



Water Supplies Department  
New Works Branch  
Construction Division  
11 Tai Yip Lane  
Kowloon Bay  
Kowloon  
Hong Kong

Your reference:

Our reference: HKWSD201/50/107871

Date: 9 March 2022

Attention: Mr Hivan Cheng

**BY POST**

Dear Sirs

Quotation No.: WQ/17/A071  
Independent Environmental Checker for Water Supplies Department  
– Contract No. 13/WSD/16 Mainlaying in Tseung Kwan O  
Verification of 3rd Annual EM&A Review Report for September 2020 to August 2021

We refer to emails of 21 February and 7 March 2022 attaching 3rd Annual EM&A Review Report for September 2020 to August 2021 for the captioned project prepared by the ET.

We have no further comments and hereby verify the captioned report in accordance with Clause 3.5 of the Environmental Permit no. EP-503/2015/A.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned or our Mr Louis Kwan on 2618 2831.

Yours faithfully  
ANEWR CONSULTING LIMITED

James Choi  
Independent Environmental Checker

CPSJ/KSYL/lsm



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**Contract No. 13/WSD/16**

**Mainlaying in Tseung Kwan O**

**Annual EM&A Review Report No. 3  
For September 2020 to August 2021**

February 2022

(Rev. 0)

	<b>Prepared by:</b>	<b>Certified by:</b>
<b>Name</b>	Howard Chan	Jacky Leung
<b>Position</b>	Environmental Team	Environmental Team Leader
<b>Signature</b>		
<b>Date:</b>	18 February 2022	18 February 2022

## Revision History

<b>0</b>	1 <sup>st</sup> Submission	18 February 2022
<b>Rev.</b>	<b>DESCRIPTION OF MODIFICATION</b>	<b>DATE</b>

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## EXECUTIVE SUMMARY

- A1. Penta-Ocean - Concentric Joint Venture (POCJV) is contracted to carry out the Mainlaying in Tseung Kwan O under Contract No. 13/WSD/16 (hereinafter known as “the Contract”).
- A2. In accordance with the Environmental Monitoring and Audit (EM&A) Manual for the Contract, EM&A works should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Contract.
- A3. The construction works of Mainlaying in Tseung Kwan O was commenced on 30 August 2018. This is the 3<sup>rd</sup> Annual Environmental Monitoring and Audit (EM&A) Review Report prepared by ASCL. This report presents the EM&A works carried out during the period of 1 September 2020 to 31 August 2021.

- A4. A summary of the monitoring activities undertaken in this reporting period is listed below:

<b>Monitoring Activities</b>	<b>Frequency</b>
Daytime Noise monitoring	46 times
Landfill Gas Monitoring	8288 times
Environmental Site Inspection	52 times

- A5. No contract-related exceedance of the noise Action/Limit Level was recorded during the reporting period.
- A6. 46 times of noise impact monitoring between September 2020 to August 2021 were conducted since contract-related construction activities were undertaken within a radius of 300m from NSR4 Creative Secondary School.
- A7. No exceedance of landfill gas monitoring was recorded during the reporting period.
- A8. No summons/ prosecutions were received in the reporting period.
- A9. 3 environmental complaints were received in the reporting period. Detailed information is summarised in **Appendix G** and **Appendix I**.
- A10. There were no changes that may affect the on-going EM&A programme.

## **1 Basic Contract Information**

### **1.1 Background**

- 1.1.1 The proposed Desalination Plant at Tseung Kwan O (DPTKO) will produce potable water with an initial capacity of 135 million liters per day (MLD), expandable to an ultimate capacity of 270 MLD in the future to provide a secure and alternative fresh water resource complying with the World Health Organization (WHO) standards. The plant will adopt the Seawater Reverse Osmosis (SWRO) technology, which dominates the market due to its reliability and progressive reduction in cost as the technology advances.
- 1.1.2 Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection granted the Variation of Environmental Permit (No. EP-503/2015/A) to Water Supplies Department (WSD) for the Project on 26 January 2018.
- 1.1.3 The scope of the Contract consists of the laying of about 10km long 1200mm diameter freshwater mains and the associated works along the alignment of the Contract as shown with the overall view in **Appendix A**.

### **1.2 The Reporting Scope**

- 1.2.1 This is the 3<sup>rd</sup> Annual EM&A Review Report for the Contract which summarizes the key findings of the EM&A programme during the reporting period from 1 September 2020 to 31 August 2021.

### **1.3 Project Organization**

- 1.3.1 The Project Organization structure for Construction Phase is presented in **Appendix B**.
- 1.3.2 Contact details of the key personnel are presented in **Table 1.1** below:

**Table 1.1 Contact Details of Key Personnel**

<b>Party</b>	<b>Position</b>	<b>Name</b>	<b>Telephone no.</b>
Penta-Ocean -Concentric Joint Venture	Environmental Officer	Calvin Chik	9863-5630
Acuity Sustainability Consulting Limited	Environmental Team Leader	Jacky Leung	2698-6833
ANewR Consulting Limited	Independent Environmental Checker	James Choi	2618-2831

### **1.4 Summary of Construction Works**

- 1.4.1 Details of the major construction works undertaken in this reporting period are shown in **Table 1.2** and **Appendix A**. The construction programme is presented in **Appendix C**.

**Table 1.2a Summary of the Construction Works Undertaken during the Reporting Quarter  
(September 2020 - October 2020)**

<b>Location</b>	<b>Location</b>	<b>Works Conducted in the reporting month</b>
Portion H of the Project Site	TKO 137 Fill Bank Desalination Plant & SENTX area	<ul style="list-style-type: none"> <li>Concrete end block casting for MS1200 pipe end at the proposed desalination plant location.</li> <li>Pipe laying and gate valve installation of the remaining NS250 pipeline.</li> </ul>
	TKO 137 Pit A	<ul style="list-style-type: none"> <li>Pipe pile for ELS of trenchless receiving pit and grouting works.</li> </ul>
	TKO 137 Pit B	<ul style="list-style-type: none"> <li>Grouting works.</li> </ul>
	TKO 137 Pit C	N/A
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying.</li> </ul>
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> <li>Annulus grouting and thrust block casting.</li> <li>Pipe laying and pipe trench excavation for next portion.</li> </ul>
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> <li>Tial pit works</li> <li>Excavation and ELS works for IT chamber.</li> <li>Construction of base slab with kicker for IT chamber.</li> </ul>
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> <li>Hole drilling and grout tube installation for grouting works.</li> <li>Grouting works.</li> </ul>
	Wan Po Rd – Pit B	N/A
	Wan Po Rd – Pit C	<ul style="list-style-type: none"> <li>Re-grouting works.</li> </ul>
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying was conducted.</li> </ul>
	Landfill Stage 1 – Area B	<ul style="list-style-type: none"> <li>Casting pipe concrete was conducted.</li> </ul>
	Cycle Track – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works.</li> </ul>
	Cycle Track – Workfront 2	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works.</li> </ul>
	Velodrome – Pit L	<ul style="list-style-type: none"> <li>Inspection pit works.</li> <li>Sheetpiling for pit ELS.</li> </ul>
	Velodrome – Pit M	<ul style="list-style-type: none"> <li>ELS for trenchless working pit.</li> <li>Trench excavation and pipe laying works.</li> </ul>
	Velodrome – Pit N	<ul style="list-style-type: none"> <li>ELS for trenchless working pit.</li> <li>Pit construction was completed.</li> </ul>
	Velodrome – Pit O	<ul style="list-style-type: none"> <li>Grouting works was completed.</li> <li>Pit excavation and ELS works.</li> </ul>
	Velodrome – Pit P	<ul style="list-style-type: none"> <li>ELS for trenchless working pit</li> <li>Erection for temperature platform for grouting works was in-progress.</li> </ul>
	Inspection Pit – Po Lam Road footpath	<ul style="list-style-type: none"> <li>Inspection pit was completed.</li> </ul>

**Table 1.2b Summary of the Construction Works Undertaken during the Reporting Quarter  
(November 2020 – January 2021)**

Location	Location	Works Conducted in the reporting month
Portion H of the Project Site	TKO 137 Fill Bank Desalination Plant & SENTX area	<ul style="list-style-type: none"> <li>Hydrostatic pressure testing for completed MS1200 pipeline section.</li> <li>Backfilling and reinstatement work.</li> </ul>
	TKO 137 Pit A	<ul style="list-style-type: none"> <li>Grouting works for ELS of trenchless receiving pit was completed.</li> <li>Pipe trench excavation and ELS works.</li> </ul>
	TKO 137 Pit B	<ul style="list-style-type: none"> <li>Pipe trench excavation and ELS works were in-progress.</li> </ul>
	TKO 137 Pit C	<ul style="list-style-type: none"> <li>Pipe piling and ELS works.</li> <li>Pipe trench excavation and ELS works were in-progress.</li> </ul>
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> <li>Construction of IT chamber.</li> <li>Pipe excavation and ELS works were in-progress.</li> </ul>
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> <li>Pit excavation and ELS works.</li> </ul>
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> <li>Additional pipe pile was completed.</li> <li>Additional re-grouting works.</li> <li>Pit excavation and ELS works.</li> </ul>
	Wan Po Rd – Pit C	<ul style="list-style-type: none"> <li>Construction of receiving pit was completed.</li> </ul>
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Landfill Stage 1 – Area B	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were as conducted.</li> <li>Trench reinstatement works.</li> </ul>
	Cycle Track – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were in-progress.</li> </ul>
	Cycle Track – Workfront 2	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were in-progress.</li> </ul>
	Velodrome – Pit K	<ul style="list-style-type: none"> <li>Trenchless pit for hand-shield works was conducted.</li> </ul>
	Velodrome – Pit L	<ul style="list-style-type: none"> <li>Sheet piling for pit ELS.</li> <li>Excavation and ELS works were conducted.</li> </ul>
	Velodrome – Pit M	<ul style="list-style-type: none"> <li>Pipe jacking works were conducted.</li> </ul>
	Velodrome – Pit N	<ul style="list-style-type: none"> <li>Receiving pit was completed.</li> </ul>
	Velodrome – Pit O	<ul style="list-style-type: none"> <li>Establishment for pipe jacking work</li> </ul>
	Velodrome – Pit P	<ul style="list-style-type: none"> <li>Grouting works.</li> <li>Pit excavation and ELS works.</li> </ul>
Mau Wu Tsai – Work front 1 & 2	<ul style="list-style-type: none"> <li>Trial pit and trench excavation were conducted.</li> <li>Pipe Mainlaying works.</li> </ul>	



**Table 1.2c Summary of the Construction Works Undertaken during the Reporting Quarter  
 (February 2021 – April 2021)**

Location	Location	Works Conducted in the reporting month
Portion H of the Project Site	TKO 137 Fill Bank Desalination Plant & SENTX area	<ul style="list-style-type: none"> <li>Hydrostatic pressure testing for completed MS1200 pipeline section were conducted.</li> </ul>
	TKO 137 Pit A	<ul style="list-style-type: none"> <li>Pipe jacking works were conducted.</li> </ul>
	TKO 137 Pit B	<ul style="list-style-type: none"> <li>Pipe jacking by TBM was conducted.</li> </ul>
	TKO 137 Pit C	<ul style="list-style-type: none"> <li>Excavation and ELS works for receiving pit were conducted.</li> <li>Construction of receiving pit was conducted.</li> </ul>
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> <li>GI works were conducted for Pit 1.</li> </ul>
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> <li>Trial pit works for Pit 2 was conducted.</li> <li>GI works were conducted for Pit 2.</li> </ul>
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> </ul>
	Wan Po Rd – Workfront 4	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> </ul>
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> <li>Grouting works for trenchless pit was conducted.</li> <li>Pit excavation and ELS works were conducted.</li> </ul>
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> <li>Grouting works for trenchless pit was conducted.</li> <li>Pit excavation and ELS works were conducted.</li> <li>Drilling and re-grouting works were conducted.</li> </ul>
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> <li>ELS and excavation works for 900HSV chamber were conducted.</li> <li>Construction works for 900HSV chamber were conducted.</li> </ul>
	Landfill Stage 1 – Area B	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Cycle Track – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Cycle Track – Workfront 2	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Velodrome – Pit K	<ul style="list-style-type: none"> <li>Trenchless hand-shield works were conducted.</li> </ul>
	Velofrome – Pit J1A	<ul style="list-style-type: none"> <li>Formation of access road and preparation works for jacking pit were conducted.</li> <li>Sheetpile driving works for pit construction were conducted.</li> </ul>
	Velodrome – Pit M	<ul style="list-style-type: none"> <li>Pipe jacking works were conducted.</li> </ul>

Location	Location	Works Conducted in the reporting month
	Velodrome – Pit O	<ul style="list-style-type: none"> <li>Establishment for pipe jacking works was conducted.</li> <li>Pipe jacking works were conducted.</li> <li>Remedial works for TBM sleeve pipe were conducted.</li> </ul>
	Mau Wu Tsai – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Mau Wu Tsai – Workfront 2	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Po Lam Road (D2)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Po Lam Road (A0)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	TKO Primary Service Reservoir	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>

**Table 1.2d Summary of the Construction Works Undertaken during the Reporting Quarter (May 2021 – July 2021)**

Location	Location	Works Conducted in the reporting month
Portion H of the Project Site	TKO 137 Pit B	<ul style="list-style-type: none"> <li>Pipe jacking by TBM was conducted.</li> </ul>
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> </ul>
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> </ul>
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> </ul>
	Wan Po Rd – Workfront 4	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying works were conducted.</li> </ul>
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> <li>Pit excavation and ELS works were conducted.</li> </ul>
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> <li>Drilling and re-grouting works were conducted.</li> <li>Pit excavation works were conducted.</li> </ul>
	Wan Po Rd – Pit D	<ul style="list-style-type: none"> <li>Pit excavation and ELS works were in-progress.</li> </ul>
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> <li>Construction works for 900HSV chamber were conducted.</li> </ul>
	Landfill Stage 1 – Area B	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Cycle Track – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Cycle Track – Workfront 2	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were conducted.</li> </ul>
	Pung Loi Rd – Pit WPR1	<ul style="list-style-type: none"> <li>Trial pit works and removal of abandoned CLP cable were conducted.</li> </ul>
	Velofrome – Pit J1A	<ul style="list-style-type: none"> <li>Pit construction works were conducted.</li> </ul>

Location	Location	Works Conducted in the reporting month
		<ul style="list-style-type: none"> <li>Setting up work for trenchless works by hand-shield was conducted</li> </ul>
	Velodrome – Pit M	<ul style="list-style-type: none"> <li>Pipe jacking preparation works were conducted.</li> <li>Commencement of Micro Tunnel Boring Machine (MTBM) pipe jacking works</li> </ul>
	Velodrome – Pit O	<ul style="list-style-type: none"> <li>Construction works for rescue pit for TBM were conducted.</li> </ul>
	Velodrome – Pit P	<ul style="list-style-type: none"> <li>Pipe jacking preparation works.</li> <li>Horizontal drilling ground treatment works were conducted.</li> </ul>
	Mau Wu Tsai – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Po Lam Road (D2)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> <li>Reinstatement works were conducted</li> </ul>
	Po Lam Road (A0)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> <li>Trench backfilling and re-instatement works were conducted.</li> <li>Concrete carriageway reinstatement works were conducted.</li> </ul>
	Po Lam Road (D1)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Po Lam Road (B5)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Tsui Lam Road	<ul style="list-style-type: none"> <li>Trial pit works were conducted.</li> <li>Reinstatement work of trial pit was conducted</li> </ul>
	TKO Primary Service Reservoir	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> <li>Trai pit excavation works were conducted.</li> </ul>

**Table 1.2e Summary of the Construction Works Undertaken during the Reporting Quarter (August 2021)**

Location	Location	Works Conducted in the reporting month
Portion H of the Project Site	TKO 137 Pit B	<ul style="list-style-type: none"> <li>Remedial works for TBM pipe jacking were conducted.</li> </ul>
Portion J of the Project Site	Wan Po Rd – Workfront 1	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Workfront 2	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Workfront 3	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Workfront 4	<ul style="list-style-type: none"> <li>Pipe trench excavation and pipe laying were in-progress.</li> </ul>
	Wan Po Rd – Pit A	<ul style="list-style-type: none"> <li>Pit excavation and ELS works were in-progress.</li> </ul>

Location	Location	Works Conducted in the reporting month
	Wan Po Rd – Pit B	<ul style="list-style-type: none"> <li>Pit excavation works were conducted.</li> </ul>
	Wan Po Rd – Pit D	<ul style="list-style-type: none"> <li>Pit excavation and ELS works were in-progress.</li> </ul>
	Landfill Stage 1 – Area A	<ul style="list-style-type: none"> <li>Construction works for 900HSV chamber were conducted.</li> </ul>
	Landfill Stage 1 – Area B	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were in-progress.</li> </ul>
	Cycle Track – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were in-progress.</li> </ul>
	Cycle Track – Workfront 2	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying were in-progress.</li> </ul>
	Roundabout – Pit G1A	<ul style="list-style-type: none"> <li>Demolishing works for road planter were conducted.</li> </ul>
	Roundabout – Pit J1A	<ul style="list-style-type: none"> <li>Trenchless works by hand-shield were conducted.</li> </ul>
	Velodrome – Pit M	<ul style="list-style-type: none"> <li>Rescue pit construction works were conducted.</li> </ul>
	Velodrome – Pit P	<ul style="list-style-type: none"> <li>Pipe jacking preparation works were conducted.</li> </ul>
	Mau Wu Tsai – Workfront 1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Ling Hong Road - Pit Y	<ul style="list-style-type: none"> <li>Excavation and ELS works for pit Construction were conducted.</li> </ul>
	Ling Hong Road - Pit R	<ul style="list-style-type: none"> <li>Excavation and ELS works for pit Construction were conducted.</li> </ul>
	Po Lam Road South Stage-1	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	Po Lam Road (A0)	<ul style="list-style-type: none"> <li>Concrete carriageway reinstatement works were conducted.</li> </ul>
	Po Lam Road (D1)	<ul style="list-style-type: none"> <li>Trench backfilling and reinstatement works were conducted.</li> </ul>
	Po Lam Road (B5)	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> </ul>
	TKO Primary Service Reservoir	<ul style="list-style-type: none"> <li>Trench excavation and pipe laying works were conducted.</li> <li>Trai pit works were conducted.</li> </ul>

## 1.5 Summary of Environmental Status

1.5.1 A summary of the valid permits, licences, and /or notifications on environmental protection for this Contract is presented in **Table 1.3**.

**Table 1.3 Summary of the Status of Valid Environmental Licence, Notification, Permit and Documentations**

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Variation of Environmental Permit	EP no.: EP-503/2015/A	Throughout the Contract	-
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)	Ref no.: 423775	Throughout the Contract	-
Chemical Waste Producer Registration	WPN: 5213-839-P3287-01	Throughout the Contract	-
Billing Account for Disposal of Construction Waste	A/C no.: 7029491	Throughout the Contract	-
Water Discharge Licence	WT00032336-2018	Until 31 December 2023	-
Construction Noise Permit	GW-RE0563-20	From 29 June 2020 until 28 September 2020	-
Construction Noise Permit (Hong Kong Velodrome)	GW-RE0364-20	From 18 May 2020 until 17 November 2020	-
Construction Noise Permit (Hong Kong Velodrome)	GW-RE0961-20	From 20 November 2020 until 17 May 2021	-
Construction Noise Permit (Hong Kong Velodrome)	GW-RE0494-21	From 17 May 2021 until 16 November 2021	-
Construction Noise Permit (Wan Po Road, Wan O Road and Chun Yat Street)	GW-RE0846-20	From 08 October 2020 until 31 March 2021	-
Construction Noise Permit (Wan Po Road, Wan O Road and Chun Yat Street)	GW-RE0277-21	From 31 March 2021 until 30 September 2021	-
Construction Noise Permit (Landfill Stage 1 near Jockey club HKFA Football Training Centre)	GW-RE0927-20	From 1 November 2020 until 24 January 2021	-
Construction Noise Permit (Tseung Kwan O Area 137, N.T.)	GW-RE0383-21	From until 1 May 2021 until 30 September 2021	-

1.5.2 The status for all environmental aspects is presented **Table 1.4**.

**Table 1.4 Summary of Status for Key Environmental Aspects under the EM&A Manual**

<b>Parameters</b>	<b>Status</b>
Noise	
Baseline Monitoring	The baseline noise monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under VEP Condition 3.4
Impact Monitoring	46 times of noise impact monitoring between September 2020 to August 2021 were conducted since contract-related construction activities were undertaken within a radius of 300m from NSR4 Creative Secondary School
Waste Management	
Mitigation Measures in Waste Monitoring Plan	On-going
Landfill Gas Monitoring	
Mitigation Measures	On-going
Monitoring	On-going
Environmental Audit	
Site Inspection	On-going

1.5.3 Other than the EM&A works by ET, regular environmental management meetings were conducted in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.

1.5.4 The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of Contract during the reporting period is provided in **Appendix E**.

## 2 Noise Monitoring

### 2.1 Monitoring Requirements

- 2.1.1 To ensure no adverse noise impact, noise monitoring is recommended to be carried out within 300m radius from the nearby noise sensitive receivers (NSRs), during construction phase. The NSRs selected as monitoring station are (i) NSR4 – Creative Secondary School, (ii) NSR24 – PLK Laws Foundation College, and (iii) NSR31 – School of Continuing and Professional Studies – CUHK respectively.
- 2.1.2 In accordance with the EM&A Manual, baseline noise level at the noise monitoring stations were established as presented in the Baseline Monitoring Report. Impact noise monitoring will be conducted once per week in the form of 30-minutes measurements  $L_{eq}$ ,  $L_{10}$  and  $L_{90}$  levels recorded at each monitoring station between 0700 and 1900 hours on normal weekdays.
- 2.1.3 Referring to EM&A manual Section 4.1.2, the impact noise monitoring should be carried out at all the designated monitoring stations when there are contract-related construction activities undertaken within a radius of 300m from the monitoring stations. 46 times of noise impact monitoring between September 2020 to August 2021 were conducted since contract-related construction activities were undertaken within a radius of 300m from NSR4 Creative Secondary School.

### 2.2 Noise Monitoring Parameters, Time, Frequency

- 2.2.1 Impact noise monitoring will be conducted weekly in the reporting period between 0700-1900 on normal weekdays.
- 2.2.2 Construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{Aeq}$ ).  $L_{eq}$  30min was used as the monitoring parameter for the time period between 0700 and 1900 on normal weekdays. **Table 2.1** summarizes the monitoring parameters, frequency and duration of the impact noise monitoring.

**Table 2.1 Noise Monitoring Parameters, Time, Frequency and Duration**

Time	Frequency	Duration	Parameters
Daytime: 0700-1900	Once per week	Continuously in $L_{eq}$ 5min/ $L_{eq}$ 30min (average of 6 consecutive $L_{eq}$ 5min)	$L_{eq}$ , $L_{10}$ & $L_{90}$

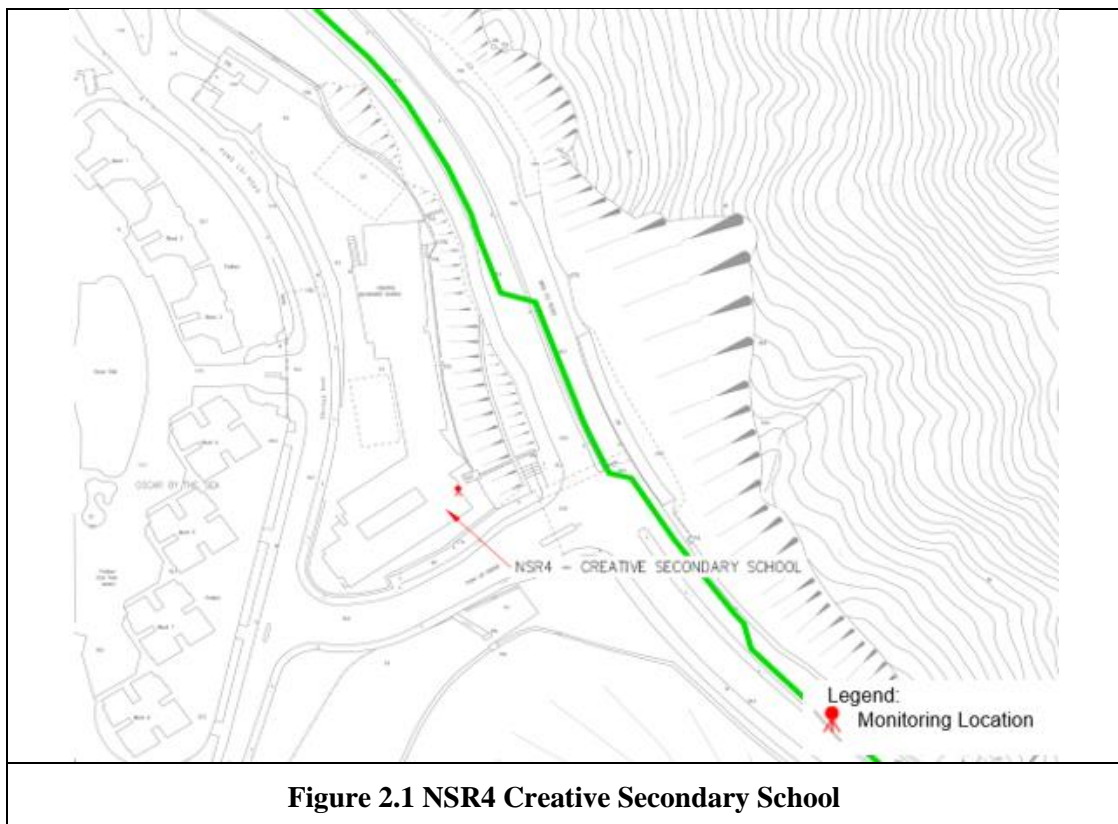
### 2.3 Noise Monitoring Locations

- 2.3.1 The monitoring locations should normally be made at a point 1m from the exterior of the NSRs building façade and placed at a position 1.2m above the ground. A correction of +3dB(A) should be made to the free-field measurements
- 2.3.2 Referring to EM&A manual Section 4.1.2, the impact noise monitoring should be carried out at all the designated monitoring stations when there are contract-related construction activities undertaken within a radius of 300m from the monitoring stations.
- 2.3.3 According to the environmental findings detailed in the EIA report and Baseline Monitoring Report, the designated locations for the construction noise monitoring are listed in Table 2.2 below.

**Table 2.2 Noise Monitoring Location**

NSR ID	Noise Sensitive Receivers	Monitoring Location	Position
NSR 4	Creative Secondary School	Roof Floor	1 m from facade
NSR 24	PLK Laws Foundation College	Pedestrian Road on Ground Floor	Free-field
NSR 31	School of Continuing and Professional Studies - CUHK	Roof Floor	1 m from facade

2.3.4 Three noise monitoring locations for impact monitoring at the nearby sensitive receivers are shown in **Figure 2.1 - 2.3**.





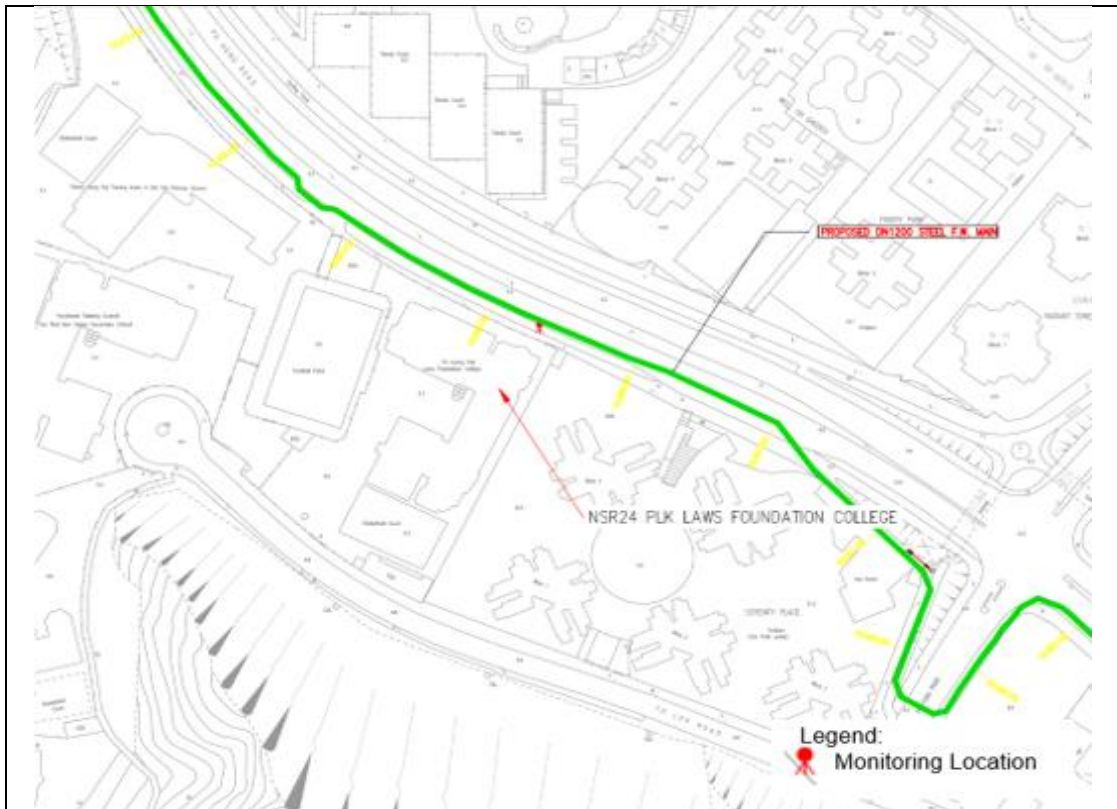


Figure 2.2 NSR24 PLK Laws Foundation College



Figure 2.3 NSR31 School of Continuing and Professional Studies - CUHK

## 2.4 Impact Monitoring Methodology

- 2.4.1 Integrated sound level meter shall be used for the noise monitoring. The meter shall be in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications. Immediately prior to and following each noise measurement the accuracy of the sound level meter would be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration level before and after the noise measurements agree to within 1.0 dB(A).
- 2.4.2 Noise measurements shall not be made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed would be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

**Table 2.3 Impact Noise Monitoring Equipment**

Equipment	Brand and Model	Detection Limit
Sound Level Meter	Nti XL2	30-130 dB(A)
Sound Level Meter	Scarlet ST-11D	27-140 dB(A)
Sound Level Meter	Lutron SL-4033SD	30-130 dB(A)
Sound Level Meter	Svantek 971	15-140 dB(A)
Sound Level Meter Calibrator	RION NC-74	Nil
Sound Level Meter Calibrator	Pulsar 105	Nil
Pocket Wind Meter Anemometer	Kestrel 1000 Wind Meter	Nil

## 2.5 Action and Limit Levels

- 2.5.1 The Action/Limit Levels are in line with the criteria of Practice Note for Professional Persons (ProPECC PN 2/93) “Noise from Construction Activities – Non-statutory Controls” and Technical Memorandum on Environmental Impact Assessment Process issued by HKSAR Environmental Protection Department [“EPD”] under the Environmental Impact Assessment Ordinance, Cap 499, S.16 are presented in **Table 2.4**.

**Table 2.4 Action and Limit Levels for Noise**

Time Period	Action	Limit (dB(A))
0700-1900 on normal weekdays	When one documented complaint is received from any one of the noise sensitive receivers	<ul style="list-style-type: none"> <li>70 dB(A) for school and</li> <li>65 dB(A) during examination period</li> </ul>
Notes: (a) Limits specified in the GW-TM and IND-TM for construction and operation noise, respectively.		

- 2.5.2 If exceedances were found during noise monitoring. The actions in accordance with the Event and Action Plan will be carried out according to **Appendix F**.

## 2.6 Monitoring Results and Observations

- 2.6.1 Noise monitoring data shall be recovered in real-time as it is a manned-event with data display from the sound level meters.
- 2.6.2 46 times of noise impact monitoring between September 2020 to August 2021 were conducted since contract-related construction activities were undertaken within a radius of 300m from NSR4 Creative Secondary School.

- 2.6.3 Detailed monitoring results are presented in **Appendix H**.
- 2.6.4 No notification of summons and prosecution related to noise was received in the reporting period.

### **3 Waste Management**

- 3.1.1 Total of 23.793 m<sup>3</sup> of inert C&D materials was collected to the Fill Bank, 0.052 m<sup>3</sup> C&D waste and general refuse were disposed of at Landfill, 0.616 tonnes of paper/ cardboard packaging were recycled and 0 tonnes chemical waste collected by licensed contractor for disposal in the reporting period.
- 3.1.2 Waste Flow Table is shown in **Appendix D**.

### **4 Summary of Monitoring Exceedance, Complaints, Notification of Summons and Prosecutions**

- 4.1.1 No monitoring exceedance, notification of summons and prosecution was received in the reporting period.
- 4.1.2 3 environmental complaints were received in the reporting period. Detailed information is summarised in **Appendix G** and **Appendix I**.

### **5 EM&A Site Inspection**

- 5.1.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections were carried out from September 2020 to August 2021 at the site portions list in **Table 5.1** below.
- 5.1.2 Twelve joint site inspections with IEC were carried out in the reporting period as shown in **Table 5.1**.

**Table 5.1 Site Inspection Record**

<b>Date</b>	<b>Inspected Site Portion</b>	<b>Time</b>
3, 10, 17, 22* and 30 September 2020	Portion F, H and J	9:15am – 12:30pm
8, 15, 21, 27* October 2020		
3, 12, 19, 23* November 2020	Portion F, H and J	9:30am – 17:00pm
2, 10, 17, 23 and 31* December 2020		
6, 15, 21, 25* January 2021		
4, 9, 18 and 22* February 2021	Portion H and J	9:20am – 12:00pm
4, 11, 18, 22* and 31 March 2021		
8, 15, 21 and 26* April 2021		
7, 14, 20 and 26* May 2021	Portion F, H and J	9:15am – 12:30pm
3, 11, 18 and 25* June 2021		
2, 8, 16, 22 and *27 July 2021		
5, 13, 20 and *27 August 2021	Portion F and J	9:20am – 12:00pm

Remark (\*): Joint Site Inspection

- 5.1.3 Minor deficiencies were observed during weekly site inspection. Key observations during the site inspections are summarized in Table 5.2.

**Table 5.2 Site Observations**

Date	Environmental Observations	Follow-up Status
03 September 2020	No major observations were observed on the reporting day.	
10 September 2020	1. Chemical was not placed inside a drip tray at CH.FC4+70.	1. Chemicals was removed.
17 September 2020	1. NRMM Label was not added on the NRMM at CHA2+14 to CHA2+66. 2. Gully was not protected by a geotextile at CHA6+64.	1. NRMM label was added. 2. Gully was fully protected by a geotextile and sand bag.
22 September 2020	1. Muddy water was observed at the discharge point of the sedimentation tank at the Hong Kong Velodrome.	1. Wastewater was treated before discharge.
30 September 2020	1. Dusty materials were observed directly next to the water barriers. It should be cleaned to prevent the escape of dusty materials from the construction site at 137 Pit A. 2. Wastewater was observed not directed to the sedimentation tank at 137 Pit A and CH.FC0+62. 3. Gully was observed not protected by sandbags at 4 sides and geotextile was not added at CHA2+14-2+66. 4. Dusty materials were observed at the site entrance/exit at CHA6+70.	1. Dusty materials were cleaned to prevent the escape of dusty materials from the construction site at 137 Pit A. 2. Wastewater was not discharged without sedimentation tank at 137 Pit A. Wastewater was directed to the sedimentation tank at 137 Pit A and CH.FC0+62. 3. Gully was protected by sandbags and geotextile. 4. Dusty materials were cleaned at the site entrance/exit at CHA6+70.
08 October 2020	1. Chemicals were not placed inside a drip tray at Portion F. 2. NRMM label was not added on the NRMM at 137 Pit C. 3. Dust suppression mitigations were not implemented at Jacking Pit B.	1. Chemicals were removed. 2. NRMM label was added. 3. Dusty materials were removed.
15 October 2020	1. Chemicals were not placed inside a drip tray at CHA6+64 and Landfill Stage 1 Area A. 2. A sedimentation tank was not placed at the site area even though no water was discharged on the observed day at CHA6+64.	1. Chemicals were removed from site. 2. There was no water pumping and discharge at CHA6+64.

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<b>Date</b>	<b>Environmental Observations</b>	<b>Follow-up Status</b>
21 October 2020	<ol style="list-style-type: none"> <li>1. NRMM label was not observed on the NRMM at Jacking Pit C.</li> <li>2. Chemicals were not placed inside a drip tray at 137 Pit A and Hong Kong Velodrome.</li> <li>3. Trapped dusty materials in the sedimentation tank were not cleaned regularly which affected the efficiency of the sedimentation tank at Hong Kong Velodrome.</li> <li>4. NRMM label was observed damaged at Hong Kong Velodrome.</li> </ol>	<ol style="list-style-type: none"> <li>1. NRMM label was added on the NRMM.</li> <li>2. Chemicals were removed from 137 Pit A and Hong Kong velodrome.</li> <li>3. Trapped dusty materials in the sedimentation tank was cleaned.</li> <li>4. A new NRMM label was added.</li> </ol>
27 October 2020	<ol style="list-style-type: none"> <li>1. Trapped dusty materials were not cleaned regularly at the gully for Hong Kong Velodrome.</li> </ol>	<ol style="list-style-type: none"> <li>1. Trapped dusty materials in the sedimentation tank was cleaned.</li> </ol>
03 November 2020	<ol style="list-style-type: none"> <li>1. NRMM label was not observed on the NRMM at 137 Pit C.</li> <li>2. Stored stockpile of dusty materials should be sprayed with water and covered with tarpaulin sheet at CHA12+50.</li> </ol>	<ol style="list-style-type: none"> <li>1. NRMM label was added.</li> <li>2. Stored stockpile of dusty materials was cleaned.</li> </ol>
12 November 2020	<ol style="list-style-type: none"> <li>1. Chemicals were not placed inside a drip tray at Portion F.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were placed inside a drip tray.</li> </ol>
19 November 2020	<ol style="list-style-type: none"> <li>1. Chemicals were not placed inside a drip tray at Portion F.</li> <li>2. Dusty materials were observed at the site entrance/exit at Jacking Pit C.</li> <li>3. Construction boundary was not protected by sandbags at CHA6+64.</li> <li>4. Gully was not protected by sandbags at CHA6+64 and CHA12+50.</li> <li>5. Wastewater was not treated before discharge at CHA12+50.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed.</li> <li>2. Dusty materials were cleaned.</li> <li>3. Construction boundary was protected by sandbags.</li> <li>4. Gully was protected.</li> <li>5. Wastewater was treated before discharge.</li> </ol>
23 November 2020	<ol style="list-style-type: none"> <li>1. Oil spillage was found at Pit L at Hong Kong Velodrome.</li> </ol>	<ol style="list-style-type: none"> <li>1. Oil spillage was cleaned.</li> </ol>
02 December 2020	<ol style="list-style-type: none"> <li>1. Chemicals were not placed inside a drip tray at Portion F.</li> <li>2. Trapped debris were not cleaned from the gully at Portion F.</li> <li>3. Environmental permit and construction noise permit were not displayed at the vehicle entrance/exit at CH.FC 0+62 and Mau Wu Tsai.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed or placed inside a drip tray.</li> <li>2. Trapped debris were cleaned.</li> <li>3. Environmental permit and construction noise permit were displayed.</li> </ol>

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Date	Environmental Observations	Follow-up Status
10 December 2020	<ol style="list-style-type: none"> <li>1. Construction boundary was not fully protected by sandbags at CHA 6+64.</li> <li>2. NRMM label was not observed at the NRMM at Jacking Pit A.</li> <li>3. Conditional survey for tree should be provided for investigation at Mau Wu Tsai. Contractor was reminded to protect the trees outside the site boundary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction boundary was fully protected.</li> <li>2. NRMM label was added at the NRMM.</li> <li>3. Protection area next to construction site were added.</li> </ol>
17 December 2020	<ol style="list-style-type: none"> <li>1. Oil spillage was observed at CHA02+50.</li> <li>2. Gully was not protected by geotextile and sandbags at four sides at CHA6+64</li> <li>3. Treated wastewater discharge point should not attach to the bottom of the sedimentation tank as trapped dusty materials would deposit at that area at CHA12+35.</li> <li>4. Environmental permit was not observed at the vehicle site entrance/exit at CHA12+35.</li> </ol>	<ol style="list-style-type: none"> <li>1. Oil spillage was cleaned.</li> <li>2. Gully was protected by timber block and geotextile. Timber block was used to avoid damage of sandbags by excavator.</li> <li>3. There was no water discharge between 19<sup>th</sup> to 31<sup>st</sup> December 2020.</li> <li>4. Environmental permit was observed at the vehicle site entrance/exit.</li> </ol>
23 December 2020	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at the site exit/entrance at Mau Wu Tsai.</li> <li>2. Chemical was not placed inside the drip tray at Pit P and Area B.</li> <li>3. Wastewater was observed not properly treated before discharge. The Contractor was recommended to add additional water treatment facility and a geotextile at the water discharge point at Pit P and Hong Kong Velodrome.</li> <li>4. Dusty materials stored on site were not properly covered at Landfill Stage 1 Area A.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed at the site exit/entrance at Mau Wu Tsai.</li> <li>2. Chemical was removed.</li> <li>3. Wastewater was observed properly treated and cleaned before discharge.</li> <li>4. Dusty materials stored on site were cleaned and covered.</li> </ol>
31 December 2020	<ol style="list-style-type: none"> <li>1. Chemical was not placed inside the drip tray at the Hong Kong Velodrome.</li> <li>2. U-Channel was not kept clear from deposited dusty materials. The contractor was reminded to clean the channel to prevent the escape of dusty materials out of the construction site at Hong Kong Velodrome.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemical was placed inside the drip tray.</li> <li>2. Wastewater was observed properly treated and cleaned before discharge.</li> </ol>

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<b>Date</b>	<b>Environmental Observations</b>	<b>Follow-up Status</b>
06 January 2021	<ol style="list-style-type: none"> <li>1. Gully was not properly covered with geo-textile and sandbags at four sides at Pit D and CHA5+90.</li> <li>2. Chemical spillage was found at CHA5+90.</li> <li>3. Environmental permit was not observed at the vehicle exit/entrance at CHA5+90.</li> <li>4. Construction boundaries was not enclosed fully at Pit B.</li> </ol>	<ol style="list-style-type: none"> <li>1. The materials were cleaned near the gully or gullies were covered with geo-textile.</li> <li>2. Chemical spillage was cleaned.</li> <li>3. Environmental permit was added.</li> <li>4. Construction boundaries were enclosed fully.</li> </ol>
15 January 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at the site entrance/exit at Wan Po Road 1, Wan Po Road 2, CH.FC 3+62.</li> <li>2. Gullies were not properly protected by sandbags and geotextile at Wan Po Road 3, CH.FC 3+62 and CH.FC 7+42.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was added.</li> <li>2. Gullies were properly protected by geotextile.</li> </ol>
21 January 2021	<ol style="list-style-type: none"> <li>1. Construction boundaries were not fully protected by sandbags at Wan Po Road 1.</li> <li>2. Environmental permit was not observed at the site entrance/exit at 137 Pit C.</li> <li>3. Gully was not protected by sandbags and geo-textile at Wan Po Road 1.</li> <li>4. Chemicals were not placed inside a drip tray at Wan Po Road 1.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction boundaries were fully protected.</li> <li>2. Environmental permit was observed.</li> <li>3. Gully was protected by timber block and geo-textile. Using Timber block for avoiding sand bag damage by excavator.</li> <li>4. Chemicals were removed.</li> </ol>
25 January 2021	<ol style="list-style-type: none"> <li>1. The desilting or water treatment facility was observed leaking. The contractor was reminded to replace a new water treatment facility to ensure proper treatment of wastewater before discharge at Hong Kong Velodrome.</li> <li>2. Grab was not placed on top of a tarpaulin sheet which may lead to accidental contamination of the ground by chemical at Hong Kong Velodrome.</li> </ol>	<ol style="list-style-type: none"> <li>1. The desilting or water treatment facility was changed a new one.</li> <li>2. Grab was removed.</li> </ol>

Date	Environmental Observations	Follow-up Status
04 February 2021	<ol style="list-style-type: none"> <li>4. Environmental permit was not observed at the site entrance/exit at 137 Pit B.</li> <li>5. Chemicals were not placed inside a drip tray and oil spillage was observed at Wan Po Road 2.</li> <li>6. Gully was not protected by sandbags and geo-textile at Wan Po Road 3.</li> <li>7. Wastewater was not properly treated before discharge at Hong Kong Velodrome</li> <li>8. Tree damage was observed at Hong Kong Velodrome. Conditional survey for the tree should be provided for investigation. The Contractor was reminded to protect the trees inside the site boundary.</li> </ol>	<ol style="list-style-type: none"> <li>4. Environmental permit was replaced at the site.</li> <li>5. Chemicals were cleaned.</li> <li>6. Gully was protected by sandbags and geo-textile.</li> <li>7. Wastewater was directed to sedimentation tank for treatment and sewer was protected by sandbags.</li> <li>8. Using notice to remind contractor to protect the trees.</li> </ol>
09 February 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at the site entrance/exit at 137 Pit B and Wan Po Road 1.</li> <li>2. Protective measures should be taken at Wan Po Road 3 for all retained trees in the construction site.</li> <li>3. Gully was not protected by sandbags and geo-textile at Wan Po Road 3.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was replaced at the site.</li> <li>2. The materials were cleaned near-by the tree.</li> <li>3. Gully was protected by sandbags and geo-textile.</li> </ol>
18 February 2021	<ol style="list-style-type: none"> <li>1. The Contractor was reminded to implement measures to protect the retained trees in the construction site at Wan Po Road 2.</li> </ol>	<ol style="list-style-type: none"> <li>1. The materials were cleaned near-by the tree.</li> </ol>
22 February 2021	<ol style="list-style-type: none"> <li>1. Wastewater was observed not treated properly at Hong Kong Velodrome. More stringent measures should be implemented to ensure compliance to requirements of Water Discharge License.</li> </ol>	<ol style="list-style-type: none"> <li>1. The tank and sewer were being cleaned at Hong Kong Velodrome.</li> </ol>
04 March 2021	<ol style="list-style-type: none"> <li>1. NRMM label was not found on the NRMM at CH.HE1+80~2+00.</li> <li>2. Chemicals were observed not placed on a drip tray at CH.HE1+80~2+00.</li> <li>3. Environmental permit was not observed at Mau Wu Tsai &amp; Mau Wu Tasi Road Abandoned Road.</li> </ol>	<ol style="list-style-type: none"> <li>1. NRMM label was found on the NRMM.</li> <li>2. Chemicals were placed on a drip tray.</li> <li>3. Environmental permit was observed.</li> </ol>



Date	Environmental Observations	Follow-up Status
11 March 2021	<ol style="list-style-type: none"> <li>1. Chemicals were not placed in a drip tray at Wan Po Road 1 and Mau Wu Tsai.</li> <li>2. Construction materials shall not be placed on the plater rack at Wan Po Road 1, Wan Po Road 2 and Mau Wu Tsai.</li> <li>3. Dusty materials were found next to the water barriers at Wan Po Road 3. It should be cleaned to prevent the escape of construction materials from the construction site.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed.</li> <li>2. Construction materials were cleaned.</li> <li>3. Dusty materials were cleaned.</li> </ol>
18 March 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at 137 Pit A, Jacking Pit K.</li> <li>2. Construction boundaries should be protected by sandbags at Wan Po Road 1.</li> <li>3. Dusty materials were found next to the water barriers. The materials should be cleaned to prevent from escape from construction site at Wan Po Road 2.</li> <li>4. Construction materials shall not be placed on the planter rack to avoid damage to the trees nearby at Wan Po Road 2.</li> <li>5. The inlet point of the water sedimentation tank was not properly connected to the water tube to avoid backflow. Remediation actions should be implemented to avoid discharge of wastewater before treatment at Pit A.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed.</li> <li>2. Construction boundaries were protected by sandbags.</li> <li>3. Dusty materials were cleaned.</li> <li>4. Construction materials were cleaned.</li> <li>5. The inlet point of the water sedimentation tank was connected to the water tube.</li> </ol>
22 March 2021	No observations were recorded on the respective day.	
31 March 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at vehicle entrance/exit at 137 Pit B, Jacking Pit K.</li> <li>2. Wastewater was not treated before discharge and oil leakage was observed at Jacking Pit K.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed.</li> <li>2. Oil leakage was cleaned and no water was discharged.</li> </ol>

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<b>Date</b>	<b>Environmental Observations</b>	<b>Follow-up Status</b>
08 April 2021	<ol style="list-style-type: none"> <li>1. Construction boundaries were not protected by sandbags at Wan Po Road 2, Wan Po Road 4.</li> <li>2. Dusty materials were not covered by tarpaulin sheet to limit dust emission at Landfill Stage 1 Area A.</li> <li>3. The outlet of water sedimentation tank should not be connected to the bottom of the sedimentation tank at Wan Po Road 3.</li> <li>4. Chemicals were not placed in a drip tray at Landfill Stage 1 WFE 1 and WFE 2.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction boundaries were protected by sandbags.</li> <li>2. Dusty materials were covered by tarpaulin sheet.</li> <li>3. The outlet of water sedimentation tank was not connected to the bottom of the sedimentation tank.</li> <li>4. Chemicals were removed.</li> </ol>
15 April 2021	<ol style="list-style-type: none"> <li>1. Construction boundaries were not protected by sandbags at Section A0, Wan Po Road 1.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction boundaries were protected by sandbags and timbers.</li> </ol>
21 April 2021	<ol style="list-style-type: none"> <li>1. Construction boundaries were not protected by sandbags at Section A0, Abandoned Road at Mau Wu Tsai.</li> <li>2. Chemicals were not placed at the chemical drip tray at Abandoned Road at Mau Wu Tsai.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction boundaries were protected by sandbags and timbers.</li> <li>2. Chemicals were removed.</li> </ol>
26 April 2021	No observations were recorded on the respective day.	
07 May 2021	<ol style="list-style-type: none"> <li>1. Oil leakage was observed at 137 Pit B.</li> </ol>	<ol style="list-style-type: none"> <li>1. Oil leakage was cleaned.</li> </ol>
14 May 2021	<ol style="list-style-type: none"> <li>1. Chemicals were not placed on a drip tray at Mau Wu Tsai Abandoned Road.</li> <li>2. NRMM label was not observed at the NRMM at Pit X.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed.</li> <li>2. NRMM label was replaced.</li> </ol>
20 May 2021	<ol style="list-style-type: none"> <li>1. Chemicals were not placed on a drip tray at CH.HE1+80~2+00, Section A0 and Po Lam South Road.</li> <li>2. NRMM label was not observed at the NRMM at Po Lam South Road, Pit X.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed.</li> <li>2. The NRMM was out of service and would be transported out from the working portion.</li> </ol>
26 May 2021	No observations were recorded on the respective day.	
03 June 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at the vehicle entrance/exit at 137 Pit C.</li> <li>2. Gully was not protected by sandbags and geo-textile at Wan Po Road 2.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed at the vehicle entrance/exit.</li> <li>2. Gully was protected by sandbags and geo-textile.</li> </ol>

Date	Environmental Observations	Follow-up Status
11 June 2021	<ol style="list-style-type: none"> <li>1. Chemicals were found not placed on a drip tray at CH.HE1+80~2+00.</li> <li>2. Dusty materials (temporary) were not covered by tarpaulin sheet to limit dust emission at CH.HE1+80~2+00.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed.</li> <li>2. Dusty materials (temporary) were covered by tarpaulin sheet to limit dust emission.</li> </ol>
18 June 2021	<ol style="list-style-type: none"> <li>1. Gully was not protected by sandbags and geo-textile at Wan Po Road 2 and Wan Po Road 3.</li> <li>2. Construction boundaries were not protected by sandbags fully at Wan Po Road 3.</li> <li>3. Dusty materials were found directly next to the water barriers. These materials shall be removed to prevent these materials escape from the construction site at Wan Po Road 3.</li> </ol>	<ol style="list-style-type: none"> <li>1. Gully was protected by sandbags and geo-textile.</li> <li>2. Construction boundaries were protected by sandbags.</li> <li>3. Dusty materials were cleaned.</li> </ol>
25 June 2021	No observations were recorded on the respective day.	
02 July 2021	<ol style="list-style-type: none"> <li>1. Chemicals were not placed inside a drip tray at Portion F, Wan Po Road 4, Landfill Stage 1 Area A and CH.FC 4+50.</li> <li>2. Environmental permit was not observed at the site entrance/exit at Wan Po Road 4, Pit A.</li> <li>3. Gully was not covered with geo-textile and sandbags at Wan Po Road 3.</li> <li>4. Untreated wastewater was observed discharging from the site area at Wan Po Road 3.</li> <li>5. Construction boundary was not protected by sandbags fully at Jacking Pit B.</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were placed in the drip tray or removed.</li> <li>2. Environmental permit was observed.</li> <li>3. Gully was covered with geo-textile and sandbags.</li> <li>4. No water was discharged from the construction site.</li> <li>5. Construction boundary was protected by sandbags fully.</li> </ol>
08 July 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at the exit or entrance at Wan Po Road</li> <li>2. Untreated water was observed discharging from the site at Wan Po Road 3. A sedimentation tank or water treatment facilities should be added.</li> <li>3. Chemicals were not placed on a drip tray at Wan Po Road 3.</li> <li>4. Construction boundary was not fully protected by sandbags at Wan Po Road 3.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed.</li> <li>2. No water was discharged from the construction site</li> <li>3. Chemicals were removed.</li> <li>4. Construction boundary was fully protected by sandbags.</li> </ol>

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<b>Date</b>	<b>Environmental Observations</b>	<b>Follow-up Status</b>
16 July 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at Pit L (Hong Kong Velodrome).</li> <li>2. Regular cleaning of drip tray should be conducted to prevent overflow of trapped materials at Pit O. (Hong Kong Velodrome).</li> <li>3. Regular cleaning of deposited materials in the water sedimentation tank to allow efficient drainage at Pit O should be conducted (Hong Kong Velodrome).</li> <li>4. Oil leakage was observed at Pit N (Hong Kong Velodrome).</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed.</li> <li>2. Drip tray was cleaned.</li> <li>3. Deposited materials in the water sedimentation tank was cleaned.</li> <li>4. Oil leakage was cleaned.</li> </ol>
22 July 2021	<ol style="list-style-type: none"> <li>1. Environmental permit was not observed at the site entrance/exit at Pit Y.</li> <li>2. Chemical was not observed in a drip tray at Pit O.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental permit was observed.</li> <li>2. Chemical was removed.</li> </ol>
27 July 2021	No observations were recorded on the respective day.	
05 August 2021	<ol style="list-style-type: none"> <li>1. Gully was not protected by sandbags and geo-textile at Wan Po Road 1 and Wan Po Road 4.</li> <li>2. The Main Contractor was reminded that all wastewater should be properly treated before discharge to drainage systems at Wan Po Road 1 and Wan Po Road 2.</li> <li>3. Construction boundary was not protected by sandbags fully at Wan Po Road 4.</li> <li>4. Environmental permit was not observed at Wan Po Road 4.</li> </ol>	<ol style="list-style-type: none"> <li>1. Gully was protected by sandbags and geo-textile.</li> <li>2. There was no wastewater being discharged from the site.</li> <li>3. Construction boundary was protected by sandbags fully.</li> <li>4. Environmental permit was Added.</li> </ol>

<b>Date</b>	<b>Environmental Observations</b>	<b>Follow-up Status</b>
13 August 2021	<ol style="list-style-type: none"> <li>1. Construction boundary was not protected by sandbags at Wan Po Road 1.</li> <li>2. Dusty materials were found directly next to the water barriers at Wan Po Road 1. These materials should be removed to prevent the escape of the materials to the area outside boundary at Wan Po Road.</li> <li>3. Gully was not protected by geo-textile and sandbags at Wan Po Road 1.</li> <li>4. The Main Contractor was reminded that all wastewater should be treated before discharge at Wan Po Road 1.</li> </ol>	<ol style="list-style-type: none"> <li>1. Construction boundary was protected by sandbags.</li> <li>2. Dusty materials were cleaned.</li> <li>3. Gully was protected by geo-textile and sandbags</li> <li>4. There was no wastewater being discharged from the site.</li> </ol>
20 August 2021	<ol style="list-style-type: none"> <li>1. Chemicals were observed not placed in a drip tray at Hong Kong Velodrome (Pit P).</li> </ol>	<ol style="list-style-type: none"> <li>1. Chemicals were removed in a drip tray.</li> </ol>
27 August 2021	No major observations were reported.	

5.1.4 According to the EIA Study Report, Environmental Permit, contract documents and EM&A Manual, the mitigation measures detailed in the documents are implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix E**.

## **6 Landfill gas monitoring**

6.1.1 In accordance with Section 11 of the EM&A Manual, monitoring of landfill gas is required for construction works within the 250m Consultation Zone. Part of the desalination plant and the indicative area of natural slope mitigation works fall within the SENT Landfill Extension Consultation Zone; and part of the 1,200 mm diameter fresh water mains along Wan Po Road falls within the SENT Landfill and SENT Landfill Extension Consultation Zones, TKO Stage II/III Restored Landfill and TKO Stage I Restored Landfill Consultation Zones. Monitoring was conducted from September 2020 to August 2021.

6.1.2 Monitoring of oxygen, methane and carbon dioxide was performed for excavations at 1m depth or more within the consultation Zone. In this reporting period, 8288 times of monitoring was carried out by the Registered Safety Officer by the Contractor at the excavation locations. Action and Limit Level is provided in **Appendix F**.

6.1.3 Monitoring Equipment used in the reporting period are summarised in **Table 6.1**.

**Table 6.1 Landfill Gas Monitoring Equipment**

<b>Equipment</b>	<b>Model and Make</b>	<b>Calibration Expiry Date</b>
Gas Detector	QRAE II	28 August 2020
Gas Detector	QRAE III	27 July 2021
Gas Detector	QRAE III	27 July 2022
MultiRAE Lite	PGM-6208	06 April 2022

## **7 Conclusion and Recommendations**

- 7.1.1 This is the 3<sup>rd</sup> Annual Environmental Monitoring and Audit (EM&A) Review Report prepared by ASCL. This report presenting the EM&A works carried out during the period of 1 September 2020 to 31 August 2021 in accordance with the EM&A Manual and the requirement under EP-503/2015/A.
- 7.1.2 46 times of noise impact monitoring between September 2020 to August 2021 were conducted since contract-related construction activities were undertaken within a radius of 300m from NSR4 Creative Secondary School.
- 7.1.3 No landfill gas exceedance was recorded in the reporting period.
- 7.1.4 No contract-related exceedance of the noise Action Level was recorded during the reporting period.
- 7.1.5 Weekly environmental site inspection was conducted during the reporting period. According to the environmental site inspections performed in the reporting period, the Contractor is reminded to pay attention on proper materials storage and wastewater treatment measures within the working portions.
- 7.1.6 3 environmental complaints were received in the reporting period. Detailed information is summarised in **Appendix G** and **Appendix I**.
- 7.1.7 No notification of summons or prosecution was received since commencement of the Contract.
- 7.1.8 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.
- 7.1.9 Statistics on complaints and regulatory compliance are summarized in **Appendix G** and **Appendix I**.

# Appendix A

## Overview of Mainlaying in TKO

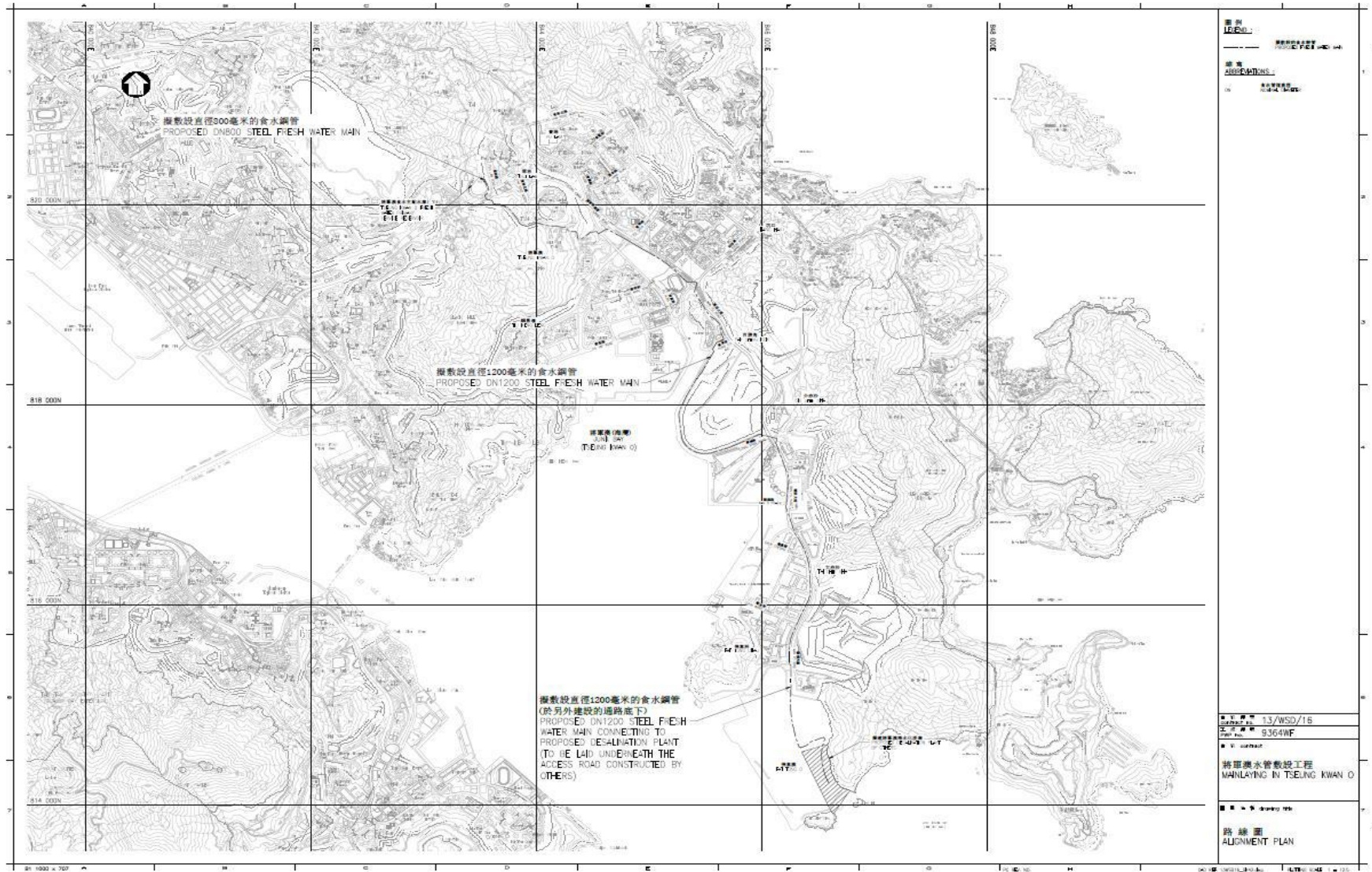
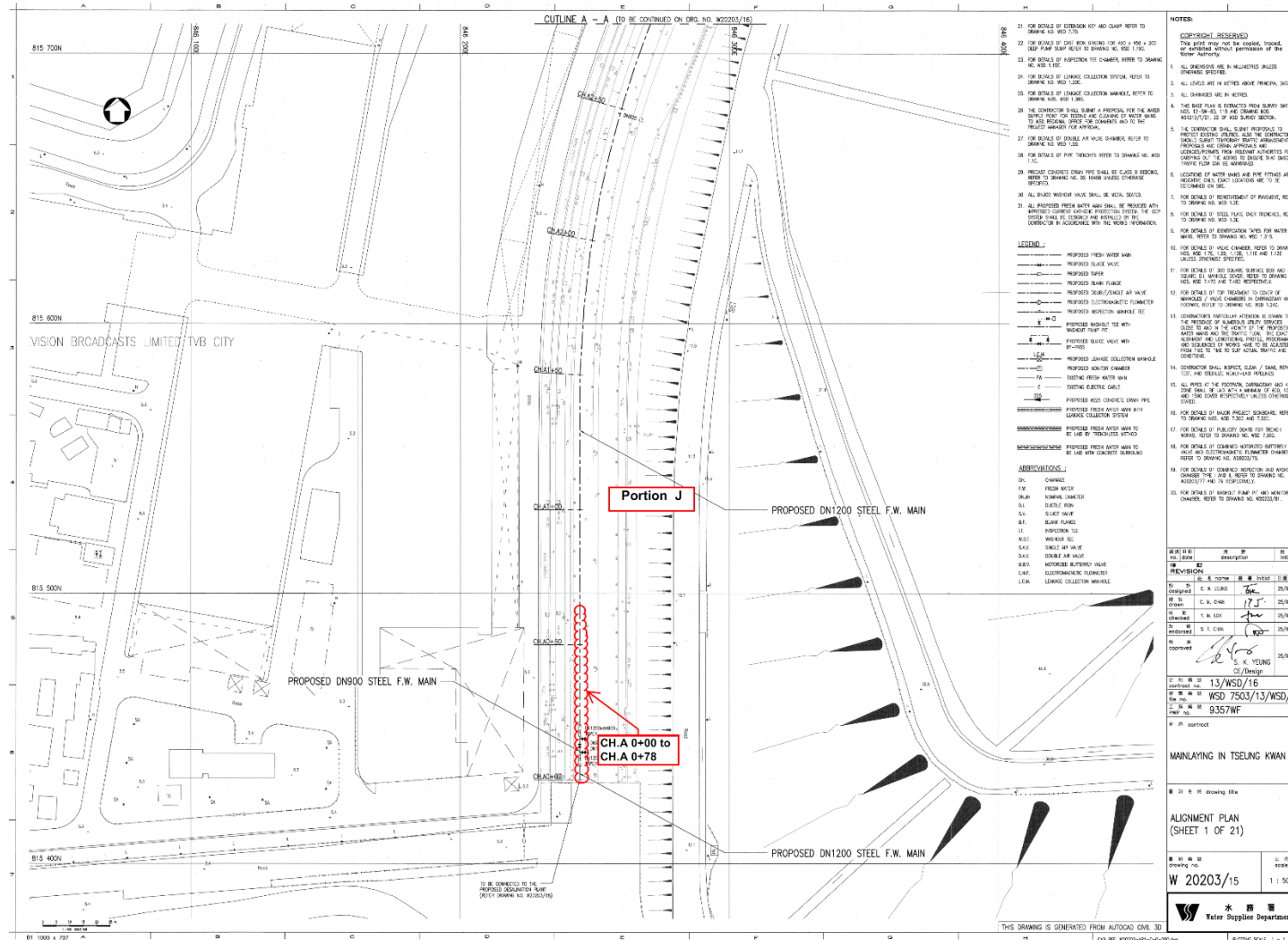


Figure A1. Overview of Mainlaying in TKO

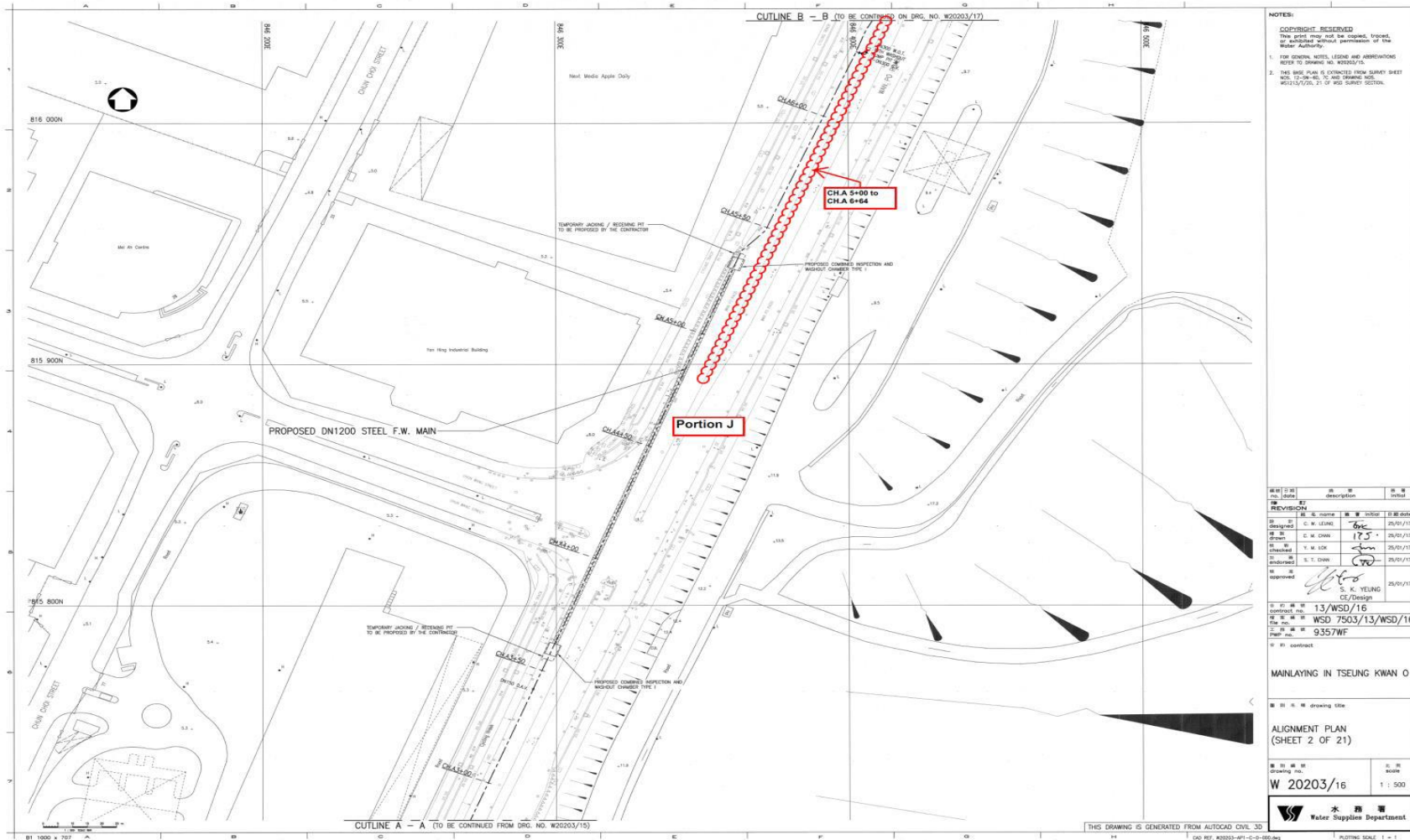


**Contract No. 13/WSD/16**  
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**Figure A2. Location Plan for Portion J - CH.A 0+00 to CH.A 0+78**

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**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



**Figure A3a. Location Plan for Portion J - CH.A 5+00 to CH.A 6+64**

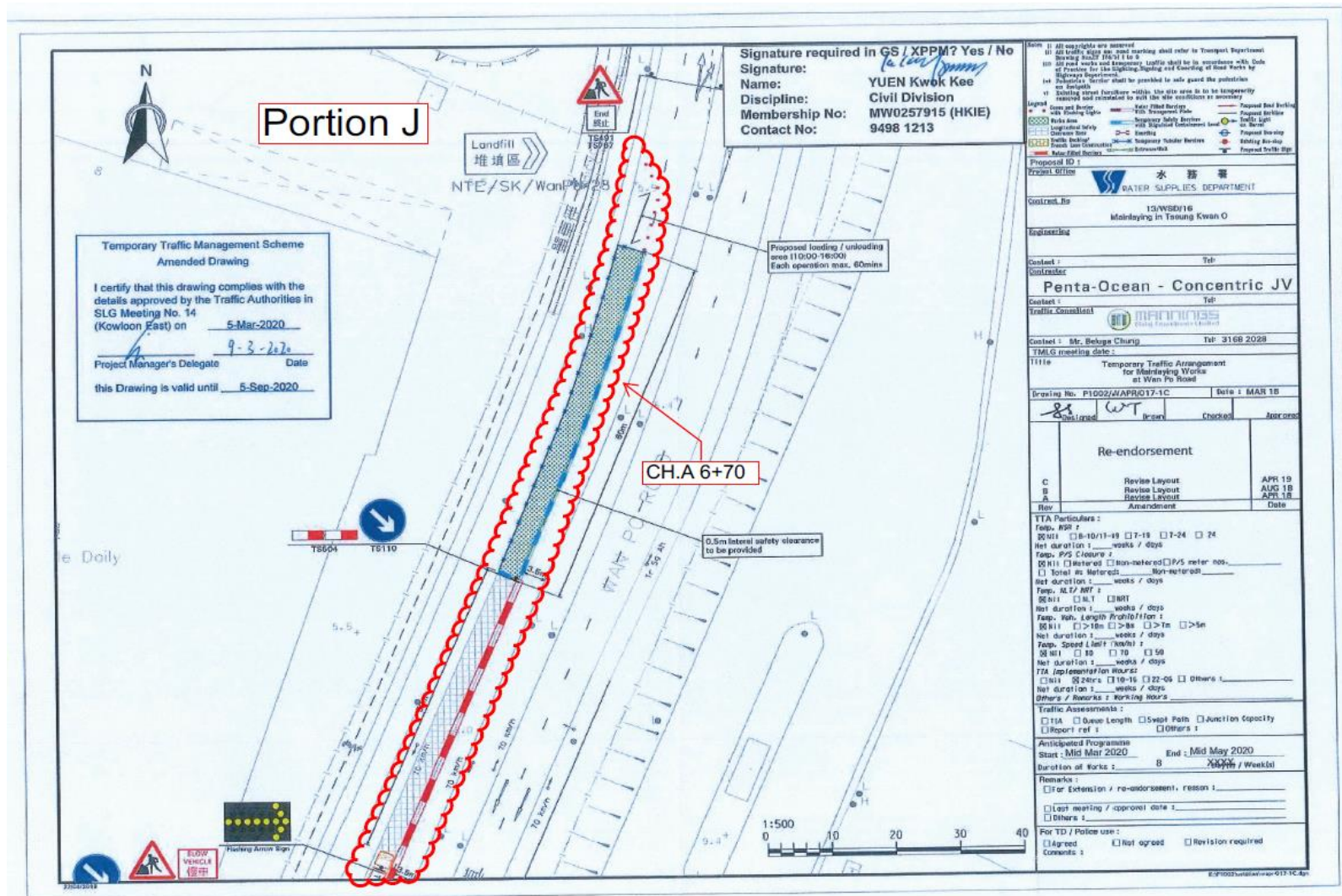


Figure A3b(i). Location Plan for Portion J - CH.A 6+70

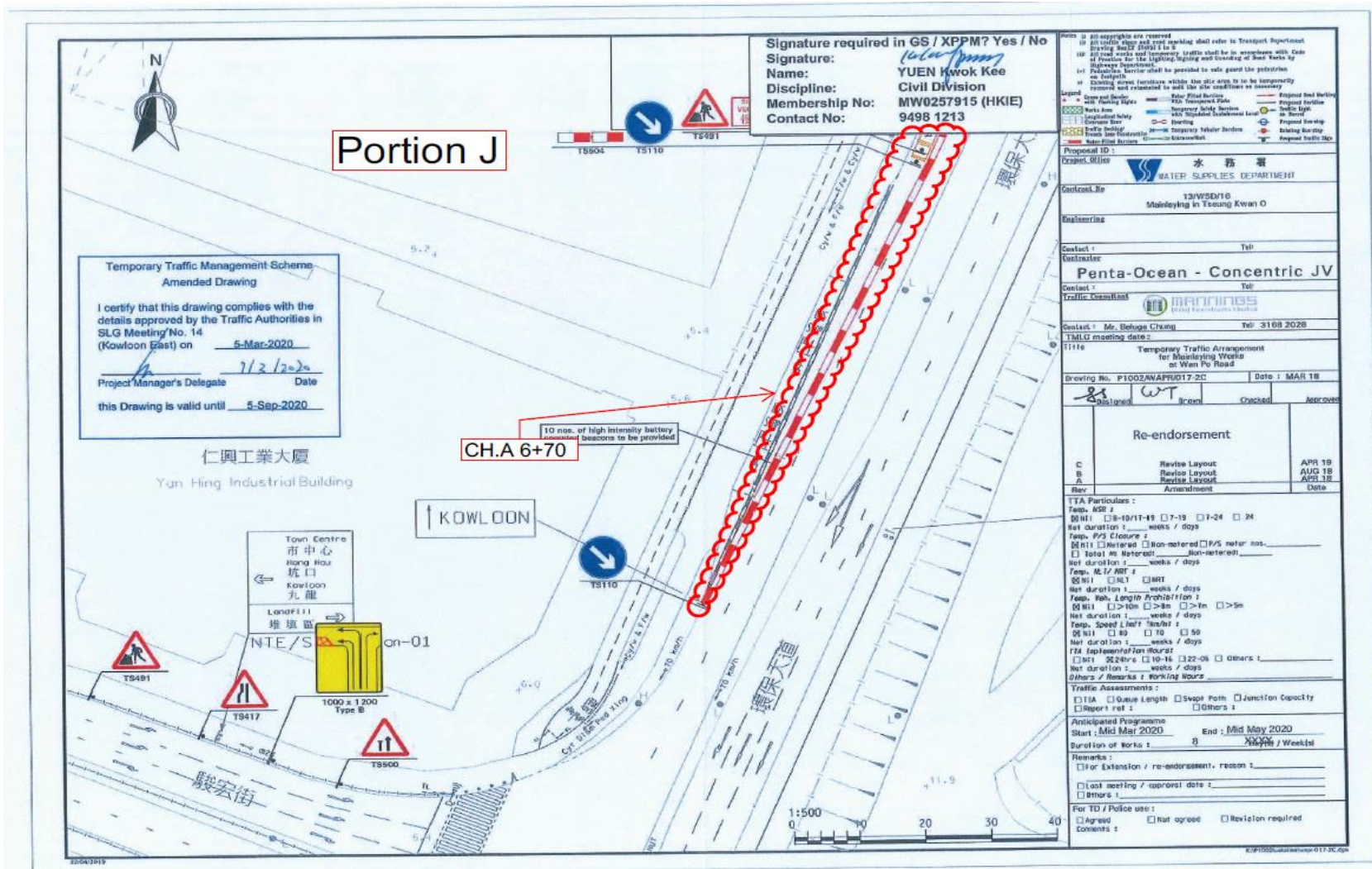
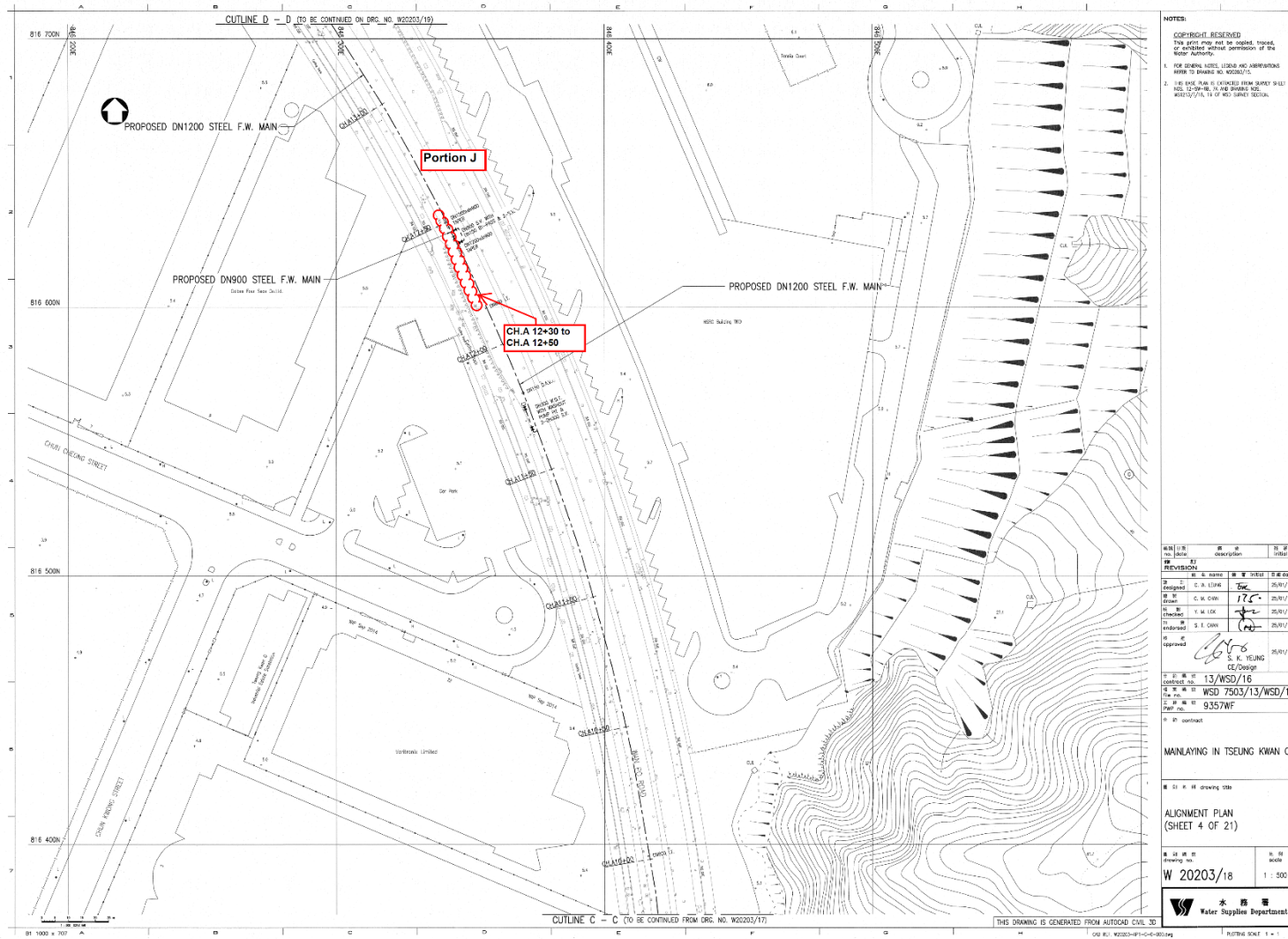


Figure A3b(ii). Location Plan for Portion J - CH.A 6+70

**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



**NOTES:**

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2. FOR SPACING NOTES, LEGEND AND ABBREVIATIONS REFER TO DRAWING NO. W20203/16.
3. THE EXIST. PLAN IS OBTAINED FROM SURVEY SHEET NO. 12/50-16, 16, 16B, 16B/16C, 16C, 16C/16D, 16D, 16D/16E, 16E, 16E/16F, 16F, 16F/16G, 16G, 16G/16H, 16H, 16H/16I, 16I, 16I/16J, 16J, 16J/16K, 16K, 16K/16L, 16L, 16L/16M, 16M, 16M/16N, 16N, 16N/16O, 16O, 16O/16P, 16P, 16P/16Q, 16Q, 16Q/16R, 16R, 16R/16S, 16S, 16S/16T, 16T, 16T/16U, 16U, 16U/16V, 16V, 16V/16W, 16W, 16W/16X, 16X, 16X/16Y, 16Y, 16Y/16Z, 16Z.

REV. NO.	DATE	DESCRIPTION	BY	CHKD.
1	25/01/17	ISSUED FOR TENDER	C. A. LING	W. C.
2	25/01/17	REVISION	C. A. LING	W. C.
3	25/01/17	REVISION	C. A. LING	W. C.
4	25/01/17	REVISION	C. A. LING	W. C.
5	25/01/17	REVISION	C. A. LING	W. C.
6	25/01/17	REVISION	C. A. LING	W. C.
7	25/01/17	REVISION	C. A. LING	W. C.
8	25/01/17	REVISION	C. A. LING	W. C.
9	25/01/17	REVISION	C. A. LING	W. C.
10	25/01/17	REVISION	C. A. LING	W. C.
11	25/01/17	REVISION	C. A. LING	W. C.
12	25/01/17	REVISION	C. A. LING	W. C.
13	25/01/17	REVISION	C. A. LING	W. C.
14	25/01/17	REVISION	C. A. LING	W. C.
15	25/01/17	REVISION	C. A. LING	W. C.
16	25/01/17	REVISION	C. A. LING	W. C.
17	25/01/17	REVISION	C. A. LING	W. C.
18	25/01/17	REVISION	C. A. LING	W. C.
19	25/01/17	REVISION	C. A. LING	W. C.
20	25/01/17	REVISION	C. A. LING	W. C.

13/WSD/16  
 WSD 7503/13/WSD/16  
 9357WF  
 CE/Design  
 S. K. YEUNG  
 25/01/17  
 MAINLAYING IN TSEUNG KWAN O  
 ALIGNMENT PLAN (SHEET 4 OF 21)  
 W 20203/18  
 1:500  
 Water Supplies Department

**Figure A4. Location Plan for Portion J - CH.A 12+30 to CH.A 12+50**

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 Mainlaying in Tseung Kwan O  
 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021

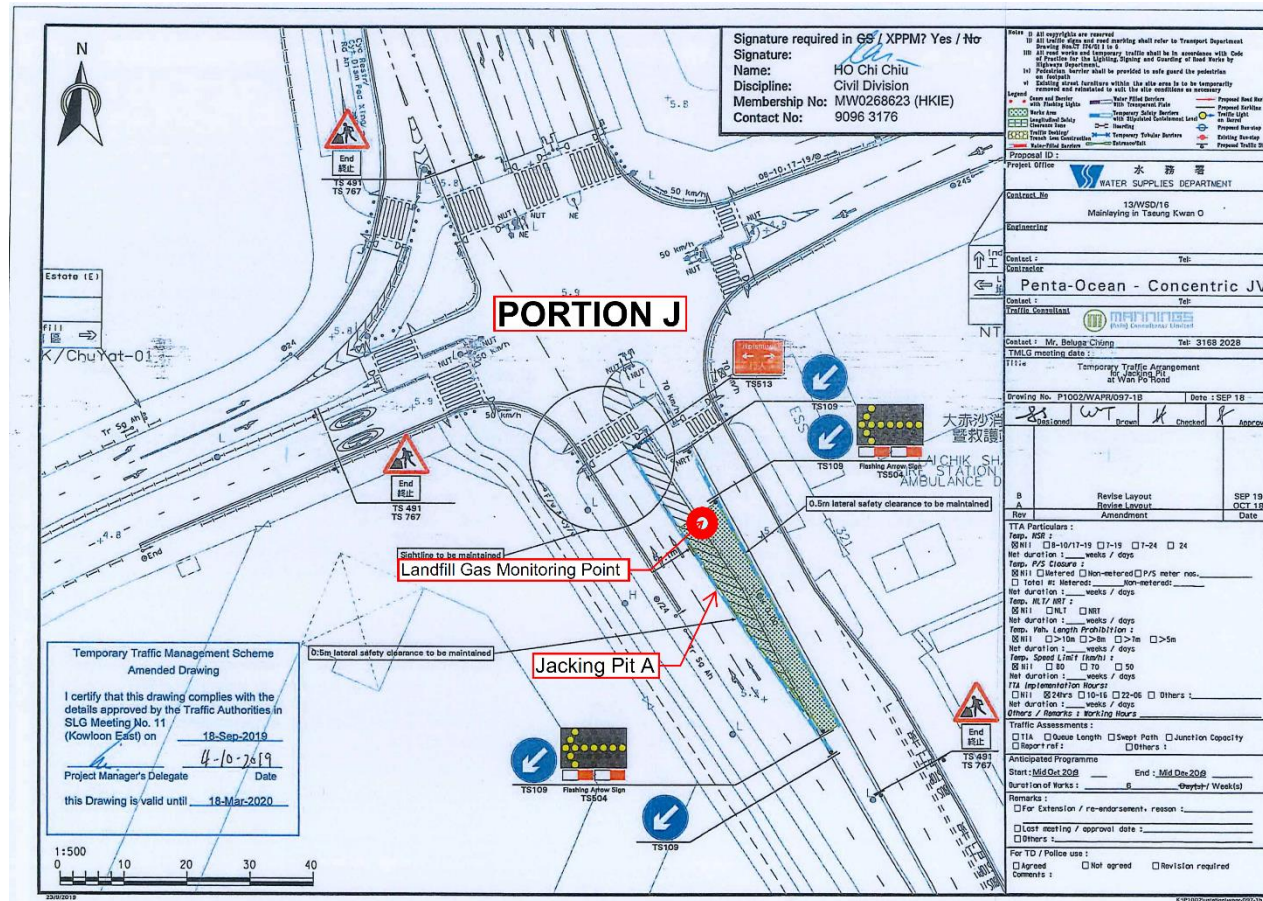
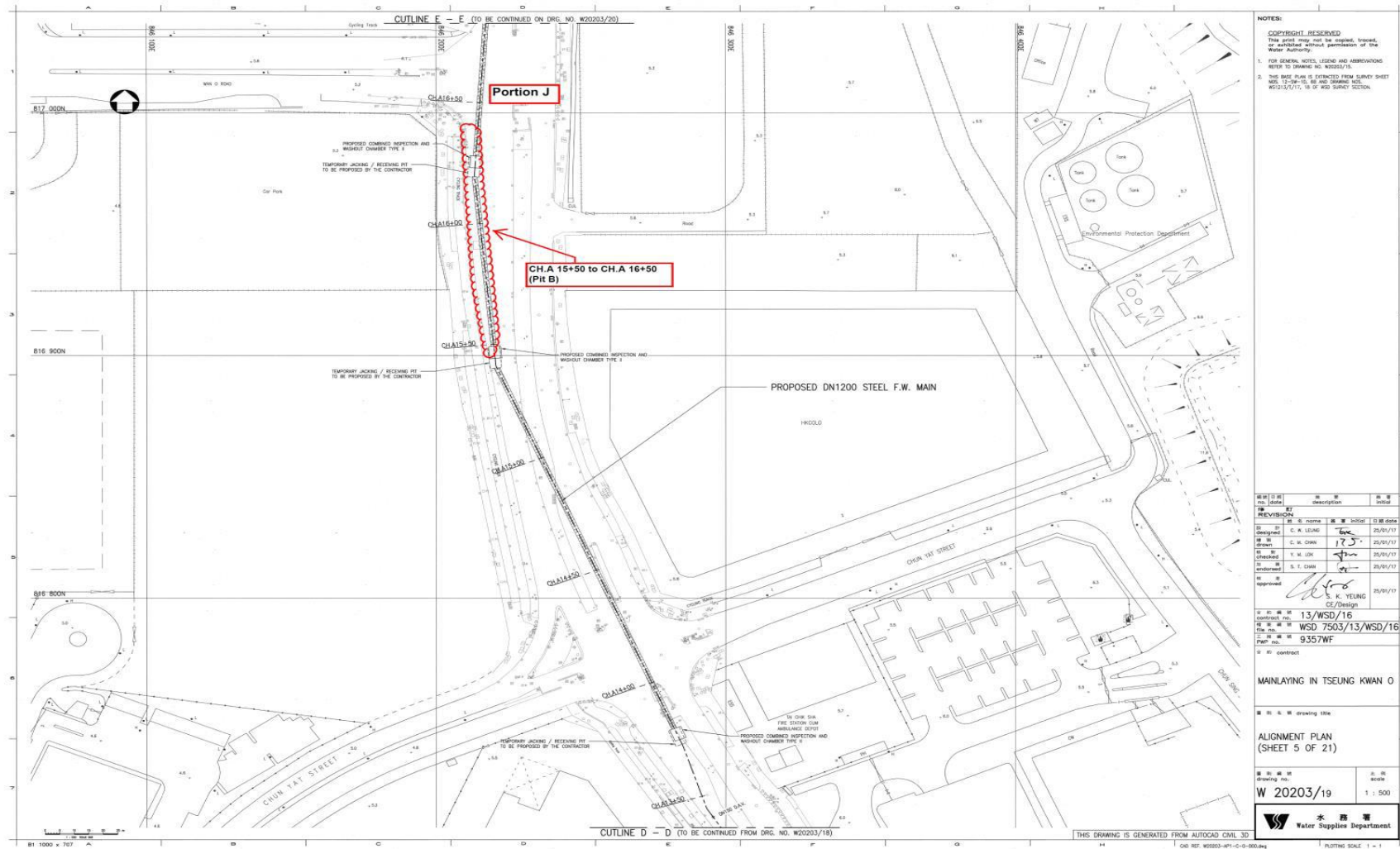


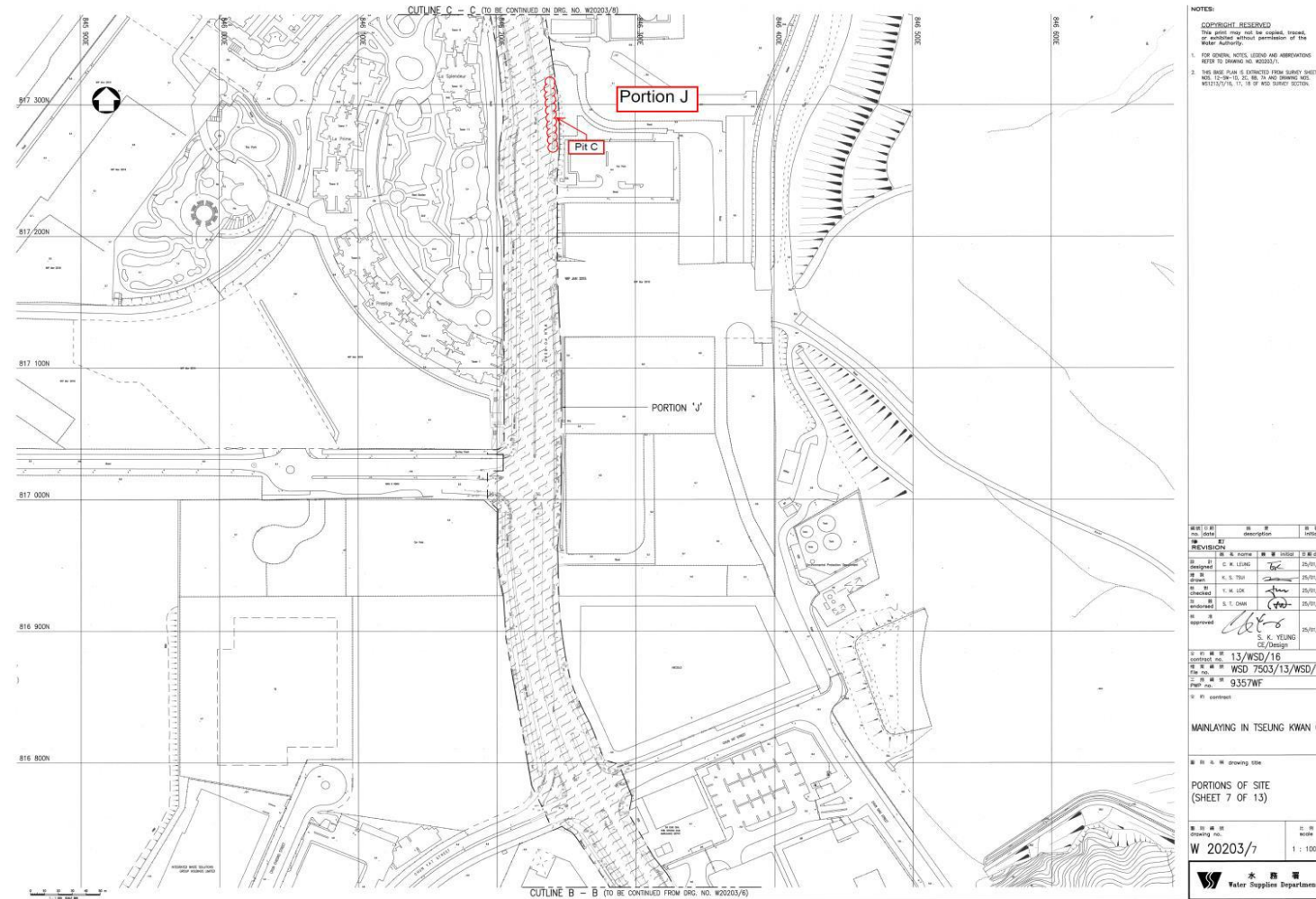
Figure A5. Location Plan for Portion J – CH. A13+50 to CH.A 14+00 (Pit A)

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**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



**Figure A6. Location Plan for Portion J – CH. A15+50 to CH.A 16+50 (Pit B)**

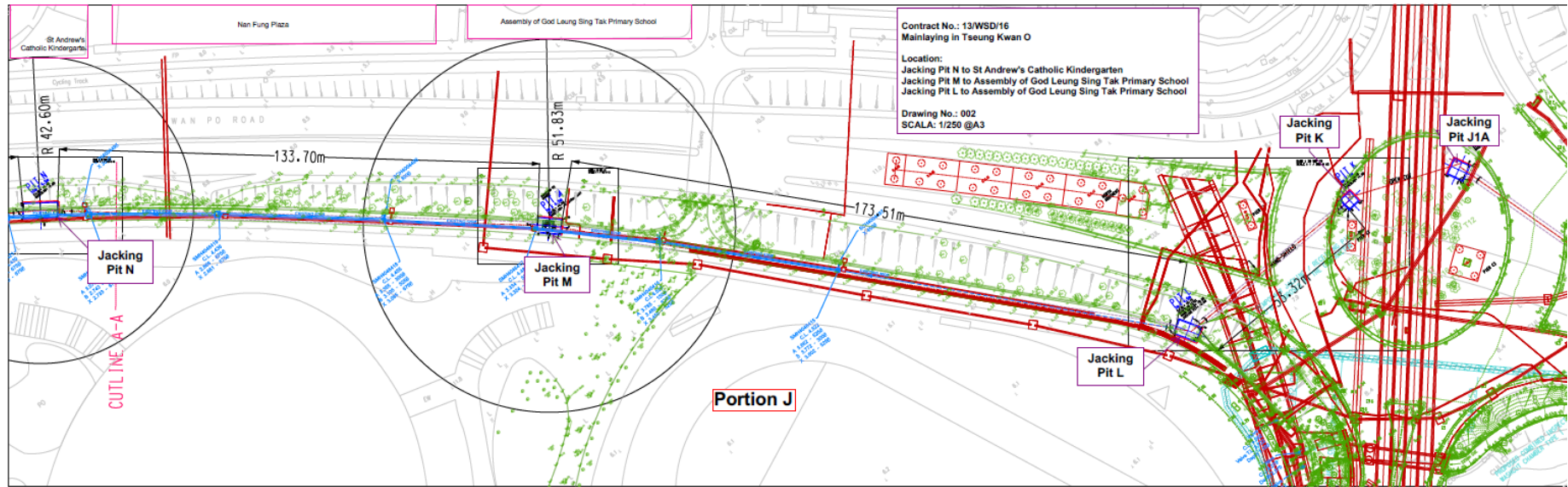
**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



**Figure A7. Location Plan for Portion J – CH.A 19+15 to CH.A 19+50 (Pit C)**



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**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



**Figure A8a. Location Plan for Portion J – Pit L-M-N, K, J1A**

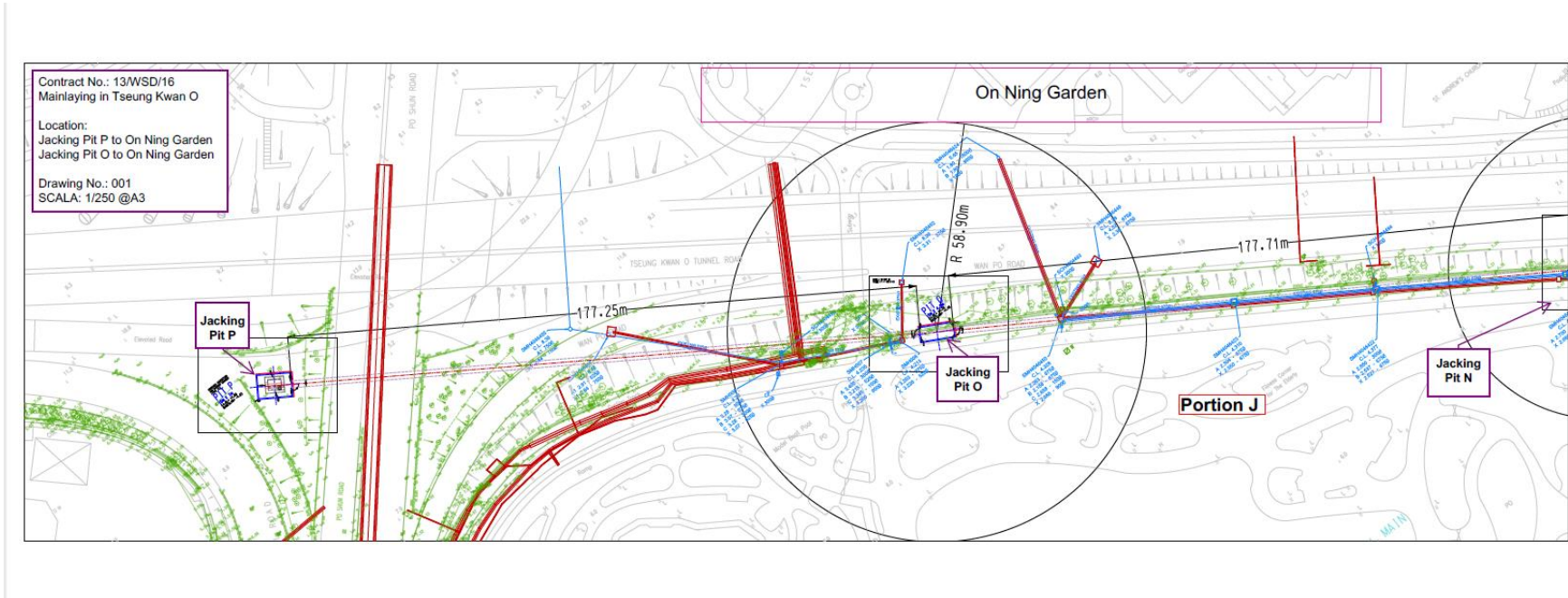


Figure A8b. Location Plan for Portion J – Pit N-O-P

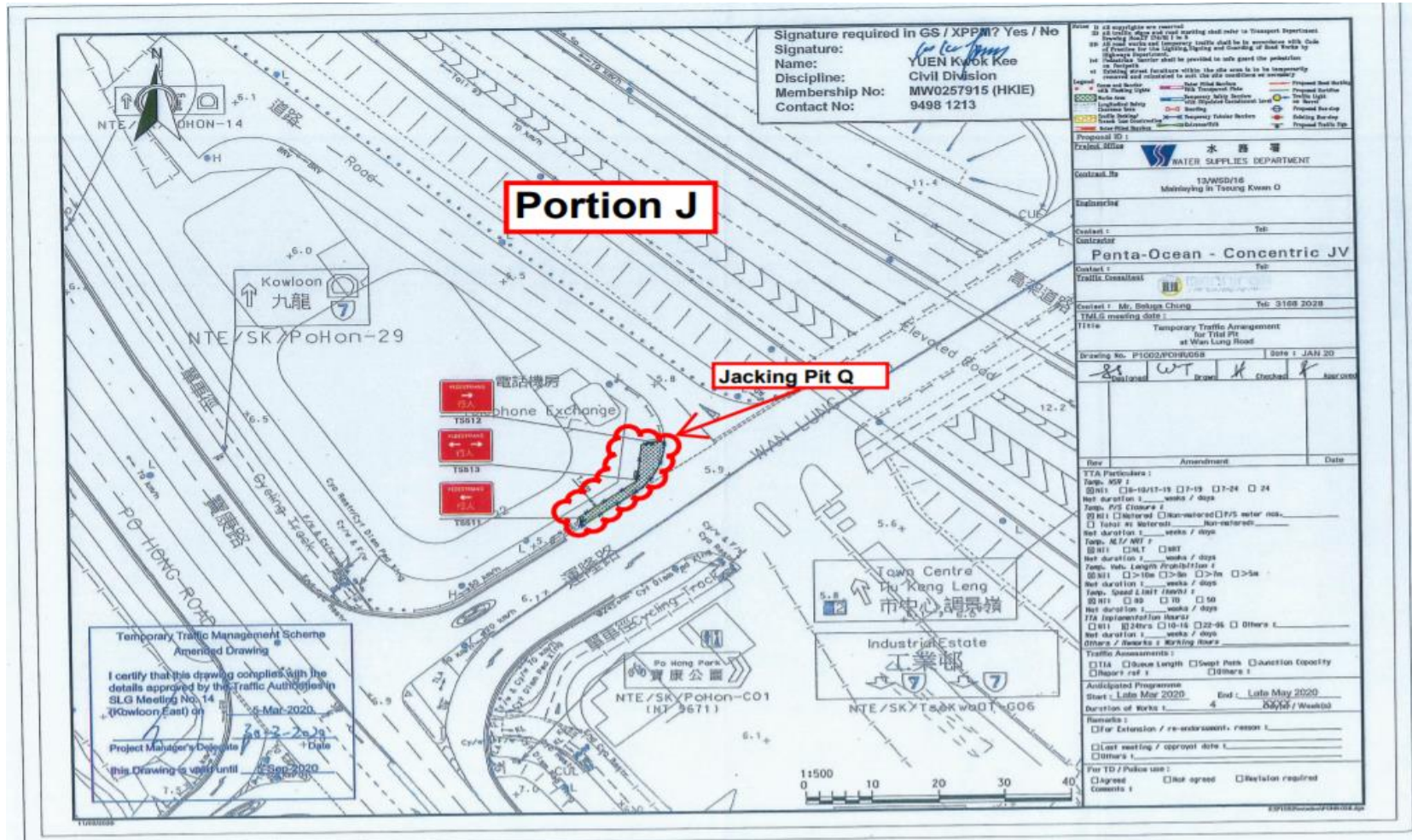


Figure A8c. Location Plan for Portion J – Pit Q

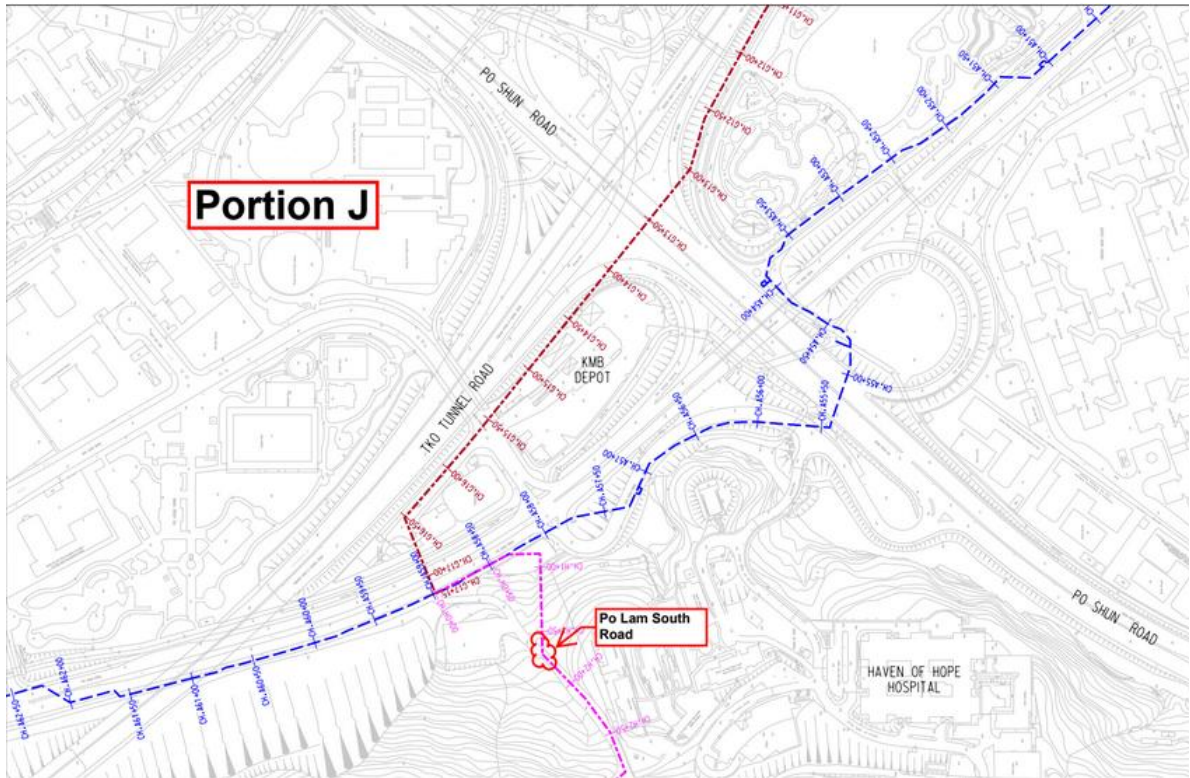


Figure A9a. Location Plan for Mau Wu Tsai 1

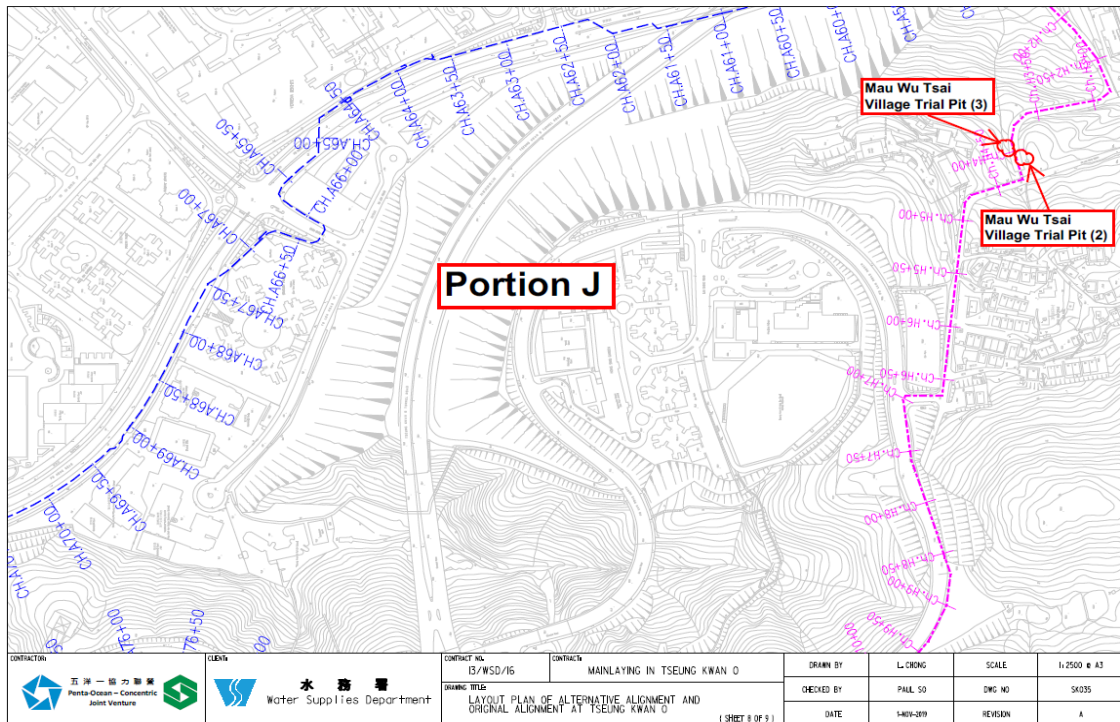


Figure A9b. Location Plan for Mau Wu Tsai 2 & 3

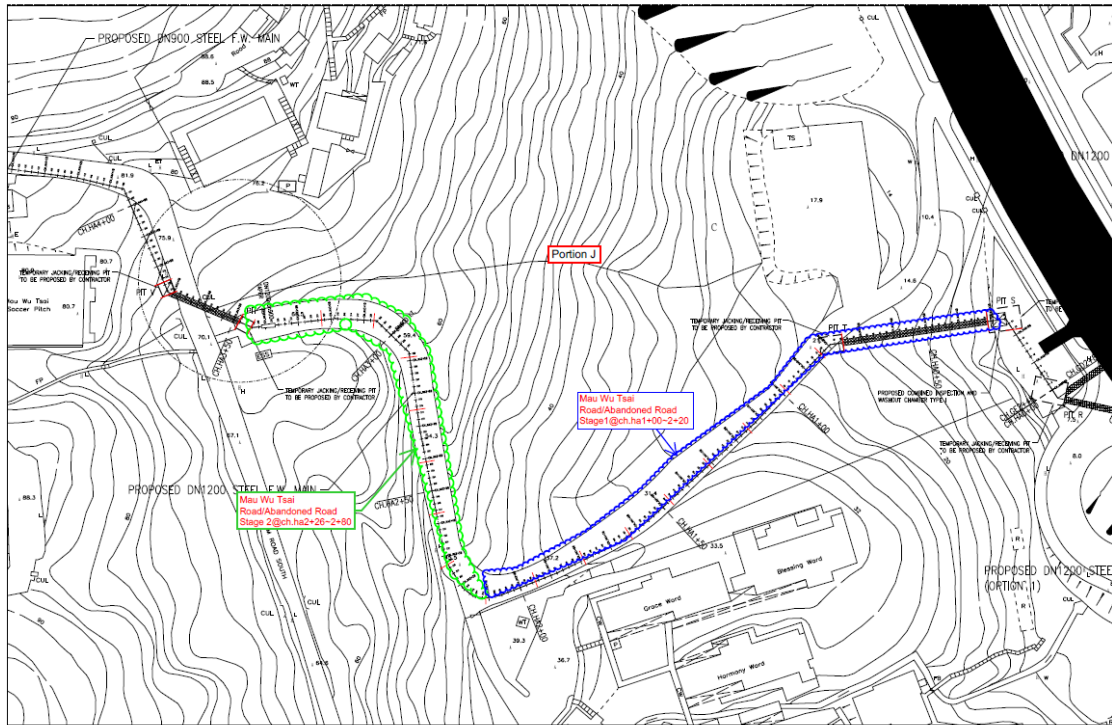


Figure A9c. Abandoned Mau Wu Tsai Road

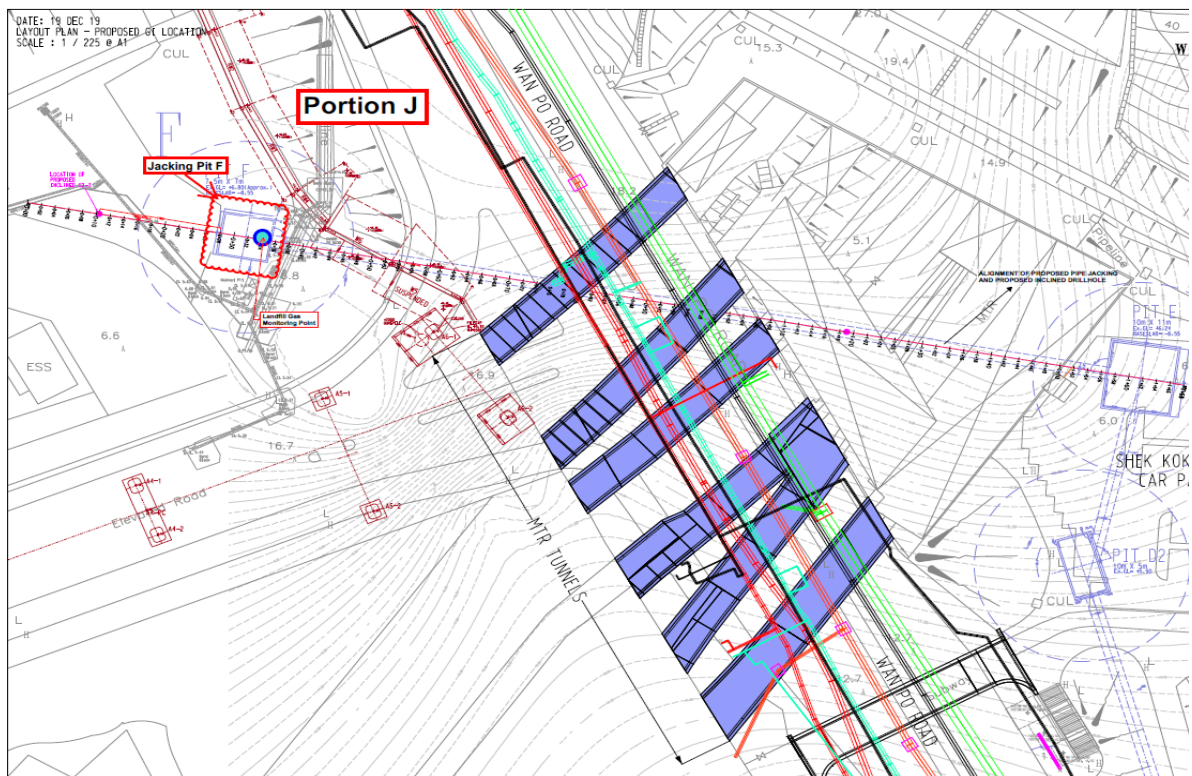


Figure A10. Location Plan for Jacking Pit F

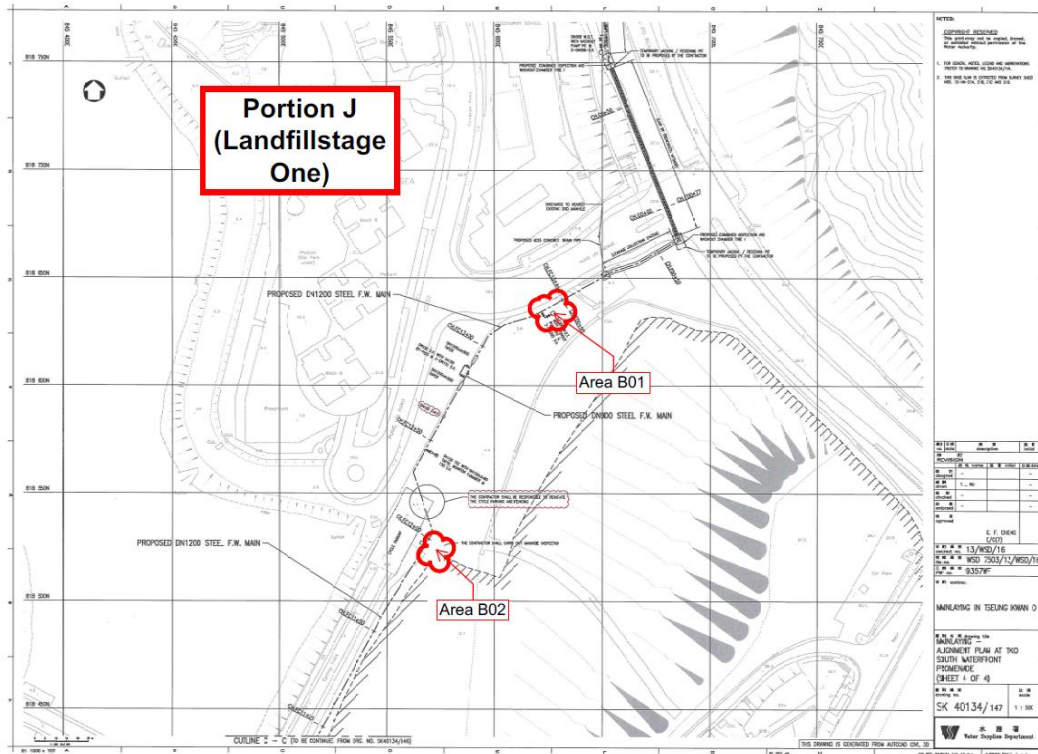


Figure A11a. Location Plan – Landfill Stage 1 (Area B01-B02)

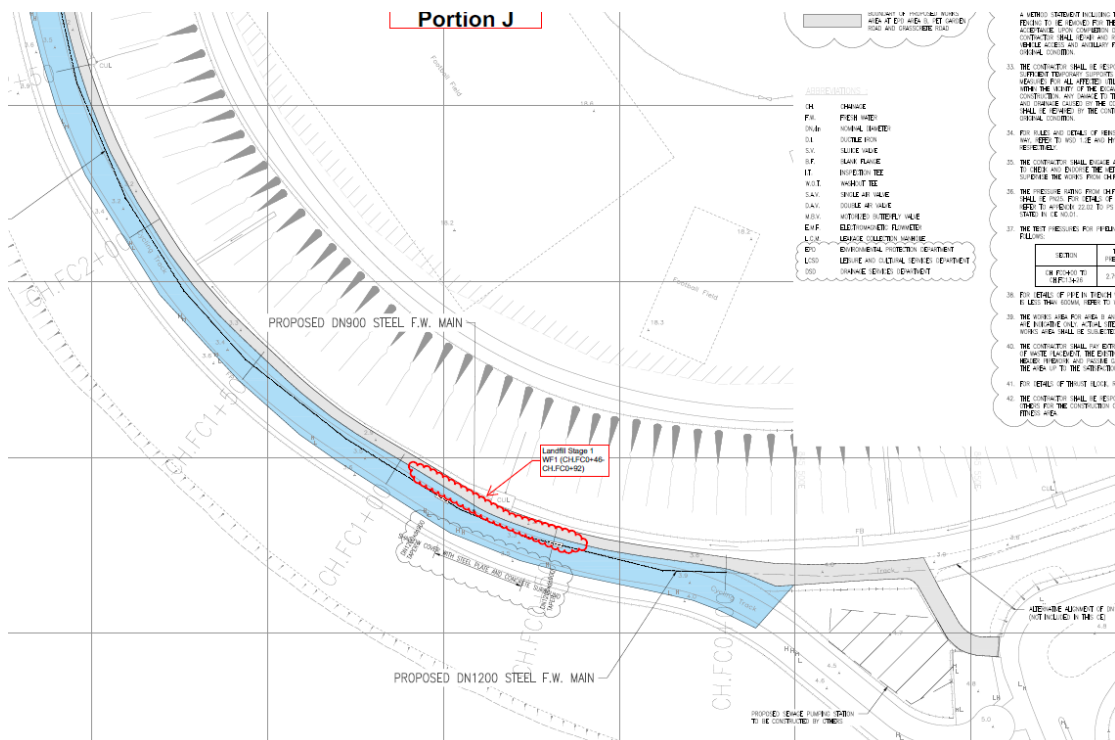


Figure A11b. Location Plan – Landfill Stage 1 (Area FC0+42 -FC0+92)

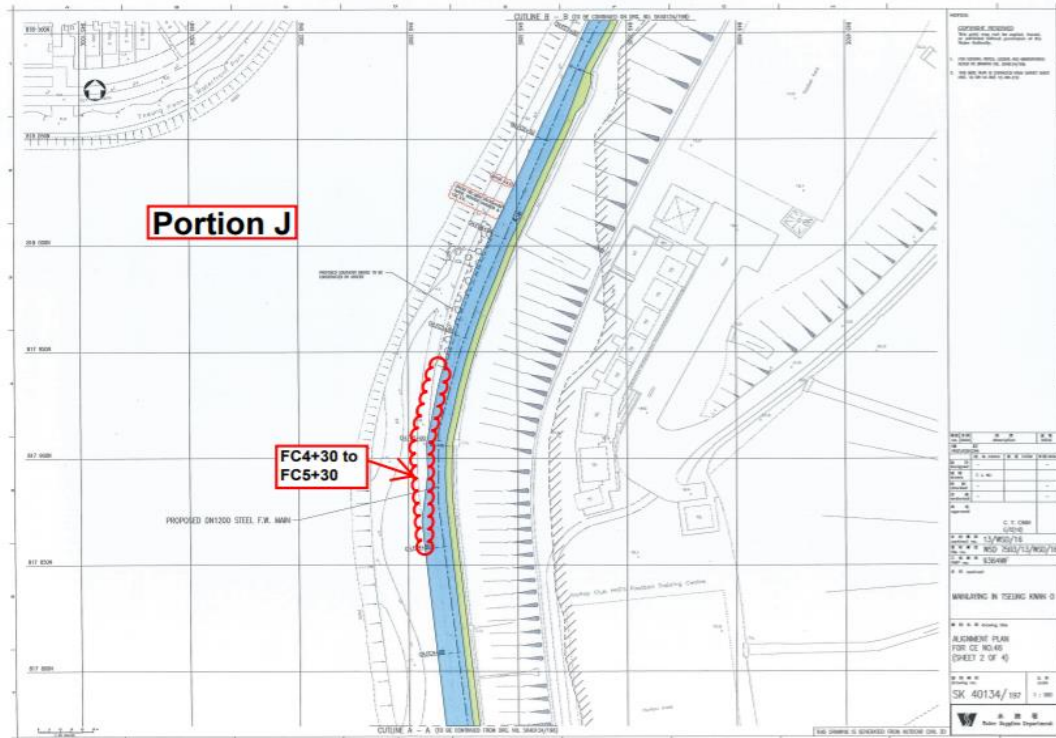


Figure A11c. Location Plan – Landfill Stage 1 (Area FC4+30 -FC5+30)

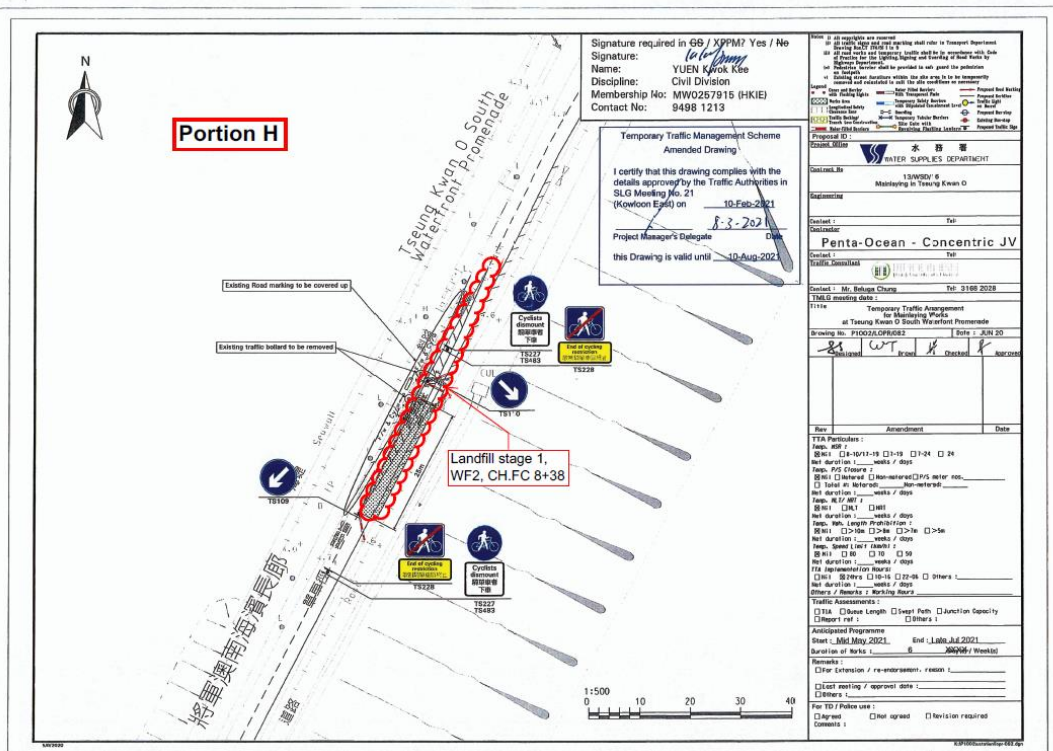


Figure A11d. Location Plan – Landfill Stage 1 (Area FC8+38)

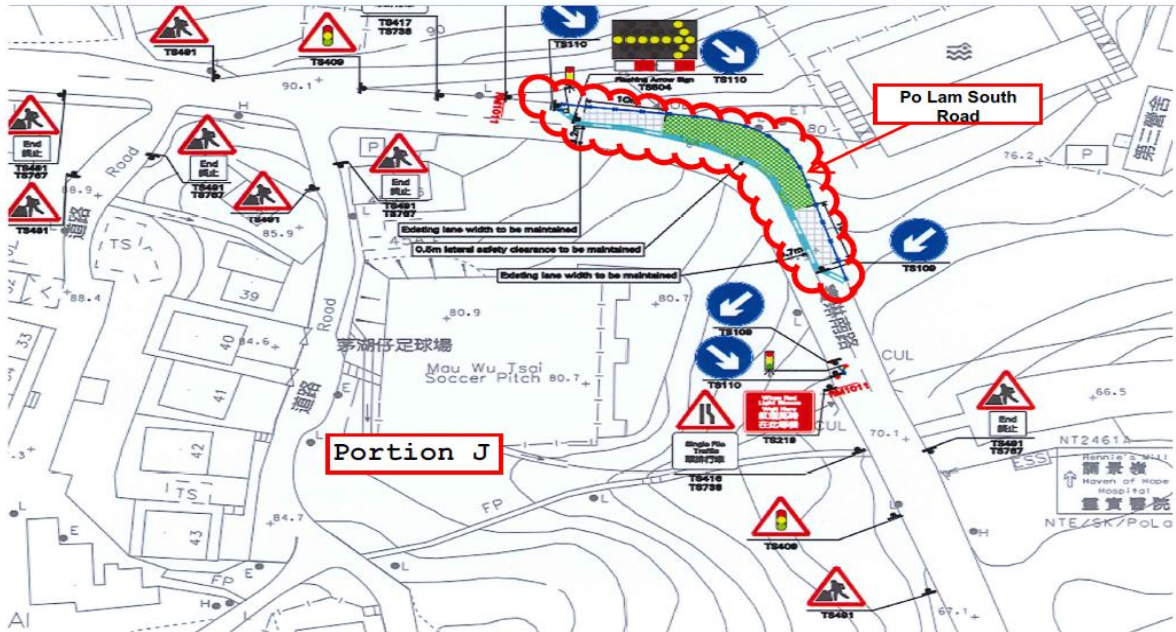


Figure A12. Monitoring Location – Po Lam South Road

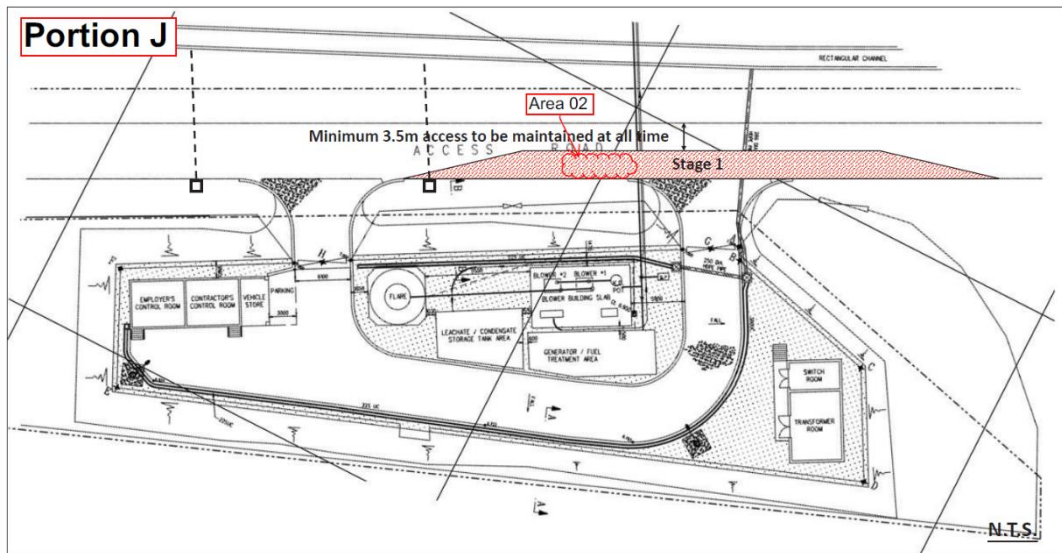


Figure A13. Monitoring Location – Area A02



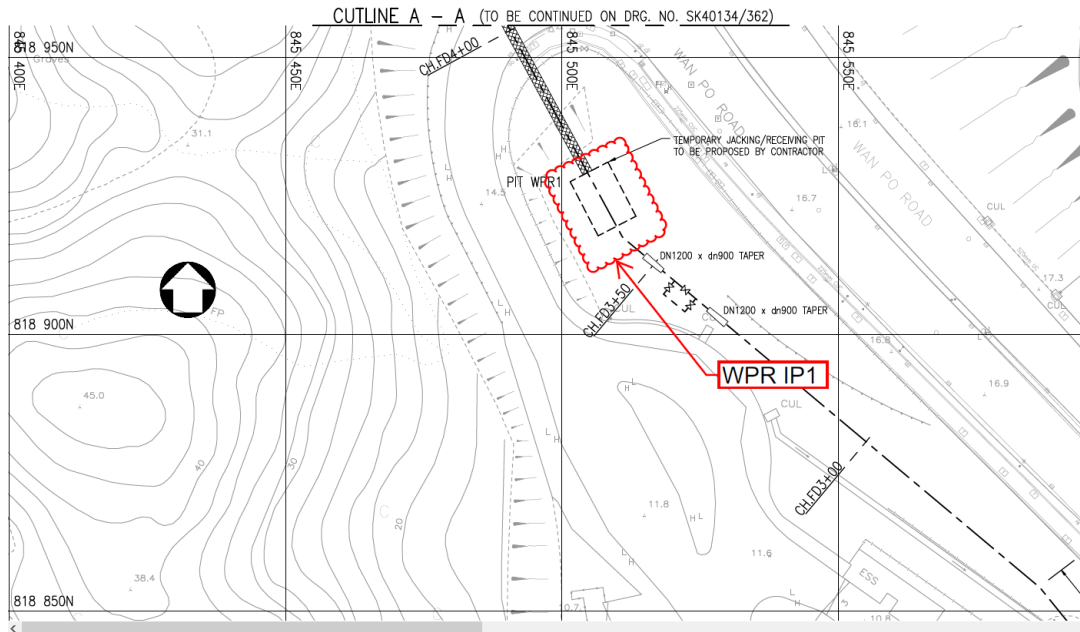


Figure A14. Location Plan for WPR IP1

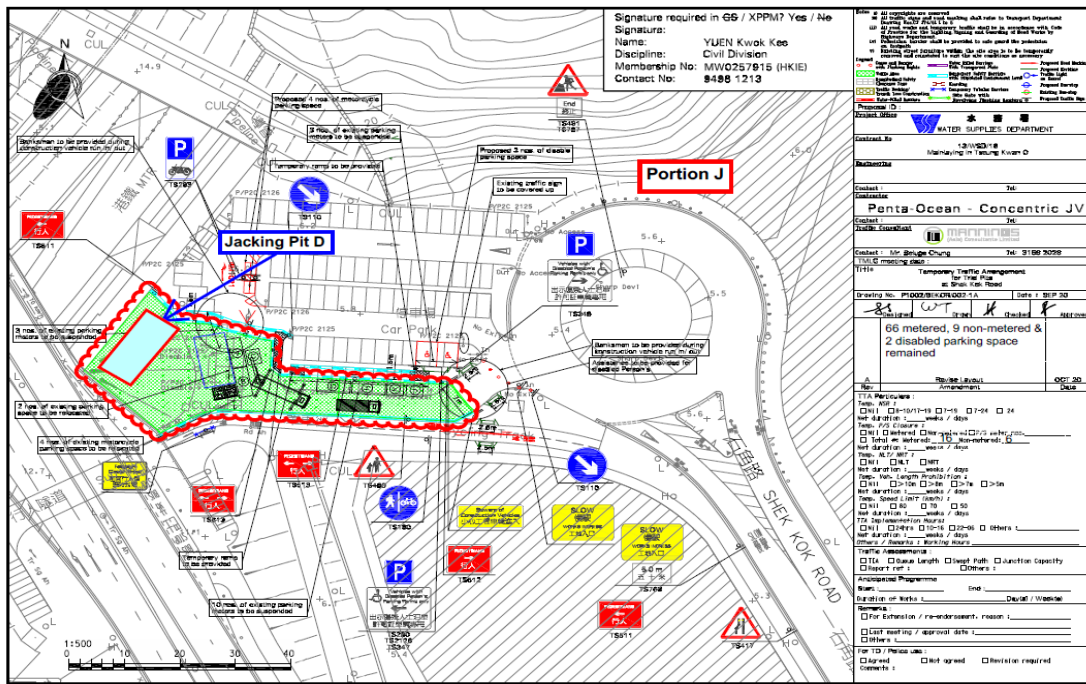


Figure A15. Location Plan for Jacking Pit D

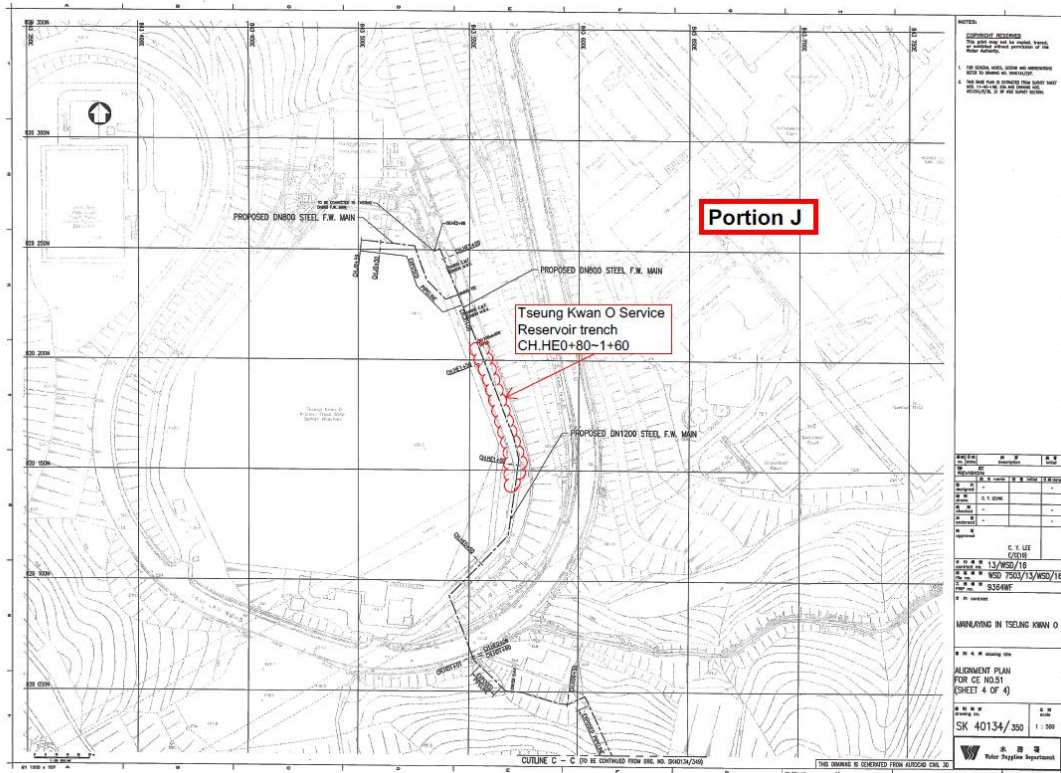


Figure A16. Location Plan for CH.HE0+80-1+60

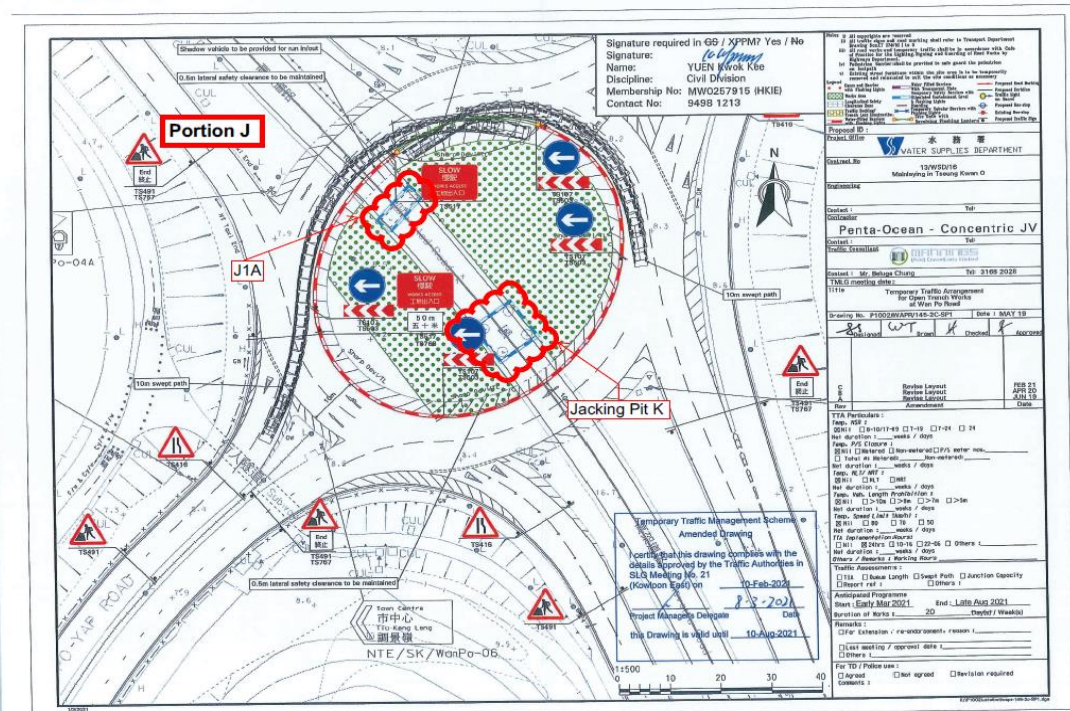


Figure A17. Location Plan for Pit K

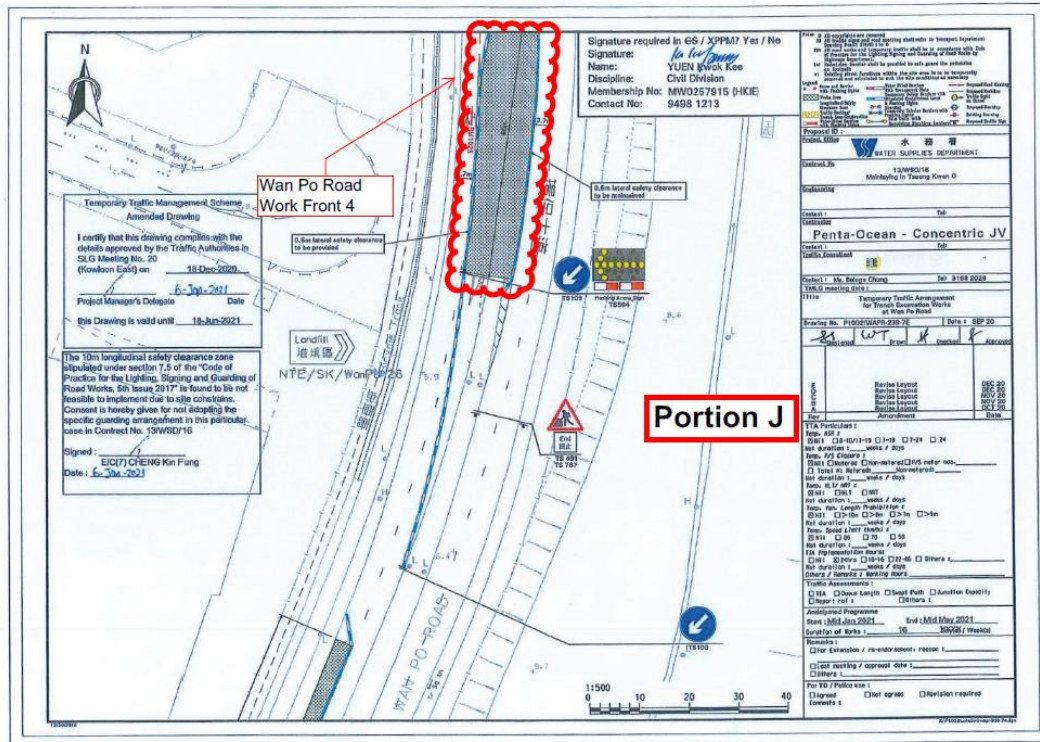


Figure A18a. Location Plan for Wan Po Road 4

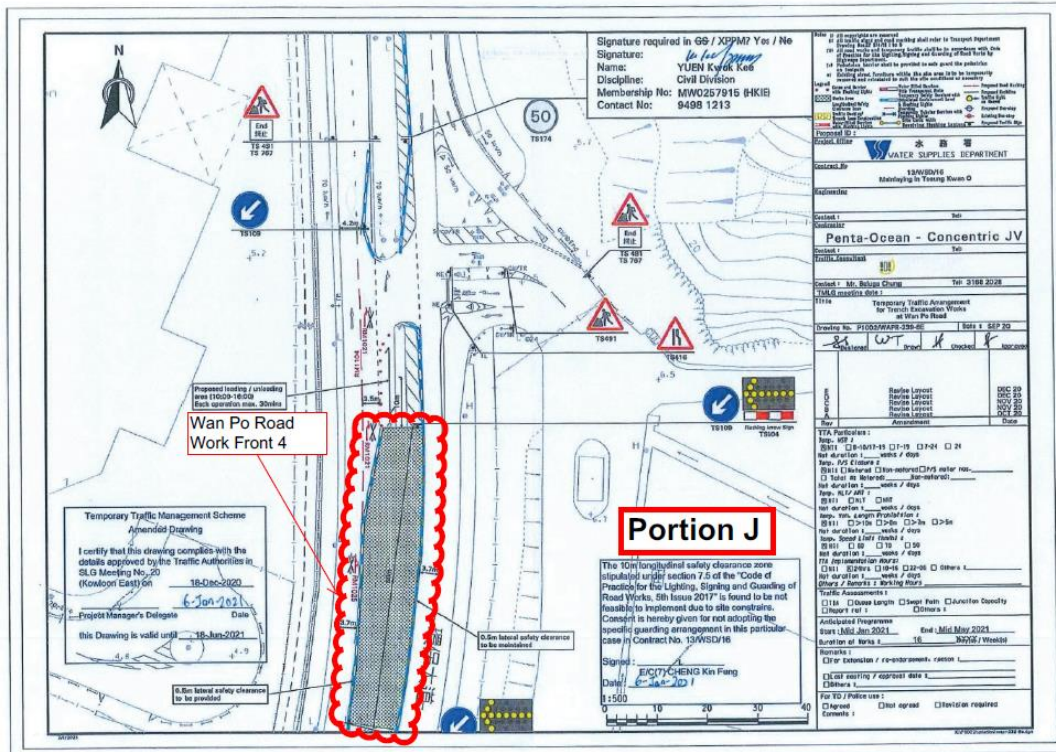


Figure A18b. Location Plan for Wan Po Road 4

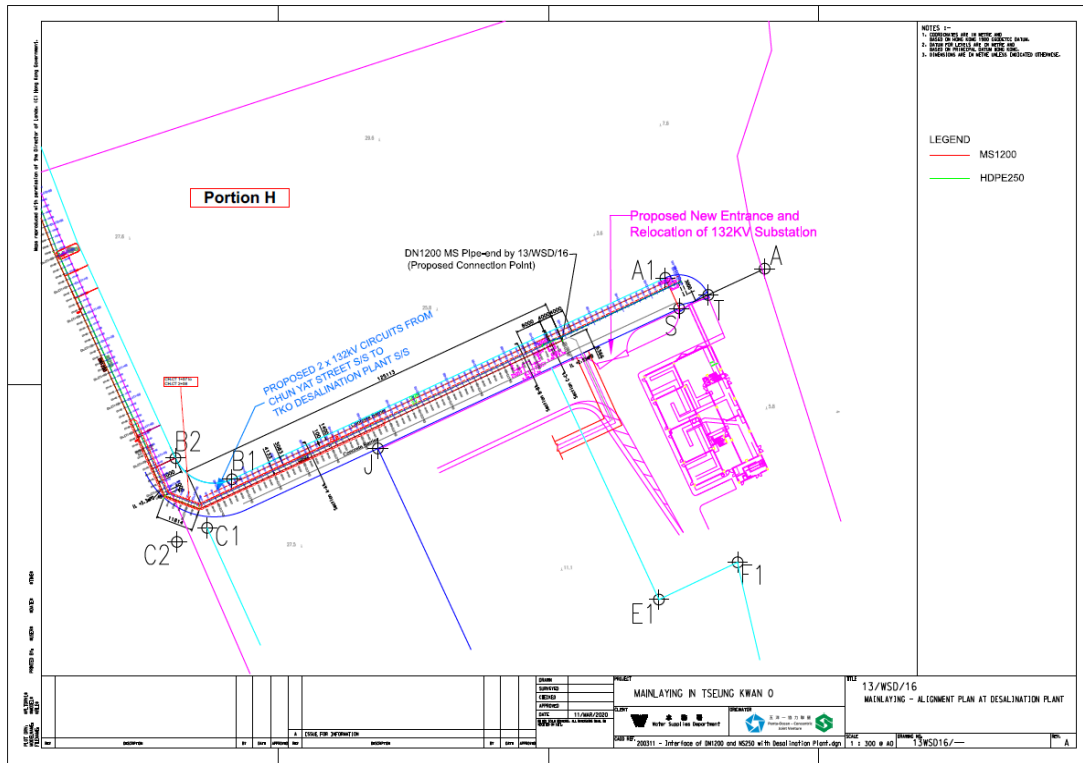


Figure A19a. Location Plan for CH.CT 0+07 – 2+58

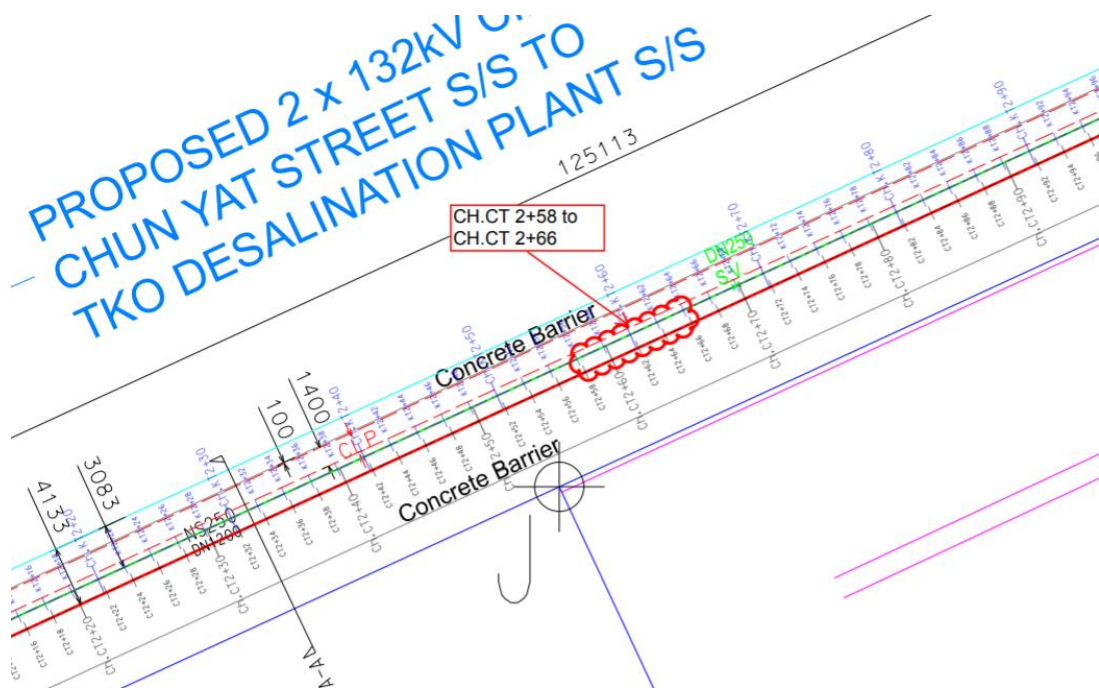


Figure A19b. Location Plan for CH.CT 2+58 – 2+66

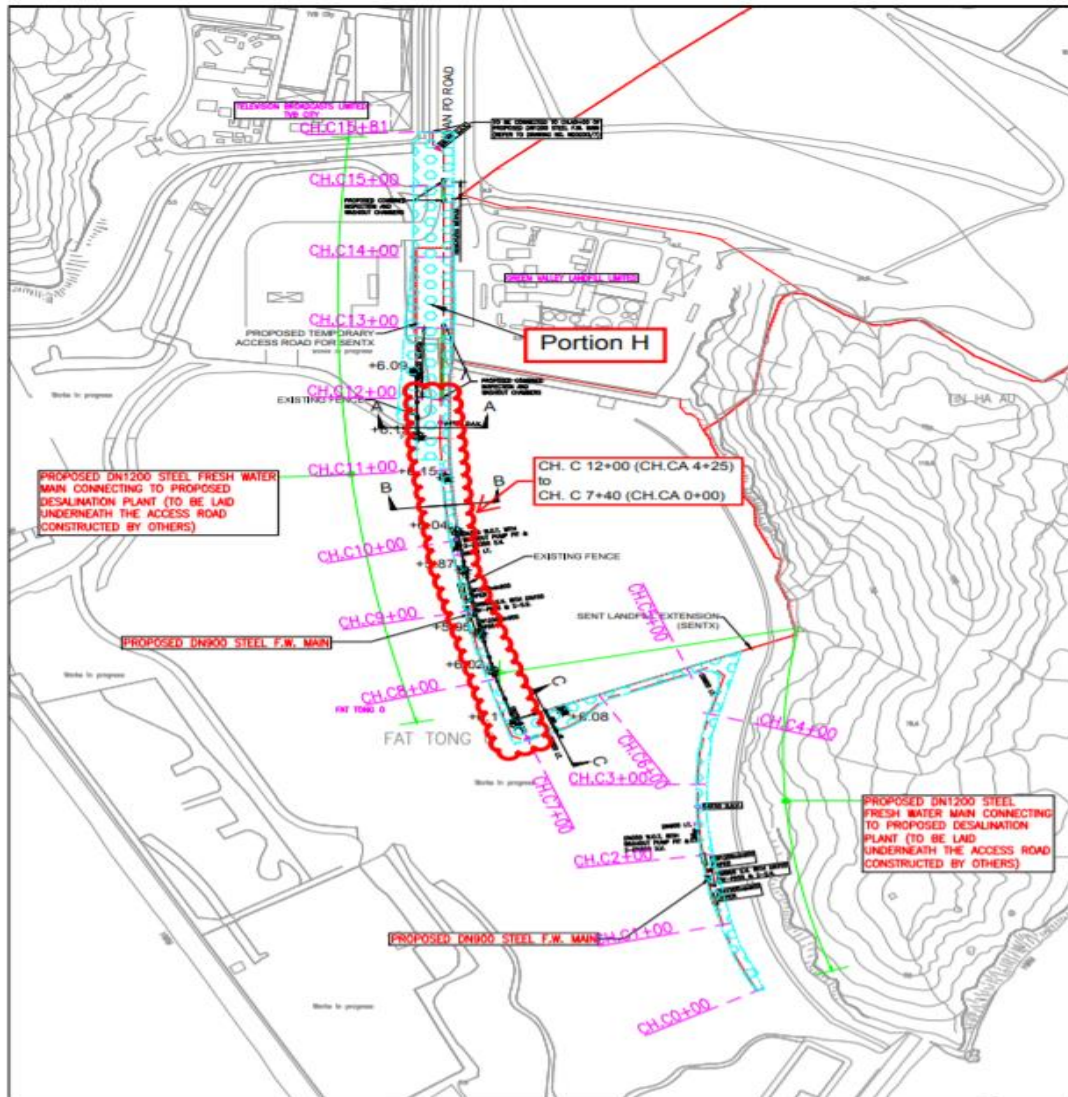


Figure A20. Location Plan for Portion H– CH.C 7+40~CH.C 12+00 (CH.CA 0+00 ~ CH.CA4+25)

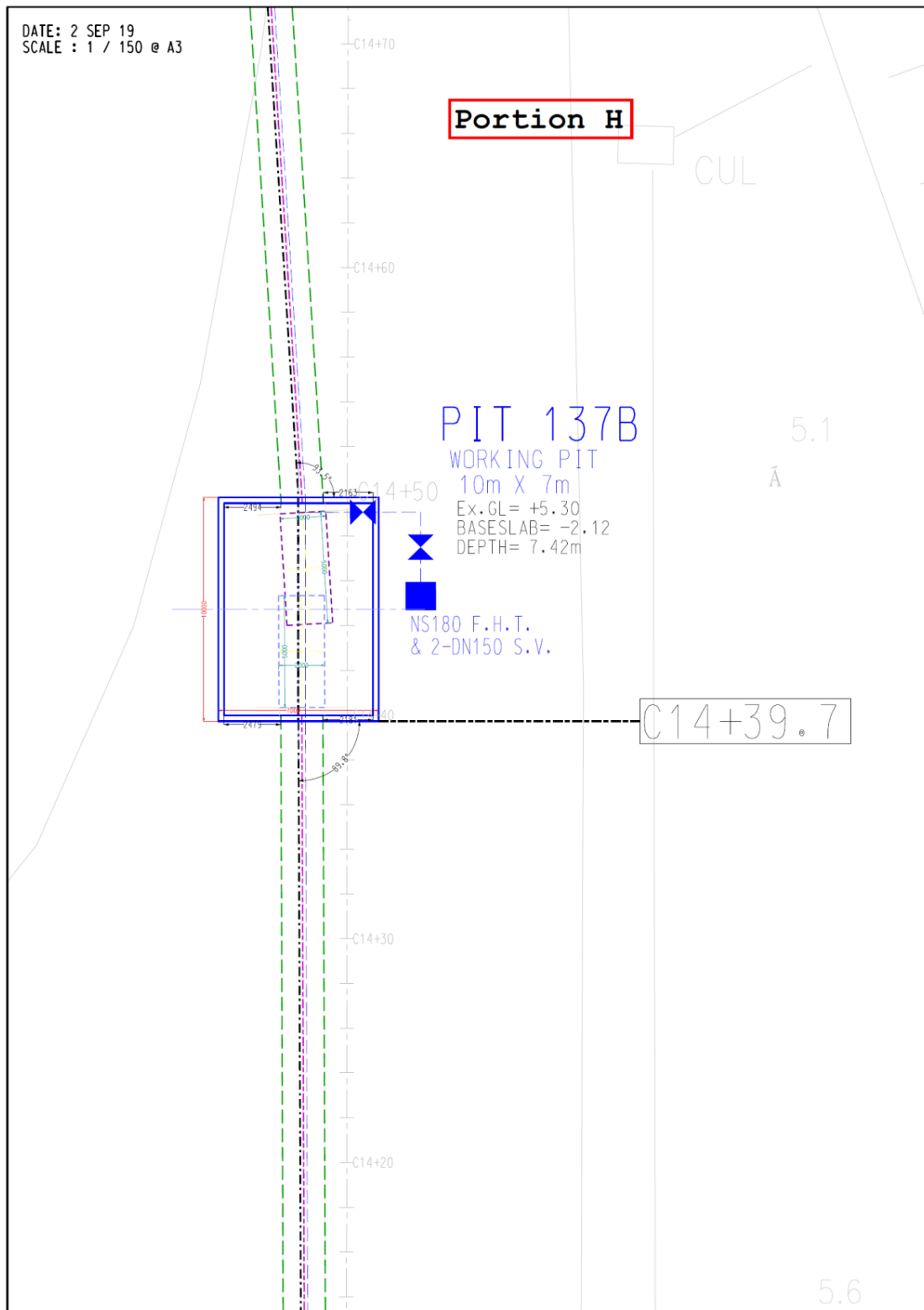


Figure A21a. Location Plan for Portion H- Pit 137B

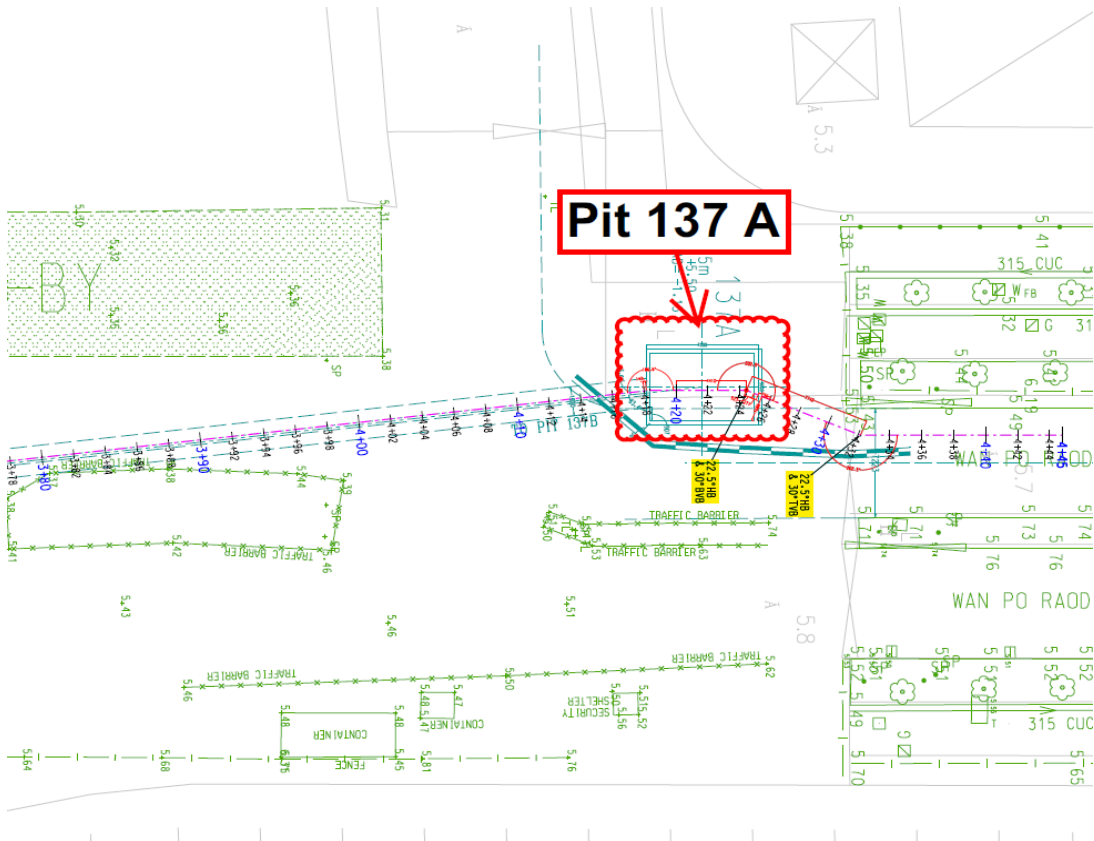


Figure A21b. Location Plan for Portion H- Pit 137A

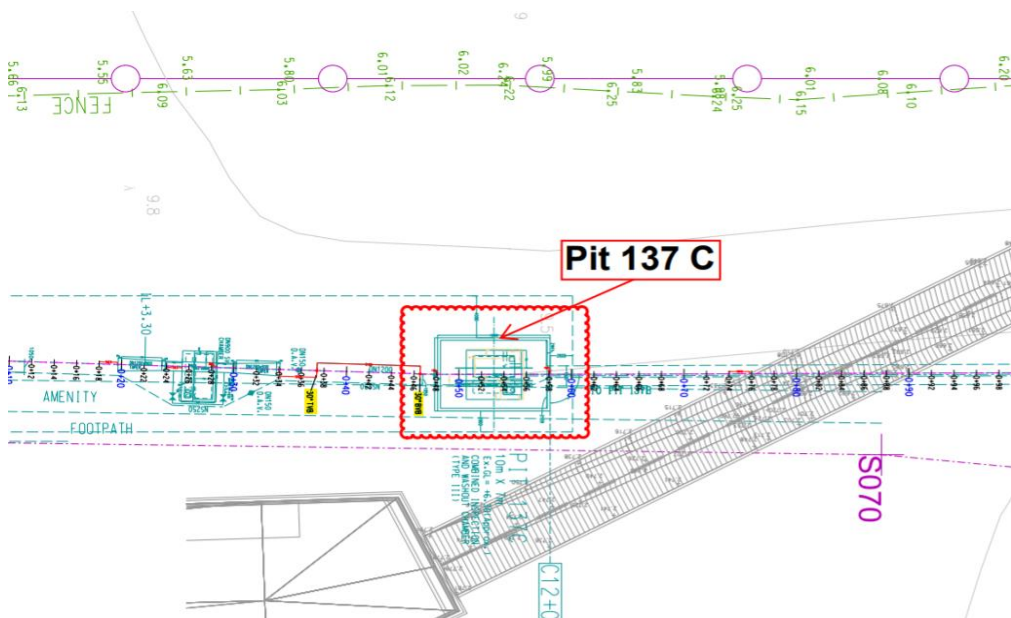
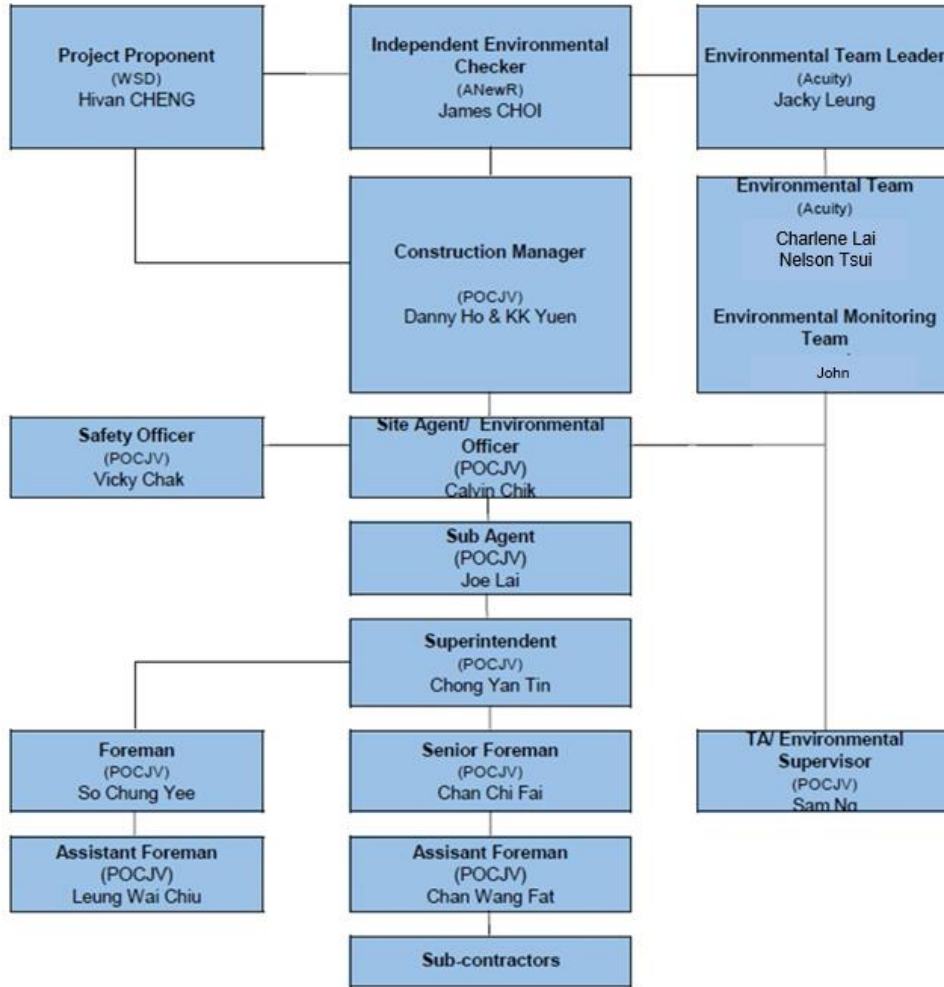


Figure A21c. Location Plan for Portion H- Pit 137C

# Appendix B

## Project Organization Chart





# Appendix C

# Construction Programme

# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

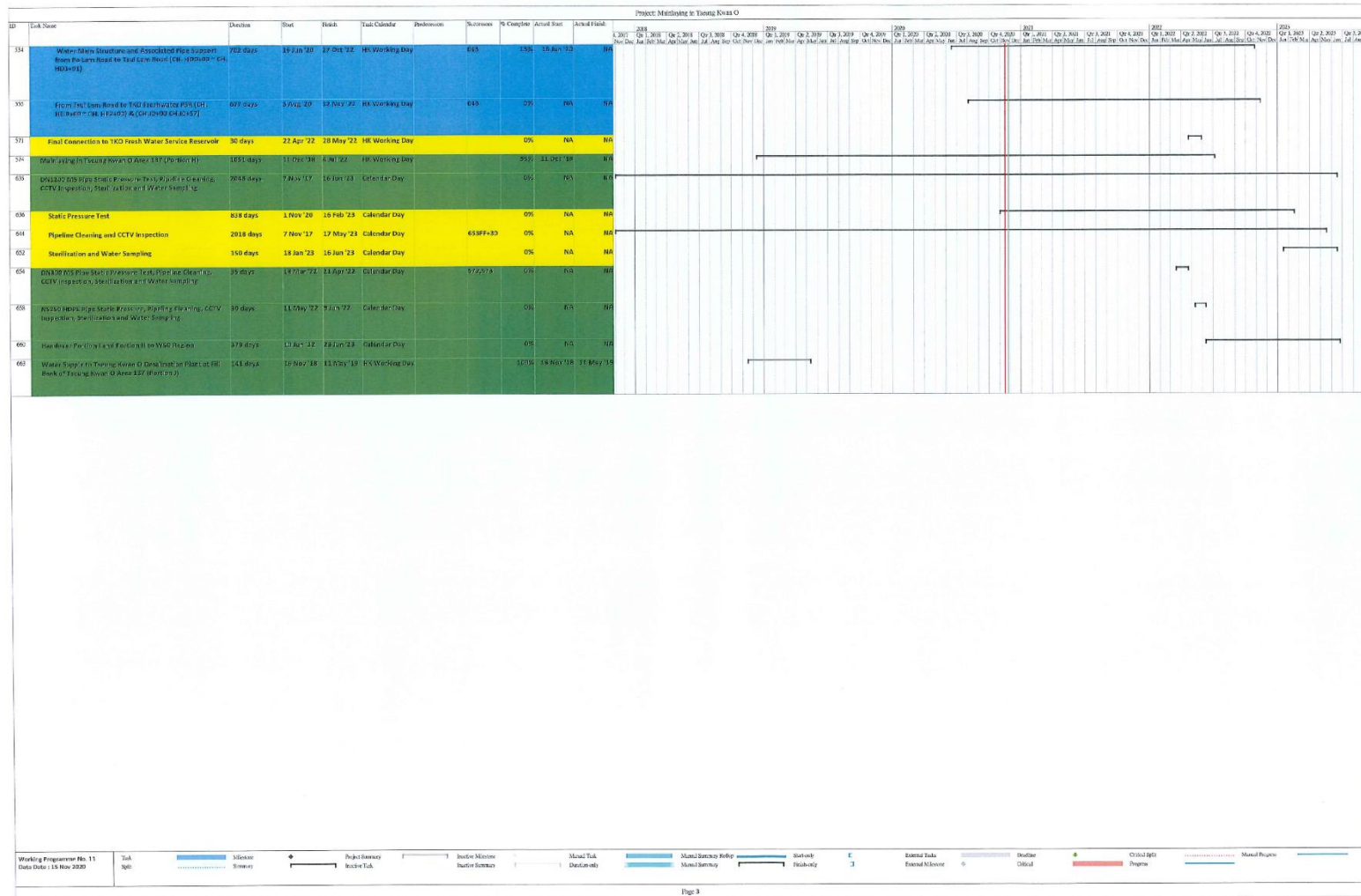
### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021

Project: Mainlaying in Tseung Kwan O										
ID	Task Name	Duration	Start	Finish	Task Calendar	Predecessors	Successors	% Complete	Actual Start	Actual Finish
1	Key Dates	2420 days	7 Nov '17	22 Jun '24	Calendar Day			0%	7 Nov '17	NA
2	Contract Date	0 days	7 Nov '17	7 Nov '17	Calendar Day		26,28,29F	100%	7 Nov '17	7 Nov '17
3	Starting Date	0 days	16 Nov '17	16 Nov '17	Calendar Day			100%	16 Nov '17	16 Nov '17
4	Access Date of Portion A, B, C, D, E, F and G	0 days	16 Nov '17	16 Nov '17	Calendar Day		56,32,40,4	100%	16 Nov '17	16 Nov '17
5	Access Date of Portion H	0 days	10 Aug '19	10 Aug '19	Calendar Day		582	100%	10 Aug '19	10 Aug '19
6	Completion Date (Contract)	0 days	18 May '21	18 May '21	Calendar Day			100%	18 May '21	18 May '21
7	Revised Completion Date (including EDT - CE21 & CE23)	0 days	11 Feb '22	11 Feb '22	Calendar Day			100%	11 Feb '22	11 Feb '22
8	Planned Completion	0 days	23 Jun '23	23 Jun '23	Calendar Day	10		0%	NA	NA
9	Defect Date	0 days	22 Jun '24	22 Jun '24	Calendar Day			0%	NA	NA
10	Mainlaying in Tseung Kwan O	2035 days	7 Nov '17	23 Jun '23	Calendar Day		215,185 d	35%	7 Nov '17	NA
11	Issue CE No. 03 - Change in Pressure Rating of Watermain, Valves and Fittings from PN16 to PN25	0 days	12 Jul '18	12 Jul '18	Calendar Day		37	100%	12 Jul '18	12 Jul '18
12	Issue CE No. 04 - Feasibility Study of Realignment of Pipeline between Po Hing Road and TKO Freshwater PDR	0 days	23 Aug '18	23 Aug '18	Calendar Day			100%	23 Aug '18	23 Aug '18
13	Issue CE No. 05 - Feasibility Study of Realignment of Pipeline at Tseung Kwan O Stage 1 Landfill	0 days	23 Aug '18	23 Aug '18	Calendar Day			100%	23 Aug '18	23 Aug '18
14	Issue CE No. 10 - Contractor Design of The Realignment	0 days	28 Feb '19	28 Feb '19	Calendar Day			100%	28 Feb '19	28 Feb '19
15	Issue CE No. 20 - Traffic Count and Preliminary Traffic Analysis in Po Lam Road and Tsui Lam Road	0 days	19 Jun '19	19 Jun '19	Calendar Day			100%	19 Jun '19	19 Jun '19
16	Issue CE No. 27 - Underground Utilities Detection Survey for Working Pit D (CH_A22+75)	0 days	2 Aug '19	2 Aug '19	Calendar Day			100%	2 Aug '19	2 Aug '19
17	Issue CE No. 21 - Temporary Diversion of Uncharted Underground Utilities near Wan O Road at CH_A16+00 (Pit B)	0 days	8 Aug '19	8 Aug '19	Calendar Day			100%	8 Aug '19	8 Aug '19
18	Issue CE No. 26 - Change in Cathodic Protection System for Mild Steel Pipes	0 days	16 Aug '19	16 Aug '19	Calendar Day		54	100%	16 Aug '19	16 Aug '19
19	Issue CE No. 25 - Feasibility Study on the Alternative Alignment by Trenchless Method in the Wan Po Road I/O Lohas Park Road	0 days	31 Dec '19	31 Dec '19	Calendar Day			100%	31 Dec '19	31 Dec '19
20	Issue CE No. 55 - Design of the Water Mains Structure and Associated Pipe Support across the Natural Stream Course for Alternative Alignment in Tsui Lam	0 days	5 May '20	5 May '20	Calendar Day			100%	5 May '20	5 May '20
21	Issue CE No. 58 - Excavation of Inspection Pits for the Alternative Alignment (Batch No. 2)	0 days	22 May '20	22 May '20	Calendar Day			100%	22 May '20	22 May '20
22	Issue CE No. 64 - Tree Survey at Tsui Lam (Location A and Location B)	0 days	9 Jun '20	9 Jun '20	Calendar Day			100%	9 Jun '20	9 Jun '20
23	Issue CE No. 62 - Design of Pipe Support in Tsui Lam (Location D)	0 days	16 Jun '20	16 Jun '20	Calendar Day			100%	16 Jun '20	16 Jun '20
24	Issue CE No. 66 - Excavation of Inspection Pits for the Alternative Alignment (Batch No. 3)	0 days	21 Aug '20	21 Aug '20	Calendar Day			100%	21 Aug '20	21 Aug '20
25	Preliminaries	325 days	7 Nov '17	14 Nov '17	Calendar Day			100%	7 Nov '17	14 Nov '17
26	Submission and Permit Application	322 days	7 Nov '17	24 Sep '18	Calendar Day			100%	7 Nov '17	24 Sep '18
27	Subcontracting	3122 days	16 Nov '17	11 Dec '20	Calendar Day			97%	16 Nov '17	NA
28	Submission and Approval	182 days	16 Nov '17	17 Nov '17	Calendar Day			100%	16 Nov '17	17 Nov '17
29	Subcontractor Selection and Subcontracting	1115 days	23 Nov '17	14 Dec '20	Calendar Day			97%	23 Nov '17	NA

# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021

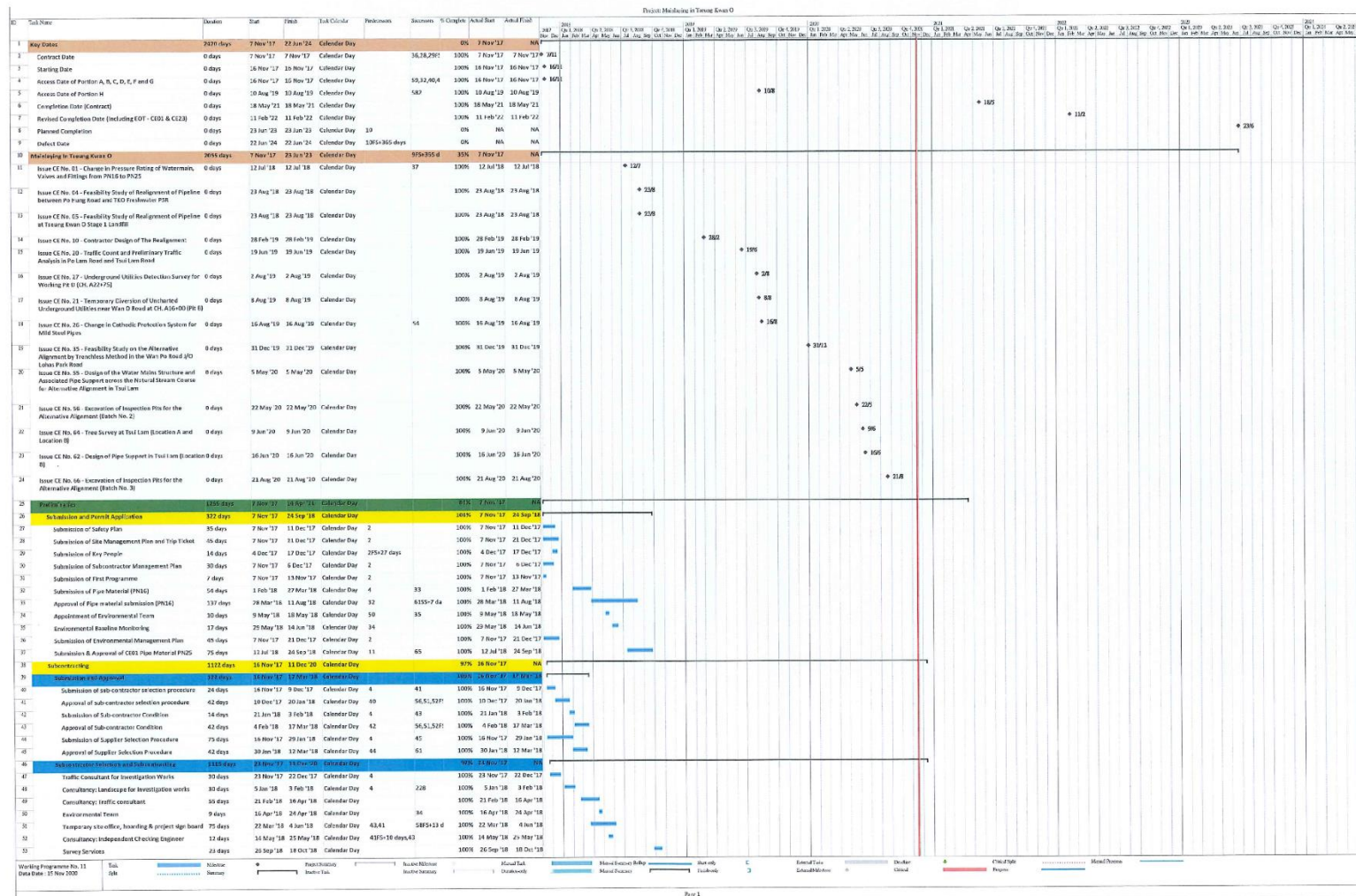




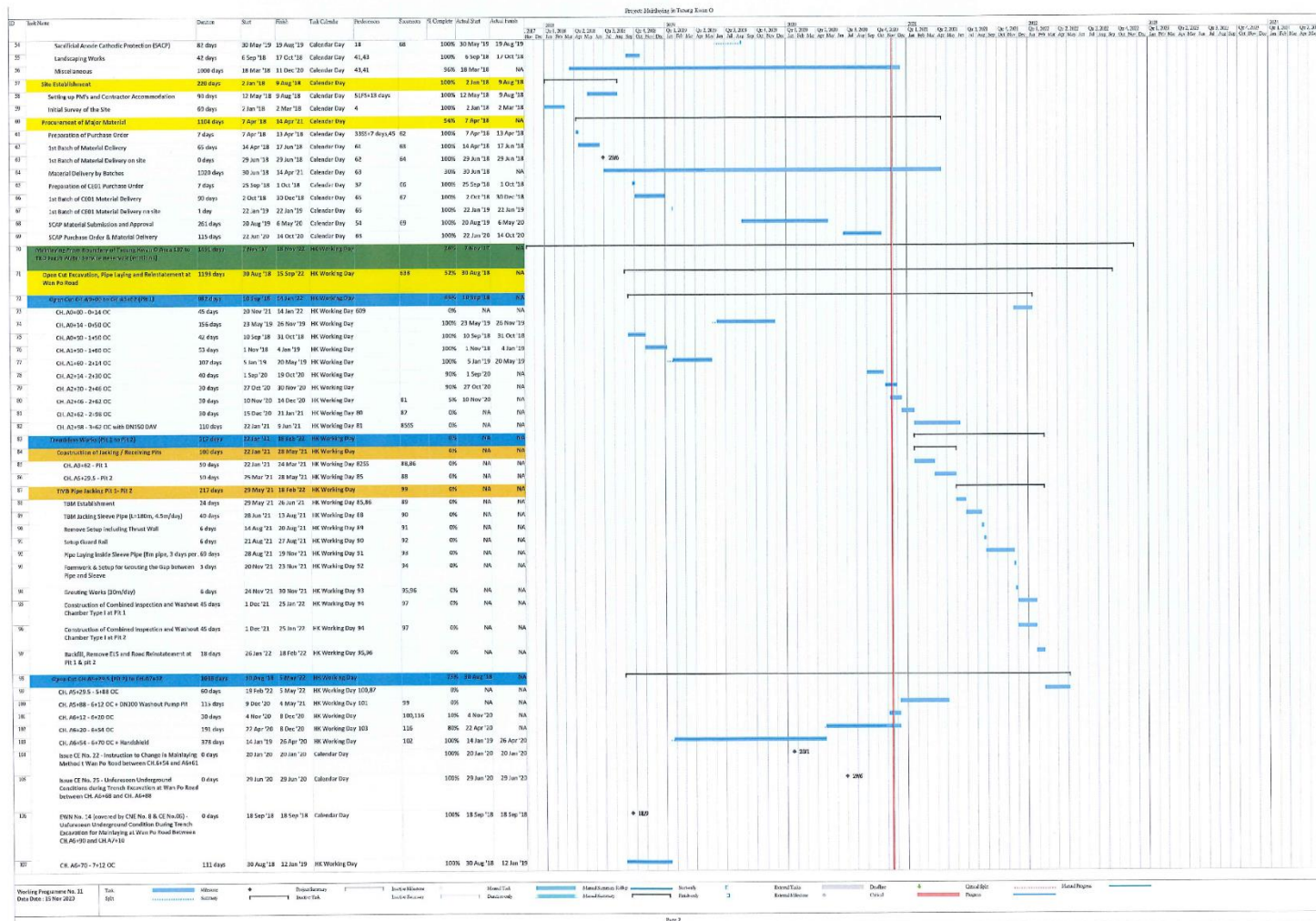
# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021



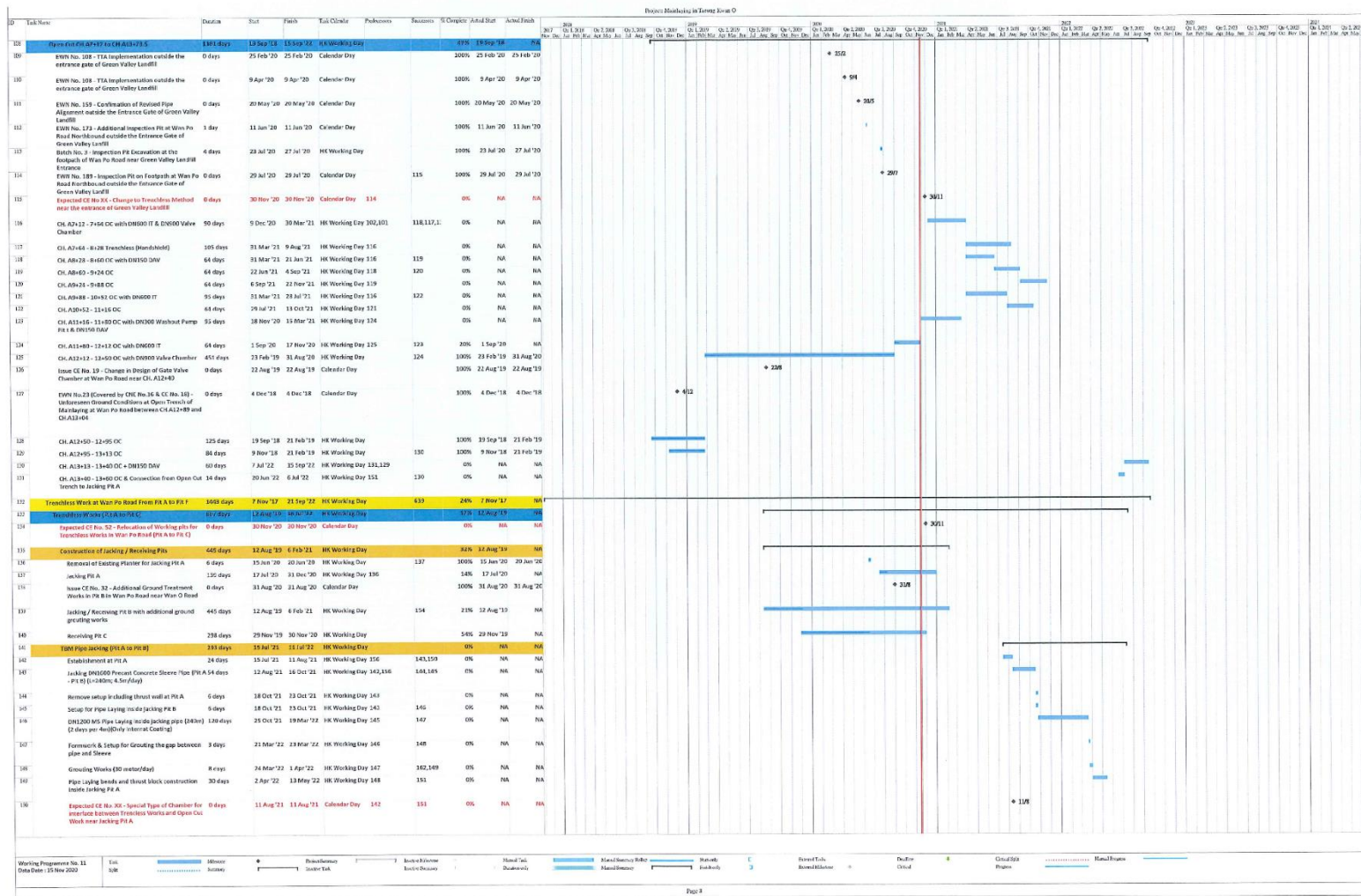
**Contract No. 13/WSD/16**  
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# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021







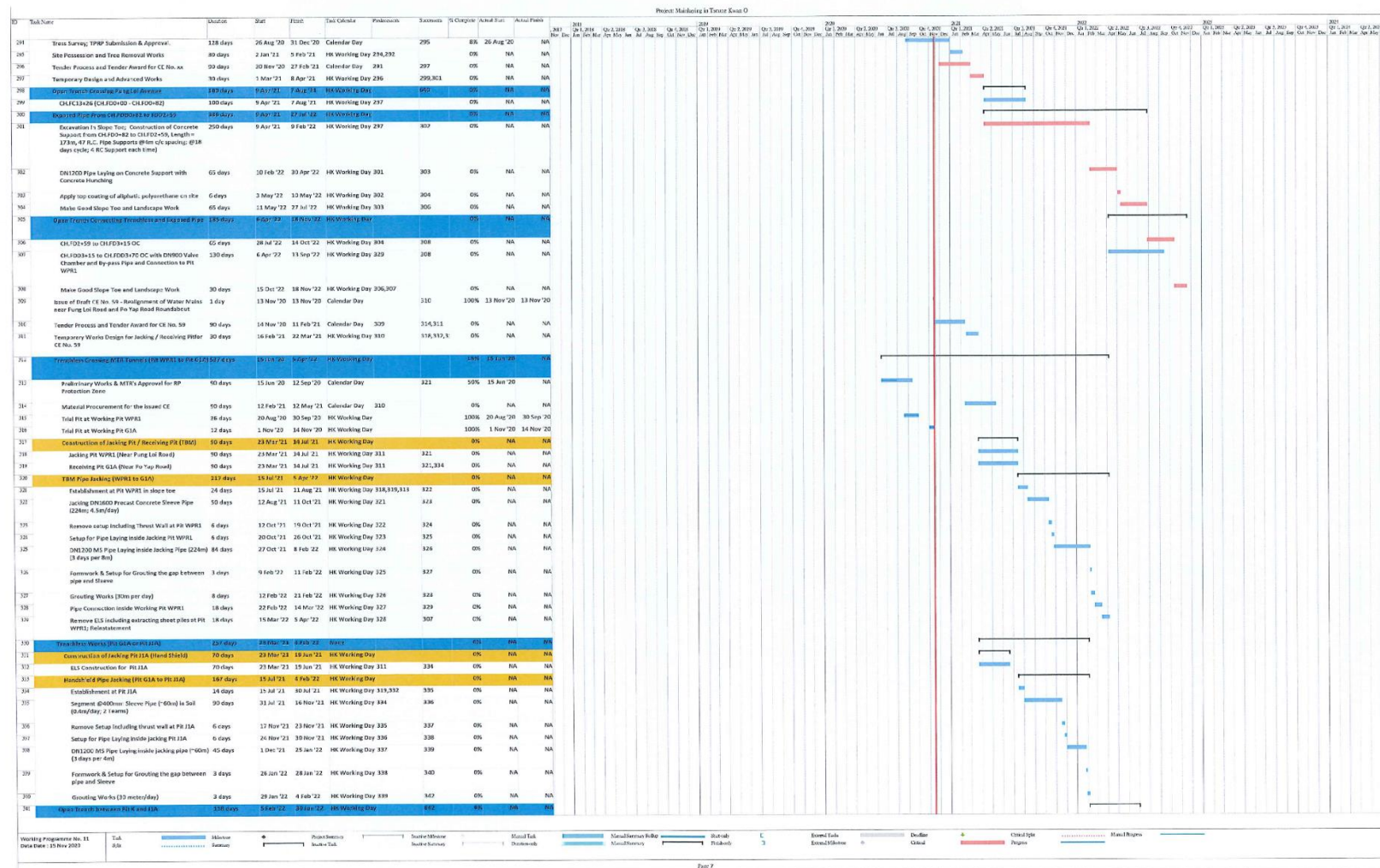




# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

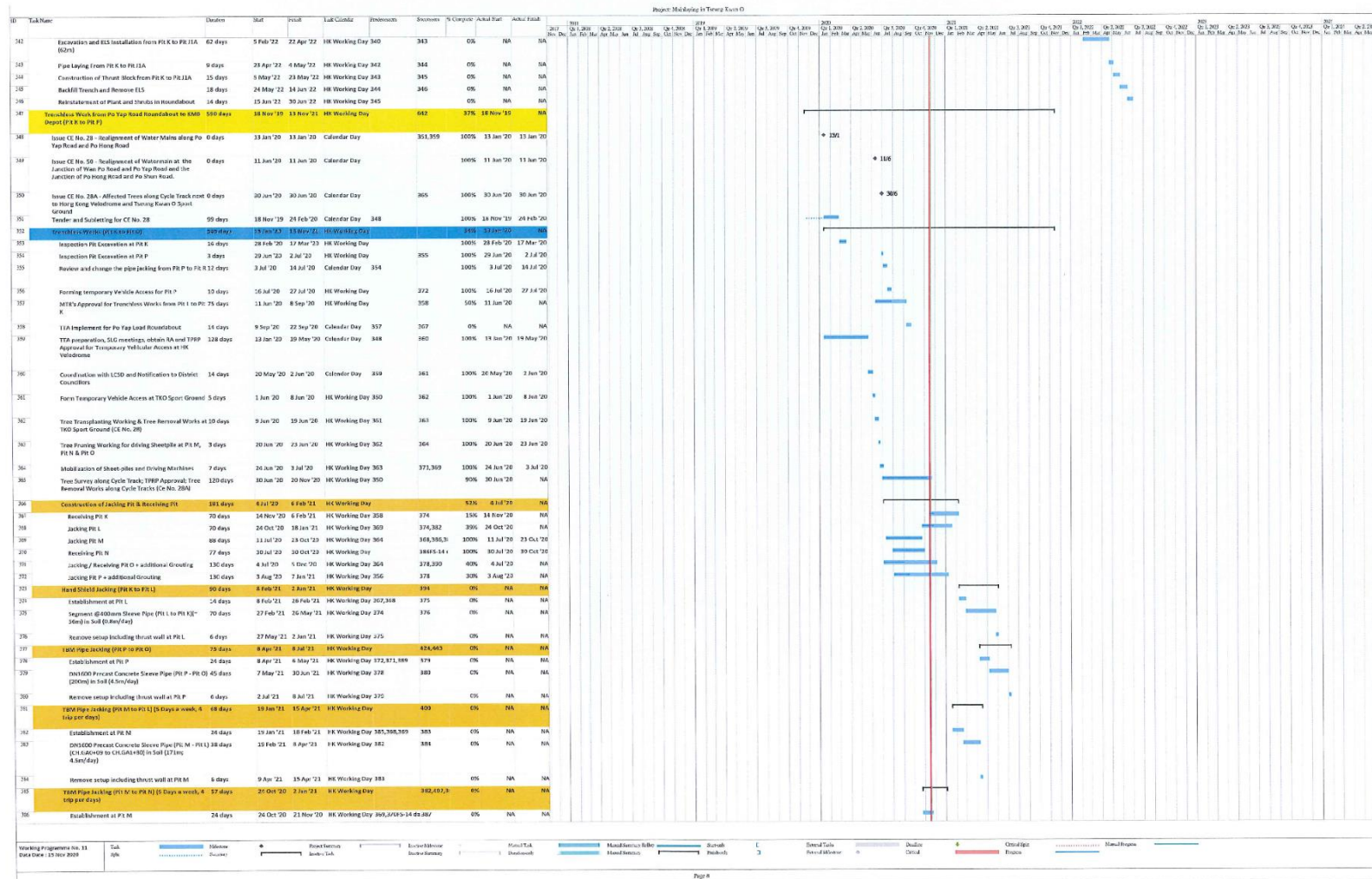
### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021



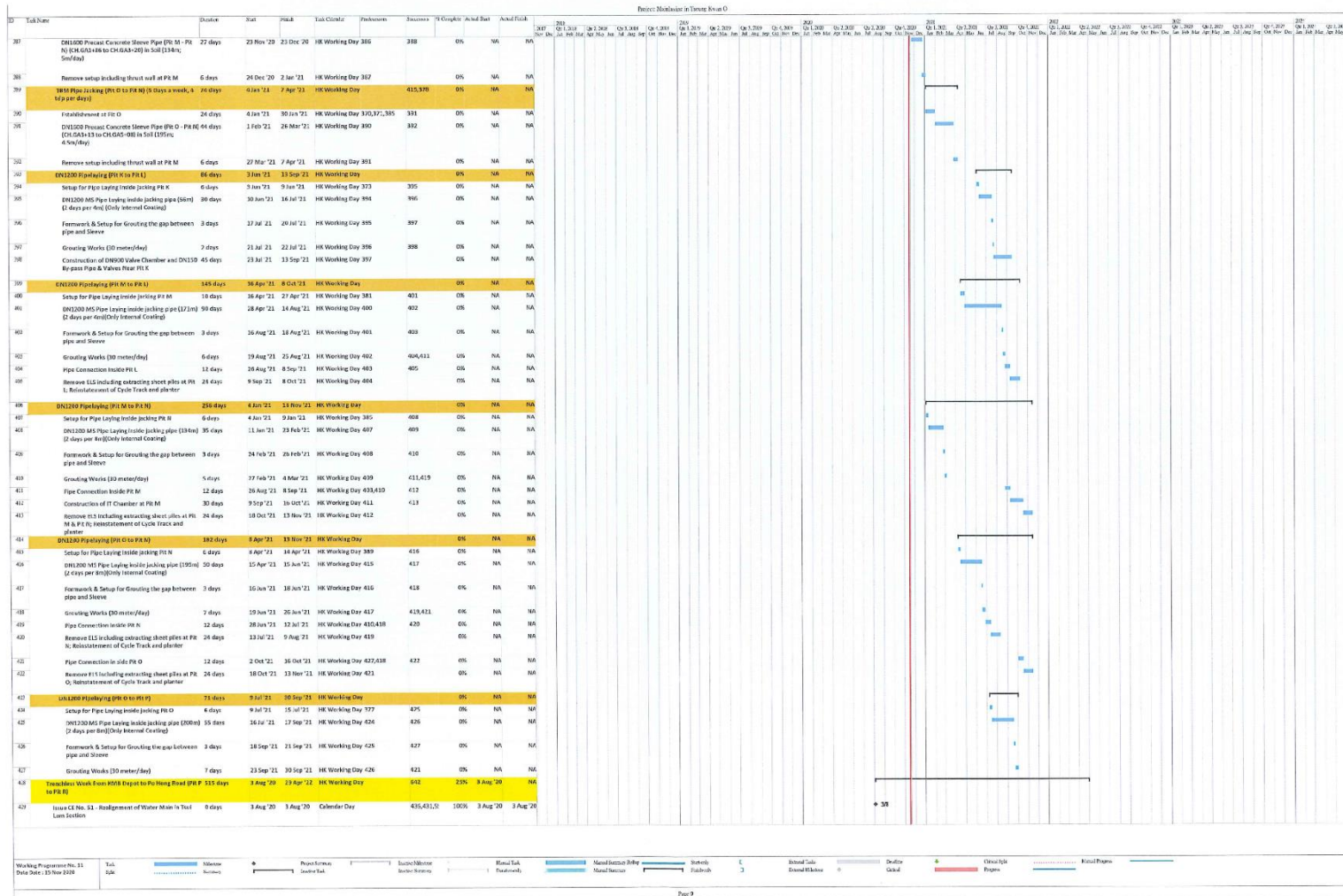
# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

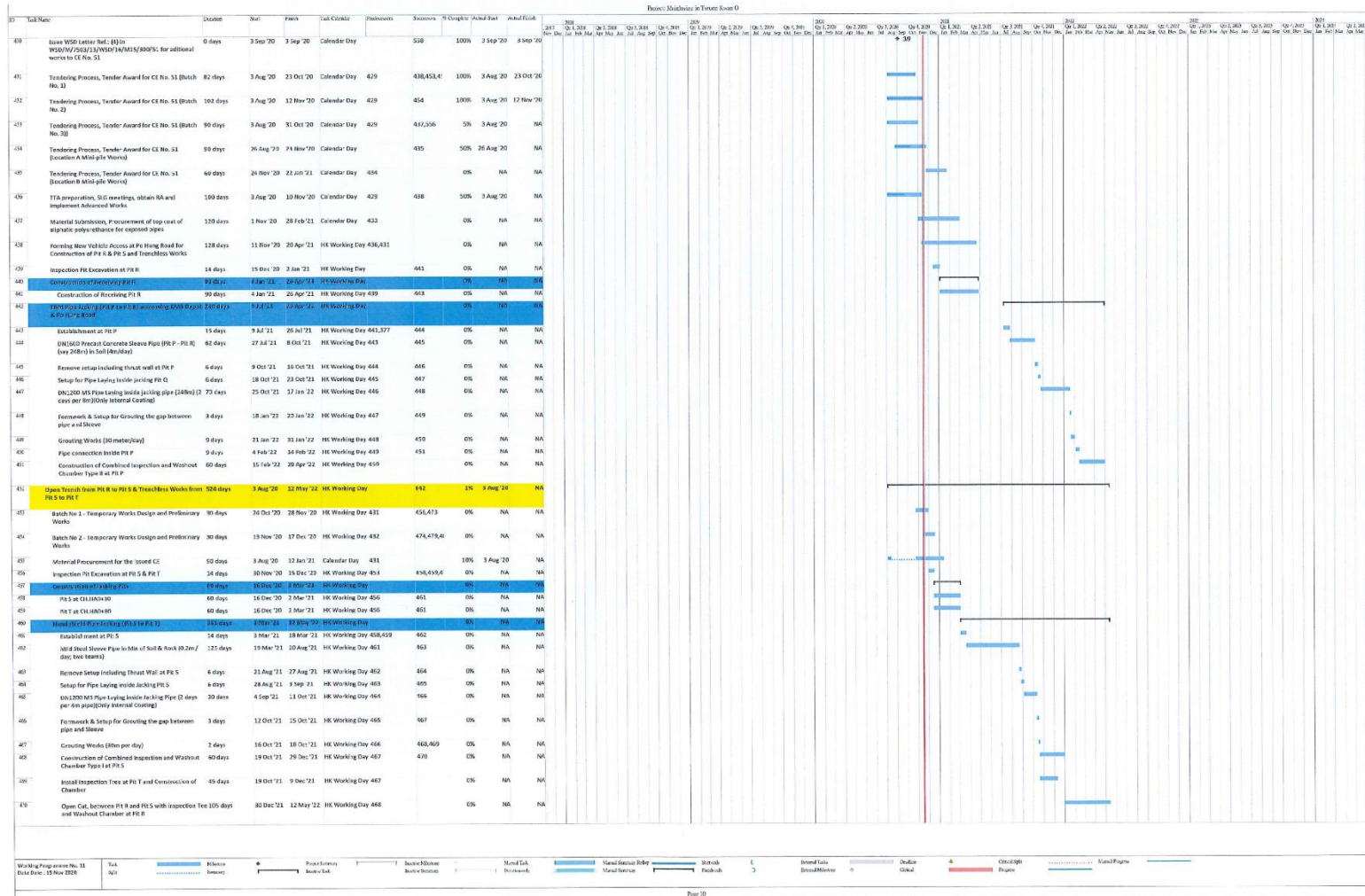
### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021



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**Mainlaying in Tseung Kwan O**  
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# Contract No. 13/WSD/16 Mainlaying in Tseung Kwan O 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021





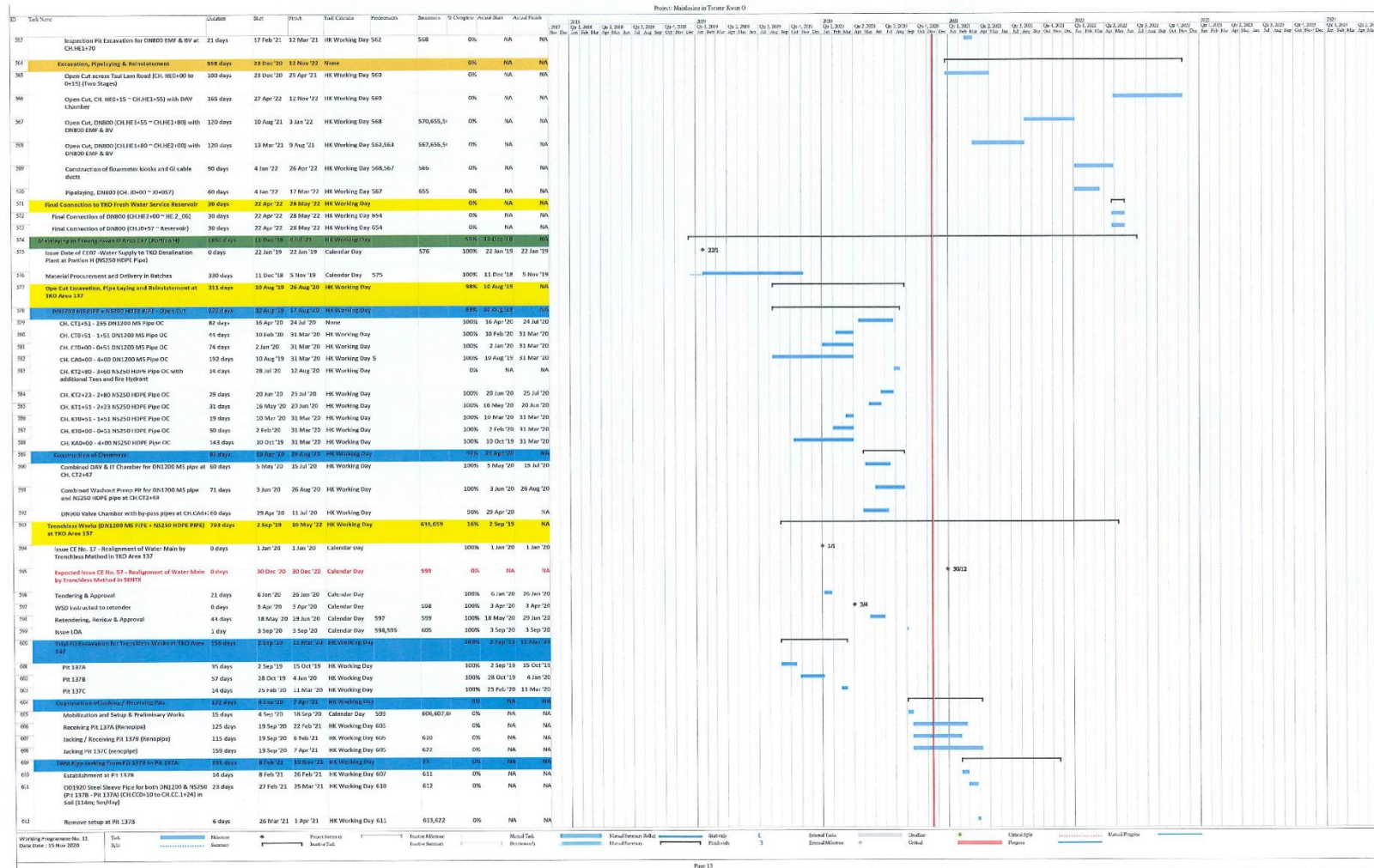




# Contract No. 13/WSD/16

## Mainlaying in Tseung Kwan O

### 3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021







# Appendix D

## Waste Flow Table

**Monthly Summary Waste Flow Table**

**Name of Department:** WSD **Contract No. / Works Order No.:** 13/WSD/16

**Monthly Summary Waste Flow Table for** September 2020 to December 2020

Month	Actual Quantities of <u>Inert</u> Construction Waste Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed of as Public Fill	Imported Fill (see Note 1)
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )
Sep-2020	1.423	0.148	--	--	1.423	0.026
Oct-2020	1.470	0.120	--	--	1.470	0.025
Nov-2020	2.180	0.340	--	--	2.176	0.152
Dec-2020	1.954	0.390	--	--	1.954	0.187
<b>Total</b>	<b>7.027</b>	<b>0.998</b>	<b>0.000</b>	<b>0.000</b>	<b>7.023</b>	<b>0.390</b>

**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
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Month	Actual Quantities of <u>Non-inert</u> Construction Waste Generated Monthly				
	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. General Refuse disposed at Landfill
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Sep-2020	0.000	0.045	0.000	0.000	0.003
Oct-2020	0.000	0.040	0.000	0.000	0.002
Nov-2020	0.000	0.056	0.000	0.000	0.003
Dec-2020	0.000	0.052	0.000	0.000	0.005
<b>Total</b>	<b>0.000</b>	<b>0.193</b>	<b>0.000</b>	<b>0.000</b>	<b>0.013</b>

Notes:

1. The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
2. Plastic refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
3. Broken concrete for recycling into aggregate.

**Monthly Summary Waste Flow Table**

**Name of Department:** WSD **Contract No. / Works Order No.:** 13/WSD/16

**Monthly Summary Waste Flow Table for January 2021 to August 2021**

Month	Actual Quantities of <u>Inert</u> Construction Waste Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 3)	Reused in the Contract	Reused in other Projects	Disposed of as Public Fill	Imported Fill (see Note 1)
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )
Sep 2020 -Dec 2020	7.027	0.998	0.000	0.000	7.023	0.390
Jan 2021	2.438	0.120	0.000	0.000	2.438	0.127
Feb-2021	1.702	0.224	0.000	0.000	1.702	0.537
Mar-2021	2.780	0.163	0.000	0.000	2.780	1.361
Apr-2021	2.338	0.271	0.222	0.000	2.116	0.629
May-2021	2.265	0.125	0.360	0.000	1.906	0.340
Jun-2021	2.017	0.135	0.221	0.000	1.796	1.148
Jul-2021	2.003	0.059	0.109	0.000	1.894	1.352
Aug-2021	1.223	0.026	0.455	0.000	1.223	0.590
<b>Total</b>	<b>16.766</b>	<b>1.123</b>	<b>1.367</b>	<b>0.000</b>	<b>15.855</b>	<b>6.084</b>



**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



Month	Actual Quantities of <u>Non-inert</u> Construction Waste Generated Monthly				
	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. General Refuse disposed at Landfill
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Sep 2020 -Dec 2020	0.000	0.193	0.000	0.000	0.013
Jan 2021	0.000	0.065	0.000	0.000	0.006
Feb-2021	0.000	0.058	0.000	0.000	0.012
Mar-2021	0.000	0.055	0.000	0.000	0.002
Apr-2021	0.000	0.045	0.000	0.000	0.008
May-2021	0.000	0.049	0.000	0.000	0.006
Jun-2021	0.000	0.051	0.000	0.000	0.000
Jul-2021	0.000	0.052	0.000	0.000	0.005
Aug-2021	0.000	0.048	0.000	0.000	0.000
<b>Total</b>	<b>0.000</b>	<b>0.423</b>	<b>0.000</b>	<b>0.000</b>	<b>0.039</b>

Notes:

1. The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
2. Plastic refers to plastic bottles/containers, plastic sheets/foam from packaging materials.
3. Broken concrete for recycling into aggregate.

## Appendix E

# Summary of Implementation Status of Environmental Mitigation

**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
<b>Air Quality</b>								
S4.8.1	Impervious dust screen or sheeting will be provided to enclose scaffolding from the ground floor level of building for construction of superstructure of the new buildings.	Land site/ During Construction	Contractor(s)		✓		N/A	Air Pollution Control (Construction Dust)
S4.8.1	Impervious sheet will be provided for skip hoist for material transport.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		N/A	
S4.8.1	The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable.	Land site/ During Construction	Contractor(s)		✓		Implemented, rectified after observation. Reminder issued.	
S4.8.1	All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation.	Land site/ During Construction	Contractor(s)		✓		Implemented, rectified after observation. Reminder issued.	
S4.8.1	Dropping heights for excavated materials should be controlled to a practical height to minimise the fugitive dust arising from unloading.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	During transportation by truck, materials should not be loaded to a level higher than the side and tail boards, and should be dampened or covered before transport.	Land site/ During Construction	Contractor(s)		✓		Implemented	
S4.8.1	Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable.	Land site/ During Construction	Contractor(s)		✓		N/A	

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EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S4.8.1	Road sections between vehicle-wash areas and vehicular entrance will be paved.	Land site/ During Construction	Contractor(s)		✓		N/A	
S4.8.1	Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary.	Land site/ During construction	Contractor(s)	✓	✓		N/A	
S4.8.1	Haul roads will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times.	Land site/ During construction	Contractor(s)		✓		Implemented, rectified after observation	
S4.8.1	Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time.	Land site/ During construction	Contractor(s)		✓		Implemented, rectified after observation	
S4.8.1	Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.8.1	All exposed areas will be kept wet always to minimise dust emission.	Land site/ During construction	Contractor(s)		✓		Implemented, rectified after observation	
S4.8.1	Ultra-low-sulphur diesel (ULSD) will be used for all construction plant on-site, as defined as diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites.	Land site/ During construction/ During Operation	Contractor(s)		✓	✓	Implemented	Environment, Transport and Works Bureau Technical Circular (ETWB- TC(W)) No 19/2005 on Environmental Management on Construction Sites
S4.8.1	The engine of the construction equipment during idling will be switched off.	Land site/ During construction	Contractor(s)		✓		Implemented	

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EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S4.8.1	Concrete batching plant will be required on site. control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented. The control measures recommended in the Guidance Note on a Best Practicable Means for Cement Works (Concrete Batching Plant) (BPM 3/2 (93)) will be implemented.	Land site/ During construction	Contractor(s)		✓		N/A	Guidance Note on a Best
S4.8.1	Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.	Land site/ During construction	Contractor(s)		✓		Implemented	
S4.10	To ensure proper implementation of the recommended dust mitigation measures and good construction site practices during the construction phase, environmental site audits on weekly basis is recommended throughout the construction period.	Land site/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	

Note: D – Design stage C – Construction O – Operation

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EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
<b>Noise</b>								
S5.7	Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Mobile plant, if any, will be sited as far away from NSRs as possible.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Plants known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works,

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EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S5.7	Use of Quite Powered Mechanical Equipment (QPME).	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. The noise barrier material should have a superficial surface density of at least 7 kg m <sup>-2</sup> and have no openings or gaps.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints.	Noise control/ During construction	Contractor(s)		✓		N/A	A Practical Guide for the Reduction of Noise from Construction Works,
S5.7	Construction activities (e.g. excavation/shoring, reinstatement (asphalt), and pipe jacking) will be planned and carried out in sequence, such that items of PME proposed for these activities will not be operated simultaneously.	Noise control/ During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	PMEs will not be used at the works areas near educational institutions with residual impact (ie the "influence area" within a radius of 40m) during school hours in order to reduce impact to the educational institutions.	Noise control / During construction	Contractor(s)		✓		Implemented	A Practical Guide for the Reduction of Noise from Construction Works
S5.7	Noise enclosures or acoustic sheds would be used to cover stationary PME such as generators. Portable/Movable noise enclosure made of material with superficial surface density of at least 7 kg m <sup>-2</sup> may be used for screening the noise from operation of the saw/groover, concrete.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		N/A	

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				D	C	O		
S5.9	Sawcutting pavement, breaking up of pavement, excavation /shoring, pipe laying, backfilling, reinstatement (concrete) and pipe jacking shall be scheduled outside the examination period.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		Implemented	
S5.9	In view the duration of noise exceedance at Creative Secondary School, PLK Laws Foundation College, TKO Kei Tak Primary School and School of Continuing and Professional Studies-CUHK is limited to 8 weeks, the construction work in the influence areas near the four schools shall be scheduled during long school holidays (eg summer holiday, Easter holiday or Christmas holiday, etc) as far as practicable. Scheduling the construction work for the four schools.	Noise control/ Pre-construction/ During construction	Contractor(s)	✓	✓		Implemented	
S5.10	A noise monitoring programme shall be implemented for the construction phase.	Designated monitoring stations as defined in EM&A Manual/During construction phase	Environmental Team (ET)		✓		Implemented	
S5.10	The effectiveness of on-site control measures could also be evaluated through the regular site audits.	All facilities/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	-

Note: D – Design stage C – Construction O – Operation



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EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementatio n Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
<b>Water Quality</b>								
S6.9	Dredged marine sediment will be disposed of in a gazetted marine disposal area in accordance with marine dumping permit conditions of the Dumping at Sea Ordinance (DASO).	Marine Dredging/ During construction	Contractor(s)		✓		N/A	Dumping at Sea Ordinance (DASO)
S6.9	Disposal vessels will be fitted with tight bottom seals in order to prevent leakage of material during transport.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	Barges will be filled to a level, which ensures that material does not spill over during transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	After dredging, any excess materials will be cleaned from decks and exposed fittings before the vessel is moved from the dredging area.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	All vessels should be well maintained and inspected before use to limit any potential discharges to the marine environment.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	All vessels must have a clean ballast system.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	No discharge of sewage/grey wastewater should be allowed. Waste water from potentially contaminated area on working vessels should be minimized and collected. These kinds of wastewater should be brought back to port and discharged at appropriate collection and treatment system.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-
S6.9	No soil waste is allowed to be disposed overboard.	Marine Dredging/ During construction	Contractor(s)		✓		N/A	-

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EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementatio n Agent	Implementation Stage			Implementation status	Relevant Legislation & Guidelines
				D	C	O		
S6.9	Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected on a regular basis and maintained to confirm proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit will be removed regularly.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented, rectified after observation	ProPECC PN 1/94 TM Standard under the WPCO
S6.9	Earthworks to form the final surfaces will be followed up with surface protection and drainage works to prevent erosion caused by rainstorms.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	Appropriate surface drainage will be designed and provided where necessary.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	The precautions to be taken at any time of year when rainstorms are likely together with the actions to be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	ProPECC PN 1/94
S6.9	Oil interceptors will be provided in the drainage system where necessary and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9	Temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge, if any, will be adequately designed for the controlled release of storm flows.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-

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S6.9	The temporary diverted drainage, if any, will be reinstated to the original condition when the construction work has finished or when the temporary diversion is no longer required.	Land site & drainage/ During construction	Contractor(s)		✓		N/A	-
S6.9	Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers over the construction site to prevent direct disposal of sewage into the water environment.	Land site & drainage/ During construction	Contractor(s)		✓		Implemented	-
S6.9 and S6.12	The sterilization water should be dechlorinated with total residual chlorine (TRC) level below 1 mg/L before discharge to public sewer. In situ testing of TRC should also be conducted for the discharge of chlorinated water for pipeline disinfection to ensure sufficient dechlorination before discharge to public sewer.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	The cleaning and flushing water should also be treated and desilted to the relevant discharge requirement stipulated in TM-DSS before discharging.	Sterilization of water mains prior to commissioning	Contractor(s)		✓	✓	N/A	Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters
S6.9	Site drainage should be well maintained and good construction practices should be observed to ensure that oil, fuels, solvents and other chemicals are managed, stored and handled properly and do not enter the nearby water streams.	Land site & drainage/ During construction/ During operation	Contractor(s)		✓	✓	Implemented, rectified after observation	-

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S6.12	Regular site inspections will be carried out in order to confirm that regulatory requirements are being met and that contractors are implementing the standard site practice and mitigation measures as proposed to reduce potential impacts to water quality.	During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	-

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<b>Waste Management</b>								
S8.5	Nomination of approved personnel to be responsible for standard site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Training of site personnel in proper waste management and chemical handling procedures. Training will be provided to workers on the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling at the beginning of the construction works.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Provision of sufficient waste disposal points and regular collection for disposal.	All area/ During construction/ During operation	Contractor(s)		✓	✓	Implemented rectified after observation. Reminder issued.	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	Appropriate measures to reduce windblown litter and dust transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	All area/ During construction	Contractor(s)		✓		Implemented, rectified after reminder.	DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A waste management plan (WMP) as stated in the “ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites” for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established and implemented during the construction phase as part of the Environmental Management Plan (EMP). The Contractor will be required to prepare the EMP and submits it to the Architect/ Engineer under the Contract for approval prior to implementation.	All area/ During construction	Contractor(s)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre at Tsing Yi.	All area/ During construction	Contractor(s)		✓		Implemented, rectified after reminder.	Chapters 2 & 3 Code of Practice on the Packaging, Labelling Storage of Chemical Wastes published under the Waste Disposal Ordinance (Cap 354),

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								Section 35
S8.5	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	Land site/ During construction	Contractor(s)		✓		Implemented, rectified after observation. Reminder issued.	Waste Disposal Ordinance (Cap 354)
S8.5	A recording system for the amount of wastes generated/ recycled and disposal sites. The trip- ticket system will be included as one of the contractual requirements and implemented by the contractor(s).	Land site/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	Land site/ During construction/ During operation	Contractor(s)		✓		Implemented	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Encourage collection of aluminium cans and waste paper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce.	Land site/ During construction	Contractor(s)		✓		Implemented	ETWB TCW No. 33/2002, Management of Construction and Demolition Material Including Rock
S8.5	Any unused chemicals and those with remaining functional capacity will be recycled as far as possible.	Land site/ During construction	Contractor(s)		✓		N/A	-
S8.5	Use of reusable non-timber formwork to reduce the amount of C&D materials.	All areas/ During construction	Contractor(s)		✓		N/A	WBTC 32/92, The Use of Tropical Hard Wood on Construction Site
S8.5	Prior to disposal of construction waste, wood, steel and other metals will be separated to the extent practical, for re-use and/or recycling to reduce the quantity of waste to be disposed of to landfill.	All areas/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	Proper storage and site practices to reduce the potential for damage or contamination of construction materials.	All areas/ During construction	Contractor(s)		✓		Implemented, rectified after observation	-
S8.5	Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.	All areas/ During construction	Contractor(s)		✓		Implemented.	-

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S8.5	A Sediment Quality Report (SQR) for sampling and chemical testing of the sediment will be prepared and submitted to the EPD for approval. The approved detailed sampling and chemical testing will be carried out prior to the commencement of the dredging activities to confirm the sediment disposal method.	Marine works/ During construction	Contractor(s)		✓		N/A	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
S8.5	The management of dredged/ excavated sediment management requirement from <i>ETWB TC(W) No. 34/2002</i> will be incorporated in the Specification of the Contract Documents.	Marine works/ During construction	WSD/ Contractor(s)		✓		Implemented	ETWB TC(W) No. 34/2002 and Dumping at Sea Ordinance (DASO)
S8.5	The contractor will open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	Cap 354N Waste Disposal (Charges for Disposal of Construction Waste) Regulation
S8.5	A trip-ticket system will be established in accordance with DEVB TC(W) No. 6/2010 to monitor the reuse of surplus excavated materials off-site and disposal of construction waste and general refuse at transfer facilities/ landfills, and to control fly-tipping.	Contract mobilisation/ During construction	Contractor(s)		✓		Implemented	DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
S8.5	The project proponent will also conduct regular inspection of the waste management measures implemented on site as described in the Waste Management Plan.	All area/ During construction	Contractor(s)/ Environmental Team (ET) & Independent Environmental Checker (IEC)		✓		Implemented	ETWB TC(W) No. 19/2005, Environmental Management on Construction Sites
S8.5	A recording system (similar to summary table as shown in Annex 5 and Annex 6 of Appendix G of <i>ETWB TC(W) No. 19/2005</i> ) for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established during the construction phase.	All area/ During construction	Contractor(s)		✓		Implemented	Annex 5 and Annex 6 of Appendix G of <i>ETWB TC(W) No. 19/2005</i>
S8.5	Inert C&D materials (public fill) will be reused within the Project as far as practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-

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S8.5	Public fill and construction waste shall be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	To reduce the potential dust and water quality impacts of site formation works, C&D materials will be wetted as quickly as possible to the extent practice after filling.	All area/ During construction	Contractor(s)		✓		Implemented, reminder issued.	Air Pollution Control (Construction Dust) Regulation (Cap 311R); WPCO (Cap 358)
S8.5	Open stockpiles of excavated/ fill materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Land site/ During Construction, particularly dry season	Contractor(s)		✓		Implemented, rectified after observation	Air Pollution Control (Construction Dust) Regulation (Cap 311R)
S8.5	Chemical waste container shall be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Chemical waste container shall have a capacity of less than 450 L unless the specifications have been approved by the EPD.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	A label in English and Chinese shall be displayed on the chemical container in accordance with instructions prescribed in Schedule 2 of the Regulations.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General)



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								Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be enclosed on at least 3 sides.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall have adequate ventilation.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary).	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging,

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								Handling and Storage of Chemical Wastes
S8.5	Storage areas for chemical waste shall be arranged so that incompatible materials are appropriately separated.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	General refuse will be stored in enclosed bins or compaction units separately from construction and chemical wastes.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Handling and Storage of Chemical Wastes
S8.5	Adequate number of waste containers will be provided to avoid over-spillage of waste.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	DEVB TC(W) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness.
S8.5	A reputable waste collector will be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	-
S8.5	Recycling bins will be provided at strategic locations within the Site to facilitate recovery of recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles) from the Site. Materials recovered will be sold for recycling.	All area/ During construction/ During operation	Contractor(s)/ WSD		✓	✓	Implemented	-

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S8.5	To avoid any odour and litter impact, accurate number of portable toilets will be provided for workers on-site.	All area/ During construction	Contractor(s)		✓		Implemented	-
S8.5	The burning of refuse on construction sites is prohibited by law.	All area/ During construction	Contractor(s)		✓		Implemented	Air Pollution Control Ordinance (Cap 311)
S8.7	To facilitate monitoring and control over the contractors' performance on waste management, a waste inspection and audit programme will be implemented throughout the construction phase.	All facilities/ During construction	ET/ IEC		✓		Implemented	-

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<b>Ecology</b>								
S9.7	For slope mitigation works within the Clear Water Bay Country Park, to avoid tree felling and damages to trees, the exact locations of the flexible barrier foundation plates, soil nails and rock dowels can be adjusted during detailed design, and a setback distance from existing trees is recommended to be maintained as far as practical. A detailed specification describing the exact locations of the flexible barrier foundation plates, soil nails and rock dowels will be prepared to illustrate how the setback distance from existing trees would be implemented for tree avoidance.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		Implemented	-
S9.7	Pruning of tree canopies along the alignment of the flexible barriers shall be limited to a minimum.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	
S9.7	The alignment of flexible barriers shall be optimized to preserve all species of conservation interest and minimize the impact to the existing vegetation as far as practicable. All individuals of <i>Marsdenia lachnostoma</i> within the slope mitigation areas shall be retained <i>in-situ</i> , by positioning the alignment of flexible barrier at a minimum 1.5m in a radius away from these individuals.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		N/A	-
S9.7 and 9.10	At the detailed design stage prior to the commencement of the slope mitigation works, a vegetation survey shall be carried out at the slope mitigation areas within the Clear Water Bay Country Park to assess the condition and identify the location of each individual of <i>Marsdenia lachnostoma</i> and other flora species of conservation interest that may be directly affected by the construction works.	Slope mitigation works area/ During detailed design/ During construction	Contractor(s)	✓	✓		Implemented	-
S9.7	Temporary fencing will be installed to fence off the concerned species either in groups of individually within the works area and in the close proximity to prevent from being damaged and disturbed during construction. A sign identifying the site shall be attached to the fence and flagging tape shall be attached to the individuals to visualize their locations.	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-
S9.7 and S9.10	A specification for fencing and demarcating individuals of <i>Marsdenia lachnostoma</i> (or other flora species of	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-

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	conservation interest, if found) adjacent to the proposed alignment of the flexible barriers will be prepared to protect the species.							
S9.7	Induction training shall also be provided to all site personnel in order to brief them on this flora of conservation interest including the locations and their importance.	Slope mitigation works area/ During construction	Contractor(s)		✓		N/A	-
S9.7	The resident site supervisory staff will closely monitor the conditions of concerned individuals during construction of flexible barriers in the close proximity.	Slope mitigation works area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Erect fences along the boundary of the works area before the commencement of works to prevent vehicle movements and encroachment of personnel onto adjacent areas.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Regularly check the work site boundaries to ensure that they are not breached and that damage does not occur to surrounding areas.	All area/ During construction	Contractor(s)/ Environmental Team (ET)		✓		Implemented	-
S9.7	Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the surrounding habitats through proper management of waste disposal.	All area/ During construction	Contractor(s)		✓		Implemented	-
S9.7	Reinstate temporarily affected areas, particularly the habitats of plantation and shrubland-grassland immediately after completion of construction works, through on-site tree/shrub planting. The tree/shrub species will be chosen with reference to those in the surrounding area.	All area/ During construction	Contractor(s)		✓		N/A	-
S9.7	Affected habitats within the Clear Water Bay Country Bay shall be reinstated by hydro-seeding and planting of climbers and native shrub seedlings where practical upon completion of the slope mitigation works.	All area/ During construction	Contractor(s)		✓		N/A	-

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<b>Landscape &amp; Visual</b>								
S11.10 & 11.11	The construction area and area allowed for temporary structures, such as the contractor's office, will be minimized to a practical minimum. (MM1)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	At the detailed design stage, the design team will seek to minimize the landscape footprint of the Project and above ground facilities, while satisfying all other requirements. (MM2)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	Design principles will be adopted to take into account the surrounding area, particularly Clear Water Bay Country Park behind and the nearby waterfront, with due consideration given to: - green roofs where practical (ie without equipment on the roof); - roadside planting; - aesthetic treatment of all structures; - vertical greening; screen planting along application site; and - landscape enhancement with amenity planting where practical including planting along the edge (site boundary) fence with native shrubs where feasible, - to reduce their visual impact and blend them into the surrounding landscape. (MM3)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-
S11.10 & 11.11	All trees within the Project Site or the potential slope mitigation works area will be carefully protected during construction according to DEVB TCW No. 10/2013 – Tree Preservation (MM4)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented, rectified after observation.	ETWB TCW No. 3/2006 - Tree Preservation.
S11.10 & 11.11	No tree within the Country Park will be felled. Trees within the Site unavoidably affected by the works will be transplanted where necessary and practical. For trees that need to be felled, compensatory planting will be provided to the satisfaction of relevant Government departments. A compensatory tree planting proposal including locations of tree compensation will be submitted to seek relevant government department's approval, in accordance with DEVB TC(W) No. 10/2013. (MM5)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	DEVB TC(W) No. 10/2013

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S11.10 & 11.11	Any slope mitigation works necessary to address natural terrain hazards, will be minimized to minimize any potential environmental impact to the Country Park e.g. soil nailing and rock stabilization will aim to avoid existing trees e.g. should any restoration of vegetation be necessary, the best planting matrix with native species will be established, with the aim of resembling the existing vegetation. (MM6)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	N/A	
S11.10 & 11.11	Dredging works for the installation of intake structures and outfall diffusers should be minimized to avoid or reduce any potential environmental impacts to as low as reasonably practicable (ALARP). The intake and outfall structures (e.g. intake openings and diffuser heads) will be prefabricated and transferred to site for installation. (MM7)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	N/A	
S11.10 & 11.11	All night-time lighting will be reduced to a practical minimum both in terms of number of level and will be hooded and directional. (MM8)units and lux level and will be hooded and directional. (MM8)	All area/ Detailed design/ During construction/ During operation	WSD/ Contractor(s)	✓	✓	✓	Implemented	-

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<b>Landfill Gas Hazard</b>								
S12.7	During all works, safety procedures should be implemented to minimise the risks of fires and explosions, asphyxiation of workers and toxicity effects resulting from contact with contaminated soil and groundwater.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	-
S12.7	During trenching and excavation as well as creation of confined spaces at near to or below ground level, precautions should be clearly laid down and rigidly Gas detection equipment and appropriate breathing apparatus should be available and used when entering confined spaces or trenches deeper than 1 metre.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	The Contractor should make the workers are aware of potential hazards of working in confined spaces (any chamber, manhole or culvert which is large enough to permit access to personnel). Such work in confined spaces is controlled by the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance. Following the Safety Guide to Working in Confined Spaces ensures compliance with the above regulations.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Safety officers, specifically trained with regard to landfill gas and leachate related hazards and the appropriate actions to take in adverse circumstances, should be present on the site throughout the works, in particular, when works are undertaken below grade.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Monitoring for landfill gas should be undertaken in all excavations, manholes, chambers (particularly during pipe jacking) and any confined spaces through the use of an intrinsically safe portable instrument, appropriately calibrated and capable of measuring the concentrations of methane, carbon dioxide and oxygen.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	



**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
S12.7	Monitoring frequency and areas to be monitored should be specified prior to commencement of groundwork, either by the Safety Officer, or by an appropriately qualified person. All measurements should be recorded and documented.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Proceed drilling with adequate care and precautions against the potential hazards which may be encountered.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Prior to the commencement of the site works, the drilling contractor should devise a 'method-of- working' statement covering all normal and emergency procedures (including but not limited to number of operatives, experience and special skills of operatives, normal method of operations, emergency procedures, supervisors responsibilities, storage and use of safety equipment, safety procedures and signs, barriers and guarding). The site supervisor and all operatives must be familiar with this statement.	All area/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	
S12.7	Where below ground service entries are necessary to the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II), the entry point should be sealed to prevent gas entry. In addition, any below grade cable trenches entering the Incoming Switchgear Room and 132 kV Substation can become the pathway for landfill gas and hence grilled metal covers should be used.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	N/A	
S12.7	It is recommended regular landfill gas monitoring should be carried out at the Incoming Switchgear Room, 132 kV Substation and Chlorine Store (I) and (II). The monitoring frequency will be monthly for the first year of operation. If the monitoring results show no sign of landfill gas migration, reduce the monitoring frequency to once every six months.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	N/A	
S12.7	The manholes and utility pits within the Project Site and along the fresh water mains. Each manhole/ utility pit should be monitored with two measurements (at mid depth and base). Each measurement should be monitored for a minimum of 10 minutes. A steady reading and peak reading should be recorded at each	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**



EIA Reference	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Implementation Agent	Implementation Stage			Implementation Status	Relevant Legislation & Guidelines
				D	C	O		
	manhole/ utility pit and for each measurement. The need for venting the manhole/ utility pit and further monitoring will be reviewed after the initial monitoring.							
S12.7	All construction, operation and maintenance personnel working on-site as well as visitors should be made aware of the hazards of landfill gas and its possible presence on-site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on landfill gas hazards and the designs and procedural means by which these hazards are being minimised on-site.	All area/ Detailed design/ During construction/ During operation	Contractor(s)	✓	✓	✓	Implemented	

Note: D – Design stage C – Construction O – Operation

## Appendix F

# Action and Limit Level for Noise and Landfill Gas

**Action/ Limit Level for Noise Monitoring**

<b>Time Period</b>	<b>Action</b>	<b>Limit (dB(A))</b>
0700-1900 on normal weekdays	When one documented complaint is received from any one of the noise sensitive receivers	<ul style="list-style-type: none"><li>• 70 dB(A) for school and</li><li>• 65 dB(A) during examination period</li></ul>
Notes: (b) Limits specified in the GW-TM and IND-TM for construction and operation noise, respectively.		

### Action Level for Landfill Gas Monitoring

Parameters	Level
Oxygen (O <sub>2</sub> )	Action Level < 19% O <sub>2</sub>  Limit Level < 19% O <sub>2</sub>
Methane (CH <sub>4</sub> )	Action Level >10% LEL  Limit Level >20% LEL
Carbon Dioxide (CO <sub>2</sub> )	Action Level >0.5% CO <sub>2</sub> Limit Level >1.5% CO <sub>2</sub>

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## Appendix G

# Complaint Log and Regulatory Compliance Proforma

**Statistical Summary of Environmental Complaints**

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Sep 2020-31 Aug 2021	0	3	Please refer to Complaint Log below

**Statistical Summary of Environmental Summons**

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Sep 2020-31 Aug 2021	0	0	N/A

**Statistical Summary of Environmental Prosecution**

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Sep 2020-31 Aug 2021	0	0	N/A

**Contract No. 13/WSD/16**  
**Mainlaying in Tseung Kwan O**  
**3<sup>rd</sup> Annual EM&A Review Report for September 2020 to August 2021**

Log ref.	Date	Location	Complaint/ Date of Contract	Details of Complaint	Investigation/ Mitigation Action	File Closed
13/WSD/16_C001	15/11/2020	TKO stage 1 near Jockey club HKFA football training center	Public	EPD received a complaint from a member of the public with concern on construction noise associated with the captioned construction site. It was suspected that powered mechanical equipment such as roller and dump truck was used for the purpose of carrying out construction works on 15 November 2020 (Sunday).	As confirmed by WSD, the works carried out on 15 November 2020 was an additional work under the same Work Contract 13/WSD/16 and the concerned work was not related to “a dedicated trunk feed system water minas for the transfer of fresh water output from the desalination plant to the existing Tsuen Kwan O Fresh Water Primary Service Reservoir in Po Lam”. So far, we concluded the responsible Contractor applied the CNP to carry out the construction work within restricted hours but there should be more evidence to be provided by the Contractor to demonstrate their compliance with the CNP.	Y
13/WSD/16_C002	11/12/2020	Hong Kong Velodrome Park at Tseung Kwan O	Public	EPD received a complaint of suspected construction noise from the construction site near Hong Kong Velodrome Park at Tseung Kwan O. The complainant made the complaint on 11 December 2020 and wrote “WSD has been conducting works at the footpath/cycling track near Tseung Kwan O Velodrome & Sports Ground. And the works started at around 7:15 am on weekdays and works are also	The site dairy and site photos shown that pipe jacking works are carried out at the concerned area from 1 to 11 December 2020. The site photos shown that only pipe jacking works were carried out after 8am. As confirmed with Contractor, the site works was only carried out from 8am to 6pm from Monday to Saturday and no preparation works and site activities was carried out on site between 7am to 8am during weekdays and Sunday.  As no construction works during the daytime (7am -8am) of weekdays and weekends, the	



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				being carried out during weekends.”	complaint would not be related to the Project.	
13/WSD/16_C003	9/7/2021	Construction Site near to Mau Wu Tsai of Po Lam Road South at Tseung Kwan O	Public	EPD has received a complaint from a member of the public regarding the discharge of stormwater with suspended particles, or in general muddy water from the construction site near to Mau Wu Tsai of Po Lam Road South at Tseung Kwan O on 09 July 2021.	<p>The site diary showed that shoring plate cutting works for hand shield tunneling were carried out at the concerned area on 09 July 2021, which has no use of water and disturbance to ground surface. It has no record of leakage of muddy water as reported by the Contractor.</p> <p>The site condition of the concerned area was reviewed. We noted that although there was no excavation works on-going or scheduled recently, clearance works and works that create disturbance to ground surface were previously conducted. To prevent the muddy water discharge from the construction site, the contractor has implemented and enhanced the mitigation measures to cater for any upcoming rainstorms or heavy precipitation from the site. Sandbags are placed along the site boundary and submersible pump is provided to direct the runoff to the wastewater treatment tank before reusing or discharging into the designated discharge point. Cement application to exposed earth within the site was also implemented, to prevent erosion caused by the precipitation. The temporarily exposed slope and areas were covered by tarpaulin.</p>	

**Contract No. 13/WSD/16**  
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					The Contractor has been reminded to inspect regularly and maintain the above water pollution mitigation measures, especially during or after rainstorms	
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# Appendix H

## Noise Impact Monitoring Result

Monitoring Location : NSR4 – Creative Secondary School  
 Monitoring Period : September 2020 – August 2021  
 Parameter :  $L_{eq-30min}$ ,  $L_{10-30min}$ ,  $L_{90-30min}$   
 Major Site Activities : Trial Pit for underground utilities detection  
 Pipe Jacking and mainlaying works  
 Major Noise Source : Nearby traffic and school activities  
 Other Factors : NA

Noise Monitoring Data

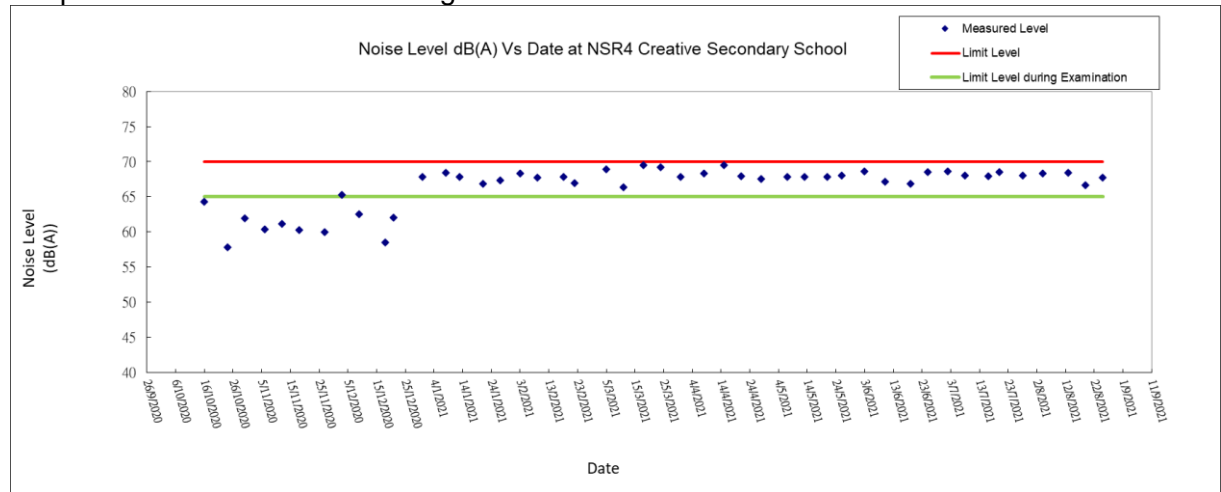
Date	Time	Weather	$L_{eq-5min}$ , dB(A)						$L_{eq-30min}$ , dB(A)	Leq30 (min) $L_{10}$ dB(A)	Leq30 (min) $L_{90}$ dB(A)	Limit Level, dB(A)	Adjusted Measured Level dB(A)**
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)					
16/10/2020	14:10 - 14:40	Sunny	63.9	65.0	63.8	64.1	64.1	64.9	64.3	66.1	60.2	70.0	--
24/10/2020	11:15 - 11:45	Sunny	57.6	57.6	57.7	58.4	58.1	57.0	57.8	58.4	57.1	70.0	--
30/10/2020	11:05 - 11:35	Sunny	63.2	60.4	61.5	62.7	61.8	61.1	61.9	64.0	59.9	70.0	--
06/11/2020	11:20 - 11:50	Sunny	59.2	60.8	61.5	61.1	59.6	59.9	60.4	62.3	58.4	70.0	--
12/11/2020	10:38 - 11:08	Sunny	61.1	60.2	60.8	61.6	61.3	61.4	61.1	62.8	57.5	70.0	--
18/11/2020	10:35 - 11:05	Sunny	58.4	60.5	60.9	59.4	59.7	61.9	60.3	62.1	57.1	70.0	--
27/11/2020	15:10 - 15:40	Sunny	59.7	60.4	60.5	58.8	59.4	60.9	60.0	62.5	55.8	70.0	--
03/12/2020	11:58 - 12:28	Sunny	65.4	67.5	66.3	62.0	64.5	63.8	65.3	68.1	55.7	70.0	--
09/12/2020	13:33 - 14:03	cloudy	68.0	63.2	57.8	57.3	57.4	57.3	62.5	63.2	56.9	70.0	--
18/12/2020	16:01 - 16:31	cloudy	57.8	58.6	58.6	58.6	58.7	58.7	58.5	58.6	57.6	70.0	--
21/12/2020	10:37 - 11:07	Sunny	63.1	62.4	62.5	60.4	61.3	61.8	62.0	66.8	55.9	70.0	--
31/12/2020	13:26 - 13:56	Sunny	66.8	68.6	67.6	68.5	68.0	66.8	67.8	71.3	58.1	70.0	--
08/01/2021	16:05 - 16:35	cloudy	67.3	68.8	69.0	68.8	68.8	67.2	68.4	71.8	60.2	70.0	--
13/01/2021	13:10 - 13:40	sunny	67.4	67.5	69.5	67.6	67.3	67.3	67.8	71.4	57.8	70.0	--
21/01/2021	11:37 - 12:07	sunny	65.4	67.3	66.9	67.9	65.8	66.8	66.8	70.1	57.6	70.0	--
27/01/2021	12:40 - 13:10	sunny	61.6	69.5	65.6	64.1	68.1	69.7	67.3	70.0	59.9	70.0	--
03/02/2021	11:30 - 12:00	cloudy	68.8	68.5	67.8	68.3	68.4	68.0	68.3	72.0	58.7	70.0	--
09/02/2021	11:31 - 12:01	sunny	67.6	68.3	67.3	67.4	68.0	67.2	67.7	71.3	58.1	70.0	--
18/02/2021	11:30 - 12:00	sunny	67.7	68.1	67.8	67.1	68.3	67.9	67.8	69.7	65.9	70.0	--
22/02/2021	11:24 - 11:54	sunny	68.5	61.4	67.2	67.1	66.3	68.2	66.9	72.5	63.7	70.0	--
05/03/2021	12:05 - 12:35	cloudy	67.8	67.9	70.8	68.0	68.8	69.4	68.9	72.1	57.1	70.0	--
11/03/2021	12:14 - 12:44	sunny	67.8	68.1	65.7	65.2	66.3	64.0	66.4	69.8	56.7	70.0	--
18/03/2021	15:16 - 15:46	Fine	68.7	68.1	69.1	69.1	70.6	70.6	69.5	72.9	61.3	70.0	--
24/03/2021	15:20 - 15:50	cloudy	70.5	70.1	68.2	70.5	66.6	67.8	69.2	72.6	62.4	70.0	--
31/03/2021	11:50 - 12:20	sunny	68.3	68.3	68.0	65.6	68.8	66.9	67.8	70.8	60.7	70.0	--
08/04/2021	13:25 - 13:55	Sunny	69.3	68.9	67.6	66.8	69.8	66.1	68.3	71.6	60.8	70.0	--
15/04/2021	13:31 - 14:01	cloudy	67.8	68.3	69.8	67.7	71.8	69.8	69.5	72.2	62.1	70.0	--
21/04/2021	15:50 - 16:20	Sunny	66.9	68.6	69.0	69.2	67.1	64.9	67.9	71.6	57.5	70.0	--
28/04/2021*	12:07 - 12:37	Sunny	67.4	67.5	66.5	67.5	66.8	68.8	67.5	70.3	61.4	65.0	63.9
07/05/2021*	11:45 - 12:15	Sunny	68.7	68.1	69.2	65.4	66.8	67.7	67.8	71.4	58.6	65.0	64.6
13/05/2021	14:07 - 14:37	Sunny	65.6	67.9	67.3	68.4	67.9	69.1	67.8	71.4	58.2	70.0	--
21/05/2021*	11:15 - 11:45	Sunny	67.1	68.7	67.8	66.0	68.7	68.2	67.8	71.5	59.9	65.0	64.7
26/05/2021*	11:58 - 12:28	Sunny	67.8	66.3	69.3	68.3	68.3	67.3	68.0	72.5	61.1	65.0	64.9
03/06/2021	11:35 - 12:05	Sunny	67.5	70.4	70.2	69.7	65.8	64.8	68.6	71.8	61.2	70.0	--
10/06/2021	11:22 - 11:52	cloudy	66.7	66.3	68.3	67.5	67.1	66.6	67.1	70.5	59.8	70.0	--
19/06/2021	11:48 - 12:18	Sunny	65.4	67.3	66.9	67.9	65.8	66.8	66.8	70.1	57.6	70.0	--
25/06/2021	14:02 - 14:32	cloudy	68.5	69.1	68.7	69.4	67.6	67.1	68.5	71.9	61.1	70.0	--
02/07/2021	09:20 - 09:50	cloudy	68.3	68.7	69.2	68.6	68.9	67.4	68.6	71.9	60.8	70.0	--
08/07/2021	11:18 - 11:48	Sunny	67.4	69.6	65.5	67.9	68.6	68.0	68.0	71.5	58.7	70.0	--
16/07/2021	11:03 - 11:33	Sunny	67.6	68.6	67.4	69.0	66.6	67.9	67.9	71.1	60.7	70.0	--
20/07/2021	11:10 - 11:40	cloudy	66.7	68.3	69.7	69.0	68.0	68.9	68.5	71.2	63.5	70.0	--
28/07/2021	11:16 - 11:46	Sunny	66.0	69.1	65.5	69.4	68.7	68.1	68.0	71.4	60.2	70.0	--
04/08/2021	11:15 - 11:45	cloudy	67.8	67.1	68.2	69.9	67.2	69.1	68.3	71.3	59.7	70.0	--
13/08/2021	11:01 - 11:31	sunny	68.6	69.6	68.7	68.3	69.0	65.2	68.4	71.8	59.4	70.0	--
19/08/2021	11:30 - 12:00	sunny	68.6	67.7	65.5	67.6	65.1	62.7	66.6	69.7	60.8	70.0	--
25/08/2021	11:10 - 11:40	cloudy	66.9	68.2	68.3	68.8	67.0	66.7	67.7	70.7	59.6	70.0	--

Remarks:

\* NSR4 was appointed as a Hong Kong Diploma of Secondary Education Examination (HKDSE) examination centre from 23rd to 30th April, 2021 and 03rd to 15th May, 2021 in the reporting period. Hence the noise limit level was 65.0 dB(A) on 28th April, 2021; 07th, 21st and 26th May, 2021 and 70 dB(A) for other impact monitoring dates

\*\* Adjusted Measured Level =  $10 \cdot \log(10^{0.1 \cdot \text{measured level}} - 10^{0.1 \cdot \text{baseline level during examination}})$

Graphical Plot of Noise Monitoring Results



# Appendix I

## Interim Reports on Environmental Complaints

### **Interim Report on Environmental Complaint**

Project Title	Proposed Desalination Plant in TKO Area 137 for Contract 13/WSD/16 Mainlaying in Tseung Kwan O
Source of Complaint	Letter from EPD (Ref. No. N08/RE/00026710-20) dated 23 Nov 2020.
Location of Incident	Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T.
Complaint Code	13/WSD/16_C001
Complaint description	<p>EPD has received the complaint of suspected construction noise from the construction site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T.</p> <p>It was also suspected that powered mechanical equipment such as roller and dump truck was used at the site for the purpose of carrying out construction works on 15 November 2020 (Sunday).</p>
Investigation finding	<p>Our Environmental Team under WSD Contract No. 13/WSD/16 carried out the complaint investigation from 23 November 2020. The contractor has been requested to provide us with the relevant site inspection records/dairy, site photos, valid Construction Noise Permit (CNP) and PME details for complaint investigation from 23 Nov. 2020, apart from the CNP ( see the valid CNP in Appendix B), we have not received the site inspection records/diary and site photos up to the date of joint meeting which has invited Independent Environmental Checker, WSD and the Contractors (see the attached email records).</p> <p>On 2 December 2020, we held the joint site audit and meeting with WSD representatives and the Environmental Officer, Mr. Calvin Chik of Penta Ocean (hereafter referred to the Contractor) for following up the complaint investigation, the Contractor has admitted that the suspected construction works were being carried out from 9am to 2pm on 15 November 2020 and confirmed that no method statement was submitted to WSD for the woks carried out on 15 November 2020.</p> <p>The contractor informed that the concerned construction work was only remedial works for deteriorated grasscrete road inside the TKO Landfill Stage 1 near TKO South Waterfront Promenade on the day of complaint arising but the works were undertaken in accordance with the approved time allowed for work during restricted hours as specified in the CNP. The Contractor claimed that no information including site photos and PME details could be provided to us, ET requested they should give the relevant information for our investigation.</p> <p>As confirmed by WSD, the works carried out on 15 November 2020 was an additional work under the same Work Contract 13/WSD/16 and the concerned work was not related to “a dedicated trunk feed system water minas for the transfer of fresh water output from the desalination plant to the existing Tsuen Kwan O Fresh Water Primary Service Reservoir in Po Lam”. (see the attached email records in Appendix A).</p> <p>So far, we concluded the responsible Contractor applied the CNP to</p>

	carry out the construction work within restricted hours but there should be more evidence to be provided by the Contractor to demonstrate their compliance with the CNP.
Actions taken / to be taken	The responsible contractor has been recommended, if any additional works to be carried in the future, should notify ET, Engineering Representative (i.e. WSD) and IEC of relevant method statements prior to commencement of the additional works for evaluation of sufficient and effective environmental mitigation measures and pollution controls to be taken for the additional works. ET will perform site audits for any additional works if considered necessary.
Prepared by	Karen Cheung
Certified by	Jacky Leung
Date	2 December 2020



## Appendix A: Supporting email records

### Karen Cheung

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**From:** Karen Cheung <kcheung@acuityhk.com>  
**Sent:** Wednesday, 2 December 2020 7:14 pm  
**To:** 'yui\_him\_wong@wsd.gov.hk'  
**Cc:** 'Adi LEE | ANewR'; 'ASCL Charlene Lai'; 'Gideon Cheng'; 'James Chim'; 'Jacky C H Leung'; 'James Choi'; 'Jacky CHOW'; 'Calvin Chik'; 'Melvin Tsang'; 'kli@acuityhk.com'; 'Kwok Kee Yuen'; 'ntsui@acuityhk.com'; 'Project ASCL'; 'Rex Man'; 'Reasonlie CHEUNG | ANewR'; 'Sam Ng'; 'Thomas Tiu'; 'Vega Wong'; 'kf\_cheng@wsd.gov.hk'; 'paul\_cy\_lee@wsd.gov.hk'; 'janice\_wai\_yan\_lai@wsd.gov.hk'; 'issac\_ho\_wai\_hui@wsd.gov.hk'  
**Subject:** RE: Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD Contract No. 13/WSD/16)///

Dear Tim ,

Thank you for your email,

Referring to your email as below and the meeting this morning, the concerned work is an additional work under the same Work Contract 13/WSD/16.

Please be reminded that the responsible contractor(s) or subcontractor(s) of any additional works under the same contract ( CN 13/WSD/16) should submit, before work commencement, the relevant method statement including environmental mitigation measures to ET for review and certification and then IEC for verification so as to comply with the statutory requirements of the EP, the EIA report and the EM&A Manual. It is friendly reminded to comply with the CNP requirements strictly when carrying out any reported works during restricted hours.

According to the requirement of the EM&A Manual, the responsible contractor i.e. Penta Ocean has been reminded to provide us the relevant site inspection records and site photos for complaint investigation from 23 Nov. 2020 but we have not received the information up to now. Gratefully please help us to seek the relevant site records from Penta Ocean before COB tomorrow i.e. 3 December 2020.

Should you have any question, please feel free to contact me through 2698-9097.

Best regards,

*Karen Cheung*

Acuity Sustainability Consulting Limited  
Unit C, 11/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,  
Cheung Sha Wan, Kowloon, H.K.  
Website: [www.acuityhk.com](http://www.acuityhk.com)  
O: 2698-9097 | F: 2333-1316

*\*Please consider the Environment before printing this Email\**

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**From:** yui\_him\_wong@wsd.gov.hk <yui\_him\_wong@wsd.gov.hk>  
**Sent:** Wednesday, 2 December 2020 2:06 pm  
**To:** Karen Cheung <kcheung@acuityhk.com>  
**Cc:** 'Adi LEE | ANewR' <aymlee@anewr.com>; 'ASCL Charlene Lai' <clai@acuityhk.com>; 'Gideon Cheng' <gideon.cheng@mail.penta-ocean.co.jp>; 'James Chim' <jameschim@ccl-concentric.com>; 'Jacky C H Leung'

<jleung@acuityhk.com>; 'James Choi' <jpschoi@anewr.com>; 'Jacky CHOW' <jtkchow@anewr.com>; 'Calvin Chik' <kacheong.chik@mail.penta-ocean.co.jp>; 'Melvin Tsang' <kin\_fai\_tsang@wsd.gov.hk>; kli@acuityhk.com; 'Kwok Kee Yuen' <kwokkee.yuen@mail.penta-ocean.co.jp>; ntsui@acuityhk.com; 'Project ASCL' <project@acuityhk.com>; 'Rex Man' <rex.man@mail.penta-ocean.co.jp>; 'Reasonlie CHEUNG | ANewR' <ryycheung@anewr.com>; 'Sam Ng' <sam.ng@mail.penta-ocean.co.jp>; 'Thomas Tiu' <thomas.tiu@mail.penta-ocean.co.jp>; 'Vega Wong' <vwong@acuityhk.com>; yui\_him\_wong@wsd.gov.hk; kf\_cheng@wsd.gov.hk; paul\_cy\_lee@wsd.gov.hk; janice\_wai\_yan\_lai@wsd.gov.hk; issac\_ho\_wai\_hui@wsd.gov.hk  
**Subject:** RE: Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD Contract No. 13/WSD/16)///

Dear Karen,

Further to our meeting in this morning, please be confirmed that the concerned works carried on 15 Nov 2020 was not related to "a dedicated trunk feed system including about 9km long water mains for the transfer of fresh water output from the desalination plant to the existing Tseung Kwan O Fresh Water Primary Service Reservoir in Po Lam" under CN13/WSD/16.

Best Regards

WONG Yui-him, Tim  
E/C(5)  
Construction Division  
Water Supplies Department

Tel: 2152 5742(Office), 3650 3418(Site), 5122 8825(Mobile)

---

From: "Karen Cheung" <kcheung@acuityhk.com>  
To: "'Calvin Chik'" <kacheong.chik@mail.penta-ocean.co.jp>, "'Tim Wong'" <yui\_him\_wong@wsd.gov.hk>, "'Reasonlie CHEUNG | ANewR'" <ryycheung@anewr.com>  
Cc: "'Hivan Cheng'" <kf\_cheng@wsd.gov.hk>, "'Melvin Tsang'" <kin\_fai\_tsang@wsd.gov.hk>, "'Vega Wong'" <vwong@acuityhk.com>, "'Project ASCL'" <project@acuityhk.com>, "'Sam Ng'" <sam.ng@mail.penta-ocean.co.jp>, "'Rex Man'" <rex.man@mail.penta-ocean.co.jp>, "'Jacky C H Leung'" <jleung@acuityhk.com>, "'ASCL Charlene Lai'" <clai@acuityhk.com>, <kli@acuityhk.com>, <ntsui@acuityhk.com>, "'Thomas Tiu'" <thomas.tiu@mail.penta-ocean.co.jp>, "'Kwok Kee Yuen'" <kwokkee.yuen@mail.penta-ocean.co.jp>, "'Tim Wong'" <yui\_him\_wong@wsd.gov.hk>, "'Gideon Cheng'" <gideon.cheng@mail.penta-ocean.co.jp>, "'James Chim'" <jameschim@ccl-concentric.com>, "'Reasonlie CHEUNG | ANewR'" <ryycheung@anewr.com>, "'Jacky CHOW'" <jtkchow@anewr.com>, "'Adi LEE | ANewR'" <aymlee@anewr.com>, "'James Choi'" <jpschoi@anewr.com>  
Date: 01/12/2020 19:04  
Subject: RE: Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD Contract No. 13/WSD/16)///

---

Dear All,

In reference to the information provided by the Contractor on 1 December 2020, the construction works carried out on 15 November 2020 was "requested by WSD to carry out remedial works for the deteriorated grasscrete road inside the TKO Landfill Stage 1 near TKO South Waterfront Promenade. The work locations for the remedial works are within the area under maintenance by EPD and it is not the construction site for the works under 13/WSD/16." Could WSD confirm whether the works carried out on 15 November 2020 are

related to 13/WSD/16 -“a dedicated trunk feed system including about 9km long water mains for the transfer of fresh water output from the desalination plant to the existing Tseung Kwan O Fresh Water Primary Service Reservoir in Po Lam.”? In addition, Contractor please provide a site plan with highlighting the works area carried out on 15 November 2020 to confirm the location of the site works.

In order to facilitate the investigation progress, a joint site walk and a meeting are proposed among IEC, WSD, ET and Contractor. The site walk will be meet up in the site office at 9am, and the meeting will be held in the site office after the site walk, around 10:30am, please IEC, WSD and contractor confirm your availability through this email. Can Contractor (Calvin) please arrange the walk including the work area that carried out on 15 November 2020 for our investigation? Thank You.

Please be reminded according to the EM&A Manual Section 13.3 “During the complaint investigation work, the Contractor and ER shall cooperate with the ET Leader in providing all necessary information and assistance for completion of the investigation. If mitigation measures are identified in the investigation, the Contractor should promptly carry out the mitigation measures. EPD will approve the proposed mitigation measures and the ET Leader and IEC should check that the measures have been carried out by the Contractor.”

Should you have any question, please feel free to contact me through 2698-9097.

Best regards,

*Karen Cheung*

Acuity Sustainability Consulting Limited  
Unit C, 11/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,  
Cheung Sha Wan, Kowloon, H.K.  
Website: [www.acuityhk.com](http://www.acuityhk.com)  
O: 2698-9097 | F: 2333-1316

*\*Please consider the Environment before printing this Email\**

**From:** Calvin Chik <[kacheong.chik@mail.penta-ocean.co.jp](mailto:kacheong.chik@mail.penta-ocean.co.jp)>  
**Sent:** Tuesday, 1 December 2020 6:00 pm  
**To:** Karen Cheung <[kcheung@acuityhk.com](mailto:kcheung@acuityhk.com)>  
**Cc:** Hivan Cheng <[kf\\_cheng@wsd.gov.hk](mailto:kf_cheng@wsd.gov.hk)>; Melvin Tsang <[kin\\_fai\\_tsang@wsd.gov.hk](mailto:kin_fai_tsang@wsd.gov.hk)>; Vega Wong <[vwong@acuityhk.com](mailto:vwong@acuityhk.com)>; Project ASCL <[project@acuityhk.com](mailto:project@acuityhk.com)>; Sam Ng <[sam.ng@mail.penta-ocean.co.jp](mailto:sam.ng@mail.penta-ocean.co.jp)>; Rex Man <[rex.man@mail.penta-ocean.co.jp](mailto:rex.man@mail.penta-ocean.co.jp)>; Jacky C H Leung <[jleung@acuityhk.com](mailto:jleung@acuityhk.com)>; ASCL Charlene Lai <[clai@acuityhk.com](mailto:clai@acuityhk.com)>; [kli@acuityhk.com](mailto:kli@acuityhk.com); [ntsui@acuityhk.com](mailto:ntsui@acuityhk.com); Thomas Tiu <[thomas.tiu@mail.penta-ocean.co.jp](mailto:thomas.tiu@mail.penta-ocean.co.jp)>; Kwok Kee Yuen <[kwokkee.yuen@mail.penta-ocean.co.jp](mailto:kwokkee.yuen@mail.penta-ocean.co.jp)>; Tim Wong <[yui\\_him\\_wong@wsd.gov.hk](mailto:yui_him_wong@wsd.gov.hk)>; Gideon Cheng <[gideon.cheng@mail.penta-ocean.co.jp](mailto:gideon.cheng@mail.penta-ocean.co.jp)>; James Chim <[jameschim@ccl-concentric.com](mailto:jameschim@ccl-concentric.com)>; Reasonlie CHEUNG | ANewR <[ryycheung@anewr.com](mailto:ryycheung@anewr.com)>; Jacky CHOW <[jtkchow@anewr.com](mailto:jtkchow@anewr.com)>; Adi LEE | ANewR <[aymlee@anewr.com](mailto:aymlee@anewr.com)>; James Choi <[jpschoi@anewr.com](mailto:jpschoi@anewr.com)>  
**Subject:** Re: Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD Contract No. 13/WSD/16)///

Dear Karen,

Below some information regarding the captioned complaint case for your reference.

We were instructed by WSD under letter reference dated 31 Aug 2020 (refer to attached letter with location layout) to carry out remedial works for the deteriorated grasscrete road inside the TKO Landfill Stage 1 near TKO South Waterfront Promenade. The locations for the remedial works are within the area under maintenance by EPD and it is not the construction site for the works under 13/WSD/16.

The nature of the remedial work is to cover up the deteriorated road surface by cold asphalt on top and to be compacted further. Since it is not possible to maintain the traffic of the road during the remedial works, temporary road blockage is required, as such we are only allowed to carry out the works by either Sunday or public holidays due to the traffic issue. We applied CNP for the works and the conditions stated in the CNP were already conveyed to the subcontractor to strictly follow including the allowable working period and the usage of designated plants/machines.

Unfortunately, a complaint from the public was received as the public may not be aware that we have already applied a valid CNP to conduct the works.

Regards,  
Calvin Chik  
Penta-Ocean - Concentric Joint Venture  
Contract No: 13/WSD/16  
Mobile: 9863 5630

**Karen Cheung**

---

**From:** Calvin Chik <kacheong.chik@mail.penta-ocean.co.jp>  
**Sent:** Monday, 30 November 2020 12:08 pm  
**To:** Karen Cheung  
**Cc:** Hivan Cheng; Melvin Tsang; Vega Wong; Project ASCL; Sam Ng; Rex Man; Jacky C H Leung; ASCL  
Charlene Lai; kli@acuityhk.com; ntsui@acuityhk.com; Thomas Tiu; Kwok Kee Yuen; Tim Wong;  
Gideon Cheng; James Chim  
**Subject:** Re: Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung  
Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD  
Contract No. 13/WSD/16)///  
**Attachments:** I-1249 EPD.pdf; photo.jpeg

Dear Karen,

Please find the attached CNP for the works.

Further to the complaint case, we have implemented noise enclosure as mitigation measures to reduce nuisance to the public at the concerned locations as shown in the attached record photo for your reference.

Since we are now being invited by EPD to attend the interview for explanation/clarification regarding the complaint, we are sorry to inform you that we cannot provide you any further information at this moment as this case may enter legal procedure.

Regards,

Calvin Chik

Penta-Ocean - Concentric Joint Venture

Contract No: 13/WSD/16

Mobile: 9863 5630

Karen Cheung <kcheung@acuityhk.com> 於 2020 年 11 月 27 日 週五 下午 6:24 寫道 :

Dear Calvin,

As per our conversation this afternoon, please provide the supporting documents to avoid any delay for response to EPD, thank you.

Should you have any question, please feel free to contact me through 2698-9097.

Best regards,

*Karen Cheung*

Acuity Sustainability Consulting Limited

Unit C, 11/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,

Cheung Sha Wan, Kowloon, H.K.

Website: [www.acuityhk.com](http://www.acuityhk.com)

O: 2698-9097 | F: 2333-1316

*\*Please consider the Environment before printing this Email\**

---

**From:** Karen Cheung <[kcheung@acuityhk.com](mailto:kcheung@acuityhk.com)>

**Sent:** Monday, 23 November 2020 4:47 pm

**To:** '[kf\\_cheng@wsd.gov.hk](mailto:kf_cheng@wsd.gov.hk)' <[kf\\_cheng@wsd.gov.hk](mailto:kf_cheng@wsd.gov.hk)>; 'Calvin Chik' <[kacheong.chik@mail.penta-ocean.co.jp](mailto:kacheong.chik@mail.penta-ocean.co.jp)>; 'Adi Lee' <[aymlee@anewr.com](mailto:aymlee@anewr.com)>

**Cc:** '[kin\\_fai\\_tsang@wsd.gov.hk](mailto:kin_fai_tsang@wsd.gov.hk)' <[kin\\_fai\\_tsang@wsd.gov.hk](mailto:kin_fai_tsang@wsd.gov.hk)>; 'Vega Wong' <[vwong@acuityhk.com](mailto:vwong@acuityhk.com)>; 'Project ASCL' <[project@acuityhk.com](mailto:project@acuityhk.com)>; 'James Choi' <[jpschoi@anewr.com](mailto:jpschoi@anewr.com)>; '[sam.ng@mail.penta-ocean.co.jp](mailto:sam.ng@mail.penta-ocean.co.jp)' <[sam.ng@mail.penta-ocean.co.jp](mailto:sam.ng@mail.penta-ocean.co.jp)>; '[yanting.chong@mail.penta-ocean.co.jp](mailto:yantin.chong@mail.penta-ocean.co.jp)' <[yanting.chong@mail.penta-ocean.co.jp](mailto:yantin.chong@mail.penta-ocean.co.jp)>; '[rex.man@mail.penta-ocean.co.jp](mailto:rex.man@mail.penta-ocean.co.jp)' <[rex.man@mail.penta-ocean.co.jp](mailto:rex.man@mail.penta-ocean.co.jp)>; '[kenng@ccl-concentric.com](mailto:kenng@ccl-concentric.com)' <[kenng@ccl-concentric.com](mailto:kenng@ccl-concentric.com)>; 'Jacky C H Leung' <[jleung@acuityhk.com](mailto:jleung@acuityhk.com)>; 'Nelson Tsui' <[ntsui@acumen-env.com](mailto:ntsui@acumen-env.com)>; 'ASCL Charlene Lai' <[clai@acuityhk.com](mailto:clai@acuityhk.com)>

**Subject:** FW: Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD Contract No. 13/WSD/16)

Dear Calvin,

A compliant has been received by EPD and concerning with the noise emission on 15 November at the TKO stage 1 near Jockey club HKFA football training center. Referring to the email from EPD on 23 November, please provide the below information for our investigation by tomorrow, thank you:

1. CNP

2. site diary on 15 November 2020

4. photos during construction works on 15 November 2020

Should you have any question, please feel free to contact me through 2698-9097.

Best regards,

*Karen Cheung*

Acuity Sustainability Consulting Limited

Unit C, 11/F, Ford Glory Plaza, No. 37-39 Wing Hong Street,

Cheung Sha Wan, Kowloon, H.K.

Website: [www.acuityhk.com](http://www.acuityhk.com)

O: 2698-9097 | F: 2333-1316

*\*Please consider the Environment before printing this Email\**

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**From:** [kiuchungtse@epd.gov.hk](mailto:kiuchungtse@epd.gov.hk) <[kiuchungtse@epd.gov.hk](mailto:kiuchungtse@epd.gov.hk)>

**Sent:** Monday, 23 November 2020 1:44 pm

**To:** [kf\\_cheng@wsd.gov.hk](mailto:kf_cheng@wsd.gov.hk)

**Cc:** [kcheung@acuityhk.com](mailto:kcheung@acuityhk.com); [jleung@acuityhk.com](mailto:jleung@acuityhk.com); [ryycheung@anewr.com](mailto:ryycheung@anewr.com); [jpschoi@anewr.com](mailto:jpschoi@anewr.com); [smchiu@epd.gov.hk](mailto:smchiu@epd.gov.hk); [ylko@epd.gov.hk](mailto:ylko@epd.gov.hk)

**Subject:** Complaint of Construction Noise during Restricted Hours from the Construction Site at Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T. (WSD Contract No. 13/WSD/16)

Dear Mr. CHENG / WSD,

We received a complaint from a member of the public with concern on construction noise associated with the captioned construction site. It was suspected that powered mechanical equipment such as roller and dump truck was used for the purpose of carrying out construction works on 15 November 2020 (Sunday). We have issued a letter inviting the contractor to attend an interview with us and copied to WSD which is attached for your advance information.

If the Engineer and the Engineer's Representative has any information to provide regarding the

above incident, please feel free to contact our Ms. Suman CHIU at 2117 7535 or the undersigned.

By copy of this email, the complaint is now referred to the ET Leader for action. Please follow the complaint handling procedure in accordance with the EM&A Manual, and submit an interim report to us on the status of the complaint investigation and follow-up action on or before 4.12.2020. Thanks.

Best Regards,  
KC Tse  
E(RE)42, EPD  
Tel: 2117 7530  
23.11.2020



Appendix B: Construction Noise Permit for the works carried out on 15 November 2020

FORM 3  
NOISE CONTROL ORDINANCE  
(Chapter 400)  
SECTION 8(9)

[reg.5(a)]

**CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED  
MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT  
CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR  
THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK**

CONSTRUCTION NOISE PERMIT NO. GW-RE0927-20

To : PENTA-OCEAN – CONCENTRIC JOINT VENTURE (PENTA-OCEAN CONSTRUCTION CO., LTD. and CONCENTRIC  
CONSTRUCTION LIMITED as partners)

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance with the conditions may result in the permit being cancelled and in a prosecution for an offence.

*CONDITIONS*

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed:

Full address: Tseung Kwan O Stage 1 Landfill near Jockey Club HKFA Football Training Centre, Tseung Kwan O, N.T.  
(WSD Contract No. 13/WSD/16). Lot No.: ---

The site boundary, that is, the boundary of the area within which the powered mechanical equipment may be used and the prescribed construction work may be carried out is delineated on the attached plan which forms part of this construction noise permit.

2. ~~PART~~/WHOLE of the site falls \* ~~WITHIN~~/OUTSIDE a designated area.  
3. Powered Mechanical Equipment

- a. Items of powered mechanical equipment which may be used inside the site boundary :

<i>Identification code of item of powered mechanical equipment (if applicable)</i>	<i>Description of item of powered mechanical equipment</i>	<i>No. of units</i>
CNP 050	Compactor, vibratory	One
CNP 169	Power rammer (petrol)	One

- b. Validity of the construction noise permit for the use of the powered mechanical equipment:

Date and time of commencement : 1 November 2020 at 0700 hours

Days and hours : 0000-2400 hours on general holiday (including Sunday), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday [but note Condition 3.d.1 below for the operating hours within which the use of the above listed powered mechanical equipment is allowed].

This part of the permit expires on : 24 January 2021 at 1900 hours

- c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise permit is required to be kept on the construction site and made available for inspection by the Authority.  
d. Other conditions imposed on the use of the powered mechanical equipment :

1. The powered mechanical equipment listed in condition 3.a. shall only be operated during the hours shown below:

<u>General holiday (including Sunday)</u>	<u>0700 – 1900 hours</u>
---	--------------------------

4. Prescribed Construction Work

a. Type of prescribed construction work which may be carried out inside the site boundary :

<i>Identification code of type of prescribed construction work</i>	<i>Description of type of prescribed construction work</i>
	Not applicable

b. Validity of the construction noise permit for the carrying out of the prescribed construction work:

Date and time of commencement: Not applicable at Not applicable

Days and hours: Not applicable

This part of the permit expires on : Not applicable at Not applicable

c. ~~Site layout plan(s), endorsed by the Authority, may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) is(are) required to be kept on the construction site and made available for inspection by the Authority.~~

d. Other conditions imposed on the carrying out of the prescribed construction work:

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5. This construction noise permit or a copy thereof must be displayed on the construction site at conspicuous location for public information.

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Dated this 30<sup>th</sup> day of October 20 20



Signed : \_\_\_\_\_  
(WONG Mei-chi)  
for Authority

\* Delete as necessary

表格 3  
噪音管制條例  
(第 400 章)  
第 8(9) 條

[第 5(a) 條]

建築噪音許可證  
為進行建築工程 (撞擊式打樁除外)  
而使用機動設備及 / 或進行訂明建築工程

建築噪音許可證編號: GW-RE0927-20

致: 五洋協力聯營 (PENTA-OCEAN CONSTRUCTION CO., LTD. 及 協力建業有限公司為合伙人)

本建築噪音許可證是按照《噪音管制條例》第 8 條的規定而發出的。現准予使用機動設備以進行撞擊式打樁工程以外的建築工程及 / 或進行訂明建築工程, 但須受以下條件規限。若不按照該等條件進行建築工程, 許可證可遭撤銷, 而且會受到檢控。

條 件

1. 可使用機動設備及 / 或進行訂明建築工程的建築地盤:

詳細地址: 新界將軍澳將軍澳第一期堆填區近賽馬會香港足球總會足球訓練中心(水務署合約編號 13/WSD/16)。地段編號: ---

地盤範圍(即可使用機動設備及進行訂明建築工程的地方範圍)已描劃於夾附的圖則上, 而該圖則是本建築噪音許可證的一部分。

2. 該地盤部分 / 全部 \* 位於指定範圍之內 / 外 \*。  
3. 機動設備

- a. 在地盤範圍內可使用的各項機動設備:

各項機動設備的識別代碼 (如適用的話)	各項機動設備的說明	數目
CNP 050	壓實機, 震動式	壹
CNP 169	機動夯土機(汽油)	壹

- b. 可使用機動設備的建築噪音許可證有效期:

生效日期及時間: 二零二零年十一月一日上午七時

日期及時間: 公眾假日(包括星期日)的凌晨零時至晚上十二時, 公眾假日以外的任何一日凌晨零時至上午七時及下午七時至晚上十二時【但須注意條件 3.d.1. 有關可以使用上列機動設備的時間】。

此部分許可證屆滿日期及時間: 二零二一年一月二十四日下午七時  
日期 時間

- c. 建築地盤須備有本建築噪音許可證所述每件機動設備的照片各一幀, 供監督隨時查看; 該等照片須經監督認可。  
d. 規限使用機動設備的其他條件:  
1. 祇可於以下時間內使用列在條件 3.a. 內的機動設備:

公眾假日(包括星期日)	上午七時至下午七時
-------------	-----------

4. 訂明建築工程

a. 在地盤範圍內可進行的訂明建築工程：

訂明建築工程的識辨代碼	訂明建築工程的類別的說明
	不適用

b. 可進行訂明建築工程的建築噪音許可證有效期：

生效日期及時間：不適用

日期及時間：不適用

此部分許可證屆滿日期及時間：不適用  
日期 時間

c. 本許可證可夾附經監督認可的地盤圖則，以顯示本許可證准予進行訂明建築工程的地點。該地盤圖則須存放於建築地盤供監督隨時查看。

d. 規限進行訂明建築工程的其他條件：

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. 本建築噪音許可證或其副本必須展示於建築地盤的當眼位置，給予公眾人士參閱。

\_\_\_\_\_

\_\_\_\_\_

日期：20 20 年 10 月 30 日



簽署：\_\_\_\_\_

監督  
(王美枝代行)

\* 刪去不適用者

**Photograph(s) attached to Construction Noise Permit No. GW-RE0927-20**  
建築噪音許可證編號：GW-RE0927-20 的照片

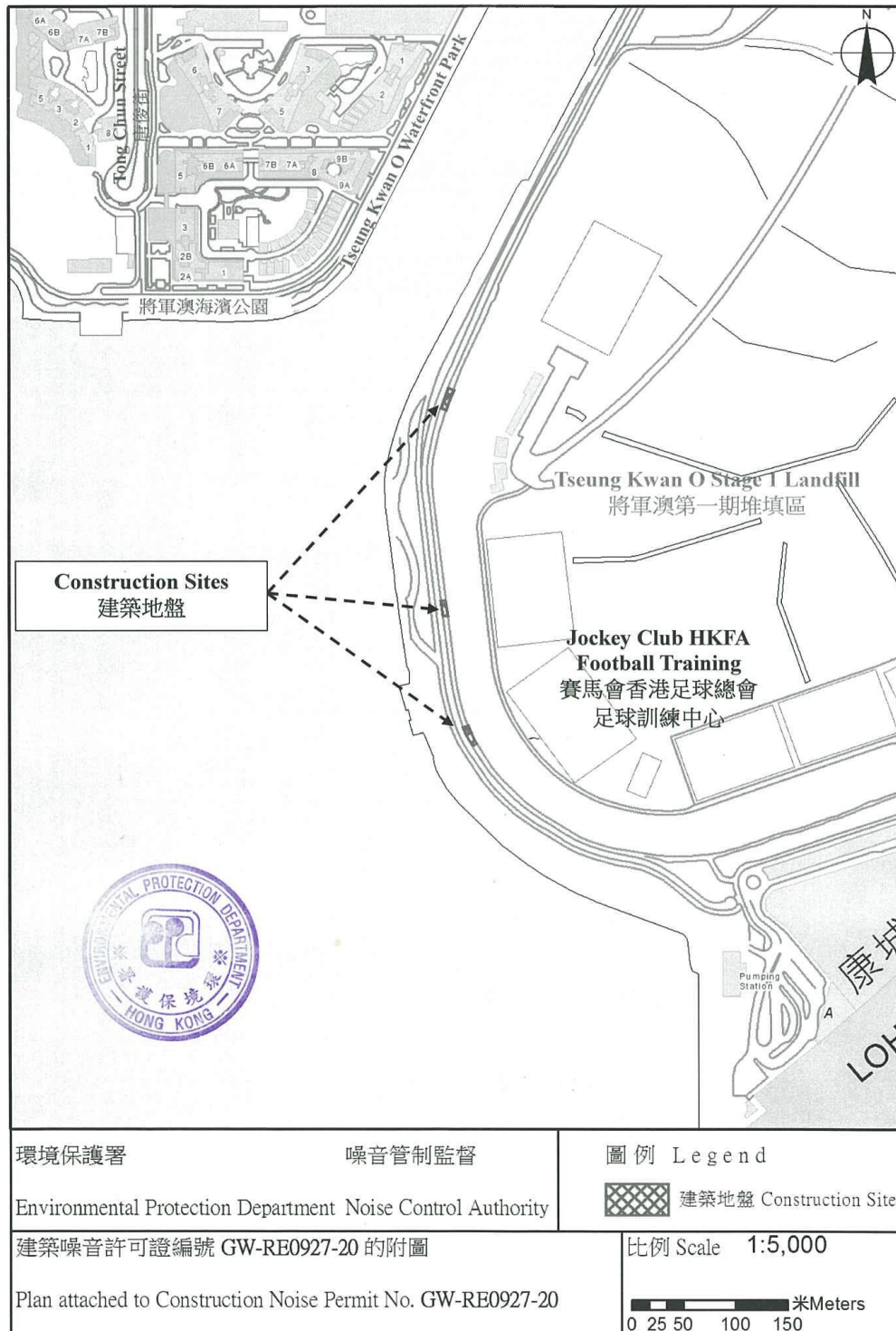


CNP 050 Compactor, vibratory  
壓實機，震動式



CNP 169 Power rammer (petrol)  
機動夯土機 (汽油)





## Appendix C: Work Order from WSD showing the work locations



水務署  
Water Supplies Department

九龍灣辦事處 Kowloon Bay Office  
九龍灣大業里 11 號水務署九龍東區大樓  
WSD Kowloon East Regional Building, 11 Tai Yip Lane, Kowloon Bay

*By Hand*

本署檔號 : (6) in WSD/M/7503/13/WSD/16/M15/300/72 電話 : 2152 5742 /  
Our ref. : 3650 3418  
來函檔號 : 傳真 : 2351 6949  
Your ref. : Fax.

31 August 2020

Penta-Ocean – Concentric Joint Venture  
Unit 601, K Wah Centre  
191 Java Road, North Point  
Hong Kong  
(Attn.: Mr. C. C. TIU, Thomas)

Dear Sirs,

**Contract No. 13/WSD/16  
Mainlaying in Tseung Kwan O**

**Compensation Event – CE No. 72  
Temporary Reinstatement of Deteriorated Grasscrete Road by Bituminous  
Pavement along TKO South Waterfront Promenade**

In accordance with NEC Clause 14.3, you are instructed to carry out temporary reinstatement for the deteriorated grasscrete road by bituminous pavement along TKO South Waterfront Promenade as shown on the Drawing No. SK40134/345.

I consider this instruction is a compensation event in accordance with NEC Clause 60.1(1). Please submit a quotation for our consideration pursuant to NEC Clause 61.1.

Yours faithfully,

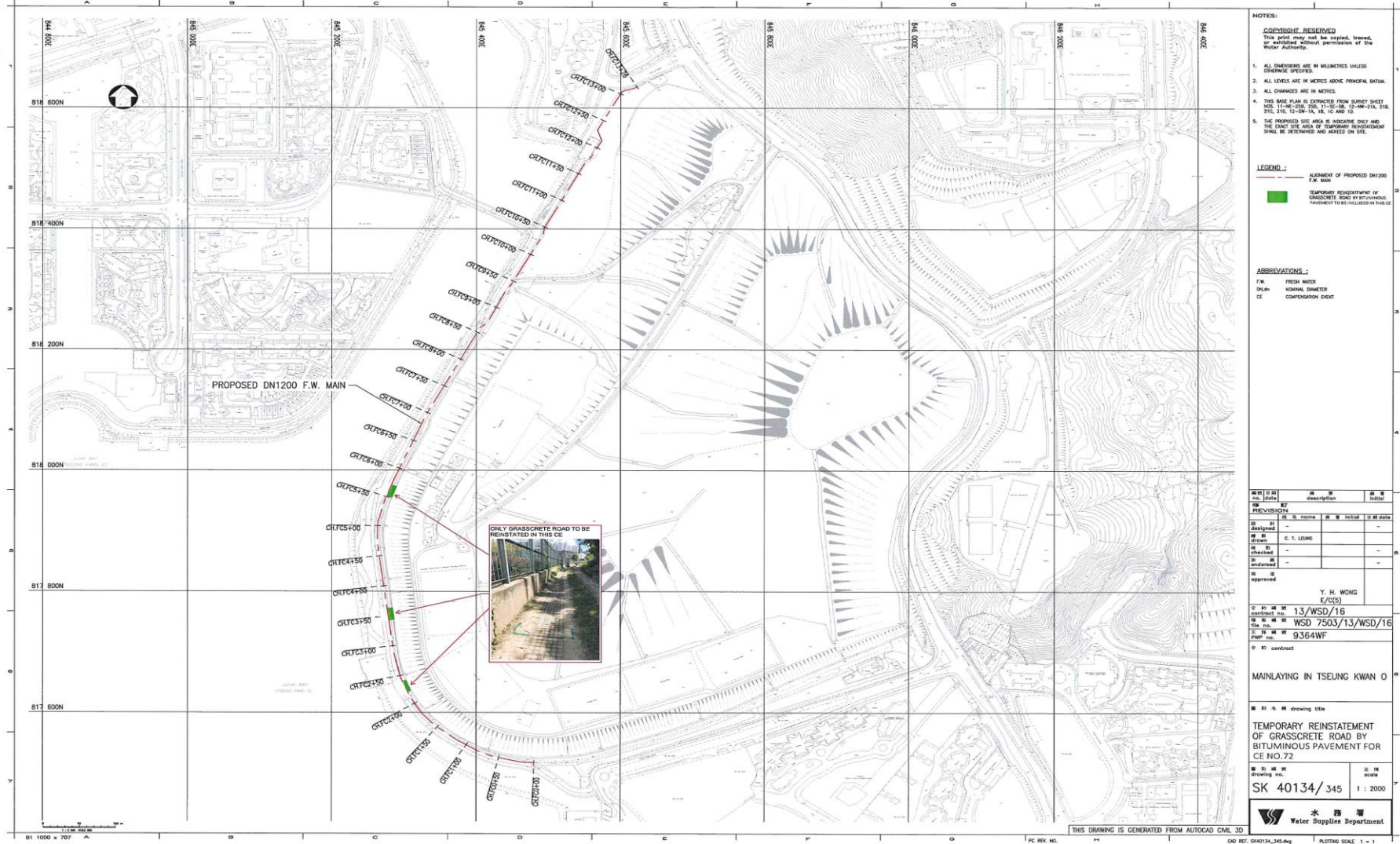
(Y. H. WONG)  
Engineer/Construction (5)  
Water Supplies Department

Encl. (w/ SK40134/345)

c.c. Meinhardt Infrastructure and Environment Ltd (Attn.: Mr. K W LEE – by fax: 2540 1580)

Internal: SE/C(3), E/C(7), E/C(10), SQS, SWI/C(10), WI/C(7), AWI/C(10), AWI/C(7) via email



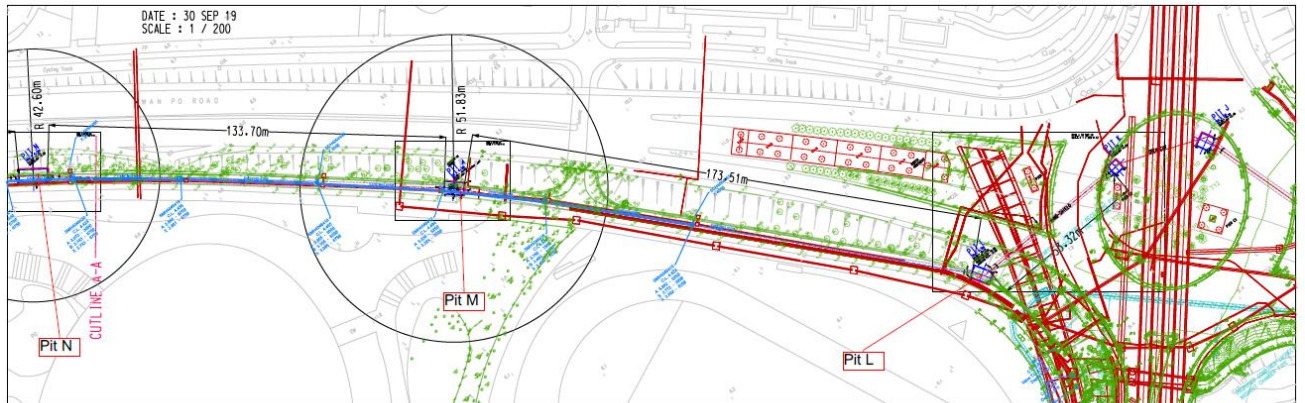
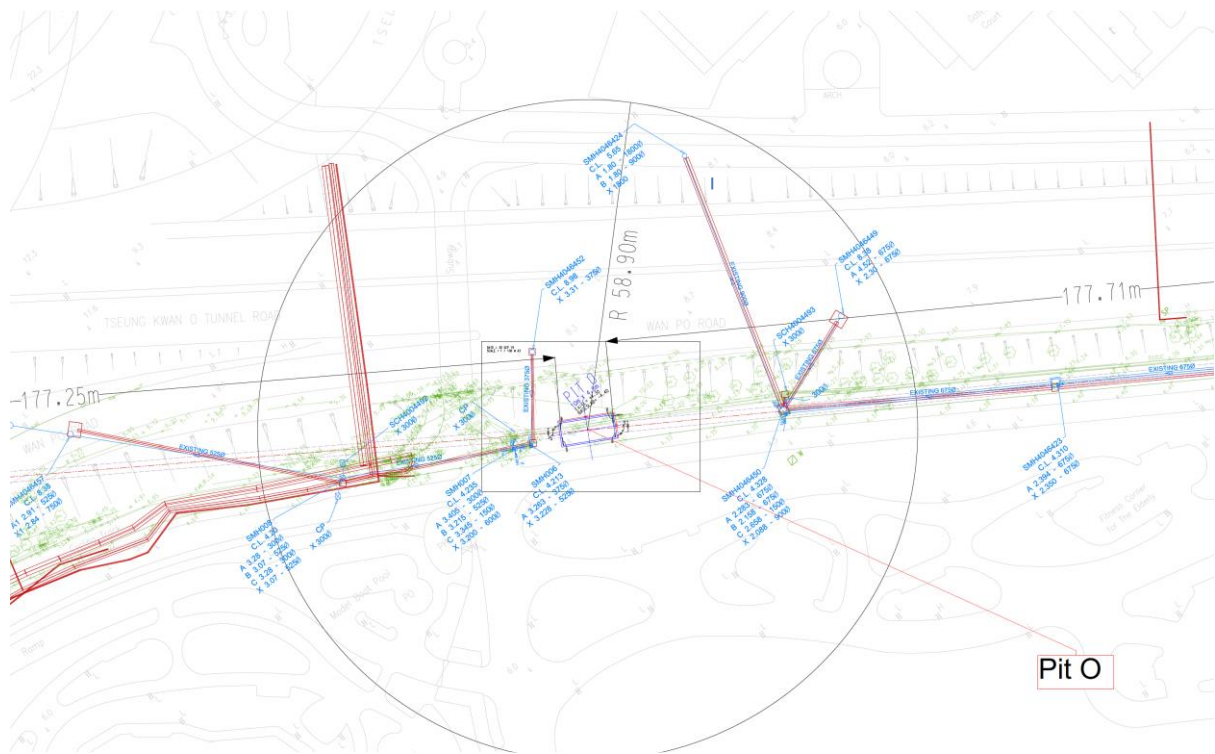




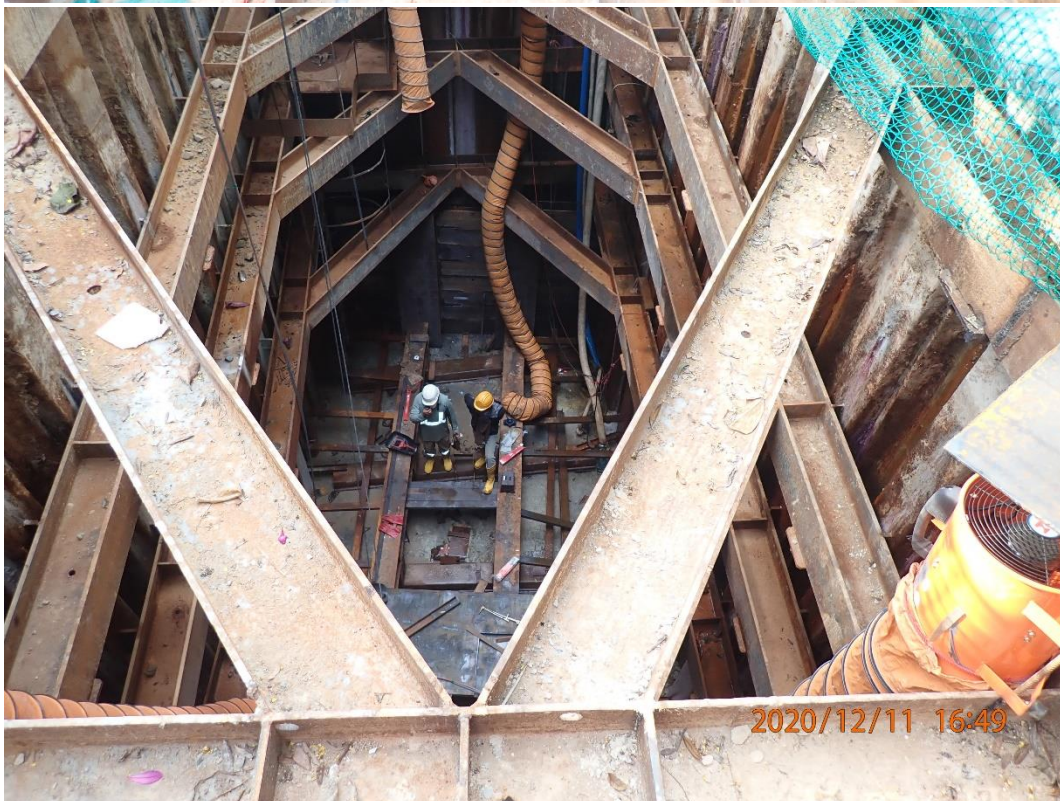
### **Interim Report on Environmental Complaint**

Project Title	Proposed Desalination Plant in TKO Area 137 for Contract 13/WSD/16 Mainlaying in Tseung Kwan O
Source of Complaint	Email from EPD to WSD dated 11 December 2020
Location of Incident	Construction Site near Hong Kong Velodrome Park at Tseung Kwan O
Complaint Code	13/WSD/16_C002
Complaint description	<p>EPD has received the complaint of suspected construction noise from the construction site near Hong Kong Velodrome Park at Tseung Kwan O (Site Plan attached in Appendix A)</p> <p>The complainant made the complaint on 11 December 2020 and wrote “WSD has been conducting works at the footpath/cycling track near Tseung Kwan O Velodrome &amp; Sports Ground. And the works started at around 7:15 am on weekdays and works are also being carried out during weekends.”</p>
Investigation finding	<p>Our Environmental Team under WSD Contract No. 13/WSD/16 received the complaint case on 15 December 2020 and carried out the complaint investigation from 16 December 2020.</p> <p>The site dairy and site photos shown that pipe jacking works are carried out at the concerned area from 1 to 11 December 2020. The site photos shown that only pipe jacking works were carried out after 8am (photos attached in Appendix B). As confirmed with Contractor, the site works was only carried out from 8am to 6pm from Monday to Saturday and no preparation works and site activities was carried out on site between 7am to 8am during weekdays and Sunday.</p> <p>As no construction works during the daytime (7am -8am)of weekdays and weekends, the complaint would not be related to the Project.</p>
Actions taken / to be taken	<p>The responsible contractor has been recommended by WSD to schedule noisy construction works to be carried out after 9am on weekdays to minimise the noise nuisance to the nearby residents.</p> <p>Moreover, the contact of liaison group is recommended to post at the site entrance in case of any public enquires. Contractor is also reminded to comply all regulations and requirement stipulated in the EM&amp;A Manual.</p>
Prepared by	Karen Cheung
Certified by	Jacky Leung
Date	22 December 2020

Appendix A: Site Layout of Concerned Area



Appendix B: Photos showing the works carried on 11 December 2020



### **Interim Report on Environmental Complaint**

Project Title	Proposed Desalination Plant in TKO Area 137 for Contract 13/WSD/16 Mainlaying in Tseung Kwan O
Source of Complaint	Email from EPD to WSD dated on 28 July 2021
Location of Incident	Construction Site near to Mau Wu Tsai of Po Lam Road South at Tseung Kwan O
Complaint Code	13/WSD/16_C003
Complaint description	EPD has received a complaint from a member of the public regarding the discharge of stormwater with suspended particles, or in general muddy water from the construction site near to Mau Wu Tsai of Po Lam Road South at Tseung Kwan O on 09 July 2021 (Site Plan attached in Appendix A).
Investigation finding	<p>Our Environmental Team under WSD Contract No. 13/WSD/16 received the complaint case on 29 July 2021 and carried out the complaint investigation from 29 July 2021.</p> <p>The site diary showed that shoring plate cutting works for hand shield tunneling were carried out at the concerned area on 09 July 2021, which has no use of water and disturbance to ground surface. It has no record of leakage of muddy water as reported by the Contractor.</p> <p>The site condition of the concerned area was reviewed. We noted that although there was no excavation works on-going or scheduled recently, clearance works and works that create disturbance to ground surface were previously conducted. To prevent the muddy water discharge from the construction site, the contractor has implemented and enhanced the mitigation measures to cater for any upcoming rainstorms or heavy precipitation from the site. Sandbags are placed along the site boundary and submersible pump is provided to direct the runoff to the wastewater treatment tank before reusing or discharging into the designated discharge point.</p> <p>Site inspection at the concerned area has been carried out by ET on 13 August 2021. There was precipitation during the site walk, while no runoff of muddy water was observed at the site boundary.</p> <p>Also, cement application to exposed earth within the site was observed during the inspection, which was being implemented to prevent erosion caused by the precipitation. The temporarily exposed slope and areas were covered by tarpaulin.</p> <p>The Contractor has been reminded to inspect regularly and maintain the above water pollution mitigation measures, especially during or after rainstorms.</p>
Actions taken / to be taken	The Contractor has been recommended by WSD to take immediate preventive measures to enhance stormwater management for construction sites (e.g. cover any stockpiled materials within the construction site with tarpaulin).

	Moreover, ET will perform spot checking on the concerned area on the implementation status of mitigation measures. Contractor is reminded to comply with all regulations and requirement stipulated in the EM&A Manual.
Prepared by	Charlene Lai
Date	06 August 2021

Appendix A – Site Layout of Concerned Area



Appendix B – Photo Records from Site Inspection

Cement being applied to exposed surface:



Appendix B – Photo Records from Site Inspection (cont’)

Sandbags placed along the site boundary and submersible pump to direct runoff:



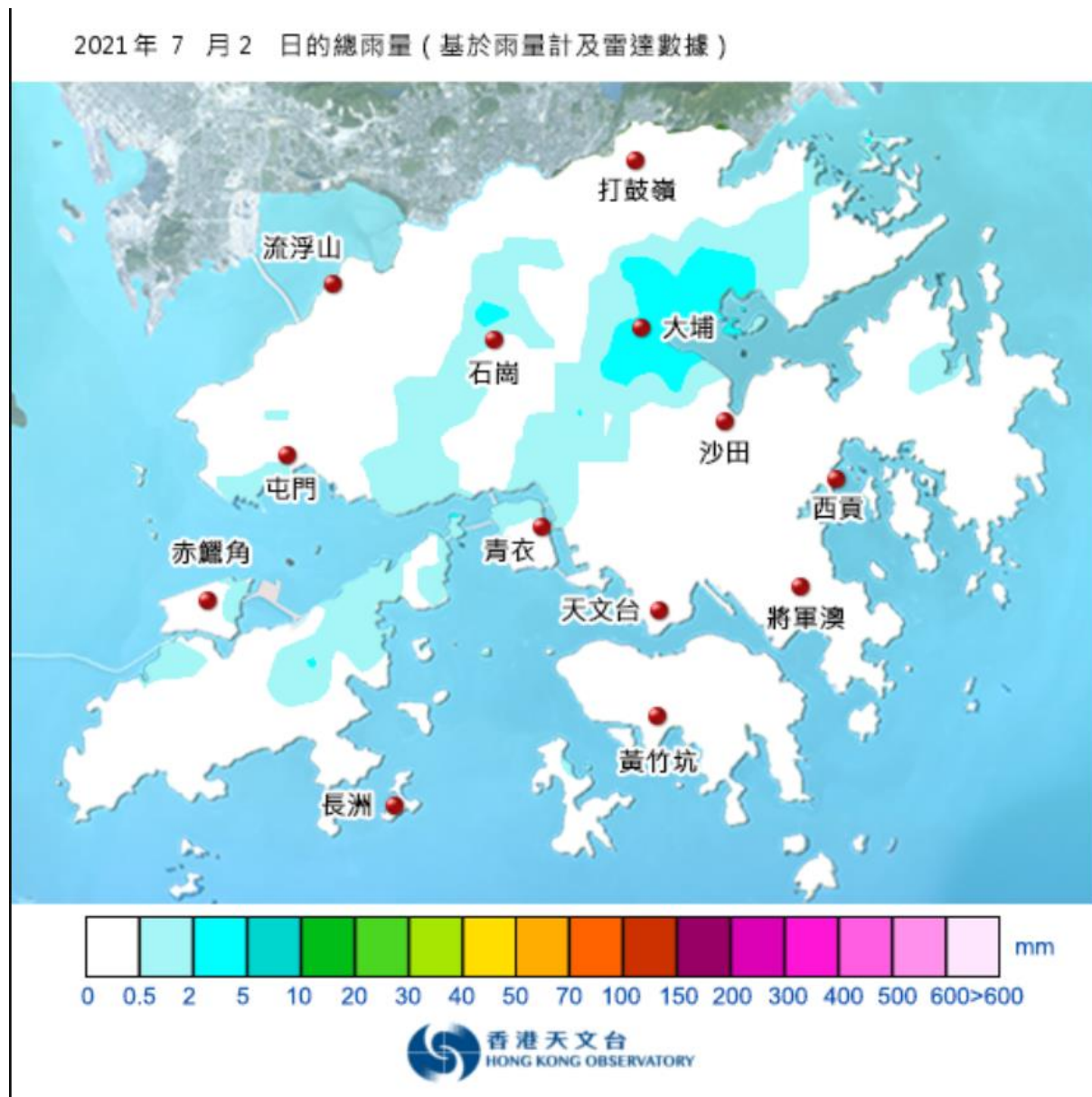


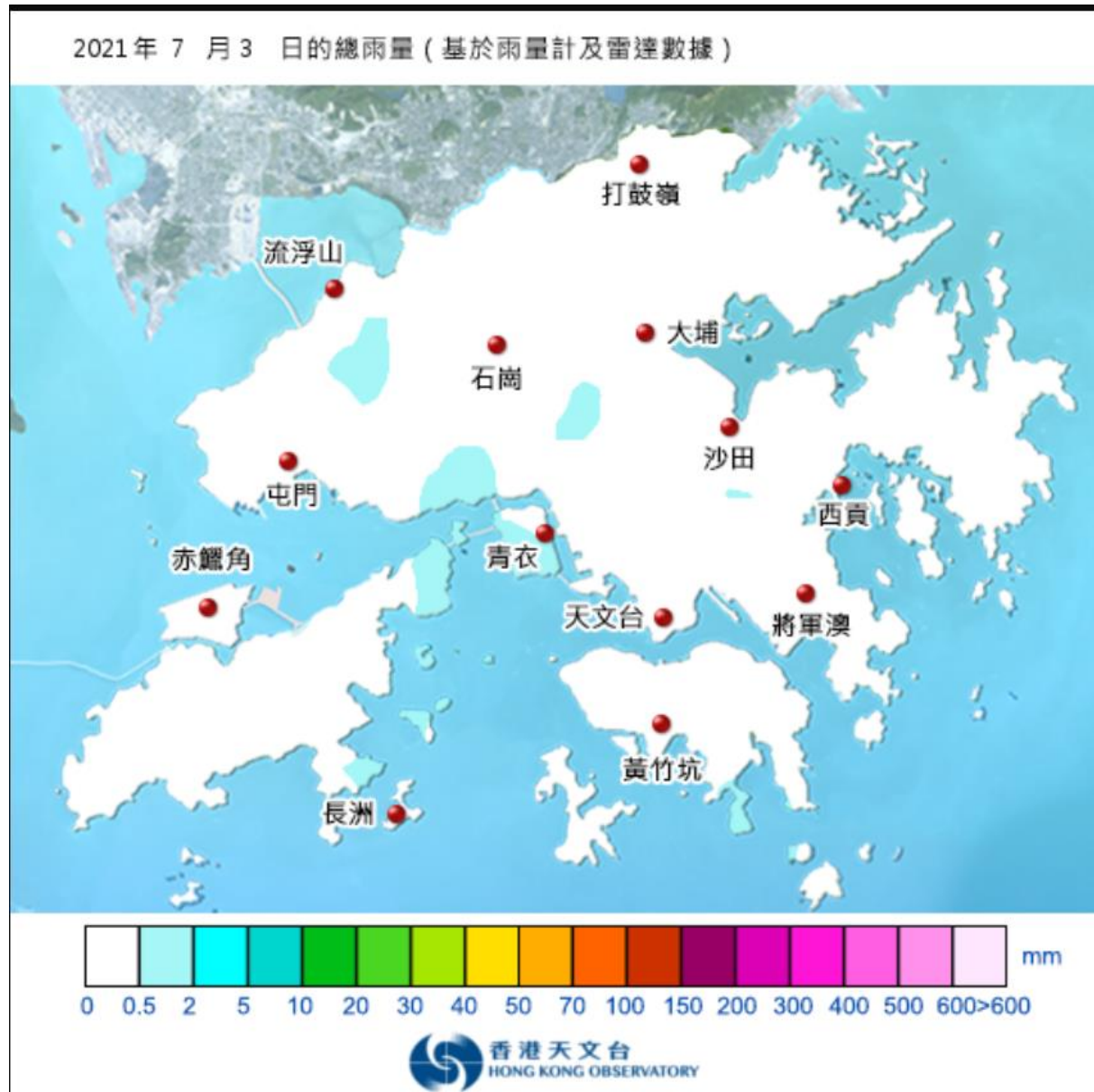
Appendix C – Site Diary on 09 July 2021

	HA3+80	HA4+50	Po Lam Road South	0209	Place concrete to bend block	1	L13	2	P81	1	L13	2	P81	LH
				0213	Breaking up rock in trench	5	L01	1	P04	5	L01	1	P04	LH
					Bankman at (00:00 to 08:00 & 16:00 to 24:00)			4	P01			4	P01	LH
								1	P40			1	P40	LH
								1	P22			1	P22	LH
														LH
25			Po Lam Road C2 & D1	0906	Erection of working platform	2	L01	1	P04	2	L01	1	P04	LH
				0221	Dispose artificial hard materials off site	1	L06	1	P31			1	P31	LH
				0312	External repairs to steel pipes with epoxy coatings			1	P22			1	P22	LH
				0213	Breaking up rock in trench			1	P80			1	P80	LH
				0806	Point cloud survey			1	P40			1	P40	LH
								1	P28			1	P28	LH
								1	P02			1	P02	LH
						3	L25			3	L25			PW
			Po Lam Road B4 & B5	0208	Break up concrete carriageway	2	L01	1	P04	2	L01	1	P04	LH
				0221	Dispose artificial hard materials off site			1	P31	1	L06	1	P31	LH
				0214	Excavate soil trench			1	P80			1	P80	LH
								1	P40			1	P40	LH
								1	P22			1	P22	LH
								1	P73			1	P73	LH
26	HC3+20	HC3+80	Po Lam Road A0 Near Tsui Lam	0802	No site activities			2	P04			2	P04	LH
								1	P27			1	P27	LH
								1	P30			1	P30	LH
								1	P01			1	P01	LH
								1	P45			1	P45	LH
			Po Lam Road		Set up for hand shield tunneling	3	L01	1	P04	3	L01	1	P04	LH
			Jacking Pit X		Shoring plate cutting for hand shield tunneling	1	L10	1	P40	1	L10	1	P40	LH
								1	P22			1	P22	LH
								2	P04			2	P04	LH
			Trial Pit Tsui Lam Road	0802	No site activities									
			Tseung Kwan O Servoir Reservoir Trial Pit 1	0802	No site activities									
			Tseung Kwan O Servoir Reservoir Trial Pit 2	0802	No site activities									
27	HE0+25	HE1+60	Tseung Kwan O Servoir Reservoir	0208	Break up concrete carriageway	4	L01	1	P04	4	L01	1	P04	LH
				0701	General site clearance	1	L06	1	P80	1	L06	1	P80	LH
				0347	Make M.S. pipe bend	1	L05	1	P40	1	L05	1	P40	LH
						1	L10	1	P22	1	L10	1	P22	LH
								1	P02			1	P02	LH
								1	P01			1	P01	LH
								1	P28			1	P28	LH
								1	P31			1	P31	LH
								1	P27			1	P27	LH
			Tseung Kwan O Servoir Reservoir TPPA	0802	No site activities									

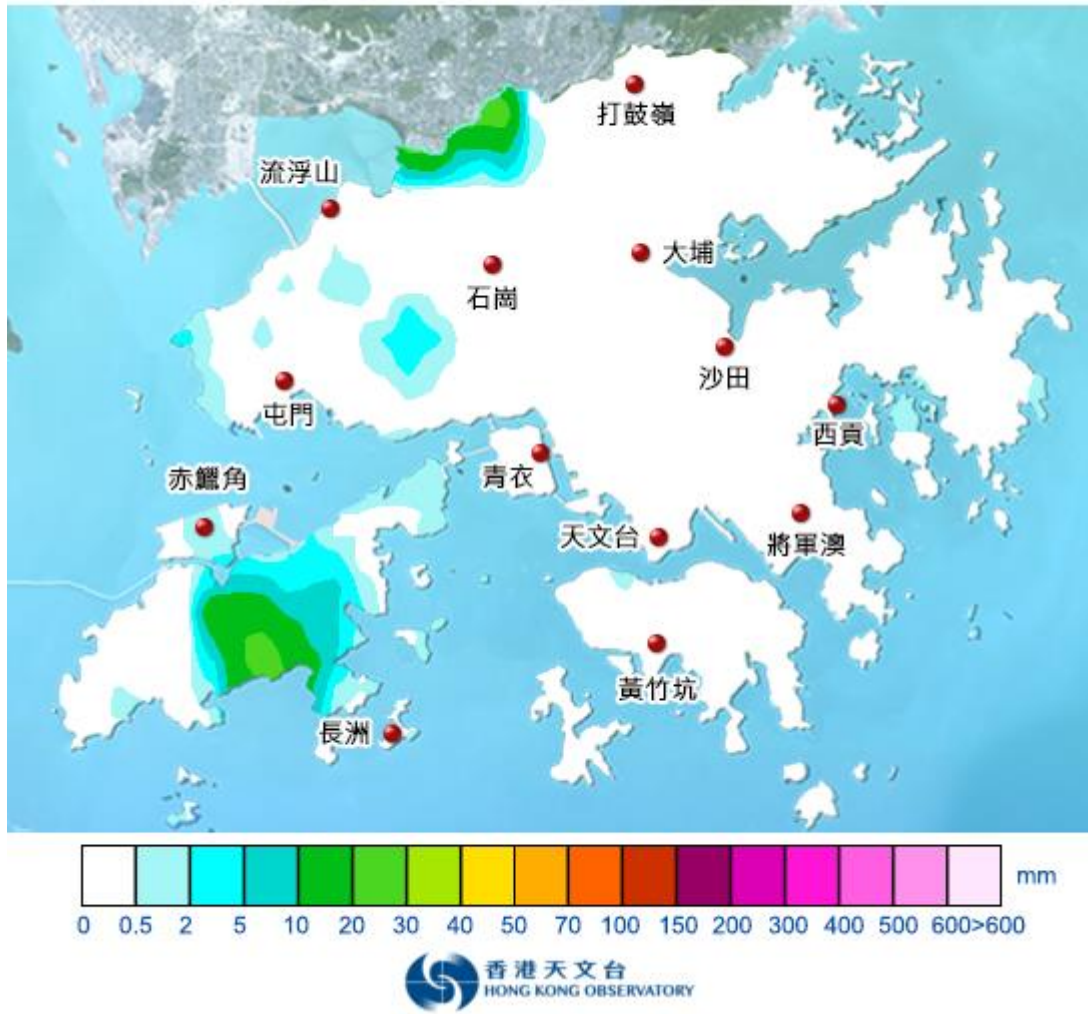
Appendix D – Weather Conditions for the Past Seven Days Prior to the Complaint has been Received

(Sourced from <http://www.weather.org.hk/dailyrain.html>)

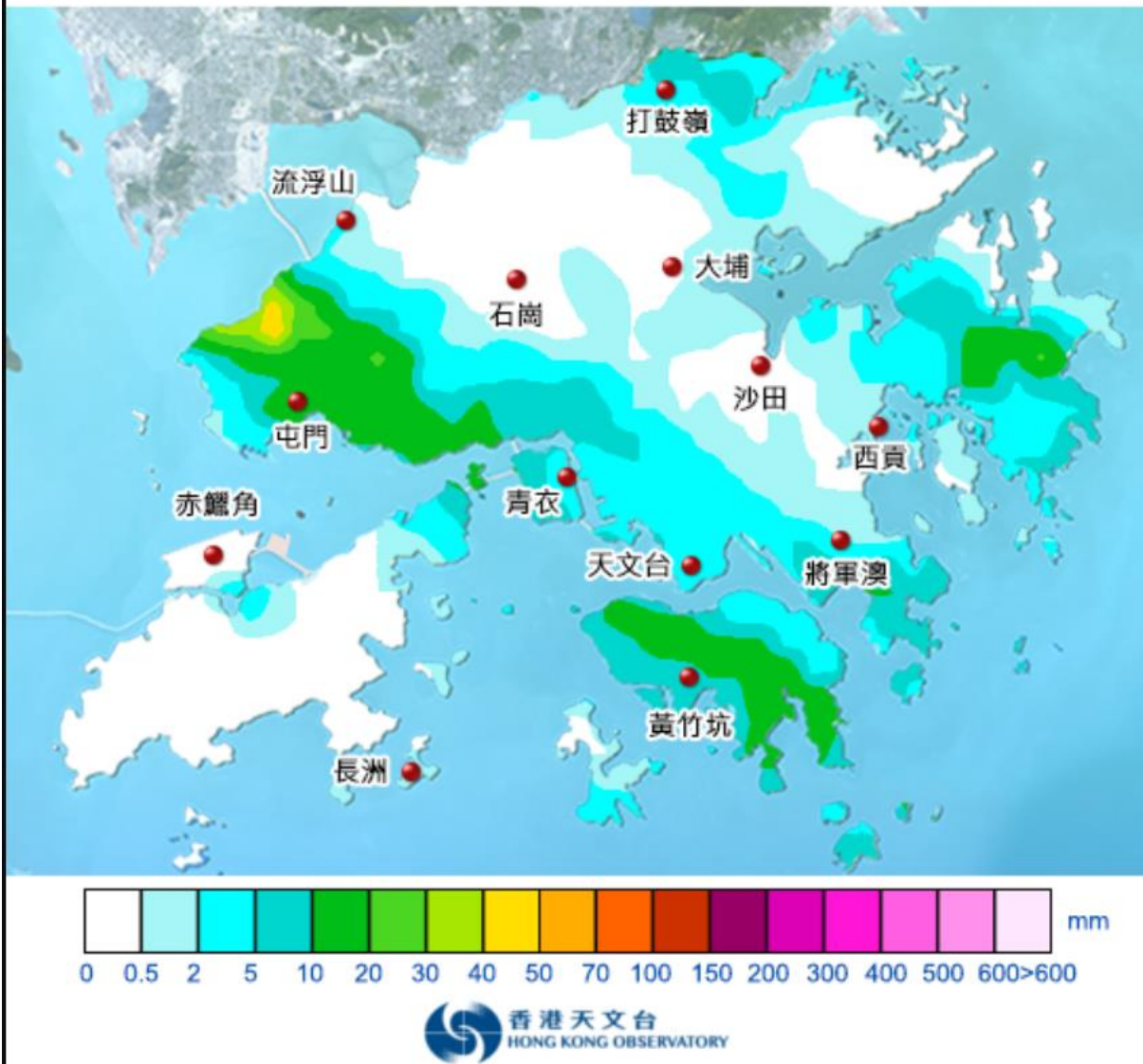




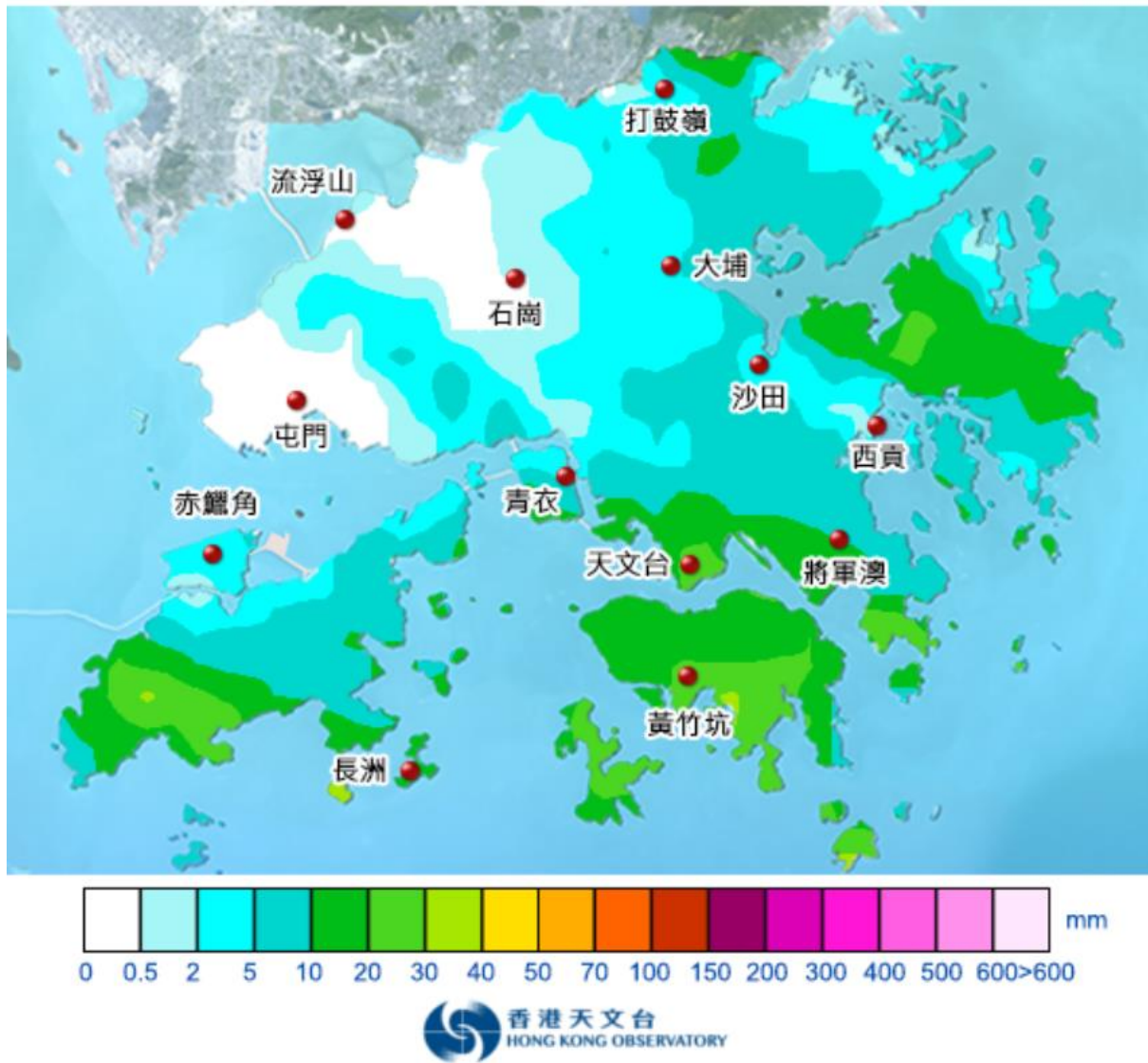
2021年7月4日的總雨量(基於雨量計及雷達數據)



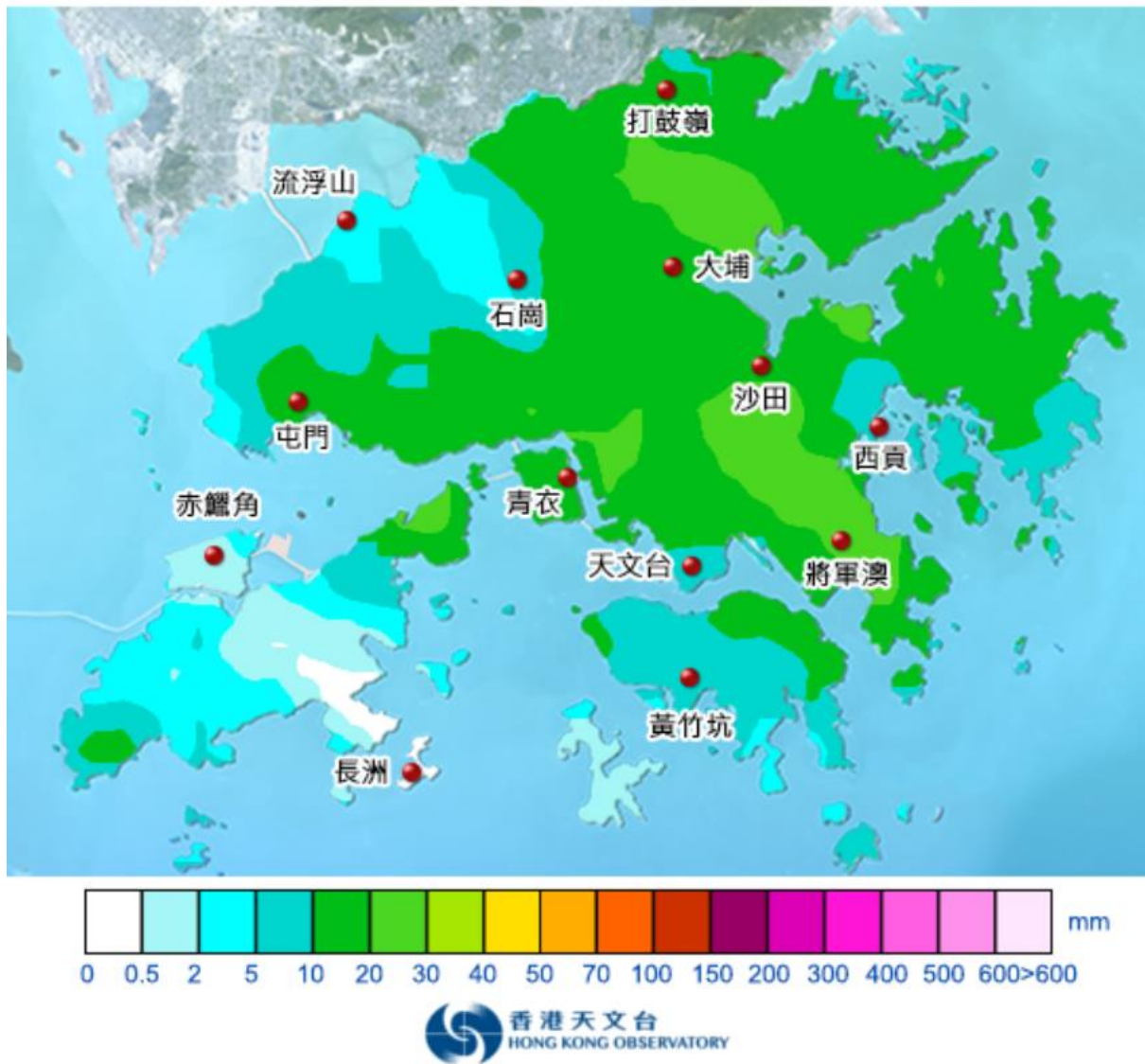
2021年7月5日的總雨量(基於雨量計及雷達數據)



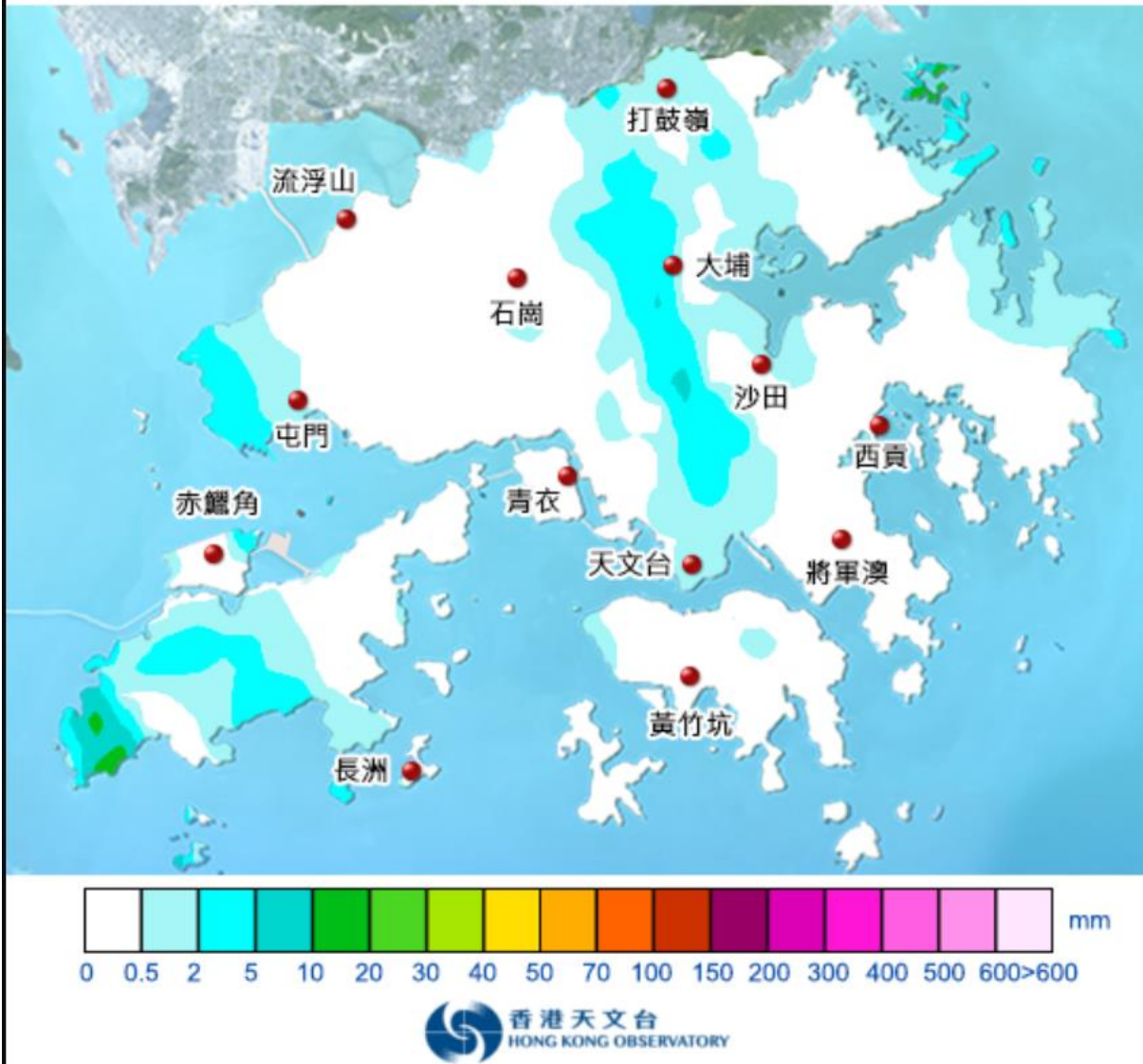
2021年7月6日的總雨量 (基於雨量計及雷達數據)



2021年7月7日的總雨量 (基於雨量計及雷達數據)



2021年7月8日的總雨量(基於雨量計及雷達數據)





2021年7月9日的總雨量 (基於雨量計及雷達數據)

