Appendix IX Contamination Assessment Plan

REDEVELOPMENT OF NOS. 20-24 TAI YAU STREET, SAN PO KONG, KOWLOON, N.K.I.L.S 4735, 4736, 4737, 4738, 4739 RP, 4739 S.A & 4739 S.B

CONTAMINATION ASSESSMENT PLAN

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Project:	REDEVELOPMENT OF NOS. 20-24 TAI YAU STREET, SAN PO KONG, KOWLOON, N.K.I.L.S 4735, 4736, 4737, 4738, 4739 RP, 4739 S.A & 4739 S.B CONTAMINATION ASSESSMENT PLAN
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Disclaimer:

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- We disclaim any responsibility to the client and others in respect of any matters outside the project scope.
- This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1 INTRODUCTION

1.1 BACKGROUND

BeeXergy Consulting Limited (the Consultant) was commissioned by the Project Proponent to conduct a Land Contamination Assessment for the planning application under Section 16 of the Town Planning Ordinance (Cap. 131) for the proposed redevelopment at 20 – 24 Tai Yau Street, San Po Kong, Kowloon.

The Project Site comprises two existing buildings: Security Printing House at 20 Tai Yau Street and Standard Industrial Building at 22 – 24 Tai Yau Street. Both buildings are currently occupied, and the land will be handed over 18 months after obtaining all approval & consent from all Government Departments. The Project Proponent plans to redevelop the Site into a hotel. The redevelopment is a private project. 1 level of basement will be constructed with approximately 5m depth of excavation works will be carried out. All underground structures, including the underground storage area at 20 Tai Yau Street and the underground fuel tanks at 22-24 Tai Yau Street will be dismantled. A supplementary site appraisal will be conducted after the land handover for this project prior to carrying out construction works or development of site.

This Contamination Assessment Plan (CAP) is prepared in accordance with the following documents:

- Guidance Note for Contaminated Land Assessment and Remediation, revised in April 2023 by the Environmental Protection Department (EPD) (the Guidance Note).
- Guidance Manual for Use of Risk-Based Remediation Goals (RBRG) for Contaminated Land Management, revised in April 2023 by EPD (the Guidance Manual).
- Practice Guide for Investigation and Remediation of Contaminated Land, revised in April 2023 by EPD (the Practice Guide).

1.2 PURPOSE OF THIS CONTAMINATION ASSESSMENT PLAN

This CAP is prepared for submission to the EPD to assess the potential land contamination impact at the assessment area due to previous land uses and/or existing operation; and identify the need for site investigation, the relevant methodologies and requirements (if any).

2 SITE APPRAISAL

2.1 SITE ENVIRONS

The site is located in the north of San Po Kong, bounded by Tai Yau Street to the southeast, Cheong Tai Industrial Building to the northeast, Tin Hung Industrial Building to the southwest, and building clusters to the northwest over the back lane. The total site area is approximately 2,426.05 m^2, a site location plan with the surrounding environment is shown in **Figure 1**.

The Project Site falls into New Kowloon Inland Lot Nos. 4735 – 4739 s.A, 4739s.B. and 4739 RP. It is zoned as "Other Specified Uses" (for "Business" only) (hereafter "OU (Business)") in the Approved Tsz Wan Shan, Diamond Hill & San Po Kong Outline Zoning Plan (OZP) (No. S/K11/31). It is classified as non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods"), and the adjacent industrial building clusters are mainly OU (Business). Open space such as Choi Hung Road Playground is located at further northwest of the Site over Sheung Hei Street.

2.2 INFORMATION FROM GOVERNMENT DEPARTMENTS

The following HKSAR Government Departments have been enquired about the latest update on the availability of land use status and records of land contamination and/or spillage for the site. The summary of correspondence is presented in **Table 2.1** below. The letters replied by various Government Departments are included in **Appendix A**.

Table 2.1 Enquiries and Responses on Land Contamination Related Records in the Application Site

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
W24152/24-0001	Environmental Protection Department	N/A	23 July 2024	No chemical spillage incident was recorded at the Project Site.
W24152/24-0002	Fire Services Department	(64) in FSD GR 6-5/4 R Pt.54	17 July 2024	No records of dangerous goods license, fire incidents or incidents of spillage / leakage of dangerous goods were found at the Project Site.
W21128/21-0003	Environmental Protection Department	N/A	23 Sep 2021	Currently, there are active 2 Chemical Waste Producers Records at the Project Site. The major chemical waste type is

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
				gasoline, thinner, ink, engine oil (idled for 10 years) and fixer, developer and organic solvent (idled for 6 years). Another inactive Chemical Waste Producers was recorded in 2011, which the major chemical waste type is dye.
W21128/21-0002	Fire Services Department	(75) in FSD GR 6-5/4 R Pt.36	28 Sep 2021	No records of dangerous goods license, fire incidents or incidents of spillage / leakage of dangerous goods were found at the Project Site.

The Consultant visited the Territorial Control Office in Wan Chai on 30 July 2024 regarding the chemical waste producer registry. It is noted that there is one valid chemical waste producer record and no invalid records. The details of the chemical waste producer register record as of 30 July 2024 are summarized in **Table 2.2** below. No land contamination issue as no chemical waste producer registered at the lowest floor of the Project Site.

Table 2.2 Chemical Waste Register Record

Waste Producer Name (WPN)	Premises Address	Nature of Business
Valid WPN		
Hong Kong Security Printing Ltd	4-8/F., 20 Tai Yau Street, San Po Kong, KL	Printing
Invalid WPN		
N/A	N/A	N/A

As per the information from the Land Registry (**Appendix D**), BRAVO system and the interview with the Project Proponent, it is noted that the land of 20 Tai Yau Street was first owned by J.N. Roland Deneault and Scott Limited in the '60s. They planned to construct an 11-storey building and submitted a General Building Plan(GBP) in 1964. While construction was idle in the '70s due to the lack of funds, the land was then sold to Yangtzekiang Garment Manufacturing Company Limited in 1978. The owner then submitted the amended GBP in

1980 and obtained the Occupation Permit in July 1980. The building was then used as printing business and named Security Printing House. Since then, no major A&A works have been encountered. The building falls into the assessment area of this land contamination assessment. Ground floor of the GBP is extracted in **Appendix C**.

The land of 22-28 Tai Yau Street has been under the same occupier, Yangtzekiang Garment Ltd., since the '60s. As the garment manufacturing industry moved to China in the '80s, the premises were renovated and separated into two buildings, Standard Industrial Building (22 – 24 Tai Yau Street) and Tin Hung Industrial Building (26 – 28 Tai Yau Street), in 1987. Standard Industrial Building is currently used as the office and storage of Yangtzekiang Garment Ltd (for garments and textiles storage). It falls into the assessment area of this land contamination assessment. Ground floor of the GBP is extracted in **Appendix C**.

2.3 REVIEW OF AERIAL PHOTOGRAPHS

Selected historical aerial photographs from the year 1945 to 2020 of the study area have been reviewed in order to ascertain any historical land uses with the potential for land contamination.

The aerial photographs of the years 1945, 1961, 1964, 1978, 1980 and 2020 are provided in **Appendix B**. As summarized in **Table 2.3**, the land was under site formation in 1945 and was proposed to be used as part of the Old Kai Tak Airport. While the Government approved a master plan for airport development in 1954 and extended the new runway towards Kowloon Bay instead of towards Wong Tai Sin, the land of the Project Site remained vacant in the late '50s and early '60s. The land lot boundary can barely be observed in the aerial photo of 1961. In 1964, building structures were observed in the Project Site. Since then, no significant change on the building exterior based on the observation on the aerial photo in 1978 and 2020. Further information will be required to confirm whether there is any land contamination issue on the Project Site.

Table 2.3 Chronological Changes in Land Use Activities of the Project Site

Year	Land Use Condition/ Activities	Sources of Information
1945	The land was under site formation to be used as part of the Old Kai Tak Airport.	Aerial photos from LandsD
1945 - 1961	The land was vacant. Land lot boundary was observed.	Aerial photos from LandsD
1961 – 1964	Construction of the industrial building for 22 – 28 Tai Yau Street was nearly completed.	Aerial photos from LandsD, GBP from BRAVO system
1964 - 1978	Construction at 22 – 28 Tai Yau Street was completed, while the construction at 20 Tai Yau Street was idled.	Aerial photos from LandsD, GBP from BRAVO system

Year	Land Use Condition/ Activities	Sources of Information
1978 - 1980	Construction at 20 Tai Yau Street was completed.	Aerial photos from LandsD, GBP from BRAVO system
1980-present	No major change was observed from the exterior of the buildings.	Aerial photos from LandsD and site visit by the Consultant

2.4 REVIEW OF RECORD PLAN

Record plans dated 1980 for 20 Tai Yau Street and dated 1965 for 22 – 28 Tai Yau Street have been retrieved from the Project Proponent and the BD BRAVO system. GBP indicating the concern area are provided in **Appendix C**. The lowest floor in direct contact with soil is the ground floor for both 20 Tai Yau Street and 22-24 Tai Yau Street.

20 Tai Yau Street

Workshops and a transformer room are observed on G/F. An underground storage is found at the loading and unloading space of the back lane on G/F, which is within the project site boundary. The underground storage area is constructed with concrete approximately 230mm thick. The depth of the underground storage area is approximately 3000mm. The concrete slab underneath the underground storage area is approximately 500mm thick.

22 – 24 Tai Yau Street

Two boiler rooms, two transformer rooms and two workshops are observed on G/F. Two underground fuel tanks are observed in the loading and unloading space of the back lane on G/F, which is within the project site boundary. It is noted that the two underground fuel tanks are made of metal and are situated inside a concrete containment with a thickness of 200mm. The depth of the underground fuel tanks was approximately 3500mm. The space between the concrete containment and the underground fuel tanks was filled with sand.

2.5 SITE OBSERVATION

In order to verify the existing site condition, a site inspection of the G/F of 20 Tai Yau Street and G/F of 22-24 Tai Yau Street by the Consultant was carried out on 10 July 2024. Site walkover checklist and photo records are provided in **Appendix E** and **Appendix F.** The existing layout of the Project Site showing the change of space after the renovation in the ‘80s is provided in **Figure 2**.

20 Tai Yau Street

During the site visit, it is noted that the entrance hall at G/F for 20 Tai Yau Street remains unchanged as entrance hall for the office upstairs (Photo 1). The workshop area at G/F as shown on the record plan has been separated into a retail shop facing Tai Yau Street (Photo 2 – 3) and a cargo storage area facing the back lane (Photo 4 – 5). The retail shop is owned by the same landlord and it is rented as a garment retail shop currently (Photo 2). The cargo storage facing the back lane is mainly for the storage of packaged materials (i.e., papers) with pallets and metal plates underneath (Photo 4 - 5). The floor of the major circulation area such as corridors and lift lobbies are covered with metal plates (Photo 4, 10 & 11).

As advised by Project Proponent, the building has been used for security printing since the '80s. All printing machines, materials and chemicals are stored at 3/F to 8/F with a security gate. Therefore, the G/F workshop has never been used for printing or any industrial activities with the use of chemicals. The female and male toilets at G/F have been demolished and changed into store room (Photo 6). Only pallets are stored in the store room with mold and damp stains observed on the wall and floor of the store room (Photo 6). Meanwhile, no change is observed for the corridor and plant room at the G/F (Photo 7 – 8). Dust and damp stains were observed in the switch room (Photo 8).

A transformer room operated by China Light Power (CLP) is situated at the north of the building at G/F, which is currently in use and inaccessible during the site visit (Photo 9). Further contamination investigation shall be carried out after the termination of the transformer or once access is granted from CLP.

A concrete-constructed underground storage is located in the lift lobby facing the back lane (Photo 11). Two cans of paint are observed near the cover of underground storage (Photo 11). Since the space is mainly used as storage with a high traffic flow of heavy cargo every day, the whole lift lobby is covered with metal plates, which shall prevent any potential leakage of paint to the ground. Stagnant liquid with no noticeable chemical smell is observed inside the underground storage (Photo 12). The condition of the entire underground storage area is uncertain. As advised by Project Proponent, there is no record of the underground storage area being used or stored chemicals of any sort. The stagnant liquid is anticipated to be underground water or rainwater.

22 – 24 Tai Yau Street

During the site visit, it is noted that the building is completely isolated from the adjacent Tin Hung Building (26 – 28 Tai Yau Street). Reception at G/F as shown in the record plan remains unchanged as the entrance hall for the office upstairs (Photo 13 – 14). Workshop C, office space at the south of the building, toilet and store room at the southwest of the building at G/F had been demolished and changed into carpark space (Photo 15 – 18) and Building

Management Office (BMO)(Photo 17). Waterproof protective paint has been used as the floor finish of the carpark with some peeling observed, while no observable oil stain on the carpark floor (Photo 16 – 18). The boiler room near workshop C at G/F has changed to a store room (Photo 19) with unknown stains observed on the floor. Hand tools are stored inside the store room (Photo 19). Spalling concrete and some dust stains were observed on the floor of the switch room (Photo 20).

According to the indicated GBP provided in **Appendix C**, two underground fuel tanks are situated in the loading/unloading space at the back lane. During the site visit, it was observed that the entire loading/unloading space at the back lane is covered with metal plates, making it impossible to inspect the condition of the underground fuel tanks (Photo 21). While the section drawing of the underground fuel tank in **Appendix C** illustrates a pipe structure within the underground fuel tank, the exact location of this pipeline is not shown in any of the retrieved layout drawings from relevant government departments. The Project Proponent stated that the underground fuel tanks were decommissioned during renovations in the '80s. The pipeline shown in the section drawing was likely connected to the demolished boiler rooms. However, the precise routing and location of the pipeline remains uncertain. Further contamination investigation shall be conducted once the metal plates are removed.

While workshop D at G/F has been separated into multiple enclosed office spaces, temporary storage for office appliances etc. (Photo 22, 27 - 32). Peeling vinyl flooring was observed in the enclosed office space (Photo 27). As advised by Project Proponent, the building was used for garment manufacturing in the '80s. However, it is uncertain whether heavy machines were situated at G/F workshops before the space changed to the existing layout. The boiler room and switch room near workshop D at G/F are combined and enlarged for cargo storage (Photo 23). The cargo storage area is mainly for the storage of packaged materials (i.e., garments and textiles) with pallets underneath (Photo 23). For the space with a high traffic flow of heavy cargo e.g., lift lobby and back of house corridor, metal plates are used for floor protection (Photo22 - 24).

The toilet near cargo lift and staircase 6a has been demolished and used as store room (Photo 25) with closets and staff clothes observed inside the store room, which served as changing room for staff and drivers. The store rooms near staircase 5 at G/F have been downsized and part of the area was used as corridor (Photo 26). Office appliances and paper were stored in the store room with some water and damp stains observed on the floor (Photo 26). The toilet near staircase 7 at G/F has been changed to the workers/drivers' restroom (Photo 33) with dust and damp stains observed on the floor. The yard at G/F is an outdoor space for pipe duct, MVAC outdoor units and toilet exhaust ventilation (Photo 34). Water hose and mop are observed in the yard (Photo 34).

Two transformer rooms operated by China Light Power (CLP) are situated at the north of the building at G/F, which is currently in use and inaccessible during the site visit (Photo 35 – 36). Further contamination investigation shall be carried out after the termination of the transformer or once access is granted from CLP.

3 POTENTIAL SOURCE AND NECESSITY OF INTRUSIVE SITE INVESTIGATION

3.1 GENERAL

Based on the site appraisal conducted in Section 2 and the site walkover, the assessment boundary shall be defined as the ground floor of 20 – 24 Tai Yau Street (TYS), which is the lowest level of the existing building, along with any underground structures in direct contact with soil. Considering the site is an industrial building with fair to bad ground conditions, regular grid samples shall be arranged across the assessment area with hotspots at locations of high concern. Potential hotspots of contamination and the necessity of intrusive site investigation are evaluated in the following **Table 3.1**.

Table 3.1 Summary of the Necessity and Sampling Parameters for Site Investigation

Area [(1)]	**Location**	**Photo ID**	**Necessity and Justification for Hotspot**	**Chemicals of Concern (COCs)**[(2)]	**Sampling Type**
Workshop (Existing cargo storage area and retail shop)	G/F of 20TYS	Photo 4-5	The area has been used as storage since occupied. No heavy machine or industrial activities on G/F, cargo storage area contains packaged materials (i.e., papers) with pallets and metal plates underneath, it is unlikely to have land contamination issue. Considering the size ratio of the workshop at G/F, sampling for workshop can be covered in the regular grid samples.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Toilet (Existing store)	G/F of 20TYS	Photo 6	Mold and damp stains are observed in the area. The material stored previously is unknown. It is likely to have land contamination issue. Sampling for the toilet can be covered in the regular grid samples.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Transformer Room (Existing space use remained unchanged)	G/F of 20TYS	Photo 9	The space is inaccessible with no available information during the site visit. Further contamination investigation shall be conducted once access is granted from CLP.	Metals, PCRs, VOCs, SVOCs and PCBs	Grid sampling covering hotspot

Area [(1)]	**Location**	**Photo ID**	**Necessity and Justification for Hotspot**	**Chemicals of Concern (COCs)**[(2)]	**Sampling Type**
Underground storage area (Existing space use remained unchanged)	G/F of 20TYS	Photo 11-12	Although the underground storage area has never been used, stagnant liquid is observed in the space and the condition of the entire underground storage area is uncertain. Moreover, paint cans are observed near the cover of the underground storage area. It is likely to have land contamination issue. Instructive site investigation shall be carried out.	Metals, PCRs, VOCs, and SVOCs	Hotspot
Workshop C (Existing carpark and BMO)	G/F of 22 - 24TYS	Photo 16-17	The area was used for garment manufacturing before the '80s. No available information to determine whether there are any heavy machines or heavy industrial activities in the space. Peeling waterproof protective paint was observed at the existing carpark. It is likely to have land contamination issue. Considering the size ratio of workshop C at G/F, sampling for workshop C can be covered in the regular grid samples.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Board room, first aid room (Existing carpark)	G/F of 22 - 24TYS	Photo 18	Peeling waterproof protective paint was observed at the existing carpark. It is likely to have land contamination issue. Considering the size ratio of existing carpark at G/F, sampling for existing carpark can be covered in the regular grid samples.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Workshop D (Existing office and temporary storage)	G/F of 22 - 24TYS	Photo 27-32	The area was used for garment manufacturing before the '80s. No available information to determine whether there is any heavy machines or heavy industrial activities in the space. Currently temporary storage contains office appliances. Peeling vinyl flooring was observed. It is likely to have land contamination issue. Considering the size ratio of workshop D at G/F, sampling for workshop D can be covered in the regular grid samples.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot

Area [(1)]	**Location**	**Photo ID**	**Necessity and Justification for Hotspot**	**Chemicals of Concern (COCs)**[(2)]	**Sampling Type**
Boiler Rooms near workshop C (Existing store)	G/F of 22 - 24TYS	Photo 19	Although the boiler rooms have been used as store room currently, operation of the boiler and the previous ground condition is uncertain. Fuels and chemicals may potentially stored in the boiler room. Unknown stains were observed. It is likely to have land contamination issue. Instructive site investigation shall be carried out.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Boiler Rooms near workshop D (Existing cargo storage area)	G/F of 22 - 24TYS	Photo 23	Although the boiler rooms have been demolished and covered by metal plates for cargo storage of garments and textiles currently, operation of the boiler and the previous ground condition are uncertain. Fuels and chemicals may potentially stored in the boiler room. It is likely to have land contamination issue. Instructive site investigation shall be carried out.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Store room near staircase 3 (Existing carpark)	G/F of 22 - 24TYS	Photo 16	The store room was demolished and used as carpark currently. The previous stored material and the previous ground condition were uncertain. Fuels and chemicals may potentially stored in the store room. It is likely to have land contamination issue. Instructive site investigation shall be carried out.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot
Two store rooms near staircase 5 (Existing space use remained unchanged)	G/F of 22 - 24TYS	Photo 26	Although no chemical stain is observed at these areas, previous stored material and the previous ground condition were uncertain. Fuels and chemicals may potentially stored in the store room. Mold and damp stains were observed on the floor. It is likely to have land contamination issue. Instructive site investigation shall be carried out.	Metals, PCRs, VOCs, and SVOCs	Grid sampling covering hotspot, hotspot

Area [1]	**Location**	**Photo ID**	**Necessity and Justification for Hotspot**	**Chemicals of Concern (COCs)**[2]	**Sampling Type**
Two Transformer Rooms (Existing space use remained unchanged)	G/F of 22 - 24TYS	Photo 35-36	The space is inaccessible with no available information during the site visit. Further contamination investigation shall be conducted once access is granted from CLP.	Metals, PCRs, VOCs, SVOCs and PCBs	Grid sampling covering hotspot
Underground fuel tanks and their associated pipelines (Existing space use remained unchanged)	G/F of 22 - 24TYS	Photo 21	The underground fuel tanks are covered with metal plates and the condition of the underground fuel tanks is uncertain. The exact location of the associated pipeline is uncertain. Fuels may potentially exist in underground fuel tanks and their associated pipelines. Further contamination investigation shall be conducted once the metal plates are removed. It is likely to have land contamination issues for the underground fuel tanks and their associated pipelines. Instructive site investigation shall be carried out.	Metals, PCRs, VOCs, and SVOCs	Hotspot
Switch Room (Existing space use remained unchanged)	G/F of 20TYS	Photo 8	Dust and damp stains are observed in the area. The switch room consists of switchboards and meters, which do not involve any use of chemicals. It is unlikely to have land contamination issue.	N/A	N/A
Switch Room (Existing space use remained unchanged)	G/F of 22 - 24TYS	Photo 20	Spalling concrete and dust stains are observed in the area. The switch room consists of switchboards and meters, which do not involve any use of chemicals. It is unlikely to have land contamination issue.	N/A	N/A
Toilet (Existing rest room)	G/F of 22 - 24TYS	Photo 33	Dust and damp stains are observed in the area. Considering the previous and existing land use do not involve any use of chemicals, it is unlikely to have land contamination issue.	N/A	N/A

Remarks:

1. The name of the area follows the GBP as shown in **Appendix C**. Existing space use after the renovation in the '80s is provided within brackets "()" and illustrated in **Figure 2**.
2. Chemicals under each category shall be referenced from Table 2.1 and 2.2 of the Guidance Manual.

4 SITE INVESTIGATION PLAN

4.1 SAMPLING LOCATION & DEPTH

In order to investigate the potential land contamination risk of the development, site investigation shall be carried out. The detail requirements of the proposed site investigation will be presented in this section.

With reference to the EPD's Practice Guide for Investigation and Remediation of Contaminated Land, potential contaminated site area of approximately 2,400 m² should adopt a grid with regular grid pattern using square grid size of 13m x 13m with a minimum of 12 sampling points. In this connection, a total 28 sampling locations, including 21 regular grid sampling locations, namely BH1 to BH21, and 7 hotspot sampling locations, namely BH 22 to BH 28, are proposed to cover the assessment area.

As mentioned in **Table 3.1** above, the "hotspots" identified in this Assignment are considered as the potential land contamination sources in the assessment area. Proposed sampling location plan can be found in **Figure 3**. **Table 4.1** summarized the site investigation sampling requirement proposed.

Underground storage area

The condition of the entire underground storage area at 20 Tai Yau Street is uncertain. One grid sample (BH06) and two hotspot locations (BH22 and BH23) are proposed to cover the entire underground storage area. Grid sample (BH06) is arranged aside from the underground storage area, sampling depth shall be 0.5m, 1.5m and 3m bgl. Hotspot samples (BH22 and BH23) are arranged under the underground storage area, sampling depth shall 0.5m, 1.5m, and 3m below the bottom of the underground storage area.

Underground fuel tanks and their associated pipelines

Two disused underground fuel tanks are located at the car parking lane of 22 – 24 Tai Yau Street. While the section drawing of the underground fuel tank in Appendix C indicates the presence of a pipe structure within the underground fuel tank, the location of the pipeline is not shown in all retrieved layout drawings from relevant government departments. As confirmed by the land owner, the pipeline shall be connected to the previous boiler rooms but the exact location of the pipeline is uncertain. Further contamination investigation shall be

conducted once the metal plates are removed. As a conservative approach, four hotspot samples (BH24 to BH27) are proposed at 0.5m, 1.5m and 3m below the bottom of the underground fuel tanks.

Transformer Rooms

The transformer rooms were under operation and no access was allowed. As the transformer room is currently under the ownership of CLP Power Hong Kong Limited, further contamination investigation is proposed to be carried out after the termination of the transformer or once access is granted from CLP. As a conservative approach, one grid sampling covering hotspot is proposed in each transformer room, namely BH05 for 20 Tai Yau Street, BH11 and BH21 for 22 – 24 Tai Yau Street.

Boiler rooms

As the boiler rooms are currently under other space uses and the previous ground condition is uncertain, two grid samples covering hotspots namely BH12 and BH19 are proposed.

Store rooms

Three store rooms are observed from the record plan of 22 – 24 Tai Yau Street. Previously stored material and the previous ground condition is uncertain. Two grid samples (BH13 and BH16) and one hotspot sample (BH28) are proposed in each store room.

The exact sampling locations of the Site Investigation (SI) will be determined on site and subject to fine adjustment due to site specific conditions (e.g. locations, presence of foundations, underground utilities, delivery pipes and services). The locations shall be agreed with the land contamination specialist prior to drilling and sampling.

Extra samples at further depths should be taken if signs of contamination are identified at the samples taken (e.g., abnormal colour, stain and odour, abnormal soil pattern, exceed PID reading etc.) and the final depths of samples will be determined by the land contamination specialist. Groundwater samples should be collected at the level of groundwater if encountered.

Table 4.1 Site Investigation Sampling Requirement

Building	Potential Source of Contamination (2)	Sampling Type	Sampling ID	Site Investigation Sampling Depth (Soil) (1)						Testing Parameters (COCs)	
				0.5 m bgl	1.5 m bgl	3.0 m bgl	0.5 m below bottom of underground tank	1.5 m below bottom of underground tank	3.0 m below bottom of underground tank	Soil (3)	Groundwater (4)
20 Tai Yau Street	Workshop (Existing cargo storage area, retail shop)	Grid	BH01 – BH03	√	√	√				Metals, PCRs, VOCs, SVOCs	
	Toilet (Existing store)	Grid	BH04	√	√	√				Metals, PCRs, VOCs, SVOCs	
	Transformer room	Grid	BH05	√	√	√				Metals, PCRs, VOCs, SVOCs, PCBs	
	Underground storage area	Grid	BH06	√	√	√				Metals, PCRs, VOCs, SVOCs	
		Hotspot	BH22, BH23				√	√	√		
22 – 24 Tai Yau Street	Workshop D (Existing office, temporary storage)	Grid	BH07 – BH10, BH14	√	√	√				Metals, PCRs, VOCs, SVOCs	
	Workshop C, board room, first aid room (Existing carpark, BMO)	Grid	BH15 – BH18, BH20	√	√	√					
	Boiler Room near workshop D (Existing cargo storage area)	Grid	BH12	√	√	√				Metals, PCRs, VOCs, SVOCs	
	Boiler Room near workshop C (Existing store)	Grid	BH19	√	√	√					
	Store rooms near staircase 5	Grid	BH13	√	√	√				Metals, PCRs, VOCs, SVOCs	
	Store room near staircase 3 (Existing carpark)	Grid	BH16	√	√	√					
		Hotspot	BH28	√	√	√					
	Transformer rooms	Grid	BH11, BH21	√	√	√				Metals, PCRs, VOCs, SVOCs, PCBs	
	Underground fuel tanks and its associated pipelines	Hotspot	BH24 – BH27				√	√	√	Metals, PCRs, VOCs, SVOCs	
Total Number of Samples										**84**	**28**

Notes:

(1) "bgl" denotes below ground level.
(2) The potential source of contamination aligned with the "Area" in **Table 3.1**.
(3) Chemicals under each category shall be all-inclusive according to Table 2.1 of the Guidance Manual as listed in **Appendix G**.
(4) Chemicals under each category shall be all-inclusive according to Table 2.2 of the Guidance Manual as listed in **Appendix G.**

4.2 SOIL SAMPLING METHODOLOGY

All soil sampling shall be supervised by the land contamination specialist who will be responsible for supervising the SI.

Boreholes shall be undertaken by means of dry rotary drilling method (i.e. without the use of flushing medium). For safety reasons, a 0.5m x 0.5m trial pit shall be excavated down to 1.5m bgl to inspect for underground utilities at the proposed borehole location. Appropriate safety precautions such as shoring, stepping and/or sloping of sides shall be taken when the depth of trial pit exceeded 1.2m. Disturbed soil samples shall be collected at the depth of 0.5m and 1.5m bgl using a hand-driven decontaminated sampler. Soil boring using drill rigs shall then be performed for depth from 1.5m to the maximum boring depth. At least three soil samples shall be collected from each borehole for laboratory analysis.

During site investigation, as a preliminary scanning for trial pit, soil colour, odour, visual inspection and on-site screening test (e.g. photoionization detection (PID)) will be used as in-situ measure for determining the vertical extent of contamination.

In case PID reading of 50ppmv or above detected, stained, unnaturally coloured soil and/or petroleum or solvent odours in soil, and etc.) is encountered, additional soil samples at the vertical directions should be taken so as to obtain an accurate estimation of the extent of soil contamination.

All equipment in contact with the soil shall be thoroughly decontaminated prior to use by cleansing with laboratory-grade (non-phosphate) detergent and rinsed thoroughly by distilled water. A clean area immediately adjacent to the sampling location shall be established, using a plastic sheet or tarpaulin, on which all cleaned equipment, shall be placed.

Boreholes will be drilled down to 3m bgl or as advised by land contamination specialist. For BH1 to BH28, soil samples at 0.5m bgl, 1.5m bgl and 3.0m bgl will be collected for laboratory analysis except BH22 to BH27. For BH22 to BH27, soil samples will be collected at 0.5m below bottom of underground tank, 1.5m below bottom of underground tank and 3.0m below bottom of underground tank for laboratory analysis. The proposed sampling depths for each borehole are summarized in **Table 4.1** above.

All soil samples collected will conducted on-site pre-screening test. A portion of the soil samples shall be placed in a plastic zip-lock bag and the bag sealed. The contents of the bag should then be manually mixed, and conduct the PID screening test. Portable PID device should be adopted for on-site screening test. The results of the PID screening test would be recorded and reported in the Contamination Assessment Report (CAR).

A groundwater sampling well should be installed for the boreholes and groundwater sample should then be collected if groundwater is encountered during soil sampling (see Section 4.3

below).

All soil samples shall be stored at a temperature range within 0°C to 4°C in the dark but not frozen, labeled and delivered to the appointed Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory appointed by the Contractor on the same day of sample collection.

The collected soil samples shall be accompanied with the following information as a minimum:

- Sample identification number;
- Trial pit and/or borehole number where sample collected;
- Sampling depth (m bgl);
- Date and time of sample collection;
- Physical appearance (colour, odour, etc.); and
- Colour photograph and other pertinent information.

Boreholes shall be logged by a qualified geologist appointed by the Contractor. Boring logs shall be maintained for all trial pits excavated and borings drilled for the site investigation, including both mechanically drilled borings and hand-auger borings. The log shall be used to record the following sampling information for each trial pit and borehole:

- Site name;
- Trial pit and/or borehole number and location;
- Name of supervising site geologist, engineer, or environmental consultant;
- Date and time of excavation and boring was started and completed and time of each sample was collected;
- Weather conditions, especially any inclement conditions that may affect sample integrity;
- Sample identification numbers;
- Sample depths;
- Groundwater level encountered;
- Lithologic description for soils encountered and for each sample collected in accordance with the Unified Soils Classifications System (USCS): and
- Description of any visible or other evidence of soil contamination (e.g. staining, odour, or other indication).

The proposed and as-constructed coordinates (i.e. Northings and Eastings according to HK1980 Grid) of the sampling locations shall be surveyed by the Contractor.

4.3 GROUNDWATER SAMPLING METHODOLOGY

Groundwater sampling well shall be installed at the boreholes and groundwater samples shall be collected from all boreholes when the groundwater table is first encountered during soil sampling for contamination investigation. All groundwater sampling shall be supervised by the land contamination specialist.

All boreholes will be drilled to a minimum depth of two meters below the water table and/or suspected contamination depth and installed with well materials to allow for groundwater sampling. PVC pipe will be used for the groundwater sampling well. All PVC pipes will be decontaminated prior to installation. PVC pipe sections should be connected together using appropriate methods such as pre-fabricated threaded joints or rivets and not connected using solvent based glues. Empty voids between the PVC pipe and the borehole will be packed with clean gravels and/or sand. The groundwater sampling wells should be secured to prevent contamination from the surface. Bentonite and cement will be used to fill up the top of the void and well caps will be used to close the pipe. A schematic diagram of the groundwater sampling well is provided in **Figure 4**.

Prior to sampling, the groundwater will be purged five times the volume of groundwater within the borehole to remove fine-grained materials and to collect freshly recharged representative samples using a Telfon/stainless steel bailer, stainless steel spoon or mechanical pump or similar device.

During the purging exercise, the time for groundwater recharge to the original level will be recorded by the SI Contractor as an indication of groundwater flow and velocity. The groundwater sampling location will then be allowed to stabilize to permit groundwater to settle and to reach equilibrium. Groundwater samples should then be taken within 24 hours of the wells after purged.

The groundwater level and thickness of any light non-aqueous phase liquid (LNAPL) floating on top of the groundwater will be measured after 2 hours of purging and before the collection of groundwater samples. If dense non-aqueous phase liquids (DNAPL) are observed, the thickness of the DNAPL shall be measured and collected separately for laboratory analysis.

Prior to sampling, at least three consecutive stable readings of temperature, electrical conductivity and pH value will be obtained.

Between sampling events, all sampling equipment used shall be thoroughly decontaminated with laboratory-grade (non-phosphate) detergent and rinsed thoroughly by distilled water.

In taking the samples from the groundwater sampling wells, a Telfon/stainless steel bailer or mechanical pump or similar device will be lowered to the groundwater sampling well until the water table is encountered.

Groundwater samples should be put into bottles provided by the HOKLAS accredited laboratory. A sufficient volume of groundwater as per the advice of the HOKLAS accredited laboratory shall be obtained. Sampling of NAPL, if present, will also be required to allow identification by the laboratory.

The samples will be stored at a temperature range between 0°C and 4ºC in the dark but not frozen, labelled and delivered to the HOKLAS accredited laboratory on the same day.

The collected groundwater samples shall be accompanied with the following information as a minimum:

- Sample identification number;
- Trial pit/borehole number where sample collected;
- Sampling depth (m bgl);
- Date and time of sample collection;
- Physical appearance (colour, odour, etc.); and
- Colour photograph and other pertinent information.

4.4 SAMPLES HANDLING REQUIREMENTS

All soil samples are to be taken by stainless steel spoon and placed into the containers provided by the HOKLAS accredited laboratory. The samples will be properly stored at a temperature range between 0°C and 4ºC in the dark but not frozen, labelled and delivered to the HOKLAS accredited laboratory on the same day.

Similarly, all groundwater samples collected will be treated and preserved in the identical manner as that for soil samples.

Soil and groundwater samples collected for volatile parameters (e.g. solvents, BTEX) will be collected quickly, with as little disturbance as possible. Samples should be taken so as to minimize the loss of volatile compounds. Direct filling of a glass container with no headspace will be adopted for soil and groundwater samples with volatiles.

A chain-of-custody (COC) form, including the description of the sample containers, will be completed by the SI Contractor and counter-signed by the land contamination specialist who supervising the SI for all samples delivered to the HOKLAS accredited laboratory as part of the laboratory quality control and quality assurance (QA/QC) requirements. The COC form will always be accompanied the samples during the delivery.

Samples should be representative of field conditions. At each sampling location, soil and groundwater samples will be collected using de-contaminated sampling equipment. All sample containers will be provided by the HOKLAS accredited laboratory who guarantee their sterilization and preservative contents.

The following QA/QC programme will be adopted:

(a) One trip blank for every twenty soil samples and one trip blank for every twenty groundwater samples respectively. The testing parameters of the trip blank will be PCRs (C_6-C_8) and VOC parameters listed in the RBRGs for soil and groundwater samples to detect any cross contamination during transport. Laboratory prepared spiked VOC samples should be stored, handled and transported in exactly the same way as the soil and groundwater samples collected;

(b) One field blank for every twenty soil samples and every twenty groundwater samples respectively. The testing parameters of the field blank will be the same as the associated soil or groundwater samples;

(c) One equipment blank for every twenty soil samples and every twenty groundwater samples respectively. The testing parameters of the equipment blank will be the same as the associated soil or groundwater samples; and

(d) One duplicate sample for every twenty soil samples and every twenty groundwater samples respectively. Precision will be calculated as the relative percent difference (RPD) between the original sample and the blind duplicate. The acceptable range of RPD to ascertain the reproducibility and precision of the sampling and laboratory analysis is ≤50% for a soil sample and ≤30% for groundwater sample. The testing parameters of the duplicate sample will be the same as the associated soil and groundwater samples.

4.5 FIELDWORK HEALTH AND SAFETY PRECAUTIONS

The following measures are to be implemented to minimize risks to all field personnel during the SI stage:

- Sweep at and in the vicinity of the sampling locations with a metal detector to check for the presence of any unexploded ordnance and underground utilities prior to soil sampling works. If there is any metal scrap discovered under the ground during the course of SI, the SI Contractor is to cease work immediately until the identity is confirmed. For areas suspect of ordnance, the SI Contractor is to inform the Project Proponent immediately for necessary notification to the Hong Kong Police Force for subsequent action;

- Minimize the exposure to any contaminated material by wearing appropriate clothing and personal protective equipment (PPE) such as suitable safety helmet with chin strap, gloves, goggles, protective coveralls and safety boots (when interacting directly with suspected contaminated material);
- Provide information to all workers on the potential hazards in the vicinity of sampling locations;
- Provide adequate hygiene and washing facilities; and
- Prohibit smoking or eating during activities with potential exposure to contaminated soil and/or groundwater.

4.6 REINSTATEMENT

The proposed site investigation for soil and groundwater contamination assessment involve considerable earthwork including excavation of trial pits and drilling of boreholes. In order to minimize the import and use of fill material, it is recommended to backfill trial pits and boreholes with the original material from corresponding trial pits and boreholes.

Since the proposed locations for site investigation may be potentially contaminated and to avoid possible cross-contamination, it is also recommended to place the excavated material on impervious sheeting adjacent to trial pits and boreholes. For each individual trial pit and borehole, it can only be backfilled with excavated material from its own corresponding trial pit and borehole. No backfilling with cross trial pits and boreholes shall be allowed.

5 LABORATORY ANALYTICAL REQUIREMENTS

5.1 LABORATORY TESTING SPECIFICATIONS

According to the EPD's Guidance Manual, all laboratory test methods must be accredited by the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or one of its Mutual Recognition Arrangement partners.

Samples shall be representative of field conditions. At each sampling location, soil samples shall be collected using de-contaminated sampling equipment. All sample containers shall be provided by the HOKLAS accredited laboratory appointed by the Contractor who guarantee their sterilization and preservative contents.

The COC forms for the samples delivered from the field shall be endorsed by the HOKLAS accredited laboratory appointed by the Contractor, with documentation of such faxed or emailed to the Land contamination specialist on a daily basis. This is performed to ensure all the samples collected from the field are safely delivered to the laboratory for analysis.

5.2 LABORATORY TESTING PARAMETERS

The parameters of laboratory analysis for the soil and groundwater samples (if any) collected from each of the proposed sampling locations are detailed and presented in **Appendix G**. The corresponding detection limits, RBRGs criteria and determination methods are also detailed in **Appendix G**. All the detection limits of the corresponding chemical parameters shown in **Appendix G** are below the respective RBRGs criteria.

RBRGs criteria are currently used in the land contamination assessment as the remediation target in Hong Kong. The assessment area is located in urban area and the Project Proponent planned to redevelop the Site into a hotel development. In a conservative approach, the set of RBRGs for Urban Residential – RBRGs for particular COCs is recommended to be adopted for soil and groundwater assessment.

6 CONCLUSION

The potential land contamination hotspots were identified based on the best available information. The Contractor(s) shall carry out site investigation and sampling works in accordance with the sampling proposal detailed in this CAP. Due to the limited headroom and space at G/F, the SI works shall be conducted during the demolition stage. As described in Section 4.2 and 4.3, the fieldwork will be supervised by the land contamination specialist who will be responsible for supervising the SI to ensure overall control of the quality.

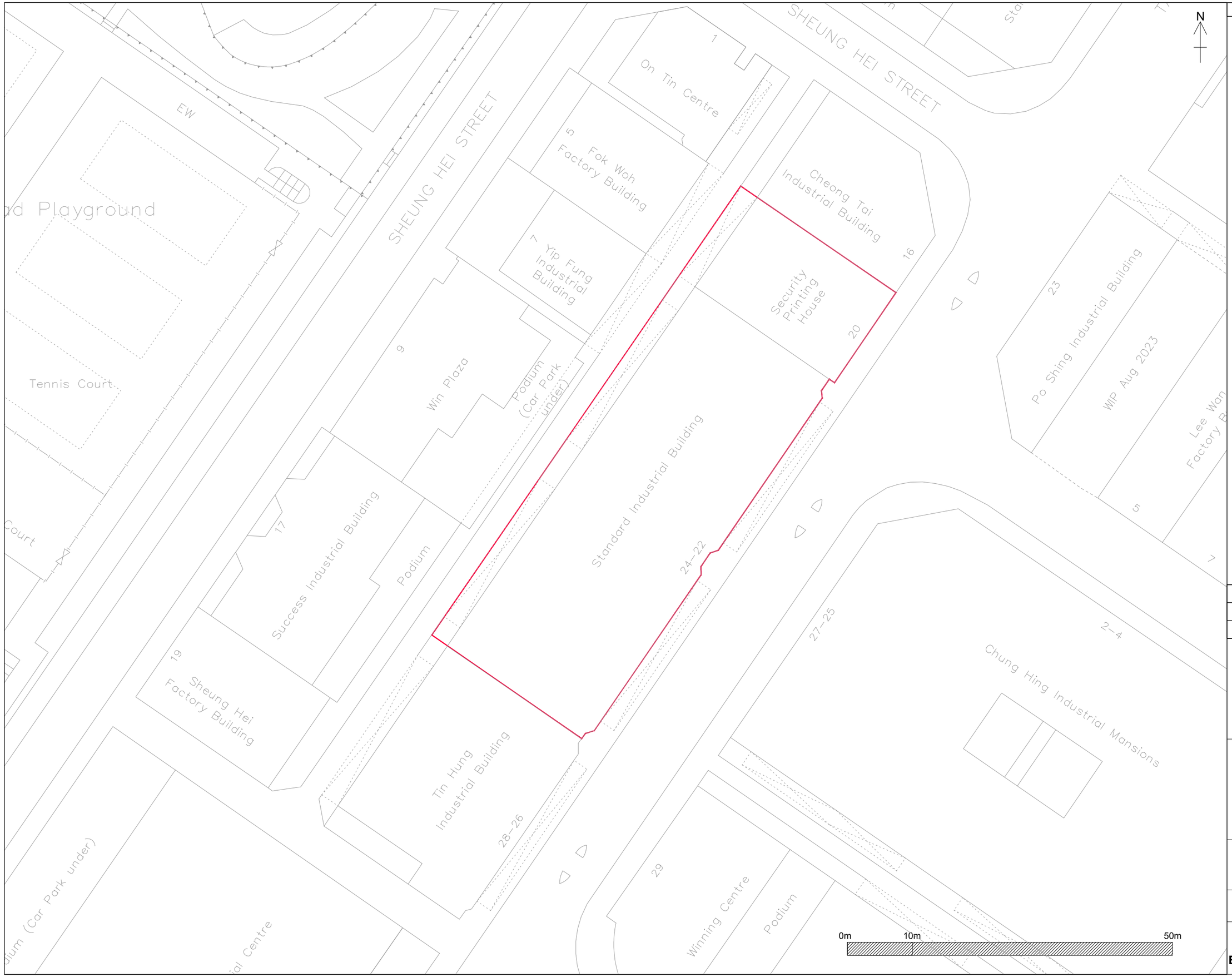
The project buildings are currently in operation, with three transformer rooms remaining inaccessible due to their ownership by CLP and metal plates covering the concrete paved ground. In addition, the exact location of the pipeline from the underground fuel tanks at 22 – 24 Tai Yau Street is uncertain. Further site appraisal is proposed to be carried out, particularly for the metal plate covering area (before and after metal plate removal) and the transformer rooms, after the project location ceases operations.

A re-appraisal, i.e. supplementary CAP, would be required for the whole Project Areas to address any change in operation or land use that may give rise to potential land contamination issues.

Upon availability of the SI results, including field observations and laboratory analytical results, the nature and extent of contamination (if any) can be ascertained by the results interpretation and all the SI results shall be presented in the Contamination Assessment Report (CAR) for EPD's approval. If land contamination is confirmed, a Remedial Action Plan (RAP) shall be submitted to the EPD for endorsement to formulate necessary remedial measures.

A Remediation Report (RR) (If any) would also be prepared to demonstrate that the remediation works are adequate and shall be submitted to EPD for agreement. The Project Proponent is noted that no construction works or development of site should be carried out prior to the approval of the RR (if any).

FIGURE 1
SITE LOCATION PLAN



Legend

Project Site

	Prepared	Checked	Approved
Initial	TL	YS	HM
Date	20250205	20250205	20250205

Project Title

Redevelopment of Nos 20- 24 Tai Yau Street, San Po Kong, Kowloon

Drawing Title

Site Environs

Drawing No.	Rev.
Figure 1	1

Scale: A3

BeeXergy Consulting Limited

FIGURE 2
EXISTING LAYOUT PLAN

Legend

- Project Site
- Existing Layout after the renovation in '80s

Remarks:

1. Non-shaded areas are those that were not renovated in the '80s and have remained unchanged since the building was occupied.
2. The original GBP for 20 Tai Yau Street and 22-24 Tai Yau Street can be found in Appendix C.

	Prepared	Checked	Approved
Initial	TL	YS	HM
Date	20250205	20250205	20250205

Project Title

Redevelopment of Nos 20- 24 Tai Yau Street, San Po Kong, Kowloon

Drawing Title

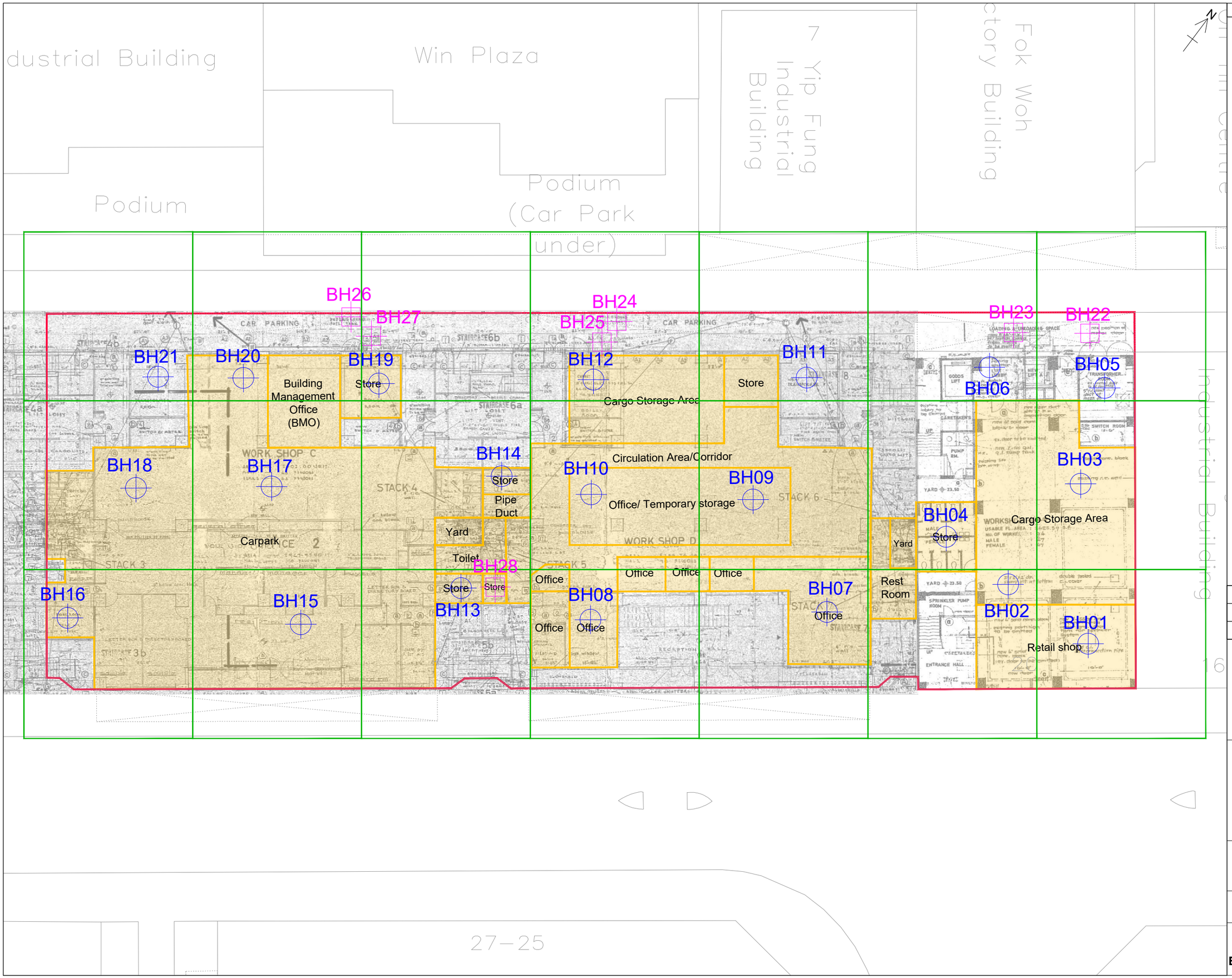
Existing layout after the renovation in '80s overlaid with the original GBP

Drawing No.	Rev.
Figure 2	1

Scale: A3

BeeXergy Consulting Limited

FIGURE3
PROPOSED SAMPLING LOCATION PLAN



Legend

- Project Site
- Regular grid pattern (13m x 13m)
- BH01 — Proposed sampling location (regular grid)
- BH22 — Proposed sampling location (hotspot)
- Existing layout after the renovation in '80s

	Prepared	Checked	Approved
Initial	TL	YS	HM
Date	20250331	20250331	20250331

Project Title

Redevelopment of Nos 20- 24 Tai Yau Street, San Po Kong, Kowloon

Drawing Title

Proposed Sampling Locations

Drawing No.	Rev.
Figure 3	3

Scale: A3

BeeXergy Consulting Limited

FIGURE 4
GROUNDWATER SAMPLING WELL DIAGRAM

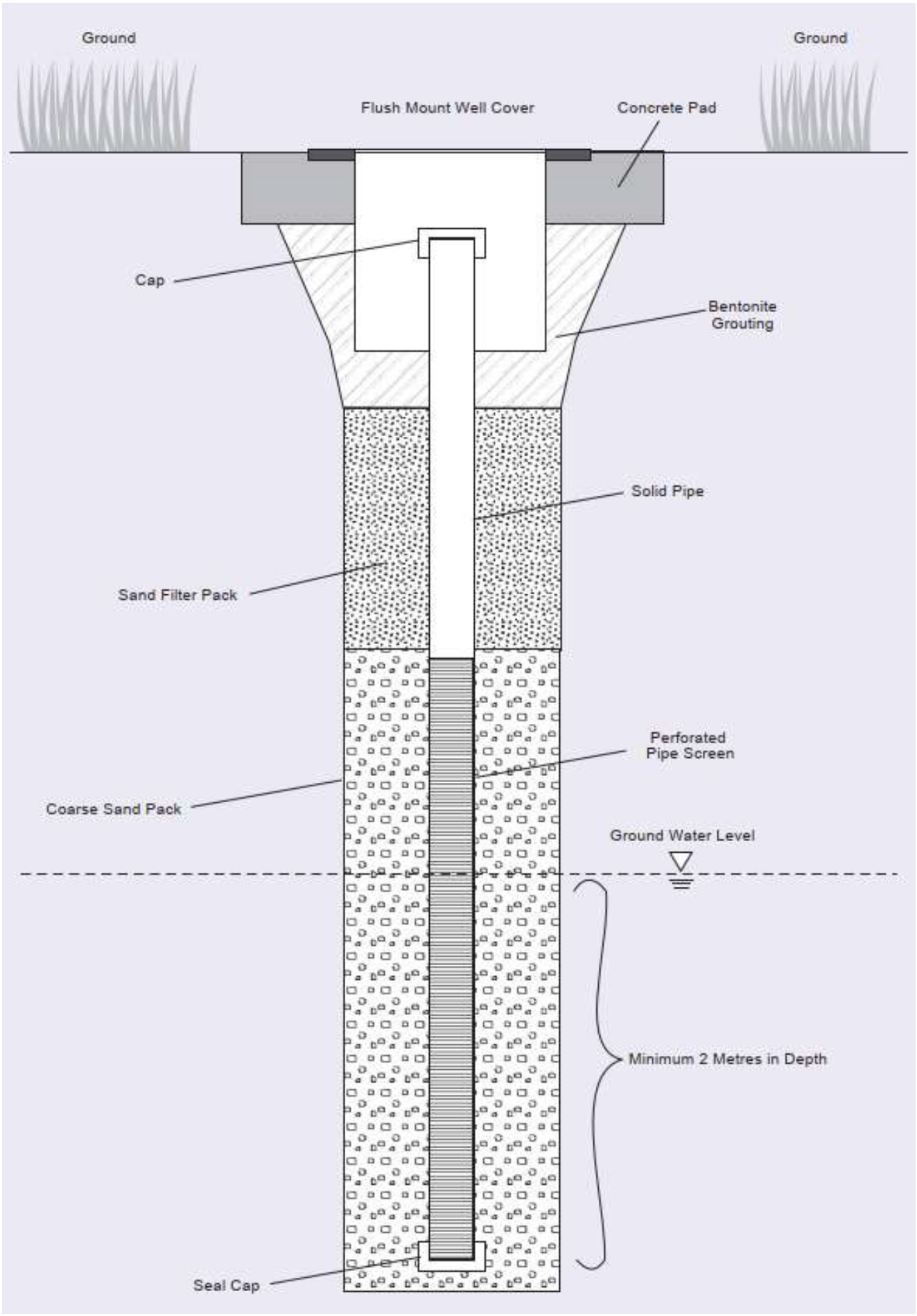


Figure:	4	
Title:	Schematic Groundwater Sampling Well	Author: Various
		Check: YS
Project:	Redevelopment of Nos 20 - 24 Tai Yau Street, San Po Kong, Kowloon	Rev: 1.0
		Date: Jan 2025

APPENDIX A
COPY OF THE LETTERS REPLIED FROM VARIOUS GOVERNMENT DEPARTMENTS

Theo Lai <theo.lai@beexergy.com>

Fw: 20 - 24 Tai Yau Street - Request for Information of Registered Chemical Waste Producers Records and Historical Records of Chemical Spillage / Leakage

1 message

ronaldvictormflam@epd.gov.hk <ronaldvictormflam@epd.gov.hk> 23 July 2024 at 10:01
To: theo.lai@beexergy.com
Cc: "CI[RE]2"@not_for_reply_from_internet.hksarg.hk, "SI[RE]22"@not_for_reply_from_internet.hksarg.hk, "I[RE]25"@not_for_reply_from_internet.hksarg.hk

Dear Mr. Lai,

(a) For the register of Chemical Waste Producers, a registry is available at our Territory Control Office at Wan Chai. Please contact our Mr. Gordon Kwan, Senior Environmental Protection Inspector, at Tel : 2835 1027 for details;

(b) For the records of reported accidents of spillage/leakage of chemicals at 20 - 24 Tai Yau Street specified in the Location Plan of your letter, please be informed that there is NO reported chemical spillage incident in our record.

Regards,
Ronald Lam
EPD/AE(RE)21

----- Forwarded by TS CHOW/EPD/HKSARG on 28/06/2024 12:08 -----

From: Theo Lai <theo.lai@beexergy.com>
To: tschow@epd.gov.hk
Date: 27/06/2024 19:20
Subject: 20 - 24 Tai Yau Street - Request for Information of Registered Chemical Waste Producers Records and Historical Records of Chemical Spillage / Leakage

Dear Ms. Chow,

We are commissioned by Ron Luen & Company Limited to conduct a Land Contamination Assessment for the redevelopment project at the captioned location. Please find the attached enquiry letter together with a location plan requesting information regarding the current and past registration of registered chemical waste producers and historical records of dangerous goods spillage / leakage.

Due to the tight programme, it would be highly appreciated if your reply to the above request could be available by 4 July 2024.

Thank you.

Best Regards,
Theo Lai

BeeXergy Consulting Limited | Units 2501, 2503 & 2504, 25/F., AIA Financial Centre, 712 Prince Edward Road East, Kowloon, Hong Kong
D: 3580-8505 | **M**: 6011-5154 | **F**: 3568-4704 | **E**: theo.lai@beexergy.com | **W**: www.beexergy.com

[attachment "24-0001 Letter_EPD.pdf" deleted by Ronald Victor MF LAM/EPD/HKSARG]

Our Ref.: W24152/24-0001
27 June 2024

By email

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
Kowloon City
5th floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay, Kowloon.

(Attn.: Ms. Chow Tsz Shan)

Dear Ms. Chow,

Redevelopment at Nos. 20 – 24 Tai Yau Street, San Po Kong, Kowloon
Request for Information of Registered Chemical Waste Producers Records and Historical Records of Chemical Spillage / Leakage

We are commissioned by Ron Luen & Company Limited to conduct a Land Contamination Assessment for the redevelopment project at the captioned location (as shown in the enclosed location plan). Information of the project location is as follows:

Lot No.:	N.K.I.L 4735, 4736 - 4741
Street Number:	Nos 20, 22 – 28 Tai Yau Street, San Po Kong
Building Name:	Security Printing House, Standard Industrial Building / Tin Hung Industrial Building

In order to facilitate the land contamination review as requested under the approval condition from Town Planning Board, we would be grateful if the following information of the Project Site can be provided:

i. Current and past registration of registered chemical waste producer, and
ii. Historical records of dangerous goods spillage / leakage.

Due to the tight programme, it would be highly appreciated if your reply to the above request could be available by 4 July 2024.

Thank you for your kind assistance. Should you have any queries, please feel free to contact the undersigned at (852) 3568 4701 or through email: theo.lai@beexergy.com

Yours sincerely,

Ms. Theo Lai
Senior Consultant
BeeXergy Consulting Limited

Site Location Plan

Theo Lai <theo.lai@beexergy.com>

Fw: 20 - 24 Tai Yau Street - Request for Information of Registered Chemical Waste Producers Records and Historical Records of Chemical Spillage / Leakage

1 message

maggie_ho@epd.gov.hk <maggie_ho@epd.gov.hk> 23 September 2021 at 11:49
To: theo.lai@beexergy.com

Dear Mr. Lai,

We have found that there were active 2 Chemical Waste Producers Records at the address concerned. The major chemical waste types of one licence is: gasoline, thinner, ink, engine oil (It has been idled for 10 years without new chemical waste collection record). The other one is : fixer, developer and organic solvent (It has been idled for 6 years without new chemical waste collection record).

There is another one which has its Chemical Waste Producers Records in 2011. The major chemical waste types of this licence is: dye.

Regards,

Maggie Ho
EPD
(Tel: 2117 7558)

From: "Theo Lai" <theo.lai@beexergy.com>
To: <tschow@epd.gov.hk>
Cc: "'Rachel Tsoi'" <rachel.tsoi@beexergy.com>
Date: 15/09/2021 15:41
Subject: 20 - 24 Tai Yau Street - Request for Information of Registered Chemical Waste Producers Records and Historical Records of Chemical Spillage / Leakage

Dear Ms Chow,

We are commissioned by Ron Luen & Company Limited to conduct a Land Contamination Assessment for the redevelopment project at the captioned location. Please find the attached cover letter together with a location plan requesting information regarding the current and past registration of registered chemical waste producer, and historical records of dangerous goods spillage / leakage.

Due to the tight programme, it is highly appreciated if your reply on the above request could be available by 22 September 2021.

Thank you for your kind assistance. Should you have any queries, please feel free to contact me.

Thank you.

Best Regards,
Theo Lai

BeeXergy Consulting Limited | *Unit 2001-05, Apec Plaza, 49 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong*
O: 3709-9221 | **F**: 3568-4704 | **M**: 6011-5154 | **E**: theo.lai@beexergy.com | **W**: www.beexergy.com

21-0003 Letter_EPD.PDF
1337K

Our Ref.: W21128/21-0003
15 September 2021

By fax (2756 8588) & email

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
Kowloon City
5th floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay, Kowloon.

(Attn.: Ms. Chow Tsz Shan)

Dear Ms. Chow,

Redevelopment at Nos. 20 – 24 Tai Yau Street, San Po Kong, Kowloon
Request for Information of Registered Chemical Waste Producers Records and Historical Records of Chemical Spillage / Leakage

We are commissioned by Ron Luen & Company Limited to conduct a Land Contamination Assessment for the redevelopment project at the captioned location (as shown in the enclosed location plan). Information of the project location is as follows:

Lot No.:	N.K.I.L 4735, 4736 - 4741
Street Number:	Nos 20, 22 – 28 Tai Yau Street, San Po Kong
Building Name:	Security Printing House, Standard Industrial Building / Tin Hung Industrial Building

In order to facilitate the land contamination review as requested under the approval condition from Town Planning Board, we would be grateful if the following information of the Project Site can be provided:

i. Current and past registration of registered chemical waste producer, and
ii. Historical records of dangerous goods spillage / leakage.

Due to the tight programme, it is highly appreciated if your reply on the above request could be available by 22 September 2021.

Thank you for your kind assistance. Should you have any queries, please feel free to contact the undersigned at (852) 3568 4701 or through email: theo.lai@beexergy.com

Yours sincerely,

Ms. Theo Lai
Senior Consultant
BeeXergy Consulting Limited

Site Location Plan

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.**	:	(64) in FSD GR 6-5/4 R Pt. 54
來函檔號 **YOUR REF.**	:	W24152/24-0002
電子郵件 **E-mail**	:	hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.**	:	2988 1196
電　　話 **TEL NO.**	:	2733 7570

17 July 2024

BeeXergy Consulting Limited
Units 2501, 2503 & 2504, 25/F.,
AIA Financial Centre,
712 Prince Edward Road East,
Kowloon, Hong Kong.
(Attn: Ms. Theo LAI, Senior Consultant)

Dear Ms. LAI,

Redevelopment at Nos. 20-24 Tai Yau Street, San Po Kong, Kowloon
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 27.6.2024 regarding the captioned request and reply below in response to your questions:-

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,

(LAI Kin-man)
for Director of Fire Services

Our Ref.: W24152/24-0002
27 June 2024

By email

Fire Services Department
3rd Floor, Fire Services Headquarters Building,
1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon

Dear Sir/Madam,

Redevelopment at Nos. 20 – 24 Tai Yau Street, San Po Kong, Kowloon
Request for Information of Registered Dangerous Goods Records and Historical Records of Chemical Spillage / Leakage

We are commissioned by Ron Luen & Company Limited to conduct a Land Contamination Assessment for the redevelopment project at the captioned location (as shown in the enclosed location plan). Information of the project location is as follows:

Lot No.:	N.K.I.L 4735, 4736 - 4741
Street Number:	Nos 20, 22 – 28 Tai Yau Street, San Po Kong
Building Name:	Security Printing House, Standard Industrial Building / Tin Hung Industrial Building

In order to facilitate the land contamination review as requested under the approval condition from Town Planning Board, we would be grateful if the following information of the Project Site can be provided:

i. Current and past registration of dangerous goods records; and
ii. Historical records of dangerous goods spillage / leakage.

Due to the tight programme, it would be highly appreciated if your reply to the above request could be available by 4 July 2024.

Thank you for your kind assistance. Should you have any queries, please feel free to contact the undersigned at (852) 3568 4701 or through email: theo.lai@beexergy.com

Yours sincerely,

Ms. Theo Lai
Senior Consultant
BeeXergy Consulting Limited

Site Location Plan

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.** : (75) in FSD GR 6-5/4 R Pt. 36
來函檔號 **YOUR REF.** : W21128/21-0002
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電　　話 **TEL NO.** : 2733 7741

28 September 2021

BeeXergy Consulting Limited
Unit 2608, Apec Plaza, 49 Hoi Yuen Road,
Kwun Tong, Kowloon,
Hong Kong
(Attn: Ms. Theo LAI, Senior Consultant)

Dear Ms. LAI,

Redevelopment Nos. 20-24 Tai Yau Street, San Po Kong, Kolwoon
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 15.9.2021 regarding the captioned request and reply below in response to your questions:-

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,

(NG Wing-chit)
for Director of Fire Services

Our Ref.: W21128/21-0002
15 September 2021

By fax (2739 5879) & email

Fire Services Department
Fire Service Headquarters Command
Management Group (MG)
9th Floor, Fire Services Headquarters Building,
1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon

(Attn.: Mr. Lo Cheung Wai)

Dear Mr. Lo,

Redevelopment at Nos. 20 – 24 Tai Yau Street, San Po Kong, Kowloon
Request for Information of Registered Dangerous Goods Records and Historical Records of Chemical Spillage / Leakage

We are commissioned by Ron Luen & Company Limited to conduct a Land Contamination Assessment for the redevelopment project at the captioned location (as shown in the enclosed location plan). Information of the project location is as follows:

Lot No.:	N.K.I.L 4735, 4736 - 4741
Street Number:	Nos 20, 22 – 28 Tai Yau Street, San Po Kong
Building Name:	Security Printing House, Standard Industrial Building / Tin Hung Industrial Building

In order to facilitate the land contamination review as requested under the approval condition from Town Planning Board, we would be grateful if the following information of the Project Site can be provided:

i. Current and past registration of dangerous goods records; and
ii. Historical records of dangerous goods spillage / leakage.

Due to the tight programme, it is highly appreciated if your reply on the above request could be available by 22 September 2021.

Thank you for your kind assistance. Should you have any queries, please feel free to contact the undersigned at (852) 3568 4701 or through email: theo.lai@beexergy.com

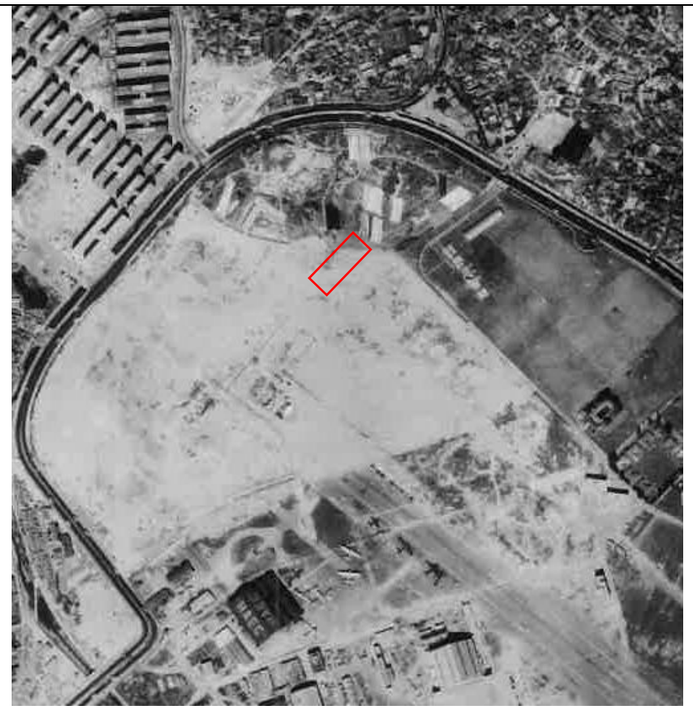
Yours sincerely,

Ms. Theo Lai
Senior Consultant
BeeXergy Consulting Limited

Site Location Plan

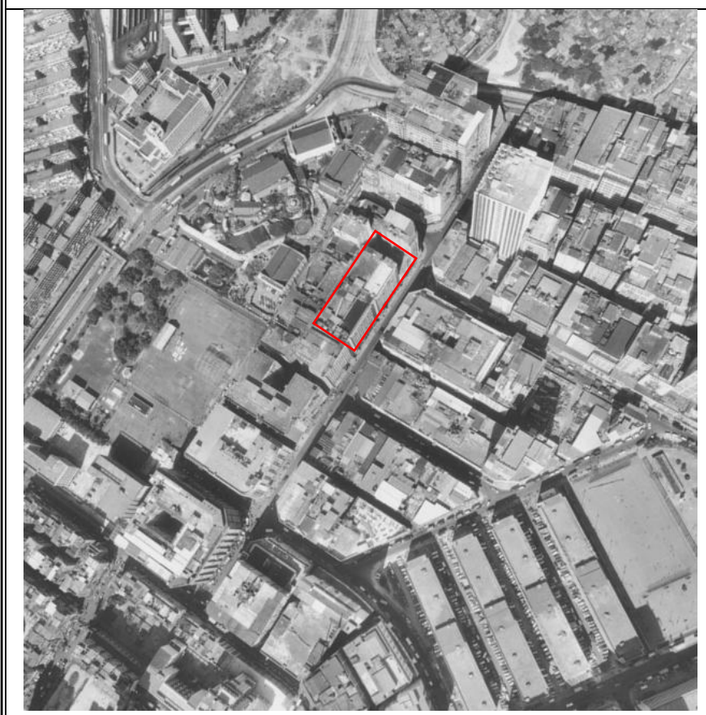
APPENDIX B
HISTORICAL AERIAL PHOTOS

Year 1945

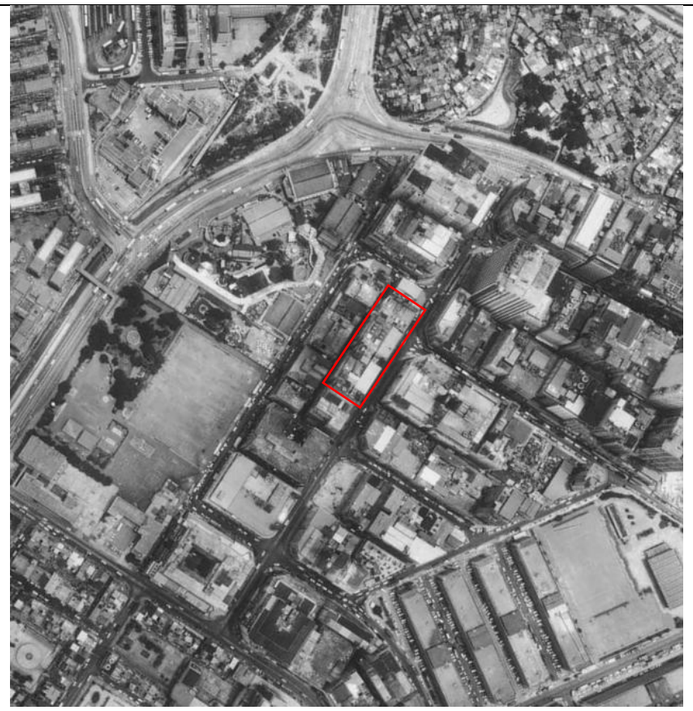


Year 1961

Year 1964



Year 1978



Year 1980

Year 2020

	Prepared	Checked	Approved
Initial	TL	YS	HM
Date	20250226	20250226	20250226

Project Title

Redevelopment of Nos 20- 24 Tai Yau Street, San Po Kong, Kowloon

Drawing Title

Aerial Photographs

Drawing No.	Rev.
Appendix B	0

Scale: A3 - N.T.S

BeeXergy Consulting Limited

APPENDIX C
AVAILABLE GENERAL BUILDING PLANS PROVIDED BY PROJECT PROPONENT AND FROM BUILDING DEPARTMENT

20 Tai Yau Street Record Plan
(Original General Building Plan (GBP))

Legend

= Concerned Area

Remarks:
1. Non-shaded areas are non-concerned areas such as lift pit & lift lobby, staircase, entrance hall, switch room etc..

Underground storage area

Details of the underground storage area

Transformer Room

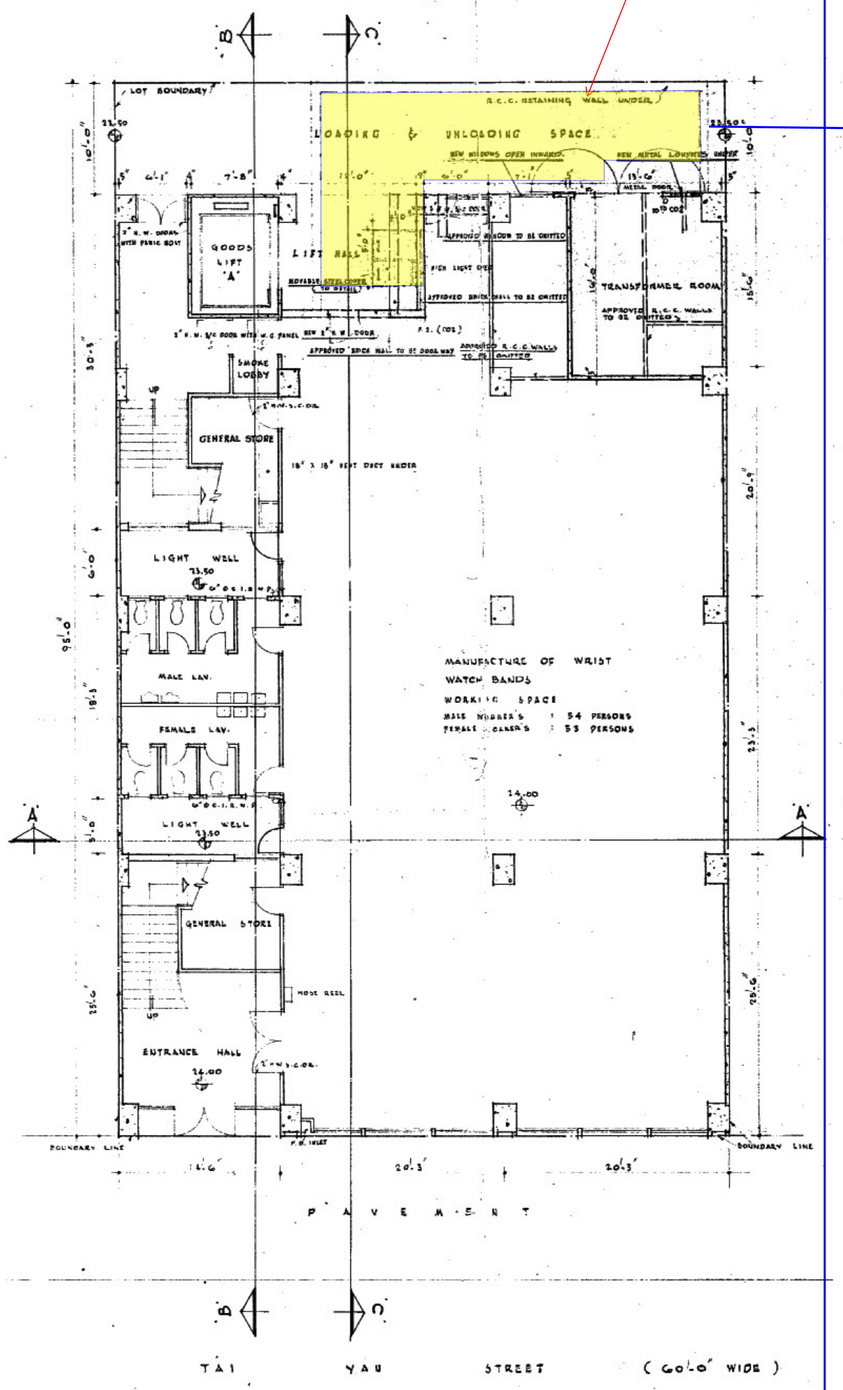
Workshop

Ground floor is the lowest floor of the existing building

20 Tai Yau Street Record Plan
(Original General Building Plan (GBP))

B.O.O. REF. BUILDINGS ORDINANCE OFFICE 2/4251/64 REF. NO.

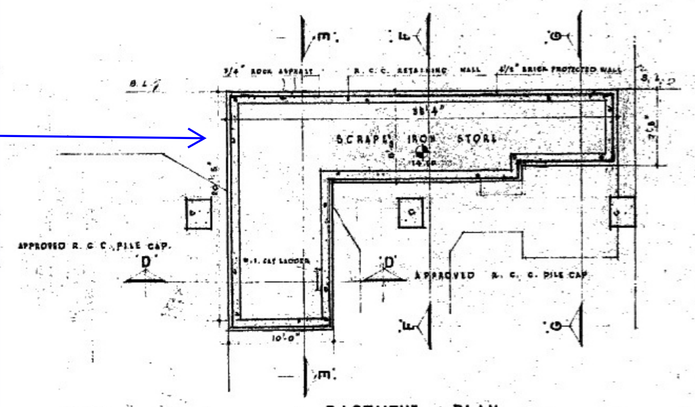
AMENDED PLANS



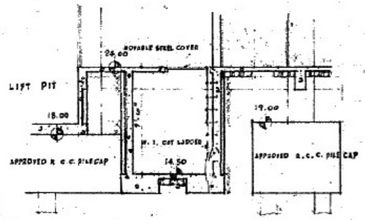
GROUND FLOOR PLAN

Underground storage area

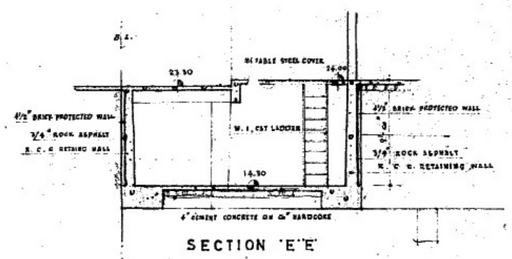
Details of the underground storage area



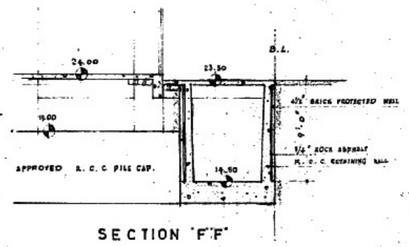
BASEMENT PLAN



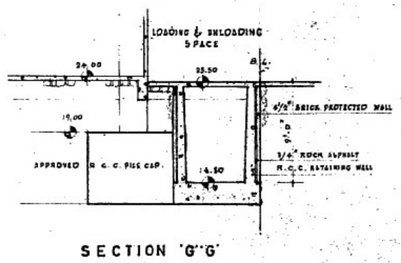
SECTION 'D''D'



SECTION 'E''E'



SECTION 'F''F'



SECTION 'G''G'

Ground floor is the lowest floor of the existing building

APPROVED BUILDING AUTHORITY - 5 MAY 1965

AMENDED NOTES.

APPROVED WORKS TO BE OMITTED HAS SHOWN DOTTED BLUE LINE.

Raymond Kan

24 FEB 1965

22/4/65

PROPOSED FACTORY BUILDING on N. K. I. L. 4735 at TAI YAU STREET SAN PO KONG	SCALE: 1/8" = 1'-0"
	JOB NO: 22
	DWG NO: A-9
DATE: 15-2-1965 REVISIONS 1 2 3 4	簡日淦建築師 RAYMOND Y. K. KAN B.ARCH.(MELB.) A.R.A.I.A. A.R.I.B.A. CHARTERED ARCHITECT
	BASEMENT & GRD. FL. PLAN

RECEIVED 26 APR 1965 BUILDINGS ORDINANCE OFFICE KOWLOON

22 - 28 Tai Yau Street Record Plan
(Original General Building Plan (GBP))

Legend

= Concerned Area

Remarks:
1. Non-shaded areas are non-concerned areas such as lift pit and lift lobby, staircase, entrance hall, office, switch room, pipe duct, yard etc..

26-28 Tai Yau Street

22 - 24 Tai Yau Street

Out of Study Area

Underground Fuel Tank

Potential location for pipeline connecting the underground fuel tank to boiler room

Transformer Room

Boiler Room

Workshop C

Workshop D

Store Room near staircase 3, demolished as carpark currently.

Store Room near staircase 5, demolished as carpark currently.

Ground floor is the lowest floor of the existing building

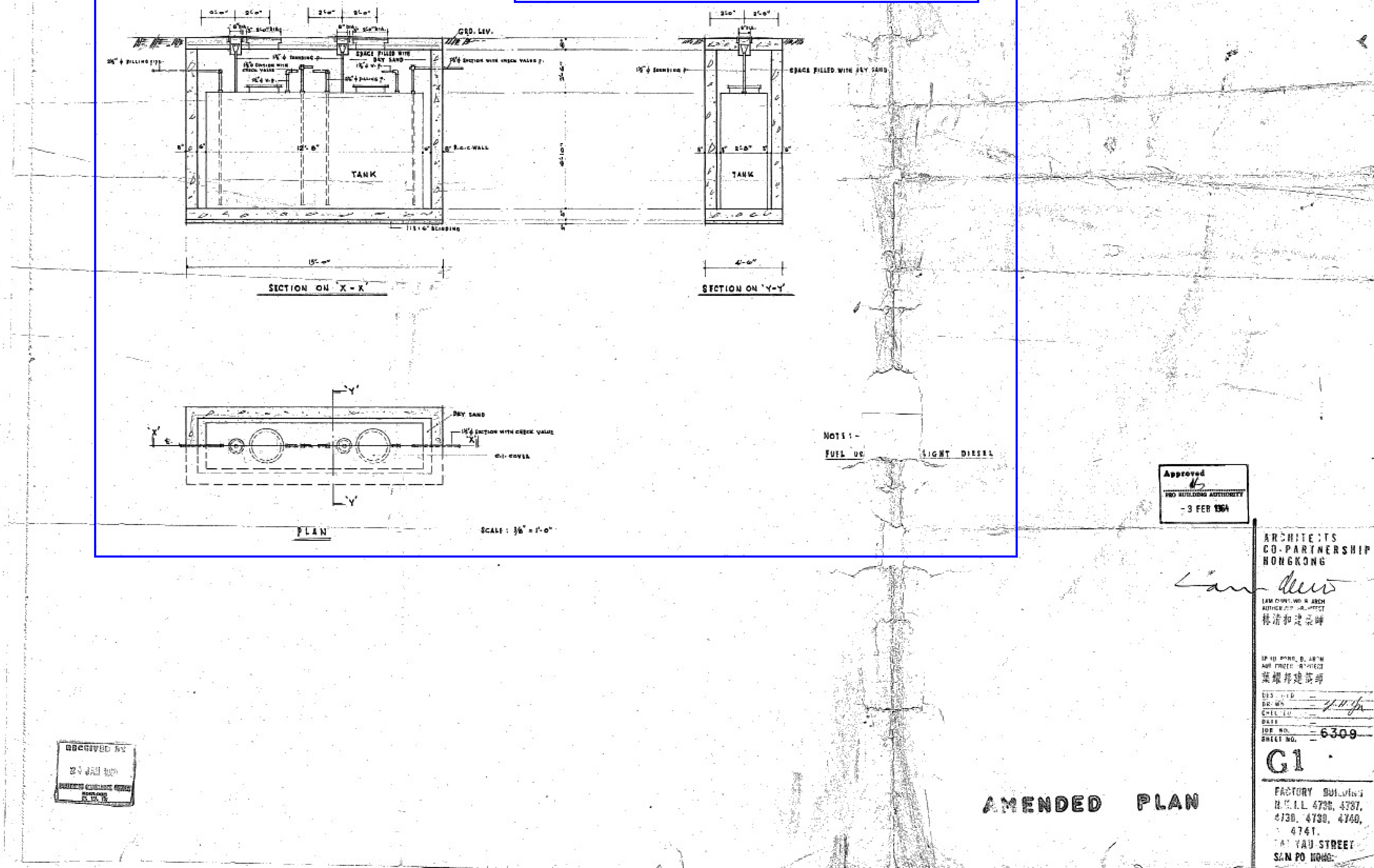
Block plan SCALE: 1" = 50'-0"

Ground floor plan SCALE: 1" = 8' 0"

AMENDED PLAN

22 - 28 Tai Yau Street Record Plan
(Original General Building Plan (GBP))

Details of the underground fuel tanks



APPENDIX D

LAND REGISTRY

印製於 PRINTED AT: INTERNET SEARCH (DOWNLOAD)
查冊日期及時間 SEARCH DATE AND TIME: 09/09/2021 11:33
查冊者姓名 NAME OF SEARCHER: jessica Wong
查冊種類 SEARCH TYPE: HISTORICAL AND CURRENT

本登記冊列明有關物業截至 09/09/2021 07:30 之資料
THE INFORMATION SET OUT BELOW CONTAINS PARTICULARS OF THE PROPERTY UP TO 07:30 ON 09/09/2021.

物業資料
PROPERTY PARTICULARS

物業參考編號
PROPERTY REFERENCE NUMBER (PRN): C5468296

地段編號
LOT NO.: NEW KOWLOON INLAND LOT NO. 4735

批約 HELD UNDER: GOVERNMENT LEASE
年期 LEASE TERM: 99 YEARS
開始日期 COMMENCEMENT OF LEASE TERM: 01/07/1898
每年地稅 RENT PER ANNUM: $120.00

所佔地段份數
SHARE OF THE LOT: -

ADDRESS: NO. 20 TAI YAU STREET KOWLOON

地址: -

備註
REMARKS: LOT CARVED OUT INTO S.A AND R.P. AFTER CARVING OUT, PARTITION OF THE LOT AVOIDED AND REVOKED BY DEED OF REVOCATION MEM. NO. 15061900280015.

業主資料
OWNER PARTICULARS

業主姓名 NAME OF OWNER	身分 (如非唯一擁有人) CAPACITY (IF NOT SOLE OWNER)	註冊摘要編號 MEMORIAL NO.	文書日期 DATE OF INSTRUMENT	註冊日期 DATE OF REGISTRATION	代價 CONSIDERATION
J.N. ROLAND DENEAULT -		-	-	-	-
		備註 REMARKS: GOVERNMENT LEASE OF NKIL 4735			
SCOTT LIMITED -	(1/2)	UB669894	08/04/1969	14/04/1969	-
		備註 REMARKS: ASSIGNMENT			
YANGTZEKIANG GARMENT MANUFACTURING COMPANY LIMITED -		UB1481747	15/12/1977	06/02/1978	$2,200,000.00
		備註 REMARKS: ASSIGNMENT			
LUK HOP GARMENTS LIMITED -		UB3595355	15/12/1987	15/01/1988	$3,630,200.00
		備註 REMARKS: ASSIGNMENT RE NKIL 4735			

APPENDIX E

SITE WALKOVER CHECKLIST

Site Walkover Checklist (10 July 2024)

GENERAL SITE DETAILS

SITE OWNER/CLIENT	Yangtzekiang Garment Ltd
PROPERTY ADDRESS	20 – 24 Tai Yau Street, San Po Kong, Kowloon

PERSON CONDUCTING THE QUESTIONNAIRE

NAME	Theo Lai
POSITION	Senior Consultant (Beexergy Consulting Limited)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME	Mr. Ron Luen
POSITION	Owner's representative
TELEPHONE	9869 1916

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:	960
	Part-time:	Not applicable
	Temporary/Seasonal:	Not applicable
Maximum no. of people on site at any time:		980
Typical hours of operation:		9
Number of shifts:		1
Days per week:		5
Weeks per year:		52
Scheduled plant shut-down:		18:00

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: Approximately 2,400 sqm

What area of the site is covered by buildings (%): 100%

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

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: _____

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

North: Industrial buildings eg., Fok Who Factory Building

South: Office buildings eg., Winning Centre

East: Office buildings eg., Win Plaza

West: Industrial buildings eg., Chung Hing Industrial Mansions

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

The site is a flat terrain in the urban area of San Po Kong.

State the size and location of the nearest residential communities.

Kai Chuen Court is located approximately 185m northeast of the site. It comprises 5 residential buildings providing 3130 numbers of flat unit.

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

Choi Hung Road Playground is located approximately 50m at the north to west of the site.

Questionnaire with Existing/Previous Site Owner or Occupier

Ref.		Yes/No	Notes
1.	What are the main activities/operations at the above address?	Yes	20TYS: Storage at G/F, security printing above G/F 22-24TYS: Carpark at G/F, office above G/F
2.	How long have you been occupying the site?	Yes	Around 50 years
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	Yes	Garment manufacturing in the 60s – 80s
4.	Prior to your occupancy, who occupied the site?	No	
5.	What were the main activities/operations during their occupancy?	-	
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	No hazardous installation at G/F
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	No chemicals used in the daily operation at G/F
	• Where do you store these chemicals?	No	No chemicals used in the daily operation at G/F
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	No chemicals used in the daily operation at G/F
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	
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)?	No	
16.	Do you have any underground storage tanks? (If yes, please provide details.)	Yes	
	▪ How many underground storage tanks do you have on site?	-	1 in 20TYS 2 in 22 – 24 TYS
	▪ What are the tanks constructed of?	-	20TYS: Concrete 22 – 24TYS: Metal tanks with concrete containment
	▪ What are the contents of these tanks?	-	20TYS: Nothing, never been used according to owner 22 – 24 TYS: Fuel in the 60s – 80s
	▪ Are the pipelines above or below ground?	-	Shall be below ground connecting the boiler rooms in 22-24 TYS, but removed in the 80s during the renovation
	▪ If the pipelines are below ground, has any leak and integrity testing been performed?	No	
	▪ Have there been any spills associated with these tanks?	No	
17.	Are there any disused underground storage tanks?	Yes	All 3 tanks were disused
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	No	
19.	How are the wastes disposed of?	-	All refuse is collected by movable refuse collection bins and stored in back lane
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?	-	
	• What were the substances spilled?	-	
	• What was the quantity of material spilled?	-	
	• Did you notify the relevant departments of the spill?	-	

	• What were the actions taken to clean up the spill?	-	
	• What were the areas affected?	-	
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.)	Yes	Renovation in the 80s
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	-	Haven't been removed. The fuel tanks in 22 – 24 TYS are secured with concrete containment.
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	

Observations

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	-	Generally do not have chemical storage areas on G/F. 2 cans of paint placed on the metal plate at G/F of 20TYS. No sign of spillage.
2.	What are the conditions of the bund walls and floors?	-	For the non-renovated area, some dampness and cracks in some areas. Details refer to App F. For the renovated area, the concrete condition is good.
3.	Are any surface water drains located near to drum storage and unloading areas?	No	
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	Yes	3 transformer rooms

	polychlorinated biphenyls (PCBs)?		
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?	Yes	22 – 24TYS: Underground fuel tanks at the loading/unloading bay outside the building.

APPENDIX F

PHOTOLOG

Site Boundary

(1) Viewpoint

N

Cheong Tai Industrial Building

Yip Fung Industrial Building

Win Plaza

Podium (Car Park under)

Podium

16

9

7

27–25

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37)

0m 10m

Photolog – G/F of 20 Tai Yau Street (10 July 2024)

Photo 1: Site entrance of 20 Tai Yau Street at G/F

Photo 2: Entrance of the retail shop at G/F

Photo 3: Inside the retail shop at G/F

Photo 4: Existing storage area at G/F (named as workshop in GBP dated 1965)

Photo 5: Existing storage area at G/F (named as workshop in GBP dated 1965)

Photo 6: Existing storage area at G/F (named as toilet in GBP dated 1965)


Photo 7: Corridor at G/F


Photo 8: Switch Room at G/F


Photo 9: Transformer room at G/F


Photo 10: Lift lobby/ entrance facing the back lane at G/F


Photo 11: Cover of the underground storage area at G/F


Photo 12: Stagnant liquid observed inside the underground storage area

Photolog – G/F 22-24 Tai Yau Street (10 July 2024)

Photo 13: Site entrance of 22-24 Tai Yau Street at G/F


Photo 14: Reception hall at G/F of project site

Photo 15: Entrance of existing carpark (previous as Reception at G/F


Photo 16: Existing carpark (previous workshop C & toilet & store room at G/F


Photo 17: Existing carpark and Building Management Office (previous workshop C) at G/F


Photo 18: Existing carpark (previous board room and first aid room at G/F

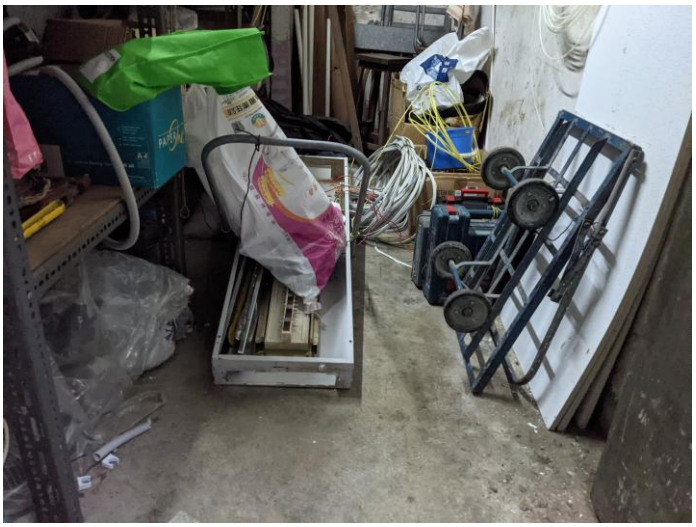


Photo 19: Existing store room (previous as boiler room near workshop C) at G/F

Photo 20: Switch Room at G/F

Photo 21: Car parking space at the back lane is covered by the metal plate at G/F

Photo 22: Back of house corridor (previous workshop D) at G/F

Photo 23: Cargo storage with packaged material (previous boiler room near workshop D) at G/F

Photo 24: Cargo lift lobby covered with metal plate at G/F


Photo 25: Store room at G/F


Photo 26: Store room at G/F


Photo 27: Existing office space (previous workshop D) at G/F


Photo 28: Existing temporary storage (previous workshop D) at G/F


Photo 29: Existing office space (previous workshop D) at G/F

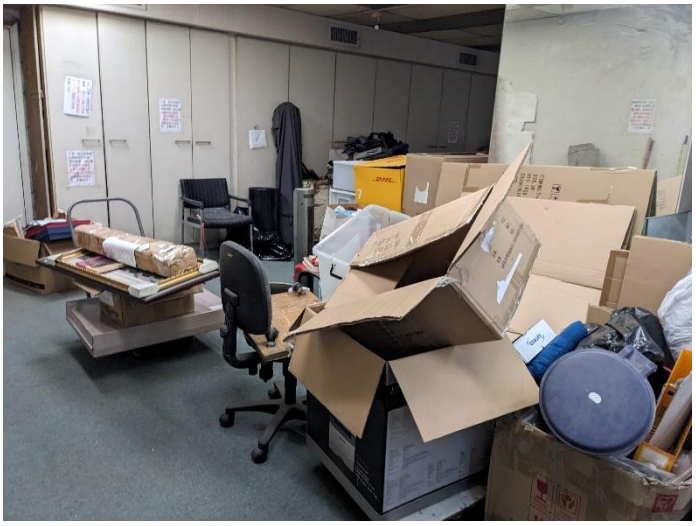


Photo 30: Office space used for temporary storage (previous workshop D) at G/F

Photo 31: Existing filing space (previous workshop D) at G/F


Photo 32: Existing office space (previous workshop D) at G/F

Photo 33: Rest Room (previous toilet) at G/F


Photo 34: Yard at G/F


Photo 35: Transformer room for 22 Tai Yau Street at G/F


Photo 36: Transformer room for 24 Tai Yau Street at G/F

Photo 37: Pipe duct at G/F

APPENDIX G
PARAMETERS OF LABORATORY ANALYSIS FOR SOIL AND GROUNDWATER

Parameters, Detection Limits and Reference Methods of Laboratory Analysis for Soil and Groundwater Samples

A. Soil Samples

Component		Parameter	Detection Limit (mg/kg)	RBRGs for Urban Residential (mg/kg)	Soil Saturation Limit (Csat) (mg/kg)	Determination Method
Metals		Antimony	1	2.95E+01	N/A	USEPA 6020
		Arsenic	1	2.21E+01	N/A	
		Barium	1	1.00E+04	N/A	
		Cadmium	0.2	7.38E+01	N/A	
		Cobalt	1	1.48E+03	N/A	
		Copper	1	2.95E+03	N/A	
		Lead	1	2.58E+02	N/A	
		Manganese	1	1.00E+04	N/A	
		Molybdenum	1	3.69E+02	N/A	
		Nickel	1	1.48E+03	N/A	
		Tin	1	1.00E+04	N/A	
		Zinc	1	1.00E+04	N/A	
		Mercury	0.2	1.10E+01	N/A	APHA 3112B
		Chromium III	1	1.00E+04	N/A	USEPA 3060; APHA 3500 Cr:D
		Chromium VI	1	2.21E+02	N/A	
Hydrocarbons	Petroleum Carbon Ranges (PCRs)	C6 - C8	5	1.41E+03	1.00E+03	USEPA 8260/8015
		C9 - C16	200	2.24E+03	3.00E+03	
		C17 - C35	500	1.00E+04	5.00E+03	
	Volatile Organic Compounds (VOCs)	Acetone	50	9.59E+03	***	USEPA 8260B
		Bromodichloromethane	0.1	3.17E-01	1.03E+03	
		2-Butanone	5	1.00E+04	***	
		Chloroform	0.04	1.32E-01	1.10E+03	
		Methyltert-Butyl Ether	0.5	6.88E+00	2.38E+03	
		Methylene Chloride	0.5	1.30E+00	9.21E+02	
		Styrene	0.5	3.22E+03	4.97E+02	
		Tetrachloroethene	0.04	1.01E-01	9.71E+01	
		Trichloroethene	0.1	5.23E-01	4.88E+02	
		Benzene	0.2	7.04E-01	3.36E+02	
		Toluene	0.5	1.44E+03	2.35E+02	
		Ethylbenzene	0.5	7.09E+02	1.38E+02	
		Xylenes (Total)	2	9.50E+01	1.50E+02	
	Semi- Volatile Organic Compounds (SVOCs)	Acenaphthene	0.5	3.51E+03	6.02E+01	USEPA 8270
		Acenaphthylene	0.5	2.34E+03	1.98E+01	
		Anthracene	0.5	1.00E+04	2.56E+00	
		Benzo(a)anthracene	0.5	1.20E+01	N/A	
		Benzo(a)pyrene	0.5	1.20E+00	N/A	
		Benzo(b)fluoranthene	0.5	9.88E+00	N/A	
		Benzo(g,h,i)perylene	0.5	1.80E+03	N/A	
		Benzo(k)fluoranthene	0.5	1.20E+02	N/A	
		bis-(2-Ethylhexyl)phthalate	5	3.00E+01	N/A	
		Chrysene	0.5	8.71E+02	N/A	
		Dibenzo(a,h)anthracene	0.5	1.20E+00	N/A	
		Fluoranthene	0.5	2.40E+03	N/A	
		Fluorene	0.5	2.38E+03	5.47E+01	
		Hexachlorobenzene	0.2	2.43E-01	N/A	
		Indeno(1,2,3-cd)pyrene	0.5	1.20E+01	N/A	
		Naphthalene	0.5	1.82E+02	1.25E+02	
		Phenanthrene	0.5	1.00E+04	2.80E+01	
		Phenol	0.5	1.00E+04	7.26E+03	
		Pyrene	0.5	1.80E+03	N/A	
	PCBs	PCBs	0.1	2.36E-01	N/A	

Remarks: (1) "N/A" denotes not applicable.

(2) Table based on "Guidance Manual for Use of Risk-Based Remediation Goals (RBRG) for Contaminated Land Management, published in December 2007 and revised in April 2023 by EPD".

(3) *** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRGS applies.

Parameters, Detection Limits and Reference Methods of Laboratory Analysis for Soil and Groundwater Samples

B. Groundwater Samples

Component		Parameter	Detection Limit (mg/L)	RBRGs for Urban Residential (mg/L)	Solubility Limit (mg/L)	Determination Method
Metals		Antimony	0.001	N/A	N/A	USEPA 6020
		Arsenic	0.01	N/A	N/A	
		Barium	0.001	N/A	N/A	
		Cadmium	0.0002	N/A	N/A	
		Cobalt	0.001	N/A	N/A	
		Copper	0.001	N/A	N/A	
		Lead	0.001	N/A	N/A	
		Manganese	0.001	N/A	N/A	
		Molybdenum	0.001	N/A	N/A	
		Nickel	0.001	N/A	N/A	
		Tin	0.001	N/A	N/A	
		Zinc	0.02	N/A	N/A	
		Mercury	0.0005	4.86E-01	N/A	APHA 3112B
		Chromium III	0.02	N/A	N/A	USEPA 3060; APHA 3500 Cr:D
		Chromium VI	0.02	N/A	N/A	
Hydrocarbons	Petroleum Carbon Ranges (PCRs)	C6 - C8	0.02	8.22E+01	5.23E+00	USEPA 8260/8015
		C9 - C16	0.5	7.14E+02	2.80E+00	
		C17 - C35	0.5	1.28E+01	2.80E+00	
	Volatile Organic Compounds (VOCs)	Acetone	0.5	1.00E+04	***	USEPA 8260B
		Bromodichloromethane	0.005	2.22E+00	6.74E+03	
		2-Butanone	0.05	1.00E+04	***	
		Chloroform	0.005	9.56E-01	7.92E+03	
		Methyltert-Butyl Ether	0.005	1.53E+02	***	
		Methylene Chloride	0.05	1.90E+01	***	
		Styrene	0.005	3.02E+03	3.10E+02	
		Tetrachloroethene	0.005	2.50E-01	2.00E+02	
		Trichloroethene	0.005	1.21E+00	1.10E+03	
		Benzene	0.005	3.86E+00	1.75E+03	
		Toluene	0.005	5.11E+03	5.26E+02	
		Ethylbenzene	0.005	1.02E+03	1.69E+02	
		Xylenes (Total)	0.02	1.12E+02	1.75E+02	
	Semi- Volatile Organic Compounds (SVOCs)	Acenaphthene	0.002	1.00E+04	4.24E+00	USEPA 8270
		Acenaphthylene	0.002	1.41E+03	3.93E+00	
		Anthracene	0.002	1.00E+04	4.34E-02	
		Benzo(a)anthracene	N/A	N/A	N/A	
		Benzo(a)pyrene	N/A	N/A	N/A	
		Benzo(b)fluoranthene	0.001	5.39E-01	1.50E-03	
		Benzo(g,h,i)perylene	N/A	N/A	N/A	
		Benzo(k)fluoranthene	N/A	N/A	N/A	
		bis-(2-Ethylhexyl)phthalate	N/A	N/A	N/A	
		Chrysene	0.001	5.81E+01	1.60E-03	
		Dibenzo(a,h)anthracene	N/A	N/A	N/A	
		Fluoranthene	0.002	1.00E+04	2.06E-01	
		Fluorene	0.002	1.00E+04	1.98E+00	
		Hexachlorobenzene	0.004	5.89E-02	6.20E+00	
		Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	
		Naphthalene	0.002	6.17E+01	3.10E+01	
		Phenanthrene	0.002	1.00E+04	1.00E+00	
		Phenol	N/A	N/A	N/A	
		Pyrene	0.002	1.00E+04	1.35E-01	
	PCBs	PCBs	0.001	4.33E-01	3.10E-02	

Remarks: (1) "N/A" denotes not applicable.

(2) Table based on "Guidance Manual for Use of Risk-Based Remediation Goals (RBRG) for Contaminated Land Management, published in December 2007 and revised in April 2023 by EPD".

(3) *** indicates that the solubility limit exceeds the 'ceiling limit' therefore the RBRGS applies.