# **Civil Engineering and Development Department**

Agreement No. CE 67/2015 (HY)
Cycle Tracks from Tuen Mun
to Sheung Shui – Remaining Works
Design and Construction

Monthly EM&A Report (Version 1.0) July 2019

Approved By

Mr. KS Lee Environmental Team Leader

#### REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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## **EXECUTIVE SUMMARY**

## Introduction

- 1. This is the 33<sup>rd</sup> Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the "Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui Remaining Works Design and Construction" (hereinafter called "the Project"). This report documents the findings of EM&A Works conducted in July 2019.
- 2. During the reporting month, the major site activities undertaken in the reporting month included:

- Installation of Traffic Aids
- Construction of Subway A, Internal Finishing & E&M Works
- Construction of U-Channel, Shrubs Planting, Installation of Bicycle
Parapet
- Construction of Drainage Pipe, Construction of 15C, 15D, 15E, 16A,
Stream Decking
- Construction of Boundary Wall, Construction of Drainage Pipe, Laying
Road Kerb
- Construction of Drainage Pipe, Construction of Boundary Wall, Relocation
of Existing Bus Stop, Construction of Resting Station R8
- Remaining Works for Box Culvert C, Relocation of Traffic Sign Gantry
- Construction of Retaining Wall RW 45A, 45B Ramp, 49, DW1 & DW2
Construction of Drainage Pipe
- Construction of U-channel in Subway D, Internal Finishing
- Construction of 24A, 24AA, 24C, Backfilling for RW 46, Construction of
Drainage Pipe, Construction of Road Kerb
- Installation of Bicycle Parapet, CCTV for Drainage Pipe
- Backfilling behind RW 30A, 30B, Construction of Bridge E's Roofing,
Construction of Bridge E's Ramp
- Construction of Bridge B

# **Environmental Monitoring Works**

3. Environmental monitoring for the Project shall be performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

4. Summary of the non-compliance in the reporting month for the Project is tabulated in **Table I**.

Table I Non-compliance Record for the Project in the Reporting Month

Parameter	No. of Ex	ceedance	Action Taken
	Action Level	Limit Level	
Noise	0	0	N/A

# **Key Information in the Reporting Month**

5. Summary of key information in the reporting month is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Month

<b>T</b>	Event I			G	<b>D</b> 1
Event	Number	Nature	Action Taken	Status	Remark
Complaint received	0		N/A	N/A	
Reporting Changes	0		N/A	N/A	
Notifications of any summons & prosecutions received	0		N/A	N/A	

No complaint was received in this reporting month.

## **Environmental License and Permits**

- 6. Licenses/Permits granted to the Project include:
  - Environmental Permits (EP) for the Project,
    - EP-450/2013 issued on 30 May 2013 and EP-450/2013/A issued on 25 August 2015; and
    - EP-501/2015 issued on 2 September 2015
  - Billing Account for Waste Disposal (Acc No.: 7025411)
  - Discharge License
    - WT00028748-2017, WT00027672-2017, WT00027661-2017, WT00027606-2017, WT00027510-2017, WT00027509-2017, WT00027603-2017, WT00027508-2017, WT00027834-2017, WT00028431-2017, WT00027584-2017, WT00027607-2017, WT00028850-2017, WT00030236-2018
  - Chemical Waste Producers
    - No.:WPN5213-524-K3261-01

## **Future Key Issues**

- 7. The future key environmental issues in the coming months include:
  - Wastewater and runoff generation on-site;
  - Regular removal of silt, mud and sand along u-channels and inside sedimentation tanks;
  - Review and implementation of temporary drainage system for the surface runoff;
  - Noise from operation of the equipment, especially for excavation works and machinery on-site;
  - Dust generation from stockpiles of dusty materials, exposed site area, excavation works and other dust-generating activities;
  - Water spraying for dust generating activities and on haul road;
  - Proper storage of construction materials on-site;
  - Storage of chemicals/fuel and chemical waste/ waste oil on-site;
  - Accumulation of general refuse and construction waste on-site; and
  - Protection measures for retained trees on-site.

## 1 INTRODUCTION

## **Background**

- 1.1 "Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River" (the EIA Report) is a Schedule 2 Designated Project (DP) under Environmental Impact Assessment Ordinance (EIAO). The Environmental Impact Assessment (EIA) Report (Registered No.: AEIAR-133/2009) and the associated Environmental Monitoring and Audit (EM&A) Manual was approved on 12 March 2009.
- 1.2 Civil Engineering and Development Department (CEDD) implemented the DP in two stages, i.e. Stage 1 and Stage 2. An Environmental Permit (EP) No. EP-450/2013 has been granted for Stage 1 works on 30 May 2013. Pursuant to Section 13 of the EIAO, the Director of Environmental Protection amends the Environmental Permit (No. EP-450/2013) based on the Application No. VEP-478/2015 and the EP (Permit No. EP-450/2013/A) was issued on 25 August 2015 to CEDD as the Permit Holder.
- 1.3 An Environmental Review (ER) Report of the "Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River Stage 2" had been prepared in July 2015 and the Environmental Monitoring and Audit Manual (EM&A Manual) was also included as part of the ER report in the application (Application No.: AEP-501-2015). An Environmental Permit No. EP-501/2015 was issued on 2 September 2015 for Stage 2 works to CEDD as the Permit Holder.
- 1.4 "Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui Remaining Works Design and Construction" (hereinafter called the "Project") covers the Stage 1 (Part) and Stage 2 works of the DP. This Project was commissioned to Sang Hing Kuly Joint Venture (hereinafter called the "Contractor") for "Contract No.: YL/2015/01 Cycle Tracks from Tuen Mun to Sheung Shui Remaining Works". The site location and work programme are shown in **Figure 1a-1h** and **Appendix A** respectively.
- 1.5 Cinotech Consultants Ltd. was designated as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The construction commencement of the Project was on 23<sup>rd</sup> November 2016. This is the 33<sup>rd</sup> Monthly EM&A Report summarizing the EM&A works for the Project during July 2019.

## **Project Organizations**

- 1.6 Different parties with different levels of involvement in the project organization include:
  - Project Proponent Civil Engineering and Development Department (CEDD)
  - Supervisor Representative Mannings (Asia) Consultants Limited (Mannings)
  - Environmental Team (ET) Cinotech Consultants Limited (Cinotech)
  - Independent Environmental Checker (IEC) ANewR Consulting Limited (ANewR)
  - Contractor Sang Hing Kuly Joint Venture (SKJV)

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1.7 The Organizational Structure for Environmental Management is shown in **Figure 3**.

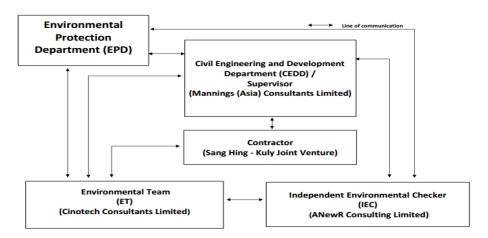


Figure 3 Organization Structure (Environmental Aspects)

1.8 The key contacts of the Project are shown in **Table 1.1**.

**Table 1.1 Key Project Contacts** 

Party	Role	Contact Person	Phone No.	Fax No.
CEDD Project Proponent		Mr. Chu Wai Lun, Thomas 2417 6370		2412 0358
Mannings	Supervisor Representative	Mr. Simon Ng	3168 2028	3168 2022
Cinotech	Environmental Team	Mr. KS Lee	2151 2091	3107 1388
Cinotecn		Ms. Betty Choi	2151 2072	3107 1300
ANewR	Independent Environmental Checker	Mr. Adi Lee	2618 2836	3007 8648
SKJV	Contractor	Mr. Ma Kin Man	9552 1734	2890 8205

# **Construction Activities undertaken during the Reporting Month**

1.9 The major site activities undertaken in the reporting month included:

Portion A	-	Installation of Traffic Aids
Portion B	-	Construction of Subway A, Internal Finishing & E&M Works
Portion C	-	Construction of U-Channel, Shrubs Planting, Installation of Bicycle
		Parapet
Portion D	-	Construction of Drainage Pipe, Construction of 15C, 15D, 15E, 16A,
		Stream Decking
Portion E	-	Construction of Boundary Wall, Construction of Drainage Pipe, Laying
		Road Kerb

Portion F	- Construction of Drainage Pipe, Construction of Boundary Wall,
	Relocation of Existing Bus Stop, Construction of Resting Station R8
Portion G	- Remaining Works for Box Culvert C, Relocation of Traffic Sign Gantry
Portion H	- Construction of Retaining Wall RW 45A, 45B Ramp, 49, DW1 & DW2
	Construction of Drainage Pipe
Portion I	- Construction of U-channel in Subway D, Internal Finishing
Portion J	- Construction of 24A, 24AA, 24C, Backfilling for RW 46, Construction
	of Drainage Pipe, Construction of Road Kerb
Portion K	- Installation of Bicycle Parapet, CCTV for Drainage Pipe
Portion M	- Backfilling behind RW 30A, 30B, Construction of Bridge E's Roofing,
	Construction of Bridge E's Ramp
Portion N	- Construction of Bridge B

1.10 Inter-relationship with environmental protection/mitigation measures are presented in **Table** 1.2.

Table 1.2 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures

Construction Works	Major Environmental Impact	Control Measures
As mentioned in Section 1.9	Noise, dust impact, water quality and waste generation	<ul> <li>Sufficient watering of the works site with active dust emitting activities</li> <li>Properly cover the stockpiles</li> <li>On-site waste sorting and implementation of trip ticket system</li> <li>Appropriate desilting/sedimentation devices provided on site for treatment with valid Discharge License before discharge</li> <li>Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall</li> <li>Use of quiet plant and well-maintained construction plant</li> <li>Provide movable noise barrier</li> <li>Proper wheel washing for construction vehicles before leaving the site</li> <li>Provide sufficient mitigation measures as recommended in Approved EM&amp;A Manual/Lease requirement</li> </ul>

# **Summary of EM&A Requirements**

- 1.11 The EM&A programme requires construction noise monitoring, air quality monitoring, landscape and visual monitoring and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
  - All monitoring parameters;
  - Action and Limit levels for all environmental parameters;
  - Event and Action Plans;
  - Environmental mitigation measures, as recommended in the EIA Reports, Environmental Review Reports and EM&A Manuals
- 1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 8 of this report.
- 1.13 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required noise monitoring and audit works for the Project in July 2019.

# 2 AIR QUALITY

## **Monitoring Requirements**

- 2.1 According to the approved EM&A Manuals for Stage 1 works and Stage 2 works in Year 2015, no air quality monitoring is required for the Project.
- 2.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of air quality mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix G**.

# 3 WATER QUALITY

# **Monitoring Requirements**

- 3.1 According to the approved EM&A Manuals for Stage 1 works and Stage 2 works in Year 2015, no water quality monitoring is required for the Project.
- 3.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of water quality mitigation measures within the site boundaries of this Project. The summaries of site audits are attached in **Appendix G**.

#### 4 NOISE

## **Monitoring Requirements**

- 4.1 In accordance with approved EM&A Manuals for Stage 1 works in Year 2015, no noise impact monitoring is required for Stage 1 works of the Project.
- 4.2 According to approved EM&A Manual for Stage 2 works (Year 2015), construction noise monitoring was conducted to monitor the construction noise arising from the construction activities under the Stage 2 works of the Project. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. Appendix B shows the established Action and Limit Levels for the environmental monitoring works.

## **Monitoring Locations**

4.3 Noise monitoring was conducted at 6 designated monitoring stations (N1, N2, N3, N5, N6 and N7) in the reporting month. **Figures 2a – 2c** show the locations of these stations.

**Table 4.1 Noise Monitoring Stations** 

<b>Monitoring Stations</b>	Locations	<b>Location of Measurement</b>
N1	HKMLC Wong Chan Sook Ying	Rooftop (about 5/F) area
	Memorial School	resortop (assat 5/1) area
N2	Bethel High School	Rooftop (about 4/F) area
N3	No. 159 Mai Po San Tsuen	G/F area
N5	Block 2, Dills Corner Garden	G/F area
N6	Home of Loving Faithfulness	Rooftop (about 3/F) area
N7	Village House in Shek Wu Wai	G/F area

## **Monitoring Equipment**

- 4.4 Integrating Sound Level Meter was used for impact noise monitoring. The meters are Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L<sub>eq</sub>) and percentile sound pressure level (L<sub>x</sub>) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications.
- 4.5 Acoustic Calibrator was used to check the accuracy of the sound level meter. The calibrators generate a continuous and highly stable sound pressure level at known frequency of 1 kHz that also complied with IEC 942: 1988 Class 1 specifications. **Table 4.2** summarizes the noise monitoring equipment in reporting period. Copies of calibration certificates are provided in **Appendix C**.

**Table 4.2** Noise Monitoring Equipment

Equipment	Model No.	Qty.
Integrating Sound Level Meter/ Sound & Vibration Analyser	SVAN957	1
Acoustic Calibrator	SV30A	1

# **Monitoring Parameters and Frequency**

4.6 **Table 4.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

**Table 4.3 Frequency and Parameters of Noise Monitoring** 

Monitoring Stations	Parameter	Period	Frequency	Measurement
N1	L <sub>eq</sub> (30 min.) dB(A) L <sub>10</sub> (30 min.) dB(A) L <sub>90</sub> (30 min.) dB(A)	B(A) B(A) B(A) normal weekdays	Once per week	Fa çade
N2				Fa çade
N3				Free Field
N5				Free Field
N6				Fa çade
N7				Free Field

# Monitoring Methodology and QA/QC Procedures

- 4.7 The monitoring procedures are as follows:
  - The monitoring station were normally be at a point 1m from the exterior of the sensitive receivers building fa cade and be at a position 1.2m above the ground.
  - For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB (A).
  - The battery condition was checked to ensure the correct functioning of the meter.
  - Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

- Frequency weighting : A- Time weighting : Fast

- Measurement time : 30 minutes

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement was required after re-calibration or repair of the equipment.
- At the end of the monitoring period, the  $L_{eq}$ ,  $L_{90}$  and  $L_{10}$  were recorded. In addition, noise sources were recorded on a standard record sheet.
- Noise measurement would be paused temporarily during periods of high intrusive noise if possible and observation would be recorded when intrusive noise was not avoided.
- Noise monitoring would be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. supplementary monitoring would be provided to ensure sufficient data would be obtained.

#### **Maintenance and Calibration**

4.8 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.

- 4.9 The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 4.10 Immediately prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.

## **Results and Observations**

- 4.11 All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. The summary of exceedance record in the reporting month is shown in **Appendix F**.
- 4.12 The baseline noise level and the Noise Limit Level at each designated noise monitoring stations are presented in **Table 4.5**.
- 4.13 Noise monitoring results and graphical presentations are shown in **Appendix E**.
- 4.14 The other noise sources identified which might affect the noise monitoring results at the designated noise monitoring stations are as follows:

Table 4.4 Other Noise Sources Identified Which Might Affect the Noise Monitoring Results

Monitoring Stations	Locations	Other Noise Source(s)
N1	HKMLC Wong Chan Sook Ying	Road traffic noise
INI	Memorial School	Noise from daily school activities
N2	Dathal High Sahaal	Road traffic noise
11/2	Bethel High School	Noise from daily school activities
N3	No. 159 Mai Po San Tsuen	Road traffic noise
N5	Block 2, Dills Corner Garden	Road traffic noise
		Road traffic noise
N6	Home of Loving Faithfulness	Noise from activities at the premise
		and workshops near the premise
N7	Village House in Shek Wu Wai	Road traffic noise
		Noise from activities at workshops
		near the village house

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Table 4.5 Baseline Noise Level and Noise Limit Level for Monitoring Stations

Station	Baseline Noise Level, dB (A)	Noise Limit Level, dB (A)
N1	62.2 (at 0700 – 1900 hrs on normal weekdays)	70* (at 0700 – 1900 hrs on normal
N2	55.2 (at 0700 – 1900 hrs on normal weekdays)	weekdays)
N3	68.8 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
N5	70.7 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
N6	72.0 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
N7	70.7 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)

<sup>(\*)</sup> Noise Limit Level is 65 dB (A) during school examination periods.

## 5 COMPARISON OF EM&A RESULTS WITH EIA PREDICTIONS

5.1 The EM&A data was compared with the predictions in EIA Report (Year 2009) and Environmental Review Report (ERR) for Stage 2 Works (Year 2015) as summarized in **Table 5.1**.

Table 5.1 Comparison of Noise Monitoring Data with Predictions in EIA Report and ERR

Stations	Predicted Mitigated Construction Noise Levels in EIA (2009), dB(A)	Predicted Mitigated Worst Case Construction Noise Levels in ERR for Stage 2 (2015), dB(A)	Reporting Month (July 19), $L_{eq~(30min)}~dB(A)$
N1 - HKMLC Wong Chan Sook Ying Memorial School	55-62	62 <sup>(1)</sup>	57.2 - 60.3
N2 – Bethel High School	57-64	64 <sup>(1)</sup>	46.1 - 53.2
N3 – No. 159 Mai Po San Tsuen	70-73	74 <sup>(2)</sup>	58.6 - 70.3
N5 – Block 2, Dills Corner Garden	73-75	75 <sup>(2)</sup>	65.3 - 69.8
N6 – Home of Loving Faithfulness	64-73	74 <sup>(1)</sup>	70.2 - 71.8
N7 – Village House in Shek Wu Wai	N/A <sup>(3)</sup>	70 <sup>(2)</sup>	64.3 - 69.4

#### Remark:

- (1) With adoptions of quiet PMEs, temporary noise barrier and enclosure
- (2) With sub-grouping of construction activities
- (3) No construction noise level was predicted in EIA Report (2009)
- 5.2 When comparing the noise monitoring results to the predicted mitigated construction noise levels in the EIA Report, the results at N1 and N6 were within the range of the predicted mitigated construction noise levels in the EIA Report. The results at N3 was slightly lower than the range of the predicted mitigated construction noise levels, while the results at N2 and N5 were lower than the range of the predicted mitigated construction noise levels in the EIA Report.
- 5.3 When comparing the noise monitoring results to the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works, the results at monitoring stations N1, N2, N3, N5, N6 and N7 were lower than the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works.

5.4

# 6 ECOLOGY AND FISHERIES

- 6.1 In accordance with the EM&A Manuals for Stage 1 and Stage 2 works in Year 2015, no specific ecological or fisheries monitoring is required during the construction phase of the Project.
- 6.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of ecology and fisheries mitigation measure. The summaries of site audits are attached in **Appendix G**.

## 7 LANDSCAPE AND VISUAL IMPACT

- 7.1 In accordance with the EM&A Manuals for Stage 1 and Stage 2 works in Year 2015, regular audits should be carried out to ensure all the recommended landscape and visual mitigation measures in EIA Report, Environmental Review Reports and EM&A Manuals were effectively implemented.
- 7.2 ET Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measure. The summaries of site audits are attached in **Appendix G**.

# 8 ENVIRONMENTAL AUDIT

## **Site Audits**

- 8.1 Site audit was carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix G**.
- 8.2 Site audits were conducted on 3, 11, 17, 25 and 31 July 2019 in the reporting month. IEC joint site inspection was conducted on 11 July 2019. No non-compliance was observed during the site audit.

## **Review of Environmental Monitoring Procedures**

8.3 The monitoring works conducted by the monitoring were inspected regularly. The following observations have been recorded for the monitoring works:

## Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

# **Statues of Environmental Licensing and Permitting**

8.4 All permits/licenses obtained for the Project are summarized in **Table 8.1**.

**Table 8.1 Summary of Environmental Licensing and Permit Status** 

D	Valid Period Pariod		D.4.3.	G4 . 4
Permit No.	From	To	- Details	Status
Environmental Permit (EP)				
EP-450/2013/A	25/08/2015	N/A	Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River – Stage 1	Valid
EP-501/2015	02/09/2015	N/A	Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River – Stage 2	Valid
Billing Account for Cor	nstruction Wast	te Disposal		
A/C No.: 7025411	N/A	N/A	Billing Account for construction waste disposal under Waste Disposal (Charges for Disposal of Construction Waste) Regulation	Valid
Effluent Discharge Lice	ense			
WT00027672-2017 WT00027661-2017 WT00027606-2017 WT00027510-2017 WT00027509-2017 WT00027508-2017 WT00027584-2017 WT00027605-2017 WT00027607-2017 WT00027834-2017 WT00028431-2017 WT00028450-2017	28/3/2017 28/3/2017 27/3/2017 27/3/2017 20/3/2017 20/3/2017 20/3/2017 27/3/2017 27/3/2017 27/3/2017 13/4/2017 13/4/2017 17/08/2017 14/08/2017	31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 31/3/2022 30/4/2022 30/6/2020 31/08/2022 31/08/2022	Discharge License for the discharge of wastewater from the construction site including contaminated surface run-off to the communal storm water drain	Valid
WT00030236-2018	7/02/2018	28/02/2022		
Registration of Chemical Waste Producer				
No.:WPN5213-524- K3261-01		N/A	Registration of chemical waste producer for chemical waste produced during construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River – Stage 2	Valid

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## **Status of Waste Management**

- 8.5 The amount of wastes generated by the major site activities of this Project during the reporting month is shown in **Appendix K**.
- 8.6 In respect of the dump truck cover, the Contractor is advised to take record photos and inspection to ensure that all dump trucks have fully covered the skip before leaving the site.

## **Implementation Status of Environmental Mitigation Measures**

- 8.7 According to the Environmental Review Reports, Environmental Permits and the EM&A Manuals of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix I**.
- 8.8 During site inspections in the reporting month, no non-conformance was identified. The ET weekly site inspections were carried out during the reporting month and the observations and recommendations are summarized in **Table 8.2**. Refer to **Appendix G** for the site inspection checklists in the reporting month.

Table 8.2 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
	3, 11, 17 July 2019	Stand water should be avoided or pumped out by sedimentation tank at Portion J.	The condition was observed to be improved/rectified by the contractor during the audit session on 25 July 2019.
	11 July 2019	Rain water should be avoided and temporary drainage system could be designed and built during rainy season at Portion M.	The condition was observed to be improved/rectified by the contractor during the audit session on 17 July 2019.
	11 July 2019	Muddy water should be prevented from directly entering the u channel and the u channel should be bounded by sandbags at Portion J.	The condition was observed to be improved/rectified by the contractor during the audit session on 17 July 2019.
Water Quality	31 July 2019	Stand water should be avoided or removed at Subway A.	Follow up actions will be reported in the next month.
	12 June – 31 July 2019	Stand water should be avoided or pumped out by sedimentation tank at Portion F.	Follow up actions will be reported in the next month.
	26 June – 11 July 2019	Stand water should be avoided or pumped out by sedimentation tank at Bridge B.	The condition was observed to be improved/rectified by the contractor during the audit session on 17 July 2019.
	30 Apr – 31 July 2019	Stand water should be avoided at Portion D.	Follow up actions will be reported in the next month.
	8 May – 31 July 2019	Drainage system and water treatment facility should be well maintained at Portion D.	Follow up actions will be reported in the next month.
Air Quality	17 July 2019	The slope should be covered by tarpaulin at Portion F.	The condition was observed to be improved/rectified by the contractor during the audit session on 25 July 2019.

Parameters	Date	Observations and Recommendations	Follow-up
	8 May – 11 July 2019	The excavated dusty materials or stockpile of dusty materials should be covered by imperious materials or maintained wet at Subway A.	The condition was observed to be improved/rectified by the contractor during the audit session on 17 July 2019.
Noise	N/A	There was no observation in the reporting period.	N/A
	11 July 2019	Accumulation of general refuse should be avoided and removed at Portion M.	The condition was observed to be improved/rectified by the contractor during the audit session on 17 July 2019.
Waste/ Chemical Management	17, 25, 31 July 2019	Accumulation of construction waste should be avoided and removed at Portion F.	Follow up actions will be reported in the next month.
	31 July 2019	Wooden waste should be removed at Portion M.	Follow up actions will be reported in the next month.
	26 June 2019	Construction waste accumulation should be avoided at Subway A.	The condition was observed to be improved/rectified by the contractor during the audit session on 3 July 2019.
Ecology and Fisheries	N/A	There was no observation in the reporting period.	N/A
Landscape and Visual	N/A	There was no observation in the reporting period.	N/A
Permits/ Licenses	N/A	There was no observation in the reporting period.	N/A

# **Implementation Status of Event and Action Plans**

8.9 The Event and Action Plan for noise is presented in **Appendix H**.

# Construction Noise

8.10 No Action/Limit Level exceedance was recorded in the reporting month.

# Record of Complaint, Warning, Notification of any Summons and Successful Prosecution

8.11 The record of all environmental complaints, warnings, summons and notifications of successful prosecution for the Project is presented in **Appendix J**.

## 9 FUTURE KEY ISSUES

9.1 Major site activities undertaken for the coming months include:

Portion A - Installation of Traffic Aids Portion B - Construction of Subway A, Installation of Traffic Aids, Internal

Finishing & E&M Works

Portion C - Construction of U-Channel, Planting, Construction of Staircase

Portion D - Construction of Drainage Pipe, Construction of RW 15B, 15C, 15D,

15E, 16A, Laying Bituminous for Cycle Track

Portion E - Road Kerb and Pavement, Laying Bituminous for Cycle Track

Portion F - Construction of Drainage Pipe, Construction of Boundary Wall, Relocation of Existing Bus Stop, Construction of Resting Station R8,

Laying Road Kerb

Portion G - Remaining Works for Box Culvert C, Relocation of Traffic Sign Gantry,

Construction of Drainage and Road Kerb

Portion H - Construction of Retaining Wall RW 45A, 45B Ramp, 49, DW1 & DW2

Construction of Drainage Pipe

Portion I - Construction of Drainage Pipe, Internal Finishing & E&M Works in

Subway D

Portion J - Construction of 24A, 24AA, 24C, Backfilling for RW 46, Construction

near Dills Corner Garden, Construction of Drainage Pipe, Relocation of

Sign Gantry, Construction of Additional Dwarf Wall

Portion K - Installation of Traffic Aids, Colour Dressing, CCTV for Drainage Pipe

Portion M - Backfilling behind RW 30A, 30B, Construction of Bridge E's Roofing,

Construction of Footpath and Cycle Track, E&M Works, Demolition of Roof of Existing Footbridge, Laying Bituminous for Cycle Track and

Construction of Footpath

Portion N - Construction of Bridge B

## 9.2 Key environmental issues in the coming months include:

- Wastewater and runoff generation on-site;
- Regular removal of silt, mud and sand along u-channels and inside sedimentation tanks;
- Review and implementation of temporary drainage system for the surface runoff;
- Noise from operation of the equipment, especially for excavation works and machinery onsite;
- Dust generation from stockpiles of dusty materials, exposed site area, excavation works and other dust-generating activities;
- Water spraying for dust generating activities and on haul road;
- Proper storage of construction materials on-site;
- Storage of chemicals/fuel and chemical waste/waste oil on-site;
- Accumulation of general refuse and construction waste on-site; and
- Protection measures for retained trees.

9.3 The tentative program of major site activities and the impact prediction and control measures for the coming months, i.e. August to September 2019, are summarized as follows:

Construction Works	Major Impact Prediction	Control Measures
As mentioned in Section 9.1	Air quality impact (dust)  Water quality impact (surface run-off)	<ul> <li>(a) Frequent watering of haul road and unpaved/exposed areas;</li> <li>(b) Frequent watering or covering stockpiles with tarpaulin or similar means; and</li> <li>(c) Watering of any earth moving activities.</li> <li>(d) Diversion of the collected effluent to de-silting facilities for treatment in compliance with valid Discharge License prior to discharge to public storm water drains;</li> <li>(e) Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge;</li> <li>(f) Provision of perimeter protection such as sealing of hoarding footings to avoid run-off from entering the existing storm water drainage system via public road; and</li> <li>(g) Provision of measures to prevent discharge into the stream.</li> </ul>
	Noise impact  Landscape and	<ul> <li>(h) Scheduling of noisy construction activities if necessary to avoid persistent noisy operation;</li> <li>(i) Controlling the number of plants use on site;</li> <li>(j) Regular maintenance of machines</li> <li>(k) Use of quiet PMEs on-site; and</li> <li>(l) Use of acoustic barriers and noise enclosure if necessary.</li> <li>(m) Proper setup of precautionary area for retained</li> </ul>
	Visual	trees.

# **Monitoring Schedule for the Next Month**

9.4 The tentative environmental monitoring schedules for the next month are shown in **Appendix D**.

## 10 CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

10.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.

# **Construction Noise Monitoring**

10.2 All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was record.

## Site Audit

10.3 5 times of ET joint weekly environmental site inspections were conducted in the reporting month.

# Complaint and Prosecution

- 10.4 No environmental complaints were received in this reporting month.
- 10.5 No environmental prosecution was received in the reporting month.

#### Recommendations

10.6 According to the environmental audit performed in the reporting month, the following recommendations were made:

## Air Quality

- Water spraying should be provided frequently to unpaved and exposed area, and haul roads for dust suppression.
- Proper tarpaulin coverage should be provided to all stockpiles in the Site to prevent dust generation.

## Water Quality

- Nearby channels should be kept clean.
- Embankment or dikes should be established at the site boundary to direct any untreated wastewater from the Site to wastewater treatment facility during rain events to perform water treatment before discharge.
- Standing or ponding water within the Site should be cleared as far as practicable.

#### Waste/Chemical Management

- General refuse should be removed regularly to prevent accumulation on-site. Proper
  enclosed bin should be provided with maintenance for collection of general refuse from
  workforce.
- Drip tray should be provided to oil/chemical containers and generator to avoid oil leakage. Any oil stain observed on ground should be properly removed as chemical waste.

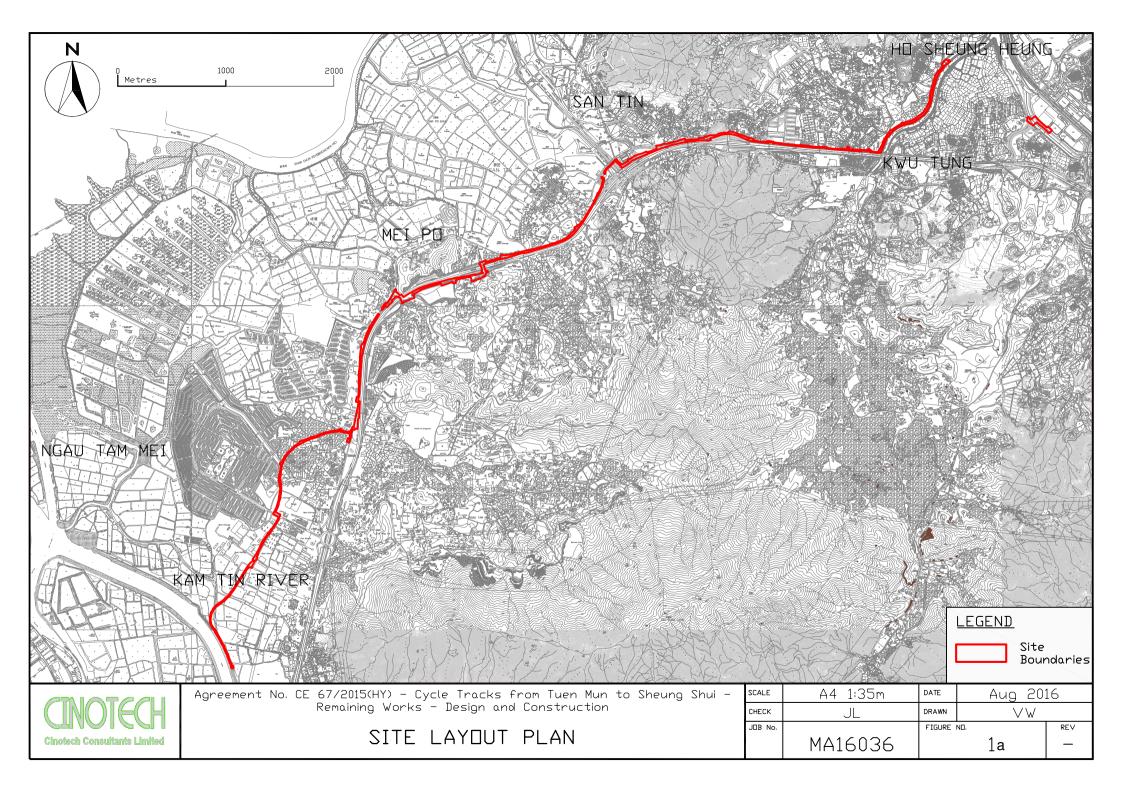
# Landscape and Visual

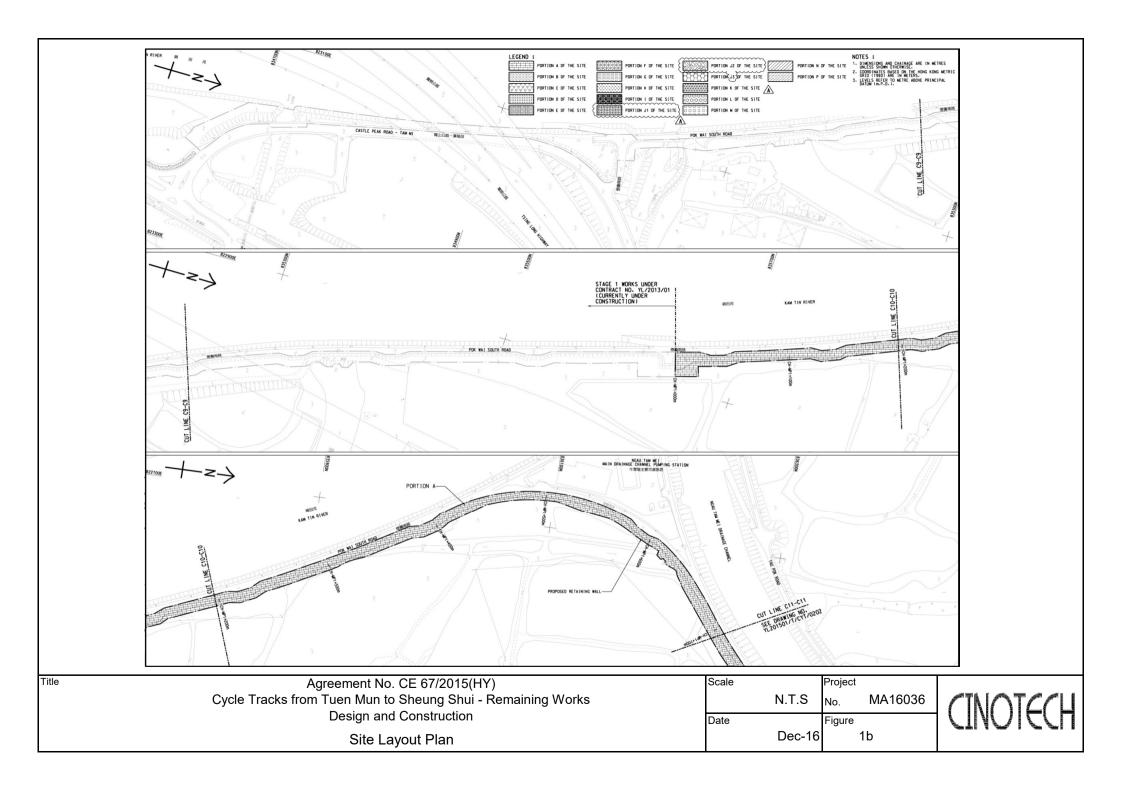
• Adequate tree protection zones should be established to protect retained and existing trees. Conspicuous signs of status of trees should be clearly shown to avoid damage from PMEs or workers.

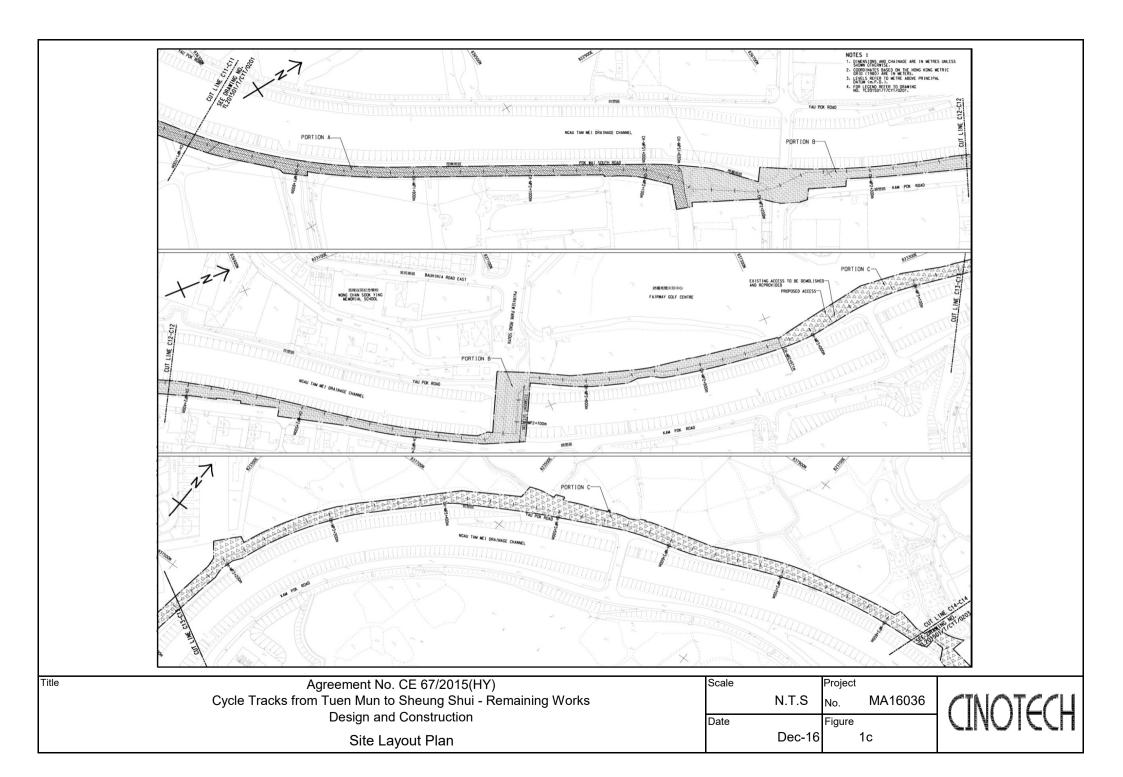
## Permits/Licences

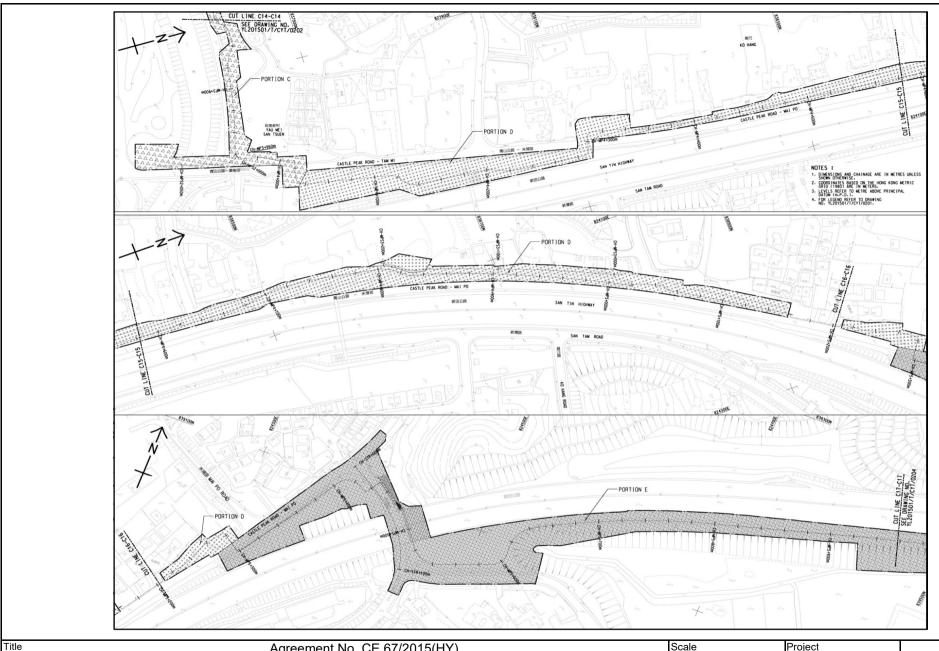
• Environmental licences should be properly displayed at every entrance.

# **FIGURES**

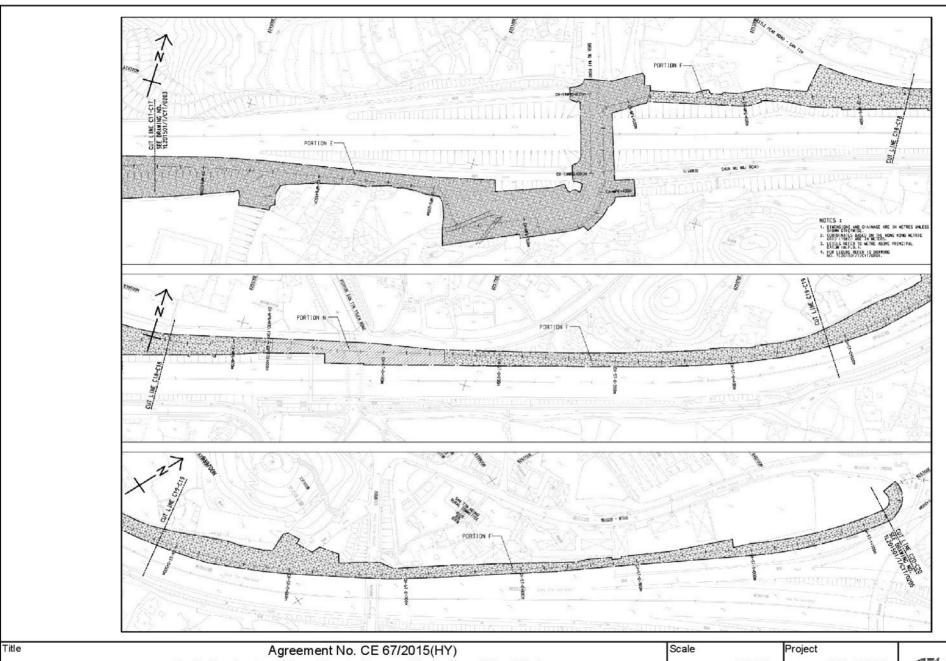




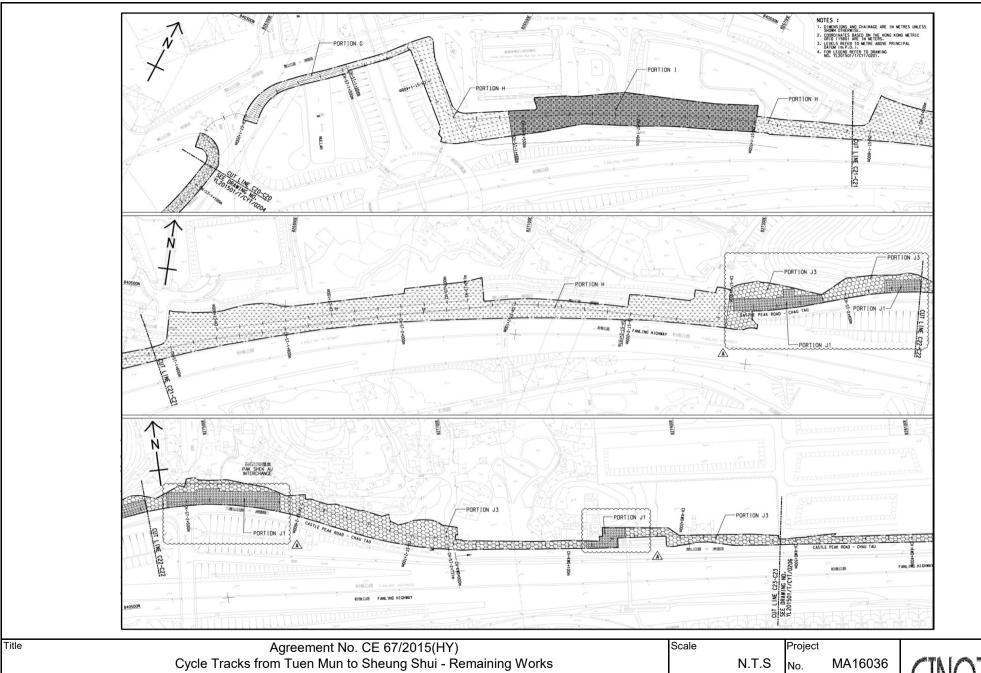




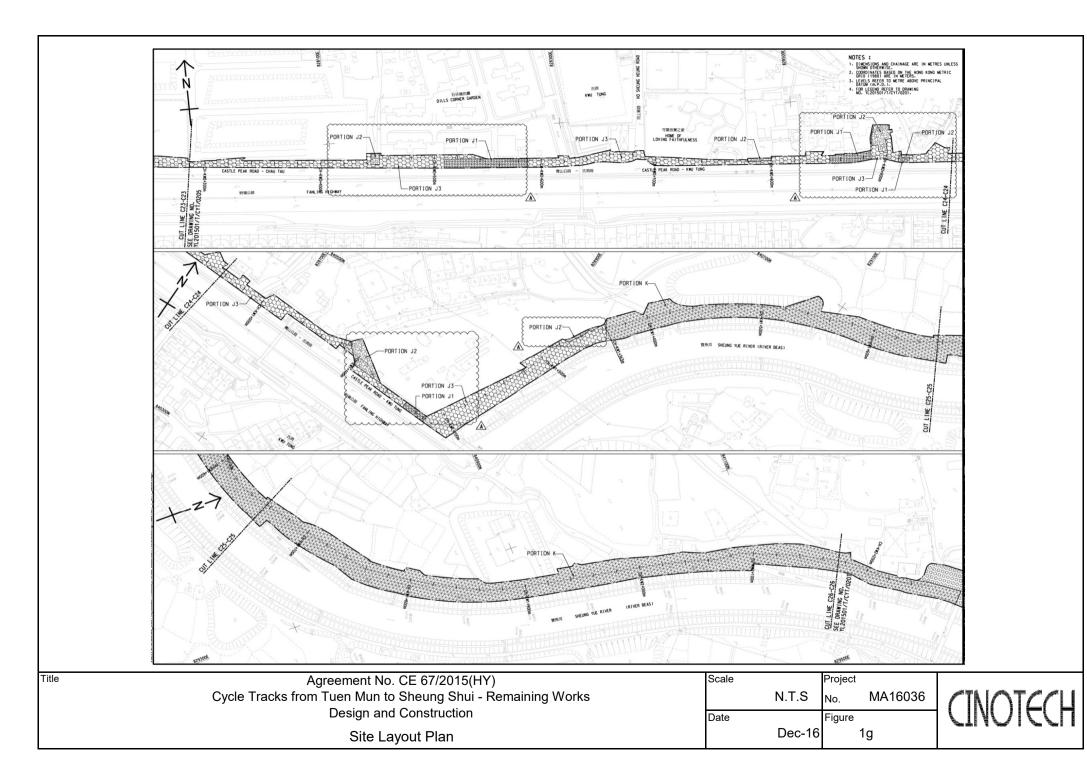
Agreement No. CE 67/2015(HY)
Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works
Design and Construction
Site Layout Plan

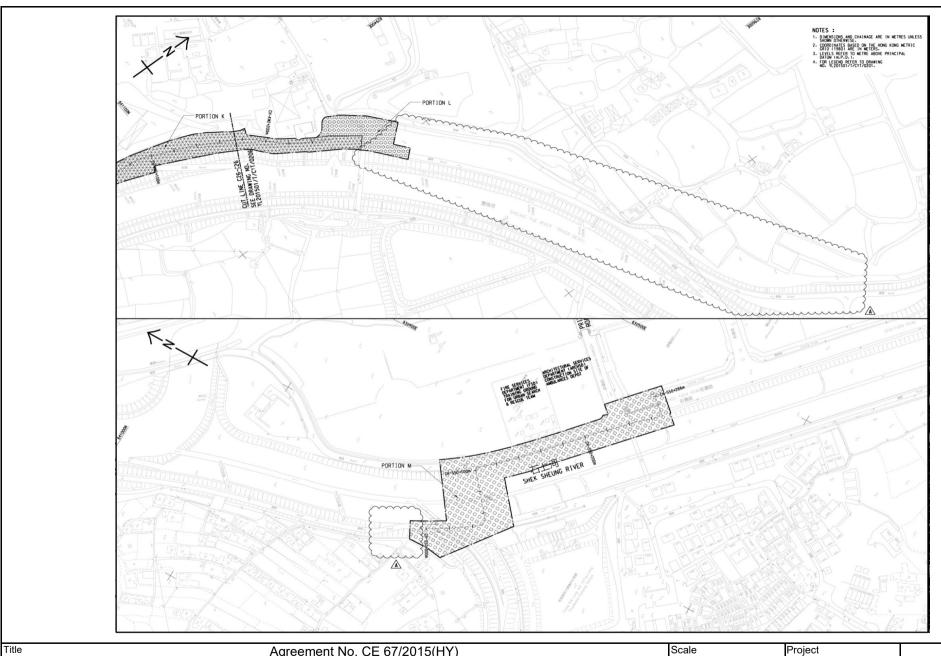


Agreement No. CE 67/2015(HY)
Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works
Design and Construction
Site Layout Plan



Agreement No. CE 67/2015(HY)
Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Work
Design and Construction
Site Layout Plan

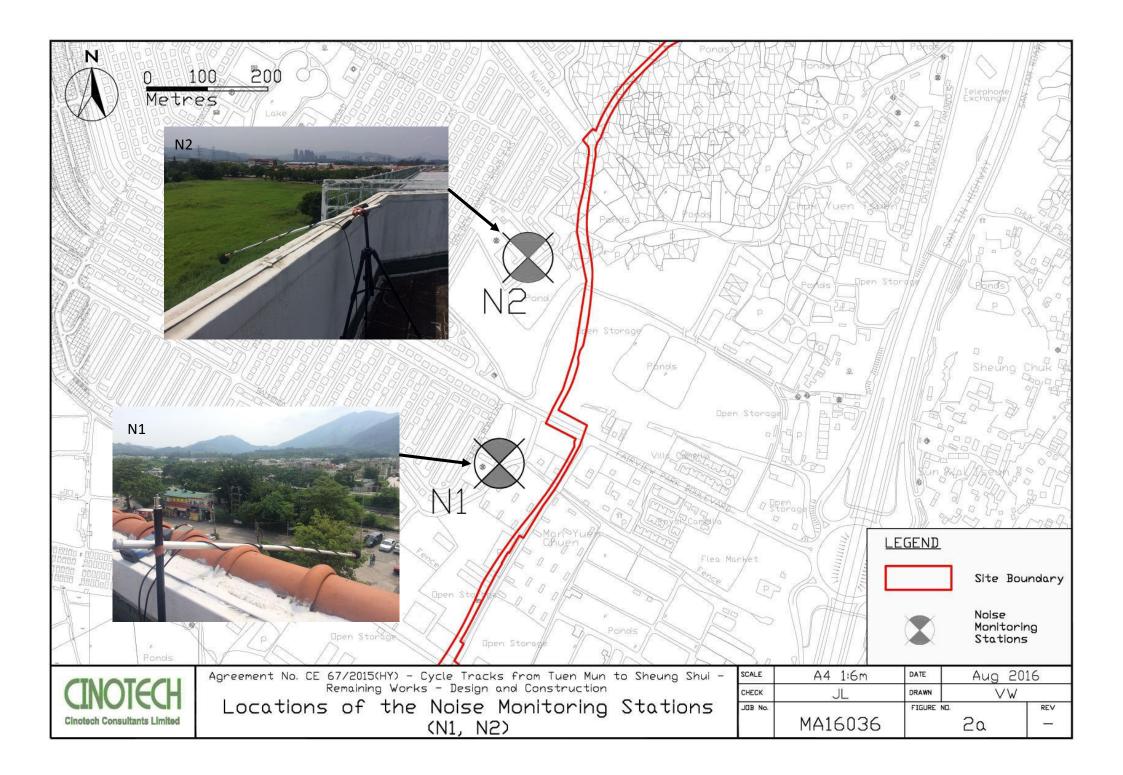


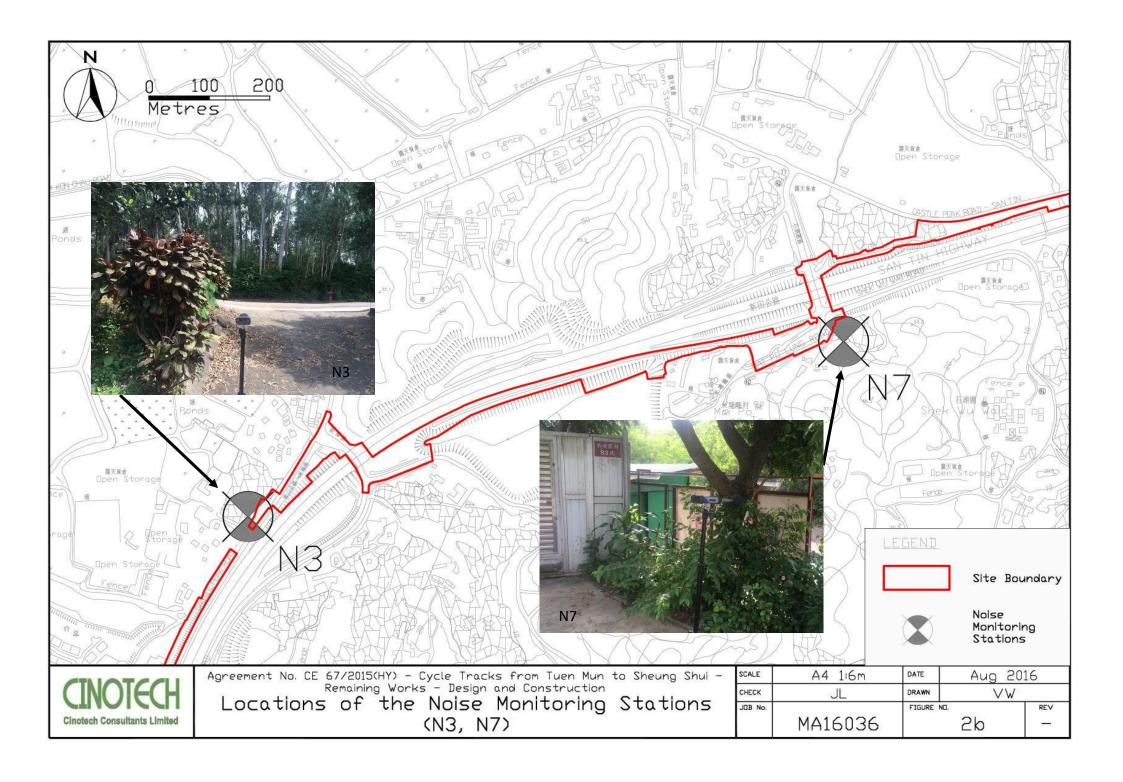


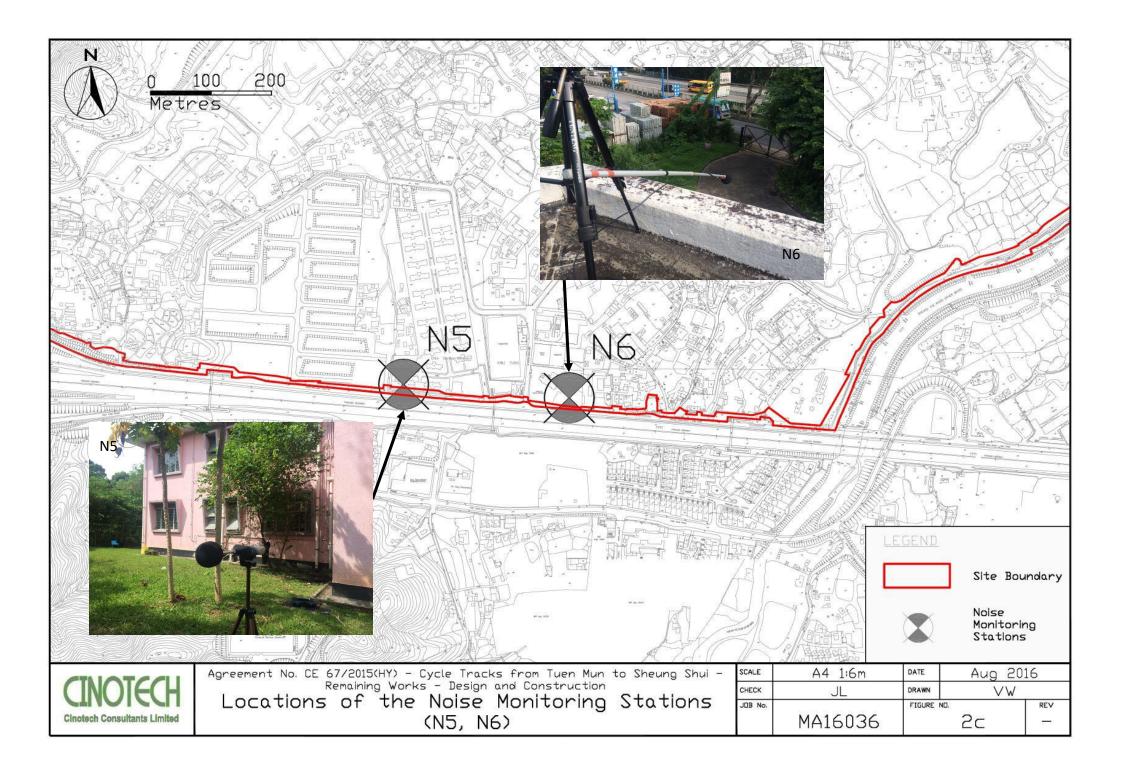
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Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works
Design and Construction
Site Layout Plan

N.T.S No. MA16036

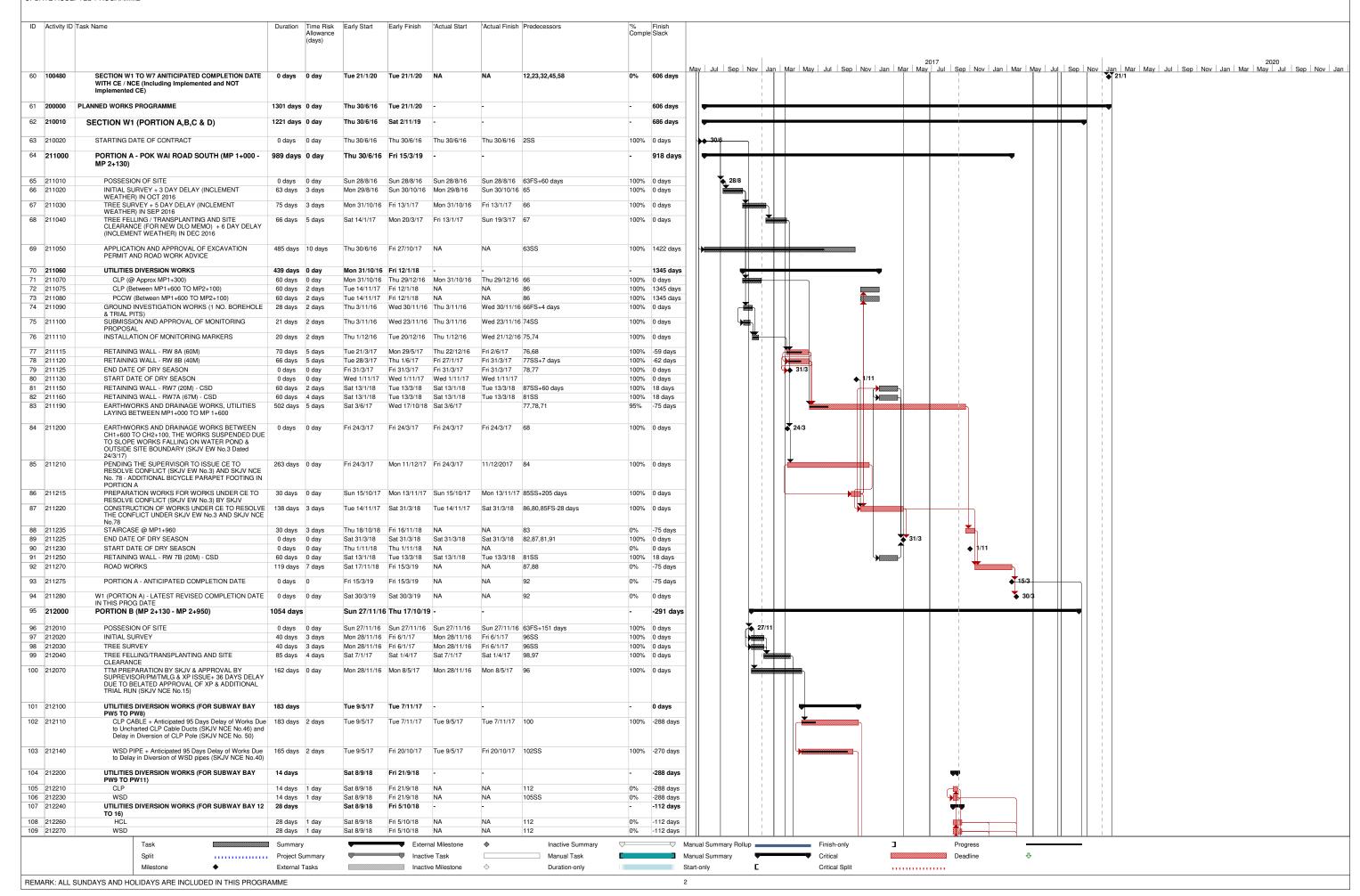
Date Dec-16 Figure 1h

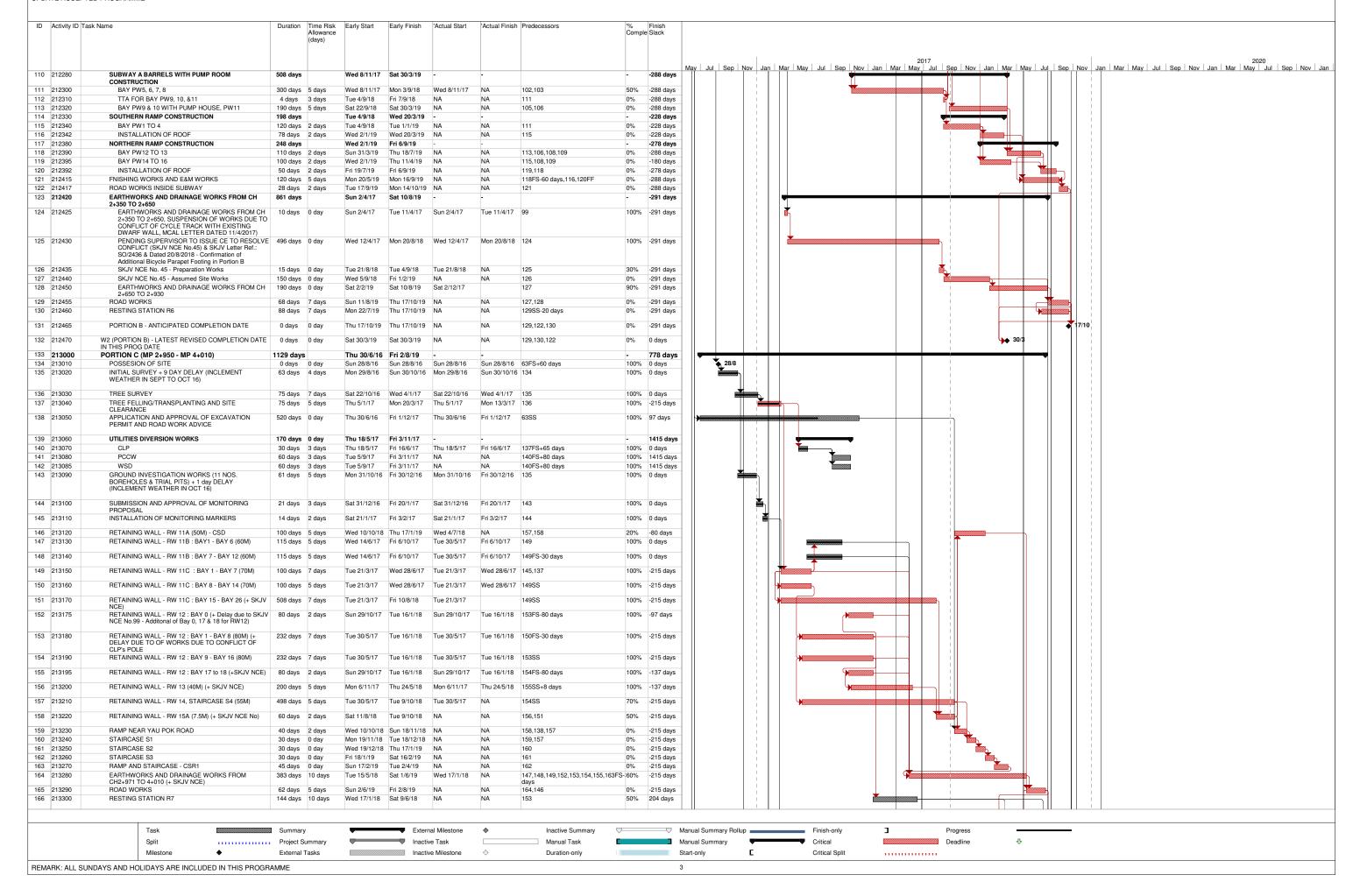


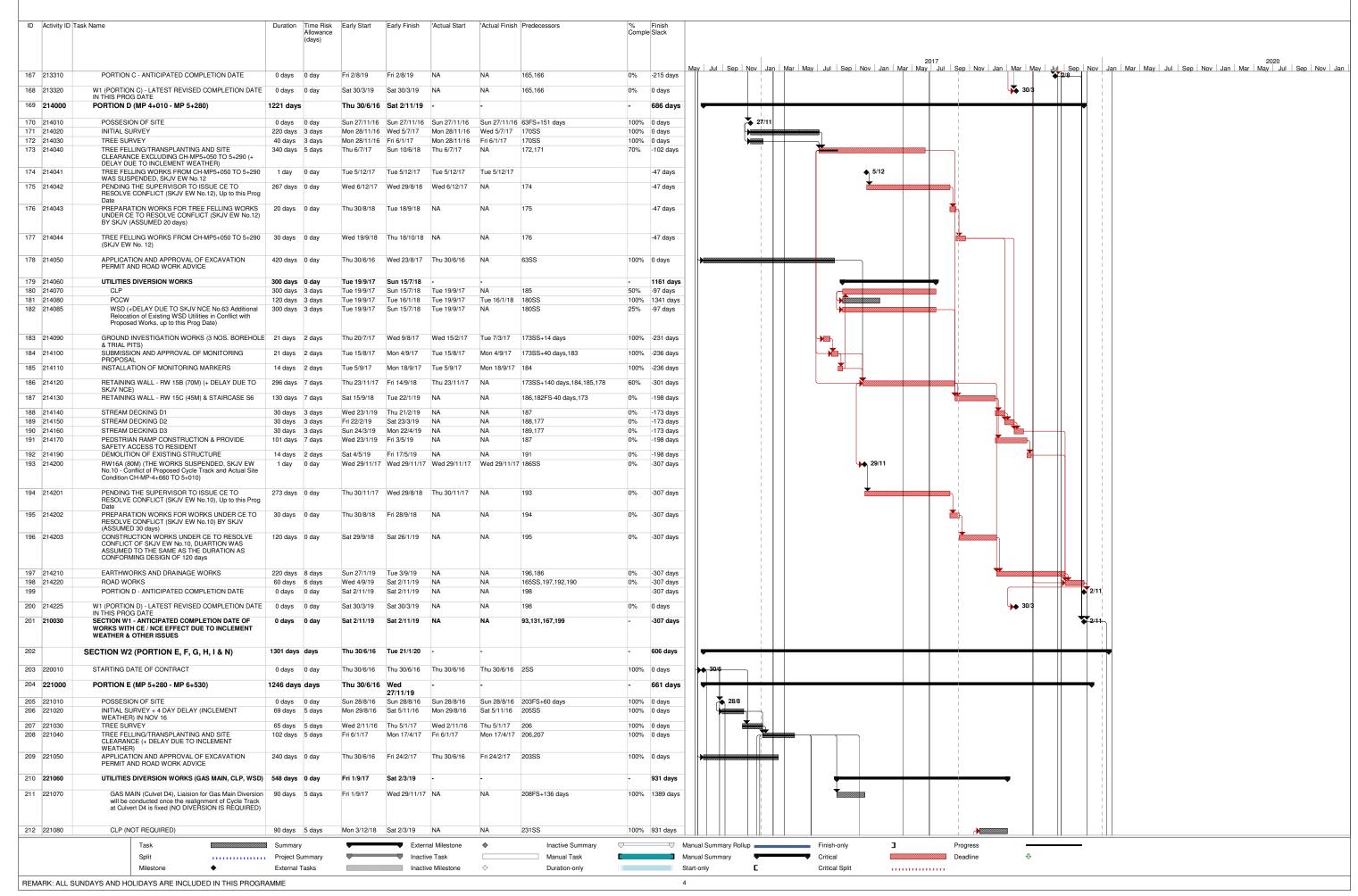


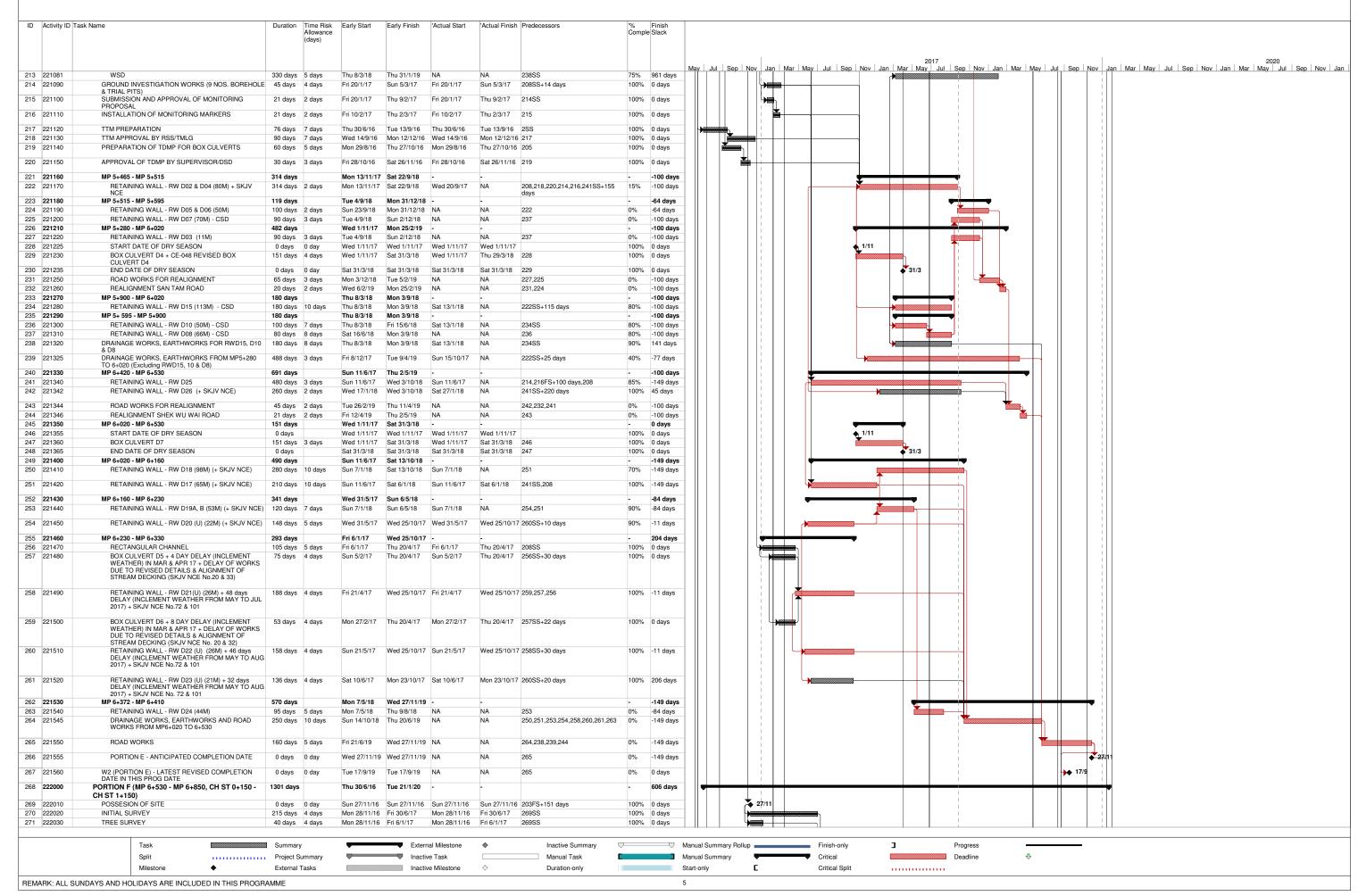


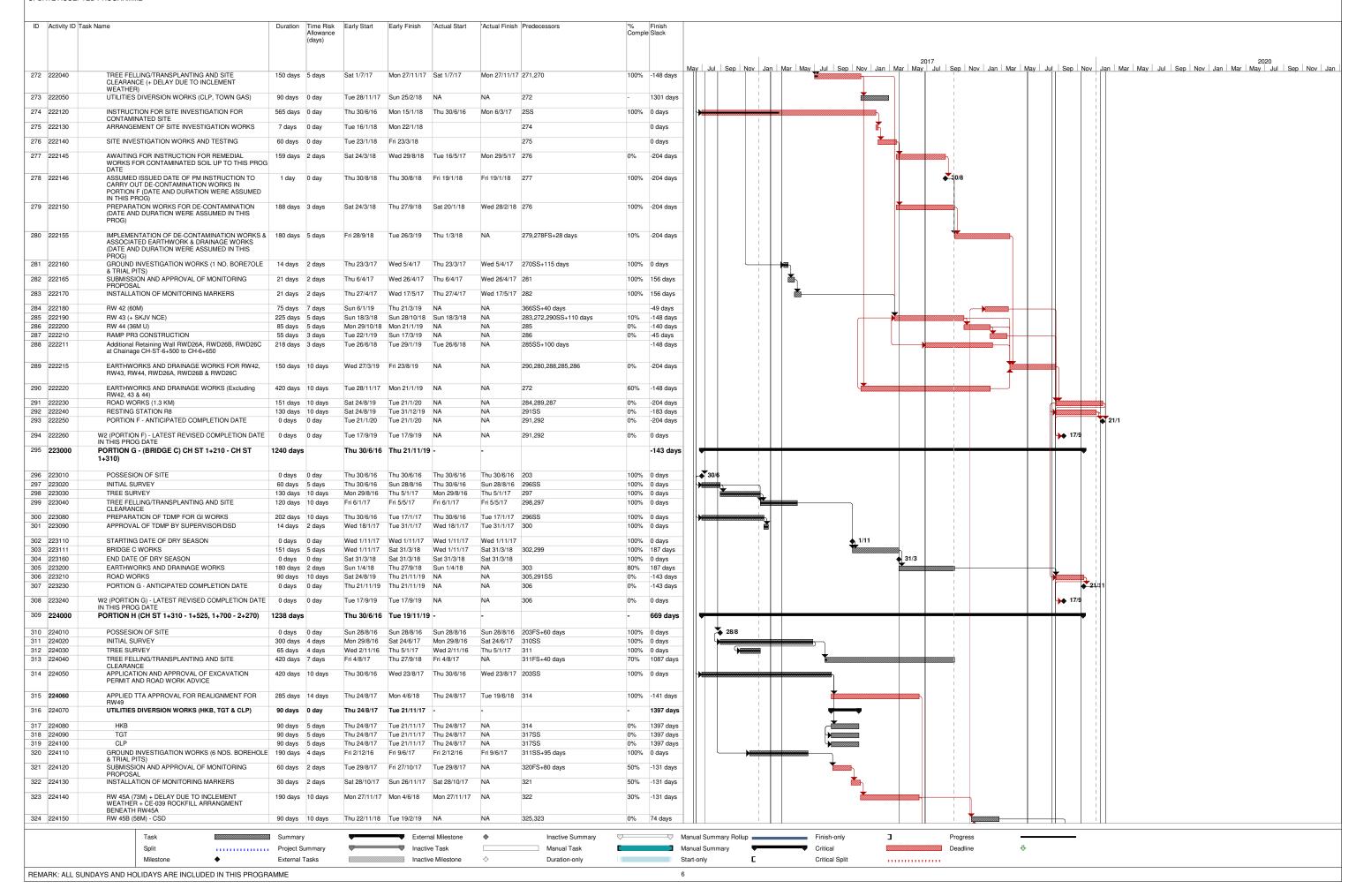
## APPENDIX A WORK PROGRAMME

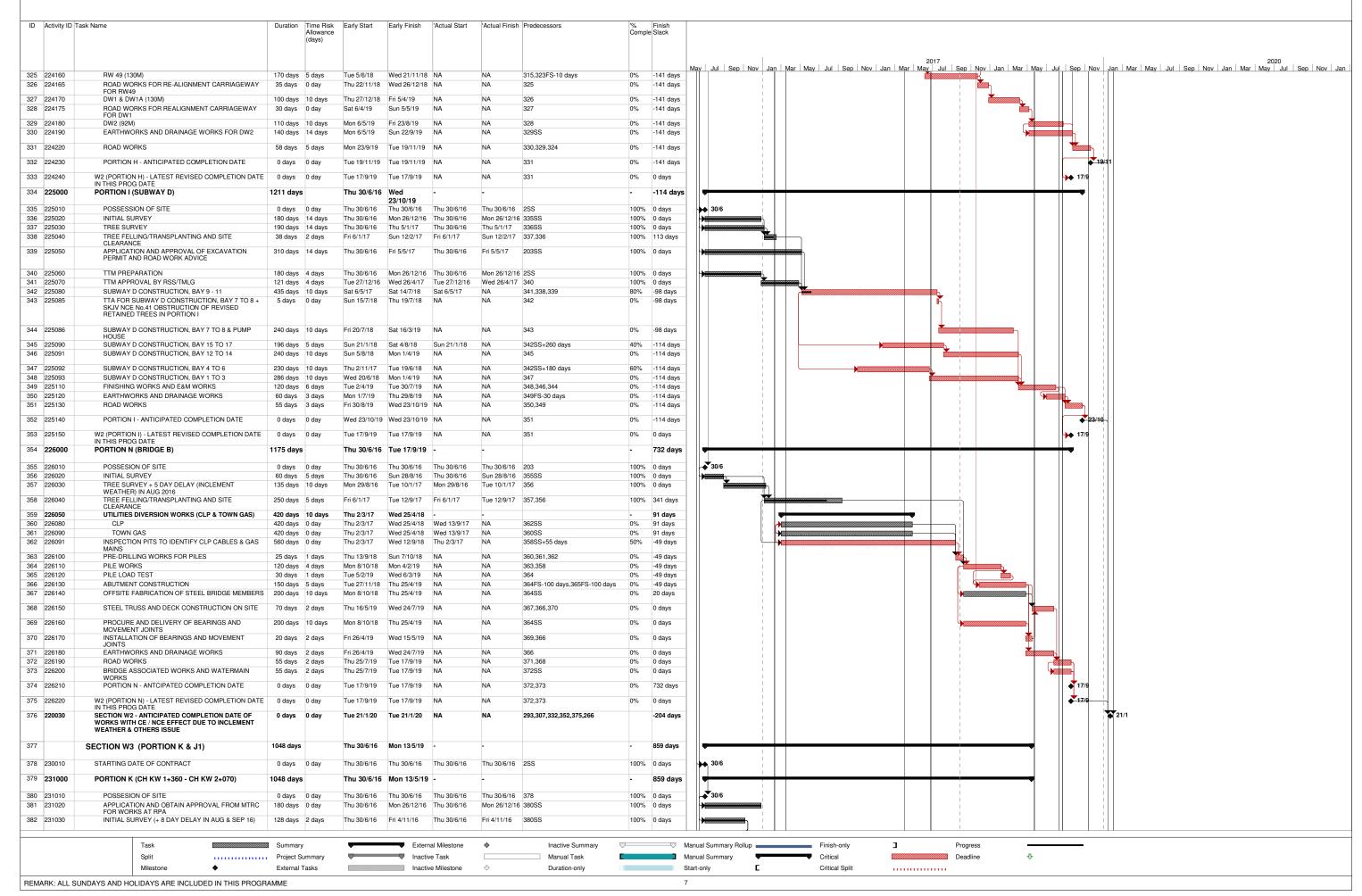


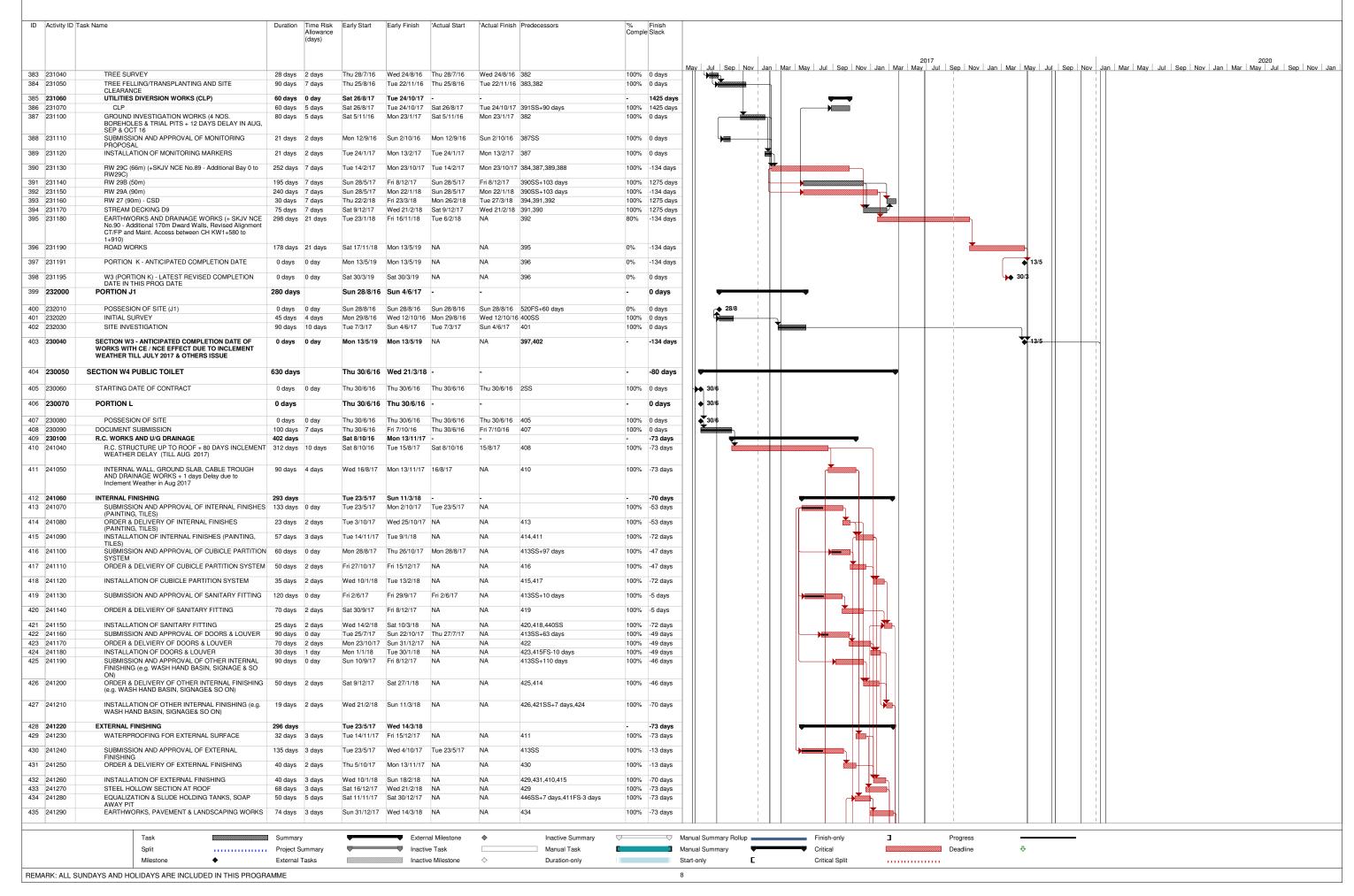


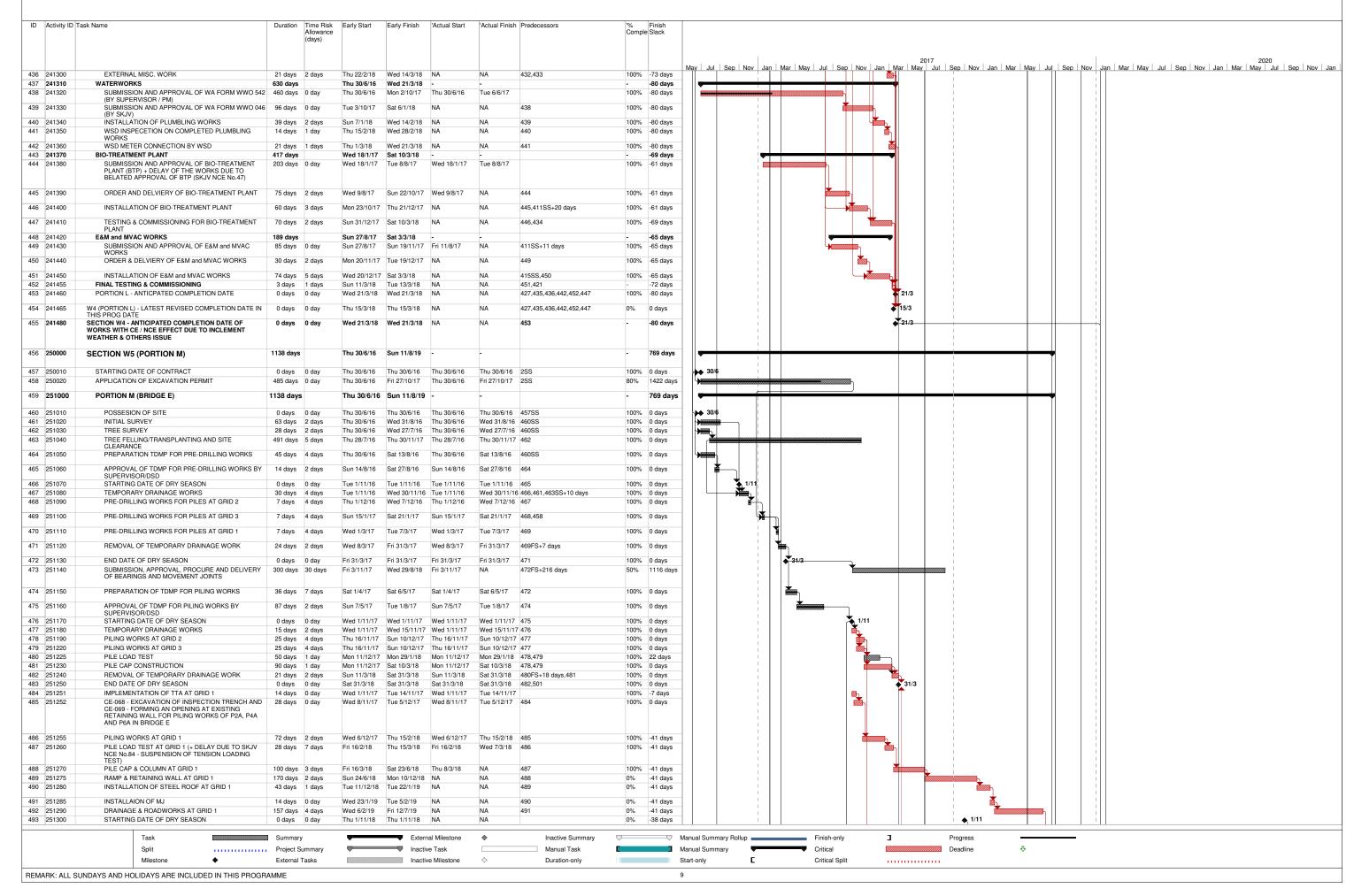


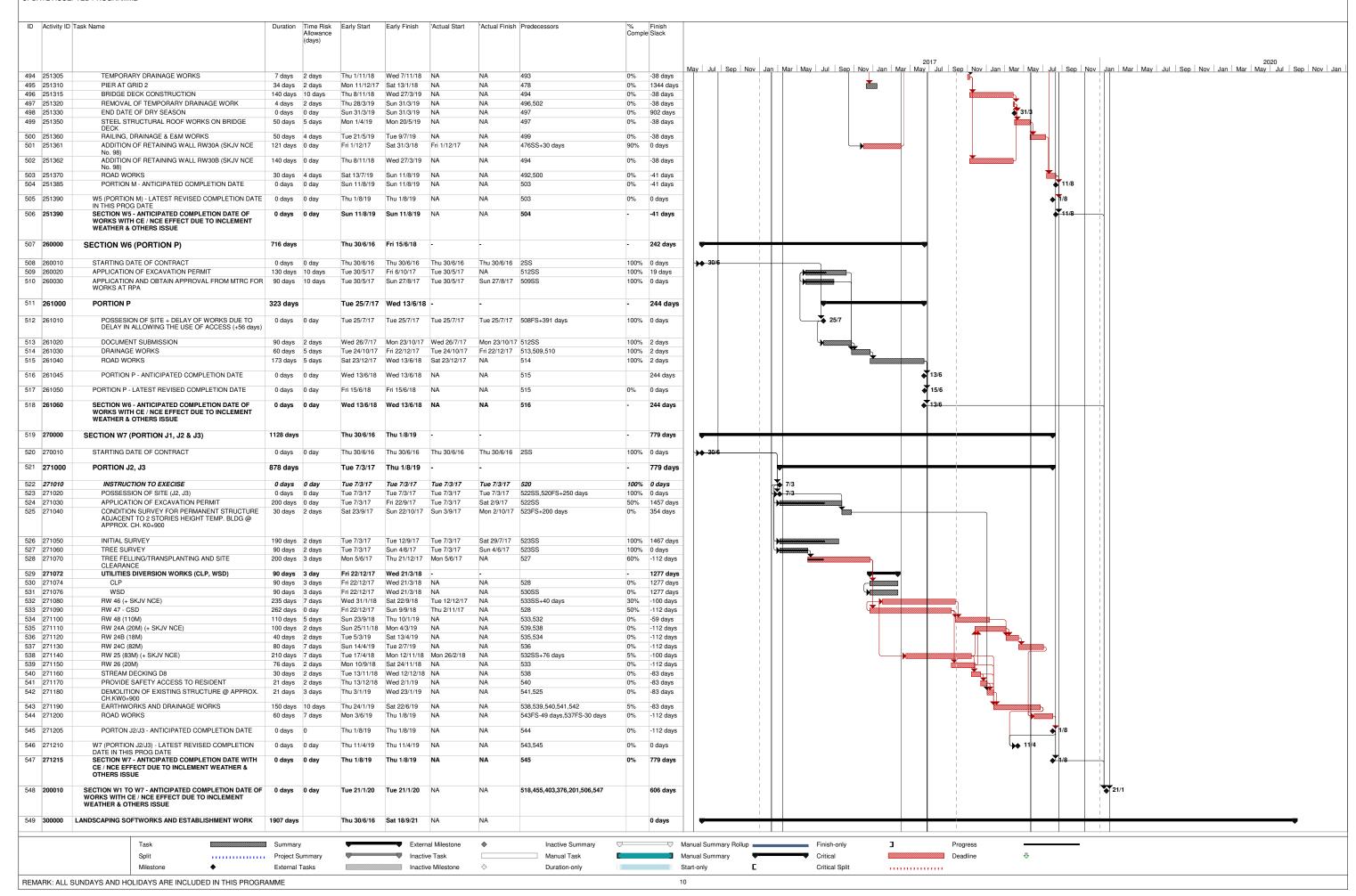


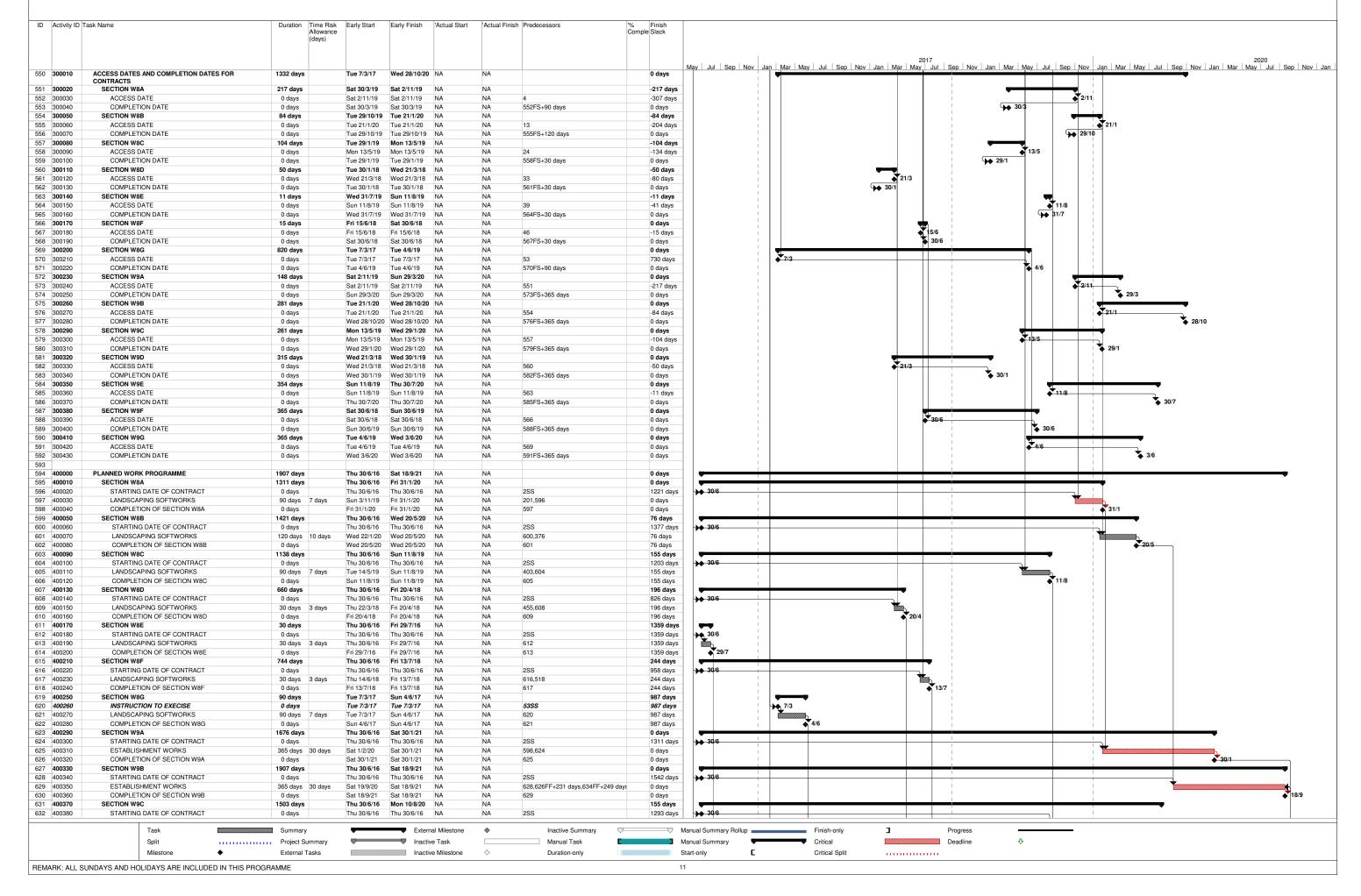












ID Activity ID Ta	ask Name	Duration		Early Start	Early Finish	'Actual Start	'Actual Finish	Predecessors	'% Finish Comple Slack															
			Allowance (davs)						Comple Slack															
			(days)																					
														Nov Jan Ma	2017			1			1		2020	
633 400390	ESTABLISHMENT WORKS	365 days	30 days	Mon 12/8/19	Mon 10/8/20	NΔ	NA	606,632	155 days	May Jul Sep	Nov Ja	an   Mar   M	ay Jul Sep	Nov   Jan   Ma	r May Ju	ul Sep Nov	Jan   Mar   Ma	y Jul Sep	Nov Jan	ı Mar May	ıy   Jul   Se	p Nov Jan	Mar   May   Jul	Sep No
634 400400	COMPLETION OF SECTION W9C	0 days	oo aays	Mon 10/8/20				633	155 days		1					1					10/8	1		1
	SECTION W9D							033											1		-10/0			
635 400410		1025 days		Thu 30/6/16			NA		196 days	<u> </u>														
636 400420	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS	856 days	30/6		+			고									
637 400430	ESTABLISHMENT WORKS	365 days	30 days	Sat 21/4/18	Sat 20/4/19	NA	NA	610,636	196 days		i								i					
638 400440	COMPLETION OF SECTION W9D	0 days		Sat 20/4/19	Sat 20/4/19	NA	NA	637	196 days		1					1	20	4	-					—
639 <b>400450</b>	SECTION W9E	395 days		Thu 30/6/16	Sat 29/7/17	NA	NA		1359 days	_	_					1			1					
640 400460	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS	1389 days	30/6						i I								
641 400470	ESTABLISHMENT WORKS	365 days	30 days	Sat 30/7/16	Sat 29/7/17	NA	NA	614,640	1359 days							i			i					
642 400480	COMPLETION OF SECTION W9E	0 days		Sat 29/7/17	Sat 29/7/17	NA	NA	641	1359 days		1		29/7											
643 <b>400490</b>	SECTION W9F	1109 days		Thu 30/6/16	Sat 13/7/19	NA	NA		244 days	_								_	l I					
644 400500	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS	988 days	30/6						i			i					
645 400510	ESTABLISHMENT WORKS	365 days	30 days	Sat 14/7/18	Sat 13/7/19	NA	NA	618,644	244 days		1								1					
646 400520	COMPLETION OF SECTION W9F	0 days		Sat 13/7/19	Sat 13/7/19	NA	NA	645	244 days							1		13/7						—
647 <b>400530</b>	SECTION W9G	455 days		Tue 7/3/17	Mon 4/6/18	NA	NA		987 days		i	_			_	i			i					
648 <b>400540</b>	INSTRUCTION TO EXECISE	0 days		Tue 7/3/17	Tue 7/3/17	NA	NA	53SS	1077 days		1	7/3				1			1					
649 400550	ESTABLISHMENT WORKS	365 days	30 days	Mon 5/6/17	Mon 4/6/18	NA	NA	622,648	987 days			•				1								
650 400560	COMPLETION OF SECTION W8A	0 days		Mon 4/6/18	Mon 4/6/18	NA	NA	649	987 days		i				4/6									

APPENDIX B ACTION AND LIMIT LEVELS FOR NOISE

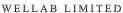
# Appendix B - Action and Limit Levels

**Table B-1** Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level		
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) 70dB(A)/65dB(A)*		

Remarks: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed. \*70dB(A) and 65dB(A) for schools during normal teaching periods and school examination periods, respectively.

APPENDIX C COPIES OF CALIBRATION CERTIFICATES





Rms 1214, 1502, 1516, 1701 & 1716, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

## TEST REPORT

**APPLICANT: Cinotech Consultants Limited** 

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	29817A
Date of Issue:	2018-09-29
Date Received:	2018-09-28
Date Tested:	2018-09-28
Date Completed:	2018-09-29
Next Due Date:	2019-09-28
•	·

ATTN: Mr. W.K. Tang Page: 1 of 1

## Item for calibration:

Description : Acoustical Calibrator

Manufacturer : SVANTEK
Model No. : SV30A
Serial No. : 10965
Equipment No. : N-09-02

#### **Test conditions:**

Room Temperatre : 17-22 degree Celsius

Relative Humidity : 40-70%

## **Methodology:**

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### **Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE
Laboratory Manager



WELLAB LIMITED

Rms 1214, 1502, 1516, 1701 & 1716, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

## TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 30294

 Date of Issue:
 2018-11-24

 Date Received:
 2018-11-23

 Date Tested:
 2018-11-23

 Date Completed:
 2018-11-24

 Next Due Date:
 2019-11-23

ATTN:

Mr. W.K. Tang

Page:

1 of 1

## **Certificate of Calibration**

#### Item for calibration:

Description

: 'SVANTEK' Integrating Sound Level Meter

Manufacturer

: SVANTEK

Model No.

: SVAN 957

Serial No.

: 23851

Equipment No.

: N-08-12

#### **Test conditions:**

Room Temperatre

: 17-22 degree Celsius

Relative Humidity

: 40-70%

## **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Laboratory Manager

## APPENDIX D ENVIRONMENTAL MONITORING SCHEDULES

# Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Impact Noise Monitoring Schedule (July 2019)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Jul	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul
					Noise	
					140100	
7-Jul	8-Jul	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul
		Noise				
		140130				
14-Jul	15-Jul	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul
		Noise				
		140130				
21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul
		Noise				
		110136				
28-Jul	29-Jul	30-Jul	31-Jul	1-Aug	2-Aug	3-Aug
				Noise		
				140156		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

#### Noise Monitoring Station

N1 - HKMLC Wong Chan Sook Ying Memorial School

N2 - Bethel High School

N3 - No. 159 Mai Po San Tsuen

N5 - Dills Corner Garden Block 2

N6 - Home of Loving Faithfulness

N7 - Village House in Shek Wu Wai

#### Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Tentative Impact Noise Monitoring Schedule (August 2019)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Aug	2-Aug	3-Aug
				Noise		
4-Aug	5-Aug	6-Aug	7-Aug	8-Aug	9-Aug	10-Aug
	2	Noise				
11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug
		Noise				
18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug
		Noise				
25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug
				Noise		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

#### Noise Monitoring Station

- N1 HKMLC Wong Chan Sook Ying Memorial School
- N2 Bethel High School
- N3 No. 159 Mai Po San Tsuen
- N5 Dills Corner Garden Block 2
- N6 Home of Loving Faithfulness
- N7 Village House in Shek Wu Wai

APPENDIX E NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

## Appendix E - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

Location N1 - H	Location N1 - HKMLC Wong Chan Sook Ying Memorial School											
				Unit: dB (A) (30-min)								
Date	Time	Weather	Meas	sured Noise I	_evel	Baseline Level	Construction Noise Level					
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>					
5-Jul-19	9:00	Sunny	57.2	62.9	53.6		57.2 measured ≦ Baseline					
9-Jul-19	9:30	Cloudy	58.7	62.3	52.6	62.2	58.7 measured ≦ Baseline					
16-Jul-19	9:30	Suuny	59.8	64.1	55.2	02.2	59.8 measured ≦ Baseline					
23-Jul-19	9:30	Sunny	60.3	63.8	56.5		60.3 measured ≦ Baseline					

Location N2 - I	Location N2 - Bethel High School												
				Unit: dB (A) (30-min)									
Date	Time	Weather	Mea	sured Noise	Level	Baseline Level	Construction Noise Level						
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>						
5-Jul-19	10:30	Sunny	56.8	59.2	53.1		51.7						
9-Jul-19	10:30	Cloudy	57.3	60.7	54.2	55.2	53.1						
16-Jul-19	11:00	Suuny	55.7	59.5	52.3	33.2	46.1						
23-Jul-19	11:00	Sunnv	53.2	57.1	50.0		53.2 measured ≤ Baseline						

Location N3 - I	Location N3 - No.159 Mai Po San Tsuen												
			Unit: dB (A) (30-min)										
Date	Time	Weather	Measured Noise Level			Baseline Level	Construction Noise Level						
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>						
5-Jul-19	13:00	Sunny	69.2	72.3	65.8		58.6						
9-Jul-19	13:00	Cloudy	71.4	74.1	68.2	68.8	67.9						
16-Jul-19	13:00	Sunny	72.6	74.3	69.1	00.0	70.3						
23-Jul-19	13:00	Sunnv	69.4	73.7	65.2		60.5						

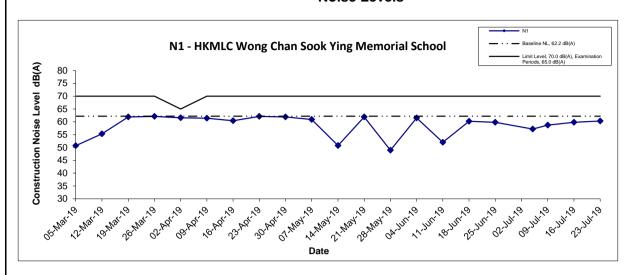
Location N5 - E	Location N5 - Block 2, Dills Corner Garden											
				Unit: dB (A) (30-min)								
Date	Time	Weather	Mea	sured Noise I	_evel	Baseline Level	Construction Noise Level					
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>					
5-Jul-19	14:00	Sunny	72.3	74.5	68.4		67.2					
9-Jul-19	14:30	Cloudy	69.8	72.6	65.7	70.7	69.8 measured ≦ Baseline					
16-Jul-19	14:00	Sunny	71.8	74.9	67.0	70.7	65.3					
23-Jul-19	14:00	Sunny	68.5	72.8	64.3		68.5 measured ≦ Baseline					

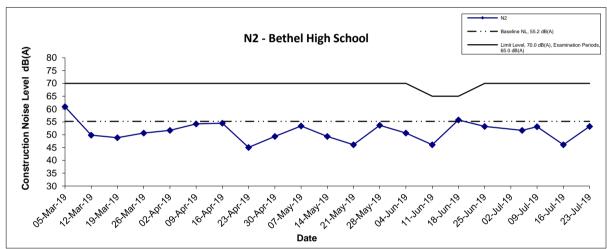
Location N6 - I	Location N6 - Home of Loving Faithfulness											
				Unit: dB (A) (30-min)								
Date	Time	Weather	Meas	sured Noise I	Level	Baseline Level	Construction Noise Level					
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>					
5-Jul-19	15:00	Sunny	70.6	73.5	67.2		70.6 measured ≦ Baseline					
9-Jul-19	15:30	Cloudy	71.8	74.8	67.9	72.0	71.8 measured ≦ Baseline					
16-Jul-19	15:30	Sunny	70.2	73.8	66.5	72.0	70.2 measured ≦ Baseline					
23-Jul-19	15:30	Sunny	71.5	74.2	68.2		71.5 measured ≦ Baseline					

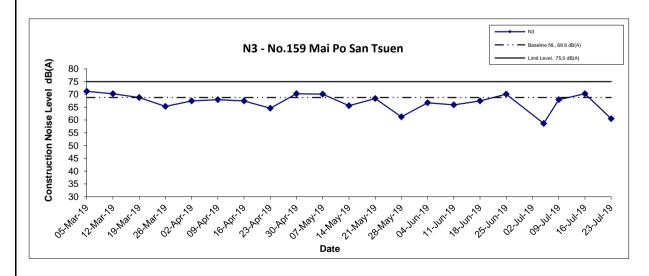
ocation N7 - Village House in Shek Wui Wai								
				Unit: dB (A) (30-min)				
Date	Time	Weather	Mea	sured Noise	Level	Baseline Level	Construction Noise Level	
			L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>	
5-Jul-19	16:00	Sunny	71.6	73.9	68.0		64.3	
9-Jul-19	16:30	Cloudy	73.1	75.3	71.1	70.7	69.4	
16-Jul-19	16:30	Sunny	72.8	75.1	68.6	10.7	68.6	
23-Jul-19	16:00	Sunny	72.3	75.5	69.4		67.2	

MA16036/App E - Noise Cinotech

#### **Noise Levels**







Title Agreement No. CE 67/2015 (HY)

Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works

Design and Construction

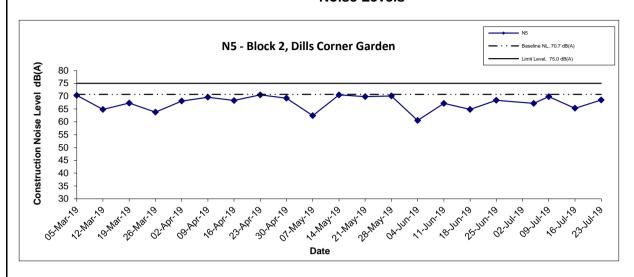
Graphical Presentation of Construction Noise Monitoring Results

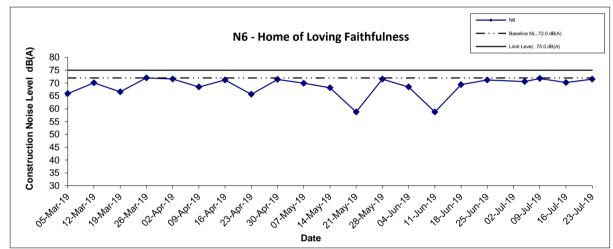
Scale Project
N.T.S No. MA16036

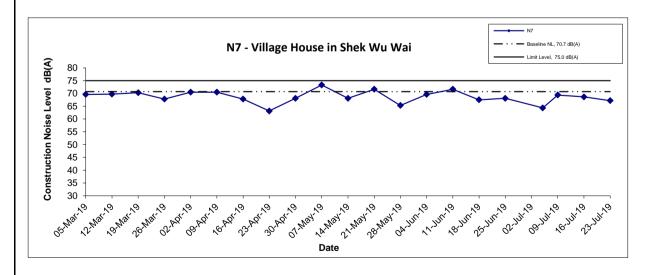
Date Jul-19 Appendix E



#### **Noise Levels**







Title Agreement No. CE 67/2015 (HY)

Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works

Design and Construction

Graphical Presentation of Construction Noise Monitoring Results

Scale Project
N.T.S No. MA16036

Date Jul-19 Appendix E



## APPENDIX F SUMMARY OF EXCEEDANCE

Agreement No. CE 67/2015 (HY)

Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction

**Appendix F – Summary of Exceedance** 

Exceedance Report for Contract No. YL/2015/01 – Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

(A) Exceedance Report for Construction Noise (NIL in the reporting month)

## APPENDIX G SITE AUDIT SUMMARY

# Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction

## Contract No. YL/2015/01

Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

## Weekly Site Inspection Record Summary

Checklist Reference Number	190703	
Date	03 July 2019 (Wednesday)	
Time	09:45 – 12:00	

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
190430-O2	Stand water should be avoided at Portion D.	В8
90508-R2	Drainage system and water treatment facility should be well maintained at Portion D.	В4
90612-R2	Stand water should be avoided or pumped out by sedimentation tank at Portion F.	В8
90626-R2	Stand water should be avoided or pumped out by sedimentation tank at Bridge B.	В8
.90703-R1	Stand water should be avoided or pumped out by sedimentation tank at Portion J.	В8
	C. Air Quality	
90508-R1	The excavated dusty materials or stockpile or dusty materials should be covered by imperious materials or maintained wet at Subway A.	C7
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	
	G. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow up on the previous session (Ref. No: 190626), follow up actions are needed to be reviewed	
	for item 190430-O2, 190508-R1& R2, 190612-R2 and 190626-R2.	
	Item 190626-R1 is rectified.	

	Name	Signature	Date
Recorded by	Mr. Eric Yan	yty	03 July 2019
Checked by	Ms. Jennifer Mok	9m	03 July 2019

Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction

## Contract No. YL/2015/01

Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

## Weekly Site Inspection Record Summary

Checklist Reference Number	190711
Date	11 July 2019 (Thursday)
Time	09:45 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
190430-O2	Stand water should be avoided at Portion D.	В8
190508-R2	Drainage system and water treatment facility should be well maintained at Portion D.	B4
190612-R2	Stand water should be avoided or pumped out by sedimentation tank at Portion F.	B8
190626-R2	Stand water should be avoided or pumped out by sedimentation tank at Bridge B.	B8
190703-R1	Stand water should be avoided or pumped out by sedimentation tank at Portion J.	В8
190711-R1	Rain water should be avoided and temporary drainage system could be designed and built during rainy season at Portion M.	В8
190711-R3	Muddy water should be prevented from directly entering the u-channel and the u-channel should be bounded by sandbags at Portion J.	B11
	C. Air Quality	
190508-R1	The excavated dusty materials or stockpile or dusty materials should be covered by imperious materials or maintained wet at Subway A.	C7
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
190711-R2	Accumulation of general refuse should be avoided and removed at Portion M.	E1
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	
	G. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow up on the previous session (Ref. No: 190703), follow up actions are needed to be reviewed for item 190430-O2, 190508-R1& R2, 190612-R2, 190626-R2 and 190703-R1.	

	Name	Signature	Date
Recorded by	Mr. Eric Yan	ighty	11 July 2019
Checked by	Ms. Jennifer Mok	Gm	11 July 2019

## Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction

## Contract No. YL/2015/01

Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

## Weekly Site Inspection Record Summary

Checklist Reference Number	190717
Date	17 July 2019 (Wednesday)
Time	09:45 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	1

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
190430-O2	Stand water should be avoided at Portion D.	В8
190508-R2	• Drainage system and water treatment facility should be well maintained at Portion D. Site run-off should pass through water treatment facility before discharge.	В4
190612-R2	Stand water should be avoided or pumped out by sedimentation tank at Portion F.	B8
190703-R1	Stand water should be avoided or pumped out by sedimentation tank at Portion J.	В8
	C. Air Quality	
190717-R1	The slope should be covered by tarpaulin at Portion F.	C7
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
190717-R2	Accumulation of construction waste should be avoided and removed at Portion F.	E1
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	
	G. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow up on the previous session (Ref. No: 190711), follow up actions are needed to be reviewed	
	for item 190430-O2, 190508-R2, 190612-R2 and 190703-R1.	
	Item 190508-R1, 190626-R2, 190711-R1,R2 &R3 are rectified.	

	Name	Signature	Date
Recorded by	Mr. Eric Yan	yti	17 July 2019
Checked by	Ms. Jennifer Mok	an an	17 July 2019

Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction

## Contract No. YL/2015/01

Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works

## Weekly Site Inspection Record Summary

Checklist Reference Number	190725
Date	25 July 2019 (Thursday)
Time	09:45 – 12:00

	Ref. No.	Non-Compliance	Related	]
Ì		None identified	Item No.	

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	HEIM NO.
190430-O2 190508-R2	<ul> <li>Stand water should be avoided at Portion D.</li> <li>Drainage system and water treatment facility should be well maintained at Portion D. Site run-off should pass through water treatment facility before discharge.</li> </ul>	B8 B4
190612-R2	Stand water should be avoided or pumped out by sedimentation tank at Portion F.	В8
	C. Air Quality  No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
190717-R2	Accumulation of construction waste should be avoided and removed at Portion F.	El
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	
	G. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	2
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow up on the previous session (Ref. No: 190717), follow up actions are needed to be reviewed for item 190430-O2, 190508-R2, 190612-R2 and 190717-R2.	
	Item 190703-R1 and 190717-R1 are rectified.	

	Name	Signature	Date
Recorded by	Mr. Eric Yan	Alf	25 July 2019
Checked by	Ms. Jennifer Mok	got	25 July 2019

## Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction

## Contract No. YL/2015/01

Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works

## Weekly Site Inspection Record Summary

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	Pectorit	THE STATE	X 1. F 2 4

Checklist Reference Number	190731
Date	31 July 2019 (Wednesday)
Time	09:45 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
190430-O2	Stand water should be avoided at Portion D.	В8
190508-O2	Drainage system and water treatment facility should be well maintained at Portion D. Site run-off should pass through water treatment facility before discharge.	B4
190612-R2	Stand water should be avoided or pumped out by sedimentation tank at Portion F.	B8
190731-R2	Stand water should be avoided or removed at Subway A.	В8
	C. Air Quality	
	No environmental deficiency was identified during site inspection.	
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
190717-R2	<ul> <li>Accumulation of construction waste should be avoided and removed at Portion F.</li> </ul>	Εl
190731-R1	Wooden waste should be removed at Portion M.	ΕI
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	
	G. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow up on the previous session (Ref. No: 190725), follow up actions are needed to be reviewed	
	for item 190430-O2, 190508-R2, 190612-R2 and 190717-R2.	
	No environmental observations improved/rectified during the environmental site inspection.	

	Name	Signature	Date
Recorded by	Mr. Eric Yan	- th	31 July 2019 /
Checked by	Ms. Jennifer Mok	m	l August 2019

# APPENDIX H EVENT AND ACTION PLANS

# **Appendix H - Event and Action Plans**

# Event and Action Plan for Construction Noise

EVENT	EVENT			
	ET LEADER	IEC	ER	CONTRACTOR
Action Level	1. Notify IC(E) and Contractor;	1. Review the analysed results	1. Confirm receipt of	1. Submit noise mitigation
being	2. Carry out investigation;	submitted by the ET;	notification of failure in	proposals to IC(E);
exceeded	3. Report the results of investigation to	2. Review the proposed remedial	writing;	2. Implement noise mitigation
	the IC(E) and Contractor;	measures by the Contractor and	2. Notify Contractor;	proposals.
	4. Discuss with the Contractor and	advise the ER accordingly;	3. Require Contractor to	
	formulate remedial measures;	3. Supervise the implementation	propose remedial measures	
	5. Increase monitoring frequency to	of remedial measures.	for the analysed noise	
	check mitigation effectiveness.		problem;	
			4. Ensure remedial measures	
			are properly implemented.	
Limit Level	1. Notify IC(E), ER, EPD and	1. Discuss amongst ER, ET, and	1. Confirm receipt of	1. Take immediate action to
being	Contractor;	Contractor on the potential	notification of failure in	avoid further exceedance;
exceeded	2. Identify source;	remedial actions;	writing;	2. Submit proposals for remedial
	3. Repeat measurement to confirm	2. Review Contractor's remedial	2. Notify Contractor;	actions to IC(E) within 3 working
	findings	actions whenever necessary to	3. Require Contractor to	days of notification;
	4. Increase monitoring frequency;	assure their effectiveness and	propose remedial measures	3. Implement the agreed
	5. Carry out analysis of Contractor's	advise the ER accordingly.	for the analysed noise	proposals;
	working procedures to determine	3. Supervise the implementation	problem;	4. Resubmit proposal if problem
	possible mitigation to be implemented;	of remedial measures	4. Ensure remedial measures	still not under control;
	6. Inform IC(E), ER and EPD the		are properly implemented;	5. Stop the relevant portion of
	causes & actions taken for the		5. If exceedance continues,	works as determined by the ER
	exceedances;		consider what portion of the	until the exceedance is abated.

# **Appendix H - Event and Action Plans**

7. Assess effectiveness of	work is responsible and	
Contractor's remedial actions and	instruct the Contractor to stop	
keep IC(E), EPD and ER informed of	that portion of the work until	
the results;	the exceedance is abated.	
8. If exceedance stops, cease		
additional monitoring		

APPENDIX I ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

**Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase** 

EIA Ref.	EM&A Ref.	Mitigation Measures	Status			
Construction	Construction Air Quality					
S.3.6.2	S.3.2.3	All the dust control measures as recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, should be implemented. Typical dust control measures include:	۸			
S.3.6.2	S.3.2.3	• The works area for site clearance shall be sprayed with water before, during and after the operation so as to maintain the entire surface wet	٨			
S.3.6.2	S.3.2.3	• Restricting heights from which materials are to be dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading	۸			
S.3.6.2	S.3.2.3	• Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from the bodies and wheels. However, all spraying of materials and surfaces should avoid excessive water usage	۸			
S.3.6.2	S.3.2.3	• Where a vehicle leaving a construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials will not leak from the vehicle	۸			
S.3.6.2	S.3.2.3	• Travelling speeds should be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks	۸			
S.3.6.2	S.3.2.3	• Erection of hoarding of not less than 2.4 m high from ground level along the site boundary, where appropriate	٨			
S.3.6.2	S.3.2.3	• Any stockpile of dusty materials shall be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and 4 sides	*			
S.3.6.2	S.3.2.3	• All dusty materials shall be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet	۸			

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status		
Construction	Construction Noise Impact				
S5.5.11	S4.2.17 (Stage 1 only)	In order to prevent potential cumulative construction noise impacts to NSRs at Mai Po San Tsuen and Palm Springs, the works at the cycle track section (near CHMP5+100m) are recommended to be scheduled to avoid works at the areas near Castle Peak Road of the Proposed Comprehensive Development at Wo Shang Wai (CDWSW) project if the works site of the CDWSW project is less than 300 m away from Castle Peak Road.	N/A		
S.5.5.14	S.4.2.2 (Stage 1 only)	The contractor shall liaise with the Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 2 (YLKTSSD2) and North West New Territories Salt Water Supply (NWNTSWS) works contractors so as to avoid undertaking works concurrently with the works when they are in the close proximity as far as practicable. As a conservative approach, works for the cycle track shall be carried out when the works from the other projects are over 300 m away. The requirements shall be included in the works contracts.	N/A		
N/A	N/A (Stage 2 only)	The contractor shall liaise with Yuen Long and Kam Tin Sewerage and Sewage Disposal (YLKSSD), Construction of Cycle Tracks and the associated Supporting Facilities at Nam Sang Wai, Yuen Long (NSWCT), Drainage Improvement at Northern NT - Package A – Drainage Improvement Works in San Tin (Remaining Works) - Investigation, North East New Territories New Development Areas Planning and Engineering Study (Investigation) (NENTNDA) and the Proposed Residential cum Passive Recreational Development within "Recreation" ("REC") zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T. (RCPRD) contractors so as to avoid undertaking works concurrently with their works (refer to S. 4.2.2 of the EM&A Manual for Stage 2 Works).	٨		

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
Table 5-7	S.4.2.19	Use of quiet plant (PME):	۸
		- mini excavator	
		- mobile crane	
		- dump truck	
		- hand-held electric circular saw	
		- concrete lorry mixer	
		- lorry	
		- vibratory poker	
		- asphalt paver	
		- crane mounted auger	
		- road roller	
		- road ripper, excavator mounted	
S.5.6.2	S.4.2.19	Noise barrier in the form of site hoarding shall be used for the following PMEs where	٨
Table 5-8		practicable:	
		- mini excavator	
		- mobile crane	
		- dump truck	
		- hand-held electric circular saw	
		- bar bender	
		- vibrating hammer	
		- generator	
		- concrete lorry mixer	
		- lorry	
		- vibratory poker	
		- asphalt paver	
		- compactor	
		- road roller	

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		- crane mounted auger - grout mixer - grout pump - drill - road ripper, excavator mounted	
S.5.6.2	S.4.2.19	Noise enclosure shall be used for the following PMEs where practicable: - air compressor - hand-held breaker	N/A (1)
S.5.6.2	S.4.2.19	The barrier / enclosure material's surface mass shall be in excess of 7 kg/m <sup>2</sup> .	^
S.5.6.6	S.4.2.19	Use of alternative quieter plant such as road ripper, excavator mounted instead of handheld breaker during levelling/excavation works.	٨
S.5.6.8	S.4.2.19	The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD	^
S.5.6.8	S.4.2.19	The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines	٨
S.5.6.8	S.4.2.19	Before commencing any work, the Contractor shall submit to the project Engineer for approval the method of working, equipment and noise mitigation measures intended to be used at the site	^

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.5.6.8	S.4.2.19	The Contractor shall devise and execute working methods to minimize the noise impact on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented	۸
S.5.6.8	S.4.2.19	Noisy equipment and noisy activities should be located as far away from the NSRs as is practical	۸
S.5.6.8	S.4.2.19	Unused equipment should be turned off. PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided	^
S.5.6.8	S.4.2.19	Regular maintenance of all plant and equipment	^
S.5.6.8	S.4.2.19	Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable	N/A
S.5.6.8	S.4.2.19	The Contractor shall liaise with the schools that are located near the works sites regarding their examination period and schedule the noisy works to avoid the examination period as far as possible.	٨

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status		
Construction	Construction Water Quality				
S.6.6.1	S.5.2.4	Mitigation measures should be implemented to prevent the uncontrolled discharge of wastewater from the construction site in accordance with Practice Note for Professional Persons ProPECC PN1/94 - Construction Site Drainage	#		
S.6.6.1	S.5.2.4	Surface run-off from the construction sites will be directed into storm drains via adequately designed wastewater treatment facilities such as sand traps, silt traps and sediment settling basins. This is important for works immediately along the Kam Tin River, Ngau Tam Mei Main Drainage Channel, River Beas and Shek Sheung River	*		
S.6.6.1	S.5.2.4	Channels, earth bunds or sand bag barriers will be provided on-site to properly direct stormwater to the above-mentioned facilities	*		
S.6.6.1	S.5.2.4	Existing silt removal facilities, channels and manholes along roads and pedestrian walkways will be maintained and the deposited silt and grit will be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times	۸		
S.6.6.1	S.5.2.4	Other manholes (including any newly constructed ones) will be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system	^		
S.6.6.1	S.5.2.4	Open stockpiles of materials on site will be avoided or where unavoidable covered with tarpaulin or similar fabric during rainstorms. Measures will be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system	۸		
S.6.6.1	S.5.2.4	Where possible, works entailing soil excavation will be minimized during the rainy season (i.e. April to September);	٨		
S.6.6.1	S.5.2.4	Where applicable, final earthworks surfaces/ slopes will be well compacted and hydro-seeded following completion to prevent erosion	N/A		

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.6.6.1	S.5.2.4	During construction works, chemical toilets will be provided for the use of site staff. These will be provided by a licensed contractor, who will be responsible for appropriate disposal and maintenance of the effluent	٨
S.6.6.1	S.5.2.4	Works adjacent to the fishponds near Mai Po San Tsuen should be avoided as far as possible during the wet season to avoid runoff into the fishponds	۸
S.6.6.1	S.5.2.4	Wastewater from site facilities (such as toilets) should be discharged to foul sewer, where available. Chemical toilets will be considered where there is no foul sewer connection. There is not expected to be a temporary canteen.	٨
S.6.6.1	S.5.2.4	All site discharges within Water Control Zones must comply with the terms and conditions of a valid discharge licence issued by EPD	^
S.6.6.1	S.5.2.4	Vehicle wheel washing facilities should be provided, where applicable, at the site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before the vehicles are leaving the site area	٨
S.6.6.1	S.5.2.4	Section of the road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains	٨
S.6.6.1	S.5.2.4	The project may occasionally involve the handling of fuel and generates chemical wastes. It must be ensured that all fuel tanks and chemical storage are sited on sealed areas and provided with locks	٨
S.6.6.1	S.5.2.4	The storage areas will be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent accidentally spilled oil, fuel or chemicals from reaching the receiving waters	٨
S.6.6.1	S.5.2.4	Oil and grease removal facilities will be provided where appropriate, for example, in area near plant workshop/ maintenance areas	N/A
S.6.6.1	S.5.2.4	Chemical waste arising from the site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal	۸

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		(Chemical Waste) (General) Regulation	
-	S.5.2.7 (Stage 1 only)	The construction work of cycle bridge at Shek Sheung River is not recommended to be carried out during wet seasons (April to October), and the dry weather flow will be diverted to avoid entering the works area. In order to further protect the river water quality from disturbance, the construction work especially excavation works, will be surrounded by cofferdams to ensure the works will be carried out in a dry condition to prevent water pollution to the river.	۸
N/A	S.5.2.4 (Stage 2 only)	Stream decking is recommended to be carried out during dry weather condition. To prevent disturbance to the river water quality, measures will be taken to ensure the works to be carry out in a dry condition to prevent water pollution to the river, such as sandbag barriers.	٨
N/A	S.5.2.6 (Stage 2 only)	Based on the current available information, the tentative programmes of some construction works for the Agreement No. CE 57/2011 (DS) Drainage Improvement at Northern NT - Package A Drainage Improvement Works in San Tin (Remaining Works) - Investigation (DIST) and the Construction of Cycle Tracks and the associated Supporting Facilities at Nam Sang Wai, Yuen Long (NSWCT) projects may overlap with Stage 2 cycle track construction works. It is recommended that the Contractor should liaise with the project contractor(s) of the DIST and the NSWCT projects to schedule the construction works and allow programme phrasing to avoid major concurrent activities to be undertaken simultaneously in the vicinity.	^

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
Construction	Waste Managem	ent	
S.7.4.1	S.6.2.1 – S.6.2.4	An on-site environmental co-ordinator employed by the Contractor should be identified at the outset of the works. Prior to commencement of Project works, the co-ordinator shall prepare a WMP in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Sites, for the ER's approval. The WMP shall include monthly and yearly Waste Flow Tables ("WFT") that indicate the amounts of waste generated, recycled and disposed of (including final disposal site), and which should be regularly updated;	٨
S.7.4.1	S.6.2.6	Given the potential for secondary environmental impacts (dust, noise, water quality and visual impacts), mitigation measures are required to ensure proper handling, storage, transportation and disposal of materials at the outset and throughout the construction phase of the project	٨
S.7.4.1	S.6.2.6	The reuse/ recycling of all materials on site shall be investigated and exhausted prior to treatment/ disposal off-site	٨
S.7.4.1	S.6.2.6	Good site practices shall be adopted from the commencement of works to avoid the generation of waste, reduce cross contamination of waste and to promote waste minimization	#
S.7.4.1	S.6.2.6	• All waste materials shall be sorted on-site into inert and non-inert C&D materials, and where the materials can be recycled or reused, they shall be further segregated. Inert material, or public fill will comprise stone, rock, masonry, brick, concrete and soil which is suitable for land reclamation and site formation whilst non-inert materials include all other wastes generated from the construction process such as plastic packaging and vegetation (from site clearance)	٨

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.7.4.1	S.6.2.6	• The Contractor shall be responsible for identifying what materials can be recycled/ reused, whether on-site or off-site. In the event of the latter, the Contractor shall make arrangements for the collection of the recyclable materials. Any remaining non-inert waste shall be collected and disposed of to the Public Filling Areas whilst any inert C&D materials shall be re-used on site as far as possible. Alternatively, if no use of the inert material can be found onsite, the materials can be delivered to a Public Fill Area or Public Fill Bank after obtaining the appropriate licence	^
S.7.4.1	S.6.2.6	• In order to monitor the disposal of C&D material and solid wastes at public filling facilities and landfills, and control fly-tipping, a trip-ticket system shall be implemented by the Contractor, in accordance with the contract and the requirements of DEVB Technical Circular (Works) No. 6/2010 "Trip Ticket System for Disposal of Construction and Demolition Material".	^
S.7.4.1	S.6.2.6	• Under the Waste Disposal (Chemical Waste) (General) Regulation, the Contractor shall register as a Chemical Waste Producer if chemical wastes such as spent lubricants and paints are generated on site. Only licensed chemical waste collectors shall be employed to collect any chemical waste generated at site. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme both published by EPD;	^
S.7.4.1	S.6.2.6	• A sufficient number of covered bins shall be provided on site for the containment of general refuse to prevent visual impacts and nuisance to the sensitive surroundings. These bins shall be cleared daily and the collected waste disposed of to the refuse transfer station. Further to the issue of ETWB Technical Circular (Works) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness, the Contractor is required to maintain a clean and hygienic site throughout the project works;	^

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.7.4.1	S.6.2.6	All chemical toilets, if any, shall be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal; and	۸
S.7.4.1	S.6.2.6	• Toolbox talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.	۸
S.7.4.1	S.6.2.6	• The Contractor shall comply with all relevant statutory requirements and guidelines and their updated versions that may be issued during the course of project construction.	۸

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status		
<b>Land Contam</b>	Land Contamination				
S.8.7.2 – S.8.7.3	S.7.2.2	Preparation of Contamination Assessment Plan (CAP), which should be submitted to EPD for endorsement, prior to investigation.  Site investigation and sampling works in accordance with the approved CAP. If contamination is identified, Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) shall be prepared and submitted for EPD's approval.	٨		
S.8.7.5	S.7.3.1	<ul> <li>The following control measures should be implemented when handling identified contaminated materials:</li> <li>General site safety shall be enforced to include basic practices such as the use of safety boots, hard hats, coveralls, gloves and eye protection;</li> <li>Avoid skin contact, ingestion and inhalation of excavated contaminated soils. Basic personal protective equipment should be used;</li> <li>Site staff and workers shall be given adequate training and instructions specific to the potential hazards, their health and safety responsibilities and safe working practice including basic personal hygiene;</li> <li>Measures shall be implemented to prevent non-workers from approaching the identified works areas in order to avoid exposure to contaminants.</li> </ul>	N/A		
S.8.7.5	S.7.3.1	<ul> <li>Management of Contaminated Soils</li> <li>Where appropriate, the use of bulk handling equipment should be maximised to reduce the potential contacts between excavated contaminated materials and associated workers;</li> <li>The plants for excavation and transportation of the material shall be cleaned prior to leaving the Site;</li> <li>All temporary stockpiles of the materials shall be completely covered with plastic/tarpaulin sheets, particularly during heavy rainstorms. The stockpiling areas should be concrete-paved or lined with its perimeter constructed of a concrete</li> </ul>	N/A		

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		<ul> <li>bund where appropriate in order to avoid any leachate from migrating out of the area; Any vehicles transporting the material shall be suitably covered to limit potential dust emissions;</li> <li>Surface waters shall be diverted around any contaminated areas or stockpiles to minimize potential runoff into excavations, as runoff might increase the volume of contaminated water requiring disposal and suspended solids in the wastewater stream</li> </ul>	

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
Ecological & l	Fisheries Impact		
S.9.11.4	S.8.2.2	Prior to tree felling, survey inspections should be made for their suitability for roosting bats. Once these trees have been highlighted, then appropriate checks of each tree for bats should be made prior to removal as a precautionary measure.	۸
S.9.11.7	S.8.2.3 (Stage 1 only)	In situ compensation planting at the Information Kiosk and R9 should occur to provide continuing function of the bamboo and plantation (see Figure 8-1 of EM&A Manual for Stage 1 Works (Year 2015)). It is recommended that the Information Kiosk and Resting Station R9 should be designed sympathetically to the natural surroundings. Compensation planting along the Sheung Yue River and Shek Sheung River including at R9 and Information Kiosk could be implemented as appropriate.	N/A
S.9.11.17 – S.9.11.19	S.8.2.4 (Stage 1) S.8.2.3 (Stage 2)	For the Kam Tin section and the Long Valley section of the Project, construction works shall not be carried out during the wet season (April to October) which is considered to have no significant impact to wildlife and to avoid the breeding season of Greater Painted-snipes at Long Valley. This is also to prevent any site run-off to adjacent water channels and fishponds including those fishponds along San Tin Tsuen Road.	٨
S.9.11.23	S.8.2.4 (Stage 2 only)	Construction of the section in the vicinity of Mai Po Village SSSI shall be undertaken beyond the recognised breeding seasons for ardeids in Hong Kong to prevent any potential disturbance to the nesting birds, i.e., from September to February.	۸
-	S.8.2.5 (Stage 1 only)	In order to avoid any adverse impact to the healthiness of the bamboo groove from dust-coating on leave next to the R9 and hence affect the breeding habitat of the very rare Dark Brown Ace, a dust barrier should be installed between the bamboo and the construct site.	N/A

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
-	S.8.2.6 (Stage 1 only)	For the lower Shek Sheung River, construction works should be scheduled in dry season to minimize the disturbance to the foraging ardeids and the Quiet PME shall be implemented practicable to minimize the noise disturbance to the foraging ardeids.	۸
S.10.5.4	S.8.2.7 (Stage 1) S.8.2.5 (Stage 2)	To prevent any negative impact to water quality as a result of site run-off, good site practice must be employed at all times, particularly in the areas close to fishponds. Practice Note for Professional Persons ProPECC PN1/94 – Construction Site Drainage shall be implemented.	۸
S.10.5.4	S.8.2.8 (Stage 1) S.8.2.6 (Stage 2)	Along Pok Wai South Road, once the final construction sequencing is known, liaison with local residents and aquaculturists should be implemented in order to minimise temporary road blockages and to identify the best timing for works along this area.	N/A
S.10.5.3	S.8.2.9 (Stage 1) S.8.2.7 (Stage 2)	During wet seasons, surface run-off from the construction sites will need to be directed into storm drains via adequately designed wastewater treatment facilities such as sand traps, silt traps, oil interceptors and sediment settling basins. Works adjacent to the fishponds near NTMDC inside the Wetland Conservation Area (WCA) and Mai Po San Tsuen should be avoided, as far as practicable, during the wet season to avoid runoff into the fishponds.	٨
-	S.8.2.10 (Stage 1 only)	The use of signage at the Resting Stations to indicate that wildlife may be present and that noise levels and activities should be kept to a minimum could be implemented. This may help to reduce any potential disturbance to wildlife from human activity. At Long Valley, to mitigate against potential indirect human disturbance to Greater Painted-snipe, planting could be undertaken as appropriate along the proposed cycle track at meander 8 to act as screening.	N/A

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.9.11.27	S.8.2.11	The following good work practices are recommended:	۸
	(Stage 1)	Avoid soil storage against trees;	
	S.8.2.9	■ Fence off any potentially ecologically sensitive areas;	
	(Stage 2)	<ul> <li>Delineation of works area to prevent encroachment onto adjacent habitats;</li> </ul>	
		■ Reinstatement of habitat after works;	
		■ No on-site burning of waste; Waste and refuse in appropriate receptacles;	
		■ Staff training/toolbox talks for site work near Long Valley and WCA – important	
		areas for birds therefore staff should reduce amount of noise whilst working and	
		during breaks where possible; • Regular ecological checks; and	
		■ Silt/ Sediment/ Oil traps for drainage to prevent site run-off	

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status				
<b>Cultural Herit</b>	age Impact						
S.11.5.1	S.9.2.1	Care should be taken during the construction stage to report any signs of possible discovery of artefacts.	N/A				
Landscape and	Landscape and Visual						
Detailed Design	n Phase						
Table 12-11	CP1	A detailed tree survey to be carried out by the IDC Consultant during the detailed design stage. The recommendations of the preliminary tree survey shall be reviewed and confirmed during the detailed survey. Should tree felling be required, tree felling application is required in accordance with DEVB Technical Circular (Works) No. 10/2013 Tree Preservation	٨				
S.12.9.3	CP6	It has been agreed that the proposed landscape areas under DSD's 4215DS project which falls within the cycle track works area will be implemented by Project proponent of this Project in form of roadside amenity areas after completion of the cycle track. During the detailed design, the works programme of this Project shall be coordinated with the above-mentioned DSD project in order to avoid abortive planting works and impact on landscape resources between the interface of different public works. The proposed landscape areas under 4215DS falled within the cycle track works area shall be incorporated in the final landscape design of this Project.	٨				
S.12.10.1	OP1	The Design Concept Drawings and Conceptual Landscape Master Plan of cycle track and associated facilities demonstrate landscape and visual mitigation strategies and design measures including integrated design approach, amenity and compensatory planting proposals and treatment of retaining structure and slopes have been recommended in the EIA. More detailed landscape and compensatory planting proposals shall be developed by IDC consultants at later stage during detailed design and construction phase of this project following the completion of the detailed Tree	٨				

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		Survey Report and approval from relevant departments at that stage	
Construction P	hase		
Table 12-11	CP1.1	To retain trees, which have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs.	۸
	CP1.2	Creation of precautionary area around trees to be retained equal to half of the trees canopy diameter. Precautionary area to be fenced.	۸
	CP1.3	Prohibition of the storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the precautionary area.	٨
	CP1.4	Phased segmental root pruning for trees to be retained and transplanted over a suitable period (determined by species and size) prior to lifting or site formation works which affect the existing rootball of trees identified for retention. The extent of the pruning will be based on the size and the species of the tree in each case.	٨
	CP1.5	Pruning of the branches of existing trees identified for transplantation and retention to be based on the principle of crown thinning maintaining their form and amenity value.	۸
	CP1.6	The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.	۸
	CP1.7	The rectification and repair of damaged vegetation following the construction phase to its original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected.	N/A

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
	CP1.8	All works affecting the trees identified for retention and transplantation will be carefully monitored. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring throughout the construction period.	۸
	CP1.9	Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in accordance with ETWB TCW No. 2/2004 and WB Technical Circular No. 14/2002.	N/A
	CP2.0	The tree preservation works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection specification would be included within the contract documents.	۸
	CP2.1	Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-use.	۸
	CP2.2	The soil will be stockpiled to a maximum height of 2m and will be either temporarily vegetated with hydroseeded grass during construction or covered with a waterproof covering to prevent erosion.	۸
	CP2.3	The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. Alternatively, if this is not practicable, it should be considered for use elsewhere, including other projects.	۸
	CP3.1	Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase.	N/A
	CP3.2	Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage.	۸

Appendix I - Summary of Implementation Schedule of Mitigation Measures for Construction Phase

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
	CP3.3	Screen the works area during the construction phase through the use of decorative hoarding along the site boundary facing adjacent VSRs	^
	CP4.1	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase	^
	CP4.2	Use of native plant species predominantly in the planting design for the buffer areas.	^
	CP4.3	The tree planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree planting specification would be included within the contract documents	۸
	CP5.1	The tree transplanting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection / transplanting specification would be included within the contract documents.	۸
	CP5.2	The implementation program should reserve enough time for advance tree transplanting preparation.	^

Remarks:		EM&A Manual for Stage 1 Works under EP-450/2013/A (App No.: VEP-478/2015) EM&A Manual for Stage 2 Works under EP-501/2015 (App No.: AEP-501/2015)						
	٨	Compliance of mitigation measure;	X	Non-compliance of mitigation measure;				
	N/A	Not Applicable at this stage; N/A(1) Not observed;	•	Non-compliance but rectified by the contractor;				
	*	Recommendation was made during site audit but improved/rectified by the contractor.	#	Recommendation was made during site audit but not yet improved/rectified by the contractor.				

APPENDIX J SUMMARIES OF ENVIRONMENTAL COMPLAINT, WARNING, SUMMON AND NOTIFIATION OF SUCCESSFUL PROSECUTION

#### Agreement No. CE 67/2015 (HY)

## Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction

## $\label{eq:condition} \begin{tabular}{ll} Appendix J-Record of environmental complaint, warning, summon and notification of successful prosecution \end{tabular}$

**Reporting Month**: July 2019

## Contract No. YL/2015/01

Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Investigation/Mitigation Action	Status
1	Pok Wai South Road	8 <sup>th</sup> November 2018	The complaint is filed against extensive dusty stockpile being placed at the works site of Pok Wai South Road (Portion A), causing dust nuisance and affecting the passer-by and residents.	<ul> <li>Cover all the stockpile when stockpiling works was not being conducted;</li> <li>Arrange on-site personnel to wash the wheels of the vehicles immediately before they leave the site area; and</li> <li>Increase the frequency of water spraying on the stockpiles to dampen the dusty surface.</li> </ul>	CIR was submitted in December
2	Mai Po San Tsuen (Portion D)	20 <sup>th</sup> December 2018	The complaint is filed against extensive dust nuisance by construction activities generated sand and dust, and may have caused the nearby village roads to look dusty and unclean.	<ul> <li>Increase the frequency of water spraying on the paved roads to minimize the dust generation; and</li> <li>Cover the temporary cut slopes by tarpaulin before any excavation works commence.</li> </ul>	CIR was submitted in December
3	Mai Po San Tsuen (Portion D)	21 <sup>st</sup> December 2018	The complaint is filed against site effluent being pumped and discharge into the nearby surface channel from the same construction site.	<ul> <li>Cover the temporary cut slopes by tarpaulin before any excavation works commence.</li> <li>Clean the water in the channel and all broken covers are replaced by new decking covers</li> <li>3 weirs have been installed at the downstream</li> <li>Use of sedimentation tank prior to discharge</li> <li>New cut-off plate next to the channel will be raised 200mm to prevent potential run-off</li> <li>A filter with aggregate is placed at the side channel</li> </ul>	CIR was submitted in February

### Agreement No. CE 67/2015 (HY)

# Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction

 $\label{eq:condition} \textbf{Appendix} \ \textbf{J} - \textbf{Record of environmental complaint, warning, summon and notification of successful prosecution}$ 

Log Ref.	Location	Received Date	Details of Complaint/warning/summon and prosecution	Investigation/Mitigation Action	Status
				Water and wastewater filtration system is installed to treat the site effluent.	

**Remarks**: Three environmental complaints were received in the previous reporting period. No environmental complaint was received in this reporting period.

APPENDIX K SUMMARY OF WASTE GENERATION AND DISPOSAL RECORDS

#### Sang Hing – Kuly Joint Venture Environmental Management Plan for Contract No. YL/2015/01 Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

Name of Department: CEDD Contract No.: YL/2015/01

- -

### Monthly Summary Waste Flow Table for <u>2016</u> (Year)

				y Samma,	,	1011 1401	2 101 201	(1 car)			
	A	ctual Quantities	of Inert C&D	Materials Gene	erated Monthl	у	Actu	al Quantities o	f C&D Wastes	Generated Mo	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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	1	-	-	-	-	-	1	-
June	-	-	1	1	1	1	-	ı	•	1	-
July	-	-	ı	1	ı	1	0.01	0.01	0.01	1	0.01
Aug	-	-	-	1	-	1	0.01	0.01	0.01	1	0.01
Sept	0.005	-	-	-	0.005	1	0.01	0.01	0.01	1	0.06
Oct	-	-	ı	1	ı	1	0.05	0.05	0.05	1	0.04
Nov	0.35	-	-	-	0.35	-	0.05	0.05	0.05	-	0.05
Dec	0.4	-	-	-	0.4	-	0.05	0.05	0.05	-	0.05
Total	0.755	-	-	-	0.755	-	0.18	0.18	0.18	-	0.22

<sup>\*</sup>Remark: Imported Fill not taken into account of Total Quantity Generated

Name of Department: CEDD Contract No.: YL/2015/01

#### Monthly Summary Waste Flow Table for <u>2017</u> (Year)

				y Summar,	)		7101	(Teal)			
	A	ctual 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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	$(in '000m^3)$	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0.04	-	-	-	0.04	0.124	0.05	0.05	0.05	-	0.06
Feb	0.02	-	-	-	0.02	-	0.05	0.05	0.05	-	0.01
Mar	1.15	-	-	-	1.15	0.369	0.05	0.05	0.05	-	0.02
Apr	0.65	-	-	-	0.65	-	0.05	0.05	0.05	-	0.02
May	0.79	-	1	-	0.79	1	0.05	0.05	0.05	1	0.01
June	1.63	-	ı	1	1.63	1	0.05	0.05	0.05	1	0.02
July	1.25	-	1	1	1.25	1	0.05	0.05	0.05		0.01
Aug	1.49				1.49	1	0.05	0.05	0.05	-	0.01
Sep	1.15	-	-	ı	1.14	0.493	0.05	0.05	0.05	1	0.01
Oct	1.19	-	ı	1	1.19	1	0.05	0.05	0.05	1	0.01
Nov	0.79	-	-	-	0.76	-	0.05	0.05	0.05	-	0.03
Dec	3.09	_	-	-	3.07	-	0.05	0.05	0.05	-	0.01
Total	13.24				13.18	0.986	0.6	0.6	0.6		0.22

<sup>\*</sup>Remark: Imported Fill not taken into account of Total Quantity Generated

Name of Department: CEDD Contract No.: YL/2015/01

### Monthly Summary Waste Flow Table for <u>2018</u> (Year)

	Actual Quantities of Inert C&D Materials Generated Monthly							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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )		
Jan	4.37	-	-	-	4.36	-	0.05	0.05	0.05	-	0.01		
Feb	1.66	-	-	-	1.64	-	0.05	0.05	0.05	-	0.01		
Mar	1.85	-	-	-	1.82	-	0.05	0.05	0.05	-	0.01		
Apr	3.35	-	-	-	3.31	-	0.05	0.05	0.05	-	0.01		
May	0.84	-	-	-	0.82	-	0.01	0.01	0.01	-	0.01		
June	0.04	-	-	-	-	-	0.01	0.01	0.01	-	0.04		
July	2.75	-	-	-	2.72	-	0.01	0.01	0.01	-	0.03		
Aug	1.34	-	-	-	1.32	-	0.01	0.01	0.01	-	0.02		
Sept	0.69	-	-	-	0.68	-	0.01	0.01	0.01	-	0.01		
Oct	2.99	-	-	-	2.97	-	0.01	0.01	0.01	-	0.01		
Nov	4.62	-	-	-	4.61	-	0.01	0.01	0.01	-	0.01		
Dec	6.49	-	-	-	6.45	-	0.01	0.01	0.01	-	0.05		
Total	30.99	-	-	-	30.70	-	0.28	0.28	0.28	-	0.22		
•	•		•	•		•	•	•	•	•			
	•	•	•	•	•	•	•	•	•	•	•		
Total	44.985	-	-	-	44.635	0.986	1.06	1.06	1.06	-	0.66		

<sup>\*</sup>Remark: Imported Fill not taken into account of Total Quantity Generated

Name of Department: CEDD Contract No.: YL/2015/01

#### Monthly Summary Waste Flow Table for <u>2019</u> (Year)

	Actual Quantities of Inert C&D Materials Generated Monthly							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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )		
Jan	1.13	-	-	-	1.08	-	0.05	0.05	0.05	-	0.05		
Feb	0.04	-	-	-	-	-	0.05	0.05	0.05	-	0.04		
Mar	0.06	-	-	-	-	-	0.05	0.05	0.05	-	0.06		
Apr	0.06	-	-	-	0.03	-	0.05	0.05	0.05	-	0.03		
May	_	-	-	-	-	-	0.05	0.05	0.05	-	0.04		
June	0.03	-	-	-	-	-	0.05	0.05	0.05	-	0.03		
July	0.05	-	-	-	-	-	0.05	0.05	0.05	-	0.05		
Sub-total	1.41	-	-	-	1.11	-	0.35	0.35	0.35	-	0.29		
Aug	_	-	-	-	-	-	-	-	-	-	-		
Sept	_	-	-	-	-	-	-	-	-	-	-		
Oct	_	-	-	-	-	-	-	-	-	-	-		
Nov	_	-	-	-	-	-	-	-	-	-	-		
Dec	-	-	-	-	-	-	-	-	-	-	-		
•	•	•	•	•	•	•	•	•	•	•	•		
		•	•	•		•				•			
Total	46.395	-	-	-	45.745	0.986	1.41	1.41	1.41	-	0.96		

<sup>\*</sup>Remark: Imported Fill not taken into account of Total Quantity Generated

#### Sang Hing – Kuly Joint Venture Environmental Management Plan for Contract No. YL/2015/01 Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works

	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 the	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 <sup>3</sup> )	$(in '000m^3)$	$(in '000m^3)$	$(in '000m^3)$	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )			
5	2	1	1	1	10	3	3	1	1	3			

\*Remark: Figure to be revised if necessary

#### 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
- 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].