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1. INTRODUCTION

1.1 Project Background

1.1.1 In view of the anticipated population growth due to large-scale development in Yuen Long, the traffic demand and traffic flow in the area are expected to increase. Further to the commission of Route 11 (Section between Yuen Long and North Lantau), the traffic flow at Yuen Long Highway (YLH) between Lam Tei Quarry (LTQ) and Tong Yan San Tsuen Interchange (TYSTI) is anticipated to exceed its capacity during peak hour. The Widening of Yuen Long Highway (Section between Lam Tei and Tong Yan San Tsuen) Project (hereinafter named as "the Project") aims to improve the capacity of YLH between LTQ and TYSTI with the following scope of works:

- Widening of an approximately 1000-metre-long at-grade road section (with 20m long x 8m wide bridge deck at Shui Fu Road) of YLH between Lam Tei Quarry Interchange (LTQI) and Tin Shui Wai West Interchange (TSWWI) (the road levels at about +24 to +37 mPD) from existing dual-three lane to dual-four lane (additional 7.3m width carriageway) at eastbound and one side of the existing YLH supported by slope works, and existing central divider will be adjusted toward south between LTQI and future Ping Shan South Housing Development (PSS), and toward north between PSS and TSWWI;
- Widening of an approximately 600-metre-long at-grade road section of YLH between Tin Shui Wai West Interchange and Tong Yan San Tsuen Interchange (the road levels at about +14 to +19 mPD) from existing dual-three lane to dual-four lane (additional 7.3m width carriageway) at westbound and one side of the YLH support by retaining structures, and existing central divider will be adjusted toward south between TSWWI and TYSYI;
- Widening of an approximately 300-metre-long at-grade slip road connecting Hung Tin Road (southbound) to Yuen Long Highway (eastbound) (the road levels at about +13 to +14 mPD) from existing one lane to two lanes (additional 3.65m width carriageway) support by retaining structures;
- Associated works including civil, geotechnical, slope, road drainage, waterworks, utilities, public lighting, landscaping works, sign gantries modification, noise barrier upgrading/re-provisioning works due to the widening of Yuen Long Highway, traffic control and surveillance system, re-provisioning of facilities affected by the proposed road works and environmental mitigation measures; and
- The interfacing works with other projects including
  - Proposed waterworks along YLH eastbound (between Tan Kwai Tsuen Road and Hung Tin Road) under Agreement No. CE 71/2020 (CE) - Hung Shui Kiu / Ha Tsuen New Development Area
  - Proposed roadworks along YLH westbound (between TYSYI and TSWWI) under Agreement Nos. CE 58/2019(CE) & CE 16/2022(CE) for Yuen Long South Development
  - Proposed roadworks at TSWWI and at slip road connecting Hung Tin Road (northbound) under Agreement No. CE 16/2022(CE) for Yuen Long South Development

  - Proposed roadworks along YLH eastbound (between Tai To Tsuen Road and TSWWI) under Agreement No. CE 16/2022(CE) for Yuen Long South Development

1.1.2 The location plan for the Project is shown in Figure 1.1. The Project is classified as the following type of Designated Project under Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO):

1.1.3 Part I, Item A.1 – A road which is an expressway, trunk road, primary distributor road or district distributor road including new roads, and major extensions or improvements to existing roads.

1.2 Purpose of this Report

1.2.1 A Study Brief (ESB-356/2022) was issued on 14 July 2022 by the Environmental Protection Department (EPD) for the Project. According to Section 1 of Appendix F, a Contamination Assessment Plan (CAP) shall be submitted to the DEP for endorsement prior to conducting an actual contamination impact assessment of the Site.

1.2.2 The purpose of this CAP is to provide information, guidance and instruction to characterize land contamination and identify where any contamination is or may be present during the construction of the Project. Therefore, the objectives of this CAP are:

- To provide an account of the land use within the Project works area boundary and relevant past land use history in relation to possible land contamination;
- To identify areas of potential contamination and the associated impacts, risks or hazards;
- To identify the chemicals of concern at the area/s of potential contamination and provide the requirements for the sampling and testing of the soil sampling from each of the area/s; and
- To propose details on representative sampling and analysis required to determine the nature and the extent of the contamination of the land or site(s).

2. ASSESSMENT METHODOLOGY

2.1 Relevant Legislations, Standards & Guidelines

2.1.1 Land contamination impact shall be assessed in accordance with the requirements set in Annexes 19 of the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) and S3.4.8 of the Environmental Impact Assessment (EIA) Study Brief No. ESB-356/2022. The following EPD issued publications are applicable to the preparation of this CAP:

- Guidance Note for Contaminated Land Assessment and Remediation (Guidance Note);
- Guidance Manual for Use of Risk-based Remediation Goals (RBRGs) for Contaminated Land Management (Guidance Manual); and
- Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide).

2.1.2 The Guidance Note sets out the EPD requirements for the assessment and management of potentially contaminated sites, provides guidelines on how site assessments should be conducted and suggests practical remedial measures that can be adopted for the remediation of a contaminated site.

2.1.3 The Guidance Manual provides the background of the use of the RBRGs and presents instructions for the comparison of soil data that is collected to the appropriate RBRGs.

2.1.4 The Practice Guide outlines the process for conducting land contamination assessments and remediation projects in Hong Kong. The Practice Guide presents the standard investigation methods and remediation strategies for the range of potential contaminated sites and the contaminants that are typically encountered in Hong Kong.

2.1.5 The approved EIA reports under the EIAO will also be reviewed, including:

- Agreement No. CE 98/98 Widening of Yuen Long Highway between Lam Tei and Shap Pat Heung Interchange Preliminary Design and Ground Investigation Assignment (EIA Report AEIAR-059/2002 Widening of Yuen Long Highway between Lam Tei and Shap Pat Heung Interchange);
- Agreement No. CE 109/98 – Deep Bay Link – Investigation and Preliminary Design (EIA Report AEIAR-064/2002 Deep Bay Link);
- Agreement No. CE 2/2011 (CE) Hung Shui Kiu New Development Area Planning and Engineering Study – Investigation (EIA Report AEIAR-203/2016 Hung Shui Kiu New Development Area);

- Agreement No. CE 35/2012 (CE) Planning and Engineering Study for Housing Sites in Yuen Long South – Investigation (EIA Report AEIAR-215/2017 Housing Sites in Yuen Long South).

2.1.6 Information of the adjacent feasibility studies and investigation assignments, including:

- Agreement No. CE 19/2015 (TP) Preliminary Land Use Study for Lam Tei and the Adjoining Areas – Feasibility Study (WP6 – Preliminary Feasibility Assessments for Preferred Land Use Option);
- Agreement No. CE51/2016 (HY) Route 11 (between North Lantau and Yuen Long) – Feasibility Study (Preliminary Environmental Review Report);
- Agreement No. CE 75/2017 (CE) Site Formation and Infrastructure Works for Public Housing Developments at Long Bin, Yuen Long – Investigation, Design and Construction (Preliminary Environmental Review Report);
- Agreement No. CE 92/2017 (CE) Site Formation and Infrastructure Works for Public Housing Development near Tan Kwai Tsuen, Yuen Long Investigation, Design and Construction (Preliminary Environmental Review Report);
- Agreement No. CE 11/2020 (CE) Site Formation and Infrastructure Works for Proposed Public Housing Developments at Ping Shan South, Yuen Long, Lam Tei North and Nai Wai, Tuen Mun – Feasibility Study.

3. DESKTOP REVIEW

3.1 Review of Historical Land Use

3.1.1 In order to identify any past land uses which may have the potential for causing land contamination, the development history of the Assessment Area has been reviewed with the aid of selected historical aerial photos between 1963 and 2022. The aerial photographs for the Project Boundary Area are shown in **Appendix A** and the findings are summarised in **Table 3.1**.

Table 3.1 Summary of the findings of Aerial Photographs

Year of Aerial Photos	Observations	Photographs Reference Number
1963	The Project area comprised of mainly rural residential houses and agricultural land. Part of the land comprised of natural terrain.	8413
1973	No significant change in land use was observed compared with Year 1963 except more village houses are formed.	04267, 06033, 06053, 07557
1982	No significant change in land use was observed compared with Year 1973.	46558
1993	Yuen Long Highway was under construction within the Project area. Some industrial buildings appeared including Hop Hing Building and its oil factory, Forefront Cyber Centre and Hang Sun Chemical Manufacturing Limited which are next to the project boundary. Part of the agricultural land was replaced by scattered industrial activities next to the project boundary.	CN03440, CN03605, CN03067
2001	Construction of Yuen Long Highway has been finished and was in operation. Most of the agricultural land were replaced by industrial activities and residential houses.	CW33160, CW33282
2011	No significant change in land use was observed compared with Year 2001.	CS32165, CS31133
2019	No significant change in land use was observed compared with Year 2011.	E066937C, E067326C, E074221C
2022	No significant change in land use was observed compared with Year 2019.	E146795C, E148256C

Source of historical aerial photographs: Survey and Mapping Office, Lands Department.

3.1.2 As shown in the **Appendix A**, Yuen Long Highway were historically occupied as farmland and village housing from 1963 until early 1990s. The construction of Yuen Long Highway has started in 1993 and it has been finished and in operation in 2000s. Since then, there is no significant change of land use within the Project Boundary.

4. REVIEW OF OTHER SUPPORTING INFORMATION

4.1 Information Request from Government Departments

4.1.1 Supporting information has been requested in order to identify any historical leakage, chemical spillage, dangerous goods stores or accidents within the Site. The email record from EPD and letter received from FSD are included in **Appendix B**.

4.1.2 According to the reply from EPD on 12 June 2023, there was no record indicating historical leakage and spillage of chemicals found within the project site boundary.

4.1.3 According to the reply from Fire Services Department (FSD) dated 30 June 2023, there was no dangerous goods license nor leakage of dangerous goods found at the Site during its operation. 14 no. of fire incidents have been recorded within the project site boundary, which include traffic accident, rubbish fire, vegetation fire and one electric fire. All the recorded fire incidents has no encroachment into Project Site Area.

4.1.4 A record checking has been conducted on 11 May 2023 at EPD office for the registration of chemical waste producers of the Site and its surrounding industrial buildings. The chemical waste producers are summarized in **Table 4.1**.

Table 4.1 Registration of Chemical Waste Producer Record

No.	Chemical Waste Producer	Address	Location within Site Boundary	Business Type	Valid (Y/N)
1	Hop Hing Oil Investment Limited	Hop Hing Building, 9 Ping Tong Street East, Tong Yan San Tsuen	No	Trading and Manufacturing	Y
2	Hop Hing Oil Refinery Limited	Flat C&D, 2/F, Hop Hing Building, 9 Ping Tong Street East, Tong Yan San Tsuen, Yuen Long, N.T.	No	Edible oils manufacturing	Y
3	Hop Hing Oil Factory Limited	Flat E&F, 2/F, Hop Hing Building, 9 Ping Tong Street East, Tong Yan San Tsuen, Yuen Long, N.T.	No	Edible Oil Manufacturing	Y
4	Wasserbel Testing Laboratory Limited	2/F, Flat D, Hop Hing Building, Ping Tong Street East, Lot 2024 DD 121, Tong Yan San Tsuen, N.T	No	Chemical Testing	Y
5	Hang Sun Chemical Manufacturing	396 Tan Kwai Tsuen, Hung Shui Kiu, Yuen Long,	No	Manufacturing of Foam Rubber	N

No.	Chemical Waste Producer	Address	Location within Site Boundary	Business Type	Valid (Y/N)
	Limited	N.T.			
6	Evergreen Oils & Fats Limited	Flat C, 2/F, Hop Hing building, Lot 2024 DD121 Ping Tong Street East, Tong Yan San Tsuen, NT.	No	Edible Oils Manufacturer	N
7	Wasserbel Testing Laboratory Limited	2/F, Flat D, Hop Hing Building, Ping Tong Street East, Lot 2024 DD 121, Tong Yan San Tsuen, N.T	No	Chemical Testing	N
8	Tak Cheong Investment (HK) Limited	G/F, No. 3 Tong Tai Road, Tong Yan San Tsuen, Yuen Long, N.T.	No	Car Repairing	N

Note: The information is provided by EPD. The validity of the records as of 2 March 2023.

4.1.5 According to the chemical waste producer record, currently there are no valid record within the project site boundary. There are 4 valid records and 4 expired records at the immediate vicinity of the project site boundary, however, the Project area will not encroach into these existing facilities. Figure 4.2 shows the locations of the chemical waste producer records.

4.2 Site Survey

4.2.1 Site surveys were conducted in May 2023 to confirm the existing condition of the site. The site walkover checklists are presented in **Appendix C**. As observed from the site visit, most of the area that have potential encroachment of the Site alignment are in operation. Detailed site appraisal at some premise was restricted as the majority of the sites surveyed are private land of which most were still in operation. Therefore, access to those premises was infeasible for both inspection and site investigation, and the questionnaire with the existing/previous site owner or occupier was not available. Peripheral inspection was conducted from the entrance/ boundary of the premises to provide a general view of the Assessment Area. The sites surveyed that were considered to have the potential for contamination were given a Site ID and presented in **Figure 4.1, 4.1a** and **4.1b**. A summary table of the potential contamination areas and their activities/ potential identified contaminants are provided in **Appendix D**.

5. FUTURE LAND USE AND ACTIVITIES

5.1.1 The Risk-Based Remediation Goals (RBRGs) have developed four different post-restoration land uses, namely "Urban Residential", Rural Residential", "Industrial" and "Public Parks", to reflect actual settings in which people could be exposed to contaminated soil or groundwater. Definitions of post-restoration land uses are given in EPD's Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management.

5.1.2 The land use element to be considered within the Project Site is widening of Yuen Long Highway which could be regarded as “Lower of industrial or Public Parks” use. Hence, in case environmental SI works are required, the RBRGs for “Lower of Industrial or Public Parks” would be adopted for result comparison.

6. POTENTIAL CONTAMINATED SITES

6.1.1 According to Section 2.3.1 of EPD’s Practice Guide for the Investigation and Remediation of Contaminated Land, through site survey and desktop review such as the review of aerial photographs and such as FSD and EPD, areas which may have potential to cause soil and groundwater contamination have been identified. Sites identified to have records of dangerous goods and chemical waste producers are considered as potentially contaminated sites. Furthermore, specific land uses which were identified as potentially contaminating sources include the below.

- Open storage;
- Warehouse;
- Vehicle maintenance;
- Metal works;
- Waste recycling;
- Construction material and equipment storage;
- Concrete batching plant; and
- Chemical store; and
- Dangerous Goods Stores; and
- Chemical Waste Producers.

6.1.2 Based on the desktop review of preliminary project alignment, location base maps, relevant findings of land contamination assessment in EIA studies, feasibility studies and investigation assignments at the development sites adjacent to the Project, the majority of the area within the Project Limit would unlikely encroach into potential land contamination areas except a stripe of widened works areas near the industrial premises at Fui Sha Wai South Road and Tong Tai Road between Tin Shui Wai West Interchange and Tong Yan San Tsuen Interchange and also in Tan Kwai Tsuen at the

western side of the north bound section of Yuen Long Highway between Tin Shui Wai West Interchange and Lam Tei Quarry. The potential contaminated areas are indicated in **Figure 4.1, 4.1a** and **4.1b**.

6.1.3 As shown in the figures, the potential contaminated areas would include the open area storage and automobile maintenance at Fui Sha Wai South Road and warehouses at Tong Tai Road etc. A preliminary site walkover at the vicinities of the identified potential land contamination hotspots was also conducted on 25 November 2022 and 12 May 2023. These industrial premises of potential land contamination hotspots may have historic operation activities which might have been causing potential land contamination issues, e.g. any possible occurrence of repairing of machineries and equipment, leakage and/or spillage from underground fuel tank/chemical waste storage facilities/dangerous good stores/diesel fuel from the use in boilers, etc, which may have caused potential land contamination of soil and groundwater due to the discharge and accumulation of Chemicals of Concern (CoC) including heavy metals, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), petroleum hydrocarbons, etc. A summary table of the potential contamination areas and their activities/ potential identified contaminants are provided in **Appendix D**.

6.1.4 With reference to the Practice Guide, the estimated number of boreholes are determined based on the area of contaminated area and regular square grid patterns are adopted follows the requirement from the Practice Guide. The location of sampling boreholes will be identified within the encroachment areas as shown in **Figure 7.1**. The minimum number of sampling boreholes will be determined with reference to Table 2.1 of the Practice Guide.

6.1.5 Other than the above hotspot locations in Fui Sha Wai and Tan Kwai Tsuen, the remaining areas within the Project Limit of the widening works would mainly only encroach local roads, villages, woodland, embankment slopes, etc.

7. SAMPLING AND TESTING PLAN FOR SITE INVESTIGATION

7.1 General

7.1.1 Based on the site background and review of previous site records and other relevant information, the potential sources of land contamination relevant to the site were identified. The chemicals of concern (COCs) for the site will be selected based on the historical land use information collected during the initial site appraisal. The broad groups of COCs for this SI included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and Petroleum Carbon Range.

7.2 Soil Sampling

7.2.1 A preliminary metal detection survey will be undertaken at each drilling location. Only metal (or utility) free locations will be drilled. The concrete slab or pavement will be removed before the actual fill material samples can be taken from underneath. U-100 samplers will be deployed for soil sampling at all boreholes.

7.2.2 Dry rotary drilling method without the need of using any flushing medium is preferable in order to avoid potential cross-contamination. No organic (carbon- or petroleum-based lubricants) or any kind of metal containing lubricants is allowed for use as drilling bit lubricant. When required, only minimum amount of clean fresh water shall be used as lubricating medium as instructed and agreed by the Land Contamination Specialist or his/her delegated Competent Person to avoid sample contamination.

7.2.3 Drilling will be undertaken to a depth at least 6m deep from ground level, or at the base above rock level, or as instructed by the Contamination Specialist or his/ her delegated Competent Person. From each borehole, soil samples will be collected at:

a) 0.5m, 1.5m, 3.0m and then every 3m until 6m (if appropriate) from ground level or reaching the base above rock level, or

b) As instructed by the Contamination Specialist or his/her delegated Competent Person.

7.2.4 Sampling of soil will be carried out with a stainless steel or ceramic spoon. The samples will be scooped directly from the sampling core box into the sample containers and the spoon must be decontaminated by washing with distilled water between samples. If a gloved hand comes into contact with the sample, new gloves will be used for each new sample.

7.2.5 Field personnel must wash hands before sampling and wear a new pair of clean PVC/latex disposable gloves before and during sampling. Field personnel avoids handling the samples directly and manipulates the samples into the appropriate laboratory sampling jars using the cleaned spoons. All sampling equipment will be decontaminated in between each sampling. A clean area will be established immediately adjacent to each drilling location with a portable table covered with a clean plastic sheet, on which all equipment may be placed.

7.2.6 Each sample shall be labelled uniquely and unambiguously. The nature of the soil/fill material in the core shall be recorded at different depths for each core. Records shall be made of the details of depth and the sampling location and other pertinent data such as any non-standard sampling events. The description of soil samples shall include but not restricted to:

- Test site where the sample is collected;
- Sample identification number;
- Soil sampling depth (with respect to the lowest level of the concrete cover, if any);
- Estimated physical characteristics (clay, silt, sand, gravel, stone, cobble, colour, odour, moisture);
- Colour photograph; and
- Any other relevant information.

7.2.7 All samples will be stored in portable cool box with frozen chilled packs at 0-4°C whilst in the field or in transit and returned to the laboratory on the same evening as the day of sampling. A chain-of-custody form will be completed for all the samples delivered to the custody of the Hong Kong Laboratory Accredited Scheme (HOKLAS) accredited laboratory on the same day as sampling. The accredited laboratory QA/QC procedures will be precisely followed.

7.2.8 Each sample tube will be fully sealed, except that the tube ends will be first covered by decontaminated metal foil so that the foil is the only material in direct contact with the soil sample collected. The sample tube will be sealed tightly such that leakage into and out of the tube is minimised.

7.2.9 Strata logging for boreholes will be conducted by a Qualified Geologist during the drilling and sampling. The logs included general stratigraphic description, soil sampling depth, sample notation and level of groundwater. The presence of rocks/boulders/cobbles and foreign objects (e.g. wood, metals and plastics) will be recorded.

7.2.10 All equipment used for sample handling and storage will be decontaminated before and after collection of each sample. Standard procedures for cleaning the drilling rig and sampling equipment are described below:

- Clean with fresh water and lab-grade detergent (use brush if necessary) to remove particulate matter and surface film;
- Rinse thoroughly with tap water (for drilling equipment) or distilled water (for sampling equipment);

- After field cleaning, the equipment will be handled by personnel wearing clean gloves to avoid re-contamination. If the equipment is not to be used immediately, it will be covered with clean plastic sheeting or put in a box to avoid re-contamination;
- The drilling equipment and sampling equipment will be cleaned according to the above procedures between sampling holes.

7.2.11 As the Toxicity Characteristic Leaching Procedure (TCLP) may be required for all soil samples if landfill disposal is selected as the remediation method, surplus soil samples shall be collected and stored for use.

7.3 Groundwater Sampling

7.3.1 Groundwater may be encountered during drilling depending on the water table at drilling locations. Water sampling will be carried out and sent to the laboratory for analysis. Prior to purging and sampling, groundwater levels should be measured and recorded in the borehole logs if water is detected.

7.3.2 Previous geological strata logs have been reviewed for the potential water levels near the Project Site. Based on the records, water levels were recorded at around 1.5m below ground level. If groundwater is encountered during drilling, groundwater samples will be collected at 2m below the water table according to the Practice Guide.

7.3.3 Completed drilled boreholes will be used for groundwater sampling by installing groundwater monitoring wells. Prior to installing the monitoring well screen and casing, the boreholes will be reamed to provide a minimum 50 mm annulus around the casing. The project proponent shall select suitable well casing and screen materials for the site by the characteristics of their strength and chemical resistance/ interference.

7.3.4 Purging of groundwater from the boreholes will be undertaken prior to sampling to remove fine-grained materials and to collect freshly infiltrating representative samples. The boreholes will be purged by removing not less than three times the original volume of groundwater within the boreholes with a pump, e.g. WaTerra Pump or Teflon bailer.

7.3.5 Prior to the commencement of sampling, a clean piece of plastic sheet will be placed on the ground beside the well. All equipment will be placed on this sheet when not in use and all cleaning will be carried out on the plastic sheet. At least two hours after purging, the depth to water table will be measured. One groundwater sample will be collected at each borehole using a hand Teflon bailer.

7.3.6 Prior to purging and sampling, groundwater levels should be measured and recorded. Presence of non-aqueous phase liquid (NAPL) should also be recorded. the evidence of NAPL should be recorded and reported in the Contamination Assessment Report (CAR).

7.3.7 The groundwater in the boreholes will be removed with the selected pump, decanted into a separate clear glass vessel and allowed to settle for five minutes. The presence of any supernatant free product on the groundwater and the respective thickness will be recorded. Emulsification of the groundwater will be noted. The floating layer will be

removed/recovered and analysed separately from the main aqueous phase of the groundwater (as far as is reasonably practicable). All samples will be uniquely labelled.

7.3.8 Between samples, all equipment used for sample handling and storage will be thoroughly decontaminated with laboratory-grade detergent. Samples will be stored in appropriate pre-washed containers (provided by the HOKLAS laboratory) and immediately put in an insulated cool box. All containers will be filled to over-flowing (i.e. no air bubble inside the container after sealing) except those which preservatives have been added. It must be ensured that the sample containers and the box are tightly closed and that sufficient chilling packs or ice are provided to maintain a temperature of 0-4°C inside the box.

7.3.9 Chilled groundwater samples will be transferred to the custody of the HOKLAS accredited laboratory on the same day as sampling. A chain-of-custody system will be operated in triplicate as part of the QA/QC procedure. The accredited laboratory QA/QC procedures will be precisely followed.

7.4 Assessment Criteria

7.4.1 The assessment criteria will make reference to the EPD's Guidance Note for Contaminated Land Assessment and Remediation, and Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management. Reference was made to the Risk-Based Remediation Goals (RBRGs) criteria for assessing the extent of land contamination in the present site based on the proposed future land use as "Lower of Industrial or Public Parks" as tabulated in **Tables 7.1** and **Table 7.2**.

Table 7.1 Risk-Based Remediation Goals (RBRGs) for Soil and Soil Saturation Limit for this Site

Chemical	RBRGs for Soil for Industrial (mg/kg)	RBRGs for Soil for Public Parks (mg/kg)	Soil Saturation Limit (Csat) (mg/kg)	Reporting Limit (mg/kg)	Analytical Method
Volatile Organic Compounds (VOCs)					
Acetone	10,000*	10,000*	***	50	USEPA 8260
Benzene	9.21	42.2	3.36E+02	0.2	
Bromodichloromethane	2.85	13.4	1.03E+03	0.1	
2-Butanone	10,000*	10,000*	***	5	
Chloroform	1.54	253	1.10E+03	0.04	
Ethylbenzene	8,240	10,000*	1.38E+02	0.2	
Methyl tert-Butyl Ether	70.1	505	2.38E+03	0.5	
Methylene Chloride	13.9	128	9.21E+02	0.5	
Styrene	10,000*	10,000*	4.97E+02	0.5	
Tetrachloroethene	0.777	1.84	9.71E+01	0.04	
Toluene	10,000*	10,000*	2.35E+02	0.2	
Trichloroethene	5.68	69.4	4.88E+02	0.1	
Xylenes (Total)	1,230	10,000*	1.50E+02	0.4	
Semi-Volatile Organic Compounds (SVOCs)					
Acenaphthene	10,000*	10,000*	6.02E+01	0.5	

Chemical	RBRGs for Soil for Industrial (mg/kg)	RBRGs for Soil for Public Parks (mg/kg)	Soil Saturation Limit (Csat) (mg/kg)	Reporting Limit (mg/kg)	Analytical Method
Acenaphthylene	10,000*	10,000*	1.98E+01	0.5	USEPA 8270
Anthracene	10,000*	10,000*	2.56E+00	0.5	
Benzo(a)anthracene	91.8	38.3	-	0.5	
Benzo(a)pyrene	9.18	3.83	-	0.5	
Benzo(b)fluoranthene	17.8	20.4	-	0.5	
Benzo(g,h,i)perylene	10,000*	5,740	-	0.5	
Benzo(k)fluoranthene	918	383	-	0.5	
Bis-(2-Ethylhexyl)phthalate	91.8	94.2	-	5.0	
Chrysene	1,140	1,540	-	0.5	
Dibenzo(a,h)anthracene	9.18	3.83	-	0.5	
Fluoranthene	10,000*	7,620	-	0.5	
Fluorene	10,000*	7,450	5.47E+01	0.5	
Hexachlorobenzene	0.582	0.713	-	0.2	
Indeno(1,2,3-cd)pyrene	91.8	38.3	-	0.5	
Naphthalene	453	914	1.25E+02	0.5	
Phenanthrene	10,000*	10,000*	2.80E+01	0.5	
Phenol	10,000*	10,000*	7.26E+03	0.5	
Pyrene	10,000*	5,720	-	0.5	
Metals					
Antimony	261	97.9	-	0.5	USEPA 6020
Arsenic	196	73.5	-	1	
Barium	10,000*	10,000*	-	1	
Cadmium	653	245	-	0.2	
Cobalt	10,000*	4,900	-	1	
Copper	10,000*	9,790	-	1	
Lead	2,290	857	-	1	
Manganese	10,000*	10,000*	-	1	
Molybdenum	3,260	1,220	-	1	
Nickel	10,000*	4,900	-	1	
Tin	10,000*	10,000*	-	1	
Zinc	10,000*	10,000*	-	1	
Mercury	38.4	45.6	-	0.2	APHA Method 3112B
Chromium III	10,000*	10,000*	-	1	By calculation Total Cr–Cr VI
Chromium VI	1,960	735	-	1	USEPA 3060 APHA 3500 Cr:D
Petroleum Carbon Ranges					
C6 - C8	10,000*	10,000*	1.00E+03	5	USEPA 8015
C9 - C16	10,000*	10,000*	3.00E+03	200	
C17 - C35	10,000*	10,000*	5.00E+03	500	

Notes:
* indicates a 'ceiling limit' concentration.
*** indicates that the Csat value exceeds the 'ceiling limit' therefore the RBRG applies.

Table 7.2 Risk-Based Remediation Goals (RBRGs) for Groundwater and Groundwater Solubility Limit for this Site

Chemical	RBRGs for Groundwater for Industrial (mg/L)	Groundwater Solubility Limit (mg/L)	Reporting Limit (µg/L)	Analytical Method
Volatile Organic Compounds (VOCs)				
Acetone	10,000*	***	500	USEPA 8260
Benzene	54.0	1,750	5	
Bromodichloromethane	26.2	6,740	5	
2-Butanone	10,000*	***	50	
Chloroform	11.3	7,920	5	
Ethylbenzene	10,000*	169	5	
Methyl tert-Butyl Ether	1,810	***	5	
Methylene Chloride	224	***	50	
Styrene	10,000*	310	5	
Tetrachloroethene	2.95	200	5	
Toluene	10,000*	526	5	
Trichloroethene	14.2	1,100	5	
Xylenes (Total)	1,570	175	20	
Semi-Volatile Organic Compounds (SVOCs)				
Acenaphthene	10,000*	4.24	2.0	USEPA 8270
Acenaphthylene	10,000*	3.93	2.0	
Anthracene	10,000*	0.0434	2.0	
Benzo(b)fluoranthene	7.53	0.0015	1.0	
Chrysene	812	0.0016	1.0	
Fluoranthene	10,000*	0.206	2.0	
Fluorene	10,000*	1.98	2.0	
Hexachlorobenzene	0.695	6.20	4.0	
Naphthalene	862	31.0	2.0	
Phenanthrene	10,000*	1.00	2.0	
Pyrene	10,000*	0.135	2.0	
Metals				
Mercury	6.79	-	0.5	APHA Method 3112B
Petroleum Carbon Ranges				
C6 - C8	1,150	5.23	20	USEPA 8015
C9 - C16	9,980	2.80	500	
C17 - C35	178	2.80	500	

Notes:
* indicates a 'ceiling limit' concentration.
*** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRG applies.

7.4.2 The findings of the investigation and the strategy of the remedial measures according to the RBRGs standard, as well as any further information on the proposed future land use of the Project site area, will be incorporated into a CAR and RAP for the approval of EPD.

7.5 Sampling Parameters

7.5.1 Based on the latest information, site C1 to C7 are currently under work area of CEDD contract no. YL/2022/01. The environmental sampling of these sites will be conducted by relevant contractors under YL/2022/01. Sites C8 and C9 are currently under Yuen Long South Stage 2B works areas. Similar to C1 to C7, the environmental sampling of these areas will be conducted by the relevant contractors. A separate CAP for site C1 to C9 shall be prepared and submitted by the relevant contractors.

7.5.2 The selection of potential chemicals of concern (CoC) for laboratory analysis at each proposed sampling location is based on the respective nature of present and historical uses together with the Guidance Manual and Practice Guide Table 2.3. The below table summarizes the sampling requirements and testing parameters.

Table 7.3 Sampling and Testing Schedule for Potential Contaminated Area

Site ID	Address	Historical Land Use	Current Land Use	Testing Parameter (Key COCs)			
				VOCs	SVOCs	Metals	PCRs
C1^	No.7 Tong Tai Road, Tong Yan San Tsuen, Yuen Long	Warehouse	Warehouse	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C2^	No.9 Tong Tai Road, Tong Yan San Tsuen, Yuen Long	Warehouse	Warehouse	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C3^	Temporary structure at Tong Tai Road, next to No. 9 Tong Tai Road	Warehouse	Warehouse	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C4^	Temporary structure at Tong Tai Road, next to Site C6	Warehouse	Warehouse	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C5^	78 Tong Yan San Tsuen Road, Yuen Long	Construction materials and equipment storage	Construction materials and equipment storage	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C6^	Temporary structure at South of Yuen Long Highway, West of Tong Yan San Tsuen Road	Warehouse and Open Area Storage	Warehouse and Open Area Storage	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C7^	South of Yuen Long Highway, West of Tong Yan San Tsuen Road	Construction material and equipment storage	Construction material and equipment storage	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C8^	Temporary structure at Fui Sha Wai South	Warehouse	Warehouse	Conducted under	Conducted under	Conducted under	Conducted under

Site ID	Address	Historical Land Use	Current Land Use	Testing Parameter (Key COCs)			
				VOCs	SVOCs	Metals	PCRs
	Road, at the North of Hung Tin Road			separate contractor	separate contractor	separate contractor	separate contractor
C9^	A vacant land at Fui Sha Wai South Road, at the North of Hung Tin Road	Vehicle Maintenance	Vehicle Maintenance	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor	Conducted under separate contractor
C10	A vacant land at Fui Sha Wai South Road next to Tai Tao Tsuen	Vacant vegetated Land	Construction materials and equipment storage/ Open area storage	Full Suite	Full Suite	Full Suite	Full Suite

Note:
(1) Full Suite refers to the parameters as shown in Table 2.1 – RBRGs for Soil & Soil Saturation Limit and Table 2.2 – RBRGs for Groundwater and Solubility Limit under VOCs, SVOCs,, Metals and Petroleum, Carbon Ranges in the Guidance Manual.
- BTEX includes benzene, toluene, ethylbenzene and total xylenes.
- PAHs include acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene.
Since RBRG value of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, bis-(2-Ethylhexyl)phthalate, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Phenol were not available for groundwater, the captioned chemicals parameters would not be tested in groundwater sample.

(2) The recommended sampling and testing strategy is only tentative and is subject to be reviewed after land resumption and site re-appraisal.

^ The SI sampling of these sites are not conducted under this Project as these areas are under contract no. YL/2022/01 and YLS Stage 2B. Construction period of YL/2022/01 is Dec 2022 – 2028 at C1 to C7 and YLS stage 2B is 2025 – 2031 at C8 to C9.

7.6 Sampling Location

7.6.1 Based on the study appraisal findings on the encroachment area and as referred to the Practice Guide, the tentative sampling locations are shown in **Figure 7.1**. 8 sampling locations (BH1 to BH8) are proposed. It is noted that the location and numbers of sampling boreholes are tentative in this stage and subject to the status of land resumption and design alignment of the Project. The actual sampling locations and numbers will be further reviewed after appraisal of the sites after land resumption. **Table 7.4** summarize the sampling grid size and proposed number of sampling locations.

Table 7.4 Sampling Grid Size and number of sampling points in accordance with Practice Guide

Site ID	Site area, m^2	Size of encroachment area, m^2	Sampling Grid Size	Proposed number of sampling locations
C1	1868	73	N/A	N/A
C2	1546	160	N/A	N/A
C3	960	158	N/A	N/A
C4	333	97	N/A	N/A
C5	5043	92	N/A	N/A
C6	2046	482	N/A	N/A
C7	974	64	N/A	N/A
C8	470	159	N/A	N/A
C9	493	55	N/A	N/A
C10	2286	1301	13m x 13m	8

Note: N/A represents the sampling locations that will not be conducted under this Project.

7.7 Sample Handling Procedure

7.7.1 Sample size and preservation procedures required for each chemical analysis should be confirmed with the laboratory prior to the commencement of site investigation. Sample containers should be laboratory cleaned, sealable, water-tight, made of suitable materials to prevent cross contamination, reaction or adsorption of contaminants with the container surface. Samples should be placed in appropriate uncontaminated containers with gas-tight, non-absorptive seals, allowing no headspace (for volatile compounds), and kept chilled until arrival at the laboratory.

7.7.2 Samples should not be frozen because glass sample jars can crack or break. For samples containing relatively volatile contaminants, immediately store at a temperature range within 0°C to 4°C in order to achieve proper sample preservation. Where field screening is required (e.g. head-space testing), a separate sample must be collected. Arrangements should be made to ensure delivery of chilled samples to the laboratory as soon as possible to allow analysis to commence within the time

limitations which apply for the parameters and laboratory methods. Samples must remain preserved until they are analysed.

7.8 Storage of Surplus Soil Samples

7.8.1 In the event that landfill disposal is required, additional tests in terms of Toxicity Characteristics Leaching Procedure (TCLP) should be required to meet the criteria for disposal to landfills. Hence, surplus soil samples obtained during the site investigation should be stored for subsequent TCLP tests if deemed necessary. The landfill disposal criteria for contaminated soil are shown in **Table 7.5**.

Table 7.5 Testing Method and Reporting Limit for TCLP Analyses of Soil Samples for Landfill Disposal

Parameters	Test Method	Reporting Limit for Soil (mg/L)
TCLP Leachate Preparation followed by analysis for:	TCLP Leachate Preparation: USEPA 1311	--
Antimony (Sb)	USEPA 1311 and 6020	0.1
Arsenic (As)	USEPA 1311 and 6020	0.1
Barium (Ba)		0.1
Beryllium (Be)		0.1
Cadmium (Cd)		0.01
Chromium (Cr)		0.1
Copper (Cu)		0.1
Lead (Pb)		0.1
Nickel (Ni)		0.1
Selenium (Se)		0.02
Silver (Ag)		0.1
Thallium (Tl)		0.01
Tin (Sn)		0.1
Vanadium (V)		0.1
Zinc (Zn)	USEPA 1311 and 6020	0.1
Mercury (Hg)	USEPA 1311 and 6020	0.002

7.9 QA/QC Requirements

7.9.1 All sampling tools would be cleaned thoroughly before and after each sampling using phosphate-free detergent to minimize chance of cross contamination. Disposable latex gloves would be worn to prevent the transfer of contaminants from other sources when handling the samples. Disposable accessories, such as latex gloves, would be discarded properly after use.

7.9.2 The samples collected will be labelled with information for identification and will be delivered to laboratory for testing within 24 hours of collection. Chain-of-custody documentation shall be prepared to document sample handling and transport procedures from the point of collection at the site to the laboratory.

7.9.3 All the specific testing methods for the COCs of the laboratories should be accredited by Hong Kong Laboratory Accreditation Scheme (HOKLAS). Laboratory QA/QC requirements, including method blank, sample duplicates, method analyte spike, negative/ positive control for biological test, etc. will be strictly complied with.

7.9.4 Field logs will be kept for all on-site sampling works with details including as-built sampling locations, sampling date, site activities and observations. Any deviation from the standard procedures and reasons will be recorded in the logs.

QA/QC Sampling

7.9.5 The following QC samples for soil and groundwater shall be collected for laboratory analysis during the sampling:

- 1 equipment blank per 20 samples;
- 1 field blank per 20 samples;
- 1 set of duplicate sample per 20 samples; and
- 1 trip blank per trip for the analysis of volatile parameters.

The testing parameters for the equipment blanks, field blanks and duplicate samples shall follow the COCs listed in **Table 7.1** and **7.2**.

7.10 Health and Safety

7.10.1 The specific safety measures to be taken depend on the nature and content of contamination, the site conditions and the regulations related to site safety requirements.. Any abnormal conditions found shall be reported immediately to the safety officer and the land contamination specialist. The Site Investigation (SI) contractor shall establish and maintain a Health and Safety Plan before commencement of the SI that will include the following:

1. Instruction of works on work procedures, safe practices, emergency duties, and applicable regulations;
2. Regularly scheduled meetings of the workers in which the possible hazards, problems of the job, and related safe practices are emphasized and discussed;
3. Good housekeeping practices; and
4. Availability of and instruction in the location, use and maintenance of personal protective equipment.

7.10.2 The GI Contractor shall maintain equipment and supplies reasonably required in an emergency, including lifesaving, evacuation, rescue and medical equipment in good working order and condition at all times. The SI Contractor shall use all reasonable means to control and prevent fires and explosions, injury to personnel and damage to equipment of property. Without limiting the foregoing, the GI Contractor shall:

1. Maintain proper safety devices and barriers to minimize hazards during performance of the work;
2. Prohibit smoking and open flames and the carrying of matches and lighters;
3. Develop and maintain a written emergency plan applicable to the work site;

4. Maintain equipment in good operating condition and have emergency and first aid equipment ready for immediate use, where applicable;
5. Conduct equipment tests to ensure that equipment is properly placed and in good operating condition, and that workers are able to respond to emergency situations;
6. Require all workers employed or retained by the Contractor, or a subcontractor, to at all time wear clothing suitable for existing work, weather and environmental conditions; and
7. Require the site personnel to wear respirator and gloves for vapour exposure protection, if necessary.
8. Ensure all site staff members wear safety helmet and protective boots.

8. REMEDIATION MEASURES

8.1.1 After endorsement of the CAP by EPD, site investigation will be conducted and then the Contamination Assessment Report (CAR) will be prepared. The CAR will present the findings of the site investigation where site access can be obtained and evaluate the level and extent of potential contamination. The CAR will evaluate the potential environmental and human health impacts based on the extent of potential contamination identified. If remediation is required, a Remediation Action Plan (RAP) will be prepared. The objectives of the RAP will be:

- To undertake further site investigation where required;
- To evaluate and recommended appropriate remedial measures for the contaminated soil and groundwater identified in the assessment;
- To recommend good handling practices for the contaminated soil and groundwater during all stages of the remediation works;
- To recommend approximate handling and disposal measures; and
- To formulate optimal and cost-effective mitigation and remedial measures for the EPD's agreement.

8.1.2 A Remediation Report (RR) to demonstrate adequate remediation shall be prepared and submitted to EPD for endorsement prior to the commencement of any construction/ development works within the Project Site. No construction/ development works shall be carried out before the endorsement of the RR.

9. PROGRAMME SCHEDULE

9.1.1 According to the current programme, land resumption will be arranged in Q3 2024 upon Scheme Authorisation (Q2 2024). It is expected the resumption programme would be divided into different distinct development or works packages. Therefore, the contamination assessment programme is expected to span the entire duration of the works packages, as access to potentially contaminated sites is granted. The assessment will comprise of the following activities:

- Preparation and submission of supplementary CAP to EPD for endorsement;
- Mobilization of the SI Contractor (pending private property access arrangements) and contracting analytical laboratory;
- Field sampling programme (number of days in field depends on number of sites and sampling locations to be employed);
- Analytical programme / laboratory turnaround (normal turnaround time is expected 10 days to two weeks depending upon the number of samples);

- Assessment and reporting of results in a draft CAR, including, if required, development of RAP (estimate minimum of three weeks) for contaminations; and
- Preparation and submission of RR after the completion of remediation works.

9.1.2 The supplementary CAP will only include information for Site C10. Site C1 to C9 will be included in the CAP/ SCAP by the relevant contractors.

9.1.3 The tentative programme for land contamination assessment and remediation after land resumption is provided in **Table 9.1** and **Figure 9.1**.

Table 9.1Tentative Programme Schedule of Submissions

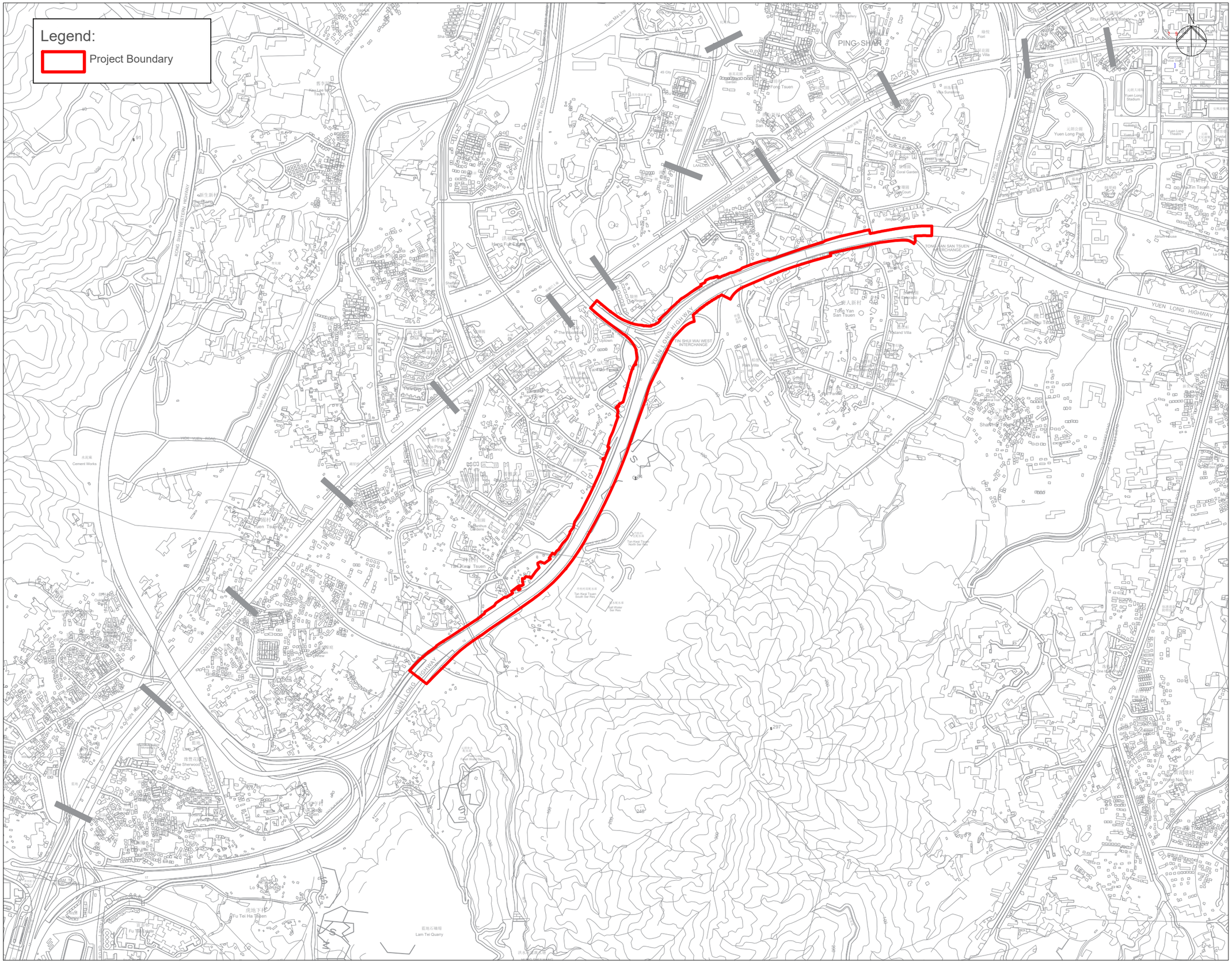
Submission Item	Tentative Schedule
Supplementary CAP	Q3 2024
Contamination Assessment Report	Q4 2024
Remediation Assessment Plan (RAP)*	Q4 2024
Remediation Assessment Report (RR)*	Q12025

*Note: The RAP and RR are only required when contamination is identified after conducting the SI and field sampling works.

FIGURES

Widening of Yuen Long Highway (section between Lam Tei and Tong Yan San Tsuen)
Contamination Assessment Plan

Figure 1.1
Location of Project Site



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PROJECT
WIDENING OF YUEN LONG HIGHWAY
(SECTION BETWEEN LAM TEI AND TONG YAN SAN TSUEN)

CLIENT
路政署 HIGHWAYS DEPARTMENT

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STATUS

SCALE **DIMENSION UNIT**

KEY PLAN

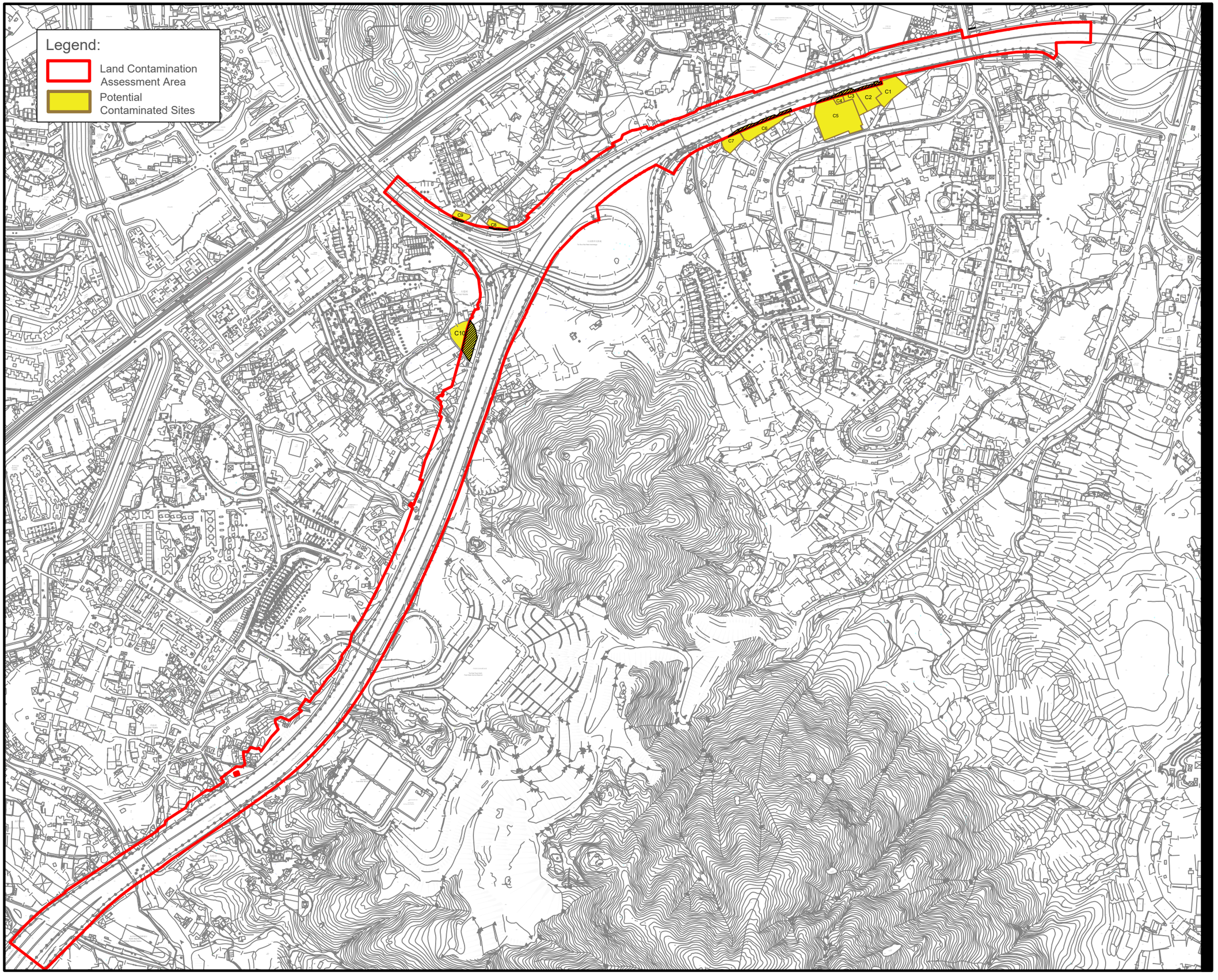
PROJECT NO. **CONTRACT NO.**
60695325 CE 17/2022(HY)

SHEET TITLE
Location of potential contaminated areas

SHEET NUMBER
Figure 1.1

Figure 4.1, 4.1a and 4.1b
Potential Land Contaminated Area

ISO A3 420mm x 297mm



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KEY PLAN

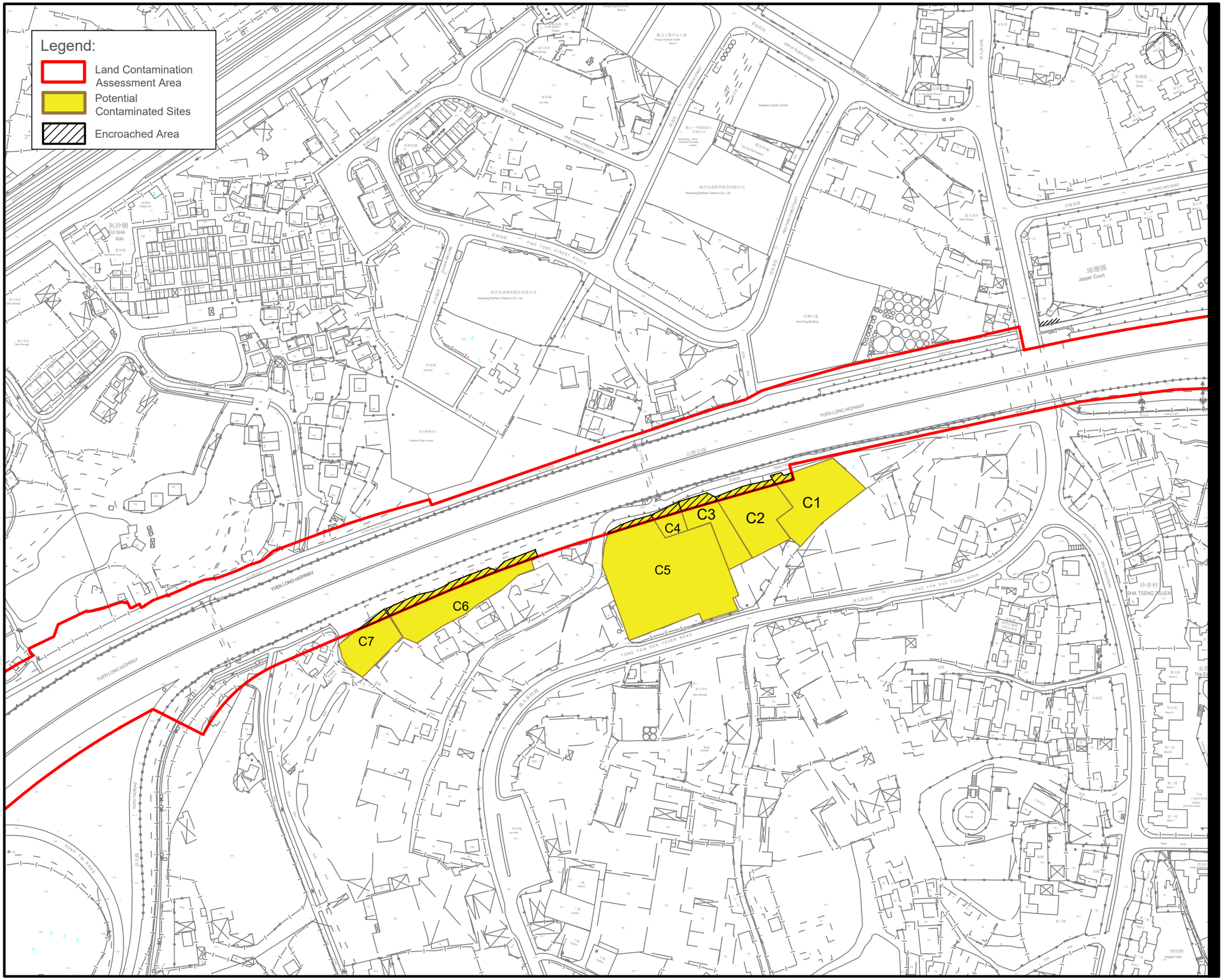
PROJECT NO.
60695325

CONTRACT NO.
CE 17/2022(HY)

SHEET TITLE
Location of potential contaminated sites

SHEET NUMBER
Figure 4.1

ISO A3 420mm x 297mm



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PROJECT NO. **CONTRACT NO.**

60695325 CE 17/2022(HY)

SHEET TITLE

Location of potential contaminated areas

SHEET NUMBER

Figure 4.1a

ISO A3 420mm x 297mm

Legend:

- Land Contamination Assessment Area
- Potential Contaminated Sites
- Encroached Area

C9

C8

C10

N

洪天路 HUNG TIN ROAD

FUI SHA WAI SOUTH ROAD 灰沙圍南路

YUEN LONG HIGHWAY

元朗公路

天水圍西交匯處
Tin Shui Wai West Interchange

大道村
TAI TAO TSUEN

蔚林
The Woodside

The Woodsville

尚城
Uptown

駿景
Le Regent

大道村變電站
Tai Tao Tsuen Substation

露天貨倉
Open Storage

和圍

前柏雨中學
Former Pak U Middle School

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KEY PLAN

PROJECT NO. **CONTRACT NO.**

60695325 CE 17/2022(HY)

SHEET TITLE

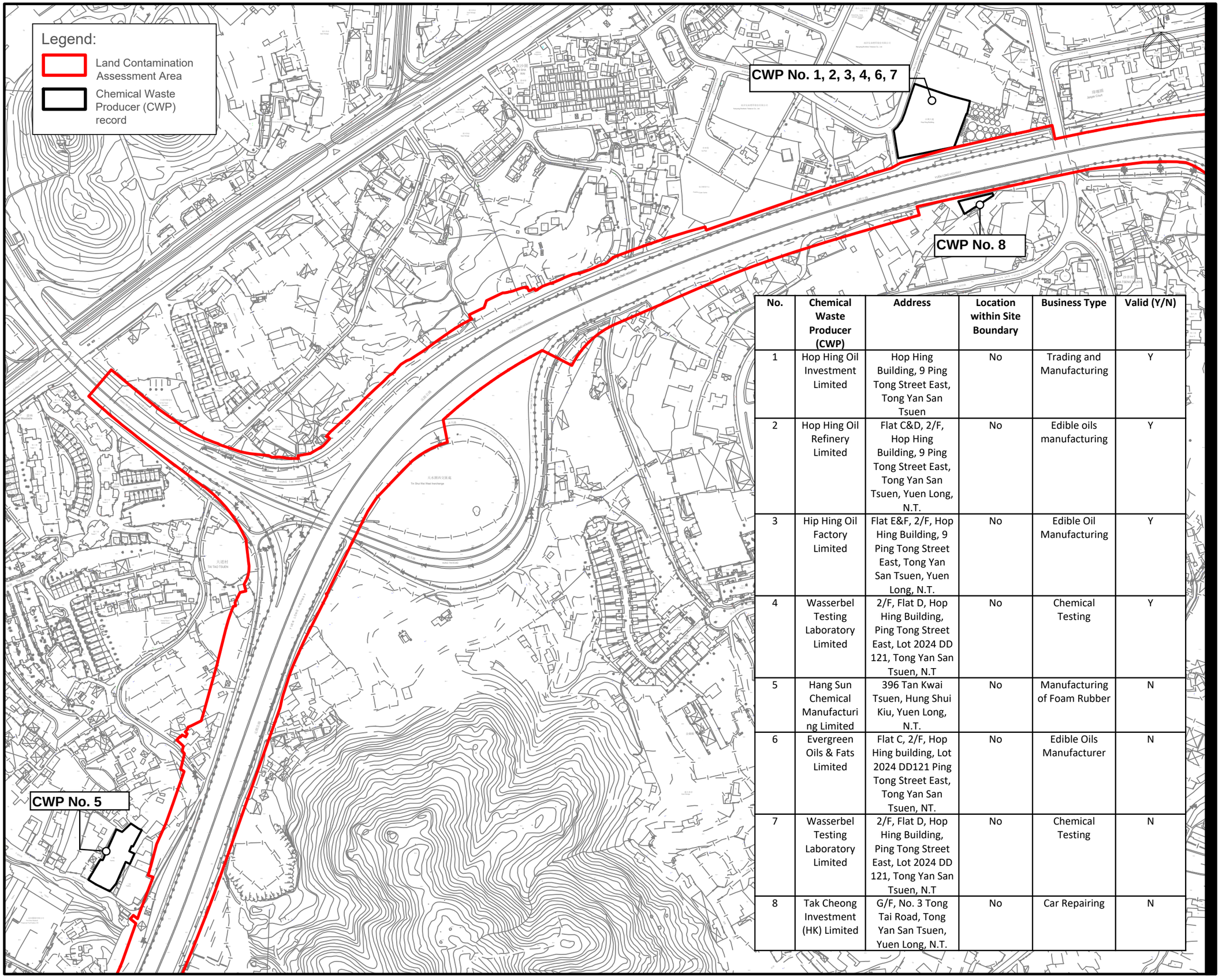
Location of potential contaminated areas

SHEET NUMBER

Figure 4.1b

Figure 4.2
Location of Chemical Waste Producer Records

ISO A3 420mm x 297mm



No.	Chemical Waste Producer (CWP)	Address	Location within Site Boundary	Business Type	Valid (Y/N)
1	Hop Hing Oil Investment Limited	Hop Hing Building, 9 Ping Tong Street East, Tong Yan San Tsuen	No	Trading and Manufacturing	Y
2	Hop Hing Oil Refinery Limited	Flat C&D, 2/F, Hop Hing Building, 9 Ping Tong Street East, Tong Yan San Tsuen, Yuen Long, N.T.	No	Edible oils manufacturing	Y
3	Hip Hing Oil Factory Limited	Flat E&F, 2/F, Hop Hing Building, 9 Ping Tong Street East, Tong Yan San Tsuen, Yuen Long, N.T.	No	Edible Oil Manufacturing	Y
4	Wasserbel Testing Laboratory Limited	2/F, Flat D, Hop Hing Building, Ping Tong Street East, Lot 2024 DD 121, Tong Yan San Tsuen, N.T	No	Chemical Testing	Y
5	Hang Sun Chemical Manufacturing Limited	396 Tan Kwai Tsuen, Hung Shui Kiu, Yuen Long, N.T.	No	Manufacturing of Foam Rubber	N
6	Evergreen Oils & Fats Limited	Flat C, 2/F, Hop Hing building, Lot 2024 DD121 Ping Tong Street East, Tong Yan San Tsuen, NT.	No	Edible Oils Manufacturer	N
7	Wasserbel Testing Laboratory Limited	2/F, Flat D, Hop Hing Building, Ping Tong Street East, Lot 2024 DD 121, Tong Yan San Tsuen, N.T	No	Chemical Testing	N
8	Tak Cheong Investment (HK) Limited	G/F, No. 3 Tong Tai Road, Tong Yan San Tsuen, Yuen Long, N.T.	No	Car Repairing	N

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DIMENSION UNIT

KEY PLAN

PROJECT NO.
60695325

CONTRACT NO.
CE 17/2022(HY)

SHEET TITLE
Location of Chemical Waste Producer Records

SHEET NUMBER
Figure 4.2

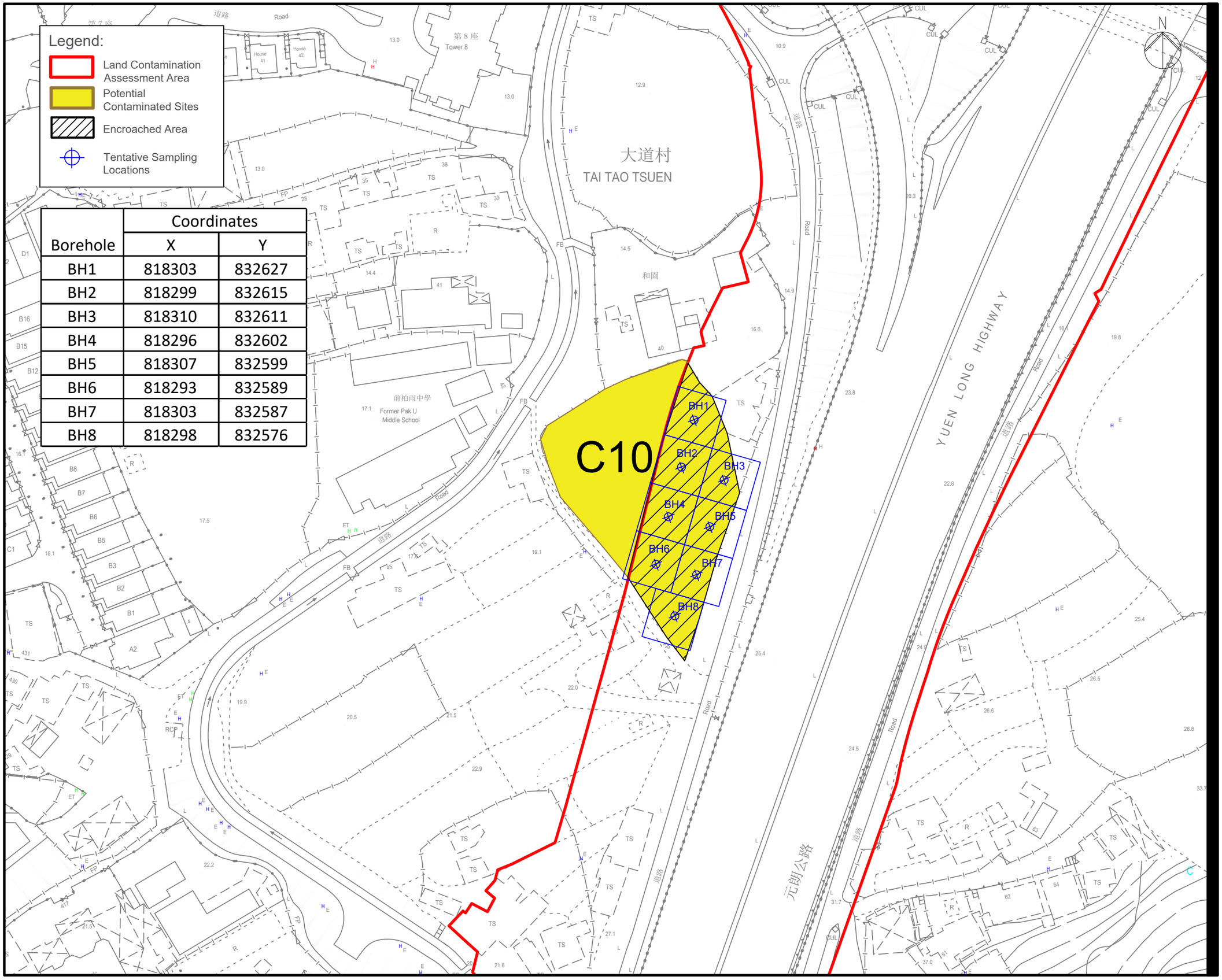
Figure 7.1
Tentative Sampling Locations of the contaminated area

ISO A3 420mm x 297mm

Legend:

- Land Contamination Assessment Area
- Potential Contaminated Sites
- Encroached Area
- Tentative Sampling Locations

Borehole	Coordinates	
	X	Y
BH1	818303	832627
BH2	818299	832615
BH3	818310	832611
BH4	818296	832602
BH5	818307	832599
BH6	818293	832589
BH7	818303	832587
BH8	818298	832576



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KEY PLAN

PROJECT NO.
60695325

CONTRACT NO.
CE 17/2022(HY)

SHEET TITLE
Tentative Sampling locations of contaminated area

SHEET NUMBER
Figure 7.1

Figure 9.1
Tentative Programme for Land Contamination Assessment and Remediation after Land Resumption

ID	Task Name	Duration	2024						2025											
			7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	Preparation of Supplementary CAP	30 days																		
2	EPD Review and Comment on Supplementary CAP	20 days																		
3	Finalization of Supplementary CAP	15 days																		
4	Field Works (Detailed SI)	20 days																		
5	Laboratory Testing Works	20 days																		
6	Prepare CAR/ RAP	30 days																		
7	EPD Comment on/ Approval of CAR/RAP	30 days																		
If Remediation is required																				
8	Remediation Works	20 days																		
9	Prepare RR	30 days																		
10	EPD Comment on / Approval of RR	30 days																		

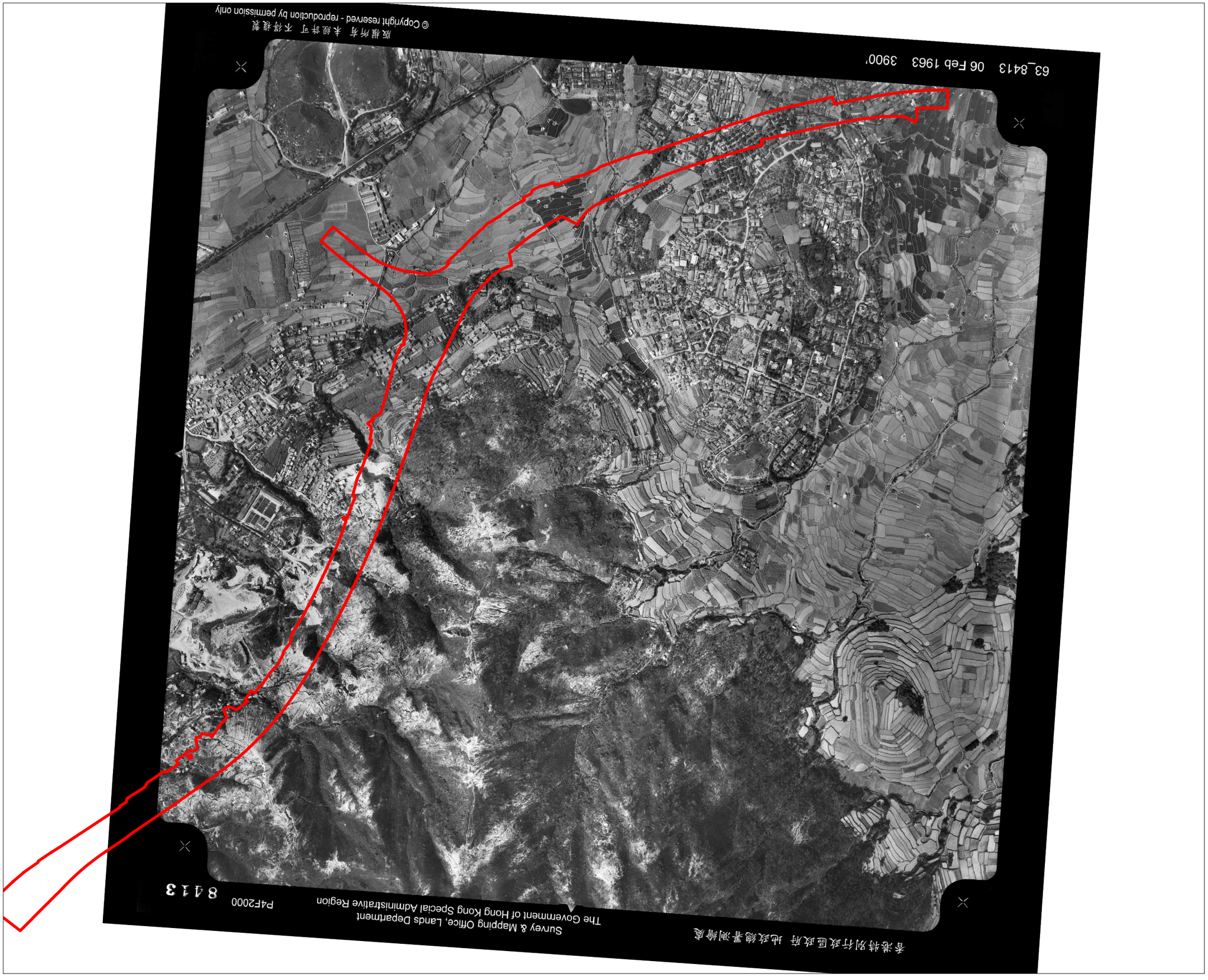
Note:

The tentative programme is for general reference only and the actual time span will be subject to the actual site condition of each concerned sites.

APPENDICES

Widening of Yuen Long Highway (section between Lam Tei and Tong Yan San Tsuen)
Contamination Assessment Plan

Appendix A
Aerial Photo Records



Legend

Project Boundary

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Photo Reference:
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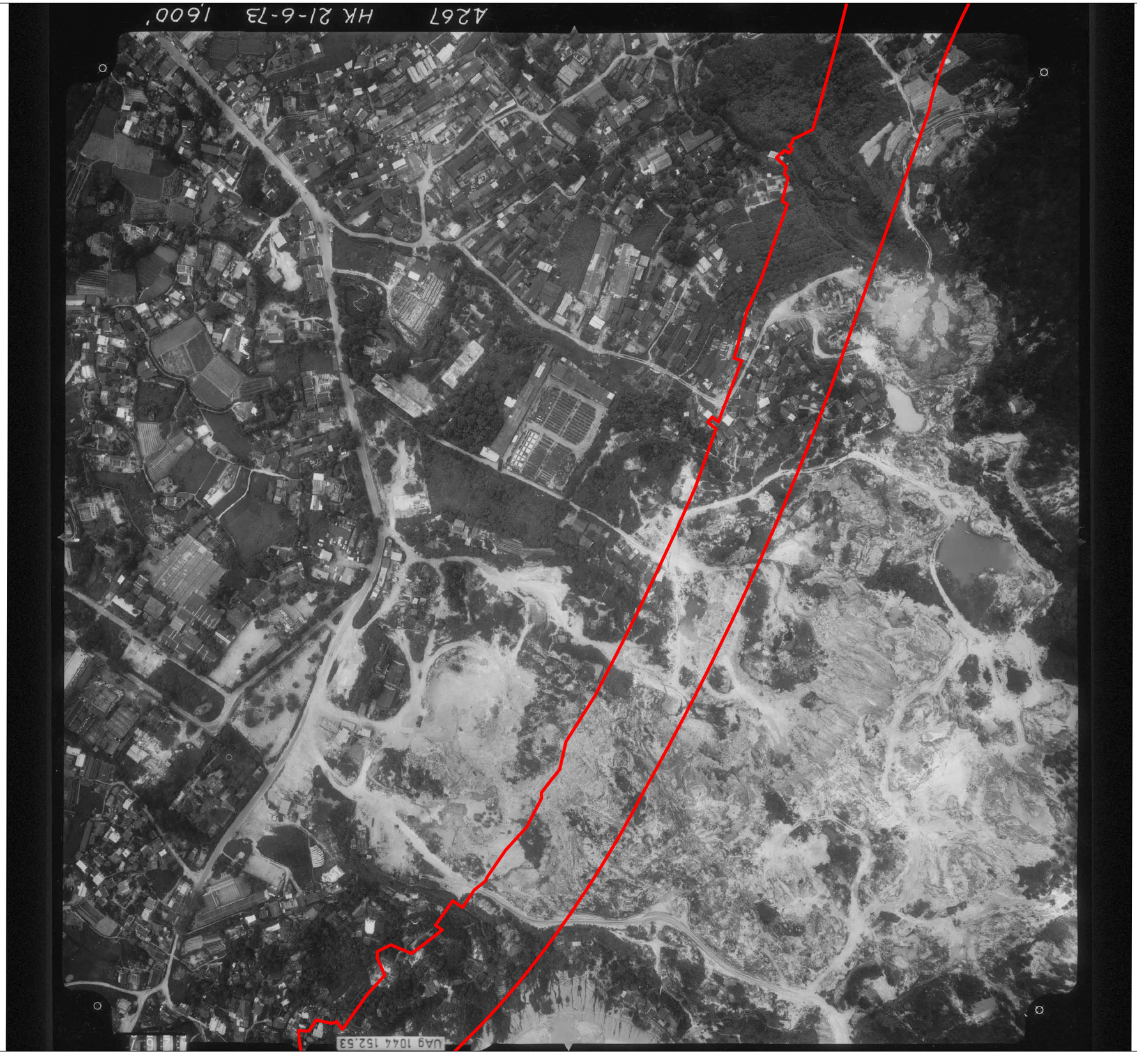

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Project Boundary

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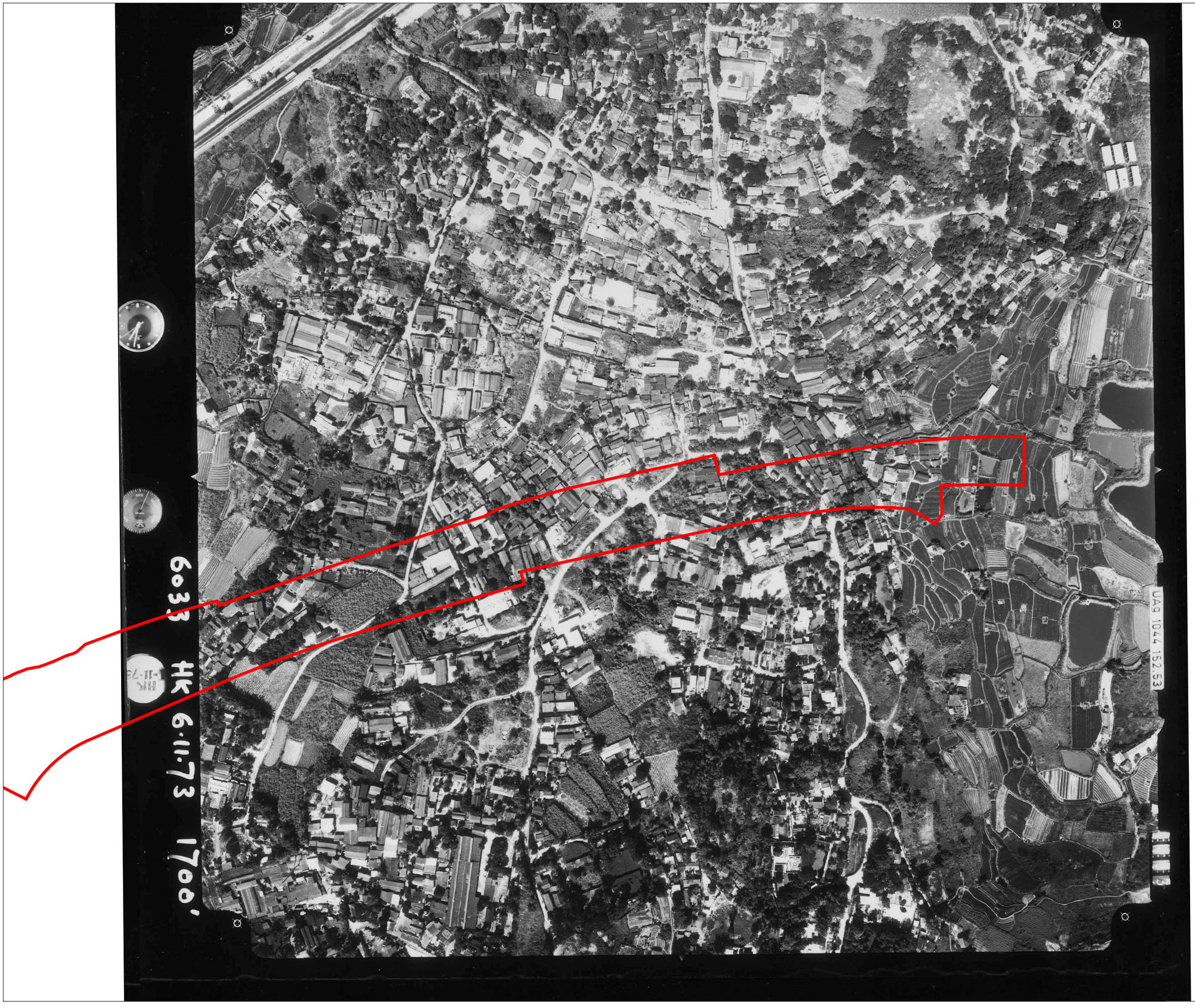

Legend

Project Boundary

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Photo Reference:
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Year of Aerial Photo:
1973

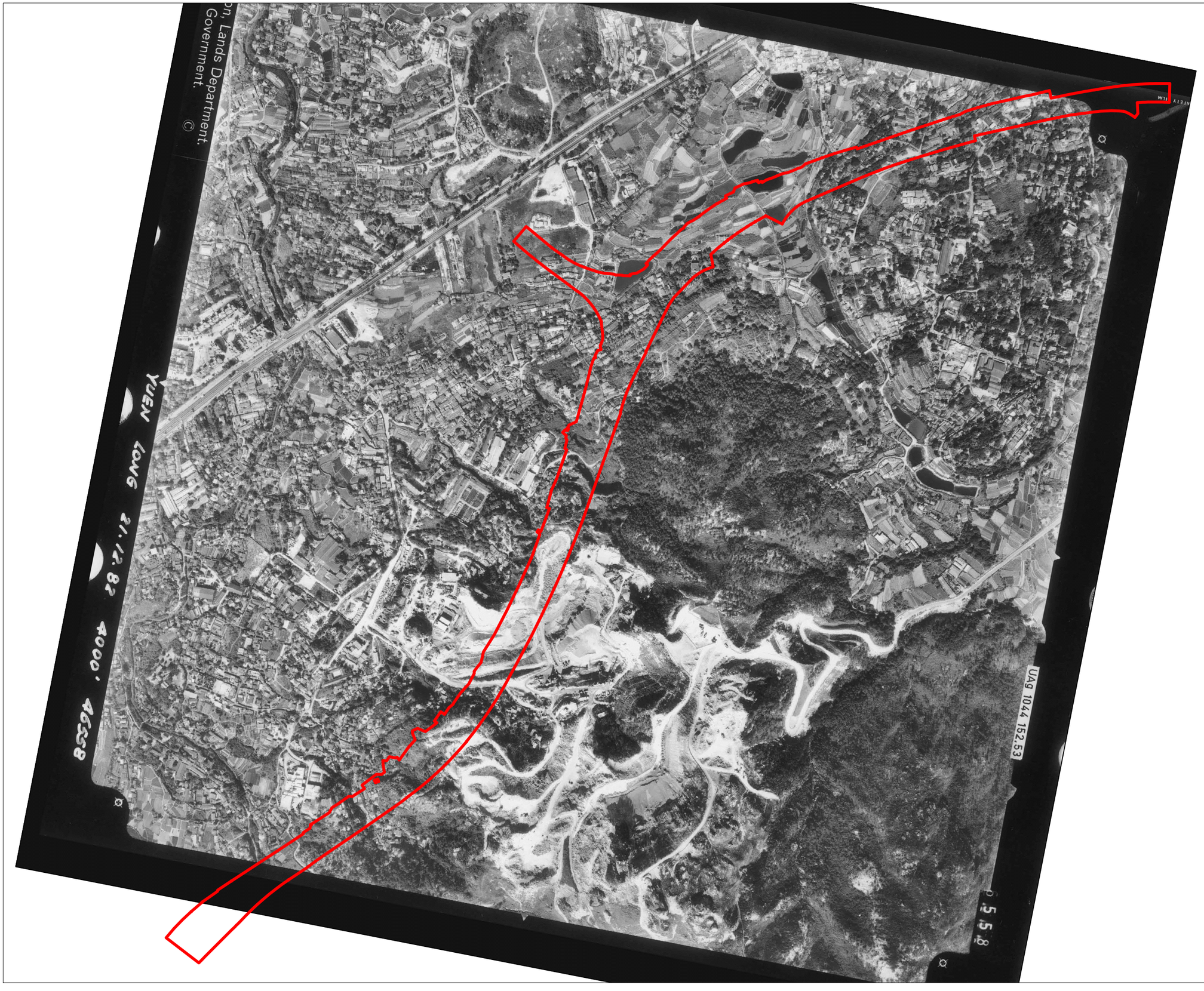
Photo Reference:
06053

Legend

Project Boundary

Year of Aerial Photo:
1973

Photo Reference:
07557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Year of Aerial Photo:
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Photo Reference:
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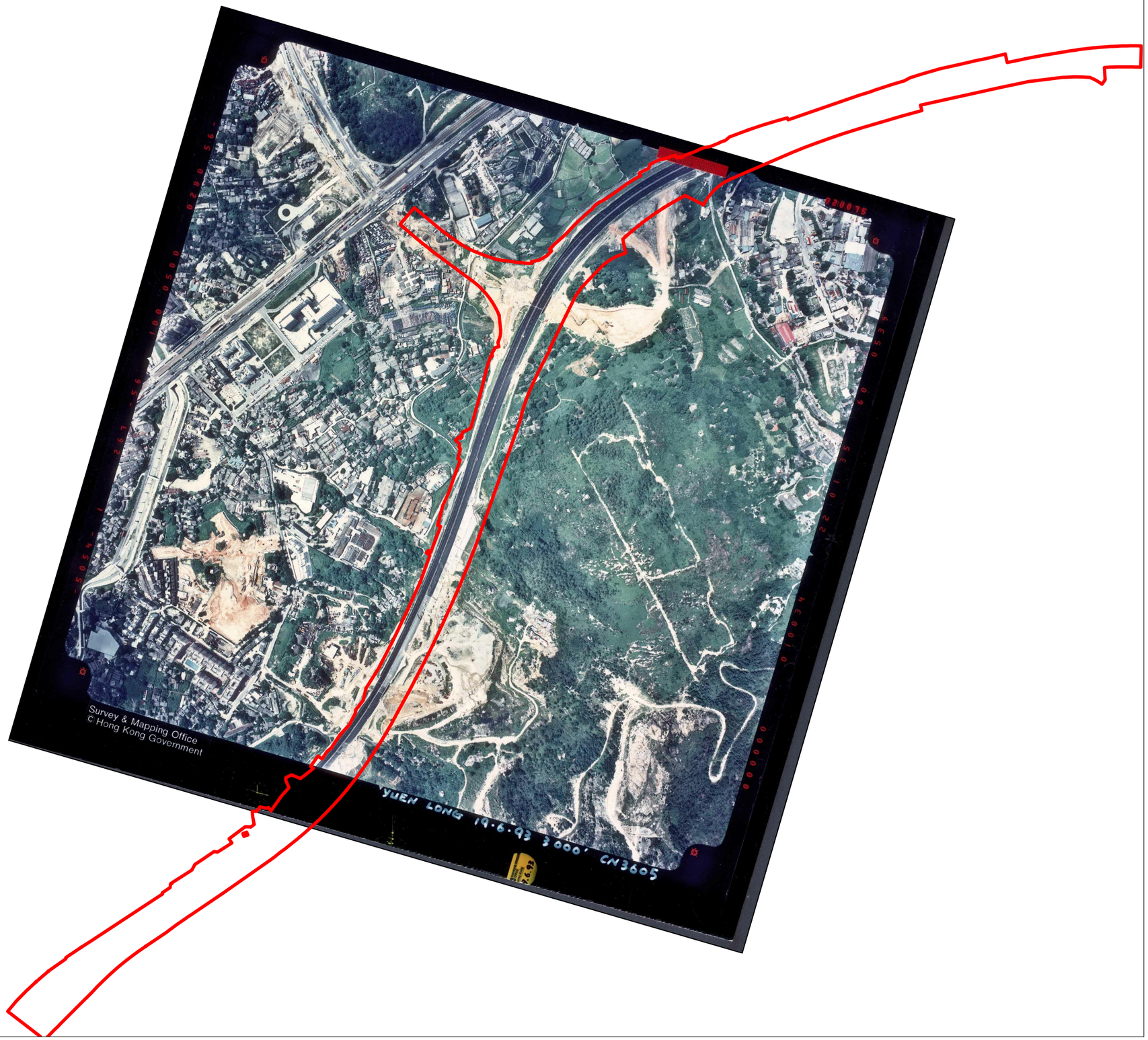
Legend

Project Boundary

Year of Aerial Photo:
1993

Photo Reference:
CN03440



Legend

Project Boundary

Year of Aerial Photo:
1993

Photo Reference:
CN03605

Legend

Project Boundary

Year of Aerial Photo:
1993

Photo Reference:
CN03607

Legend

Project Boundary

Year of Aerial Photo:
2001

Photo Reference:
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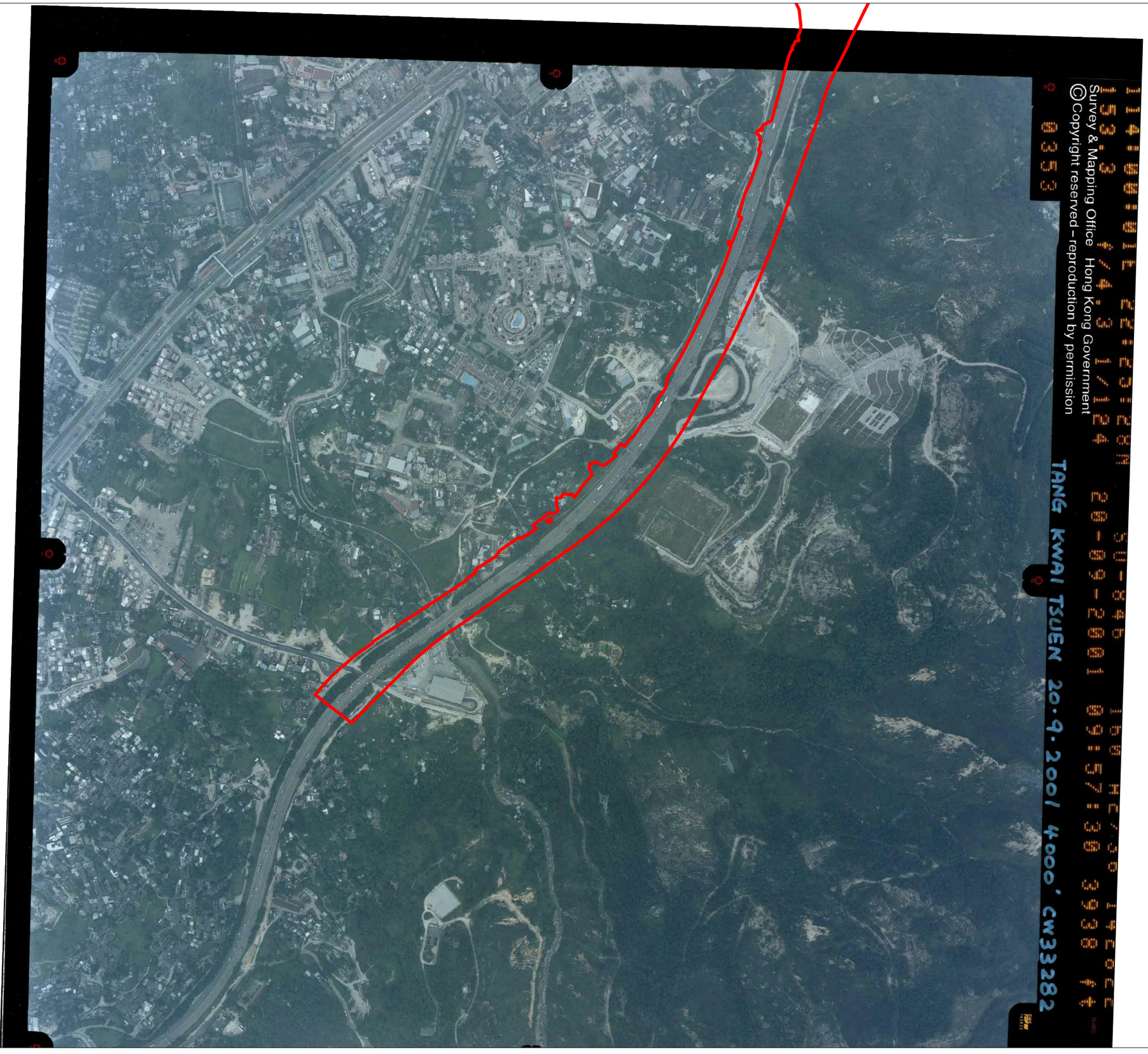


Legend

Project Boundary

Year of Aerial Photo:
2001

Photo Reference:
CW33282

Legend

Project Boundary

Year of Aerial Photo: 2011

Photo Reference: CS31133

Legend

Project Boundary

Year of Aerial Photo: 2011

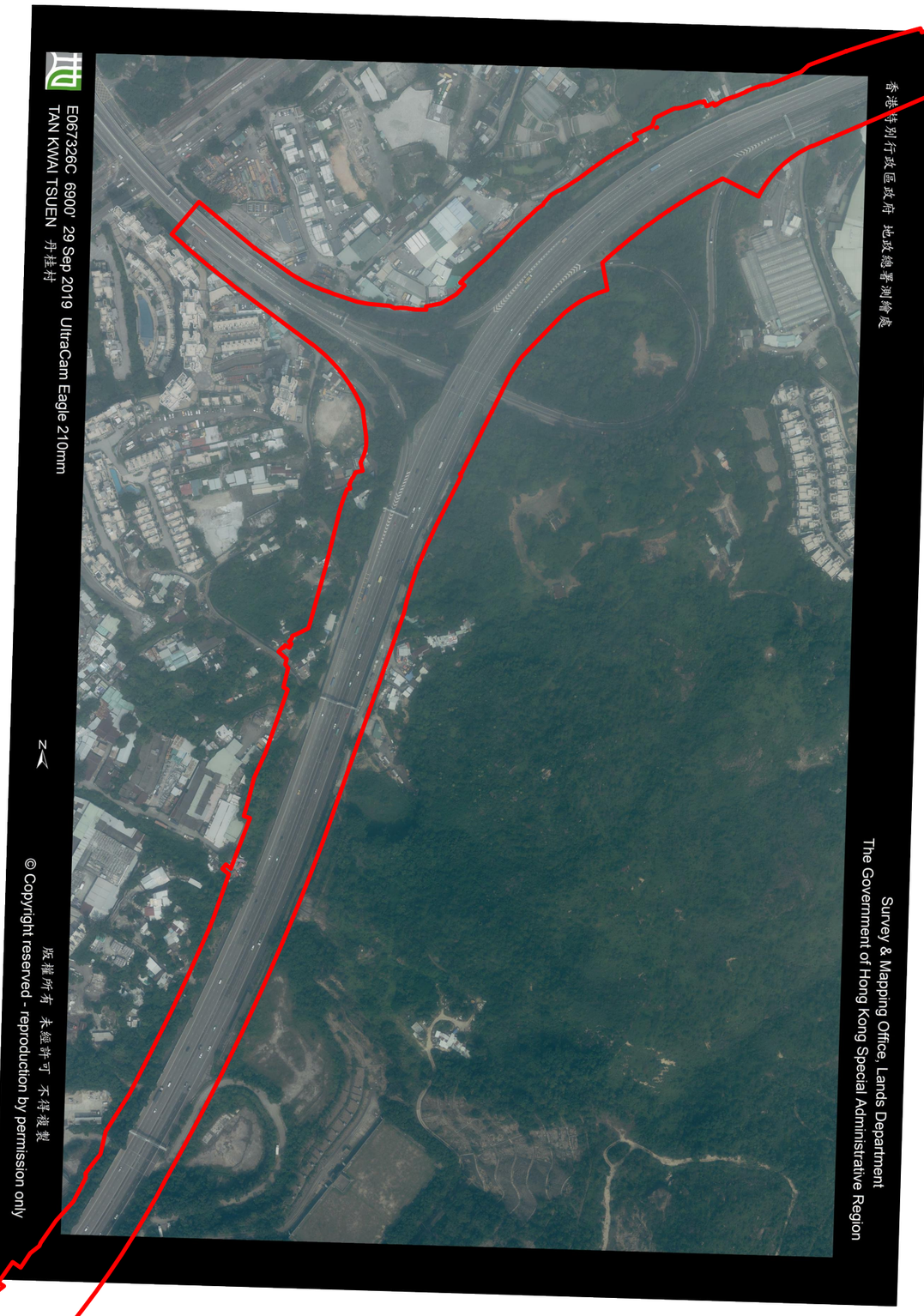
Photo Reference: CS32165

Legend

Project Boundary

Year of Aerial Photo:
2019

Photo Reference:
E066937C



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Project Boundary

Year of Aerial Photo: 2019

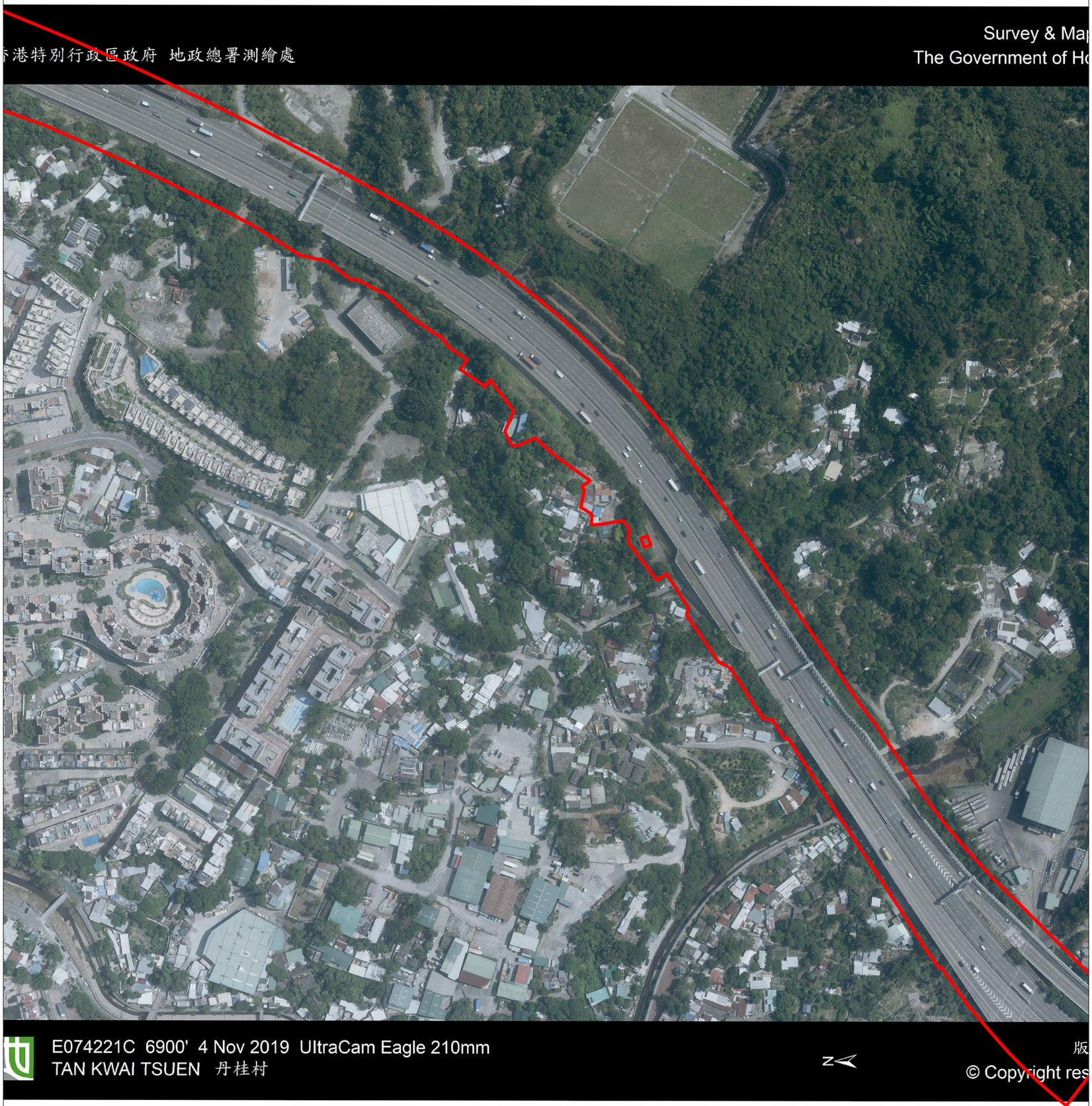
Photo Reference: E067326CC

Legend

Project Boundary

Year of Aerial Photo:
2019

Photo Reference:
E074221C



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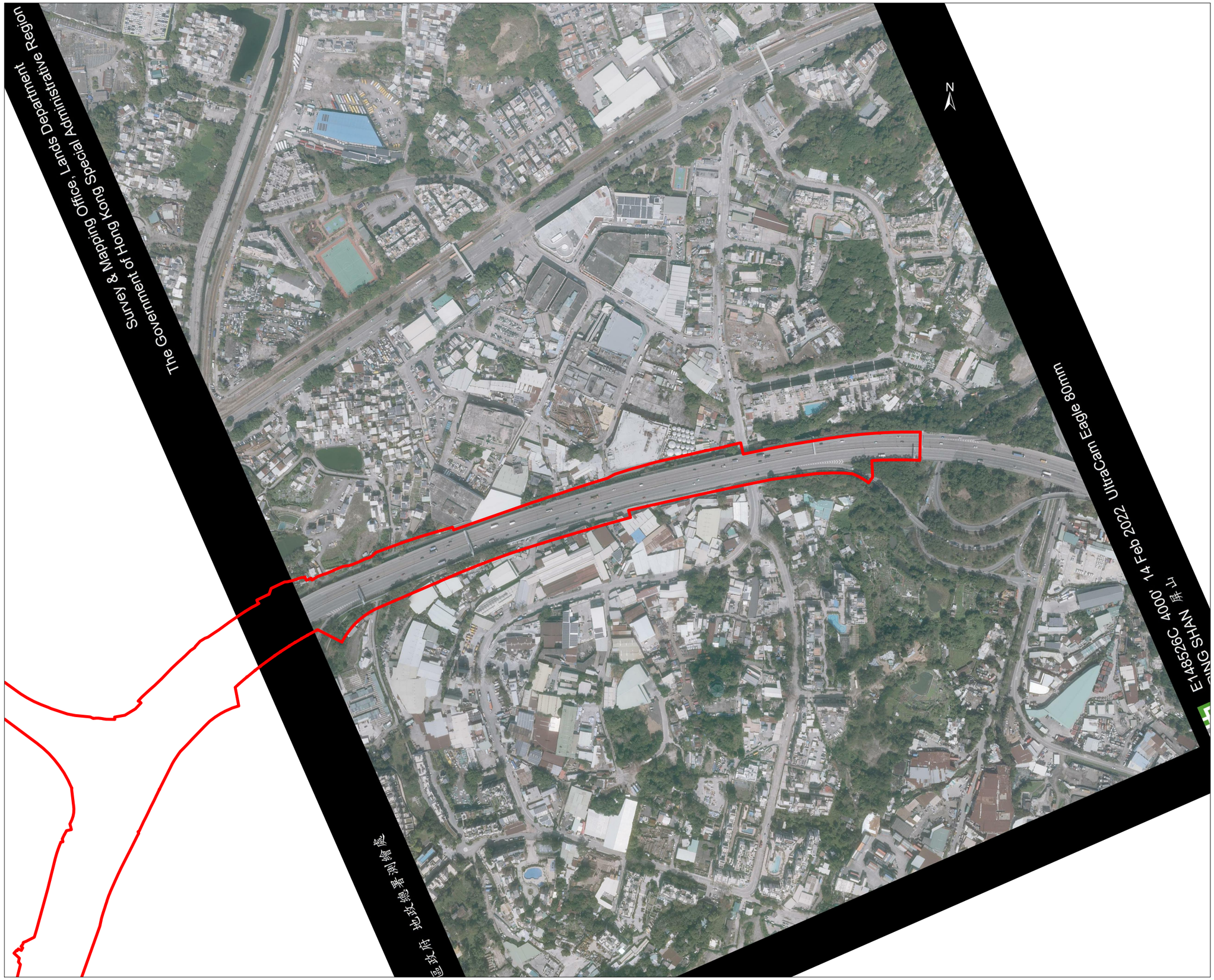
Project Boundary

Year of Aerial Photo: 2022

Photo Reference: E146795C



Legend

Project Boundary

Year of Aerial Photo: 2022

Photo Reference: E148526C

Appendix B
Supplementary Information from Government Departments

Daisy Au Yeung

From: hauyinwong@epd.gov.hk
Sent: Monday, 12 June 2023 2:51 PM
To: Daisy Au Yeung
Cc: cwlaw@epd.gov.hk; Keith Chau
Subject: RE: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information
Attachments: Figure 1.1.pdf

Dear Ms. AU YEUNG,

I refer to your email dated 2 Jun 2023 about the captioned. Our reply is as below:

This Regional Office has no record of reported accidents of spillage/ leakage of chemicals within the updated project site boundary as specified in your email in the past five years. You may also need to check with other parties / departments for such information as appropriate.
Please contact me at 2158 5823 should you have any questions.

Best Regards,
Suki Wong
Regional Office (North)
Environmental Protection Department

From: Daisy Au Yeung <Daisy.AuYeung@aurecongroup.com>
To: "hauyinwong@epd.gov.hk" <hauyinwong@epd.gov.hk>
Cc: "cwlaw@epd.gov.hk" <cwlaw@epd.gov.hk>, Keith Chau <Keith.Chau@aurecongroup.com>
Date: 02/06/2023 16:33
Subject: RE: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

Dear Ms. Wong,

I refer to your email dated 3 May 2023. Due to a slight update of the Project Boundary, it would be grateful if you could review and provide us the information for the reported accidents of spillage/ leakage of chemicals based on the latest road alignment (see Figure 1.1). As the updates are just minor, we have circled the area which are not included in the previous alignment for your easy reference.

Grateful if you could provide us the information on or before 9 June 2023. Nil return is also required.

Should you have any queries regarding the above, please kindly contact me at the undersigned or Mr. Keith Chau at 3664 6788 for further liaison. Thank you for your kind assistance.

Daisy Au Yeung
Project Consultant, Environmental, Aurecon
T +852 36646884

From: hauyinwong@epd.gov.hk <hauyinwong@epd.gov.hk>
Sent: Wednesday, 3 May 2023 9:48 AM
To: Daisy Au Yeung <Daisy.AuYeung@aurecongroup.com>
Cc: cwlaw@epd.gov.hk; Keith Chau <Keith.Chau@aurecongroup.com>
Subject: RE: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

Dear Ms. AU YEUNG,

I refer to your email dated 27 Apr 2023 about the captioned. Our reply is as below:

This Regional Office has no record of reported accidents of spillage/ leakage of chemicals within the updated project site boundary as specified in your email in the past five years. You may also need to check with other parties / departments for such information as appropriate.
Please contact me at 2158 5823 should you have any questions.

Best Regards,
Suki Wong
Regional Office (North)
Environmental Protection Department

From: Daisy Au Yeung <Daisy.AuYeung@aurecongroup.com>
To: "hauyinwong@epd.gov.hk" <hauyinwong@epd.gov.hk>
Cc: Keith Chau <Keith.Chau@aurecongroup.com>, "cwlaw@epd.gov.hk" <cwlaw@epd.gov.hk>
Date: 27/04/2023 11:26
Subject: RE: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

Dear Ms. Wong,

Agreement No. CE 17/2022 (HY)
Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange) – Investigation, Design and Construction

Request for Information

I refer to your email dated 9 Dec 2022. Due to a slightly update on the project site boundary, we would like to request for the record of reported accidents of spillage/ leakage of chemicals within the updated site boundary. The updated site boundary (Figure 1.1) is enclosed for your reference.

Grateful if you could provide us the information on or before 5 May 2023. Nil return is also required.

Should you have any queries regarding the above, please kindly contact me at the undersigned or Mr. Keith Chau at 3664 6788 for further liaison. Thank you for your kind assistance.

Daisy Au Yeung
Project Consultant, Environmental, Aurecon
T +852 36646884

From: hauyinwong@epd.gov.hk <hauyinwong@epd.gov.hk>
Sent: Friday, 9 December 2022 5:59 PM
To: Daisy Au Yeung <Daisy.AuYeung@aurecongroup.com>
Cc: Keith Chau <Keith.Chau@aurecongroup.com>
Subject: Fw: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

Dear Ms. AU YEUNG,

Agreement No. CE 17/2022 (HY)
Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange) – Investigation, Design and Construction

Request for Information

I refer your email dated 7 Dec 2022 about the captioned. Our reply is as below:

This Regional Office has no record of reported accidents of spillage/ leakage of chemicals within the study areas specified in your email in the past five years. You may also need to check with other parties / departments for such information as appropriate.

Please contact me at 2158 5823 should you have any questions.

Best Regards,
Suki Wong
Regional Office (North)
Environmental Protection Department

----- Forwarded by Hau Yin WONG/EPD/HKSARG on 09/12/2022 10:02 -----
From: Daisy Au Yeung <Daisy.AuYeung@aurecongroup.com>
To: "cwlaw@epd.gov.hk" <cwlaw@epd.gov.hk>
Cc: Keith Chau <Keith.Chau@aurecongroup.com>
Date: 07/12/2022 10:21
Subject: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

---

Dear Sir,

Agreement No. CE 17/2022 (HY)
Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange) – Investigation, Design and Construction

Request for Information

We have been commissioned by AECOM Asia Company Limited as a sub-consultant regarding the EIA assignment to conduct the land contamination assessment for the above consultancy Agreement for Highways Department (HyD). A copy of the self-explanatory memo issued by HyD dated 24 October 2022 and the subcontracting agreement are enclosed for your information. The proposed Project Site Location (Figure 1.1) is also enclosed for your reference.

To enable us to conduct the land contamination assessment for the agreement appropriately, we would be most grateful if you would provide us with the information of any reported chemical spillage/leakage incident records in the vicinity of the proposed works as shown in the attached Figure.

Your response on or before 16 December 2022 will be highly appreciated. Nil return is also required.

Should you have any queries regarding the above, please kindly contact me at the undersigned or Mr. Keith Chau at 3664 6788 for further liaison. Thank you for your kind assistance.

Daisy Au Yeung
Project Consultant, Environmental, Aurecon
T +852 36646884

Unit 1608, 16/F, Tower B, Manulife Financial Centre, 223 – 231 Wai Yip Street, Kwun Tong, Kowloon Hong Kong S. A. R.
aurecongroup.com

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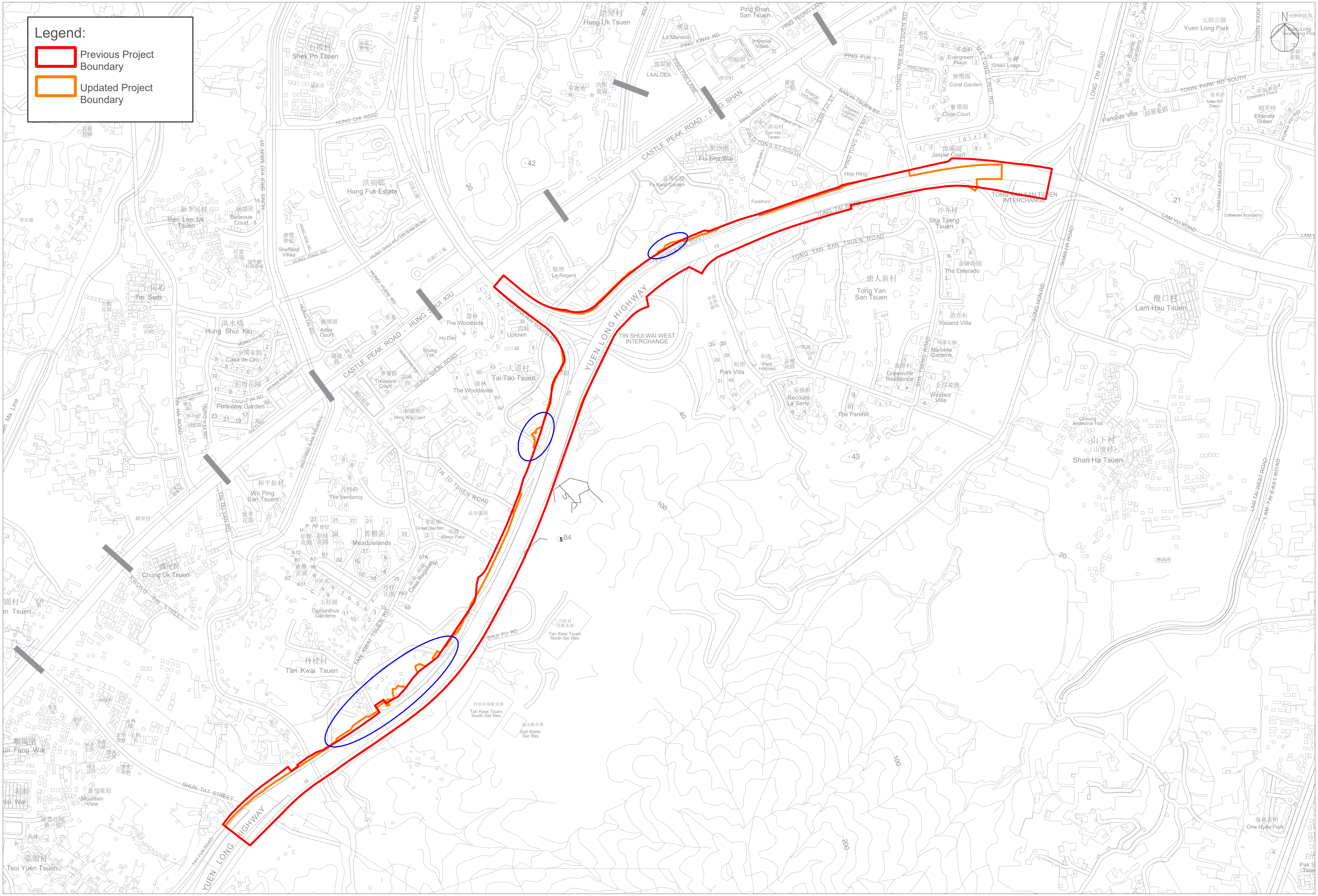
Legend:
Previous Project Boundary
Updated Project Boundary
YUEN LONG HIGHWAY
CASTLE PEAK ROAD - HUNG SHUI KIU
CASTLE PEAK ROAD - PING SHAN
TIN SHUI WAI WEST INTERCHANGE
TONG YAN SAN TSUEN INTERCHANGE
TONG YAN SAN TSUEN ROAD
TAI TAO TSUEN ROAD
LAM YU ROAD
TOWN PARK RD SOUTH
SHUN TAT STREET
KWONG TIN STREET
HUNG CHI ROAD
Hung Fuk Estate
Shek Po Tsuen
Hung Uk Tsuen
Ping Shan San Tsuen
Tin Sam
Hung Shui Kiu
San Lee Uk Tsuen
Tai Tao Tsuen
The Woodside
The Woodsville
Uptown
Wo Ping San Tsuen
Chung Uk Tsuen
Tan Kwai Tsuen
Meadowlands
Osmanthus Gardens
The Verdancy
Tong Yan San Tsuen
Sha Tseng Tsuen
The Eldorado
Kisland Villa
Park Villa
Lam Hau Tsuen
Shan Ha Tsuen
Yuen Long Park
Fu Sha Wai
Jasper Court
Tsoi Yuen Tsuen
One Hyde Park
Parkview Garden
Casa de Oro
Le Regent
Treasure Court

(101)

消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (101) in FSD GR 6-5/4 R Pt. 47
來函檔號 YOUR REF. :
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電 話 TEL NO. : 2733 7741

30 June 2023

Aurecon
Unit 1608, 16/F., Tower B,
Manulife Financial Centre,
223-231 Wai Yip Street,
Kwun Tong, Kowloon
(Attn: Ms. Daisy AU-YEUNG, Project Consultant)

Dear Ms. AU-YEUNG,

Agreement No. CE 17/2022(HY) Widening of Yuen Long Highway (Section bewteen Lam Tei Quarry and Tong Yan San Tsuen Intercharge) – Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 2.6.2023 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.

2. A total of fourteen incident records were found at the subject location. Please refer to **Appendix A** for details.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(NG Wing-chit)
for Director of Fire Services

Ref. number and date should be quoted in reference to this letter
凡 提 及 本 信 時 請 引 述 編 號 及 日 期

Appendix A

Agreement No. CE 17/2022(HY) Widening of Yuen Long Highway (Section bewteen Lam Tei Quarry and Tong Yan San Tsuen Intercharge) – Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

No.	Date	Type of Incident	Address
1.	3.7.2020	Rubbish Fire	Lamppost FB1811, Highway
2.	13.10.2020	No.2 Fire Alarm	Lamppost BD3337, near Yuen Long highway, Tong Yan San Tsuen
3.	15.1.2021	Traffic Accident	Lamppost FB5368, near Hung Tin Road, Tin Shui Wai Bound
4.	29.4.2021	Late Call	Pak Sha Tsuen Openground
5.	14.5.2021	Traffic Accident	Lamppost BD3807, near Yuen Long highway
6.	23.5.2021	Vegetation Fire	Lamppost FB5372, near Hung Tin Road
7.	8.2.2022	Rubbish Fire	Lamppost BD2780, near Yuen Long highway, Tong Yan San Tsuen
8.	1.6.2022	Rubbish Fire	Lamppost AD4157, Fui Sha Wai South Road
9.	12.9.2022	Traffic Accident	Lamppost BD3331, near Yuen Long highway, Tong Yan San Tsuen
10.	14.10.2022	Traffic Accident	Lamppost BD3806, near Yuen Long highway, near Fuk Hang Tsuen
11.	23.10.2022	Rubbish Fire	Lamppost AD2311, near Shun Tat Street
12.	9.3.2023	Traffic Accident	Lamppost BD3336, near Yuen Long highway, Tong Yan San Tsuen
13.	18.4.2023	Traffic Accident	Lamppost FB5402, near Hung Tin Road
14.	28.5.2023	Rubbish Fire	Lamppost FB5411, near Sha Wai South Road

Daisy Au Yeung

From: Daisy Au Yeung
Sent: Friday, 2 June 2023 3:23 PM
To: hkfsdenq@hkfsd.gov.hk
Cc: Keith Chau; ado_mg_1@hkfsd.gov.hk
Subject: RE: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information
Attachments: Figure 1.1.pdf; 20230525 FSD Letter .pdf

Dear Sirs,

Agreement No. CE 17/2022 (HY)
Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange) – Investigation, Design and Construction

Request for Information

I refer to the attached letter received from your office dated 25 May 2023 based on our request for information. Due to a slight update of the Project Boundary, it would be grateful if you could review and provide us the information for the records of dangerous goods license, fire incidents and incidents of spillage/ leakage of dangerous goods based on the latest road alignment (see Figure 1.1). As the updates are just minor, we have circled the area which are not included in the previous alignment for your easy reference.

Grateful if you could provide us the information on or before 9 June 2023. Nil return is also required.

Should you have any queries regarding the above, please kindly contact me at the undersigned or Mr. Keith Chau at 3664 6788 for further liaison. Thank you for your kind assistance.

Daisy Au Yeung
Project Consultant, Environmental, Aurecon
T +852 36646884

From: Daisy Au Yeung
Sent: Thursday, 27 April 2023 11:43 AM
To: 'hkfsdenq@hkfsd.gov.hk' <hkfsdenq@hkfsd.gov.hk>
Cc: Keith Chau <Keith.Chau@aurecongroup.com>; 'ado_mg_1@hkfsd.gov.hk' <ado_mg_1@hkfsd.gov.hk>
Subject: RE: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

Dear Sirs,

Agreement No. CE 17/2022 (HY)
Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange) – Investigation, Design and Construction

Request for Information

I refer to your replied letter dated 21 December 2022 (Letter attached to this email). Due to slightly change of the Project Site Boundary, we would like to request for the records of dangerous goods license, fire incidents and incidents of spillage/ leakage of dangerous goods within the updated Site Boundary. The updated site boundary (Figure 1.1) is enclosed for your reference.

Grateful if you could provide us the information on or before 5 May 2023. Nil return is also required.

Should you have any queries regarding the above, please kindly contact me at the undersigned or Mr. Keith Chau at 3664 6788 for further liaison. Thank you for your kind assistance.

Daisy Au Yeung
Project Consultant, Environmental, Aurecon
T +852 36646884

From: Daisy Au Yeung
Sent: Tuesday, 6 December 2022 3:44 PM
To: hkfsdenq@hkfsd.gov.hk
Cc: Keith Chau <Keith.Chau@aurecongroup.com>
Subject: Agreement No. CE 17/2022 (HY) Widening of Yuen Long Highway - Request for Information

Dear Sirs,

Agreement No. CE 17/2022 (HY)
Widening of Yuen Long Highway (Section between Lam Tei Quarry and Tong Yan San Tsuen Interchange) – Investigation, Design and Construction

Request for Information

We have been commissioned by AECOM Asia Company Limited as a sub-consultant regarding the EIA assignment to conduct the land contamination assessment for the above consultancy Agreement for Highways Department (HyD). A copy of the self-explanatory memo issued by HyD dated 24 October 2022 and the subcontracting agreement are enclosed for your information. The proposed Project Site Location (Figure 1.1) is also enclosed for your reference.

To enable us to conduct the land contamination assessment for the agreement appropriately, we would be most grateful if you would provide us with the following information:

(1) Records of current and past (as early as the records are available) registration of storage of dangerous goods (with type of dangerous goods, storage method, quantity, licence No., date of issue and location of storage) within the Proposed Project Boundary; and

(2) Any records of accidents of spillage/leakage of dangerous goods stored within the Proposed Project Site Boundary.

Your response on or before 16 December 2022 will be highly appreciated. Nil return is also required.

Should you have any queries regarding the above, please kindly contact me at the undersigned or Mr. Keith Chau at 3664 6788 for further liaison. Thank you for your kind assistance.

Yours faithfully,

Daisy Au Yeung
Project Consultant, Environmental, Aurecon
T +852 36646884

Unit 1608, 16/F, Tower B, Manulife Financial Centre, 223 – 231 Wai Yip Street, Kwun Tong, Kowloon Hong Kong S.

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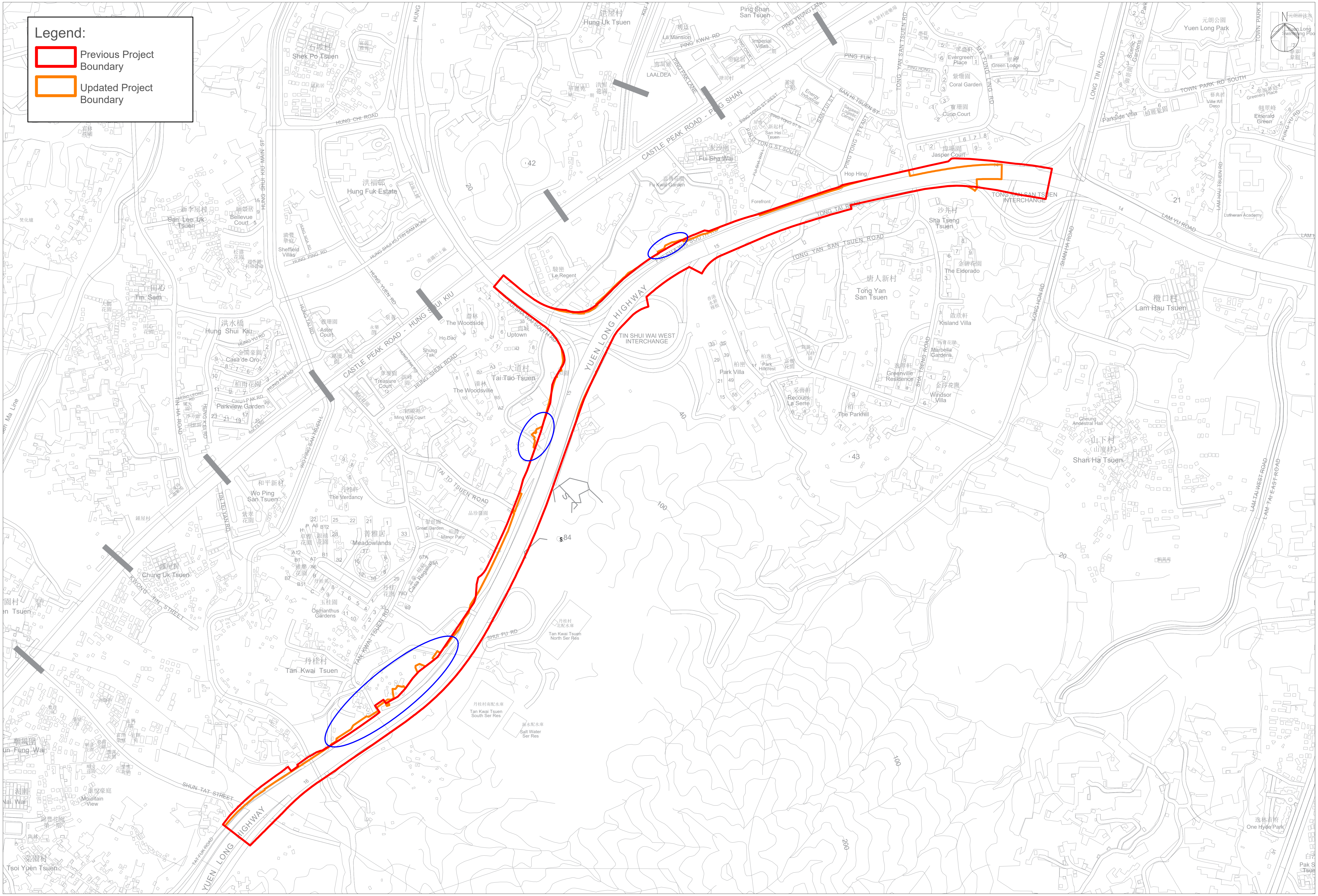


Legend:
Previous Project Boundary
Updated Project Boundary
YUEN LONG HIGHWAY
CASTLE PEAK ROAD - HUNG SHUI KIU
CASTLE PEAK ROAD - PING SHAN
TIN SHUI WAI WEST INTERCHANGE
TONG YAN SAN TSUEN INTERCHANGE
TONG YAN SAN TSUEN ROAD
LAM YU ROAD
TOWN PARK RD SOUTH
Hung Fuk Estate
Tong Yan San Tsuen
Tan Kwai Tsuen
Tai Tao Tsuen
Hung Shui Kiu
Shan Ha Tsuen
Lam Hau Tsuen
Wo Ping San Tsuen
Chung Uk Tsuen

Appendix C
Site Walkover Checklist

Site Walkover Checklist

General Site Details

Site Owner/Client

World Trade Warehousing Logistics Limited

Property Address

No.7 Tong Tai Road, Tong Yan San Tsuen, Yuen Long

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 1868m^2

What area of the site is covered by buildings (%):

100%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

Temporary structure of warehouse

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The Eldorado is located at approx.300m to the East.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	Loading and unloading activities of goods was observed
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

No.9 Tong Tai Road, Tong Yan San Tsuen, Yuen Long

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 1546m^2

What area of the site is covered by buildings (%):

100%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

Temporary structure of warehouse

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Fui Sha Wai are located at approx.260m to the West.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	
• What was the quantity of material spilled?	N/A*	

	Yes/No	Notes
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

Temporary structure at Tong Tai Road, next to No.9 Tong Tai Road

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 1546m^2

What area of the site is covered by buildings (%):

100%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

Temporary structure of warehouse

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Fui Sha Wai are located at approx.220m to the West.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

Temporary structure at Tong Tai Road

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 333m^2

What area of the site is covered by buildings (%):

100%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

A-Chow Engineering Company Ltd.

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Fui Sha Wai are located at approx.200m to the West.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

A-Chow Engineering Company Ltd.

Property Address

78 Tong Yan San Tsuen Road, Yuen Long

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 5043m^2

What area of the site is covered by buildings (%):

70%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

Temporary structure of warehouse

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Fui Sha Wai are located at approx.175m to the West.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

Temporary structure at South of Yuen Long Highway, West of Tong Yan San Tsuen Road

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 2046m^2

What area of the site is covered by buildings (%):

40%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

Temporary structure of warehouse

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Fui Sha Wai are located at approx.90m to the North.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

South of Yuen Long Highway, West of Tong Yan San Tsuen Road

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 974m^2

What area of the site is covered by buildings (%):

100%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Yuen Long Highway

South:

Industrial Area at Tong Yan San Tsuen

East:

Temporary structure of warehouse

West:

Temporary houses

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Fui Sha Wai are located at approx.85m to the North.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

*As the site was not accessible, questionnaire was unable to conduct.

	Yes/No	Notes

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	The site is unoccupied.
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	Some oil stains were observed at the wall of the temporary structure and on the ground outside the temporary structure. A suspected oil pipe was observed.
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	

	Yes/No	Notes
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

Temporary structure at Fui Sha Wai South Road, at the North of Hung Tin Road

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 470m^2

What area of the site is covered by buildings (%):

80%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Temporary structures and open storage

South:

Fui Sha Wai South Road

East:

Yuen Long Highway

West:

Temporary structure

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Le Regent are located at approx.60m to the Northwest.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	The site was in operation.
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	Temporary structures and open space storage of goods are observed within the site.

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

A vacant land at Fui Sha Wai South Road, at the North of Hung Tin Road

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 493m^2

What area of the site is covered by buildings (%):

10%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Le Regent

South:

Fui Sha Wai South Road

East:

Temporary structure

West:

Tai Tao Tsuen Substation

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Le Regent are located at approx.20m to the North.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	The site was in operation.
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	Some chemical/ lubricant drums and trucks were observed within the site. Vehicle painting were observed on the ground.

* Access for site inspection was not available.

Site Walkover Checklist

General Site Details

Site Owner/Client

Unknown

Property Address

A vacant land at Fui Sha Wai South Road next to Tai Tao Tsuen

Person Conducting the Questionnaire

Name:

Daisy Au Yeung

Position:

Project Consultant, Aurecon

Phone:

36646884

Site Activities

Briefly describe activities carried out on site, including types of products/materials handled. Obtain a flow schematic if possible.

Number of employees

Full-time:	Part-time:	Temporary/Seasonal:
N/A	N/A	N/A

Maximum no. of people on site at any time:

N/A

Typical hours of operation:

N/A

Number of shifts:

N/A

Days per week:

N/A

Weeks per year:

N/A

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site: N/A

Gas	Yes /No
Electricity	Yes /No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

Site Description

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area:

Approximately 2286m^2

What area of the site is covered by buildings (%):

10%

Please list all current and previous owners/occupiers if possible.

N/A

Is a site plan available? If yes, please attach. Yes/No

N/A

Are there any other parties on site as tenants or sub-tenants? Yes/No

N/A

If yes, identify those parties:

N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North:

Tai To Tsuen

South:

Vacant Land

East:

Yuen Long Highway

West:

Former Pak U Middle School

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc).

Flat terrain.

State the size and location of the nearest residential communities.

The residential houses at Le Regent are located at approx.100m to the West.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitat identified within the near distance from the Study Site.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	N/A*	The site gate was closed and not in operation.
2. How long have you been occupying the site?	N/A*	
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N/A*	
4. Prior to your occupancy, who occupied the site?	N/A*	
5. What were the main activities/operations during their occupancy?	N/A*	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A*	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A*	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A*	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N/A*	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N/A*	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	N/A*	
• Where do you store these chemicals?	N/A*	
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A*	
13. Has the facility produced a separate hazardous substance inventory?	N/A*	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N/A*	
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N/A*	
16. Do you have any underground storage tanks? (If yes, please provide details.)	N/A*	
• How many underground storage tanks do you have on site?	N/A*	
• What are the tanks constructed of?	N/A*	
• What are the contents of these tanks?	N/A*	
• Are the pipelines above or below ground?	N/A*	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A*	
• Have there been any spills associated with these tanks?	N/A*	
17. Are there any disused underground storage tanks?	N/A*	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N/A*	
19. How are the wastes disposed of?	N/A*	
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N/A*	
21. Have any spills occurred on site? (If yes, please provide details.)	N/A*	
• When did the spill occur?	N/A*	
• What were the substances spilled?	N/A*	

	Yes/No	Notes
• What was the quantity of material spilled?	N/A*	
• Did you notify the relevant departments of the spill?	N/A*	
• What were the actions taken to clean up the spill?	N/A*	
• What were the areas affected?	N/A*	
22. Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N/A*	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N/A*	
24. Are there any known contaminations on site? (If yes, please provide details.)	N/A*	
25. Has the site ever been remediated? (If yes, please provide details.)	N/A*	

* No interview was able to be conducted. Notes shown are based on observation from site walkover.

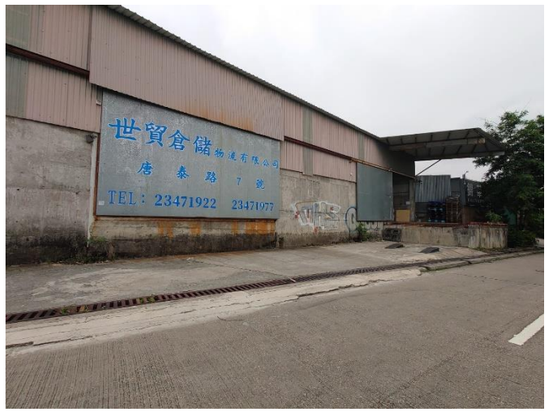
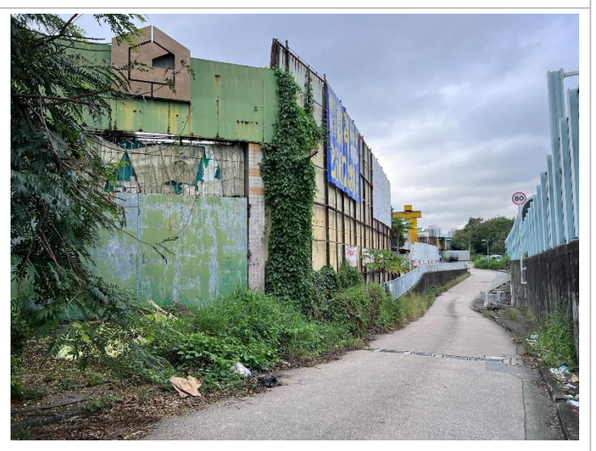
Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A*	
2. What are the conditions of the bund walls and floors?	N/A*	
3. Are any surface water drains located near to drum storage and unloading areas?	N/A*	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	N/A*	
5. Is there a storage site for the wastes?	N/A*	
6. Is there an on-site landfill?	N/A*	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	N/A*	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	N/A*	
9. Are there any potential off-site sources of contamination?	N/A*	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	N/A*	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	N/A*	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	N/A*	Some construction equipment was observed within the site.

* Access for site inspection was not available. Notes shown are based on observation from site walkover.

Appendix D
Summary of Site Appraisal

Summary of Site Appraisal

Potential Contaminated Site ID	Premise Name and Location (Approx. Site Area, m^2)	Suspected Current Use	Approx. Area encroaching the Project Limit (m^2)	Site Observation	Potential Polluting Activities and Potential Chemical of Concern (COC)	Sampling and analysis proposal	Photo Reference
C1 ^	No.7 Tong Tai Road, Tong Yan San Tsuen, Yuen Long (1868 m^2)	Warehouse	73	The site is a temporary structure. The site occupant is World Trade Warehousing Logistics Limited. The site was in operation. Loading and unloading activities of goods was observed. Access for site inspection was not available.	N/A	N/A	
C2 ^	No.9 Tong Tai Road, Tong Yan San Tsuen, Yuen Long (1546 m^2)	Warehouse	160	The site gate was close and not in operation. The site occupant is unknown. The site gate was closed. Access for site inspection was not available.	N/A	N/A	
C3 ^	Temporary structure at Tong Tai Road, next to No. 9 Tong Tai Road (960m^2)	Warehouse	158	The site gate was close and not in operation. The site occupant is unknown. The site gate was closed. Access for site inspection was not available.	N/A	N/A	

Potential Contaminated Site ID	Premise Name and Location (Approx. Site Area, m^2)	Suspected Current Use	Approx. Area encroaching the Project Limit (m^2)	Site Observation	Potential Polluting Activities and Potential Chemical of Concern (COC)	Sampling and analysis proposal	Photo Reference
C4 ^	Temporary structure at Tong Tai Road (333m^2)	Warehouse	97	The site gate was close and not in operation. The site occupant is unknown. The site gate was closed. Access for site inspection was not available.	N/A	N/A	
C5 ^	78 Tong Yan San Tsuen Road, Yuen Long (5043m^2)	Construction materials and equipment storage	92	The site occupant is A-Chow Engineering Company Ltd. The site gate was close. Access for site inspection was not available.	N/A	N/A	

Potential Contaminated Site ID	Premise Name and Location (Approx. Site Area, m^2)	Suspected Current Use	Approx. Area encroaching the Project Limit (m^2)	Site Observation	Potential Polluting Activities and Potential Chemical of Concern (COC)	Sampling and analysis proposal	Photo Reference
C6 ^	Temporary structure at South of Yuen Long Highway, West of Tong Yan San Tsuen Road (2046m^2)	Construction materials and equipment storage	482	The site gate was close and not in operation. The site occupant is unknown. Some construction materials were observed in the site. Access for site inspection was not available.	N/A	N/A	
C7 ^	South of Yuen Long Highway, West of Tong Yan San Tsuen Road (974m^2)	Not in used	64	The site is unoccupied. Some oil stains were observed at the wall of the temporary structure and on the ground outside the temporary structure. A suspected oil pipe was observed. The gate was locked. Access for site inspection was not available.	N/A	N/A	
C8 ^	Temporary structure at Fui Sha Wai South Road, at the North of Hung Tin Road (470m^2)	Warehouse and open area storage	60	The site occupant is unknown. The site was in operation. Temporary structures and open space storage of goods are observed within the Site. Access for site inspection was not available.	N/A	N/A	

Potential Contaminated Site ID	Premise Name and Location (Approx. Site Area, m^2)	Suspected Current Use	Approx. Area encroaching the Project Limit (m^2)	Site Observation	Potential Polluting Activities and Potential Chemical of Concern (COC)	Sampling and analysis proposal	Photo Reference
C9 ^	A vacant land at Fui Sha Wai South Road, at the North of Hung Tin Road (493 m^2)	Vehicle Maintenance	55	The site occupant is unknown. Some chemical/ lubricant drums and trucks were observed within the site. Vehicle painting were observed on the ground. The site was in operation. Access for site inspection was not available.	N/A	N/A	
C10	A vacant land at Fui Sha Wai South Road next to Tai Tao Tsuen (2286 m^2)	Construction materials and equipment storage/ Open area storage	1201	The occupant is unknown. Some construction equipment was observed within the site. The site gate was closed and not in operation. Access for site inspection was not available.	Loading, unloading, storage and transfer of goods. COC: Metals, PCRs, VOCs, SVOCs	As specific hotspots of contamination cannot be identified due to inaccessibility, 8 boreholes based on regular size grid 13m x 13m at this stage is proposed determined by the area of encroachment with reference to Practice Guide.	

Note:

The sampling number of the boreholes are tentative at this stage and is subject to further site appraisal after land resumption.

Practice Guide is referring to practice guide for investigation and remediation of contaminated land.

^ The SI sampling of these sites are not conducted under this Project as these areas are under contract no. YL/2022/01 and YLS Stage 2B.