FUGRO TECHNICAL SERVICES LIMITED Fugro Development Centre, Tel : +852 2450 8233 5 Lok Yi Street, Tai Lam, : +852 2450 6138 Fax Tuen Mun, N.T., E-mail : matlab@fugro.com Hong Kong. Website : www.fugro.com



QUARTERLY ENVIRONMENTAL MONITORING & AUDIT SUMMARY REPORT

December 2017 – February 2018

- Client : SANG HING - KULY JOINT VENTURE
- Contract Name : Castle Peak Road Trunk Sewer and Tuen Mun Village Sewerage (Sewage Pumping Station at Lok Chui Street near Castle Peak Villas)
- Contract No. : DC/2014/01
- EP No. : EP-068/2000/A
- Title of Project : Sewage Pumping Stations at Tai Lam Chung Tsuen Luen On San Tsuen, Tai Lam Valley and Lok Chui Street near Castle Peak Villas under the scope of "Tuen Mun Sewerage -Eastern Coastal Sewerage Extension"
- **Report No.** : 0367/15/ED/1001

Prepared by 2

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Wingo H. W. So

Reviewed by

Certified by

Cyrus C. Y. Lai

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Colin K. L. Yung **Environmental Team Leader Fugro Technical Services Limited**

9 March 2018



Drainage Services Department 42/F., Revenue Tower 5 Gloucester Road Wan Chai Hong Kong Your reference:

Our reference:

HKDSD202/50/104884

Date: 14 March 2018

Attention: Ms Winnie Ng

BY EMAIL & POST (email: wyng03@dsd.gov.hk)

Dear Sirs

Agreement No.: PM 08/2014 Services for Independent Environmental Checker for Construction of Lok Chui Street Sewage Pumping Station Verification of Quarterly EM&A Summary Report (December 2017 – February 2018)

We refer to email of 9 March 2018 attaching a Quarterly EM&A Summary Report (December 2017 - February 2018) for the captioned project prepared by the ET.

We have no comment and hereby verify the Quarterly EM&A Summary Report (December 2017 - February 2018).

Please do not hesitate to contact the undersigned or our Ms Lucita Lee at 2618 2831 should you have any queries.

Yours faithfully ANEWR CONSULTING LIMITED

Independent Environmental Checker

LYMA/LPYL/CLYA/lhmh







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EXECUTIVE SUMMARY

i. This is the 8th Quarterly Environmental Monitoring Audit (EM&A) Summary Report, it presents the environmental monitoring and audit works for the period from 1 December 2017 to 28 February 2018.

Construction Activities for the Reporting Period

- ii. During this reporting period, the principal work activities within the site included: <u>December 2017 – February 2018</u>
 - Construction of Pumping Station (Transformer Room)

Breaches of Action and Limit Levels for Air Quality

iii. No Action or Limit Level Exceedance of 1-hr TSP monitoring was recorded in the reporting period.

Breaches of Action and Limit Levels for Noise

iv. No exceedance was recorded at all monitoring stations in the reporting period.

Complaint, Notifications of Summons and Successful Prosecutions

- v. No Action or Limit Level Exceedance of noise monitoring was recorded in the reporting period.
- vi. No complaints, notification of summons or successful prosecutions were received in the reporting period.

Reporting Change

vii. There was no reporting change required in the reporting period.

Future Key Issues

viii. Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.



1. INTRODUCTION

1.1 Background

- 1.1.1 Contract No. DC/2014/01 Castle Peak Road Trunk Sewer and Tuen Mun Village Sewerage ("the Project") includes the construction of a sewage pumping station at Lok Chui Street near Castle Peak Villas as shown in **Figure 1**.
- 1.1.2 The environmental impact assessment (EIA) report (Tuen Mun Sewerage Eastern Coastal Sewerage Extension) EIA Report (Register No. AEIAR-034/2000) for the Project was approved by Environmental Protection Department (EPD) dated 7 June 2000. The EIA Report involves the construction of four sewage pumping stations at Tai Lam Chung Tsuen, Luen On San Tsuen, Tai Lam Valley and Lok Chui Street near Castle Peak Villas. The scope of this EM&A Manual focuses on the Sewage Pumping Station at Lok Chui Street near Castle Peak Villas in the EIA Report. The Project is designated under Schedule 2, section F3(b) and Q1 of the Environmental Impact Assessment Ordinance (EIAO). EPD subsequently issued the Environmental Permit (EP) EP- 068/2000 on 25 July 2000.
- 1.1.3 A Register of Change to Environmental Permit was submitted to EPD to register any change to the conditions in the EP for adoption of the latest design of the Pumping Station at Lok Chui Street and justify that the latest changes would not violate the conditions as stated in the approved EIA Report and EP based on the latest engineering design information. A Variation of Environmental Permit (VEP) EP-068/2000/A was issued on 10 April 2015 and it is the current permit for the Project.
- 1.1.4 The amended EP (EP-068/2000/A) is the current permit for the Project.
- 1.1.5 In accordance to EP-068/2000/A Condition 2.3 and 2.4, an updated EM&A Manual was duly certified by ETL and verified by IEC and submitted to EPD for approval on 18 January 2016.
- 1.1.6 The construction phase and EM&A programme of the Project commenced on 29 February 2016.
- 1.1.7 This is the 8th Quarterly Environmental Monitoring Audit (EM&A) Summary Report, it presents the environmental monitoring and audit works for the period from 1 December 2017 to 28 February 2018.



1.2 **Project Organization**

1.2.1 The Project Organization structure is shown in **Appendix B**. The key personnel contact names and numbers are summarized in **Table 1.1**.

| Party | Position | Name | Telephone | Fax | |
|---|---|---------------------|-----------|-----------|--|
| Drainage Services Department, HKSAR (DSD) | Project Management | Ms. Winnie Ng | 2594 7265 | 2827 8526 | |
| Engineer/Engineer's | Resident Engineer | Ms. Jacqueline Chan | 3127 5103 | 2441 1755 | |
| Representative (AECOM) | Senior Inspector of Works | Mr. Raymond Au | 3127 5160 | 2441 1755 | |
| Independent Environmental Checker (ANEWR) | Independent Environmental Checker | Mr. Adi Lee | 2618 2836 | 3007 8648 | |
| Contractor | Site Agent | Mr. Alan Lo | | | |
| Contractor (SKLV) | Environmental Officer | Mr. Billy Wong | 2674 3888 | 2674 6688 | |
| Environmental Team (FTS) | Environmental Team Leader | Mr. Colin Yung | 3565 4114 | 3565 4160 | |

Table 1.1Contact Information of Key Personnel

1.3 Construction Programme and Activities

- 1.3.1 The construction phase of the Project under the EP commenced on 29 February 2016.
- 1.3.2 The construction programme of the Project is shown in **Appendix A**.

1.4 Works undertaken during the month

1.4.1 During this reporting period, the principal work activities within the site included:

December 2017 – February 2018

• Construction of Pumping Station (Transformer Room)

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1.5 Status of Environmental Licences, Notification and Permits

1.5.1 A summary of the relevant permits, licences and/or notifications on environmental protection for this Contract is presented in **Table 1.2**.

Table 1.2 Status of Environmental Licences, Notification and Permits

| Permit / Direction / License | Ref No | Valid From | Valid Till |
|---|-------------------|------------|------------|
| Environmental Permit | EP-068/2000/A | 10/04/2015 | N/A |
| Notification of Works Under APCO | 391923 | 06/08/2015 | N/A |
| Wastewater Discharge Licence | WT00022654-2015 | 23/10/2015 | 31/10/2020 |
| Registration as a Chemical Waste Producer | 5111-421-S3879-01 | 02/09/2015 | N/A |
| Billing Account for Disposal of Construction Waste | 7022922 | 06/08/2015 | N/A |



2. ENVIRONMENTAL MONITORING & AUDIT REQUIREMENTS

2.1 Monitoring Parameters and Monitoring Locations

2.1.1 In accordance with the updated EM&A Manual, monitoring of the 1 hourly average of Total Suspended Particulates (TSP) levels for air quality and the A-weighted equivalent continuous sound pressure level Leq (30min) for the time period between 0700-1900 hours on normal weekdays for noise impact. The monitoring locations are shown in **Figure 2**.

2.2 Monitoring Methodology and Calibration

2.2.1 Monitoring equipment were conducted and calibrated regularly in accordance with the updated EM&A Manual. Copies of calibration certificates are attached in the appendices of the corresponding Monthly EM&A Reports.

2.3 Environmental Quality Performance Limits (Action and Limit Levels)

2.3.1 The adopted Action and Limit Levels for air quality impact and noise monitoring are presented in **Appendix C.**

2.4 Environmental Mitigation Measures

2.4.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting period is summarized in **Appendix G**.

2.5 Results and Observations

- 2.5.1 The weather conditions during the monitoring are presented in the Appendices of the corresponding Monthly EM&A Reports.
- 2.5.2 The monitoring data of 1-hr TSP are summarized in **Table 2.1**. Detailed monitoring data are presented in **Appendix D**.

| Reporting Months | MonitoringAverageRangeStation(μg/m³)(μg/ m³) | | Range (µg/ m³) | Action Level (µg/ m³) | Limit Level (µg/ m³) |
|---------------------|--|----|-------------------|-----------------------------|----------------------------|
| December | LC6a | 67 | 29-119 | 344 | |
| 2017 | LC9 | 65 | 28-133 | 335 | |
| January | LC6a | 51 | 18-92 | 344 | 500 |
| 2018 | LC9 | 48 | 22-85 | 335 | 500 |
| February | LC6a | 60 | 15-160 | 344 | |
| 2018 | LC9 | 59 | 29-84 | 335 | |

Table2.1Summary of 1-hr TSP Monitoring Results



2.5.3 The noise monitoring data are summarized in **Table 2.2**. Detailed monitoring data are presented in **Appendix E**.

| Reporting | Monitoring | Leq Range | (30min) , dB(A) | Leq (30min) |
|-----------|-------------------|----------------------------|---------------------------|--------------------|
| Month | Station | Station Measured Corrected | | Limit Level, dB(A) |
| December | LC6a ¹ | 63-67 | 58-62 | |
| 2017 | LC9 | 65-71 | N.A | |
| January | LC6a ¹ | 60-71 | 55-66 | 75 |
| 2018 | LC9 | 58-64 | N.A | 13 |
| February | LC6a ¹ | 60-73 | 55-68 | |
| 2018 | LC9 | 62-72 | N.A | |

Table 2.2Summary of Noise Impact Monitoring Results

Note:

- Leq (30min) was measured at day-time (0700-1900) on normal weekdays.
- 1) A distance correction of -5dB(A) has been applied in monitoring data of LC6a according to baseline monitoring report (Appendix G).
- 2.5.4 No Action or Limit Level Exceedance of 1-hr TSP monitoring was recorded in the reporting period.
- 2.5.5 No Action or Limit Level Exceedance of noise monitoring was recorded in the reporting period.

2.6 Other factor influencing the monitoring results

2.6.1 There were no other noticeable external factors generally affecting the monitoring results in this reporting period.

3. ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

- 3.1.1 The Contractor has been registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting was carried out on site. Receptacles were available for general refuse collection.
- 3.1.2 Monthly summary of waste flow table is detailed in **Appendix H**.



4. ENVIRONMENTAL SITE INSPECTION AND AUDIT

4.1 Site Inspection

- 4.1.1 Weekly site inspections and bi-weekly landscape and visual impact inspections were carried out to monitor the implementation of proper environmental pollution control and mitigation measures for the Project.
- 4.1.2 In the reporting period, site inspections were carried out on 7, 14, 21 and 28 December 2017, 4, 11, 18, 25 and 30 January 2018, 8, 13, 24 and 27 February 2018 and the landscape and visual impact inspections were carried out on 15 and 28 December 2017, 11 and 25 January 2018, 8 and 24 February 2018.
- 4.1.3 Detailed of site inspections during the reporting period are summarized in the appendices of the corresponding Monthly EM&A Reports.

5. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

5.1 Environmental Exceedance

- 5.1.1 No Action or Limit Level Exceedance of 1-hr TSP monitoring was recorded in the reporting period.
- 5.1.2 No Action or Limit Level Exceedance of noise monitoring was recorded in the reporting period.
- 5.1.3 The summary of noncompliance (exceedances) of the environmental quality performance limits (Action and Limit levels) are shown in **Table 5.1**:

| Parameter | No. Exceed | | No. of Ex due to th | Cumulative Project-to- | | |
|---------------------------------------|-----------------|----------------|------------------------|---------------------------|------|--|
| Farameter | Action Level | Limit Level | Action Level | Limit Level | Date | |
| 1-hr TSP | 0 | 0 | 0 | 0 | 0 | |
| Noise Leq _(30min) dB(A) | 0 | 0 | 0 | 0 | 0 | |

 Table 5.1
 Summary of noncompliance (exceedances)

5.2 Complaints, Notification of Summons and Successful Prosecution

- 5.2.1 No complaints, notification of summons or successful prosecutions were received in the reporting period.
- 5.2.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix F.**



6. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

6.1 Implementation Status

- 6.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting period is summarized in **Appendix G**.
- 6.1.2 Based on the monitoring results and the implementation status of the mitigation measures during the reporting period, it is considered that the environmental mitigation measures implemented by the Contractor in the reporting period are effective.

7. FUTURE KEY ISSUES

Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.



8. CONCLUSIONS

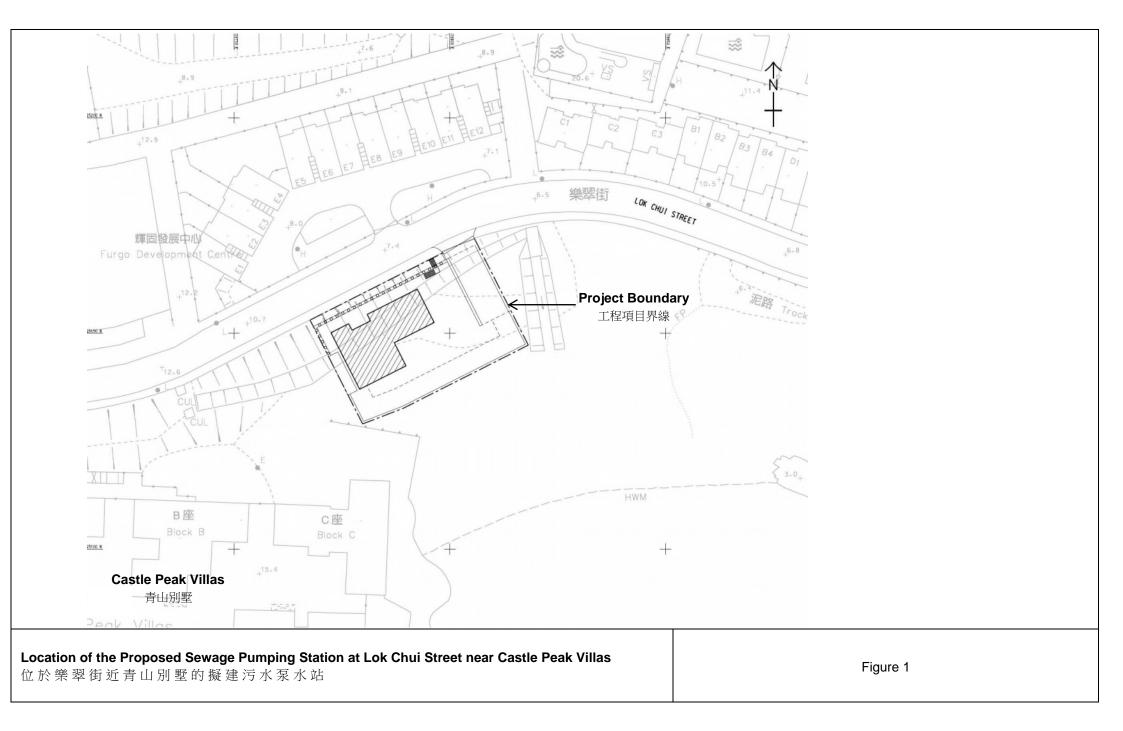
- 8.1.1 The construction phase and EM&A programme of the Project commenced on 29 February 2016.
- 8.1.2 No Action or Limit Level Exceedance of 1-hr TSP monitoring was recorded in the reporting period.
- 8.1.3 No Action or Limit Level Exceedance of noise monitoring was recorded in the reporting period.
- 8.1.4 In the reporting period, site inspections were carried out on 7, 14, 21 and 28 December 2017, 4, 11, 18, 25 and 30 January 2018, 8, 13, 24 and 27 February 2018 and the landscape and visual impact inspections were carried out on 15 and 28 December 2017, 11 and 25 January 2018, 8 and 24 February 2018.
- 8.1.5 No complaints, notification of summons or successful prosecutions were received in the reporting period.

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Figure 1

Project General Layout



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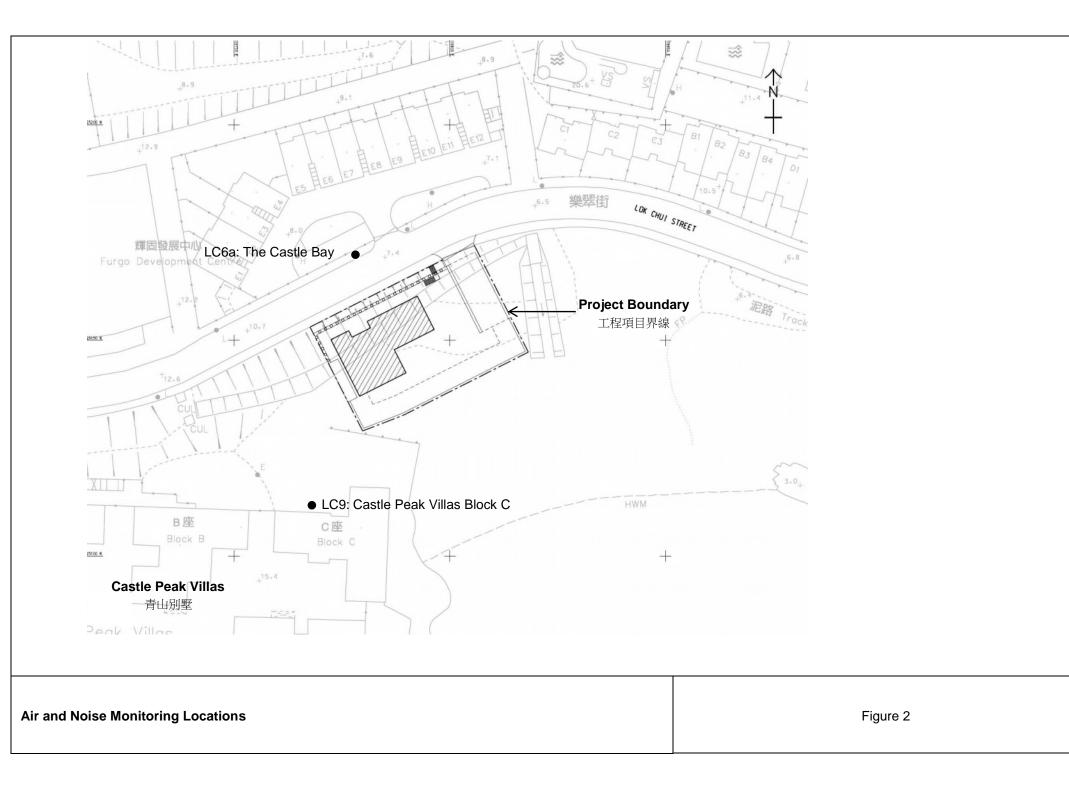
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 : matlab@fugro.com

 Website
 : www.fugro.com



Figure 2

Air and Noise Monitoring Locations



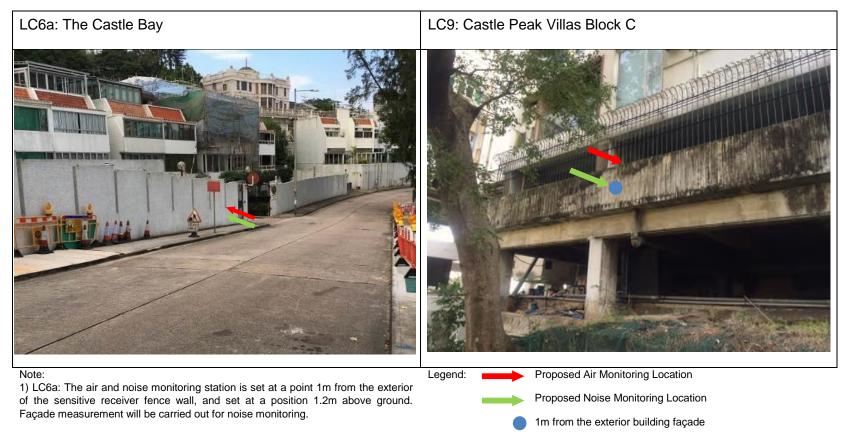
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2) LC9: The air monitoring station is set at the top of parapet wall of sensitive receivers building and the noise monitoring station is set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 5m above the ground.

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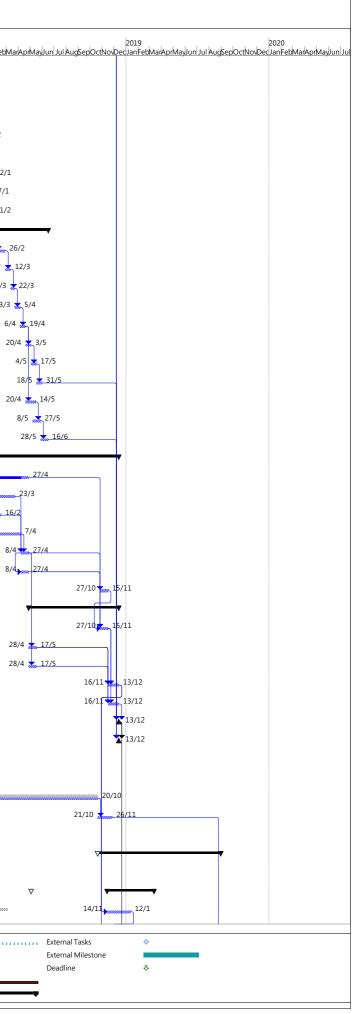
Appendix A

Construction Programme

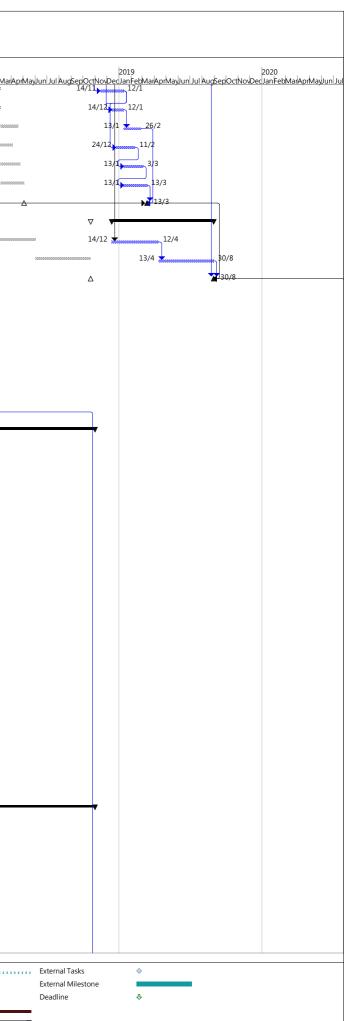
| Contra | ictor : Sang Hing - Kuly Joint Venture | | | | | | | | | Contract no. Castle Peak Road Tuen Mun Villa | Trunk Sewer and |
|-----------|---|-----------------------|------------|----------------|-------------------------|--------------|---------------|--------------------------|----------------------------|--|---|
| ID | Task Name | Baseline Duration | Duration | Baseline Start | Baseline Finish | Actual Start | Actual Finish | % Complet | Start | Finish Predecessors | 2016 2017 2018 |
| 187 | | Baration | | | | | | lompier | | | Jul AugSepOctNovDecJanFebMarAprMayJun Jul AugSepOctNovDecJanFebMarAprMayJun Jul AugSepOctNovDecJanFeb |
| 188 | | | | | | | | | | | |
| 189 | Duration of Section 11A | 929 days | 929 days | Mon 20/7/15 | Fri 2/2/18 | Mon 20/7/15 | N | A 64% | Mon 20/7/15 | Fri 2/2/18 1SS | 2/ |
| 190 | Inclement Weather Granted (EOT Claim No. 3.10, up to 31 Oct 16) | 0 days? | | | | NA | N | A 0% | | Sat 10/3/18 1189 | 3/2 |
| 191 | EOT for Delayed Possession of Site & Additional length of mini-pile | - | 62 days | NA | NA | NA | N | A 0% | Sat 3/2/18 | Thu 5/4/18 1189 | 3/2 |
| 192 | (interim) | | | | | | | | | | |
| 193 | Section 11 A - Lok Chui Street Sewage Pumping Station | 929 days | 1243 days? | Mon 20/7/15 | Fri 2/2/18 | Mon 20/7/15 | NA | A 51% | Mon 20/7/15 | Thu 13/12/18 | ▽ |
| 194 🗸 | Portion 11 - Time of Possession of Site | 90 days | 90 days | Mon 20/7/15 | Sat 17/10/15 | Mon 20/7/15 | Sat 17/10/1 | 5 100% | Mon 20/7/15 | Sat 17/10/15 1SS | 17/10 |
| 195 🗸 | <i>EOT claim 002 - Delayed Possession of Site</i> | 0 days? | 41 days? | NA | NA | Sun 18/10/15 | Fri 27/11/1 | 5 100% | Sun 18/10/15 | Fri 27/11/15 1194 | 18/10 27/11 |
| .96 🗸 | Objection to commence of work by The Castle Bay | 0 days? | 21 days? | NA | NA | Sat 28/11/15 | Fri 18/12/1 | 5 100% | Sat 28/11/15 | Fri 18/12/15 1195 | 28/11 - 18/12 |
| L97 | | | | | | | | | | | |
| 98 🗸 | EOT Claim 011 - Increased Length of Mini-pile at Lok Chui | 0 days? | 72 days | NA | NA | Thu 18/2/16 | Fri 29/4/1 | 6 100% | Thu 18/2/16 | Fri 29/4/16 1208 | 18/2 29/4 |
| 99 | Street Pumping Station | | | | | | | | | | |
| 00 | | | | | | | | | | | |
| 201 🗸 | Preparation Work | 74 days | 74 days | Sun 18/10/15 | Wed 30/12/15 | Sat 19/12/15 | Tue 1/3/10 | 6 100% | Sat 19/12/15 | Tue 1/3/16 | |
| 02 🗸 | Initial Survey | 30 days | 30 days | Sun 18/10/15 | Mon 16/11/15 | Sat 19/12/15 | Sun 17/1/1 | 6 100% | Sat 19/12/15 | Sun 17/1/16 1196 | 49/12 x 17/1 |
| 03 🗸 | Agree extend of Site clearance | 30 days | 30 days | Sun 18/10/15 | Mon 16/11/15 | Sat 19/12/15 | Sun 17/1/1 | 6 100% | Sat 19/12/15 | Sun 17/1/16 1194 | 19/12 |
| 04 🗸 | Site clearance | 14 days | 14 days | Tue 17/11/15 | Mon 30/11/15 | Mon 18/1/16 | Sun 31/1/1 | 6 100% | Mon 18/1/16 | Sun 31/1/16 1203,1202 | ***18/1 🗙 31/1 |
| 05 🗸 | Hoarding | 30 days | 30 days | Tue 1/12/15 | Wed 30/12/15 | Mon 1/2/16 | Tue 1/3/1 | 6 100% | Mon 1/2/16 | Tue 1/3/16 1204 | xxxx1/2 1/3 |
| 06 🗸 | Mini-pile Foundation and Soldier Pile | 297 days | 369 days | Tue 1/12/15 | Thu 22/9/16 | Mon 1/2/16 | Fri 3/2/1 | 7 100% | Mon 1/2/16 | Fri 3/2/17 | ▽ |
| 07 🗸 | Mobilization of plant for predrilling works | 7 days | 7 days | Tue 1/12/15 | Mon 7/12/15 | Mon 1/2/16 | Sun 7/2/1 | 6 100% | Mon 1/2/16 | Sun 7/2/16 1204 | s 1/2 z 7/2 |
| 08 🗸 | Construct settlement and piezometer for monitoring | 10 days | 10 days | Tue 8/12/15 | Thu 17/12/15 | Mon 8/2/16 | Wed 17/2/1 | 6 100% | Mon 8/2/16 | Wed 17/2/16 1207 | × 8/2 17/2 |
| 09 🗸 | Predrilling works of mini-pile and soldier pile | 23 days | 23 days | Fri 18/12/15 | Sat 9/1/16 | Sat 30/4/16 | Sun 22/5/1 | 6 100% | Sat 30/4/16 | Sun 22/5/16 1208,1198 | 30/4 22/5 |
| 10 🗸 | Submission of predrilling report | 15 days | 15 days | Sun 10/1/16 | Sun 24/1/16 | Mon 23/5/16 | Mon 6/6/1 | 6 100% | Mon 23/5/16 | Mon 6/6/16 1209 | 23/5 <mark>x</mark> 6/6 |
| 11 🗸 | Mobilization of plant for 610mm soldier pile | 14 days | 14 days | Sun 10/1/16 | Sat 23/1/16 | Mon 23/5/16 | Sun 5/6/1 | 6 100% | Mon 23/5/16 | Sun 5/6/16 1205,1209 | 23/5 🖕 5/6 |
| 12 🗸 | Construction of soldier pile (43 nos) | 130 days | 130 days | Sun 24/1/16 | Wed 1/6/16 | Mon 6/6/16 | Thu 13/10/1 | 6 100% | Mon 6/6/16 | Thu 13/10/16 1211 | 13/10 |
| 13 🗸 | Mobilization of plant for mini-pile (64 nos) | 14 days | 14 days | Thu 19/5/16 | Wed 1/6/16 | Fri 30/9/16 | Thu 13/10/1 | 6 100% | Fri 30/9/16 | Thu 13/10/16 1212FS-14 day | /s 30/9 13/10 |
| 14 🗸 | Drilling of mini-piles | 50 days | 50 days | Thu 2/6/16 | Thu 21/7/16 | Fri 14/10/16 | Fri 2/12/1 | 6 100% | Fri 14/10/16 | Fri 2/12/16 1213 | 14/10 2/12 |
| 15 🗸 | Installation of Rein-bar and Grouting | 14 days | 14 days | Fri 22/7/16 | Thu 4/8/16 | Sat 3/12/16 | Fri 16/12/1 | 6 100% | Sat 3/12/16 | Fri 16/12/16 1214 | |
| 16 🗸 | Mobilization for proof drilling | 7 days | 7 days | Fri 29/7/16 | Thu 4/8/16 | Sat 10/12/16 | Fri 16/12/1 | 6 100% | Sat 10/12/16 | Fri 16/12/16 1215FS-7 days | s 10/12 1 0/12 |
| 17 🗸 | Proof Drilling | 14 days | 14 days | Fri 5/8/16 | Thu 18/8/16 | Sat 17/12/16 | Fri 30/12/1 | 6 100% | Sat 17/12/16 | Fri 30/12/16 1216 | ∞ 17/12 × 30/12 |
| 218 🗸 | Submission of proof drilling report | 14 days | 14 days | Fri 19/8/16 | Thu 1/9/16 | Sat 31/12/16 | Fri 13/1/1 | 7 100% | Sat 31/12/16 | Fri 13/1/17 1217 | oo: 31/12 13/1 |
| 19 🗸 | Preparation of loading Test | 21 days | 21 days | Fri 5/8/16 | Thu 25/8/16 | Sat 17/12/16 | Fri 6/1/1 | 7 100% | Sat 17/12/16 | Fri 6/1/17 1216 | ×××× 17/12 👱 6/1 |
| 20 🗸 | Carry out loading test | 14 days | 14 days | Fri 26/8/16 | Thu 8/9/16 | Sat 7/1/17 | Fri 20/1/1 | 7 100% | Sat 7/1/17 | Fri 20/1/17 1219 | ∞ 7/1 <mark>≠</mark> 20/1 |
| 221 🗸 | Submission of loadign test report | 14 days | 14 days | Fri 9/9/16 | Thu 22/9/16 | Sat 21/1/17 | Fri 3/2/1 | 7 100% | Sat 21/1/17 | Fri 3/2/17 1220 | 21/1 = 3/2 |
| 222 | Strucutral Work of Pumping Station | 377 days | 377 days | Fri 9/9/16 | Wed 20/9/17 | Sat 21/1/17 | NA | A 26% | Sat 21/1/17 | Thu 1/2/18 | ∇ $$ ∇ |
| 223 | Temporary cofferdam for ELS for construction of pumping station | 90 days | 90 days | | | Sat 21/1/17 | | A 90% | Sat 21/1/17 | Thu 20/4/17 1220,1221FS-1 days,1218 | |
| 224 | Excavation and shoring to formation level for wet well construction (refer drg. No. 5321A, formation level = | 30 days | - | | | Fri 21/4/17 | | | Fri 21/4/17 | Sat 20/5/17 1223 | 2000 21/4 2 0/5 |
| 25 | Welding of pile head (i.e.PC01 to PC 14) | 9 days | | | | NA | | | | Mon 29/5/17 1224 | ··· 21/5 🛫 29/5 |
| 26 | Blinding layer | 2 days | | | | NA | | | | Wed 31/5/17 1225 | < 30/5 3 31/5 |
| 27 | Construction of base slab of wet well | 14 days | | | | NA | | | Thu 1/6/17 | Wed 14/6/17 1226 | 1/6 1/6 |
| 28 | Construction of Wall of wet well upto approx0.675mPD to 0.725mPD | 14 days | | | | NA | | | | Wed 28/6/17 1227 | 15/6 👷 28/6 |
| 29 | Excavation and shoring to formation levels for Valve chamber, Coarse screen chamber and energency storage tank | - | | | | NA | | | | Sun 23/7/17 1228 | 29/6 📩 23/7 |
| 30 | Welding of pile head (i.e PB01 to PB15, PD01 to PD08 and PE01 to PE10 etc) | 20 days | | | | NA | | | | Sat 12/8/17 1229 | 24/7 📩 12/8 |
| 31 | Blinding layer | 2 days | | | | NA | | | | Mon 14/8/17 1230 | : 13/8 214/8 |
| 32 | Construction of base slabs of Valve chamber, Coarse screen chamber and emergency storage tank | 25 days | 25 days | Mon 3/4/17 | Thu 27/4/17 | NA | N | A 0% | Tue 15/8/17 | Fri 8/9/17 1231 | xxxxx 15/8 📩 8/9 |
| | Task | | | | ilestone | A | Roll | led Up Mil | lestone | Split | |
| | Task Pro | | | Ba | seline Milestone | | Base | eline Sum | mary | ∇ ∇ Baseline Spli | it Inactive Milestone Manual Summary Rollup |
| roject: R | tolling Programme (Feb 2017) Critical Critical Critical | Fask Fask Progress | | | immary olled Up Task | V | | led Up Bas led Up Bas | seline seline Milestone | Δ External Task Project Sum | |
| | Baseline | | | | olled Up Critical Ta | ack | | led Up Bas | | Group By Su | |

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| Non-Yorkey conversional 1500 Model Mod | Contra | actor : Sang Hing - Kuly Joint Venture | | | | | | | | | Castle F | ntract no. DC Peak Road Tru n Mun Village | ink Sewer and | | | | | |
|--|----------|---|-----------|-----------|----------------|----------------------|--------------|-----------------|-------|--------------|--------------|---|--------------------|-----------------------|----------------------|---------|--------------------|-------------|
| Del No. No. <th></th> <th></th> <th></th> <th>Duration</th> <th>Baseline Start</th> <th>Baseline Finish</th> <th>Actual Start</th> <th></th> <th></th> <th>Start</th> <th>Finish</th> <th>Predecessors</th> <th></th> <th>2016</th> <th>20:</th> <th>7</th> <th>111 AudenOctVIO/De</th> <th>2018</th> | | | | Duration | Baseline Start | Baseline Finish | Actual Start | | | Start | Finish | Predecessors | | 2016 | 20: | 7 | 111 AudenOctVIO/De | 2018 |
| His Mark Mark Mark Mark Mark Mark Mark Mark | | Excavation to formation level of switch room and transformer | 20 days | 20 days | Fri 28/4/17 | 7 Wed 17/5/17 | NA | NA | 0% | Sat 9/9/17 | Thu 28/9/17 | 1232 | Jur Augsepocinoide | JanreowarApiwayJunijo | n Rugsepocinovoeciai | | 9/9 📩 28/9 | ecjanjeuwi |
| | 1234 | | 10 days | 10 days | Thu 18/5/17 | 7 Sat 27/5/17 | NA | NA | 0% | Fri 29/9/17 | Sun 8/10/17 | 1233 | | | | 201 | 29/9 🗙 8/10 | |
| 121 121 <td>1235</td> <td>Construction of walls below ground level</td> <td>25 days</td> <td>25 days</td> <td>Sun 28/5/17</td> <td>7 Wed 21/6/17</td> <td>NA</td> <td>NA</td> <td>0%</td> <td>Mon 9/10/17</td> <td>Thu 2/11/17</td> <td>1234</td> <td></td> <td></td> <td></td> <td>2002</td> <td>9/10 📩 2/11</td> <td>L</td> | 1235 | Construction of walls below ground level | 25 days | 25 days | Sun 28/5/17 | 7 Wed 21/6/17 | NA | NA | 0% | Mon 9/10/17 | Thu 2/11/17 | 1234 | | | | 2002 | 9/10 📩 2/11 | L |
| ni 0xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | 1236 | Construction of ground floor slab | 20 days | 20 days | Thu 22/6/17 | 7 Tue 11/7/17 | NA | NA | 0% | Fri 3/11/17 | Wed 22/11/17 | 1235 | | | | | | 2/11 |
| 101 000000000000000000000000000000000000 | 1237 | Backfilling to ground floor slab | 25 days | 25 days | Wed 12/7/17 | 7 Sat 5/8/17 | NA | NA | 0% | Thu 23/11/17 | Sun 17/12/17 | 1236 | | | | | 23/11 | 17/12 |
| Det Des Des <thdes< th=""> <thdes< th=""> <thdes< th=""></thdes<></thdes<></thdes<> | 1238 | Construction of walls up to roof slab | 25 days | 25 days | Fri 28/7/17 | 7 Mon 21/8/17 | NA | NA | 0% | Sat 9/12/17 | Tue 2/1/18 | 1237FS-9 days | | | | | ssss 9/12 . | 2/1 |
| Data Data Partial | 1239 | Construction of roof slab | 20 days | 20 days | Tue 22/8/17 | 7 Sun 10/9/17 | NA | NA | 0% | Wed 3/1/18 | Mon 22/1/18 | 1238 | | | | | | 1 22/1 |
| Disp Disp <thdisp< th=""> Disp Disp <thd< td=""><td>1240</td><td>Water Tightness test of wet well</td><td>15 days</td><td>15 days</td><td>Tue 22/8/17</td><td>7 Tue 5/9/17</td><td>NA</td><td>NA</td><td>0%</td><td>Wed 3/1/18</td><td>Wed 17/1/18</td><td>1238</td><td></td><td></td><td></td><td></td><td>ooo 3/1</td><td>1 🗙 17/1</td></thd<></thdisp<> | 1240 | Water Tightness test of wet well | 15 days | 15 days | Tue 22/8/17 | 7 Tue 5/9/17 | NA | NA | 0% | Wed 3/1/18 | Wed 17/1/18 | 1238 | | | | | ooo 3/1 | 1 🗙 17/1 |
| Disp Disp< Disp Disp< Disp Disp Disp Disp Disp Disp< Disp< Disp< Disp< Disp< Disp< Disp< Disp< Disp< <thdisp< th=""> <thdisp< th=""> <thdisp< th=""></thdisp<></thdisp<></thdisp<> | 1241 | Roof kerb and staircase | 10 davs | 10 davs | Mon 11/9/17 | 7 Wed 20/9/17 | NA | NA | 0% | Tue 23/1/18 | Thu 1/2/18 | 1239.1240 | - | | | | » 23 | 3/1 1/2 |
| 121 Maxma Ahorng Abor Abor <td></td> | | | | | | | | | | | | | | | | | | |
| 144 440 540 5400 5400 5400 540 540 540 540 540 540 540 540 540 540 540 540 540 540 540 540 540 540 540 550 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td>·</td><td>2/2 2</td></t<> | | | | | | | | | | | | | - | | | | · | 2/2 2 |
| 131 Decognaming 340 | | | | - | | | | | | | | | | | | | | |
| dia Diráq diado Jádo Jádo No No <td></td> <td>2000</td> <td></td> | | | | | | | | | | | | | | | | | 2000 | |
| 200 0 400000000000000000000000000000000000 | | | | | | | | | | | | | | | | | 00 | 13/3 |
| 1210 Indexponden 1440 Hord 20 Mod2/202 100 1440 No 100 1440 No 100 1440 No 100 1 | 1246 | Skirting | 14 days | 14 days | Thu 9/11/17 | 7 Wed 22/11/17 | NA | NA | 0% | Fri 23/3/18 | Thu 5/4/18 | 1245 | | | | | 000 | 23/3 |
| Line - Parken and have used base of the set of the se | 1247 | Granlithic screen and expoxy coating floor screen | 14 days | 14 days | Thu 23/11/17 | 7 Wed 6/12/17 | NA | NA | 0% | Fri 6/4/18 | Thu 19/4/18 | 1246 | | | | | 888 | 6/4 |
| 328 Ladar are Ausorial 14 arg 14 a | 1248 | Painting on ceiling | 14 days | 14 days | Thu 7/12/17 | 7 Wed 20/12/17 | NA | NA | 0% | Fri 20/4/18 | Thu 3/5/18 | 1247 | | | | | 201 | 20/ |
| 232 Orace to detered 26 do 26 do No 0.0 No 0.0 No 0.0 No 0.0 No 0.0 No 0.0 No | 1249 | Installation of lourves and Doors | 14 days | 14 days | Thu 21/12/17 | 7 Wed 3/1/18 | NA | NA | 0% | Fri 4/5/18 | Thu 17/5/18 | 1248 | | | | | | 000 |
| 2323 | 1250 | Ladder and Handrail | 14 days | 14 days | Thu 4/1/18 | 3 Wed 17/1/18 | NA | NA | 0% | Fri 18/5/18 | Thu 31/5/18 | 1249 | | | | | | 885 |
| 212 Ardreg sport 2199 2199 2199 10000 10000 10000 10000 | 1251 | Cover to cable trench | 25 days | 25 days | Thu 7/12/17 | 7 Sun 31/12/17 | NA | NA | 0% | Fri 20/4/18 | Mon 14/5/18 | 1247 | | | | | 00 | |
| 1283 Library was & & & & & & & & & & & & & & & & & & & | 1252 | cement sand screen for roofing system | 20 days | 20 days | Mon 25/12/17 | 7 Sat 13/1/18 | NA | NA | 0% | Tue 8/5/18 | Sun 27/5/18 | 1251FS-7 days | | | | | | 10000 |
| 1283 Lagerg and are opplie bar on scher plan. 95.40 95.40 95.40 95.40 95.40 95.40 95.40 95.40 95.40 95.40 95.40 95.20 16.2000000000000000000000000000000000000 | 1253 | Roofing system | 20 days | 20 days | Sun 14/1/18 | 8 Fri 2/2/18 | NA | NA | 0% | Mon 28/5/18 | Sat 16/6/18 | 1252 | | | | | | 5552 |
| 1253 Addition to genore three subset 0.6 stage 0.6 stage No. 10.401/20 No. 10.401/2 | 1254 | External Works & External Finishes | 145 days | 325 days | Mon 11/9/17 | 7 Fri 2/2/18 | Tue 23/1/18 | NA | 18% | Tue 23/1/18 | Thu 13/12/18 | | | | | | ∇ | • V |
| 1253 Addition to genore three subset 0.6 stage 0.6 stage No. 10.401/20 No. 10.401/2 | 1255 | Lagging wall and capping beam on soldier piles | 95 days | 95 days | Mon 11/9/17 | 7 Thu 14/12/17 | Tue 23/1/18 | NA | 80% | Tue 23/1/18 | Fri 27/4/18 | 1239 | - | | | | | 3/1 |
| Link Link <thlink< th=""> Link Link</thlink<> | | | | | | | | | | | | | | | | | | 3/1 |
| 1212 Retarning Wald Addrs concente undit 71 day 75 day Monthly P 92 dalay NN < | | | | | | | | | | | | | | | | | | |
| 1210 X core, Kang and hackeling X dogs | | | | - | | | | | | | | | - | | | | | |
| 1219 Biologication for Murphy Station for Murphy Statin for Murphy Statin for Murphy Station for Murphy Station for Mur | | | | | | | | | | | | | | | | | | |
| Internation Concretion Concre | | | | - | | | | | | | | | | | | | 5552 | 8/4 |
| http://without.public for utilitie 0.0000 0. | 1260 | | 20 days | 20 days | Sat 25/11/17 | 7 Thu 14/12/17 | NA | NA | 0% | Sun 8/4/18 | Fri 27/4/18 | 1259SS | | | | | 0000 | 8/4 |
| 2128 Muter meter box 20 day 20 day 50 day 20 day 50 day 20 day 50 day 20 day 71 5/2/12 Wet 3/2/12 NM NM 0% 54 27/2/12 The 1/12/12 12/22/12/22/12/22/12 100 day 70 day 7 | 1261 | | 20 days | 20 days | Sun 17/12/17 | 7 Fri 5/1/18 | NA | NA | 0% | Sat 27/10/18 | Thu 15/11/18 | | | | | | : | 20202 |
| 1294 CCP drampts and cable ducts 30 day 71 day 90 day 71 day 90 day 91 day 100 day 91 day 100 day <td>1262</td> <td>Plumbing Work & Drawpits for utilities</td> <td>50 days</td> <td>230 days</td> <td>Fri 15/12/17</td> <td>7 Fri 2/2/18</td> <td>NA</td> <td>NA</td> <td>0%</td> <td>Sat 28/4/18</td> <td>Thu 13/12/18</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>∇</td> <td>⁄ ▽</td> | 1262 | Plumbing Work & Drawpits for utilities | 50 days | 230 days | Fri 15/12/17 | 7 Fri 2/2/18 | NA | NA | 0% | Sat 28/4/18 | Thu 13/12/18 | | | | | | ∇ | ⁄ ▽ |
| 128 Ughting pits 20 day 0 days 11 512/21 Wed 3/L18 N N 00 581 28/L18 Thu 13/2/28 1261 1261 1261 1261 1261 1261 1261 12 | 1263 | Water meter box | 20 days | 20 days | Sun 17/12/17 | 7 Fri 5/1/18 | NA | NA | 0% | Sat 27/10/18 | Thu 15/11/18 | 1259,1255,1261FS- | | | | | | 0000 |
| Normal line of watermain 28 day | 1264 | CLP drawpits and cable ducts | 20 days | 20 days | Fri 15/12/17 | 7 Wed 3/1/18 | NA | NA | 0% | Sat 28/4/18 | Thu 17/5/18 | 1259 | - | | | | 2 | |
| $ \left \begin{array}{c c c c c c c c c c c c c c c c c c c $ | 1265 | Lighting pits | 20 days | 20 days | Fri 15/12/17 | 7 Wed 3/1/18 | NA | NA | 0% | Sat 28/4/18 | Thu 17/5/18 | 1259 | | | | | 5 | |
| 128 CLP energization 0 day 0 day 0 day 0 fi 2/2/8 Fi 2/2/8 Fi 1 2/2/8 Fi 2/2/8 Fi 1 2/2/8 Fi 2/2/ | 1266 | Installation of watermain | 28 days | 28 days | Sat 6/1/18 | 3 Fri 2/2/18 | NA | NA | 0% | Fri 16/11/18 | Thu 13/12/18 | 1263,1264,1265 | | | | | | 200000 |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$ | 1267 | Cabling and Installation of Transformer | 28 days | 28 days | Sat 6/1/18 | 8 Fri 2/2/18 | NA | NA | 0% | Fri 16/11/18 | Thu 13/12/18 | 1264,1263,1265 | | | | | | 100000 |
| $ \frac{1}{127} $ | 1268 | CLP energization | 0 days | 0 days | Fri 2/2/18 | 3 Fri 2/2/18 | NA | NA | 0% | Thu 13/12/18 | Thu 13/12/18 | 1267,1253,1191 | | | | | | Δ |
| $ \frac{1}{1270} = \frac{1}{1272} $ $ \frac{1}{$ | 1269 | Completion of Section 11A | | | | | NA | NA | 0% | Thu 13/12/18 | Thu 13/12/18 | 1268.1250.1190 | | | | | | |
| 1271 Implement Meather Granted (207 Claim No. 3.10, up to 31 Oxt 10) 0 Grass 0 Gras 0 Grass | | | | | | ,_,_,_, | | | | | | | | | | | | - |
| 1272 Duration of Section 118 1189 days 1189 days Mon 207/15 Sat 20/10/18 Mon 207/15 Sat 20/10/18 Mon 207/15 Mon 207/15 Sat 20/10/18 Mon 207/15 Sat 17/10/15 Mon 207/15 Sat 1 | | | | | | | | | | | | | - | | | | | |
| 1273 Inclement Weather Granted (EOT Claim No. 3.10, up to 31 Oct 10) 0 days 37 days NA NA NA NA OB Sun 22/10/18 Mon 26/11/28 1272 1274 I <td< td=""><td></td><td>Duration of Section 11P</td><td>1100</td><td>1100</td><td>Mc- 20 7 7</td><td>Cat 20 /2 0 /2 0</td><td>M 20 C (5</td><td></td><td>E 00/</td><td>Ma- 20 G #-</td><td>6-1-20/10/17</td><td>166</td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | Duration of Section 11P | 1100 | 1100 | Mc- 20 7 7 | Cat 20 /2 0 /2 0 | M 20 C (5 | | E 00/ | Ma- 20 G #- | 6-1-20/10/17 | 166 | | | | | | |
| $ \frac{1}{1274} = \frac{1}{1274} = \frac{1}{1274} = \frac{1}{1274} = \frac{1}{189} + \frac{1}{189} +$ | | | | | | | | | | | | | 7 | | | | | |
| $\frac{1275}{and Remaining Works} = \frac{1189 days}{and Remaining Works} = \frac{1189 days}{90 days} = \frac{1503 days}{90 days} = \frac{1000 days}{90 days} = 1000 da$ | | Inclement Weather Granted (EOT Claim No. 3.10, up to 31 Oct 16) | 0 days? | 37 days | NA | a <i>N</i> A | NA | NA | 0% | Sun 21/10/18 | Mon 26/11/18 | 1272 | | | | | | |
| and Remaining Works | | | | | | | | | | | | | | | | | | |
| 1276 Portion 11 - Time of Possession of Site 90 days 90 days 90 days Mon 20/7/15 Sat 17/10/15 100% Mon 20/7/15 Sat 17/10/15 120 Sat 17/10/15 Mon 20/7/15 Sat 17/10/15 100% Mon 20/7/15 Sat 17/10/15 120 Mon 20/7/15 Sat 17/10/15 Mon | 1275 | | 1189 days | 1503 days | Mon 20/7/15 | 5 Sat 20/10/18 | Mon 20/7/15 | NA | 13% | Mon 20/7/15 | Fri 30/8/19 | | | | | | | |
| Commissioning | 1276 | | 90 days | 90 days | Mon 20/7/15 | 5 Sat 17/10/15 | Mon 20/7/15 | Sat 17/10/15 10 | 00% | Mon 20/7/15 | Sat 17/10/15 | 1SS | 17/10 | | | | | |
| 1278 Recycle Timber plastic cladding of External Finishign of Pumping Station 60 days 60 days Thu 4/1/18 Sun 4/3/18 NA NA 0% Wed 14/11/18 Sat 12/1/19 1266FS-30 days Control of the state of the st | 1277 | | 120 days | 120 days | Thu 4/1/18 | 3 Thu 3/5/18 | NA | NA | 0% | Wed 14/11/18 | Wed 13/3/19 | | | | | | | ∇ |
| Task Task Milestone Δ Rolled Up Milestone Δ Split Inactive Task Duration-only Task Progress Baseline Milestone Δ Baseline Summary ∇ ∇ Baseline Split Manual Summary Rollup Manual Summary Rollup Manual Summary Rollup Manual Summary | 1278 | Recycle Timber plastic cladding of External Finishign of | 60 days | 60 days | Thu 4/1/18 | 3 Sun 4/3/18 | NA | NA | 0% | Wed 14/11/18 | Sat 12/1/19 | 1266FS-30 days | | | | | | 00000000000 |
| Task Progress — Baseline Milestone △ Baseline Summary ▽ ⊽ Baseline Split Inactive Milestone • Manual Summary Rollup • Project: Rolling Programme (Feb 2017) Critical Task Summary ✓ Rolled Up Baseline • Rolled Up Baseline External Tasks Inactive Milestone • Manual Summary • Critical Task Progress — Rolled Up Task … Rolled Up Progress • Project Summary … Start-only — — Baseline Nilestone • Manual Task • Finish-only — … • … • | | | | | | | | | | | | | | | | | | |
| Project: Rolling Programme (Feb 2017) Critical Task Summary Rolled Up Baseline External Tasks Inactive Milestone Manual Summary Manual Summary Critical Task Progress Rolled Up Task Rolled Up Baseline Milestone Project Summary Inactive Milestone Manual Summary Inactive Milestone Start-only Baseline Rolled Up Critical Task Rolled Up Progress Group By Summary Manual Task Finish-only Inactive Milestone Manual Task Finish-only Inactive Milestone Finish-only Finish-only Finish-only Finish-only < | | | arocc | | | | | | | | | | | | | | 2 | • |
| Critical Task Progress Rolled Up Task Rolled Up Baseline Milestone △ Project Summary Inactive Summary Start-only Baseline Rolled Up Critical Task Rolled Up Progress Group By Summary Manual Task Finish-only | Project: | | - | | | | ~ | | | | • V | | | | | | , i | • |
| | - | | | | | , | | | | | Δ | | | | | | - | |
| Page 0 | | Baseline | | 000000000 | R | tolled Up Critical T | ask 🛛 | Rolled U | p Pro | ogress | | Group By Summa | y 🛡 | Manual Task | \diamond | Finish- | only | |
| | | | | | | | | | | | | Page 6 | | | | | | |



| Contrac | ctor : Sang Hing - Kuly Joint Venture | | | | | | | | | Castle P | ntract no. DC eak Road Tru Mun Village | unk Sewer and | | | | | |
|-------------|--|----------------------|------------|----------------|---------------------------------------|--------------|---------------|-------------------------|----------------------------|-------------------|--|--------------------|----------------------|---------------------------|-----------------|---------------------------|-----------------|
| ID | Task Name | Baseline Duration | Duration | Baseline Start | Baseline Finish | Actual Start | Actual Finish | % Complet | Start | Finish | Predecessors | | 2016 | layJun Jul AugSepOctNovDe | 2017 | | 2018 |
| 1279 | Metal fence wall & Gate | 60 days | 60 days | Thu 4/1/18 | Sun 4/3/18 | NA | N | A 0% | Wed 14/11/18 | Sat 12/1/19 | 1266FS-30 days | Jul AugSepOctNovDe | ecJan FebMarAprM | layJun Jul AugSepOctNovDe | cJanFebMarAprMa | yJun Jul AugSepOctNovL | Jec Jan FebMarA |
| 1280 | Tempred glass fence on roof | 30 days | 30 days | Sat 3/2/18 | Sun 4/3/18 | NA | N | A 0% | Fri 14/12/18 | Sat 12/1/19 | 1279FS-30 days,127 | T. | | | | | 2000000 |
| 1281 | Green Roof | 45 days | 45 days | Mon 5/3/18 | Wed 18/4/18 | NA | N | A 0% | Sun 13/1/19 | Tue 26/2/19 | 1280 | - | | | | | 10000000 |
| 1282 | U-channel | 50 days | 50 days | Tue 13/2/18 | Tue 3/4/18 | NA | N | A 0% | Mon 24/12/18 | Mon 11/2/19 | 1279FS-20 days | - | | | | | 0000000000 |
| 1283 | Road pavement around Pumping Station | 50 days | 50 days | Mon 5/3/18 | Mon 23/4/18 | NA | N | A 0% | Sun 13/1/19 | Sun 3/3/19 | 1282FS-30 days | - | | | | | 200000000 |
| 1284 | Landscaping work | 60 days | 60 days | Mon 5/3/18 | Thu 3/5/18 | NA | N | A 0% | Sun 13/1/19 | Wed 13/3/19 | 1283FS-50 days | - | | | | | |
| 1285 | Handing Over to E&M (1019 days after commencement of Pumping Station) | 0 days | 0 days | Thu 3/5/18 | Thu 3/5/18 | NA | N | A 0% | Wed 13/3/19 | | 1SS+1019 days,1281FF,1284 | - | | | | | |
| 1286 | E&M Work | 260 days | 260 days | Sat 3/2/18 | Sat 20/10/18 | NA | NA | A 0% | Fri 14/12/18 | | , | - | | | | | ∇ |
| 1287 | Installation of E&M work | 120 days | 120 days | Sat 3/2/18 | Sat 2/6/18 | NA | N | A 0% | Fri 14/12/18 | Fri 12/4/19 | 1268 | - | | | | | |
| 1288 | Installation of E&M works & Testing and Commissioning | 140 days | 140 days | Sun 3/6/18 | Sat 20/10/18 | NA | N | A 0% | Sat 13/4/19 | Fri 30/8/19 | 1287 | - | | | | | |
| 1289 | Completion Section 11B | 0 days | 0 days | Sat 20/10/18 | Sat 20/10/18 | NA | N | A 0% | Fri 30/8/19 | Fri 30/8/19 | 1288,1285FF+170 da | a | | | | | |
| 1290 | | | | | | | | | | | | - | | | | | |
| 1291 | | | | | | | | | | | | - | | | | | |
| 1292 | | | | | | | | | | | | - | | | | | |
| 1293 | | | | | | | | | | | | - | | | | | |
| 1294 | | | | | | | | | | | | - | | | | | |
| 1295 | Duration of Section 10A | 750 days | 750 days | Mon 20/7/15 | Mon 7/8/17 | Mon 20/7/15 | N | A 80% | Mon 20/7/15 | Mon 7/8/17 | 1SS | • | | | | 7/8 | |
| 1296 | Inclement Weather Granted (EOT Claim No. 3.10, up to 31 Oct 16) | 0 days? | 22 days | NA | NA | NA | N | A 0% | Tue 8/8/17 | Tue 29/8/17 | 1295 | - | | | | 8/8 29/8 | |
| 1297 | Section 10A - Siu Lam Psychiatric Centre Sewage | 750 days | 1200 days? | Mon 20/7/15 | Mon 7/8/17 | Mon 20/7/15 | NA | A 29% | Mon 20/7/15 | Wed 31/10/18 | | ⊽ | | | | ∇ | |
| 1298 🗸 | Portion 10 - Time Possession of Site | 60 days | 60 days | Mon 20/7/15 | Thu 17/9/15 | Mon 20/7/15 | Thu 17/9/1 | 5 100% | Mon 20/7/15 | Thu 17/9/15 | 1SS | 17/9 | | | | | |
| 1299 🗸 | Prepartation Work | 90 days | 90 days | Fri 18/9/15 | Wed 16/12/15 | Fri 18/9/15 | Wed 16/12/1 | 5 100% | Fri 18/9/15 | Wed 16/12/15 | | - V V | 7 | | | | |
| 1300 🗸 | Initial Survey | 60 days | 60 days | Fri 18/9/15 | Mon 16/11/15 | Fri 18/9/15 | Mon 16/11/1 | 5 100% | Fri 18/9/15 | Mon 16/11/15 | 1298 | 18/9 | /11 | | | | |
| 1301 🗸 | Site clearance | 30 days | 30 days | Tue 17/11/15 | Wed 16/12/15 | Tue 17/11/15 | Wed 16/12/1 | 5 100% | Tue 17/11/15 | Wed 16/12/15 | 1300 | 17/11 | 16/12 | | | | |
| 1302 | | | | | | | | | | | | - | | | | | |
| 1303 🗸 | EOT Claim 021 - Delay due to Change of Design at SLPC SPS | 0 days? | 80 days? | NA | NA | Sat 10/9/16 | Tue 29/11/1 | 6 100% | Sat 10/9/16 | Tue 29/11/16 | | - | | | | | |
| 1304 🗸 | Works were suspended due to design change | 0 days? | 0 days | NA | NA | Sat 10/9/16 | Sat 10/9/1 | 6 100% | Sat 10/9/16 | Sat 10/9/16 | | - | | 10/9 | | | |
| 1305 🗸 | Partially updated design information was reviewed by AECOM and provided | 0 days? | 79 days? | NA | NA | Sun 11/9/16 | Mon 28/11/1 | 6 100% | Sun 11/9/16 | Mon 28/11/16 | 1304 | - | | 11/9 🛨2 | 8/11 | | |
| 1306 🗸 | Works resumed | 0 days? | 0 days | NA | NA | Tue 29/11/16 | Tue 29/11/1 | 6 100% | Tue 29/11/16 | Tue 29/11/16 | 1305 | - | | * | 29/11 | | |
| 1307 | | | | | | | | | | | | - | | | | | |
| 1308 | EOT Claim XXX (34A) - Change of Design in Siu Lam Psychiatric Centre SPS | 0 days? | 168 days? | NA | NA | Mon 28/11/16 | N/ | A 26% | Mon 28/11/16 | Sun 14/5/17 | | - | | - | | | |
| 1309 🗸 | Additional cast-in socket for davit is requested to install under updated construction details | 0 days? | 0 days | NA | NA | Mon 28/11/16 | Mon 28/11/1 | 6 100% | Mon 28/11/16 | Mon 28/11/16 | 1306 | - | | 42 | 28/11 | | |
| 1310 🗸 | Order, Fabrication and Delivery of socket | 0 days? | 42 days? | NA | NA | Tue 29/11/16 | Mon 9/1/1 | 7 100% | Tue 29/11/16 | Mon 9/1/17 | 1309 | - | | 29/11 🛨 | 9/1 | | |
| 1311 🗸 | Ready for installation | 0 days? | 0 days | NA | NA | Tue 10/1/17 | Tue 10/1/1 | 7 100% | Tue 10/1/17 | Tue 10/1/17 | 1310 | - | | | 10/1 | | |
| 1312 🗸 | Installation of cast-in davit and modification of installed RC bars | 0 days? | 3 days | NA | NA | Tue 10/1/17 | Thu 12/1/1 | 7 100% | Tue 10/1/17 | Thu 12/1/17 | 1311 | - | | 10/ | 1 12/1 | | |
| 1313 | Construct Rasing main (CH 307 to CH 282) from Pump House in advance Koisk due to increase of depth of pumping station | 0 days? | 55 days | NA | NA | NA | N | A 0% | Wed 22/2/17 | Mon 17/4/17 | 1336 | - | | | 22/2 17, | 14 | |
| 1314 🏢 | Confirm details of additional 45 degree bend by AECOM | 0 days? | 0 days | NA | NA | NA | N | A 0% | Wed 1/3/17 | Wed 1/3/17 | | - | | | 1/3 | | |
| 1315 🏢 | Additional time for ordering of 45 degree bend in front of pumping station to aviod conflict with Koisk | 0 days? | 75 days | NA | NA | NA | N | A 0% | Wed 1/3/17 | Sun 14/5/17 | 1314 | - | | | 1/3 🛨 | 14/5 | |
| 1316 | | | | | | | | | | | | - | | | | | |
| 1317 | EOT Claim XXX (33A) - Pending Details for Boundary Fencing and Vehicular Gate in Siu Lam Psychiatric Centre SPS | 0 days? | 659 days | NA | NA | Wed 11/1/17 | N/ | A 0% | Wed 11/1/17 | Wed 31/10/18 | | - | | | • | | |
| 1318 🗸 | Preliminary details for cost estimation were provised by AECOM | 0 days? | 0 days | NA | NA | Wed 11/1/17 | Wed 11/1/1 | 7 100% | Wed 11/1/17 | Wed 11/1/17 | | - | | | ▲ 11/1 | | |
| 1319 | Provision of final construction details from AECOM (interim only) | 0 days? | 60 days | NA | NA | NA | N | A 0% | Wed 11/1/17 | Sat 11/3/17 | 1318 | | | 11/ | 1 🗙 11/3 | | |
| 1320 | Subletting | 0 days? | 120 days | NA | NA | NA | N | A 0% | Sun 12/3/17 | Sun 9/7/17 | 1319 | - | | | 12/3 🛨 | 9/7 | |
| 1321 | Prepare shop drawings | 0 days? | 60 days | NA | NA | NA | N | A 0% | Mon 10/7/17 | Thu 7/9/17 | 1320 | - | | | | 10/7 7/9 | |
| 1322 | Submission of shop drawings | 0 days? | 0 days | NA | NA | NA | N | A 0% | Thu 7/9/17 | Thu 7/9/17 | 1321 | - | | | | 7/9 | |
| 1323 | Approval of shop drawings | 0 days? | 60 days | NA | NA | NA | N | A 0% | Fri 8/9/17 | Mon 6/11/17 | 1322 | - | | | | 8/9 📩 6/: | 11 |
| 1324 | Place order | 0 days? | 14 days | NA | NA | NA | N | A 0% | Tue 7/11/17 | Mon 20/11/17 | 1323 | - | | | | 7/11 🗶 2 | 20/11 |
| | Task | | | | ilestone | | Roll | led Up Mi | ilestone | A | Split | | Inactive | e Task | Du | ration-only | |
| | Task Pro | - | | Ba | aseline Milestone | Δ | Bas | eline Sum | nmary | ∇ ∇ | Baseline Split | | Inactive | Milestone | Ma | inual Summary Rollup | • |
| Project: Ro | olling Programme (Feb 2017) Critical T. Critical T. | ask ask Progress | | | ummary olled Up Task | ▼ | | led Up Ba led Up Ba | seline seline Milestone | ^ | External Tasks Project Summary | | Inactive Inactive | | Ma | inual Summary irt-only | • |
| | Baseline | - | 0000000 | | olled Up Task olled Up Critical Ta | ask | | led Up ва led Up Pro | | - | Group By Summary | | Manual | | | ish-only | - |
| | I | | | | | | | | | | Page 7 | | | | | | |
| | | | | | | | | | | | | | | | | | |



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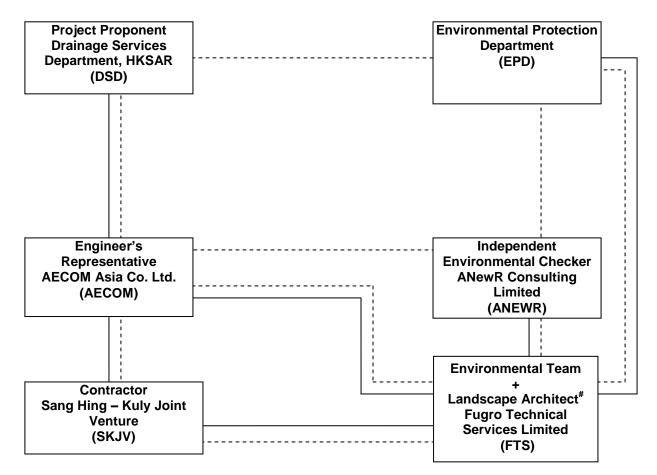


Appendix B

Project Organization Chart

Fugro Development Centre, 5 Lok Yi Street, Tai Lam, Tuen Mun, N.T., Hong Kong.





Remark:

The Landscape Architect with a minimum of 1-2years on site experience as a member of the ET to monitor and audit the landscaping installation works and landscape protection measures.

| Legend: | | | | | | | | |
|---------|-----------------------|--|--|--|--|--|--|--|
| | Line of Reporting | | | | | | | |
| | Line of Communication | | | | | | | |
| | | | | | | | | |

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Appendix C

Action and Limit Levels for Air Quality and Noise

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Action and Limit Levels for Air Quality

| Parameter | Monitoring Station | onitoring Station Action Level (µg/m³) | | | | |
|-----------|--------------------|--|-----|--|--|--|
| 1-hr TSP | LC6a | 344 | 500 | | | |
| (µg/m³) | LC9 | 335 | 500 | | | |

Action and Limit Levels for Construction Noise

| Time Period | Location | Action | Limit |
|----------------------------------|-------------|--|-----------|
| 0700-1900 hrs on normal weekdays | LC6a LC9 | When one documented complaint is received | 75* dB(A) |

* reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

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Appendix D

Air Quality Monitoring Data and Graphical Presentations

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LC6a The Castle Bay

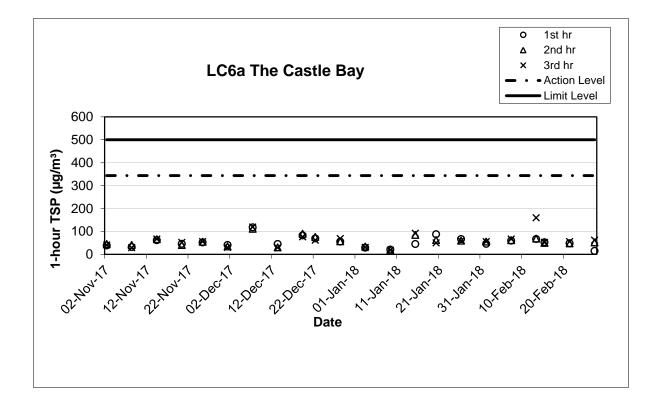
| | 1-hour TSP (μg/m³) | | | | | | | |
|-----------|--------------------|--------|--------|--------|---------|--|--|--|
| Date | Start Time | 1st hr | 2nd hr | 3rd hr | Weather | | | |
| 02-Nov-17 | 08:30 | 39 | 45 | 41 | Fine | | | |
| 08-Nov-17 | 14:00 | 32 | 41 | 29 | Cloudy | | | |
| 14-Nov-17 | 14:00 | 62 | 66 | 67 | Cloudy | | | |
| 20-Nov-17 | 13:04 | 46 | 41 | 52 | Fine | | | |
| 25-Nov-17 | 13:17 | 52 | 55 | 56 | Fine | | | |
| 01-Dec-17 | 14:00 | 41 | 35 | 31 | Fine | | | |
| 07-Dec-17 | 09:33 | 118 | 112 | 119 | Fine | | | |
| 13-Dec-17 | 08:37 | 45 | 31 | 29 | Fine | | | |
| 19-Dec-17 | 13:30 | 83 | 90 | 77 | Fine | | | |
| 22-Dec-17 | 08:51 | 70 | 76 | 62 | Fine | | | |
| 28-Dec-17 | 13:10 | 56 | 57 | 69 | Fine | | | |
| 03-Jan-18 | 14:00 | 29 | 34 | 31 | Fine | | | |
| 09-Jan-18 | 08:51 | 21 | 20 | 18 | Cloudy | | | |
| 15-Jan-18 | 14:43 | 45 | 85 | 92 | Fine | | | |
| 20-Jan-18 | 08:36 | 88 | 63 | 50 | Fine | | | |
| 26-Jan-18 | 08:38 | 67 | 60 | 59 | Fine | | | |
| 01-Feb-18 | 14:11 | 46 | 56 | 56 | Fine | | | |
| 07-Feb-18 | 13:04 | 60 | 62 | 67 | Fine | | | |
| 13-Feb-18 | 09:11 | 67 | 69 | 160 | Sunny | | | |
| 15-Feb-18 | 08:45 | 53 | 50 | 52 | Cloudy | | | |
| 21-Feb-18 | 09:39 | 49 | 48 | 56 | Cloudy | | | |
| 27-Feb-18 | 09:00 | 15 | 52 | 62 | Sunny | | | |

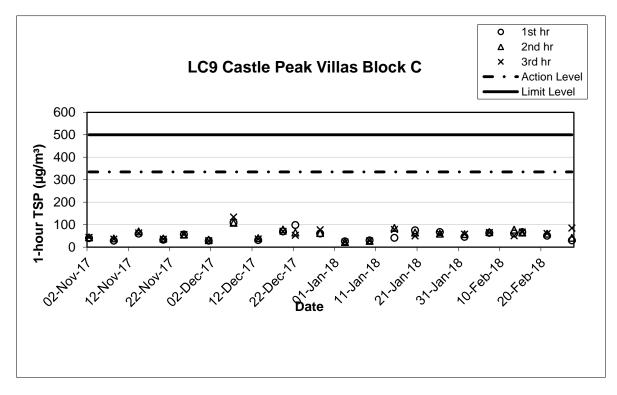
LC9 Castle Peak Villas Block C

| 1-hour TSP (μg/m³) | | | | | | |
|--------------------|------------|--------|--------|--------|---------|--|
| Date | Start Time | 1st hr | 2nd hr | 3rd hr | Weather | |
| 02-Nov-17 | 08:45 | 39 | 43 | 43 | Fine | |
| 08-Nov-17 | 14:25 | 28 | 38 | 35 | Cloudy | |
| 14-Nov-17 | 14:48 | 59 | 69 | 63 | Cloudy | |
| 20-Nov-17 | 13:54 | 32 | 38 | 35 | Fine | |
| 25-Nov-17 | 13:25 | 56 | 55 | 56 | Fine | |
| 01-Dec-17 | 14:15 | 28 | 32 | 28 | Fine | |
| 07-Dec-17 | 09:04 | 109 | 108 | 133 | Fine | |
| 13-Dec-17 | 08:48 | 31 | 39 | 36 | Fine | |
| 19-Dec-17 | 13:40 | 69 | 78 | 70 | Fine | |
| 22-Dec-17 | 09:02 | 98 | 64 | 52 | Fine | |
| 28-Dec-17 | 13:02 | 60 | 62 | 76 | Fine | |
| 03-Jan-18 | 14:15 | 25 | 22 | 22 | Fine | |
| 09-Jan-18 | 08:35 | 29 | 27 | 27 | Cloudy | |
| 15-Jan-18 | 14:04 | 41 | 85 | 78 | Fine | |
| 20-Jan-18 | 08:51 | 74 | 64 | 49 | Fine | |
| 26-Jan-18 | 08:55 | 66 | 59 | 59 | Fine | |
| 01-Feb-18 | 14:26 | 45 | 57 | 57 | Fine | |
| 07-Feb-18 | 13:20 | 63 | 66 | 64 | Fine | |
| 13-Feb-18 | 09:15 | 60 | 77 | 50 | Sunny | |
| 15-Feb-18 | 09:11 | 66 | 64 | 66 | Cloudy | |
| 21-Feb-18 | 09:50 | 50 | 59 | 60 | Cloudy | |
| 27-Feb-18 | 09:15 | 29 | 41 | 84 | Sunny | |

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Note:

- 1) The major activities during the reporting period refer to section 1.4.1.
- 2) The weather conditions during the period refer to section 2.5.1.
- 3) The other factors influencing the monitoring results refer to section 2.6.

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Appendix E

Noise Monitoring Data and Graphical Presentations

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LC6a The Castle Bay

| | | L _{eq} 30min | Corrected | | | |
|-----------|------------|-----------------------|-----------------|-----------------------|-----------------------|---------|
| Date | Start Time | dB(A) | Leq 30min dB(A) | L ₉₀ dB(A) | L ₁₀ dB(A) | Weather |
| 02-Nov-17 | 09:37 | 72 | 67 | 64 | 76 | Fine |
| 08-Nov-17 | 13:45 | 73 | 68 | 71 | 75 | Cloudy |
| 14-Nov-17 | 14:00 | 68 | 63 | 56 | 71 | Cloudy |
| 20-Nov-17 | 13:10 | 69 | 64 | 65 | 71 | Fine |
| 25-Nov-17 | 13:34 | 73 | 68 | 69 | 74 | Fine |
| 01-Dec-17 | 14:21 | 63 | 58 | 57 | 65 | Fine |
| 07-Dec-17 | 09:28 | 65 | 60 | 55 | 69 | Fine |
| 13-Dec-17 | 09:46 | 66 | 61 | 60 | 69 | Fine |
| 19-Dec-17 | 13:31 | 64 | 59 | 56 | 66 | Fine |
| 22-Dec-17 | 10:22 | 67 | 62 | 51 | 70 | Fine |
| 28-Dec-17 | 11:12 | 65 | 60 | 56 | 67 | Fine |
| 03-Jan-18 | 14:00 | 65 | 60 | 64 | 67 | Fine |
| 09-Jan-18 | 09:15 | 71 | 66 | 63 | 74 | Cloudy |
| 15-Jan-18 | 14:43 | 71 | 66 | 56 | 73 | Fine |
| 20-Jan-18 | 09:48 | 65 | 60 | 56 | 67 | Fine |
| 26-Jan-18 | 10:00 | 60 | 55 | 50 | 66 | Fine |
| 01-Feb-18 | 15:14 | 65 | 60 | 56 | 69 | Fine |
| 07-Feb-18 | 14:12 | 69 | 64 | 55 | 74 | Fine |
| 13-Feb-18 | 09:11 | 65 | 60 | 49 | 69 | Sunny |
| 15-Feb-18 | 09:47 | 60 | 55 | 51 | 61 | Cloudy |
| 21-Feb-18 | 14:46 | 67 | 62 | 60 | 69 | Cloudy |
| 27-Feb-18 | 10:20 | 73 | 68 | 60 | 76 | Fine |

LC9 Castle Peak Villas Block C

| Date | Start Time | L _{eq} 30min dB(A) | Corrected Leq 30min dB(A) | L ₉₀ dB(A) | L ₁₀ dB(A) | Weather |
|-----------|------------|--------------------------------|------------------------------|--------------------------|-----------------------|---------|
| 02-Nov-17 | 09:00 | 70 | N.A | 61 | 73 | Fine |
| 08-Nov-17 | 14:30 | 71 | N.A | 60 | 74 | Cloudy |
| 14-Nov-17 | 14:55 | 66 | N.A | 61 | 69 | Cloudy |
| 20-Nov-17 | 14:03 | 69 | N.A | 65 | 70 | Fine |
| 25-Nov-17 | 14:17 | 70 | N.A | 65 | 72 | Fine |
| 01-Dec-17 | 15:02 | 65 | N.A | 55 | 70 | Fine |
| 07-Dec-17 | 13:38 | 71 | N.A | 65 | 73 | Fine |
| 13-Dec-17 | 09:05 | 68 | N.A | 63 | 71 | Fine |
| 19-Dec-17 | 14:06 | 71 | N.A | 65 | 74 | Fine |
| 22-Dec-17 | 09:39 | 65 | N.A | 57 | 68 | Fine |
| 28-Dec-17 | 13:29 | 67 | N.A | 57 | 70 | Fine |
| 03-Jan-18 | 14:40 | 64 | N.A | 61 | 65 | Fine |
| 09-Jan-18 | 10:27 | 64 | N.A | 61 | 66 | Cloudy |
| 15-Jan-18 | 14:04 | 58 | N.A | 51 | 60 | Fine |
| 20-Jan-18 | 09:07 | 59 | N.A | 55 | 62 | Fine |
| 26-Jan-18 | 09:16 | 59 | N.A | 54 | 62 | Fine |
| 01-Feb-18 | 14:31 | 63 | N.A | 54 | 66 | Fine |
| 07-Feb-18 | 13:30 | 67 | N.A | 62 | 70 | Fine |
| 13-Feb-18 | 09:47 | 68 | N.A | 53 | 70 | Sunny |
| 15-Feb-18 | 10:23 | 63 | N.A | 52 | 67 | Cloudy |
| 21-Feb-18 | 14:03 | 62 | N.A | 55 | 65 | Cloudy |
| 27-Feb-18 | 11:00 | 72 | N.A | 57 | 75 | Fine |

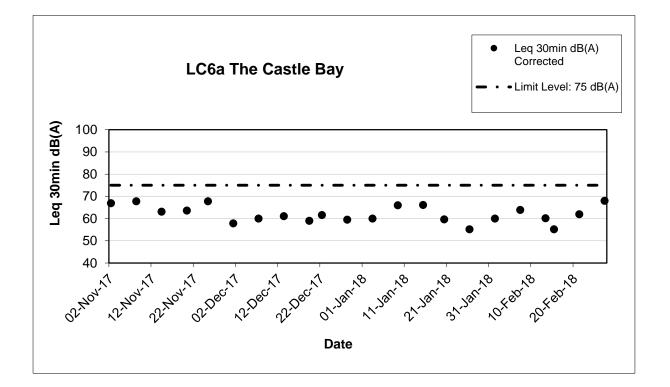
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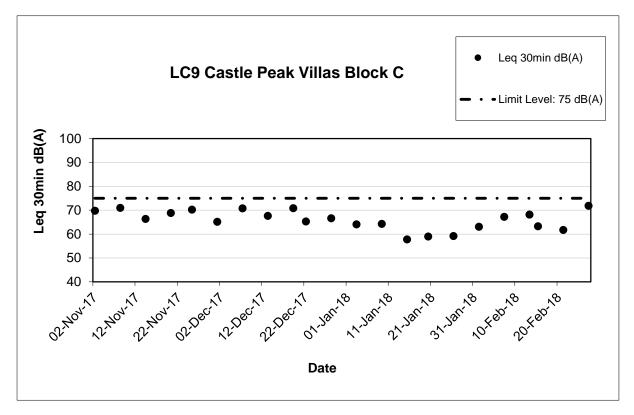
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Note:

- 1) The major activities during the reporting period refer to section 1.4.1.
- 2) The weather conditions during the period refer to section 2.5.1.
- 3) The other factors influencing the monitoring results refer to section 2.6.

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Appendix F

Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

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Environmental Complaints Log

| Complaint Log No. | Date of Receipt | Received From and Received By | Nature of Complaint | Date Investigated | Outcome | Date of Reply |
|----------------------|--------------------|--|------------------------|----------------------|---------|------------------|
| Nil | - | - | - | - | - | - |

Cumulative Statistics on Complaints

| Environmental Parameters | Cumulative No. Brought Forward | No. of Complaints This Month | Cumulative Project-to-Date |
|-----------------------------|-----------------------------------|---------------------------------|-------------------------------|
| Air | 0 | 0 | 0 |
| Noise | 0 | 0 | 0 |
| Water | 0 | 0 | 0 |
| Waste | 0 | 0 | 0 |
| Total | 0 | 0 | 0 |

Cumulative Statistics on Notifications of Summons and Successful Prosecutions

| Environmental Parameters | Cumulative No. Brought Forward | No. of Prosecutions This Month | Cumulative Project-to-Date |
|-----------------------------|-----------------------------------|-----------------------------------|-------------------------------|
| Air | 0 | 0 | 0 |
| Noise | 0 | 0 | 0 |
| Water | 0 | 0 | 0 |
| Waste | 0 | 0 | 0 |
| Total | 0 | 0 | 0 |

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Appendix G

Implementation Status of Environmental Mitigation Measures

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Air Quality

| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|---|--|-------------------------|---|--|
| 4.5 | Undertake all air pollution measures to prevent dust nuisance as a result of and during construction activities. | All unpaved haul roads, bulldozed material, exposed site areas / Throughout construction period | Contractor | TMEIA | ۸ |
| 4.5 | No debris or other materials shall be burnt on the works areas. | All areas / Throughout construction period | Contractor | TMEIA. Avoid smoke impacts and disturbance | ۸ |
| 4.5 | Dust suppression measures shall be provided and to be submitted to and approved by the Engineer. | All areas / Throughout construction period | Contractor | TMEIA | ۸ |
| 4.5 | Stockpiles of imported material kept on site shall be contained within hoardings, dampened and/or covered during dry and windy weather. | All areas / Throughout construction period | Contractor | TMEIA Avoid dust generation | ۸ |
| 4.5 | Material stockpiled along side trenches should be covered with tarpaulins whenever works are within village boundaries. | All areas / Throughout construction period | Contractor | TMEIA Avoid dust generation / visual impacts | ^ |
| 4.5 | Water sprays shall be used during the delivery and handling of cement, sands aggregates and the like. | All areas / Throughout construction period | Contractor | TMEIA Avoid dust generation | ۸ |
| 4.5 | No batching of concrete should be carried out on site. Concrete should be used in ready mixed form and off loaded adjacent to designated works areas. | All areas / Throughout construction period | Contractor | TMEIA | ۸ |

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| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|---|--|-------------------------|--|--|
| 4.5 | Any vehicle used for moving cement, sands, aggregates and construction waste and the like shall have properly fitting side and tail boards. Materials shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards. | All areas / Throughout construction period | Contractor | TMEIA Avoid dust and spillage of material | ۸ |
| 4.5 | No earth, mud, debris, dust and the like shall be deposited on public roads. Details of proposals for the wheel cleaning facilities shall be agreed with the Engineer. Such wheel washing facility shall be usable prior to any earthworks excavation activity on the Site. | All areas, particularly pumping station sites / Throughout construction period | Contractor | TMEIA Avoid spread/ deposition of mud | Λ |
| 4.6.9 | Pumping station vent shafts should be located away from sensitive receivers. | All pumping stations | DSD | TMEIA Avoid odour impacts | N/A |
| 4.6.18 | Use a covered container to store and transport the screenings from the pump house. | All pumping stations /operational phase | DSD | TMEIA Avoid odour impacts | N/A |
| 4.6.18 | Undertake the collection of the screenings and transfer to the covered container within the confines of the pump house. | All pumping stations / operational phase | DSD | TMEIA Avoid odour impacts | N/A |
| 11.2.8 | EM&A in the form of 1 hour total suspended particulates monitoring once per week | All sensitive representative receivers / Throughout construction period | Contractor | EM&A Manual | ٨ |

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| | NOISE | | | | | | | |
|------------------|--|---|-------------------------|--|--|--|--|--|
| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase | | | |
| 5.7.1 & 5.8.1 | Ensure silencers are installed on the exhaust pipes of the trucks, excavators, compactors, concrete lorry mixer, and cranes for all activities. | All areas / Throughout construction period | Contractor | TMEIA | ٨ | | | |
| 5.7.1 & 5.8.1 | Use of mufflers on the breakers for all activities. | All areas / Throughout construction period | Contractor | TMEIA | N/A | | | |
| 5.7.1 & 5.8.1 | Use of temporary noise barriers for all activities at the pumping station sites and during main sewer construction. During main sewer construction, barriers should be used to screen the activities of mobile equipment including the crane and excavator. | All pumping stations and main sewer construction locations / Throughout construction period | Contractor | TMEIA | N/A | | | |
| 5.5.10 | Use of temporary noise barriers for all activities in the villages, where there is at least a 5m clearance | Village sewer alignment / Throughout construction period | Contractor | TMEIA | ۸ | | | |
| 5.8.6 & 5.9.6 | Manual breaking of concrete, where the concrete is less than 50mm thick. | Sewer alignment construction / concrete breaking activities | Contractor | TMEIA | N/A | | | |
| 5.8.6 & 5.9.6 | Use of alternative pavement removal methods/equipment (kick ripper), where the concrete is less than 100mm thick | Sewer alignment construction / concrete breaking activities | Contractor | TMEIA | N/A | | | |

Noise

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| EIA Reference | Environmental Protection Measures | Location/ Timing Implementation Agent | | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|--|--|------------|--|--|
| 5.8.6 & 5.9.6 | Use of acoustic enclosure in place of a barrier where there is a 6m clearance. | Sewer alignment construction / Throughout construction period | | TMEIA | N/A |
| 5.8.6 & 5.9.6 | Scheduling the numbers and operating times of equipment, when noise levels cannot be reduced to within the standards by other means | Sewer alignment construction / Throughout construction period | | TMEIA | ۸ |
| 5.8.11 | The construction activities should be carried out in the daytime period (08.00- 18.00) only and shall exclude Sundays and public holidays. | All areas | Contractor | TMEIA | ٨ |
| 5.8.11 | Powered mechanical equipment shall not be used within 5m of an NSR without the permission of the Engineer | All areas / Throughout construction period | Contractor | TMEIA | ٨ |
| 5.8.11 | Carry out good site practice to limit noise emission at source. | All areas / Throughout construction period | Contractor | TMEIA | Λ |
| 5.8.11 | Avoid simultaneous noisy activities. | All areas / Throughout construction period | Contractor | TMEIA | Λ |
| 11.2.8 | EM&A in the form of noise monitoring. | All representative receivers / Throughout construction period | Contractor | EM&A Manual | ٨ |

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Water Quality

| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|---|---|-------------------------|--|--|
| 6.4.3 | Stockpiles of excavated material should be kept to a minimum and covered during times of heavy rainfall. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.4.10 | Pass any trench dewatering through a portable sand/silt removal traps prior to discharge. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.5.2 | When works are carried out during the rainy season exposed slopes, stockpiles should be covered with tarpaulin and temporary access roads protected with a layer of gravel or crushed stone. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | N/A |
| 0.0.2 | Surface run off should be discharged to storm drains via sand/silt removal traps. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | / |
| 6.5.2 | Channels, bunds or sand bags should be used to direct any storm water to the traps and perimeter channels should be constructed before the main works begin to prevent external run off from crossing the site. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.5.2 | Silt removal structures, channels and manholes should be maintained to remove accumulated material, specifically at the onset and end of rainy periods. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | / |

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| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|--|---|-------------------------|--|--|
| 6.5.2 | Trenches for the sewer main should be dug and backfilled in short sections to minimise the quantities of rain water which will need to be pumped from them and upslope bunding provided to prevent surface water from flowing into the trenches. | | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | N/A |
| | Rainwater pumped from the trenches should be discharged to storm drains via sand/silt removal traps. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | N/A |
| 667 | | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 & Technical Memorandum on Standards for Effluent Discharged in Drainage and Sewerage Systems, Inland and Coastal Waters | ٨ |
| 6.5.3 | nearage of fuel of oil. Any waste oils should be collected in designated tarks | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.5.3 | All mechanical plant maintenance and refuelling areas shall be sited on paved areas. All storm water run-off from these areas should be discharged via oil separators/petrol separators and sand/silt removal traps. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |

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| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|---|---|-------------------------|--|--|
| 6 5 4 | Groundwater pumped out of excavations for the construction of pump sumps should only be discharged following removal of silt by sand/silt removal traps. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ٨ |
| 6 6 6 | Water from drilling of rock should be discharged following removal of silt by sand/silt removal traps. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.5.6 | The wheels of all vehicles leaving the construction site should be washed before leaving the site to minimise the carry over of mud onto public roads. Wheel wash water should be recycled and only discharged following removal of silt by sand/silt removal traps. | All areas particularly pumping station sites / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.5.7 | Run off from the roofs of site buildings should be conveyed in closed drains to the nearest surface water course to prevent the generation of excessive quantities of surface water run off carrying suspended solids. | Site Office areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 667 | All spillages should be cleaned up immediately to prevent their downward migration into the groundwater. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ۸ |
| 6.5.7 | Sewage from toilets and any kitchens in the site facilities should be treated via a septic tank system or if this is not practicable chemical toilets should be provided and the waste from these together with 'grey water' removed from the site on a daily basis for disposal at an appropriate receiving point. | All areas / throughout construction period | Contractor | WPCO, TMEIA & ProPECC PN 1/94 | ٨ |

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| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|--|--|-------------------------|-------------------------------------|--|
| 6.6.2 | Overflow bypasses to be used in emergency situations only and no effluent should be discharged during regular maintenance. | All pumping stations / Operation | DSD | WPCO, TMEIA | N/A |
| | Supply pumping stations with stand-by pumps, emergency power supplies and telemetry system. | All Pumping Stations | DSD | WPCO, TMEIA & ProPECC PN 1/94 | N/A |
| 1128 | | All areas/ Throughout construction period | Contractor | EM&A | ۸ |

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Waste Management

| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|---|---|-------------------------|---|--|
| 7.12.1 | The Contractor shall identify a coordinator for the management of waste. The coordinator shall prepare a Waste Management Plan which specifies procedures such as a ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of wastes does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposed. The Waste Management Plan shall be prepared with reference to Works Branch Technical Circular (WBTC) No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material and issued to the DEP and CED to confirm the availability for C&D and public fill waste. | Plan to be prepared prior to the start of construction, Implementation throughout construction period / All areas | Contractor | TMEIA.Works Branch Technical Circular (WBTC) No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material | ۸ |
| 7.12.1 | Stockpiled material should avoid vegetated areas where possible and covered by tarpaulins. Storage of material on site should be kept to a minimum. | All areas/ Throughout construction period | Contractor | TMEIA. Prevent windblown dust and/or surface run-off / avoid nuisance to local residents | ۸ |
| 7.12.1 | Surplus material should be sorted on site into C&D waste and that suitable for public fill | All areas /throughout construction period | Contractor | TMEIA. Maximise reusable material | ۸ |
| 7.12.1 | The contractor should provide a temporary storage area for general refuse during the construction phase which should be enclosed to avoid refuse being windblown and affected by rain. General refuse should be stored on site for a minimum period and disposed of at a licenced facility. | All areas / throughout construction period | Contractor | TMEIA | ۸ |

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| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Relevant Standard or Requirement | Implementation Status in Construction Phase |
|------------------|---|--|-------------------------|---|--|
| 7.12.1 | Excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage. | All areas / throughout construction period | Contractor | TMEIA | ۸ |
| 7.12.1 | Suitable chemical waste storage areas shall be formed on the site for temporary storage pending collection. All chemical wastes shall be handled, stored, transported and disposed of in accordance with the relevant practices. | All areas / throughout construction period | Contractor | TMEIA/ Code of Practice on the Package, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme | / |
| 7.12.1 | Nightsoil arising from chemical toilets and on site chemical treatment facilities shall be transported by a licensed contractor to government Sewage Treatment Works for disposal. | All areas / throughout construction period | Contractor | TMEIA/ Sanitation and Conservancy (Regional Council) By-laws | ۸ |
| 7.12.1 | Any screenings and grit that are removed during maintenance shall be disposed of at a landfill site. The material shall be suitably contained and covered. | All areas / operational phase | DSD | TMEIA | N/A |
| 11.2.8 | EM&A in the form of supervision of waste management practices | All areas / throughout construction period | Contractor | EM&A | ۸ |

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Landscape and Visual

| EIA Reference | Environmental Protection Measures | Location/ Timing | Implementation Agent | Standard Or | Implementation Status in Construction Phase |
|--|---|--|-------------------------|---|---|
| 10.8.5, 10.9.15, 10.10.6, 10.10.11, 10.10.20, 10.11.6 | Use of a suitable colour scheme to the pump station building to match the design of the adjacent properties. | All pumping stations | DSD & Contractor | Reduce visual intrusion of pumping stations | N/A |
| 10.8.5, 10.9.15, 10.10.11, 10.10.20, 10.11.6 | Construction of boundary wall similar to the adjacent housing instead of standard chain link and barbed wire fence. | All pumping stations except Tai Lam Correctional Institution | DSD & Contractor | Screen pumping stations | N/A |
| 10.8.5, 10.9.15, 10.10.11, 10.10.20, 10.11.6 | Planting of trees and shrubs to the boundary of the pumping station compound. | All pumping stations except Tai Lam Correctional Institution | DSD & Contractor | Screen pumping stations | N/A |
| 10.8.6 | Minimise damage to the rootball of the tree east of the pumping station site. | East of Castle Peak Villas pumping station/ During excavation | DSD and Contractor | | ۸ |
| 11.2.8 | EM&A in the form of site supervision of protection measures for trees and landscaping and compensatory planting establishment during the construction and operational phases respectively | All areas | Contractor | EM&A | ۸ |

Remarks: ^ Compliance of mitigation measure

Recommendation was made during site audit but improved/ rectified by the Contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting month

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Appendix H

Monthly Summary of Waste Flow Table

Sang Hing – Kuly Joint Venture Environmental Monthly Report for Contract No. DC/2014/01 Castle Peak Road Trunk Sewer and Tuen Mun Village Sewage

Name of Department: DSD

Contract No.: DC/2014/01

| | Wonting Summary Waster Iow Tuble for <u>12/17</u> (Wild, 11) | | | | | | | | | | | |
|-----------|--|---|------------------------------|--------------------------------|---|--------------------------|--------------|----------------------------------|--------------------------|-------------------|--------------------------------|--|
| | A | Actual Quantities | of Inert C&D | Materials Gene | Actual Quantities of C&D Wastes Generated Monthly | | | | | | | |
| Month | Total Quantity Generated | Hard Rock and Large Broken Concrete | Reused in the Contract | Reused in other Projects | Disposed as Public Fill | Imported Fill | Metals | Paper/ cardboard packaging | Plastics (see Note 3) | Chemical Waste | Others, e.g. general refuse | |
| | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | $(in '000m^3)$ | (in '000m ³) | (in '000 kg) | (in '000kg) | (in '000kg) | (in '000kg) | (in '000m ³) | |
| Jan 2017 | 0.040 | 0.040 | 0.040 | - | 0.000 | - | - | - | - | - | 0 | |
| Feb 2017 | 0.580 | 0.580 | 0.080 | - | 0.500 | - | - | - | - | - | 0 | |
| Mar 2017 | 0.910 | 0.910 | 0.460 | - | 0.450 | - | - | - | - | - | 0 | |
| Apr 2017 | 0.050 | 0.050 | 0.050 | - | 0.000 | - | - | - | - | - | 0 | |
| May 2017 | 0.050 | 0.050 | 0.050 | - | 0.000 | - | - | - | - | - | 0 | |
| Jun 2017 | 0.020 | 0.020 | 0.020 | - | 0.000 | - | - | - | - | - | 0 | |
| Jul 2017 | 0.020 | 0.020 | 0.020 | - | 0.000 | - | - | - | - | - | 0 | |
| Aug 2017 | 0.020 | 0.020 | 0.020 | - | 0.000 | - | - | - | - | - | 0 | |
| Sept 2017 | 0.000 | 0.000 | 0.000 | - | 0.000 | - | - | - | - | - | 0 | |
| Oct 2017 | 0.350 | 0.350 | 0.000 | - | 0.350 | - | - | - | - | - | 0 | |
| Nov 2017 | 1.300 | 0.000 | 0.000 | - | 1.300 | - | - | - | - | - | 0 | |
| Dec 2017 | 0.300 | 0.300 | 0.000 | - | 0.300 | - | - | - | - | - | 0 | |
| Total | 3.640 | 2.070 | 0.740 | - | 2.900 | - | - | - | - | - | 0 | |

Monthly Summary Waste Flow Table for <u>12/17</u> (MM/YY)

Name of Department: DSD

Contract No.: DC/2014/01

| | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | Actu | al Quantities of | of C&D Wastes | Generated M | onthly |
|-----------|--|---|------------------------------|--------------------------------|----------------------------|----------------|--------------|----------------------------------|--------------------------|-------------------|-----------------------------|
| Month | Total Quantity Generated | Hard Rock and Large Broken Concrete | Reused in the Contract | Reused in other Projects | Disposed as Public Fill | Imported Fill | Metals | Paper/ cardboard packaging | Plastics (see Note 3) | Chemical Waste | Others, e.g. general refuse |
| | $(in '000m^3)$ | $(in '000m^3)$ | $(in '000m^3)$ | $(in '000m^3)$ | $(in '000m^3)$ | $(in '000m^3)$ | (in '000 kg) | (in '000kg) | (in '000kg) | (in '000kg) | $(in '000m^3)$ |
| Jan 2018 | 0.350 | 0.350 | 0.020 | - | 2.300 | - | - | - | - | - | 0 |
| Feb 2018 | 0.300 | 0.300 | 0.020 | - | 0.000 | - | - | - | - | - | 0 |
| Mar 2018 | | | | | | | | | | | |
| Apr 2018 | | | | | | | | | | | |
| May 2018 | | | | | | | | | | | |
| Jun 2018 | | | | | | | | | | | |
| Jul 2018 | | | | | | | | | | | |
| Aug 2018 | | | | | | | | | | | |
| Sept 2018 | | | | | | | | | | | |
| Oct 2018 | | | | | | | | | | | |
| Nov 2018 | | | | | | | | | | | |
| Dec 2018 | | | | | | | | | | | |
| Total | 0.650 | 0.650 | 0.040 | - | 2.300 | - | - | - | - | - | 0 |

Monthly Summary Waste Flow Table for <u>02/18</u> (MM/YY)

Sang Hing – Kuly Joint Venture Environmental Monthly Report for Contract No. DC/2014/01 Castle Peak Road Trunk Sewer and Tuen Mun Village Sewage

Name of Department: DSD

Contract No.: DC/2014/01

| | Forecast of Total Quantities of C&D Materials to be Generated from the Contract* | | | | | | | | | | | |
|--------------------------------|--|--------------------------|--------------------------------|----------------------------|--------------------------|--------------|----------------------------------|--------------------------|----------------|--------------------------------|--|--|
| Total Quantity Generated | Hard Rock and Large Broken Concrete | | Reused in other Projects | Disposed as Public Fill | Imported Fill | Metals | Paper/ cardboard packaging | Plastics (see Note 3) | Chemical Waste | Others, e.g. general refuse | | |
| (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000 kg) | 1 0 0 | (in '000kg) | (in '000kg) | (in '000m ³) | | |
| 27 | 10 | 8 | 1 | 1 | 0 | 2 | 1 | 1 | 1 | 2 | | |

Notes:

(1) The performance targets are given in ETWB Technical Circular PS Clause 6(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

(4) *The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (ETWB Technical Circular PS Clause 5(4)(b) refers).
 [Delete Note (4) and the table above on the forecast, where inapplicable].