MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

QUARTERLY EM&A REPORT

September 2016 – November 2016

Client	**:**	Civil Engineering and Development Department, HKSAR
Contract No.	**:**	KLN/2015/07
Contract Name	**:**	Environmental Monitoring Works for Contract KL/2014/03 – Kai Tak Development – Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway
Report No.	**:**	0405/15/ED/0658A

EP-337/2009 New Distributor Roads Serving the Planned Kai Tak Development Area

EP-339/2009/A Decommissioning of the Remaining Parts (Ex-GFS Building, Radar Station and Hong Kong Aviation Club) of the former Kai Tak Airport

EP-451/2013 Trunk Road T2

Prepared by : Alfred Y. S. Lam

Reviewed by : Cyrus C. Y. Lai

Certified by :

Colin K. L. Yung
Environmental Team Leader
MateriaLab Consultants Limited

RAMBOLL ENVIRON

Ref.: CEDKTDS3EM00_0_0153L.17

11 January 2017

By Post and Email

Hyder-Meinhardt Joint Venture
20/F., AXA Tower,
Landmark East,
100 How Ming Street,
Kwun Tong,
Kowloon, Hong Kong

Attention: Mr. Wong W K, Chris

Dear Mr. Wong,

Re: Contract No. KL/2014/03 – Kai Tak Development – Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway
Quarterly EM&A Report for September to November 2016

Reference is made to the Environmental Team's submission of the Quarterly EM&A Report for September to November 2016 (Report No. 0405/15/ED/0658A) we received by e-mail on 11 January 2017.

Please be informed that we have no adverse comment on the captioned report.

Thank you for your attention. Please do not hesitate to contact us should you have any queries.

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

F. C. Tsang
Independent Environmental Checker

c.c.	CEDD	Attn.:	Ms. Amy Chu	Fax: 2369 4980
	MateriaLab	Attn.:	Mr. Colin K. L. Yung	Fax: 2450 8032
	CRBC	Attn.:	Mr. Arnold Chan	Fax: 2283 1689

Q:\Projects\CEDKTDS3EM00\02_Proj_Mgt\02_Corr\CEDKTDS3EM00_0_0153L.17.docx

Ramboll Environ 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-Environ.com

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

TABLE OF CONTENTS

FIGURES

LIST OF APPENDICES

EXECUTIVE SUMMARY

i. The Civil Engineering and Development Department HKSAR has appointed MateriaLab Consultants Limited (MCL) to undertake the Environmental Team services for the Project and implement the EM&A works.

ii. This is the third Quarterly EM&A Report presents the environmental monitoring and audit works for the period between 1 September 2016 and 30 November 2016. As informed by the Contractor, major activities in the reporting period included:

September 2016	October 2016	November 2016
• Carrying out pre-drilling; • Construction of guide walls and temporary D-walls; • Construction of Socketed H piles; • Temporary utility diversion; • Excavation and Earth Lateral Support (ELS) construction for Supporting Underground Structure (SUS) and Subway B; • Demolition of Radar Tower; • Construction of temporary road diversion of Shing Cheong Road • Construction of District Cooling System Works; and • Implementation of Temporary Traffic Arrangement (TTA).	• Carrying out pre-drilling; • Construction of guide walls and temporary D-walls; • Construction of Socketed H piles; • Temporary utility diversion; • Excavation and Earth Lateral Support (ELS) construction for Supporting Underground Structure (SUS) and Subway B; • Demolition of Radar Tower; • Construction of District Cooling System Works; and • Implementation of Temporary Traffic Arrangement (TTA).	• Carrying out pre-drilling; • Construction of guide walls and D-walls; • Construction of Socketed H piles; • Temporary utility diversion; • Excavation and Earth Lateral Support (ELS) construction for Supporting Underground Structure (SUS); • Construction of Subway B; • Demolition of Radar Tower; • Construction of District Cooling System Works; and • Implementation of Temporary Traffic Arrangement (TTA).

Breaches of the Action and Limit Levels

iii. No Action and Limit Level exceedance for 24-hr TSP and noise was recorded in the reporting period at all monitoring stations.

Complaint, Notification of Summons and Successful Prosecution

iv. No environmental complaint and no notification of summons and successful prosecution were received in the reporting period.

1. INTRODUCTION

1.1 Background

1.1.1 The Kai Tak Development is located in the south-eastern part of Kowloon Peninsula of the HKSAR, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling.

1.1.2 Contract No. KL/2014/03 is the works package to construct an approximately 420m long supporting underground structure (SUS) underneath Shing Cheong Road and Cheung Yip Street. The EM&A programme under this Contract is governed by three EPs (EP-337/2009, EP-339/2009/A and EP-451/2013) and two EM&A Manuals (AEIAR-130/2009 and AEIAR-174/2013). The Works to be executed under this Contract and corresponding EPs include but not be limited to the following main items:

EP-451/2013 – Trunk Road T2

(i) Construction of approximately 420m long supporting underground structure (SUS) including diaphragm walls, barrettes, piled foundation, top and bottom slabs, end wall and adits underneath Shing Cheong Road and Cheung Yip Street;

EP-337/2009 – New Distributor Roads Serving the Planned Kai Tak Development

(ii) Widening and re-alignment of Cheung Yip Street of approximately 330m long and associated footpaths;
(iii) Demolition, reconstruction and widening of Shing Cheong Road of approximately 410m long and associated footpaths;
(iv) Construction of drainage outfall and modification of existing seawall;
(v) Construction of ancillary works including surface drainage, sewerage, water, fire fighting, street lighting, street furniture, road marking, road signage, utilities and services, irrigation and landscape works.

EP-339/2009/A – Decommissioning of the Remaining Parts (Ex-GFS Building, Radar Station and Hong Kong Aviation Club) of the former Kai Tak Airport

(vi) Demolition of RADAR Tower and guard house;

Other works not covered by any EP

(vii) Construction of two subways between Phase II of New Acute Hospital (Site A) and Hong Kong Children's Hospital (Site C), and between Phase I of New Acute Hospital (Site B) and Site C;
(viii) Construction of District Cooling System (DCS) along Cheung Yip Street and Shing Cheong Road

1.1.3 The location and boundary of the site is shown in **Figure 1**.

1.1.4 This Quarterly EM&A report is required under Section 16.1.2 and 16.7.1 of the EM&A Manual AEIAR-130/2009. It is to report the results and findings of the EM&A programme required in the EM&A Manual.

1.1.5 This is the third quarterly EM&A Report which summaries the impact monitoring results and audit findings for the Project within the period between 1 September 2016 and 30 November 2016.

1.2 Project Organization

1.2.1 The project proponent was the Civil Engineering and Development Department, HKSAR (CEDD). Hyder Meinhardt Joint Venture (HMJV) was commissioned by CEDD as the Engineer for the Project. Ramboll Environ Hong Kong Limited was commissioned as the Independent Environmental Checker (IEC). China Road and Bridge Corporation (Hong Kong) (CRBC) was appointed as the main contractor for the construction works under the contract KL/2014/03. MateriaLab Consultants Limited (MCL) was appointed as the Environmental Team (ET) by CEDD to implement the EM&A programme for the Project.

1.2.2 The organization structure is shown in **Appendix B**. The key personnel contact names and numbers for the Project are summarized in **Table 1.1**.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Project Proponent (CEDD)	Co-ordinator	Ms. Amy Chu	3106 3172	2369 4980
Engineer's Representative (HMJV)	Chief Resident Engineer	Mr. W. K., Chris Wong	3742 3803	3742 3899
IEC (Ramboll Environ Hong Kong Limited)	Independent Environmental Checker	Mr. F. C. Tsang	3465 2888	3465 2899
Main Contractor (CRBC)	Site Agent	Mr. Chan See Wai, Arnold	9380 4110	2283 1689
	Environmental Officer	Mr. Andy Choy	6278 2693	2283 1689
ET (MCL)	Environmental Team Leader	Mr. Colin Yung	3565 4114	3565 4160

1.3 Construction Programme and Activities

1.3.1 The construction of the Project commenced in February 2016 and is expected to complete in 2020. The construction programme is shown in **Appendix A**.

1.3.2 A summary of the major construction activities undertaken in the reporting period were:

September 2016	October 2016	November 2016
• Carrying out pre-drilling; • Construction of guide walls and temporary D-walls; • Construction of Socketed H piles; • Temporary utility diversion; • Excavation and Earth Lateral Support (ELS) construction for Supporting Underground Structure (SUS) and Subway B; • Demolition of Radar Tower; • Construction of temporary road diversion of Shing Cheong Road • Construction of District Cooling System Works; and • Implementation of Temporary Traffic Arrangement (TTA).	• Carrying out pre-drilling; • Construction of guide walls and temporary D-walls; • Construction of Socketed H piles; • Temporary utility diversion; • Excavation and Earth Lateral Support (ELS) construction for Supporting Underground Structure (SUS) and Subway B; • Demolition of Radar Tower; • Construction of District Cooling System Works; and • Implementation of Temporary Traffic Arrangement (TTA).	• Carrying out pre-drilling; • Construction of guide walls and D-walls; • Construction of Socketed H piles; • Temporary utility diversion; • Excavation and Earth Lateral Support (ELS) construction for Supporting Underground Structure (SUS); • Construction of Subway B; • Demolition of Radar Tower; • Construction of District Cooling System Works; and • Implementation of Temporary Traffic Arrangement (TTA).

2. SUMMARY OF EM&A REQUIREMENTS AND MONITORING RESULTS

2.1 Monitoring Requirement

In accordance with the approved EM&A Manuals, 24-hour Total Suspended Particulates (TSP) level and Leq (30min) at the designated monitoring stations is required. Impact 24-hour TSP monitoring should be carried out at least once every 6 days. In case of complaints, 1-hour TSP monitoring should be carried out at least 3 times per 6 days when the highest dust impacts are likely to occur. Leq (30min) monitoring is conducted for at least once a week during the construction phase between 0700 and 1900 on normal weekdays. The Action and Limit Levels of the air quality monitoring and noise monitoring are given in **Appendix C**

2.2 Monitoring Locations

2.2.1 According to the EM&A Manual, three monitoring locations for air quality monitoring and noise monitoring, namely KTD1, KTD2 and KER1, are covered by this Contract within the South Apron Area of Former Kai Tak Airport. The other two air quality monitoring locations and two noise monitoring locations which are identified in Cha Kwo Ling area, are farther than 500m and 300m away from the site boundary respectively and thus not covered by this Contract. The monitoring works in Cha Kwo Ling area are covered by other Contract(s) respectively.

2.2.2 According to the approved alternative baseline air quality and noise monitoring locations (EPD reference: EP2/K19/A/21 Pt.5), the original monitoring locations (KTD1, KTD2 and KER1) are proposed to be replaced by alternative monitoring locations (KTD1a, KTD2a and KER1a), they are summarized in **Table 2.1** and shown in **Figure 2**.

Table 2.1 Location of Air Quality Monitoring and Noise Monitoring Station

Monitoring Station	Location
KTD1a	Centre of Excellence in Paediatrics (Children's Hospital)
KTD2a	G/IC Zone next to Kwun Tong Bypass (Future Hospital at Site 3C1)
KER1a / KER 1b	Site Boundary at Cheung Yip Street

2.2.3 The existing location KER 1a for 24-hours TSP monitoring is situated at the work area of upcoming cable diversion works of CLP Hong Kong Power Limited (CLP) at Cheung Yip Street. The proposal of temporary relocation of monitoring location KER 1a for TSP monitoring was submitted to EPD on 26 October 2016 for approval under condition 3.1 of EP-337/2009, EP339/2009/A and EP-451/2013 and Section 11.3.1.2 of the EM&A Manual, AEIAR-174/2013. The monitoring location of KER1b for TSP monitoring was approved by EPD on 11 November 2016. 24-hours TSP monitoring at KER 1a was suspended on 16 November 2016. 24-hours TSP monitoring was carried out at KER 1b, effective from 16 November 2016 until the cable diversion works at Cheung Yip Street carried out by CLP are completed.

2.3 Results and Observations

2.3.1 No Action and Limit Level exceedance for 24-hr TSP was recorded in the reporting period at all monitoring stations.

2.3.2 No Action / Limit Level exceedance was recorded for construction noise in the reporting period at all monitoring stations.

2.3.3 No complaint of air quality was received. Therefore, no impact 1-hour TSP monitoring was conducted in the reporting period.

2.3.4 No raining and wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation.

2.3.5 During the reporting period, major dust sources including loading and unloading of C&D wastes, vehicles movement were observed in the site. Major noise sources including noise emission from plant & PME and some other construction activities, travel of vehicles, loading and unloading of C&D waste were observed in the site. Non-project related construction activities at the nearby construction site and road traffic along Shing Cheong Road, Cheung Yip Street and the Kwun Tong By-pass were observed. The above factors may affect the monitoring results.

2.3.6 Graphical presentation of the monitoring data in the reporting period is presented in **Appendix D**.

2.4 Comparison of Monitoring Results with EIA Predictions

2.4.1 The monitoring data was compared with the EIA predictions as summarized in **Table 2.4** and **Table 2.5**.

Table 2.4 Comparison of 24-hr TSP data with EIA predictions

Monitoring Station	Receiver Reference	Predicted Maximum 24-hour TSP Concentration (μg/m^3)	24-hour TSP concentration in Reporting Period (μg/ m^3)			Average 24-hour TSP concentration in Reporting Period (μg/ m^3)		
			September 2016	October 2016	November 2016	September 2016	October 2016	November 2016
KTD1a	KTD3	126	59 – 125	11 – 115	34 – 122	98	55	80
KTD2a	-	-	36 – 83	12 – 46	16 – 56	57	28	35
KER1a / KER1b	KTD6	169	63 – 147	21 – 141	9 – 116	123	92	65

Note:
For KTD2a, there was no receiver reference in the EIA report, EIAR-174/2013.
Predicted Maximum TSP Concentration extracted from Table 4.14 of EIA Report, EIAR-174/2013.

Table 2.5 Comparison of Noise Monitoring data with EIA predictions

Monitoring Station	Receiver Reference	Maximum Predicted Mitigated Construction Noise Level, dB(A)	Leq $_{(30min)}$ dB(A) in Reporting Period		
			September 2016	October 2016	November 2016
KTD1a	KTD1	74	68 - 72	63 - 70	67 - 72
KTD2a	KTD2	75	61 - 64	61 - 70	61 - 69
KER1a / KER1b	KER1	75	68 - 70	64 - 69	64 - 70

Note:
Maximum Predicted Mitigated Construction Noise Level extracted from Table 5.13 of EIA Report, EIAR-174/2013.

2.4.2 The 24-hour TSP monitoring and noise monitoring results in the reporting months were below the Predicted Maximum 24-hour TSP Concentration and Maximum Predicted Mitigated Construction Noise Level in the approved Environmental Impact Assessment (EIA) Report and no Action / Limit Level exceedance was recorded in the reporting period.

3. LANDSCAPE AND VISUAL

3.1 Results and Observations

3.1.1 To monitor and audit the implementation of landscape and visual mitigation measures, 13 weekly Landscape and Visual Site audits were carried out and 7 of them were carried out by a Registered Landscape Architect. The weekly Landscape and Visual Impact reports were counter-signed by IEC as according to the requirement of EM&A Manual (AEIAR-130/2009).

3.1.2 Total 9 no. of non-compliance was recorded in the weekly Landscape and Visual Site audits in the reporting period.

3.1.3 Observations and recommendations during site audits are summarized in **Table 5.1**.

4. WASTE MANAGEMENT

4.1 Results and Observations

4.1.1 C&D materials and wastes sorting were carried out on site. Receptacles were available for C&D wastes and general refuse collection.

4.1.2 The amount of wastes generated by the site activities in the reporting period is shown in **Appendix E**.

4.1.3 The Contractor is advised to properly maintain on site C&D materials and wastes collection, sorting and recording system and maximize reuse / recycle of C&D materials and wastes. The Contractor is reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

4.1.4 The Contractor is reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

5. SITE INSPECTION

5.1 Site Inspection

5.1.1 Site inspections were carried out weekly to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. A summary of the mitigation measures implementation schedule is provided in **Appendix F**.

5.1.2 In the reporting month, 13 site inspections were carried out. 7 of them were the joint inspections with the IEC, ER, the Contractor and the ET.

5.1.3 No outstanding issues were reported during the reporting period.

5.1.4 All the follow-up actions requested by Contractor's ET and IEC during the site inspections were undertaken as reported by the Contractor and confirmed in the following weekly site inspection conducted during the reporting month.

5.1.5 Details of observations recorded during the site inspections are presented in **Table 5.1**.

Table 5.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	1 September 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion Q)	The item was rectified by the Contractor and inspected on 8 September 2016.
	14 September 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I)	The item was rectified by the Contractor and inspected on 21 September 2016.
	21 September 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion F)	The item was rectified by the Contractor and inspected on 29 September 2016.
	29 September 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I and X)	The item was rectified by the Contractor and inspected on 6 October 2016.
	6 October 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I and X)	The item was rectified by the Contractor and inspected on 13 October 2016.
	13 October 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I)	The item was rectified by the Contractor and inspected on 19 October 2016.
	19 October 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I and X)	The item was rectified by the Contractor and inspected on 27 October 2016.
	27 October 2016	Watering shall be provided for dust emitting activities such as loading or unloading C&D materials or excavation. (Portion H)	The item was rectified by the Contractor and inspected on 3 November 2016.

Parameters	Date	Observations and Recommendations	Follow-up
	3 November 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I)	The item was rectified by the Contractor and inspected on 10 November 2016.
	10 November 2016	Open stockpile shall be covered with impermeable sheeting to prevent dust emission. (Portion I)	The item was rectified by the Contractor and inspected on 16 November 2016.
Noise	NA		
Water Quality	8 September 2016	Muddy surface runoff shall be avoided entering the discharge channel directly. (Portion F)	The item was rectified by the Contractor and inspected on 14 September 2016.
	8 September 2016	More sand bags shall be provided to direct surface runoff flowing into the mud pit. (Portion F)	The item was rectified by the Contractor and inspected on 14 September 2016.
	21 September 2016	Sediment accumulated in U-channel shall be cleaned up regularly. (Portion F)	The item was rectified by the Contractor and inspected on 29 September 2016.
	6 October 2016	Wheel washing facilities shall be provided at vehicle exit point. Exit point shall be paved with concrete or hardcores. (Portion X)	The item was rectified by the Contractor and inspected on 13 October 2016.
	6 October 2016	Accumulated sediment inside gullies shall be removed. (Portion X)	The item was rectified by the Contractor and inspected on 13 October 2016.
	13 October 2016	Bund shall be provided at the gate of C&D materials storage area to prevent runoff of wastewater. (Portion I)	The item was rectified by the Contractor and inspected on 19 October 2016.
	13 October 2016	Contractor was reminded to prevent the runoff of wastewater to public drainage. (Portion X)	The item was rectified by the Contractor and inspected on 19 October 2016.
	19 October 2016	Muddy runoff shall be prevented to discharge to gullies and off the site directly. (Portion X)	The item was rectified by the Contractor and inspected on 27 October 2016.
	27 October 2016	Overflow of waste water from vehicles washing was found in the exit of Portion I. Waste water shall be removed. Wheel washing and water recycling facilities are in progress. (Portion I)	The item was rectified by the Contractor and inspected on 3 November 2016.
	10 November 2016	Gully which linked to the public drainage shall be covered properly. (Portion X)	The item was rectified by the Contractor and inspected on 16 November 2016.
Chemical and Waste Management	8 September 2016	Spillage of oil was found on the ground. The spilled oil shall be removed properly. (Portion N)	The item was rectified by the Contractor and inspected on 14 September 2016.
	21 September 2016	Oil container shall be stored	The item was rectified by the

Parameters	Date	Observations and Recommendations	Follow-up
		and labeled properly. (Portion F)	Contractor and inspected on 29 September 2016.
	29 September 2016	General refuse stored in the skip shall be collected regularly. (Portion B)	The item was rectified by the Contractor and inspected on 6 October 2016.
	3 November 2016	Drip tray shall be provided to store the oil containers. (Portion M)	The item was rectified by the Contractor and inspected on 10 November 2016.
	10 November 2016	General refuse shall be cleaned up and stored properly. Larger skip shall be provided and general refuse shall be collected regularly. (WA 1)	The item was rectified by the Contractor and inspected on 16 November 2016.
Land Contamination	16 November 2016	Breaker tips shall be placed on drip tray to prevent land contamination due to the leakage of lubricant oils. (Portion X and P).	The item was rectified by the Contractor and inspected on 24 November 2016.
Landscape and Visual Impact	1 September 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion Q)	The item was rectified by the Contractor and inspected on 8 September 2016.
	14 September 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I)	The item was rectified by the Contractor and inspected on 21 September 2016.
	21 September 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion F)	The item was rectified by the Contractor and inspected on 29 September 2016.
	29 September 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I and X)	The item was rectified by the Contractor and inspected on 6 October 2016.
	6 October 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent	The item was rectified by the Contractor and inspected on 13 October 2016.

Parameters	Date	Observations and Recommendations	Follow-up
		landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I and X)	
	13 October 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I)	The item was rectified by the Contractor and inspected on 19 October 2016.
	19 October 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I and X)	The item was rectified by the Contractor and inspected on 27 October 2016.
	3 November 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I)	The item was rectified by the Contractor and inspected on 10 November 2016.
	10 November 2016	Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. (Portion I)	The item was rectified by the Contractor and inspected on 16 November 2016.
General	24 November 2016	Stagnant water was found in the storage area of construction materials. Stagnant water shall be removed. (Portion B)	The item was rectified by the Contractor and inspected on 1 December 2016.

6. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

6.1 Environmental Exceedance

6.1.1 No Action and Limit Level exceedance for 24-hr TSP and noise was recorded in the reporting period at all monitoring stations. Number of exceedance in the reporting period was summarized in **Table 6.1**.

Table 6.1 Summary of Exceedance in Reporting Period

Monitoring Station		Number of exceedance in the reporting period						
		24hr TSP μg/m^3			Leq $_{(30min)}$ dB(A)			Total
		September 2016	October 2016	November 2016	September 2016	October 2016	November 2016	
KTD1a	AL	0	0	0	0	0	0	0
	LL	0	0	0	0	0	0	0
KTD2a	AL	0	0	0	0	0	0	0
	LL	0	0	0	0	0	0	0
KER1a / KER1b	AL	0	0	0	0	0	0	0
	LL	0	0	0	0	0	0	0
Total	AL	0	0	0	0	0	0	0
	LL	0	0	0	0	0	0	0

6.2 Complaints, Notification of Summons and Prosecution

6.2.1 No complaint, inspection notice, notification of summons or prosecution was received in this reporting period. Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Table 6.2, 6.3 and 6.4**.

Table 6.2 Environmental Complaints Log

Complaint Log No.	Date of Receipt	Received From and Received By	Nature of Complaint	Date Investigated	Outcome	Date of Reply
Nil	-	-	-	-	-	-

Table 6.3 Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Reporting Period			Cumulative Project-to-Date
		September 2016	October 2016	November 2016	
Air	0	0	0	0	0
Noise	0	0	0	0	0
Water	0	0	0	0	0
Waste	0	0	0	0	0
Total	0	0	0	0	0

Table 6.4 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Reporting Period			Cumulative Project-to-Date
		September 2016	October 2016	November 2016	
Air	0	0	0	0	0
Noise	0	0	0	0	0
Water	0	0	0	0	0
Waste	0	0	0	0	0
Total	0	0	0	0	0

7. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

7.1 Implementation Status

7.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting period is summarized in **Appendix F**.

8. CONCLUSIONS

8.1.1 No Action and Limit Level exceedance for 24-hr TSP and noise was recorded in the reporting period at all monitoring stations.

8.1.2 No complaint of air quality was received. Therefore, no impact 1-hour TSP monitoring was conducted in the reporting period.

8.1.3 13 weekly environmental site inspections were carried out in the reporting period. Recommendations on mitigation measures on air quality, water quality, noise, waste management and landscape and visual impact were given to the Contractor for remediating the deficiencies identified during the site inspections.

8.1.4 13 weekly Landscape and Visual Site audits were carried out on in the reporting period and 7 of them were carried out by a Registered Landscape Architect in the reporting period. The weekly Landscape and Visual Impact reports were counter-signed by IEC as according to the requirement of EM&A Manual (AEIAR-130/2009). Total 9 no. of non-compliance was recorded in the weekly Landscape and Visual Site audits in the reporting period.

8.1.5 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting period.

8.2 Comment and Recommendations

8.2.1 The recommended environmental mitigation measures, as proposed in the EIA reports and EM&A Manuals shall be effectively implemented to minimize the potential environmental impacts from the Project. The EM&A programme would effectively monitor the environmental impacts generated from the construction activities and ensure the proper implementation of mitigation measures.

8.2.2 According to the environmental audit performed in the reporting period, the following recommendations were made:

Air Quality Impact

- Open stockpiles shall be covered by unobtrusive sheeting to prevent dust emission.
- Watering shall be provided for dust emitting activities such as loading or unloading C&D materials or excavation.

Construction Noise Impact

- No specific observation was identified in the reporting month.

Water Quality Impact

- Muddy surface runoff shall be avoided entering the discharge channel directly.
- More sand bags shall be provided to direct surface run flowing into the mud pit.
- Sediment accumulated in U-channel shall be cleaned up regularly.
- Wheel washing facilities shall be provided at vehicle exit point. Exit point shall be paved with concrete or hardcores.
- Accumulated sediment inside gullies shall be removed.
- Bund shall be provided at the gate of C&D materials storage area to prevent runoff of wastewater.
- Contractor was reminded to prevent the runoff of wastewater to public drainage.
- Gully which linked to the public drainage shall be covered properly.

Chemical and Waste Management

- Chemical and Waste Management shall be provided properly.
- The spilled oil shall be removed properly.
- Drip tray shall be provided to store the oil containers.
- General refuse shall be cleaned up and stored properly. Larger skip shall be provided and general refuse shall be collected regularly.

Landscape and Visual Impact

- Open stockpiles shall be covered by unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance.

General Condition

- Stagnant water was found in the storage area of construction materials. Stagnant water shall be removed.

Permit / Licenses

- No specific observation was identified in the reporting period.

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Figure 1

Project General Layout

PROPOSED
NEW ACUTE HOSPITAL
(PHASE II)

PROPOSED
NEW ACUTE HOSPITAL
(PHASE I)

HONG KONG CHILDREN'S HOSPITAL
(HKCH)

PUBLIC WORKS
CENTRAL LABORATARY
BUILDING

Proposed Fire Station cum Ambulance Facility

WANG CHU ROAD

TSUNG KWO ROAD

TSUNG YIP STREET

KAI HING ROAD

LAM CHAK STREET

Kowloon Bay Waste Recycling Centre

Temporary Department Vehicle Examination Centre

Octa Tower

Pacific Trade Centre

Kowloon Godown

Kerry D.G. Godown (Kowloon Bay)

Open Storage

Elevated Road

Podium

Road

Seawall

CREEK

KAI TAK BRIDGE

KEY PLAN

KAI TAK

KOWLOON BAY

JORDAN VALLEY

SAU MAU PING

NGAU TAU KOK

KWUN TONG

SAU KOK

AWA WAN

To Kwa Wan Typhoon Shelter

Kwun Tong Typhoon Shelter

SAI TSO WAN

SHA KWO LING

KWUN TONG TSAI WAN (YAU TONG BAY)

YAU TONG

LEGENDS:

- SITE BOUNDARY
- HOSPITAL SITE BOUNDARY
- PROPOSED SUPPORTING UNDERGROUND STRUCTURE
- PROPOSED SUBWAYS
- PROPOSED ROADWORKS
- PROPOSED DISTRICT COOLING SYSTEM
- DEMOLITION OF RADAR TOWER

Rev.	Date	Drawn	Description	Checked	Approved

Hyder-Meinhardt JV

CLIENT

土木工程拓展署
Civil Engineering and Development Department
九龍拓展處
Kowloon Development Office

PROJECT

CONTRACT NO. KL/2014/03
KAI TAK DEVELOPMENT - STAGE 3
INFRASTRUCTURE WORKS FOR DEVELOPMENTS AT THE SOUTHERN PART OF THE FORMER RUNWAY

TITLE

GENERAL LAYOUT PLAN

DESIGNED			ENG. CHECK		
DRAWN			COORDINATION		
DWG. CHECK			APPROVED		

SCALE AT A1	STATUS	REV
1 : 1000		A

Drawing No.

FIGURE 1.0

PRINTED BY: kitchan 18/2/2015 13:00:43
FILENAME: K:\9164 Trunk Road T2\Tender Drawing (Contract II)\Figure 1.dgn

PLOT DRIVE: K:\9164 Trunk Road T2\Cad Admin\AI_COLOUR V8I.plt

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

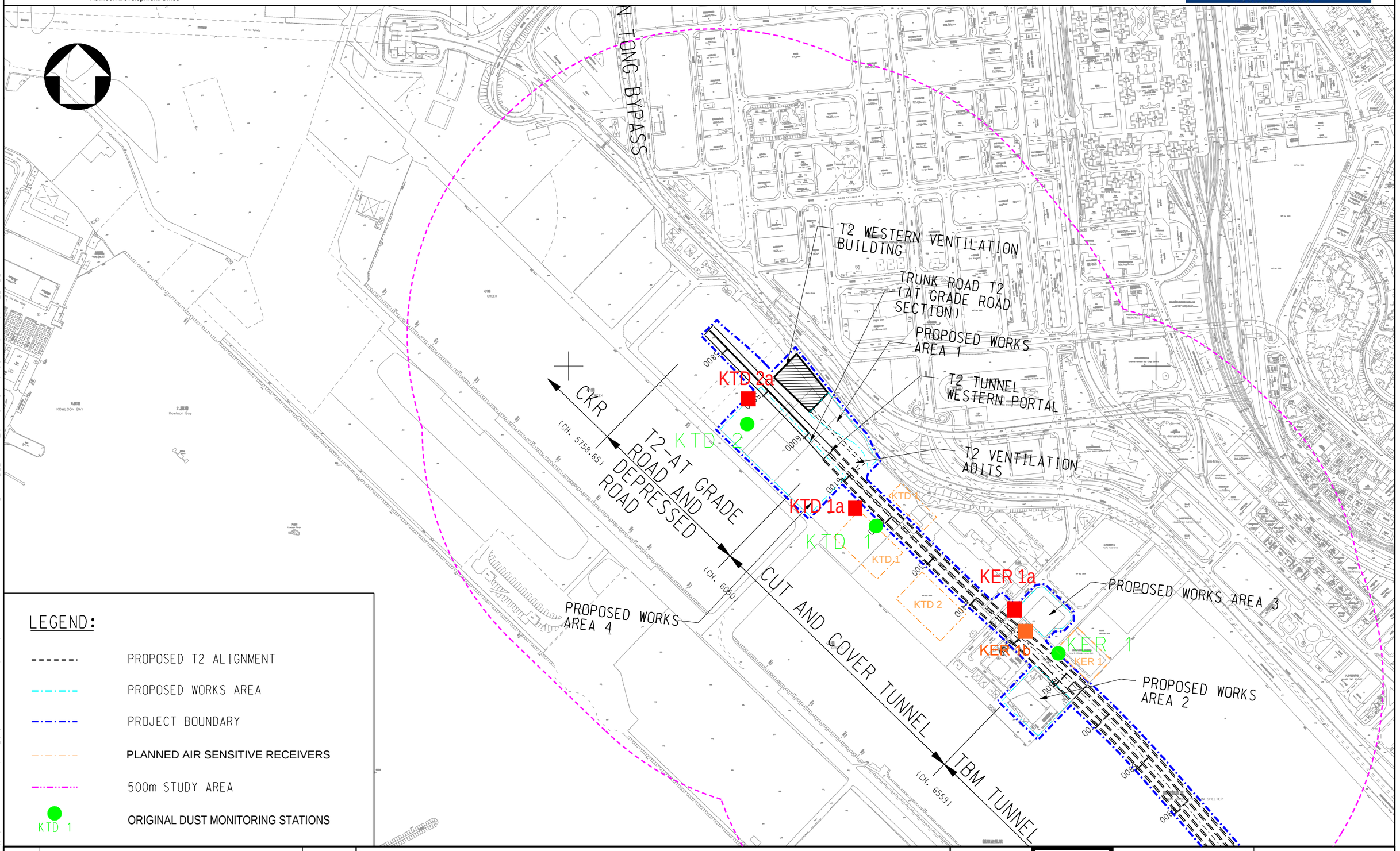
Figure 2

Air and Noise Monitoring Locations

土木工程拓展署
Civil Engineering and Development Department
九龍拓展處
Kowloon Development Office

AGREEMENT NO. CE 38/2008(HY)
KAI TAK DEVELOPMENT - TRUNK ROAD T2 AND INFRASTRUCTURE AT SOUTH APRON - INVESTIGATION, DESIGN AND CONSTRUCTION

Hyder-Meinhardt JV



LEGEND:

- PROPOSED T2 ALIGNMENT
- PROPOSED WORKS AREA
- PROJECT BOUNDARY
- PLANNED AIR SENSITIVE RECEIVERS
- 500m STUDY AREA
- KTD 1 — ORIGINAL DUST MONITORING STATIONS
- KTD 1a — PROPOSED DUST MONITORING STATIONS

Rev.	Description	Date

Drawing title

IDENTIFIED DUST MONITORING STATIONS AT SOUTH APRON OF FORMER KAI TAK AIRPORT

Original Size: A3
Scale: 1 : 6000
Date: 30/01/2012
File name:
© Copyright reserved
Drawing No.: FIGURE 2.1a (revised)
Rev.: --

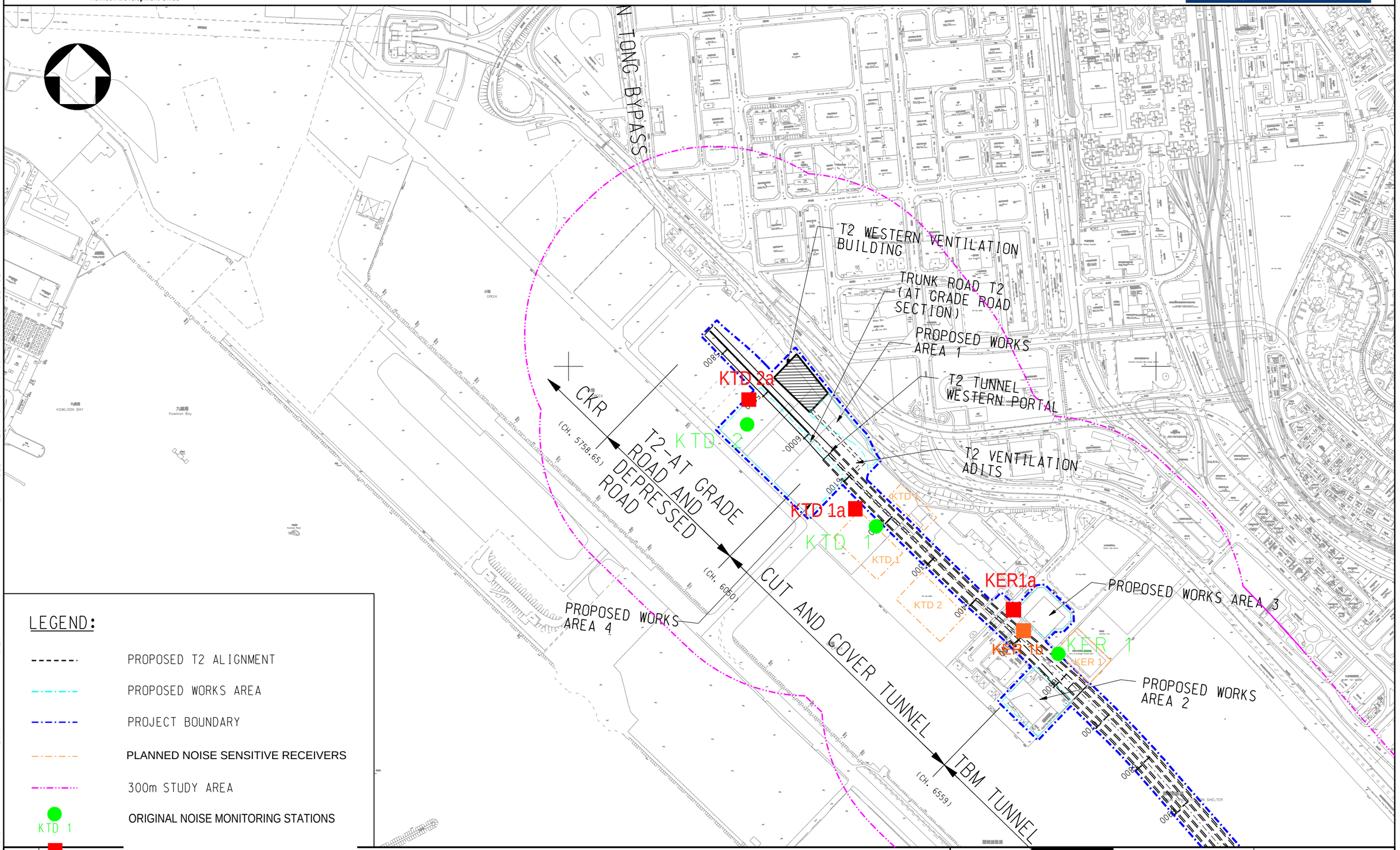
PEN TABLE: K:_STANDARD\MICROSTATION\Plot\MIEL.TBL
PRINTER NAME: PDFCreator
PLOT DRV: K:\91164 Trunk Road T2\Cad Admin\A3_colour.plt
PRINTED BY: kitchan
6/11/2013 6:14:49 PM

CAD FILE : k:\91164 trunk road t2\report\final emna report\Figure 2.1a.dgn

土木工程拓展署
Civil Engineering and Development Department
九龍拓展處
Kowloon Development Office

AGREEMENT NO. CE 38/2008(HY)
KAI TAK DEVELOPMENT - TRUNK ROAD T2 AND INFRASTRUCTURE AT SOUTH APRON - INVESTIGATION, DESIGN AND CONSTRUCTION

Hyder-Meinhardt JV



LEGEND:

- PROPOSED T2 ALIGNMENT
- PROPOSED WORKS AREA
- PROJECT BOUNDARY
- PLANNED NOISE SENSITIVE RECEIVERS
- 300m STUDY AREA
- KTD 1 — ORIGINAL NOISE MONITORING STATIONS
- KTD 1a — PROPOSED NOISE MONITORING STATIONS

Rev.	Description	Date

Drawing title

IDENTIFIED NOISE MONITORING STATIONS AT SOUTH APRON OF FORMER KAI TAK AIRPORT

Original Size: A3

Scale: 1 : 6000 | Date: 30/01/2012

File name

Drawing No. FIGURE 3.1a (revised) | Rev. --

CAD FILE : k:\91164 trunk road t2\report\final emna report\Figure 3.1a.dgn

PEN TABLE: K:_STANDARD\MICROSTATION\Plot\MIEL_TBL
PRINTER NAME: PDFCreator
PLOT DRV: K:\91164 Trunk Road T2\Cad Admin\A3_colour.plt
PRINTED BY: kitchan
6/11/2013 6:15:29 PM

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Appendix A

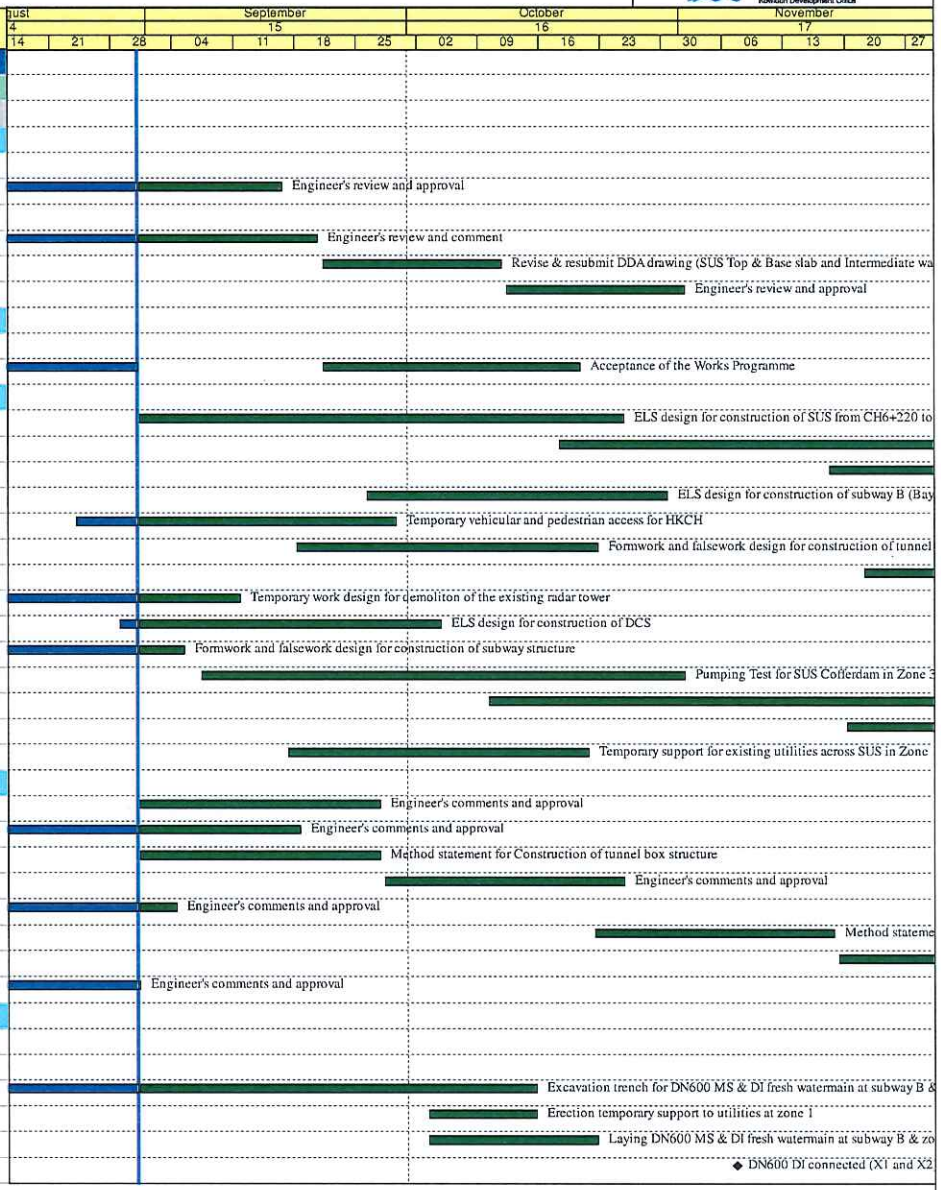
Construction Programme

Hyder MEINHARDT
Hyder - Meinhardt JV

KL/2014/03 Kai Tak Development - Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway

CEDD 土木工程拓展署 Civil Engineering and Development Department 九龍拓展處 Kowloon Development Office

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish
KL/2014/03-Stage 3 Infrastructure Works for Developments at the Southern Part of the Fo		1200	1012	04-Jun-16 A	08-Jun-19
Project Key Dates		1190	1012	01-Feb-16 A	08-Jun-19
General Submission		248	165	09-May-16 A	11-Feb-17
Alternative Design Submission and Approval		85	63	13-Jul-16 A	01-Nov-16
Package B03 : SUS Tunnel box from (CH6+150 to CH6+220)		21	17	13-Jul-16 A	16-Sep-16
K-PA-ADS-1030	Engineer's review and approval	21	17	13-Jul-16 A	16-Sep-16
Package B06 : SUS Top & base slab and intermediate wall from (CH6+220 to CH6+568)		64	63	14-Jul-16 A	01-Nov-16
K-PA-ADS-1410	Engineer's review and comment	21	21	14-Jul-16 A	20-Sep-16
K-PA-ADS-1420	Revise & resubmit DDA drawing (SUS Top & Base slab and Intermediate wall from CH6+220 to CH6+568)	21	21	21-Sep-16	11-Oct-16
K-PA-ADS-1430	Engineer's review and approval	21	21	12-Oct-16	01-Nov-16
Programming / Reporting		21	30	08-Jun-16 A	20-Oct-16
Works Programme		21	30	08-Jun-16 A	20-Oct-16
K-PA-GSP-4300	Acceptance of the Works Programme	21	30	08-Jun-16 A	20-Oct-16
Major Temporary Works Design		206	137	09-May-16 A	14-Jan-17
K-PA-GSP-6820	ELS design for construction of SUS from CH6+220 to CH6+291 in Zone 2 - horizontal members	56	56	31-Aug-16	25-Oct-16
K-PA-GSP-6830	ELS design for construction of SUS from CH6+291 to CH6+568 in Zone 3 to 4 - horizontal members	56	56	18-Oct-16	12-Dec-16
K-PA-GSP-6840	ELS design for construction of subway A (Bay 1&5)	35	35	18-Nov-16	22-Dec-16
K-PA-GSP-6860	ELS design for construction of subway B (Bay 3&4)	35	35	26-Sep-16	30-Oct-16
K-PA-GSP-6870	Temporary vehicular and pedestrian access for HKCH	35	30	24-Aug-16 A	29-Sep-16
K-PA-GSP-6880	Formwork and falsework design for construction of tunnel box structure	35	35	18-Sep-16	22-Oct-16
K-PA-GSP-6900	Falsework design for construction of top slab of SUS structure	35	35	22-Nov-16	26-Dec-16
K-PA-GSP-6940	Temporary work design for demoliton of the existing radar tower	35	12	09-May-16 A	11-Sep-16
K-PA-GSP-7000	ELS design for construction of DCS	35	35	29-Aug-16 A	04-Oct-16
K-PA-GSP-8350	Formwork and falsework design for construction of subway structure	35	5	31-May-16 A	05-Sep-16
K-PA-GSP-8850	Pumping Test for SUS Cofferdam in Zone 3	56	56	07-Sep-16	01-Nov-16
K-PA-GSP-8870	Pumping Test for SUS Cofferdam in Zone 2	56	56	10-Oct-16	04-Dec-16
K-PA-GSP-8880	Pumping Test for SUS Cofferdam in Zone 4	56	56	20-Nov-16	14-Jan-17
K-PA-GSP-9000	Temporary support for existing utilities across SUS in Zone 1	35	35	17-Sep-16	21-Oct-16
Major Construction Works Method Statement		177	108	25-May-16 A	16-Dec-16
K-PA-GSP-7145	Engineer's comments and approval	28	28	31-Aug-16	27-Sep-16
K-PA-GSP-7305	Engineer's comments and approval	28	19	09-Aug-16 A	18-Sep-16
K-PA-GSP-7400	Method statement for Construction of tunnel box structure	28	28	31-Aug-16	27-Sep-16
K-PA-GSP-7405	Engineer's comments and approval	28	28	28-Sep-16	25-Oct-16
K-PA-GSP-7485	Engineer's comments and approval	28	4	05-Jul-16 A	04-Sep-16
K-PA-GSP-7500	Method statement for Erection and Removal of the temporary support for the utilities	28	28	22-Oct-16	18-Nov-16
K-PA-GSP-7505	Engineer's comments and approval	28	28	19-Nov-16	16-Dec-16
K-PA-GSP-7515	Engineer's comments and approval	28	0	25-May-16 A	31-Aug-16
Temporary Utility Diversion Works		169	133	11-Jul-16 A	11-Feb-17
Temporary Diversion for Watermain Works		92	56	11-Jul-16 A	07-Nov-16
Laying Proposed (Fresh) Watermain		92	56	11-Jul-16 A	07-Nov-16
K-PA-TUD-1100	Excavation trench for DN600 MS & DI fresh watermain at subway B & zone 1	37	37	01-Aug-16 A	15-Oct-16
K-PA-TUD-1110	Erection temporary support to utilities at zone 1	11	11	03-Oct-16	15-Oct-16
K-PA-TUD-1120	Laying DN600 MS & DI fresh watermain at subway B & zone 1	17	17	03-Oct-16	22-Oct-16
K-PA-TUD-1150	DN600 DI connected (X1 and X2)	0	0		07-Nov-16



中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

◆ Milestone
Critical Activity
Non-Critical Activity
Remaining Level of Effort
Actual Work

3 MRP Sep 2016 - Nov 2016

Data Date: 31-Aug-16 Run Date: 10-Sep-16

Project ID :09 3MPR Sep-Nov 2016
Layout : KL201403 WP2 3MRP

3 Months Rolling Programme

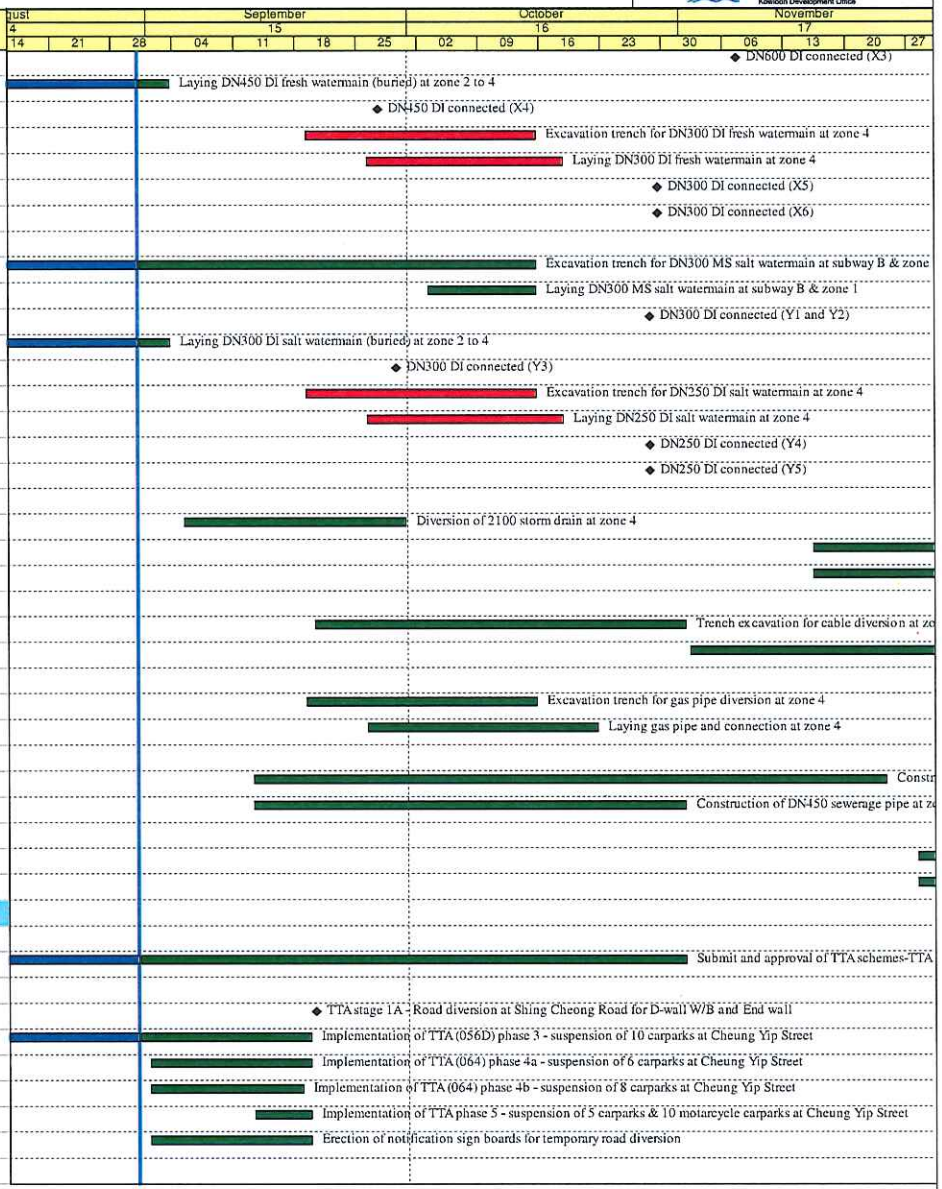
Date	Revision	Checked	Approved
20-Jul-16	WP Rev.2		
31-Aug-16	Sep 16- Nov 16		

Hyder MEINHARDT
Hyder - Meinhardt JV

KL/2014/03 Kai Tak Development - Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway

CEDD 土木工程拓展署 Civil Engineering and Development Department 九龍拓展處 Kowloon Development Office

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish
K-PA-TUD-1170	DN600 DI connected (X3)	0	0		07-Nov-16
K-PA-TUD-2020	Laying DN450 DI fresh watermain (buried) at zone 2 to 4	40	4	11-Jul-16 A	03-Sep-16
K-PA-TUD-2050	DN450 DI connected (X4)	0	0		27-Sep-16
K-PA-TUD-2100	Excavation trench for DN300 DI fresh watermain at zone 4	22	22	19-Sep-16	15-Oct-16
K-PA-TUD-2120	Laying DN300 DI fresh watermain at zone 4	18	18	26-Sep-16	18-Oct-16
K-PA-TUD-2140	DN300 DI connected (X5)	0	0		29-Oct-16
K-PA-TUD-2150	DN300 DI connected (X6)	0	0		29-Oct-16
Laying Proposed (Salt) Watermain		84	48	11-Jul-16 A	28-Oct-16
K-PA-TUD-1200	Excavation trench for DN300 MS salt watermain at subway B & zone 1	30	37	01-Aug-16 A	15-Oct-16
K-PA-TUD-1220	Laying DN300 MS salt watermain at subway B & zone 1	11	11	03-Oct-16	15-Oct-16
K-PA-TUD-1250	DN300 DI connected (Y1 and Y2)	0	0		28-Oct-16
K-PA-TUD-2220	Laying DN300 DI salt watermain (buried) at zone 2 to 4	40	4	11-Jul-16 A	03-Sep-16
K-PA-TUD-2250	DN300 DI connected (Y3)	0	0		29-Sep-16
K-PA-TUD-2300	Excavation trench for DN250 DI salt watermain at zone 4	22	22	19-Sep-16	15-Oct-16
K-PA-TUD-2320	Laying DN250 DI salt watermain at zone 4	18	18	26-Sep-16	18-Oct-16
K-PA-TUD-2340	DN250 DI connected (Y4)	0	0		28-Oct-16
K-PA-TUD-2350	DN250 DI connected (Y5)	0	0		28-Oct-16
Temporary Diversion for Drainage Works		129	129	05-Sep-16	11-Feb-17
K-PA-TUD-2400	Diversion of 2100 storm drain at zone 4	22	22	05-Sep-16	30-Sep-16
K-PA-TUD-2500	Excavation and laying of DN600 MS pipe and manhole (N-CP-1) at zone 4 for HKCH connection	25	25	16-Nov-16	14-Dec-16
K-PA-TUD-2600	Excavation and laying of DN300 MS pipe and manhole (FMH23-15D) at zone 4	70	70	16-Nov-16	11-Feb-17
Temporary Diversion for CLP Cable at CH6+560		60	60	20-Sep-16	30-Nov-16
K-PA-TUD-3300	Trench excavation for cable diversion at zone 4 - stage 1	35	35	20-Sep-16	01-Nov-16
K-PA-TUD-3500	Trench excavation for cable diversion at zone 4 - stage 2	25	25	02-Nov-16	30-Nov-16
Temporary Diversion for Gas Pipe		28	28	19-Sep-16	22-Oct-16
K-PA-TUD-3100	Excavation trench for gas pipe diversion at zone 4	22	22	19-Sep-16	15-Oct-16
K-PA-TUD-3200	Laying gas pipe and connection at zone 4	22	22	26-Sep-16	22-Oct-16
Temporary Diversion for Sewage Rising Main		60	60	13-Sep-16	24-Nov-16
K-PA-TUD-1600	Construction of DN750 sewage pipe and manhole - stage 1	60	60	13-Sep-16	24-Nov-16
K-PA-TUD-2750	Construction of DN450 sewerage pipe at zone 2 - stage 1	40	40	13-Sep-16	01-Nov-16
Temporary Diversion for Telecommunication Cable		18	18	28-Nov-16	17-Dec-16
K-PA-TUD-4000	Diversion of Fibre optical cable (PCCW)	18	18	28-Nov-16	17-Dec-16
K-PA-TUD-4050	Diversion of Fibre optical cable (HGC)	18	18	28-Nov-16	17-Dec-16
Temporary Traffic Management		90	63	22-Jul-16 A	01-Nov-16
Temp Traffic Arrangement Schemes		90	63	31-Jul-16 A	01-Nov-16
K-PA-TTA-8100	Submit and approval of TTA schemes-TTA stage 2 for D-wall W/B at Zone 2	90	63	31-Jul-16 A	01-Nov-16
Implementation of Temporary Traffic Arrangement		60	20	22-Jul-16 A	20-Sep-16
K-PA-TTA-2000	TTA stage 1A - Road diversion at Shing Cheong Road for D-wall W/B and End wall	0	0	20-Sep-16	
K-PA-TTA-2300	Implementation of TTA (056D) phase 3 - suspension of 10 carparks at Cheung Yip Street	60	20	22-Jul-16 A	19-Sep-16
K-PA-TTA-2400	Implementation of TTA (064) phase 4a - suspension of 6 carparks at Cheung Yip Street	19	19	01-Sep-16	19-Sep-16
K-PA-TTA-2450	Implementation of TTA (064) phase 4b - suspension of 8 carparks at Cheung Yip Street	18	18	01-Sep-16	18-Sep-16
K-PA-TTA-2500	Implementation of TTA phase 5 - suspension of 5 carparks & 10 motorcycle carparks at Cheung Yip Street	7	7	13-Sep-16	19-Sep-16
K-PA-TTA-2600	Erection of notification sign boards for temporary road diversion	15	15	01-Sep-16	19-Sep-16
Construction of Temporary Diversion Road for Shing Cheong Road (TTA stage 1A)		45	16	25-Jul-16 A	19-Sep-16



中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

◆ Milestone
Critical Activity
Non-Critical Activity
Remaining Level of Effort
Actual Work

3 MRP Sep 2016 - Nov 2016

Data Date: 31-Aug-16 Run Date: 10-Sep-16

Project ID :09 3MPR Sep-Nov 2016
Layout : KL201403 WP2 3MRP

3 Months Rolling Programme

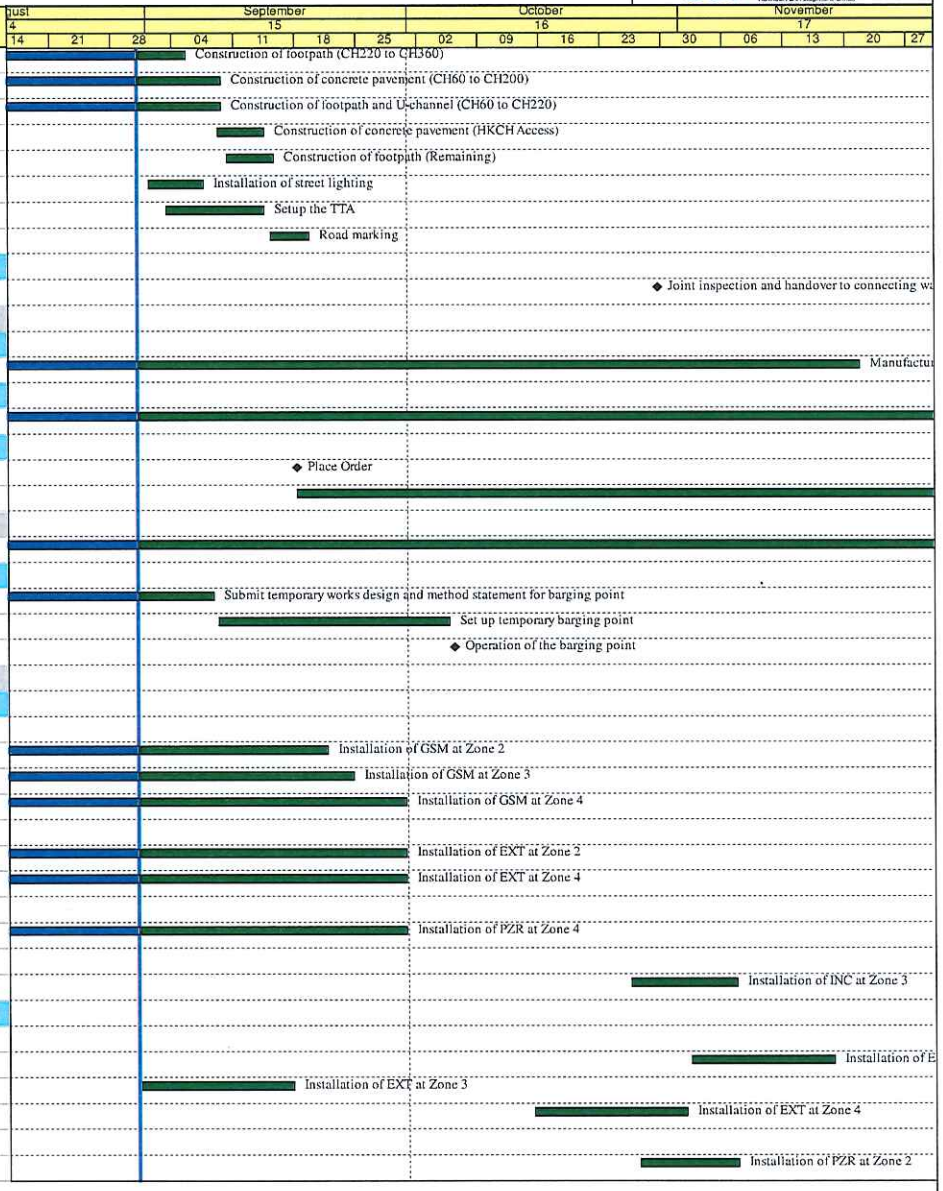
Date	Revision	Checked	Approved
20-Jul-16	WP Rev.2		
31-Aug-16	Sep 16- Nov 16		

Hyder MEINHARDT
Hyder - Meinhardt JV

KL/2014/03 Kai Tak Development - Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway

CEDD 土木工程拓展署 Civil Engineering and Development Department 九龍拓展處 Kowloon Development Office

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish
K-PA-TTA-5100	Construction of footpath (CH220 to CH360)	12	5	25-Jul-16 A	05-Sep-16
K-PA-TTA-5150	Construction of concrete pavement (CH60 to CH200)	15	9	08-Aug-16 A	09-Sep-16
K-PA-TTA-5200	Construction of footpath and U-channel (CH60 to CH220)	10	9	13-Aug-16 A	09-Sep-16
K-PA-TTA-5250	Construction of concrete pavement (HKCH Access)	5	5	09-Sep-16	14-Sep-16
K-PA-TTA-5300	Construction of footpath (Remaining)	5	5	10-Sep-16	15-Sep-16
K-PA-TTA-5350	Installation of street lighting	6	6	01-Sep-16	07-Sep-16
K-PA-TTA-5400	Setup the TTA	10	10	03-Sep-16	14-Sep-16
K-PA-TTA-5450	Road marking	3	3	15-Sep-16	19-Sep-16
Interfacing Works		0	0	29-Oct-16	29-Oct-16
K-PA-INT-1000	Joint inspection and handover to connecting watermain (HKCN)	0	0		29-Oct-16
Materials Procurement (Major Materials)		903	738	01-Feb-16 A	07-Sep-18
ELS struct / waling		138	83	10-Jun-16 A	21-Nov-16
K-PA-MP-1160	Manufacturing & delivery to site for Zone 1	138	83	10-Jun-16 A	21-Nov-16
Steel H-Pile		360	180	01-Feb-16 A	26-Feb-17
K-PA-MP-1250	Manufacturing & delivery to site	360	180	01-Feb-16 A	26-Feb-17
Chilled Water Pipes - DCS		720	720	18-Sep-16	07-Sep-18
K-PA-MP-1300	Place Order	0	0	18-Sep-16	
K-PA-MP-1350	Manufacturing & delivery to site	720	720	18-Sep-16	07-Sep-18
Prelimiaries		1190	1012	11-Mar-16 A	08-Jun-19
K-DR-PRE-1800	Submission of time-lapsed photographs and viedo	1190	1012	11-Mar-16 A	08-Jun-19
Barge Loading Facilities		105	36	31-May-16 A	06-Oct-16
K-DR-PRE-1400	Submit temporary works design and method statement for barging point	35	9	31-May-16 A	08-Sep-16
K-DR-PRE-1450	Set up temporary barging point	21	21	09-Sep-16	05-Oct-16
K-DR-PRE-1480	Operation of the barging point	0	0	06-Oct-16	
Instrumentation and Monitoring		124	66	18-Apr-16 A	18-Nov-16
Eastbound Instrumentation and Monitoring		113	55	18-Apr-16 A	07-Nov-16
Ground Settlement Marker (GSM)		99	26	29-Apr-16 A	30-Sep-16
K-IM-GSM-1100	Installation of GSM at Zone 2	10	18	29-Apr-16 A	21-Sep-16
K-IM-GSM-1200	Installation of GSM at Zone 3	10	21	11-May-16 A	24-Sep-16
K-IM-GSM-1300	Installation of GSM at Zone 4	10	26	10-Jun-16 A	30-Sep-16
Extensomter (EXT)		104	26	18-Apr-16 A	30-Sep-16
K-IM-EXT-1100	Installation of EXT at Zone 2	15	26	18-Apr-16 A	30-Sep-16
K-IM-EXT-1300	Installation of EXT at Zone 4	15	26	19-May-16 A	30-Sep-16
Piezometer/Standpipe (PZR)		10	26	04-Jun-16 A	30-Sep-16
K-IM-PZR-1300	Installation of PZR at Zone 4	10	26	04-Jun-16 A	30-Sep-16
Inclinometer (INC)		10	10	26-Oct-16	07-Nov-16
K-IM-INC-1200	Installation of INC at Zone 3	10	10	26-Oct-16	07-Nov-16
Westbound Instrumentation and Monitoring		115	66	19-Jul-16 A	18-Nov-16
Extensomter (EXT)		66	66	31-Aug-16	18-Nov-16
K-IM-EXT-1320	Installation of EXT at Zone 2	15	15	02-Nov-16	18-Nov-16
K-IM-EXT-1330	Installation of EXT at Zone 3	15	15	31-Aug-16	17-Sep-16
K-IM-EXT-1340	Installation of EXT at Zone 4	15	15	15-Oct-16	01-Nov-16
Piezometer/Standpipe (PZR)		105	56	19-Jul-16 A	07-Nov-16
K-IM-PZR-1320	Installation of PZR at Zone 2	10	10	27-Oct-16	07-Nov-16



中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

◆ Milestone
Critical Activity
Non-Critical Activity
Remaining Level of Effort
Actual Work

3 MRP Sep 2016 - Nov 2016

Data Date: 31-Aug-16 Run Date: 10-Sep-16

Project ID :09 3MPR Sep-Nov 2016
Layout : KL201403 WP2 3MRP

3 Months Rolling Programme

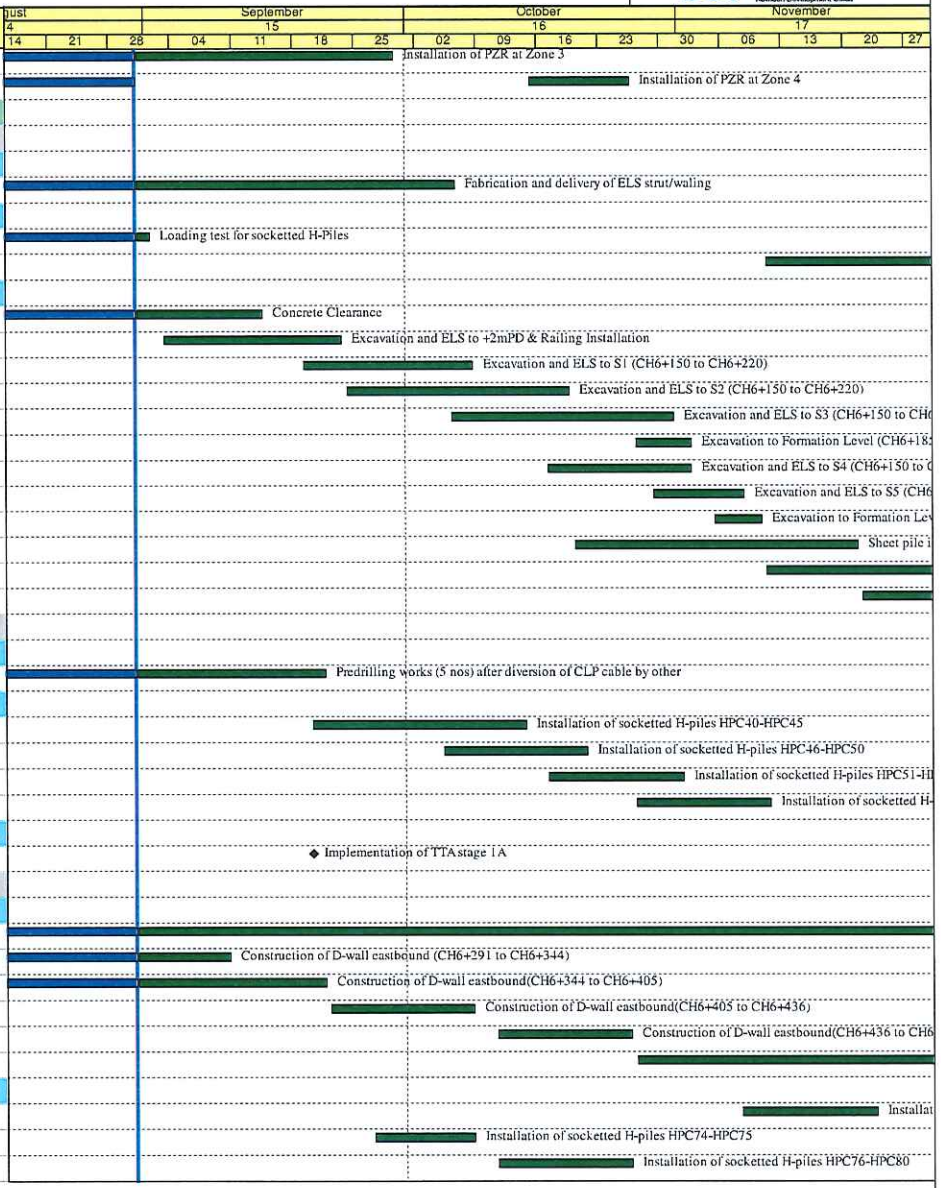
Date	Revision	Checked	Approved
20-Jul-16	WP Rev.2		
31-Aug-16	Sep 16- Nov 16		

Hyder MEINHARDT
Hyder - Meinhardt JV

KL/2014/03 Kai Tak Development - Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway

CEDD 土木工程拓展署 Civil Engineering and Development Department 九龍拓展處 Kowloon Development Office

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish
K-IM-PZR-1330	Installation of PZR at Zone 3	10	25	05-Aug-16 A	29-Sep-16
K-IM-PZR-1340	Installation of PZR at Zone 4	10	10	19-Jul-16 A	26-Oct-16
Section 1A of the Works -Construction of Supporting Underground Structure (Alternative Design)		157	99	10-May-16 A	29-Dec-16
SUS and Ventilation Adits from CH6+150 to CH6+220 in Zone 1		128	99	10-May-16 A	29-Dec-16
Preparation Works		120	30	10-May-16 A	06-Oct-16
K-1A-SV1-0500	Fabrication and delivery of ELS strut/waling	120	30	10-May-16 A	06-Oct-16
Construction of Socketed H-Pile		110	99	09-Aug-16 A	29-Dec-16
K-1A-SV1-3300	Loading test for socketted H-Piles	8	2	09-Aug-16 A	01-Sep-16
K-1A-SV1-3400	Trimming pilehead at cut-off level	40	40	11-Nov-16	29-Dec-16
Excavation and ELS Construction		98	98	04-Aug-16 A	28-Dec-16
K-1A-SV1-4950	Concrete Clearance	5	13	04-Aug-16 A	14-Sep-16
K-1A-SV1-5050	Excavation and ELS to +2mPD & Railing Installation	17	17	03-Sep-16	23-Sep-16
K-1A-SV1-5100	Excavation and ELS to S1 (CH6+150 to CH6+220)	17	17	19-Sep-16	08-Oct-16
K-1A-SV1-5200	Excavation and ELS to S2 (CH6+150 to CH6+220)	20	20	24-Sep-16	19-Oct-16
K-1A-SV1-5350	Excavation and ELS to S3 (CH6+150 to CH6+220)	21	21	06-Oct-16	31-Oct-16
K-1A-SV1-5400	Excavation to Formation Level (CH6+185 to CH6+220)	6	6	27-Oct-16	02-Nov-16
K-1A-SV1-5450	Excavation and ELS to S4 (CH6+150 to CH6+185)	15	15	17-Oct-16	02-Nov-16
K-1A-SV1-5460	Excavation and ELS to S5 (CH6+150 to CH6+185)	9	9	29-Oct-16	08-Nov-16
K-1A-SV1-5550	Excavation to Formation Level (CH6+150 to CH6+185)	5	5	05-Nov-16	10-Nov-16
K-1A-SV1-5650	Sheet pile installation for ventilation adit 2 (VA2) construction (CH6+150 to CH6+220)	28	28	20-Oct-16	21-Nov-16
K-1A-SV1-5700	Excavation and ELS to formation -18.0mPD for VA2 construction (CH6+150 to CH6+175)	20	20	11-Nov-16	03-Dec-16
K-1A-SV1-5750	Excavation and ELS to formation -17.2mPD for VA2 construction (CH6+175 to CH6+220)	30	30	22-Nov-16	28-Dec-16
SUS and Ventilation Adits from CH6+220 to CH6+291 in Zone 2		44	60	10-Aug-16 A	11-Nov-16
G.I and Pre-drilling Works		30	18	10-Aug-16 A	21-Sep-16
K-1A-SV2-3800	Predrilling works (5 nos) after diversion of CLP cable by other	30	18	10-Aug-16 A	21-Sep-16
Construction of Socketed H-Pile		44	44	20-Sep-16	11-Nov-16
K-1A-SV2-3170	Installation of socketted H-piles HPC40-HPC45	20	20	20-Sep-16	14-Oct-16
K-1A-SV2-3180	Installation of socketted H-piles HPC46-HPC50	14	14	05-Oct-16	21-Oct-16
K-1A-SV2-3190	Installation of socketted H-piles HPC51-HPC55	14	14	17-Oct-16	01-Nov-16
K-1A-SV2-3192	Installation of socketted H-piles HPC51-HPC55	14	14	27-Oct-16	11-Nov-16
W/B Construction of D-Wall in TTA Stage 1A		0	0	20-Sep-16	20-Sep-16
K-1A-SV2-4900	Implementation of TTA stage 1A	0	0		20-Sep-16
SUS Structure from CH6+291 to 6+467 in Zone 3		141	89	08-Jun-16 A	15-Dec-16
E/B Construction of D-Wall		128	76	08-Jun-16 A	30-Nov-16
K-1A-SV3-2000	Construction of guide wall	65	76	08-Jun-16 A	30-Nov-16
K-1A-SV3-2250	Construction of D-wall eastbound (CH6+291 to CH6+344)	28	10	18-Jul-16 A	10-Sep-16
K-1A-SV3-2300	Construction of D-wall eastbound(CH6+344 to CH6+405)	28	18	16-Aug-16 A	21-Sep-16
K-1A-SV3-2350	Construction of D-wall eastbound(CH6+405 to CH6+436)	14	14	22-Sep-16	08-Oct-16
K-1A-SV3-2360	Construction of D-wall eastbound(CH6+436 to CH6+467)	14	14	11-Oct-16	26-Oct-16
K-1A-SV3-2400	Testing of D-wall (Sonic test and IC)	30	30	27-Oct-16	30-Nov-16
Construction of Socketed H-Pile		64	64	27-Sep-16	12-Dec-16
K-1A-SV3-3050	Installation of socketted H-piles HPC56-HPC60	14	14	08-Nov-16	23-Nov-16
K-1A-SV3-3055	Installation of socketted H-piles HPC74-HPC75	10	10	27-Sep-16	08-Oct-16
K-1A-SV3-3060	Installation of socketted H-piles HPC76-HPC80	14	14	11-Oct-16	26-Oct-16



中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

◆ Milestone
Critical Activity
Non-Critical Activity
Remaining Level of Effort
Actual Work

3 MRP Sep 2016 - Nov 2016

Data Date: 31-Aug-16 Run Date: 10-Sep-16

Project ID :09 3MPR Sep-Nov 2016
Layout : KL201403 WP2 3MRP

3 Months Rolling Programme

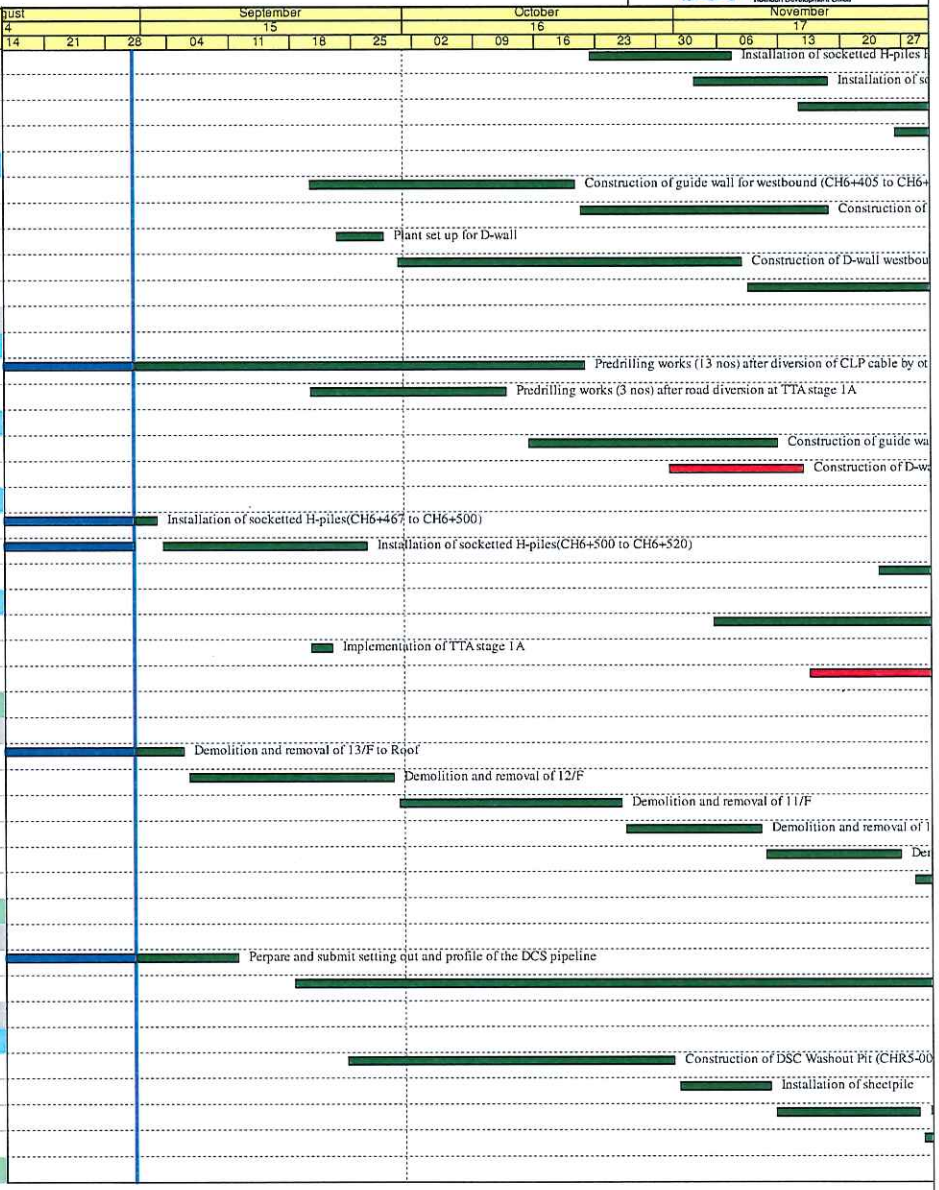
Date	Revision	Checked	Approved
20-Jul-16	WP Rev.2		
31-Aug-16	Sep 16- Nov 16		

Hyder MEINHARDT
Hyder - Meinhardt JV

KL/2014/03 Kai Tak Development - Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway

CEDD 土木工程拓展署 Civil Engineering and Development Department 九龍拓展處 Kowloon Development Office

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish
K-1A-SV3-3065	Installation of socketted H-piles HPC81-HPC85	14	14	22-Oct-16	07-Nov-16
K-1A-SV3-3070	Installation of socketted H-piles HPC86-HPC90	14	14	03-Nov-16	18-Nov-16
K-1A-SV3-3075	Installation of socketted H-piles HPC91-HPC95	14	14	15-Nov-16	30-Nov-16
K-1A-SV3-3080	Installation of socketted H-piles HPC96-HPC100	14	14	26-Nov-16	12-Dec-16
W/B Construction of D-Wall in TTA Stage 1A		73	73	20-Sep-16	15-Dec-16
K-1A-SV3-4000	Construction of guide wall for westbound (CH6+405 to CH6+467)	25	25	20-Sep-16	20-Oct-16
K-1A-SV3-4005	Construction of guide wall for westbound (CH6+344 to CH6+405)	25	25	21-Oct-16	18-Nov-16
K-1A-SV3-4100	Plant set up for D-wall	5	5	23-Sep-16	28-Sep-16
K-1A-SV3-4200	Construction of D-wall westbound (CH6+405 to CH6+467)	32	32	30-Sep-16	08-Nov-16
K-1A-SV3-4300	Construction of D-wall westbound (CH6+344 to CH6+405)	32	32	09-Nov-16	15-Dec-16
SUS Structure from CH6+467 to 6+568 in Zone 4		147	89	17-Jun-16 A	15-Dec-16
G.I and Pre-drilling Works		43	42	30-Jul-16 A	21-Oct-16
K-1A-SV4-1200	Predrilling works (13 nos) after diversion of CLP cable by other	42	42	30-Jul-16 A	21-Oct-16
K-1A-SV4-1300	Predrilling works (3 nos) after road diversion at TTA stage 1A	18	18	20-Sep-16	12-Oct-16
E/B Construction of D-Wall		27	27	15-Oct-16	15-Nov-16
K-1A-SV4-2100	Construction of guide wall	25	25	15-Oct-16	12-Nov-16
K-1A-SV4-2400	Construction of D-wall eastbound(CH6+550 to CH6+560)	14	14	31-Oct-16	15-Nov-16
Construction of Socketed H-Pile		142	84	17-Jun-16 A	09-Dec-16
K-1A-SV4-3000	Installation of socketted H-piles(CH6+467 to CH6+500)	32	3	17-Jun-16 A	02-Sep-16
K-1A-SV4-3200	Installation of socketted H-piles(CH6+500 to CH6+520)	56	19	11-Jul-16 A	26-Sep-16
K-1A-SV4-7610	Installation of socketted H-piles(CH6+520 to CH6+530)	14	14	24-Nov-16	09-Dec-16
W/B and End Construction of D-Wall in TTA Stage 1A		73	73	20-Sep-16	15-Dec-16
K-1A-SV4-4000	Construction of guide wall	35	35	05-Nov-16	15-Dec-16
K-1A-SV4-4100	Implementation of TTA stage 1A	3	3	20-Sep-16	22-Sep-16
K-1A-SV4-4300	Construction of D-wall westbound (CH6+550 to CH6+560)	14	14	16-Nov-16	01-Dec-16
Section 2 of the Works-Demolition of Radar Tower and Guard House		80	85	05-Aug-16 A	10-Dec-16
Demolition of Radar Tower		80	85	05-Aug-16 A	10-Dec-16
K-02-DRT-1400	Demolition and removal of 13/F to Roof	40	5	05-Aug-16 A	05-Sep-16
K-02-DRT-1500	Demolition and removal of 12/F	20	20	06-Sep-16	29-Sep-16
K-02-DRT-1510	Demolition and removal of 11/F	20	20	30-Sep-16	25-Oct-16
K-02-DRT-1520	Demolition and removal of 10/F	14	14	26-Oct-16	10-Nov-16
K-02-DRT-1530	Demolition and removal of 9/F	14	14	11-Nov-16	26-Nov-16
K-02-DRT-1600	Demolition and removal of 8/F	12	12	28-Nov-16	10-Dec-16
Section 3 of the Works- Construction of District Cooling System (Subject to Excision)		780	738	02-Jun-16 A	07-Sep-18
Preparation Works		780	738	02-Jun-16 A	07-Sep-18
K-03-DCS-0800	Perpare and submit setting out and profile of the DCS pipeline	30	12	02-Jun-16 A	11-Sep-16
K-03-DCS-0950	Manufacturing & delivery of DCS pipe	720	720	18-Sep-16	07-Sep-18
Construction of District Cooling System		68	68	24-Sep-16	14-Dec-16
Construction of DCS Works at Zone 1		68	68	24-Sep-16	14-Dec-16
K-03-DCS-1050	Construction of DSC Washout Pit (CHR5-000)	30	30	24-Sep-16	31-Oct-16
K-03-DCS-1100	Installation of sheetpile	10	10	01-Nov-16	11-Nov-16
K-03-DCS-1150	Excavation and ELS works	14	14	12-Nov-16	28-Nov-16
K-03-DCS-1200	Laying chilled water pipes from CHR5-000 to CHR5-024	14	14	29-Nov-16	14-Dec-16
Section 4B of the Works- Construction of Subway B (Subject to Excision)		69	53	12-Aug-16 A	03-Nov-16



中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

◆ Milestone
Critical Activity
Non-Critical Activity
Remaining Level of Effort
Actual Work

3 MRP Sep 2016 - Nov 2016

Data Date: 31-Aug-16 Run Date: 10-Sep-16

Project ID :09 3MPR Sep-Nov 2016
Layout : KL201403 WP2 3MRP

3 Months Rolling Programme

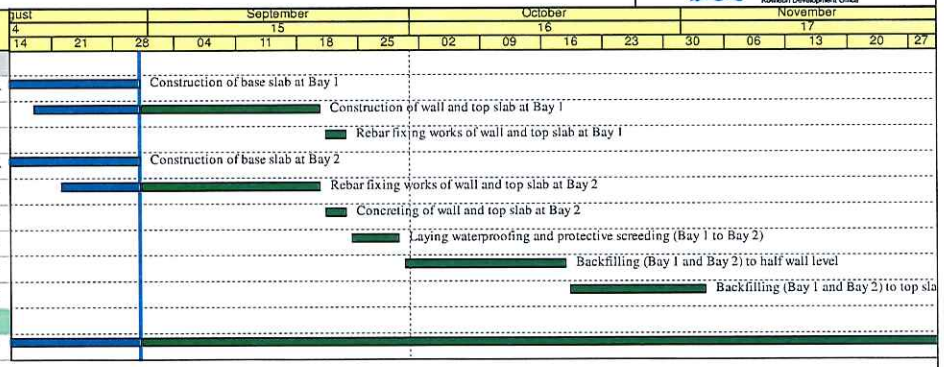
Date	Revision	Checked	Approved
20-Jul-16	WP Rev.2		
31-Aug-16	Sep 16- Nov 16		

Hyder MEINHARDT
Hyder - Meinhardt JV

KL/2014/03 Kai Tak Development - Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway

CEDD 土木工程拓展署 Civil Engineering and Development Department 九龍拓展處 Kowloon Development Office

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish
Bay 1 & 2		69	53	12-Aug-16 A	03-Nov-16
K-4B-BAY-2200	Construction of base slab at Bay 1	12	0	12-Aug-16 A	31-Aug-16 A
K-4B-BAY-2250	Construction of wall and top slab at Bay 1	16	17	19-Aug-16 A	20-Sep-16
K-4B-BAY-2260	Rebar fixing works of wall and top slab at Bay 1	3	3	21-Sep-16	23-Sep-16
K-4B-BAY-2300	Construction of base slab at Bay 2	12	0	12-Aug-16 A	31-Aug-16 A
K-4B-BAY-2350	Rebar fixing works of wall and top slab at Bay 2	16	17	22-Aug-16 A	20-Sep-16
K-4B-BAY-2360	Concreting of wall and top slab at Bay 2	3	3	21-Sep-16	23-Sep-16
K-4B-BAY-2400	Laying waterproofing and protective screeding (Bay 1 to Bay 2)	5	5	24-Sep-16	29-Sep-16
K-4B-BAY-2450	Backfilling (Bay 1 and Bay 2) to half wall level	14	14	30-Sep-16	18-Oct-16
K-4B-BAY-2460	Backfilling (Bay 1 and Bay 2) to top slab level	14	14	19-Oct-16	03-Nov-16
Section 7 of the Works-Preservation and Protection of Existing Trees		1200	1008	04-Jan-16 A	04-Jun-19
K-07-001-1000	Section 7 of the Works-Preservation and Protection of Existing Trees	1200	1008	04-Jan-16 A	04-Jun-19



中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

◆ Milestone
Critical Activity
Non-Critical Activity
Remaining Level of Effort
Actual Work

3 MRP Sep 2016 - Nov 2016

Data Date: 31-Aug-16 Run Date: 10-Sep-16

Project ID :09 3MPR Sep-Nov 2016
Layout : KL201403 WP2 3MRP

3 Months Rolling Programme

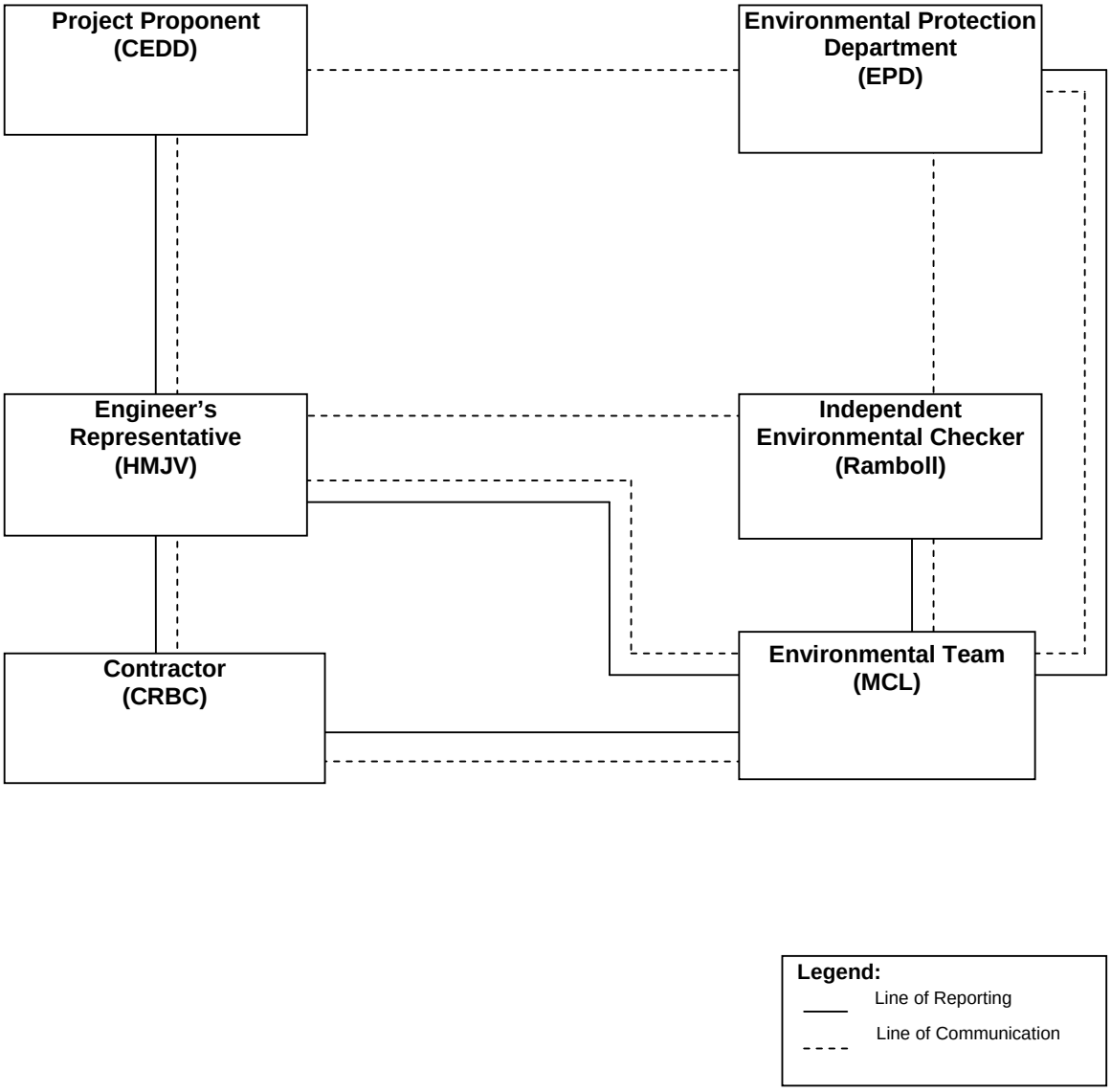
Date	Revision	Checked	Approved
20-Jul-16	WP Rev.2		
31-Aug-16	Sep 16- Nov 16		

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Appendix B

Project Organization Chart

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com



MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Appendix C

Action and Limit Levels for Air Quality and Noise

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Action and Limit Levels for 24-hr TSP and 1-hr TSP

Parameter	Monitoring Station	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/ m^3$)
24-hr TSP ($\mu g/m^3$)	KTD1a	177	260
	KTD2a	157	
	KER1a / KER1b	172	
*1-hr TSP ($\mu g/m^3$)	KTD1a	285	500
	KTD2a	279	
	KER1a / KER1b	295	

Note:
1-hr TSP monitoring should be required in case of complaints.

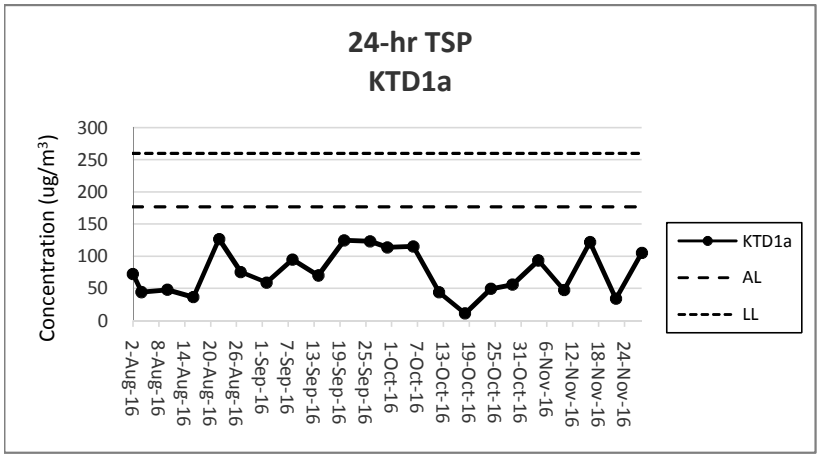
Action and Limit Levels for Construction Noise, Leq (30min), dB(A)

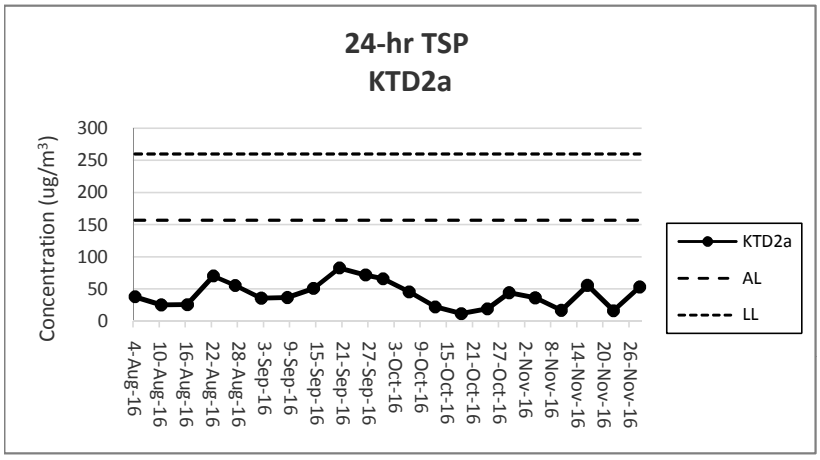
Time Period	Location	Action	Limit
0700-1900 hrs on normal weekdays	KTD1a KTD2a KER1a / KER1b	When one documented complaint is received	75 dB(A)

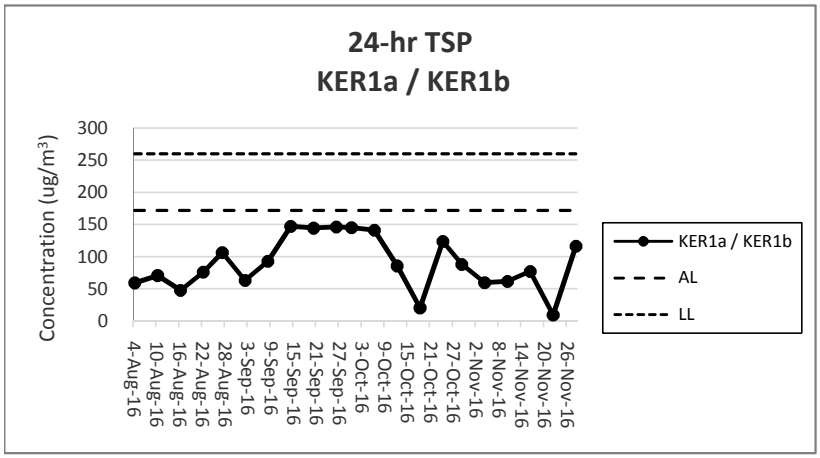
MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Appendix D

Graphical Presentation of Monitoring Data

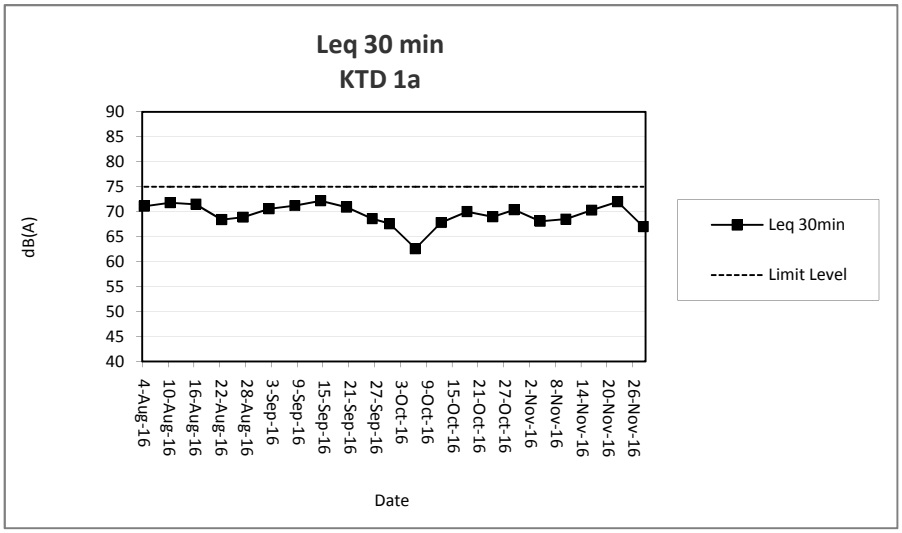


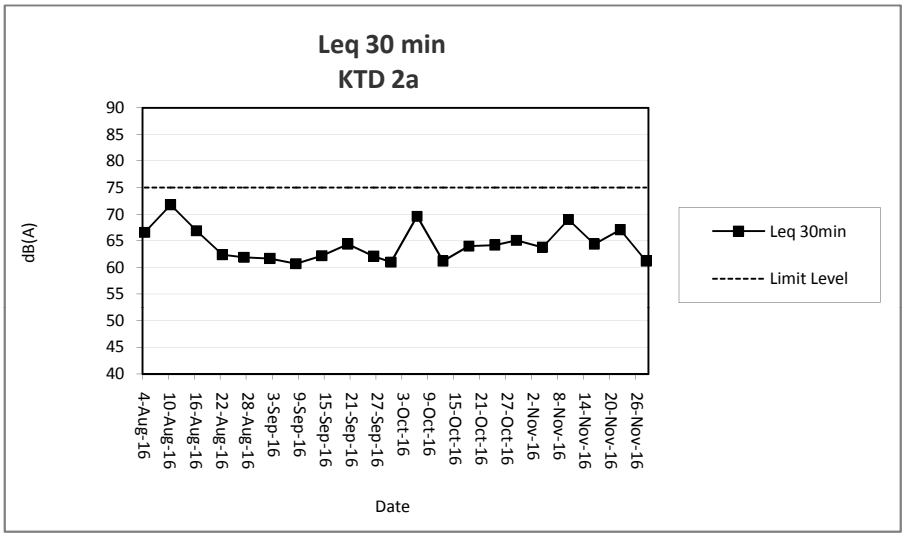


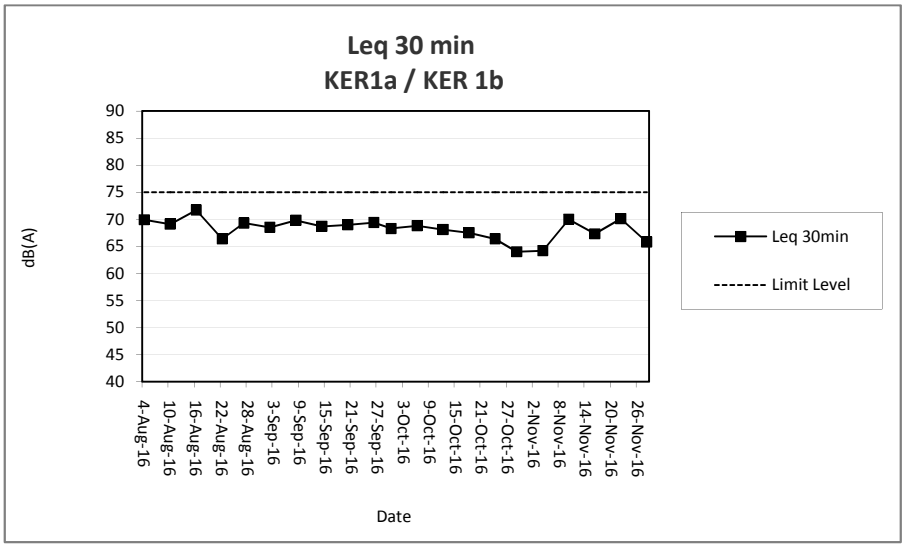


Note:

1) The major activities being carried out on site during the reporting period can be referred to Section 1.3.2.
2) The weather conditions during monitoring in the reporting period was range from cloudy, fine and sunny.
3) Any other factors which might affect the monitoing results can be referred to Section 2.3.5.
4) The 24-hr TSP monitoring at KTD 1a on 29 July 2016 was postponed due to the insufficient power supply and rescheduled to 2 August 2016.
5) The 24-hour TSP monitoring location KER1a was replaced by KER1b, effective from 16 November 2016.







Note:

1) The major activities being carried out on site during the reporting period can be referred to Section 1.3.2.
2) The weather conditions during monitoring in the reporting period was range from cloudy, fine and sunny. No raining or wind with speed over 5 m/s was observed during monitoring in the reporting period.
3) Any other factors which might affect the monitoing results can be referred to Section 2.3.5.
4) Noise monitoring location KER1a was replaced by KER1b, effective from 16 November 2016.

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Appendix E

Waste Flow Table

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Monthly Ending	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2016 Jan	0.159	0.101	0.058	Nil	Nil	Nil	Nil	0.023	0.00002	0.0158	0.0335
2016 Feb	0.291	0.050	0.241	Nil	Nil	Nil	1.34	0.023	0.00002	0.0158	0.0335
2016 Mar	2.7389	0.0407	0.0662	Nil	2.632	Nil	5.92	0.023	0.00002	0.0158	0.0571
2016 Apr	4.1718	0.0578	0.462	Nil	3.652	Nil	12.5	0.023	0.00002	0.0158	0.0426
2016 May	3.592	Nil	0.299	Nil	3.293	Nil	5.23	0.023	0.00002	0.0158	0.0621
2016 June	4.6035	Nil	0.8555	Nil	3.748	Nil	Nil	0.023	0.00002	0.0158	0.0619
2016 July	6.155	0.153	0.015	Nil	5.987	Nil	7.84	0.023	0.00002	0.0158	0.0433
2016 Aug	5.1155	Nil	Nil	Nil	5.1155	Nil	19.93	0.023	Nil	Nil	0.0147
2016 Sept	7.2267	Nil	Nil	Nil	7.2267	Nil	33.65	0.023	Nil	Nil	0.0103
2016 Oct	4.6448	Nil	Nil	Nil	4.6448	Nil	13.30	0.023	Nil	Nil	0.0385
2016 Nov	6.1626	Nil	Nil	Nil	6.1626	Nil	27.06	0.023	Nil	Nil	0.0192
2016 Dec											
Total	44.8608	0.4025	1.9967	Nil	42.4616	Nil	126.77	0.253	0.00014	0.1106	0.4167

Note:
1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Appendix F

Environmental Mitigation Implementation Schedule (EMIS)

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
Air Quality Measures					
New Distributor Roads Serving the Planned KTD					
AEIAR-130/2009 S3.2	AEIAR 130/2009 EM&A Manual S2.2	8 times daily watering of the work site with active dust emitting activities.	Contractor	All relevant worksites	Implemented
Decommissioning of the Radar Station of the former Kai Tak Airport					
AEIAR-130/2009 S5.2.19	AEIAR 130/2009 EM&A Manual S4.2.4	The excavation area should be limited to as small in size as possible and backfilled with clean and/or treated soil shortly after excavation work. The exposed excavated area should be covered by the tarpaulin during night time. The top layer soils should be sprayed with fine misting of water immediately before the excavation.	Contractor	All relevant worksites	Not Applicable
Trunk Road T2					
AEIAR-174/2013 S4.9.2.1	AEIAR-174/2013 EM&A Manual S2.3.1.1	Watering of the construction areas 12 times per day to reduce dust emissions by 91.7%, with reference to the "Control of Open Fugitive Dust Sources" (USEPA AP-42). The amount of water to be applied would be 0.91L/m2 for the respective watering frequency.	Contractor	All relevant worksites	Implemented
		Dust enclosures with watering would be provided along the loading ramps and conveyor belts for unloading the C&D materials to the barge for dust suppression.	Contractor	All relevant worksites	Not Applicable
		8 km per hour is the recommended limit of the speed for vehicles on unpaved site roads.	Contractor	All relevant worksites	Implemented
		Good Site Practices			
AEIAR-130/2009 S3.2, S5.2.19, AEIAR-174/2013 S4.9.2.2	AEIAR 130/2009 EM&A Manual S2.2, S4.2, AEIAR-174/2013 EM&A Manual S2.3.1.2	Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be fully covered by impermeable sheeting to reduce dust emission.	Contractor	All relevant worksites	Partially Implemented
		Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. Use of frequent watering for particularly dusty construction areas and areas close to ASRs.	Contractor	All relevant worksites	Implemented
		Misting for the dusty material should be carried out before being loaded into the vehicle. Any vehicle with an open load carrying area should have properly fitted side and tail boards.	Contractor	All relevant worksites	Implemented
		Material having the potential to create dust should not be loaded from a level higher than the side and tail boards and should be dampened and covered by a clean tarpaulin.	Contractor	All relevant worksites	Partially Implemented
		Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations; The tarpaulin should be properly secured and should extent at least 300 mm over the edges of the sides and tailboards. The material should also be dampened if necessary before	Contractor	All relevant worksites	Partially Implemented

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
		transportation.			
		The vehicles should be restricted to maximum speed of 10 km per hour. Confined haulage and delivery vehicle to designated roadways insider the site. Onsite unpaved roads should be compacted and kept free of lose materials.	Contractor	All relevant worksites	Implemented
		Vehicle washing facilities should be provided at every vehicle exit point. Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	Contractor	All relevant worksites	Partially Implemented
		Every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.	Contractor	All relevant worksites	Implemented
		Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.	Contractor	All relevant worksites	Implemented
		Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed.	Contractor	All relevant worksites	Implemented
		Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system.	Contractor	All relevant worksites	Implemented
		Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.	Contractor	All relevant worksites	Implemented
		Open stockpiles shall be avoided or covered. Prevent placing dusty material storage piles near ASRs.	Contractor	All relevant worksites	Partially Implemented
		Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs.	Contractor	All relevant worksites	Implemented
		Dark smoke			
		Dark smoke emission shall be control in accordance with the Air Pollution Control (Smoke) Regulation and ETWB TCW 19/2005.	Contractor	All relevant worksites	Implemented
		Plant and equipment should be well maintained to prevent dark smoke emission.	Contractor	All relevant worksites	Implemented
Noise Measures					
Trunk Road T2					

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
AEIAR-174/2013 S5.9.2.1	AEIAR-174/2013 EM&A Manual S3.4.1.1	The use of quieter plant, including Quality Powered Mechanical Equipment (QPME) is specified for the list of equipment: • Concrete lorry mixer • Dump Truck, 5.5 tonne < gross vehicle weight <= 38 tonne • Generator, Super Silenced, 70 dB(A) at 7m • Poker, vibratory, Hand-held (electric) • Water Pump, Submersible (Electric) • Mobile Crane - KOBELCO CKS900 • Excavator, wheeled/tracked - HYUNDAI R80CR-9	Contractor	All relevant worksites	Implemented
		Use of temporary or fixed noise barriers with a surface density of at least 10kg/m^2 to screen noise from movable and stationary plant.	Contractor	All relevant worksites	Not Applicable
		Use of enclosures with covers at top and three sides and a surface density of at least 10kg/m^2 to screen noise from generally static noisy plant such as air compressors.	Contractor	All relevant worksites	Not Applicable
		Use of acoustic fabric for the silent piling system, drill rigs, rock drills etc.	Contractor	All relevant worksites	Implemented
		<u>Good Site Practices</u>			
AEIAR-130/2009 S3.3, S5.3.10, AEIAR-174/2013 S5.9.2.1	AEIAR 130/2009 EM&A Manual S2.3, S4.3.2, AEIAR-174/2013 EM&A Manual S3.4.1.1	Only well-maintained plant should be operated on-site and plant shall be serviced regularly during the construction/ decommissioning program.	Contractor	All relevant worksites	Implemented
		Silencers or mufflers on construction equipment should be utilized and shall be properly maintained during the construction/ decommissioning program.	Contractor	All relevant worksites	Not Applicable
		Mobile plant, if any, should be sited as far away from NSRs as possible.	Contractor	All relevant worksites	Implemented
		Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or should be throttled down to a minimum.	Contractor	All relevant worksites	Implemented
		Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.	Contractor	All relevant worksites	Implemented
		Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction/ decommissioning activities.	Contractor	All relevant worksites	Implemented
		Use of site hoarding as a noise barrier to screen noise at low level NSRs.	Contractor	All relevant worksites	Implemented
		For the use of hand held percussive breakers (with mass of above 10kg) and portable air compressors (supply air at 500 kPa or above), the noise level of such PME shall comply with a stringent noise emission standard and a noise emission label shall be obtained from the DEP before use at any time in construction site.	Contractor	All relevant worksites	Implemented

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
		Quiet powered mechanical equipment (PME) shall be used for the construction of the Project.	Contractor	All relevant worksites	Implemented
		Full enclosures shall be used to screen noise from relatively static PMEs (including air compressor, bar bender, concrete pump, generator and water pump) from sensitive receiver(s).	Contractor	All relevant worksites	Not Applicable
		Movable cantilevered noise barriers shall be used to screen noise from mobile PMEs (including asphalt paver, breaker, excavator and hand-held breaker) from sensitive receiver(s). These movable cantilevered noise barriers shall be located close to the mobile PMEs and shall be moved/adjusted iteratively in step with each movement of the corresponding mobile PMEs in order to maximize their noise reduction effects.	Contractor	All relevant worksites	Not Applicable
		Only approved or exempted Non-road Mobile Machineries (NRMMs) including regulated machines and non-road vechicles with proper labels are allowed to be used in specified activities on-site.	Contractor	All relevant worksites	Implemented
Water Quality Measures					
Trunk Road T2					
		Accidental Spillage			
AEIAR-174/2013 S6.4.8.5	AEIAR-174/2013 EM&A Manual S4.2.1.1	All bentonite slurry should be stored in a container that resistant to corrosion, maintained in good conditions and securely closed; The container should be labelled in English and Chinese and note that the container is for storage of bentonite slurry only.	Contractor	All relevant worksites	Implemented
		The storage container should be placed on an area of impermeable flooring and bunded with capacity to accommodate 110% of the volume of the container size or 20% by volume stored in the area and enclosed with at least 3 sides.	Contractor	All relevant worksites	Implemented
		The storage container should be sufficiently covered to prevent rainfall entering the container or bunded area (water collected within the bund must be tested and disposed of as chemical waste, if necessary). An emergency clean up kit shall be readily available where bentonite fluid will be stored or used.	Contractor	All relevant worksites	Implemented
		The handling and disposal of bentonite slurries should be undertaken in accordance within ProPECC PN 1/94. Surplus bentonite slurries used in construction works shall be reconditioned and reused wherever practicable. Residual bentonite slurry shall be disposed of from the site as soon as possible as stipulated in Clause 8.56 of the General Specification for Civil Engineering Works. The Contractor should explore alternative disposal outlets for the residual bentonite slurry (dewatered bentonite slurry to be disposed to a public filling area and liquid bentonite slurry, if mixed with inert fill material, to be disposed to a public filling area) and disposal at landfill should be the last resort.	Contractor	All relevant worksites	Implemented
AEIAR-174/2013 S6.4.8.8	AEIAR-174/2013 EM&A Manual	In order to protect against impacts to the surrounding marine waters of the KTTS and Victoria Harbour in the event of an accidental spillage of fuel or oil, the Contractor will be required to	Contractor	All relevant worksites	Implemented

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
	S4.2.1.1	prepare a spill response plan to the satisfaction of AFCD, EPD, FSD, Police, TD and WSD to define procedures for the control, containment and clean-up of any spillage that could occur on the construction site.			
		Dredging, Reclamation and Filling			
		No dredging, reclamation or filling in the marine environment shall be carried out.	Contractor	All relevant worksites	Implemented
Decommissioning of the Radar Station of the former Kai Tak Airport					
		Building Demolition			
AEIAR-130/2009 S5.4	AEIAR 130/2009 EM&A Manual S4.4	The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed as far as practicable in order to minimise surface runoff and the chance of erosion.	Contractor	All relevant worksites	Not Applicable
		There is a need to apply to EPD for a discharge licence under the WPCO for discharging effluent from the construction site. The discharge quality is required to meet the requirements specified in the discharge licence. All the runoff, wastewater or extracted groundwater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. It is anticipated that the wastewater generated from the works areas would be of small quantity. Monitoring of the treated effluent quality from the works areas should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.	Contractor	All relevant worksites	Implemented
		General Construction Works			
		Construction Runoff			
AEIAR-130/2009 S3.4, S5.4/ AEIAR-174/2013 S6.4.8.1	AEIAR 130/2009 EM&A Manual S2.4, S4.4/ AEIAR-174/2013 EM&A Manual S4.2.1.1	Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include the use of sediment traps and adequate maintenance of drainage systems to prevent flooding and overflow.	Contractor	All relevant worksites	Partially Implemented
		Construction site should be provided with adequately designed perimeter channel and pre-treatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.	Contractor	All relevant worksites	Implemented
		Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the	Contractor	All relevant worksites	Implemented

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
		cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.			
		Sediment tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m^3 capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.	Contractor	All relevant worksites	Implemented
		Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50 m^3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	Contractor	All relevant worksites	Partially Implemented
		Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.	Contractor	All relevant worksites	Implemented
		Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.	Contractor	All relevant worksites	Not Applicable
		Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Contractor	All relevant worksites	Not Applicable
		An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	Contractor	All relevant worksites	Implemented
		Drainage			
		It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There should be no direct discharge of effluent from the site into the sea.	Contractor	All relevant worksites	Implemented
		All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control	Contractor	All relevant worksites	Partially Implemented

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
		measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.			
		Stormwater Discharges			
		Minimum distances of 100 m should be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes.	Contractor	All relevant worksites	Not Applicable
		Sewage Effluent			
		Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor should also be responsible for waste disposal and maintenance practices.	Contractor	All relevant worksites	Implemented
		Debris and Litter			
		In order to maintain water quality in acceptable conditions with regard to aesthetic quality, contractors should be required, under conditions of contract, to ensure that site management is optimised and that disposal of any solid materials, litter or wastes to marine waters does not occur. Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering into the adjacent harbour waters. Stockpiles of cement and other construction materials should be kept covered when not being used.	Contractor	All relevant worksites	Implemented
		Accidental Spillage			
		Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to the nearby harbour waters, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour WCZ. The bund should be drained of rainwater after a rain event.	Contractor	All relevant worksites	Implemented
		Waste Management Measures			
		Waste Management Plan			
AEIAR-174/2013 S11.4.8.1	AEIAR-174/2013 EM&A Manual S9.2.1.2	Contractor should be requested to submit an outline Waste Management Plan (WMP) prior to the commencement of construction work, in accordance with the ETWB TC(W) No.19/2005 so as to provide an overall framework of waste management and reduction.	Contractor	All relevant worksites	Implemented
		Good Site Practices			

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
AEIAR-130/2009 S3.5, S5.5	AEIAR 130/2009 EM&A Manual S2.5, S4.5	Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	Contractor	All relevant worksites	Implemented
		Training of site personnel in proper waste management and chemical waste handling procedures.	Contractor	All relevant worksites	Implemented
		Provision of sufficient waste disposal points and regular collection for disposal.	Contractor	All relevant worksites	Partially Implemented
		Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.	Contractor	All relevant worksites	Implemented
		A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).	Contractor	All relevant worksites	Implemented
		<u>Waste Reduction Measures</u>			
		Sort C&D waste from demolition of the remaining structures to recover recyclable portions such as metals.	Contractor	All relevant worksites	Not Applicable
		Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	Contractor	All relevant worksites	Partially Implemented
		Encourage collection of aluminum cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force.	Contractor	All relevant worksites	Implemented
		Any unused chemicals or those with remaining functional capacity should be recycled.	Contractor	All relevant worksites	Implemented
		Proper storage and site practices to minimize the potential for damage or contamination of construction materials.	Contractor	All relevant worksites	Implemented
		<u>Construction and Demolition Materials</u>			
		Where it is unavoidable to have transient stockpiles of C&D material within the work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.	Contractor	All relevant worksites	Implemented
		Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric.	Contractor	All relevant worksites	Partially Implemented
		Skip hoist for material transport should be totally enclosed by impervious sheeting.	Contractor	All relevant worksites	Implemented
		Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site.	Contractor	All relevant worksites	Implemented
		The area where vehicle washing takes place and the section of the road between the washing	Contractor	All relevant	Implemented

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
		facilities and the exit point should be paved with concrete, bituminous materials or hardcores.		worksites	
		The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.	Contractor	All relevant worksites	Implemented
		All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.	Contractor	All relevant worksites	Implemented
		The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.	Contractor	All relevant worksites	Implemented
		When delivering inert C&D material to public fill reception facilities, the material should consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system as stipulated in the ETWB TCW No. 31/2004 “Trip Ticket System for Disposal of Construction and Demolition Materials” should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. An Independent Environmental Checker should be responsible for auditing the results of the system.	Contractor	All relevant worksites	Implemented
		Chemical Waste			
		After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Contractor	All relevant worksites	Partially Implemented
		General Refuse			
		General refuse should be stored in enclosed bins or compaction units separate from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Effective collection and storage methods (including enclosed and covered area) of site wastes would be required to prevent waste materials from being blown around by wind, wastewater discharge by flushing or leaching into the marine environment, or creating odour nuisance or pest and vermin problem.	Contractor	All relevant worksites	Partially Implemented
Land Contamination Measures					
		For any excavation works conducted at Radar Station			
AEIAR-130/2009 S3.6.57	AEIAR 130/2009 EM&A Manual S4.6	As the risk due to dermal contact with groundwater by site workers is uncertain, it is recommended that personnel protective equipment (PPE) be used by site workers as a mitigation measure.	Contractor	All relevant worksites	Not Applicable

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
Landscape and Visual Impact					
New Distributor Roads Serving the Planned KTD					
		Construction Phase			
AEIAR-130/2009 S3.8.12	AEIAR 130/2009 EM&A Manual S2.8	All existing trees should be carefully protected during construction.	Contractor	All relevant worksites	Not Applicable
		Trees unavoidably affected by the works should be transplanted where practical. Detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBC 2/2004 and 3/2006. Final locations of transplanted trees should be agreed prior to commencement of the work.	Contractor	All relevant worksites	Not Applicable
		Control of night-time lighting.	Contractor	All relevant worksites	Not Applicable
		Erection of decorative screen hoarding.	Contractor	All relevant worksites	Implemented
Trunk Road T2					
		Construction Phase			
AEIAR-174/2013 S9.9.1.1	AEIAR-174/2013 EM&A Manual S7.2.1.2	All works shall be carefully designed to minimize impacts on existing landscape resources and visually sensitive receivers. Existing trees within works area shall be retained and protected.	Contractor	All relevant worksites	Not Applicable
		Existing trees of good quality and condition that are unavoidably affected by the works should be transplanted.	Contractor	All relevant worksites	Not Applicable
		Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance.	Contractor	All relevant worksites	Partially Implemented
		Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance.	Contractor	All relevant worksites	Implemented
		Erection of decorative screen hoarding should be designed to be compatible with the existing urban context.	Contractor	All relevant worksites	Implemented
		All lighting in construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC user. The contractor shall consider other security measures, which shall minimize the visual impacts.	Contractor	All relevant worksites	Not Applicable
General Condition					
		The Permit Holder shall display conspicuously a copy of this Permit on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times.	Contractor	All relevant worksites	Implemented

MATERIALAB CONSULTANTS LIMITED
Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong..
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

EIA Ref	EM&A Ref	Environmental Protection Measures / Mitigation Measures	Who to implement the measure	Location / Timing	Construction Phase Implementation Status
		The Permit Holder shall ensure that the most updated information about the Permit, including any amended Permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).			

Implementation status: Implemented / Partially Implemented / Not Implemented / Not Applicable