CONTRACT NO. SPW 25/2018
ENVIRONMENTAL TEAM FOR
RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS – SITE PREPARATION AND ACCESS TUNNEL CONSTRUCTION

UNDER ENVIRONMENTAL PERMIT NO. EP-533/2017

SUPPLEMENTARY CONTAMINATION ASSESSMENT PLAN FOR THE EXISTING DSD STAFF QUARTER REVISION 2.1

CLIENT:

DRAINAGE SERVICES DEPARTMENT

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20 October 2020

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Contract No. SPW 01/2020
Independent Environmental Checker for Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction

Environmental Permit No. EP-533/2017

EP Conditions 1.9 & 2.21 – Supplementary Contamination Assessment Plan for the Existing DSD Staff Quarters Site at Sha Tin Sewage Treatment Works (Revision 2.1)

20 October 2020
By Email

Dear Sir,

I refer to the captioned Supplementary Contamination Assessment Plan for the Existing DSD Staff Quarters Site at Sha Tin Sewage Treatment Works (Revision 2.1) under the captioned Project, which was certified by the Environmental Team Leader (ETL) on 20 October 2020.

I have no comment on the captioned submission and hereby verify it in accordance with Conditions 1.9 and 2.21 of Environmental Permit (EP) No. EP-533/2017.

Should you have any queries regarding the captioned or require any further information, please contact the undersigned at 2828 5875.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

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Encl.

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1.1 Background

1.1.1 Drainage Services Department (DSD) is the owner of the Existing Staff Quarter (The Site) nearby the Sha Tin Sewage Treatment Works (STSTW). DSD intended to decommission the Existing Staff Quarter to construct a temporary site office in the Site.

1.1.2 A Contamination Assessment Plan (CAP) was prepared for the existing STSTW in the appendices of the approved EIA (AEIAR-202/2016 - Sha Tin Cavern Sewage Treatment Works). The Site is included in the assessment area of this CAP. Section 7.1.1.4 of the CAP stated that "*since STSTW will continue to work for quite some time, the change in operation which lead to any new or relocation of contamination hotspots or occurrence of spillage or accident is not foreseeable.*" As the CAP was prepared in 2016, a Supplementary Contamination Assessment Plan (SCAP) shall be prepared to conduct a review to confirm the findings in the EIA CAP at the concerned site is still valid after 4 years of approval of the EIA CAP. As stipulated in Condition 2.21 of the Environmental Permit (EP no.: EP-533/2017) (the EP), detailed assessment of land contamination shall be carried out before the construction the commencement of demolition/construction of the Project when access to the concerned site(s) identified in Appendix 6.01 of the approved EIA Report (Register No. AEIA-202/2016) is available.

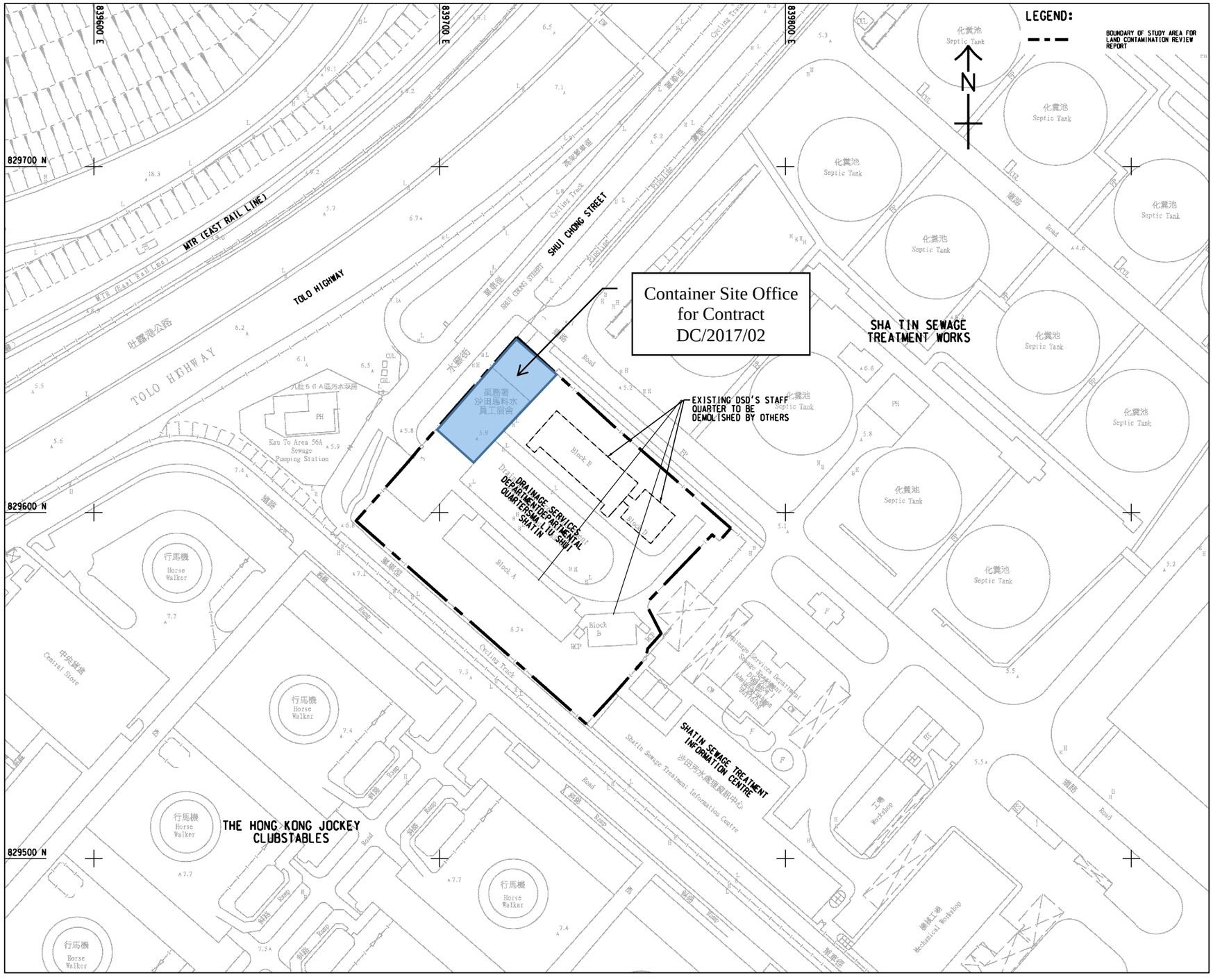
1.1.3 Lam Environmental Services Limited (LES) has been appointed by Drainage Services Department to carry out the SCAP for the Site to identify the potential land contamination issues at the Site for partial fulfilment of Condition 2.21 of the EP. This SCAP only covers the assessment of the Existing DSD Staff Quarter Site and subsequent SCAP(s) for the existing STSTW will be submitted prior to demolition. Site location map is shown in ***Figure 1-1***.

1.2 Environmental Legislation and Standards

1.2.1 The SCAP was prepared with reference to the following relevant legislations, documents and guidelines that are applicable to land contamination assessment and remediation in Hong Kong:

- Guidance Note for Contaminated Land Assessment and Remediation, issued on 15 August 2007 by the Environmental Protection Department (EPD) (the Guidance Note).
- Guidance Manual for Use of Risk-Based Remediation Goals (RBRG) for Contaminated Land Management, published in December 2007 by EPD (the Guidance Manual).
- Practice Guide for Investigation and Remediation of Contaminated Land, published in August 2011 by EPD (the Practice Guide).

Figure 1-1 Site Location Map



2. SITE APPRAISAL

2.1 Site Appraisal Approach

2.1.1 Site walkover was conducted on 28 July 2020 to identify the potential land contamination sources due to the present land-use activity at the Site that may lead to land contamination.

2.1.2 Site appraisal also included review of previous contamination studies associated with the Site and historical information and site reconnaissance.

2.2 Review of Land Contamination Studies Associated With the Site

2.2.1 A Land Contamination Assessment was conducted for the EIA of Sha Tin Cavern Sewage Treatment Works (AEIAR-202/2016) to assess the potential land contamination concern at existing STSTW prior to July 2015 by reviewing previous land contamination assessment, site reconnaissance and acquisition of information from government department.

2.2.2 The Site falls within the assessment area of "Administration and Laboratory Buildings" and the potential land contamination risk of Site was reviewed in the approved CAP. The previous site walkover conducted on 7 November 2014 and 28 December 2015 in the approved CAP concluded no land contamination was found within the ground floor of the "Administration and Laboratory Buildings" and intrusive SI was considered not necessary, but one grid sample point was proposed in the grid (ENV-G01) to study the vertical profile of possible contamination within the existing STSTW. The sampling point and Chemicals of Concern (CoCs) proposed in the approved CAP agreed by the EPD are extracted as below ***Table 2-1***.

Table 2-1 Summary of Sampling Points & CoCs proposed in Approved CAP at the Site

Sampling Location ID[1]	Sampling and Testing Rationale	Sampling Method	Sample Matrix/ Depth[2]		Parameters to be Tested
ENV-G01	Grid Sampling points for the whole STSTW (280,000m^2)	Borehole drilling to 2m below the groundwater table or 6m bgs	Soil	i. 0.5m bgs ii. 1.5m bgs iii. 3.0m bgs iv. GW level or 6m bgs[4]	PCR, VOC, SVOC, Metals[3]
			GW	If present[4]	PCR, VOC, SVOC, Mercury

Remark:

1. The location plan of the approved CAP is extracted in ***Appendix A*** for indication of ENV-G01.
2. Bgs refers to below ground surface; GW refers to groundwater

3. Metals refers to Antimony, Arsenic, Barium, Cadmium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Tin, Zinc, Mercury, Chromium (III) and Chromium (VI);

4. The deepest depth of sampling should be above/ near groundwater table or 6m bgs, whichever is shallower. Groundwater sample would only be collected if encountered.

5. All sampling and testing requirement specified in the CAP shall be followed for sampling at ENV-G01.

2.2.3 A Land Contamination Assessment was conducted for the EIA of Sha Tin Cavern Sewage Treatment Works (AEIAR-202/2016) to assess the potential land contamination concern at existing STSTW prior to July 2015 by reviewing previous land contamination assessment, site reconnaissance and acquisition of information from government department.

2.2.4 In order to review to confirm the findings in the EIA CAP at the concerned site is still valid after 4 years of approval of the EIA CAP, this SCAP assessed potential land contamination risk by following approaches:

- Review of aerial photos between 2016 and 2019;
- Acquisition of historical Information from Environmental Protection Department (EPD) and Fire Services Department (FSD);
- Conduct site reconnaissance and interview with the land users (DSD).

2.3 Review of Historical Information

Review of Aerial Photographs

2.3.1 Aerial photographic records for the Site between 2016 and 2019 were reviewed to evaluate the likelihood of potential contamination associated with past uses of the Site. The historical land uses identified from the review are summarised in ***Table 2-2*** and the aerial photographs are provided in ***Appendix B***.

Table 2-2 Summary of Historical Land-use at the Site

Year	Landuse / Description	Aerial Photo Ref.
Prior to 2015	- Reclamation first appeared in 1974 and completed in around 1981 - Construction of Staff Quarters appeared at around 1981 and completed in around 1985. - No signification change at the study area since the commencement of the DSD's Staff Quarter in around 1985.	Appendix 2.02 of the CAP
2016	- DSD's Staff Quarter	E003385C
2019	- DSD's Staff Quarter	E063859C

2.3.2 The aerial photos taken from 2016 and 2019 have shown no land use change at the Site since 2015 and potential land contamination activities were observed from the aerial photos during 2016 to 2019.

Acquisition of historical Information from EPD and FSD

2.3.3 EPD and FSD were approached to obtain information regarding chemical waste and dangerous goods storage at the Site.

2.3.4 Further to EPD's replies, visit to EPD's Southern Centre Office were made to review the available record of registered Chemical Waste Producers (CWPs) at the Site and a number of registered CWPs were identified at the STSTW, but none of them are located in the study area according to DSD's advice. According to the EPD's reply, no record of chemical spillage/leakage spillage or leakage of chemical within the study area for the past 5 years. The EPD's reply was attached in ***Appendix C***.

2.3.5 FSD also replied no records of dangerous good license, fire incidents and spillage/leakage of dangerous good were found in the Site. The FSD's reply was attached in ***Appendix C***.

Site Drawings and Information from Site Operator

2.3.6 Floor layout plan of Block A, B, D and E in the Site were provided by the RSS for review. All available ground floor layout and sectional plans of the buildings in the Site are provided in ***Appendix D***. No underground structure was indicated on the plans.

2.3.7 According to the as-built layout plans, all buildings and rooms in the Site were built for residential use and no potential land contamination sources were identified from the plans.

Interview with the Site owner (DSD)

2.3.8 Interview with Site owner (DSD) was conducted for obtaining information and history of the Site. The completed questionnaire used during the Site walkover and interview is provided in ***Appendix E***.

2.4 Site Walkover

Site Description and Surrounding

2.4.1 The total site area is approximately 5,890m^2 and it is located at No. 1 Shui Chong Street, Shatin as shown in ***Figure 1-1***. The existing DSD's Staff Quarter consist of four buildings, namely Block A, B, D and E. The block C has already dismantled and redeveloped as a container site office. The buildings have been used for storage of documentation and also residential use. Photos showing the existing buildings are shown on **Photo 1** and **Photo 2** in ***Appendix F***.

2.4.2 Surrounding land uses are summarised as below ***Table 2-3*** and representative photos are provided in ***Appendix F***.

Table 2-3 Surrounding Land use of the Site

Direction	Land-use
Northwest	DSD's Sewage Pumping Station
Northeast	Shatin Sewage Treatment Works
Southeast	Shatin Sewage Treatment Works Information Centre
Southwest	Hong Kong Jockey Club Stable

Detail Site Inspection on 28 July 2020

2.4.3 A joint site walkover among RSS and the DSD's representative was conducted on 28 July 2020 to gather information regarding the existing condition of the Site as well as its enviros to confirm any potential land contamination source. No underground structure was observed during the inspection, which is tally with the as-built drawings.

2.4.4 There were four existing building blocks in the Site and the container site office were visited to identify the current use and condition. According to the RSS and the DSD's representative, all building blocks were DSD's Staff Quarter initially, then they were turned into general storeroom for DSD's documentation. It is observed that most of the rooms in the buildings were idle and some of these rooms were used for DSD's document storage. No potential land contamination source or hotspot was identified in all buildings.

2.4.5 Some Waste electrical and electronic equipment (WEEE) was observed during the site walkover and the WEEE will be collected by Government's recycling service operator or transported to one of the Community Green Stations for recycle. No potential contamination issue was anticipated for such disposal arrangement.

2.4.6 The container site office for DSD's Contract DC /2017/02 at the north edge of the Site was also visited during the walkover. The container site office was built on top of concrete block and floor condition of the site office was good. No use and storage of chemical was observed in the site office. No potential land contamination source or hotspot was identified in the site office.

2.4.7 Findings from the site walkover are summarised in ***Table 2-4*** and the corresponding photo records are shown in ***Appendix F***.

Table 2-4 Summary of Site Walkover Findings

Floor Level	Inspected Area	Building Block	Findings	Rationale for Need of Intrusive Site Investigation (S.I.)	Require S.I.?	Photo Ref. in Appendix F
G/F	Corridor	Block A	- No potential contamination source was identified. - Concrete floor was observed in good condition without crack.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 7
	Living Area	Block A	- Access key was lost. - The room was used as storeroom for documentation. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 8
	Living Area	Block A	- Access key was lost. - The room was used as storeroom for documentation. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 9
	Water Meter Room 3	Block A	- No potential contamination source was identified. - Concrete floor was observed in good condition without crack.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 10
	Storeroom	Block A	- Miscellaneous boxes stored in the room. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 11
	Corridor	Block B	- Concrete floor was observed in good condition without crack. - WEEE was observed and the WEEE will be collected by Government's recycling service operator or transported to one of the Community Green Stations for recycle. No potential contamination issue was anticipated for such disposal arrangement.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 12
	Store	Block B	- Access key was lost and access is blocked by miscellaneous items at the corridor. - As advised by the DSD's representative, the room was used as storeroom for DSD's documentation. - WEEE was observed and the WEEE will be collected by Government's recycling service operator or transported to one of the Community Green Stations for recycle. No potential contamination issue was anticipated for such disposal arrangement.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 13 & Photo 14
	Block D	Block D	- Access key of all rooms of Block D were lost. - As advised by the DSD's representative, all rooms were used as storeroom for DSD's documentation. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 25 to Photo 27
	Corridor	Block E	- No potential contamination source was identified. - Concrete floor was observed in good condition without crack.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 17
	Room 1	Block E	- The room was used as storeroom for documentation. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 18
	Toilet	Block E	- No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 19
	Room 4	Block E	- No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 20
	Balcony of Room4	Block E	- Miscellaneous furniture was stored in the room. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 21
	Room 6	Block E	- DSD's physical model was stored in the room. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 22
	Kitchen of Room 6	Block E	- Miscellaneous electronics was stored in the room. - WEEE was observed and the WEEE will be collected by Government's recycling service operator or transported to one of the Community Green Stations for recycle. No potential contamination issue was anticipated for such disposal arrangement.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 23
	Room 4	Block E	- Miscellaneous furniture was stored in the room. - WEEE was observed and the WEEE will be collected by Government's recycling service operator or transported to one of the Community Green Stations for recycle. No potential contamination issue was anticipated for such disposal arrangement.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 24

Floor Level	Inspected Area	Building Block	Findings	Rationale for Need of Intrusive Site Investigation (S.I.)	Require S.I.?	Photo Ref. in Appendix F
	Refuse Collection Point	-	- Bamboo brooms and buckets were stored. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 15 & Photo 16
	Container Site Office for Contract DC/2017/02	-	- The site office was a container site office built on a concrete slab. - As advised by the staff in the site office, no chemical was stored or used in the office. - The floor was paved with vinyl floor tile. - No potential contamination source was identified.	No potential contamination source was identified at the ground and further soil investigation is not necessary.	No	Photo 28 & Photo 29

3. Sampling and Testing Plan for Site Investigation

3.1 Location of Site Investigation

3.1.1 According to the CAP, one grid sampling point – ENV-G01 was proposed to study the vertical profile of possible contamination within the existing STSTW. The location of ENV-G01 is indicated in the location plan at ***Appendix A***, which is extracted from Figure 2.01 of the CAP. After reviewing the actual site conditions, the grid sampling point – ENV-G01 is very close to the existing building structure and it might disturb the user of the existing building during SI and impose unnecessary safety concern. In view of the above, an alternative grid sampling point – ENV-G01 (2) for grid sampling point – ENV-G01 is proposed and indicated in the location plan at ***Appendix A***. The alternative grid sampling point – ENV-G01 (2) is considered representative to ENV-G01 as they also are in the same grid and they are located within a short distance about ~10m. Location of ENV-G01 and ENV-G01 (2) were indicated in ***Photo 30*** and ***Photo 31***.

3.1.2 The CoCs proposed in the approved CAP agreed by the EPD for laboratory analysis are extracted as ***Table 2-1***.

3.2 Proposed Sampling Method and Depth of Sampling

Soil Sampling

3.2.1 All sampling and testing requirement specified in the CAP for sampling at ENV-G01 (2) shall be followed. The CAP proposed that all soil boring/ excavation and sampling shall be supervised by a land contamination specialist. Boreholes sampling shall be conducted by dry rotary drilling to prevent cross-contamination by flushing medium during sampling. An inspection pit shall be developed to 1.5m below ground level (m bgl) to identify any underground utilities at ENV-G01 (2) for safety reasons and an disturbed soil shall be collected at depth of 0.5m bgl from the inspection pit by using stainless steel hand tools or other appropriate equipment. Undisturbed U100/U76 soil sampling shall then be collected from 1.5m, 3.0m and groundwater level or 6m bgl if groundwater is not encountered. If groundwater is encountered, borehole is proposed to be advanced to approximately 2m below the stabilized water table. Where there are suspected signs of contamination, extra samples should be taken for laboratory analysis.

3.2.2 If drilling of borehole at ENV-G01 (2) is considered not possible (e.g. presence of underground utilizes, limitation of headroom space, etc.), a trail pit shall be developed to 3m bgl. Disturbed soil sampling shall be collected at 0.5m, 1.5m and 3.0m below ground level at the trial pit to delineate the vertical contamination profile.

3.2.3 Sufficient amount of soil samples should be taken as required by the laboratory for analyses of the specified parameters. Backup samples shall be kept. All soil samples shall be properly labelled.

3.2.4 Strata logging for the borehole shall be conducted by a qualified geologist during drilling/digging at ENV-G01 (2). The strata log shall include the general stratigraphic description, depth of soil samples taken, sample notation and level of groundwater (if encountered). The presence of rocks/boulders/cobbles and foreign materials such as metals, wood and plastics should also be recorded in the log.

Groundwater Sampling and Free Product Measurement

3.2.5 If groundwater is encountered, groundwater samples should be taken for laboratory analysis.

3.2.6 Groundwater sampling well should be installed if groundwater is encountered unless agreed otherwise by the land contamination specialist. The typical design of the groundwater sampling well was proposed in the CAP and extracted in ***Appendix G***. After installation of the monitoring well, groundwater levels (metres below ground level) should be measured with an interface probe to assess groundwater gradient and predominant direction.

3.2.7 Thickness of any Non-aqueous Phase Liquid (NAPL) or free product layer floating on top of the groundwater shall be measured and recorded before groundwater samples are taken, if present. A sample should be collected for analysis the composition of such layer in laboratory if encountered.

3.2.8 If groundwater is encountered for trial pit sampling method, groundwater sample shall be taken after collecting all required soil samples. The trial pits shall be pumped to near dry and allowed to recharge for 24 hours before sampling.

3.2.9 Before groundwater sampling, the monitoring wells should be purged in order to remove fine-grained materials and to freshly refill representative groundwater samples.

3.2.10 Groundwater sample shall be collected using Teflon bailer and decanted immediately into appropriate sample containers provided by the laboratory to minimise agitation and volatilization of VOCs from the samples. After sample collection, samples shall be stored at temperature of about 0-4^{o}C until delivered to laboratory.

3.3 Sampling, Handling and Transport of Samples

3.3.1 All sampling equipment should be thoroughly decontaminated by washing with phosphate-free detergent and rinsed with distilled/deionised water prior to sampling and between drilling, digging and sampling event to prevent cross contamination of samples.

3.3.2 Following sampling, samples should be stored in a cool box at a temperature of between 0°C and 4°C and transported to the laboratory within the sample retention time, as advised by the laboratory.

3.4 QA/QC Procedures

3.4.1 For the field QA/QC samples, the followings shall be followed:

- 1 duplicate soil sample per 20 soil samples and 1 duplicate groundwater sample per 20 groundwater samples for analysis of same parameters as shown in ***Table 2-1***.
- 1 field blank per 20 samples for analysis of same parameters as shown in ***Table 2-1***.
- 1 equipment sample shall be collected per 20 samples for analysis of same parameters as shown in ***Table 2-1***.
- 1 trip blank sample per 10 trips for petroleum carbon range C6-C8.

3.4.2 Supporting documentation, including Chain-of-Custody Procedures, Data Quality Objectives and Quality Assurance/Quality Control, shall be maintained by the project proponents and shall be submitted to EPD when required.

3.5 Laboratory Analytical Requirements

3.5.1 The CAP recommended the reporting limits and reference methods for the laboratory analyses of soil and groundwater samples for the COCs under this land contamination assessment. The schedule for laboratory analysis is listed in ***Table 3-1***:

Table 3-1 Parameters, Reporting Limits and Reference Methods for Laboratory Analysis

Parameters	Soil Reporting Limit (mg/kg)	Reference Test Method	Groundwater Reporting Limit (µg/L)	Reference Test Method
SVOCs				
Acenaphthene	0.5	USEPA 8270 or similar method*	2	USEPA 8270 or similar method*
Acenaphthylene	0.5		2	
Anthracene	0.5		2	
Benzo(a)anthracene	0.5		NA	
Benzo(a)pyrene	0.5		NA	
Benzo(b)fluoranthene	0.5		1	
Benzo(g,h,i)perylene	0.5		NA	
Benzo(k)fluoranthene	0.5		NA	
bis-(2-Ethylhexyl)phthalate	5		NA	
Chrysene	0.5		1	
Dibenzo(a,h)anthracene	0.5		NA	
Fluoranthene	0.5		2	
Fluorene	0.5		2	
Hexachlorobenzene	0.2		4	
Indeno(1,2,3-cd)pyrene	0.5		NA	
Naphthalene	0.5		2	
Phenanthrene	0.5		2	
Phenol	0.5		NA	
Pyrene	0.5		2	
VOCs				
Acetone	50	USEPA 8260 or similar method*	500	USEPA 8260 or similar method*
Bromodichloromethane	0.1		5	
2-Butanone	5		50	

Parameters	Soil Reporting Limit (mg/kg)	Reference Test Method	Groundwater Reporting Limit (µg/L)	Reference Test Method
Chloroform	0.04		5	
Methyl tert-Butyl Ether	0.5		5	
Methylene Chloride	0.5		50	
Styrene	0.5		5	
Tetrachloroethene	0.04		5	
Trichloroethene	0.1		5	
Benzene	0.2		5	
Toluene	0.5		5	
Ethylbenzene	0.5		5	
Xylenes	2		20	
Metals				
Antimony	1	USEPA 6020A or similar method*	NA	NA
Arsenic	1		NA	NA
Barium	1		NA	NA
Cadmium	0.2		NA	NA
Chromium III^	1	By calculation	NA	NA
Chromium VI	1	USEPA 3060 APHA 3500 Cr: D or similar method*	NA	NA
Cobalt	1	USEPA 6020A or similar method*	NA	NA
Copper	1		NA	NA
Lead	1		NA	NA
Manganese	1		NA	NA
Mercury	0.05		0.5	USEPA 6020A or similar method*
Molybdenum	1		NA	NA
Nickel	1		NA	NA
Tin	1		NA	NA
Zinc	1		NA	NA
Petroleum Carbon Ranges (PCRs)				
C6 - C8	5	USEPA 8015/8260 or similar method*	20	USEPA 8015/8260 or similar method*
C9 - C16	200		500	
C17 - C35	500		500	

Notes:

1. NA = Not Applicable

2. ^ Chromium III is quantified by calculation based on Chromium VI and Total Chromium measured under HOKLAS accredited methods.
3. *Alternative testing methods with accreditation by HOKLAS or its Mutual Recognition Arrangement partners are also accepted.

3.6 Health and Safety Precautions

3.6.1 All health and safety recommendations specified in the CAP shall be implemented.

3.6.2 The SI contractor shall establish and maintain a Health and Safety Plan before commencement of the SI that will include the following:

a. Instruction of works on work procedures, safe practices, emergency duties, and applicable regulations;

b. Regularly scheduled meetings of the workers in which the possible hazards, problems of the job, and related safe practices are emphasized and discussed;

c. Good housekeeping practices;

d. Availability of and instruction in the location, use and maintenance of personal protective equipment;

e. Any abnormal conditions found shall be reported immediately to the safety officer and the land contamination specialist.

3.6.3 The SI 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. The following measures were recommended in the CAP and shall be implemented, but not limited to, for minimising the risk to field personnel during SI:

a. Maintain proper safety devices, barriers to minimise hazards during performance of the work;

b. Prohibit smoking and open flames and the carrying of matches and lighters;

c. Develop and maintain a written emergency plan applicable to the Work and Site;

d. Maintain equipment in good operating condition and have emergency and first aid equipment ready for immediate use, where applicable;

e. 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;

f. 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

g. The personnel are required to wear respirator and gloves for vapour exposure protection, if necessary. Safety helmet and protective boots should be worn.

3.6.4 Workmen Compensation Insurance and third party insurance must be provided for the SI work.

4. Interpretation of Results for Site Investigation

4.1 Future Land Use and Land Use Scenarios of the Site

4.1.1 Refer to the CAP, the existing STSTW would be used for housing development or other beneficial uses to improve the community and environment and the Urban Residential Land Use Scenario is adopted as the criteria for this type of land uses.

4.1.2 The future land use of the Site will be similar to the future land use of existing STSTW and the criteria of Urban Residential Land Use Scenario is considered applicable.

5. Conclusion

5.1.1 This SCAP was prepared to conduct a review to confirm the findings in the EIA CAP at the Site is still valid after 4 years of approval of the EIA CAP. This SCAP only covers the assessment of the Existing DSD Staff Quarter Site and subsequent SCAP(s) for the existing STSTW will be submitted prior to demolition.

5.1.2 In this study, site appraisal was conducted to identify potential land contamination sources/ hotspot in the Site by site inspection on 28 July 2020, review of aerial photos, obtaining information from government departments and interview with the land owner. Also, the findings on land contamination issues prior to 2016 from EIA CAP was also reviewed to obtain the information prior to 2016 for the Site. Based on the findings of the CAP for the Site and this SCAP, no land contaminating source/hotspot/activities were observed at the study area and the findings in the EIA CAP at the study area is considered valid.

5.1.3 However, one grid sample point was proposed in the grid (ENV-G01) in the CAP, which is within the Site, to study the vertical profile of possible contamination within the existing STSTW. After reviewing the actual site conditions, an alternative grid sampling point – ENV-G01 (2) for grid sampling point – ENV-G01 is proposed due to site constraint and indicated in the location plan at ***Appendix A*** to represent ENV-G01.The sampling works for this grid sampling point shall be conducted by DSD according to the ***Sampling and Testing Plan for Site Investigation*** at ***Section 3*** and the requirement specified in the CAP.

5.1.4 According to Section 7.1.1.4 of the CAP, no construction works or development shall be carried out within the Site prior to the approval of the Contamination Assessment Report (CAR) or Remediation Report (if necessary).

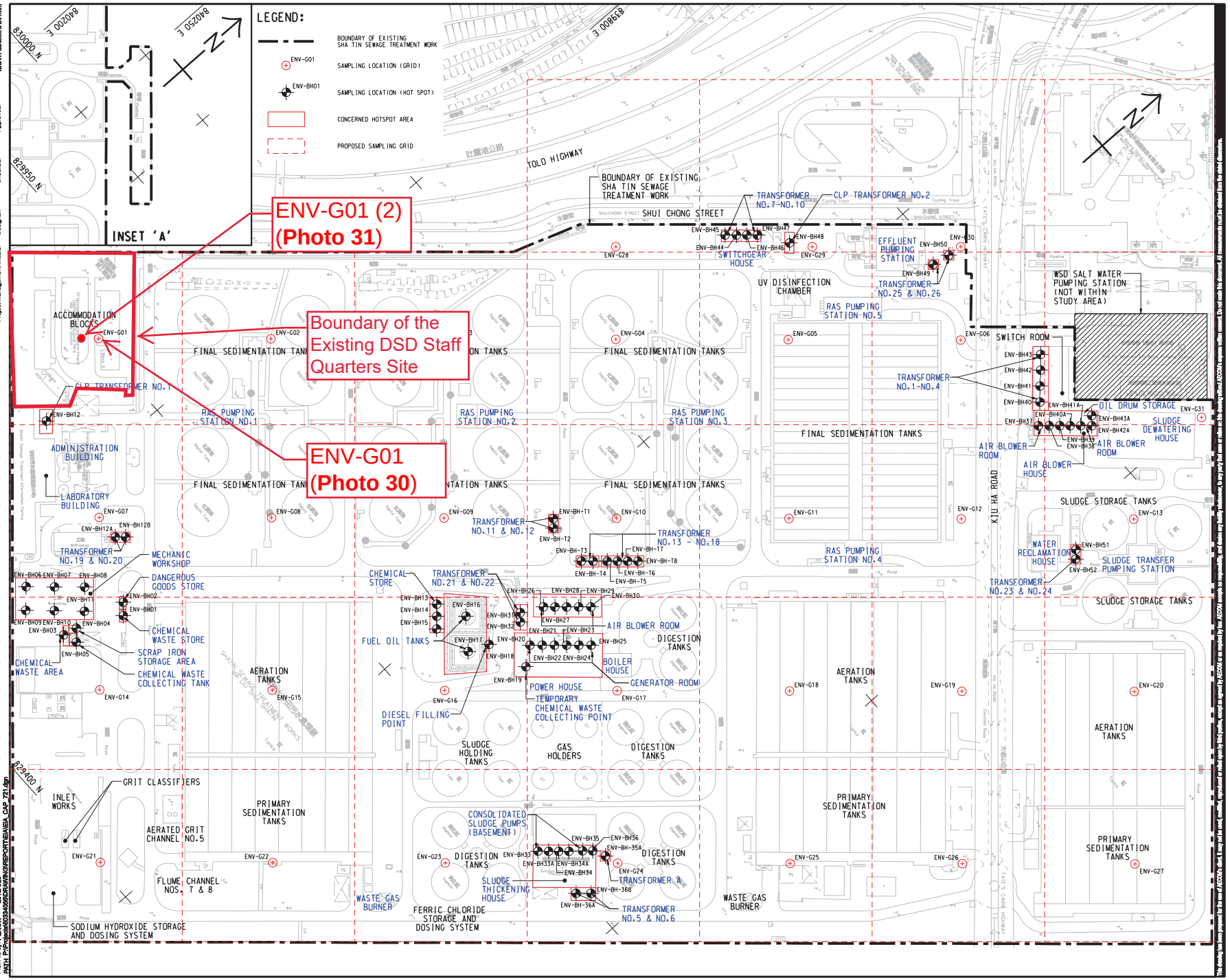
5.1.5 A CAR shall be prepared following the site investigation work at ENV-G01 (2). The CAR should present the detailed methodology, observations and the analytical results from the site investigation works. The CAR shall be submitted for EPD endorsement.

5.1.6 If contamination is confirmed, strategies for remediation of the Site shall be recommended in a Remediation Action Plan (RAP), to be prepared by the Contamination Specialist. The RAP shall be submitted for EPD endorsement.

5.1.7 Based on the approved RAP, remediation of the Site shall be conducted. The RR shall be submitted for EPD endorsement. No construction works or development of the Site shall commence before completion of remediation and approval of the RR, if required.

Appendix A

Location Plan of ENV-G01 Extracted from Figure 2.01 of the CAP and Location of Alternative Grid Sampling Point - ENV-G01 (2)



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RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

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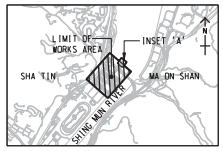
DIMENSION UNIT: METRES

KEY PLAN A3 1 : 100000



PROJECT NO. 60334056

CONTRACT NO. CE 30/2014 (DS)

SHEET TITLE

GENERAL SITE LAYOUT OF EXISTING STSTW AND PROPOSED SAMPLING LOCATIONS

SHEET NUMBER

60334056/CAP/2.01

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:
Plot File by: PENGKW 20/04/2020
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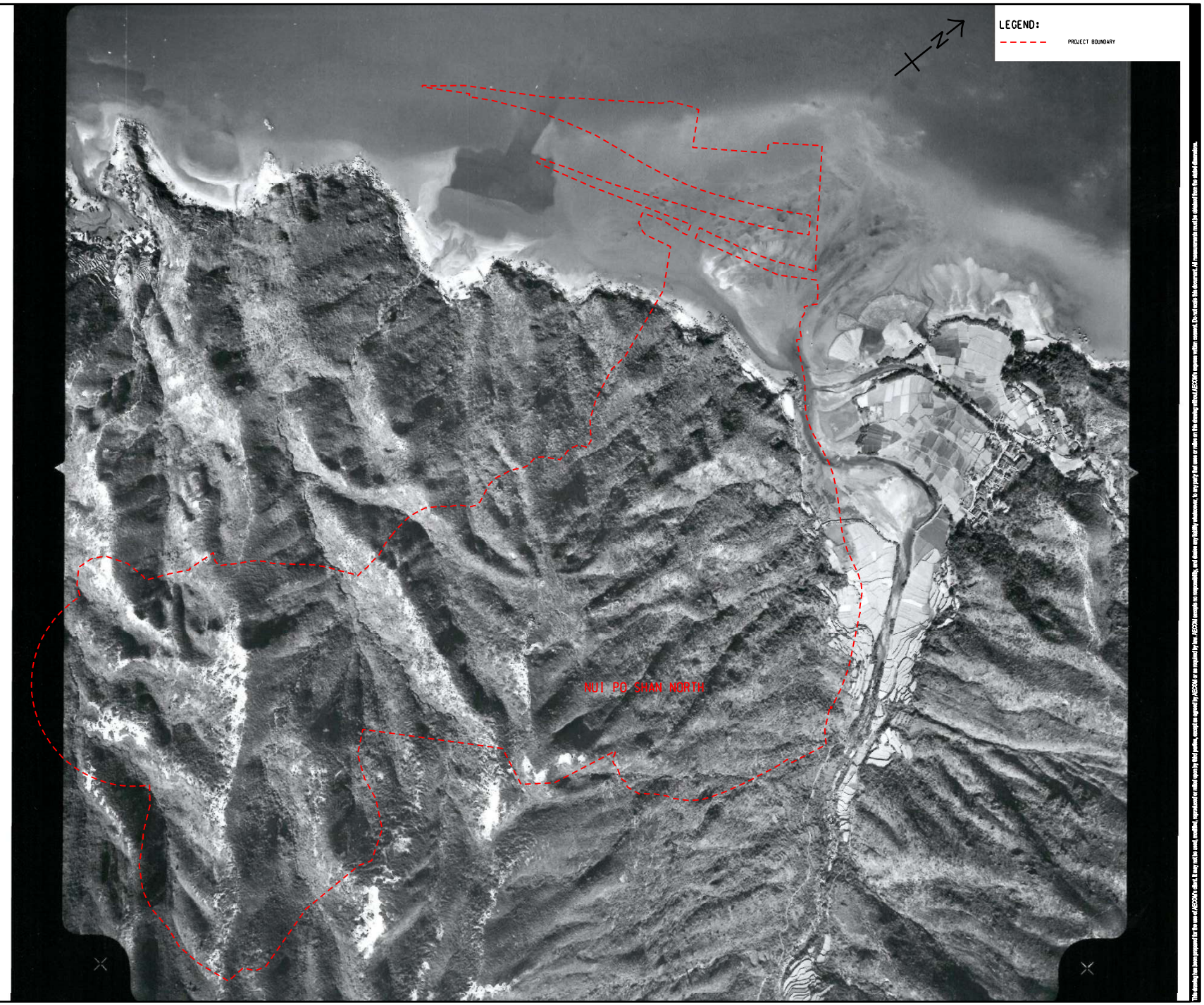
Appendix B1

Aerial Photos Extracted from the CAP



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Plot File by: PEW/GW 2016/4/19
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SCALE
A1 1 : 2500

DIMENSION UNIT
METRES

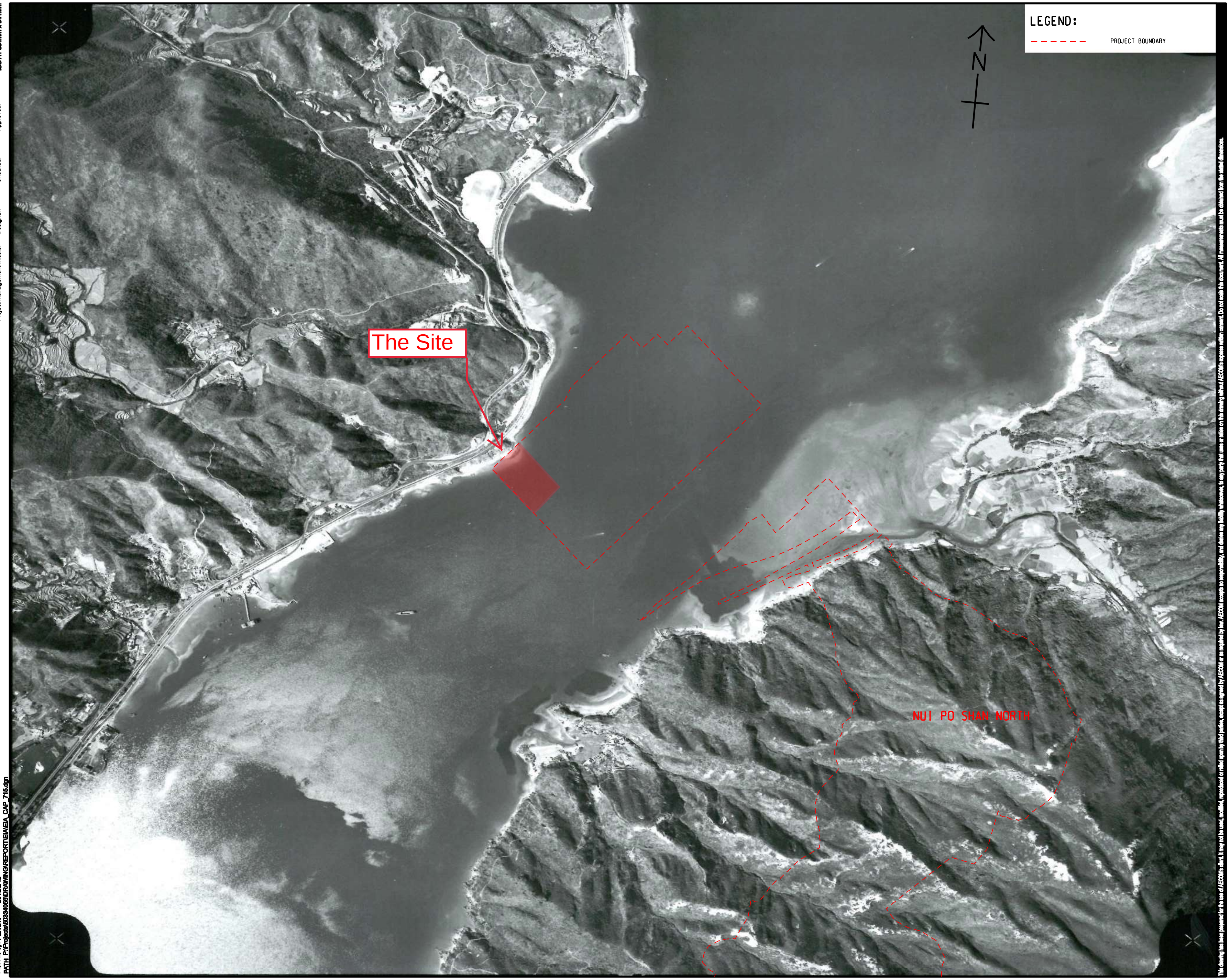
KEY PLAN

PROJECT NO.
60334056

CONTRACT NO.
CE 30/2014 (DS)

SHEET TITLE
AERIAL PHOTOGRAPH (1963)

SHEET NUMBER
60334056/CAP/1963A



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DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60334056

CONTRACT NO. CE 30/2014 (DS)

SHEET TITLE

AERIAL PHOTOGRAPH (1963) (2)

SHEET NUMBER

60334056/CAP/1963(2)A

ISO A1 594mm x 841mm
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Designer:
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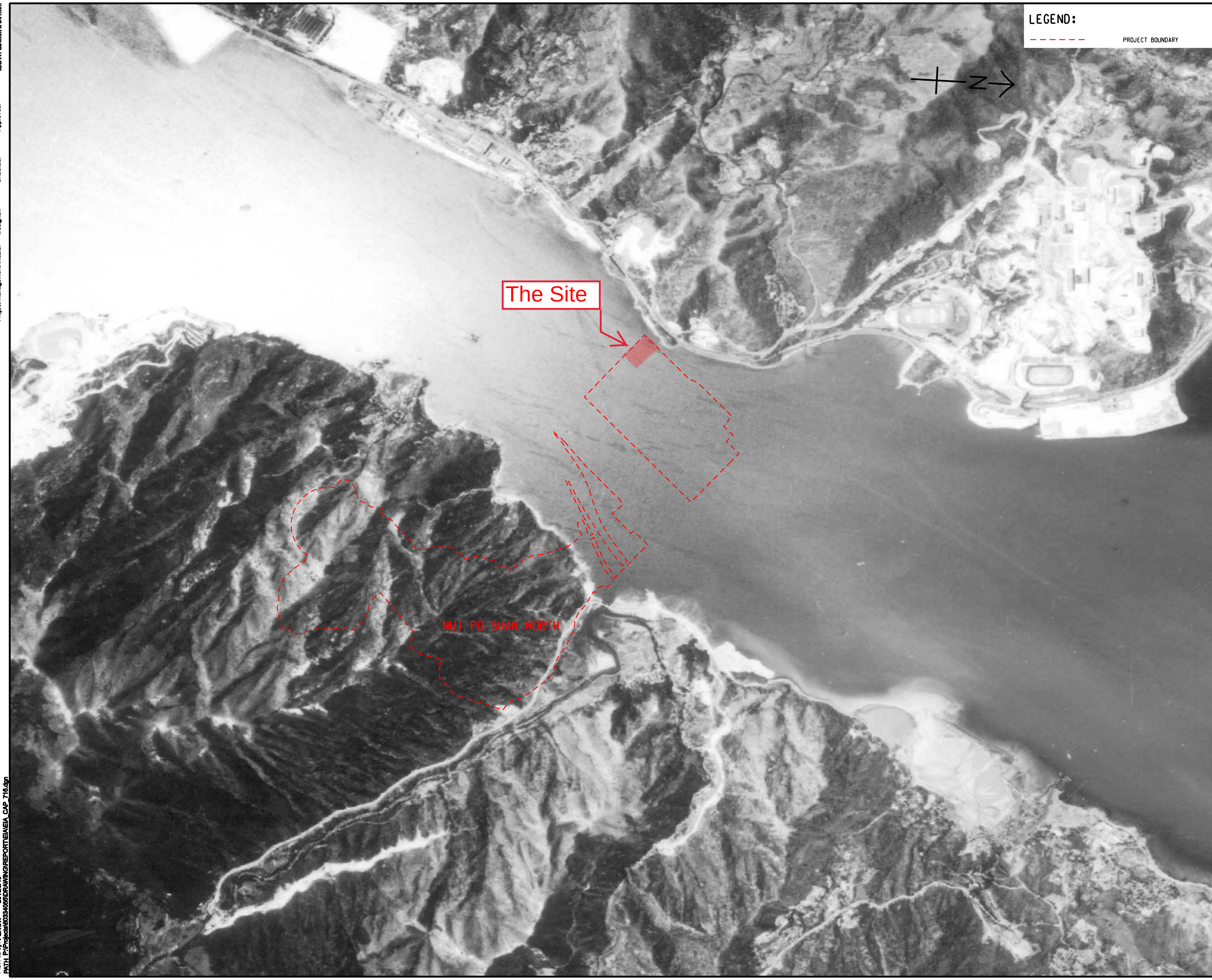

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KEY PLAN

PROJECT NO.	CONTRACT NO.
60334056	CE 30/2014 (DS)

SHEET TITLE

AERIAL PHOTOGRAPH (1974)

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60334056/CAP/1974A

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DIMENSION UNIT
METRES

KEY PLAN

PROJECT NO.
60334056

CONTRACT NO.
CE 30/2014 (DS)

SHEET TITLE
AERIAL PHOTOGRAPH (1979)

SHEET NUMBER
60334056/CAP/1979A

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SCALE

A1 1 : 2500

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60334056

CONTRACT NO.

CE 30/2014 (DS)

SHEET TITLE

AERIAL PHOTOGRAPH (1981)

SHEET NUMBER

60334056/CAP/1981A

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STATUS

SCALE A1 1 : 5000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60334056

CONTRACT NO. CE 30/2014 (DS)

SHEET TITLE

AERIAL PHOTOGRAPH (1982)

SHEET NUMBER

60334056/CAP/1982A

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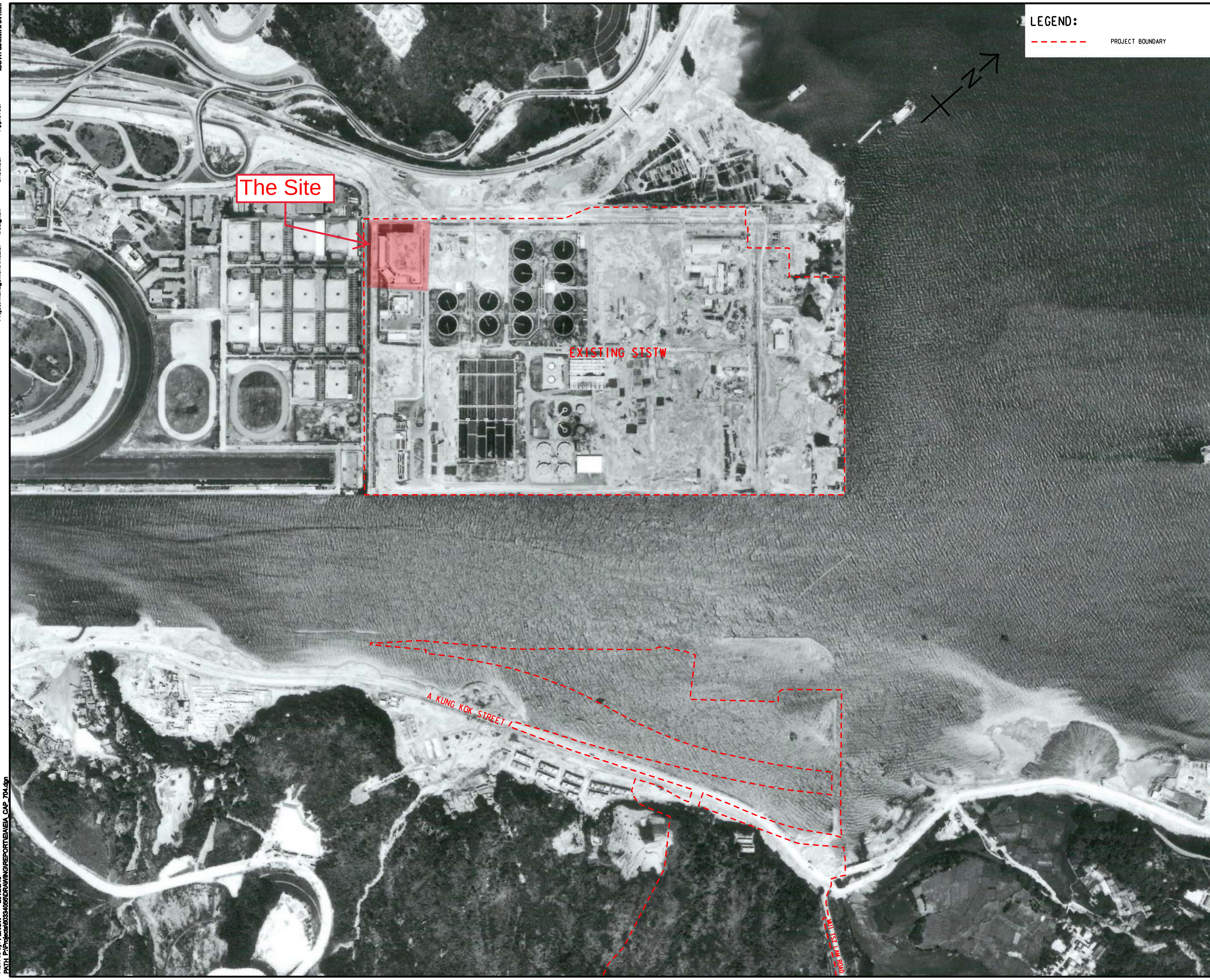

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KEY PLAN

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CONTRACT NO.
CE 30/2014 (DS)

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ISO A1 594mm x 841mm

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DIMENSION UNIT
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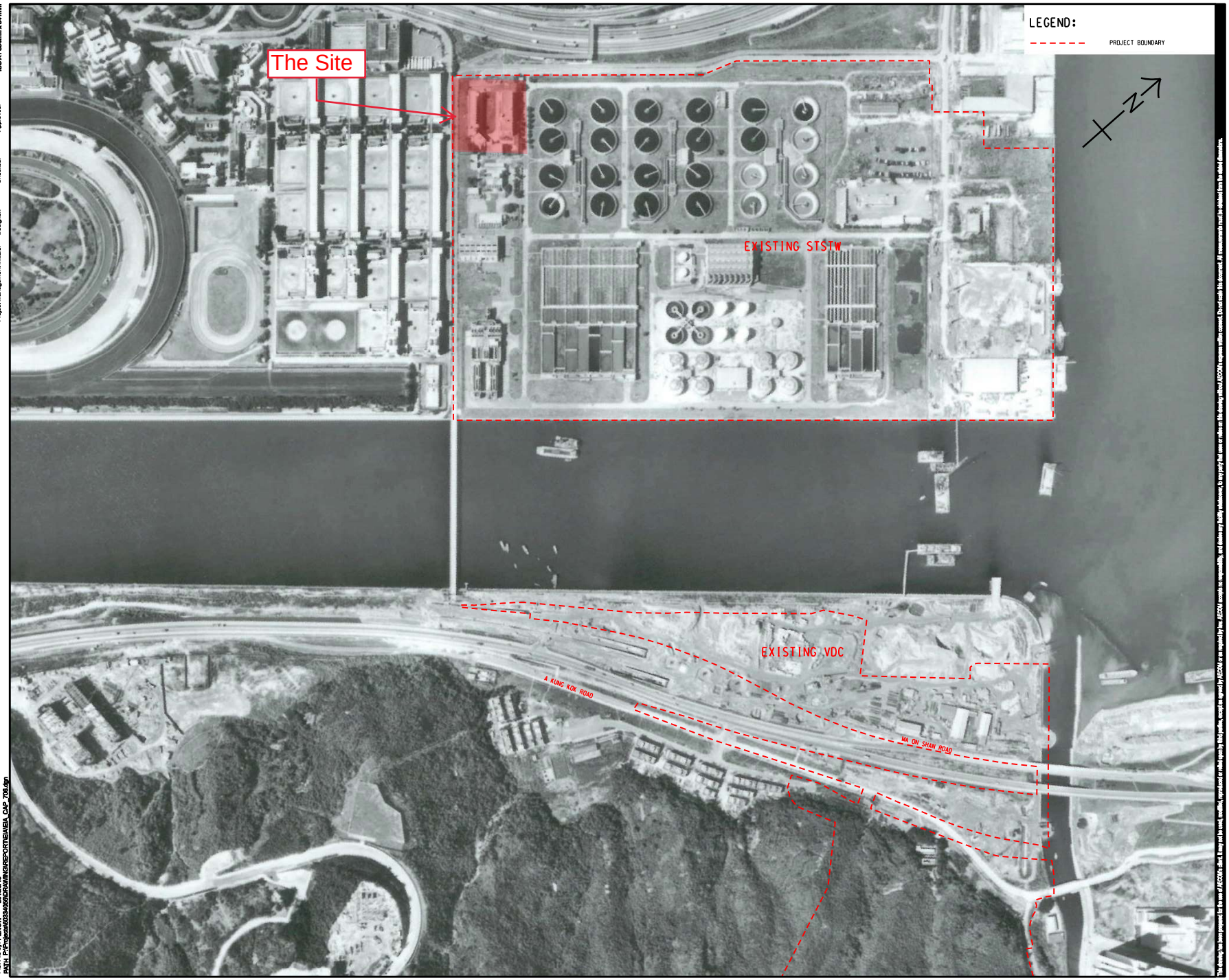
60334056/CAP/1985A



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DIMENSION UNIT METRES

KEY PLAN

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CONTRACT NO. CE 30/2014 (DS)

SHEET TITLE

AERIAL PHOTOGRAPH (1989)

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60334056/CAP/1989A

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ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

Plot File by: PENGW 2016/3/19

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KEY PLAN

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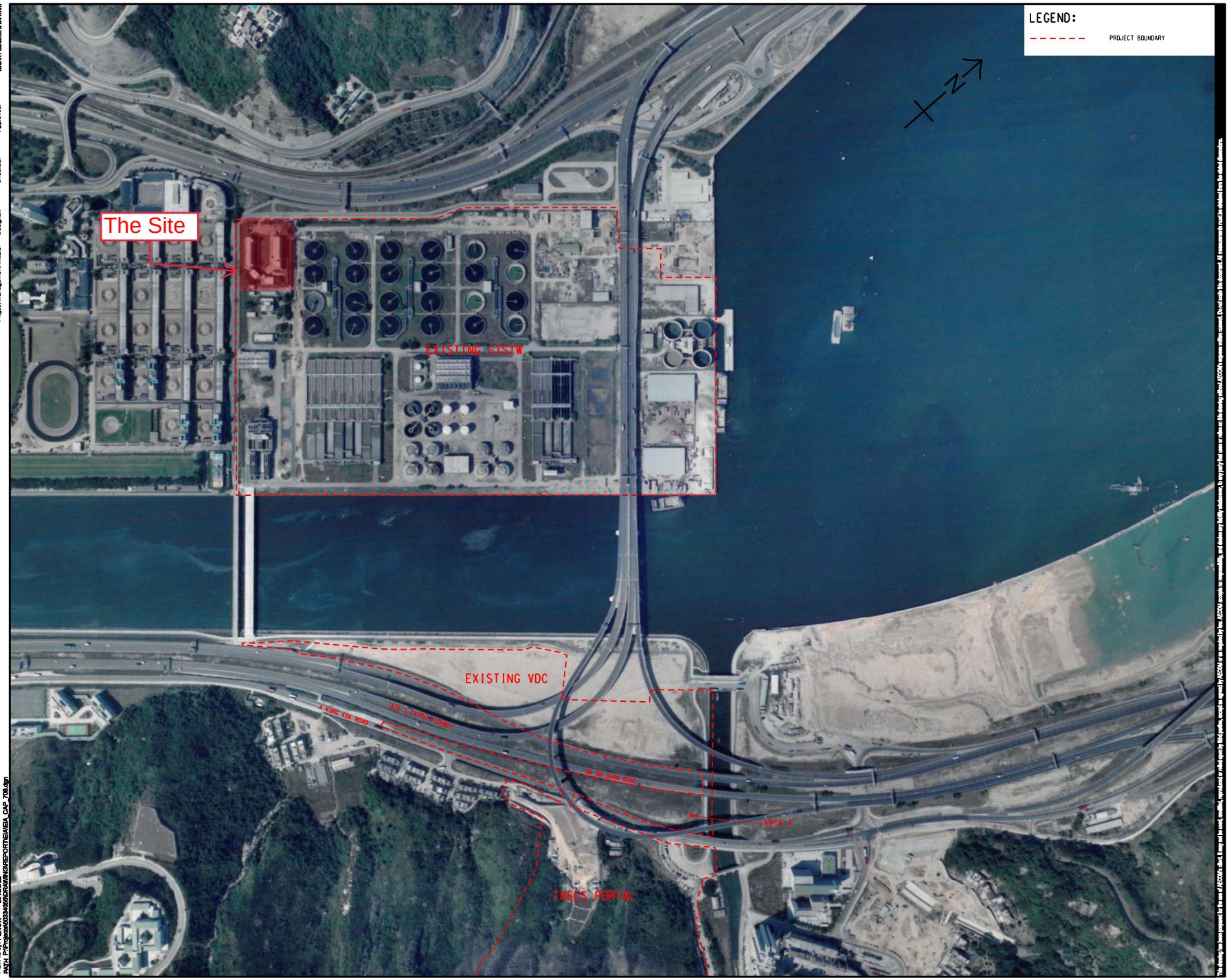

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KEY PLAN

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60334056

CONTRACT NO.
CE 30/2014 (DS)

SHEET TITLE
AERIAL PHOTOGRAPH (1993)

SHEET NUMBER
60334056/CAP/1993B

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SCALE
N.T.S.

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KEY PLAN

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SHEET NUMBER
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KEY PLAN

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60334056

CONTRACT NO.

CE 30/2014 (DS)

SHEET TITLE

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SHEET NUMBER

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SCALE
A1 1 : 2500

DIMENSION UNIT
METRES

KEY PLAN

PROJECT NO.
60334056

CONTRACT NO.
CE 30/2014 (DS)

SHEET TITLE
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SHEET NUMBER
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SCALE: A1 1 : 2000

DIMENSION UNIT: METRES

KEY PLAN

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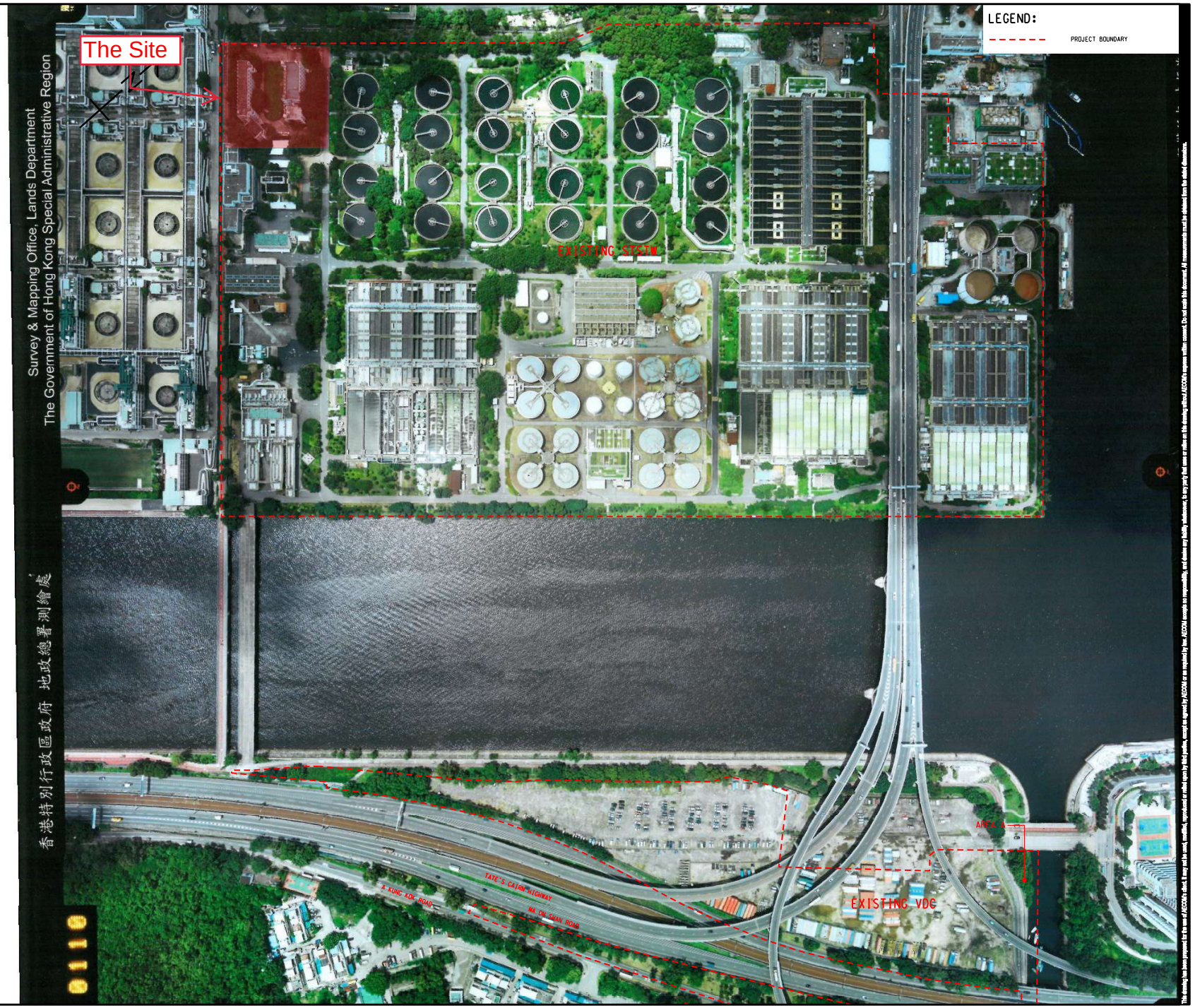
60334056/CAP/2009B



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SCALE

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DIMENSION UNIT

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KEY PLAN

PROJECT NO.

60334056

CONTRACT NO.

CE 30/2014 (DS)

SHEET TITLE

AERIAL PHOTOGRAPH (2014)

SHEET NUMBER

60334056/CAP/2014B

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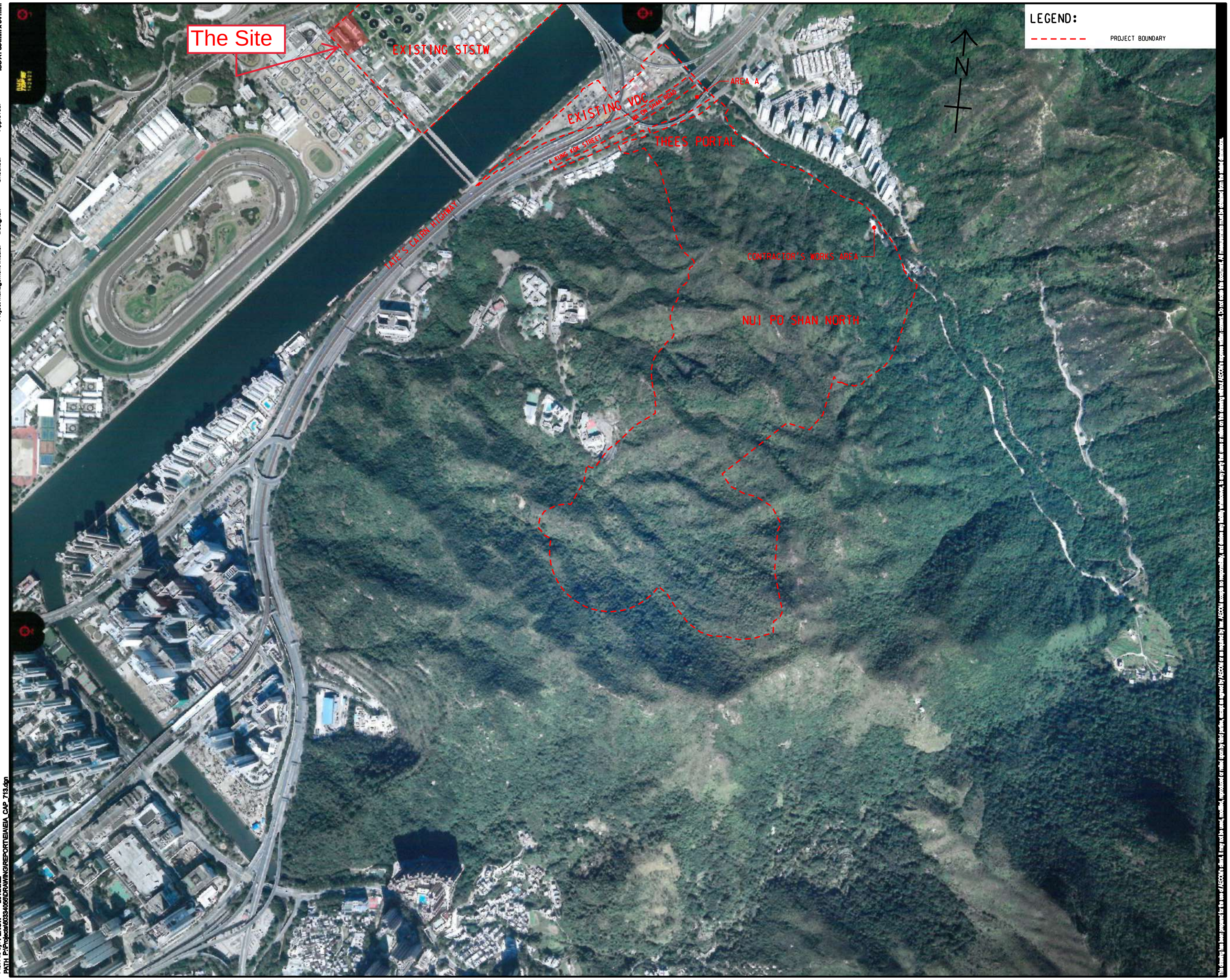

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SCALE 比例: A1 1 : 5000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

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CONTRACT NO. 合約編號: CE 30/2014 (DS)

SHEET TITLE 圖紙名稱

AERIAL PHOTOGRAPH (2015)

SHEET NUMBER 圖紙編號

60334056/CAP/2015B

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Appendix B2

Aerial Photos of 2016 and 2020

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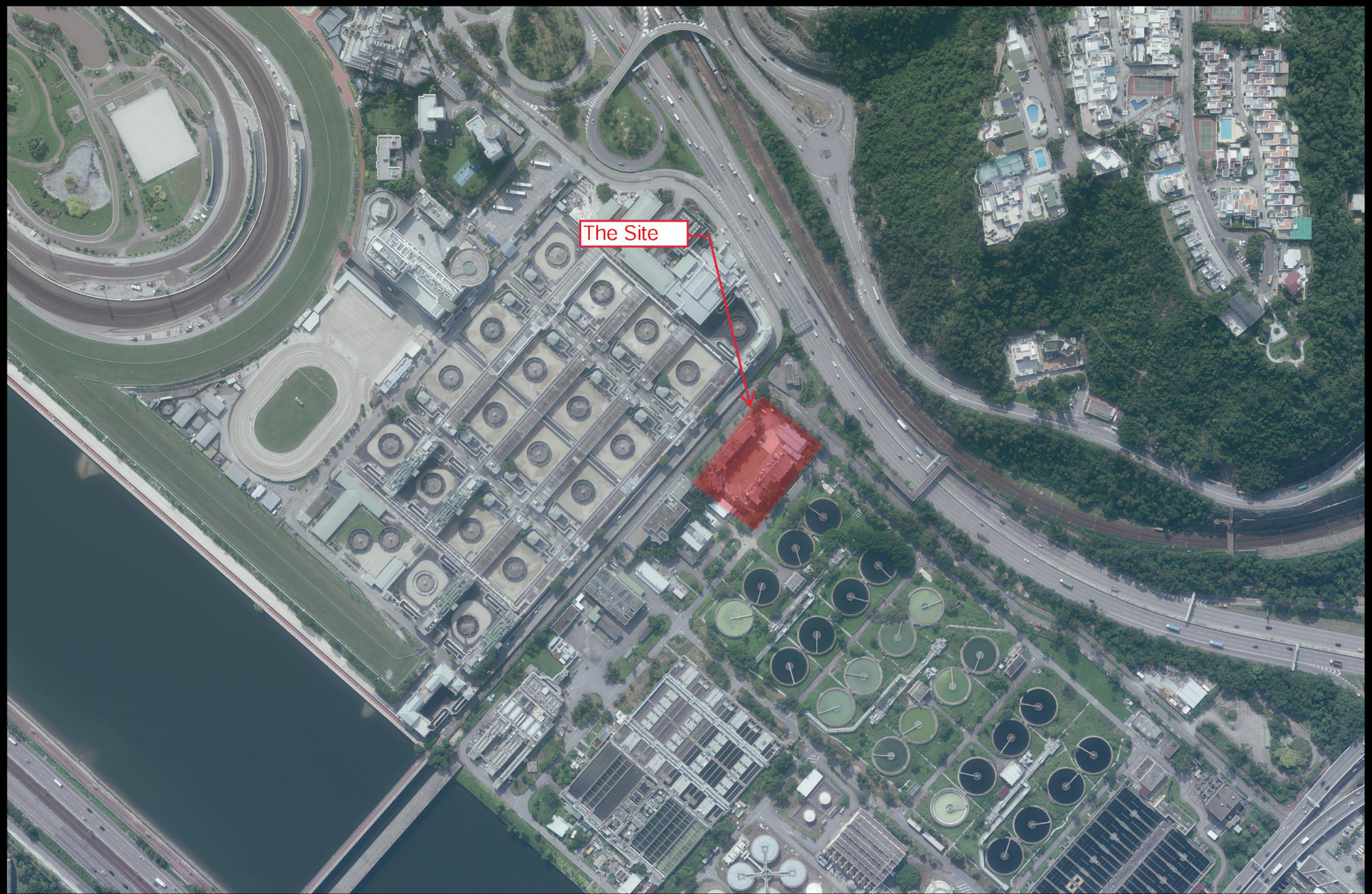
Survey & Mapping Office, Lands Department
The Government of Hong Kong Special Administrative Region

E003385C 7000' 6 Oct 2016 UltraCam Eagle 80mm
SHA TIN 沙田

香港特別行政區政府 地政總署測繪處

Survey & Mapping Office, Lands Department
The Government of Hong Kong Special Administrative Region



E063859C 6900' 12 Sep 2019 UltraCam Eagle 210mm
SHA TIN 沙田

Appendix C

Replies from FSD and EPD

Man Cheung

From: kwlaw@epd.gov.hk
Sent: Tuesday, 4 August 2020 3:41 pm
To: mancheung@lamenviro.com
Subject: Relocation of Sha Tin Sewage Treatment Works to Caverns - Site Preparation and Access Tunnel Construction Supplementary Land Contamination Plan (SCAP) Request for Information

Dear Mr. Cheung,

I refer to your letter dated 22 July 2020 with your reference: J2019-02/CS/L058/EPD on the captioned.

Regarding your enquiries in the above letter, this Regional Office has no record of spillage or leakage of chemical within the site boundary as depicted in the enclosed figures for the past 5 years. You may like to check with other relevant parties or departments for such information as appropriate.

As registered chemical waste producers at the location are concerned, a register of chemical waste producers is available for inspection in the Territorial Control Office of this department. If you would like to inspect, please contact Mr. Leung Chi-keung, Dennis at 2835 1017 for making appointment to view the records.

Should you have any query on the matter, please contact me at 2158 5841.

Yours sincerely,
Polly Law
Shatin Section
Regional Office (North)/EPD
Tel.: 2158 5841

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. : (95) in FSD GR 6-5/4 R Pt. 28
來函檔號 YOUR REF. : J2019-02/CS/L059/FSD
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電 話 TEL NO. : 2733 7741

27 August 2020

Lam Environmental Service Litmited
11/F, Centre Point,
181-185 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Mr. Raymond DAI, Contamination Specialist)

Dear Mr. DAI,

**Relocation of Sha Tin Sewage Treatment Works to Caverns –
Site Preparation and Access Tunnel Construction Supplementary
Land Contamination Plan (SCAP)
Request for Information of Dangerous Goods & Incident Records**

I refer to your letters of 22.7.2020 and 4.8.2020p regarding the captioned subject.

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

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

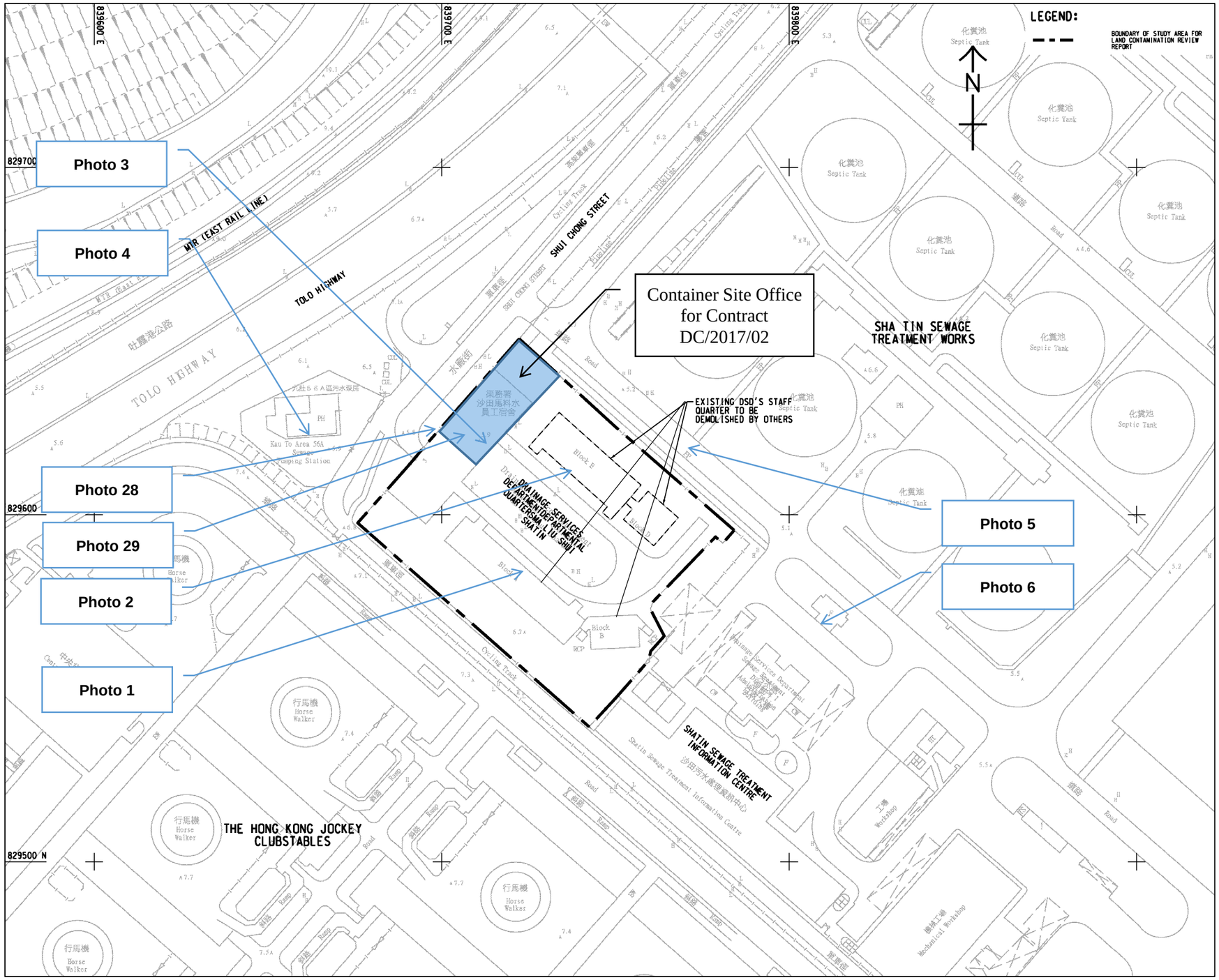
Yours sincerely,

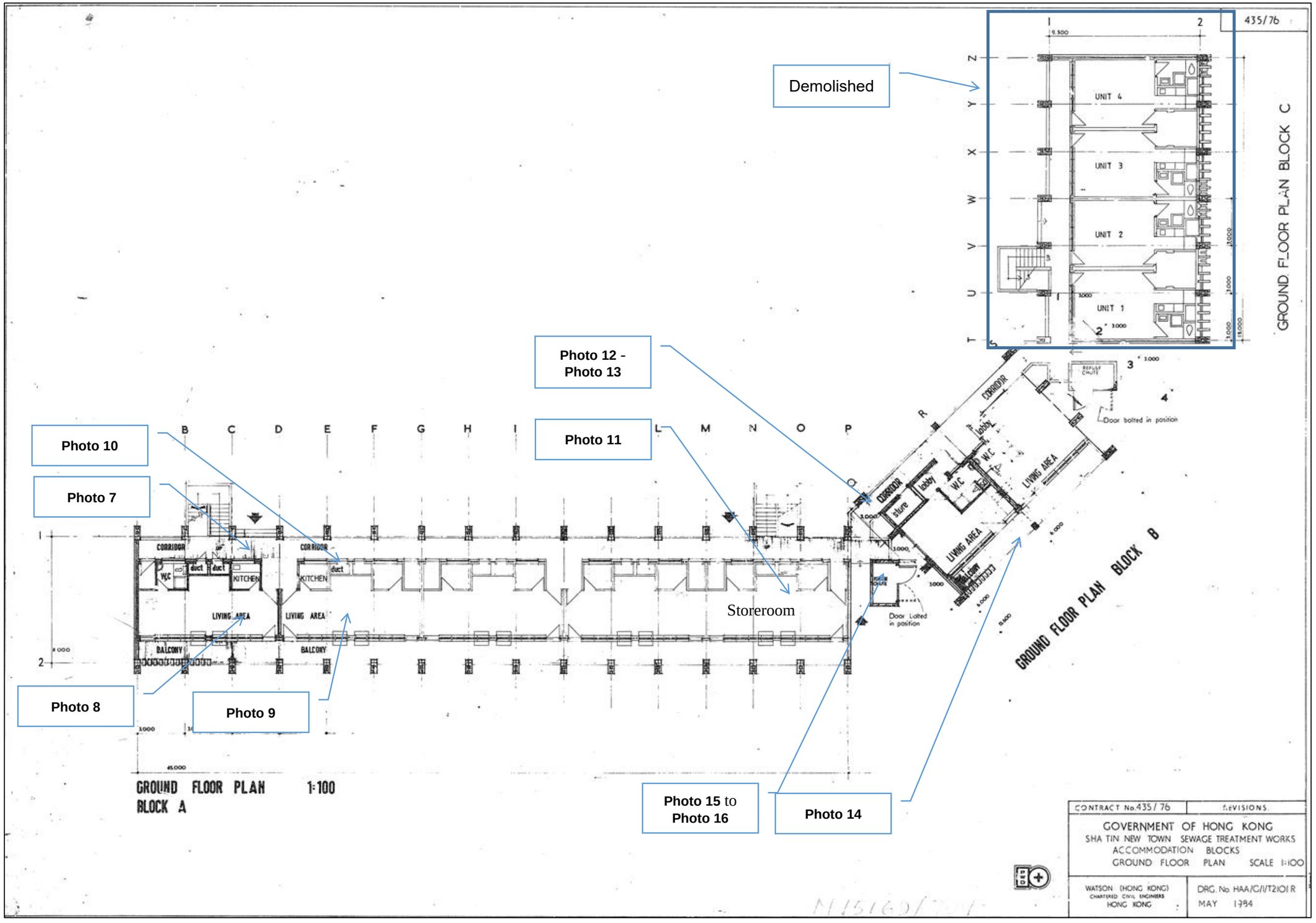
(KONG Wai-chung)
for Director of Fire Services

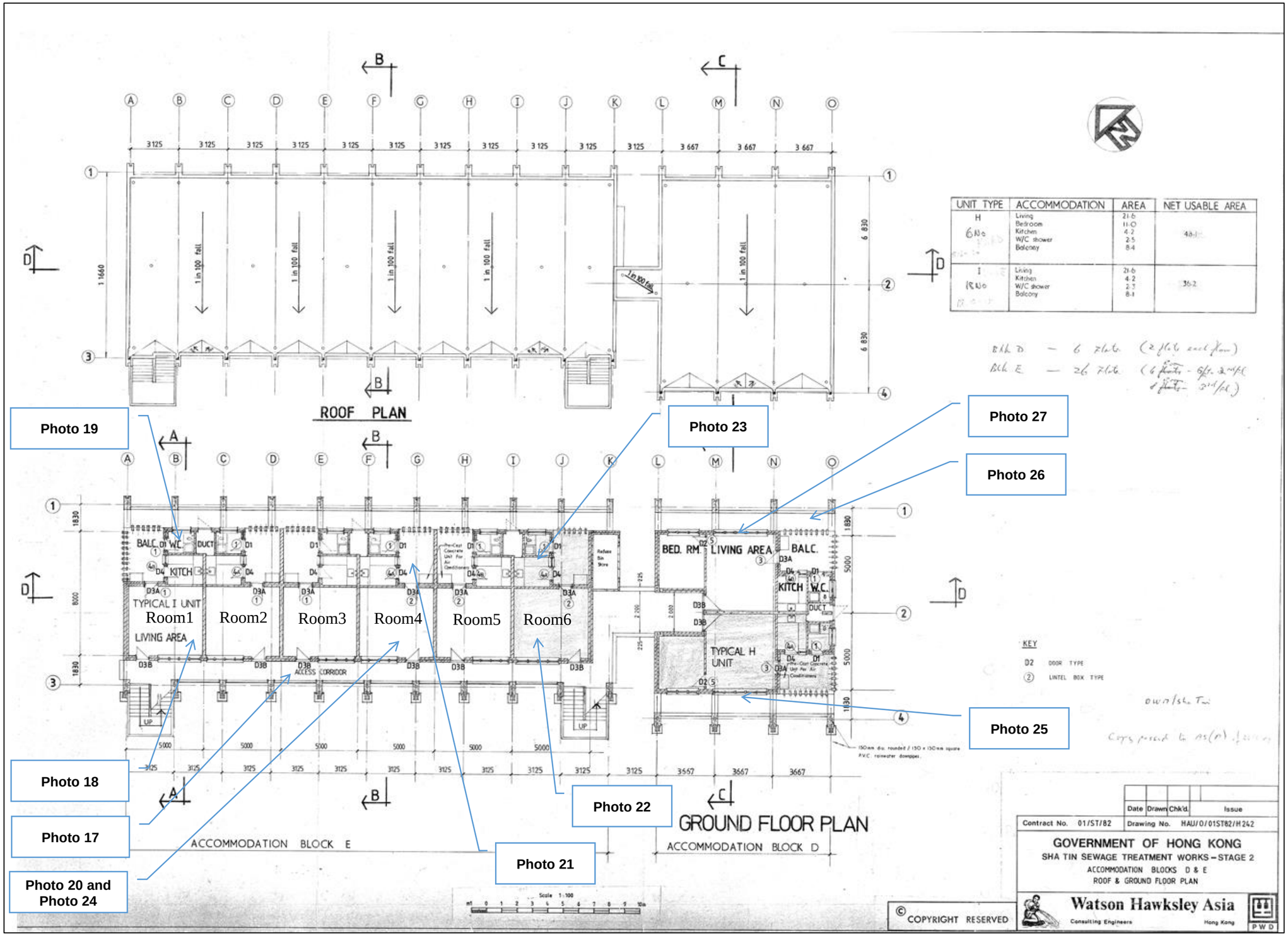
Ref. number and date should be quoted in reference to this letter
凡 提 及 本 信 時 請 引 述 編 號 及 日 期

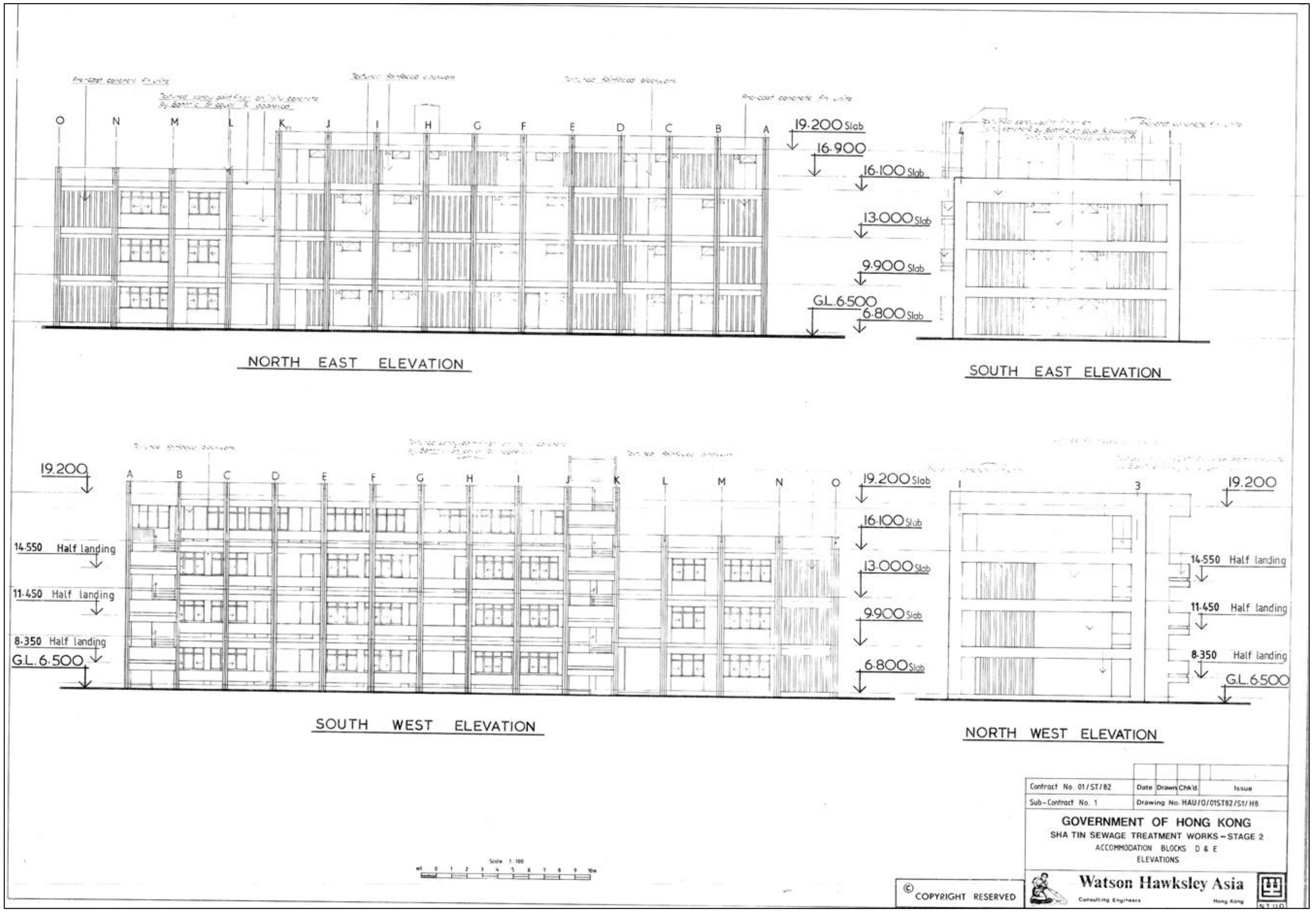
Appendix D

Available Floor Layout and Sectional Plans of the Buildings at the Site


LEGEND:
BOUNDARY OF STUDY AREA FOR LAND CONTAMINATION REVIEW REPORT
N
839600 E
839700 E
839800 E
829700
829600
829500 N
Photo 3
Photo 4
Photo 28
Photo 29
Photo 2
Photo 1
Photo 5
Photo 6
Container Site Office for Contract DC/2017/02
EXISTING DSD'S STAFF QUARTER TO BE DEMOLISHED BY OTHERS
DRAINAGE SERVICES DEPARTMENT DEPARTMENTAL QUARTERS, LIU SHUI SHA TIN
SHA TIN SEWAGE TREATMENT WORKS
SHATIN SEWAGE TREATMENT INFORMATION CENTRE
沙田污水處理資訊中心
THE HONG KONG JOCKEY CLUBSTABLES
TOLO HIGHWAY
SHUI CHONG STREET
WR (EAST RAIL LINE)
Block E
Block B
Block L
Cycling Track
Road
Horse Walker
Septic Tank
Workshop
Mechanical Workshop


435/76
GROUND FLOOR PLAN BLOCK C
UNIT 4
UNIT 3
UNIT 2
UNIT 1
CORRIDOR
REFUSE CHUTE
Door bolted in position
Lobby
W.C
LIVING AREA
Store
Demolished
Photo 12 - Photo 13
Photo 11
Photo 10
Photo 7
Photo 8
Photo 9
Photo 15 to Photo 16
Photo 14
Storeroom
GROUND FLOOR PLAN BLOCK B
GROUND FLOOR PLAN 1:100
BLOCK A
KITCHEN
BALCONY
duct
Door bolted in position
CONTRACT No.435/76
REVISIONS.
GOVERNMENT OF HONG KONG
SHA TIN NEW TOWN SEWAGE TREATMENT WORKS
ACCOMMODATION BLOCKS
GROUND FLOOR PLAN SCALE 1:100
WATSON (HONG KONG)
CHARTERED CIVIL ENGINEERS
HONG KONG
DRG. No. HAA/C/I/T2101R
MAY 1984


ROOF PLAN
GROUND FLOOR PLAN
ACCOMMODATION BLOCK E
ACCOMMODATION BLOCK D
TYPICAL I UNIT
Room1
Room2
Room3
Room4
Room5
Room6
LIVING AREA
ACCESS CORRIDOR
BED. RM.
LIVING AREA
BALC.
KITCH
W.C.
TYPICAL H UNIT
UNIT TYPE
ACCOMMODATION
AREA
NET USABLE AREA
KEY
D2 DOOR TYPE
LINTEL BOX TYPE
Contract No. 01/ST/82
Drawing No. HAU/O/01ST82/H242
GOVERNMENT OF HONG KONG
SHA TIN SEWAGE TREATMENT WORKS – STAGE 2
ACCOMMODATION BLOCKS D & E
ROOF & GROUND FLOOR PLAN
Watson Hawksley Asia
Consulting Engineers
Hong Kong
© COPYRIGHT RESERVED
Photo 19
Photo 23
Photo 27
Photo 26
Photo 25
Photo 22
Photo 18
Photo 17
Photo 20 and Photo 24
Photo 21


O N M L K J I H G F E D C B A
19.200 Slab
16.900
16.100 Slab
13.000 Slab
9.900 Slab
GL.6.500
6.800 Slab
NORTH EAST ELEVATION
SOUTH EAST ELEVATION
19.200
A B C D E F G H I J K L M N O
14.550 Half landing
11.450 Half landing
8.350 Half landing
G.L.6.500
SOUTH WEST ELEVATION
NORTH WEST ELEVATION
Scale 1:100
Contract No. 01/ST/82
Sub-Contract No. 1
Date Drawn Chk'd Issue
Drawing No. HAU/O/01ST82/S1/H8
GOVERNMENT OF HONG KONG
SHA TIN SEWAGE TREATMENT WORKS – STAGE 2
ACCOMMODATION BLOCKS D & E
ELEVATIONS
Watson Hawksley Asia
Consulting Engineers
Hong Kong
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Appendix E

Questionnaire used during Interview with Site Owner (DSD)

Annex C1
Site Walkover Checklist

GENERAL SITE DETAILS

SITE OWNER/CLIENT: Drainage Services Department, HKSAR

PROPERTY ADDRESS: DSD's Staff Quarters, 1 Shui Chong Street, Ma Liu Shui, Shatin, N.T.

PERSON CONDUCTING THE QUESTIONNAIRE

NAME: Man Cheung

POSITION: Project Engineer

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME: (1) Edward Yam , (2) Wang Chun Kit, Johnny and (3) Carolina Chan

POSITION: (1) Senior Resident Engineer of Contract No.DC/2017/02, (2) Electronics Inspector of EMSD and (3) Assistant Clerical Officer of DSD

TELEPHONE: (1) 6119 2270 , (2) 2601 6769 and (3) 2594 7042

SITE ACTIVITIES

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

Number of employees: Full-time: Total = 42 ppl including (1)30,(2)10 and (3) 2 occupant

Part-time: NIL

Temporary/Seasonal: NIL

Maximum no. of people on site at any time: Total = 52 ppl including (1)40,(2)10 and (3) 2 occupant

Typical hours of operation: (1) 8.5 hr ,(2) 9 hr and (3) NA

Number of shifts: Nil

Days per week: 6

Weeks per year: 52

Scheduled plant shut-down: (1) NA , (2)18:00 and (3) NA

Detail the main sources of energy at the site:

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: 5,890m2

What area of the site is covered by buildings (%): ~20%

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

Hong Kong Drainage Services Department

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

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

If yes, identify those parties: Site co-office of DC/2017/02 ,EMSD

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

North: Shatin Sewage Treatment Works

South: *Hong Kong Jockey Club Stable*

East: Shatin Sewage Treatment Works Information Centre

West: Industrial (MTR and Highway)

Annex C1
Site Walkover Checklist

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

Staff Quarters on reclaimed land

State the size and location of the nearest residential communities.

Residential area along Kau To Shan Road, ~ approx. 200m to 350m to the west of the Study Area

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

No

Questionnaire with Existing/Previous Site Owner or Occupier

		Yes/No	Notes
1.	What are the main activities/operations at the above address?	-	Staff quarter
2.	How long have you been occupying the site?	-	Since 1982
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	Yes	
4.	Prior to your occupancy, who occupied the site?	-	Not applicable
5.	What were the main activities/operations during their occupancy?	-	Residential, office, document keeping, store
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	No	
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	
10.	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	
	• Where do you store these chemicals?	-	Not applicable
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	
13.	Has the facility produced a separate hazardous substance inventory?	No	
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.)	No	

		Yes/No	Notes
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)?	-	By truck and lorry. The materials were stored in above ground tanks and cyclinders
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	
	• How many underground storage tanks do you have on site?	-	Not applicable
	• What are the tanks constructed of?	-	Not applicable
	• What are the contents of these tanks?	-	Not applicable
	• Are the pipelines above or below ground?	-	Not applicable
	• If the pipelines are below ground, has any leak and integrity testing been performed?	-	Not applicable
	• Have there been any spills associated with these tanks?	-	Not applicable
17.	Are there any disused underground storage tanks?	No	
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	-	Not applicable
19.	How are the wastes disposed of?	-	
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	
21.	Have any spills occurred on site? (If yes, please provide details.)	No	
	• When did the spill occur?	-	Not applicable
	• What were the substances spilled?	-	Not applicable
	• What was the quantity of material spilled?	-	Not applicable
	• Did you notify the relevant departments of the spill?	-	Not applicable
	• What were the actions taken to clean up the spill?	-	Not applicable
	• What were the areas affected?	-	Not applicable
22.	Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	
24.	Are there any known contaminations on site? (If yes, please provide details.)	No	
25.	Has the site ever been remediated? (If yes, please provide details.)	No	

Annex C1
Site Walkover Checklist

Observations

		Yes/No	Notes
1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A	No chemical storage was observed
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.)	No	
5.	Is there a storage site for the wastes?	No	
6.	Is there an on-site landfill?	No	
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9.	Are there any potential off-site sources of contamination?	No	
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	
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?	No	

Appendix F

Photo Record of Site Walkover

The Site Conditions and Surrounding Land-use

Photo 1 – DSD's Staff Quarter – Block A & B Northern Façade

Photo 2 – DSD's Staff Quarter – Block D & E Southern Facade

The Site Conditions and Surrounding Land-use

Photo 3 – Container Site Office for Contract DC/2017/02

Photo 4 – DSD's Sewage Pumping Station at the northwest of the Site

The Site Conditions and Surrounding Land-use

Photo 5 – Sha Tin Sewage Treatment Works at the northeast of the Site

Photo 6 – Sha Tin Sewage Treatment Works at the east of the Site

Block A & B – Ground Floor

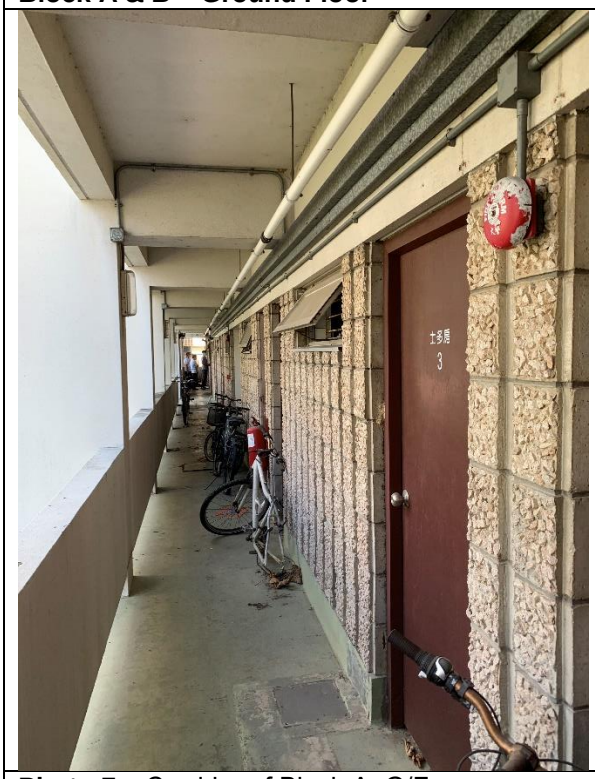

Photo 7 – Corridor of Block A, G/F

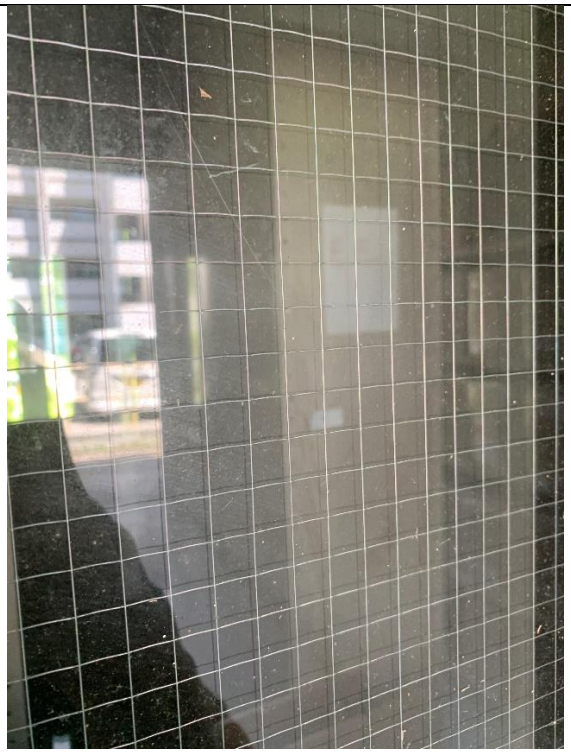

Photo 8 – Living Area at Block A, G/F

Photo 9 – Living Area at Block A, G/F

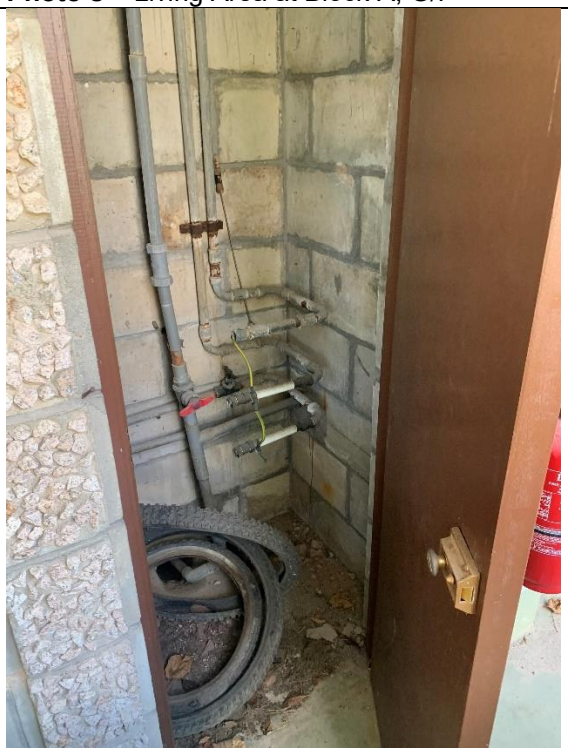

Photo 10 – Water Meter Room 3

Block A & B – Ground Floor

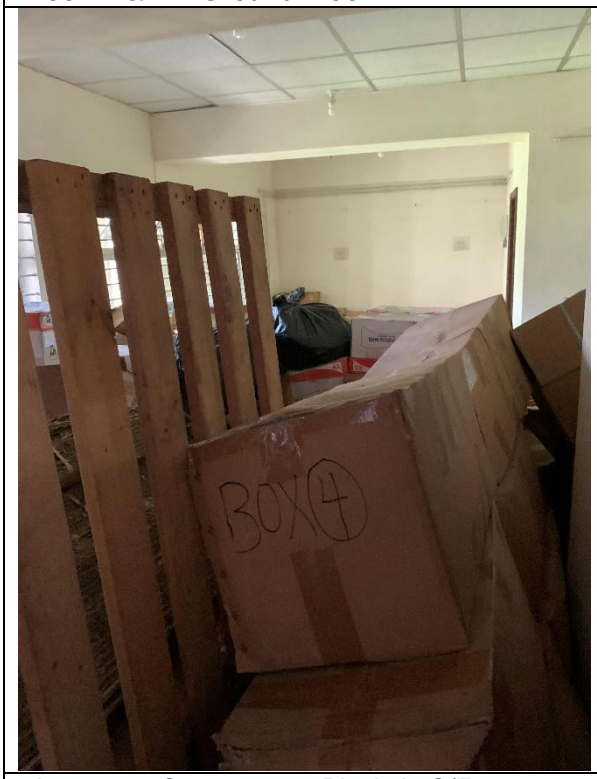

Photo 11 – Storeroom at Block A, G/F

Photo 12 – Corridor of Block B, G/F

Photo 13 – Block B, G/F

Photo 14 – Southern Façade of Block B

Block A & B – Ground Floor	
	
Photo 15 – Refuse Collection Point, G/F	**Photo 16** – Refuse Collection Point, G/F

Block D & E – Ground Floor

Photo 17 – Corridor, Block E, G/F

Photo 18 – Room 1, Block E, G/F

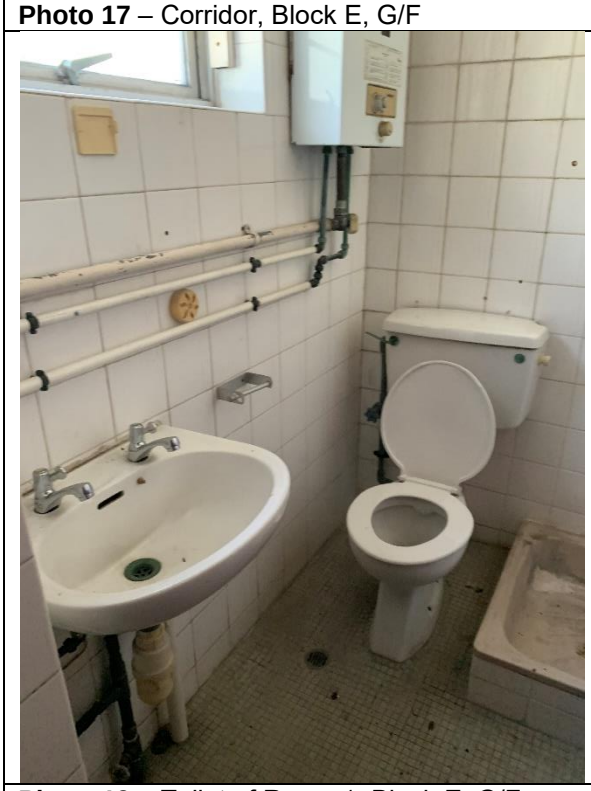

Photo 19 – Toilet of Room 1, Block E, G/F

Photo 20 – Room 4, Block E, G/F

Block D & E – Ground Floor

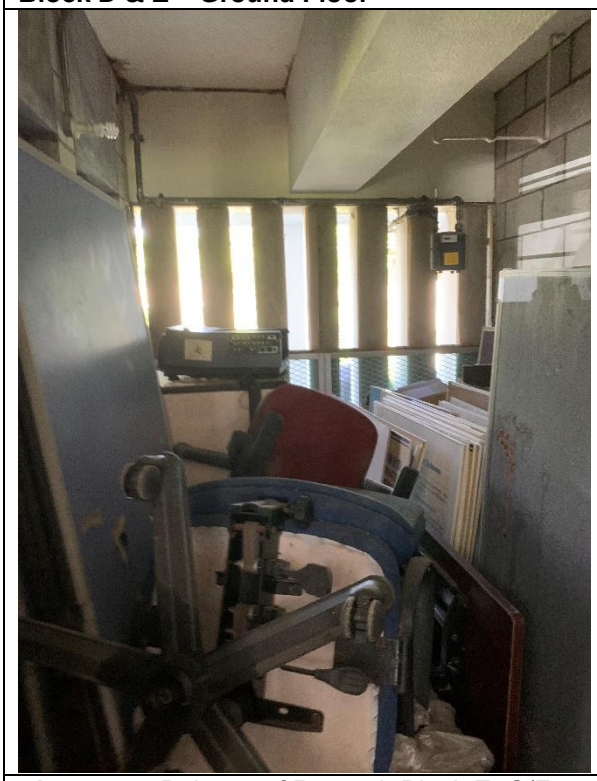

Photo 21 – Balcony of Room 4, Block E, G/F

Photo 22 – Room 6, Block E, G/F

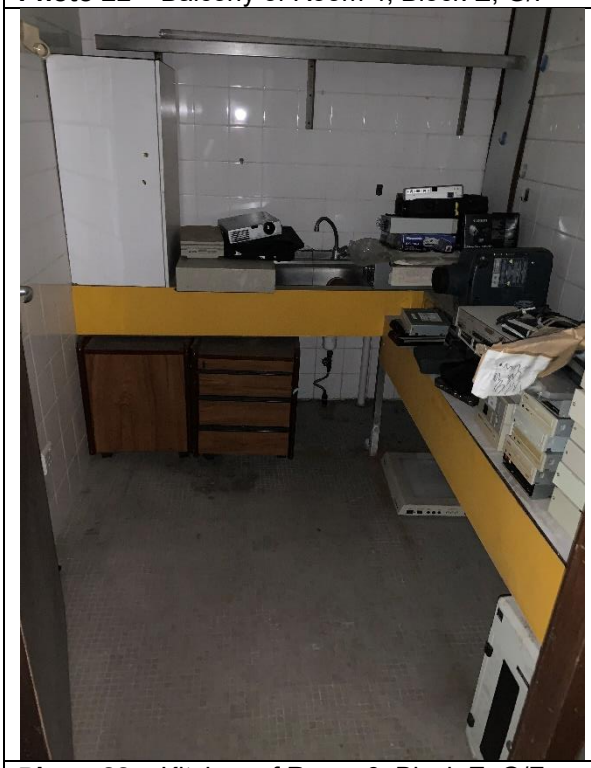

Photo 23 – Kitchen of Room 6, Block E, G/F

Photo 24 – Room 4, Block E, G/F

Block D & E – Ground Floor

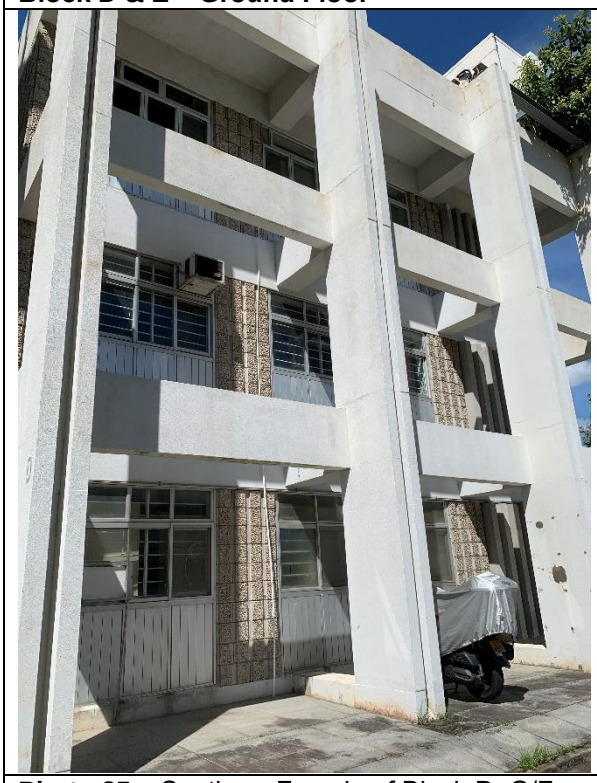

Photo 25 – Southern Façade of Block D, G/F

Photo 26 – Northern Façade of Balcony of Block D, G/F

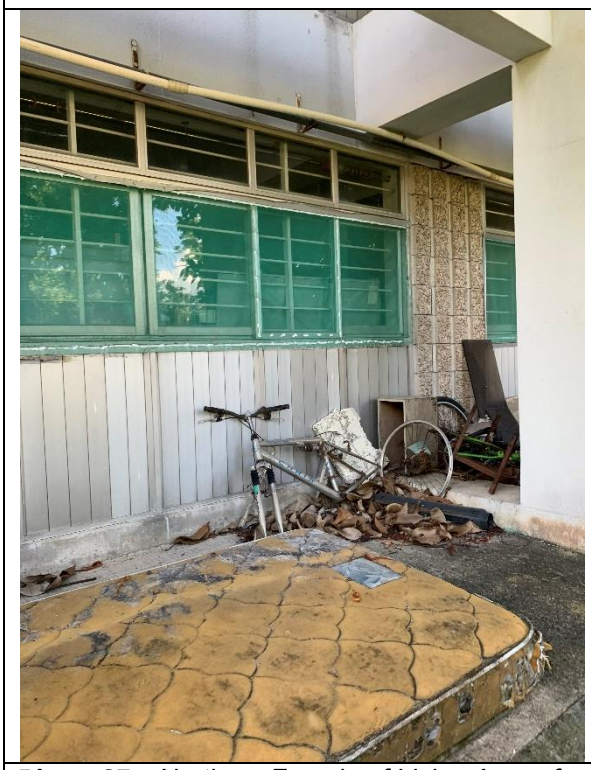

Photo 27 – Northern Façade of Living Area of Block D, G/F

Container Site Office for Contract DC/2017/02

Photo 28 – Entrance of the Site Office

Photo 29 – Floor Condition of the Site Office, G/F

Location of the original and alternative grid sampling points, ENV-G01 and ENV-G01 (2)

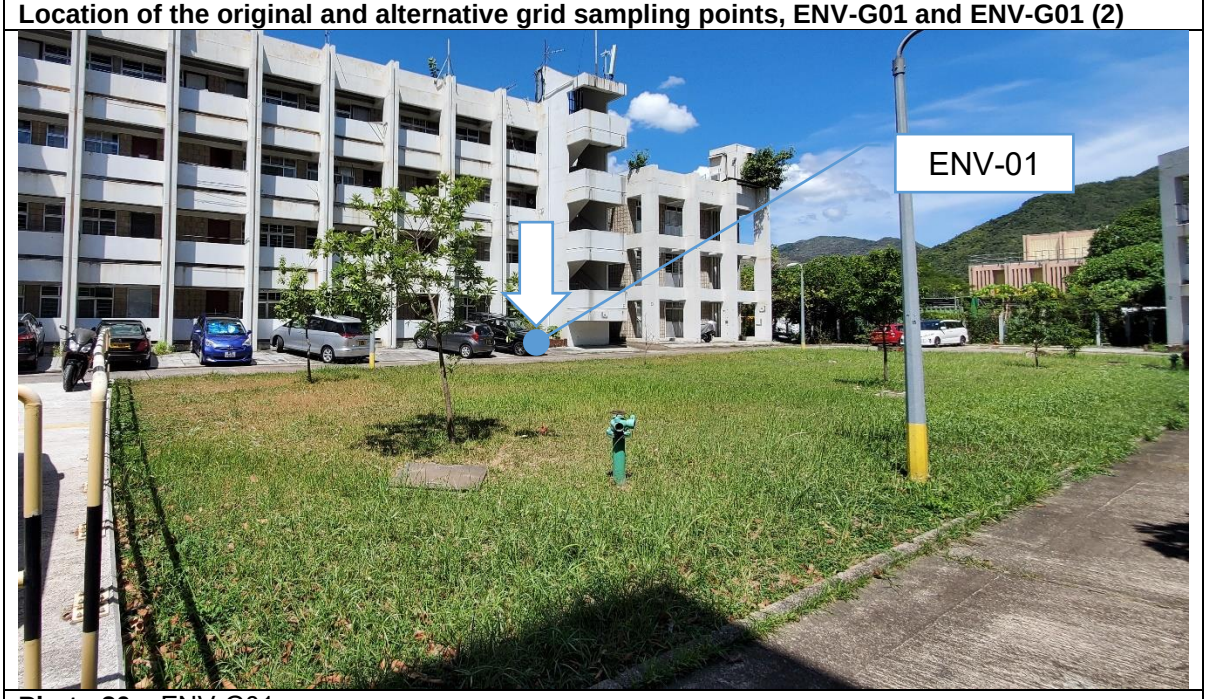

Photo 30 – ENV-G01

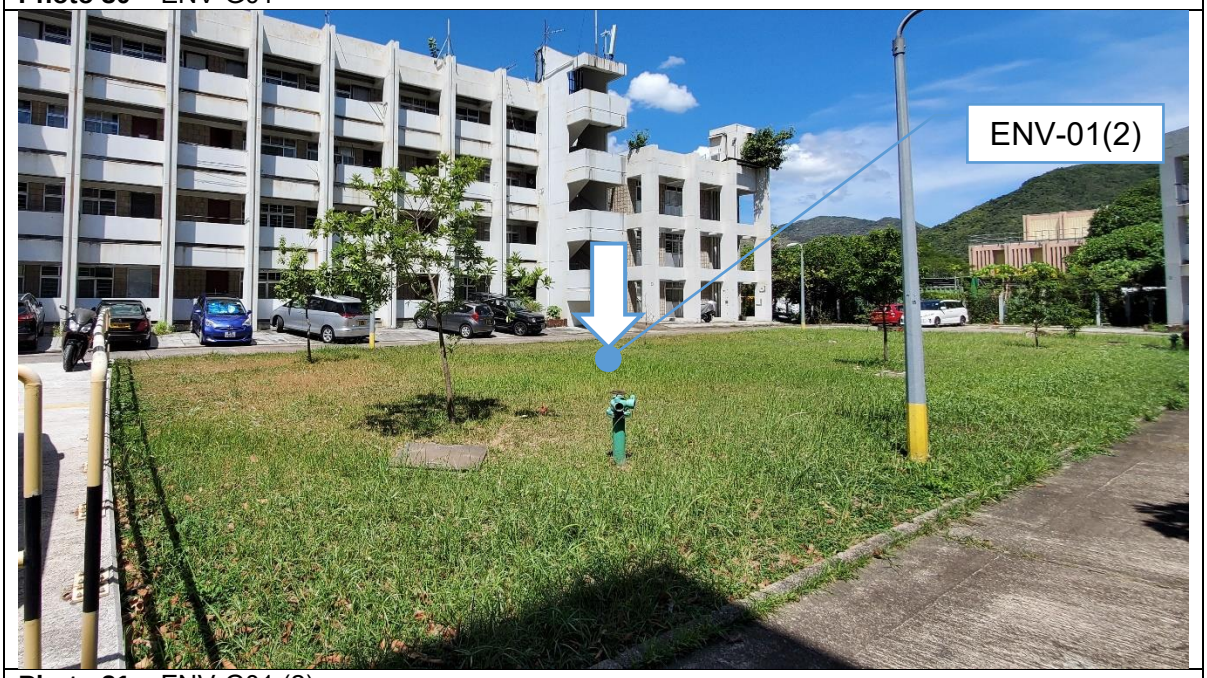

Photo 31 – ENV-G01 (2)

Appendix G

Typical Design of the Groundwater Sampling Well Extracted from Annex E of EPD's Practice Guide

Annex E
Site Investigation Methods

Figure E3
Schematic Drawing of Groundwater Monitoring Well