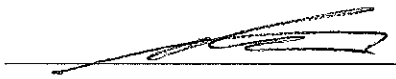
Civil Engineering and Development Department

Trunk Road T2

Proposal for Relocation of Monitoring Station KTD2c

(Version 1.0)

Approved By  (Environmental Team Leader: Mr. KS Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

CINOTECH CONSULTANTS LTD
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong
Tel: (852) 2151 2083 Fax: (852) 3107 1388
Email: info@cinotech.com.hk

RAMBOLL

Ref.: CEDKTDT2EM00_0_0160L.21

5 March 2021

By Post and Email

Hyder-Meinhardt Joint Venture
17/F, Two Harbour Square
180 Wai Yip Street, Kwun Tong
Kowloon, Hong Kong

Attention: Mr. Edwin Ching

Dear Mr. Ching,

Re: Agreement No. EDO 01/2019
Independent Environmental Checker for
Contract No. ED/2018/04 – Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron

Proposal for Relocation of Monitoring Station KTD2c

Reference is made to the Environmental Team's submission of the captioned proposal (Version 1.0) certified by the ET Leader and provided to us via email on 5 March 2021.

We are pleased to inform you that we have no adverse comment on the proposed relocation of monitoring station KTD2c. We hereby verify the captioned submission in accordance with Condition 3.1 of EP-451/2013.

Thank you for your attention. Please do not hesitate to contact the undersigned or our Ms. Rachel Wong at 3465 2815 should you have any queries.

Yours sincerely,
For and on behalf of
Ramboll Hong Kong Limited

Manson Yeung
Independent Environmental Checker

c.c.	CEDD	Attn.:	Mr. Tommy Wong	Fax: 2739 0076
	BTP	Attn.:	Mr. Ivan Chau	By email
	Cinotech	Attn.:	Mr. K. S. Lee	Fax: 3107 1388

Q:\Projects\CEDKTDT2EM00\02 Proj_Mgt\02 Corr\CEDKTDT2EM00_0_0160L.21.docx

Ramboll Hong Kong Limited 英環香港有限公司
21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.ramboll.com

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1. INTRODUCTION

1.1 Project Background

1.1.1 In 2009, Civil Engineering and Development Department (CEDD) commissioned a Kai Tak Development (KTD) – Trunk Road T2 and Infrastructure at South Apron Investigation. The assignment covers the provision of the Trunk Road T2 and its connections with the Central Kowloon Route (CKR) at the north apron area and the Tseung Kwan O – Lam Tin Tunnel (TKOLTT) to the south in the Cha Kwo Ling area.

1.1.2 The Contract No. ED/2018/04 is the main contract of Trunk Road T2 which comprises mainly the design and construction of a dual two-lane trunk road of approximately 3.0km long with about 2.7km of the trunk road in form of tunnel; ventilation and administration buildings, environmental protection and mitigation works and etc. The EM&A programme at Kai Tak area under this Contract is governed by the EP-451/2013 and EM&A Manual (AEIAR-174/2013).

Monitoring Works in Kai Tak under EP-451/2013

1.1.3 The baseline monitoring works under EM&A Manual (AEIAR-174/2013) was conducted by the Environmental Team (ET) of the Contract No. KL/2014/03 (hereinafter called the "T2 Advance Works") at the approved relocated monitoring locations (EPD reference: EP2/K19/A/21 pt.5), namely KTD 1a, KTD 2a and KER 1a. During the period of impact monitoring, monitoring location KTD 2a and KER 1a were relocated to new location , i.e. KTD 2b and KER 1b (EPD reference: ( ) in EP2/K19/A/21 pt. 6 and ( ) in EP2/K19/A/21 pt. 5) respectively. Location KTD 2b was then further relocated to location KTD 2c, the proposal of such relocation was submitted to EPD on 24 March 2020 and was approved by EPD on 6 April 2020 (EPD reference: ( ) in EP2/K19/A/21 pt.7). The aforementioned relocation was effective from 9 April 2020. Since the major part of work under T2 Advance Works has been completed and monitoring works conducted by the ET of T2 Advance Works was determined to be ceased, the impact monitoring within the Kai Tak area was then handed over to the ET of Contract No. ED/2018/04 on 1 August 2020.The monitoring location has been reviewed and updated to obtain the data with higher representative based on several conditions, such as distance between monitoring location and the sensitive receiver, non-project related interference, obstruction to the construction works on site and the power supply problem. The monitoring location KTD 1a and KER 1b has been updated to the monitoring location KTD 1 and KER 1 on 3 August 2020, where are the original location as proposed in the EM&A manual (AEIAR-174/2013). And the monitoring location KTD 2c was remained unchanged after the aforementioned review. The impact monitoring for the three stations KTD 1, KTD 2c and KER 1 are currently conducted by the ET of T2 Main Works.

1.1.4 Cinotech Consultants Ltd. Was designated as the ET to undertake the EM&A works for "Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron" (hereinafter called the "Project")

1.2 Purpose of this Proposal

1.2.1 The impact environmental monitoring works of the Project has always been reviewed, so as to facilitate the representativeness and accuracy of the monitoring results. Therefore, the current monitoring station KTD 2c is proposed to be relocated, after a review of impact environmental monitoring works, based on the reasons presented as follow:

Monitoring Station – KTD2c

1.2.2 The station was relocated from the Future Hospital at site 3C1, the original location proposed in the EM&A Manual for Trunk Road T2 project, to the nearest open space as the site 3C1 is still under construction. However, as the T2 works were developing in the past months, the works boundary had been moving closer towards the station. Several exceedances of 24 hour TSP monitoring were consecutively recorded at the station in November, December 2020 and January 2021, which we deduce that their proximity (approximately 5m from the construction area) may have produced the unfavorable results when works are operated very near to the station / HVS, e.g. trucks moving past the station, concrete breaking activities near the station. In addition, the location of the present station cannot accurately represent how the sensitive receivers (SR) are being affected by the construction activities. Therefore, the relocation of KTD 2c to the nearest NSR/ASR is proposed until the Hospital (the original NSR/ASR defined in the approved EIA) is built.

2. ENVIRONMENTAL MONITORING WORKS OF THE PROJECT

2.1 Existing Air Quality and Noise Monitoring Stations

Monitoring Station – KTD 2c

2.1.1 Referring to the early point in Section 1.1.3, the original monitoring location KTD 2a was relocated to KTD 2b and then further relocated to existing monitoring location KTD 2c. The relocation from KTD 2b to KTD 2c was effective from 9 April 2020 and its location is illustrated in the **Figure 1**.

2.2 Proposed Alternative Air Quality and Noise Monitoring Location

2.2.1 According to the Section 3.3.1.2 of EM&A Manual (AEIA-174/2013), the alternative monitoring locations shall be proposed based on the following criteria, as far as practicable.

i. The monitoring location close to the NSRs/ ASRs as defined in the EIAO-TM;

ii. The monitoring location that allow the monitoring equipment to be set up and/or situated with a proper sitting/ position and orientation;

iii. The meteorological conditions;

iv. The monitoring location close to the major construction works activities that are likely to have air quality/ noise impact; and,

v. The assurance of minimal disturbance and working under a safe condition to the occupants during the monitoring in the vicinity of the NSRs/ ASRs.

2.2.2 Based on the above criteria of monitoring location selection, the proposed alternative environmental monitoring locations and reasons for relocating the existing monitoring location KTD 2c is tabulated below in **Table 2-1**. **Appendix B** shown the proposed position of the HVS.

Table 2-1 Proposed Alternative Air Quality and Noise Monitoring Location

Existing Monitoring Station ID	Existing Monitoring Station Location	Proposed Alternative Monitoring Station ID	Proposed Alternative Monitoring Location(2)
KTD 2c	G/IC Zone next to Kwun Tong Bypass (Next to the the Kowloon Bay Sewage Interception Station)	KTD 2d	Next to the SOR Office of Trunk Road T2 in Kai Tak Area
Existing Monitoring Station ID	**Reason(s) of Relocation**		
KTD 2c	1. Several exceedances of 24 hour TSP monitoring were consecutively recorded at the station in November, December 2020 and January 2021and we deduce that their proximity (approximately 5m from the construction area) may have produced the unfavorable results when works are operated very near to the station / HVS, e.g. trucks moving past the station. 2. The existing monitoring station cannot accurately represent how the sensitive receiver is influenced by the Project as the New Acute Hospital is still under construction. 3. The Kowloon Bay Sewage Interception Station rejected our request on installing a HVS on the rooftop of their building (1). Also, it is not consider as an ASR/ NSR, as no operator works in the sewage interception station. 4. For the adjacent NSR/ASRs defined in the EIAO-TM (e.g. KB 1, KB 2, KB 3, KB 4, and KB 5), the major environmental nuisances are identified by the road traffic along the Kwun Tong Bypass but not the T2 construction activities. 5. The SOR's Office of Trunk Road T2 with the openable windows and fresh air intakes for ventilation is perceived as the nearest NSR/ASR, thus, KTD 2d is a suitable monitoring station.		

Remark(s):
(1): Email of Objection on the installation request are presented in the **Appendix A**.
(2): The proposed alternative monitoring locations are indicated in **Figure 1**.

2.3 The Baseline, Action and Limit Level of The Proposed Alternative Monitoring Station

Proposed Alternative Monitoring Station – KTD 2d

2.3.1 Considering the following reasons, the Baseline, Action and Limit level of KTD 2c will be applied to KTD 2d. The Baseline, Action and Limit level of KTD 2d are presented in **Table 2-2.**

i. The baseline monitoring at KTD 2a was conducted in early 2016 when most of the construction works at the nearby construction sites had not been commenced.

ii. The same major background noise and dust source (Road Traffic along the Kwun Tong Bypass).

iii. No baseline measurement can be carried out to measure the baseline level of the environment there due to the construction activities in both project and non-project related are commenced.

Table 2-2 Baseline, Action and Limit Level of KTD2d

Monitoring Station	Parameter	Baseline Level	Action Level	Limit Level
KTD 2d	24-hr TSP ($\mu g/m^3$) (1)	42 $\mu g/m^3$	157 $\mu g/m^3$	260 $\mu g/m^3$
	1-hr TSP ($\mu g/m^3$) (1)	44 $\mu g/m^3$	279 $\mu g/m^3$	500 $\mu g/m^3$
	$Leq_{(30min)}$,dB(A) (0700-1900 hrs on normal weekdays) (2)	64 dB(A)	When one documented complaint is received	75 dB(A)

Remarks:
(1): For Air Quality Monitoring
(2): For Noise Monitoring
(3): The baseline level refer to the average TSP concentration/ noise level

3. CONCLUSION

3.1.1 The monitoring station KTD 2c is proposed to be relocated to facilitate the representativeness and accuracy of the results of impact environmental monitoring works. Detail shall be referred to **Section 1.2.2**.

3.1.2 The proposed alternative monitoring location KTD 2d satisfy the selection criteria as stated in **Section 2.2.1**. Reasons of relocation can be found in **Table2-1**

3.1.3 The baseline monitoring results obtained in year 2016 are still representative at the proposed alternative monitoring stations. Detail shall be referred to **Section 2.3.1**.

3.1.4 Based on the above conclusion and site observation, the proposed alternative monitoring stations KTD 2d is considered as a suitable monitoring location for impact air quality and noise monitoring.

FIGURES

N

SOR Office of Trunk Road T2 in Kai Tak

KTD2d

KTD2c

KTD2a

LEGEND

- Works Area under Trunk Road T2
- Noise/ Air Sensitive Receiver
- Existing Impact Monitoring Station
- Baseline Monitoring Station
- Proposed Alternative Monitoring Location

CINOTECH
Cinotech Consultants Limited

Trunk Road T2

Monitoring Station at South Apron of Former Kai Tak Airport

SCALE	1:4000@A3	DATE	Mar 21
CHECK	KC	DRAWN	TL
JOB No.	MA20003	FIGURE No. Fig 1	REV -

APPENDIX A – EMAIL OF OBJECTION ON THE REQUEST OF INSTALLATION AT KOWLOON BAY SEWAGE INTERCETION STATION

Subject: Re: [Spam] Re: Contract No. ED/2018/04(EP-451/2013) – Trunk Road T2 and Infrastructure Works for Development at the Former South Apron_Air/Noise Monitoring
From: fptsang@dsd.gov.hk
Date: 12/29/2020, 4:24 PM
To: Karina <karina.chan@cinotech.com.hk>
CC: kllau02@dsd.gov.hk, Tim Lui <tim.lui@cinotech.com.hk>, ylchong@dsd.gov.hk

Dear Karina,

Please be advised the the Kowloon Bay Sewage Interception Station is not available for your proposed works.

Regards,
Terence TSANG
E/KTD
Mainland South Division, DSD
Tel: 2300 1425

From: Karina <karina.chan@cinotech.com.hk>
To: fptsang@dsd.gov.hk
Cc: kllau02@dsd.gov.hk, Tim Lui <tim.lui@cinotech.com.hk>
Date: 29/12/2020 16:08
Subject: [Spam] Re: Contract No. ED/2018/04(EP-451/2013) – Trunk Road T2 and Infrastructure Works for Development at the Former South Apron_Air/Noise Monitoring
Serial No.:

Dear Mr. Tsang,

As discussed, please kindly revert by email to indicate your preference.

Thanks & Regards,
Karina

Karina Chan
Cinotech Consultants Limited
Direct line: 2157 3880

On Tue, Dec 15, 2020 at 5:52 PM Karina <karina.chan@cinotech.com.hk> wrote:
Dear Mr Tsang,

We are pleased to inform you that we, Cinotech Consultants Limited, are the Environmental team

appointed by the Civil Engineering and Development Department (CEDD), the HKSAR for the captioned Project.

Your Kowloon Bay interception station is the closest to one of our designated environmental monitoring stations for conducting Air Quality and Noise monitoring. We are writing to enquire if your station has any offices with openable windows / fresh air intake for ventilation. In addition, in light of the safety reasons and limited available outdoor space, we are also asking for the possibility to install a 24-hr dust monitoring equipment (i.e. High Volume Sampler (HVS, See attached photo)) on the rooftop of your building, commence the aforesaid monitoring within your premises upon your approval, and continue until the end of the Project (tentatively in 2026). The weekly Noise Monitoring shall be conducted using a portable handheld sound power level meter while the Air Quality Monitoring shall be conducted using the HVS, installed during the monitoring period. Details of the set-up of the HVS are as follow:

Air Quality Monitoring:

The set-up requires placing one HVS, about 0.5m x 0.5m x 1.2m height; Power supply, capable of supplying 220V, 4 Amp a/c power.

· The installation work will be conducted within half a working day (The exact date is subject to your approval)
· Visiting Frequency = Once every 6 days (24-hour TSP) and once per week for noise monitoring
· Duration for each visit = 30 mins

The HVS will be set to run for 24 hours and will stop automatically. The operation will require one of our field staff to visit the premises and perform some minor operation, such as replacing the battery, replacing filters, equipment inspection and calibration. No hazard regarding the operation of the HVS has been recorded from our past experience.

During the monitoring period, the electricity will be supplied by your building to our air quality monitoring equipment, HVS. The electricity rating of CLP Holding Ltd. in 2020 is tabulated as followed (Non-residential Tariff):

Year	Rate (Cents/Unit)
2020	101.6

Note: In this table, “unit” shall mean one kilowatt-hour (kWh) of electricity

image.png

Should you have any questions, please do not hesitate to contact me. We look forward to receiving your reply/approval.

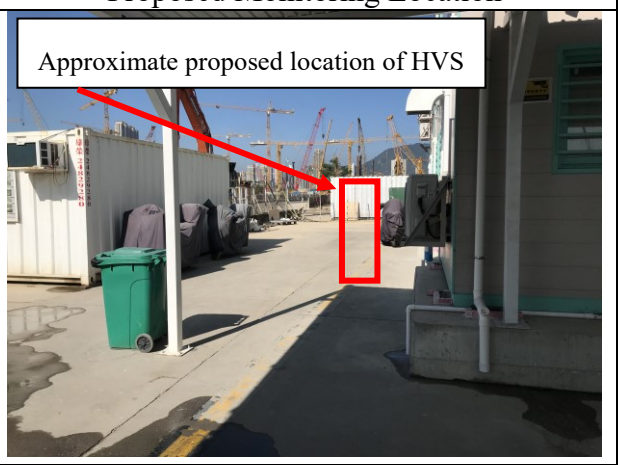
Thanks & Regards,
Karina

Karina Chan
Cinotech Consultants Limited
Direct line: 2157 3880

==========

APPENDIX B – PHOTO RECORDS

Photo Records

Existing Monitoring Location	Proposed Monitoring Location
	
Photo 1 – KTD2c	Photo 2 – KTD2d