



Alternative Ground Decontamination Works at the Proposed Kennedy Town Comprehensive Development Area Site

Review Report for New World First Bus Depot

June 2018

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Contents

1	Introduction	1
1.1	Background	1
1.2	Objectives	1
2	Desktop Review and Site Appraisal	2
2.1	Review of Relevant Information from Government Departments	2
2.2	Site Appraisal of the Bus Depot since Supplementary EIA Study	2
2.2.1	Site Appraisal in May 2012	2
2.2.2	Interim Site Appraisal in December 2015	2
2.2.3	Final Site Appraisal in June and July 2016	3
2.2.4	Confirmation from Bus Depot Operator	3
2.3	Review of Contamination Assessment Plan (CAP)	3
2.3.1	Supplementary EIA Stage	3
2.3.2	After Supplementary EIA Stage	4
2.4	Review of Contamination Assessment Report/ Remediation Action Plan (CAR/RAP)	4
2.4.1	Supplementary EIA Stage	4
2.4.2	After Supplementary EIA Stage	5
3	Identification of Further Land Contamination Potential	6
4	Conclusion	7
	Appendices	8
A.	Responses from EPD and FSD	9
B.	Site Walkover Checklist	10
C.	Written Confirmation from NWFB on Land Use between May 2012 and July 2016	11
D.	Distribution of Contaminated Soil Layer within Bus Depot (Grids 4R, 8R and D)	12

Figures

- Figure 2.1 Photographic Record of Bus Depot during Interim Site Appraisal in December 2015
- Figure 2.2 Photographic Record of Bus Depot during Final Site Appraisal in July 2016

1 Introduction

1.1 Background

Mott MacDonald Hong Kong Limited (MMHK) has been commissioned by the Civil Engineering and Development Department (CEDD) to undertake the detailed design for the Alternative Ground Decontamination Works at the Proposed Kennedy Town Comprehensive Development Area (KTCD) site (hereafter referred to as “the Project”).

An Environmental Impact Assessment (EIA) report was approved by Environmental Protection Department (EPD) on 16 April 2002 under the Environmental Impact Assessment Ordinance (EIAO) (EIA Register No. AEIAR-058/2002) (hereafter referred to as “the original EIA report”).

Site investigation (SI) and laboratory testing works were carried out for the Project area in year 2000. As per the Environmental Permit (EP) (Permit No. EP-136/2002) requirements, a Contamination Confirmatory Investigation (CCI) Proposal was submitted to EPD in January 2003 to recommend further SI to ascertain the extent of land contamination and volume of contaminated soil. The CCI was completed in 2003, which indicated that the amount of soil requiring remediation would be significantly larger than the quantity as predicted in the original EIA report. As such, the recommended land decontamination methods and related mitigation measures in the original EIA report were no longer applicable. Therefore, a supplementary EIA is required for the alternative ground decontamination works.

As part of the supplementary EIA, MMHK has prepared a Contamination Assessment Plan (CAP), which was approved by EPD in March 2013, and subsequently MMHK has also compiled the Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) which form part of the supplementary EIA report. The supplementary EIA report was approved by EPD on 1 April 2015 under the EIAO (EIA Register No. AEIAR-188/2015). A variation of EP was issued by Director of Environment Protection (DEP) on 25 June 2015 (Permit No. EP-136/2002/E).

The EP Condition 2.13 stipulates that “*As the area occupied by the New World First Bus Depot as shown in Figure 5 of this Permit may be subjected to further contamination since approval of the CAR/RAP in the EIA Report (Register No. AEIAR-188/2015), the Permit Holder shall, no later than two months before commencement of work at the Bus Depot area, deposit with the Director four hard copies and one electronic copy of a Review Report to confirm:*

- (a) *the validity of the approved CAP and CAR/RAP in the EIA Report (Register No. AEIAR-188/2015);*
- (b) *whether there is any potential contaminations due to the continual operation of the Bus Depot; and*
- (c) *whether further site investigation is required.”*

The New World First Bus Depot (hereafter referred to as “the Bus Depot”) has stopped operation since 18 June 2016. This Review Report is prepared to fulfil the EP Condition 2.13.

1.2 Objectives

The objectives of this Review Report are to:

- Present the findings of desktop studies, including the review of approved CAP and CAR/RAP, as well as site appraisal after completion of operation of the Bus Depot;
- Identify any further potential land contamination since the approval of supplementary EIA report; and
- Propose, where necessary, further SI to determine the nature and extent of any potential further land contamination that may be identified.

2 Desktop Review and Site Appraisal

2.1 Review of Relevant Information from Government Departments

EPD and Fire Service Department (FSD) have been contacted for the following information:

- Records on any active (present) and inactive (past) registered chemical waste producer(s) and any reported accidents of chemical waste spillage / leakage within the Bus Depot; and
- Records of any licensed dangerous goods (DG) store(s) and any reported accidents of spillage / leakage of DG within the Bus Depot.

Relevant replies from EPD and FSD are given in **Appendix A**, and the information provided is summarised below:

A review of the chemical waste producers (CWPs) records had been conducted at the EPD's Territory Control Office. One registered CWP was identified at the bus depot. The record of the registered CWP obtained from EPD is presented in **Table 1**.

Table 1: Summary of Registered Chemical Waste Producers

Name of Chemical Waste Producer	Business Nature	Premises Address
New World First Bus Services Limited	Bus Repairing	45 Victoria Road, Kennedy Town, Hong Kong

Based on the information given by EPD, there was no record of chemical spillage / leakage within the Bus Depot.

According to the reply from FSD, there was one record of DG license at the Bus Depot which consisted of one aboveground diesel tank. However, the DG license was cancelled on 28 July 2016 and no incident of spillage / leakage of DG was found within the Bus Depot.

2.2 Site Appraisal of the Bus Depot since Supplementary EIA Study

2.2.1 Site Appraisal in May 2012

As recorded in the previous site appraisal carried out in May 2012 (approved CAP refers), the Bus Depot was in operation including mainly office building, vehicle washing and refuelling activities. An aboveground fuel tank was located near to the refuelling area. No other potential land contamination activities were observed on-site.

2.2.2 Interim Site Appraisal in December 2015

Interim site appraisal was carried out on 21 December 2015 to identify any further potential land contamination in the Bus Depot since the last site appraisal and to verify the validity of the approved CAP and CAR/RAP. The completed site walkover checklist and the photographic records are provided in **Appendix B** and **Figure 2.1** respectively.

During the interim site appraisal, it was observed that refuelling was the only operation in the Bus Depot and was the same activity as the previous site appraisal in May 2012. The other activities found during the supplementary EIA stage such as vehicle washing and parking were no longer in place. No further potentially contaminative land uses and no signs of further land contaminative activities were observed in the Bus Depot.

Also, it was observed that the ground surfaces of Bus Depot were fully paved with intact concrete and no apparent stains were found (including the area near the above-ground fuel tank). The ground

condition of the Bus Depot has not changed since the supplementary EIA stage. Since there are no additional operation activities in the Bus Depot, no new potential source of contamination is anticipated since the site appraisal in 2012.

2.2.3 Final Site Appraisal in June and July 2016

Final site appraisal was conducted on 20 June and 18 July 2016 after the completion of operation of the Bus Depot on 18 June 2016 to verify the previous findings. The completed site walkover checklist and the photographic records are provided in **Appendix B** and **Figure 2.2** respectively.

During the site appraisal on 20 June 2016, it was observed that no activity was being carried out in the Bus Depot. No further potentially contaminative land uses and no signs of new potential source of contamination were observed in the Bus Depot. It was also observed that the ground surfaces of Bus Depot were fully paved with intact concrete and no apparent stains were found at the surfaces (including the area near the above-ground fuel tank). The ground condition of the Bus Depot has not changed since the site appraisal in December 2015.

During the final site appraisal in 18 July 2016, it was observed that only minor site clearance works were being carried out in the Bus Depot. All the building structure including the aboveground fuel tank were removed from the Bus Depot. It was also observed that the ground surfaces of Bus Depot were fully paved with intact concrete and no apparent stains were found at the surfaces (including the area near the removed above-ground fuel tank). Therefore, no further potentially contaminative land uses and no signs of new potential source of contamination were observed in the Bus Depot.

2.2.4 Confirmation from Bus Depot Operator

We received written confirmation from the Bus Depot operator (New World First Bus) to confirm no change in land use within the Bus Depot between May 2012 and July 2016. A copy of the email confirmation is provided in **Appendix C**.

2.3 Review of Contamination Assessment Plan (CAP)

2.3.1 Supplementary EIA Stage

During the course of supplementary EIA study, the Bus Depot was still under operation. Site appraisal was carried out in May 2012 to identify the land uses of the Bus Depot and spot out any potential contaminated area due to operation of the Bus Depot. An aboveground fuel tank was located and oil stain was found near the tank during the site appraisal. The Bus Depot consisted of vehicle washing area and washing liquid was stored within the site area. The vehicle washing area was fully paved with intact concrete with no apparent stains observed. The Bus Depot area is identified as potential locations of land contamination for further SI in the approved CAP.

A total of 4 boreholes were proposed in the approved CAP to assess the extent and nature of soil contamination at the Bus Depot within Grids 4R, 8R and D¹. The sampling locations were proposed as shown in Figure 2.1, which were deemed close to where the use, handling and/or transfer of oils and fuels were likely to occur.

Based on the land use of the Bus Depot, petroleum carbon ranges (PCR), poly aromatic hydrocarbons (PAH), volatile organic chemicals (VOCs) and heavy metals were selected for assessing the potential land contamination in accordance to the "Practice Guide for Investigation and Remediation of Contaminated Land" (Practice Guide).

¹ The selection of grid areas was based on the grid system adopted in the "Final Site Investigation Report for Kennedy Town Comprehensive Development Area" dated March 2004. The dimension of grids is revised in the approved CAP for the Bus Depot area to clearly show the investigation boundary in order to carry out the SI works at the Bus Depot.

2.3.2 After Supplementary EIA Stage

As mentioned in **Section 2.2.2 and 2.2.3**, the activities found during the supplementary EIA stage such as vehicle washing and parking were no longer in place. These activities were located in Grids 4R and 8R (see **Figure 2.1**). During the site appraisal in June and July 2016, refuelling activity was no longer in place and the aboveground fuel tank was removed from the Bus Depot. It was also observed that the ground surfaces of Bus Depot were fully paved with intact concrete and no apparent stains were found at the surfaces (including the area near the removed above-ground fuel tank). The ground condition of the Bus Depot has not changed since the supplementary EIA stage. No further potentially contaminative land uses and no signs of further land contaminative activities were anticipated after the SI carried out in 2013. Since there is no change of operation activities in the Bus Depot, no new potential source of contamination is anticipated after the SI carried out in 2013. In addition, confirmatory sampling will be carried out during the ground decontamination works as required by the EP Conditions to further ascertain the extent of contamination within the site. Given the above, no further SI is considered necessary for the Bus Depot and the findings of the approved CAP for the Bus Depot should remain valid.

2.4 Review of Contamination Assessment Report/ Remediation Action Plan (CAR/RAP)

2.4.1 Supplementary EIA Stage

According to the approved CAR, the SI for the Bus Depot was conducted between 19 July 2013 and 7 August 2013. The 4 sampling locations (see **Figure 2.1**) were located around the potential land contamination areas as identified in the approved CAP. According to the laboratory analysis, exceedances of the relevant Risk-Based Remediation Goals (RBRGs) (for Urban Residential / Rural Residential) in lead, mercury, PCR and benzo(a)pyrene were found in some of the soil samples. All the groundwater analysis results were below the relevant RBRGs and solubility limits.

The SI results obtained in 2013 (hereafter referred to as the “2013 SI results”) were compared with the CCI results, which revealed that:

- The contaminants identified with RBRG exceedance in the Bus Depot from the 2013 SI results were already found in the CCI results, except for mercury in borehole BD4 where the relevant RBRG exceedance had not been observed from the CCI results. However, the classification of soil contamination was not affected given that exceedances of other heavy metals (such as lead, copper and zinc) were already found in the same grid and at similar depths from both CCI and 2013 SI results.
- RBRG exceedance of lead was identified in one of the soil layers in borehole BD1 from the 2013 SI results, whereas only hydrocarbons were found at that soil layer from the CCI results. Therefore, the concerned soil layer (0.3 – 0.5 m) was re-classified as “soil contaminated with both metals and hydrocarbons”.

In summary, the soil in the Bus Depot can be classified into two types:

- Soil contaminated with heavy metals only (Type A); and
- Soil contaminated with both heavy metals and hydrocarbons (Type C).

According to the approved CAR/RAP, the distribution of the contaminated soil within Bus Depot (Grids 4R, 8R and D) is shown in **Appendix D**.

Based on the recommendation of approved CAR/RAP, Type A contaminated soil will be treated by cement solidification whilst Type C contaminated soil will be treated by biopiling followed by cement solidification.

2.4.2 After Supplementary EIA Stage

As mentioned in **Section 2.2.2 and 2.2.3**, refuelling was the only continual operation of the Bus Depot and an aboveground fuel tank was located near to the refuelling area. Both the refuelling activity and aboveground fuel tank were located within Grid D. According to Appendix I of approved CAR/RAP, below the concrete layer (0 – 0.3m) of Grid D, the soil layer of 0.3 - 4.5m was classified as Type C, and contaminated soil will be treated by biopiling followed by cement solidification. The soil layer of 4.5 – 6.0m of Grid D was classified as Type A and contaminated soil will be treated by cement solidification. As such, all the soil up to 6m below ground level within Grid D will be excavated and treated. All soil requiring decontamination works would be treated to the most stringent RBRGs (i.e. Urban Residential / Rural Residential) as per the approved CAR/RAP. In addition, confirmatory sampling will be carried out during the ground decontamination works as required by the EP Conditions to further ascertain the extent of contamination within the site.

Given that (a) the first 6m of soil below ground within Grid D (where the aboveground fuel tank was located) will be treated based on the approved CAR/RAP, (b) the ground surfaces of the Bus Depot (i.e. Grid 4R, 8R and D) were fully paved with intact concrete with no apparent stains observed during the interim/final site appraisal, and (c) there was no accidents of spillage/leakage of chemical waste or dangerous goods, the findings of the approved CAR/RAP including the proposed soil decontamination methods for the Bus Depot (i.e. Grid 4R, 8R and D) should remain valid.

3 Identification of Further Land Contamination Potential

Based on the findings obtained from review of approved CAP, CAR/RAP and information received from government departments, as well as from site appraisal, the Bus Depot has been appraised for any potential of further land contamination and the appraisal results are summarised in **Table 2**.

During the site appraisal in December 2015, it was observed that refuelling was the only operation in the Bus Depot. The other activities found during the supplementary EIA stage such as vehicle washing and parking were no longer in place.

During the site appraisal in June and July 2016, it was observed that all operation of Bus Depot has stopped and the aboveground fuel tank was removed from the Bus Depot. No further potentially contaminative land uses and no signs of further land contaminative activities were observed in the Bus Depot after the SI was carried out in 2013. Both the refuelling activity and aboveground fuel tank were located within Grid D. According to the approved CAR/RAP, the contaminated soil will be treated. Type C contaminated soil layer of 0.3 - 4.5m in Grid D will be treated through biopiling followed by cement solidification. Type A contaminated soil layer of 4.5 – 6.0m in Grid D will be treated by cement solidification. All soil requiring decontamination works will be treated to the most stringent RBRGs (i.e. Urban Residential / Rural Residential) as per CAR/RAP of supplementary EIA Report.

Given that no change of operation activities in the Bus Depot since the supplementary EIA stage and no new potential source of contamination is anticipated after the SI was carried out in 2013, it is assessed that there was no further land contamination since completion of the supplementary EIA.

Table 2: Summary of Appraisal Results of the Bus Depot

Location	Present Land Use	Land Use during Supplementary EIA	Further Land Contamination Issues	Need for Further Site Investigation	Photo No. (in Figure 2.1)	Photo No. (in Figure 2.2)
Western area of the Bus Depot	Abandoned area	Office building	No further contaminative land uses identified	No	Photo 1	Photo 6
Southern area of the Bus Depot	Abandoned area	Vehicle washing area	No further contaminative land uses identified	No	Photo 2	Photo 7
Northern area of the Bus Depot	Abandoned area	Open ground	No further contaminative land uses identified	No	Photo 3	Photo 8
Eastern area of the Bus Depot	Abandoned area	Refuelling area	No further contaminative land uses identified	No	Photo 4	Photo 9
Above-ground fuel tank	Abandoned area	Fuel storage area	No further contaminative land uses identified	No	Photo 5	Photo 10 & Photo 11

4 Conclusion

In accordance with the EP Condition 2.13, this Review Report is prepared to confirm:

- the validity of the approved CAP and CAR/RAP in the EIA Report (Register No.: AEIAR-188/2015);
- whether there is any potential contamination due to the continual operation of the Bus Depot; and
- whether further SI is required.

Based on desktop review of the relevant information and the findings of the site appraisals at the Bus Depot, it was found that:

- Based on the information given by EPD, there was no record of chemical spillage / leakage within the Bus Depot;
- According to the reply from FSD, there was one record of DG license at the Bus Depot which consisted of one aboveground diesel tank. However, the DG license was cancelled on 28 July 2016 and no incident of spillage / leakage of DG was found within the Bus Depot;
- Refuelling was the only operation in the Bus Depot before closure in June 2016 and the other activities found during the supplementary EIA stage such as vehicle washing and parking were no longer in place;
- All the building structures and the above-ground fuel tank was removed from the Bus Depot during the final site appraisal in July 2016;
- No change in the land use and no other potential land contaminative activities were observed on-site;
- No new potential source of contamination after the SI carried out in 2013; and
- The concrete-paved ground surfaces of Bus Depot were still in good condition and no signs of further land contamination were observed.

Therefore, it is concluded that the findings of the approved CAP and CAR/RAP remain valid and there were no evidences to suggest any potential of further land contamination since completion of the supplementary EIA. As such, no further SI is considered necessary for the Bus Depot.

Appendices

A.	Responses from EPD and FSD	9
B.	Site Walkover Checklist	10
C.	Written Confirmation from NWFB on Land Use between May 2012 and July 2016	11
D.	Distribution of Contaminated Soil Layer within Bus Depot (Grids 4R, 8R and D)	12

A. Responses from EPD and FSD

本署檔案 EP60/C3/23 Annex 5(2)
OUR REF:
來函檔案: SHC/LA/la/T203204/21.19/L-1652
YOUR REF:
電話 2835 1165
TEL NO.:
傳真 2305 0453
FAX NO.:
電郵 beatricewong@epd.gov.hk
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Environmental Protection Department
Environmental Compliance Division
Territorial Control Office
28/F, Southorn Centre
130 Hennessy Road
Wan Chai, Hong Kong



環境保護署
環保法規管理科
總區辦事處
香港灣仔
軒尼詩道一百三十號
修頓中心廿八樓

Mott Macdonald
20/F AIA Kowloon Tower
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Kwun Tong, Kowloon
(Attn.: Ms. Loretta AU)

	To	Action	Informant	Copy	Sign	Date
1	LA					
2						
Rec'd	12 JUL 2016					
3						
4						
File No.						MOTT MACDONALD M H

11 July 2016

Dear Ms. AU

Request for Information about Chemical Waste Producer and Spillage/Leakage Incidents for Demolition and Decontamination Works at the Kwai Chung Incineration Plant and the Proposed Kennedy Town Comprehensive Development Area Site – Design and Construction

We refer to your letter dated 28 June 2016 regarding the subject matters.

Please be informed that we have no records of spillage/leakage of chemical and incident reports regarding chemical handling at the subject site up to the date of this letter.

A registry of chemical waste producers is available in the Territorial Control Office of this department. Please contact Mr. Eric FUNG at 2835 1027 for making an appointment to view the records.

Should you have any query on the above matter, please contact the undersigned at 2835 1165.

Yours faithfully,

(Beatrice WONG)
Territorial Control Office
for Director of Environmental Protection



173

消防處

香港九龍尖沙咀東部康莊道1號
消防總部大廈



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.** : (173) in FSD GR 6-5/4 R Pt. 12
來函檔號 **YOUR REF.** : SHC/LA/la/T203204/21.15/L-1651
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電話 **TEL NO.** : 2733 7741

26 July 2016

Mott MacDonald Hong Kong Limited
20/F AIA Kowloon Tower
Landmark East
100 How Ming Street
Kwun Tong
Kowloon
Hong Kong
(Attn: Ms. Loretta AU)

Dear Ms. AU,

**Demolition and Decontamination Works at the
Proposed Kennedy Town Comprehensive Development Area Site
Request for Information of Dangerous Goods & Incident Records**

I refer to your letter of 28.6.2016 regarding the captioned request and reply below in response to your questions.

According to our record, a dangerous goods license has been issued by this department to the subject address, with details as shown in **Appendix A**. No incident record was found at the aforesaid location with your given conditions.

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

Yours sincerely,

(LEE Kui-hung)
for Director of Fire Services

Appendix A

**Demolition and Decontamination Works at the
Proposed Kennedy Town Comprehensive Development Area Site
Request for Information of Dangerous Goods & Incident Records**

<u>Item</u>	<u>Type of DG</u>	<u>Quantity</u>	<u>Storage Method</u>
1.	Diesel	45,460 Litres	A/G Tank

消防處
香港九龍尖沙咀東部康莊道1號
消防總部大廈



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.** : (198) in FSD GR 6-5/4 R Pt. 13
來函檔號 **YOUR REF.** : SHC/LA/la/T203204/21.15/L-1654
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電話 **TEL NO.** : 2733 7741

22 December 2016

Mott MacDonald Hong Kong Limited
20/F AIA Kowloon Tower
Landmark East
100 How Ming Street
Kwun Tong
Kowloon
Hong Kong
(Attn: Ms. Loretta AU)

	To	Action/Informant	Copy	Sign	Date
1	LA			CA	9/1
2					
Rec'd		30 DEC 2016			
3					
4					
File No. T203204/21.15					

Dear Ms. AU,

**Demolition and Decontamination Works at the
Kwai Chung Incineration Plant and at the
Proposed Kennedy Town Comprehensive Development Area Site
Request for Information of Dangerous Goods & Incident Records**

I refer to your letter of 25.11.2016 regarding the captioned request and reply below in response to your questions.

According to our record, the exact location of the 45,460 litre aboveground diesel tank at the Bus Depot at the junction of Sai Ning Street and Victoria Road was matched with your given plan.

Please be informed that the dangerous goods licence of the subject tank was cancelled on 28.7.2016 by this department.

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

Yours sincerely,


(LAM Wai-to)
for Director of Fire Services

B. Site Walkover Checklist

Interim Site Appraisal on 21 December 2015

General Site Details:

Site Owner: New World First Bus Service Limited

Property Address: STT NHS 583, Sai Ning Street, Hong Kong

Person Conduction the Questionnaire:

Name: Bus Depot Operator

Position: Bus Depot Operator

Site Activities

Number of employees:	Full-time:	2
	Part-time:	Nil
	Temporary / Seasonal:	Nil
Maximum no. of people on site at any time:		2
Typical hours of operation:		19:00 – 08:00
Number of shifts:		2 shifts
Days per week:		7
Weeks per year:		52
Scheduled plant shut-down:		N/A
Detail the main sources of energy at the site:		
	Gas	No
	Electricity	Yes
	Coal	No
	Oil	No
	Other	No

Site Description

What is the total site area:	Approx. 2,150m ²
What area of the site is covered by buildings (%):	40%
Is a site plan available?	No
Are there any other parties on site as tenants or sub-tenants?	No

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

North: Victoria Harbour

South: Clinic and Elderly centre

East: Public car park

West: Factory buildings

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

The surrounding landscape resources consist of some trees to the west and south, and a water body (Victoria Harbour) to the north.

State the size and location of the nearest residential communities.

The nearest residential communities are Mount Davis 33 and Cayman Rise Block 1 & 2.

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

There is a temporary public park (Cadogan Street Temporary Garden) to the east of bus depot, however, this is also included in the scope of this Project.

Questionnaire with Existing / Previous Site Owner or Occupier

	Yes / No	Notes
1. What are the main activities / operations at the above address?	--	Bus refuelling activity
2. How long have you been occupying the site?	--	Around 18 years
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	No	--
4. Prior to your occupancy, who occupied the site?	--	EMSD Depot
5. What were the main activities / operations during their occupancy?	--	Vehicle washing and Filling station
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?	Yes	--
8. To the best of your knowledge, has the site ever been used as a petrol filling station / car service garage?	Yes	--
9. Are there any boreholes / wells or natural springs either on the site or in the surrounding area?	Yes	Boreholes used in previous EIA study and previous SI
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	Yes	Above-ground fuel tank
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Above-ground fuel tank
<ul style="list-style-type: none"> Where do you store these chemicals? 	--	Above ground as shown in Figure 2.1
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	--	Not known
13. Has the facility produced a separate hazardous substance inventory?	--	Not known
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)?	--	Stored in drums
16. Do you have any underground storage tanks? (If yes, please provide details.)	No	Only above-ground storage tank
<ul style="list-style-type: none"> How many underground storage tanks do you have on site? 	--	--
<ul style="list-style-type: none"> What are the tanks constructed of? 	--	--
<ul style="list-style-type: none"> What are the contents of these tanks? 	--	--
<ul style="list-style-type: none"> Are the pipelines above or below ground? 	--	--
<ul style="list-style-type: none"> If the pipelines are below ground, has any leak and integrity testing \g been performed? 	No	--
<ul style="list-style-type: none"> Have there been any spills associated with these tanks? 	No	--
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.)	No	--
19. How are the wastes disposed of?	--	Registered as a chemical wastes producer
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	--
21. Have you spills occurred on site? (If yes, please provide details.)	No	--
<ul style="list-style-type: none"> When did the spill occur? 	--	--
<ul style="list-style-type: none"> What were the substances spilled? 	--	--
<ul style="list-style-type: none"> What was the quantity of material spilled? 	--	--
<ul style="list-style-type: none"> Did you notify the relevant departments of the spill? 	--	--

	Yes / No	Notes
• 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 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	--

Observations

	Yes / No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	Yes	On concrete ground
2. What are the conditions of the bund walls and floors?	--	Good condition
3. Are there any surface water drains located near to drum storage and unloading areas?	Yes	--
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	The previous vehicle washing pits were filled with concrete
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, oil tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Figure 2.1

Final Site Appraisal on 20 June and 18 July 2016

General Site Details:

Site Owner: New World First Bus Service Limited

Property Address: STT NHS 583, Sai Ning Street, Hong Kong

Person Conduction the Questionnaire:

Name: Bus Depot Operator

Position: Bus Depot Operator

Site Activities

Number of employees:	Full-time:	Nil
	Part-time:	Nil
	Temporary / Seasonal:	Nil
Maximum no. of people on site at any time:		N/A
Typical hours of operation:		N/A
Number of shifts:		N/A
Days per week:		N/A
Weeks per year:		N/A
Scheduled plant shut-down:		N/A
Detail the main sources of energy at the site:		
	Gas	No
	Electricity	Yes
	Coal	No
	Oil	No
	Other	No

Site Description

What is the total site area:	Approx. 2,150m ²
What area of the site is covered by buildings (%):	0%
Is a site plan available?	No
Are there any other parties on site as tenants or sub-tenants?	No

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

North: Victoria Harbour

South: Clinic and Elderly centre

East: Public car park

West: Factory buildings

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

The surrounding landscape resources consist of some trees to the west and south, and a water body (Victoria Harbour) to the north.

State the size and location of the nearest residential communities.

The nearest residential communities are Mount Davis 33 and Cayman Rise Block 1 & 2.

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

There is a temporary public park (Cadogan Street Temporary Garden) to the east of bus depot, however, this is also included in the scope of this Project.

Questionnaire with Existing / Previous Site Owner or Occupier

	Yes / No	Notes
1. What are the main activities / operations at the above address?	--	The bus depot has stopped operations on 18 June 2016. Site clearance works was undertaken during site appraisal.
2. How long have you been occupying the site?	--	--
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	--	--
4. Prior to your occupancy, who occupied the site?	--	--
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?	--	--
7. Have any polluting activities been carried out in the vicinity of the site in the past?	--	--
8. To the best of your knowledge, has the site ever been used as a petrol filling station / car service garage?	--	--
9. Are there any boreholes / wells or natural springs either on the site or in the surrounding area?	--	--
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	--	--
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	--	--
• Where do you store these chemicals?	--	--
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	--	--
13. Has the facility produced a separate hazardous substance inventory?	--	--
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)	--	--
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)?	--	--
16. Do you have any underground storage tanks? (If yes, please provide details.)	--	--
• How many underground storage tanks do you have on site?	--	--
• What are the tanks constructed of?	--	--
• What are the contents of these tanks?	--	--
• Are the pipelines above or below ground?	--	--
• If the pipelines are below ground, has any leak and integrity testing \g been performed?	--	--
• Have there been any spills associated with these tanks?	--	--
17. Are there any disused underground storage tanks?	--	--
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	--	--
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.)	--	--
21. Have you spills occurred on site? (If yes, please provide details.)	--	--
• 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?	--	--

	Yes / No	Notes
• 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 re-arrangement of underground utilities, pipe work / underground tanks (If yes, please provide details.)	--	--
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	--	--
24. Are there any known contaminations on site? (If yes, please provide details.)	--	--
25. Has the site ever been remediated? (If yes, please provide details.)	--	--

Observations

	Yes / No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	Yes	On concrete ground
2. What are the conditions of the bund walls and floors?	--	Good condition
3. Are there any surface water drains located near to drum storage and unloading areas?	Yes	--
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, oil tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Figure 2.2

C. Written Confirmation from NWFB on Land Use between May 2012 and July 2016

Mung, Ada

From: Alfee Au Kin Leung <alfeeau@nwst.com.hk>
Sent: 29 May 2018 17:52
To: Mung, Ada
Cc: Albert Chu Wai Leung
Subject: RE: Land Use of Kennedy Town Bus Depot

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ada,

We confirm that there is no change in land use within the Bus Depot between May 2012 and July 2016.

Regards
Alfee

From: Mung, Ada [mailto:Ada.Mung@mottmac.com]
Sent: Friday, May 18, 2018 11:35 AM
To: Alfee Au Kin Leung
Cc: Ching, Eric; Derek Kwok; Lo, Liz; Tang, Ricky; carriekyleung@cedd.gov.hk
Subject: Land Use of Kennedy Town Bus Depot

Dear Alfee,

As mentioned on phone, we would like to seek your confirmation on any change of land use within Kennedy Town Bus Depot between May 2012 and July 2016.

During our visit in May 2012, the Bus Depot was in operation including mainly office building, vehicle washing and refuelling activities. However, it was observed that refuelling was the only operation in the Bus Depot during our visit in Dec 2015. The other activities, such as vehicle washing and parking, were no longer in place.

During our visit in July 2016, it was observed that all the building structures including the aboveground fuel tank were removed from the Bus Depot.

Hence, we would like to seek your confirmation that there is no change in land use within the Bus Depot between May 2012 and July 2016.

Thanks & Regards,
Ada

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D. Distribution of Contaminated Soil Layer within Bus Depot (Grids 4R, 8R and D)

Depth	4R	8R	D
existing ground level	RR 0.0	RR 0.0	RR 0.0
0.5mBGL	concrete slab 0.3 M and HC 0.5	concrete slab 0.3 M 0.5	concrete slab 0.3 M and HC 0.5
1.0mBGL	Clean 1.5	M 1.5	M and HC 1.5
1.5mBGL			
2.0mBGL	M and HC 3.0	M and HC 3.0	M and HC 3.0
2.5mBGL			
3.0mBGL			
3.5mBGL	M and HC 4.5	M and HC 4.5	M and HC 4.5
4.0mBGL			
4.5mBGL			
5.0mBGL			M 6.0
5.5mBGL			
6.0mBGL			
6.5mBGL			
7.0mBGL			
7.5mBGL			

Figures



Notes

- Key to symbols
- - - PROJECT SITE BOUNDARY
 - - - PROPOSED REVISED GRID
 - MTRCL WIL WORKS SITE
 - HyD MAINTENANCE DEPOT
 - EXISTING BUS DEPOT
 - EXISTING CAR PARK
 - EXISTING CADOGAN STREET TEMPORARY GARDEN
 - EXISTING REFUSE COLLECTION POINT
 - SAMPLING LOCATIONS

Reference drawings

Rev	Date	Drawn	Description	Ch'kd	App'd
P1	OCT 12	MING	PRELIMINARY	AM	AFK

20/F AIA Kowloon Tower
Landmark East
100 How Ming Street
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
www.mottmac.com.hk

Client

**CIVIL ENGINEERING
AND DEVELOPMENT
DEPARTMENT**

Project
**ALTERNATIVE GROUND DECONTAMINATION
WORKS AT THE PROPOSED KENNEDY
TOWN COMPREHENSIVE DEVELOPMENT
AREA SITE**

Title
**PHOTOGRAPHIC RECORD OF BUS
DEPOT DURING INTERIM SITE
APPRAISAL IN DECEMBER 2015**

Designed	AM	Eng check	SMF
Drawn	MING	Coordination	SMF
Dwg check	AM	Approved	AFK
Scale at A1	1:600	Status	PRE
Drawing Number			P1

FIGURE 2.1



Notes

- Key to symbols
- PROJECT SITE BOUNDARY
 - PROPOSED REVISED GRID
 - MTRCL WIL WORKS SITE
 - HyD MAINTENANCE DEPOT
 - EXISTING BUS DEPOT
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**ALTERNATIVE GROUND DECONTAMINATION
WORKS AT THE PROPOSED KENNEDY
TOWN COMPREHENSIVE DEVELOPMENT
AREA SITE**

Title
**PHOTOGRAPHIC RECORD OF BUS
DEPOT DURING FINAL SITE APPRAISAL
IN JULY 2016**

Designed	AM	Eng check	SMF
Drawn	MING	Coordination	SMF
Dwg check	AM	Approved	AFK
Scale at A1	1:600	Status	PRE
Drawing Number		Rev	P1

FIGURE 2.2