MOTT MACDONALD

Expansion of Hong Kong International Airport into a Three-Runway System

Site Re-appraisal Summary Report – Fire Training Facility

November 2023

Mott MacDonald
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Kwun Tong
Kowloon
Hong Kong

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Airport Authority Hong Kong

Expansion of Hong Kong International Airport into a Three-Runway System

Site Re-appraisal Summary Report – Fire Training Facility

November 2023

Mott MacDonald Hong Kong Limited
registered in Hong Kong no. 236497

This Site Re-appraisal Summary Report – Fire Training Facility has been reviewed and certified by

the Environmental Team Leader (ETL) in accordance with

Section 4.2.1 of the Supplementary Contamination Assessment Plan (Aug 2018).

Certified by: 

Terence Kong
Environmental Team Leader (ETL)
Mott MacDonald Hong Kong Limited

Date 17 November 2023

AECOM
12/F, Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Road, Shatin, Hong Kong
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Our Ref : 60440482/C/RMKY231117

By Email

Airport Authority Hong Kong
HKIA Tower, 1 Sky Plaza Road
Hong Kong International Airport
Lantau, Hong Kong

Attn: Mr. Lawrence Tsui, Principal Manager

17 November 2023

Dear Sir,

Contract No. 3102
3RS Independent Environmental Checker Consultancy Services

Site Re-appraisal Summary Report – Fire Training Facility

Reference is made to the ET's submission of Site Re-appraisal Summary Report – Fire Training Facility certified by the ET Leader on 17 November 2023.

We would like to inform you that we have no adverse comment on the captioned submission. Therefore we write to verify the captioned submission in accordance with the requirement stipulated in Condition 1.9 of EP-489/2014.

Should you have any query, please feel free to contact the undersigned at 3922 9141.

Yours faithfully,
AECOM Asia Co. Ltd.

Roy Man
Independent Environmental Checker

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Appendices

1 Introduction

1.1 Background

In August 2018, a Supplementary Contamination Assessment Plan (hereinafter referred to as "SCAP") was submitted to fulfil Condition 2.20 of Environmental Permit (EP) (Permit No.: EP-489/2014), to present the findings of the follow-up site reconnaissance survey conducted in the third quarter of 2016, May 2017 as well as January and February 2018. EPD expressed no comment on the SCAP on 13 August 2018.

An evaluation of contamination potential of the fire training facility was included in the SCAP. The location of the fire training facility is presented in **Figure 1.1**, while the general view of the facility is presented in **Figure 1.2**.

As refer to the SCAP, it is noted that in Section 11.5.4.50 of the approved Environmental Impact Assessment (EIA) Report (AEIAR-185/2014), the fire training facility was not identified as one of the potential contaminative land use types as given in Table 2.3 of the *Practice Guide for Investigation and Remediation of Contaminated Land*.

Nevertheless, a site reconnaissance survey was conducted at the fire training facility in May 2017. During the site reconnaissance survey, a 10,000 L above-ground tank containing kerosene (hereinafter referred to as "kerosene tank") was found at the fire training facility. The area of the fire training facility is around 34,000 m^2, while the area of the kerosene tank is around 45 m^2. As mentioned in Section 4.2.1 of the SCAP, based on the available information during preparation of the submission, site investigation (SI) is proposed for the kerosene tank to ascertain any potential contamination issues before commencement of any construction works at this area.

Refer to Section 3.2.4 in the SCAP, a new fire training facility would replace the existing facility, but the demolition of the kerosene tank was not confirmed then. It was also considered that the potential leakage or spillage of fuel might cause land contamination concern; and with reference to Section 4.2.1 of the SCAP, site re-appraisal shall be conducted to ascertain the contamination evaluation of the kerosene tank at the fire training facility and assess the necessity of site investigation works proposed. The findings of the re-appraisal shall be documented appropriately and seek EPD agreement prior to the commencement of site investigation works, if require.

In third quarter of 2023, Mott MacDonald Hong Kong Limited (MMHK) conducted a site re-appraisal for the fire training facility according to the SCAP to ascertain the contamination evaluation of the kerosene tank at the fire training facility and review the necessity of the site investigation works proposed. The site re-appraisal findings are documented in this *Site Re-appraisal Summary Report – Fire Training Facility* (hereinafter referred to as "this Report").

1.2 Objectives

This Report aims to:

- Document the findings of the site re-appraisal conducted in third quarter of 2023 according to Section 4.2.1 of the SCAP;
- Ascertain the contamination evaluation of the kerosene tank inside the fire training facility; and
- Review the necessity of site investigation works previously proposed.

1.3 Report Structure

Section 1 Introduction

Section 2 Assessment Criteria and Methodology

Section 3 Site-Re-appraisal of Land Contamination Potential

Section 4 Conclusion

2 Assessment Criteria and Methodology

2.1 Relevant Standards, Guidelines and Requirements

EPD promulgated guidelines for utilising the Risk-Based Remediation Goals (RBRGs) developed for Hong Kong, and references are made to the following guidelines:

- *Guidance Note for Contaminated Land Assessment and Remediation* ("Guidance Note"), revised in April 2023;
- *Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management* ("Guidance Manual"), revised in April 2023; and
- *Practice Guide for Investigation and Remediation of Contaminated Land* ("Practice Guide"), revised in April 2023.

2.2 Assessment Methodology

Site re-appraisal was undertaken to ascertain the contamination evaluation of the kerosene tank and review the necessity of site investigation works proposed. Relevant information was gathered with collection of latest records from the relevant Government departments and summarised in this Report, including:

- The SCAP;
- Schematic drawings of the kerosene tank and the fire training facility from AAHK;
- Records of chemical waste producer and spillage/leakage incidents from Environmental Protection Department (EPD);
- Operational information and incident record of the kerosene tank from Fire Services Department (FSD); and
- Inspection information and incident record of the kerosene tank as well as the fire training facility from Electrical and Mechanical Services Department (EMSD).

2.3 Findings and Recommendation in the Supplementary Contamination Assessment Plan (SCAP)

A review of relevant information from government departments, including EPD and FSD, was conducted and summarised in Section 3.1 of the SCAP. Based on the information provided by EPD, no registered chemical waste producer was identified and no record of chemical spillage/leakage was found. Based on the information provided by FSD, there were dangerous goods records including a 10,000 L above-ground kerosene tank at the fire training facility, which is the concerned kerosene tank in this Report; yet no incident of spillage/leakage of dangerous goods was found.

As mentioned in Section 3.2.4 of the SCAP, a site reconnaissance survey was carried out in May 2017 at the fire training facility, with the findings extracted and presented in this Section.

A simulator was located at the centre of facility for fire training exercise. The whole training area was concrete paved. No oil stain or crack was found on the ground. An effluent pit was located under the simulator for collection of stormwater and water generated from fire training exercise. The collected stormwater would be stored in the three underground storage tanks and conveyed to the wastewater treatment plant for treatment. As mentioned in Section 11.5.4.50 of the EIA Report, fire training facility is not identified as one of the potential contaminative land use types as given in Table 2.3 of the Practice Guide.

During the survey in May 2017, a 10,000 L above-ground tank containing kerosene was found. The tank was located on a concrete-paved ground and was surrounded by concrete bund wall on all four sides. No oil stain or crack was found on the ground.

During the preparation of the SCAP, based on the available information at that moment, site investigation (SI) is proposed for the kerosene tank to ascertain any potential contamination issues before commencement of any construction works at this area as mentioned in Section 4.2.1 of the SCAP. It is also recommended that to ascertain the contamination evaluation of the kerosene tank at the fire training facility and review the necessity of site investigation works proposed, site re-appraisal shall be conducted prior to commencement of SI works. The findings of the re-appraisal shall be documented appropriately and seek EPD agreement prior to the commencement of site investigation works, if require.

3 Site-Re-appraisal of Land Contamination Potential

3.1 Review of Relevant Information from Government Departments

Information was obtained from EPD, FSD and EMSD to confirm the findings in the SCAP and compare if there is any change between August 2018 and the time being. The latest information collected are listed below:

- Records of registered chemical waste producer(s) (CWP) and any spillage/leakage incidents from EPD;
- Operational information and incident record of the kerosene tank from FSD; and
- Inspection information and incident record of the kerosene tank as well as the fire training facility from EMSD.

Relevant correspondences from EPD, FSD and EMSD are provided in **Appendix A** and the information is summarised in the following sections.

3.1.1 Environmental Protection Department

According to the reply from EPD, there was no registered CWP record for the kerosene tank, and there was no record of spillage / leakage of chemical waste or chemical at the kerosene tank over the past 10 years.

The correspondence with EPD is provided in **Appendix A.1**.

3.1.2 Fire Services Department

According to the reply from FSD, the kerosene filling record and training record at the fire training facility were provided which reflect the operational pattern. As from the record, it is noted that the frequency of operating fire training facility was gradually decreasing with time; and starting from 2022 there was no more kerosene filling to the kerosene tank.

The correspondence with FSD is provided in **Appendix A.2**.

3.1.3 Electrical and Mechanical Services Department

According to the reply from EMSD, no incident was recorded at the fire training facility (including the kerosene tank) for the past 3 years.

License renewal related document of the existing fire training facility of the recent 3-year provided by EMSD have been reviewed and it is considered that the kerosene tank within the fire training facility is regularly inspected throughout the years.

The correspondence with EMSD is provided in **Appendix A.3**.

3.2 Site Reconnaissance Survey

A site reconnaissance survey was conducted on 22 August 2023 with access granted by FSD to countercheck the current site condition against the information collected and the schematic drawings (as shown in **Appendix C)** acquired.

3.2.1 Kerosene Tank at the Fire Training Facility

3.2.1.1 Kerosene Tank

On top of the findings during the survey in 2017, a comprehensive review of the latest available information (e.g. schematic drawing) together with the observations during the site reconnaissance survey in August 2023, the latest findings of the kerosene tank are obtained and presented as below:

- The kerosene tank is located on a concrete slab with thickness around 300mm;
- No oil stain or crack was observed for the concrete slab;
- Four foundation bolts, which situated atop the concrete slab, are supporting the kerosene tank; and
- The whole kerosene tank is surrounded by concrete bund walls on all four sides, which are with thickness of 200mm and 2000mm in height.

Details and photo records of the aforementioned findings of the kerosene tank are presented in **Appendix C.2**. The latest findings are more in-depth than that in the SCAP, which revealed that the facility setup had incorporated contamination preventive consideration.

3.2.1.2 Kerosene Pipes from Kerosene Tank to Fuel Ramp Control Box

There are 2 kerosene pipes running parallelly from the kerosene tank. The pipes first pass through the concrete bund wall and then connect to the aboveground fuel ramp control box located underneath the elevated control room. The section of kerosene pipes between the concrete bund wall and the fuel ramp control box is located underground, running in a vertical parallel configuration. (Refer to details in **Appendix C.3**) The bottom level of this underground pipe section is approximately 200mm below ground level. The section is covered by soil and grass, with no sign of grass withering along the section. Soil surrounding the bottom of the underground pipes near the bund wall was taken for inspection. No specific odour or visual observations in relation to kerosene leakage / spillage was identified. (Refer to photo record in **Appendix C.4**)

The aboveground fuel ramp control box is located on a concrete plinth, where no oil stain or crack was observed at the concrete plinth under the fuel ramp control box.

3.2.1.3 Kerosene Pipes from Fuel Ramp Control Box to the Simulator

The pipes continue to go underground from the fuel ramp control box towards the simulator, the whole section is running within the concrete trench with cover plate sealed. (Refer to photo record in **Appendix C.5**)

A simulator is located at the centre of the fire training facility, the whole area is concrete paved with no oil stain or cracks observed on ground.

The completed site walkover checklist of the fire training facility is provided in **Appendix B**.

3.3 Identification of Land Contamination Potential

As presented in **Section 3.1**, no spillage and incident were recorded for the kerosene tank. The kerosene tank (as part of the fire training facility) was regularly inspected as reflected from the license renewal documents provided by EMSD.

And as presented in **Section 3.2**, the kerosene tank is situated above a concrete slab with thickness around 300mm and surrounded by concrete bund walls with thickness of 200mm and 2000mm in height, which are in good condition. No oil stain or crack was observed on the concrete slab.

For the section of underground kerosene pipes from the concrete bund wall towards the aboveground fuel ramp control box, which is covered by soil and grass. No sign of grass withering along the section was observed. No specific odour or visual observation in relation to kerosene leakage / spillage was identified for soil at the bottom of the kerosene pipes.

For the section of kerosene pipes from the aboveground fuel ramp control box to the simulator, the whole section is running within the concrete trench with cover plate sealed.

In view of the facility setup and site survey observations, it is considered that the contamination potential of the kerosene tank and the associated pipes is very unlikely, and thus the previously proposed SI at the fire training facility is considered no longer required. Therefore, SI at BH18 (Potential Land Contamination Source Reference ID in Table 3.4 of the SCAP previously for fire training facility) is considered not required.

4 Conclusion

This Report has been prepared to ascertain the contamination evaluation of the kerosene tank at the fire training facility and review the necessity of site investigation works as proposed in the SCAP. A site re-appraisal was undertaken in August 2023, including a review of the relevant information from government departments and schematic drawings, and a site reconnaissance survey.

In view of the relevant information from government departments, facility setup and site survey observations, it is considered that the contamination potential of the kerosene tank and the associated pipes is very unlikely, and thus the previously proposed SI at the fire training facility is considered not required. Therefore, SI at BH18 (Potential Land Contamination Source Reference ID in Table 3.4 of the SCAP previously for fire training facility) is considered not required.

Figures

824000 N

822000 N

820000 N

818000 N

804000 E

806000 E

808000 E

810000 E

812000 E

814000 E

LEGEND:

RECLAMATION AREA

FIRE TRAINING FACILITY

HKSAR BOUNDARY

FIRE TRAINING FACILITY

沙洲
SHA CHAU

PAK CHAU

大磡刃
TAI MO TO

東涌
TUNG CHUNG

0 250 500 750 1000 m

1 : 30 000 SCALE BAR

Rev.	Date	Description	Checked
A	28JUL17	FIRST ISSUE	PL
B	13OCT17	GENERAL REVISION	PL

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2181 7111 Fax : (852) 2834 0717

MOTT MACDONALD

Title

LOCATION OF FIRE TRAINING FACILITY

Consultant's Signatures for Approval		Date
Design	PL	13OCT17
Checkers	AM	13OCT17
Approver	EC	13OCT17

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No.

FIGURE 1.1

Scale at A3 1 : 30000

Rev. B

Filename: J:\355482\REPORT\ENV\SC\171013\FIG 1-1.dgn

809200 E

809400 E

817800 N

LEGEND:

FIRE TRAINING FACILITY

10,000L KEROSENE TANK

0 10 20 30 40 m

1 : 1 000 SCALE BAR

Rev.	Date	Description	Checked
A	14AUG17	FIRST ISSUE	PL

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKIA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2181 1111 Fax : (852) 2824 0717

MOTT MACDONALD

Title

GENERAL VIEW OF FIRE TRAINING FACILITY

Consultant's Signatures for Approval		Date
Design	PL	14AUG17
Checkers	AM	14AUG17
Approver	EC	14AUG17

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No.

FIGURE 1.2

Scale at A3 1 : 1000

Rev. A

Filename: J:\355482\REPORT\ENV\SC\170814\FIG 4-1.dgn

Appendices

A. Correspondences with Government Departments

A.1.Correspondence with EPD

MOTT MACDONALD

Environmental Protection Department
Environmental Compliance Division
Regional Office (West)
8th floor, Tsuen Wan Government Offices,
38 Sai Lau Kok Road,
Tsuen Wan, New Territories.

By Post and Email (hotline_s@epd.gov.hk)

Your Reference
/

Our Reference
AL/EC/TC/hc/426338/L0652

3/F Manulife Place
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
D +852 2828 5793
F +852 2827 1823
mottmac.hk

Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS)

Request for Information about Chemical Waste Producer and Spillage/ Leakage Incidents for the 10,000L Kerosene Tank within the Existing Fire Training Facilities in the Hong Kong International Airport

9 August 2023

Dear Sir / Madam,

We have been appointed by the Airport Authority Hong Kong (AAHK) as the Environmental Team (ET) for the Expansion of Hong Kong International Airport into a Three-Runway System (the Project) under Environmental Permit (EP) No. EP-489/2014.

As part of the environmental monitoring and audit for the captioned project, we are required to undertake a land contamination assessment which includes the 10,000L above-ground tank containing kerosene (hereinafter referred to as “kerosene tank”) at the Fire Training Facility as highlighted in the attached drawing **Figure 1**. For this, we would like to request for the following information for the concerned location (i.e. the kerosene tank) as indicated in **Figure 1** by the green box:

1. Records of current and past (as early as the records are available) registered Chemical Waste Producer(s) for the kerosene tank (preferably with the registration date, nature and quantity of the chemical waste and storage location); and

2. Any records of spillage / leakage of chemical waste or chemicals at the kerosene tank.

Due to the tight programme of this assessment, we shall be much grateful if you could return to us by 21 August 2023. Should you have any enquiries, please feel free to contact Mr. Thomas Chan at Tel: 2828-5967 or by email: thomas.chan@mottmac.com, or Mr. Hin Chan at Tel: 2828-5764 or by email hin.chan@mottmac.com.

MOTT MACDONALD

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

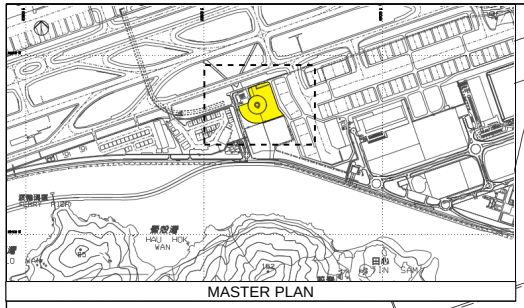
Terence Kong
Environmental Team Leader
T +852 2828 5919
terence.kong@mottmac.com

Enclosure:

1. **Figure 1** - Location Plan of the 10,000 L above-ground tank containing kerosene at the Fire Training Facility

c.c.

Airport Authority Hong Kong	Mr. Lawrence Tsui	Via e-mail (lawrence.tsui@hkairport.com)



809200 E

809400 E

817800 N

LEGEND:
FIRE TRAINING FACILITY
10,000L KEROSENE TANK

10,000L Kerosene Tank
(Concerned location)

0 10 20 30 40 m
1 : 1 000 SCALE BAR

Rev.	Date	Description	Checked
A	14AUG17	FIRST ISSUE	PL

香港國際機場 HONG KONG INTERNATIONAL AIRPORT

MOTT MACDONALD

Title
LOCATION PLAN OF THE 10,000 L ABOVE-GROUND TANK CONTAINING KEROSENE AT THE FIRE TRAINING FACILITY

Consultant's Signatures for Approval		Date
Design	PL	14AUG17
Checkers	AM	14AUG17
Approver	EC	14AUG17

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No.
FIGURE 1

Scale at A3
1 : 1000

Rev.
A

Filename: J:\355482\REPORT\ENV\SC\170814\FIG 4-1.dgn

本署檔號
OUR REF: (2) in L/M in EP 2/G/B/162 Pt.38
來函檔號
YOUR REF: AL/EC/TC/hc/426338/L0652
電　話
TEL. NO.: 3741 1838
圖文傳真
FAX NO: 2960 1760
電子郵件
E-MAIL: stellawylai@epd.gov.hk
網　址
HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)

2/F Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong

環境保護署
環保法規管理科
區域辦事處(南)

香港鰂魚涌
海灣街一號
華懋交易廣場二樓

24 Aug 2023

By Email and Fax (2182 1734)

Airport Authority
HKIA Tower, 1 Sky Plaza Road,
Hong Kong International Airport,
Lantau, Hong Kong
(Attn.: Mr. Lawrence TSUI, Principal Manager (Environmental Compliance))

Dear Mr. TSUI

Request for Information about Chemical Waste Producer and Spillage/Leakage Incidents for the 10,000L Kerosene Tank within the Existing Fire Training Facilities in the Hong King International Airport

We refer to the letter from your Environmental Team Leader (Mott MacDonald, Hong Kong Limited) dated 9 Aug 2023 (Ref: AL/EC/TC/hc/426338/L0652) requesting the information on Chemical Waste Producer and Spillage/Leakage Record for conduction the land contamination assessment at the Fire Training Facility.

According to our record, there is no chemical waste producer record for the concerned kerosene tank and there is no records of spillage/leakage of chemical waste or chemicals at the kerosene tank over the past 10 years.

According to section 4.2.1 of the Supplementary Contamination Assessment Plan (Aug 2018), SI is proposed for this above-ground kerosene tank. To ascertain contamination evaluation of this facility and review the necessity of additional site investigation works proposed, site re-appraisal will be conducted prior to commencement of SI woks. The findings of the re-appraisal will be documented appropriately and seek EPD agreement prior to the commencement of site investigation works, if require.

Yours faithfully,

(Stella W Y LAI)

for Director of Environmental Protection

c.c.

Mott Macdonald/ET (Attn: Mr. Terence KONG Fax: 2827 1823)
AECOM/IEC (Attn: Mr. Roy MAN Fax: 3922 9797)

Internal: E(MP)4, PO(MP)

A.2. Correspondence with FSD

MOTT MACDONALD

Fire Services Department
Airport South Fire Station
23 South Runway Road,
Hong Kong International Airport,
Lantau

Attention: ADO(OS) (airs_fstn_os@hkfsd.gov.hk)

Your Reference
/

Our Reference
AL/EC/TC/hc/426338/L0647

3/F Manulife Place
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
D +852 2828 5793
F +852 2827 1823
mottmac.hk

By Email

Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS)

Request for Information about the 10,000L Kerosene Tank within the Existing Fire Training Facilities

3 July 2023

Dear Sir/Madam,

We have been appointed by the Airport Authority Hong Kong (AAHK) as the Environmental Team (ET) for the Expansion of Hong Kong International Airport into a Three-Runway System (the Project) under Environmental Permit (EP) No. EP-489/2014.

As part of the environmental monitoring and audit for the captioned project, we are required to undertake a land contamination assessment which includes the 10,000 L above-ground tank containing kerosene (hereinafter referred to as "kerosene tank") at the Fire Training Facility as highlighted in the attached drawing **Figure 1**. For this, we would like to request for the following information within the concerned location (i.e. the kerosene tank) as indicated in **Figure 1** by the green box:

1. Maintenance record (as early as the records are available) of the kerosene tank;
2. Operational pattern (as early as the records are available) of the kerosene tank (e.g. kerosene filling record and/or the usage pattern of kerosene for fire training activities);
3. As-built drawings of the kerosene tank, the concrete slab under the tank, and the concrete bund walls at the 4 sides; and
4. Any incident record associated with the kerosene tank.

Your reply by 14 July 2023 would be highly appreciated. Should you have any enquiries, please feel free to contact Mr. Thomas Chan at Tel: 2828-5967 or by email: thomas.chan@mottmac.com, or Mr. Hin Chan at Tel: 2828-5764 or by email hin.chan@mottmac.com.

MOTT MACDONALD

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

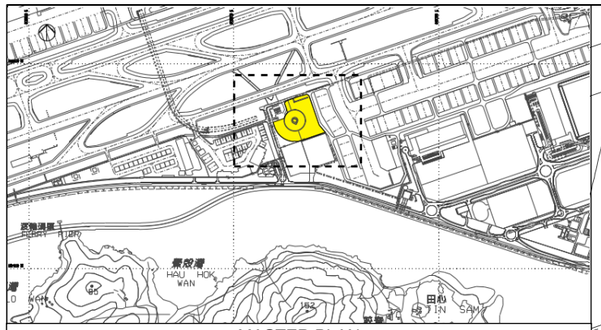
Terence Kong
Environmental Team Leader
T +852 2828 5919
terence.kong@mottmac.com

Enclosure:

1. **Figure 1** - Location Plan of the 10,000 L above-ground tank containing kerosene at the Fire Training Facility

c.c.

Airport Authority Hong Kong	Mr. Lawrence Tsui	Via e-mail (lawrence.tsui@hkairport.com)



MASTER PLAN

809200 E

809400 E

817800 N

LEGEND:

FIRE TRAINING FACILITY

10,000L KEROSENE TANK

10,000L Kerosene Tank
(Concerned location)

0 10 20 30 40 m

1 : 1 000 SCALE BAR

Rev.	Date	Description	Checked
A	14AUG17	FIRST ISSUE	PL

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Airport Authority HKA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2181 1111 Fax : (852) 2824 0717

MOTT MACDONALD

Title

LOCATION PLAN OF THE 10,000 L ABOVE-GROUND TANK CONTAINING KEROSENE AT THE FIRE TRAINING FACILITY

Consultant's Signatures for Approval		Date
Design	PL	14AUG17
Checkers	AM	14AUG17
Approver	EC	14AUG17

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No.

FIGURE 1

Scale at A3 1 : 1000

Rev. A

Filename: J:\355482\REPORT\ENV\SC\170814\FIG 4-1.dgn

Hin Chan

From: airs_fstn_1_os2@hkfsd.gov.hk
Sent: 03 August 2023 16:24
To: Hin Chan
Cc: airs_fstn_os@hkfsd.gov.hk; airs_fstn@hkfsd.gov.hk; airs_fstn_1_os1@hkfsd.gov.hk; airs_fstn_1@hkfsd.gov.hk
Subject: Fw: Request for Information about the 10,000L Kerosene Tank within the Existing Fire Training Facilities
Attachments: L0647 Request for Information_FSD.pdf; Record of kerosene filling and training activity (2016 - 2023).pdf

Dear Mr. Chan,

I refer to our tele-conversation today,
Base on the information on hand, please find our reply as follows:

1. Maintenance Record of the kerosene tank
We do not have the relevant maintenance record of the subject tank.

2. Operational Pattern of the kerosene tank
Please find the attached record regarding kerosene filling and training activity from 2016 to 2023 for your reference.

3. As-built drawings of kerosene tank
We do not have the relevant as-built drawing of the subject tank.

4. Any incident record
We do not have the relevant incident record of the subject tank.

Should you need further clarification, please feel free to contact me direct.

Best Regards,

PANG Tai-kin
Senior Station Officer
Operational Support 2
Airport Fire Contingent
Fire Services Department
Tel: 2183 5317

----- Forwarded by AirSFStn OS/FSD/HKSARG on 26/07/2023 15:19 -----

From: Hin Chan <Hin.Chan@mottmac.com>
To: "airs_fstn_os@hkfsd.gov.hk" <airs_fstn_os@hkfsd.gov.hk>
Cc: "airs_fstn@hkfsd.gov.hk" <airs_fstn@hkfsd.gov.hk>, "airs_fstn_1@hkfsd.gov.hk" <airs_fstn_1@hkfsd.gov.hk>, Lawrence M L Tsui <lawrence.tsui@hkairport.com>, Sharifah W S Or <sharifah.or@hkairport.com>, Tommy C Y Wan <Tommy.wan@hkairport.com>, Terence Kong <Terence.Kong@mottmac.com>, Ken Wong <Ken.Wong@mottmac.com>, 3RS.ET <3RS.ET@mottmac.com>, Thomas Chan <Thomas.Chan@mottmac.com>, Liz Lo <Liz.Lo@mottmac.com>

Date: 03/07/2023 11:54
Subject: Request for Information about the 10,000L Kerosene Tank within the Existing Fire Training Facilities

Dear Sir/Madam,

This is Hin Chan from Mott MacDonald Hong Kong Limited.

As per our tele-communication on 30 June 2023, we have been appointed by the Airport Authority Hong Kong (AAHK) as the Environmental Team (ET) for the Expansion of Hong Kong International Airport into a Three-Runway System, and we are required to undertake a land contamination assessment which includes the 10,000 L above-ground tank containing kerosene at the existing Fire Training Facility. As such, we would like to request for the information as detailed in the enclosed letter, and your reply by 14 July 2023 would be highly appreciated. Please feel free to contact us should you have any enquiry. Many thanks in advance.

Best regards,
Hin Chan

D +852 28285764
hin.chan@mottmac.com

MOTT MACDONALD
Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

A.3. Correspondence with EMSD

MOTT MACDONALD

Electrical & Mechanical Services Department
Airport Services 1
Rm 6T066,
Terminal 1, Hong Kong International Airport,
Lantau

Attention: Mr. FONG Kiu On (Engr/Airport Services1/1) (kofong@emsd.gov.hk)

Your Reference
/

Our Reference
AL/EC/TC/hc/426338/L0646

3/F Manulife Place
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
D +852 2828 5793
F +852 2827 1823
mottmac.hk

By Email

Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS)

Request for Information about the 10,000L Kerosene Tank within the Existing Fire Training Facilities

3 July 2023

Dear Sir,

We have been appointed by the Airport Authority Hong Kong (AAHK) as the Environmental Team (ET) for the Expansion of Hong Kong International Airport into a Three-Runway System (the Project) under Environmental Permit (EP) No. EP-489/2014.

As part of the environmental monitoring and audit for the captioned project, we are required to undertake a land contamination assessment which includes the 10,000 L above-ground tank containing kerosene (hereinafter referred to as "kerosene tank") at the Fire Training Facility as highlighted in the attached drawing **Figure 1**. For this, we would like to request for the following information within the concerned location (i.e. the kerosene tank) as indicated in **Figure 1** by the green box:

1. Maintenance record (as early as the records are available) of the kerosene tank;
2. Operational pattern (as early as the records are available) of the kerosene tank (e.g. kerosene filling record and/or the usage pattern of kerosene for fire training activities);
3. As-built drawings of the kerosene tank, the concrete slab under the tank, and the concrete bund walls at the 4 sides; and
4. Any incident record associated with the kerosene tank.

Your reply by 14 July 2023 would be highly appreciated. Should you have any enquiries, please feel free to contact Mr. Thomas Chan at Tel: 2828-5967 or by email: thomas.chan@mottmac.com, or Mr. Hin Chan at Tel: 2828-5764 or by email hin.chan@mottmac.com.

MOTT MACDONALD

Yours sincerely
for MOTT MACDONALD HONG KONG LIMITED

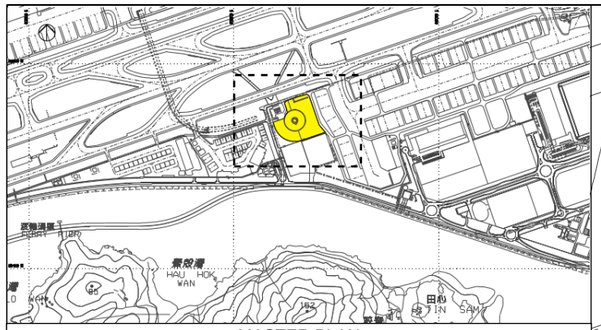
Terence Kong
Environmental Team Leader
T +852 2828 5919
terence.kong@mottmac.com

Enclosure:

1. **Figure 1** - Location Plan of the 10,000 L above-ground tank containing kerosene at the Fire Training Facility

c.c.

Airport Authority Hong Kong	Mr. Lawrence Tsui	Via e-mail (lawrence.tsui@hkairport.com)



MASTER PLAN

809200 E

809400 E

817800 N

LEGEND:

FIRE TRAINING FACILITY

10,000L KEROSENE TANK

10,000L Kerosene Tank
(Concerned location)

0 10 20 30 40 m

1 : 1 000 SCALE BAR

Rev.	Date	Description	Checked
A	14AUG17	FIRST ISSUE	PL

香港國際機場 HONG KONG INTERNATIONAL AIRPORT
Airport Authority HKA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2181 1111 Fax : (852) 2824 0717

MOTT MACDONALD

Title

LOCATION PLAN OF THE 10,000 L ABOVE-GROUND TANK CONTAINING KEROSENE AT THE FIRE TRAINING FACILITY

Consultant's Signatures for Approval		Date
Design	PL	14AUG17
Checkers	AM	14AUG17
Approver	EC	14AUG17

EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM

Drawing No.

FIGURE 1

Scale at A3 1 : 1000

Rev. A

Filename: J:\355482\REPORT\ENV\SC\170814\FIG 4-1.dgn

Hin Chan

From: kofong@emsd.gov.hk
Sent: 14 July 2023 14:53
To: Hin Chan
Cc: 3RS.ET; Ken Wong; Lawrence M L Tsui; Liz Lo; Sharifah W S Or; Terence Kong; Thomas Chan; Tommy C Y Wan; lauyatming@emsd.gov.hk; chanchungtak@emsd.gov.hk; airs_fstn_os@hkfsd.gov.hk
Subject: 回覆： Request for Information about the 10,000L Kerosene Tank within the Existing Fire Training Facilities
Attachments: L0646 Request for Information_EMSD.pdf; WR2 2020-2021.pdf; WR2 2021-2022.pdf; WR2 2022-2023.pdf; FS251 Fire Simulator 2022-2023.pdf; FS251 Fire Simulator 2021-2022.pdf; FS251 Fire Simulator 2020-2021 Rectified.pdf; FS251 Fire Simulator 2020-2021 Defect.pdf

Dear Mr. Chan,

I referred to our phone conversation and your preceding email & letter on the information of the Fire Training Facilities at Airport South Fire Station, please note our reply as follow:

1. Maintenance Record
Attached please find the supporting documents for the license renewal of the existing fire training facility (regarding the kerosene tank) of the recent 3 years for information.

2. Operational Pattern
You may wish to contact FSD for the operational pattern detail.

3. As built drawings
We do not possess the relevant drawing.

4. Any incident record
Please be advised that nil incident was recorded in the past 3 years.

Thanks.

Best regards,
Alvis FONG
E/AS1/1, EMSD
2183 6898/9033 9763

寄件者: "Hin Chan" <Hin.Chan@mottmac.com>
收件者: "kofong@emsd.gov.hk" <kofong@emsd.gov.hk>
副本抄送: "Lawrence M L Tsui" <lawrence.tsui@hkairport.com>, "Sharifah W S Or" <sharifah.or@hkairport.com>, "Tommy C Y Wan" <Tommy.wan@hkairport.com>, "Terence Kong" <Terence.Kong@mottmac.com>, "Ken Wong" <Ken.Wong@mottmac.com>, "3RS.ET" <3RS.ET@mottmac.com>, "Thomas Chan" <Thomas.Chan@mottmac.com>, "Liz Lo" <Liz.Lo@mottmac.com>
日期: 2023/07/03 上午 11:54
主旨: Request for Information about the 10,000L Kerosene Tank within the Existing Fire Training Facilities

---

Dear Mr. Fong,

This is Hin Chan from Mott MacDonald Hong Kong Limited.

As per our tele-communication on 30 June 2023, we have been appointed by the Airport Authority Hong Kong (AAHK) as the Environmental Team (ET) for the Expansion of Hong Kong International Airport into a Three-Runway System, and we are required to undertake a land contamination assessment which includes the 10,000 L above-ground tank containing kerosene at the existing Fire Training Facility. As such, we would like to request for the information as detailed in the enclosed letter, and your reply by 14 July 2023 would be highly appreciated. Please feel free to contact us should you have any enquiry. Many thanks in advance.

Best regards,
Hin Chan

D +852 28285764
hin.chan@mottmac.com

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Kowloon
Hong Kong

Website | Twitter | LinkedIn | Facebook | Instagram | YouTube

by e-mail or telephone and delete the message and any attachment from your system.

Any comments, opinions or other information contained in this transmission that
do not relate to the official business of the Electrical and Mechanical Services
Department shall not be construed to be expressed or endorsed by the Department.
==========

B. Site Walkover Checklist

Site Walkover Checklist for Fire Training Facility

1. General Site Details

Site Owner / Client: Airport Authority (Operator: Fire Services Department)

Property Address: Refer to Figure 1

Person Conducting the Questionnaire

Name: Mott MacDonald HK Ltd.

Position: N/A

Date of Site Walkover: 22 August 2023

Authorized Owner / Client Representative (if applicable)

Name: N/A

Position: N/A

Telephone: N/A

2. Site Activities

Briefly describe activities carried out on site, including types of products / chemicals / materials handled.

Number of employees:	Full-time:	Approximately 120
	Part-time:	N/A
	Temporary / Seasonal:	N/A
Maximum no. of people on site at any time:		Approximately 40

Typical hours of operation: 24 hours

Number of shifts: 3 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	Yes
Electricity	Yes
Coal	No
Oil	No
Other	No

3. 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: approx. 34,000 m^2 for the whole fire training facility
(approx. 45 m^2 for the kerosene tank)

What area of the site is covered by buildings (%): 0%

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

Fire Services Department

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

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

If yes, identify those parties: N/A

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

North: Existing South Runway

South: DHL Central Asia Hub and road networks

East: Airport taxiways

West: HK Business Aviation Centre

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

Flat concrete ground

State the size and location of the nearest residential communities.

No residential community nearby

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

No

4. Questionnaire with Existing / Previous Site Owner or Occupier

Questions	Yes / No	Notes
1. What are the main activities / operations at the site?	--	Fire training exercise
2. How long have you been occupying the site?	--	Operation since 1998
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	Yes	--
4. Prior to your occupancy, who occupied the site?	--	It was a reclaimed land
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.)	Yes	Kerosene
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	No	--
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	--
13. Has the facility produced a separate hazardous substance inventory?	No	--
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details)	No	--
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 a 10,000 L above-ground tank within concrete bund wall
16. Do you have any underground storage tanks? (If yes, please provide details.)	Yes	3 underground storage tanks for receiving wastewater generated from the fire training activity
17. Are there any disused underground storage tanks?	Yes	The abovementioned tanks in items 16 are no longer in use
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	Yes	Regular visual inspection is carried out to check if any spillage of above-ground tank
19. How are the wastes disposed of?	--	No chemical waste generated on-site
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	--
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	An above-ground tank is made of steel and fabricated with concrete
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?	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 polychlorinated biphenyls (PCBs)?	No	--
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	Yes	An effluent pit for collection of rainwater
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, ask, oil tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Kerosene

C. Schematic Drawing of Fire Training Facility

Appendix C – Schematic Drawing of Fire Training Facility

Appendix C.1 – General View of Fire Training Facility

REV. No. DATE SIGN'RE	MODIFICATIONS
A 14.06.99 JRK	AS BUILT ISSUE

NORTH

AS CONSTRUCTED	
APPROVED IFTE LTD	
APPROVED AWJV	

Simulator

SECTION AA
2 OFF 2" NB
KEROSENE PIPES

A

A

Appendix C.5

Appendix C.2, C.3

Kerosene Tank

FUEL RAMP BOX

CONTROL ROOM

Appendix C.4

Aboveground Fuel Ramp Control Box

GENERAL NOTES

1. KEROSENE FUEL PIPEWORK TO BE SCREWED TO BS 6323
2. PIPEWORK TO BE PRESSURE TESTED TO XXXXX USING WATER OR FUEL PRIOR TO BACKFILLING THE TRENCH.
3. REFER TO I.F.T.E. STANDARDS 250–496 KEROSENE PUMPS/PIPEWORK 250–498 KEROSENE STORAGE TANKS

REFERENCE DRAWINGS

FOR ELEVATION OF SIMULATOR SHOWING TERMINATION OF PIPE RUN SEE DRG No 250–126

FOR SITE LAYOUT SEE DRG No 250–110

FOR DETAILS OF KEROSENE STORAGE TANK SEE DRG No 250–133

FOR DETAILS OF LPG STORAGE TANKS SEE DRG No 250–133

USE IN CONJUNCTION WITH DRG 250–126

ITEM No.	DESCRIPTION	QTY PER SET	MATL./DRG. REF

INTERNATIONAL FIRE TRAINING EQUIPMENT
39 JUBILEE DRIVE, BELTON ROAD
INDUSTRIAL ESTATE , LOUGHBOROUGH
LEICESTERSHIRE, ENGLAND. (LE11 5XS)
Tel: +44(0) 1509 210310 Fax: +44(0) 1509 213717

CONTRACT No.

SCHEMATIC KEROSENE PIPEWORK LAYOUT

DRG. No. 250–134

SCALE 1:100 REV.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

THIRD ANGLE PROJECTION

GENERAL TOLERANCES UNLESS OTHERWISE STATED:–
OPEN DIMENSIONS > 1000 ± 3
OPEN DIMENSIONS < 1000 ± 1.5
ONE FIGURE DECIMALS ± 0.25
TWO FIGURE DECIMALS ± 0.13

ALL SHARP EDGES AND CORNERS TO BE REMOVED MINIMUM RADIUS 1mm.

FLANGE DRILLING – ALL HOLES TO BE DRILLED OFF CENTRES, UNLESS OTHERWISE STATED.

MACHINING GRADE SYMBOL	CAST/FC	ROUGH	SMOOTH	FINE	GRIND OR POLISH	MIRROR
BS 308 ROUGHNESS No.	N10	N9	N8	N7	N6	N5
MICROMETRES	12.5	6.3	3.2	1.6	0.8	0.4

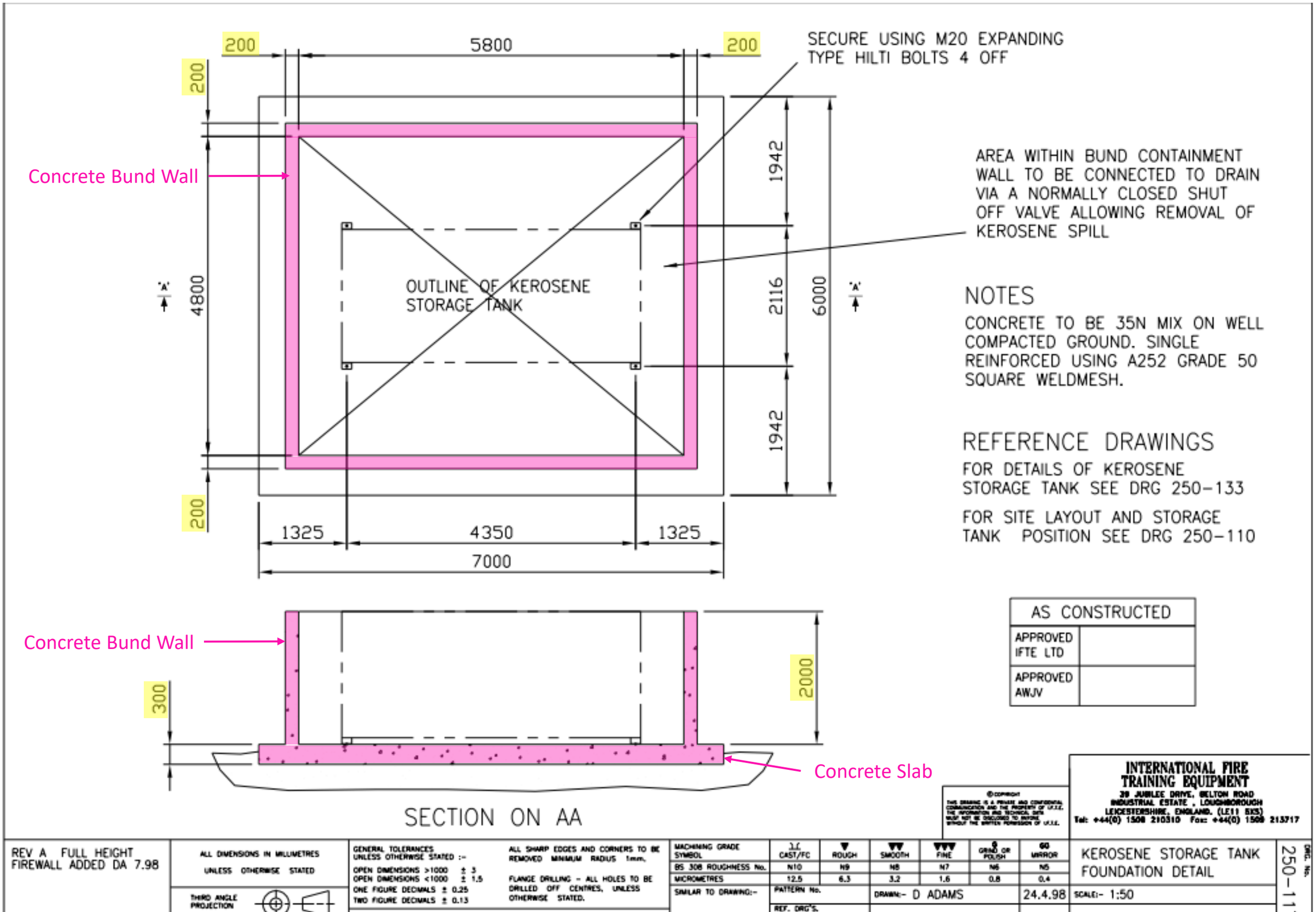
SIMILAR TO DRAWING:– PATTERN No. REF. ORD'S

DRAWN:– D ADAMS DATE:– 25.04.98

DO NOT SCALE – IF IN DOUBT ASK

Appendix C – Schematic Drawing of Fire Training Facility

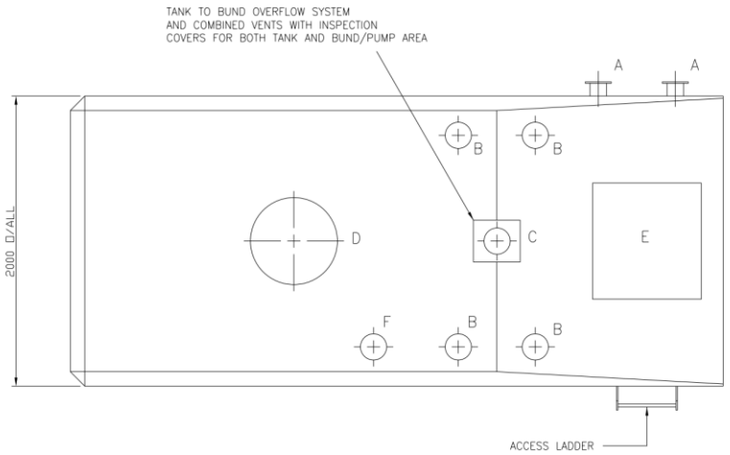
Appendix C.2 – Details of Kerosene Tank



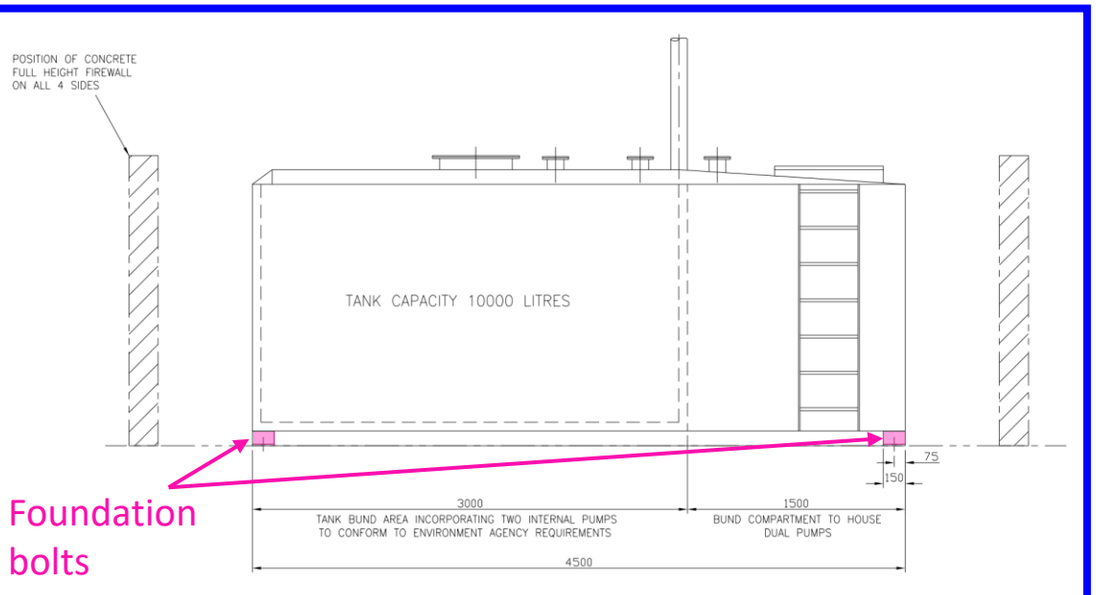
Appendix C – Schematic Drawing of Fire Training Facility

Appendix C.2 – Details of Kerosene Tank

REV. No. DATE SIGN'RE	MODIFICATIONS
A 25.4.98 JM	DRAWING UPDATED
B 20.7.98 DA	DRAWING SIZE WAS A1 DETAILS OF CONNECTIONS, VENT PIPE AND FIREWALL ADDED



Please refer to Drawing A1 for further details

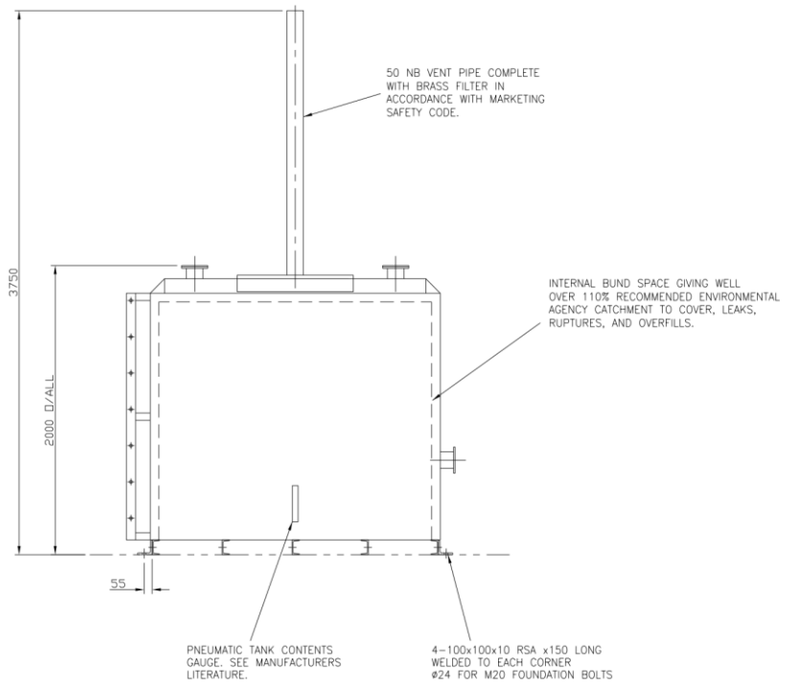


Please refer to Drawing A2 for further details

CONNECTION DETAILS		
A	KEROSENE OUTLET	50 NB
B	RELIEF TO TANK	50 NB
C	VENT	50 NB
D	MANHOLE COVER	600 DIA
E	HINGED INSPECTION COVER	600 SQ
F	KEROSENE FILL POINT	50 NB

GENERAL NOTES:–

1. USE IN CONJUCTION WITH I.F.T.E. STANDARD No 250–498
2. FOR POSITION AND FOUNDATION DETAILS SEE DRG No 250–117
3. FOR SITE LAYOUT SEE DRG No 250–110



AS CONSTRUCTED	
APPROVED IFTE LTD	
APPROVED AWJV	

ITEM No.	DESCRIPTION	QTY. PER SET	MATL./DRG. REF

INTERNATIONAL FIRE TRAINING EQUIPMENT
39 JUBILEE DRIVE, BELTON ROAD
INDUSTRIAL ESTATE , LOUGHBOROUGH
LEICESTERSHIRE, ENGLAND. (LE11 5XS)
Tel: +44(0) 1509 210310 Fax: +44(0) 1509 213717

CONTRACT No.

KEROSENE STORAGE TANK

DRG No. 250–133

SCALE 1:15 REV. B

HONG KONG 747–MD11 FIRE SIMULATOR

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

THIRD ANGLE PROJECTION

GENERAL TOLERANCES UNLESS OTHERWISE STATED:–
OPEN DIMENSIONS > 1000 ± 3
OPEN DIMENSIONS < 1000 ± 1.5
ONE FIGURE DECIMALS ± 0.25
TWO FIGURE DECIMALS ± 0.13

ALL SHARP EDGES AND CORNERS TO BE REMOVED MINIMUM RADIUS 1mm.

FLANGE DRILLING – ALL HOLES TO BE DRILLED OFF CENTRES, UNLESS OTHERWISE STATED.

DO NOT SCALE : IF IN DOUBT ASK

MACHINING GRADE SYMBOL	√ CAST/FC	▼ ROUGH	▼▼ SMOOTH	▼▼▼ FINE	G GRND OR POLISH	GG MIRROR
BS 308 ROUGHNESS No.	N10	N9	N8	N7	N6	N5
MICROMETRES	12.5	6.3	3.2	1.6	0.8	0.4

SIMILAR TO DRAWING:– PATTERN No. REF. DRG'S.

DRAWN:– R HODGES DATE:– 22.04.98

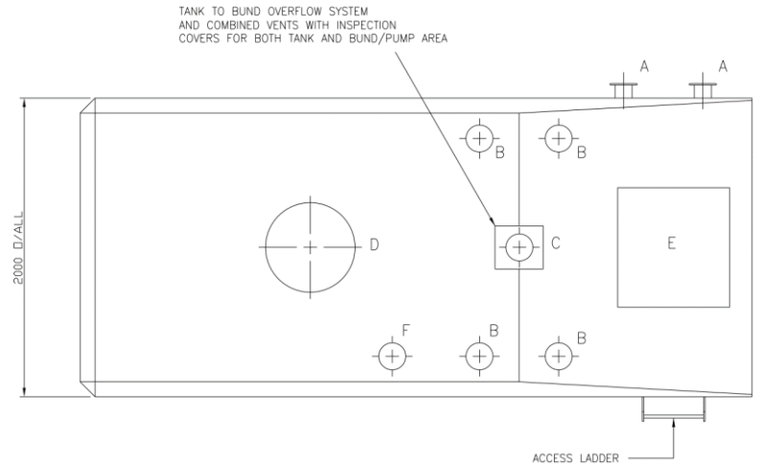
APPROVED:–

Appendix C – Schematic Drawing of Fire Training Facility

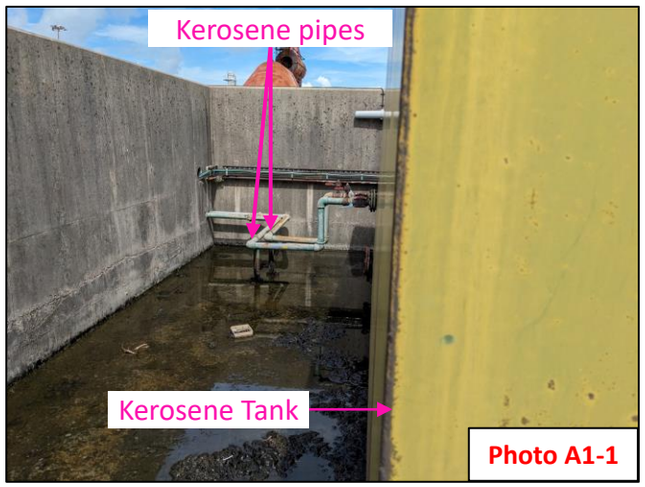
Appendix C.2 – Details of Kerosene Tank

Drawing A1

Photo A1-1



Top view



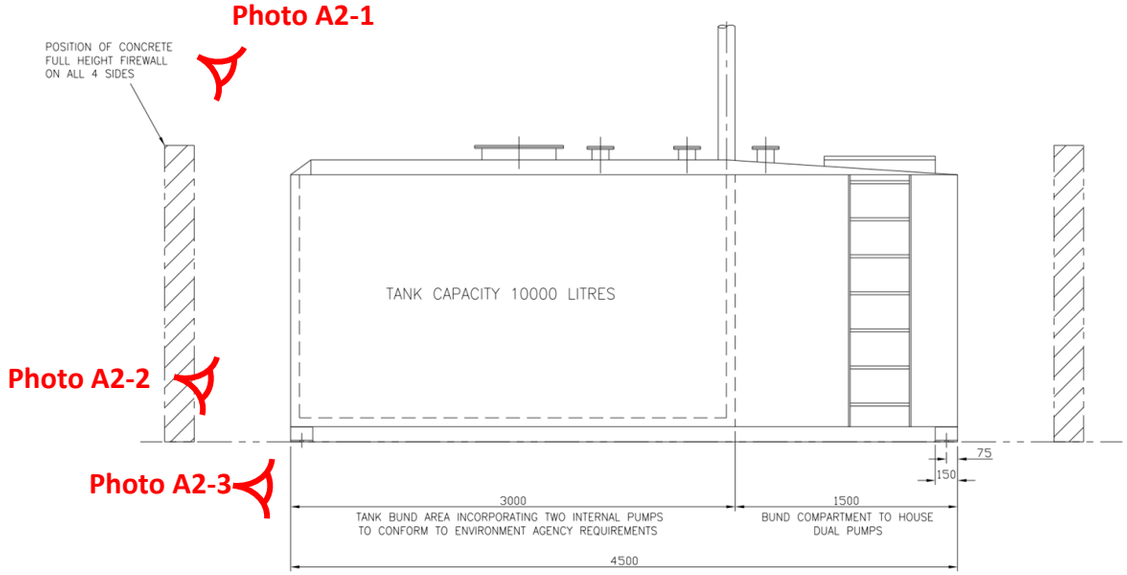
- Kerosene pipes connecting the kerosene tank and the fuel ramp control box

Drawing A2

Photo A2-1

Photo A2-2

Photo A2-3



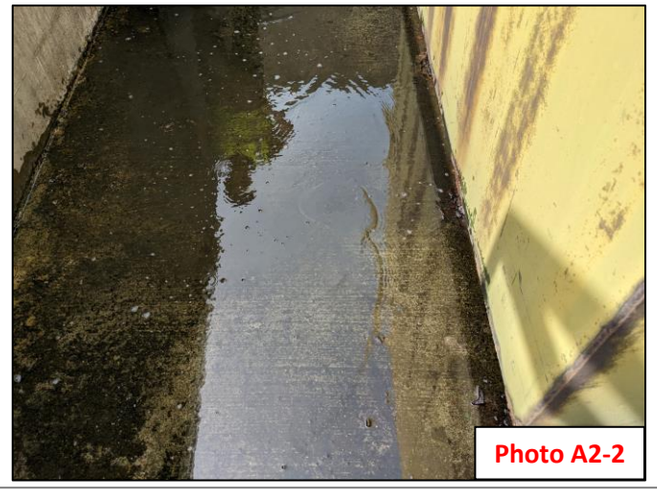
Side view

Photo A2-1

- Overview of the kerosene tank
- Securely surrounded by concrete bund walls on four sides

Photo A2-2 & A2-3

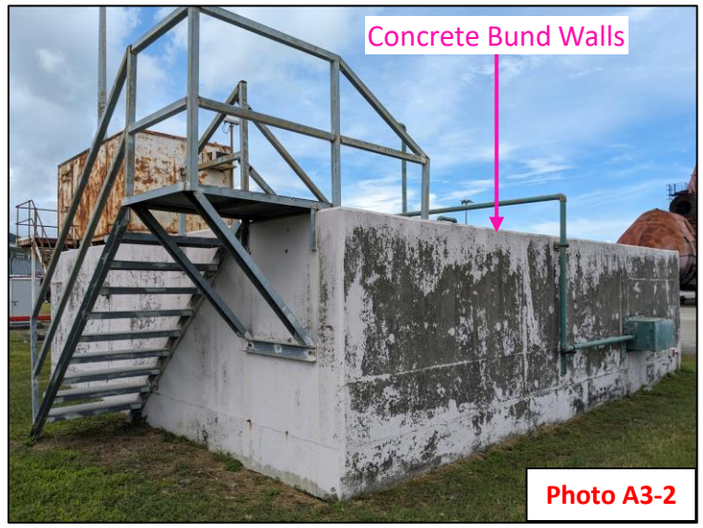
- Concrete-paved ground
- No oil stain or crack was observed for the whole concrete slab, including the portion underneath the kerosene tank

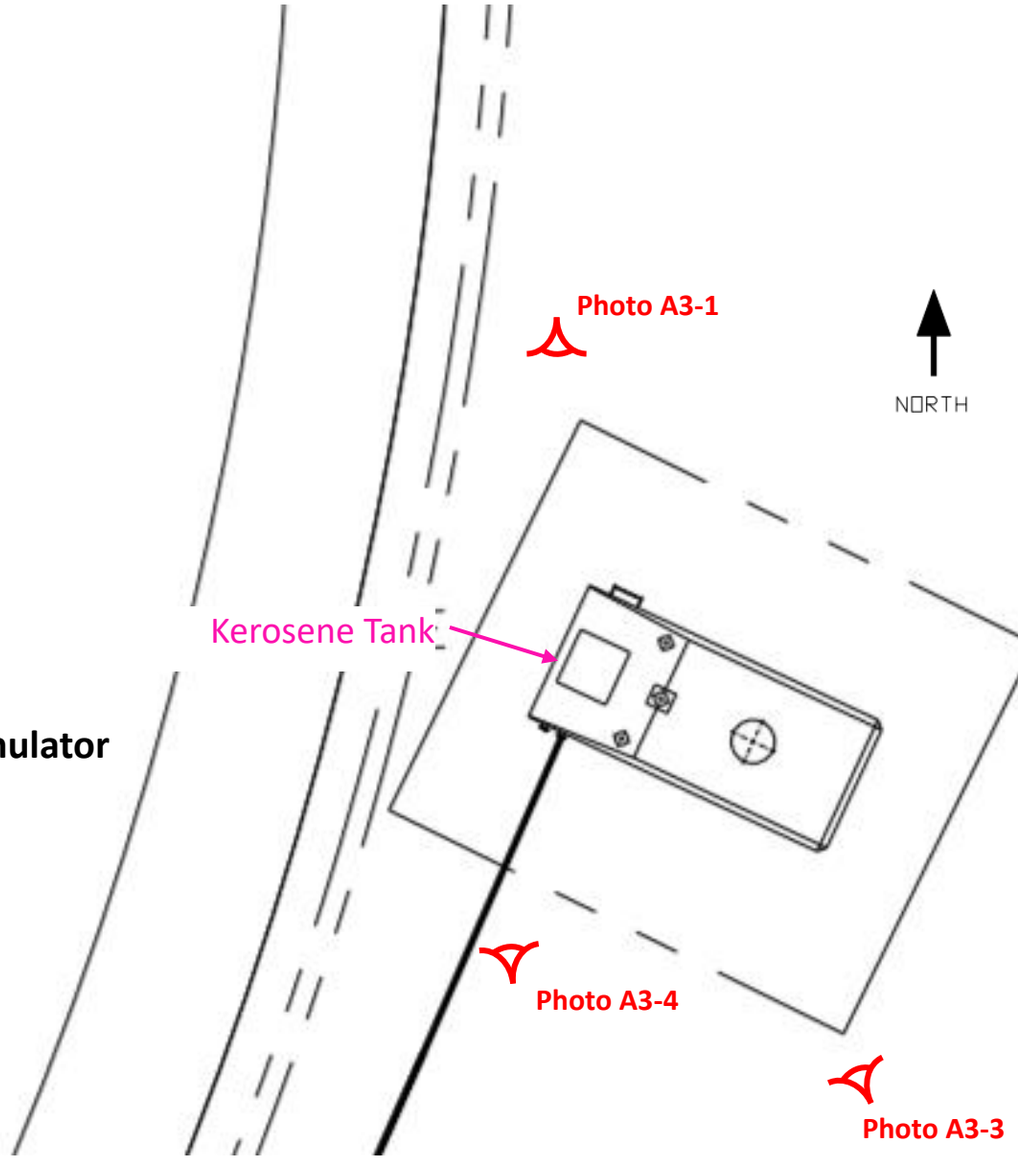


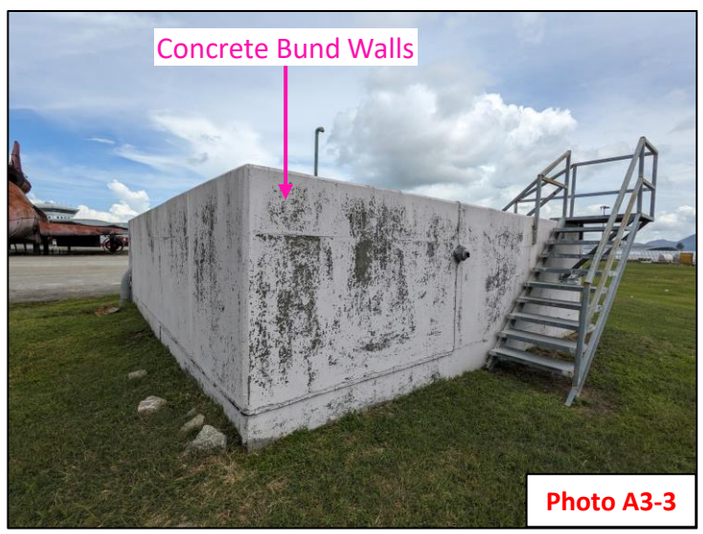
Appendix C – Schematic Drawing of Fire Training Facility

Appendix C.2 – Details of Kerosene Tank

Drawing A3

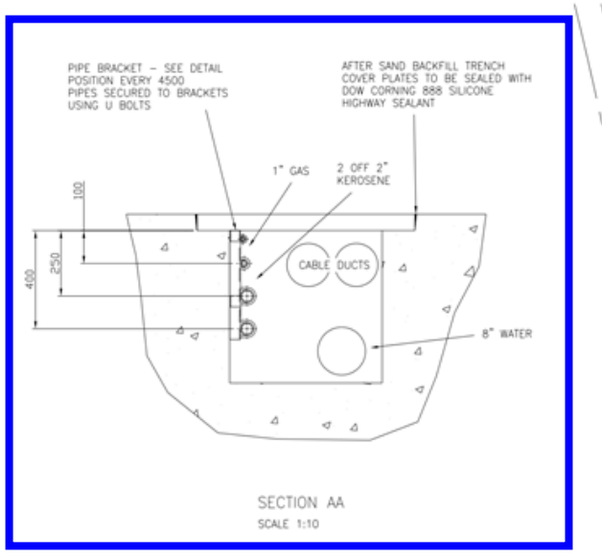




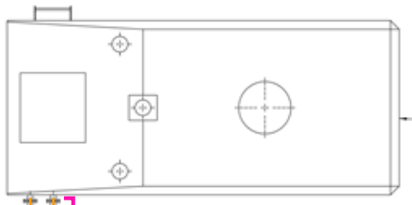


Appendix C – Schematic Drawing of Fire Training Facility

Appendix C.3 – Details between Kerosene Tank and Fuel Ramp Control Box



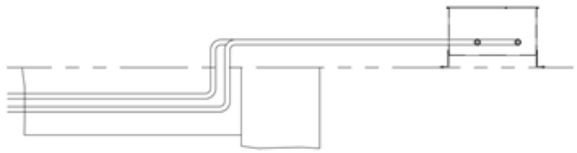
Please refer to Drawing D for further details



FOR DETAILS OF TANK BASE SEE DRG 250–117

FOR DETAILS OF KEROSENE TANK SEE DRG 250–133

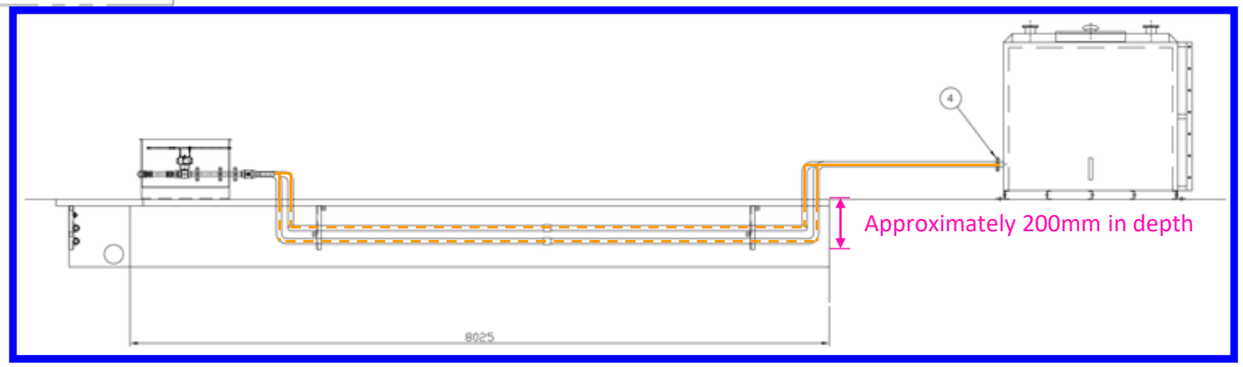
Aboveground Kerosene Pipes



SECTION BB

NOTE

POSITION OF KEROSENE TANK AND BASE NOT IN THE TRUE POSITION RELATIVE TO CONTROL ROOM AND SERVICE TRENCH. FOR ACTUAL POSITION SEE DRAWING No 250–110

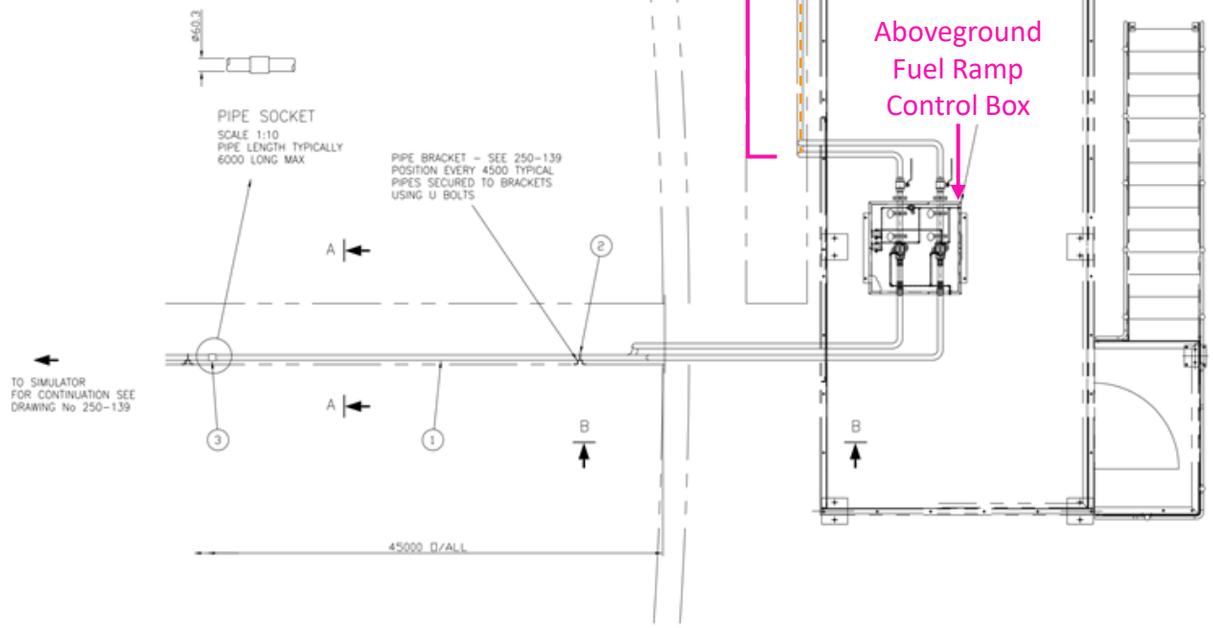


Please refer to Drawing C1 for further details

Underground Kerosene Pipes

C

VIEW ON ARROW C



GENERAL NOTES

1. FITTINGS TO BE FORGED STEEL SCREWED 3000lb RATING TO ANSI B16.11 AND BS3799.
2. PIPEWORK TO BE IN ACCORDANCE WITH BS 6323.
2. PIPEWORK TO BE PRESSURE TESTED TO 6 BAR USING WATER OR FUEL PRIOR TO BACKFILLING THE TRENCH.
3. REFER TO I.F.T.E. STANDARDS
250–496 KEROSENE PUMPS/PIPEWORK
250–498 KEROSENE STORAGE TANKS

REFERENCE DRAWINGS

FOR SITE LAYOUT SEE DRG No 250–110

FOR DETAILS OF KEROSENE STORAGE TANK SEE DRG No 250–133

USE IN CONJUNCTION WITH DRG 250–139,140 & 141

AS CONSTRUCTED

APPROVED IFTE LTD	
APPROVED AWJV	

ITEM No.	DESCRIPTION	QTY. PER SET	MATL./DRG. REF
4	2" FLANGE	2	
3	2" SOCKET	24	3000 lb
2	2" U BOLT	24	M10
1	50 NB PIPE	130m	A106 GRB

INTERNATIONAL FIRE TRAINING EQUIPMENT
39 JUBILEE DRIVE, BELTON ROAD
INDUSTRIAL ESTATE , LOUGHBOROUGH
LEICESTERSHIRE, ENGLAND. (LE11 5XS)
Tel: +44(0) 1509 210310 Fax: +44(0) 1509 213717

CONTRACT No.

KEROSENE PIPEWORK

DRG No. 250–138

SCALE 1:25 REV. A

DRAWN:– D ADAMS DATE:– 05.05.98

APPROVED:–

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

THIRD ANGLE PROJECTION

GENERAL TOLERANCES UNLESS OTHERWISE STATED:–
OPEN DIMENSIONS > 1000 ± 3
OPEN DIMENSIONS < 1000 ± 1.5
ONE FIGURE DECIMALS ± 0.25
TWO FIGURE DECIMALS ± 0.13

ALL SHARP EDGES AND CORNERS TO BE REMOVED MINIMUM RADIUS 1mm.

FLANGE DRILLING – ALL HOLES TO BE DRILLED OFF CENTRES, UNLESS OTHERWISE STATED.

DO NOT SCALE : IF IN DOUBT ASK

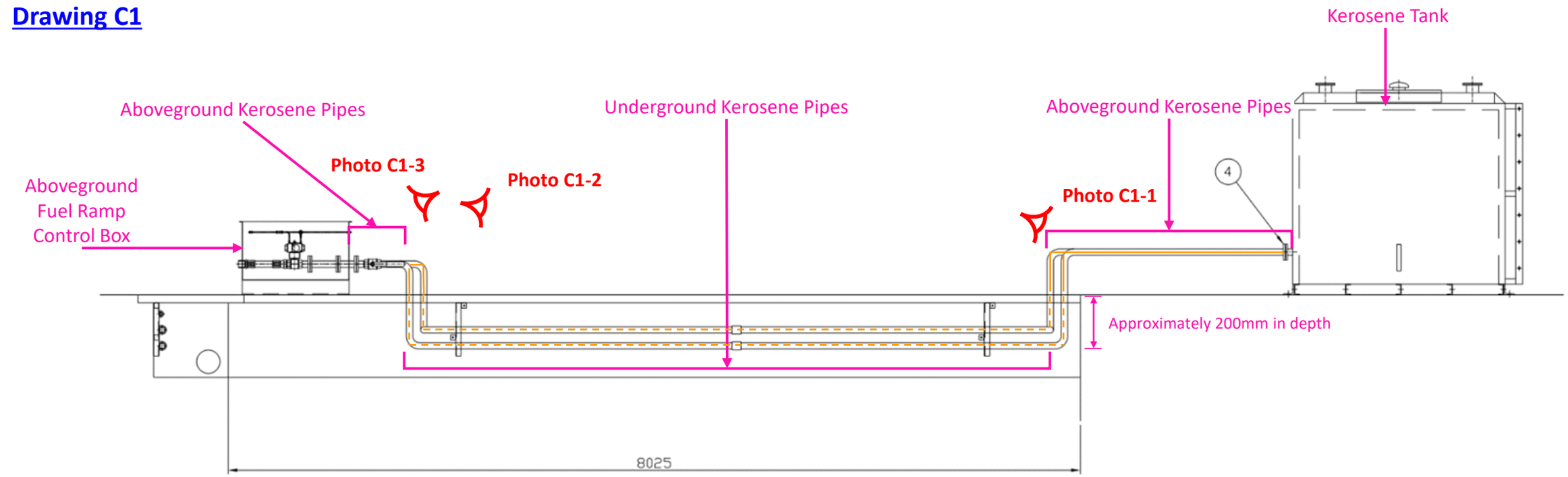
MACHINING GRADE SYMBOL	3.2 CAST/FC	ROUGH	SMOOTH	FINE	GRIND OR POLISH	MIRROR
BS 308 ROUGHNESS No.	N10	N9	N8	N7	N6	N5
MICROMETRES	12.5	6.3	3.2	1.6	0.8	0.4

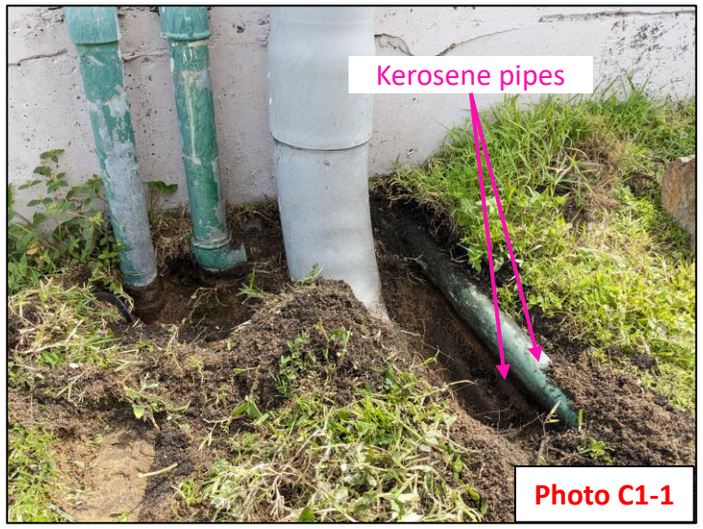
SIMILAR TO DRAWING:– PATTERN No. REF. DRG'S.

Appendix C – Schematic Drawing of Fire Training Facility

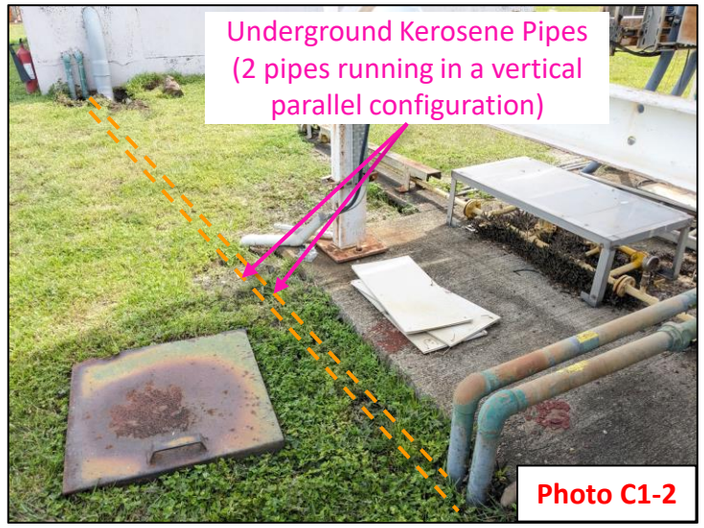
Appendix C.4 – Details between Kerosene Tank and Fuel Ramp Control Box

Drawing C1

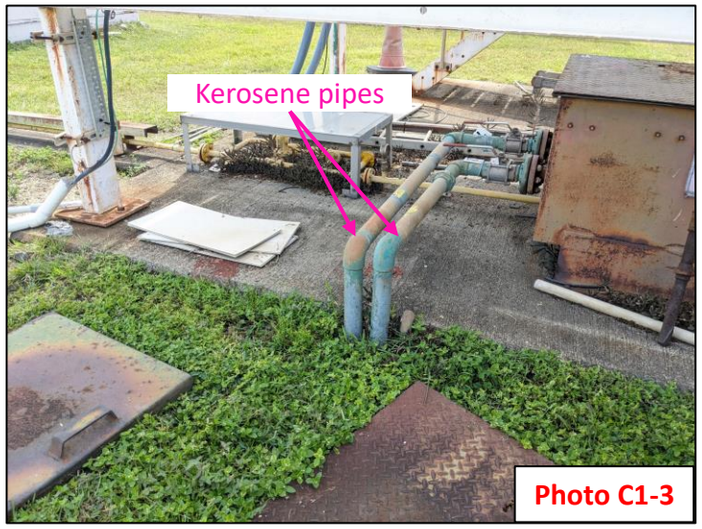




- Pipes between the concrete bund wall and the fuel ramp control box is located underground.
- The bottom level of this underground pipe section is approximately 200mm below ground level.
- Soil surrounding the bottom of the underground pipes near the bund wall have been taken for inspection.
- No specific odour or visual observations in relation to kerosene leakage / spillage have been identified.



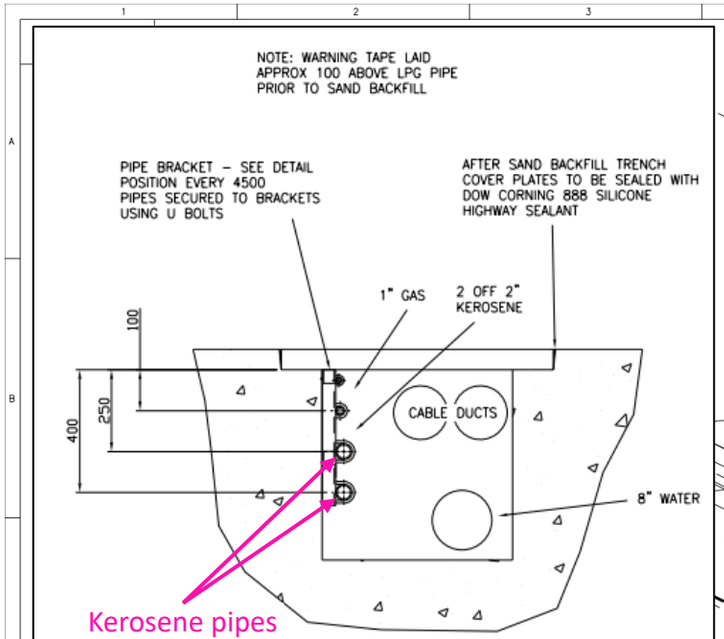
- Section of underground pipes connecting the kerosene tank and fuel ramp control box
- No sign of grass withering



- Kerosene pipe from underground section to aboveground section towards the fuel ramp control box

Appendix C – Schematic Drawing of Fire Training Facility

Appendix C.5 – Details between Fuel Ramp Control Box and Simulator



Extracted from Appendix C.3

Section AA

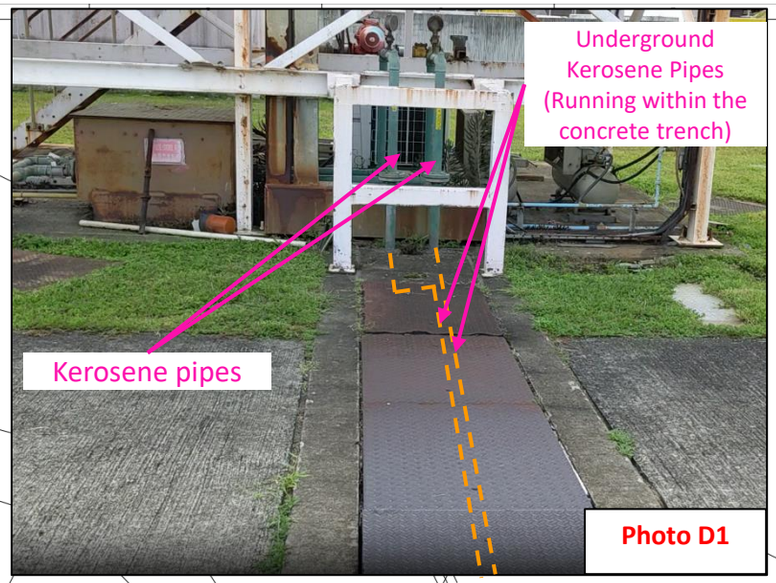


Photo D1

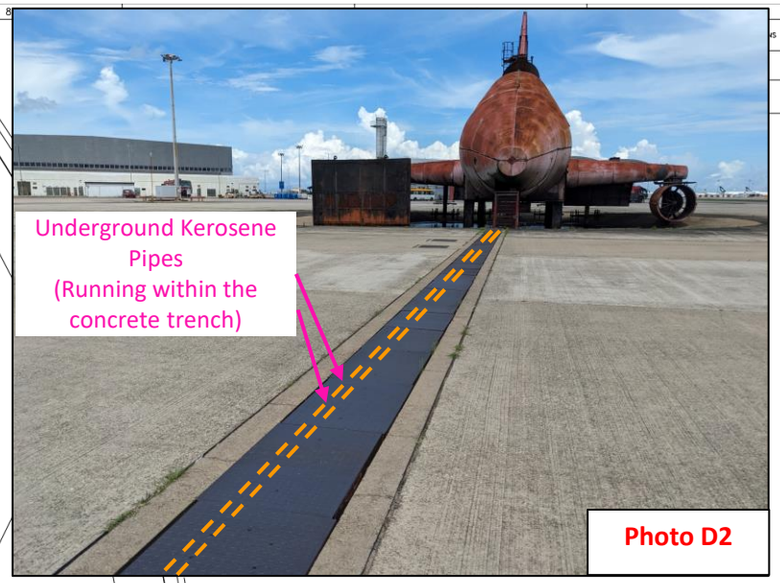


Photo D2

The whole section (marked in light blue box) of underground kerosene pipes is running through the concrete trench and sealed with cover plate.

Photo D4

Photo D3

Section AA

Simulator

Kerosene Tank

Photo D2

Photo D1

FUEL RAMP BOX

CONTROL ROOM

Aboveground Fuel Ramp Control Box

GENERAL NOTES

1. KEROSENE FUEL PIPEWORK TO BE SCREWED TO BS 6323.
2. PIPEWORK TO BE PRESSURE TESTED TO XXXXX USING WATER OR FUEL PRIOR TO BACKFILLING THE TRENCH.
3. REFER TO I.F.T.E. STANDARDS
250-496 KEROSENE PUMPS/PIPEWORK
250-498 KEROSENE STORAGE TANKS

REFERENCE DRAWINGS

FOR ELEVATION OF SIMULATOR SHOWING TERMINATION OF PIPE RUN SEE DRG No 250-126

FOR SITE LAYOUT SEE DRG No 250-110

FOR DETAILS OF KEROSENE STORAGE TANK SEE DRG No 250-133

FOR DETAILS OF LPG STORAGE TANKS SEE DRG No 250-133

USE IN CONJUNCTION WITH DRG 250-126

Photo D4

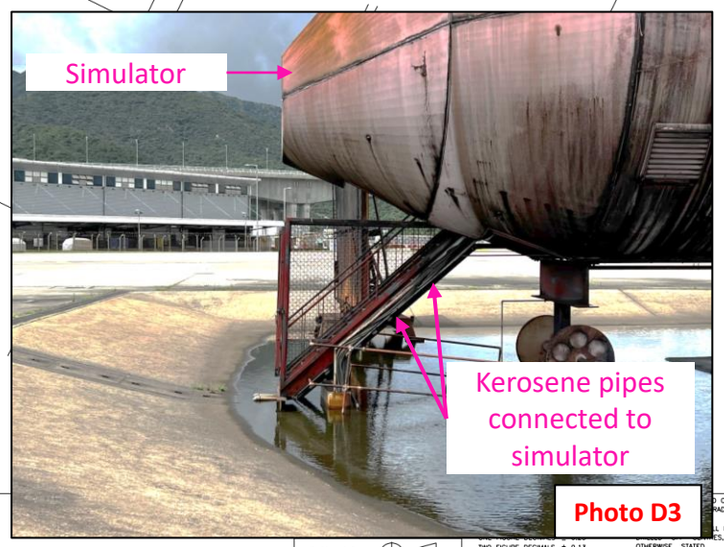


Photo D3

ITEM No.	DESCRIPTION	QTY. PER SET	MATL./DRG. REF

INTERNATIONAL FIRE TRAINING EQUIPMENT
39 JUBILEE DRIVE, BELTON ROAD
INDUSTRIAL ESTATE , LOUGHBOROUGH
LEICESTERSHIRE, ENGLAND. (LE11 5XS)
Tel: +44(0) 1509 210310 Fax: +44(0) 1509 213717

CONTRACT No.

SCHEMATIC KEROSENE PIPEWORK LAYOUT

DRG. No. 250-134

MACHINING GRADE SYMBOL	▽ CAST/FC	▽ ROUGH	▽▽ SMOOTH	▽▽▽ FINE	▽▽▽ GRIND OR POLISH	GG MIRROR
BS 308 ROUGHNESS No.	N10	N9	N8	N7	N6	N5
MICROMETRES	12.5	6.3	3.2	1.6	0.8	0.4

SIMILAR TO DRAWING:– PATTERN No. DRAWN:– D ADAMS DATE:– 25.04.98

TWO FIGURE DECIMALS ± 0.13 OTHERWISE STATED.

DO NOT SCALE : IF IN DOUBT ASK

REF. DRG'S. APPROVED:–

THIRD ANGLE PROJECTION

SCALE 1:100 REV.

CORNERS TO BE RADIUS 1mm.

HOLES TO BE ES, UNLESS