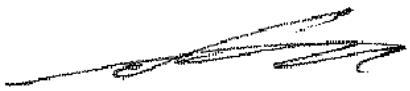
Civil Engineering and Development Department

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

Final EM&A Summary Report

(Version 1.1)

Approved By 

(Mr. KS Lee,
Environmental Team Leader)

REMARKS:

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

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

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ANEWR

Civil Engineering and Development Department
West Development Office
25/F., Tsuen Wan Government Offices
38 Sai Lau Kok Road
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Hong Kong

Your reference:

Our reference: HKCEDD09/50/107790

Date: 19 January 2022

Attention: Mr Thomas Chu

BY FAX & POST
(Fax no.: 2405 0456)

Dear Sirs

Agreement No.: NTW/01/2016
Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works
– Independent Environmental Checker
Final Environmental Monitoring and Audit Summary Report

We refer to emails of 5 October 2021 and 18 January 2022 from Cinotech Consultants Limited attaching a Final Environmental Monitoring and Audit Summary Report.

We have no comments and hereby verify the captioned report in accordance with Section 12.6 of the Environmental Monitoring and Audit Manual.

Should you have any queries, please do not hesitate to contact the undersigned or our Ms Karen Po on 2618 2831.

Yours faithfully
ANEWR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/LCCR/PKWK/lsmt

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EXECUTIVE SUMMARY

Introduction

1. This is the Final Environmental Monitoring and Audit (EM&A) Summary Report prepared by Cinotech Consultants Ltd. under "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 of the Project.

2. The major construction works were commenced in November 2016 and were substantially completed in April 2021.

Summary of Construction Works undertaken in the Construction Period

3. The major site activities undertaken in the construction period include:

Portion A - Site clearance, Ground investigation works, Construction of wheel washing facilities, Construction of trial pit, Utilities diversion works, Tree felling, Construction of retaining wall, Earthworks and drainage works, Construction of Cycle Track, Installation of Bicycle Parapet, Construction of Drainage Pipe, Installation of Light pole, Planting, Colour Dressing, CCTV for Drainage Pipe, Installation of Traffic Aids, Modification of Traffic Aids, General Cleaning

Portion B - Site clearance, Construction of wheel washing facilities, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of Subway A, Construction of U-channel, Construction of Cycle Track, Parapet Footing, Internal Finishing & E&M Works, Construction of Resting Station R6, Colour Dressing, Installation of Bicycle Parapet, Installation of Traffic Aids, Modification of Existing Carriageway

Portion C - Site clearance, Construction of wheel washing facilities, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of Retaining Wall, Construction of Resting Station R7, Construction of U-Channel, Laying Bituminous for Cycle Track, Parapet Footing, Planting, Shrubs Planting, Installation of Bicycle Parapet, Construction of Staircase, Installation of Traffic Aids, CCTV for Drainage Pipe, Installation of water point, Planting

Portion D - Site clearance, Ground investigation works, Construction of Drainage Pipe, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of Retaining Wall, Construction of Stream Decking, Construction of pedestrian ramp, Construction of Drainage Pipe, Realignment of San Tam Road, Construction of 16A, Construction of Planter Wall, Laying Road Kerb and Paving Block, Laying

Bituminous for Cycle Track, Backfilling, Installation of Bicycle Parapet, Installation of Traffic Aids, General Cleaning, CCTV for drainage pipe, Installation of Road Lighting

Portion E - Site clearance, Ground investigation works, Construction of wheel washing facilities, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of rectangular channel, Road works, Construction of Box Culvert, Construction of Retaining Wall Construction of Boundary Wall, Realignment of Mai Po Lung Road, Laying Road Kerb, Paving Block, Colour Dressing for Cycle Track, Installation of Bicycle Parapet and Railing, Construction of Footpath, Construction of Drainage Pipe / Channel, CCTV for Drainage Pipe, Installation of Road Lighting, General Cleaning

Portion F - Site clearance, Ground investigation works, Construction of wheel washing facilities, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Construction of Drainage Pipe, Construction of Retaining wall, Soil Treatment for RAP, Construction of Resting Station at Man Tin Cheung Park, Construction of Boundary Wall, Relocation of Existing Bus Stop, Construction of Resting Station R8, Installation of Traffic Aids, CCTV for Drainage Pipe, Installation of Road Lighting, General Cleaning

Portion G - Site clearance, Ground investigation works, Construction of trial pit, Utilities diversion works, Tree felling, Construction of Box Culvert C, Pre Bored H-piles and Abutment Construction, Load test, Relocation of Traffic Sign Gantry, Laying Bituminous for Cycle Track, Colour Dressing for Cycle Track, Installation of Railing, General Cleaning

Portion H - Site clearance, Ground investigation works, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Construction of Retaining Wall, Construction of Drainage, Construction of Ramp, Laying Road Kerb, Construction of Cross Ducting for Traffic Signal, Realignment of Castle Peak Road, Installation of Road Lighting, General Cleaning, Construction of Drainage pipe at Castel Peak Road – Chau Tau

Portion I - Site clearance, Tree felling, Construction of Subway D, Construction of Drainage Pipe, Construction of Ramp, Internal Finishing, Reinstatement of Carriageway, Installation of Structural frame of Roofing, Internal Finishing & E&M Works for Subway D, Installation of Steel Roof, Installation of Flooding Warning System, Reinstate the Existing Slope and Carriageway, Removal of Temporary Steel Bridge of TTA, Construction of Drainage / Channel, Modification of Carriageway and Removal of Temporary Steel Bridge of TTA, Installation of Traffic Aids, Installation of Road Lighting, General Cleaning, Widening of Slip Road near Cross Boundary Shuttle Bus Station

Portion J	-	Ground investigation works, Tree felling, Earthworks and drainage works, Construction of public toilet, Construction of Utilities Works, Construction of Retaining Wall, Construction of Stream Decking, Construction near Dills Corner Garden, Backfilling, Construction of Drainage Pipe, Construction of Road Kerb, Laying Bituminous Pavement for Cycle Track, Installation of Bicycle Parapet and Type II Railing, Installation of Road Lighting
Portion K	-	Site clearance, Construction of wheel washing facilities, Utilities diversion works, Tree felling, Construction of retaining wall, Earthworks and drainage works, Construction of Road Kerb, paving block, Construction of Cycle Track, Construction of Dwarf Wall, Construction of Drainage Pipe, Laying Bituminous for Cycle Track, Construction of U-Channel, Construction of DSD's Access Road, Installation of Bicycle Parapet, CCTV for Drainage Pipe, Installation of Traffic Aids, Construction of additional concrete pavement, General Cleaning, Installation of Road Lighting
Portion L	-	Excavation works for site formation, Construction of RC structure, Construction of public toilet, E&M works and PD installation
Portion M	-	Site clearance, Tree felling, Drainage Works, Construction of Retaining Wall, Construction of Bridge E, Piling Works for Bridge E, Construction of Pile Cap, Loading Test for pile, Plate Load Test for Retaining Wall, Pile Cap & Column at Grid, Construction of Filled Slope, Construction of Access Road, Backfilling, Construction of Bridge E's Roofing, Construction of Bridge E's Ramp, Dismantle of Existing Roof, Installation of Lighting for Bridge E, Laying Bituminous Pavement for Cycle Track, Installation of Bicycle Parapet / Railing, Construction of Road Kerb, Construction of Drainage / Channel, Installation of Traffic Aids, Installation of Road Lighting
Portion N	-	Site clearance, Utilities diversion works, Tree felling, Pile Works and Abutment Construction; Loading Test for pile, Pre-Drilling Works for Piles, Construction of Bridge B, Construction of Decking, Construction of Drainage / Channel, Construction of Retaining Wall, Construction of Road Kerb, Installation of Traffic Aids, Installation of Road Lighting, General Cleaning
Portion P	-	Drainage Works, Construction of Cycle Track and Planting
Works Area 3	-	Construction of project signboards
Shui Fu Road	-	Decontamination of soil

Environmental Monitoring and Audit Works

4. A summary of the baseline and impact monitoring activities is listed below:

- Construction Noise Monitoring
  - Baseline Monitoring: 22 September 2016 to 5 October 2016
  - Impact Monitoring: 25 November 2016 to 15 June 2021

Waste Management

5. Waste generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Details of waste management data is presented in Section 4 and **Appendix F**.

Environmental Site Inspections

6. Joint site inspections were conducted once per week by representatives of the Contractor, Engineer and ET throughout the construction period. The representative of the IEC joined the site inspections once per month.

Environmental Exceedance/Non-conformance/Complaint/Summons and Successful Prosecution

7. For construction noise monitoring, no Action Level or Limit Level exceedances were recorded during the construction period.

8. No non-compliance event was recorded during the construction period.

9. 2 environmental-related prosecutions, summons and 4 complaints were received during the construction period.

Conclusion

10. The EM&A programme was effective in monitoring impacts arising from the Project. No adverse noise impacts were brought by the Project.

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 is shown in **Figures 1a-1h**.

The Proposed Scope of Works

1.5 The construction works undertaken by Agreement No. CE/67/2015 (HY) under the EP was commenced in November 2016 and have been substantially completed in April 2021. The scopes of construction works completed by the Contractor under EP-501/2015 are listed below:

- A new cycle track (with footpath) about 11 km in length from Kam Tin River in Yuen Long to Sheung Yue River in Sheung Shui;
- Three bridges across an existing channel near San Tin Tsuen Road at Shek Wu Wai; across San Tin Eastern Channel near Castle Peak Road – Chau Tau in Yuen Long; and across Shek Sheung River in Sheung Shui;
- Two subways across Kam Pok Road and near the Cross Boundary Shuttle Bus San Tin Terminus in Yuen Long;

- Three resting stations at Kam Pok Road, Ngau Tam Mei Drainage Channel and Castle Peak Road – San Tin in Yuen Long and provision of supporting facilities including bicycle parking spaces, shelters and benches at the proposed resting stations;

- A public toilet with bio-treatment facilities at Ho Sheung Heung; and

- Associated landscaping, traffic aids and signaling works, street lightings, utilities, irrigation, geotechnical and other miscellaneous works including the reprovisioning of staircases and pedestrian ramps, for completion of the works as well as improvement works to a section of existing cycle track in Tuen Mun.

1.6 The completion certificate of construction works is shown in **Appendix A**, whereas the endorsement letters of Proposal for Termination of EM&A Programme by IEC and EPD are shown in **Appendix B**.

1.7 Cinotech Consultants Limited (Cinotech) was commissioned by CEDD as the Environmental Team (ET) to undertake environmental monitoring and auditing services for the Project to ensure that the environmental performance of the Works Contracts comply with the requirements specified in the EP, Environmental Monitoring & Audit (EM&A) Programme, Service Specification and Supporting Documents of the Project and other relevant statutory requirements.

Construction Programme and Activities

1.8 A summary of the major construction activities undertaken in the construction period is shown as follows:

Portion A - Site clearance, Ground investigation works, Construction of wheel washing facilities, Construction of trial pit, Utilities diversion works, Tree felling, Construction of retaining wall, Earthworks and drainage works, Construction of Cycle Track, Installation of Bicycle Parapet, Construction of Drainage Pipe, Installation of Light pole, Planting, Colour Dressing, CCTV for Drainage Pipe, Installation of Traffic Aids, Modification of Traffic Aids, General Cleaning

Portion B - Site clearance, Construction of wheel washing facilities, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of Subway A, Construction of U-channel, Construction of Cycle Track, Parapet Footing, Internal Finishing & E&M Works, Construction of Resting Station R6, Colour Dressing, Installation of Bicycle Parapet, Installation of Traffic Aids, Modification of Existing Carriageway

Portion C - Site clearance, Construction of wheel washing facilities, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of Retaining Wall, Construction of Resting Station R7, Construction of U-Channel, Laying Bituminous for Cycle Track, Parapet Footing, Planting, Shrubs Planting, Installation of Bicycle

Parapet, Construction of Staircase, Installation of Traffic Aids, CCTV for Drainage Pipe, Installation of water point, Planting

Portion D - Site clearance, Ground investigation works, Construction of Drainage Pipe, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of Retaining Wall, Construction of Stream Decking, Construction of pedestrian ramp, Construction of Drainage Pipe, Realignment of San Tam Road, Construction of 16A, Construction of Planter Wall, Laying Road Kerb and Paving Block, Laying Bituminous for Cycle Track, Backfilling, Installation of Bicycle Parapet, Installation of Traffic Aids, General Cleaning, CCTV for drainage pipe, Installation of Road Lighting

Portion E - Site clearance, Ground investigation works, Construction of wheel washing facilities, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Earthworks and drainage works, Construction of rectangular channel, Road works, Construction of Box Culvert, Construction of Retaining Wall Construction of Boundary Wall, Realignment of Mai Po Lung Road, Laying Road Kerb, Paving Block, Colour Dressing for Cycle Track, Installation of Bicycle Parapet and Railing, Construction of Footpath, Construction of Drainage Pipe / Channel, CCTV for Drainage Pipe, Installation of Road Lighting, General Cleaning

Portion F - Site clearance, Ground investigation works, Construction of wheel washing facilities, Construction of trial pit, Construction of borehole, Utilities diversion works, Tree felling, Construction of Drainage Pipe, Construction of Retaining wall, Soil Treatment for RAP, Construction of Resting Station at Man Tin Cheung Park, Construction of Boundary Wall, Relocation of Existing Bus Stop, Construction of Resting Station R8, Installation of Traffic Aids, CCTV for Drainage Pipe, Installation of Road Lighting, General Cleaning

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Portion K - Site clearance, Construction of wheel washing facilities, Utilities diversion works, Tree felling, Construction of retaining wall, Earthworks and drainage works, Construction of Road Kerb, paving block, Construction of Cycle Track, Construction of Dwarf Wall, Construction of Drainage Pipe, Laying Bituminous for Cycle Track, Construction of U-Channel, Construction of DSD's Access Road, Installation of Bicycle Parapet, CCTV for Drainage Pipe, Installation of Traffic Aids, Construction of additional concrete pavement, General Cleaning, Installation of Road Lighting

Portion L - Excavation works for site formation, Construction of RC structure, Construction of public toilet, E&M works and PD installation

Portion M - Site clearance, Tree felling, Drainage Works, Construction of Retaining Wall, Construction of Bridge E, Piling Works for Bridge E, Construction of Pile Cap, Loading Test for pile, Plate Load Test for Retaining Wall, Pile Cap & Column at Grid, Construction of Filled Slope, Construction of Access Road, Backfilling, Construction of Bridge E's Roofing, Construction of Bridge E's Ramp, Dismantle of Existing Roof, Installation of Lighting for Bridge E, Laying Bituminous Pavement for Cycle Track, Installation of Bicycle Parapet / Railing, Construction of Road Kerb, Construction of Drainage / Channel, Installation of Traffic Aids, Installation of Road Lighting

Portion N - Site clearance, Utilities diversion works, Tree felling, Pile Works and Abutment Construction; Loading Test for pile, Pre-Drilling Works for Piles, Construction of Bridge B, Construction of Decking, Construction of Drainage / Channel, Construction of Retaining Wall, Construction of Road Kerb, Installation of Traffic Aids, Installation of Road Lighting, General Cleaning

Portion P - Drainage Works, Construction of Cycle Track and Planting

Works Area 3 - Construction of project signboards

Shui Fu Road - Decontamination of soil

Project Organizations

1.9 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)

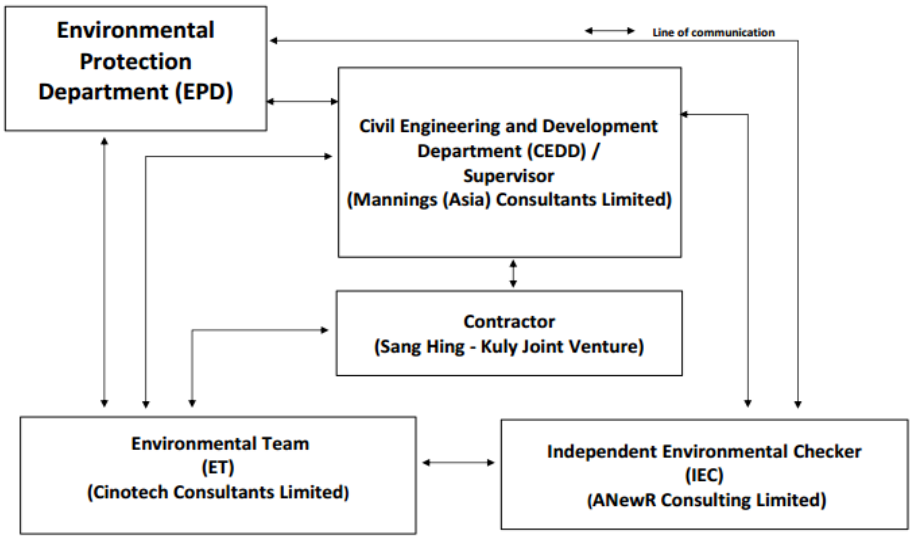
1.10 The key contacts of the Project are shown in **Table 1.1**.

Table 1.1 Key Project Contacts

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

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

Figure 3 Organization Structure (Environmental Aspects)



Summary of EM&A Requirements

1.12 The EM&A programme requires construction noise 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

1.13 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 the construction period.

2 ENVIRONEMNTAL MONITORING REQUIREMENTS

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 throughout the construction period to monitor and audit the timely implementation of air quality mitigation measures within the site boundaries of this Project.

Water Quality Monitoring

Monitoring Requirements

2.3 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.

2.4 Site audits were carried out on a weekly basis throughout the construction period to monitor and audit the timely implementation of water quality mitigation measures within the site boundaries of this Project.

Noise

Monitoring Requirements

2.5 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.

2.6 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 C** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

2.7 Noise monitoring was conducted at 6 designated monitoring stations (N1, N2, N3, N5, N6 and N7) throughout the construction period. **Figures 2a – 2c** show the locations of these stations.

Table 2.1 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 Parameters

2.8 **Table 2.2** summarizes the monitoring parameters, frequency and total duration of monitoring.

Table 2.2 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

2.5 The Event and Action Plan for construction noise is presented in **Appendix D**.

Ecology

Monitoring Requirements

2.6 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.

2.7 Site audits were carried out on a weekly basis throughout the construction period to monitor and audit the timely implementation of ecology and fisheries mitigation measures within the site boundaries of this Project.

Landscape and Visual Impact

Monitoring Requirements

2.8 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.

2.9 Site audits were carried out on a weekly basis throughout the construction period to monitor and audit the timely implementation of landscape and visual mitigation measures within the site boundaries of this Project.

3 INPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

3.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Report, the Environmental Permit and the EM&A Manual. The implementation status of the environmental mitigation measures of the construction period is summarized in Appendix G. Status of required submissions under the Environmental Permit (EP) of this Project is presented in **Table 3.1**.

Table 3.1 Status of Required Submissions under EP

EP Condition	Submission	Submission Date
3.4	Baseline Monitoring Report	16 November 2016
3.5	Monthly EM&A Report (November 2016)	14 December 2016
	Monthly EM&A Report (December 2016)	13 January 2017
	Monthly EM&A Report (January 2017)	14 February 2017
	Monthly EM&A Report (February 2017)	14 March 2017
	Monthly EM&A Report (March 2017)	14 April 2017
	Monthly EM&A Report (April 2017)	12 May 2017
	Monthly EM&A Report (May 2017)	15 June 2017
	Monthly EM&A Report (June 2017)	13 July 2017
	Monthly EM&A Report (July 2017)	11 August 2017
	Monthly EM&A Report (August 2017)	14 September 2017
	Monthly EM&A Report (September 2017)	13 October 2017
	Monthly EM&A Report (October 2017)	13 November 2017
	Monthly EM&A Report (November 2017)	13 December 2017
	Monthly EM&A Report (December 2017)	12 January 2018
	Monthly EM&A Report (January 2018)	13 February 2018
	Monthly EM&A Report (February 2018)	13 March 2018
	Monthly EM&A Report (March 2018)	12 April 2018
	Monthly EM&A Report (April 2018)	11 May 2018
	Monthly EM&A Report (May 2018)	8 June 2018

EP Condition	Submission	Submission Date
	Monthly EM&A Report (June 2018)	12 July 2018
	Monthly EM&A Report (July 2018)	10 August 2018
	Monthly EM&A Report (August 2018)	14 September 2018
	Monthly EM&A Report (September 2018)	9 October 2018
	Monthly EM&A Report (October 2018)	14 November 2018
	Monthly EM&A Report (November 2018)	14 December 2018
	Monthly EM&A Report (December 2018)	14 January 2019
	Monthly EM&A Report (January 2019)	18 February 2019
	Monthly EM&A Report (February 2019)	12 March 2019
	Monthly EM&A Report (March 2019)	11 April 2019
	Monthly EM&A Report (April 2019)	10 May 2019
	Monthly EM&A Report (May 2019)	11 June 2019
	Monthly EM&A Report (June 2019)	11 July 2019
	Monthly EM&A Report (July 2019)	12 August 2019
	Monthly EM&A Report (August 2019)	12 September 2019
	Monthly EM&A Report (September 2019)	11 October 2019
	Monthly EM&A Report (October 2019)	14 November 2019
	Monthly EM&A Report (November 2019)	13 December 2019
	Monthly EM&A Report (December 2019)	14 January 2020
	Monthly EM&A Report (January 2020)	13 February 2020
	Monthly EM&A Report (February 2020)	11 March 2020
	Monthly EM&A Report (March 2020)	17 April 2020
	Monthly EM&A Report (April 2020)	13 May 2020
	Monthly EM&A Report (May 2020)	13 June 2020
	Monthly EM&A Report (June 2020)	13 July 2020
	Monthly EM&A Report (July 2020)	17 August 2020

EP Condition	Submission	Submission Date
	Monthly EM&A Report (August 2020)	14 September 2020
	Monthly EM&A Report (September 2020)	19 October 2020
	Monthly EM&A Report (October 2020)	13 November 2020
	Monthly EM&A Report (November 2020)	18 December 2020
	Monthly EM&A Report (December 2020)	19 January 2021
	Monthly EM&A Report (January 2021)	25 February 2021
	Monthly EM&A Report (February 2021)	17 March 2021
	Monthly EM&A Report (March 2021)	21 April 2021
	Monthly EM&A Report (April 2021)	20 May 2021
	Monthly EM&A Report (May 2021)	28 July 2021

4 SUMMARY OF EM&A WORKS

Construction Noise Monitoring

4.1 The baseline construction noise monitoring was conducted by ET between 22 September 2016 to 5 October 2016 at monitoring stations N1, N2, N3, N5, N6 and N7. The Action and Limit Levels for construction noise monitoring have been established accordingly. Action and Limit Levels for construction noise is summarised in **Appendix C**.

4.2 Impact construction noise monitoring was carried out at the monitoring stations during normal weekdays throughout the construction period by ET.

4.3 The graphical presentations of construction noise monitoring results are presented in **Appendix E**, and a summary of the construction noise monitoring results in the construction period is given in **Table 4.1**.

Table 4.1 Summary Table of Construction Noise Monitoring Results

Location	Range, dB(A) $L_{eq\ (30\ mins)}$	Limit Level, dB(A) $L_{eq\ (30\ mins)}$
N1	45.9 - 69.9	70
N2	38.9 - 69.9	70
N3	52.5 - 74.0	75
N5	54.4 - 75.0	75
N6	55.7 - 72.2	75
N7	54.0 - 75.0	75

4.4 With reference to the trends of the monitoring parameters shown in **Appendix E**, the linear trends at the impact monitoring stations are steady and in line with the baseline noise level.

4.5 No exceedance of the Action and Limit Levels of construction noise due to the Project was recorded during the construction period. Therefore, it is considered that no adverse noise impact was brought to the nearby noise monitoring station by this Project.

Waste Management

4.6 Waste generated from this Project includes inert construction and demolition (C&D) materials and non-inert C&D materials. The quantities of different types of waste generated in the construction are summarised in **Table 4.2**. Details of the amount of wastes generated by the major site activities of this Project during the construction period is shown in **Appendix F**.

Table 4.2 Quantities of Waste Generated from the Project

Quantity								
Whole Construction Period	Inert C&D Materials			Non-inert C&D Materials				
	Total Quantity Generated (in '000m^3)	Disposed as Public Fill (in '000m^3)	Imported Fill (in '000m^3)	Others, e.g. general refuse (in '000m^3)	Metals (in '000kg)	Paper/cardboard Packaging (in '000kg)	Plastics (in '000kg)	Chemical waste (in '000kg)
	48.03	45.745	0.986	2.68	2.29	2.29	2.29	0

Site Inspections

4.7 Site audit was carried out by representatives of the Contractor, Engineer and ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The representative of the IEC joined the site inspections once per month.

4.8 No non-compliance was recorded during all site inspections throughout the construction period. Observations and recommendations recorded during the site inspections were summarized in the Monthly EM&A Reports.

4.9 According to the EIA Study Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. A Summary of the Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix G**.

4.10 The major findings and the corresponding recommendations given during the site audits are summarized in **Table 4.3**.

Table 4.3 Major Findings and Corresponding Recommendations Given during Site Inspections

Parameters	Observations / Reminders	Corresponding Recommendations
Water Quality	Mud was accumulated near the sediment tank.	Mud accumulated near the sediment tank should be cleared to prevent muddy runoff generation.
	Silt and sediment was observed in wheel washing bay.	Silt and sediment in wheel washing bay should be properly and regularly removed.
	Sandbag bund was not provided next to the wheel washing bay.	Sandbag bund should be provided next to the wheel washing bay to avoid silty runoff out of the site boundary.
	Stagnant water was observed.	Stagnant water should be cleared.
	Direct discharge of untreated wastewater was found.	Appropriate and adequate treatment to wastewater should be provided prior to discharge.
Air Quality	Dust trail was found to be dirty and wheel washing facility was not provided.	Dust trail should be properly cleared and wheel washing facility should be provided.
	No water spraying was provided in the exposed area.	Water spraying should be provided frequently to exposed area.
	Dust and soil was observed near the boundary of the site area.	Dust and soil near the boundary should be properly cleared.
	NRMM label was missing on PMEs.	NRMM label should be displayed on PMEs.
	Bagged cement was not covered.	Bagged cement should be covered with impervious materials to prevent dust generation.
	Stockpile was not covered.	Stockpile should be covered by impervious materials to minimize dust generation.
	Dust and soil was observed on the public pedestrian road.	Public pedestrian road should be cleared of dust and kept clean.
Waste / Chemical Management	General refuse was accumulated on-site.	General refuse should be properly disposed of to prevent accumulation.
	Chemical containers were observed to be placed on the unpaved ground.	Drip tray should be provided to chemical / oil containers.
	Rubbish bin was not provided on-site.	Rubbish bin should be provided to collect general refuse.

Parameters	Observations / Reminders	Corresponding Recommendations
	Stagnant water was observed to be accumulated in drip tray.	The wastewater should be cleared and treated as chemical waste.
	Oil stain was observed on the ground.	Oil stain should be properly removed and disposed as chemical waste.
Landscape and Visual	Fencing of tree protection zones was not provided.	Fencing of tree protection zones should be provided to protect existing trees.
	Construction materials was placed nearby the existing trees.	Construction materials should be placed away from existing trees and tree protection zone should be properly set up.
	Retained tree was not maintained properly.	Retained tree was needed to be well maintained.
Permits/ Licenses	No Environmental permit was observed to be display at site entrance.	The Environmental permit should be displayed at site entrance.

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 during the Construction Period

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)	$L_{eq\ (30min)}$ dB(A)
N1 - HKMLC Wong Chan Sook Ying Memorial School	55-62	62(1)	45.9 - 69.9
N2 – Bethel High School	57-64	64(1)	38.9 - 69.9
N3 – No. 159 Mai Po San Tsuen	70-73	74(2)	52.5 - 74.0
N5 – Block 2, Dills Corner Garden	73-75	75(2)	54.4 - 75.0
N6 – Home of Loving Faithfulness	64-73	74(1)	55.7 - 72.2
N7 – Village House in Shek Wu Wai	N/A(3)	70(2)	54.0 - 75.0

Remarks:
(1) With adoptions of quiet PMEs, temporary noise barrier and enclosure
(2) With sub-grouping of construction activities
(3) No construction noise level was predicted in EIA Report (2009)

5.2 When comparing the noise monitoring results to the predicted mitigated construction noise levels in the EIA Report, the results at N5 and N6 were within the range of the predicted mitigated construction noise levels in the EIA Report. The results at N1, N2 and N3 were slightly higher than the range of the predicted mitigated construction noise levels in the EIA Report. No construction noise level was predicted in the EIA Report for N7.

When comparing the noise monitoring results to the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works, the results at N3, N5 and N6 were within the range of the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works. The results at N1, N2 and N7 were higher than the range of the predicted mitigated worst case construction noise levels in the ERR for Stage 2 Works.

6 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

6.1 No exceedance of the Action and Limit Levels of construction noise monitoring was recorded during the construction period.

6.2 A summary of exceedances is attached in **Appendix H**.

Summary of Environmental Non-Compliance

6.3 No environmental non-compliance was recorded in the construction period.

Summary of Environmental Complaints

6.4 4 environmental project-related complaints were received in the construction period.

Summary of Environmental Summon and Successful Prosecution

6.5 2 environmental-related prosecutions and notification of summons were received since the Project commencement.

6.6 The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix I**.

7 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

Review on Validity of Predictions of EM&A Programme

7.1 It is predicted in the EM&A Programme that with the implementation of the recommended mitigation measures, there would be no unacceptable or residual noise impacts arising from the project-related construction works. The impact monitoring data obtained was in-line with the predictions since no Action and Limit Levels exceedances of noise were recorded at all designated monitoring stations during the whole construction period.

Review on Effectiveness of Mitigation Measures and Overall EM&A Data

7.2 The mitigation measures recommended in the EIA Study Report, Environmental Permit and the EM&A Manual of the Project are considered effective in minimizing environmental impacts.

7.3 Site inspections ensure the timely implementation of mitigation measures during the Project. The Contractor has implemented the recommended mitigation measures properly during the whole construction period. No significant deficiencies of the environmental protection and pollution control measures were recorded. Therefore, the environmental performance of the Project was acceptable.

7.4 Proper waste management measures as required in the Waste Disposal Ordinance and its subsidiary regulations were effectively implemented during the construction period. No non-compliance with the waste management requirements was identified.

7.5 Environmental monitoring works were performed during the construction period and all monitoring results were checked and reviewed. Baseline and impact noise monitoring were carried out according to the required standard sets in the EM&A Manual. No significant deficiencies of the EM&A methodology and programme were observed. Therefore, the data collected were useful in determining whether the Project had caused unacceptable impacts on the sensitive receivers. Analysis of all EM&A data collected throughout the construction period has demonstrated the environmental acceptability of the Project.

7.6 The overall performance of monitoring methodology adopted and environmental management system was satisfactory given that the recommendations given in the site inspections performed in the reporting period are met.

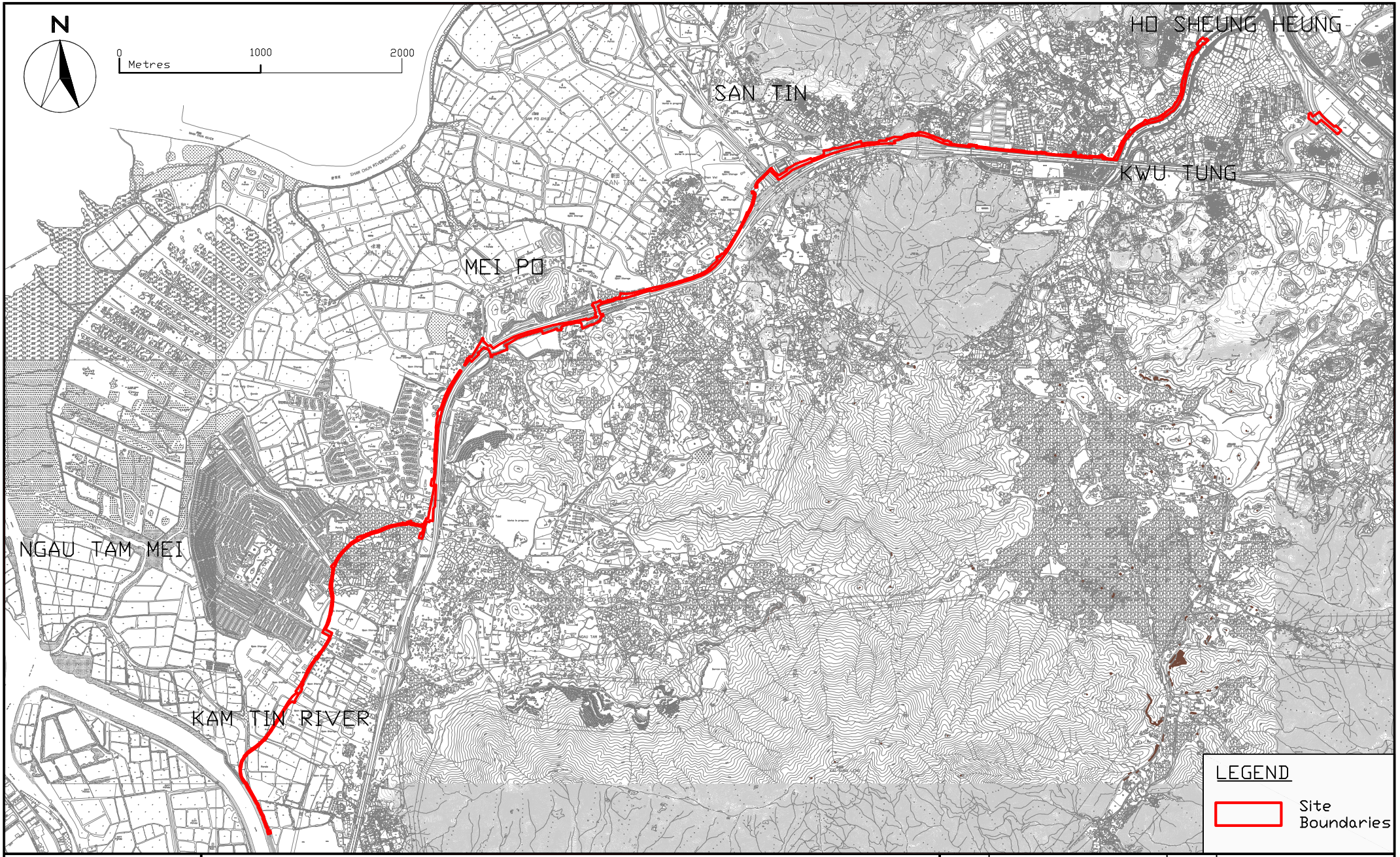
Recommendations and Conclusions on Overall EM&A Programme

7.7 The EM&A programme was found to be effective in monitoring impacts arising from the Project as the environmental monitoring was performed according to the requirements in the EM&A Manual. No significant deficiencies of the EM&A methodology and programme were observed, and no Action and Limit Levels exceedances of noise were recorded during the construction period of the Project. No significant deficiencies of the environmental protection and pollution control measures were recorded, and no non-compliance with the waste management requirements was identified as well. Therefore, the findings of the environmental monitoring programme suggest that no adverse impacts on sensitive receivers at the designated monitoring locations were brought by the Project.

7.8 The Project was environmentally acceptable in terms of construction noise. Insignificant environmental impacts were generated from the Project, and the adverse environmental impacts were effectively alleviated to acceptable levels by effective implementation of the mitigation measures recommended in the EIA Study Report, Environmental Permit and the EM&A Manual.

7.9 With the success of the overall EM&A programme, the deterioration of the environment caused by the Project was minimized and necessary prompt effective mitigation measures were successfully implemented to avoid any unacceptable impacts.

FIGURES



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Cinotech Consultants Limited

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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CHECK	JL	DRAWN	VW
JOB No.	MA16036	FIGURE NO.	1a
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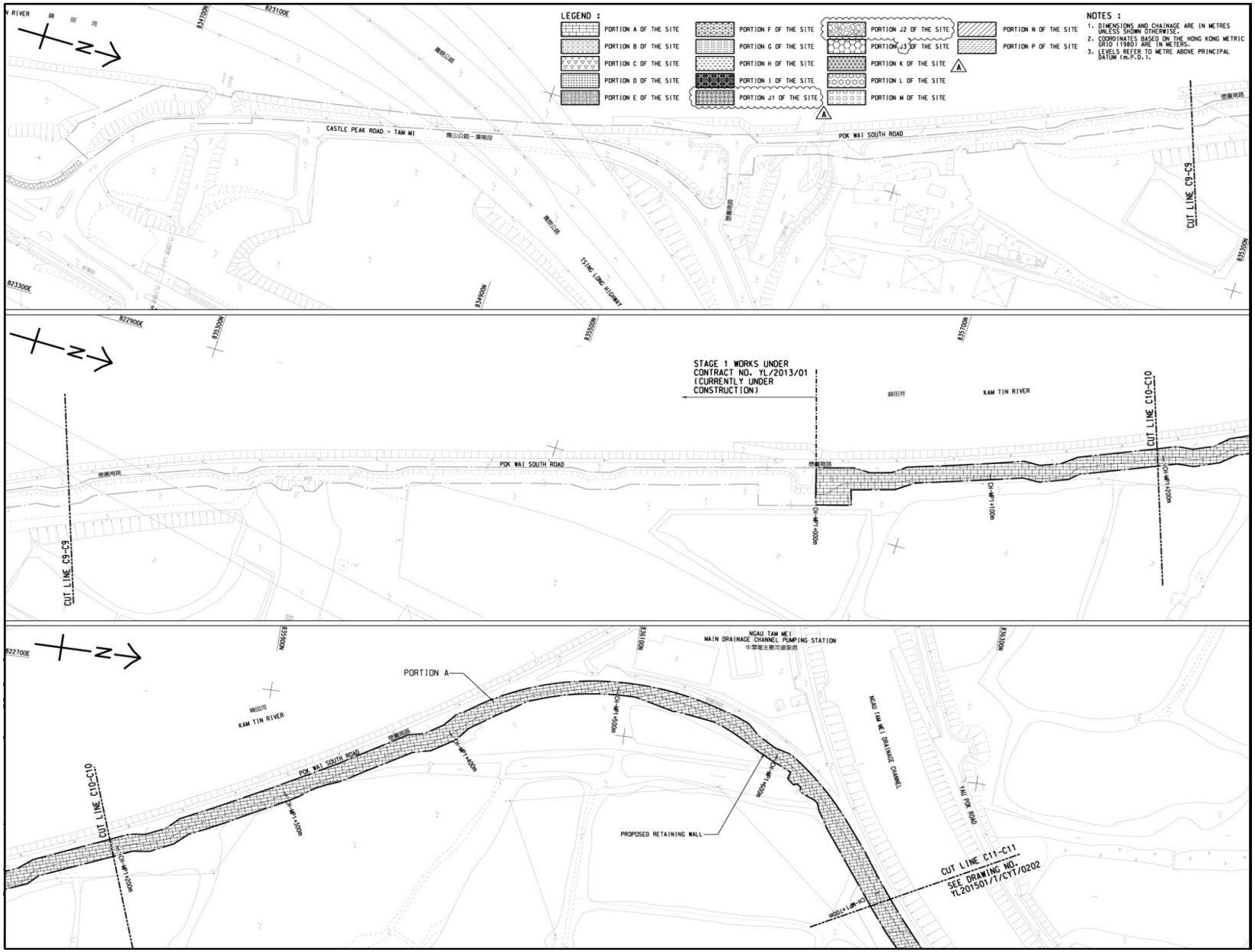
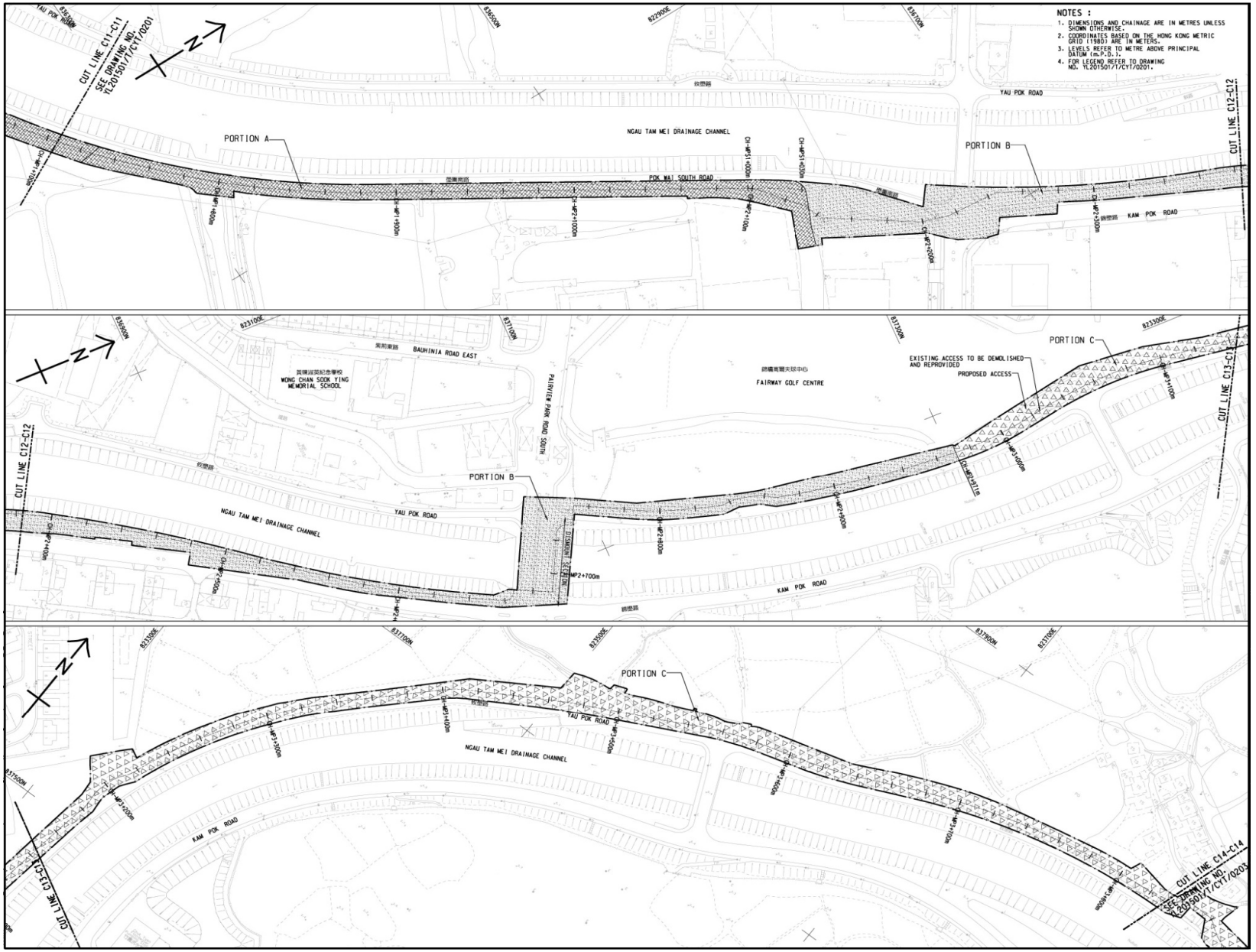


Title	Agreement No. CE 67/2015(HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works Design and Construction Site Layout Plan	Scale N.T.S Date Dec-16	Project No. MA16036 Figure 1b

CINOTECH

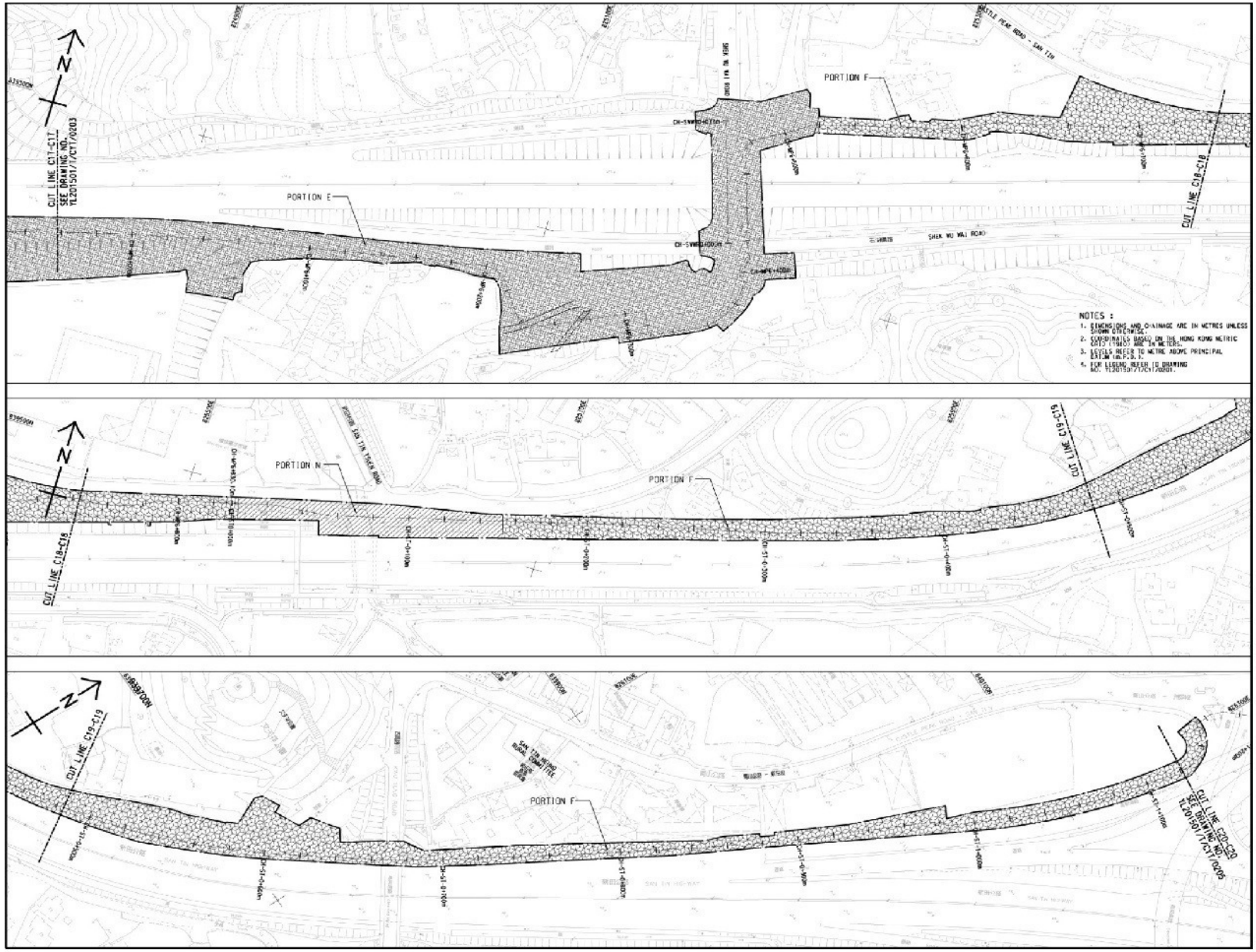


Title	Agreement No. CE 67/2015(HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works Design and Construction Site Layout Plan	Scale N.T.S Date Dec-16	Project No. MA16036 Figure 1c

CINOTECH

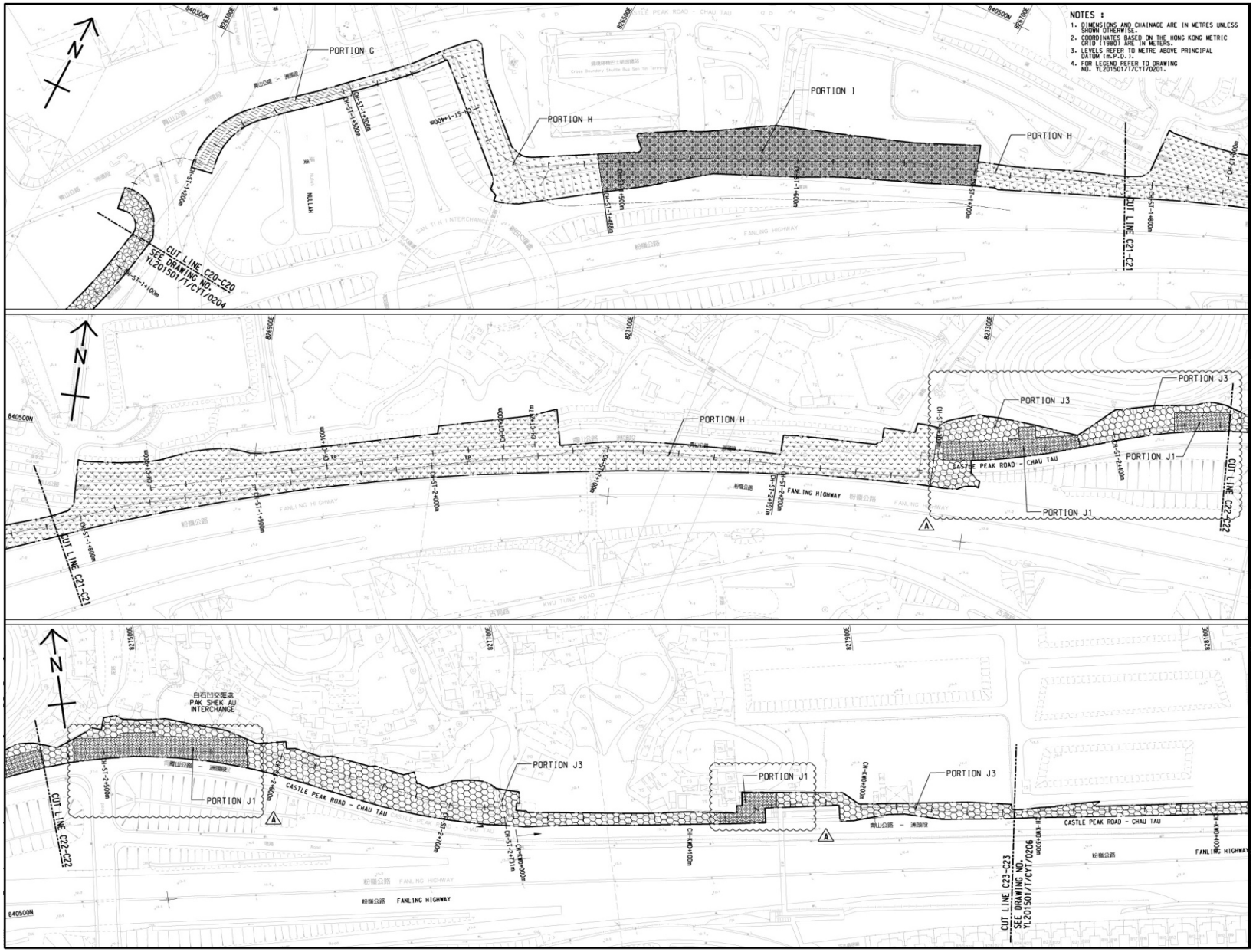
Title	Agreement No. CE 67/2015(HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works Design and Construction Site Layout Plan	Scale N.T.S Date Dec-16	Project No. MA16036 Figure 1d

CINOTECH



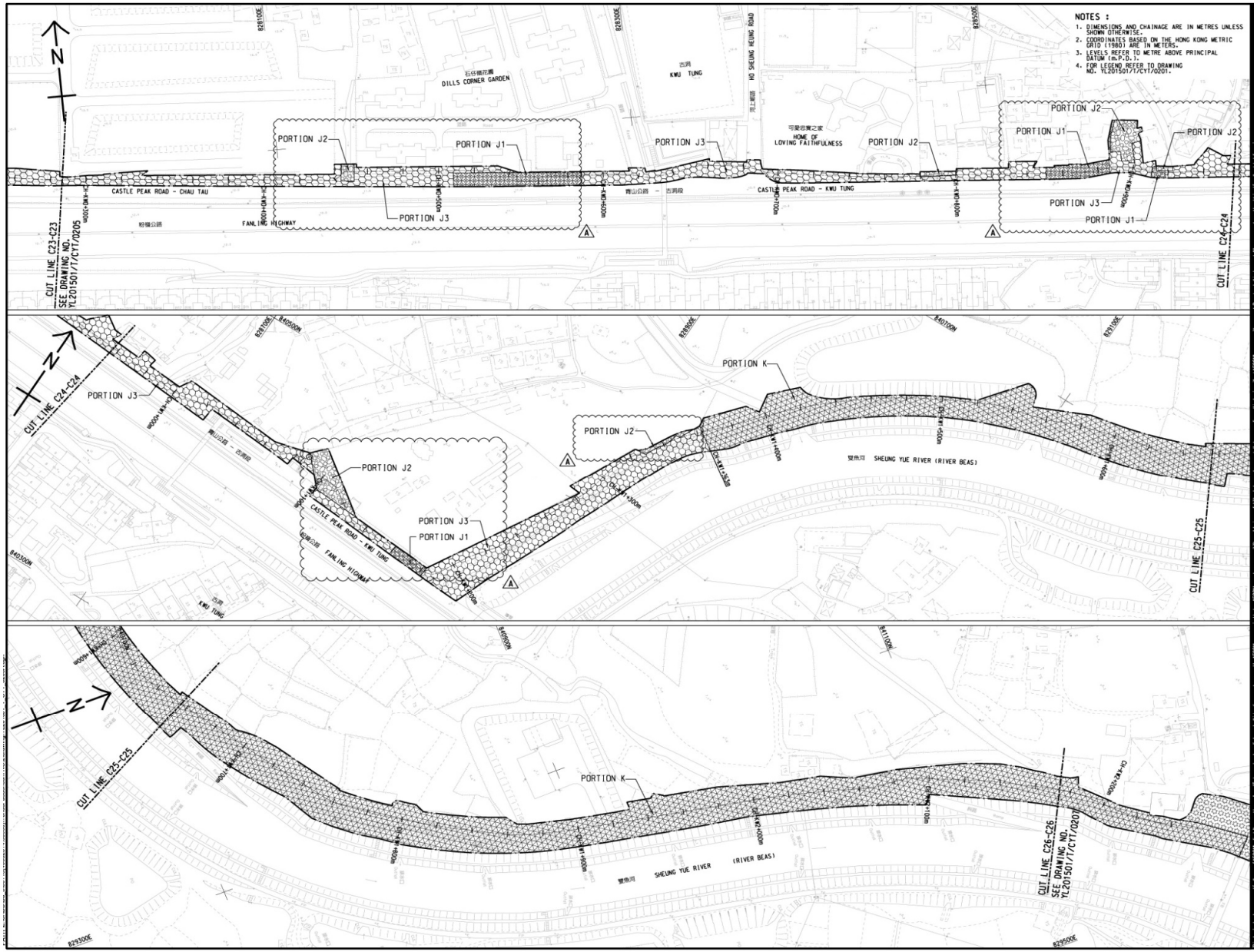
Title	Agreement No. CE 67/2015(HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works Design and Construction Site Layout Plan	Scale: N.T.S Date: Dec-16	Project No.: MA16036 Figure: 1e

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 Date Dec-16	Project No. MA16036 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 Date Dec-16	Project No. MA16036 Figure 1g

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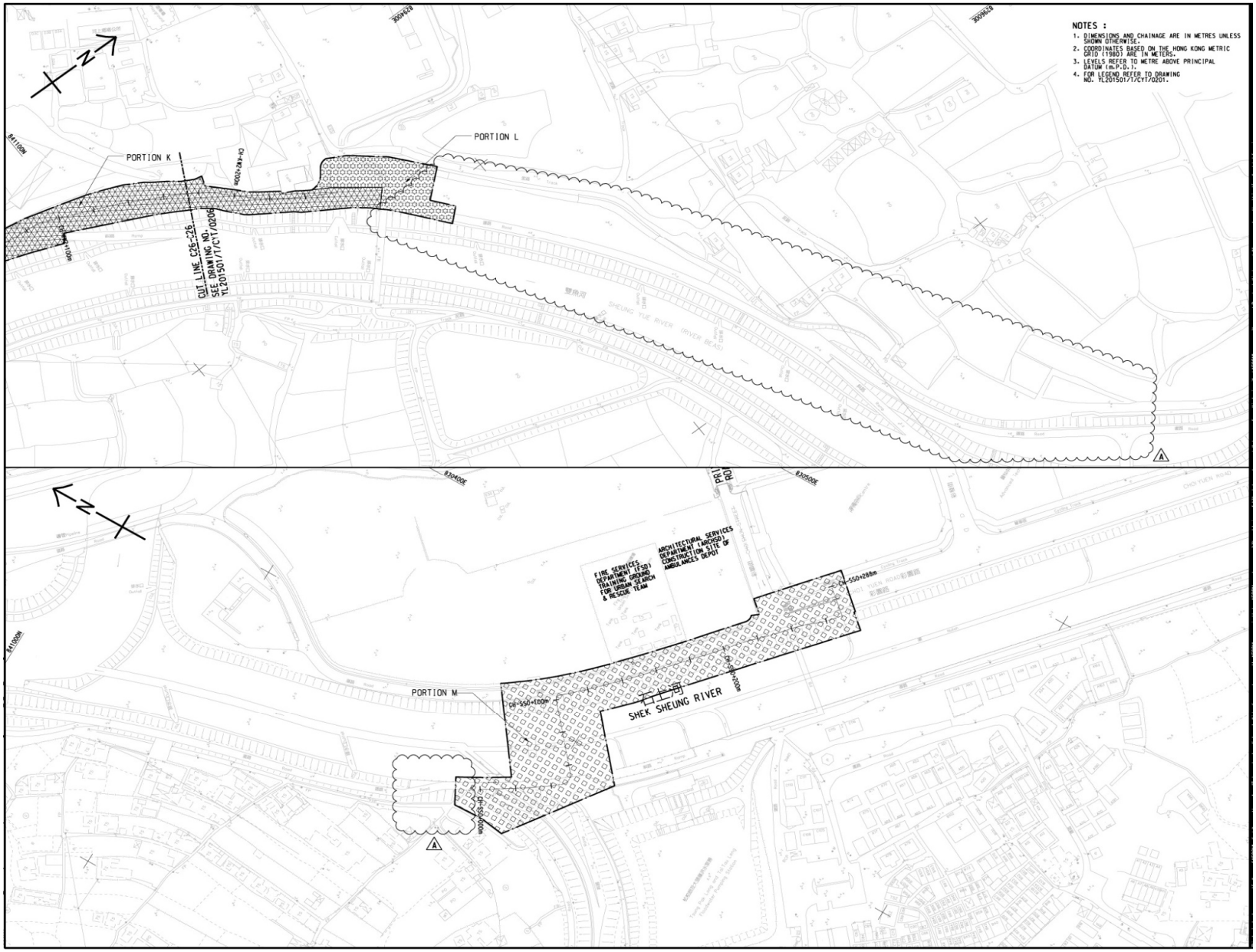

Title	Agreement No. CE 67/2015(HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works Design and Construction Site Layout Plan	Scale N.T.S Date Dec-16	Project No. MA16036 Figure 1h

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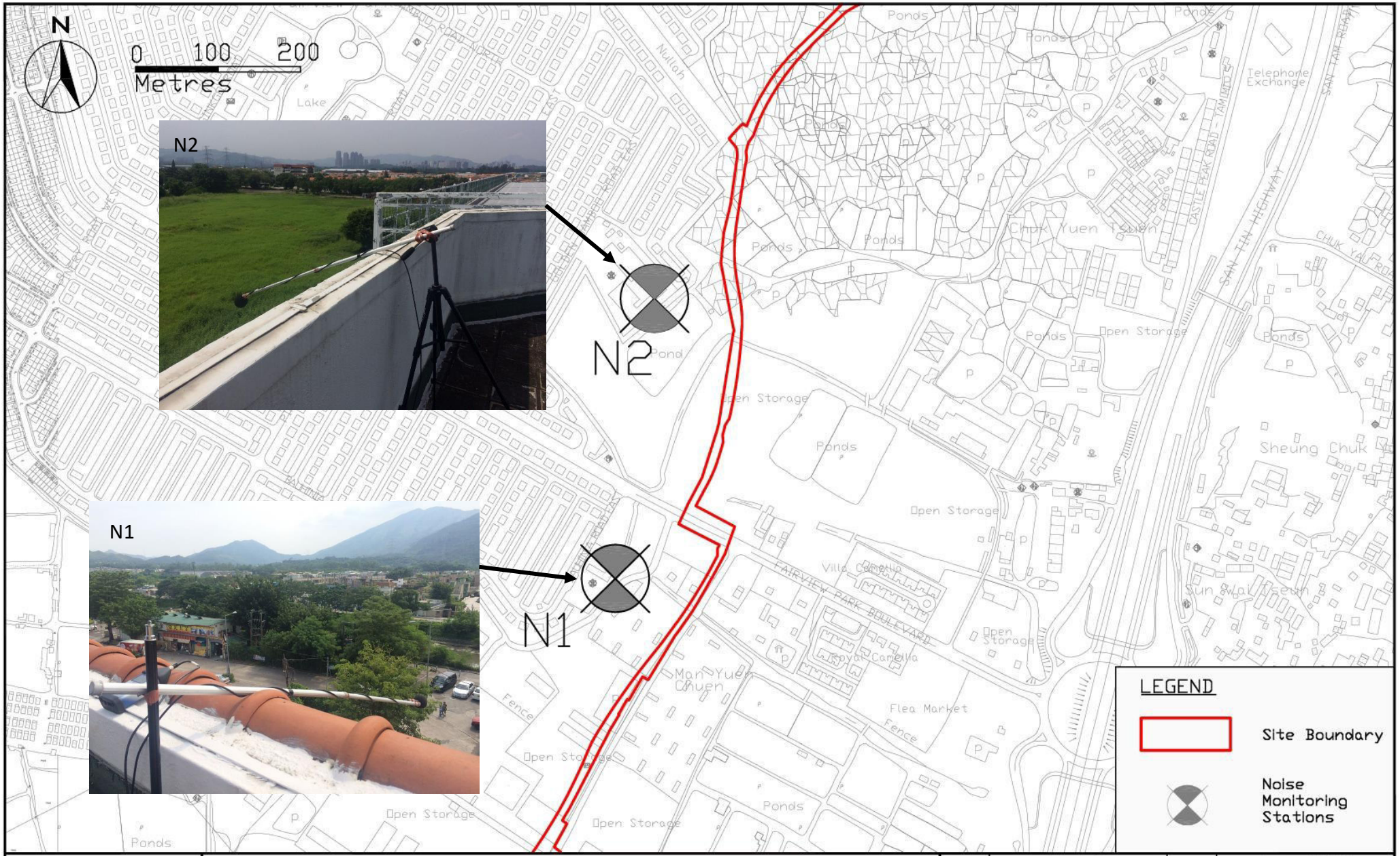

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Agreement No. CE 67/2015(HY) - Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction

Locations of the Noise Monitoring Stations (N1, N2)

SCALE	A4 1:6m	DATE	Aug 2016
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JOB No.	MA16036	FIGURE NO.	2a
		REV	–

CINOTECH
Cinotech Consultants Limited

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

Locations of the Noise Monitoring Stations (N3, N7)

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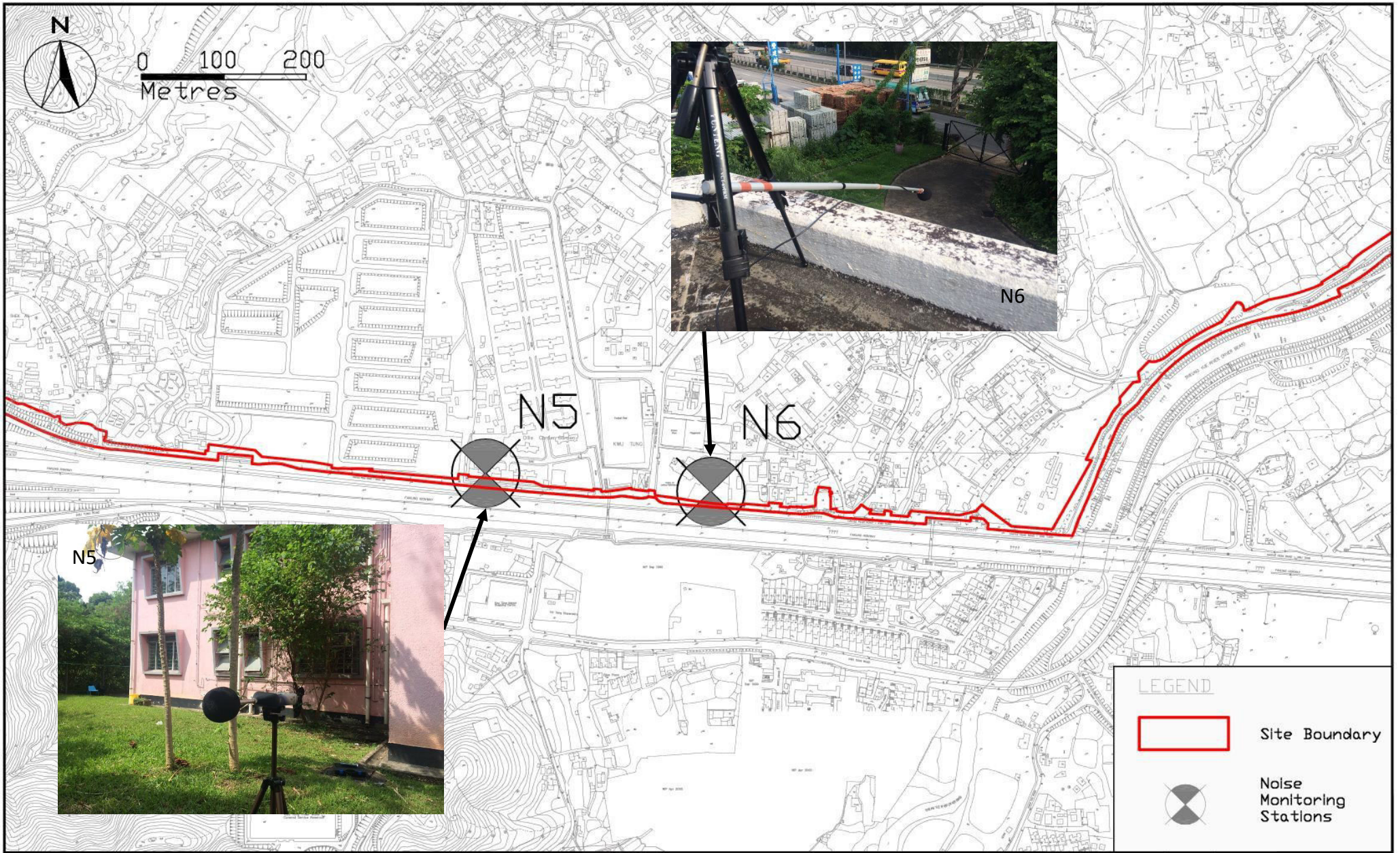
CHECK	JL	DRAWN	VW
JOB No.	MA16036	FIGURE NO.	2b
		REV	-



CINOTECH
Cinotech Consultants Limited

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

Locations of the Noise Monitoring Stations (N5, N6)

SCALE	A4 1:6m	DATE	Aug 2016
CHECK	JL	DRAWN	VW
JOB No.	MA16036	FIGURE NO.	2c
		REV	–

APPENDIX A
COMPLETION CERTIFICATE OF CONSTRUCTION WORKS

30 April 2021

Our Ref. : (YL/2015/01)/M45/350/05724
Your Ref. :

By Hand

CINOTECH
18 On Lai Street, Shek Mun
Rm 1710, Technology Park
Shatin, New Territories
Hong Kong

For the attention of Ms. Betty CHOI and Ms. Echo HUNG

Dear Madam,

Contract No. YL/2015/01
Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works
Proposed Termination of the EM&A Programme

With reference to Clause 12.6.1 of EM&A (Document No. 4082-OR036-02) (December 2008), please be informed that the construction activities in this contract were substantially completed on 16 April 2021 with no significant environmental impacts of the remaining outstanding construction works.

Therefore, I am pleased to propose the termination of the EM&A Programme.

I shall be grateful if you could arrange to the site inspection and advise the earliest date of the termination.

Yours faithfully,
For and on behalf of Mannings (Asia) Consultants Limited

Tam Chi Sing, Mole
Supervisor's Representative

cc MACL Messrs. Mark CHEUNG, Simon NG and William SO

MT/TL/kc

Site Office:
22 Yuen Ching Road
Yuen Long, N.T
Tel: (+852) 2149 9964
Fax: (+852) 2440 9008

Head Office :
5/F., Winning Commercial Building,
46-48 Hillwood Road, Tsim Sha Tsui
Kowloon, Hong Kong
Tel : (+852) 3168 2028 Fax : (+852) 3168 2022

APPENDIX B
ENDORSEMENT LETTER OF PROPOSAL FOR TERMINATION OF EM&A PROGRAMME

ANEWR

Civil Engineering and Development Department
West Development Office
25/F., Tsuen Wan Government Offices
38 Sai Lau Kok Road
Tsuen Wan
New Territories

Your reference:

Our reference: HKCEDD09/50/107332

Date: 26 May 2021

Attention: Mr Thomas Chu

BY FAX & POST
(Fax no.: 2405 0456)

Dear Sirs

Agreement No.: NTW/01/2016
Cycle Tracks from Tuen Mun to Sheung Shui – Remaining Works
– Independent Environmental Checker
Proposal for the Termination of EM&A Programme (Version 1)

We refer to emails of 17 and 25 May 2021 from Cinotech Consultants Limited attaching the Proposal for the Termination of EM&A Programme (Version 1).

We have no comments and hereby verify the captioned proposal in accordance with Section 12.6.1 and 12.6.2 of the Environmental Monitoring and Audit Manual.

Should you have any queries, please do not hesitate to contact the undersigned or our Ms Karen Po on 2618 2831.

Yours faithfully
ANEWR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/LCCR/PKWK/lsmt

ANewR Consulting Limited
Unit 517, 5/F, Tower A, Regent Centre
63 Wo Yi Hop Road, Kwai Chung, Hong Kong
Tel: (852) 2618 2831 Fax: (852) 3007 8648
Email: info@anewr.com
Web: www.anewr.com

ISO 9001 : 2015
Certificate No.: CC 3988

本署檔號 OUR REF: (32) in EP2/N6/162 Pt.14
來函檔號 YOUR REF:
電話 TEL. NO.: 2835 1115
圖文傳真 FAX NO.: 2591 0558
電子郵件 E-MAIL:
網址 HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Branch Office
28th Floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong.

環境保護署分處
香港灣仔
軒尼詩道
一百三十號
修頓中心廿八樓

21 July 2020

Urgent By Registered Post & Fax : 2693 2918
West Development Office,
Civil Engineering and Development Department,
9/F, Sha Tin Government Offices,
1 Sheung Wo Che Road Sha Tin,
New Territories

(Attn: Mr. Dennis CHAN)

Dear Mr. CHAN,

Environmental Impact Assessment (EIA) Ordinance, Cap.499,
Project Title: Site Formation and Infrastructure Works for Development at Kam Tin South, Yuen Long – Advance Works
Environmental Permit No. FEP-01/195/2004A

Proposal of the Termination of Environmental Monitoring and Audit (EM&A) Programme for Contract YL/2017/01

We refer to the letter of 16th July 2020 from your consultant, Cinotech Consultants Limited (Ref: MA18072/Corres/kc200716), enclosing the subject proposal of termination of the EM&A programme for the construction works at the river bed of the channelized Kam Tin River under the captioned Project, proposed by the ET Leader and endorsed by the IEC and Project Manager and submitted under Section 3.6.4.1 of the Proposal on Mitigation Measures and EM&A Programme, as reproduced below

S.3.6.4.1: The EM&A programme for construction stage should be terminated upon the completion of the construction activities of the proposed works. The proposed termination should only be implemented after the proposal has been endorsed by the IEC and the PM followed by approval from the Director of Environmental Protection.

Based on the submission which confirmed that all your construction work under the EP has been completed, we hereby approve the proposal of termination of subject EM&A programme.

The submission is approved by the Director for fulfilling the corresponding permit condition from the environmental perspective as examined under the EIA Ordinance (Cap.499) and does not absolve the project proponent and/or its work agent(s) from any requirements or obligations under other laws in force in Hong Kong, nor their liability due to any conflicts, nuisance or damages that proposed works may cause to third parties.

Please be also reminded to submit the Final EM&A Review Report in accordance with the S.3.6.4.2 of the Proposal on Mitigation Measures and EM&A Programme.

Yours sincerely,

(Vincent Y. C. LAU)
Senior Environmental Protection Officer
for Director of Environmental Protection

c.c.

ET Leader / Cinotech	(Attn: Mr. K.S. LEE)	Fax: 3107 1388
IEC / ANEWR	(Attn: James CHOI)	Fax: 3007 8648
Project Manager /CEDD	(Attn: Desmond LAM)	Fax: 2693 2918

b.c.c. (internal):
S(RN)2, E(SA)32

APPENDIX C
ACTION AND LIMIT LEVELS

Appendix C - Action and Limit Levels

Table C-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 D
EVENT AND ACTION PLANS

Appendix D - Event and Action Plans

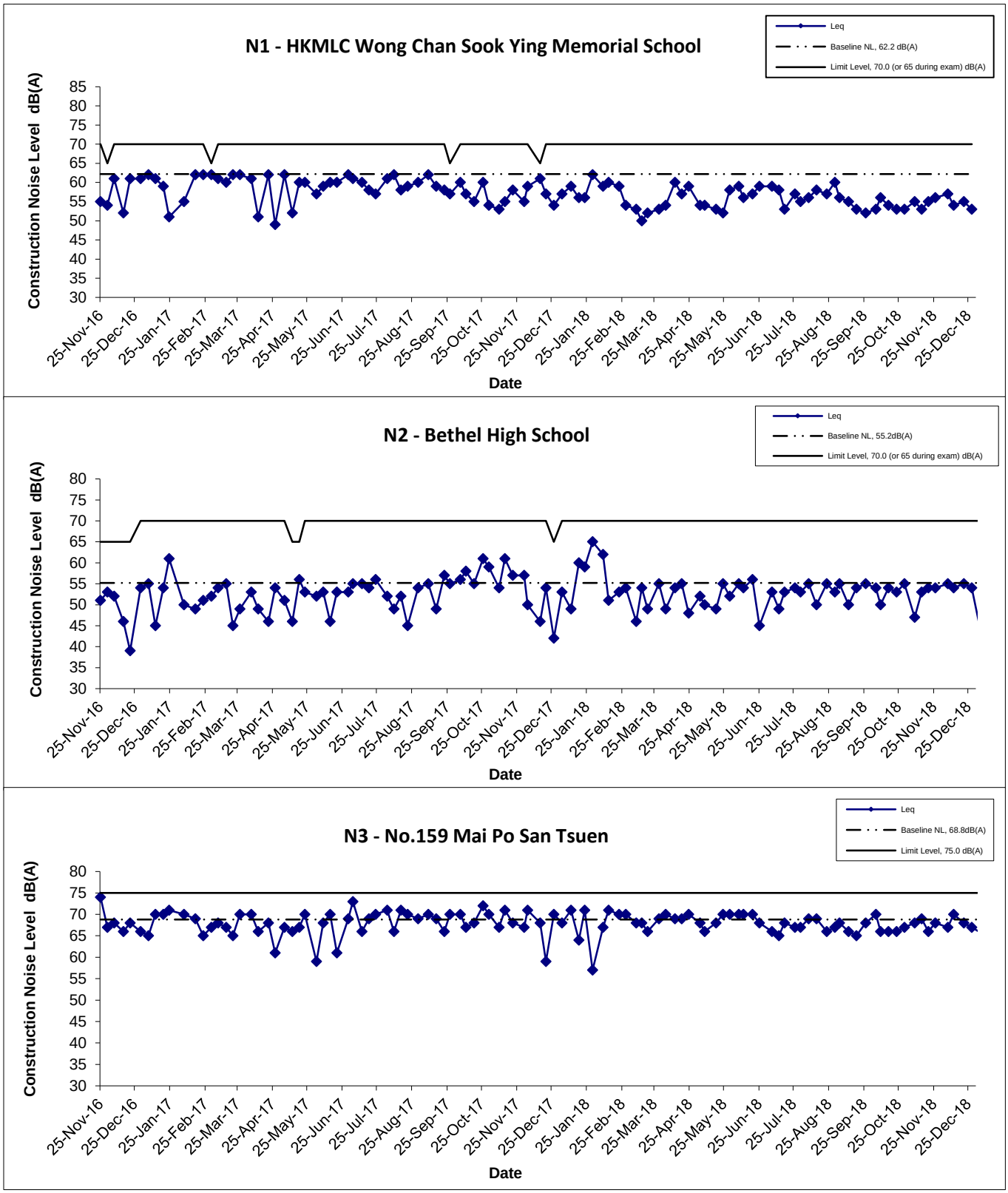
Event and Action Plan for Construction Noise

EVENT	ACTION			
	ET LEADER	IEC	ER	CONTRACTOR
Action Level being exceeded	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.	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.	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.	1. Submit noise mitigation proposals to IC(E); 2. Implement noise mitigation proposals.
Limit Level being exceeded	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;	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	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	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.

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

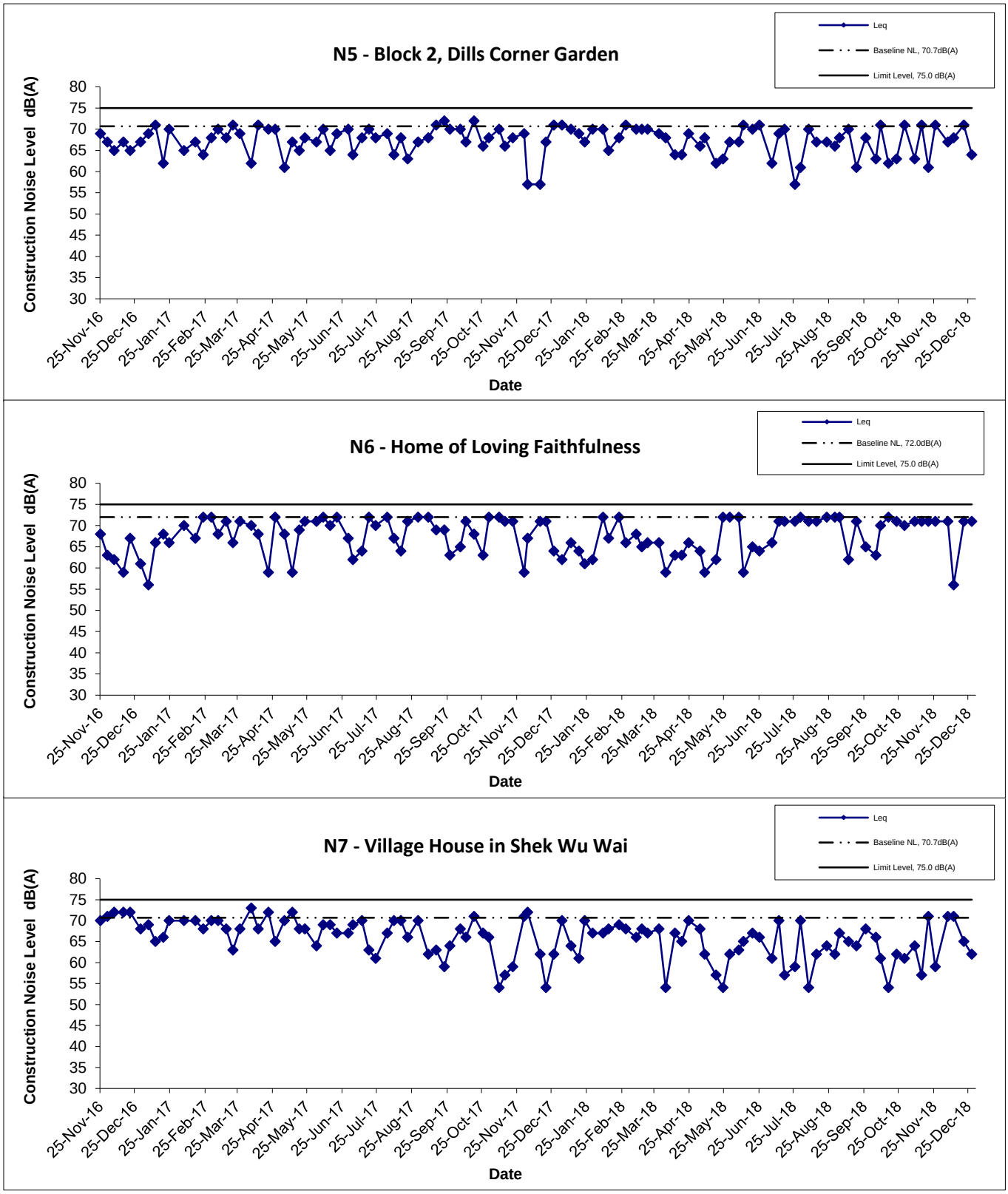
APPENDIX E
GRAPHICAL PRESENTATIONS OF CONSTRUCTION NOISE MONITORING RESULTS

Noise Levels



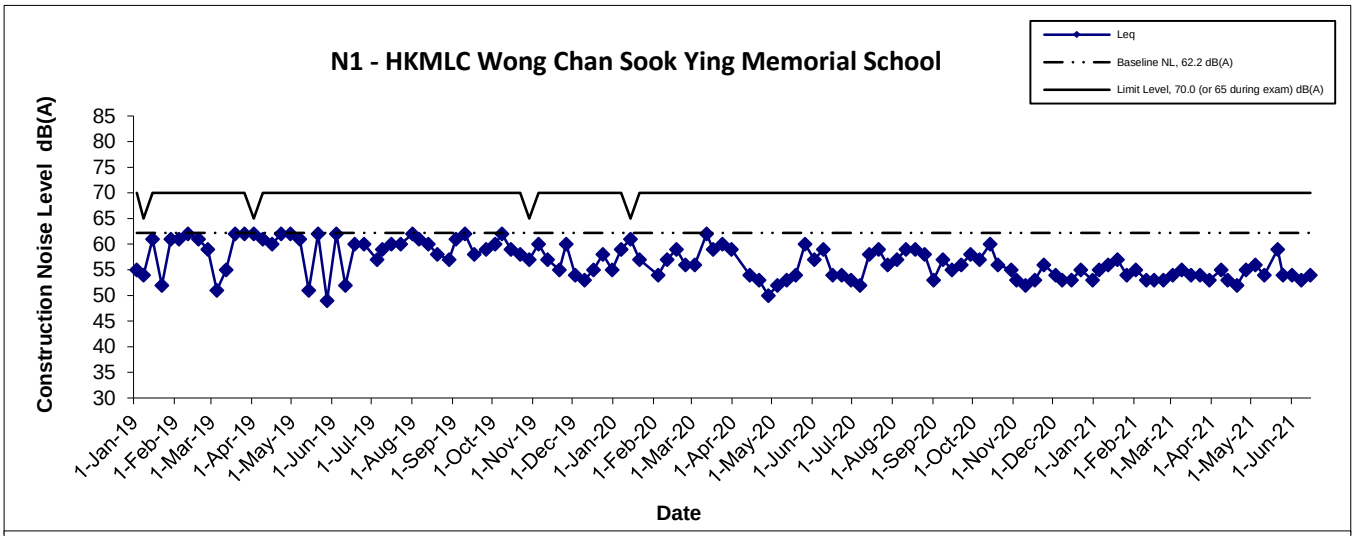
Title: Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Jun 2021	Project No.: MA16036 Appendix: E	CINOTECH

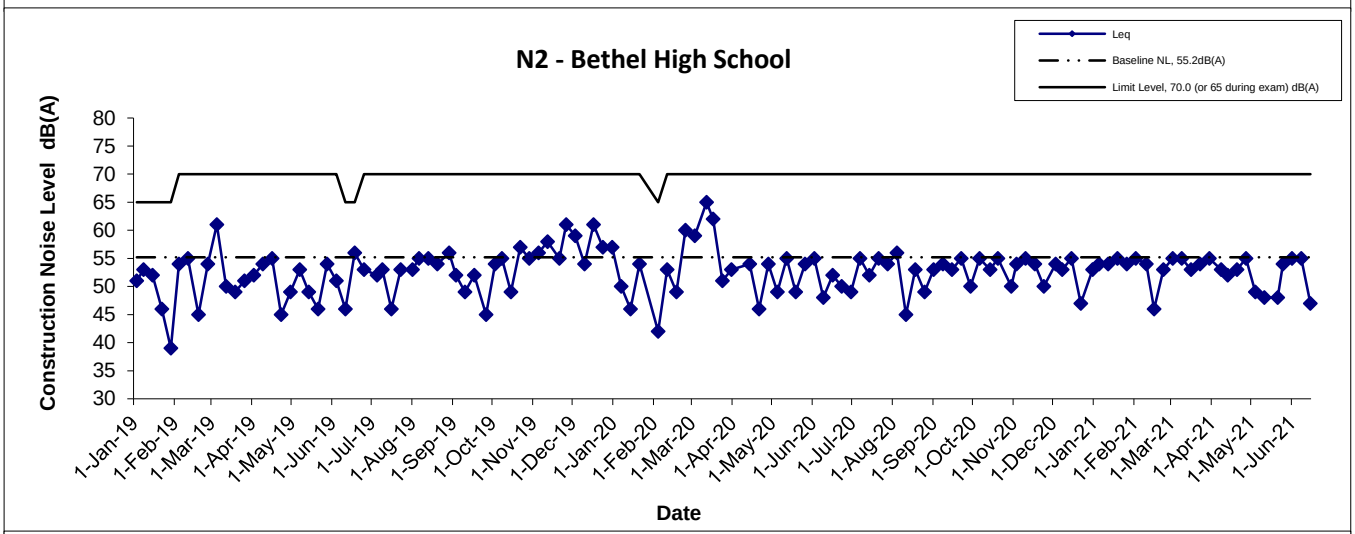
Noise Levels

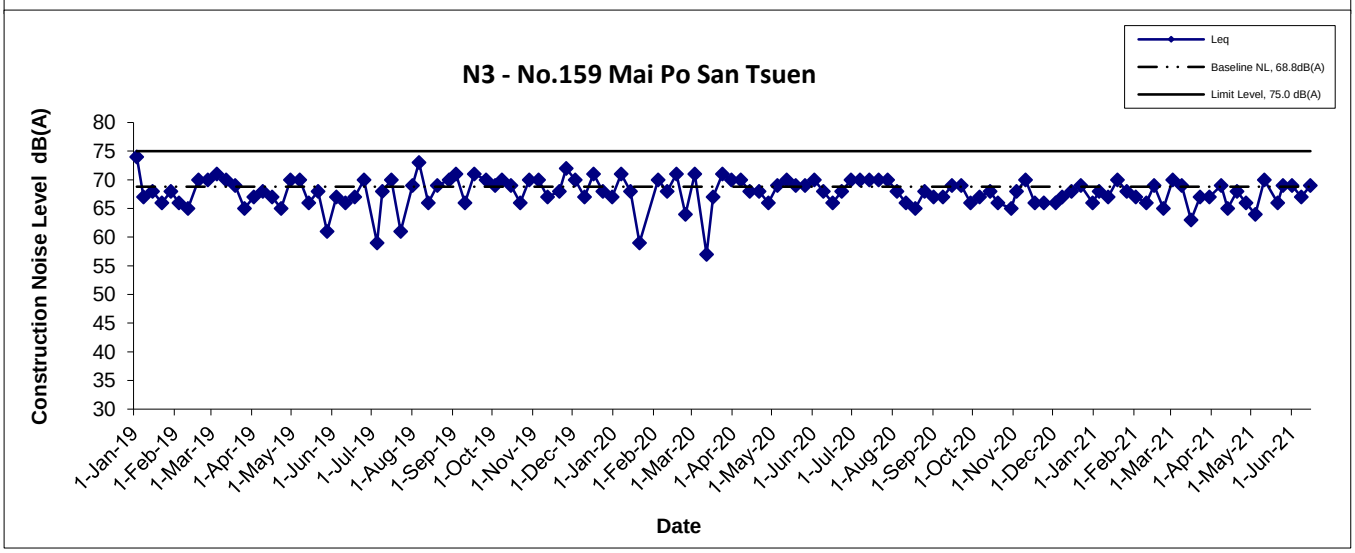


Title: Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Jun 2021	Project No. MA16036 Appendix E	CINOTECH

Noise Levels

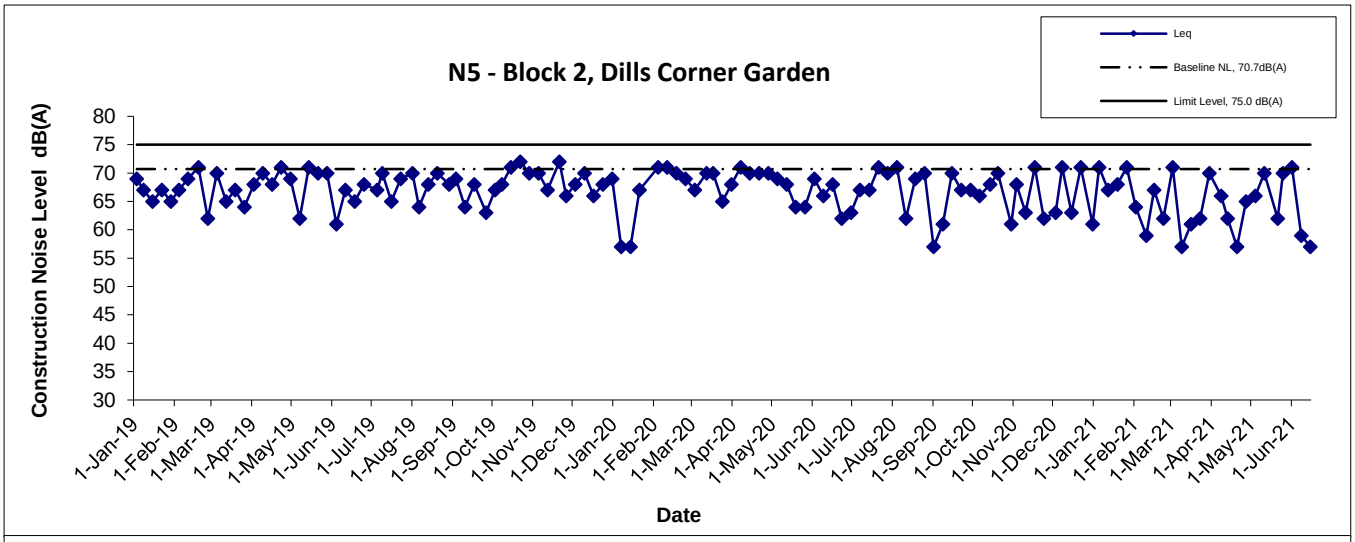


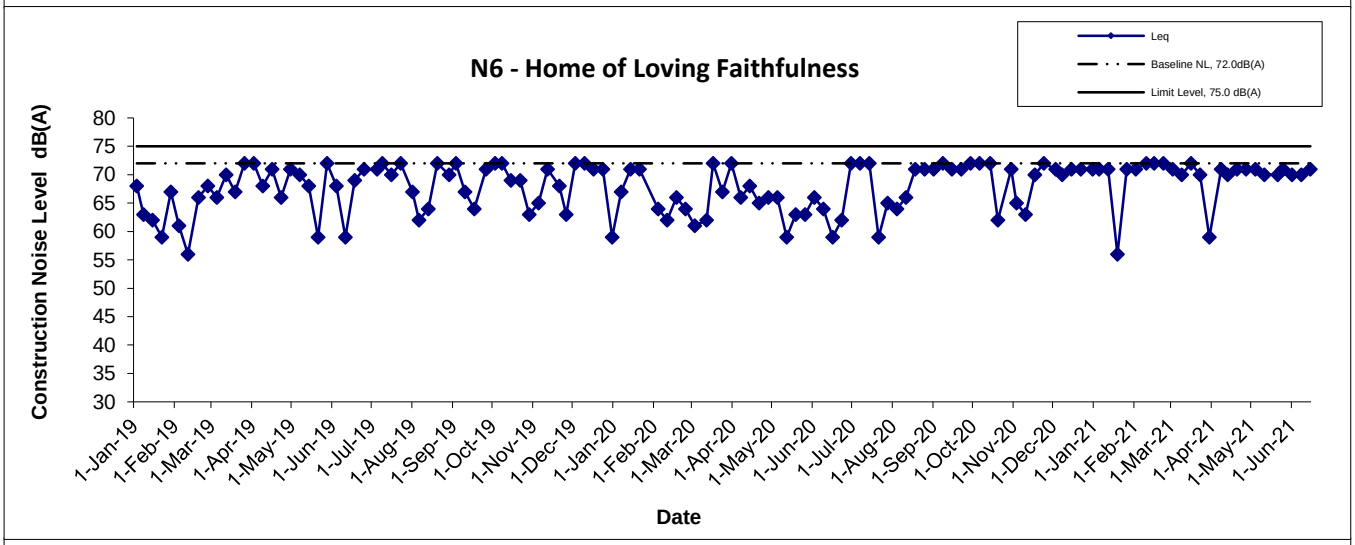


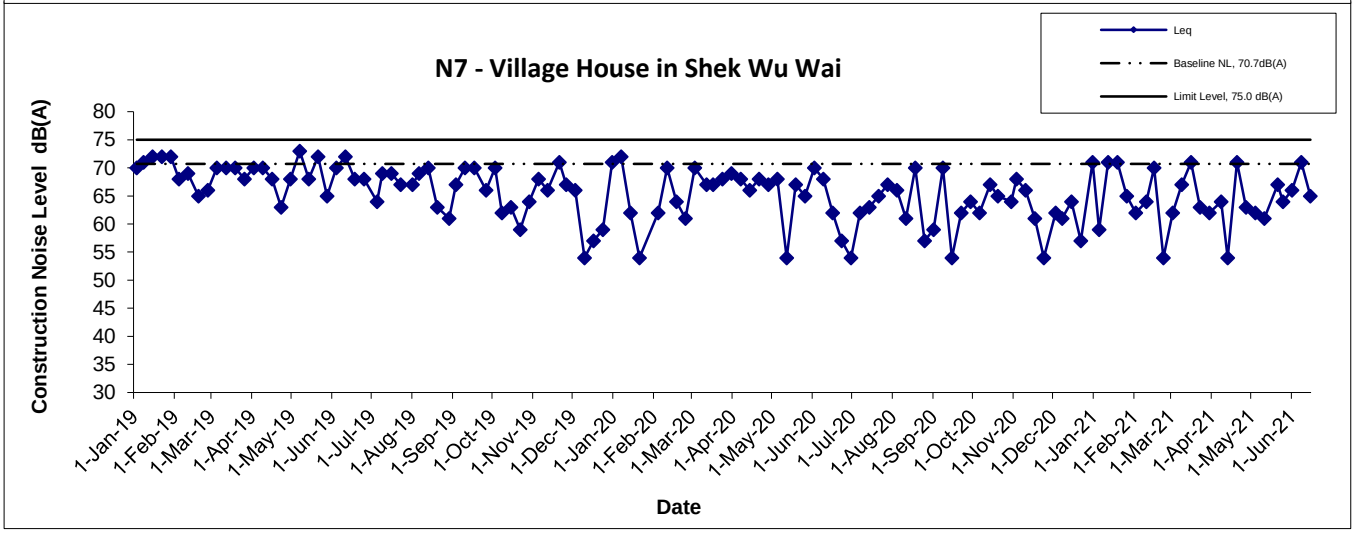


Title Agreement No. CE 67/2015 (HY) Cycle Tracks from Tuen Mun to Sheung Shui - Remaining Works - Design and Construction Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S Date Jun 2021	Project No. MA16036 Appendix E	CINOTECH

Noise Levels







Title		Scale	Project	
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		N.T.S	No. MA16036	CINOTECH
		Date Jun 2021	Appendix E	

APPENDIX F
SUMMARY OF WASTE GENERATION AND DISPOSAL RECORDS

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

Monthly Summary Waste Flow Table for 2016 (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	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-	-	-	-	-
July	-	-	-	-	-	-	0.01	0.01	0.01	-	0.01
Aug	-	-	-	-	-	-	0.01	0.01	0.01	-	0.01
Sept	0.005	-	-	-	0.005	-	0.01	0.01	0.01	-	0.06
Oct	-	-	-	-	-	-	0.05	0.05	0.05	-	0.04
Nov	0.35	-	-	-	0.35	-	0.05	0.05	0.05	-	0.05
Dec	0.4	-	-	-	0.4	-	0.05	0.05	0.05	-	0.05
Total	0.755	-	-	-	0.755	-	0.18	0.18	0.18	-	0.22

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

#Revised Figure

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

Monthly Summary Waste Flow Table for 2017 (Year)

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	1.15	-	-	-	1.15	0.369	0.05	0.05	0.05	-	0.02
Apr	0.65	-	-	-	0.65	-	0.05	0.05	0.05	-	0.02
May	0.79	-	-	-	0.79	-	0.05	0.05	0.05	-	0.01
June	1.63	-	-	-	1.63	-	0.05	0.05	0.05	-	0.02
July	1.25	-	-	-	1.25	-	0.05	0.05	0.05		0.01
Aug	1.49				1.49	-	0.05	0.05	0.05	-	0.01
Sep	1.15	-	-	-	1.14	0.493	0.05	0.05	0.05	-	0.01
Oct	1.19	-	-	-	1.19	-	0.05	0.05	0.05	-	0.01
Nov	0.79	-	-	-	0.76	-	0.05	0.05	0.05	-	0.03
Dec	3.09	-	-	-	3.07	-	0.05	0.05	0.05	-	0.01
Total	13.24				13.18	0.986	0.6	0.6	0.6		0.22

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

#Revised Figure

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

Monthly Summary Waste Flow Table for 2018 (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	4.37	-	-	-	4.36	-	0.05	0.05	0.05	-	0.01
Feb	1.66	-	-	-	1.64	-	0.05	0.05	0.05	-	0.01
Mar	1.85	-	-	-	1.82	-	0.05	0.05	0.05	-	0.01
Apr	3.35	-	-	-	3.31	-	0.05	0.05	0.05	-	0.01
May	0.84	-	-	-	0.82	-	0.01	0.01	0.01	-	0.01
June	0.04	-	-	-	-	-	0.01	0.01	0.01	-	0.04
July	2.75	-	-	-	2.72	-	0.01	0.01	0.01	-	0.03
Aug	1.34	-	-	-	1.32	-	0.01	0.01	0.01	-	0.02
Sept	0.69	-	-	-	0.68	-	0.01	0.01	0.01	-	0.01
Oct	2.99	-	-	-	2.97	-	0.01	0.01	0.01	-	0.01
Nov	4.62	-	-	-	4.61	-	0.01	0.01	0.01	-	0.01
Dec	6.49	-	-	-	6.45	-	0.01	0.01	0.01	-	0.05
Sub-total	30.99	-	-	-	30.70	-	0.28	0.28	0.28	-	0.22
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
Total	44.985	-	-	-	44.635	0.986	1.06	1.06	1.06	-	0.66

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

#Revised Figure

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

Monthly Summary Waste Flow Table for 2019 (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	1.13	-	-	-	1.08	-	0.05	0.05	0.05	-	0.05
Feb	0.04	-	-	-	-	-	0.05	0.05	0.05	-	0.04
Mar	0.06	-	-	-	-	-	0.05	0.05	0.05	-	0.06
Apr	0.06	-	-	-	0.03	-	0.05	0.05	0.05	-	0.03
May	-	-	-	-	-	-	0.05	0.05	0.05	-	0.04
Jun	0.03	-	-	-	-	-	0.05	0.05	0.05	-	0.03
July	0.05	-	-	-	-	-	0.05	0.05	0.05	-	0.05
Aug	0.02	-	-	-	-	-	0.05	0.05	0.05	-	0.02
Sep	0.02	-	-	-	-	-	0.05	0.05	0.05	-	0.02
Oct	0.02	-	-	-	-	-	0.05	0.05	0.05	-	0.02
Nov	0.03	-	-	-	-	-	0.05	0.05	0.05	-	0.03
Dec	0.19	-	-	-	-	-	0.05	0.05	0.05	-	0.19
Sub-total	1.69	-	-	-	1.11	-	0.60	0.60	0.60	-	0.58
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
Total	46.675	-	-	-	45.745	0.986	1.66	1.66	1.66	-	1.24

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

#Revised Figure

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

Monthly Summary Waste Flow Table for 2020 (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	0.13	-	-	-	-	-	0.05	0.05	0.05	-	0.13
Feb	0.16	-	-	-	-	-	0.05	0.05	0.05	-	0.16
Mar	0.14	-	-	-	-	-	0.05	0.05	0.05		0.14
Apr	0.15						0.05	0.05	0.05		0.15
May	0.22						0.05	0.05	0.05		0.22
Jun	0.06						0.05	0.05	0.05		0.06
July	0.14						0.05	0.05	0.05		0.14
Aug	0.15						0.05	0.05	0.05		0.15
Sep	0.08						0.05	0.05	0.05		0.08
Oct	0.07						0.02	0.02	0.02		0.07
Nov	0.07						0.02	0.02	0.02		0.07
Dec	0.01						0.02	0.02	0.02		0.01
Sub-total	1.38	-	-	-		-	0.51	0.51	0.51	-	1.38
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
Total	47.92	-	-	-	45.745	0.986	2.17	2.17	2.17	-	2.62

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

#Revised Figure

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

Monthly Summary Waste Flow Table for 2021 (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	0.05	-	-	-	-	-	0.02	0.02	0.02	-	0.05
Feb	0.02	-	-	-	-	-	0.02	0.02	0.02	-	0.02
Mar	0.01	-	-	-	-	-	0.02	0.02	0.02	-	0.01
Apr	0.02	-	-	-	-	-	0.02	0.02	0.02	-	0.02
May	0.01	-	-	-	-	-	0.02	0.02	0.02	-	0.01
Jun	0.00	-	-	-	-	-	0.02	0.02	0.02	-	0.00
July											
Aug											
Sep											
Oct											
Nov											
Dec											
Sub-total	1.49	-	-	-		-	0.63	0.63	0.63	-	1.49
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
Total	48.03	-	-	-	45.745	0.986	2.29	2.29	2.29	-	2.68

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

#Revised Figure

APPENDIX G
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

Appendix G - 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	• 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	• 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	• Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from the bodies and wheels. However, all spraying of materials and surfaces should avoid excessive water usage	*
S.3.6.2	S.3.2.3	• Where a vehicle leaving a construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials will not leak from the vehicle	^
S.3.6.2	S.3.2.3	• Travelling speeds should be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks	^
S.3.6.2	S.3.2.3	• Erection of hoarding of not less than 2.4 m high from ground level along the site boundary, where appropriate	^
S.3.6.2	S.3.2.3	• Any stockpile of dusty materials shall be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and 4 sides	*
S.3.6.2	S.3.2.3	• All dusty materials shall be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet	*

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

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

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
Table 5-7	S.4.2.19	Use of quiet plant (PME): - 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: - mini excavator - mobile crane - dump truck - hand-held electric circular saw - bar bender - vibrating hammer - generator - concrete lorry mixer - lorry - vibratory poker - asphalt paver - compactor - road roller	*

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		- crane mounted auger - grout mixer - grout pump - drill - road ripper, excavator mounted	
S.5.6.2	S.4.2.19	Noise enclosure shall be used for the following PMEs where practicable: - air compressor - hand-held breaker	N/A (1)
S.5.6.2	S.4.2.19	The barrier / enclosure material's surface mass shall be in excess of 7 kg/m^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	^

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.5.6.8	S.4.2.19	Unused equipment should be turned off. PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided	^
S.5.6.8	S.4.2.19	Regular maintenance of all plant and equipment	^
S.5.6.8	S.4.2.19	Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable	N/A
S.5.6.8	S.4.2.19	The Contractor shall liaise with the schools that are located near the works sites regarding their examination period and schedule the noisy works to avoid the examination period as far as possible.	^

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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 hydro-seeded following completion to prevent erosion	N/A

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.6.6.1	S.5.2.4	During construction works, chemical toilets will be provided for the use of site staff. These will be provided by a licensed contractor, who will be responsible for appropriate disposal and maintenance of the effluent	^
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

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.6.6.1	S.5.2.4	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	*
-	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.	^

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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 and visual impacts), mitigation measures are required to ensure proper handling, storage, transportation and disposal of materials at the outset and throughout the construction phase of the project	^
S.7.4.1	S.6.2.6	• The reuse/ recycling of all materials on site shall be investigated and exhausted prior to treatment/ disposal off-site	^
S.7.4.1	S.6.2.6	• Good site practices shall be adopted from the commencement of works to avoid the generation of waste, reduce cross contamination of waste and to promote waste minimization	*
S.7.4.1	S.6.2.6	• All waste materials shall be sorted on-site into inert and non-inert C&D materials, and where the materials can be recycled or reused, they shall be further segregated. Inert material, or public fill will comprise stone, rock, masonry, brick, concrete and soil which is suitable for land reclamation and site formation whilst non-inert materials include all other wastes generated from the construction process such as plastic packaging and vegetation (from site clearance)	*

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.7.4.1	S.6.2.6	• The Contractor shall be responsible for identifying what materials can be recycled/ reused, whether on-site or off-site. In the event of the latter, the Contractor shall make arrangements for the collection of the recyclable materials. Any remaining non-inert waste shall be collected and disposed of to the Public Filling Areas whilst any inert C&D materials shall be re-used on site as far as possible. Alternatively, if no use of the inert material can be found onsite, the materials can be delivered to a Public Fill Area or Public Fill Bank after obtaining the appropriate licence	*
S.7.4.1	S.6.2.6	• In order to monitor the disposal of C&D material and solid wastes at public filling facilities and landfills, and control fly-tipping, a trip-ticket system shall be implemented by the Contractor, in accordance with the contract and the requirements of DEVB Technical Circular (Works) No. 6/2010 “Trip Ticket System for Disposal of Construction and Demolition Material”.	^
S.7.4.1	S.6.2.6	• Under the Waste Disposal (Chemical Waste) (General) Regulation, the Contractor shall register as a Chemical Waste Producer if chemical wastes such as spent lubricants and paints are generated on site. Only licensed chemical waste collectors shall be employed to collect any chemical waste generated at site. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme both published by EPD;	*

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.7.4.1	S.6.2.6	• A sufficient number of covered bins shall be provided on site for the containment of general refuse to prevent visual impacts and nuisance to the sensitive surroundings. These bins shall be cleared daily and the collected waste disposed of to the refuse transfer station. Further to the issue of ETWB Technical Circular (Works) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness, the Contractor is required to maintain a clean and hygienic site throughout the project works;	*
S.7.4.1	S.6.2.6	• All chemical toilets, if any, shall be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal; and	^
S.7.4.1	S.6.2.6	• Toolbox talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.	^
S.7.4.1	S.6.2.6	• The Contractor shall comply with all relevant statutory requirements and guidelines and their updated versions that may be issued during the course of project construction.	^

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
Land Contamination			
S.8.7.2 – S.8.7.3	S.7.2.2	Preparation of Contamination Assessment Plan (CAP), which should be submitted to EPD for endorsement, prior to investigation. Site investigation and sampling works in accordance with the approved CAP. If contamination is identified, Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) shall be prepared and submitted for EPD's approval.	^
S.8.7.5	S.7.3.1	The following control measures should be implemented when handling identified contaminated materials: • 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	<u>Management of Contaminated Soils</u> • 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	N/A

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		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 contaminated water requiring disposal and suspended solids in the wastewater stream	

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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)	*In situ* compensation planting at the Information Kiosk and R9 should occur to provide continuing function of the bamboo and plantation (see Figure 8-1 of EM&A Manual for Stage 1 Works (Year 2015)). It is recommended that the Information Kiosk and Resting Station R9 should be designed sympathetically to the natural surroundings. Compensation planting along the Sheung Yue River and Shek Sheung River including at R9 and Information Kiosk could be implemented as appropriate.	N/A
S.9.11.17 – S.9.11.19	S.8.2.4 (Stage 1) S.8.2.3 (Stage 2)	For the Kam Tin section and the Long Valley section of the Project, construction works shall not be carried out during the wet season (April to October) which is considered to have no significant impact to wildlife and to avoid the breeding season of Greater Painted-snipes at Long Valley. This is also to prevent any site run-off to adjacent water channels and fishponds including those fishponds along San Tin Tsuen Road.	^
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 groove from dust-coating on leave next to the R9 and hence affect the breeding habitat of the very rare Dark Brown Ace, a dust barrier should be installed between the bamboo and the construct site.	N/A

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
-	S.8.2.6 (Stage 1 only)	For the lower Shek Sheung River, construction works should be scheduled in dry season to minimize the disturbance to the foraging ardeids and the Quiet PME shall be implemented practicable to minimize the noise disturbance to the foraging ardeids.	^
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

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
S.9.11.27	S.8.2.11 (Stage 1) S.8.2.9 (Stage 2)	The following good work practices are recommended: • 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; 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	^

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
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			
Detailed Design Phase			
Table 12-11	CP1	A detailed tree survey to be carried out by the IDC Consultant during the detailed design stage. The recommendations of the preliminary tree survey shall be reviewed and confirmed during the detailed survey. Should tree felling be required, tree felling application is required in accordance with DEVB Technical Circular (Works) No. 10/2013 Tree Preservation	^
S.12.9.3	CP6	It has been agreed that the proposed landscape areas under DSD's 4215DS project which falls within the cycle track works area will be implemented by Project proponent of this Project in form of roadside amenity areas after completion of the cycle track. During the detailed design, the works programme of this Project shall be coordinated with the above-mentioned DSD project in order to avoid abortive planting works and impact on landscape resources between the interface of different public works. The proposed landscape areas under 4215DS falled within the cycle track works area shall be incorporated in the final landscape design of this Project.	^
S.12.10.1	OP1	The Design Concept Drawings and Conceptual Landscape Master Plan of cycle track and associated facilities demonstrate landscape and visual mitigation strategies and design measures including integrated design approach, amenity and compensatory 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	^

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
		Survey Report and approval from relevant departments at that stage	
Construction Phase			
Table 12-11	CP1.1	To retain trees, which have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs.	^
	CP1.2	Creation of precautionary area around trees to be retained equal to half of the trees canopy diameter. Precautionary area to be fenced.	*
	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

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
	CP1.8	All works affecting the trees identified for retention and transplantation will be carefully monitored. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring throughout the construction period.	^
	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.	^

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

EIA Ref.	EM&A Ref.	Mitigation Measures	Status
	CP3.3	Screen the works area during the construction phase through the use of decorative hoarding along the site boundary facing adjacent VSRs	^
	CP4.1	Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase	^
	CP4.2	Use of native plant species predominantly in the planting design for the buffer areas.	^
	CP4.3	The tree planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree planting specification would be included within the contract documents	^
	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.	# Recommendation was made during site audit but not yet improved/rectified by the contractor.

APPENDIX H
SUMMARY OF EXCEEDANCES

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

Appendix H – Summary of Exceedance

Reporting Period: November 2016 - June 2021

(A) Exceedance Report for Construction Noise
(NIL in the Contract)

APPENDIX I
SUMMARIES OF ENVIRONMENTAL COMPLAINT, WARNING, SUMMON AND NOTIFICATION OF SUCCESSFUL PROSECUTION

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

Appendix I – Record of environmental complaint, warning, summon and notification of successful prosecution

Reporting Period: November 2016 - June 2021

Table I - Record of Environmental Complaints

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
1	Pok Wai South Road	8th November 2018	The complaint is filed against extensive dusty stockpile being placed at the works site of Pok Wai South Road (Portion A), causing dust nuisance and affecting the passer-by and residents.	• Cover all the stockpile when stockpiling works was not being conducted; • Arrange on-site personnel to wash the wheels of the vehicles immediately before they leave the site area; and • Increase the frequency of water spraying on the stockpiles to dampen the dusty surface.	CIR was submitted in December 2018
2	Mai Po San Tsuen (Portion D)	20th December 2018	The complaint is filed against extensive dust nuisance by construction activities generated sand and dust, and may have caused the nearby village roads to look dusty and unclean.	• Increase the frequency of water spraying on the paved roads to minimize the dust generation; and • Cover the temporary cut slopes by tarpaulin before any excavation works commence.	CIR was submitted in December 2018
3	Mai Po San Tsuen (Portion D)	21st December 2018	The complaint is filed against site effluent being pumped and discharge into the nearby surface channel from the same construction site.	• Cover the temporary cut slopes by tarpaulin before any excavation works commence. • Clean the water in the channel and all broken covers are replaced by new decking covers • 3 weirs have been installed at the downstream • Use of sedimentation tank prior to discharge • New cut-off plate next to the channel will be raised 200mm to prevent potential run-off • A filter with aggregate is placed at the side channel	CIR was submitted in February 2019

Appendix I – Record of environmental complaint, warning, summon and notification of successful prosecution

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				• Water and wastewater filtration system is installed to treat the site effluent.	
4	Yau Mei San Tsuen	5th December 2019	The complaint is filed against several stockpiles of dusty materials were not covered in the construction site (Yau Mei San Tsuen, Portion D) on 19 November 2019, 1300hr. No dust suppression measures were observed on site. Moreover, earth moving by grabber on lorry also generated large amount of dust.	• Increased the frequency of water spraying on the exposed earth to minimize the dust generation • Removed the stockpiles on site • Installed sprinklers to keep the site clearance wet	CIR was submitted in December 2019

Remarks: 4 environmental complaints were received during the construction period.

Table II - Record of Notification of Summon and Successful Prosecution

Log Ref.	Received Date	Details of summon and prosecution	Status
1	5th November 2019	Carrying out regulatory work not in accordance with the Schedule of the Air Pollution Control (Construction Dust) Regulation.	Acquitted
2	5th November 2019	Constructing a designated project contrary to the condition of environmental permit.	The prosecution was successful

Remarks: 2 notifications of summon and one successful prosecution were received during the construction period.