


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)

February 2017

Approved By


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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.

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EXECUTIVE SUMMARY

Introduction

1. This is the 4th 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 – 28 February 2017.
2. During the reporting month, the major site activities undertaken in the reporting month included:
 - Site Clearance in Portions A, B, C, D, E, F, G, H, I and N;
 - Construction of wheel washing facilities in Portions B, C, E and F;
 - Ground investigation in Portions D, E, H and J;
 - Construction of RC structure and public toilet in Portion L;
 - Tree felling in Portions A, B, C, D, E, F, G, H, I and N;
 - Construction of retaining wall in Portions A, C, E and K;
 - Construction of subway in Portions B and I;
 - Utilities diversion works in Portions A, B, C, D, E, F, G, H and N;
 - Earthworks and drainage works, utilities laying in Portions A and B;
 - Construction of rectangular channel in Portion E; and
 - Construction of project signboards in Works Area 3.

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	
Noise	0	0	N/A

Key Information in the Reporting Month

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

Table II Summary Table for Key Information in the Reporting Month

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

1 INTRODUCTION

Background

- 1.1 “Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River” (the EIA Report) is a Schedule 2 Designated Project (DP) under Environmental Impact Assessment Ordinance (EIAO). The Environmental Impact Assessment (EIA) Report (Registered No.: AEIAR-133/2009) and the associated Environmental Monitoring and Audit (EM&A) Manual was approved on 12 March 2009.
- 1.2 Civil Engineering and Development Department (CEDD) implemented the DP in two stages, i.e. Stage 1 and Stage 2. An Environmental Permit (EP) No. EP-450/2013 has been granted for Stage 1 works on 30 May 2013. Pursuant to Section 13 of the EIAO, the Director of Environmental Protection amends the Environmental Permit (No. EP-450/2013) based on the Application No. VEP-478/2015 and the EP (Permit No. EP-450/2013/A) was issued on 25 August 2015 to CEDD as the Permit Holder.
- 1.3 An Environmental Review (ER) Report of the “Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River – Stage 2” had been prepared in July 2015 and the Environmental Monitoring and Audit Manual (EM&A Manual) was also included as part of the ER report in the application (Application No.: AEP-501-2015). An Environmental Permit No. EP-501/2015 was issued on 2 September 2015 for Stage 2 works to CEDD as the Permit Holder.
- 1.4 “Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works – Design and Construction” (hereinafter called the “Project”) covers the Stage 1 (Part) and Stage 2 works of the DP. This Project was commissioned to Sang Hing – Kuly Joint Venture (hereinafter called the “Contractor”) for “Contract No.: YL/2015/01 Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works”. The site location and work programme are shown in **Figure 1a-1h** and **Appendix A** respectively.
- 1.5 Cinotech Consultants Ltd. was designated as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The construction commencement of the Project was on 23th November 2016. This is the 4th Monthly EM&A Report summarizing the EM&A works for the Project from 1 – 28 February 2017.

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**.

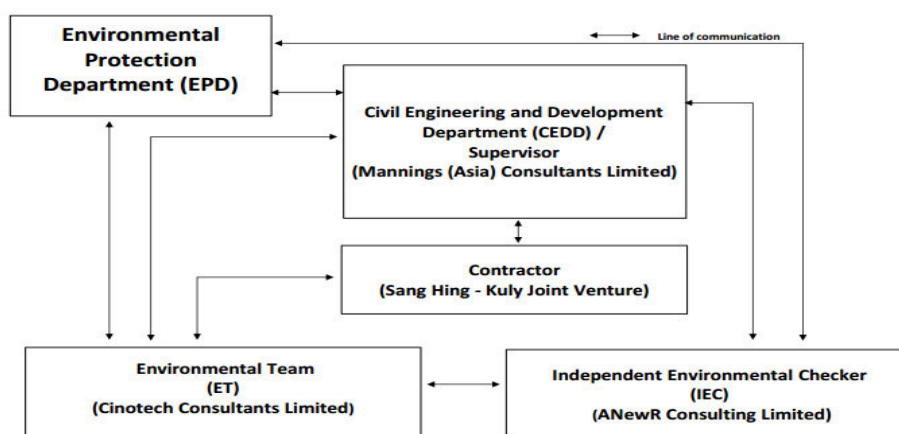


Figure 3 Organization Structure (Environmental Aspects)

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
		Ms. Ivy Tam	2151 2090	
ANewR	Independent Environmental Checker	Mr. Adi Lee	2618 2836	3007 8648
SKJV	Contractor	Mr. Michael Wan	9222 3089	N/A

Construction Activities undertaken during the Reporting Month

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

- Site Clearance in Portions A, B, C, D, E, F, G, H, I and N;
- Construction of wheel washing facilities in Portions B, C, E and F;
- Ground investigation in Portions D, E, H and J;
- Construction of RC structure and public toilet in Portion L;
- Tree felling in Portions A, B, C, D, E, F, G, H, I and N;
- Construction of retaining wall in Portions A, C, E and K;
- Construction of subway in Portions B and I;
- Utilities diversion works in Portions A, B, C, D, E, F, G, H and N;
- Earthworks and drainage works, utilities laying in Portions A and B;
- Construction of rectangular channel in Portion E; and
- Construction of project signboards in Works Area 3.

1.10 The construction programme showing the 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 1.8	Noise, dust impact, water quality and waste generation	<ul style="list-style-type: none"> • 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 – 28 February 2017.

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 and Make	Qty.
Integrating Sound Level Meter	SVAN 957	1

Acoustic Calibrator	SV30A	1
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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 on normal weekdays	Once per week	Façade
N2				Façade
N3				Free Field
N5				Free Field
N6				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 re-calibration or repair of the equipment.
- At the end of the monitoring period, the L_{eq}, L₉₀ and L₁₀ 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 4.4**.
- 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:

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

Table 4.4 Baseline Noise Level and Noise Limit Level for Monitoring Stations

Station	Baseline Noise Level, dB (A)	Noise Limit Level, dB (A)
N1	62.2 (at 0700 – 1900 hrs on normal weekdays)	70* (at 0700 – 1900 hrs on normal weekdays)
N2	55.2 (at 0700 – 1900 hrs on 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 (Feb 17), L_{eq} (30min) dB(A)
N1 - HKMLC Wong Chan Sook Ying Memorial School	55-62	62 ⁽¹⁾	60.3 – 61.3
N2 – Bethel High School	57-64	64 ⁽¹⁾	58.3 – 61.8
N3 – No. 159 Mai Po San Tsuen	70-73	74 ⁽²⁾	67.8 – 72.7
N5 – Block 2, Dills Corner Garden	73-75	75 ⁽²⁾	63.1 – 70.2
N6 – Home of Loving Faithfulness	64-73	74 ⁽¹⁾	69.8 – 70.7
N7 – Village House in Shek Wu Wai	N/A ⁽³⁾	70 ⁽²⁾	67.3 – 70.7

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 The noise monitoring results in the reporting month at monitoring stations (N3 and N5) were lower than the predicted mitigated construction noise levels in the EIA Report. The noise monitoring results at N1, N2 and N6 in the reporting month were within the range of predictions in the EIA Report.

5.3 The noise monitoring results in the reporting month at monitoring stations (N1, N2, N3, N5 and N6) were lower than the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works. The noise monitoring results at N7 in the reporting month were 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 8, 15, 21 and 28 February 2017 in the reporting month. IEC joint site inspection was conducted on 21 February 2017. 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 10.1**.

Table 10.1 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Details	Status
	From	To		
Environmental Permit (EP)				
EP-450/2013/A	25/08/ 15	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/ 15	N/A	Construction of Cycle Tracks and the Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River – Stage 2	Valid
Billing Account for Construction Waste 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				
Application in Progress				
Registration of Chemical Waste Producer				
Application in Progress				
Construction Noise Permit (CNP)				
N/A				

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 10.2**.

Table 10.2 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	17, 24 Jan and 8 Feb 2017	Silt and sediment in wheel washing bay in Portion A should be properly and regularly removed.	Rectification/improvement was observed during the follow-up audit session.
	21 and 28 Feb 2017	Water inside the wheel washing bay of Portion A is observed silty. The Contractor is reminded to clear the water regularly to increase the efficiency of wheel washing	Follow up actions will be reported in the next month.
<i>Air Quality</i>	21 and 28 Feb 2017	To provide frequent water spray to unpaved area in Portion K.	Follow up actions will be reported in the next month.
	28 Feb 2017	Tarpaulin coverage should be provided to the stockpiles in Portions A, C and Works Area 3 for dust suppression.	Follow up actions will be reported in the next month.
	17, 24 Jan and 8 Feb 2017	Dust on haul road next to entrance of Portion A and C should be cleared.	Rectification/improvement was observed during the follow-up audit session.
	24 Jan and 8 Feb 2017	Water spraying should be provided more frequently to haul roads in Portion C for dust suppression.	Rectification/improvement was observed during the follow-up audit session.
	24 Jan and 8 Feb 2017	Dust on haul roads in Portion A and Portion C should be cleared.	Rectification/improvement was observed during the follow-up audit session.
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	8, 15 and 21 Feb 2017	Rubbish bins in Portion K should be maintained more frequently.	Rectification/improvement was observed during the follow-up audit session.
	15 Feb 2017	Drip tray should be provided to chemical container in Portion K and Works Area 3.	Rectification/improvement was observed during the follow-up audit session.

Parameters	Date	Observations and Recommendations	Follow-up
	21 and 28 Feb 2017	To clear the oil stain in unpaved area in Portion K.	Follow up actions will be reported in the next month.
	28 Feb 2017	Drip tray should be provided to chemical containers in Portion K.	Follow up actions will be reported in the next month.
	13, 17, 24 Jan, 8 and 15 Feb 2017	Oil stain under excavator in WA3 should be properly removed as chemical waste.	Rectification/improvement was observed during the follow-up audit session.
	24 Jan, 8 and 15 Feb 2017	Drip tray should be provided to chemical containers in Works Area 3.	Rectification/improvement was observed during the follow-up audit session.
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Landscape and Visual</i>	24 Jan, 8 and 15 Feb 2017	Fencing of tree protection zones in Portion A, Works Area 3 and Portion K should be enhanced to protect existing trees. Construction materials should not be placed within tree protection zones.	Rectification/improvement was observed during the follow-up audit session.
<i>Permits/ Licenses</i>	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 two months include:

- Site clearance in Portions A, C, D, F, G, H and N;
- Construction of wheel washing facilities in Portions B;
- Ground investigation in Portions D, E, H and J;
- Construction of RC structure and public toilet in Portion L;
- Tree felling in Portions A, C, D, F, G, H and N;
- Construction of retaining wall in Portions A, C, E and K;
- Construction of subway in Portions B and I;
- Construction of rectangular channel in Portion E;
- Utilities diversion works in Portion A, B, C, D, E, F, G, H and N;
- Construction of project signboards in WA3; and
- Roads Works in Portions A, B, E and K.

Key Issues for the Coming Month

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. March 2017 to April 2017, 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 tarpaulin or similar means; and (c) Watering of any earth moving activities.
	Water quality impact (surface run-off)	(d) Diversion of the collected effluent to de-silting facilities for treatment in compliance with valid Discharge License prior to discharge to public storm water drains; (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 impact	(h) Scheduling of noisy construction activities if necessary to avoid persistent noisy operation; (i) Controlling the number of plants use on site; (j) Regular maintenance of machines (k) Use of quiet PME's on-site; and (l) Use of acoustic barriers and noise enclosure if necessary.
	Landscape and 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 4 times of ET joint weekly environmental site inspection was conducted in the reporting month.

Complaint and Prosecution

- 10.4 No environmental complaints and environmental prosecution were 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 road for dust suppression.
- Site area near site entrance/exit should be kept clear of dust and proper wheel washing facility should be provided for wheel washing before vehicle leaving the site.

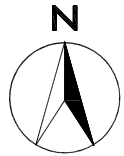
Waste/Chemical Management

- 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.

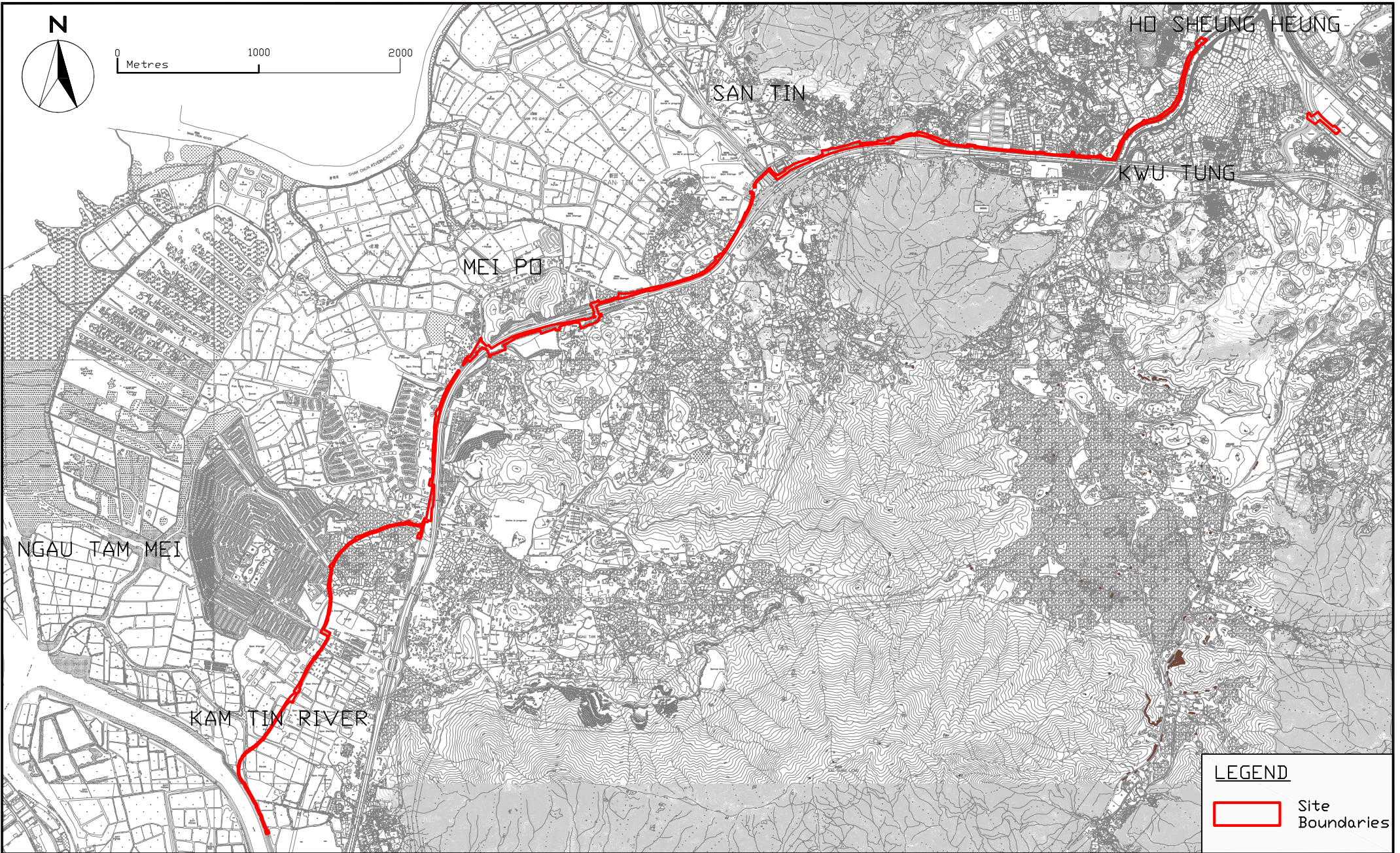
Landscape and Visual

- Proper tree protection zone should be set for retained trees to avoid damage.

FIGURES



0 Metres 1000 2000



LEGEND

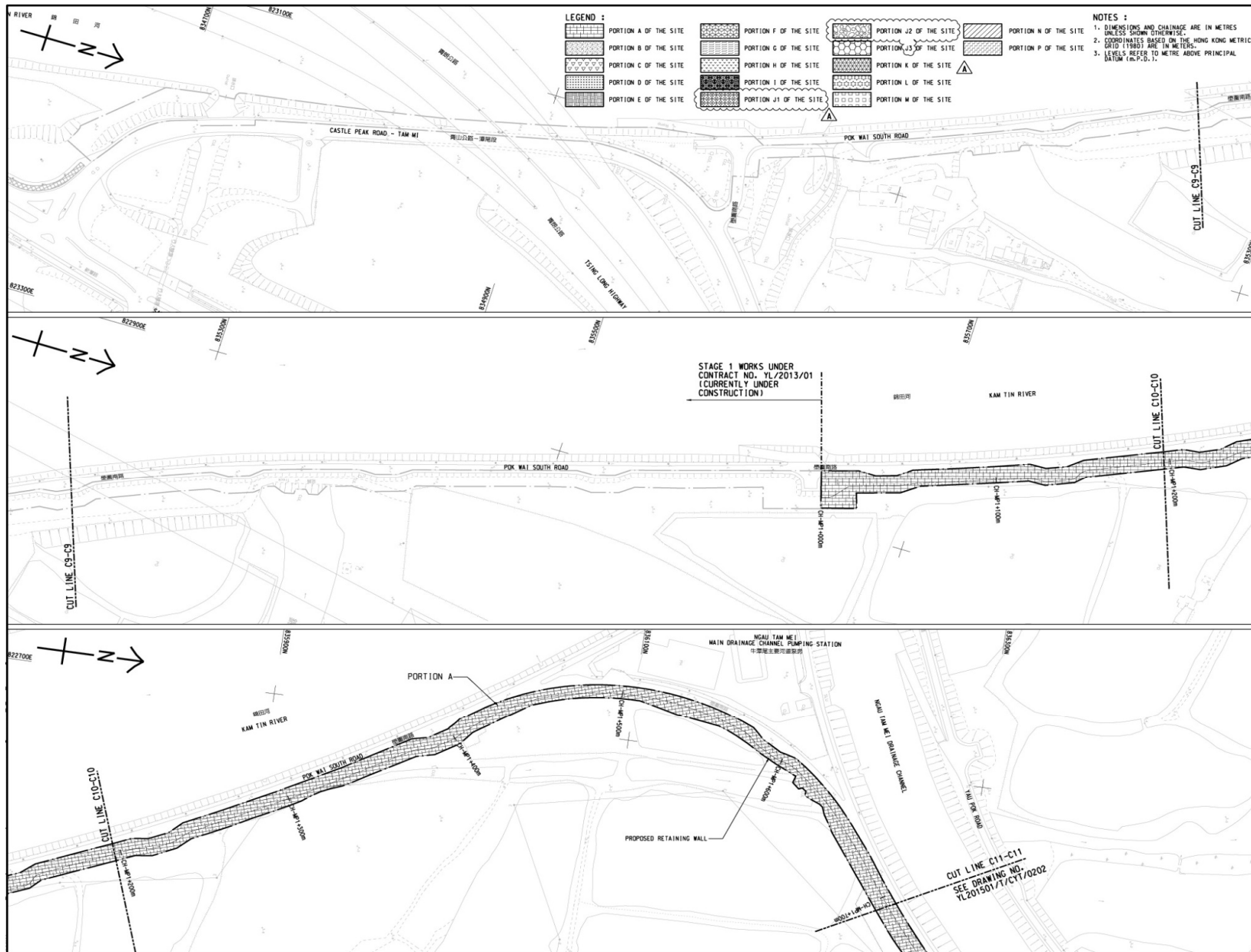
 Site Boundaries



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

SITE LAYOUT PLAN

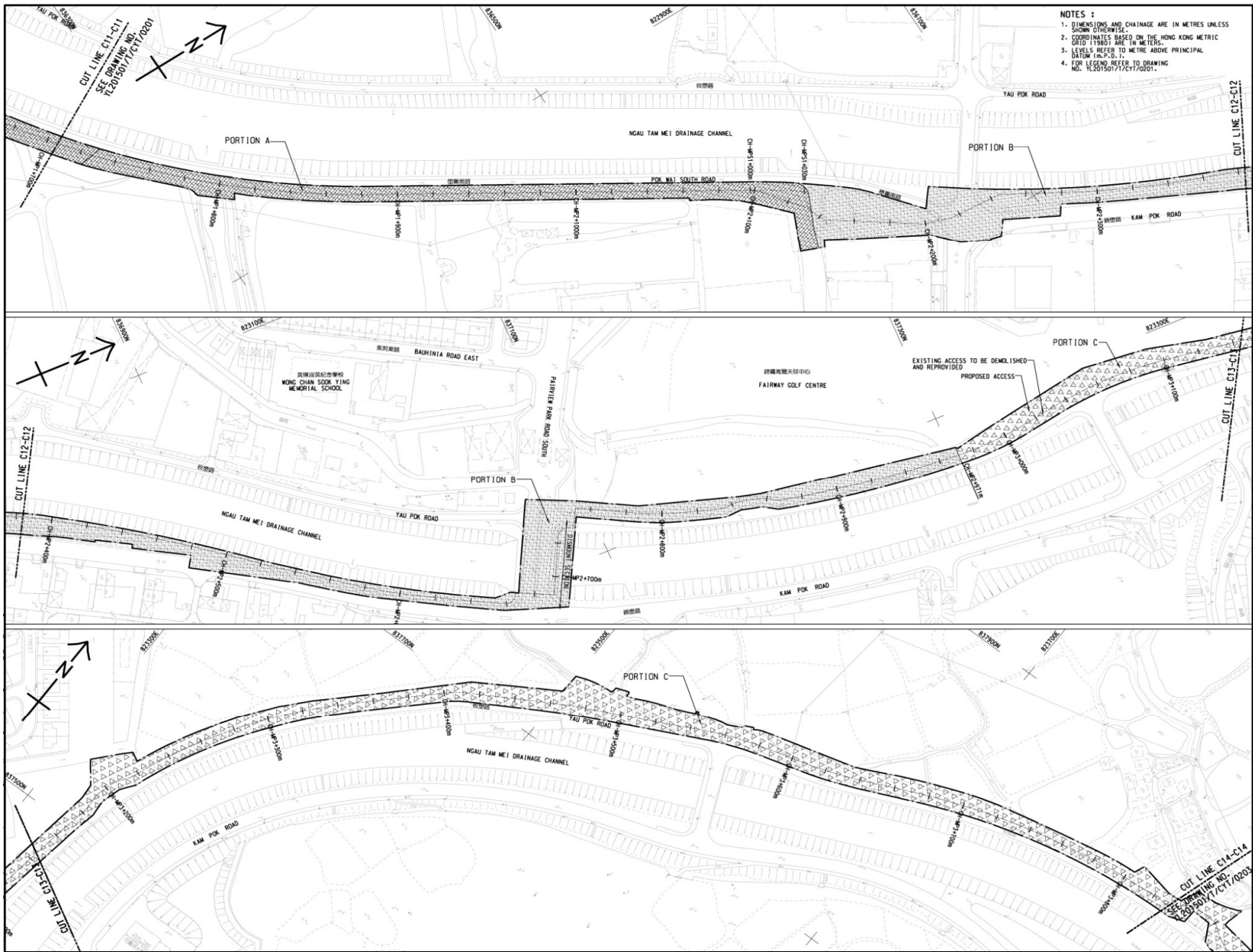
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JOB No.	MA16036	FIGURE NO.	1a	REV	-



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

Scale	N.T.S	Project No.	MA16036
Date	Dec-16	Figure	1b

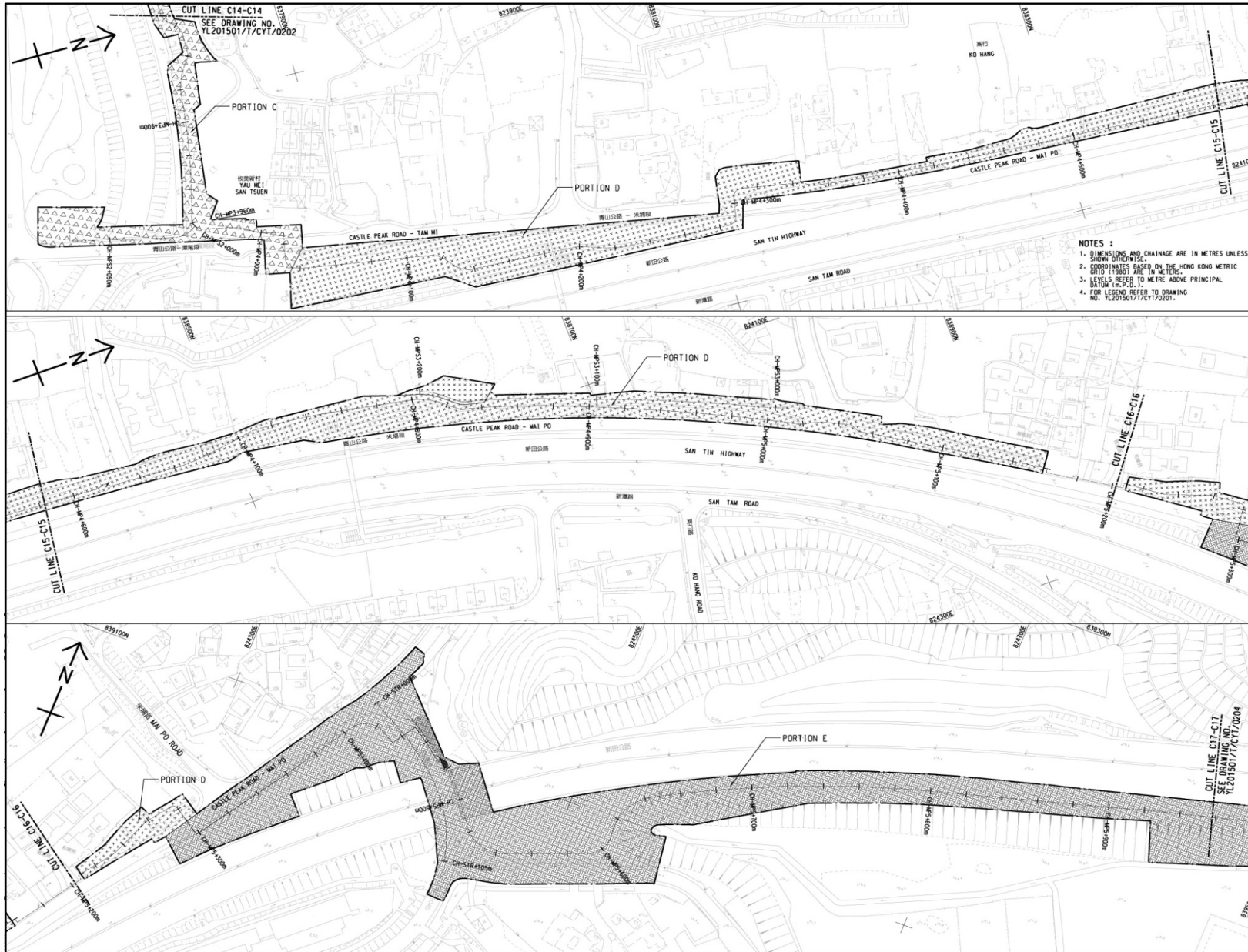
CINOTECH



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

Scale	N.T.S	Project No.	MA16036
Date	Dec-16	Figure	1c



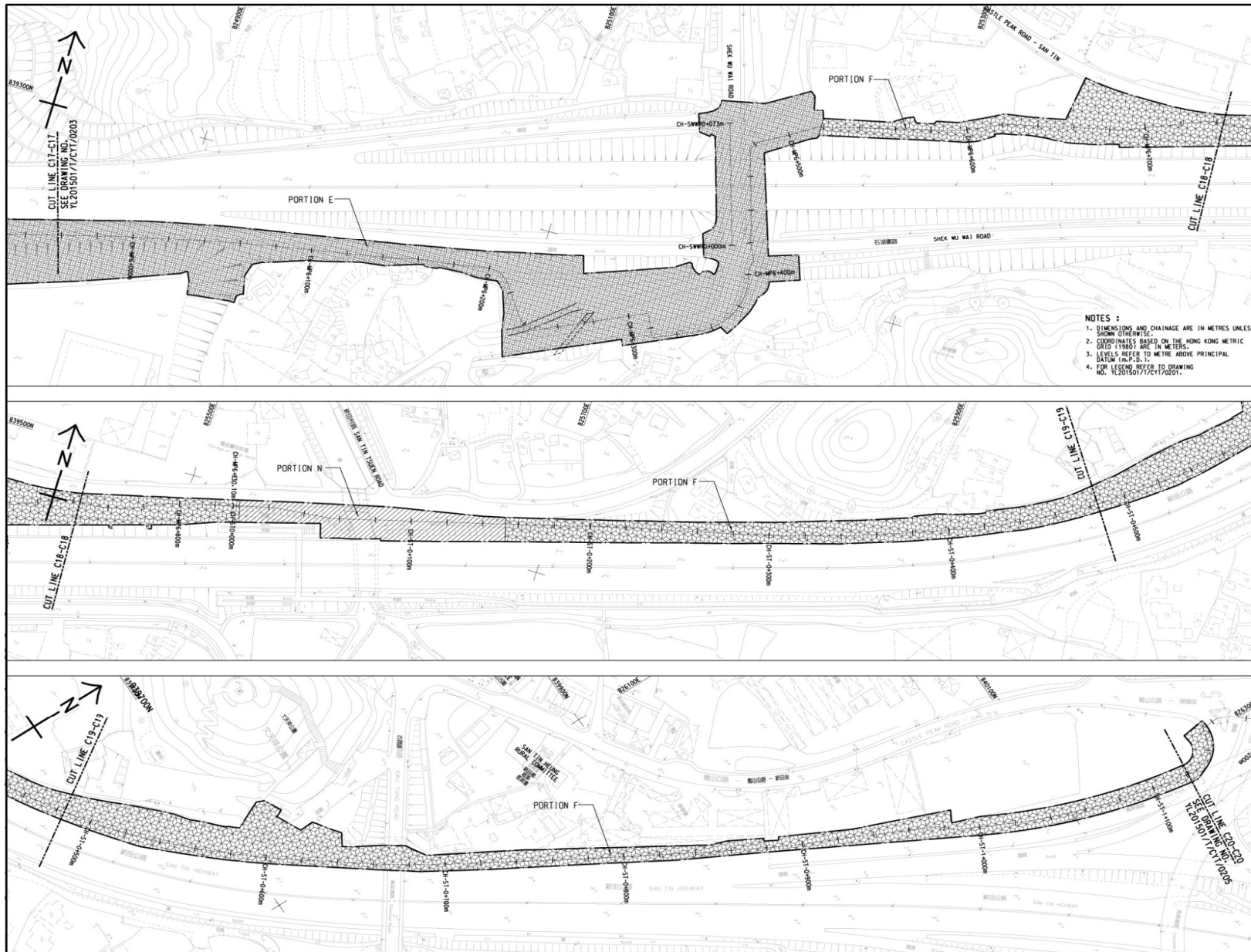


Title

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

Scale	N.T.S	Project No.	MA16036
Date	Dec-16	Figure	1d



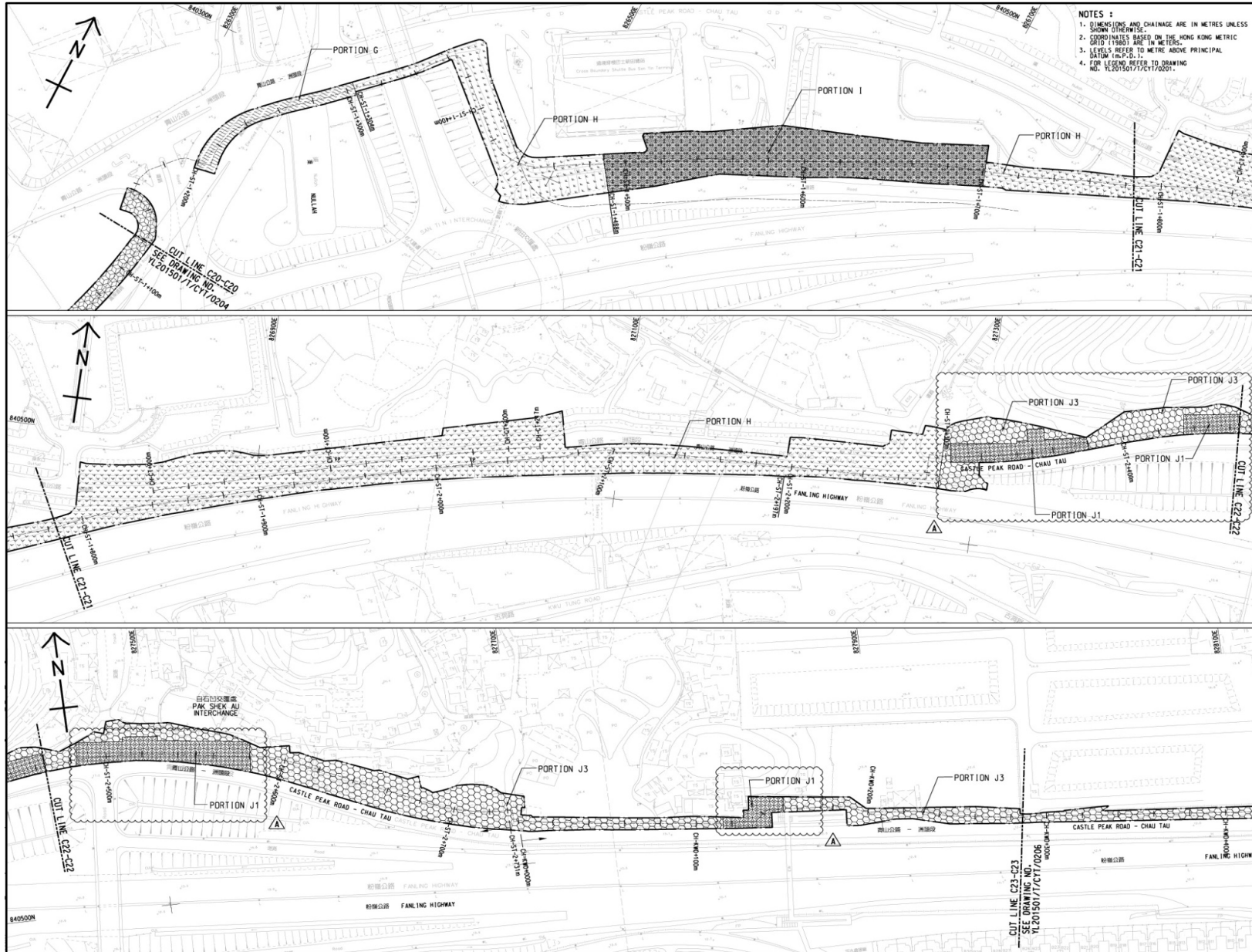


Title

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

Scale	N.T.S	Project No.	MA16036
Date	Dec-16	Figure	1e



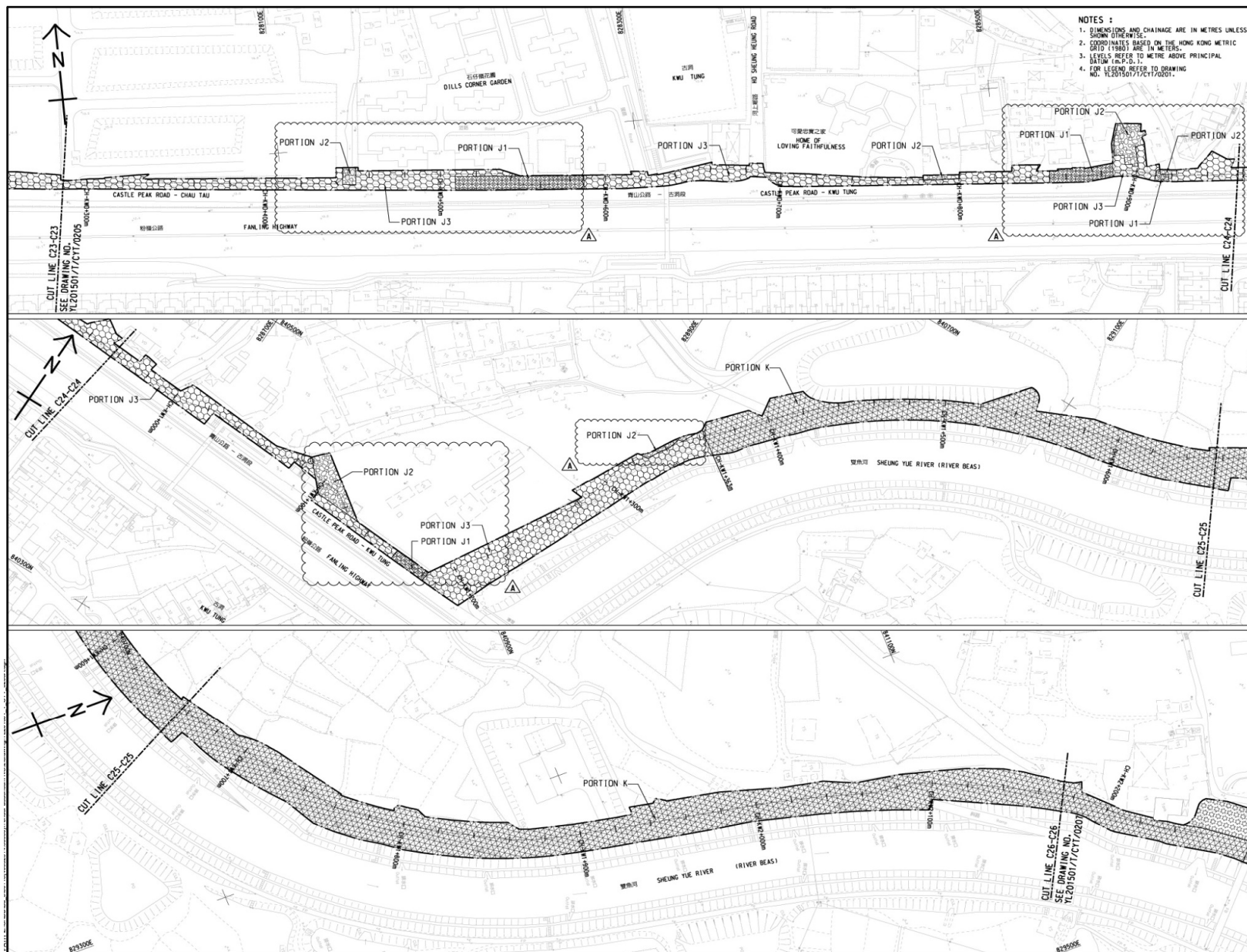


Title

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

Scale	N.T.S	Project No.	MA16036
Date	Dec-16	Figure	1f

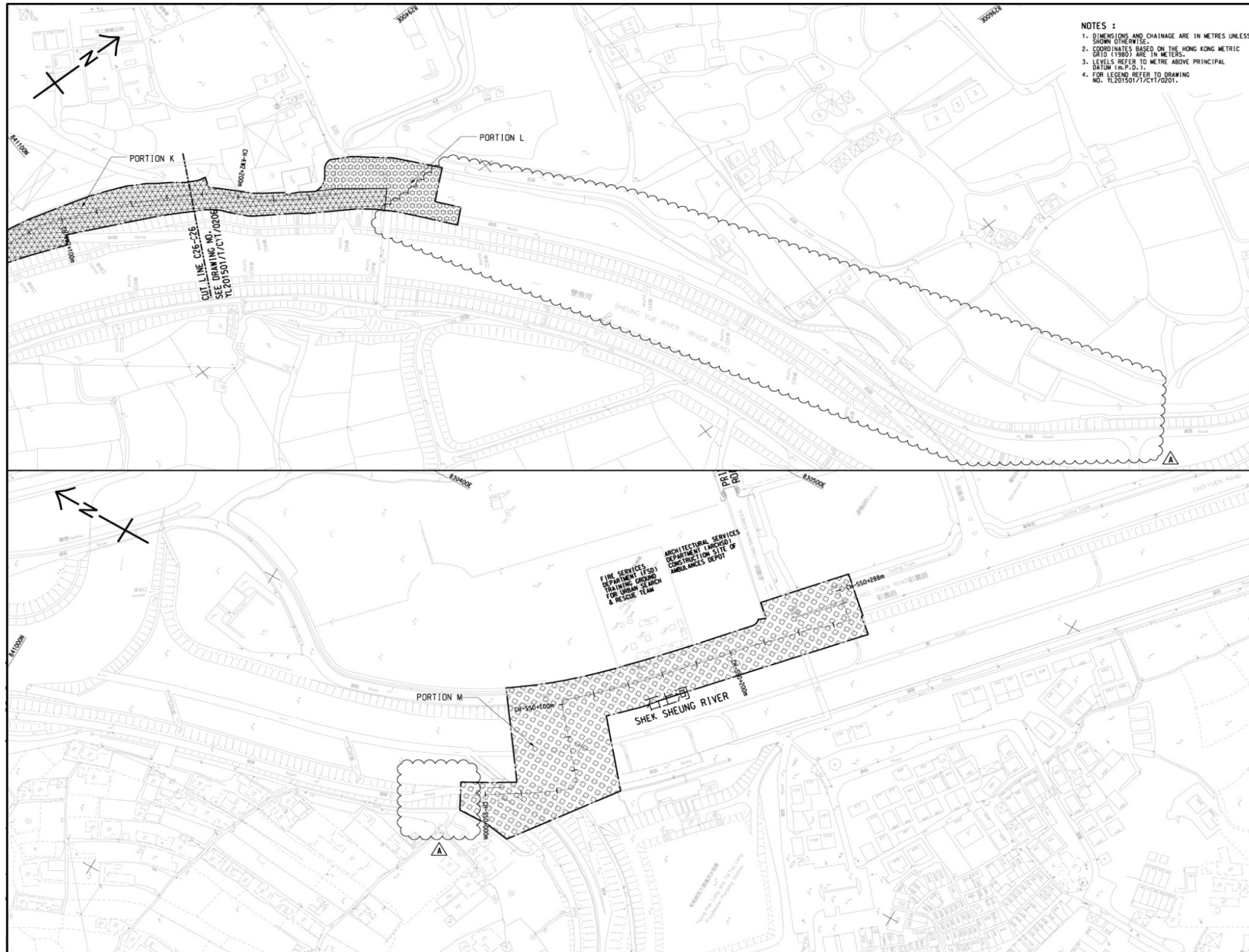
CINOTECH



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

Scale	N.T.S	Project No.	MA16036
Date	Dec-16	Figure	1g





Title

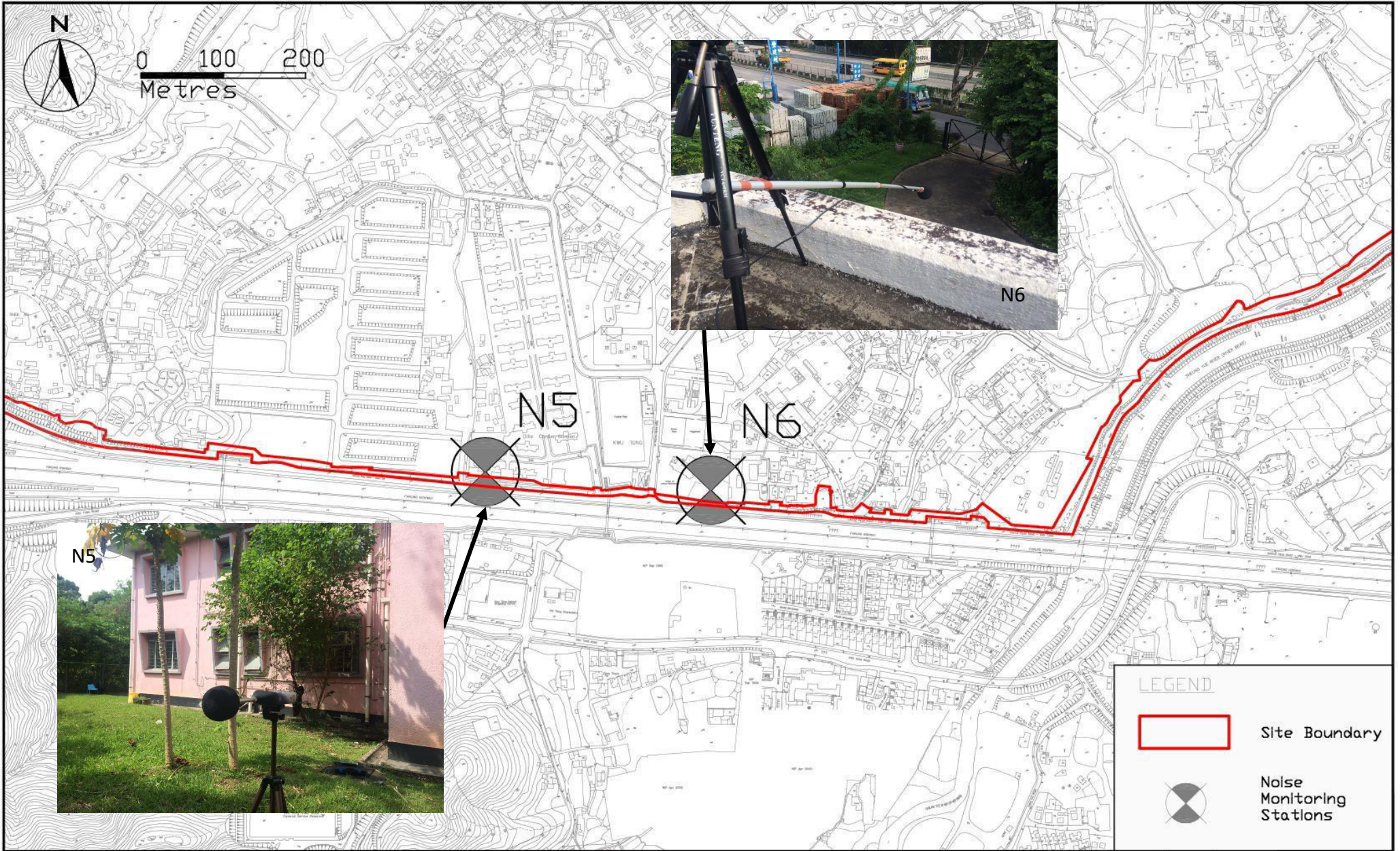
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 Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works
 Design and Construction
 Site Layout Plan

Scale	N.T.S	Project No.	MA16036
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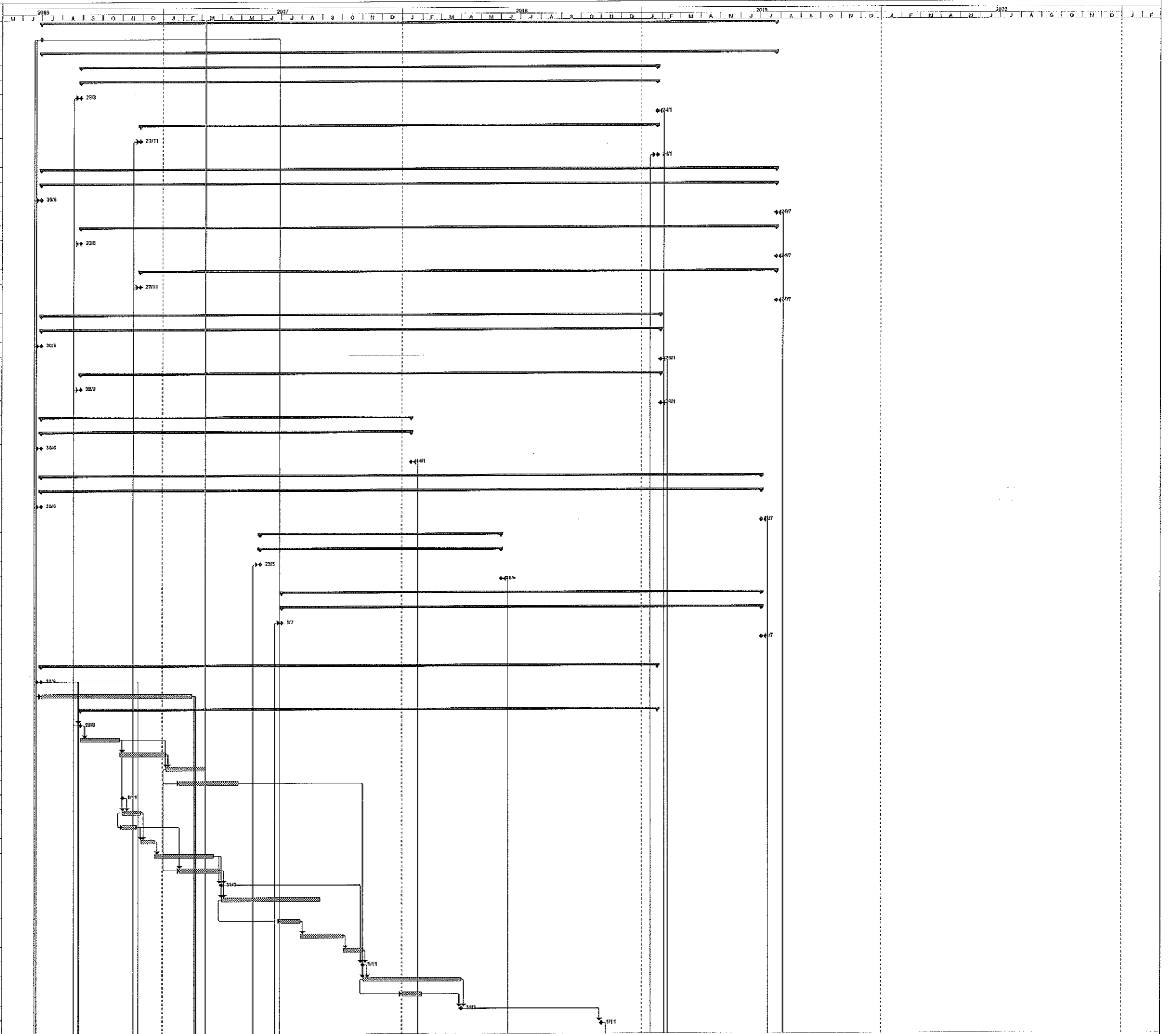
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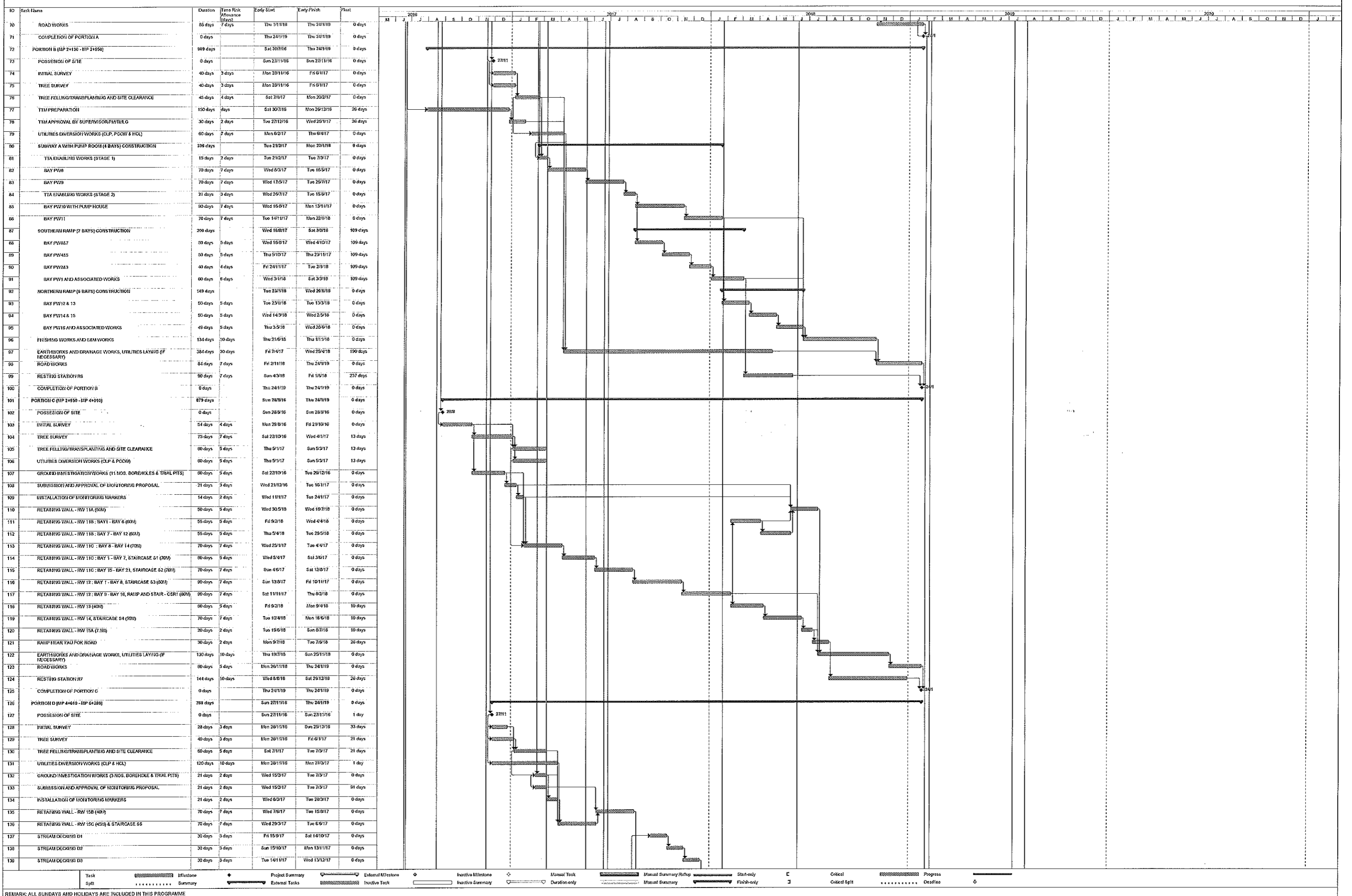
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JOB No.	MA16036	FIGURE NO.	2c
		REV	-

**APPENDIX A
WORK PROGRAMME**

ID	Task Name	Duration	Tree Risk Allowance (days)	Early Start	Early Finish	Float
1	CONTRACT DURATION (ALL WORKS EXCEPT LANDSCAPING AND ESTABLISHMENT)	1120 days		Thu 30/9/16	Wed 24/7/19	493 days
2	COMMENCEMENT OF CONTRACT	0 days		Thu 30/9/16	Thu 30/9/16	0 days
3	ACCESS DATES AND COMPLETION DATES FOR CONTRACTS	1120 days		Thu 30/9/16	Wed 24/7/19	493 days
4	SECTION W1 (PORTION A, B, O & Q)	879 days		Sun 28/9/16	Thu 24/7/19	674 days
5	PORTION A & C	879 days		Sun 28/9/16	Thu 24/7/19	674 days
6	ACCESS DATE	0 days		Sun 28/9/16	Sun 28/9/16	1553 days
7	COMPLETION DATE	0 days		Thu 24/7/19	Thu 24/7/19	674 days
8	PORTION B & D	788 days		Sun 27/11/16	Thu 24/7/19	674 days
9	ACCESS DATE	0 days		Sun 27/11/16	Sun 27/11/16	1492 days
10	COMPLETION DATE	0 days		Thu 24/7/19	Thu 24/7/19	674 days
11	SECTION W2 (PORTION E, F, G, H, I & J)	1120 days		Thu 30/9/16	Wed 24/7/19	493 days
12	PORTION O, I & N	1120 days		Thu 30/9/16	Wed 24/7/19	493 days
13	ACCESS DATE	0 days		Thu 30/9/16	Thu 30/9/16	1613 days
14	COMPLETION DATE	0 days		Wed 24/7/19	Wed 24/7/19	493 days
15	PORTION E & H	1069 days		Sun 28/9/16	Wed 24/7/19	493 days
16	ACCESS DATE	0 days		Sun 28/9/16	Sun 28/9/16	1553 days
17	COMPLETION DATE	0 days		Wed 24/7/19	Wed 24/7/19	493 days
18	PORTION F	969 days		Sun 27/11/16	Wed 24/7/19	493 days
19	ACCESS DATE	0 days		Sun 27/11/16	Sun 27/11/16	1492 days
20	COMPLETION DATE	0 days		Wed 24/7/19	Wed 24/7/19	493 days
21	SECTION W3 (PORTION K, J1)	944 days		Thu 30/9/16	Tue 23/7/19	669 days
22	PORTION K	944 days		Thu 30/9/16	Tue 23/7/19	669 days
23	ACCESS DATE	0 days		Thu 30/9/16	Thu 30/9/16	1613 days
24	COMPLETION DATE	0 days		Tue 23/7/19	Tue 23/7/19	669 days
25	PORTION J1	884 days		Sun 28/9/16	Tue 23/7/19	669 days
26	ACCESS DATE	0 days		Sun 28/9/16	Sun 28/9/16	1553 days
27	COMPLETION DATE	0 days		Tue 23/7/19	Tue 23/7/19	669 days
28	SECTION W4	664 days		Thu 30/9/16	Sun 14/11/18	1049 days
29	PORTION L	664 days		Thu 30/9/16	Sun 14/11/18	1049 days
30	ACCESS DATE	0 days		Thu 30/9/16	Thu 30/9/16	1613 days
31	COMPLETION DATE	0 days		Sun 14/11/18	Sun 14/11/18	1049 days
32	SECTION W5	1097 days		Thu 30/9/16	Mon 1/7/19	616 days
33	PORTION M	1097 days		Thu 30/9/16	Mon 1/7/19	616 days
34	ACCESS DATE	0 days		Thu 30/9/16	Thu 30/9/16	1613 days
35	COMPLETION DATE	0 days		Mon 1/7/19	Mon 1/7/19	616 days
36	SECTION W6	387 days		Mon 29/5/17	Thu 31/5/18	912 days
37	PORTION P	387 days		Mon 29/5/17	Thu 31/5/18	912 days
38	ACCESS DATE	0 days		Mon 29/5/17	Mon 29/5/17	1279 days
39	COMPLETION DATE	0 days		Thu 31/5/18	Thu 31/5/18	912 days
40	SECTION W7	739 days		Sat 1/7/17	Mon 1/7/19	616 days
41	PORTION J2 & J3	739 days		Sat 1/7/17	Mon 1/7/19	616 days
42	ACCESS DATE	0 days		Sat 1/7/17	Sat 1/7/17	1246 days
43	COMPLETION DATE	0 days		Mon 1/7/19	Mon 1/7/19	616 days
44	SECTION W8 (PORTION A, B, C & D)	839 days		Thu 30/9/16	Thu 24/7/19	0 days
45	STARTING DATE OF CONTRACT	0 days		Thu 30/9/16	Thu 30/9/16	0 days
46	APPLICATION FOR INDIVIDUAL EXCAVATION PERMIT FOR SECTION W1	230 days		Thu 30/9/16	Tue 14/2/17	0 days
47	PORTION A - POK WAI ROAD SOUTH (MP 14000 - MP 24130)	879 days		Sun 28/9/16	Thu 24/7/19	0 days
48	POSSESSION OF SITE	0 days		Sun 28/9/16	Sun 28/9/16	0 days
49	INITIAL SURVEY	60 days	3 days	Mon 28/9/16	Thu 27/10/16	0 days
50	TREE SURVEY	70 days	3 days	Fri 28/10/16	Thu 9/1/17	0 days
51	TREE FELLING / TRANSPLANTING AND SITE CLEARANCE (FOR NEW OLD MEMO)	60 days	5 days	Fri 6/1/17	Mon 6/3/17	0 days
52	UTILITIES DIVERSION WORKS (CLP & PCCW)	90 days	7 days	Fri 27/1/17	Wed 28/4/17	189 days
53	START DATE OF 1ST DRY SEASON	0 days		Tue 1/11/16	Tue 1/11/16	12 days
54	GROUND INVESTIGATION WORKS (1 NO. BOREHOLE & TRIAL PITS)	29 days	2 days	Tue 1/11/16	Mon 28/11/16	12 days
55	SUBMISSION AND APPROVAL OF MONITORING PROPOSAL	21 days	2 days	Tue 1/11/16	Mon 27/11/16	19 days
56	INSTALLATION OF MONITORING MARKERS	21 days	2 days	Tue 28/11/16	Mon 19/12/16	12 days
57	RETAINING WALL - RW 6A (200)	90 days	5 days	Tue 28/12/16	Sun 19/3/17	12 days
58	RETAINING WALL - RW 6B (400)	64 days	5 days	Fri 27/1/17	Fri 31/3/17	0 days
59	END DATE OF 1ST DRY SEASON	0 days		Fri 31/3/17	Fri 31/3/17	0 days
60	EARTHWORKS AND DRAINAGE WORKS, UTILITIES LAYING (IF NECESSARY) BETWEEN /SP1400 TO MP 14500 (EXCLUDING RETAINING WALL RW7, 7A & 7B)	150 days	10 days	Sat 1/4/17	Mon 28/3/17	0 days
61	RETAINING WALL - RW7 (200)	30 days	4 days	Fri 30/3/17	Sat 29/7/17	0 days
62	RETAINING WALL - RW 7A (870)	60 days	7 days	Sun 30/3/17	Mon 2/10/17	0 days
63	RETAINING WALL - RW 7B (200)	30 days	3 days	Tue 3/10/17	Wed 1/11/17	0 days
64	START DATE OF 2ND DRY SEASON	0 days		Wed 1/11/17	Wed 1/11/17	0 days
65	EARTHWORKS AND DRAINAGE WORKS, UTILITIES LAYING (IF NECESSARY) BETWEEN /SP1400 TO MP 24100	150 days	10 days	Thu 2/11/17	Sat 3/3/18	0 days
66	STAIRCASE	30 days	3 days	Mon 1/11/18	Tue 30/1/18	60 days
67	END DATE OF 2ND DRY SEASON	0 days		Sat 3/3/18	Sat 3/3/18	0 days
68	START DATE OF 3RD DRY SEASON	0 days		Thu 1/1/18	Thu 1/1/18	0 days

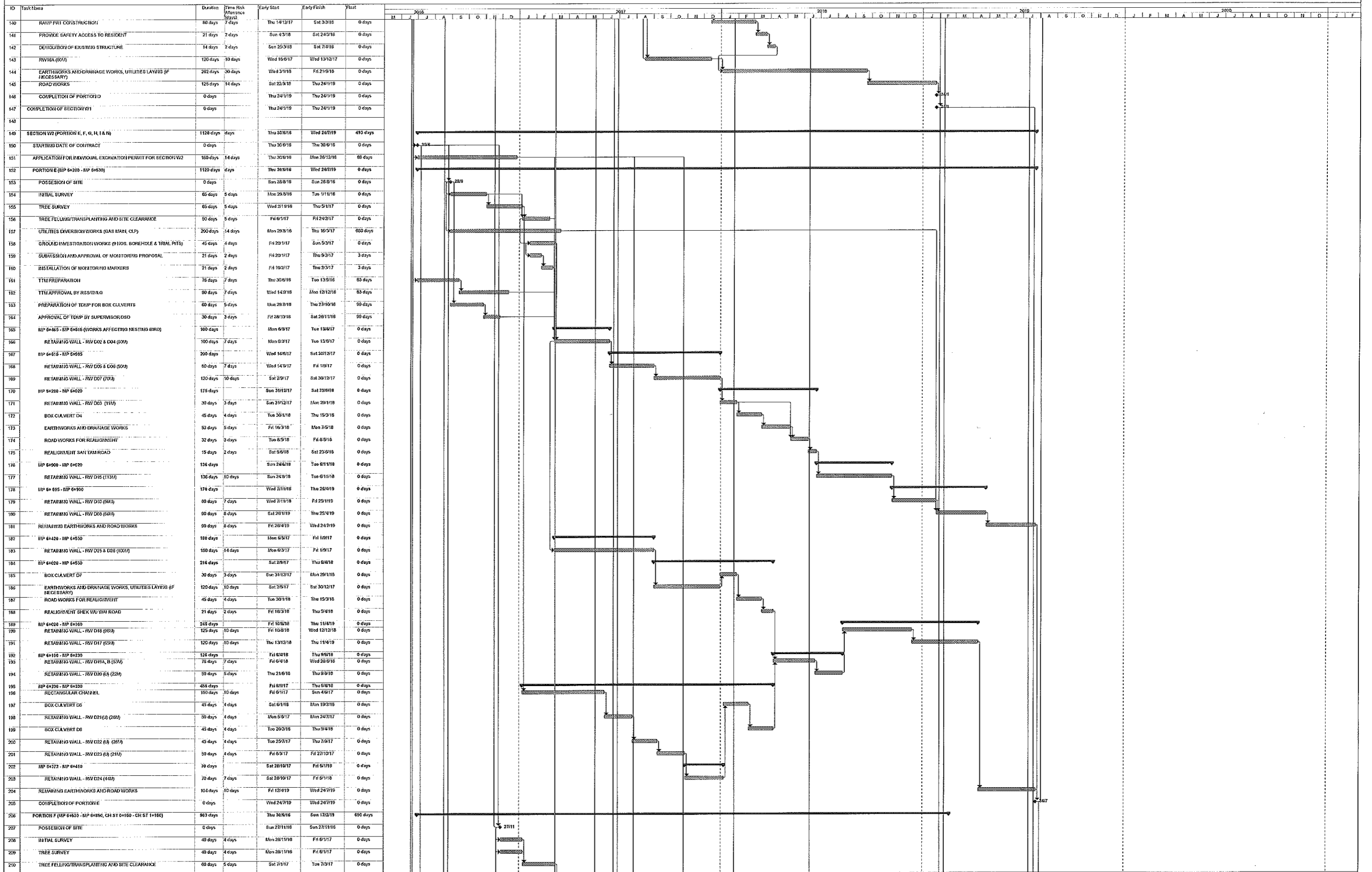


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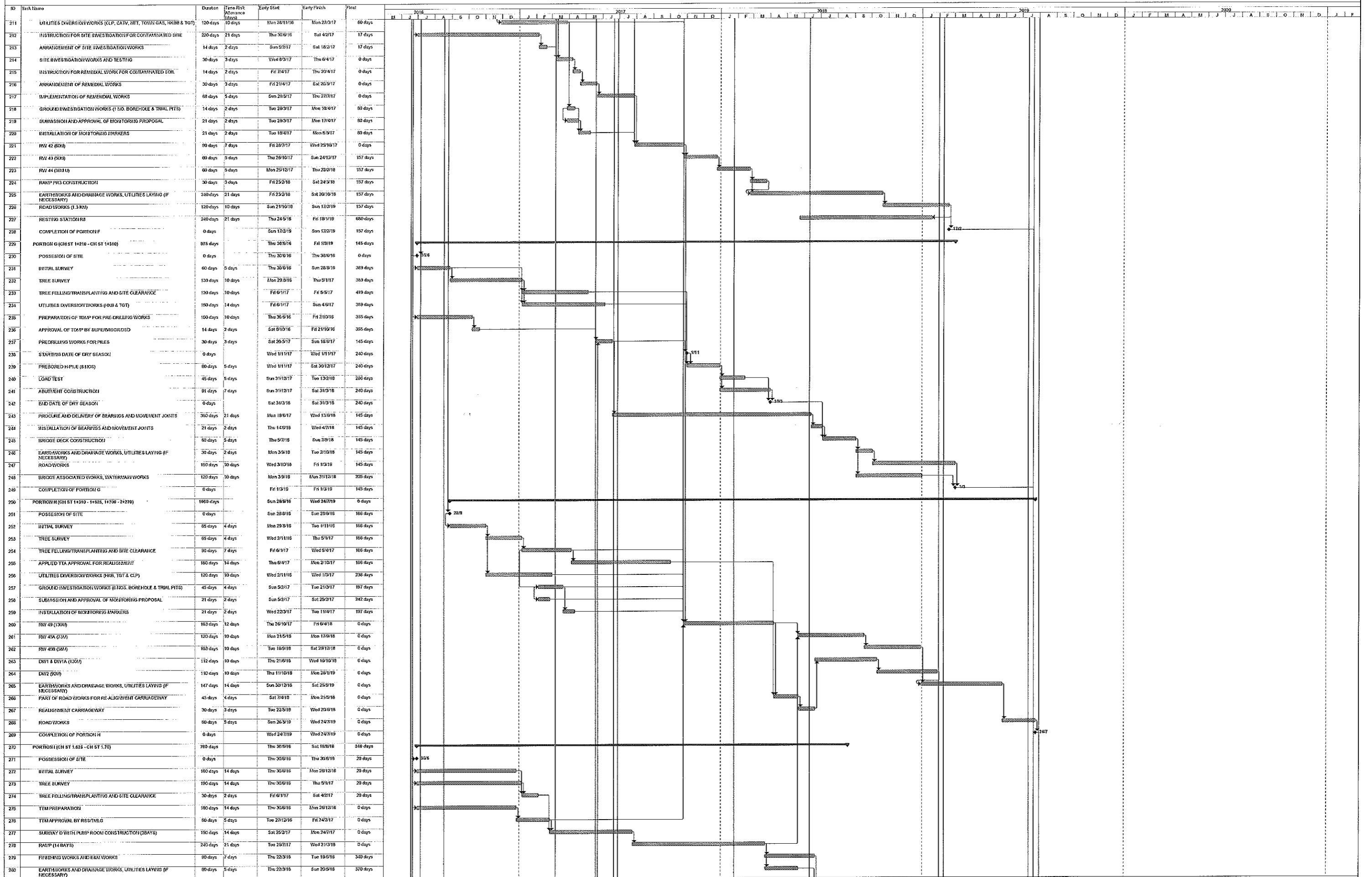


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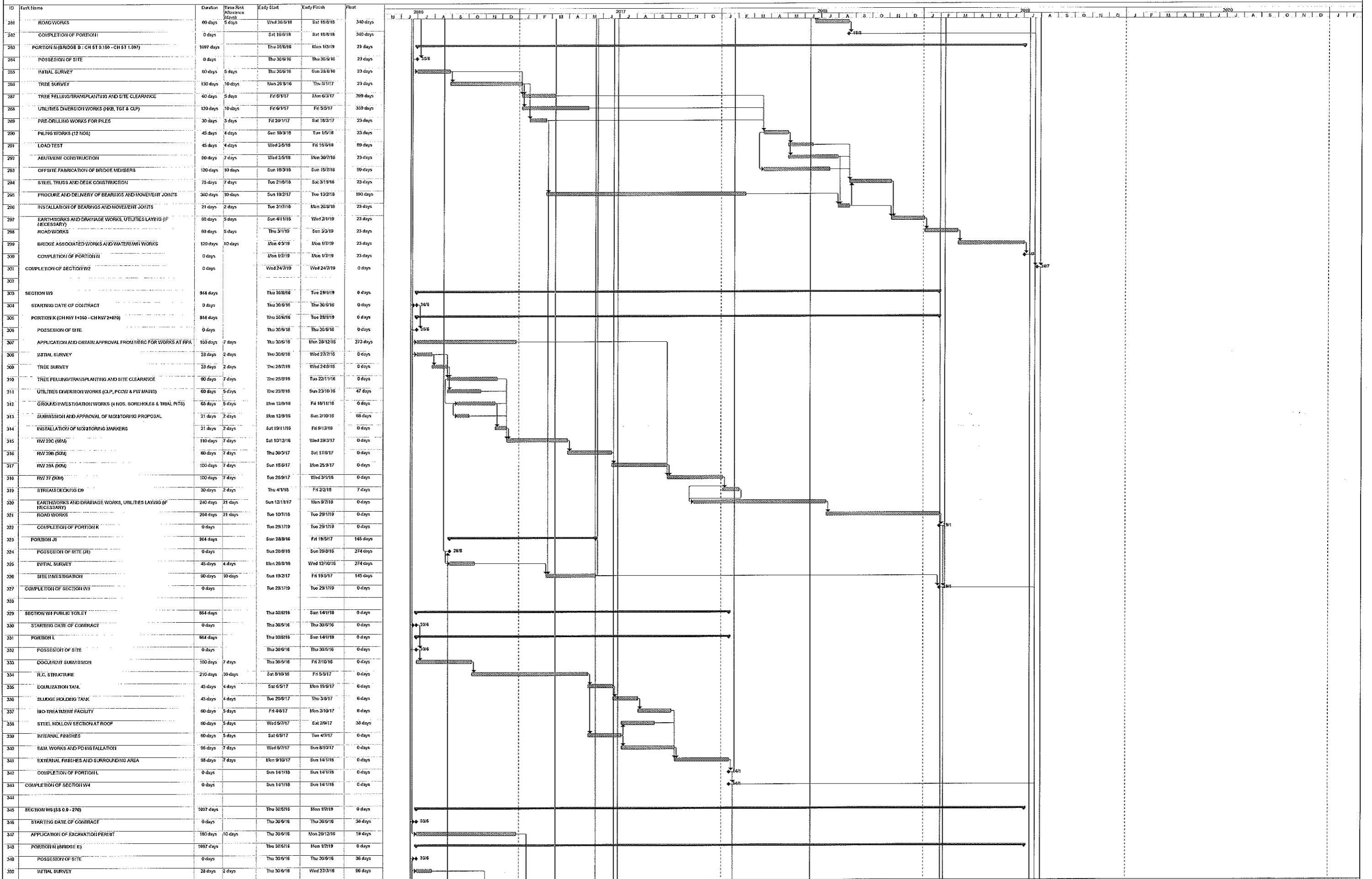
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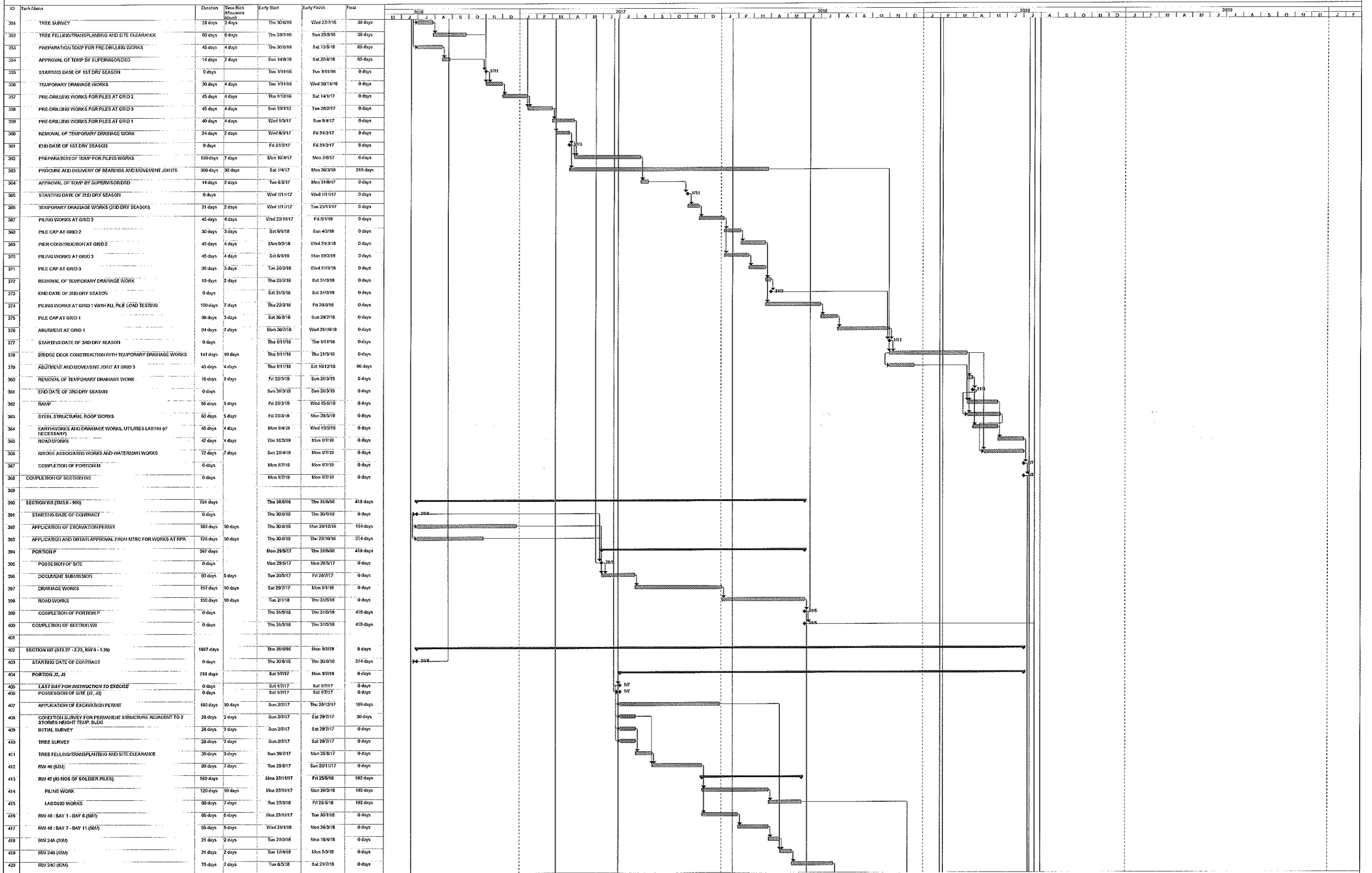
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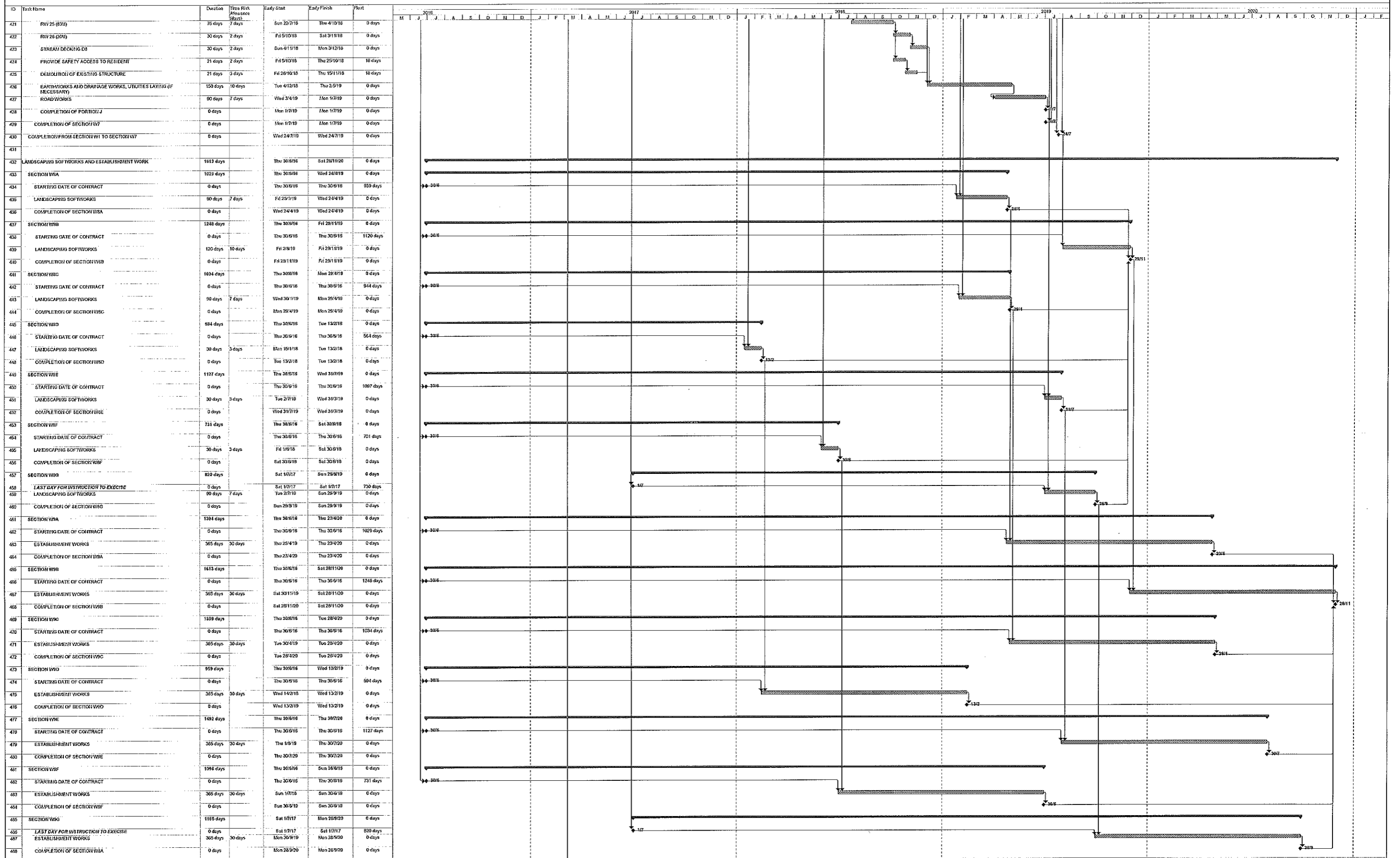
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**APPENDIX B
ACTION AND LIMIT LEVELS FOR
NOISE**

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/160819C
Date of Issue:	2016-08-22
Date Received:	2016-08-19
Date Tested:	2016-08-19
Date Completed:	2016-08-22
Next Due Date:	2017-08-21

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 21460
Microphone No.	: 43679
Equipment No.	: N-08-09

Test conditions:

Room Temperature	: 24 degree Celsius
Relative Humidity	: 58%

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

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/160930B
Date of Issue:	2016-10-03
Date Received:	2016-09-30
Date Tested:	2016-09-30
Date Completed:	2016-10-03
Next Due Date:	2017-10-02

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24791
Equipment No.	: N-09-04

Test conditions:

Room Temperature	: 25 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 (February 2017)

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

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

Agreement No. CE 67/2015 (HY)
Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction
Tentative Impact Noise Monitoring Schedule (March 2017)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Mar	2-Mar	3-Mar	4-Mar
				Noise		
5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar
			Noise			
12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar
			Noise			
19-Mar	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar
		Noise				
26-Mar	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	
	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 - HKMLC Wong Chan Sook Ying Memorial School							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Feb-17	9:20	Cloudy	60.4	63.6	56.7	62.2	60.4 Measured ≤ Baseline
16-Feb-17	9:25	Sunny	61.3	63.9	56.8		61.3 Measured ≤ Baseline
23-Feb-17	16:00	Cloudy	60.3	62.2	57.2		60.3 Measured ≤ Baseline

Location N2 - Bethel High School							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Feb-17	13:50	Cloudy	60.0	62.6	56.3	55.2	58.3
16-Feb-17	10:10	Sunny	61.8	64.2	56.7		60.7
23-Feb-17	15:15	Cloudy	62.7	64.9	52.2		61.8

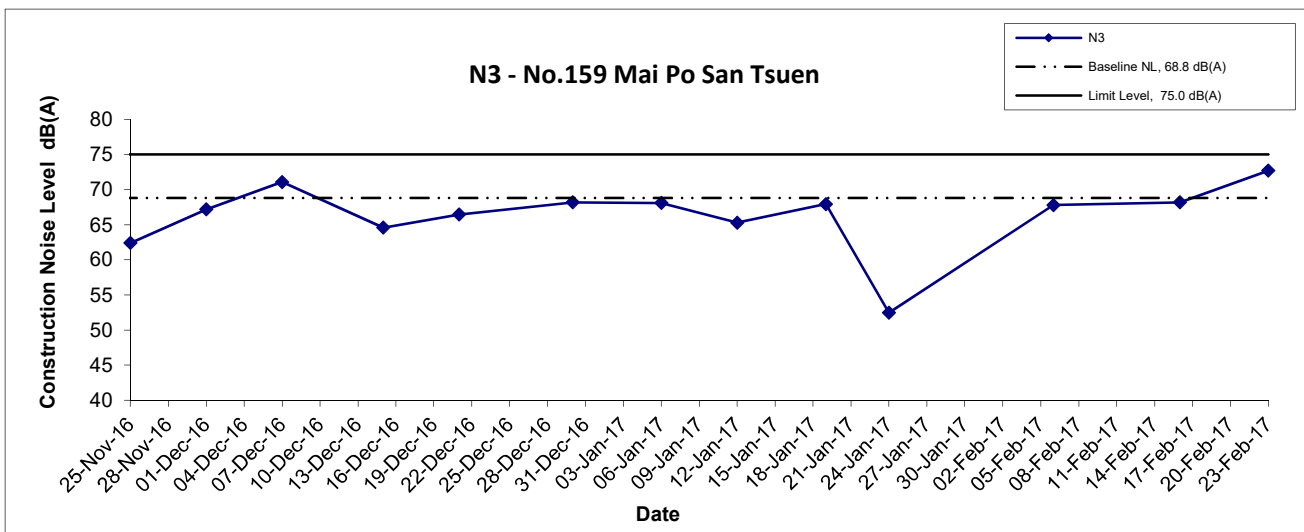
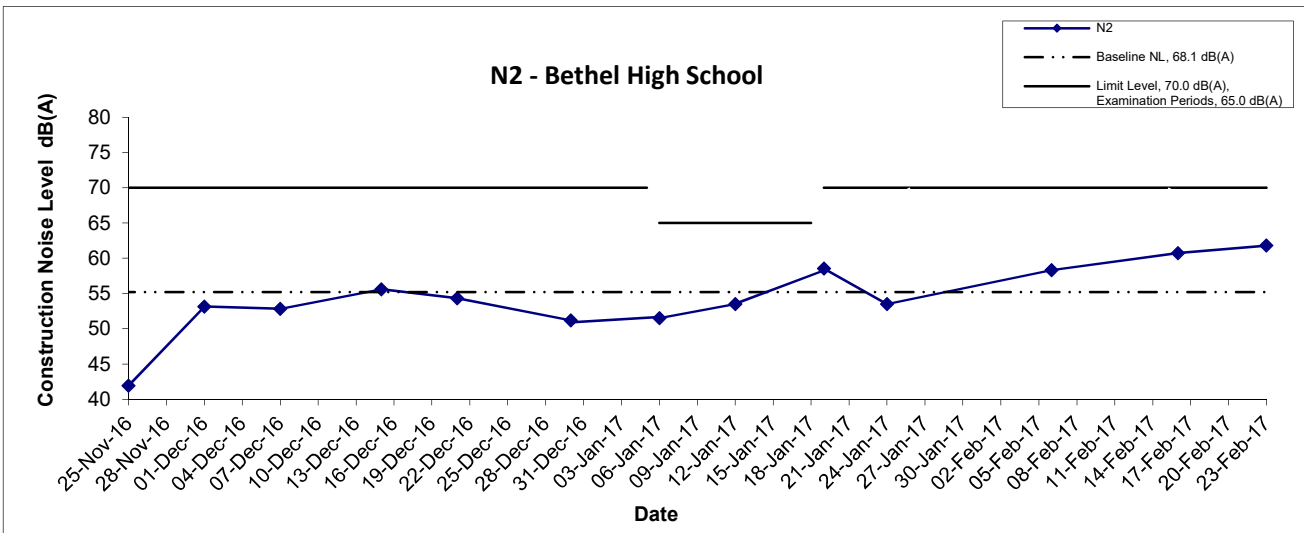
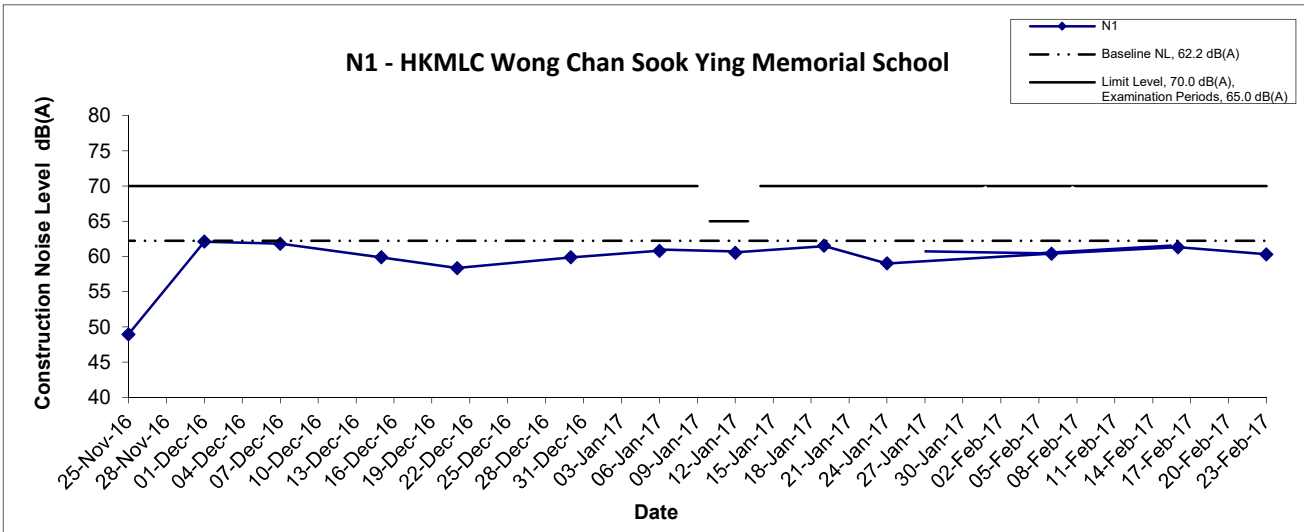
Location N3 - No.159 Mai Po San Tsuen							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Feb-17	9:20	Cloudy	67.8	70.1	64.9	68.8	67.8 Measured ≤ Baseline
16-Feb-17	11:00	Sunny	71.5	74.4	68.8		68.2
23-Feb-17	13:00	Cloudy	74.2	76.1	68.8		72.7

Location N5 - Block 2, Dills Corner Garden							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Feb-17	10:55	Cloudy	70.2	73.9	66.6	70.7	70.2 Measured ≤ Baseline
16-Feb-17	13:50	Sunny	72.2	75.5	67.9		66.9
23-Feb-17	10:00	Cloudy	71.4	74.0	67.1		63.1

Location N6 - Home of Loving Faithfulness							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Feb-17	11:35	Cloudy	70.4	72.8	65.7	72.0	70.4 Measured ≤ Baseline
16-Feb-17	14:30	Sunny	70.7	72.9	67.6		70.7 Measured ≤ Baseline
23-Feb-17	10:50	Cloudy	69.8	71.6	66.2		69.8 Measured ≤ Baseline

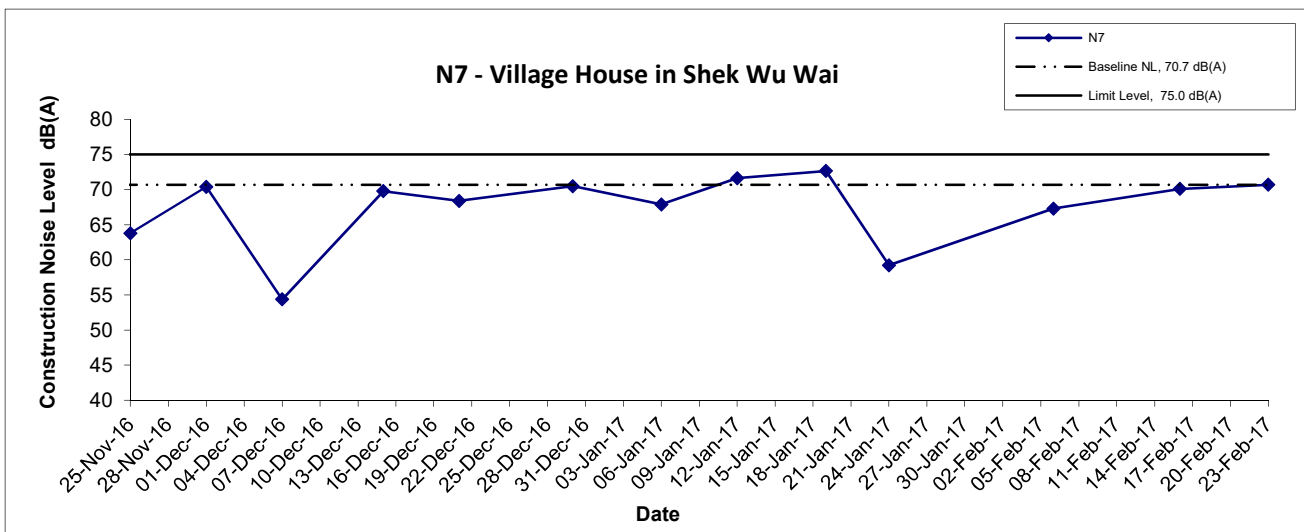
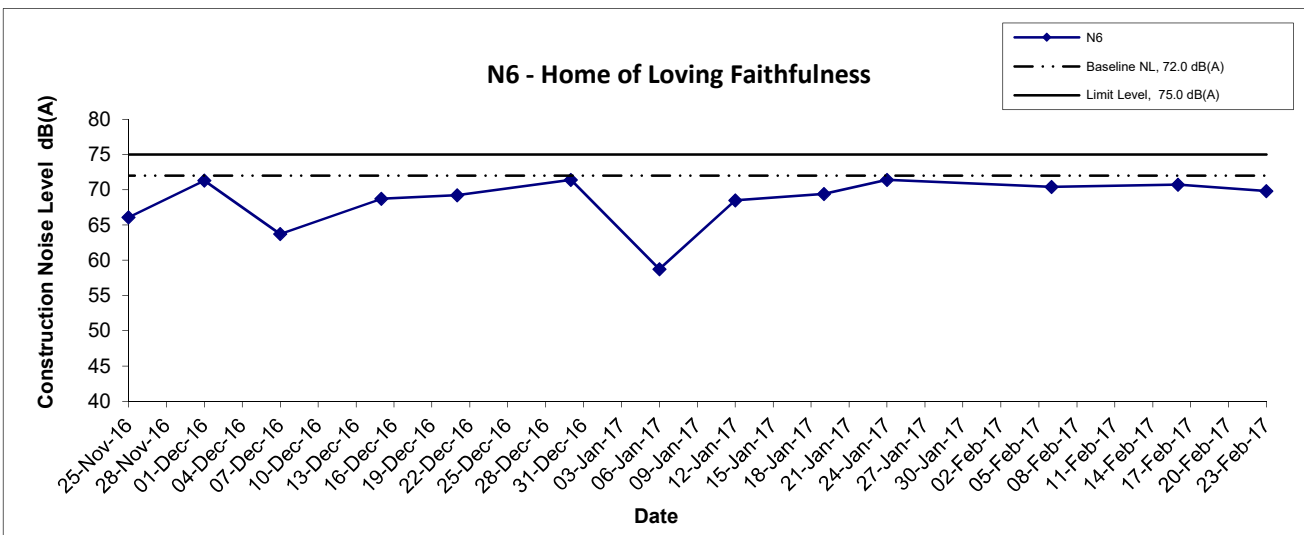
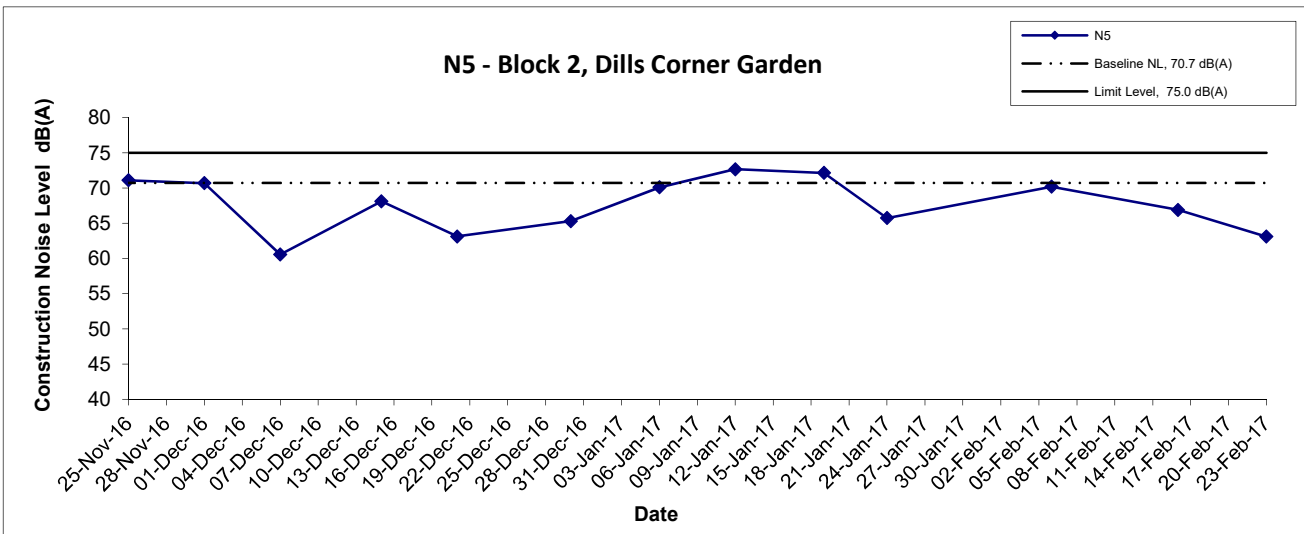
Location N7 - Village House in Shek Wui Wai							
Date	Time	Weather	Unit: dB (A) (30-min)				
			Measured Noise Level			Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Feb-17	10:10	Cloudy	67.3	69.6	64.2	70.7	67.3 Measured ≤ Baseline
16-Feb-17	13:00	Sunny	70.1	72.7	66.2		70.1 Measured ≤ Baseline
23-Feb-17	13:45	Cloudy	73.7	74.1	66.7		70.7

Noise Levels



Title Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale	Project No.	CINOTECH
	N.T.S	MA16036	
	Date	Appendix	
	Feb 17	E	

Noise Levels



Title Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale	Project No.	CINOTECH
	N.T.S	MA16036	
	Date	Appendix	
	Feb 17	E	

APPENDIX F
SUMMARY OF EXCEEDANCE

Agreement No. CE 67/2015 (HY)

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

Appendix F – Summary of Exceedance

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

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

**APPENDIX G
SITE AUDIT SUMMARY**

Agreement No. CE 67/2015 (HY)

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

Inspection Information

Checklist Reference Number	170208
Date	8 February 2017 (Wednesday)
Time	10:00-12:30

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

Ref. No.	Remarks/Observations	Related Item No.
170208-001	<p>B. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>C. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>D. Construction Noise Impact</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>E. Waste / Chemical Management</p> <ul style="list-style-type: none"> Rubbish bins in Portion K should be maintained more frequently. <p>F. Ecology and Fisheries</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>G. Landscape & Visual</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>H. Permits/Licences</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>I. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit session (Ref. No.: 170124), items 170124-O01, 170124-O02, 170124-O03, 170124-O04, 170124-F05 and 170124-F06 were remarked as 170208-F02, 170208-F03, 170208-F04, 170208-F05, 170208-F06 and 170208-F07 respectively. Review will be needed during next audit session. 	E ii

	Name	Signature	Date
Recorded by	Kelvin Koo		8 February 2017
Checked by	Dr. Priscilla Choy		8 February 2017

Agreement No. CE 67/2015 (HY)

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

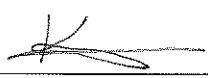
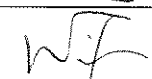
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	170215
Date	15 February 2017 (Wednesday)
Time	10:00-12:30

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

Ref. No.	Remarks/Observations	Related Item No.
170215-001	<p>B. Water Quality</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>C. Air Quality</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>D. Construction Noise Impact</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>E. Waste / Chemical Management</p> <ul style="list-style-type: none">Drip tray should be provided to chemical containers in Portion K and Works Area 3. <p>F. Ecology and Fisheries</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>G. Landscape & Visual</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>H. Permits/Licences</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>I. Others</p> <ul style="list-style-type: none">Follow-up on previous audit session (Ref. No.: 170208), items 170208-O01, 170208-F02, 170208-F04 and 170208-F07 were remarked as 170215-F02, 170215-F03, 170215-O01 and 170215-F04 respectively. Review will be needed during next audit session.	E 8

	Name	Signature	Date
Recorded by	Kelvin Koo		15 February 2017
Checked by	Dr. Priscilla Choy		15 February 2017

Agreement No. CE 67/2015 (HY)

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


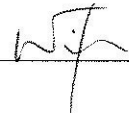
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	170221
Date	21 February 2017 (Tuesday)
Time	10:00-12:30

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

Ref. No.	Remarks/Observations	Related Item No.
170221-O01	B. Water Quality <ul style="list-style-type: none">Water inside the wheel washing bay of Portion A is observed silty. The Contractor is reminded to clear the water regularly to increase the efficiency of wheel washing.	B 10iii & iv
170221-R02	C. Air Quality <ul style="list-style-type: none">To provide frequent water spray to unpaved area in Portion K. D. Construction Noise Impact <ul style="list-style-type: none">No environmental deficiency was identified during site inspection.	C 6
170221-R03 170221-R04	E. Waste / Chemical Management <ul style="list-style-type: none">To clear the oil stain in unpaved area in Portion K.To avoid accumulation of general refuse and clear the waste properly at Portion K. F. Ecology and Fisheries <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. G. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. H. Permits/Licences <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. I. Others <ul style="list-style-type: none">Follow-up on previous audit session (Ref. No.: 170215), items 170215-F02 were remarked as 170221-R04. Review will be needed during next audit session.	E 8 E 1i & 1iii

	Name	Signature	Date
Recorded by	Kelvin Koo		21 February 2017
Checked by	Dr. Priscilla Choy		21 February 2017

Agreement No. CE 67/2015 (HY)

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

Inspection Information

Checklist Reference Number	170228
Date	28 February 2017 (Tuesday)
Time	14:00-16:30

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

Ref. No.	Remarks/Observations	Related Item No.
170228-001	<p>B. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>C. Air Quality</p> <ul style="list-style-type: none"> Tarpaulin coverage should be provided to the stockpiles in Portions A, C and Works Area 3 for dust suppression. 	C 7
170228-002	<p>D. Construction Noise Impact</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>E. Waste / Chemical Management</p> <ul style="list-style-type: none"> Drip tray should be provided to chemical containers in Portion K. <p>F. Ecology and Fisheries</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>G. Landscape & Visual</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>H. Permits/Licences</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>I. Others</p> <ul style="list-style-type: none"> Follow-up on previous audit session (Ref. No.: 170221), items 170221-001, 170221-R02 and 170221-R04 were remarked as 170228-F03, 170228-F04 and 170228-F05 respectively. Review will be needed during next audit session. 	E 8

	Name	Signature	Date
Recorded by	Kelvin Koo		28 February 2017
Checked by	Dr. Priscilla Choy		28 February 2017

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 being exceeded	<ol style="list-style-type: none"> 1. Notify IC(E) and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IC(E) and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IC(E); 2. Implement noise mitigation proposals.
Limit Level being exceeded	<ol style="list-style-type: none"> 1. Notify IC(E), ER, EPD and Contractor; 2. Identify source; 3. Repeat measurement to confirm findings 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IC(E), ER and EPD the causes & actions taken for the exceedances; 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly. 3. Supervise the implementation of remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of the 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IC(E) within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposal if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix H - Event and Action Plans

	<p>7. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring</p>		<p>work is responsible and instruct the Contractor to stop that portion of the work until the exceedance is abated.</p>	
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**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 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:	^
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> ● 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 	*
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> ● Restricting heights from which materials are to be dropped, as far as practicable to minimize the fugitive dust arising from unloading/ loading 	^
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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 	^
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> ● Travelling speeds should be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks 	^
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> ● Erection of hoarding of not less than 2.4 m high from ground level along the site boundary, where appropriate 	^
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> ● 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 	*

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.3.6.2	S.3.2.3	<ul style="list-style-type: none"> 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): <ul style="list-style-type: none"> - 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 Table 5-8	S.4.2.19	Noise barrier in the form of site hoarding shall be used for the following PMEs where practicable: <ul style="list-style-type: none"> - 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
		<ul style="list-style-type: none"> - 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 PME's where practicable: <ul style="list-style-type: none"> - air compressor - hand-held breaker 	N/A(1)
S.5.6.2	S.4.2.19	The barrier / enclosure material's surface mass shall be in excess of 7 kg/m ² .	^
S.5.6.6	S.4.2.19	Use of alternative quieter plant such as road ripper, excavator mounted instead of handheld breaker during levelling/excavation works.	^
S.5.6.8	S.4.2.19	The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD	^
S.5.6.8	S.4.2.19	The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines	^
S.5.6.8	S.4.2.19	Before commencing any work, the Contractor shall submit to the project Engineer for approval the method of working, equipment and noise mitigation measures intended to be used at the site	^
S.5.6.8	S.4.2.19	The Contractor shall devise and execute working methods to minimize the noise impact on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented	^
S.5.6.8	S.4.2.19	Noisy equipment and noisy activities should be located as far away from the NSRs as is practical	^
S.5.6.8	S.4.2.19	Unused equipment should be turned off. PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided	^
S.5.6.8	S.4.2.19	Regular maintenance of all plant and equipment	^
S.5.6.8	S.4.2.19	Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable	N/A

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	^
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	^
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	^
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);	^
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. 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 area near plant workshop/ maintenance areas	N/A
S.6.6.1	S.5.2.4	Chemical waste arising from the site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (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.	^
Construction Waste Management			
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	^

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	<ul style="list-style-type: none"> ● The reuse/ recycling of all materials on site shall be investigated and exhausted prior to treatment/ disposal off-site 	^
S.7.4.1	S.6.2.6	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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) 	^
S.7.4.1	S.6.2.6	<ul style="list-style-type: none"> ● The Contractor shall be responsible for identifying what materials can be recycled/ reused, whether on-site or off-site. In the event of the latter, the Contractor shall make arrangements for the collection of the recyclable materials. Any remaining non-inert waste shall be collected and disposed of to the Public Filling Areas whilst any inert C&D materials shall be re-used on site as far as possible. Alternatively, if no use of the inert material can be found onsite, the materials can be delivered to a Public Fill Area or Public Fill Bank after obtaining the appropriate licence 	^
S.7.4.1	S.6.2.6	<ul style="list-style-type: none"> ● 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”. 	^

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.7.4.1	S.6.2.6	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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 	^
S.7.4.1	S.6.2.6	<ul style="list-style-type: none"> ● Toolbox talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling. 	^
S.7.4.1	S.6.2.6	<ul style="list-style-type: none"> ● 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. 	^
Land Contamination			
S.8.7.2 – S.8.7.3	S.7.2.2	Preparation of Contamination Assessment Plan (CAP), which should be submitted to EPD for endorsement, prior to investigation.	^

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	<p>The following control measures should be implemented when handling identified contaminated materials:</p> <ul style="list-style-type: none"> ▪ 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. 	N/A
S.8.7.5	S.7.3.1	<p><u>Management of Contaminated Soils</u></p> <ul style="list-style-type: none"> ▪ 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 	N/A

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		contaminated water requiring disposal and suspended solids in the wastewater stream	
Ecological & 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.	^
S.9.11.7	S.8.2.3 (Stage 1 only)	<i>In situ</i> 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.	^
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.	^
-	S.8.2.5 (Stage 1 only)	In order to avoid any adverse impact to the healthiness of the bamboo grove 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	^

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 (Stage 1) S.8.2.5 (Stage 2)	To prevent any negative impact to water quality as a result of site run-off, good site practice must be employed at all times, particularly in the areas close to fishponds. Practice Note for Professional Persons ProPECC PN1/94 – Construction Site Drainage shall be implemented.	^
S.10.5.4	S.8.2.8 (Stage 1) S.8.2.6 (Stage 2)	Along Pok Wai South Road, once the final construction sequencing is known, liaison with local residents and aquaculturists should be implemented in order to minimise temporary road blockages and to identify the best timing for works along this area.	N/A
S.10.5.3	S.8.2.9 (Stage 1) S.8.2.7 (Stage 2)	During wet seasons, surface run-off from the construction sites will need to be directed into storm drains via adequately designed wastewater treatment facilities such as sand traps, silt traps, oil interceptors and sediment settling basins. Works adjacent to the fishponds near NTMDC inside the Wetland Conservation Area (WCA) and Mai Po San Tsuen should be avoided, as far as practicable, during the wet season to avoid runoff into the fishponds.	^
-	S.8.2.10 (Stage 1 only)	The use of signage at the Resting Stations to indicate that wildlife may be present and that noise levels and activities should be kept to a minimum could be implemented. This may help to reduce any potential disturbance to wildlife from human activity. At Long Valley, to mitigate against potential indirect human disturbance to Greater Painted-snipe, planting could be undertaken as appropriate along the proposed cycle track at meander 8 to act as screening.	N/A
S.9.11.27	S.8.2.11 (Stage 1) S.8.2.9 (Stage 2)	The following good work practices are recommended: <ul style="list-style-type: none"> ▪ Avoid soil storage against trees; ▪ Fence off any potentially ecologically sensitive areas; ▪ 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
		<ul style="list-style-type: none"> ▪ 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 Heritage Impact			
S.11.5.1	S.9.2.1	Care should be taken during the construction stage to report any signs of possible discovery of artefacts.	N/A
Landscape and Visual			
<i>Detailed Design Phase</i>			
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 fallen 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	^

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	
<i>Construction Phase</i>			
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.	^
	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.	^
	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.	^
	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	^

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 government departments for approval under the lease conditions and in accordance with ETWB TCW No. 2/2004 and WB Technical Circular No. 14/2002.	N/A
	CP2.0	The tree preservation works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection specification would be included within the contract documents.	^
	CP2.1	Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-use.	^
	CP2.2	The soil will be stockpiled to a maximum height of 2m and will be either temporarily vegetated with hydroseeded grass during construction or covered with a waterproof covering to prevent erosion.	^
	CP2.3	The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. Alternatively, if this is not practicable, it should be considered for use elsewhere, including other projects.	^
	CP3.1	Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase.	N/A
	CP3.2	Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage.	^
	CP3.3	Screen the works area during the construction phase through the use of decorative hoarding along the site boundary facing adjacent VSRs	^
	CP4.1	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase	^
	CP4.2	Use of native plant species predominantly in the planting design for the buffer areas.	^
	CP4.3	The tree planting works should be implemented by approved Landscape Contractors	^

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.	^
	CP5.2	The implementation program should reserve enough time for advance tree transplanting preparation.	^

Remarks:	EM&A Manual for Stage 1 Works under EP-450/2013/A (App No.: VEP-478/2015) EM&A Manual for Stage 2 Works under EP-501/2015 (App No.: AEP-501/2015)	
	^ 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.	

**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

Appendix J – Summary of environmental complaint, warning, summon and notification of successful prosecution

Reporting Month: February 2017

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 2017 (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	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	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	0.06	-	-	-	0.06	0.124	0.1	0.1	0.1	-	0.07
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	0.04	-	-	-	0.04	0.124	0.05	0.05	0.05	-	0.06

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