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)

May 2018

Approved By

(Dr. Priscilla Choy, 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 19th 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 1 31 May 2018.
- 2. During the reporting month, the major site activities undertaken in the reporting month included:

Portion B – Construction of Subway A, Construction of Utilities Work, Earthworks and

Drainage Works

Portion C – Construction of Resting Station

Portion D – Construction of pedestrian ramp

Portion E – Construction of Retaining Wall

Portion F – Construction of Drainage Pipe, Construction of Retaining wall, Soil Treatment for

RAP, Construction of Resting Station at Man Tin Cheung Park

Portion H – Construction of Retaining Wall

Portion I – Construction of Subway D

Portion J – Construction of Retaining Wall

Portion K – Construction of Drainage Pipe

Portion L – Construction of Public Toilet

Work Area 4 (Shui Fu Road) – Decontamination of soil

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 Exceedance		Action Taken	
	Action Level	Limit	Level	1 aken
Noise	0		0	N/A

1

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

T	Event Details			G	D 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		

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)

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.

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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 23rd November 2016. This is the 19th Monthly EM&A Report summarizing the EM&A works for the Project from 1 31 May 2018.

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

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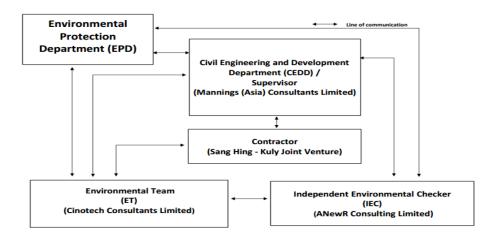


Figure 3 Organization Structure (Environmental Aspects)

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	Dr. Priscilla Choy	2151 2089	3107 1388
Cinotech		Ms. Ivy Tam	2151 2090	
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 B – Construction of Subway A, Construction of Utilities Work, Earthworks and Drainage Works

Portion C – Construction of Resting Station

Portion D – Construction of pedestrian ramp

Portion E – Construction of Retaining Wall

Portion F – Construction of Drainage Pipe, Construction of Retaining wall, Soil Treatment for RAP, Construction of Resting Station at Man Tin Cheung Park

Portion H – Construction of Retaining Wall

Portion I – Construction of Subway D

Portion J – Construction of Retaining Wall

Portion K – Construction of Drainage Pipe

Portion L – Construction of Public Toilet

Work Area 4 (Shui Fu Road) – Decontamination of soil

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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	 Sufficient watering of the works site with active dust emitting activities Properly cover the stockpiles On-site waste sorting and implementation of trip ticket system Appropriate desilting/sedimentation devices provided on site for treatment with valid Discharge License before discharge Well maintain the drainage system to prevent the spillage of wastewater during heavy rainfall Use of quiet plant and well-maintained construction plant Provide movable noise barrier Proper wheel washing for construction vehicles before leaving the site Provide sufficient mitigation measures as recommended in Approved EM&A Manual/Lease requirement

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 1-31 May 2018.

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** shows the locations of these stations.

Table 4.1 Noise Monitoring Stations

Monitoring Stations	Locations	Location of Measurement
N1	HKMLC Wong Chan Sook Ying Memorial School	Rooftop (about 5/F) 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_{eq}) and percentile sound pressure level (L_x) 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	SVAN977	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 _{eq} (30 min.) dB(A) L ₁₀ (30 min.) dB(A) L ₉₀ (30 min.) dB(A)	0700-1900 hrs	Once non week	Façade
N2				Façade
N3				Free Field
N5			Once per week	Free Field
N6		weekdays		Façade
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 façade 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 recalibration 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)	
NI 1	HKMLC Wong Chan Sook Ying	Road traffic noise	
N1	Memorial School	Noise from daily school activities	
		Road traffic noise	
N2	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	
	Home of Loving Faithfulness	Road traffic noise	
N6		Noise from activities at the	
NO		premise and workshops near	
		the premise	
		Road traffic noise	
N7	Village House in Shek Wu Wai	Noise from activities at	
11/		workshops near the village	
		house	

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

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
N2	55.2 (at 0700 – 1900 hrs on normal weekdays)	normal 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)
M7	70.7 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)

^(*) 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 (May 18), Leq (30min) dB(A)
N1 - HKMLC Wong Chan Sook Ying Memorial School	55-62	62 ⁽¹⁾	48.9 – 60.4
N2 – Bethel High School	57-64	64 ⁽¹⁾	52.1 – 60.6
N3 – No. 159 Mai Po San Tsuen	70-73	74 ⁽²⁾	67.2 – 71.6
N5 – Block 2, Dills Corner Garden	73-75	75 ⁽²⁾	66.9 – 70.5
N6 – Home of Loving Faithfulness	64-73	74 ⁽¹⁾	64.4 – 71.9
N7 – Village House in Shek Wu Wai	N/A ⁽³⁾	70 ⁽²⁾	70.1 - 71.4

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, N2, N3 and N5 were lower than the range of the predicted mitigated construction noise levels in the EIA Report. The results at N6 was within 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 were lower than the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works. The noise monitoring result at monitoring station N7 was slightly higher than the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works.

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 2, 9, 15, 24 and 30 May 2018 in the reporting month. IEC joint site inspection was conducted on 15 May 2018. 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

Permit No.	Valid Period		Details	Ctatus
rerimi No.	From	To	Details	Status
Environmental Permit (EP)				
EP-450/2013/A	25/08/2015	708/2015 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 the Associated Facilities from Sha		Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River – Stage 2	Valid
Billing Account for Cons	struction 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 License				
WT00027672-2017 WT00027661-2017 WT00027606-2017 WT00027510-2017 WT00027509-2017 WT00027603-2017		31/3/2022	Discharge License for the discharge of wastewater from the construction site including contaminated surface run-off to the communal storm water drain	Valid

Darmit No	Valid Period		D-4-9-	G4 . 4
Permit No.	From	To	Details	Status
WT00027508-2017				
WT00027582-2017		30/6/2018		
WT00027584-2017		31/7/2019		
WT00027431-2017		30/6/2020		
WT00027605-2017		31/3/2022		
WT00027607-2017		31/3/2022		
WT00027834-2017		30/4/2022		
WT00028748-2017	17/08/2017	31/08/2022		
WT00028850-2017	14/08/2017	31/08/2022		
WT00030236-2018	7/02/2018	28/02/2023		
Registration of Chemica	l Waste Produ	icer		
No.:WPN5213-524- K3261-01	1-	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
Construction Noise Permit (CNP)				

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**.

Table 8.2 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	23, 31 January, 7, 13, 21, 28 February, 7 14, 20, 28 March, 6, 11, 17, 25 April, 2, 9, 15 May 2018	Stagnant water was observed accumulating behind the retaining wall at Portion C. The Contractor was reminded to remove the stagnant water regularly to prevent mosquito breeding.	The condition was observed to be improved/rectified by the contractor during the audit session on 24 May 2018
Air Quality	28 March, 6, 11, 17, 25 April, 2, 9, 15, 24, 30 May 2018	To keep site entrances clean and free from dust at Portion C.	Follow up actions will be reported in the next month.
	25 April 2018	To keep site entrances clean and free from dust at Subway A.	The condition was observed to be improved/rectified by the contractor during the audit session on 2 May 2018
	15, 24, 30 May 2018	To clean up the dusty surface at the entrance of R7.	Follow up actions will be reported in the next month.
Noise	N/A	There was no observation in the reporting period.	N/A
Waste/ Chemical Management	7, 14, 20, 28 March, 6, 11, 17, 25 April, 2 May 2018	The Contractor was reminded to dispose regularly and properly to avoid accumulating of general refuse/construction waste in Portion E. To clear the damaged traffic barrier and	The condition was observed to be improved/rectified by the contractor during the audit session on 9 May 2018 The condition was observed to be improved/rectified by the
	April 2018	opened cement bags at Subway A.	contractor during the audit session on 2 May 2018

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Parameters	Date	Observations and Recommendations	Follow-up
	25 April, 2 May 2018	Provide drip tray for the chemical containers at Subway A.	The condition was observed to be improved/rectified by the contractor during the audit session on 9 May 2018
	9 May 2018	To clear the accumulated waste at Portion I.	The condition was observed to be improved/rectified by the contractor during the audit session on 15 May 2018
	2, 9, 15, 24, 30 May 2018	To clear the damaged traffic barriers in Portion E.	Follow up actions will be reported in the next month.
	15, 24, 30 May 2018	To provide skip or container for the disposal of general refuse at R7.	Follow up actions will be reported in the next month.
	30 May 2018	To provide drip tray for the chemical containers at Portion B.	Follow up actions will be reported in the next month.
Ecology and Fisheries	N/A	There was no observation in the reporting period.	N/A
Landscape and Visual	9, 15, 24 May 2018	To set up a proper tree protection zone near the proposed public toilet at Portion K.	The condition was observed to be improved/rectified by the contractor during the audit session on 30 May 2018
	24, 30 May 2018	To set up a proper tree protection zone at Subway A.	Follow up actions will be reported in the next month.
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.

Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution

8.11 The summaries of environmental complaint, warning, summon and notification 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 – Construction of Cycle Track, Construction of Drainage Pipe

Portion B –Construction of Subway A, Construction of Cycle Track

Portion C – Construction of Retaining Wall RW 11B, 11C, 12, 13 & 14, 15A

Resting Station R7

Portion D – Construction of Drainage Pipe, Construction of RW 15B,15C GI near at Ko Hang, Stream Decking D2 & D3

Portion E – Construction of Retaining Wall RW D4, D17, D18, D19, D20, D21,D22, D23, D24& D25,D26 Construction of Drainage Pipe

Portion F – Construction of Drainage Pipe, Construction of Retaining wall RW 43,

Soil Treatment for RAP, Construction of Resting Station at Man Tin Cheung Park,

Construction of Resting Station R7

Portion H – Construction of Retaining Wall RW 45A, 49 Construction of Drainage

Portion I – Construction of Subway D

Portion J – Construction of RW 46, 47, 48, 24, 25

Portion K – Construction of Retaining Wall RW 29A, 29B & 29C, 29AA Construction

of Dwarf Wall, Construction of Drainage Pipe, Construction of Cycle Track

Portion L – Construction of Public Toilet

Portion M – Construction of RW 30A, Construction of Bridge E, Construction of

Ramp of Bridge E and adjacent access road

Shui Fu Road – Decontamination of soil

- 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 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.
- 9.3 The tentative program of major site activities and the impact prediction and control measures for the coming months, i.e. June 2018 to July 2018, are summarized as follows:

Construction Works	Major Impact Prediction	Control Measures
As mentioned in Section 9.1	Air quality impact (dust)	(a) Frequent watering of haul road and unpaved/exposed areas;(b) Frequent watering or covering stockpiles with

Monthly EM&A Report – May 2018

Water quali impact (sur	face facilities for treatment in compliance with
run-off)	valid Discharge License prior to discharge to public storm water drains; (e) Provision of adequate de-silting facilities for treating surface run-off and other collected effluents prior to discharge; (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 (g) Provision of measures to prevent discharge into the stream.
Noise impa	necessary to avoid persistent noisy operation; (i) Controlling the number of plants use on site; (j) Regular maintenance of machines (k) Use of quiet PMEs on-site; and (l) Use of acoustic barriers and noise enclosure if necessary.
Landscape a Visual	(m) Proper setup of precautionary area for retained 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 and environmental prosecution was received in the 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

- Wheel washing bays in all Portions within the Site should be maintained as far as practicable by means of removing silty water or using cleaner water in order to enhance the effectiveness of wheel washing in every portion within the Site.
- 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.

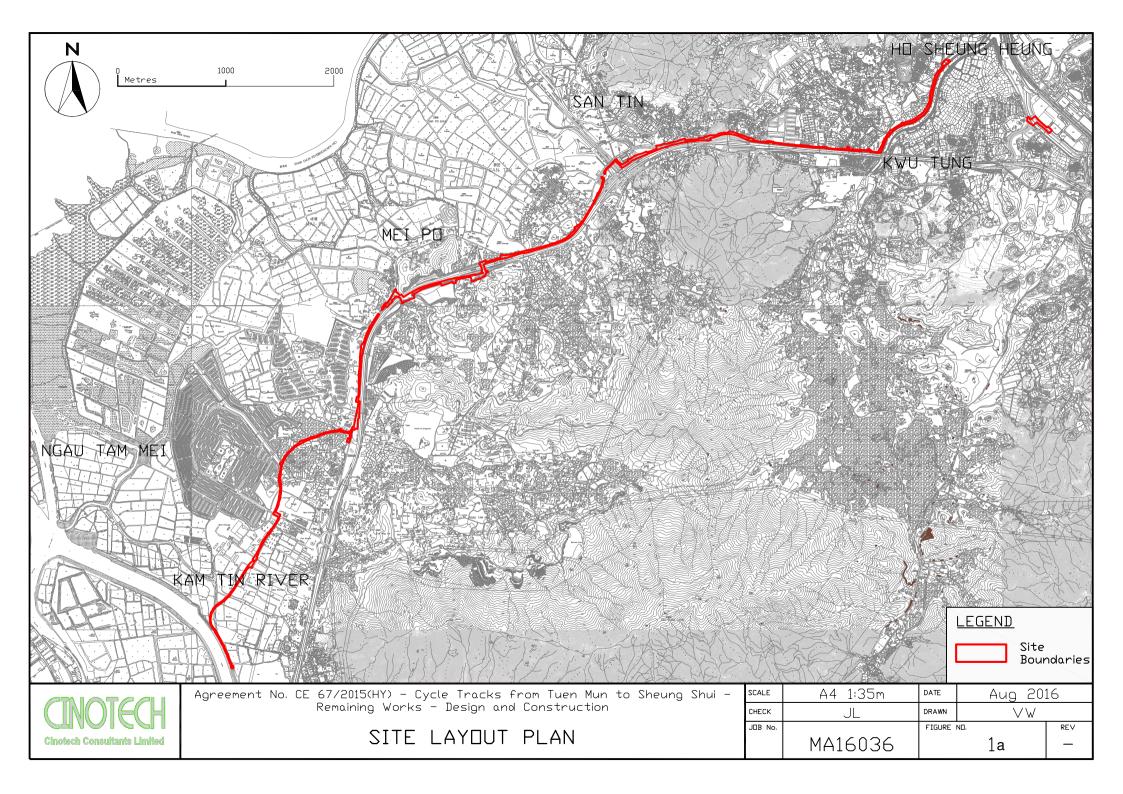
Waste/Chemical Management

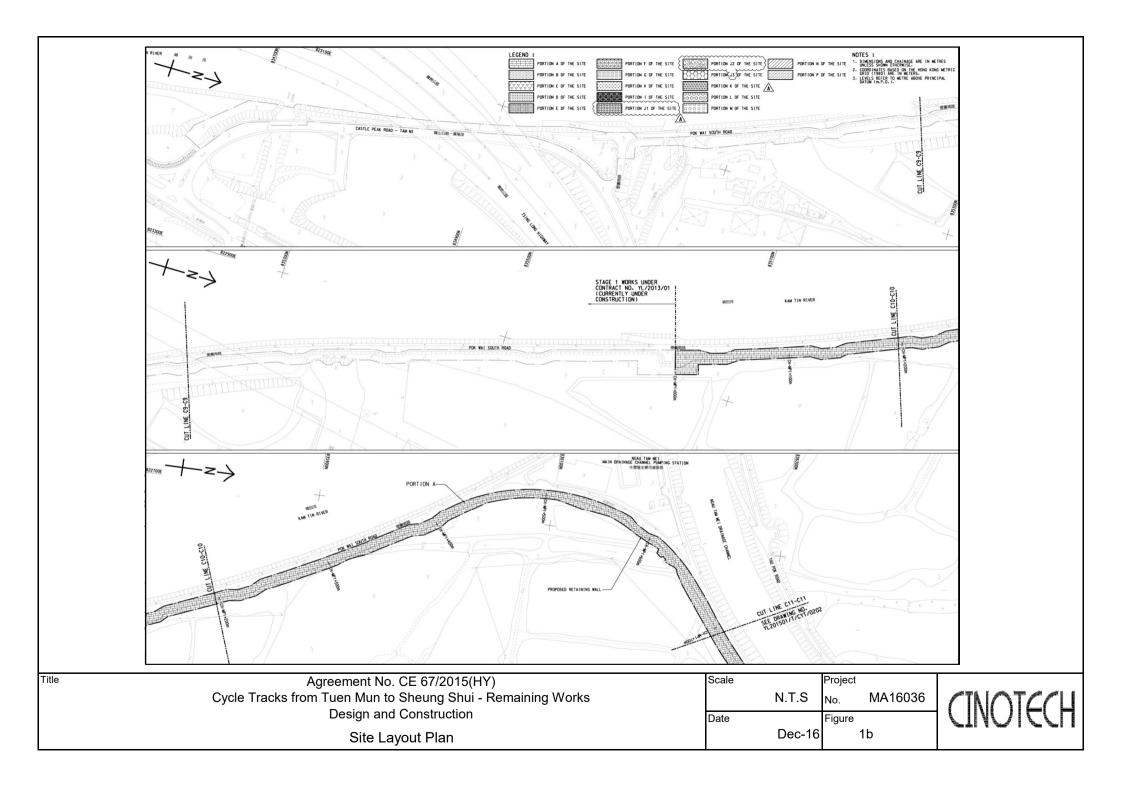
- General refuse should be removed regularly to prevent accumulation on-site.
 Proper enclosed bin should be provided with maintenance for collection of general refuse from workforce.
- Drip tray should be provided to oil/chemical containers and generator to avoid oil leakage. Any oil stain observed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

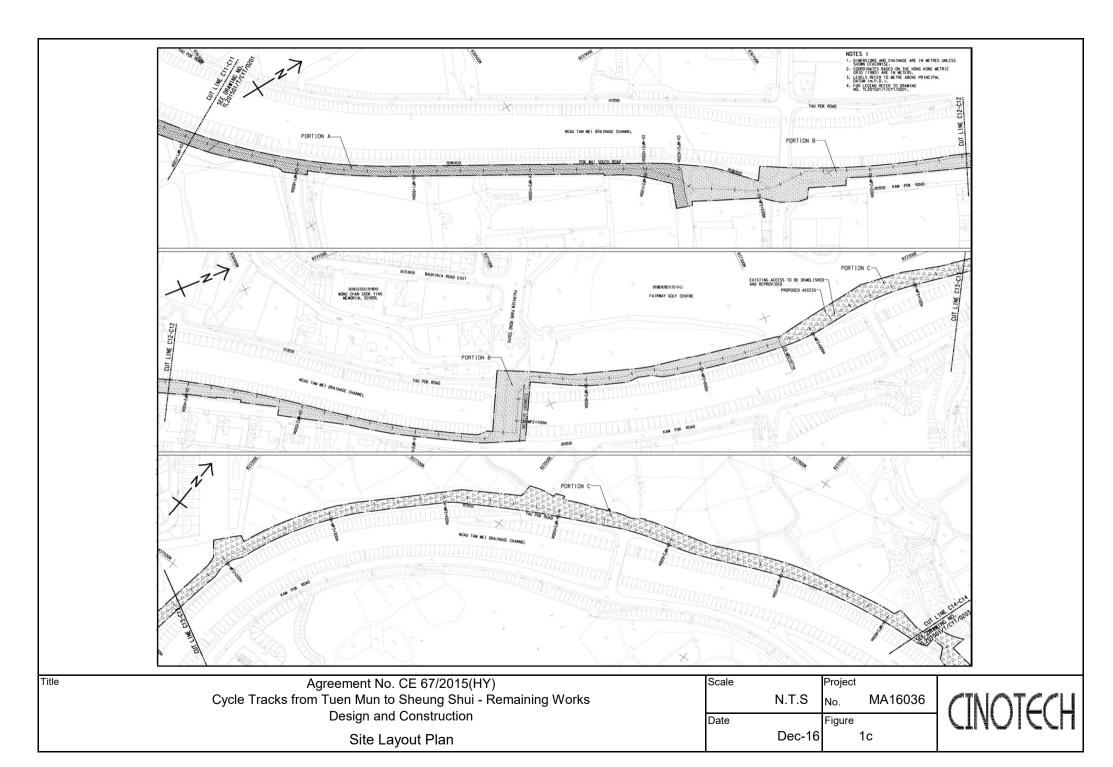
Landscape and Visual

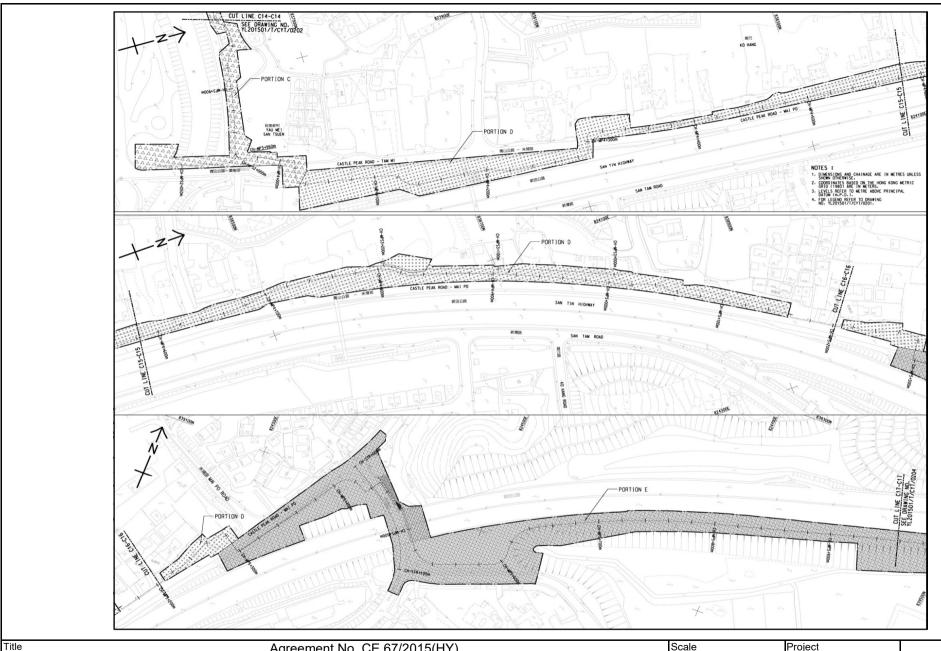
 Adequate tree protection zones should be established to protect retained and existing trees. Conspicuous signs of status of trees should be clearly shown to avoid damage from PMEs or workers.

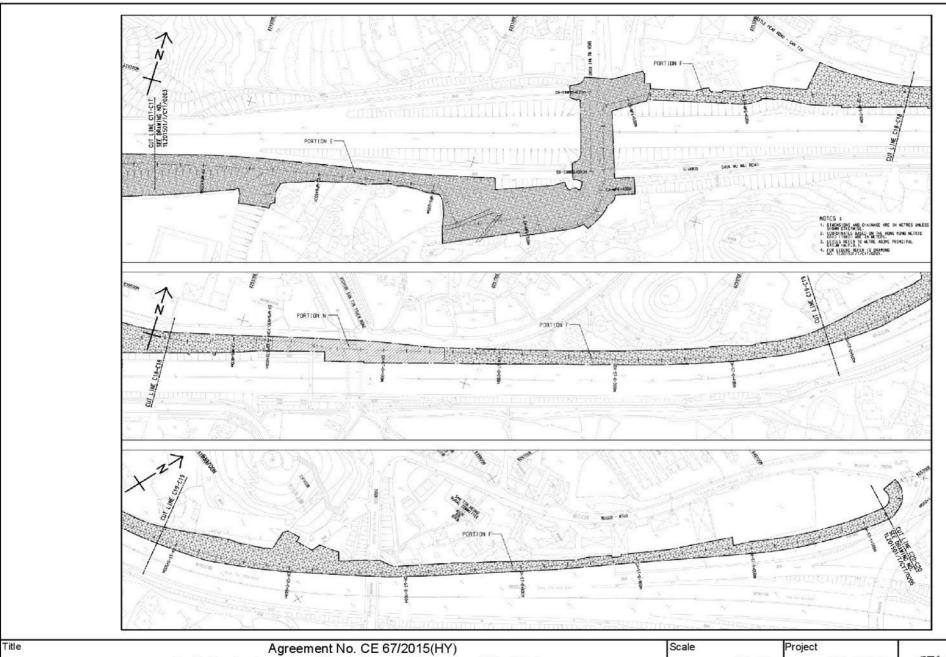
FIGURES





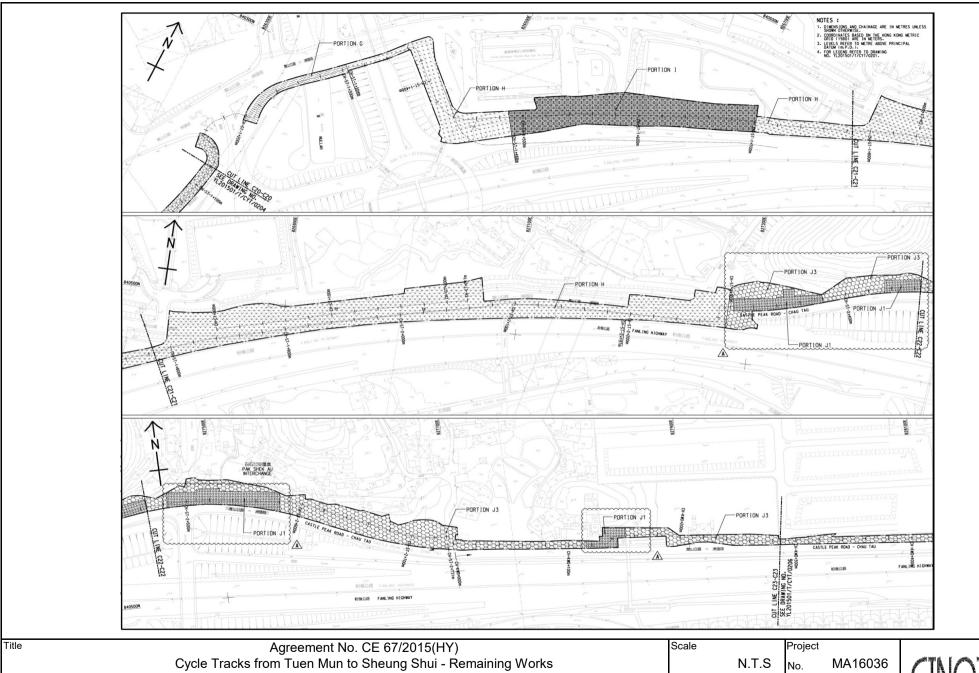


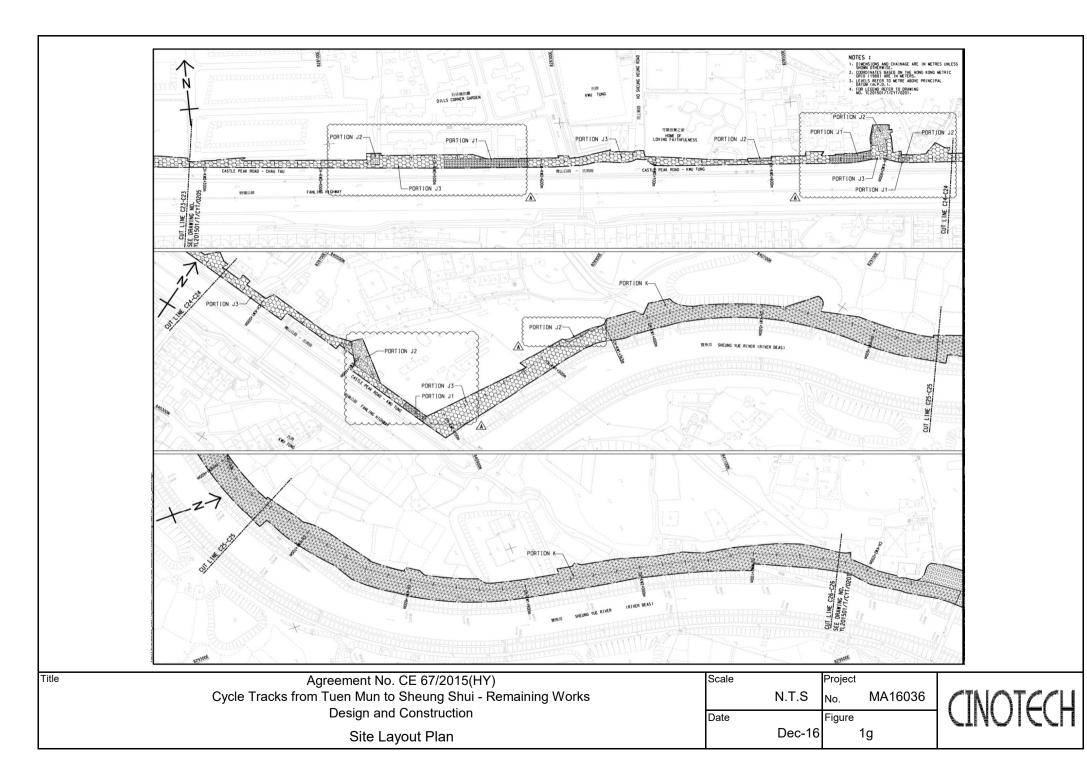


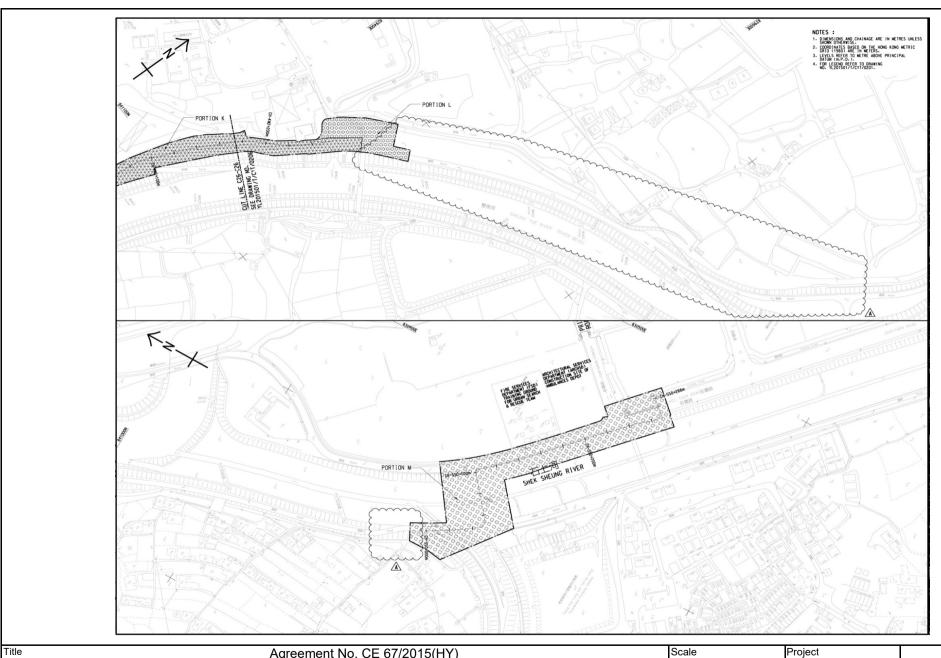


N.T.S No. MA16036

Date Dec-16 Figure 1e

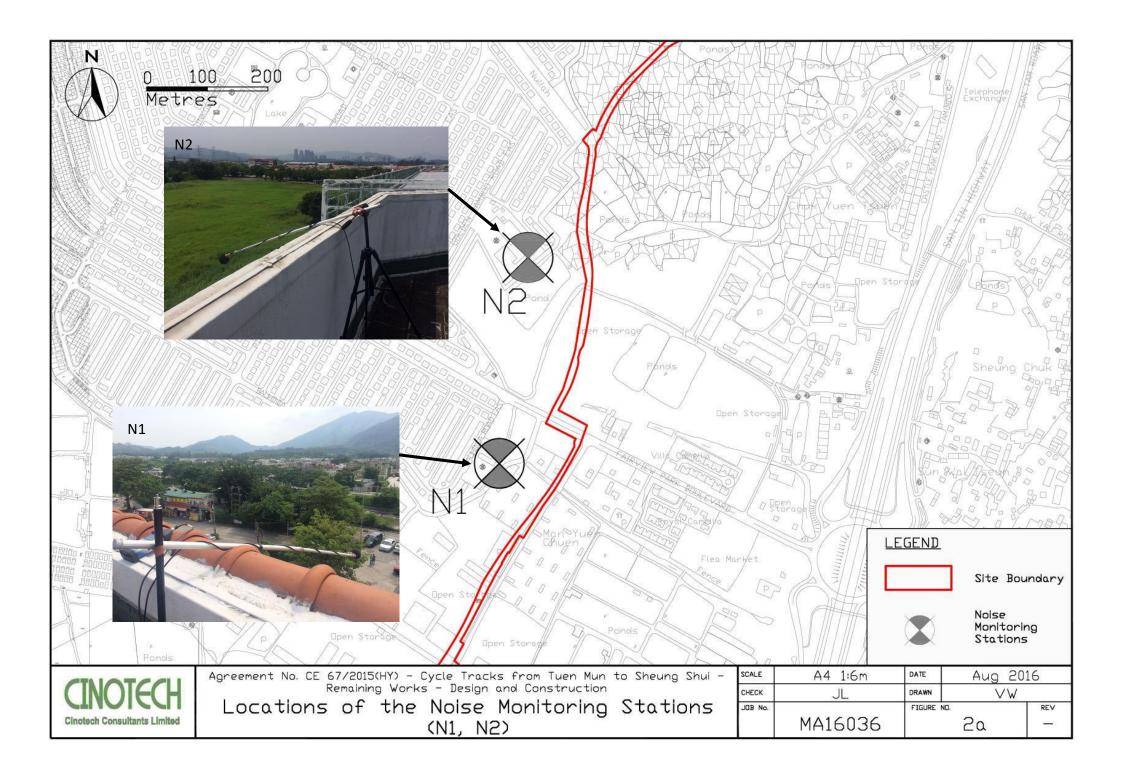


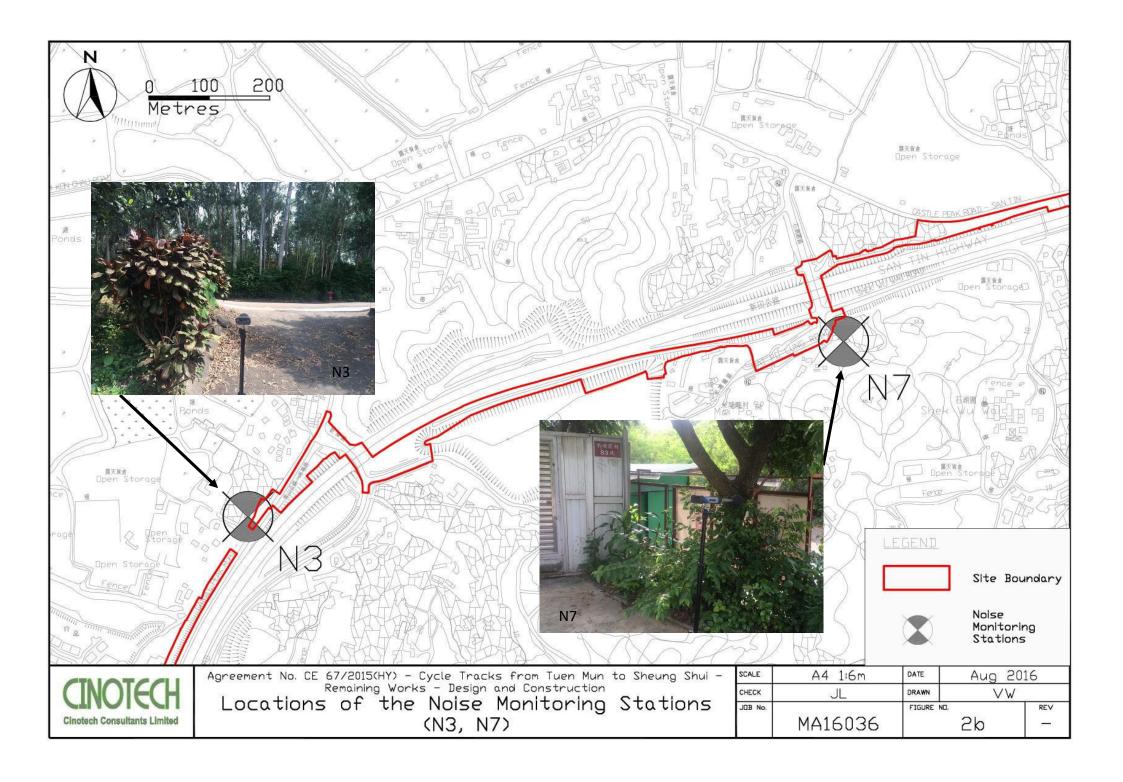


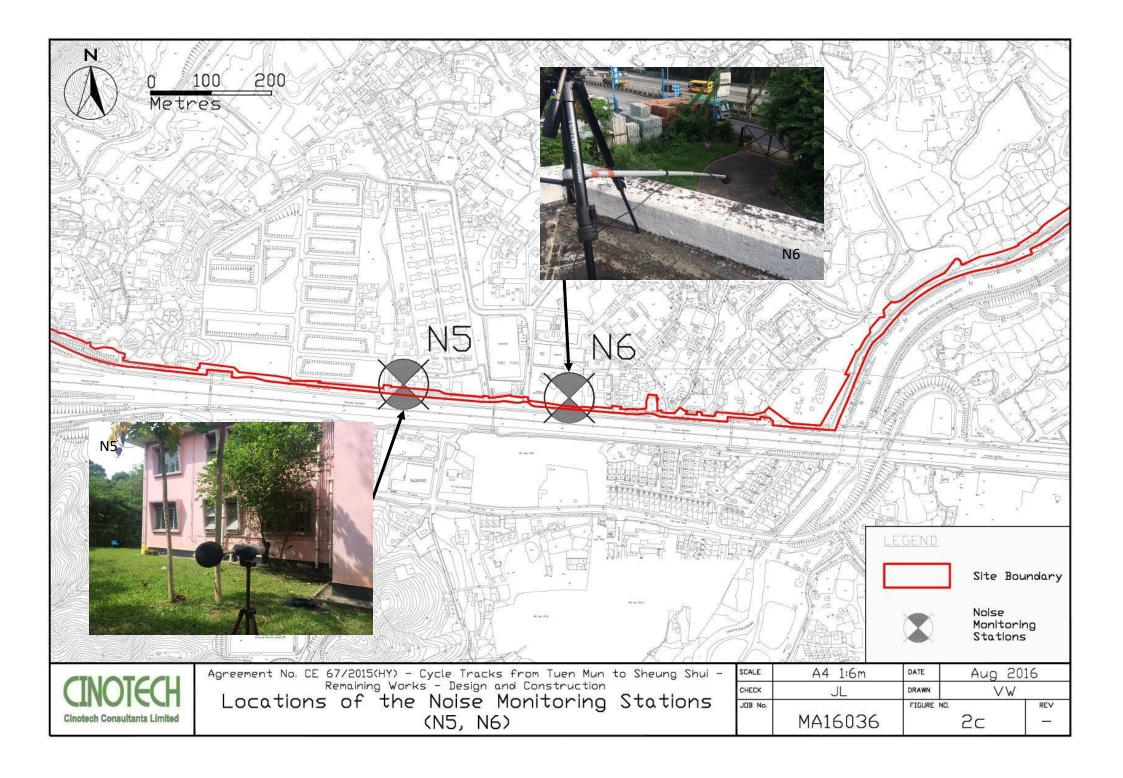


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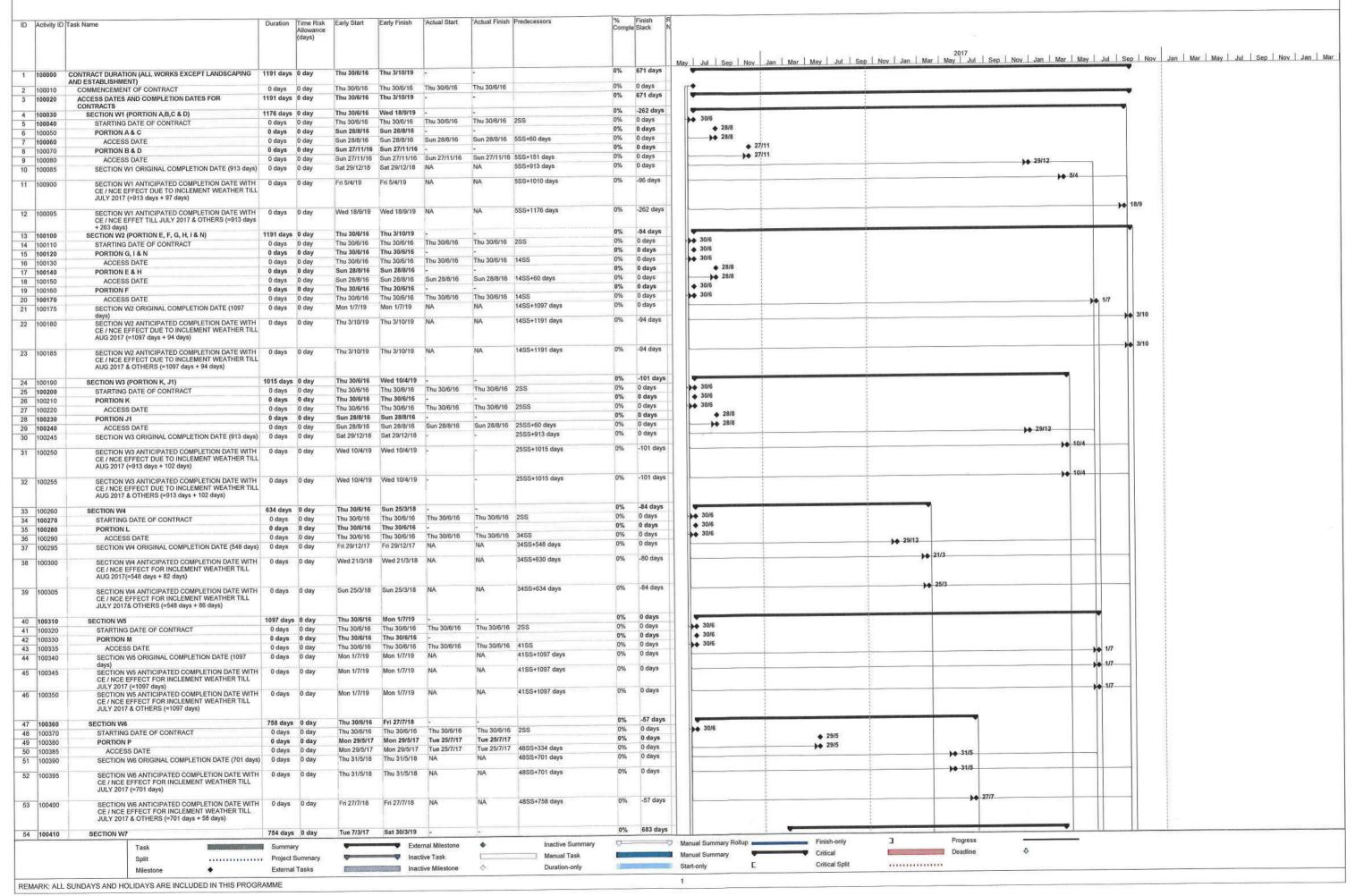
Date Dec-16 Figure 1h

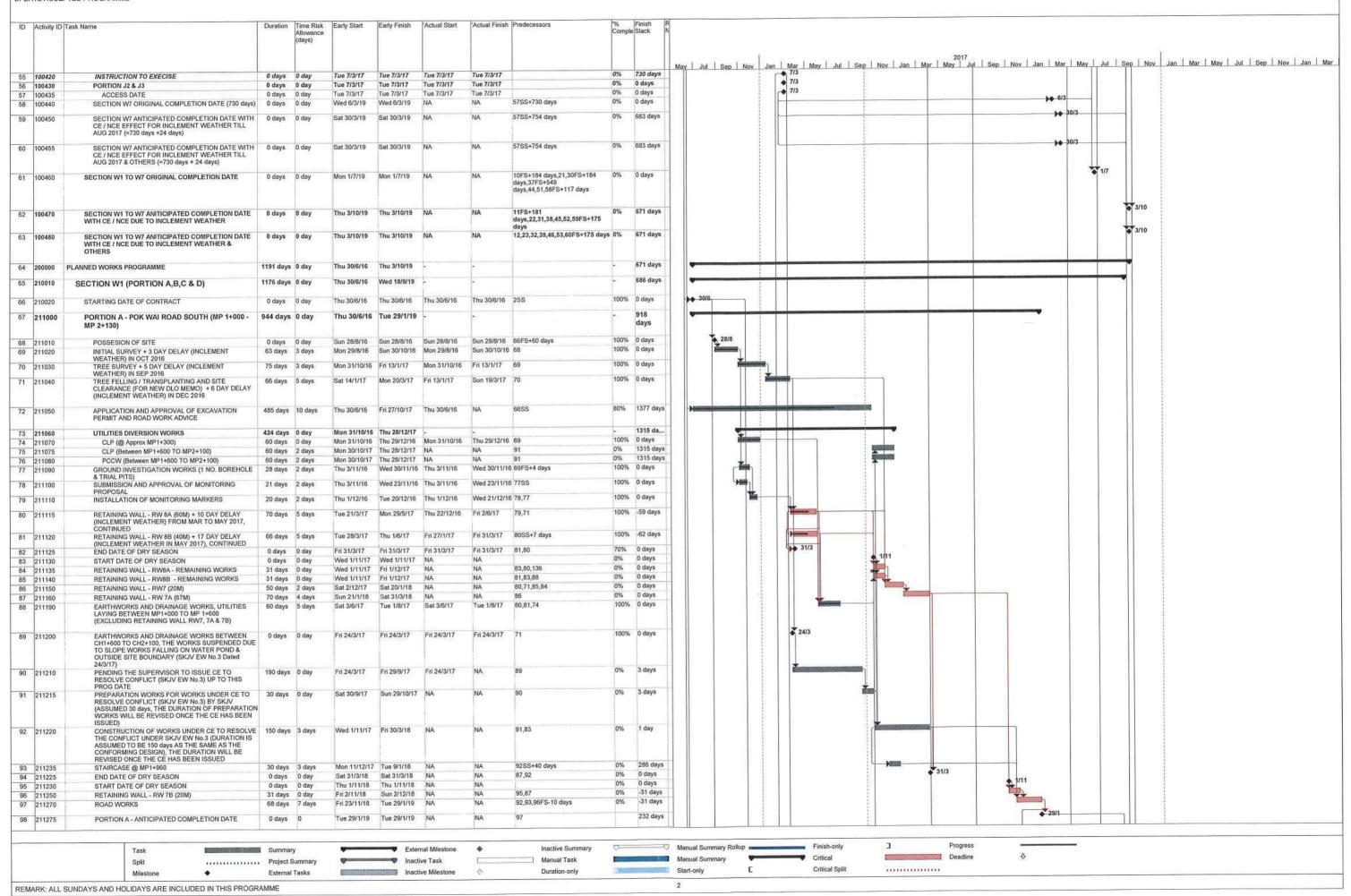


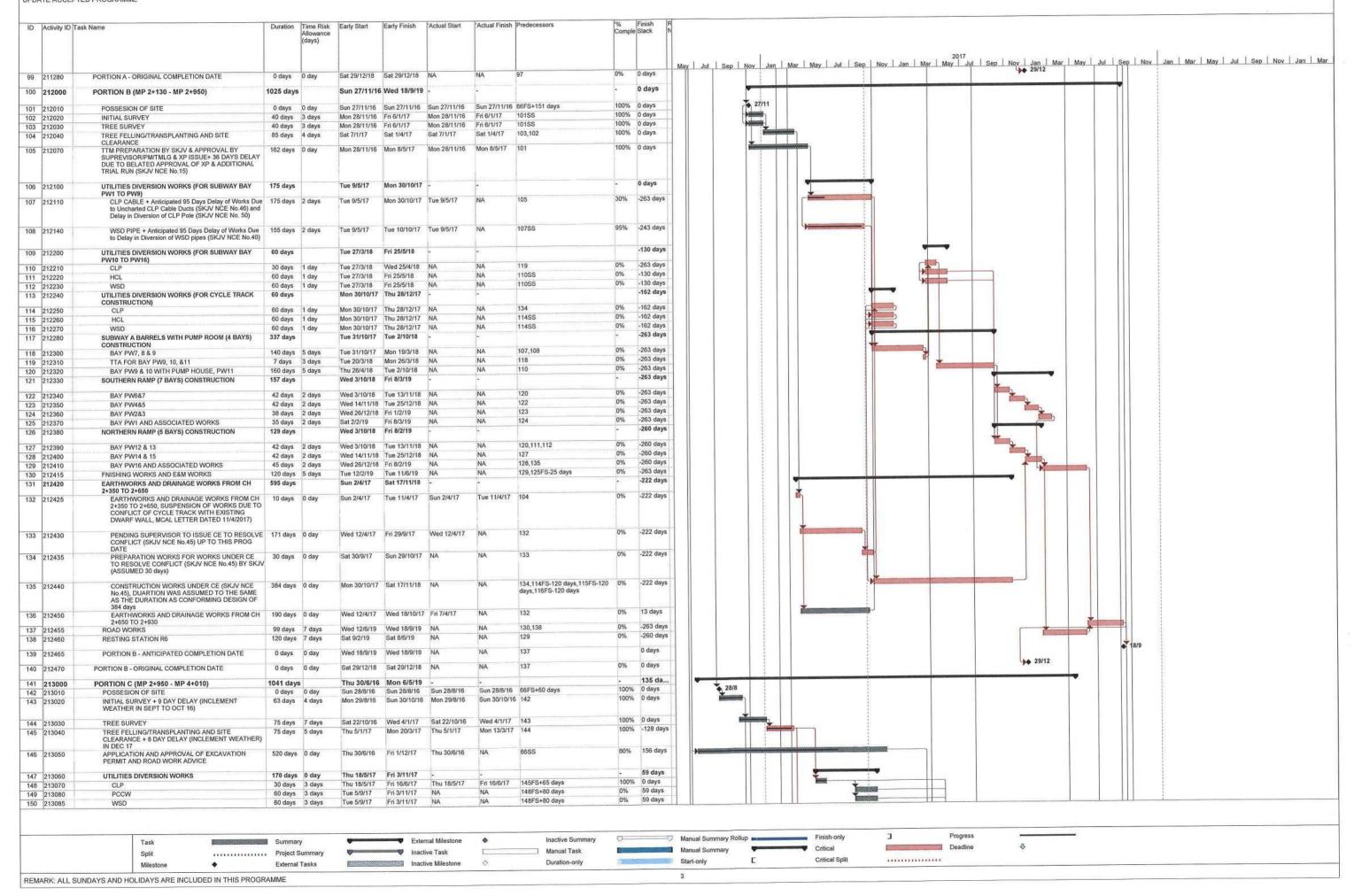


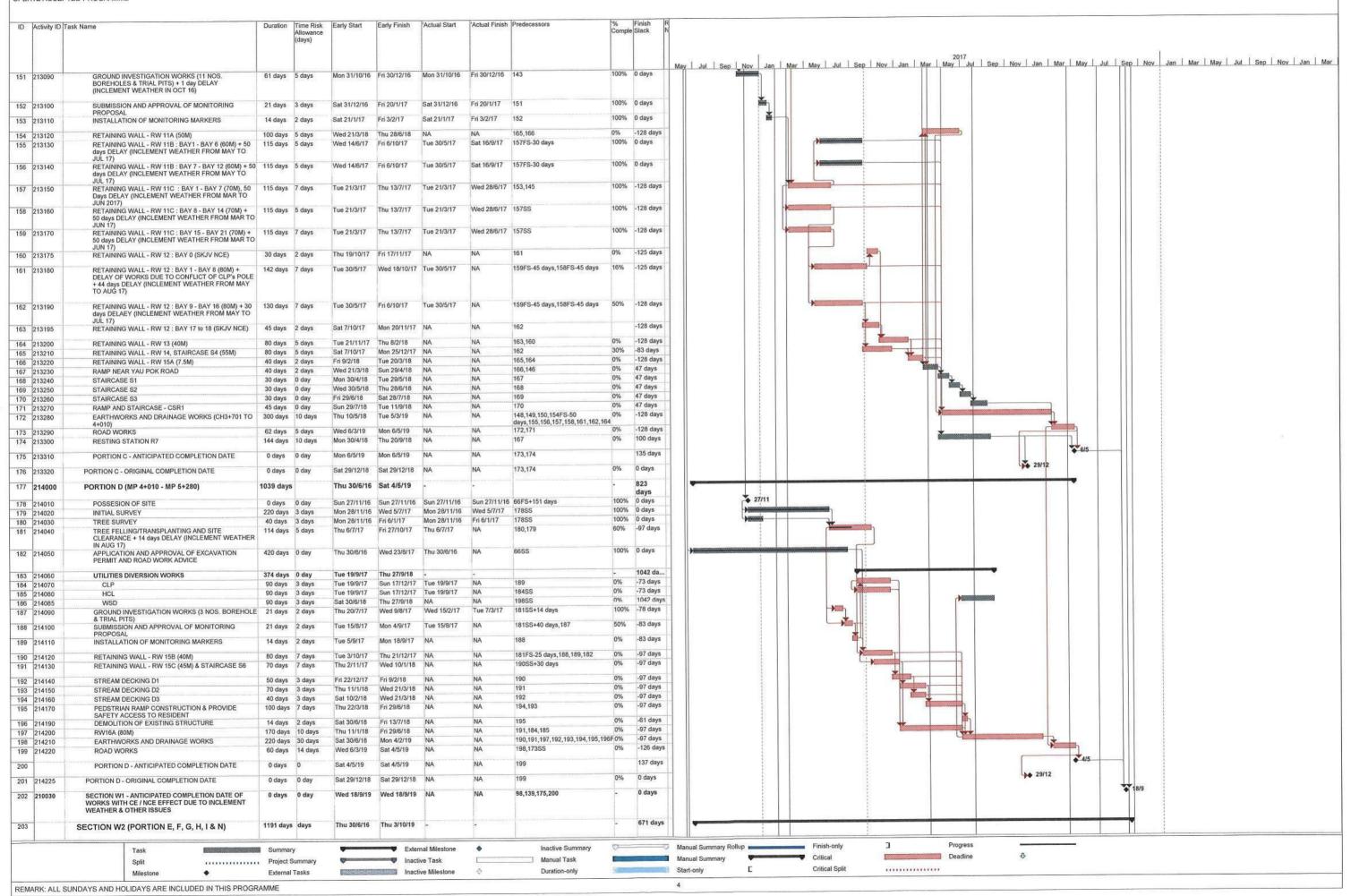


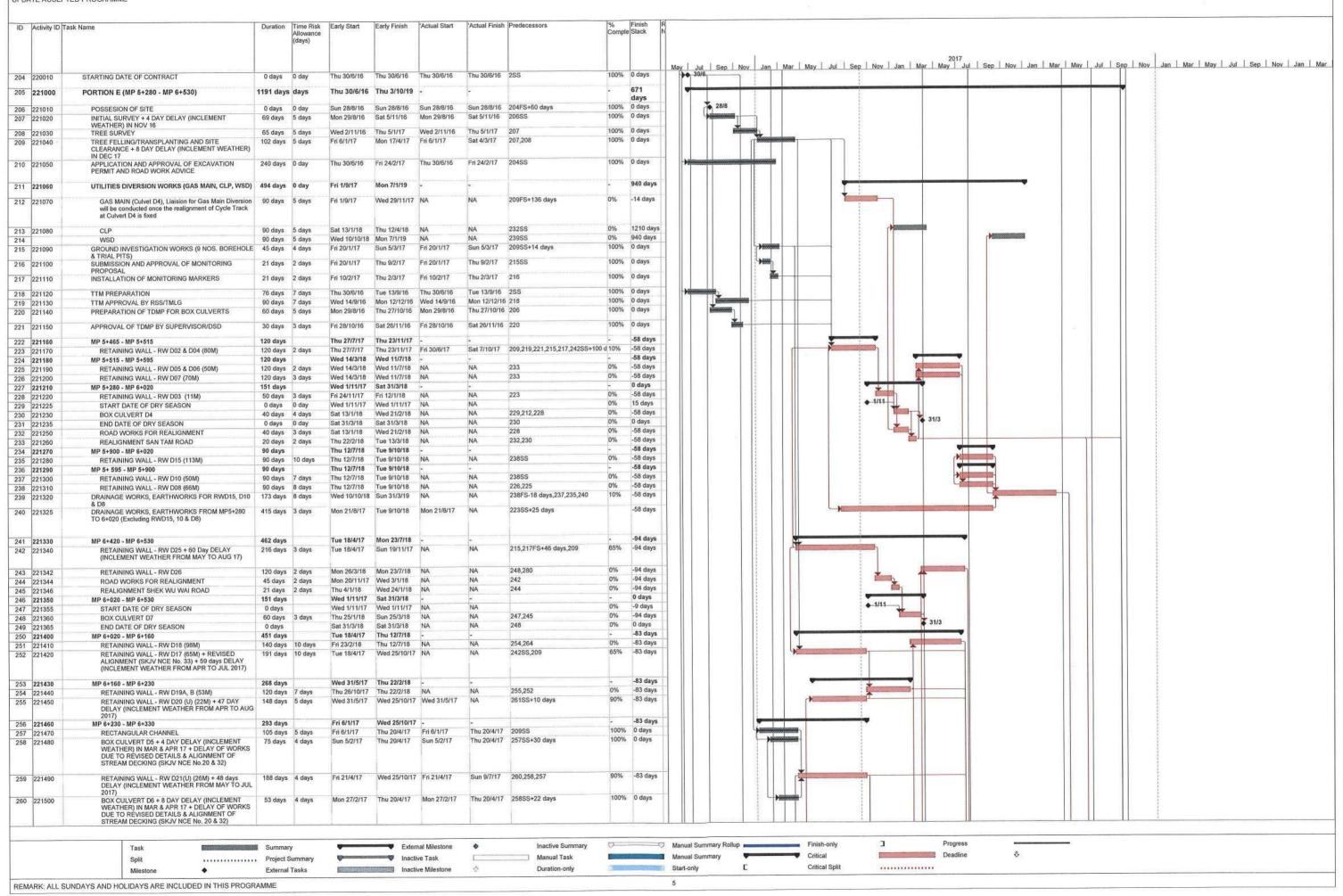
APPENDIX A WORK PROGRAMME

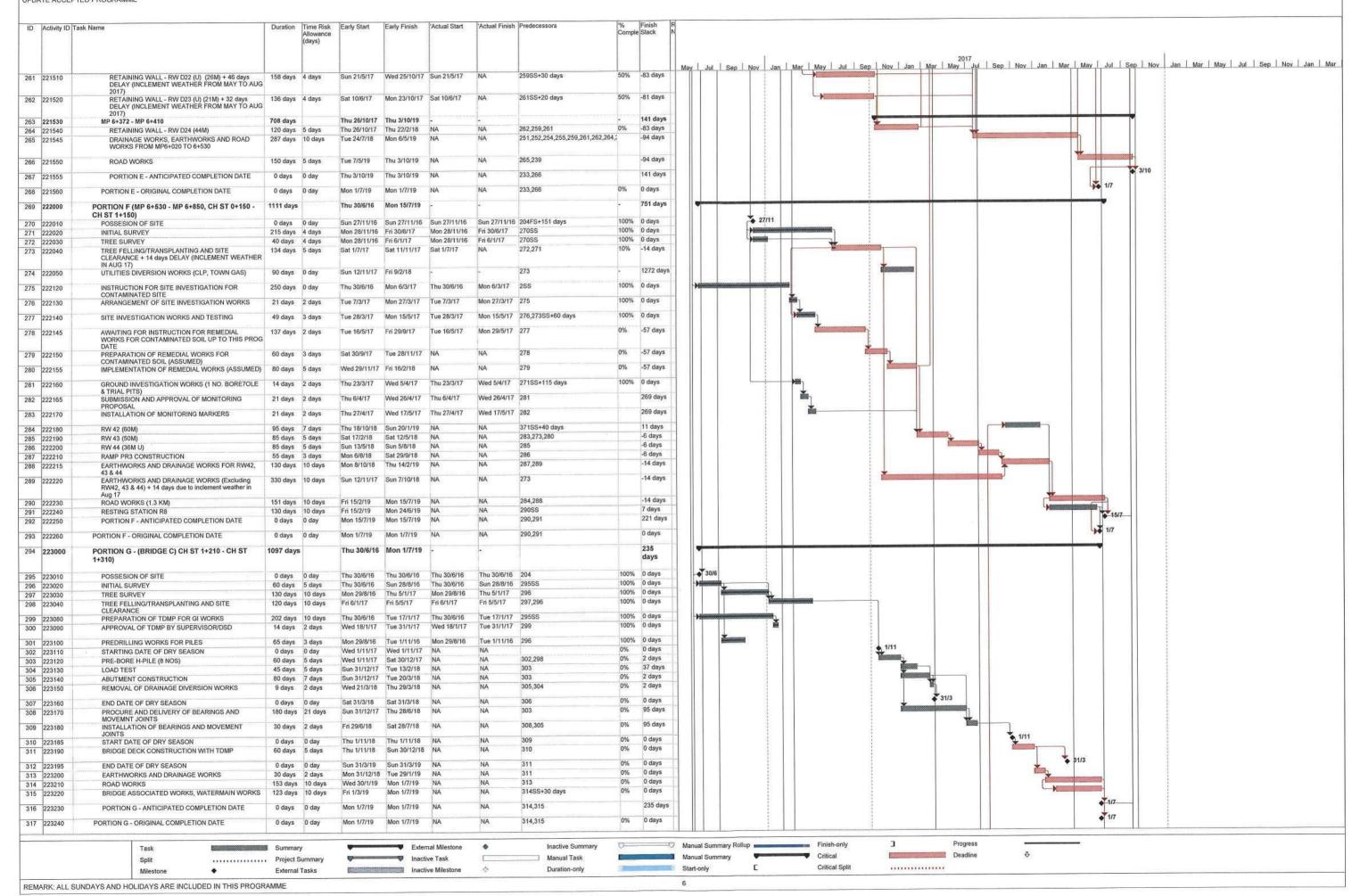


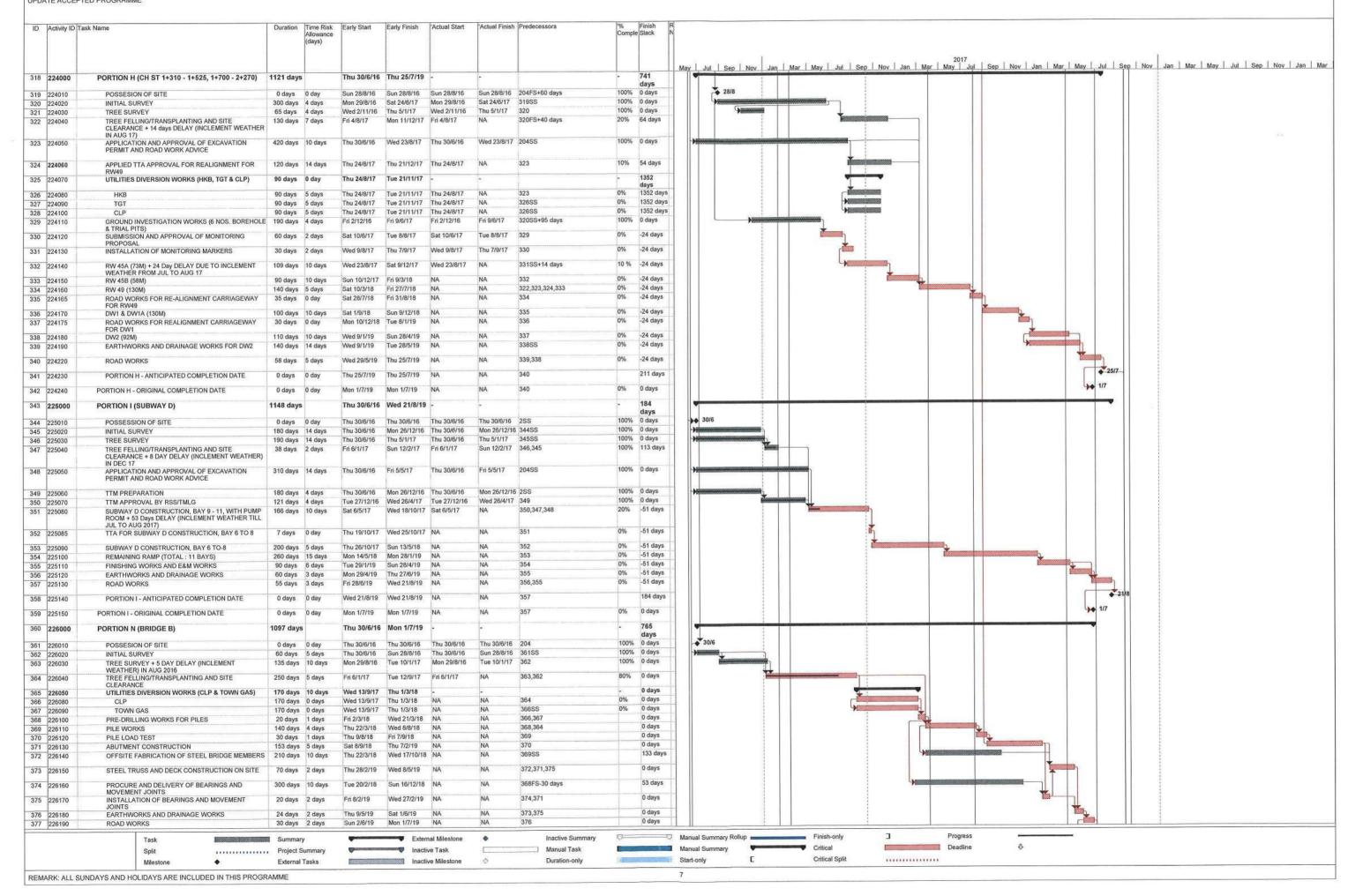


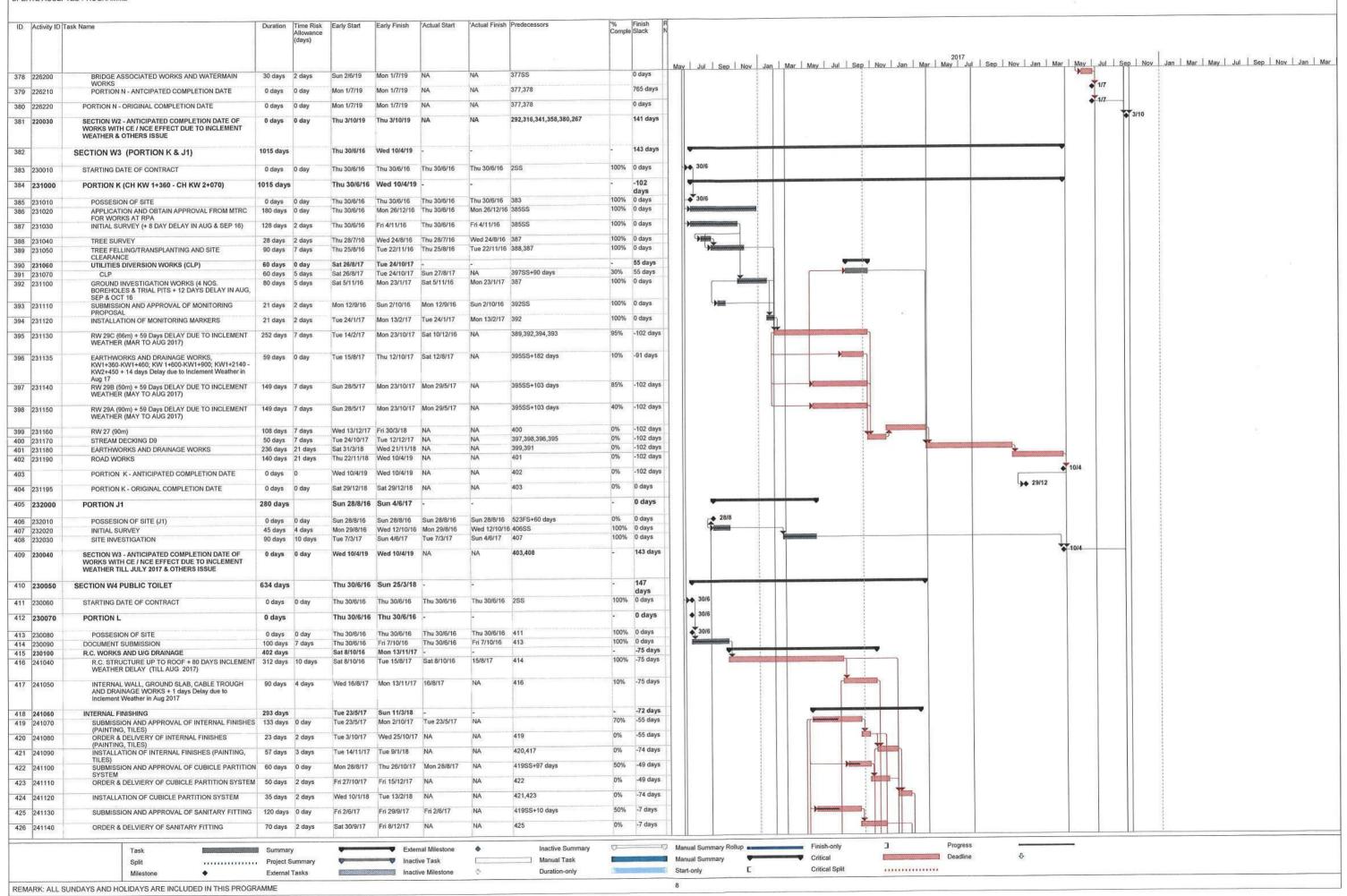


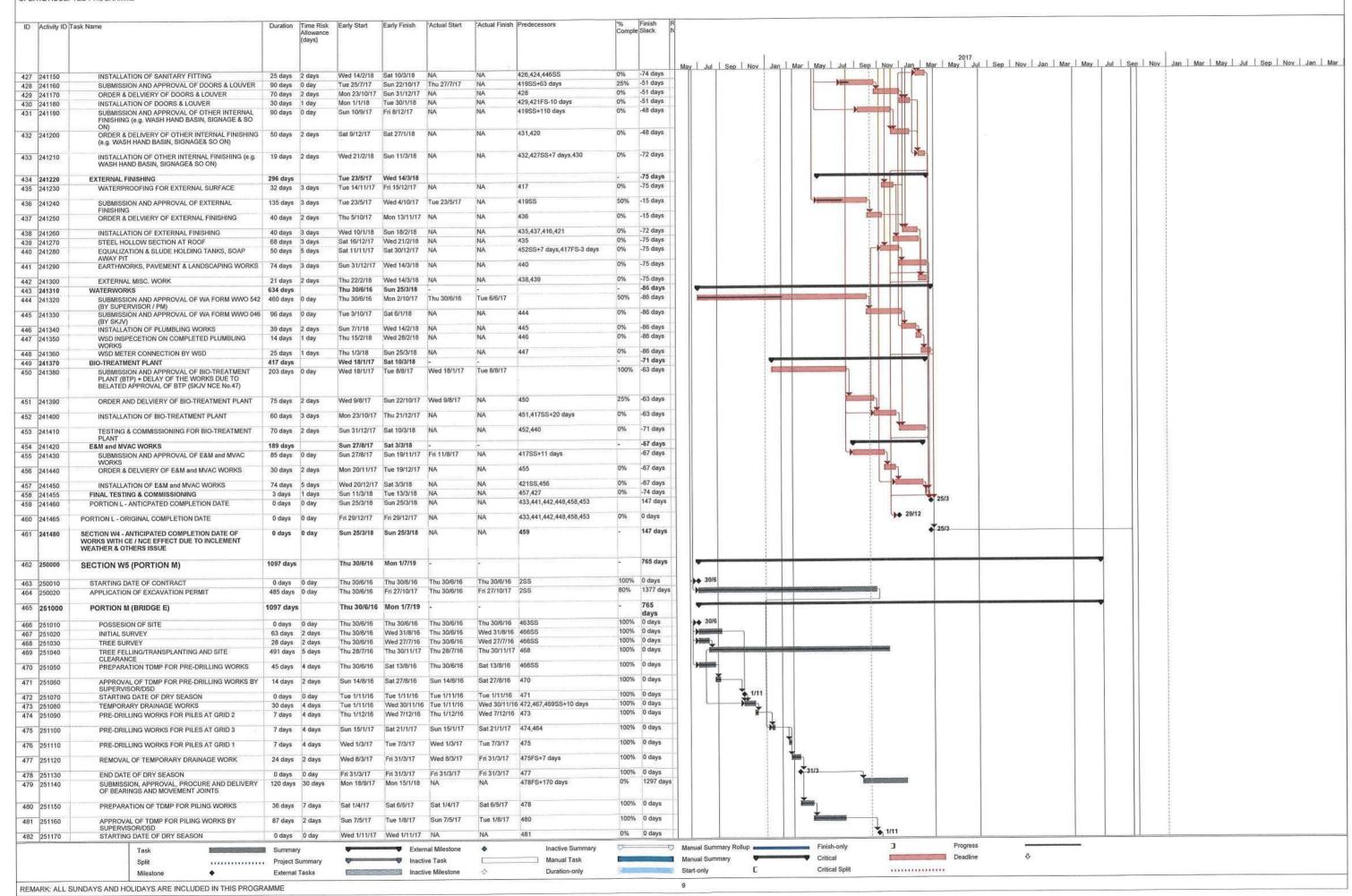


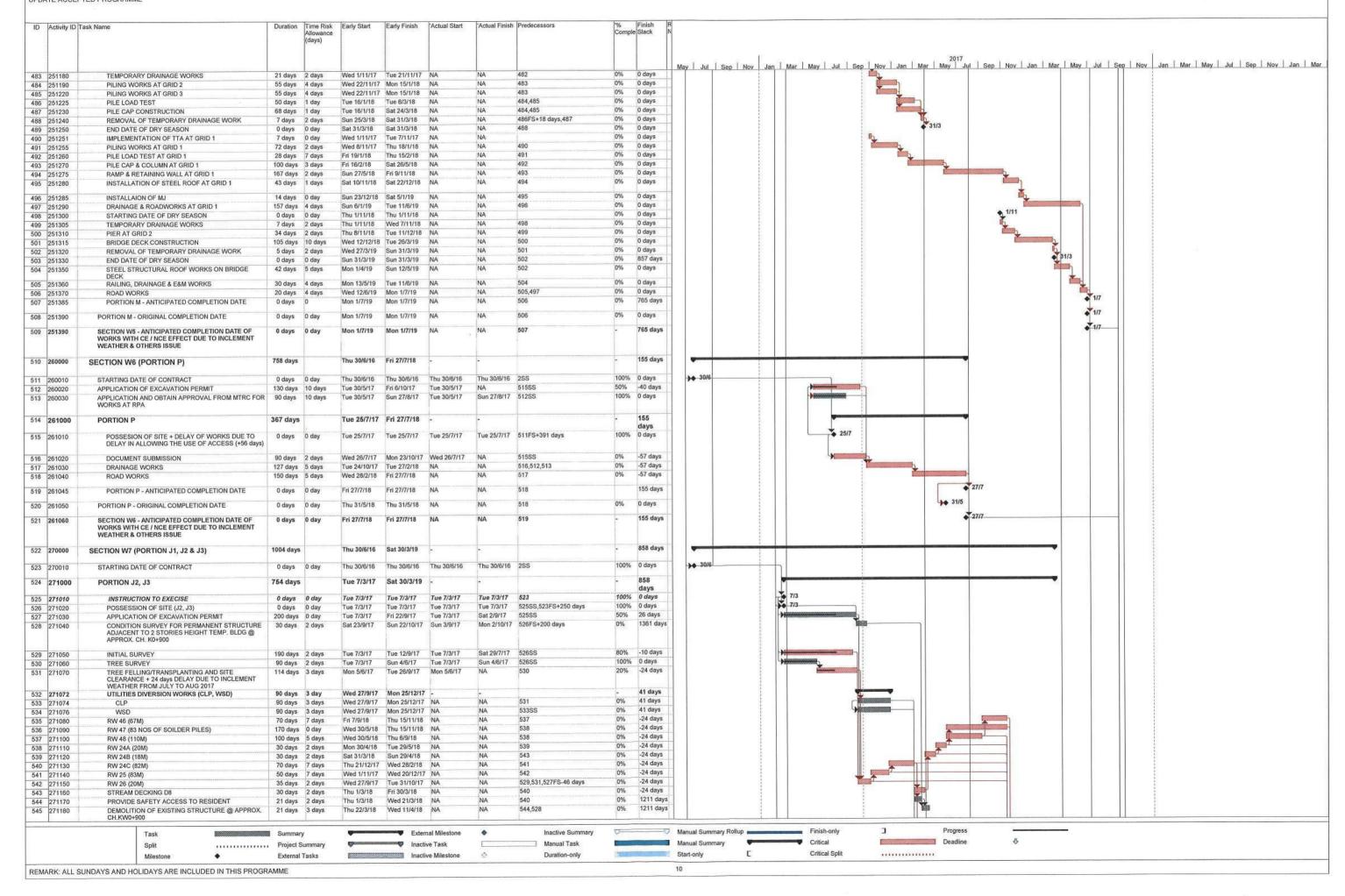












Activity ID Task Name		Duration	Time Risk Allowance (days)	Early Start	Early Finish	'Actual Start	'Actual Finish	Predecessors	'% Compl	Finish I le Slack I
3 271190 EART	HWORKS AND DRAINAGE WORKS	135 days	10 days	Fri 16/11/18	Sat 30/3/19	NA.	NA NA	535,536,537,538,539,540,541,54	12 5%	-24 days
- P. C.	WORKS	395 days		Thu 1/3/18	Sat 30/3/19	NA	NA	540,533,534	0%	-24 days
271205 PORT	ON J2/J3 - ANTICIPATED COMPLETION DATE	0 days	0	Sat 30/3/19	Sat 30/3/19	NA	NA	547	-	-24 days
			O de:				NA NA	546,548		
271210 PORTON	J2/J3 - ORIGINAL COMPLETION DATE	0 days	о дау	Wed 6/3/19	Wed 6/3/19	NA				0 days
	W7 - ANTICIPATED COMPLETION DATE WITH EFFECT DUE TO INCLEMENT WEATHER &	0 days	0 day	Sat 30/3/19	Sat 30/3/19	NA	NA	548		858 days
200010 SECTION W WORKS WI	1 TO W7 - ANTICIPATED COMPLETION DATE OF TH CE / NCE EFFECT DUE TO INCLEMENT OTHERS ISSUE	0 days	0 day	Thu 3/10/19	Thu 3/10/19	NA	NA	521,461,409,381,202,509,550		671 days
	SOFTWORKS AND ESTABLISHMENT WORK	1862 days		Thu 30/6/16	Wed 4/8/21	NA	NA			0 days
300010 ACCESS DA	TES AND COMPLETION DATES FOR	1332 days		Tue 7/3/17	Wed 28/10/20	NA	NA	·		0 days
CONTRACT	3						NA	<u> </u>		-172 days
300020 SECTION 300030 ACCE	SS DATE	172 days 0 days	-	Sat 30/3/19 Wed 18/9/19	Wed 18/9/19 Wed 18/9/19	- Transcription 111111	NA NA	4		-172 days
	LETION DATE	0 days	-	Sat 30/3/19	Sat 30/3/19		NA	555FS+90 days		0 days
300050 SECTION		26 days	-	Thu 3/10/19	Tue 29/10/19	1.00	NA		11000	0 days
	SS DATE	0 days	Cuaringen	Thu 3/10/19	Thu 3/10/19		NA	13		-94 days
	LETION DATE	0 days		Tue 29/10/19	Tue 29/10/19		NA	558FS+120 days		0 days
300080 SECTION		71 days		Tue 29/1/19	Wed 10/4/19	A. A	NA NA	24	-	-71 days
The state of the s	SS DATE LETION DATE	0 days 0 days		Wed 10/4/19 Tue 29/1/19	Wed 10/4/19 Tue 29/1/19	NA NA	NA NA	561FS+30 days		0 days
300100 COMP 300110 SECTION		54 days	-	Tue 30/1/18	Sun 25/3/18		NA			-54 days
	SS DATE	0 days		Sun 25/3/18	Sun 25/3/18	NA	NA	33	-	-84 days
	LETION DATE	0 days		Tue 30/1/18	Tue 30/1/18		NA	564FS+30 days		0 days
300140 SECTION		30 days		Mon 1/7/19	Wed 31/7/19		NA	40		0 days
	SS DATE	0 days		Mon 1/7/19	Mon 1/7/19	NA NA	NA NA	40 567FS+30 days	-	0 days 0 days
	LETION DATE	0 days 27 days	1000	Wed 31/7/19 Sat 30/6/18	Wed 31/7/19 Fri 27/7/18	NA NA	NA NA	JULY STOU days	-	-27 days
	W8F SS DATE	0 days	1777	Fri 27/7/18	Fri 27/7/18	NA	NA	47		-57 days
	LETION DATE	0 days	1	Sat 30/6/18	Sat 30/6/18	NA	NA	570FS+30 days		0 days
300200 SECTION	W8G	820 days		Tue 7/3/17	Tue 4/6/19	NA	NA		200	0 days
	SS DATE	0 days		Tue 7/3/17	Tue 7/3/17	NA	NA	55 57250+00 down		730 days
	LETION DATE	0 days		Tue 4/6/19 Wed 18/9/19	Tue 4/6/19 Sun 29/3/20	NA NA	NA NA	573FS+90 days		0 days
300230 SECTION 300240 ACCE	W9A SS DATE	193 days 0 days	14	Wed 18/9/19	Wed 18/9/19	100	NA NA	554	111	-172 days
	LETION DATE	0 days	100000000000000000000000000000000000000	Sun 29/3/20	Sun 29/3/20		NA	576FS+365 days		0 days
300260 SECTION		365 days		and the second second second second	Wed 28/10/20		NA			0 days
300270 ACCE	SS DATE	0 days	4-11-1-1	- The section of Value of	Tue 29/10/19	- Charles and the second	NA	557		0 days
	LETION DATE	0 days		- American company	Wed 28/10/20		NA NA	579FS+365 days	-	0 days
300290 SECTION		294 days		Wed 10/4/19 Wed 10/4/19	Wed 29/1/20 Wed 10/4/19		NA NA	560	-	-71 days
	SS DATE LETION DATE	0 days 0 days	-	Wed 29/1/20	Wed 29/1/20		NA	582FS+365 days	-	0 days
300320 SECTION		311 days	1	Sun 25/3/18	Wed 30/1/19		NA			0 days
300330 ACCE	SS DATE	0 days		Sun 25/3/18	Sun 25/3/18		NA	563		-54 days
	LETION DATE	0 days	10000000	Wed 30/1/19	Wed 30/1/19		NA NA	585FS+365 days		0 days
300350 SECTION		365 days 0 days			Thu 30/7/20 Wed 31/7/19	-3	NA NA	566	-	0 days
	SS DATE LETION DATE	0 days		Thu 30/7/20	Thu 30/7/20	NA	NA	588FS+365 days		0 days
300370 SECTION		338 days		Fri 27/7/18	Sun 30/6/19	NA	NA			0 days
300390 ACCE	SS DATE	0 days	1	Fri 27/7/18	Fri 27/7/18	NA	NA	569		-27 days
A DATE OF THE PARTY OF THE PART	LETION DATE	0 days		Sun 30/6/19	Sun 30/6/19	NA	NA NA	591FS+365 days		0 days
300410 SECTION		365 days		Tue 4/6/19 Tue 4/6/19	Wed 3/6/20 Tue 4/6/19	NA NA	NA NA	572	-	0 days
The state of the s	SS DATE LETION DATE	0 days 0 days		Wed 3/6/20	Wed 3/6/20	NA NA	NA NA	594FS+365 days	-	0 days
300430 COMP	LLIMIDALE		1	1	1					- Lawrence
400000 PLANNED V 400010 SECTION	VORK PROGRAMME	1862 days 1266 days	THE PERSON NAMED IN COLUMN	Thu 30/6/16 Thu 30/6/16	Wed 4/8/21 Tue 17/12/19	NA NA	NA NA			0 days 0 days
	TING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16		NA	2SS		1176 days
	SCAPING SOFTWORKS	90 days	7 days	Thu 19/9/19	Tue 17/12/19		NA NA	202,599		0 days
Procedure of the second	LETION OF SECTION W8A	0 days		Tue 17/12/19 Thu 30/6/16		NA NA	NA NA	600	-	0 days 141 days
400050 SECTION 400060 STAF	TING DATE OF CONTRACT	1311 days 0 days	-	Thu 30/6/16	Fri 31/1/20 Thu 30/6/16		NA NA	2SS		1332 days
	SCAPING SOFTWORKS		10 days	Fri 4/10/19	Fri 31/1/20	NA	NA	603,381		141 days
- COLOR COLO	PLETION OF SECTION W8B	0 days		Fri 31/1/20	Fri 31/1/20	NA	NA	604		141 days
400090 SECTION		1105 days		Thu 30/6/16	Tue 9/7/19	NA	NA			143 days
	TING DATE OF CONTRACT	0 days	7.3	Thu 30/6/16	Thu 30/6/16	NA	NA NA	2SS 409,607		1158 days 143 days
The state of the s	SCAPING SOFTWORKS	90 days 0 days	/ days	Thu 11/4/19 Tue 9/7/19	Tue 9/7/19 Tue 9/7/19	NA NA	NA NA	409,607		143 days
400120 COM 400130 SECTION	PLETION OF SECTION W8C	664 days		Thu 30/6/16	Tue 24/4/18		NA NA			147 days
	TING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS	TT I ZAVANI	781 days
DOSESTING THE RESERVE OF THE PROPERTY OF THE P	SCAPING SOFTWORKS	30 days	3 days	Mon 26/3/18	Tue 24/4/18		NA	461,611		147 days
400160 COM	PLETION OF SECTION W8D	0 days		Tue 24/4/18	Tue 24/4/18		NA	612		147 days
400170 SECTION		30 days		Thu 30/6/16	Fri 29/7/16	NA NA	NA NA	2SS		1314 da 1314 days
	TING DATE OF CONTRACT OSCAPING SOFTWORKS	0 days 30 days	3 days	Thu 30/6/16 Thu 30/6/16	Thu 30/6/16 Fri 29/7/16	NA NA	NA NA	615		1314 days
A CONTROL OF THE PARTY OF THE P	PLETION OF SECTION W8E	0 days	o days	Fri 29/7/16	Fri 29/7/16	NA NA	NA NA	616	1100	1314 days
8 400210 SECTION		788 days	1	Thu 30/6/16	Sun 26/8/18		NA			155 days
9 400220 STAR	TING DATE OF CONTRACT	0 days	1	Thu 30/6/16	Thu 30/6/16	NA	NA	2SS		913 days
	SCAPING SOFTWORKS		3 days	Sat 28/7/18	Sun 26/8/18		NA	619,521		155 days
1 400240 COM	PLETION OF SECTION W8F	0 days		Sun 26/8/18	Sun 26/8/18	NA	NA	620		155 days
	Task	Summar	у	-	Exte	mal Milestone	•	Inactive Summary	0	
	Split			V-	Inact			Manual Task	100	
	Milestone •	External			Inacl		0	Duration-only	C-SECTION .	

ID Activity I	D Task Name	Duration	Time Risk Allowance (days)	Early Start	Early Finish	'Actual Start	'Actual Finish	h Predecessors	'% Comple	Finish F Slack N												
											May Jul Sep No	Jan Mar	May Jul	Sep Nov Ja	2017 Mar May	Jul Sep Nov	Jan Mar	May Jul	Sep Nov	Jan Mar M	May Jul Sep	Nov Jan Mar
622 400250	SECTION W8G	90 days		Tue 7/3/17		NA	NA			942 days			-						1			
623 400260	INSTRUCTION TO EXECISE	0 days		Tue 7/3/17	Tue 7/3/17	NA	NA	55SS		942 days		7/3	0.00000	1					1			
624 400270	LANDSCAPING SOFTWORKS	90 days	7 days	Tue 7/3/17	Sun 4/6/17	NA	NA	623		942 days		1 10000	7	į					4			
625 400280	COMPLETION OF SECTION W8G	0 days		Sun 4/6/17	Sun 4/6/17	NA	NA	624		942 days		1	4/6	1								
626 400290	SECTION W9A	1631 days		Thu 30/6/16	Wed 16/12/20	NA	NA			0 days												* .
627 400300	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	Alexander and the second	NA	288		1266 days	▶♦ 30/6	1		1					+			
628 400310	ESTABLISHMENT WORKS	365 days	30 days	Wed 18/12/19	Wed 16/12/20	+	NA	601,627		0 days		1		1					E SON			16/12
629 400320	COMPLETION OF SECTION W9A	0 days		Wed 16/12/20	Wed 16/12/20	NA	NA	628		0 days				1					1			-TOPIZ
630 400330	SECTION W9B	1862 days		Thu 30/6/16	Wed 4/8/21		NA			0 days									1			
631 400340	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS		1497 days	▶♦ 30/6	1		1	100				1		¥	
632 400350	ESTABLISHMENT WORKS	365 days	30 days	Wed 5/8/20	Wed 4/8/21	NA	NA	631,629FF+231 days,637FF+249 d		0 days				1					1		B	
633 400360	COMPLETION OF SECTION W9B	0 days		Wed 4/8/21	Wed 4/8/21	NA	NA	632		0 days				1								
634 400370	SECTION W9C	1470 days		Thu 30/6/16	Wed 8/7/20	NA	NA			143 days	•											
635 400380	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS		1248 days	▶♦ 30/6			1				+	1		AND DESCRIPTION OF THE PERSON	
636 400390	ESTABLISHMENT WORKS	365 days	30 days	Wed 10/7/19	Wed 8/7/20	NA	NA	609,635		143 days		8		1				80000000	-		8/7	
637 400400	COMPLETION OF SECTION W9C	0 days		Wed 8/7/20	Wed 8/7/20	NA	NA	636		143 days				i					1		Q 011	
638 400410	SECTION W9D	1029 days		Thu 30/6/16	Wed 24/4/19	NA	NA			147 days	V								1			
639 400420	STARTING DATE OF CONTRACT	0 days	A STATE OF THE STA	Thu 30/6/16	Thu 30/6/16	NA	NA	2SS		811 days	▶♦ 30/6	1		1	+				1			
640 400430	ESTABLISHMENT WORKS	365 days	30 days	Wed 25/4/18	Wed 24/4/19	NA	NA	613,639		147 days				à i				24/4	1			
641 400440	COMPLETION OF SECTION W9D	0 days		Wed 24/4/19	Wed 24/4/19	NA	NA	640		147 days				1			•	2414	1			
642 400450	SECTION W9E	395 days		Thu 30/6/16	Sat 29/7/17	NA	NA			1314 da	-		-						1			
643 400460	STARTING DATE OF CONTRACT	0 days	S. COMMITTEE	Thu 30/6/16	Thu 30/6/16	NA	NA	2SS		1344 days	30/6	i	NAME OF TAXABLE	1					1			
644 400470	ESTABLISHMENT WORKS	365 days	30 days	Sat 30/7/16	Sat 29/7/17	NA	NA	617,643		1314 days	**		T.						1			
645 400480	COMPLETION OF SECTION W9E	0 days	-	Sat 29/7/17	Sat 29/7/17	NA	NA	644		1314 days			*	19/7					1			
646 400490	SECTION W9F	1153 days		Thu 30/6/16	Mon 26/8/19	NA	NA			155 days	-	-	-	-	The same of the sa				1			
647 400500	STARTING DATE OF CONTRACT	0 days		Thu 30/6/16	Thu 30/6/16	NA	NA	2SS		943 days	30/6					<u> </u>						
648 400510	ESTABLISHMENT WORKS	365 days	30 days	Mon 27/8/18	Mon 26/8/19	NA	NA	621,647		155 days								-	2010			
649 400520	COMPLETION OF SECTION W9F	0 days	4	Mon 26/8/19	Mon 26/8/19	NA	NA	648		155 days								•	26/8			
650 400530	SECTION W9G	455 days		Tue 7/3/17	Mon 4/6/18	NA	NA			942 days			-	-	-				1			
651 400540	INSTRUCTION TO EXECISE	0 days		Tue 7/3/17	Tue 7/3/17	NA	NA	55SS		1032 da		7/3	3	1					1			
652 400550	ESTABLISHMENT WORKS	365 days	30 days	Mon 5/6/17	Mon 4/6/18	NA	NA	625,651		942 days			2		2							
653 400560		0 days	1	Mon 4/6/18	Mon 4/6/18	NA	NA	652		942 days		1		1	4/6	Time and the second			- 1			

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





TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	C/N/170915C
Date of Issue:	2017-09-18
Date Received:	2017-09-15
Date Tested:	2017-09-15
Date Completed:	2017-09-18
Next Due Date:	2018-09-17

ATTN:

Mr. W.K. Tang

Page:

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Certificate of Calibration

Item for calibration:

Description

: 'SVANTEK' Integrating Sound Level Meter

Manufacturer

: SVANTEK

Model No.

: SVAN 977

Serial No.

: 45482

Microphone No.

: 63626

Equipment No.

: N-08-14

Test conditions:

Room Temperatre

: 22 degree Celsius

Relative Humidity

: 60%

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



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.:	C/N/170929B
Date of Issue:	2017-09-30
Date Received:	2017-09-29
Date Tested:	2017-09-29
Date Completed:	2017-09-30
Next Due Date:	2018-09-29

ATTN:

Mr. W.K. Tang

Page:

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Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: SVANTEK

Model No.

: SV30A

Serial No.

: 24780

Equipment No.

: N-09-05

Test conditions:

Room Temperatre

: 21 degree Celsius

Relative Humidity

: 60 %

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

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 (May 2018)

Sunday		Tuesday	Wednesday	Thursday	Friday	Saturday
		1-May	2-May	3-May	4-May	5-May
					Noise	
					140130	
6-May	7-May	8-May	9-May	10-May	11-May	12-May
		Noise				
		110.00				
13-May	14-May	15-May	16-May	17-May	18-May	19-May
					Noise	
					110.00	
20-May	21-May	22-May	23-May	24-May	25-May	26-May
				Noise		
				140/30		
27-May	28-May	29-May	30-May	31-May		
			Noise			
			140136			

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 (June 2018)

Sunday		Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Jun	2-Jun
3-Jun	4-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun
				Noise		
				140136		
10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
	Noise					
	140136					
17-Jun	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun
		Noise				
		140.00				
24-Jun	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun
	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	Mea	sured Noise I	Level	Baseline Level	Construction Noise Level					
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}					
4-May-18	10:15	Sunny	60.2	62.7	55.4		60.2 Measured ≦ Baseline					
8-May-18	14:15	Cloudy	59.5	62.4	55.0		59.5 Measured ≦ Baseline					
18-May-18	10:00	Sunny	62.4	64.7	57.8	62.2	48.9					
24-May-18	10:00	Sunny	63.7	65.1	60.0		58.4					
30-May-18	10:00	Sunny	60.4	62.6	55.9		60.4 Measured ≦ Baseline					

Location N2 - E	ocation N2 - Bethel High School											
				Unit: dB (A) (30-min)								
Date	Time	Weather	Mea	sured Noise I	Level	Baseline Level	Construction Noise Level					
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}					
4-May-18	11:25	Sunny	52.1	53.5	49.9		52.1 Measured ≦ Baseline					
8-May-18	15:00	Cloudy	52.5	53.4	50.2		52.5 Measured ≦ Baseline					
18-May-18	11:00	Sunny	61.7	63.7	56.1	55.2	60.6					
24-May-18	10:45	Sunny	61.4	63.6	58.5		60.2					
30-May-18	10:45	Sunny	58.9	60.3	55.0		56.5					

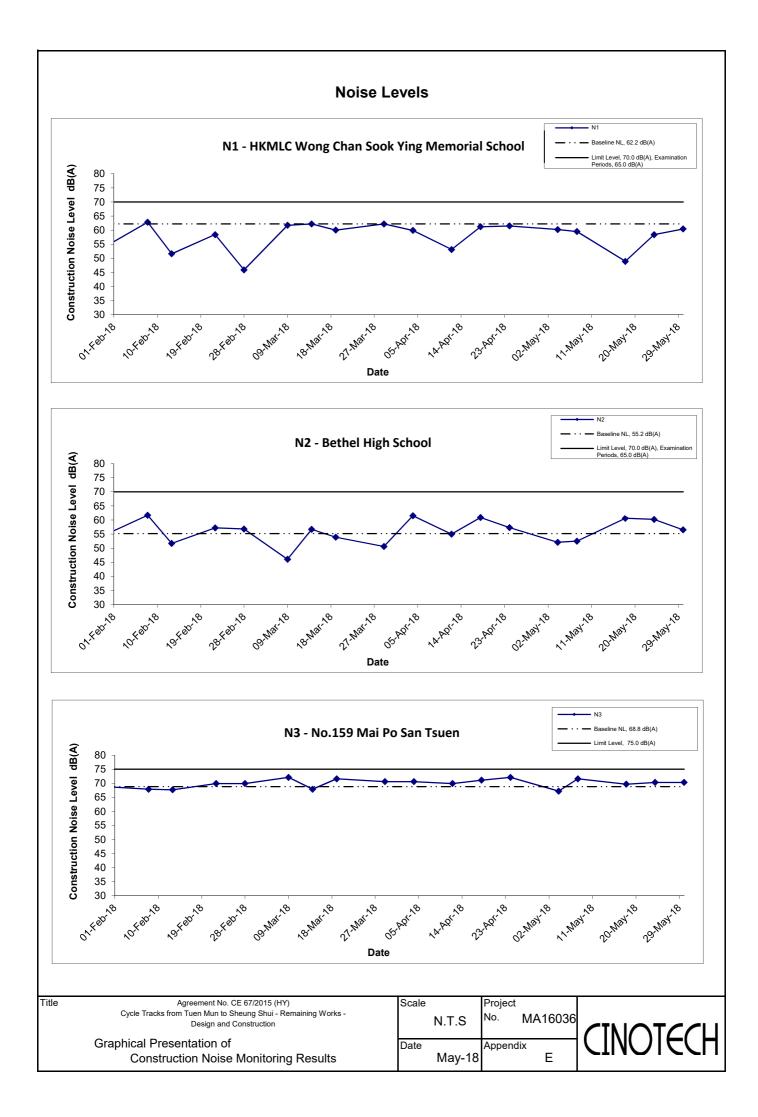
			Unit: dB (A) (30-min)							
Date	Time	Weather	Meas	sured Noise I	_evel	Baseline Level	Construction Noise Level			
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}			
4-May-18	13:00	Sunny	71.1	72.6	66.3		67.2			
8-May-18	16:00	Cloudy	73.4	75.2	67.5		71.6			
18-May-18	9:00	Sunny	72.3	74.5	69.4	68.8	69.7			
24-May-18	13:20	Sunny	72.6	74.8	69.2		70.3			
30-May-18	9:00	Sunny	72.6	75.1	68.7		70.3			

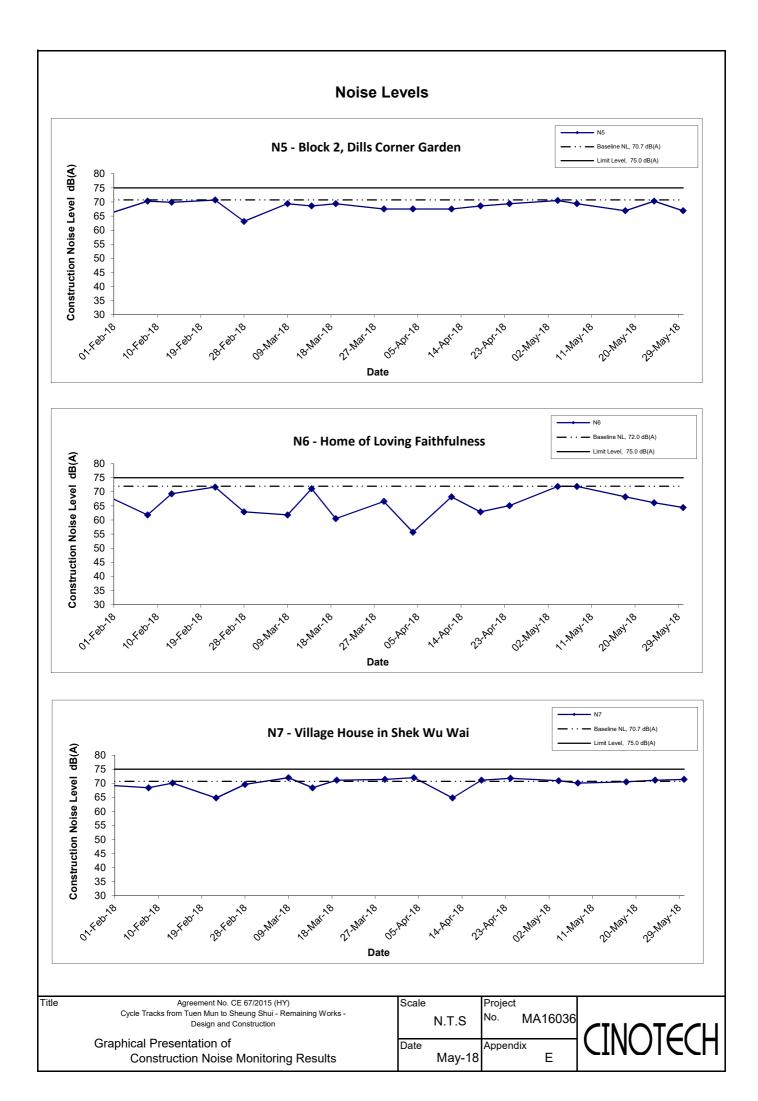
Location N5 - E	ocation N5 - Block 2, Dills Corner Garden							
				Unit: dB (A) (30-min)				
Date	Time	Weather	Mea	sured Noise I	_evel	Baseline Level	Construction Noise Level	
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}	
4-May-18	14:15	Sunny	70.5	72.3	66.7		70.5 Measured ≦ Baseline	
8-May-18	10:15	Cloudy	73.1	76.0	69.4		69.4	
18-May-18	14:10	Sunny	72.2	74.3	68.2	70.7	66.9	
24-May-18	14:15	Sunny	73.5	75.4	68.8		70.3	
30-May-18	14:10	Sunny	72.2	74.8	67.9		66.9	

Location N6 - H	ocation N6 - Home of Loving Faithfulness							
					Unit:	dB (A) (30-min)		
Date	Time	Weather	Mea	sured Noise I	_evel	Baseline Level	Construction Noise Level	
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}	
4-May-18	15:00	Sunny	71.9	73.4	67.8		71.9 Measured ≦ Baseline	
8-May-18	11:05	Cloudy	71.9	73.8	68.2		71.9 Measured ≦ Baseline	
18-May-18	15:00	Sunny	73.5	75.7	68.1	72.0	68.2	
24-May-18	15:05	Sunny	73.0	75.4	68.8		66.1	
30-May-18	15:00	Sunny	72.7	74.9	67.5		64.4	

Location N7 - V	ocation N7 - Village House in Shek Wui Wai							
				Unit: dB (A) (30-min)				
Date	Time	Weather	Mea	sured Noise I	_evel	Baseline Level	Construction Noise Level	
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}	
4-May-18	9:25	Sunny	73.8	74.5	66.8		70.9	
8-May-18	9:10	Cloudy	73.4	76.8	69.7		70.1	
18-May-18	13:20	Sunny	73.6	75.1	69.5	70.7	70.5	
24-May-18	11:30	Sunny	73.9	76.1	70.2		71.1	
30-May-18	13:20	Sunny	74.1	76.5	69.2		71.4	

MA16036/App E - Noise Cinotech





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	180502	
Date	2 May 2018 (Wednesday)	
Time	14:00-17:00	

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

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
180502-F05	• Stagnant water was observed accumulating behind the retaining wall at Portion C. The Contractor was reminded to remove the stagnant water regularly to prevent mosquito breeding.	B 8
	C. Air Quality]
180502-F03	To keep site entrances clean and free from dust at Portion C.	C 3
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.]
	E. Waste / Chemical Management	
180502-F04	The Contractor was reminded to dispose regularly and properly to avoid accumulating of general refuse/construction waste in Portion E.	E 7
180502-F02	Provide drip tray for the chemical containers at Subway A.	E9
180502-R01	To clear the damaged traffic barriers in Portion E.	E Ii, Iiii
	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	_
	No environmental deficiency was identified during site inspection.	<u></u>

	Name	Signature	Date
Recorded by	Kinson Poon	7	2 May 2018
Checked by	Dr. Priscilla Choy	NF	3 May 2018

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	180509
Date	9 May 2018 (Wednesday)
Time	09:30-12:30

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

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
180509-F05	• Stagnant water was observed accumulating behind the retaining wall at Portion C. The Contractor was reminded to remove the stagnant water regularly to prevent mosquito breeding.	В 8
	C. Air Quality	
180509-F04	To keep site entrances clean and free from dust at Portion C.	C 3
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	1
180509-F03	To clear the damaged traffic barriers in Portion E.	E 1i, 1iii
180509-R01	To clear the accumulated waste at Portion I.	E 1i, 1iii
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	1
	G. Landscape & Visual	
180509-R02	• To set up a proper tree protection zone near the proposed public toilet at Portion K.	G 1, 2
	H. Permits/Licences]
	No environmental deficiency was identified during site inspection.	
	I. Others	
ļ <u>.</u>	No environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kinson Poon	A	9 May 2018
Checked by	Dr. Priscilla Choy	NF	10 May 2018

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	180515
Date	15 May 2018 (Tuesday)
Time	09:30-12:30

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

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	1101111101
180515-F06	• Stagnant water was observed accumulating behind the retaining wall at Portion C. The Contractor was reminded to remove the stagnant water regularly to prevent mosquito breeding.	В8
	C. Air Quality	
180515-F05	To keep site entrances clean and free from dust at Portion C.	C 3
180515-R02	• To clean up the dusty surface at the entrance of R7.	C 3
	D. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
180515-F04	To clear the damaged traffic barriers in Portion E.	E 1i, 1iii
180515-R01	• To provide skip or container for the disposal of general refuse at R7.	E lii
	F. Ecology and Fisheries	
	No environmental deficiency was identified during site inspection.	
	G. Landscape & Visual	
180515-F03	To set up a proper tree protection zone near the proposed public toilet at Portion K.	G 1, 2
	H. Permits/Licences	Í
	No environmental deficiency was identified during site inspection.	
	I. Others	
	No environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kinson Poon		15 May 2018
Checked by	Ivy Tam	YIH	16 May 2018

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	180524
Date	24 May 2018 (Thursday)
Time	10:00-12:30

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

Ref. No.	Remarks/Observations	Related Item No.
	B. Water Quality	
	No environmental deficiency was identified during site inspection.	
	C. Air Quality	
180524-F06	To keep site entrances clean and free from dust at Portion C.	C 3
180524-F03	• To clean up the dusty surface at the entrance of R7.	C 3
	D. Construction Noise Impact]
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	1
180524-F05	To clear the damaged traffic barriers in Portion E.	E 1i, 1iii
180524-F02	To provide skip or container for the disposal of general refuse at R7.	E Iii
	F. Ecology and Fisheries	7
	No environmental deficiency was identified during site inspection.	,
	G. Landscape & Visual	
180524-F04	To set up a proper tree protection zone near the proposed public toilet at Portion K.	G 1, 2
180524-R01	To set up a proper tree protection zone at Subway A.	G 1, 2
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow up on the previous session (Ref. No: 180515), follow up action is needed to be reviewed for item 180515-R01, 180515-R02, 180515-F03, 180515-F04 and 180515-F05.	

	Name	Signature	Date
Recorded by	Kinson Poon	F	24 May 2018
Checked by	Dr. Priscilla Choy	NI	25 May 2018

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	180530	
Date	30 May 2018 (Wednesday)	
Time	10:00-12:30	

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

Ref. No.	Remarks/Observations	Related Item No.	
	B. Water Quality		
	No environmental deficiency was identified during site inspection.		
	C. Air Quality		
180530-F06	To keep site entrances clean and free from dust at Portion C.	C 3	
180530-F04	To clean up the dusty surface at the entrance of R7.	C3	
	D. Construction Noise Impact]	
	No environmental deficiency was identified during site inspection.]	
	E. Waste / Chemical Management	1	
180530-F05	To clear the damaged traffic barriers in Portion E.	E 1i, 1iii	
180530-F03	To provide skip or container for the disposal of general refuse at R7.	E 1ii	
180530-R01	To provide drip tray for the chemical containers at Portion B.	E9	
	F. Ecology and Fisheries		
	No environmental deficiency was identified during site inspection.]	
	G. Landscape & Visual	_	
180530-F02	To set up a proper tree protection zone at Subway A.	G 1, 2	
	H. Permits/Licences		
	No environmental deficiency was identified during site inspection.		
	I. Others	_	
	Follow up on the previous session (Ref. No: 180524), follow up action is needed to be reviewed for item 180524-R01, 180524-F02, 180524-F03, 180524-F05 and 180524-F06.		

	Name	Signature	Date
Recorded by	Kinson Poon	J	30 May 2018
Checked by	Dr. Priscilla Choy	WI	31 May 2018

APPENDIX H EVENT AND ACTION PLANS

Appendix H - Event and Action Plans

Event and Action Plan for Construction Noise

EVENT	ACTION				
	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 ad	tions and	instruct the Contractor to stop	
keep IC(E), EPD and EF	informed of	that portion of the work until	
the results;		the exceedance is abated.	
8. If exceedance stops,	ease		
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:	٨
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	۸
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	#
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	۸
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	۸

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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 	^
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 CH-MP5+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).	^

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
Table 5-7	S.4.2.19	Use of quiet plant (PME):	^
		- 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	^
Table 5-8		where 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	
		- crane mounted auger	

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		- 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:	N/A (1)
		- air compressor	
		- hand-held breaker	
S.5.6.2	S.4.2.19	The barrier / enclosure material's surface mass shall be in excess of 7 kg/m ² .	۸
S.5.6.6	S.4.2.19	Use of alternative quieter plant such as road ripper, excavator mounted instead of	٨
		handheld breaker during levelling/excavation works.	
S.5.6.8	S.4.2.19	The Contractor shall adopt the Code of Practice on Good Management Practice to	٨
		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	٨
		requirements and guidelines	
S.5.6.8	S.4.2.19	Before commencing any work, the Contractor shall submit to the project Engineer	۸
		for approval the method of working, equipment and noise mitigation measures	
		intended to be used at the site	
S.5.6.8	S.4.2.19	The Contractor shall devise and execute working methods to minimize the noise	٨
		impact on the surrounding sensitive uses, and provide experienced personnel with	
		suitable training to ensure that those methods are implemented	
S.5.6.8	S.4.2.19	Noisy equipment and noisy activities should be located as far away from the NSRs as	٨
		is practical	
S.5.6.8	S.4.2.19	Unused equipment should be turned off. PME should be kept to a minimum and the	٨
		parallel use of noisy equipment / machinery should be avoided	
S.5.6.8	S.4.2.19	Regular maintenance of all plant and equipment	٨
S.5.6.8	S.4.2.19	Material stockpiles and other structures should be effectively utilised as noise	N/A
		barriers, where practicable	

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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	^
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	۸
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	٨
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	٨
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	N/A

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		hydro-seeded following completion to prevent erosion	
S.6.6.1	S.5.2.4	During construction works, chemical toilets will be provided for the use of site staff.	٨
		These will be provided by a licensed contractor, who will be responsible for	
		appropriate disposal and maintenance of the effluent	
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	
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.	
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	
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	
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	
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	
S.6.6.1	S.5.2.4	Oil and grease removal facilities will be provided where appropriate, for example, in	N/A
		area near plant workshop/ maintenance areas	
S.6.6.1	S.5.2.4	Chemical waste arising from the site should be properly stored, handled, treated and	٨
		disposed of in compliance with the requirements stipulated under the Waste Disposal	
		(Chemical Waste) (General) Regulation	

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
-	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.	^
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.	^
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.	٨
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;	^
S.7.4.1	S.6.2.6	Given the potential for secondary environmental impacts (dust, noise, water quality	٨

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		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	
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 minimisation 	#
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
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	٨
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".	۸

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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;	#
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.	٨
Land Contam	nination		
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.	٨

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		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.	
S.8.7.5	S.7.3.1	The following control measures should be implemented when handling identified contaminated materials:	N/A
		■ General site safety shall be enforced to include basic practices such as the use of	
		safety boots, hard hats, coveralls, gloves and eye protection;	
		Avoid skin contact, ingestion and inhalation of excavated contaminated soils. Basic	
		personal protective equipment should be used;	
		■ 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;	
		 Measures shall be implemented to prevent non-workers from approaching the 	
		identified works areas in order to avoid exposure to contaminants.	
S.8.7.5	S.7.3.1	Management of Contaminated Soils	N/A
		■ Where appropriate, the use of bulk handling equipment should be maximised to reduce the potential contacts between excavated contaminated materials and	
		associated workers;	
		■ The plants for excavation and transportation of the material shall be cleaned prior	
		to leaving the Site;	
		 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	
		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;	
		■ Surface waters shall be diverted around any contaminated areas or stockpiles to	
		minimize potential runoff into excavations, as runoff might increase the volume of	

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		contaminated water requiring disposal and suspended solids in the wastewater stream	l .
Ecological & 1	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.	٨
-	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
-	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	۸

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		be implemented practicable to minimize the noise disturbance to the foraging ardeids.	
S.10.5.4	S.8.2.7	To prevent any negative impact to water quality as a result of site run-off, good site	٨
	(Stage 1)	practice must be employed at all times, particularly in the areas close to fishponds.	
	S.8.2.5	Practice Note for Professional Persons ProPECC PN1/94 – Construction Site	
	(Stage 2)	Drainage shall be implemented.	
S.10.5.4	S.8.2.8	Along Pok Wai South Road, once the final construction sequencing is known, liaison	N/A
	(Stage 1)	with local residents and aquaculturists should be implemented in order to minimise	
	S.8.2.6	temporary road blockages and to identify the best timing for works along this area.	
	(Stage 2)		
S.10.5.3	S.8.2.9	During wet seasons, surface run-off from the construction sites will need to be	٨
	(Stage 1)	directed into storm drains via adequately designed wastewater treatment facilities	
	S.8.2.7	such as sand traps, silt traps, oil interceptors and sediment settling basins. Works	
	(Stage 2)	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.	
-	S.8.2.10	The use of signage at the Resting Stations to indicate that wildlife may be present	N/A
	(Stage 1 only)	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.	
S.9.11.27	S.8.2.11	The following good work practices are recommended:	٨
	(Stage 1)	■ Avoid soil storage against trees;	
	S.8.2.9	■ Fence off any potentially ecologically sensitive areas;	
	(Stage 2)	■ Delineation of works area to prevent encroachment onto adjacent habitats;	
		■ Reinstatement of habitat after works;	
		■ No on-site burning of waste;	

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		 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 	
Cultural Heri	tage Impact	The state of the s	
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 an	d Visual		
Detailed Desig	gn 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	^
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.	^
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	۸

EIA Ref.	EM&A Ref.	Mitigation Measures	Status				
		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 Survey Report and approval from relevant departments at that stage					
Construction I	Phase						
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.					
	CP1.2	Creation of precautionary area around trees to be retained equal to half of the trees canopy diameter. Precautionary area to be fenced.					
C	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.	#				
	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.	۸				
	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.	٨				
	CP1.6	The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.	^				
	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				
	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	٨				

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		implementation of protection measures and health monitoring throughout the	
		construction period	
	CP1.9	Detailed landscape and tree preservation proposals will be submitted to the relevant	N/A
		government departments for approval under the lease conditions and in accordance	
		with ETWB TCW No. 2/2004 and WB Technical Circular No. 14/2002.	
	CP2.0	The tree preservation works should be implemented by approved Landscape	٨
		Contractors and inspected and approved on site by a qualified Landscape Architect.	
		A tree protection specification would be included within the contract documents.	
	CP2.1	Topsoil disturbed during the construction phase should be tested using a standard soil	٨
		testing methodology and where it is found to be worthy of retention stored for re-use.	
	CP2.2	The soil will be stockpiled to a maximum height of 2m and will be either temporarily	٨
		vegetated with hydroseeded grass during construction or covered with a waterproof	
		covering to prevent erosion.	
	CP2.3	The stockpile should be turned over on a regular basis to avoid acidification and the	٨
		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.	
	CP3.1	Where appropriate to the final design the landscape of these works areas should be	N/A
		restored following the completion of the construction phase.	
	CP3.2	Construction site controls should be enforced including the storage of materials, the	٨
		location and appearance of site accommodation and the careful design of site lighting	
	GD2 2	to prevent light spillage.	
	CP3.3	Screen the works area during the construction phase through the use of decorative	٨
	CD 4.1	hoarding along the site boundary facing adjacent VSRs	
	CP4.1	Replanting of disturbed vegetation should be undertaken at the earliest possible stage	٨
	CD4.2	of the construction phase	Δ.
	CP4.2	Use of native plant species predominantly in the planting design for the buffer areas.	٨
	CP4.3	The tree planting works should be implemented by approved Landscape Contractors	^

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		and inspected and approved on site by a qualified Landscape Architect. A tree planting specification would be included within the contract documents	
	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.	۸

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)							
	^ 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

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

Reporting Month: May 2018

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
N/A	N/A	N/A	N/A	N/A	N/A

Remarks: No environmental complaint/warning/summon and prosecution were received in the 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)

	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 ³)	(in '000m ³)	$(in '000m^3)$	(in '000m ³)	$(in '000m^3)$	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	1	-	ı	1	1	ı	1	-	-
June	-	-	-	-	-	1	-	1	1	-	-
July	-	-	1	-	ı	ı	0.01	0.01	0.01	-	0.01
Aug	-	-	1	-	-	1	0.01	0.01	0.01	-	0.01
Sept	0.005	-	1	-	0.005	ı	0.01	0.01	0.01	-	0.06
Oct	_	-	-	_	-	-	0.05	0.05	0.05	_	0.04
Nov	0.35	-	ı	-	0.35	-	0.05	0.05	0.05	_	0.05
Dec	0.4	-	1	-	0.4	-	0.05	0.05	0.05	-	0.05
Total	0.755	-	-	_	0.755	-	0.18	0.18	0.18	_	0.22

^{*}Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

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

Monthly Summary Waste Flow Table for 2017 (Year)

	Tronding Summary Waste flow Table for (Teal)											
	Α	ctual Quantities	of Inert C&D	ert 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 ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)	
Jan	0.04	-	-	1	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	-	0.05	0.05	0.05	-	0.01	
June	1.63	-	ı	1	1.63	-	0.05	0.05	0.05	-	0.02	
July	1.25	-	-	-	1.25	-	0.05	0.05	0.05		0.01	
Aug	1.49				1.49	-	0.05	0.05	0.05	-	0.01	
Sep	1.15	-	-	-	1.14	0.493	0.05	0.05	0.05	-	0.01	
Oct	1.19	-	ı	1	1.19	-	0.05	0.05	0.05	-	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	

^{*}Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

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 ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	$(in '000m^3)$	$(in '000m^3)$	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)		
Jan	4.37	-	-	-	4.36	1	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		
Sub-total	12.07	-	-	-	11.95	-	0.21	0.21	0.21		0.05		
June	_	-	-	-	-	-	-	-	-	-	-		
July	_	-	-	-	-	-	-	-	-	-	_		
Aug	_	-	-	-	-	-	-	-	-	-	-		
Sept	_	-	-	-	-	-	-	-	-	-	-		
Oct	_	-	-	-	-	-	-	-	-	-	-		
Nov	_	-	-	-	-	-	-	-	-	-	-		
Dec	_	-	-	-	-	-	-	-	-	-	-		
•		•	•		•	•	•	•	•	•	•		
		•	•	•	•	•	•	•	•	•			
Total	26.065	-	-	-	25.885	0.986	0.99	0.99	0.99	-	0.50		

^{*}Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

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 Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse			
$(in '000m^3)$	(in '000m ³)	$(in '000m^3)$	$(in '000m^3)$	$(in '000m^3)$	$(in '000m^3)$	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)			
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].