Layout of Work Site

2. AIR QUALITY

2.1 Monitoring Requirements

1-hour and 24-hour TSP monitoring at agreed frequencies were conducted to monitor air quality. The impact monitoring data were checked against the Action/Limit Levels as determined in the Baseline Monitoring Report (Construction Phase). [Appendix B](#) shows the established Action/Limit Levels for Air Quality.

2.2 Monitoring Locations

Three dust monitoring locations were selected for 1-hour TSP sampling (AM1, AM2 & AM3) while four monitoring locations were selected for 24-hour TSP sampling (AM1, AM2, AM3 and AM4). [Table 2.1](#) tabulates the monitoring stations. The locations of the monitoring stations are shown in [Figure 2.1](#).

Table 2.1 Air Quality Monitoring Locations

| Location I.D. | Description |
|---------------|------------------|
| AM1 | Reservoir |
| AM2 | East Gate |
| AM3 | Ash Lagoon |
| AM4 | Tai Yuen Village |

2.3 Monitoring Equipment

It is agreed with EPD that continuous 24-hour TSP air quality monitoring would be performed using TEOM continuous dust monitor and the MINIVOL Portable Sampler at AM1,2&3 and AM4 respectively. TEOM continuous dust monitors were used to carry out 1-hour TSP monitoring at AM1, AM2 and AM3. [Table 2.2](#) summarises the equipment used in dust monitoring.

Table 2.2 Air Quality Monitoring Equipment

| Equipment | Model and Make |
|---------------------------|---|
| <i>24-hour sampling:</i> | |
| Continuous TSP Dust Meter | TEOM continuous dust monitor Thermo Scientific |
| MINIVOL Portable Sampler | AIRMETRICS |
| <i>1-hour sampling:</i> | |
| Continuous TSP Dust Meter | TEOM continuous dust monitor Thermo Scientific |

2.4 Monitoring Parameters, Frequency and Duration

[Table 2.3](#) summarises the monitoring parameters, duration and frequency of air quality monitoring. The monitoring schedule for the reporting month is shown in [Appendix C](#).

Table 2.3 Air Quality Monitoring Parameter, Duration and Frequency

| Monitoring Stations | Parameter | Duration | Frequency |
|---------------------|-------------|----------|-------------------------------|
| AM1 | 1-hour TSP | 1 | 3 hourly samples every 6 days |
| | 24-hour TSP | 24 | Once every 6 days |
| AM2 | 1-hour TSP | 1 | 3 hourly samples every 6 days |
| | 24-hour TSP | 24 | Once every 6 days |
| AM3 | 1-hour TSP | 1 | 3 hourly samples every 6 days |
| | 24-hour TSP | 24 | Once every 6 days |
| AM4 | 24-hour TSP | 24 | Once every 6 days |

2.5 Monitoring Procedures and Calibration Details

MINIVOL (24- hour TSP Monitoring):

Preparation of Filter Papers

- Visual inspection of filter papers was carried out to ensure that there were no pinholes, tears and creases;
- The filter papers were then labeled before sampling.
- The filter papers were equilibrated at room temperature and relative humidity < 50% for at least 24 hours before weighing.

Field Monitoring

- During collection of the sampled filter paper, the information on the elapse timer was logged. Site observations around the monitoring stations, which might have affected the monitoring results, were also recorded. Major pollution sources, if any, would be identified and reported.
- The post-sampling filter papers were removed carefully from the filter holder and folded to avoid loss of fibres or dust particles from the filter papers;
- The filter holder and its surrounding were cleaned;
- A pre-weighed blank filter paper for the next sampling was put in place and aligned carefully. The filter holder was then tightened firmly to avoid leakage;
- The programmable timer was set for the next 24 hrs sampling period;
- The post-sampling filter papers were equilibrated at room temperature and relative humidity < 50% for at least 24 hours before weighing.

TEOM continuous dust monitor (24- hour TSP and 1- hour TSP Monitoring):

- The following parameters of the TEOM model dust meters are regularly checked to ensure proper functionality:
 - Operation Mode;
 - Frequency of the tapered element;
 - Main flow;
 - Bypass flow.

Maintenance & Calibration

- The monitoring equipment and their accessories are maintained in good working conditions.

- Monitoring equipment is calibrated at monthly intervals. Calibration details are shown in [Appendix F](#).

2.6 Results and Observations

All dust monitoring works were conducted on schedule. All monitoring data and graphical presentation of the monitoring results are provided in [Appendix D](#). Key findings and observations are provided below:

1-hour TSP

No exceedance of 1-hour TSP Action/Limit Level was recorded in the month.

24-hour TSP

No exceedance of 24-hour TSP Action/Limit Level was recorded in the month.

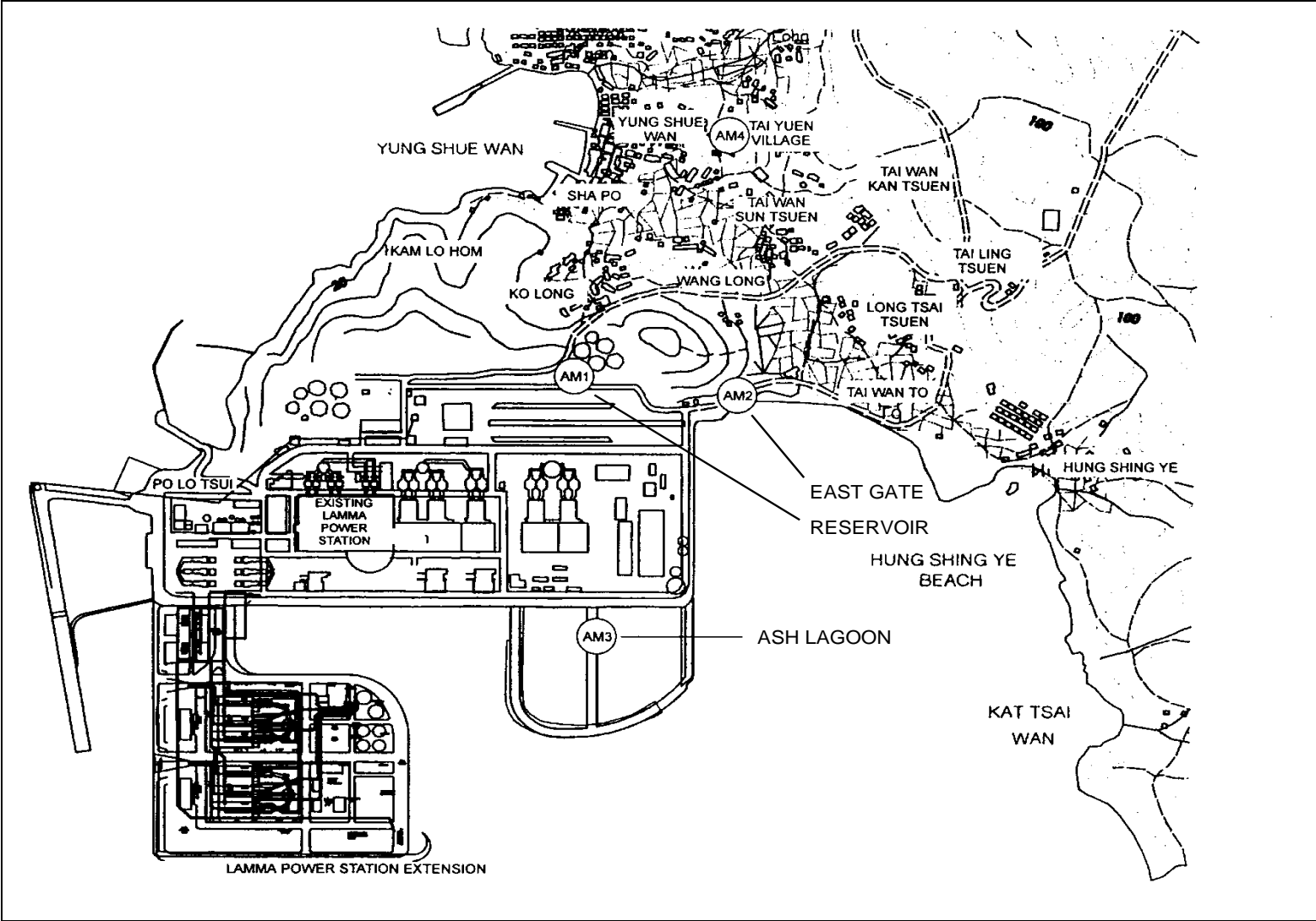


Figure 2.1 Location of Air Quality Monitoring Stations

3. NOISE

3.1 Monitoring Requirements

Continuous noise alarm monitoring at Ash Lagoon/Ching Lam were carried out to calculate the noise contributed by the construction activities at the two critical NSR's, viz. Long Tsai Tsuen/Hung Shing Ye and the school within the village of Tai Wan San Tsuen. The impact monitoring data for construction noise were checked against the limit levels specified in the EM&A Manual. With the availability of the construction noise permits, impact monitoring for the construction work during the restricted hours was also carried out. Section 3 presents the details of the construction noise permits.

The impact noise monitoring data were checked against the limit levels specified in the EM&A Manual. [Appendix B](#) shows the established Action/Limit Levels for noise.

3.2 Monitoring Locations

In accordance with the EM&A manual, the identified noise monitoring locations of Ash Lagoon and Ching Lam are shown in [Figure 3.1](#).

3.3 Monitoring Equipment

The sound level meters used for noise monitoring complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). The noise monitoring equipment used is shown in [Table 3.1](#).

Table 3.1 Noise Monitoring Equipment

| Equipment | Model |
|------------------------|----------|
| Sound level meters | B&K 2250 |
| Sound level calibrator | B&K 4231 |

3.4 Monitoring Parameters, Frequency and Duration

Continuous alarm monitoring was carried out at Ash Lagoon and Ching Lam. The measurement duration and parameter of noise monitoring were presented in [Table 3.2](#) as follows:

Table 3.2 Noise Monitoring Duration and Parameter

| Location | Time Period | Frequency | Parameter |
|----------|-------------|-----------|-----------|
|----------|-------------|-----------|-----------|

| | | | |
|------------|---|---------------------------------------|------------------|
| Ash Lagoon | Day-time: 0700-1900 hrs on normal weekdays | Day-time: 30 minutes | 30-min L_{Aeq} |
| | Evening-time & holidays: 0700-2300 hrs on holidays; and 1900-2300 hrs on all other days | Evening-time & holidays: 5 minutes | 5-min L_{Aeq} |
| Ching Lam | Night-time: 2300-0700 hrs of next day | Night-time: 5 minutes | 5-min L_{Aeq} |

3.5 Monitoring Procedures and Calibration Details

Monitoring Procedures

Continuous Noise Monitoring for Lamma Extension Construction

The measured noise levels (MNL's) were collected at the noise alarm monitoring stations at Ash Lagoon and Ching Lam. The notional background noise levels (viz. baseline noise data at Ash Lagoon and Ching Lam) were applied to correct the corresponding MNL's in 30-min/5-min L_{Aeq} .

A wind speed sensor was installed at Station Building Rooftop. The wind speed signal was used to determine whether the data from Ash Lagoon and Ching Lam noise alarm monitoring stations were affected. The instantaneous data was discarded in case the instantaneous wind speed exceeded 10 m/s. The 30-min/5-min L_{Aeq} was considered valid only if the amount of valid data was equal to or above 70%.

Equipment Calibration

The sound level meters and calibrators were verified by the manufacturer or accredited laboratory. With the endorsement of the Independent Environmental Checker, the enhancement of calibration of sound level meter at the noise monitoring stations was implemented. The monthly manual on-site calibration using sound level calibrator was replaced by the daily auto charge injection calibration function of the sound level meter. For additional quality assurance, manual on-site calibration would still be conducted for the noise monitoring stations once every 6 months. The manual on-site calibrations for Ash Lagoon and Ching Lam noise monitoring stations were carried out in May and September 2022 respectively. The next calibrations for the two corresponding noise monitoring stations were scheduled in November 2022 and March 2023 respectively.

3.6 Results and Observations

Continuous noise monitoring was conducted at the two monitoring stations at Ash Lagoon and Ching Lam.

All monitoring results and their graphical presentations are provided in [Appendix E](#). No exceedance of noise Action/Limit Level was recorded in the month.

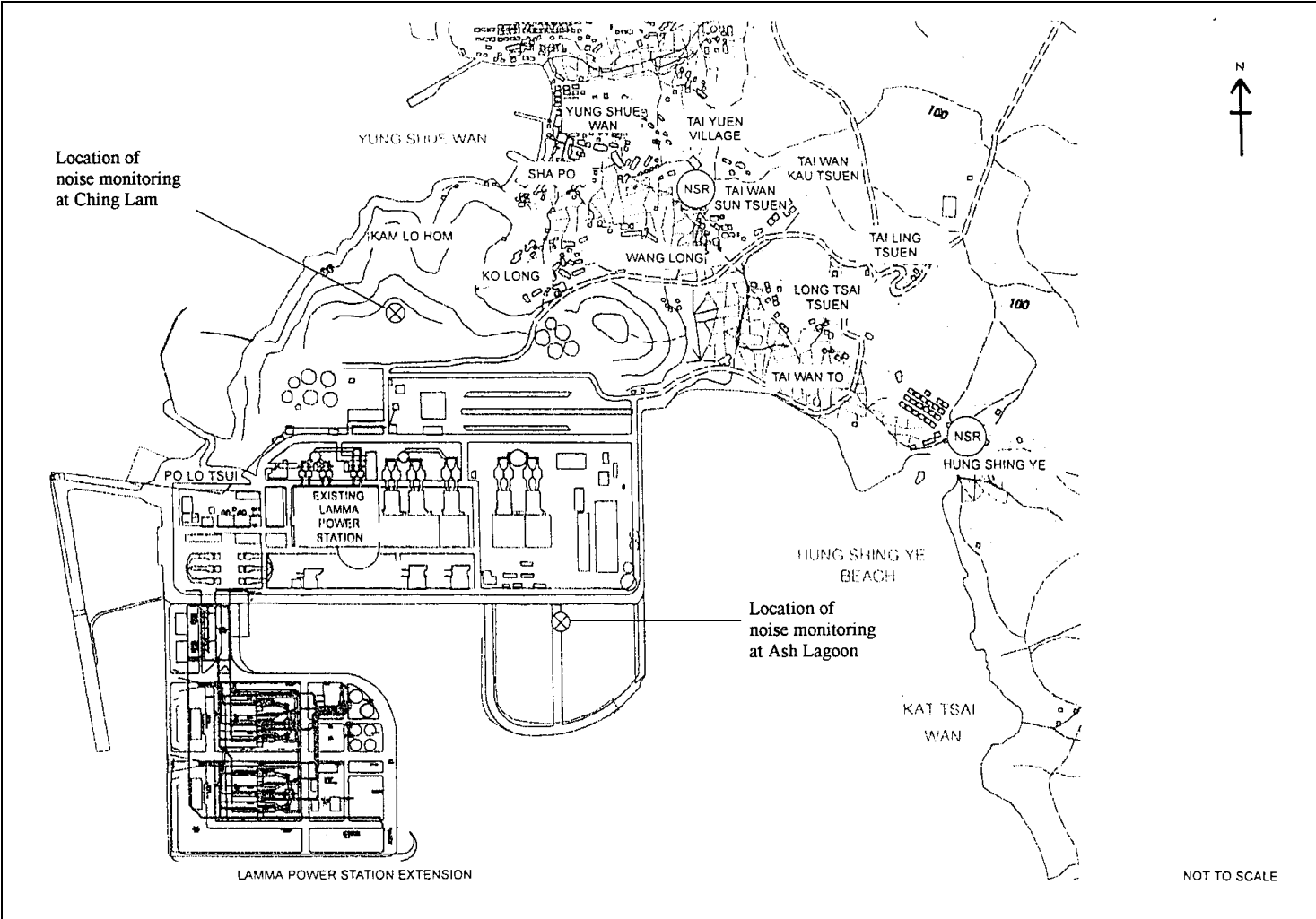


Figure 3.1 Location of Noise Monitoring Stations

4. ENVIRONMENTAL AUDIT

4.1 Review of Environmental Monitoring Procedures

The environmental monitoring procedures were regularly reviewed by the Environmental Team. No modification to the existing monitoring procedures was recommended.

4.2 Assessment of Environmental Monitoring Results

Monitoring results for Air Quality and Noise

The environmental monitoring results for Air Quality and Noise in the reporting month presented in Sections 2 and 3 respectively are summarized in [Table 4.1](#).

Table 4.1 Summary of AL Level Exceedances on Monitoring Parameters

| Item | Parameter Monitored | Monitoring Period | No. of Exceedances In | | Event/Action Plan Implementation Status and Results |
|-------|--|-----------------------|-----------------------|-------------|---|
| | | | Action Level | Limit Level | |
| Air | | | | | |
| 1 | Ambient TSP (24-hour) | 01/10/2022-31/10/2022 | 0 | 0 | |
| 2 | Ambient TSP (1-hour) | 01/10/2022-31/10/2022 | 0 | 0 | |
| Noise | | | | | |
| 1 | Noise level at the critical NSR's predicted by the noise alarm monitoring system | 01/10/2022-31/10/2022 | 0 | 0 | |

4.3 Waste Management

Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Inert C&D materials comprise excavated materials and broken concrete. Non-inert C&D materials comprise general refuse, metals and paper/ cardboard packaging, plastics, chemical waste, etc.

Inert C&D material and non-inert C&D material disposed of in October 2022 are shown in [Table 4.2](#).

Table 4.2 Estimated Amounts of Waste in October 2022

| Total Inert C&D Waste Materials | Non-inert C&D Materials | | |
|---------------------------------|-------------------------|-----------------------------------|----------------|
| | C&D Materials Recycled | C&D Waste Disposed of at Landfill | Chemical Waste |
| | | | |

| | | | |
|----------|----------|--------------|----------|
| 0 Tonnes | 0 Tonnes | 95.47 Tonnes | 0 Litres |
|----------|----------|--------------|----------|

The monthly waste flow tables prepared by the contractors are attached in [Appendix K](#)

4.4 Site Environmental Audit

EPD officials from Regional Office (South) visited Lamma Power Station on 13/10/2022. There was no adverse comment from EPD regarding the construction site.

Site audits were carried out by ET on a weekly basis to monitor environmental issues at the construction sites to ensure that all mitigation measures were implemented timely and properly. The site audit findings for the reporting month are summarized in [Appendix H](#). The site conditions were generally satisfactory. All required mitigation measures were implemented.

4.5 Status of Environmental Licensing and Permitting

All permits/licenses obtained for the project are summarised in [Table 4.3](#).

Table 4.3 Summary of Environmental Licensing and Permit Status

| Description | Permit No. | Valid Period | | Highlights | Status |
|-----------------------------|-----------------|--------------|----------|---|--------|
| | | From | To | | |
| Varied Environmental Permit | EP-071/2000/D | 28/09/20 | - | The whole construction work site | Valid |
| Construction Noise Permit | GW-RS0222-22 | 13/04/22 | 12/10/22 | Construction site of Unit L12. Operation of PME during restricted hours | Valid |
| Construction Noise Permit | GW-RS0551-22 | 10/07/22 | 07/01/23 | Construction site of Unit L12. Operation of PME during restricted hours | Valid |
| Construction Noise Permit | GW-RS0613-22 | 29/07/22 | 27/01/23 | Civil and Building Works for Unit L12. Operation of PME during restricted hours | Valid |
| Construction Noise Permit | GW-RS0674-22 | 01/09/22 | 28/02/23 | Power Block Facilities works for Unit L12. Operation of PME during restricted hours | Valid |
| WPCO Discharge Licence# | WT00037613-2021 | 15/04/21 | 30/04/26 | Civil and Building Works for No.5 C.W. Intake and Cable Bridge | Valid |
| WPCO Discharge Licence## | WT00037665-2021 | 06/05/21 | 31/05/26 | Civil and Building Works for Unit L12 | Valid |

| Description | Permit No. | Valid Period | | Highlights | Status |
|---|----------------------|--------------|----|--|--------|
| | | From | To | | |
| Registration of Chemical Waste Producer | WPN5213-912-P2781-22 | 22/02/16 | - | Civil and Building Works | Valid |
| Registration of Chemical Waste Producer | WPN5517-912-T2007-02 | 17/03/05 | - | E&M Equipment Installation and Maintenance | Valid |
| Waste Disposal Billing Account | Account No.: 7038672 | 27/10/20 | - | Civil works for Unit L12 No.5 C.W. intake and cable bridge | Valid |
| Waste Disposal Billing Account | Account No.: 7039272 | 08/01/21 | - | Civil and building works for Unit L12 | Valid |
| Waste Disposal Billing Account | Account No.: 7041942 | 21/10/21 | - | E&M Erection of Power Block Facilities – L12 | Valid |

Notes: # and ## - Water quality monitoring was carried out in August 2022 and the results of which would be reported separately by the contractor.

4.6 Implementation Status of Environmental Mitigation Measures

Mitigation measures detailed in the permits and the EM&A Manual (Construction Phase) are required to be implemented. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in [Appendix I](#).

4.7 Implementation Status of Event/Action Plans

The Event/Action Plans extracted from the EM&A Manual (Construction Phase) are presented in [Appendix G](#).

4.8 Implementation Status of Environmental Complaint Handling Procedures

In October 2022, no complaint in relation to the environmental impact of the construction activities was received.

Table 4.4 Environmental Complaints Received in October 2022

| Case Reference / Date, Time Received / Date, Time Concerned | Descriptions / Actions Taken | Conclusion / Status |
|---|------------------------------|---------------------|
| Nil | N/A | N/A |

Table 4.5 Outstanding Environmental Complaints Carried Over

| Case Reference / Date, Time Received / Date, Time Concerned | Descriptions / Actions Taken | Conclusion / Status |
|---|------------------------------|---------------------|
|---|------------------------------|---------------------|

| | | |
|-----|-----|-----|
| Nil | N/A | N/A |
|-----|-----|-----|

5. FUTURE KEY ISSUES

5.1 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

Unit L12 Civil and Building Works

Noise Impact

- To continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained.

Air Impact

- To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

Water Impact

- To treat wastewater in sedimentation pit and tanks before discharge and to ensure compliance in accordance with the WPCO discharge licence already obtained.

Unit L12 Mechanical Erection

Noise Impact

- To continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained.
- To continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the noise performance.

Air Impact

- To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

Unit L12 Electrical, Instrumentation & Control Erection

Noise Impact

- To continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained.
- To continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the noise performance.

Air Impact

- To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

5.2 Monitoring Schedules for the Next 3 Months

The tentative environmental monitoring schedules for the next 3 months are shown in [Appendix C](#).

5.3 Construction Program for the Next 3 Months

The tentative construction programs for the next 3 months are shown in [Appendix J](#).

6. CONCLUSION

All monitoring work at designated stations was performed as scheduled satisfactorily. The environmental monitoring works and site inspection were performed as scheduled in the reporting month. All monitoring results were checked and reviewed.

No Action/Limit level exceedance on 1-hour and 24-hour TSP level was recorded in the reporting month.

No Action/Limit level exceedance on noise was recorded in the reporting month.

Environmental mitigation measures recommended in the EM&A manual for the construction activities were implemented in the reporting month. No complaint in relation to the environmental impact of the construction activities was received in the reporting month. No prosecution was received for this Project in the reporting period.

The environmental performance of the Project was generally satisfactory.

Appendix A Organization Chart

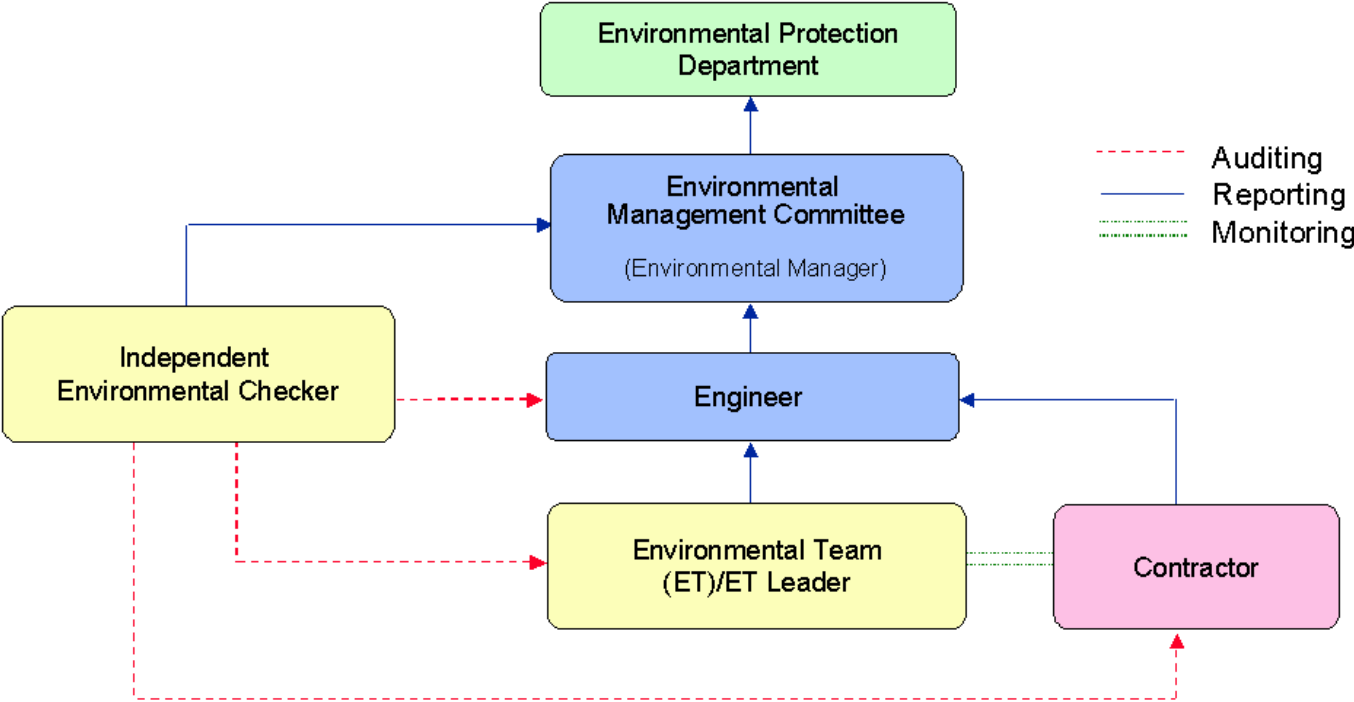


Figure A.1 Organisation of EM&A Programme at Construction Phase

Appendix B Action and Limit Levels for Air Quality and Noise Monitoring

B.1. Air

Table B.1 Action and Limit Levels for 1-hour and 24-hour TSP

| | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|-------------|--|---------------------------------------|
| 1-hour TSP* | 340 | 500 |
| 24-hour TSP | 190 | 260 |

* No Action/Limit Level for 1-hour TSP is applied to AM4 where no real time dust monitor is installed.

B.2. Noise

Table B.2 AL Levels for Construction Noise (Other than Percussive Piling)

| Parameters | Action | Limit |
|--|---|--|
| Noise Levels at the NSR's at Long Tsai Tsuen/Hung Shing Ye and school within the village of Tai Wan San Tsuen predicted by the noise alarm monitoring system | When one or more documented complaints are received | a. 75 dB(A) in $L_{Aeq,30 \text{ min}}$ (07:00-19:00 hrs on normal weekdays) (Note 1) |
| Manual noise monitoring at the nearest Pak Kok Tsui residences to cable landing points N4 and N5 | | b. subject to statutory control under the Noise Control Ordinance (07:00-23:00 hrs on holidays and 19:00-23:00 hrs on all other days). Set to 60 dB(A) in $L_{Aeq,5 \text{ min}}$ c. subject to statutory control under the Noise Control Ordinance (23:00-07:00 hrs of next day). Set to 45 dB(A) in $L_{Aeq,5 \text{ min}}$ |
| Note: | | |
| 1. For educational institution, the limit level shall be 70 dB(A), reduced to 65 dB(A) during examination periods. | | |

Appendix C Environmental Monitoring Schedule

Table C.1 Monitoring schedule for 24hr and 1hr TSP monitoring for Lamma Extension Construction (October 2022 to January 2023)

| 24hr TSP Monitoring | 1hr TSP Monitoring |
|---------------------|-----------------------------------|
| 4/October/2022 | 4/October/2022 1500hr to 1800hr |
| 10/October/2022 | 10/October/2022 1500hr to 1800hr |
| 16/October/2022 | 16/October/2022 1500hr to 1800hr |
| 22/October/2022 | 22/October/2022 1500hr to 1800hr |
| 28/October/2022 | 28/October/2022 1500hr to 1800hr |
| 3/November/2022 | 3/November/2022 1500hr to 1800hr |
| 9/November/2022 | 9/November/2022 1500hr to 1800hr |
| 15/November/2022 | 15/November/2022 1500hr to 1800hr |
| 21/November/2022 | 21/November/2022 1500hr to 1800hr |
| 27/November/2022 | 27/November/2022 1500hr to 1800hr |
| 3/December/2022 | 3/December/2022 1500hr to 1800hr |
| 9/December/2022 | 9/December/2022 1500hr to 1800hr |
| 15/December/2022 | 15/December/2022 1500hr to 1800hr |
| 21/December/2022 | 21/December/2022 1500hr to 1800hr |
| 27/December/2022 | 27/December/2022 1500hr to 1800hr |
| 2/January/2023 | 2/January/2023 1500hr to 1800hr |
| 8/January/2023 | 8/January/2023 1500hr to 1800hr |
| 14/January/2023 | 14/January/2023 1500hr to 1800hr |
| 20/January/2023 | 20/January/2023 1500hr to 1800hr |
| 26/January/2023 | 26/January/2023 1500hr to 1800hr |

APPENDIX D AIR QUALITY MONITORING RESULTS

Site: Lamma Power Station Extension

Month: October 2022

24 hour TSP Measurement:-

| Date | TSP concentration ($\mu\text{g}/\text{m}^3$) | | | | Weather Information (From Hong Kong Observatory) | | |
|------------|--|--------------------|---------------------|------------------------------|---|---|------------------|
| | Reservoir (AM1) | East Gate (AM2) | Ash Lagoon (AM3) | Tai Yuen Village (AM4) | Mean Wind Speed (km/hr) | Prevailing Wind Dir. ($^{\circ}$) | Mean R.H. (%) |
| 4/10/2022 | 34 | 28 | 27 | 21 | 9.3 | 70 | 76 |
| 10/10/2022 | 59 | 80 | 43 | 42 | 43.6 | 360 | 51 |
| 16/10/2022 | 102 | 79 | 55 | 89 | 39.1 | 360 | 46 |
| 22/10/2022 | 44 | 36 | 43 | 35 | 11.9 | 90 | 67 |
| 28/10/2022 | 50 | 38 | 44 | 43 | 24.8 | 70 | 68 |

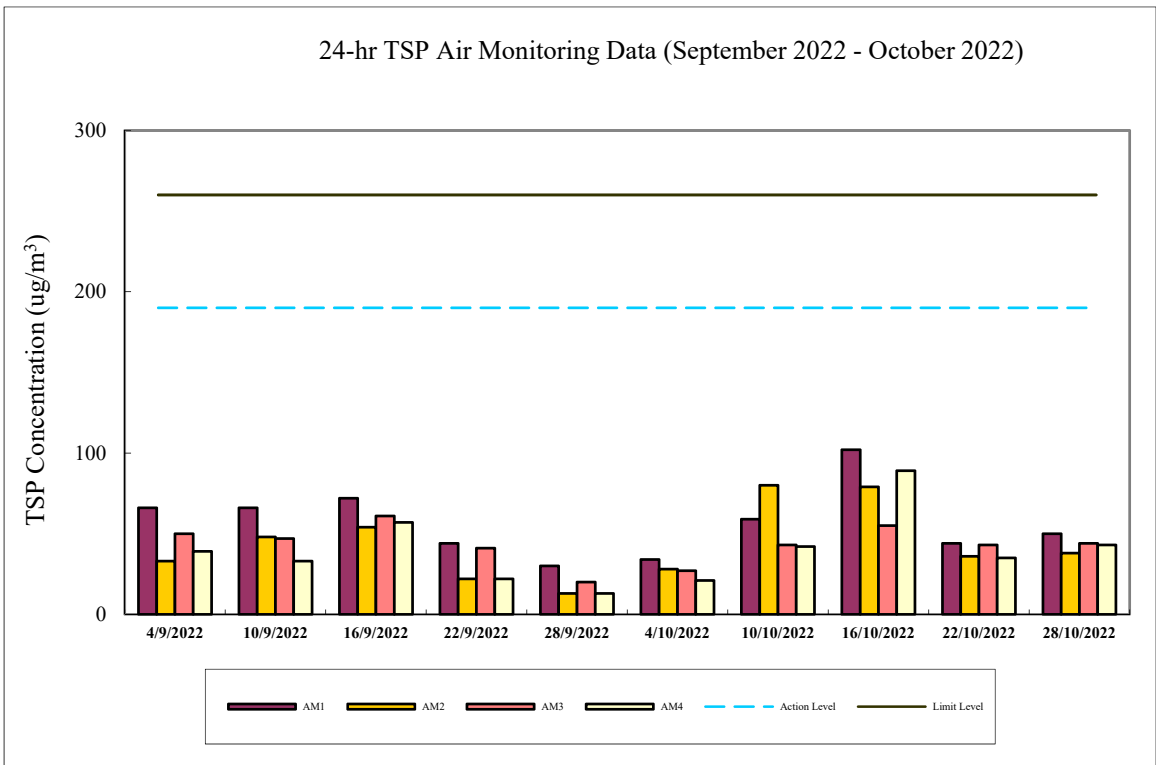
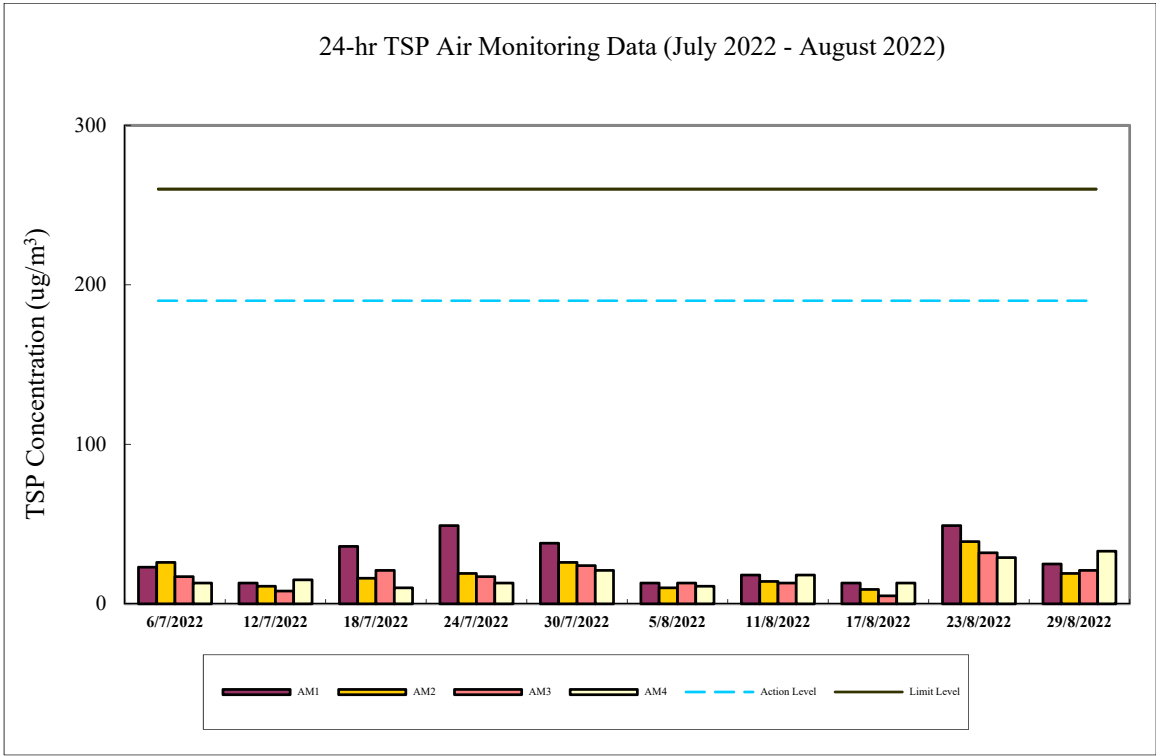
1 hour TSP Measurement:-

| Date | Time | TSP concentration ($\mu\text{g}/\text{m}^3$) | | |
|------------|---------------|--|--------------------|---------------------|
| | | Reservoir (AM1) | East Gate (AM2) | Ash Lagoon (AM3) |
| 4/10/2022 | 15:00 - 15:59 | 96 | 28 | 39 |
| | 16:00 - 16:59 | 118 | 28 | 37 |
| | 17:00 - 17:59 | 51 | 27 | 35 |
| 10/10/2022 | 15:00 - 15:59 | 45 | 63 | 56 |
| | 16:00 - 16:59 | 59 | 67 | 86 |
| | 17:00 - 17:59 | 59 | 70 | 79 |
| 16/10/2022 | 15:00 - 15:59 | 82 | 87 | 64 |
| | 16:00 - 16:59 | 122 | 90 | 69 |
| | 17:00 - 17:59 | 148 | 81 | 66 |
| 22/10/2022 | 15:00 - 15:59 | 48 | 41 | 44 |
| | 16:00 - 16:59 | 52 | 38 | 54 |
| | 17:00 - 17:59 | 46 | 42 | 51 |
| 28/10/2022 | 15:00 - 15:59 | 79 | 58 | 58 |
| | 16:00 - 16:59 | 73 | 44 | 55 |
| | 17:00 - 17:59 | 64 | 33 | 44 |

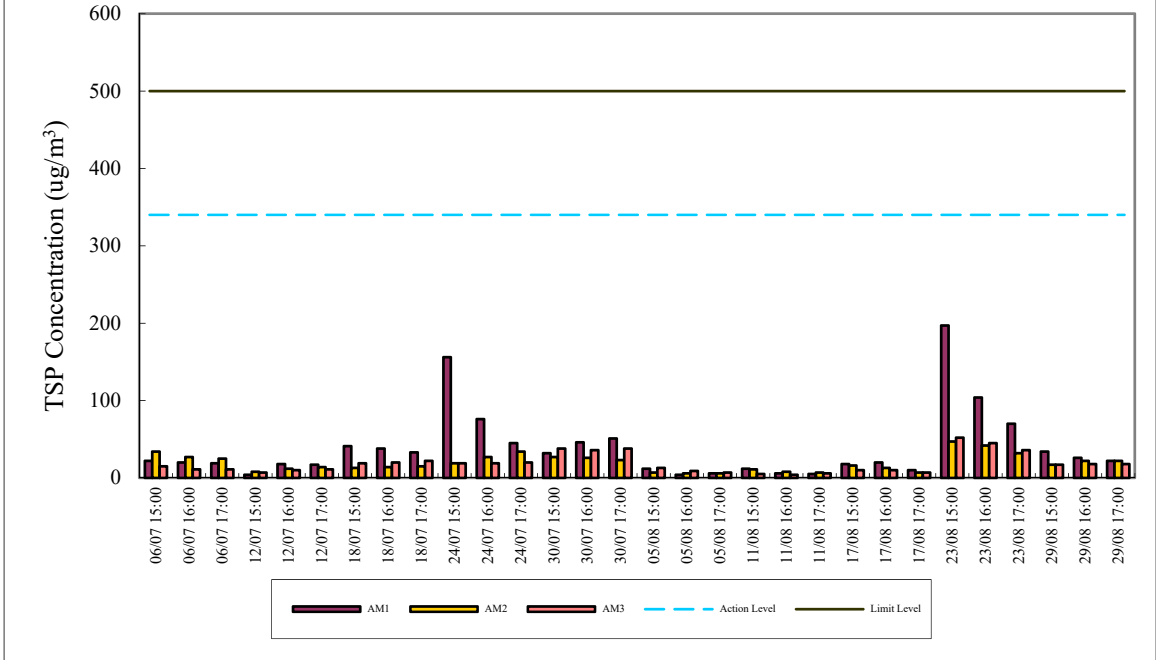
| | | |
|--------------|--|------------------------------|
| | 1-hr TSP | 24-hr TSP |
| | ($\mu\text{g}/\text{m}^3$) | ($\mu\text{g}/\text{m}^3$) |
| Action Level | 340 | 190 |
| Limit Level | 500 | 260 |
| Calibration: | Calibration details are shown in appendix F. | |

Equipment used:

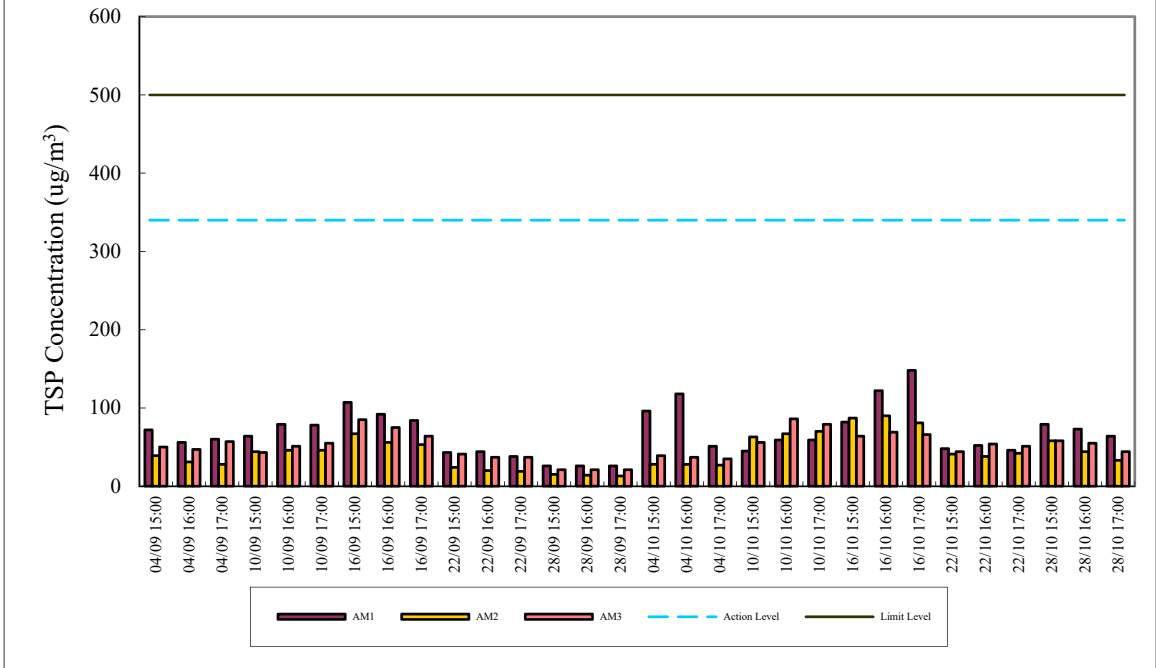
| Location | 1-hr TSP | 24-hr TSP |
|-------------------------------------|----------|--------------------------|
| Reservoir, East Gate and Ash Lagoon | TEOM | TEOM |
| Tai Yuen Village | - | MINIVOL Portable Sampler |



1-hr TSP Air Monitoring Data (July 2022 - August 2022)



1-hr TSP Air Monitoring Data (September 2022 - October 2022)



Appendix E Continuous Noise Monitoring Results for October 2022

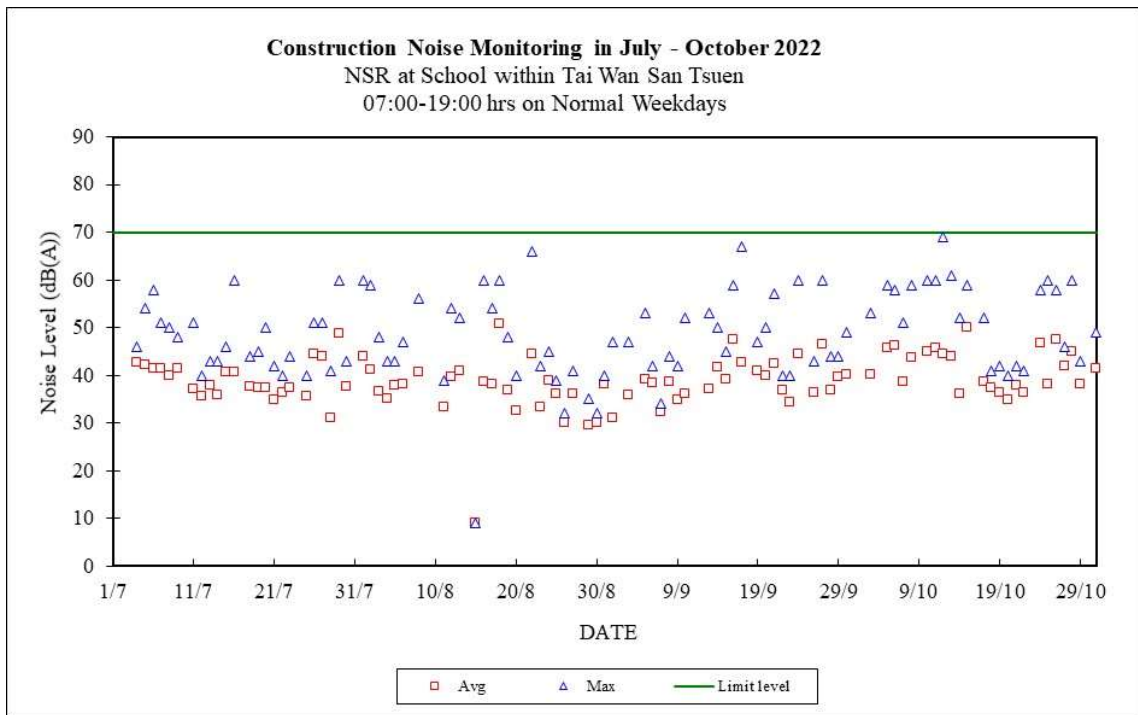
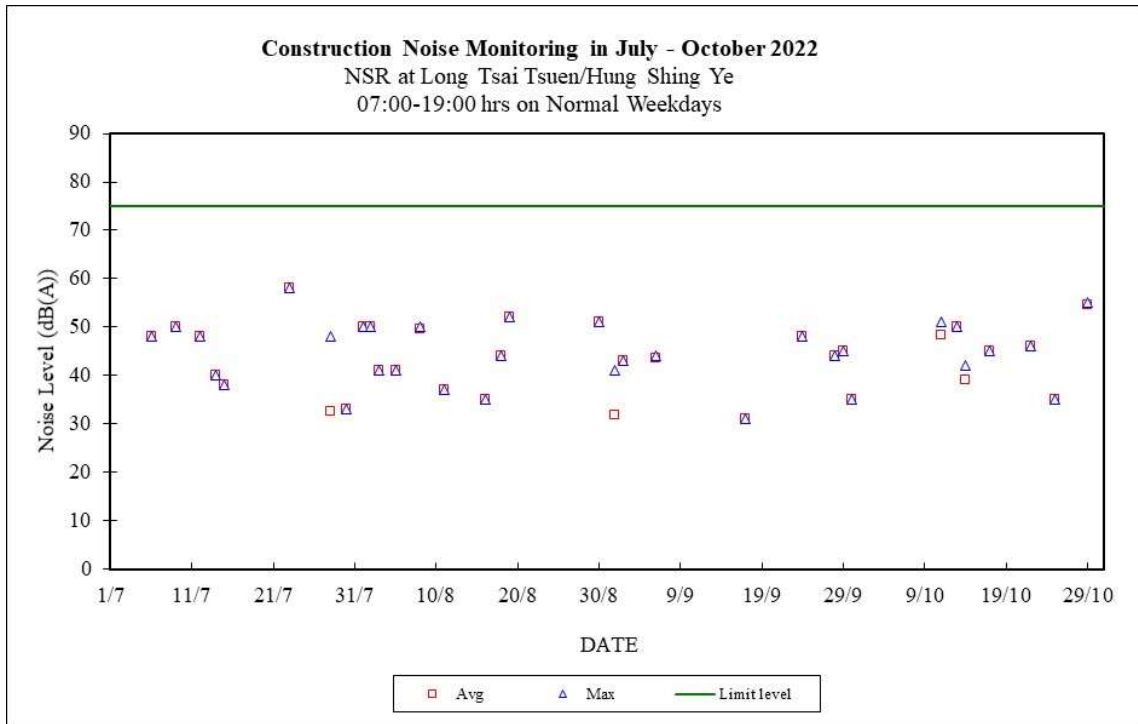
Site: Lamma Power Station Extension Construction
 Measurement Location: Ash Lagoon and Ching Lam
 Measurement Parameter: 30-min Leq (07:00-19:00 hrs on normal weekdays)
 5-min Leq (07:00-23:00 hrs on holidays and
 19:00-23:00 hrs on all other days, and 23:00-
 07:00 hrs of next day)
 Noise Equipment: B&K 2250 sound level meters and B&K 4231 sound
 Level calibrator
 Lab. Calibration Date: B&K 2250 sound level meters - 21/10/2021 (Ash Lagoon)
 03/09/2021 (Ching Lam)
 B&K 4231 calibrator (30/08/2022)

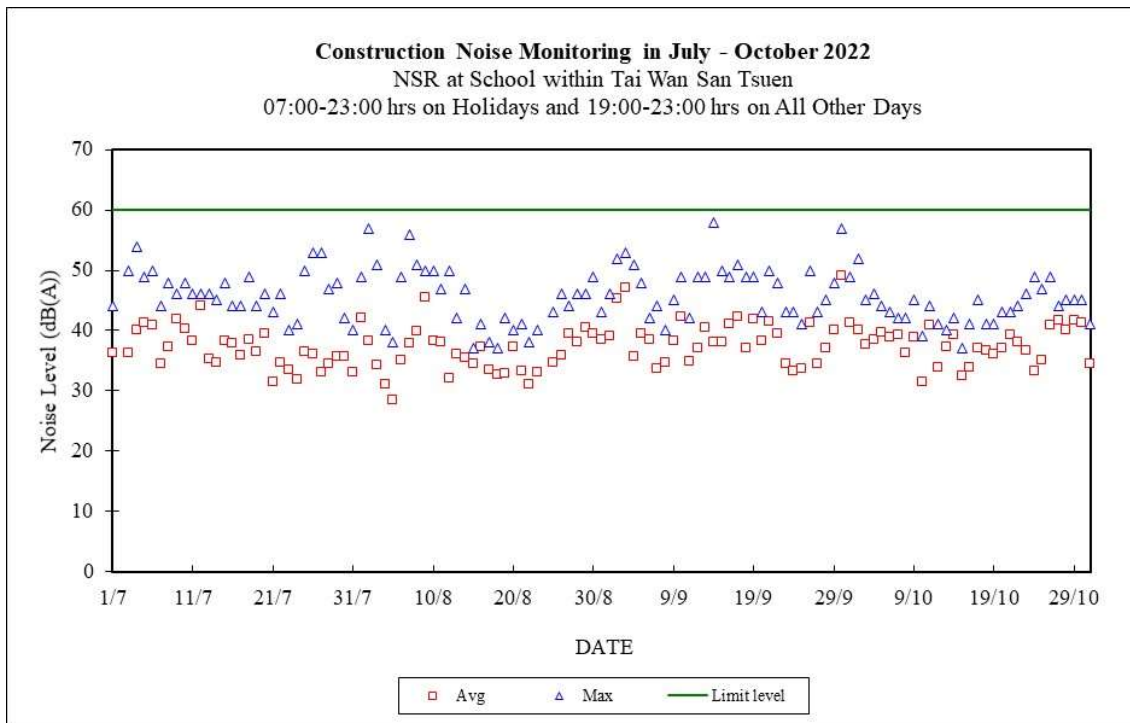
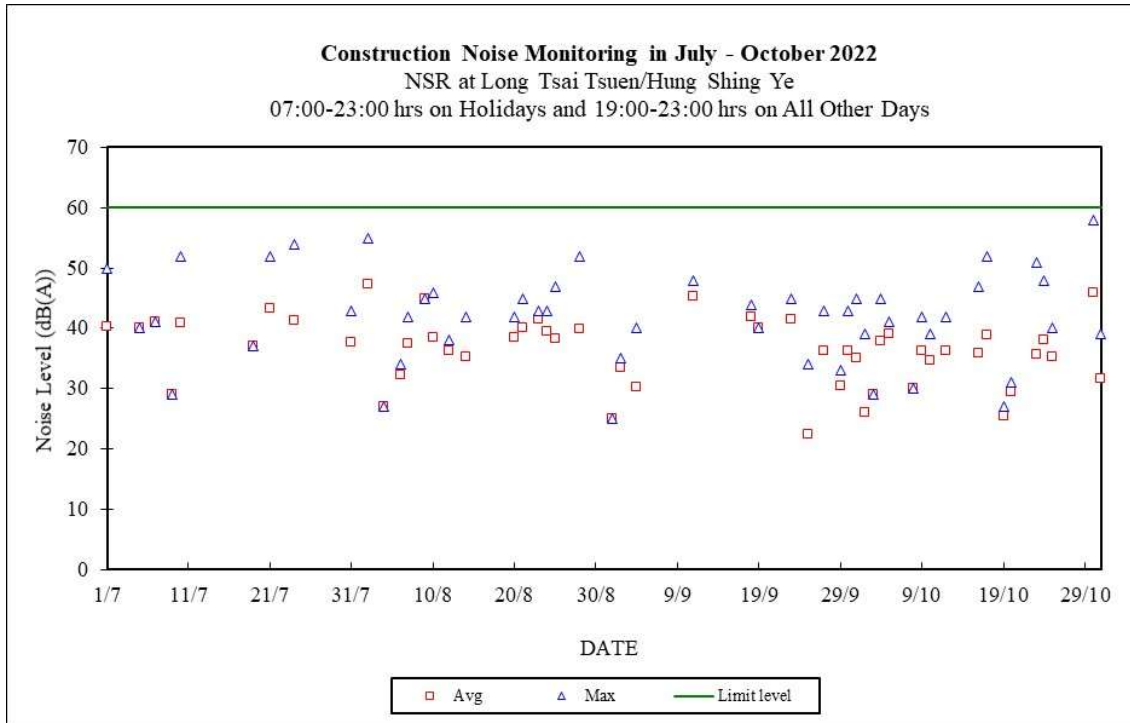
| Date | Time | Calculated Noise Level at NSR at Long Tsai Tsuen/Hung Shing Ye (dB(A)) | | Limit Noise Level (dB(A)) | Calculated Noise Level at NSR at the school within Tai Wan San Tsuen (dB(A)) | | Limit Noise Level (dB(A)) |
|------------|-------------|--|-----|---------------------------|--|-----|---------------------------|
| | | Max | Avg | | Max | Avg | |
| 01/10/2022 | 07:00-23:00 | 45 | 35 | 60 | 49 | 41 | 60 |
| 01/10/2022 | 23:00-07:00 | 43 | 35 | 45 | 45 | 41 | 45 |
| 02/10/2022 | 07:00-23:00 | 39 | 26 | 60 | 52 | 40 | 60 |
| 02/10/2022 | 23:00-07:00 | 41 | 38 | 45 | 44 | 39 | 45 |
| 03/10/2022 | 07:00-19:00 | --- | --- | 75 | 53 | 40 | 70 |
| 03/10/2022 | 19:00-23:00 | 29 | 29 | 60 | 45 | 38 | 60 |
| 03/10/2022 | 23:00-07:00 | --- | --- | 45 | 45 | 41 | 45 |
| 04/10/2022 | 07:00-23:00 | 45 | 38 | 60 | 46 | 38 | 60 |
| 04/10/2022 | 23:00-07:00 | 36 | 36 | 45 | 42 | 38 | 45 |
| 05/10/2022 | 07:00-19:00 | --- | --- | 75 | 59 | 46 | 70 |
| 05/10/2022 | 19:00-23:00 | 41 | 39 | 60 | 44 | 40 | 60 |
| 05/10/2022 | 23:00-07:00 | 44 | 36 | 45 | 45 | 36 | 45 |
| 06/10/2022 | 07:00-19:00 | --- | --- | 75 | 58 | 46 | 70 |
| 06/10/2022 | 19:00-23:00 | --- | --- | 60 | 43 | 39 | 60 |
| 06/10/2022 | 23:00-07:00 | 42 | 35 | 45 | 43 | 37 | 45 |
| 07/10/2022 | 07:00-19:00 | --- | --- | 75 | 51 | 39 | 70 |
| 07/10/2022 | 19:00-23:00 | --- | --- | 60 | 42 | 39 | 60 |
| 07/10/2022 | 23:00-07:00 | 45 | 36 | 45 | 42 | 34 | 45 |
| 08/10/2022 | 07:00-19:00 | --- | --- | 75 | 59 | 44 | 70 |
| 08/10/2022 | 19:00-23:00 | 30 | 30 | 60 | 42 | 36 | 60 |
| 08/10/2022 | 23:00-07:00 | 45 | 36 | 45 | 43 | 39 | 45 |
| 09/10/2022 | 07:00-23:00 | 42 | 36 | 60 | 45 | 39 | 60 |
| 09/10/2022 | 23:00-07:00 | 45 | 43 | 45 | 44 | 38 | 45 |
| 10/10/2022 | 07:00-19:00 | --- | --- | 75 | 60 | 45 | 70 |
| 10/10/2022 | 19:00-23:00 | 39 | 35 | 60 | 39 | 32 | 60 |
| 10/10/2022 | 23:00-07:00 | 45 | 37 | 45 | 44 | 35 | 45 |
| 11/10/2022 | 07:00-19:00 | 51 | 48 | 75 | 60 | 46 | 70 |
| 11/10/2022 | 19:00-23:00 | --- | --- | 60 | 44 | 41 | 60 |
| 11/10/2022 | 23:00-07:00 | --- | --- | 45 | 44 | 39 | 45 |
| 12/10/2022 | 07:00-19:00 | --- | --- | 75 | 69 | 44 | 70 |
| 12/10/2022 | 19:00-23:00 | 42 | 36 | 60 | 41 | 34 | 60 |
| 12/10/2022 | 23:00-07:00 | 44 | 40 | 45 | 45 | 41 | 45 |
| 13/10/2022 | 07:00-19:00 | 50 | 50 | 75 | 61 | 44 | 70 |
| 13/10/2022 | 19:00-23:00 | --- | --- | 60 | 40 | 37 | 60 |
| 13/10/2022 | 23:00-07:00 | 45 | 42 | 45 | 41 | 36 | 45 |
| 14/10/2022 | 07:00-19:00 | 42 | 39 | 75 | 52 | 36 | 70 |

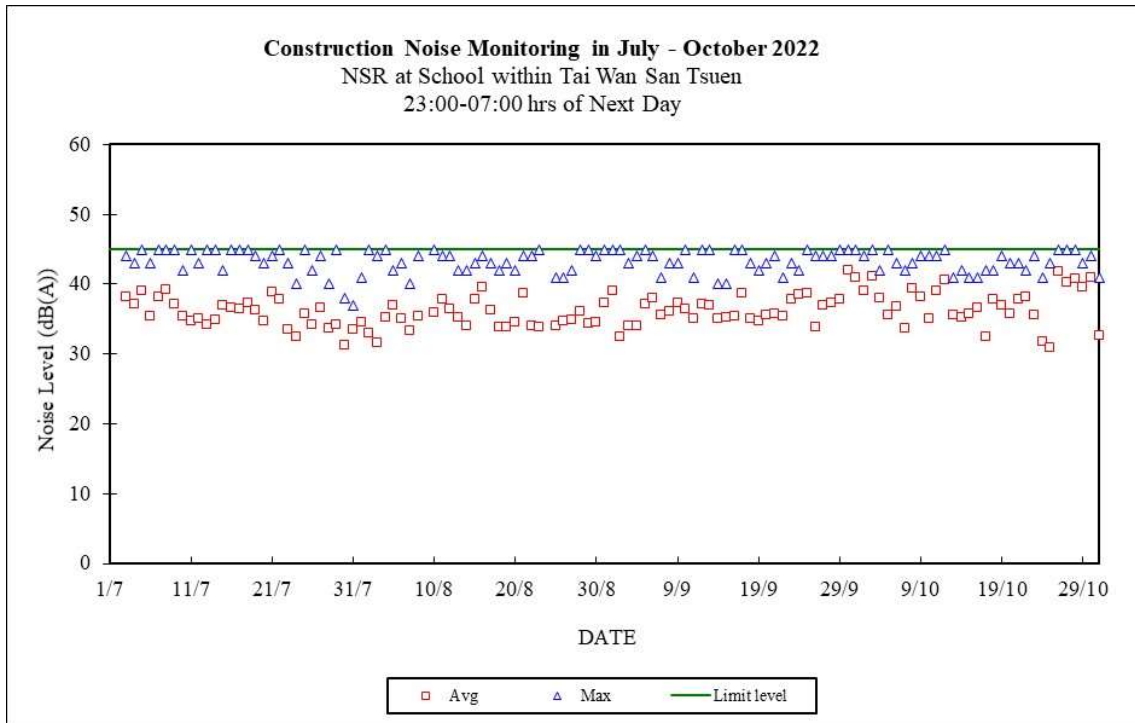
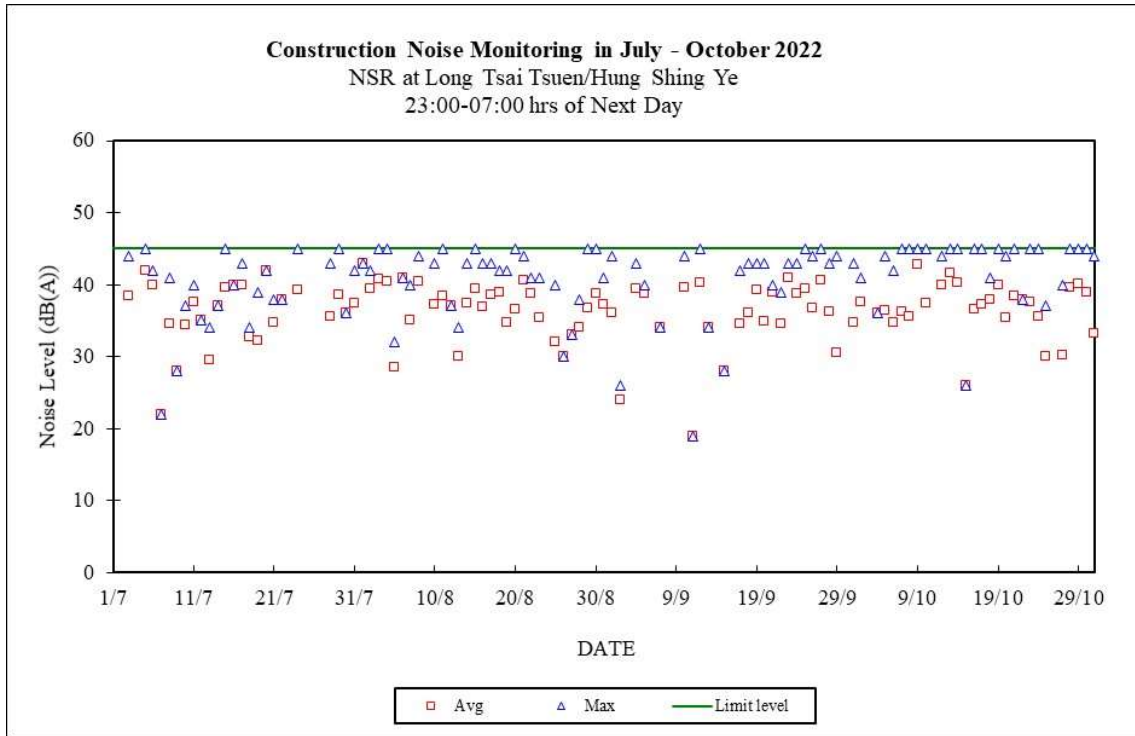
| | | | | | | | |
|------------|-------------|-----|-----|----|----|----|----|
| 14/10/2022 | 19:00-23:00 | --- | --- | 60 | 42 | 39 | 60 |
| 14/10/2022 | 23:00-07:00 | 45 | 40 | 45 | 42 | 35 | 45 |
| 15/10/2022 | 07:00-19:00 | --- | --- | 75 | 59 | 50 | 70 |
| 15/10/2022 | 19:00-23:00 | --- | --- | 60 | 37 | 33 | 60 |
| 15/10/2022 | 23:00-07:00 | 26 | 26 | 45 | 41 | 36 | 45 |
| 16/10/2022 | 07:00-23:00 | 47 | 36 | 60 | 41 | 34 | 60 |
| 16/10/2022 | 23:00-07:00 | 45 | 37 | 45 | 41 | 37 | 45 |
| 17/10/2022 | 07:00-19:00 | 45 | 45 | 75 | 52 | 39 | 70 |
| 17/10/2022 | 19:00-23:00 | 52 | 39 | 60 | 45 | 37 | 60 |
| 17/10/2022 | 23:00-07:00 | 45 | 37 | 45 | 42 | 32 | 45 |
| 18/10/2022 | 07:00-19:00 | --- | --- | 75 | 41 | 38 | 70 |
| 18/10/2022 | 19:00-23:00 | --- | --- | 60 | 41 | 37 | 60 |
| 18/10/2022 | 23:00-07:00 | 41 | 38 | 45 | 42 | 38 | 45 |
| 19/10/2022 | 07:00-19:00 | --- | --- | 75 | 42 | 36 | 70 |
| 19/10/2022 | 19:00-23:00 | 27 | 26 | 60 | 41 | 36 | 60 |
| 19/10/2022 | 23:00-07:00 | 45 | 40 | 45 | 44 | 37 | 45 |
| 20/10/2022 | 07:00-19:00 | --- | --- | 75 | 40 | 35 | 70 |
| 20/10/2022 | 19:00-23:00 | 31 | 30 | 60 | 43 | 37 | 60 |
| 20/10/2022 | 23:00-07:00 | 44 | 35 | 45 | 43 | 36 | 45 |
| 21/10/2022 | 07:00-19:00 | --- | --- | 75 | 42 | 38 | 70 |
| 21/10/2022 | 19:00-23:00 | --- | --- | 60 | 43 | 39 | 60 |
| 21/10/2022 | 23:00-07:00 | 45 | 38 | 45 | 43 | 38 | 45 |
| 22/10/2022 | 07:00-19:00 | 46 | 46 | 75 | 41 | 37 | 70 |
| 22/10/2022 | 19:00-23:00 | --- | --- | 60 | 44 | 38 | 60 |
| 22/10/2022 | 23:00-07:00 | 38 | 38 | 45 | 42 | 38 | 45 |
| 23/10/2022 | 07:00-23:00 | 51 | 36 | 60 | 46 | 37 | 60 |
| 23/10/2022 | 23:00-07:00 | 45 | 38 | 45 | 44 | 36 | 45 |
| 24/10/2022 | 07:00-19:00 | --- | --- | 75 | 58 | 47 | 70 |
| 24/10/2022 | 19:00-23:00 | 48 | 38 | 60 | 49 | 33 | 60 |
| 24/10/2022 | 23:00-07:00 | 45 | 36 | 45 | 41 | 32 | 45 |
| 25/10/2022 | 07:00-19:00 | 35 | 35 | 75 | 60 | 38 | 70 |
| 25/10/2022 | 19:00-23:00 | 40 | 35 | 60 | 47 | 35 | 60 |
| 25/10/2022 | 23:00-07:00 | 37 | 30 | 45 | 43 | 31 | 45 |
| 26/10/2022 | 07:00-19:00 | --- | --- | 75 | 58 | 47 | 70 |
| 26/10/2022 | 19:00-23:00 | --- | --- | 60 | 49 | 41 | 60 |
| 26/10/2022 | 23:00-07:00 | --- | --- | 45 | 45 | 42 | 45 |
| 27/10/2022 | 07:00-19:00 | --- | --- | 75 | 46 | 42 | 70 |
| 27/10/2022 | 19:00-23:00 | --- | --- | 60 | 44 | 42 | 60 |
| 27/10/2022 | 23:00-07:00 | 40 | 30 | 45 | 45 | 40 | 45 |
| 28/10/2022 | 07:00-19:00 | --- | --- | 75 | 60 | 45 | 70 |
| 28/10/2022 | 19:00-23:00 | --- | --- | 60 | 45 | 40 | 60 |
| 28/10/2022 | 23:00-07:00 | 45 | 40 | 45 | 45 | 41 | 45 |
| 29/10/2022 | 07:00-19:00 | 55 | 55 | 75 | 43 | 38 | 70 |
| 29/10/2022 | 19:00-23:00 | --- | --- | 60 | 45 | 42 | 60 |
| 29/10/2022 | 23:00-07:00 | 45 | 40 | 45 | 43 | 40 | 45 |
| 30/10/2022 | 07:00-23:00 | 58 | 46 | 60 | 45 | 41 | 60 |
| 30/10/2022 | 23:00-07:00 | 45 | 39 | 45 | 44 | 41 | 45 |
| 31/10/2022 | 07:00-19:00 | --- | --- | 75 | 49 | 41 | 70 |
| 31/10/2022 | 19:00-23:00 | 39 | 32 | 60 | 41 | 35 | 60 |
| 31/10/2022 | 23:00-07:00 | 44 | 33 | 45 | 41 | 33 | 45 |

Note:

- a. " --- " represents the measured noise monitoring data lower than the established notional background level/discarded under strong wind.
- b. Continuous noise monitoring was also carried out at holidays & evening-time (07:00-23:00 hrs on holidays and 19:00-23:00 hrs on all other days) and night-time (23:00-07:00 hrs of next day).







Appendix F

The QA/QC Procedures and Results

The Hongkong Electric Co., Ltd.
Lamma Power Station Extension
TEOM Continuous Dust Monitor
Data Quality Assurance Log Sheet

Month: October

Year: 2022

| Reservoir (AM1) | | | | |
|-----------------|-------------------------------|----------------------------|------------------------------------|--|
| Date | Frequency (Hz) (240 - 275) | Operation Mode (Mode 4) | Main Flow (l/min) (2.70 - 3.30) | Bypass Flow (l/min) (12.30 - 15.04) |
| 4/10/2022 | 267.657 | 4 | 2.85 | 10.31 |
| 10/10/2022 | 271.169 | 4 | 2.92 | 10.31 |
| 16/10/2022 | 270.257 | 4 | 2.85 | 10.31 |
| 22/10/2022 | 269.324 | 4 | 2.89 | 10.31 |
| 28/10/2022 | 268.685 | 4 | 2.88 | 10.31 |

| East Gate (AM2) | | | | |
|-----------------|-------------------------------|----------------------------|------------------------------------|--|
| Date | Frequency (Hz) (240 - 275) | Operation Mode (Mode 4) | Main Flow (l/min) (2.70 - 3.30) | Bypass Flow (l/min) (12.30 - 15.04) |
| 4/10/2022 | 265.340 | 4 | 2.95 | 13.44 |
| 10/10/2022 | 265.012 | 4 | 2.88 | 13.88 |
| 16/10/2022 | 264.116 | 4 | 2.16 | 13.28 |
| 22/10/2022 | 263.454 | 4 | 2.38 | 13.70 |
| 28/10/2022 | 263.110 | 4 | 2.16 | 13.68 |

| Ash Lagoon (AM3) | | | | |
|------------------|-------------------------------|----------------------------|------------------------------------|--|
| Date | Frequency (Hz) (240 - 275) | Operation Mode (Mode 4) | Main Flow (l/min) (2.70 - 3.30) | Bypass Flow (l/min) (12.30 - 15.04) |
| 4/10/2022 | 257.125 | 4 | 2.60 | 13.68 |
| 10/10/2022 | 256.786 | 4 | 2.31 | 13.68 |
| 16/10/2022 | 256.189 | 4 | 2.12 | 13.67 |
| 22/10/2022 | 258.280 | 4 | 3.00 | 13.69 |
| 28/10/2022 | 257.746 | 4 | 3.00 | 13.68 |

| Maintenance Record | | | |
|-----------------------------|-----------|-----------|------------|
| | Reservoir | East Gate | Ash Lagoon |
| TEOM Filter Exchange | ✓ | ✓ | ✓ |
| Clean TSP Inlet | ✓ | ✓ | ✓ |
| Replace flow in-line filter | ✓ | ✓ | ✓ |
| Pump Repair | | | |
| Leak Check | | | |
| Flow audit | | | |
| Flow Controller Calibration | | | |
| A/C filter cleaning | | | |

Remarks:

Prepared by: Chris Chan

Checked by: HY Chan

The Hongkong Electric Co., Ltd.
Mini Volume Air Sampler Site Visit Log Sheet

Attendance Log _____

Site Name: Tai Yuen Village (AM4)

| Date/Time | Staff Name |
|--------------------|------------|
| 19/10/2022 / 10:15 | WM Tam |

Equipment / Item

| Equipment / Item | Serial No. / No. |
|-----------------------|------------------|
| MINIVOL | 5580 |
| Used filter paper no. | MS25 |
| New filter paper no. | MS26 |

Type of filter: Glass-fibre

- I. Calibration is performed by using Drycal DC-2 Flow Calibrator
5 std. L/min set point is recommended

Before: 5.041
After: 5.041 (No adjustment)

II. General Services

1. Clean Rotameter: Yes
2. Clean / Replace Pump Valves: No
3. Clean / Replace Pump Diaphragms: No
4. Clean Impaction Inlet: Yes
5. Replace Timer Battery Every 6 months: No
6. Replace Inlet Filter: Yes

Remarks

N/A

Conducted by: WM Tam

Checked by: SM Hon

The Hongkong Electric Co., Ltd.
Lamma Power Station Extension
Noise Monitoring Station
Daily Calibration Records

| Date | Location: Ash Lagoon | | Location: Ching Lam | |
|------------|----------------------|-------------------------------|---------------------|-------------------------------|
| | Calibration Results | Deviation from Reference (dB) | Calibration Results | Deviation from Reference (dB) |
| 01/10/2022 | Passed | 0.03 | Passed | 0.02 |
| 02/10/2022 | Passed | 0.04 | Passed | 0.06 |
| 03/10/2022 | Passed | 0.03 | Passed | 0.04 |
| 04/10/2022 | Passed | 0.07 | Passed | 0.05 |
| 05/10/2022 | Passed | 0.03 | Passed | 0.04 |
| 06/10/2022 | Passed | 0.03 | Passed | 0.05 |
| 07/10/2022 | Passed | 0.04 | Passed | 0.02 |
| 08/10/2022 | Passed | 0.02 | Passed | 0.03 |
| 09/10/2022 | Passed | 0.01 | Passed | 0.02 |
| 10/10/2022 | Passed | 0.00 | Passed | 0.00 |
| 11/10/2022 | Passed | -0.01 | Passed | -0.02 |
| 12/10/2022 | Passed | 0.00 | Passed | -0.01 |
| 13/10/2022 | Passed | 0.00 | Passed | 0.01 |
| 14/10/2022 | Passed | 0.03 | Passed | 0.01 |
| 15/10/2022 | Passed | 0.04 | Passed | 0.03 |
| 16/10/2022 | Passed | 0.03 | Passed | 0.01 |
| 17/10/2022 | Passed | -0.05 | Passed | -0.07 |
| 18/10/2022 | Passed | -0.01 | Passed | -0.02 |
| 19/10/2022 | Passed | 0.00 | Passed | -0.01 |
| 20/10/2022 | Passed | -0.02 | Passed | -0.02 |
| 21/10/2022 | Passed | 0.01 | Passed | 0.02 |
| 22/10/2022 | Passed | 0.02 | Passed | -0.01 |
| 23/10/2022 | Passed | -0.04 | Passed | -0.02 |
| 24/10/2022 | Passed | -0.04 | Passed | -0.03 |
| 25/10/2022 | Passed | -0.03 | Passed | -0.03 |
| 26/10/2022 | Passed | -0.03 | Passed | 0.00 |
| 27/10/2022 | Passed | -0.01 | Passed | -0.02 |
| 28/10/2022 | Passed | 0.00 | Passed | 0.00 |
| 29/10/2022 | Passed | 0.02 | Passed | 0.00 |
| 30/10/2022 | Passed | 0.02 | Passed | 0.00 |
| 31/10/2022 | Passed | -0.05 | Passed | -0.05 |

Remarks:

1. The B&K sound level meter at the noise monitoring station has an advanced feature of internal calibration checking (viz. Charge Injection Calibration (CIC)). CIC is a B&K patented method for in situ verification of the integrity of the entire sound measurement chain (including microphone, preamplifier and cabling).
2. The acceptance criterion of deviation from reference is ± 0.5 dB.

Appendix G Event/Action Plans

Table G.1 Event and Action Plans for Air Quality

| Event | Monitoring | | Action | |
|---|---|--|--|--|
| | ET Leader | IEC | Engineer | Contractor |
| Action Level | | | | |
| Exceedance of one sample | Identify source Inform Engineer and IEC verbally Repeat measurement to confirm finding | Check monitoring data submitted by ET and advise Engineer. | Notify Contractor Checking monitoring data and contractor's working methods | Rectify any unacceptable practice amend any working methods if appropriate |
| Exceedance of two or more consecutive samples | Identify source Inform Engineer and IEC verbally Repeat measurement to confirm finding Increase monitoring frequency Discuss with Engineer and Contractor on remedial actions required If exceedance continues, arrange meeting with Engineer If exceedance stops, discontinue additional monitoring | Check monitoring data submitted by ET and advise Engineer. Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures | Confirm receipt of notification of failure in writing Notify contractor Checking monitoring data and contractor's working methods Discuss proposed remedial actions with the ET and Contractor Ensure remedial actions properly implemented | Submit proposals for remedial actions to Engineer within 3 working days of notifications Implement the agreed proposals Amend proposal if appropriate |
| Limit level | | | | |
| Exceedance of one sample | Repeat measurement to confirm finding. Identify the source(s) of the impact. If the exceedance is found to be valid and due to the Construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the exceedance, as soon as practicable. Increase monitoring frequency to daily Assess the effectiveness of the contractor's remedial actions and keep Engineer, IEC and EPD informed of the results | Check monitoring data submitted by ET and advise Engineer Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures | Confirm receipt of notification of failure in writing Notify Contractor Checking monitoring data and Contractor's working method Discuss with ET and Contractor on remedial actions to be provided Ensure remedial measures properly implemented | Take immediate action to avoid further exceedance Submit proposals for remedial actions to Engineer within 3 working days of notifications Implement the agreed proposals Amend proposal if appropriate |
| Exceedance of two or more | Identify source | Provide feedback to the Engineer on the remedial actions proposed by the | Confirm receipt of notification of | Take immediate action to |

| Event | Monitoring | | Action | |
|---------------------|--|--|--|---|
| | ET Leader | IEC | Engineer | Contractor |
| consecutive samples | <p>If the exceedance is found to be valid and due to the construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the exceedance as soon as practicable.</p> <p>Repeat measurement to confirm finding</p> <p>Increase monitoring frequency to daily</p> <p>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented</p> <p>Arrange meeting with Engineer and Contractor to discuss the remedial actions to be taken</p> <p>If exceedance stops, discontinue additional monitoring</p> | <p>ET / Contractor</p> <p>Advise Engineer on the effectiveness of the proposed remedial measures</p> <p>Verify the implementation of the remedial measures</p> | <p>failure in writing</p> <p>Checking monitoring data and Contractor's working methods</p> <p>Notify Contractor</p> <p>Discuss proposed remedial actions with ET and Contractor</p> <p>Ensure remedial measures properly implemented</p> <p>If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop the portion of work until the exceedance is abated</p> | <p>avoid further exceedance</p> <p>Submit proposals for remedial actions to Engineer within 3 working days of notifications</p> <p>Implement the agreed proposals</p> <p>Resubmit proposals if problem still not under control</p> <p>Stop the relevant portion of works as determined by the Engineer until the exceedance is abated</p> |

Table G.2 Event and Action Plans for Construction Noise

| Exceedance | ET Leader | IEC | Engineer | Contractor |
|---------------------|---|---|---|---|
| Action Level | Undertake noise measurement/check monitoring data to establish validity of complaint. | Review the analysed results submitted by the ET. | Notify Contractor of the complaint if proven. | Submit proposals for remedial actions to Engineer. |
| | If the complaint is valid, inform Engineer and IEC verbally. | Review the remedial measures proposed by the Contractor and advise the Engineer and ET accordingly. | Check Contractor's working methods and advise IEC and ET accordingly. | Amend proposals if required by the Engineer. |
| | Identify the source(s) of the noise. | Verify the implementation of the remedial measures. | Remind the Contractor of his contractual obligations and discuss remedial actions. | Implement the remedial actions immediately upon instruction from the Engineer. |
| | Discuss remedial actions required with Contractor and Engineer. | | Keep the Contractor informed of the efficacy of remedial actions. | Liaise with the Engineer to optimise the effectiveness of the agreed mitigation. |
| | Increase manual monitoring frequency to assess efficacy of remedial measures. | | | |
| | If exceedance continues, review implementation of appropriate mitigation measures. | | | |
| Limit Level | Repeat manual measurement/check monitoring data to confirm findings. | Agree potential remedial actions with Engineer, ET and Contractor. | Notify Contractor of exceedance. | Take immediate action to avoid further exceedance. |
| | Identify the source(s) of the impact. If the exceedance is found to be valid and due to the Construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the exceedance, as soon as practicable. | Review Contractor's remedial actions / measures to ensure their effectiveness and advise the Engineer and ET accordingly. | Check Contractor's working methods and advise IEC and ET accordingly. Discuss with Contractor the remedial actions to be implemented. | Submit proposals for remedial actions to Engineer. Amend proposals if required by the Engineer. |
| | Discuss remedial actions required with Engineer. | Verify the implementation of the remedial measures | Keep the Contractor informed of the efficacy of remedial actions. If the exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop the portion of work until the exceedance is abated | Implement remedial actions immediately upon instruction from the Engineer. If the exceedance continues, consider what portion of the work is responsible and, as instructed by the Engineer, stop the portion of work until the exceedance is abated |
| | Increase manual monitoring frequency to assess efficacy of remedial measures. | | | |

Table G.3 Event and Action Plans for Water Quality

| Exceedance | ET Leader | IEC | Engineer | Contractor |
|---|--|--|---|---|
| Action level exceeded on one sampling day | Verbally inform the Contractor, and IEC. Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with Engineer and Contractor; Repeat measurement on next day of exceedance. | Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures | Discuss with Contractor the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. | Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose and discuss mitigation measures with Engineer; Implement the agreed mitigation measures. |
| Action level exceeded on more than one consecutive sampling day | Repeat in-situ measurements to confirm findings; Identify source(s) of impact; Inform Contractor and IEC; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with Engineer and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; Repeat measurement on next day of exceedance. | Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures | Discuss with ET and Contractor on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. | Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with ET and Engineer; Implement the agreed mitigation measures. |
| Limit level exceeded on one sampling day | Verbally inform the Contractor, IEC and the EPD of the exceedance; Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Check monitoring data, all plant, | Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures | Discuss with Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the | Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer |

| Exceedance | ET Leader | IEC | Engineer | Contractor |
|---|---|---|--|---|
| | <p>equipment and Contractor's working methods;</p> <p>Discuss mitigation measure with Engineer and Contractor;</p> <p>Ensure mitigation measures are implemented;</p> <p>Increase the monitoring frequency to daily until no exceedance of Limit level.</p> | | <p>implemented mitigation measures.</p> | <p>within 3 working days and discuss with Engineer;</p> <p>Implement the agreed mitigation measures.</p> |
| <p>Limit level exceeded by more than one consecutive sampling day</p> | <p>Repeat in-situ measurement to confirm findings;</p> <p>Identify source(s) of impact;</p> <p>Inform Contractor, IEC and EPD;</p> <p>Check monitoring data, all plant, equipment and Contractor's working methods;</p> <p>Discuss mitigation measure with Engineer and Contractor;</p> <p>Ensure mitigation measures are implemented;</p> <p>Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.</p> | <p>Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor</p> <p>Advise Engineer on the effectiveness of the proposed remedial measures</p> <p>Verify the implementation of the remedial measures</p> | <p>Discuss with Contractor on the proposed mitigation measures;</p> <p>Request Contractor to critically review the working methods;</p> <p>Make agreement on the mitigation measures to be implemented;</p> <p>Assess the effectiveness of the implemented mitigation measures;</p> <p>Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine works until no exceedance of the Limit Level.</p> | <p>Inform the Engineer and confirm notification of the non-compliance in writing;</p> <p>Rectify unacceptable practice;</p> <p>Check all plant and equipment; Consider changes of working methods;</p> <p>Propose mitigation measures to Engineer within 3 working days and discuss with Engineer;</p> <p>Implement the agreed mitigation measures..</p> <p>As directed by the Engineer, to slow down or to stop all or part of the marine work</p> |

Appendix H Summary of Site Audit Findings

L12 Civil and Building Works

Dates of Inspection: 6/10/2022, 13/10/2022, 20/10/2022 and 25/10/2022.

Summary of Findings

General

- No environmental deficiency identified.

Air Quality

- No environmental deficiency identified.

Noise

- No environmental deficiency identified.

Water Quality

- No environmental deficiency identified.

Waste Management

- No environmental deficiency identified.

L12 Mechanical, Electrical, Instrumentation & Control Erection Works

Dates of Inspection: 6/10/2022, 13/10/2022, 20/10/2022 and 27/10/2022.

Summary of Findings

General

- No environmental deficiency identified.

Air Quality

- No environmental deficiency identified.

Noise

- No environmental deficiency identified.

Water Quality

- No environmental deficiency identified.

Waste Management

- No environmental deficiency identified.

Summary of EMIS

Power Station – (Part B of EIA Report)

Construction Phase Mitigation Measures and their Implementation

| EM&A Log Ref. | Mitigation Measures | Implementation Status |
|---------------|---|--------------------------|
| | AIR QUALITY | |
| A1 | For general construction works, the dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation shall be complied with, such as: <ul style="list-style-type: none"> the haul roads shall be sprayed with water to keep the entire road surface wet. the load carried by vehicle shall be covered by impervious sheeting to ensure no leakage of dusty materials from the vehicle. the heights from which fill materials are dropped shall be controlled to a practical level to minimise the fugitive dust arising from unloading. | C C C |
| A2 | For the concrete batching plant, the following control measures are recommended: <ul style="list-style-type: none"> loading, unloading, handling, transfer or storage of any dusty materials shall be carried out in a totally enclosed system. The materials which may generate airborne dust emissions shall be wetted by water spray system. All receiving hoppers shall be enclosed on three sides up to 3m above unloading point. All conveyor transfer points shall be totally enclosed. | N/A N/A N/A N/A |
| | WATER QUALITY | |
| B1 | Silt curtains shall be installed on the eastern, southern and north western sides of the reclamation site during dredging for the reclamation construction. This is a required mitigation measure for the construction works and shall be implemented prior to the commencement of bulk dredging. ** | N/A |
| B3 | As a necessary operational constraint combined bulk dredging and sand filling for site formation shall not be permitted at any time. In addition, sand filling for site platform shall take place behind constructed sea walls which pierce the water surface. ** | N/A |
| B4 | HEC shall ensure design to divert all storm drains away from Hung Shing Ye Bay. ** | N/A |
| B5 | Sand fill for the rubble mound seawalls shall be placed by controlled pumping down the trailer arm. ** | N/A |
| B6 | EM&A shall confirm the acceptability of any impacts during construction and should any unacceptable impacts be found then one or more of the following mitigation measures shall be implemented: ** <ul style="list-style-type: none"> reducing the number of dredgers working at any one time; reducing the rate of working of the dredgers; temporary suspension of operations; phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle. | N/A |

| EM&A Log Ref. | Mitigation Measures | Implementation Status |
|---------------------------------------|---|---|
| B7 | <p>In addition to the above specific measures the following general working procedures shall be adopted. **</p> <ul style="list-style-type: none"> • fully-enclosed or watertight grabs shall be used to minimise loss of sediment during the raising of loaded grabs through the water column; • the descent speed of grabs shall be controlled to minimise the seabed impact speed and to reduce the volume of over dredging; • barges shall be loaded carefully to avoid splashing of material; • all barges used for the transport of dredged materials shall be fitted with tight bottom seals in order to prevent leakage of material during loading and transport; • all barges shall be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action; • the speed of trailer dredgers shall be controlled to prevent propeller wash from stirring up the sea bed sediments; • "rainbowing" sand fill from trailer dredgers shall not be permitted; and • the works shall cause no visible foam, oil, grease or litter or other objectionable matter to be present in the water within and adjacent to the dredging site and along the route to the disposal site. | N/A N/A N/A N/A N/A N/A N/A |
| B8 | <p>Cumulative impacts shall be assessed through EM&A. Co-ordination with the EM&A consultants for other projects to determine if any exceedances are caused by the other projects or by HEC's activities. Should monitoring results indicate exceedances at sensitive receivers due to HEC's activities, then the above described mitigation measures shall be implemented until impacts reduce to acceptable levels. **</p> | N/A |
| | | |
| NOISE | | |
| C1 | <p>General noise mitigation measures shall be employed at all work sites throughout the construction phase.</p> | C |
| C2 | <p>Mitigate against general construction noise during Sunday's and public holidays, either at source with portable noise barriers, or by rescheduling of some PME's to less sensitive time periods.</p> | C |
| C3 | <p>Mitigate against night time noise from dredging equipment, with silencers or mufflers. **</p> | N/A |
| | | |
| LANDSCAPE & VISUAL IMPACTS | | |
| D1 | <p>The following mitigation measures shall be allowed for landscape and visual improvement:</p> <ul style="list-style-type: none"> • Use rubble mound seawall along south and west edges of the reclamation to provide a more natural look. • Break the mass of main buildings by varying the height/division into smaller units. • Plant trees and vegetation for screening. • Adopt colour scheme to blend the buildings into the scenery. | C C C C |

| EM&A Log Ref. | Mitigation Measures | Implementation Status |
|---|--|-----------------------|
| | | |
| WASTE MANAGEMENT | | |
| E1 | HEC to submit a Waste Management Plan for the construction phase to EPD. The Plan shall be verified by the IEC and shall describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities and shall take into account the recommendations of the EIA report. | C |
| <i>Dredging Waste</i> | | |
| E2 | All vessels for marine transportation of dredged sediment shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials. In addition, loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water, and barges or hoppers should under no circumstances be filled to a level which shall cause the overflowing of materials or polluted water during loading or transportation** | N/A |
| <i>Storage, Collection and Transport of Waste</i> | | |
| E3 | <ul style="list-style-type: none"> Minimise windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers. | C |
| | <ul style="list-style-type: none"> Obtain the necessary waste disposal permits from the appropriate authorities, if they are required, in accordance with the Waste Disposal Ordinance (Cap.354), Waste Disposal (Chemical Waste) (General) Regulation (Cap.354), the Crown Land Ordinance (Cap 28), Dumping at Sea Ordinance (Cap 466) and Work Branch Technical Circular No. 22/92, Marine Disposal of Dredged Mud. | C |
| | <ul style="list-style-type: none"> Disposal of waste at Licensed sites; | C |
| | <ul style="list-style-type: none"> Develop procedures such as a ticketing system to facilitate tracking of marine mud and chemical waste, and to ensure that illegal disposal does not occur; | C |
| | <ul style="list-style-type: none"> Segregate and sort the waste materials into 3 categories: <ul style="list-style-type: none"> public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area; re-use and/or recycling waste (e.g. steel and other metals); waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal. The sorting process shall be carefully monitored to avoid missing of the 3 categories. Different types of wastes shall be stockpiled and stored in different containers or skips to enhance re-use or recycling of materials and their proper disposal. Maintain records of the quantities of wastes generated and disposed off-site for each category of waste. | C |
| E4 | Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes | C |
| | | |
| LAND CONTAMINATION | | |
| F1 | No land Contamination mitigation measures are required during the construction phase. | N/A |
| | | |
| MARINE ECOLOGY | | |

| EM&A Log Ref. | Mitigation Measures | Implementation Status |
|------------------------------|---|----------------------------------|
| G1 | All percussive piling works shall be conducted on reclaimed land to avoid noise impact to marine mammals** | N/A |
| G2 | All construction related vessels shall approach the extension site from the north and via the East Lamma Channel to avoid disturbance to the finless porpoise** | N/A |
| G3 | Rubble mound seawall to the south and west edges of the reclamation to enhance recolonisation of marine organisms** | N/A |
| G4 | Artificial Reefs of a volume not less than 400 m ³ shall be deployed in a location to be decided upon consultation with the Director of Agriculture and Fisheries to serve the purpose of an Additional Habitat Enhancement Measure.** | N/A |
| FISHERIES | | |
| H1 | No Fisheries-specific mitigation measures are required during the construction phase. | N/A |
| RISK ASSESSMENT | | |
| I1 | No risk mitigation measures are required during the construction phase. | N/A |

Remarks:

- ** - No dredging and reclamation work would be involved for L12 construction
- C - Compliance with mitigation measure
- NC - Non-compliance with mitigation measure
- N/A - Not Applicable

Contract No. 19/83002 Lamma Power Station Extension Civil and Building Works for Unit L12

Master Programme

| ID | Task Name | Duration | Start | Finish | Nov 2022 | Dec 2022 | Jan 2023 |
|-----|--|------------------|---------------------|---------------------|----------|----------|----------|
| 1 | KEY DATES & MILESTONES | 1123 days | Fri 4/12/20 | Sun 31/12/23 | | | |
| 2 | Contract Period | 1123 days | Fri 4/12/20 | Sun 31/12/23 | | | |
| 3 | Deferred Work Completion Key Dates | 784 days | Mon 8/11/21 | Sun 31/12/23 | | | |
| 4 | Substantial Completion of the Whole Contract Works (1123 Days) | 0 days | Sun 31/12/23 | Sun 31/12/23 | | | |
| 5 | SITE POSSESSION DATES | 518 days | Fri 4/12/20 | Sun 15/5/22 | | | |
| 6 | Site Possession Date as phased site possession plan and PS1.4.2 | 0 days | Fri 4/12/20 | Fri 4/12/20 | | | |
| 7 | Site Possession Date as phased site possession plan and PS1.4.2 | 0 days | Fri 1/1/21 | Fri 1/1/21 | | | |
| 8 | Site Possession Date as phased site possession plan and PS1.4.2 | 0 days | Sat 1/5/21 | Sat 1/5/21 | | | |
| 9 | Site Possession Date as phased site possession plan and PS1.4.2 | 0 days | Fri 1/10/21 | Fri 1/10/21 | | | |
| 10 | Site Possession Date as phased site possession plan and PS1.4.2 | 0 days | Fri 1/4/22 | Fri 1/4/22 | | | |
| 11 | Site Possession Date as phased site possession plan and PS1.4.2 | 0 days | Sun 1/5/22 | Sun 1/5/22 | | | |
| 12 | COMPLETION DATES as per PS1.4.2 Time for Completion | 537 days | Thu 30/9/21 | Tue 21/3/23 | | | |
| 13 | Section A1 (i) - Area south of L12 MSB and L12 HRSG from GL12-F eastwards leading to Chimney Road at Area F1 & F2 | 0 days | Thu 30/9/21 | Thu 30/9/21 | | | |
| 14 | Section A1 (ii) - Supporting structures for overhead cranes of L12 MSB including the associated roof structure except the roof deferred works | 0 days | Mon 1/11/21 | Mon 1/11/21 | | | |
| 15 | Section A2 (i) External Works including CW Inlet Culvert at Area F8A | 0 days | Mon 10/1/22 | Mon 10/1/22 | | | |
| 16 | Section A2 (ii) External Works including CW Inlet Culvert at Area F8B | 0 days | Thu 31/3/22 | Thu 31/3/22 | | | |
| 17 | Section A2 (iii) External Works including CW Inlet Culvert at Area F8C | 0 days | Fri 11/3/22 | Fri 11/3/22 | | | |
| 18 | Section B1 - Area south of L12 MSB from GL12-F westwards leading to Station Road at Area F3 | 0 days | Wed 15/1/21 | Wed 15/1/21 | | | |
| 19 | Section B2 (i) - Southern Part of L12 HRSG areas and its surrounding refer to Area F6B as shown in drawing no 553/03/2040 including the foundations for Gas Exhaust Duct | 0 days | Thu 30/9/21 | Thu 30/9/21 | | | |
| 20 | Section B2 (ii) - Remaining northern part of L12 HRSG area and its surrounding at Area F6A and F6C | 0 days | Mon 15/11/21 | Mon 15/11/21 | | | |
| 21 | Section B2 - (iii) L12 Turbo Block foundation including the L12 MSB ground floor together with the equipment foundations between GL 12-F to 12-H and 12-1 to 12-6 for the installation of power generator, air inlet duct and lube oil reservoir | 0 days | Mon 28/2/22 | Mon 28/2/22 | | | |
| 22 | Section B2 - (iv) G/F of L12 MSB including the Condenser Pit, Circulating Water Pipe Pit and equipment foundations between GL 12-B to 12-C and 12-1 to 12-6 for the installation of condenser | 0 days | Wed 15/12/21 | Wed 15/12/21 | | | |
| 23 | Section C - (i) Roads including external grounds surrounding L12 MSB and L12 HRSG in addition to the southern & eastern areas mentioned above in Area F5 | 0 days | Sat 15/1/22 | Sat 15/1/22 | | | |
| 24 | Section C - (ii) Whole of L12 MSB including the pipe and cable rack along south facade of L12 MSB with all underground utilities at Area F4 including C.W. Inlet and Outlet Culvert except the deferred works | 0 days | Thu 31/3/22 | Thu 31/3/22 | | | |
| 25 | Section C - (iii) Link Bridge between L11 and L12 MSB including their associated A&A at L11 MSB | 0 days | Sun 10/4/22 | Sun 10/4/22 | | | |
| 26 | Section D - (i) Microwave Antenna Room and Chimney Windshield for the installation of microwave equipment and antenna | 0 days | Fri 10/6/22 | Fri 10/6/22 | | | |
| 27 | Section D (ii) - No. 5 Chimney with L12 Steel Flue Liner | 0 days | Tue 21/3/23 | Tue 21/3/23 | | | |
| 28 | Section E (i) T3 Room of Administration and Control Building | 0 days | Sun 31/10/21 | Sun 31/10/21 | | | |
| 29 | Section E (ii) - G/F, 1/F, 2/F & Hoisting Well of Admin. & Control Building | 0 days | Mon 28/2/22 | Mon 28/2/22 | | | |
| 30 | Section E (iii) - Whole of Admin. And Control Building | 0 days | Tue 31/5/22 | Tue 31/5/22 | | | |
| 31 | Section F (i) - Gas Receiving Station and L12 Gas Receiving Station Equipment Room (GRS) Area Extension at Area F14 | 0 days | Wed 30/11/22 | Wed 30/11/22 | | | |
| 32 | Section F (ii) - Pipe and Cable rack and external work at Area F9A and F9B | 0 days | Tue 31/5/22 | Tue 31/5/22 | | | |
| 33 | Section F (iii) - No. 5 CW Equipment Room, pipe and cable rack, external works at Area F10 | 0 days | Wed 31/8/22 | Wed 31/8/22 | | | |
| 34 | Section G (i) - External Work surrounding Area F11 | 0 days | Wed 26/10/22 | Wed 26/10/22 | | | |
| 35 | Section G (ii) - External Works at Area F12 & F13 | 0 days | Fri 30/9/22 | Fri 30/9/22 | | | |
| 36 | Section G (iii) - F5 Modification works along South Seafront Road at Area F15 | 0 days | Fri 30/9/22 | Fri 30/9/22 | | | |
| 37 | Section G (iv) - 275KV cable trenches and External Works at Area F16 | 0 days | Fri 30/9/22 | Fri 30/9/22 | | | |
| 38 | Section G (v) - Shunt Reactor Compound and External Works at Area F17 | 0 days | Fri 30/9/22 | Fri 30/9/22 | | | |
| 39 | Section G (vi) - 275KV cable trenches and External Works at Area F18 | 0 days | Wed 1/6/22 | Wed 1/6/22 | | | |
| 40 | Section G (vii) - Flood Wall at No. 4 CW Intake Area along HUA at Area F20A | 0 days | Sun 8/5/22 | Sun 8/5/22 | | | |
| 41 | Section G (viii) - Flood wall at No. 5 CW Intake Area along HUA at Area F20B | 0 days | Fri 30/9/22 | Fri 30/9/22 | | | |
| 42 | Section G (ix) - Bund wall modification works at South Seafront Road at Area F21 | 0 days | Fri 15/10/21 | Fri 15/10/21 | | | |
| 43 | Section G (x) - DAX Cable Diversion Works (from Part I to Part IV) | 0 days | Sat 31/12/22 | Sat 31/12/22 | | | |
| 44 | Section H - All remaining works shall be completed for reporting completion to BD and ready for OP inspection | 0 days | Tue 28/2/23 | Tue 28/2/23 | | | |
| 45 | GENERAL & PRELIMINARY | 228 days | Fri 4/12/20 | Mon 19/7/21 | | | |
| 46 | First Mobilization | 18 days | Fri 4/12/20 | Mon 21/12/20 | | | |
| 47 | Set up Temporary Site Office and Welfare Facilities | 90 days | Tue 22/12/20 | Sun 21/3/21 | | | |
| 48 | Permit Applications & Statutory Submissions | 120 days | Mon 22/3/21 | Mon 19/7/21 | | | |
| 49 | Existing Utilities scanning & Excavation Permit | 45 days | Tue 22/12/20 | Thu 4/2/21 | | | |
| 50 | Tower Crane erection | 60 days | Wed 27/12/20 | Wed 24/2/21 | | | |
| 51 | TECHNICAL SUBMISSION AND APPROVAL | 314 days | Thu 10/12/20 | Wed 20/10/21 | | | |
| 52 | BD Approval & Consent (If required) | 0 days | Thu 10/12/20 | Thu 10/12/20 | | | |
| 53 | Submission and Approval of Master Programme | 14 days | Fri 11/12/20 | Thu 24/12/20 | | | |
| 54 | Work Execution Overall Plan submission & approval | 14 days | Fri 11/12/20 | Thu 24/12/20 | | | |
| 55 | Material Submissions and approval | 300 days | Fri 25/12/20 | Wed 20/10/21 | | | |
| 56 | Method Statement submission and approval | 300 days | Fri 25/12/20 | Wed 20/10/21 | | | |
| 57 | BIM Model, CSD & CBWD Submission & approval | 120 days | Fri 25/12/20 | Fri 23/4/21 | | | |
| 58 | Structure Steelwork Connection Design Submission & BD approval | 45 days | Tue 29/12/20 | Thu 11/2/21 | | | |
| 59 | Structure Steelwork Shop Drawing & Approval | 30 days | Fri 12/2/21 | Sat 13/3/21 | | | |
| 60 | Metal Cladding, louvre & windows submission & BD approval | 45 days | Tue 29/12/20 | Thu 11/2/21 | | | |
| 61 | Metal Cladding, louvre & windows shop drawing submission | 45 days | Fri 12/2/21 | Sun 28/3/21 | | | |
| 62 | Order, Off Site Fabrication and Delivery (S. Steel & Cladding & Louvres) | 120 days | Mon 29/3/21 | Mon 26/7/21 | | | |
| 63 | ELS Submission and BD approval | 90 days | Fri 11/12/20 | Wed 10/3/21 | | | |
| 64 | No. 5 Chimney windshield temporary work submission, approval & fabrication | 60 days | Fri 11/12/20 | Mon 8/2/21 | | | |
| 65 | Steel Flue Assessment Report and Design Drawings submission & approval | 60 days | Tue 9/2/21 | Fri 9/4/21 | | | |
| 66 | Folding Shutters Shop Drawing Submission & Approval | 30 days | Thu 11/2/21 | Fri 12/3/21 | | | |
| 67 | Fabrication & Delivery of Folding Shutters | 180 days | Sat 13/3/21 | Wed 8/9/21 | | | |
| 68 | Sewage Pump System Design submission & approval | 45 days | Tue 23/2/21 | Thu 8/4/21 | | | |
| 69 | Fabrication & Delivery of Sewage Pump | 180 days | Fri 9/4/21 | Tue 5/10/21 | | | |
| 70 | Other material submission & approval & delivery | 180 days | Sat 24/4/21 | Wed 20/10/21 | | | |
| 71 | Other material submission & approval & delivery | 180 days | Sat 24/4/21 | Wed 20/10/21 | | | |
| 72 | CONSTRUCTION | 1123 days | Fri 4/12/20 | Sun 31/12/23 | | | |
| 73 | Coordination with the Employer's Specialist Contractors | 562 days | Fri 15/1/21 | Sat 30/7/22 | | | |
| 74 | Installation of Puddle Pipes at C.W. outlet Culvert | 7 days | Mon 22/3/21 | Sun 28/3/21 | | | |
| 75 | Installation of Puddle Pipes at C.W. Inlet Culvert | 7 days | Thu 27/3/21 | Wed 2/4/21 | | | |
| 76 | Template setting at L12 Turbo Block Foundation | 45 days | Tue 16/11/21 | Thu 30/12/21 | | | |
| 77 | Template setting of holding down bolts at HRSG column base | 45 days | Fri 15/1/21 | Sun 28/2/21 | | | |
| 78 | I-beam / channel base installation on top of transformer foundations at Transformer Area | 45 days | Tue 1/6/21 | Thu 15/7/21 | | | |
| 79 | Overhead crane erection at turbine hall using access through a temporary opening at L12 MSB roof between GL12-G to 12-H and 12-2 to 6 | 38 days | Mon 1/11/21 | Wed 8/12/21 | | | |
| 80 | Condenser assembly and erection using access through a temporary facade opening at L12 MSB below 1/F along GL 12-6 from GL12-B to 12-C including a clear space below 1/F between GL 12-B to 12-C | 122 days | Thu 16/12/21 | Sat 16/4/22 | | | |
| 81 | Installation of power train equipment including air inlet duct using access through a temporary facade opening at L12 MSB below 1/F along GL 12-6 from GL12-F to 12-H including a clear space below 1/F of the above area | 121 days | Fri 1/4/22 | Sat 30/7/22 | | | |
| 82 | Installation of embedded materials such as holding down bolts for equipment foundations - Commencement | 0 days | Thu 15/4/21 | Thu 15/4/21 | | | |
| 83 | Section A1 (i) - Area south of L12 MSB and L12 HRSG from GL12-F eastwards leading to Chimney Road at Area F1 & F2 | 301 days | Fri 4/12/20 | Thu 30/9/21 | | | |
| 84 | Area Possession & Clearance | 30 days | Fri 4/12/20 | Sat 21/1/21 | | | |
| 85 | Subletting / Fabrication / Delivery (both for Area F1 and Area F2) | 60 days | Sun 17/1/21 | Wed 17/3/21 | | | |
| 86 | Excavation for CW Inlet Culvert (Type D Construction Area) | 14 days | Tue 1/6/21 | Mon 14/6/21 | | | |
| 87 | Installation CW Inlet Culvert pipe | 70 days | Tue 15/6/21 | Mon 23/8/21 | | | |
| 88 | Backfill | 7 days | Tue 24/8/21 | Mon 30/8/21 | | | |
| 89 | Construction UG Utilities 2m deep below further surface | 21 days | Tue 31/8/21 | Mon 27/9/21 | | | |
| 90 | Temporary Paving and handover for plant erection | 3 days | Tue 28/9/21 | Thu 30/9/21 | | | |
| 91 | Section A1 (ii) - Supporting structures for overhead cranes of L12 MSB including the associated roof structure except the roof deferred works | 333 days | Fri 4/12/20 | Mon 1/11/21 | | | |
| 92 | Area Possession & Clearance | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 93 | Subletting / Fabrication / Delivery | 210 days | Tue 23/2/21 | Mon 20/9/21 | | | |
| 94 | Complete structural steel erection | 0 days | Tue 19/10/21 | Tue 19/10/21 | | | |
| 95 | Install Crane Girders | 11 days | Tue 12/10/21 | Fri 29/10/21 | | | |
| 96 | Construction of roof slab (except defer work) | 14 days | Tue 12/10/21 | Mon 11/1/21 | | | |
| 97 | Touch up and handover for install overhead cranes | 3 days | Sat 30/10/21 | Mon 1/11/21 | | | |
| 98 | Section A2 (i) External Works including CW Inlet Culvert at Area F8A | 403 days | Fri 4/12/20 | Mon 10/1/22 | | | |
| 99 | BD consent for Sheetpile installation | 30 days | Fri 4/12/20 | Sat 21/1/21 | | | |
| 100 | Subletting / Fabrication / Delivery (both for Area F8A-F8B) | 30 days | Fri 18/12/20 | Sat 16/1/21 | | | |
| 101 | Area Possession & Clearance | 14 days | Sat 21/1/21 | Fri 15/1/21 | | | |
| 102 | Install Sheet pile | 55 days | Sat 16/1/21 | Thu 11/3/21 | | | |
| 103 | Installation of Additional sheet Pile at South of area F8A | 7 days | Sat 17/4/21 | Fri 23/4/21 | | | |
| 104 | BD Consent for ELS | 28 days | Sat 24/4/21 | Fri 21/5/21 | | | |
| 105 | ELS and install CW Inlet Pipe (NW to N direction) (Assume flexible joint deliver in Sep 2021) | 100 days | Fri 16/7/21 | Sat 23/10/21 | | | |
| 106 | Construction of Thrust Box & Manholes,etc | 15 days | Thu 15/9/21 | Thu 30/9/21 | | | |
| 107 | Backfill, UG Utilities and Road Paving | 79 days | Sun 24/10/21 | Mon 10/1/22 | | | |
| 108 | Section A2 (ii) External Works including CW Inlet Culvert at Area F8B | 483 days | Fri 4/12/20 | Thu 31/3/22 | | | |
| 109 | Area Possession & Clearance | 30 days | Mon 1/3/21 | Tue 30/3/21 | | | |
| 110 | BD consent for Sheetpile installation | 30 days | Fri 4/12/20 | Sat 21/1/21 | | | |
| 111 | Install Sheet pile | 90 days | Fri 2/4/21 | Wed 30/6/21 | | | |
| 112 | BD Consent for ELS | 28 days | Thu 1/7/21 | Wed 28/7/21 | | | |
| 113 | ELS and install CW Inlet Pipe | 100 days | Thu 29/7/21 | Fri 5/11/21 | | | |
| 114 | Construction of Thrust Box & Manholes,etc | 15 days | Wed 1/9/21 | Wed 15/9/21 | | | |
| 115 | Backfill, UG Utilities and Road Paving | 146 days | Sat 6/11/21 | Thu 31/3/22 | | | |
| 116 | Section A2 (iii) External Works including CW Inlet Culvert at Area F8C | 365 days | Fri 12/3/21 | Fri 11/3/22 | | | |
| 117 | Area Possession & Clearance | 30 days | Fri 12/3/21 | Sat 10/4/21 | | | |
| 118 | Subletting / Fabrication / Delivery (for Area F8C) | 60 days | Fri 12/3/21 | Mon 10/5/21 | | | |
| 119 | BD consent for Sheetpile installation | 30 days | Tue 13/4/21 | Wed 10/5/21 | | | |
| 120 | Install Sheet pile | 62 days | Thu 13/5/21 | Tue 13/7/21 | | | |
| 121 | BD Consent for ELS | 75 days | Wed 14/7/21 | Tue 17/8/21 | | | |
| 122 | ELS and install CW Inlet Pipe (including soil nail installation under 19/83014) | 76 days | Wed 18/8/21 | Thu 20/1/22 | | | |
| 123 | Construction of Thrust Box & Manholes,etc | 30 days | Fri 21/1/22 | Sat 19/2/22 | | | |
| 124 | Backfill, UG Utilities and Road Paving | 20 days | Sun 20/2/22 | Fri 11/3/22 | | | |
| 125 | Section B1 - Area south of L12 MSB from GL12-F westwards leading to Station Road at Area F3 | 377 days | Fri 4/12/20 | Wed 15/12/21 | | | |
| 126 | Area Possession & Clearance | 30 days | Fri 4/12/20 | Sat 21/1/21 | | | |
| 127 | Subletting / Fabrication / Delivery | 120 days | Fri 25/12/20 | Fri 23/4/21 | | | |
| 128 | Complete CW Pipe Installation & Thrust box | 45 days | Tue 25/5/21 | Thu 8/7/21 | | | |
| 129 | Backfill | 30 days | Fri 9/7/21 | Sat 7/8/21 | | | |
| 130 | Construction of Storm Drain & Manholes | 67 days | Mon 20/9/21 | Thu 25/11/21 | | | |
| 131 | Temp Paving and handover for Condenser Move in | 20 days | Fri 26/11/21 | Wed 15/ | | | |

Contract No. 19/83002 Lamma Power Station Extension Civil and Building Works for Unit L12

Master Programme

| ID | Task Name | Duration | Start | Finish | Nov-2022 | Dec-2022 | Jan-2023 |
|-----|---|-----------------|--------------------|---------------------|----------|----------|----------|
| 136 | Excavation & Construct Pile Caps & Tie Beams & Piers | 86 days | Mon 8/3/21 | Thu 19/8/21 | | | |
| 137 | Installation of Pipe Pile for HRSG foundation (VO) | 48 days | Thu 25/3/21 | Tue 11/5/21 | | | |
| 138 | Construction HRSG & Gas Duct foundations | 112 days | Fri 7/5/21 | Fri 3/9/21 | | | |
| 139 | Construction of HRSG Equipment Room incl. ABWF & BS (except T&C) | 64 days | Tue 4/5/21 | Thu 30/9/21 | | | |
| 140 | Construction underground utilities within HRSG | 55 days | Mon 19/7/21 | Sat 11/9/21 | | | |
| 141 | Backfill & Construction on-grade slabs & RC plinths on top | 14 days | Fri 30/7/21 | Mon 27/9/21 | | | |
| 142 | Backfill and Temporary paving | 21 days | Fri 10/9/21 | Thu 30/9/21 | | | |
| 143 | Section B2 (ii) - Remaining northern part of L12 HRSG area and its surrounding at Area F6A and F6C | 319 days | Fri 1/1/21 | Mon 15/11/21 | | | |
| 144 | Area Possession & Clearance at Area F6A | 30 days | Fri 1/1/21 | Sat 30/1/21 | | | |
| 145 | Subletting / Fabrication / Delivery (for Area F6A and F6C civil) | 90 days | Sat 2/1/21 | Thu 1/4/21 | | | |
| 146 | Construction of Underground pits (HRSG Blowdown sump pit) | 110 days | Sat 2/1/21 | Wed 21/4/21 | | | |
| 147 | Excavation & Construct Pile Caps & Tie Beams & Piers | 139 days | Mon 1/2/21 | Sat 10/7/21 | | | |
| 148 | Construction underground utilities within HRSG | 55 days | Mon 19/7/21 | Sat 11/9/21 | | | |
| 149 | Construction of Underground pits (GT Oil & Chemical drain pits) | 15 days | Thu 5/8/21 | Thu 19/8/21 | | | |
| 150 | Backfill & Construction on-grade slabs & RC plinths on top | 45 days | Sun 12/9/21 | Tue 26/10/21 | | | |
| 151 | Construct RC Walls | 90 days | Thu 22/4/21 | Tue 20/7/21 | | | |
| 152 | Construction of Underground utilities at F6C | 21 days | Tue 19/10/21 | Mon 8/11/21 | | | |
| 153 | Backfill and Temporary paving | 7 days | Tue 9/11/21 | Mon 15/11/21 | | | |
| 154 | Section B2 - (iii) L12 Turbo Block foundation including the L12 MSB ground floor together with the equipment foundations between GL 12-F to 12-H and 12-1 to 12-6 for the installation of power generator, air inlet duct and lube oil reservoir | 452 days | Fri 4/12/20 | Mon 28/2/22 | | | |
| 155 | Area Possession & Clearance | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 156 | Subletting / Fabrication / Delivery (Civil+ABWF+BS for MSLB12) | 150 days | Fri 25/12/20 | Sun 23/5/21 | | | |
| 157 | Complete excavation at Type A&C Construction Area | 0 days | Sun 21/3/21 | Sun 21/3/21 | | | |
| 158 | Excavation & Pile Caps & Tie Beams + Slabs (Turbo Block North) | 75 days | Sun 31/1/21 | Thu 15/4/21 | | | |
| 159 | Backfill and construction turbine block & equipment foundation | 85 days | Tue 1/6/21 | Tue 24/8/21 | | | |
| 160 | Excavation & Pile Caps & Tie Beams + Slabs (Turbo Block South) | 45 days | Sat 17/4/21 | Mon 31/5/21 | | | |
| 161 | Construction of internal drainage & on-grade slab | 90 days | Wed 1/9/21 | Mon 29/11/21 | | | |
| 162 | Construction turbine block columns and upper portion for plant embed installation | 83 days | Wed 25/8/21 | Mon 15/11/21 | | | |
| 163 | Concrete Turbine upper part foundation | 15 days | Fri 31/12/21 | Fri 14/1/22 | | | |
| 164 | Construction of Lube Oil Room | 14 days | Tue 30/11/21 | Tue 18/1/22 | | | |
| 165 | Concrete RC walls | 115 days | Tue 7/9/21 | Thu 30/12/21 | | | |
| 166 | ABFW Works | 60 days | Thu 4/11/21 | Sun 2/1/22 | | | |
| 167 | Building Services Works | 45 days | Sat 15/1/22 | Mon 28/2/22 | | | |
| 168 | Remove temporary falsework and scaffolding for installation of power generator | 13 days | Mon 7/2/22 | Sat 19/2/22 | | | |
| 169 | Section B2 - (iv) G/F of L12 MSB including the Condenser Pit, Circulating Water Pipe Pit and equipment foundations between GL 12-B to 12-C and 12-1 to 12-6 for the installation of condenser | 377 days | Fri 4/12/20 | Wed 15/12/21 | | | |
| 170 | Area Possession & Clearance | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 171 | Subletting / Fabrication / Delivery (for MSB L12 civil) | 150 days | Fri 25/12/20 | Sun 23/5/21 | | | |
| 172 | Excavation to foundation level at ELS SP Type A & C | 80 days | Fri 1/1/21 | Sun 21/3/21 | | | |
| 173 | Install CW Outlet pipe | 85 days | Mon 22/3/21 | Mon 14/6/21 | | | |
| 174 | Construction of CW Outlet Box + lowest tie beam & caps | 40 days | Mon 22/3/21 | Fri 30/4/21 | | | |
| 175 | Construction of pile caps & tie beams & sump pits up to +2.7mPD | 26 days | Sat 1/5/21 | Wed 26/5/21 | | | |
| 176 | Backfill & Construction of CW Inlet Box + tie beams | 71 days | Thu 27/5/21 | Thu 5/8/21 | | | |
| 177 | Construction of pile caps & tie beams at SunShadeCover Area | 45 days | Tue 16/6/21 | Thu 29/7/21 | | | |
| 178 | Backfill and Construction ground beams & trenches | 28 days | Thu 27/5/21 | Mon 5/7/21 | | | |
| 179 | Construction of indoor underground drainage | 14 days | Fri 13/8/21 | Thu 26/8/21 | | | |
| 180 | Backfill & construction on-grade slabs | 60 days | Sun 1/8/21 | Wed 29/9/21 | | | |
| 181 | Construction Column casting and RC walls & equipment foundations | 50 days | Thu 30/9/21 | Thu 18/11/21 | | | |
| 182 | ABFW Works | 15 days | Fri 19/11/21 | Fri 3/12/21 | | | |
| 183 | Building Services Works | 20 days | Fri 26/11/21 | Wed 15/12/21 | | | |
| 184 | Mis. Works and Ready for condenser move in | 25 days | Wed 17/11/21 | Wed 15/12/21 | | | |
| 185 | Section C - (i) Roads and external grounds surrounding L12 MSB and L12 HRSG in addition to the southern & eastern areas mentioned above in Area F5 | 406 days | Fri 4/12/20 | Sat 15/1/22 | | | |
| 186 | Area Possession & Clearance | 30 days | Fri 4/12/20 | Sat 21/21 | | | |
| 187 | Subletting / Fabrication / Delivery | 210 days | Fri 25/12/20 | Thu 22/7/21 | | | |
| 188 | Complete substructure & Steel Erection works for MSB | 0 days | Tue 17/8/21 | Tue 17/8/21 | | | |
| 189 | Construction all utilities deeper than 2m from future road level | 30 days | Wed 18/8/21 | Thu 16/9/21 | | | |
| 190 | Construction of cable trenches | 30 days | Fri 17/9/21 | Sat 16/10/21 | | | |
| 191 | Backfill and lay temporary paving | 91 days | Sun 17/10/21 | Sat 15/1/22 | | | |
| 192 | Section C - (ii) Whole of L12 MSB including the pipe and cable rack along south façade of L12 MSB with all underground utilities at Area F4 including C.W. Inlet and Outlet Culvert except the deferred works | 483 days | Fri 4/12/20 | Thu 31/3/22 | | | |
| 193 | Area Possession & Clearance | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 194 | Subletting / Fabrication / Delivery | 120 days | Fri 25/12/20 | Fri 23/4/21 | | | |
| 195 | Construction of pile caps & tie beams at Transformer Area | 180 days | Sun 31/1/21 | Thu 29/7/21 | | | |
| 196 | Backfill and on-grade slab at transformer Area | 160 days | Sun 11/4/21 | Thu 7/10/21 | | | |
| 197 | Construction of Fire Walls at Transformer Area | 45 days | Fri 8/10/21 | Sun 21/11/21 | | | |
| 198 | Excavation & Construction Blow Down Sump pit (SP Type B) | 140 days | Wed 14/4/21 | Tue 31/8/21 | | | |
| 199 | Preparation for S Steelwork Erection | 7 days | Sat 5/8/21 | Fri 11/8/21 | | | |
| 200 | Structural Delivery & Erection (Turbine Hall North fr G.L. 1-3(H-B)) | 67 days | Sat 12/6/21 | Tue 17/8/21 | | | |
| 201 | Structural Delivery & Erection (Equipment Floors) | 33 days | Wed 18/8/21 | Sun 19/9/21 | | | |
| 202 | Structural Delivery & Erection (Turbine Hall South + East Elevation) | 47 days | Mon 20/9/21 | Mon 15/11/21 | | | |
| 203 | Joint Tightening and touch up coating | 99 days | Sat 3/7/21 | Wed 24/11/21 | | | |
| 204 | External Scaffolding Erection | 97 days | Thu 15/7/21 | Mon 22/11/21 | | | |
| 205 | Construction 1/F RC Slab | 14 days | Mon 20/9/21 | Sun 3/10/21 | | | |
| 206 | Construction 2/F RC Slab | 7 days | Mon 27/9/21 | Sun 10/10/21 | | | |
| 207 | Construction 3/F RC Slab | 16 days | Thu 30/9/21 | Sun 17/10/21 | | | |
| 208 | Construction 4/F RC Slab | 7 days | Thu 7/10/21 | Sun 24/10/21 | | | |
| 209 | Construction 5/F RC Slab | 44 days | Mon 25/10/21 | Tue 7/12/21 | | | |
| 210 | Construction 6/F RC Slab | 14 days | Wed 11/12/21 | Tue 14/12/21 | | | |
| 211 | Construction Upper Roof RC Slab | 10 days | Sun 12/12/21 | Fri 24/12/21 | | | |
| 212 | Construction Main Roof RC Slab | 39 days | Tue 12/10/21 | Fri 19/11/21 | | | |
| 213 | Construction Defer Roof RC Slab (G.L. G-H) | 14 days | Wed 11/12/21 | Tue 14/12/21 | | | |
| 214 | Construction of Staircase ST-01 & lift shaft & machine room | 130 days | Fri 27/8/21 | Mon 3/1/22 | | | |
| 215 | Construction M/F RC Slab | 14 days | Wed 1/9/21 | Tue 14/9/21 | | | |
| 216 | Lift Installation | 60 days | Tue 4/1/22 | Fri 4/3/22 | | | |
| 217 | Construction of Staircase ST-02 except defer work | 65 days | Mon 11/10/21 | Fri 24/12/21 | | | |
| 218 | Construction of RC plinth, kerbs & parapet Walls | 40 days | Sat 20/11/21 | Wed 29/12/21 | | | |
| 219 | Erection of Skylight & Roof Features | 50 days | Fri 26/11/21 | Fri 14/1/22 | | | |
| 220 | Waterproofing & Flooring at Roof | 34 days | Thu 30/12/21 | Thu 17/2/22 | | | |
| 221 | ABFW Works | 100 days | Fri 8/10/21 | Sat 15/1/22 | | | |
| 222 | Building Services Works | 105 days | Tue 16/11/21 | Mon 28/2/22 | | | |
| 223 | Metal Cladding, Windows and Louvers incl. roof feature | 185 days | Mon 23/8/21 | Wed 23/2/22 | | | |
| 224 | Removal of external scaffolding | 90 days | Wed 11/12/21 | Mon 28/2/22 | | | |
| 225 | Installation of Catwalk at south elevation | 26 days | Mon 31/1/22 | Tue 1/3/22 | | | |
| 226 | Cladding, ABWF & BS Works | 30 days | Wed 2/3/22 | Thu 31/3/22 | | | |
| 227 | Removal of temporary works & clearance for plant erection contractor | 30 days | Sun 30/1/22 | Mon 28/2/22 | | | |
| 228 | Section C - (iii) Link Bridge between L11 and L12 MSB includin their associated A&A at L11 MSB | 493 days | Fri 4/12/20 | Sun 10/4/22 | | | |
| 229 | BD Consent | 0 days | Fri 4/12/20 | Fri 4/12/20 | | | |
| 230 | Subletting / Fabrication / Delivery (For BS and ABWF) | 250 days | Fri 25/12/20 | Tue 31/8/21 | | | |
| 231 | Clearing Works and plant set-up | 30 days | Fri 3/12/21 | Sat 11/2/22 | | | |
| 232 | Dismantle of north scaffold for link bridge erection | 0 days | Tue 25/1/22 | Tue 25/1/22 | | | |
| 233 | A&A works at South of L11 MSB | 30 days | Fri 3/12/21 | Sat 11/2/22 | | | |
| 234 | Erection of link bridge structural steel | 30 days | Sun 21/1/22 | Mon 31/1/22 | | | |
| 235 | Casting of bridge deck | 11 days | Tue 1/2/22 | Fri 11/2/22 | | | |
| 236 | Metal roofing installation | 24 days | Sat 12/2/22 | Mon 7/3/22 | | | |
| 237 | ABWF work | 30 days | Sun 20/2/22 | Mon 21/3/22 | | | |
| 238 | BS Works | 20 days | Tue 22/3/22 | Sun 10/4/22 | | | |
| 239 | Ready for power cable laying work by others | 0 days | Sun 10/4/22 | Sun 10/4/22 | | | |
| 240 | Section D - (ii) No. 5 Chimney with L12 Steel Flue Liner | 810 days | Fri 11/1/21 | Tue 21/3/23 | | | |
| 241 | Area Possession & Clearance | 45 days | Fri 1/1/21 | Sun 14/2/21 | | | |
| 242 | Subletting / Fabrication / Delivery (For Civil and BS for Microwave Antenna and Equipment) | 120 days | Fri 8/1/21 | Fri 7/5/21 | | | |
| 243 | Excavation & Pile Cap & Backfill | 90 days | Sat 2/1/21 | Thu 1/4/21 | | | |
| 244 | Tower Crane erection | 30 days | Tue 11/5/21 | Wed 9/6/21 | | | |
| 245 | Construction of Wind Shield + clearance for internal floors and flue+Ground slab | 308 days | Fri 2/4/21 | Mon 4/4/22 | | | |
| 246 | Structural steel fabrication & Delivery for floors and staircase | 201 days | Mon 3/1/22 | Fri 22/7/22 | | | |
| 247 | Erection of steel floors | 79 days | Tue 19/4/22 | Wed 6/7/22 | | | |
| 248 | Construction of G/F room incl. Microwave Antenna Rm | 45 days | Thu 7/7/22 | Sat 20/8/22 | | | |
| 249 | Construction of 1/F RC slab | 8 days | Sat 13/8/22 | Sat 20/8/22 | | | |
| 250 | Construction of 2/F RC Slab | 8 days | Fri 5/8/22 | Fri 12/8/22 | | | |
| 251 | Construction of 3/F RC slab | 8 days | Thu 28/7/22 | Thu 4/8/22 | | | |
| 252 | Construction of 4/F RC slab | 8 days | Thu 7/7/22 | Thu 14/7/22 | | | |
| 253 | Construction of Roof RC slab | 61 days | Tue 21/6/22 | Sat 20/8/22 | | | |
| 254 | Removal of tower Crane | 7 days | Sun 21/8/22 | Sat 27/8/22 | | | |
| 255 | Steel Flue fabrication and delivery | 145 days | Sat 5/3/22 | Wed 27/7/22 | | | |
| 256 | Set up for steel flue installation | 60 days | Tue 5/7/22 | Fri 2/9/22 | | | |
| 257 | Lift & install steel flue liner + cladding works | 161 days | Thu 28/7/22 | Wed 4/1/23 | | | |
| 258 | Lift installation | 100 days | Mon 12/12/22 | Tue 21/3/23 | | | |
| 259 | Installation Louvre & Doors | 30 days | Thu 5/1/23 | Fri 3/3/23 | | | |
| 260 | Mis works, Demobilization and ready for gas duct connection | 17 days | Sat 5/1/23 | Sat 21/1/23 | | | |
| 261 | Section D (i) - ABWF and BS Works at Microwave Antenna Room and Chimney Windshield for installation of microwave and antenna | 102 days | Tue 1/3/22 | Fri 10/6/22 | | | |
| 262 | Completion of Microwave Antenna Room | 0 days | Tue 1/3/22 | Tue 1/3/22 | | | |
| 263 | Remaining ABWF & BS Works | 100 days | Thu 3/3/22 | Fri 10/6/22 | | | |
| 264 | Section E - (i) Administration and Control Building (Transformer Room) | 332 days | Fri 4/12/20 | Sun 31/10/21 | | | |
| 265 | Area Possession & Clearance + BD consent | 60 days | Fri 4/12/20 | Mon 1/2/21 | | | |
| 266 | Subletting / Fabrication / Delivery (For Civil+BS+ABWF) | 100 days | Tue 2/2/21 | Wed 12/5/21 | | | |
| 267 | Excavation works | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 268 | Main Earth Grid installation | 45 days | Sun 3/1/21 | Tue 16/2/21 | | | |
| 269 | Pile cap and Tie Beam | 45 days | Sun 3/1/21 | Tue 16/2/21 | | | |
| 270 | Tower Crane Erection and modification works | 49 days | Wed 10/2/21 | Tue 30/3/21 | | | |
| 271 | Substructure + Bearing walls + On grade slabs | 115 days | Wed 17/2/21 | Fri 11/6/21 | | | |
| 272 | Construction of RC up to 1/F incl. staircases | 69 days | Sat 12/6/21 | Thu 19/8/21 | | | |
| 27 | | | | | | | |

Contract No. 19/83002 Lamma Power Station Extension Civil and Building Works for Unit L12

Master Programme

| ID | Task Name | Duration | Start | Finish | Nov 2022 | Dec 2022 | Jan 2023 |
|-----|--|-----------------|--------------------|---------------------|----------|----------|----------|
| 281 | Construction of RC up to R/F incl. staircases | 25 days | Thu 30/9/21 | Sun 24/10/21 | | | |
| 282 | Construction of RC up to lift machine room | 21 days | Mon 25/10/21 | Sun 14/11/21 | | | |
| 283 | Construction of RC up to UR/F | 21 days | Mon 15/11/21 | Sun 5/12/21 | | | |
| 284 | External Wall Finish, Cladding + Windows and Louvres + Features | 138 days | Thu 30/9/21 | Mon 14/2/22 | | | |
| 285 | ABWF at 1/F | 95 days | Fri 8/10/21 | Mon 10/1/22 | | | |
| 286 | ABWF at 2/F | 96 days | Fri 15/10/21 | Tue 18/1/22 | | | |
| 287 | Building Services Works at G/F, 1/F, 2/F + Hoisting Well | 147 days | Tue 5/10/21 | Mon 28/2/22 | | | |
| 288 | Section E (iii) Whole of Administration and Control Building | 544 days | Fri 4/12/20 | Tue 31/5/22 | | | |
| 289 | Subletting / Fabrication / Delivery (For BS-ABWF) | 127 days | Sat 23/10/21 | Sun 20/3/22 | | | |
| 290 | Construction of New UG Grey Water Tank | 60 days | Mon 20/3/23 | Thu 18/5/23 | | | |
| 291 | Submission of WW046 for commencement | 60 days | Wed 19/1/22 | Sat 19/3/22 | | | |
| 292 | ABWF at 3/F | 120 days | Mon 25/10/21 | Mon 21/2/22 | | | |
| 293 | ABWF at 4/F | 90 days | Wed 24/11/21 | Mon 21/2/22 | | | |
| 294 | ABWF at R/F | 60 days | Wed 15/12/21 | Sat 12/2/22 | | | |
| 295 | ABWF at UR/F + Lift Machine Room | 45 days | Wed 5/1/22 | Fri 18/2/22 | | | |
| 296 | Bridge Erection & Connection | 28 days | Mon 7/2/22 | Mon 28/3/22 | | | |
| 297 | Installation of Raised floors | 60 days | Fri 7/1/22 | Fri 29/4/22 | | | |
| 298 | Removal of external scaffolding | 39 days | Mon 24/1/22 | Wed 9/3/22 | | | |
| 299 | Waterproofing & screeding | 60 days | Mon 6/1/22 | Thu 3/2/22 | | | |
| 300 | Removal of Tower Crane | 7 days | Thu 10/3/22 | Wed 16/3/22 | | | |
| 301 | External utilities and road work | 45 days | Tue 8/2/22 | Thu 14/4/22 | | | |
| 302 | Building Services Works | 160 days | Tue 7/12/21 | Sun 15/3/22 | | | |
| 303 | False ceiling after BS works | 54 days | Tue 29/3/22 | Sat 21/5/22 | | | |
| 304 | Submission of WW046 for completion | 30 days | Wed 9/3/22 | Thu 7/4/22 | | | |
| 305 | Submission of FS inspection | 14 days | Fri 13/5/22 | Thu 26/5/22 | | | |
| 306 | Submission for OP Inspection | 14 days | Wed 18/5/22 | Tue 31/5/22 | | | |
| 307 | Section F (i) Gas Receiving Station and L12 Gas Receiving Station Equipment Room (GRS) Area Extension at Area F14 | 548 days | Tue 1/6/21 | Wed 30/11/22 | | | |
| 308 | Area Possession & Clearance + BD consent | 90 days | Tue 1/6/21 | Sun 29/8/21 | | | |
| 309 | Subletting / Fabrication / Delivery | 30 days | Tue 22/6/21 | Wed 21/7/21 | | | |
| 310 | Installation of pipe pile at north of GRS (VO) | 134 days | Mon 5/7/21 | Mon 15/11/21 | | | |
| 311 | Construction Equipment room extension | 145 days | Sun 31/10/21 | Thu 24/3/22 | | | |
| 312 | Modification of existing drainage | 45 days | Fri 25/3/22 | Sun 8/5/22 | | | |
| 313 | Excavation & earthing for Skid foundations | 21 days | Mon 9/5/22 | Sun 29/5/22 | | | |
| 314 | Construction of Skid foundation | 45 days | Mon 30/5/22 | Wed 13/7/22 | | | |
| 315 | Construct underground utilities and drainage | 45 days | Thu 14/7/22 | Sat 27/8/22 | | | |
| 316 | Backfill and road works | 60 days | Sun 29/8/22 | Wed 26/10/22 | | | |
| 317 | Relocate / install new fencing for completion | 21 days | Thu 27/10/22 | Wed 16/11/22 | | | |
| 318 | Mis. Work and ready for OP inspection | 14 days | Thu 17/11/22 | Wed 30/11/22 | | | |
| 319 | Section F (ii) - Pipe and Cable rack and external work at Area F9A and F9B | 515 days | Sat 21/21 | Tue 31/5/22 | | | |
| 320 | BD consent + Site Possession at Area F9A & F9B | 90 days | Sat 21/21 | Thu 14/4/21 | | | |
| 321 | Excavation & Plate load test | 30 days | Mon 11/11/21 | Tue 30/11/21 | | | |
| 322 | Construction new footing for pipe rack | 30 days | Wed 11/12/21 | Thu 30/12/21 | | | |
| 323 | Underground utilities and road works for completion | 11 days | Thu 31/3/22 | Tue 31/5/22 | | | |
| 324 | Structural Steel fabrication & Delivery | 90 days | Sat 2/10/21 | Thu 30/12/21 | | | |
| 325 | Erection of new pipe rack | 70 days | Fri 31/12/21 | Thu 10/3/22 | | | |
| 326 | Mis. Work and ready for OP inspection | 21 days | Wed 15/1/22 | Tue 31/5/22 | | | |
| 327 | Section F (iii) - No. 5 CW Equipment Room, pipe and cable rack, external works at Area F10 | 457 days | Tue 1/6/21 | Wed 31/8/22 | | | |
| 328 | Area Possession & Clearance + BD consent | 90 days | Tue 1/6/21 | Sun 29/8/21 | | | |
| 329 | Subletting / Fabrication / Delivery For ABWF + BS | 150 days | Wed 2/6/21 | Fri 29/10/21 | | | |
| 330 | Installation of Sheet Pile (VO) | 85 days | Tue 16/6/21 | Tue 24/8/21 | | | |
| 331 | Consent for ELS Works | 28 days | Wed 25/8/21 | Tue 21/9/21 | | | |
| 332 | Excavation & Plate load test | 30 days | Wed 22/9/21 | Thu 21/10/21 | | | |
| 333 | Construction new footing for equipment room | 68 days | Thu 23/12/21 | Mon 28/2/22 | | | |
| 334 | Superstructure for equipment room | 60 days | Tue 1/3/22 | Fri 29/4/22 | | | |
| 335 | ABWF Works | 45 days | Sat 30/4/22 | Mon 13/6/22 | | | |
| 336 | BS Works | 30 days | Wed 1/6/22 | Thu 30/6/22 | | | |
| 337 | Construction RC Wall & plinths & drainage at Chlorinator area | 45 days | Wed 30/3/22 | Fri 13/5/22 | | | |
| 338 | External wall finish & remove scaffolding | 30 days | Sat 14/5/22 | Sun 12/6/22 | | | |
| 339 | Excavation & Plate load test for pipe rack extension (For F45-47 & F49) | 30 days | Sat 16/10/21 | Sun 14/11/21 | | | |
| 340 | Construction new footing for pipe rack (For F45-47 & F49) | 60 days | Mon 15/11/21 | Wed 29/12/21 | | | |
| 341 | Underground utilities and road works for completion | 60 days | Thu 30/12/21 | Sun 27/2/22 | | | |
| 342 | Structural Steel fabrication & Delivery | 90 days | Sun 12/12/21 | Fri 11/3/22 | | | |
| 343 | Backfilling and prepare for steel erection | 12 days | Mon 28/2/22 | Fri 11/3/22 | | | |
| 344 | Excavation & Plate load test for pipe rack extension (For F48 F56) | 14 days | Wed 30/3/22 | Tue 12/4/22 | | | |
| 345 | Construction of new footing for pipe rak (For F48 & F56) | 14 days | Wed 13/4/22 | Tue 26/4/22 | | | |
| 346 | Erection of new pipe rack (For F48 & F56) | 65 days | Tue 3/5/22 | Wed 6/7/22 | | | |
| 347 | Erection of new pipe rack (For F45-47 & F49) | 70 days | Sat 12/3/22 | Fri 20/5/22 | | | |
| 348 | Mis. Work and ready for OP inspection | 55 days | Thu 7/7/22 | Wed 31/8/22 | | | |
| 349 | Section G (i) - External Work surrounding Area F11 | 145 days | Sat 4/6/22 | Wed 26/10/22 | | | |
| 350 | Area Possession & Clearance after handover from No. 5 Intake Contractor | 30 days | Sat 4/6/22 | Sun 3/7/22 | | | |
| 351 | Subletting / Fabrication / Delivery | 30 days | Sat 4/6/22 | Sun 3/7/22 | | | |
| 352 | Submission WW0046 for commencement | 30 days | Sat 4/6/22 | Sun 3/7/22 | | | |
| 353 | Construct Underground utilities and drainage | 30 days | Mon 20/6/22 | Tue 19/7/22 | | | |
| 354 | Install new FS Hydrant | 20 days | Mon 20/6/22 | Sat 9/7/22 | | | |
| 355 | Submission WW0046 for completion | 30 days | Sat 30/7/22 | Sun 28/8/22 | | | |
| 356 | Construction Road extension | 58 days | Sat 30/7/22 | Sun 25/9/22 | | | |
| 357 | Construction road paving and install fencing | 30 days | Mon 26/9/22 | Tue 25/10/22 | | | |
| 358 | Ready for OP inspection | 14 days | Thu 13/10/22 | Wed 26/10/22 | | | |
| 359 | Section G (ii) - External Works at Area F12 & F13 | 666 days | Fri 4/12/20 | Fri 30/9/22 | | | |
| 360 | Area Possession & Clearance after handover from other | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 361 | Subletting / Fabrication / Delivery | 180 days | Thu 4/3/21 | Mon 30/8/21 | | | |
| 362 | Excavation | 21 days | Sat 23/10/21 | Fri 12/11/21 | | | |
| 363 | Submission WW0046 for commencement | 30 days | Sat 13/11/21 | Sun 12/12/21 | | | |
| 364 | Construct Underground utilities and drainage | 90 days | Mon 13/12/21 | Sat 12/3/22 | | | |
| 365 | Install new FS Hydrant | 30 days | Sun 13/3/22 | Mon 11/4/22 | | | |
| 366 | Submission WW0046 for completion | 30 days | Tue 12/4/22 | Wed 11/5/22 | | | |
| 367 | Construction Road extension | 127 days | Thu 12/5/22 | Thu 15/9/22 | | | |
| 368 | Complete with Mis. Works for completion | 15 days | Fri 16/9/22 | Fri 30/9/22 | | | |
| 369 | Section G (iii) - FS Modification works along South Seafront Road at Area F15 | 183 days | Fri 1/4/22 | Fri 30/9/22 | | | |
| 370 | Area Possession & Clearance after handover from other | 45 days | Fri 1/4/22 | Sun 15/5/22 | | | |
| 371 | Subletting / Fabrication / Delivery | 21 days | Fri 1/4/22 | Thu 21/4/22 | | | |
| 372 | Temporary Traffic Arrangement approval | 14 days | Fri 1/4/22 | Thu 14/4/22 | | | |
| 373 | Utilities scanning and expose existing FS | 14 days | Fri 15/4/22 | Thu 28/4/22 | | | |
| 374 | Determine new FS alignment | 21 days | Fri 29/4/22 | Thu 19/5/22 | | | |
| 375 | Submission to FSD | 14 days | Fri 20/5/22 | Thu 2/6/22 | | | |
| 376 | Modification of FS | 60 days | Fri 3/6/22 | Mon 1/8/22 | | | |
| 377 | Backfill and reinstatement + report to FSD | 60 days | Tue 6/8/22 | Fri 18/9/22 | | | |
| 378 | Section G (iv) - 275KV cable trenches and External Works at Area F16 | 518 days | Sat 1/5/21 | Fri 30/9/22 | | | |
| 379 | Area Possession & Clearance | 60 days | Sat 1/5/21 | Tue 29/6/21 | | | |
| 380 | Subletting / Fabrication / Delivery | 210 days | Wed 17/11/21 | Tue 14/6/22 | | | |
| 381 | Temporary Traffic Arrangement approval | 60 days | Sat 1/5/21 | Tue 29/6/21 | | | |
| 382 | Removal of aboveground services | 60 days | Wed 30/6/21 | Sat 28/8/21 | | | |
| 383 | Utilities scanning and expose existing UG | 30 days | Sun 29/8/21 | Mon 27/9/21 | | | |
| 384 | Arrange of diversion existing UG utilities | 90 days | Tue 28/9/21 | Sun 26/12/21 | | | |
| 385 | Construct new cable trenches | 173 days | Mon 27/12/21 | Fri 17/6/22 | | | |
| 386 | Realignment / install new UG utilities | 60 days | Sat 18/6/22 | Tue 16/8/22 | | | |
| 387 | Backfill and reinstate + ready for cable laying by others | 45 days | Wed 17/8/22 | Mon 30/9/22 | | | |
| 388 | Section G (v) - Shunt Reactor Compound and External Works at Area F17 | 666 days | Fri 4/12/20 | Fri 30/9/22 | | | |
| 389 | Temporary Traffic Arrangement approval | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 390 | Subletting / Fabrication / Delivery | 100 days | Fri 25/12/20 | Sat 3/4/21 | | | |
| 391 | BD approval & consent for pipe pile installation | 90 days | Fri 4/3/20 | Wed 3/3/21 | | | |
| 392 | Area Possession & Clearance | 14 days | Thu 4/3/21 | Wed 17/3/21 | | | |
| 393 | Removal of aboveground services | 21 days | Thu 18/3/21 | Wed 7/4/21 | | | |
| 394 | Utilities scanning and expose existing UG | 15 days | Thu 8/4/21 | Thu 22/4/21 | | | |
| 395 | Arrange of diversion existing UG utilities | 45 days | Fri 23/4/21 | Sun 6/6/21 | | | |
| 396 | Install pipe piles | 61 days | Sun 23/5/21 | Thu 22/7/21 | | | |
| 397 | BA14 for pipepile and BD consent for ELS | 28 days | Fri 23/7/21 | Thu 19/8/21 | | | |
| 398 | Excavation & install earthing | 35 days | Fri 20/8/21 | Thu 23/9/21 | | | |
| 399 | Construct Pile Caps and Tie Beams | 45 days | Fri 24/9/21 | Sun 7/11/21 | | | |
| 400 | Backfill & Erect scaffold | 21 days | Mon 8/11/21 | Sun 28/11/21 | | | |
| 401 | Construction of SRC Walls | 75 days | Mon 29/11/21 | Fri 11/2/22 | | | |
| 402 | Wall finish and remove scaffolding | 24 days | Sat 12/2/22 | Mon 7/3/22 | | | |
| 403 | Construct new cable trenches | 60 days | Tue 8/3/22 | Fri 6/5/22 | | | |
| 404 | Install new UG Utilities, Backfill and reinstate + ready for cable laying by Others for DAX1 | 55 days | Thu 7/4/22 | Tue 31/5/22 | | | |
| 405 | Realignment / install new UG utilities (for DAX2, APX1 & APX3) | 117 days | Sat 7/5/22 | Wed 31/8/22 | | | |
| 406 | Backfill and reinstate + ready for cable laying by others (for DAX2, APX1, & APX3) | 30 days | Thu 11/9/22 | Wed 1/10/22 | | | |
| 407 | Section G (vi) - 275KV cable trenches and External Works at Area F18 | 397 days | Sat 1/5/21 | Wed 1/6/22 | | | |
| 408 | Temporary Traffic Arrangement approval | 45 days | Sat 1/5/21 | Mon 14/6/21 | | | |
| 409 | Subletting / Fabrication / Delivery | 60 days | Tue 15/6/21 | Fri 13/8/21 | | | |
| 410 | Area Possession & Clearance | 15 days | Sat 1/5/21 | Sat 15/5/21 | | | |
| 411 | Removal of aboveground services | 30 days | Sun 16/5/21 | Mon 14/6/21 | | | |
| 412 | Utilities scanning and expose existing UG | 45 days | Tue 15/6/21 | Thu 29/7/21 | | | |
| 413 | Arrange of diversion existing UG utilities | 60 days | Fri 30/7/21 | Mon 27/9/21 | | | |
| 414 | Construct new cable trenches | 172 days | Tue 28/9/21 | Fri 18/3/22 | | | |
| 415 | Realignment / install new UG utilities | 45 days | Sat 19/3/22 | Mon 25/2/22 | | | |
| 416 | Backfill and reinstate + ready for cable laying by others | 30 days | Tue 3/5/22 | Wed 1/6/22 | | | |
| 417 | Section G (vii) - Flood wall at No. 5 CW Intake Area along HUA at Area F20A | 521 days | Fri 4/12/20 | Sun 8/5/22 | | | |
| 418 | Area Possession & Clearance | 30 days | Fri 4/12/20 | Sat 21/1/21 | | | |
| 419 | Subletting / Fabrication / Delivery | 60 days | Fri 25/12/20 | Mon 22/2/21 | | | |
| 420 | Temporary Traffic Arrangement approval | 300 days | Fri 4/12/20 | Wed 29/9/21 | | | |

Contract No. 19/83002 Lamma Power Station Extension Civil and Building Works for Unit L12

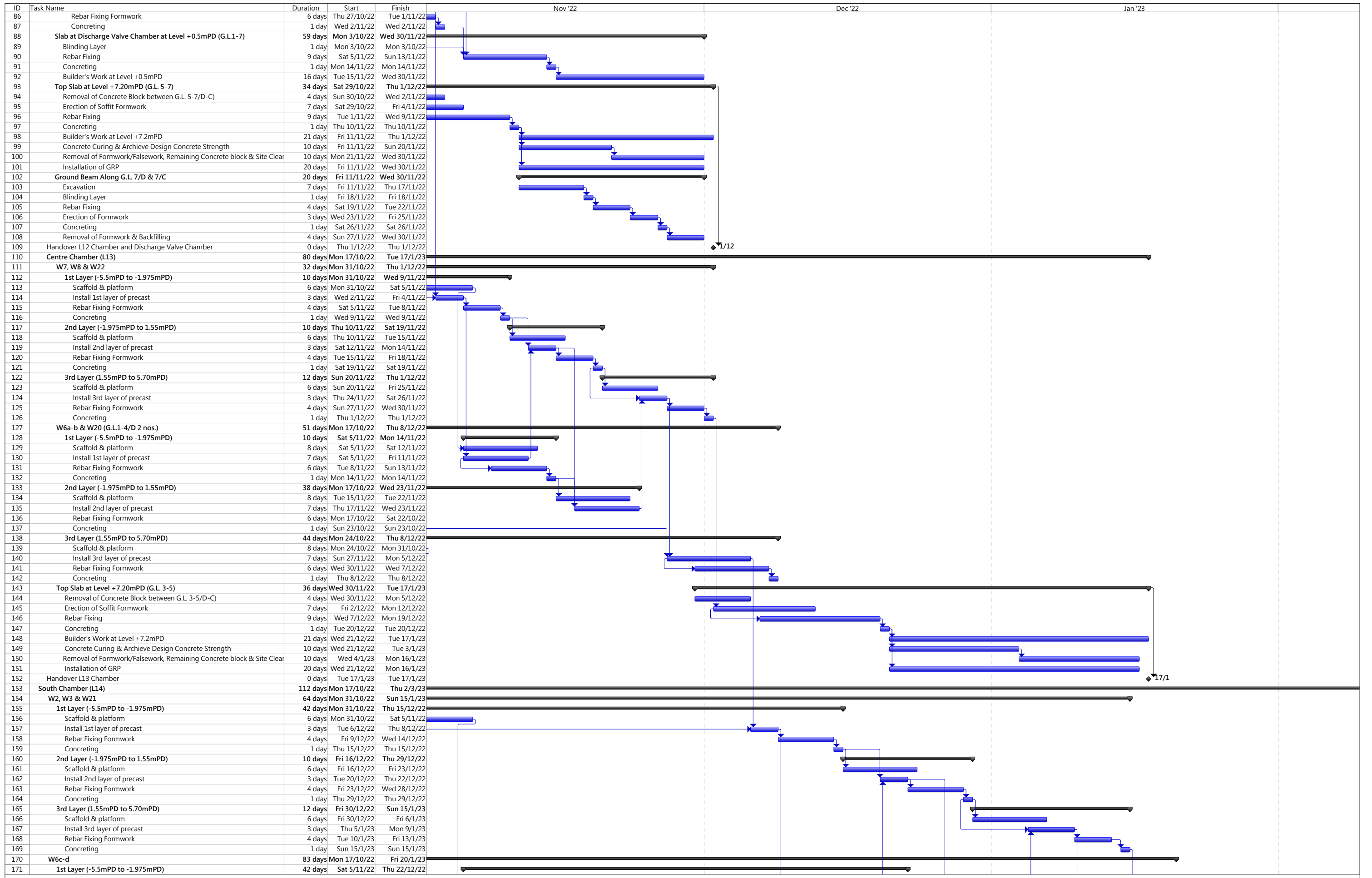
Master Programme

| ID | Task Name | Duration | Start | Finish | Nov 2022 | Dec 2022 | Jan 2023 |
|-----|--|-----------------|---------------------|---------------------|----------|----------|----------|
| 435 | Demolition of existing carriageway | 60 days | Fri 1/10/21 | Mon 29/11/21 | | | |
| 436 | Removal of aboveground services | 21 days | Tue 30/11/21 | Mon 20/12/21 | | | |
| 437 | Utilities scanning and expose existing UG | 21 days | Tue 21/12/21 | Mon 10/1/22 | | | |
| 438 | Arrange of diversion existing UG utilities | 30 days | Tue 11/1/22 | Wed 9/2/22 | | | |
| 439 | Install Sheetpiles | 55 days | Thu 10/2/22 | Tue 5/4/22 | | | |
| 440 | BA14 for sheetpile and BD consent for ELS | 28 days | Wed 6/4/22 | Tue 3/5/22 | | | |
| 441 | Excavation and construction of new Flood wall | 90 days | Wed 4/5/22 | Mon 1/8/22 | | | |
| 442 | Realignment / install new UG utilities | 30 days | Tue 2/8/22 | Wed 31/8/22 | | | |
| 443 | Backfill and construct new carriageway | 21 days | Thu 1/9/22 | Wed 21/9/22 | | | |
| 444 | Mis. Work for completion | 9 days | Thu 22/9/22 | Fri 30/9/22 | | | |
| 445 | Section G (ix) - Bund wall modification works at South Seafront Road at Area F21 | 316 days | Fri 4/12/20 | Fri 15/10/21 | | | |
| 446 | Area Possession & Clearance | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 447 | Subletting / Fabrication / Delivery | 90 days | Fri 25/12/20 | Wed 24/3/21 | | | |
| 448 | Temporary Traffic Arrangement approval | 165 days | Fri 4/12/20 | Mon 17/5/21 | | | |
| 449 | ELS BD approval & consent | 0 days | Thu 17/12/20 | Thu 17/12/20 | | | |
| 450 | Demolition of existing carriageway | 14 days | Tue 18/5/21 | Mon 31/5/21 | | | |
| 451 | Removal of aboveground services | 14 days | Tue 1/6/21 | Mon 14/6/21 | | | |
| 452 | Utilities scanning and expose existing UG | 21 days | Tue 15/6/21 | Mon 5/7/21 | | | |
| 453 | Arrange of diversion existing UG utilities (include FS pipe under 17/8002) | 40 days | Tue 6/7/21 | Sat 14/8/21 | | | |
| 454 | Excavation and expose existing bund wall & demolish | 18 days | Wed 28/7/21 | Sat 14/8/21 | | | |
| 455 | Construction new bund wall for road junction | 21 days | Sat 4/9/21 | Fri 24/9/21 | | | |
| 456 | Realignment / install new UG utilities (include FS pipe under 17/8002) | 60 days | Sun 1/10/21 | Wed 29/9/21 | | | |
| 457 | Backfill and construct new carriageway | 16 days | Thu 30/9/21 | Fri 15/10/21 | | | |
| 458 | Mis. Work for completion | 5 days | Mon 11/10/21 | Fri 15/10/21 | | | |
| 459 | Section G (x) - DAX Cable Diversion Works (from Part I to Part IV) | 758 days | Fri 4/12/20 | Sat 31/12/22 | | | |
| 460 | Temporary Traffic Arrangement approval | 14 days | Fri 4/12/20 | Thu 17/12/20 | | | |
| 461 | Subletting / Fabrication / Delivery | 90 days | Fri 25/12/20 | Wed 24/3/21 | | | |
| 462 | Area Possession & Clearance | 45 days | Fri 4/12/20 | Sun 17/1/21 | | | |
| 463 | Identification of existing cable trench | 7 days | Mon 18/1/21 | Sun 24/1/21 | | | |
| 464 | Part 1 Re-excavation works incl.construction of joint bay (at Water Reservoir Road) | 246 days | Mon 25/1/21 | Mon 27/9/21 | | | |
| 465 | Part 1 Re-excavation works incl.construction of joint bay (other than Reservoir road base on revised routing) | 310 days | Mon 25/1/21 | Tue 30/11/21 | | | |
| 466 | Part 2 Re-excavation works incl. joint bay | 120 days | Mon 1/11/21 | Mon 28/2/22 | | | |
| 467 | Part 3 Re-excavation works incl. joint bay | 242 days | Mon 1/11/21 | Thu 30/6/22 | | | |
| 468 | Part 4 Re-excavation works incl. joint bay & new oil tank pits | 92 days | Sat 1/10/22 | Sat 31/12/22 | | | |
| 469 | Backfill & Reinstatement Part 1 | 61 days | Mon 1/11/21 | Fri 31/12/21 | | | |
| 470 | Backfill & Reinstatement Part 2 | 61 days | Sun 1/5/22 | Thu 30/6/22 | | | |
| 471 | Backfill & Reinstatement Part 3 | 61 days | Thu 1/9/22 | Mon 31/10/22 | | | |
| 472 | Section H - All remaining works shall be completed for reporting completion to BD and ready for OP inspection (PS1.4.4) | 775 days | Wed 17/11/21 | Sun 31/12/23 | | | |
| 473 | Deferred works (MSB & HRSBG) Listed in PS 1.4.4 | 272 days | Wed 17/11/21 | Mon 15/8/22 | | | |
| 474 | Construction of L12 MSB roof between GL12-G to 12-H and 12-2 to 12-6 after the overhead crane installation by the Employer's Specialist Contractors | 38 days | Wed 17/11/21 | Fri 17/1/22 | | | |
| 475 | Construction of walls of L12 MSB below 1/F along GL 12-G from GL12-B to 12-C and the associated staircases including the enclosure walls between G/F and 1/F. The Contractor shall allow access for the Employer's Specialist Contractors to use the hoisting we | 92 days | Mon 16/5/22 | Mon 15/8/22 | | | |
| 476 | Provision in associated with hoisting well | 21 days | Mon 6/6/22 | Sun 26/6/22 | | | |
| 477 | Construction of internal partition wall at 1/F of L12 MSB along GL 12-C from GL 12-2 to 12-3 AND North Façade at 1/F of L12 MSB along GL 12-1 from GL 12-B to 12-C | 30 days | Sat 16/4/22 | Sun 15/5/22 | | | |
| 478 | Construction of steel frame and the associated Fire Services (F.S.) installations and installation of removable shelter at Transformer Area | 92 days | Mon 16/5/22 | Mon 15/8/22 | | | |
| 479 | Deferred works (DAX1 and DAX2) Listed in PS 1.4.4 | 334 days | Wed 1/2/23 | Sun 31/12/23 | | | |
| 480 | Backfilling of whole DAX1 compartment inside existing joint bay "STJ1Z" and the new oil tank pit A located aside existing joint bay "STJ1Z" | 59 days | Wed 1/2/23 | Fri 31/3/23 | | | |
| 481 | Re-excavation of whole DAX2 compartment inside existing joint bay "STJ1Z" | 61 days | Tue 1/8/23 | Sat 30/9/23 | | | |
| 482 | Backfilling of whole DAX2 compartment inside existing joint bay "STJ1Z" and the new oil tank pit B located aside existing joint bay "STJ1Z" | 61 days | Wed 1/11/23 | Sun 31/12/23 | | | |
| 483 | Deferred works (External Work) Listed in PS 1.4.4 | 121 days | Thu 1/12/22 | Fri 31/3/23 | | | |
| 484 | Final reinstatement of access roads and pavement surrounding and within L12 MSB and L12 HRSBG area | 62 days | Thu 1/12/22 | Tue 31/1/23 | | | |
| 485 | Installation of trench cover and road reinstatement of gas pipe and cable trenches within Area F5, F14, F16, F17 and F18. | 90 days | Sun 1/1/23 | Fri 31/3/23 | | | |
| 486 | Backfilling and road-reinstatement of 275kV cable trenches | 90 days | Sun 1/1/23 | Fri 31/3/23 | | | |
| 487 | All Remaining work ready for OP inspection | 0 days | Tue 28/2/23 | Tue 28/2/23 | | | |
| 488 | STATUTORY SUBMISSION, INSPECTION & APPROVAL | 560 days | Tue 16/11/21 | Mon 29/5/23 | | | |
| 489 | WSD Statutory Submission, Inspection and Approval WWO Part I to III Submission / Approval | 256 days | Tue 16/11/21 | Fri 29/7/22 | | | |
| 490 | WSD : Submit to WSD Form WWO 046 Part I to II - FOR ACB Building (for Ext Works at later stage) | 0 days | Tue 16/11/21 | Tue 16/11/21 | | | |
| 491 | WSD: Vetting Form WWO 046 Part I and II Submission | 90 days | Wed 17/11/21 | Mon 14/2/22 | | | |
| 492 | WSD: Issue of Form WWO 046 Part III by WSD - FOR ACB Building | 0 days | Tue 15/2/22 | Tue 15/2/22 | | | |
| 493 | WSD: Prepare for 1st Amendment for Plumbing Plan | 60 days | Tue 15/2/22 | Fri 15/4/22 | | | |
| 494 | WSD: Submit to WSD 1st Amendment for Plumbing Plan | 0 days | Fri 15/4/22 | Fri 15/4/22 | | | |
| 495 | WSD: Vetting of Plumbing Plan by WSD | 60 days | Sat 16/4/22 | Tue 14/6/22 | | | |
| 496 | WSD: 1st Approval for Plumbing Plan by WSD | 0 days | Tue 14/6/22 | Tue 14/6/22 | | | |
| 497 | WSD: Prepare and Submit for Final Amendment for Plumbing Plan | 45 days | Wed 15/6/22 | Fri 29/7/22 | | | |
| 498 | WSD: Vetting and Final Approval for Plumbing Plan by WSD | 0 days | Fri 29/7/22 | Fri 29/7/22 | | | |
| 499 | WSD Statutory Submission, Inspection and Approval WWO Part IV to V Fire Services Water Submission / Approval | 33 days | Fri 29/7/22 | Wed 31/8/22 | | | |
| 500 | WSD: Form WWO 046 Part IV Submission (FS) | 0 days | Fri 29/7/22 | Fri 29/7/22 | | | |
| 501 | WSD: WSD Received Form WWO046 Part IV and arrange for inspection (FS) | 7 days | Sat 30/7/22 | Fri 5/8/22 | | | |
| 502 | WSD: WSD Inspection (FS) | 7 days | Sat 6/8/22 | Fri 12/8/22 | | | |
| 503 | WSD: WWO 046 Part V Endorsement by WSD (FS) | 12 days | Sat 13/8/22 | Wed 24/8/22 | | | |
| 504 | WSD: WSD Processing Water Supply Connection Certificate (FS) | 7 days | Tue 25/8/22 | Wed 31/8/22 | | | |
| 505 | WSD: Issue by WSD Water Supply Connection Certificate (FS) | 0 days | Wed 31/8/22 | Wed 31/8/22 | | | |
| 506 | WSD Statutory Submission, Inspection and Approval WWO Part IV to V Potable / Flush Water Submission / Approval | 60 days | Fri 19/8/22 | Tue 18/10/22 | | | |
| 507 | WSD: Form WWO 046 Part IV Submission (Fresh/Flush) | 0 days | Fri 19/8/22 | Fri 19/8/22 | | | |
| 508 | WSD: WSD Acknowledge Form WWO 046 | 6 days | Sat 20/8/22 | Thu 25/8/22 | | | |
| 509 | WSD: WSD Inspection with Testing to lead (Fresh/Fluhs) | 12 days | Fri 26/8/22 | Tue 6/9/22 | | | |
| 510 | WSD: Cleansing/Disinfecting Water Tanks / Piping System (Fresh/Flush) | 6 days | Wed 7/9/22 | Mon 12/9/22 | | | |
| 511 | WSD: Collection of Sample for Testing at Accredited Lab (Fresh/Flush) | 12 days | Tue 13/9/22 | Sat 24/9/22 | | | |
| 512 | WSD: Accredited Lab Testing Report of Sample to WSD | 12 days | Sun 25/9/22 | Thu 6/10/22 | | | |
| 513 | WSD: Vetting of Test Report by WSD | 6 days | Fri 7/10/22 | Wed 12/10/22 | | | |
| 514 | WSD: Issue of WWO 046 Part V (Fresh/Flush) | 12 days | Wed 12/10/22 | Wed 12/10/22 | | | |
| 515 | WSD: WSD Processing WWO1005 Water Certification (Fresh/Flush) | 6 days | Thu 13/10/22 | Tue 18/10/22 | | | |
| 516 | WSD: Issue by WSD WWO 1005 Water Certification (Fresh/Flush) | 0 days | Tue 18/10/22 | Tue 18/10/22 | | | |
| 517 | EMSD Lift Statutory Submission, Inspection and Approval | 45 days | Sat 26/3/22 | Mon 9/5/22 | | | |
| 518 | EMSD: Submission of Lift Form LES to EMSD | 12 days | Sat 26/3/22 | Sat 6/4/22 | | | |
| 519 | EMSD: EMSD Makes arrangement for Lift Installation | 5 days | Thu 7/4/22 | Mon 11/4/22 | | | |
| 520 | EMSD: EMSD Inspection to Lift Installation | 14 days | Tue 12/4/22 | Mon 25/4/22 | | | |
| 521 | EMSD: Processing Lift Certificate (Form LE6) | 0 days | Tue 26/4/22 | Mon 9/5/22 | | | |
| 522 | EMSD: Lift Issuance of Form 6 (Lift Certificate) | 0 days | Mon 9/5/22 | Mon 9/5/22 | | | |
| 523 | HKE Transformer Final Inspection | 120 days | Thu 30/6/22 | Thu 27/10/22 | | | |
| 524 | TX Room: Invite HKE For Transformer Room Inspection | 7 days | Thu 30/6/22 | Wed 6/7/22 | | | |
| 525 | TX Room: Give Access to Transformer Room for HKE Contractor | 0 days | Wed 6/7/22 | Wed 6/7/22 | | | |
| 526 | TX Room: Move-IN HKE Transformer Equipments | 5 days | Thu 7/7/22 | Mon 11/7/22 | | | |
| 527 | TX Room: Install HKE Transformer, MEP Works & Testing | 90 days | Tue 13/7/22 | Sun 31/9/22 | | | |
| 528 | TX Room: HKE Power Energization / Inspection | 6 days | Mon 10/10/22 | Sat 15/10/22 | | | |
| 529 | TX Room: Metering Installation | 12 days | Sun 16/10/22 | Thu 27/10/22 | | | |
| 530 | TX Room: HKE Power-ON Date | 0 days | Thu 27/10/22 | Thu 27/10/22 | | | |
| 531 | DSD Drainage Completion Memo | 65 days | Sun 2/10/22 | Mon 9/12/22 | | | |
| 532 | DSD: CCTV Survey Report on Completed Drainage | 30 days | Sun 2/10/22 | Mon 31/10/22 | | | |
| 533 | DSD: Submitted CCTV Report & Form HPB1 of Completed Drainage to DSD For Technical Audit | 7 days | Tue 1/11/22 | Mon 7/11/22 | | | |
| 534 | DSD: Completed Drainage System including TMC Inspection/Technical Audit by DSD | 14 days | Tue 8/11/22 | Mon 21/11/22 | | | |
| 535 | DSD: Preparation of Drainage Connection Completion Memo by DSD | 14 days | Tue 22/11/22 | Mon 5/12/22 | | | |
| 536 | DSD: Issue of Drainage Connection Completion Memo by DSD | 0 days | Mon 5/12/22 | Mon 5/12/22 | | | |
| 537 | EPD Submission, Inspection and Approval | 60 days | Thu 30/6/22 | Mon 29/8/22 | | | |
| 538 | EPD: License Application to EPD under APCO (Cap 311) for Generator Sets | 0 days | Thu 30/6/22 | Thu 30/6/22 | | | |
| 539 | EPD: Vetting of Application by EPD under APCO (Cap 311) for Generator Sets | 60 days | Fri 1/7/22 | Mon 29/8/22 | | | |
| 540 | EPD: Approval from EPD under APCO (Cap 311) for Generator Sets Installation | 0 days | Mon 29/8/22 | Mon 29/8/22 | | | |
| 541 | FSD VAC Statutory Submission, Inspection and Approval | 150 days | Wed 20/7/22 | Fri 16/1/22 | | | |
| 542 | Preparation of FSD VAC Drawings and Submission to HEC | 60 days | Wed 20/7/22 | Sat 17/9/22 | | | |
| 543 | HEC: Review and Approval | 30 days | Sun 18/9/22 | Mon 17/10/22 | | | |
| 544 | Preparation of VAC Drawings and Submission to FSD | 30 days | Tue 18/10/22 | Wed 16/11/22 | | | |
| 545 | FSD: Review and Approval | 30 days | Thu 17/11/22 | Fri 16/12/22 | | | |
| 546 | FSD Statutory Submission, Inspection and Approval | 91 days | Tue 29/2/23 | Mon 29/5/23 | | | |
| 547 | Testing and Commissioning (Individual System - FSI Related) | 45 days | Tue 28/2/23 | Thu 13/4/23 | | | |
| 548 | FSD: All Sections FS Ingration Test by NSC, BS | 15 days | Fri 14/4/23 | Fri 28/4/23 | | | |
| 549 | FSD: Completion of FS Ingration Test by NSC, BS for FS314/501 | 0 days | Fri 28/4/23 | Fri 28/4/23 | | | |
| 550 | FSD: Submit Form 213/314 & Form 501 Request for Inspection | 0 days | Fri 28/4/23 | Fri 28/4/23 | | | |
| 551 | FSD: FSD Makes Arrangement for Inspection | 7 days | Sat 29/4/23 | Fri 5/5/23 | | | |
| 552 | FSD: FSD Inspection | 12 days | Sat 6/5/23 | Wed 17/5/23 | | | |
| 553 | FSD: Completion of FS Inspection | 0 days | Wed 17/5/23 | Wed 17/5/23 | | | |
| 554 | FSD: FSD Processing FS Certificate Form 172 | 12 days | Thu 18/5/23 | Mon 29/5/23 | | | |
| 555 | FSD: Issue of Fire Services FS Certificate Form 172 | 0 days | Mon 29/5/23 | Mon 29/5/23 | | | |
| 556 | PRACTICAL COMPLETION | 216 days | Tue 30/5/23 | Sun 31/12/23 | | | |
| 557 | BD Inspection | 97 days | Tue 30/5/23 | Sun 3/9/23 | | | |
| 558 | BD: Application Form BA13 for OP Application | 21 days | Tue 30/5/23 | Mon 19/6/23 | | | |
| 559 | BD: BD Inspection Date | 15 days | Tue 20/6/23 | Tue 4/7/23 | | | |
| 560 | BD: Reinspection date with defects and rectification works | 60 days | Wed 5/7/23 | Sat 2/9/23 | | | |
| 561 | BD: Obtain Occupation Permit (OP) from BD | 4 days | Sun 3/9/23 | Sun 3/9/23 | | | |
| 562 | As-Built Drawings & Handover Documentation | 120 days | Wed 14/6/23 | Wed 11/10/23 | | | |
| 563 | Prepare and Submit As-Built Drawings & Handover Documentation | 45 days | Wed 14/6/23 | Fri 28/7/23 | | | |
| 564 | Review and Approval | 45 days | Sat 29/7/23 | Mon 11/9/23 | | | |
| 565 | As-Built Drawings & Handover Documentation - Revision by MC | 30 days | Tue 12/9/23 | Wed 11/10/23 | | | |
| 566 | Revised As | | | | | | |

| ID | Task Name | Duration | Start | Finish | Nov '22 | Dec '22 | Jan '23 |
|----|---|-----------------|---------------------|---------------------|---------|---------|---------|
| 1 | 19-83014 - Civil Works for No. 5 C.W. Intake and Cable Bridge at Lamna Power Station Extension | 199 days | Fri 22/7/22 | Thu 2/3/23 | | | |
| 2 | No. 5 C.W. Intake | 129 days | Fri 22/7/22 | Sun 27/11/22 | | | |
| 3 | Delivery of Precast No. 5 Intake Chamber | 3 days | Fri 22/7/22 | Sun 24/7/22 | | | |
| 4 | Installation of Precast No. 5 Intake Chamber | 2 days | Mon 25/7/22 | Tue 26/7/22 | | | |
| 5 | Prepare formation level for reinstall culvert | 18 days | Wed 27/7/22 | Sat 13/8/22 | | | |
| 6 | Typhoon | 3 days | Fri 12/8/22 | Sun 14/8/22 | | | |
| 7 | Reinstate of culvert | 7 days | Mon 15/8/22 | Sun 21/8/22 | | | |
| 8 | Reinstate of seawall block | 28 days | Mon 22/8/22 | Sun 18/9/22 | | | |
| 9 | Backfill at East Side | 15 days | Mon 19/9/22 | Mon 3/10/22 | | | |
| 10 | Reinstate of seawall coping | 45 days | Tue 4/10/22 | Thu 17/11/22 | | | |
| 11 | Reinstate of storm drain | 45 days | Tue 4/10/22 | Thu 17/11/22 | | | |
| 12 | Temporary backfill for access at east of Intake Chamber | 10 days | Fri 18/11/22 | Sun 27/11/22 | | | |
| 13 | In-situ Construction Work for Intake Chamber | 138 days | Sat 20/8/22 | Tue 17/1/23 | | | |
| 14 | Backfilling Work between Pipepile and Intake Chamber External Wall | 19 days | Sat 20/8/22 | Wed 7/9/22 | | | |
| 15 | Backfilling upto +2.80mPD - North side (Between pipepile & W13) | 14 days | Sat 20/8/22 | Fri 2/9/22 | | | |
| 16 | Backfilling upto +2.80mPD - South side (Between pipepile & W1) | 5 days | Sat 3/9/22 | Wed 7/9/22 | | | |
| 17 | Backfilling upto +1.40mPD - West side (Between pipepile & W19) | 5 days | Sat 3/9/22 | Wed 7/9/22 | | | |
| 18 | Backfilling at Discharge Valve Chamber to -0.5mPD | 10 days | Fri 9/9/22 | Sun 18/9/22 | | | |
| 19 | Backfill from -5.50mPD to -1.50mPD for Discharge Valve Chamber | 10 days | Fri 9/9/22 | Sun 18/9/22 | | | |
| 20 | Install Concrete Block Counter Weight | 25 days | Tue 23/8/22 | Fri 16/9/22 | | | |
| 21 | Installation of Concrete Block inside/ on intake chamber/ culvert | 25 days | Tue 23/8/22 | Fri 16/9/22 | | | |
| 22 | Removal of Internal Strut/ King Post | 28 days | Sat 20/8/22 | Fri 16/9/22 | | | |
| 23 | Removal of Internal Strut/ King Post | 28 days | Sat 20/8/22 | Fri 16/9/22 | | | |
| 24 | Dewatering | 3 days | Tue 20/9/22 | Thu 22/9/22 | | | |
| 25 | Dewatering in Chamber Internal Side | 3 days | Tue 20/9/22 | Thu 22/9/22 | | | |
| 26 | Corrosion Protection of Rebar | 8 days | Fri 23/9/22 | Fri 30/9/22 | | | |
| 27 | Corrosion Protection of Rebar | 8 days | Fri 23/9/22 | Fri 30/9/22 | | | |
| 28 | Construction of Intake Chamber External Wall to Level +5.70mPD | 48 days | Sun 28/8/22 | Fri 14/10/22 | | | |
| 29 | Erection of Scaffolding Supporting Bracket | 28 days | Sun 28/8/22 | Sat 24/9/22 | | | |
| 30 | North Side - W13 (Chamber Internal Side) | 6 days | Sun 28/8/22 | Fri 2/9/22 | | | |
| 31 | South Side - W1 (Chamber Internal Side) | 6 days | Fri 2/9/22 | Wed 7/9/22 | | | |
| 32 | West Side - W19 (Chamber Internal Side) | 6 days | Mon 19/9/22 | Sat 24/9/22 | | | |
| 33 | Installation of Scaffolding | 27 days | Sat 3/9/22 | Thu 29/9/22 | | | |
| 34 | Chamber Internal Side | 27 days | Sat 3/9/22 | Thu 29/9/22 | | | |
| 35 | North Side - W13 | 5 days | Sat 3/9/22 | Wed 7/9/22 | | | |
| 36 | South Side - W1 | 5 days | Thu 8/9/22 | Mon 12/9/22 | | | |
| 37 | West Side - W19 | 5 days | Sun 25/9/22 | Thu 29/9/22 | | | |
| 38 | Chamber External Side | 21 days | Sat 3/9/22 | Fri 23/9/22 | | | |
| 39 | North Side - W13 | 5 days | Sat 3/9/22 | Wed 7/9/22 | | | |
| 40 | South Side - W1 | 5 days | Thu 8/9/22 | Mon 12/9/22 | | | |
| 41 | West Side - W19 | 5 days | Mon 19/9/22 | Fri 23/9/22 | | | |
| 42 | Rebar Fixing & Formwork | 36 days | Thu 8/9/22 | Thu 13/10/22 | | | |
| 43 | North Side - W13 | 21 days | Thu 8/9/22 | Wed 28/9/22 | | | |
| 44 | South Side - W1 | 21 days | Tue 13/9/22 | Mon 3/10/22 | | | |
| 45 | West Side - W19 | 14 days | Fri 30/9/22 | Thu 13/10/22 | | | |
| 46 | Concreting | 16 days | Thu 29/9/22 | Fri 14/10/22 | | | |
| 47 | North Side - W13 | 1 day | Thu 29/9/22 | Thu 29/9/22 | | | |
| 48 | South Side - W1 | 1 day | Tue 4/10/22 | Tue 4/10/22 | | | |
| 49 | West Side - W19 | 1 day | Fri 14/10/22 | Fri 14/10/22 | | | |
| 50 | Excavation and installation of CW culvert pipes | 47 days | Sat 15/10/22 | Wed 30/11/22 | | | |
| 51 | Excavation for CW culverts pipe | 14 days | Sat 15/10/22 | Fri 28/10/22 | | | |
| 52 | Installation of CW culvert pipes | 7 days | Sat 29/10/22 | Fri 4/11/22 | | | |
| 53 | RC works after installation of puddle flange | 21 days | Sat 5/11/22 | Fri 25/11/22 | | | |
| 54 | Backfill at west of Intake Chamber | 5 days | Sat 26/11/22 | Wed 30/11/22 | | | |
| 55 | North Chamber (L12) | 70 days | Fri 23/9/22 | Thu 1/12/22 | | | |
| 56 | W11, W12 & W23 | 36 days | Fri 23/9/22 | Fri 28/10/22 | | | |
| 57 | 1st Layer (-5.5mPD to -1.975mPD) | 16 days | Fri 23/9/22 | Sat 8/10/22 | | | |
| 58 | Scaffold & platform | 12 days | Fri 23/9/22 | Tue 4/10/22 | | | |
| 59 | Install 1st layer of precast | 3 days | Sat 1/10/22 | Mon 3/10/22 | | | |
| 60 | Rebar Fixing Formwork | 4 days | Tue 4/10/22 | Fri 7/10/22 | | | |
| 61 | Concreting | 1 day | Sat 8/10/22 | Sat 8/10/22 | | | |
| 62 | 2nd Layer (-1.975mPD to 1.55mPD) | 10 days | Sun 9/10/22 | Tue 18/10/22 | | | |
| 63 | Scaffold & platform | 6 days | Sun 9/10/22 | Fri 14/10/22 | | | |
| 64 | Install 2nd layer of precast | 3 days | Tue 11/10/22 | Thu 13/10/22 | | | |
| 65 | Rebar Fixing Formwork | 4 days | Fri 14/10/22 | Mon 17/10/22 | | | |
| 66 | Concreting | 1 day | Tue 18/10/22 | Tue 18/10/22 | | | |
| 67 | 3rd Layer (1.55mPD to 5.70mPD) | 10 days | Wed 19/10/22 | Fri 28/10/22 | | | |
| 68 | Scaffold & platform | 6 days | Wed 19/10/22 | Mon 24/10/22 | | | |
| 69 | Install 3rd layer of precast | 3 days | Fri 21/10/22 | Sun 23/10/22 | | | |
| 70 | Rebar Fixing Formwork | 4 days | Mon 24/10/22 | Thu 27/10/22 | | | |
| 71 | Concreting | 1 day | Fri 28/10/22 | Fri 28/10/22 | | | |
| 72 | W10a-d & W20 (G.L.4-7/D 3 nos.) | 30 days | Tue 4/10/22 | Wed 2/11/22 | | | |
| 73 | 1st Layer (-5.5mPD to -1.975mPD) | 10 days | Tue 4/10/22 | Thu 13/10/22 | | | |
| 74 | Scaffold & platform | 8 days | Tue 4/10/22 | Tue 11/10/22 | | | |
| 75 | Install 1st layer of precast | 7 days | Tue 4/10/22 | Mon 10/10/22 | | | |
| 76 | Rebar Fixing Formwork | 6 days | Fri 7/10/22 | Wed 12/10/22 | | | |
| 77 | Concreting | 1 day | Thu 13/10/22 | Thu 13/10/22 | | | |
| 78 | 2nd Layer (-1.975mPD to 1.55mPD) | 10 days | Fri 14/10/22 | Sun 23/10/22 | | | |
| 79 | Scaffold & platform | 8 days | Fri 14/10/22 | Fri 21/10/22 | | | |
| 80 | Install 2nd layer of precast | 7 days | Fri 14/10/22 | Thu 20/10/22 | | | |
| 81 | Rebar Fixing Formwork | 6 days | Mon 17/10/22 | Sat 22/10/22 | | | |
| 82 | Concreting | 1 day | Sun 23/10/22 | Sun 23/10/22 | | | |
| 83 | 3rd Layer (1.55mPD to 5.70mPD) | 10 days | Mon 24/10/22 | Wed 2/11/22 | | | |
| 84 | Scaffold & platform | 8 days | Mon 24/10/22 | Mon 31/10/22 | | | |
| 85 | Install 3rd layer of precast | 7 days | Mon 24/10/22 | Sun 30/10/22 | | | |

Project: 19-83014 - No. 5 Intake and Cable Br
 Date: 12 Aug 2022
 Rev. 8 - Programme for No. 5 C.W. Intake (D)

| | | | | | | | | | | | |
|-----------|--|-----------------|--|--------------------|--|------------------|--|-----------------------|--|-------------|--|
| Task | | Summary | | External Milestone | | Inactive Summary | | Manual Summary Rollup | | Finish-only | |
| Split | | Project Summary | | Inactive Task | | Manual Task | | Manual Summary | | Progress | |
| Milestone | | External Tasks | | Inactive Milestone | | Duration-only | | Start-only | | Deadline | |



Project: 19-83014 - No. 5 Intake and Cable Br
 Date: 12 Aug 2022
 Rev. 8 - Programme for No. 5 C.W. Intake (D)

| | | | | | | | | | | | |
|-----------|--|-----------------|--|--------------------|--|------------------|--|-----------------------|--|-------------|--|
| Task | | Summary | | External Milestone | | Inactive Summary | | Manual Summary Rollup | | Finish-only | |
| Split | | Project Summary | | Inactive Task | | Manual Task | | Manual Summary | | Progress | |
| Milestone | | External Tasks | | Inactive Milestone | | Duration-only | | Start-only | | Deadline | |

| ID | Task Name | Duration | Start | Finish |
|-----|--|----------------|---------------------|--------------------|
| 172 | Scaffold & platform | 8 days | Sat 5/11/22 | Sat 12/11/22 |
| 173 | Install 1st layer of precast | 7 days | Fri 9/12/22 | Mon 19/12/22 |
| 174 | Rebar Fixing Formwork | 6 days | Wed 14/12/22 | Wed 21/12/22 |
| 175 | Concreting | 1 day | Thu 22/12/22 | Thu 22/12/22 |
| 176 | 2nd Layer (-1.975mPD to 1.55mPD) | 70 days | Mon 17/10/22 | Wed 4/1/23 |
| 177 | Scaffold & platform | 8 days | Fri 23/12/22 | Tue 3/1/23 |
| 178 | Install 2nd layer of precast | 7 days | Tue 27/12/22 | Wed 4/1/23 |
| 179 | Rebar Fixing Formwork | 6 days | Mon 17/10/22 | Sat 22/10/22 |
| 180 | Concreting | 1 day | Sun 23/10/22 | Sun 23/10/22 |
| 181 | 3rd Layer (1.55mPD to 5.70mPD) | 76 days | Mon 24/10/22 | Fri 20/1/23 |
| 182 | Scaffold & platform | 8 days | Mon 24/10/22 | Mon 31/10/22 |
| 183 | Install 3rd layer of precast | 7 days | Tue 10/1/23 | Tue 17/1/23 |
| 184 | Rebar Fixing Formwork | 6 days | Fri 13/1/23 | Thu 19/1/23 |
| 185 | Concreting | 1 day | Fri 20/1/23 | Fri 20/1/23 |
| 186 | Top Slab at Level +7.20mPD (G.L. 1-3) | 35 days | Sun 15/1/23 | Thu 2/3/23 |
| 187 | Removal of Concrete Block between G.L. 1-3/D-C) | 4 days | Sun 15/1/23 | Wed 18/1/23 |
| 188 | Erection of Soffit Formwork | 7 days | Mon 16/1/23 | Tue 24/1/23 |
| 189 | Rebar Fixing | 9 days | Thu 19/1/23 | Tue 31/1/23 |
| 190 | Concreting | 1 day | Wed 1/2/23 | Wed 1/2/23 |
| 191 | Builder's Work at Level +7.2mPD | 21 days | Thu 2/2/23 | Thu 2/3/23 |
| 192 | Concrete Curing & Archieve Design Concrete Strength | 10 days | Thu 2/2/23 | Wed 15/2/23 |
| 193 | Removal of Formwork/Falsework, Remaining Concrete block & Site Clearan | 10 days | Thu 16/2/23 | Wed 1/3/23 |
| 194 | Installation of GRP | 20 days | Thu 2/2/23 | Wed 1/3/23 |
| 195 | Handover L14 Chamber | 0 days | Thu 2/3/23 | Thu 2/3/23 |

Project: 19-83014 - No. 5 Intake and Cable Br
 Date: 12 Aug 2022
 Rev. 8 - Programme for No. 5 C.W. Intake (D)

| | | | | | | | | | | | | | |
|-----------|--|-----------------|--|--------------------|--|------------------|--|-------------|--|-----------------------|--|-------------|--|
| Task | | Summary | | External Milestone | | Inactive Summary | | Manual Task | | Manual Summary Rollup | | Finish-only | |
| Split | | Project Summary | | Inactive Task | | Duration-only | | Start-only | | Manual Summary | | Progress | |
| Milestone | | External Tasks | | Inactive Milestone | | | | | | Deadline | | | |

Monthly Waste Flow Table for October 2022

Project: Lamma Power Station Extension Civil and Building Works for Unit L12

Contractor: Paul Y. Construction Company, Limited

Record by: Ben Lam

Year of Record: 2020, 2021 & 2022

| MM.YYYY | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | | | Actual Quantities of Non-inert C&D Materials Generated Monthly | | | | | | |
|----------|--|--------------------------------|--|---|-------------------------|--------------------------|-------------------------|--------------------------------|--|--------------------------------------|--|-----------------------------------|---|---|----------------------------|
| | Excavated Materials | | | | Non-excavated Materials | | | | Metals (steel bar / metal strip) ⁽¹⁾ | Metals (aluminum can) ⁽¹⁾ | Paper / cardboard packaging ⁽¹⁾ | Plastics ^{(1) & (4)} | Chemical waste (wasted lubricant oil/oil container) | Chemical waste (wasted lubricant oil/oil container) | Other, e.g. general refuse |
| | Disposed in Public Fill | Disposed in Sorting Facilities | Others (e.g Reused in the Contract / Other Projects) | Broken Concrete or Construction Waste Collected by Recycled Company | Reused in the Contract | Reused in other Projects | Disposed in Public Fill | Disposed in Sorting Facilities | | | | | | | |
| | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | | | | | | | |
| Dec 2020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan 2021 | 0.00 | 0.00 | 21020.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.82 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb 2021 | 0.00 | 0.00 | 18083.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar 2021 | 0.00 | 0.00 | 9048.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.69 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.61 |
| Apr 2021 | 0.00 | 0.00 | 3205.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 28.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.45 |
| May 2021 | 0.00 | 0.00 | 6267.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 34.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jun 2021 | 0.00 | 0.00 | 6555.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 26.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.03 |
| Jul 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.97 |
| Aug 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.49 |
| Sep 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 | 0.28 | 0.00 | 49.15 |
| Oct 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.47 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 62.08 |
| Nov 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 34.17 |
| Dec 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 52.18 |
| Jan 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 42.73 |
| Feb 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.62 |
| Mar 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.70 |
| Apr 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 52.83 |
| May 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 38.60 |
| Jun 2022 | 0.00 | 0.00 | 6645.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 37.38 |
| Jul 2022 | 0.00 | 0.00 | 4710.98 | 0.00 | 0.00 | 0.00 | 0.00 | 6.58 | 11.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.22 |
| Aug 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 0.42 | 0.00 | 21.74 |
| Sep 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 48.57 |
| Oct 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 44.71 |
| Total | 0.00 | 0.00 | 75536.55 | 0.00 | 0.00 | 0.00 | 0.00 | 17.79 | 271.49 | 0.00 | 0.25 | 0.00 | 1.00 | 0.70 | 600.23 |

| Total Inert C&D Waste Materials Generated | Non-inert C&D Materials | | |
|---|-------------------------|-----------------------------------|----------------|
| | C&D Materials Recycled | C&D Waste Disposed of at Landfill | Chemical Waste |
| 75554.34 tonnes | 271.74 tonnes | 600.23 tonnes | 0.70 tonnes |

Where (A) Inert C&D materials include bricks, concrete, building debris, rubble and excavated spoil. In total, 75554.34 tonnes of inert C&D material were generated from the Project, of which 75536.55 tonnes were reused in this and other contracts, and the remaining 5.51 tonnes were disposed as public fill to Fill Banks / Sorting Facilities.

(b) Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. Metals generated from the Project were grouped into construction wastes as the materials were not disposed of with others at the public fill.

(c) 0 kg of metals, 0 kg of papers/ cardboard packing and 0 kg of plastics were sent to recyclers for recycling during the reporting period.

(d) Construction wastes other than metals, paper/cardboard packaging, plastics and chemicals were disposed of at Landfill.

- Notes:
- (1) metal, paper & plastic were collected by recycler
 - (2) The performance target of waste recycling are specified in the Contract.
 - (3) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (4) Plastics refer to plastic bottles/ containers, plastic/ foam from packaging material.
 - (5) Broken concrete for recycling into aggregates.
 - (6) Disposal of inert waste to public fill or sorting facilities will NOT be considered as recycled waste.

Monthly Waste Flow Table for October 2022

Project: Civil Works for No. 5 C.W. Intake and Cable Bridge at Lamma Power Station Extension

Contractor: Paul Y. Construction Company, Limited

Record by: Ben Lam

Year of Record: 2020, 2021 & 2022

| MM.YYYY | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | | | Actual Quantities of Non-inert C&D Materials Generated Monthly | | | | | | |
|----------|--|--------------------------------|--|---|-------------------------|--------------------------|-------------------------|--------------------------------|--|--------------------------------------|--|-----------------------------------|---|---|----------------------------|
| | Excavated Materials | | | | Non-excavated Materials | | | | Metals (steel bar / metal strip) ⁽¹⁾ | Metals (aluminum can) ⁽¹⁾ | Paper / cardboard packaging ⁽¹⁾ | Plastics ^{(1) & (4)} | Chemical waste (wasted lubricant oil/oil container) | Chemical waste (wasted lubricant oil/oil container) | Other, e.g. general refuse |
| | Disposed in Public Fill | Disposed in Sorting Facilities | Others (e.g Reused in the Contract / Other Projects) | Broken Concrete or Construction Waste Collected by Recycled Company | Reused in the Contract | Reused in other Projects | Disposed in Public Fill | Disposed in Sorting Facilities | | | | | | | |
| | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000kg) | | | | | | | |
| Oct 2020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov 2020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec 2020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.49 |
| Apr 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 0.42 | 4.85 |
| May 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 22.61 |
| Jun 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 37.84 |
| Oct 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.93 |
| Nov 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec 2021 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 46.25 |
| Feb 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.45 |
| Mar 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 29.86 |
| Apr 2022 | 0.00 | 0.00 | 15076.75 | 0.00 | 0.00 | 0.00 | 0.00 | 10.27 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 43.60 |
| May 2022 | 0.00 | 0.00 | 29148.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 54.64 |
| Jun 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 11.79 |
| Jul 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 24.04 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 35.90 |
| Aug 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 41.91 |
| Sep 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 51.26 |
| Oct 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 37.87 |
| Total | 0.00 | 0.00 | 44225.70 | 0.00 | 0.00 | 0.00 | 0.00 | 34.31 | 4.21 | 0.00 | 0.00 | 0.00 | 0.60 | 0.42 | 464.25 |

| Total Inert C&D Waste Materials Generated | Non-inert C&D Materials | | |
|---|-------------------------|-----------------------------------|----------------|
| | C&D Materials Recycled | C&D Waste Disposed of at Landfill | Chemical Waste |
| 44260.01 tonnes | 4.21 tonnes | 464.25 tonnes | 0.42 tonnes |

Where (A) Inert C&D materials include bricks, concrete, building debris, rubble and excavated spoil. In total, 44260.01 tonnes of inert C&D material were generated from the Project, of which 44225.70 tonnes were reused in this and other contracts, and the remaining 10.27 tonnes were disposed as public fill to Fill Banks / Sorting Facilities.

(b) Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. Metals generated from the Project were grouped into construction wastes as the materials were not disposed of with others at the public fill.

(c) 0 kg of metals, 0 kg of papers/ cardboard packing and 0 kg of plastics were sent to recyclers for recycling during the reporting period.

(d) Construction wastes other than metals, paper/cardboard packaging, plastics and chemicals were disposed of at Landfill.

- Notes:
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 - (5) Broken concrete for recycling into aggregates.

