

Maeda Corporation

MONTHLY REPORT (JULY 2018)

MTRCL Contract C3840-13C

Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works



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By Email and Post

MTR Corporation Limited Fo Tan Railway House No. 9, Lok King Street, Fo Tan Shatin, N.T., Hong Kong

Attn.: Mr. Alfa Liu

8 August 2018

Dear Sirs,

Consultancy Agreement A130-13 Independent Environmental Checker for CRS and LTS CRS - Verification for 53rd Monthly Environmental Monitoring and Audit (EM&A) Report (July 2018) (Report No.: EB001340R0721)

We refer to the 53rd Monthly EM&A Report (July 2018) received under cover of the email from the Environmental Team, Arcadis Design & Engineering Limited, dated on 7 August 2018.

We have no further comment and have verified the captioned report (Report No.: EB001340R0721).

Should you have any queries, please feel free to contact the undersigned at 3922 9366.

Yours faithfully

AECOM Consulting Services Ltd

Y. W. Fung

Independent Environmental Checker

LLMC/wwsc

Arcadis Design & Engineering Limited Maeda Corporation

(Attn.: Mr. F. N. Wong) (Attn.: Ms. Cecilia Lee)

via email via email





Maeda Corporation

Monthly EM&A Report (JULY 2018)

MTRCL Contract C3840-13C

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CONTENTS

EXE	ECUTIV	'E SUMMARY	3
1	INTF	RODUCTION	4
	1.1	The Reporting Period	4
	1.2	Project Background	4
	1.3	Environmental Status	4
	1.4	Construction Activities	5
2	EM8	A REQUIREMENTS	6
	2.1	Air Quality	6
	2.2	Construction Noise	9
3	MON	NITORING RESULTS	12
	3.1	Air Quality	12
	3.2	Construction Noise	12
	3.3	Conclusions and Recommendations	13
4	ENV	IRONMENTAL AUDIT	14
	4.1	Site Inspection	14
	4.2	Compliance with Legal/Contractual Requirement	15
	4.3	Environmental Complaints	15
	4.4	Notification of Summons/Successful Prosecutions	15
5	CON	ISTRUCTION WASTE	16
	5.1	Waste Management	16
	5.2	Waste Management Status and Record	16
6	FUT	URE ENVIRONMENTAL ISSUES	16
	6.1	Key Environmental Issues	16
	6.2	Mitigation Measures	16
7	CON	ICLUSIONS AND RECOMMENDATIONS	
	7.1	Conclusions	17
	7.2	Recommendations	17

APPENDICES

Appendix A

Site Location Plan

Appendix B

Management Structure

Appendix C

Construction Programme

Appendix D

Implementation Schedule

Appendix E

Status of Environmental Licenses and Permits

Appendix F

Event and Action Plan

Appendix G

Monitoring Schedule

Appendix H

Weather Information Extracted from HK Observatory

Appendix I

Certificate of Laboratory and Equipment Calibration

Appendix J

Sample Data Record Sheet

Appendix K

Monitoring Results and Plots

Appendix L

Flow Chart for Handling Environmental Complaints

Appendix M

Waste Management Record

EXECUTIVE SUMMARY

Breaches of Action and Limit Levels

- ES01 No Notice of Exceedance. The environmental monitoring results registered no breaches of Action and Limit Levels of air quality and construction noise during the Reporting Period, therefore, associated investigation and follow-up actions were not required.
- ES02 No major corrective actions were taken as the environmental audit during the Reporting Period observed:
 - 1) No deficiencies with major environmental significance of the required environmental mitigation measures;
 - 2) No non-compliance with the required waste management; and
 - 3) No adverse environmental impacts on the sensitive receivers environed with the site of the Project.

Environmental Complaints

ES03 No environmental complaints were recorded during the Report Period.

Notification of Summons & Successful Prosecutions

ES04 No notification of summons and successful prosecutions were recorded during the Reporting Period.

Reporting Changes

ES05 Project Organization Chart in Environmental Management was updated during the Reporting Period. See Appendix B.

Future Key Issues

General

ES06 Construction noise, air quality and water quality are continued to be the key issues for the coming construction period. In order to alleviate potential adverse environmental impacts generated from construction activities to acceptable levels, environmental mitigation measures recommended in the EM&A Plan and summarised in the Implementation Schedule should be fully implemented and improved whenever appropriate.

Construction Noise

ES07 Particular attention should be paid to construction noise mitigation measures to ensure full compliance with statutory and non-statutory requirements and guidelines. Proactive review of working methods, careful selection and arrangement of the noisy equipment as well as effective noise mitigation measures are strongly recommended.

Water Quality

ES08 In addition, compliance with water quality mitigation measures remains one of the key environmental issues within the construction period, especially when water usage is high. Waste water treatment plant was replaced by sedimentation tank and no quarterly water sampling test due to no water discharge during the Reporting Period.

Air quality

ES09 Furthermore, implementation of necessary construction dust suppression measures is recommended during dusty activities under dry and windy conditions.

1 INTRODUCTION

1.1 The Reporting Period

- 1.1.1 This is the 53rd monthly EM&A report (hereinafter referred as 'This Report') covering construction period from 1 to 31 July 2018 (hereinafter referred as 'the Reporting Period').
- 1.1.2 This Report has been written in accordance with the *Environmental Monitoring and Audit Plan* (hereinafter referred as 'the EM&A Plan') enclosed in the *Project Profile MTR Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works*, which is registered in the Environmental Permit No. EP-440/2012 (hereinafter referred as 'the EP') (Register No.: PP-462/2012).

1.2 Project Background

- 1.2.1 In order to improve the appearance of Carnarvon Road Entrance D1 and D2 of Tsim Sha Tsui (hereafter referred as 'TST') Station and to provide a more comfortable walking environment nearby, MTR Corporation Limited (hereafter referred as 'MTRC' or 'the Corporation') has commissioned Meada Corporation (hereinafter referred as 'MC') the contract MTR Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works (hereafter referred as 'the Project'). The Project is proposed to rebuild the existing Entrance D1 and D2 and construct a new Entrance D3 at the basement B2 level of the K11 Art Mall to connect to the TST station by a subway, which extends from the Entrance D1 and D2 and runs approximately 80m along Carnarvon Road and across the Bristol Avenue to the Entrance D3. The Project was commenced in March 2014 and is anticipated to be completed by the end of 2018.
- 1.2.2 The existing TST Station had been in operation before the *Environmental Impact Assessment Ordinance* (hereafter referred as 'EIAO') comes into effect on 1 April 1998. It constitutes an exempted Designated Project (hereinafter referred as 'DP') according to Section 9(2) (g) of the EIAO (Cap. 499). As the Project involves a material change to an exempted DP which may have potential environmental impacts, an environmental permit is required prior to the commencement of the modification works. The Project Profile has been developed to provide information for direct application of an environmental permit. The EP has been granted since 18 July 2012, after the Project Profile and the associated *EM&A Plan* were registered.
- 1.2.3 Site map, works area and locations of the environmental monitoring under the Project are illustrated in Figure 1.1 Site Location Plan of *Appendix A*.
- 1.2.4 Management structure of the Project, including organization chart, lines of communication and contact names and telephone numbers of key personnel, is demonstrated in *Appendix B*.
- 1.2.5 Construction programme is shown in *Appendix C*, whereas implementation schedule for the recommended environmental mitigation measures (hereinafter referred as 'the Implementation Schedule') are summarised in *Appendix D*, which fine tunes the construction activities and shows inter-relationships with the environmental protection/mitigation measures for the construction period. It is being reviewed and will be updated soon upon availability of more solid information.

1.3 Environmental Status

1.3.1 As required in the EP, AECOM Consulting Services Limited has been appointed as the Independent Environmental Checker under the Project (hereinafter referred as 'the IEC'), whereas Arcadis Design and Engineering Limited (formerly known as Hyder Consulting Limited) has been appointed as the Environmental Team under the Project (hereinafter referred as 'the ET').

- 1.3.2 According to the EP Condition 3.2 (a) under Environmental Monitoring and Audit (EM&A) during the Construction Period, baseline monitoring has been completed and the required Baseline Monitoring Report has been submitted to EPD on 14 February 2014 prior to commencement of the works under the Project.
- 1.3.3 Status of relevant environmental permits, licences, and/or notifications on environmental protection for the Project is summarised in *Table 1-3-1* below. They are detailed in *Appendix E*.

Table 1-3-1 Summary of Status of Environmental Licenses and Permits

Item	Description	License/Permit Status		
1	Air Pollution Control (Construction Dust)	Notification Ref. 403252, 421293 & 433242 acknowledged on 02 Jun 2016, 18 Sep 2017 & 07 May 2018 respectively		
2	Water Pollution Control Ordinance (Discharge License)	The discharge license (Ref No. WT00019722-2014) was granted on 01 Sep 2014 superseding the previous license (Ref No. WT00018229-2014)		
3	Billing Account for Disposal of Construction Waste	A/C Ref. 7018523 granted on 25 Oct 2013		
4	Chemical Waste Producer Registration	Registration Ref. 5213-2214-M2446-16 granted on 4 Mar 2014		
5	Construction Noise Permit	GW-RE0158-18 approved on 12 March 2018 for operation of 4 submersible water pump (electric) or 1 drill for 24-hr; 4 drill & 4 grinder for 07:00-23:00 from 1 April 2018 to 30 September 2018.		

1.4 Construction Activities

1.4.1 Construction activities undertaken during the Reporting Period and the following month are summarised in *Table 1-4-1*:

Table 1-4-1 Construction Activities

Item	Description			
	Construction Activities Undertaken during the Reporting Period			
1	Construction of the ABWF works			
2	Installation of the BS related works			
3	Reinstatement of the DSD drainage			
4	Demolition of Temporary Staircase			
	Construction Activities to be Undertaken in the Up-Coming Month			
1	Defect Rectification for ABWF and BS works at Entrance D2 & D3			
2	Backfilling of the subway			
3	Reinstatement of Underground Utility			
4	Demolition of Temporary Staircase			
5	Construction of Entrance D1			

2 EM&A REQUIREMENTS

2.1 Air Quality

Monitoring Parameters and Frequency

- 2.1.1 24-Hour Total Suspended Particulates (hereinafter referred as '24-Hr TSP') is required to be monitored once a week during construction period of the Project.
- 2.1.2 1-Hour Total Suspended Particulates (hereinafter referred as '1-Hr TSP') is required to be monitored when exceedances of 24-Hr TSP occur, following the Event and Action Plan presented in *Appendix F*.
- 2.1.3 Schedules for 24-Hr TSP monitoring for the Reporting Period and the next month were prepared and submitted to MTRC, IEC and MC prior to implementation via e-mail and / or facsimile for ease of necessary inspection. If amendment is necessary under ad hoc conditions, including actual and broadcast adverse weather, accidental instrument failures, etc., notification will be given at least 24 hours prior to implementation or as practical as possible. The monitoring schedules are enclosed in *Appendix G*.

Monitoring Location

- 2.1.4 According to the EM&A Plan, Mirador Mansion was designated to be the air quality monitoring station of the Project. As the access to the air monitoring location designated in the EM&A Plan has been denied by the owner of the property, the ET proposes an alternative monitoring location on the roof-top above the 4/F of the commercial complex of K11 (hereinafter referred as 'K11'), which has been agreed among MTRC, IEC and MC, and the associated access to K11 has been granted by the management office of K11 prior to the commencement of the baseline monitoring in January 2014.
- 2.1.5 Air quality monitoring location is summarised in *Table 2-1-1* below and illustrated in *Appendix A*.

Table 2-1-1 Air Quality Monitoring Location

Location ID	Name of Premises	Description
K11	K11 Art Mall	Rooftop, 4/F

Monitoring Equipment

2.1.6 The air quality monitoring equipment to be used for construction air impact monitoring is shown in *Table 2-1-2* below:

Table 2-1-2 Air Quality Monitoring Equipment

Equipment Type	Model	Serial Number	Calibration Orifice Number
High Volume Air Sampler	TE5170 MFC	0462	1785
Sibata Digital Dust Monitor	LD-3B	456677	Not Applicable

2.1.7 Weather information including wind speeds and wind directions is obtained from King's Park Weather Station. The weather information is used as weather conditions during the Reporting Period. They are presented in *Appendix H*.

Calibration of Monitoring Equipment

2.1.8 The HVAS is calibrated before commencement of monitoring using standard orifice 5-points calibration method with orifice calibrator to determine the actual flow rate of each HVAS. A calibration Kit (Model - TE5025A) is used for calibration of the HVAS. At least once every 12 months, recalibration of the calibration kit is carried out during its maintenance.

- 2.1.9 Calibration of the HVAS is conducted following the manufacturer's instruction manual. Initial calibration of the equipment is conducted upon installation and thereafter at bimonthly intervals throughout the period of impact monitoring. The transfer standard should be traceable to the internationally recognised primary standard and be calibrated annually.
- 2.1.10 The Sibata Digital Dust Monitor LD-3B for 1-hour TSP monitoring is calibrated annually and the calibration certificates of the equipment are shown in *Appendix I*.

Monitoring Methodology - 24-Hr TSP

2.1.11 Air quality monitoring (24-Hr TSP) will be conducted once a week under typical weather conditions (with no adverse weather such as typhoon signal or rain storm warning).

Installation of HVAS

- 2.1.12 When positioning the HVAS, the following points will be noted:
 - a) A horizontal platform with appropriate support to secure the samplers against gusty wind will be provided;
 - b) No two samplers will be placed less than 2 m apart;
 - c) The distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler where possible;
 - d) A minimum of 2 m of separation from walls, parapets and penthouses is required for rooftops samplers;
 - e) A minimum of 2 m of separation from any supporting structure, measured horizontally is required;
 - f) No furnace or incinerator flue or building vent is nearby;
 - g) Airflow around the sampler is unrestricted;
 - h) The sampler is more than 20 m from the drip line;
 - i) Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring;
 - Permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
 - k) A secured supply of electricity is needed to operate the samplers.

Preparation of Filter Papers and Laboratory Analysis

- 2.1.13 Sufficient pieces of filter paper should be labelled before sampling. It should be a clean filter paper with no pinholes, and should be conditioned in a humidity-controlled chamber for over 24-hour and be pre-weighed before use for the sampling. The preferred room temperature is around 25 °C \pm 3 °C with relative humidity (hereinafter referred as 'the RH') less than 50% \pm 5%, preferably 40%.
- 2.1.14 Preparation of filters and subsequent laboratory analysis of the collected 24-Hr TSP samples were performed by ALS Technetiem (HK) Pty Ltd (hereinafter referred as 'ALS'), a local laboratory which have been accredited under Hong Kong Laboratory Accreditation Scheme (HOKLAS).
- 2.1.15 All the collected samples should be kept by the ET in standard office conditions for 6 months before disposal.

Field Monitoring Procedures

- 2.1.16 Procedures for field monitoring are as follows:
 - a) Check power supply to ensure the HVAS works properly.
 - b) Clean the filter holder and the area surrounding the filter.
 - c) Remove the filter holder by loosening the four bolts and carefully align a new filter, with stamped number upward, on a supporting screen.
 - d) Align the filter properly on the screen so that the gasket forms an airtight seal on the outer edges of the filter.
 - e) Fasten the swing bolts to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges.
 - f) Close the shelter lid and secure with the aluminium strip.

- g) Warmed-up the HVAS for about 5 minutes to establish run-temperature conditions.
- h) Set a new flow rate record sheet into the flow recorder.
- i) Checked and adjust the flow rate of the HVAS at around 1.1 m³ per minute. (The range specified in the EM&A Plan is between 0.6-1.7 m³ per minute.)
- j) Set the programmable timer for a sampling period of 24 hours, and record the starting time, weather condition and the filter number.
- k) Record the initial elapsed time.
- I) At the end of sampling, remove the sampled filter carefully and fold it in half-length so that only surfaces with collected particulate matter are in contact.
- m) Place the sampled filter in a clean plastic envelope and seal.
- n) Record all monitoring information on a Field Data Sheet as shown in *Appendix J*.
- o) Send the filters to ALS for analysis.

Monitoring Methodology – 1-Hr TSP

Field Monitoring

- 2.1.17 The procedures for measurement of 1-Hr TSP follow Manufacturer's Instruction Manual, which is summarised as follows:
 - a) Turn on the power.
 - b) Close the air collecting opening cover.
 - c) Set the "TIME SETTING" switch to [BG].
 - d) Press "START/STOP" switch to perform background measurement.
 - e) Turn the knob at SENSI ADJ position.
 - f) Leave the equipment upon "SPAN CHECK" is indicated in the display.
 - g) Press "START/STOP" switch to perform automatic sensitivity adjustment.
 - h) Turn the knob at MEASURE position.
 - i) Set time period of 1 hour for the 1-hour TSP measurement.
 - j) Press "START/STOP" to start the 1-hour TSP measurement.
 - k) Check the time period to ensure monitoring time of 1 hour.
 - I) Record all monitoring information on a Field Data Sheet.

Maintenance and Calibration

- 2.1.18 The procedures for maintenance and calibration of 1-Hr TSP follow Manufacturer's Instruction Manual as follows:
 - a) The Sibata is checked at 3-month intervals and calibrated at 1-year intervals throughout the whole construction period.
 - b) Calibration records for the Sibata Digital Dust Monitor direct dust meters are shown in **Appendix I**.

Action and Limit Levels

2.1.19 The Action and Limit levels (hereinafter referred as 'the A/L Levels) at K11 have been established in the Baseline Monitoring Report in accordance with the derivation criteria specified in Section 3.7 of the EM&A Plan, which are summarised in *Table 2-1-3* as follows:

Table 2-1-3 Derivation of Action and Limit Levels for Air Quality at K11, μg/m³

Parameter	Action Level	Limit Level
24-Hr TSP	For baseline level ≤200 µg/m³, Action level = (130% of baseline level + Limit level)/2	260
1-Hr TSP	For baseline level ≤384 µg/m³, Action level = (130% of baseline level + Limit level)/2 For baseline level >384 µg/m³, Action level = Limit level	500

2.1.20 The established A/L Levels for 24-Hr and 1-Hr TSP are summarised in Table 2-1-4 as follows:

Table 2-1-4 Action & Limit Levels for Air Quality at K11, μg/m³

Parameter	Action Level	Limit Level
24-Hr TSP	221.6	260
1-Hr TSP	373	500

Event and Action Plan

2.1.21 In case exceedances of Action and/or Limit levels for air quality occur, Event and Action Plan for Air Quality enclosed in *Appendix F* will be implemented.

Environmental Mitigation Measures for Air Quality

- 2.1.22 Although most of the construction works would be carried out underground, appropriate dust mitigation measures as stipulated in the EP, Project Profile, related environmental regulation including Air Pollution Control (Construction Dust) Regulation as well as those recommended in the Implementation Schedule should be implemented to control fugitive dust emission. The following key dust suppression measures are recommended:
 - a) Decking over the excavation areas;
 - b) Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather;
 - Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers;
 - d) Provision of vehicle washing facilities at the exit points of the site; and
 - e) Provision of tarpaulin covering for any dusty materials on a vehicle leaving the site.
- 2.1.23 Details of the implementation schedule for the required environmental mitigation measures are presented in *Appendix D*.

2.2 Construction Noise

Monitoring Parameters and Frequency

2.2.1 **Table 2-2-1** summarizes the monitoring parameters and frequency for construction noise:

Table 2-2-1 Noise Monitoring Parameters and Frequency

Parameters	Frequency
L _{eq} in 30 minutes	Once a week

2.2.2 Monitoring schedules for construction noise for the Reporting Period and the next Reporting Period are prepared and submitted to MTRC, IEC and MC prior to implementation via e-mail and / or facsimile for ease of necessary inspection. Where amendment is necessary under ad hoc conditions, including actual and broadcast adverse weather, accidental instrument failures, etc., advanced notification is given at least 24 hours prior to implementation or as practical as possible.

Monitoring Equipment

2.2.3 With reference to the Technical Memorandum (TM) issued under the Noise Control Ordinance (NCO), sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications (both publications have been withdrawn and replaced by 61672:2003) are used for carrying out the noise monitoring. The details of the calibration of the sound level meters and their respective calibrators are as shown in the following *Table 2-2-2*:

Table 2-2-2 Construction Noise Monitoring Equipment

Item	Equipment Name	Model
1	Sound Level Meter	B&K2238 (Serial No. 2562782)
2	Acoustic Calibrator	CAL200 (Serial No. 10929)

Monitoring Location

- 2.2.4 As stated in previous **Section 2.1.4**, the alternative air quality monitoring location K11 which is proposed by the ET and agreed among MTRC, IEC and MC, i.e. on the roof-top above the 4/F of the commercial complex of K11, is used for the construction noise monitoring location. The access to K11 has been granted by the management office of the K11 prior to the commencement of the baseline monitoring in January 2014.
- 2.2.5 **Table 2-2-3** summarizes the recommended alternative noise monitoring location, which is illustrated in **Appendix A**.

<u>Table 2-2-3 Noise Monitoring Location</u>

Location ID	Name of Premises	Description
K11	K11 Art Mall	Rooftop, 4/F

Monitoring Methodology

Field Monitoring

- 2.2.6 Procedures for noise monitoring summarised as follows:
 - a) The microphones of the Sound Level Meter are about 1 m from the exterior of the building façade.
 - b) The battery condition is checked to ensure the correct functioning of the meter.
 - c) Parameters such as frequency weighting, the time weighting, the measurement time and monitoring frequency are set as follows:
 - i. Frequency weighting: A
 - ii. Time weighting: Fast
 - iii. Time measurement: 30 minutes' intervals (between 0700-1900 on normal weekdays)
 - iv. Monitoring frequency: one set of measurement on a weekly basis
 - d) Prior to and after each noise measurement, the meter is calibrated using a Calibrator for 94 dB at 1 kHz. If the difference in the calibration level before and after measurement is more than 1 dB, the measurement should be considered invalid and the measurement repeated after re-calibration or repair of the equipment.
 - e) During the monitoring period, the Leg(30 min) are recorded.
 - f) Record all monitoring information on a Field Data Sheet as shown in Appendix J.
 - g) Maintenance and Calibration.
 - h) The meter and calibrator are sent to the supplier or HOKLAS laboratory to check and calibrate prior to the monitoring. Calibration records are presented in *Appendix I*.

Weather Condition

2.2.7 The wind speeds and directions during the monitoring period are recorded and shown in **Appendix H.**

Action and Limit Levels

2.2.8 The Action and Limit levels (hereinafter referred as 'the A/L Levels) at K11 have been established in the Baseline Monitoring Report. They are summarised in *Table 2-2-4* as follows:

<u>Table 2-2-4 Action and Limit Levels for Construction Noise</u>

Time Period	Action Level	Limit Level
0700-1900 hours on normal	When one valid documented	75*
weekdays	complaint is received.	75*

Note: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

Event and Action Plan

2.2.9 In case exceedances of Action and/or Limit levels for construction noise occur, the Event and Action Plan enclosed in *Appendix F* will be triggered.

Mitigation Measures for Construction Noise

- 2.2.10 Although no residual noise impact would be generated after the proposed mitigation measures are in place, the general construction noise control measures stipulated in the EP, Project Profile as well as those recommended in the Implementation Schedule should be fully implemented in order to minimise noise impacts during the construction phase. They are summarised as follows:
 - a) The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted;
 - b) The statutory and non-statutory requirements and guidelines shall be complied with;
 - Approval for the method of working, equipment and noise mitigation measures intended to be used at the site shall be granted from the Project Engineer before commencing any work;
 - d) Working methods to minimize the noise impact on the surrounding NSRs shall be formulated and executed, and the implementation of these methods shall be monitored by experienced personnel with suitable training;
 - e) Noisy equipment and noisy activities shall be located as far away from the NSRs as is practical;
 - f) Unused equipment shall be turned off;
 - g) PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided:
 - h) All plant and equipment shall be maintained regularly; and
 - Material stockpiles and other structures shall be effectively utilised as noise barriers, whenever practicable.
- 2.2.11 Details of the implementation schedule for the mitigation measures are presented in *Appendix D*.

3 MONITORING RESULTS

3.1 Air Quality

Monitoring Results

- 3.1.1 24-Hr TSP monitoring during the Reporting Period was conducted following the agreed monitoring schedule.
- 3.1.2 24-Hr TSP results of the Reporting Period are summarised in the following *Table 3-1-1*. Graphical plots of the parameter are illustrated in *Appendix K*.

Table 3-1-1 Summary of 24-Hr TSP Monitoring Results, µg/m³

Monitoring Date	24-Hr TSP	Action Level	Limit Level
3 July 2018	41.0		
10 July 2018	39.3		
16 July 2018	32.2	224.6	200
23 July 2018	33.6	221.6	260
30 July 2018	26.4		
Mean (Min – Max)	34.5 (26.4- 41.0)		

Discussion

- 3.1.3 **Table 3-1-1** demonstrates that all 24-Hr TSP results of the Reporting Period fluctuated well below the A/L Levels of the parameter, i.e. neither Action Level nor Limit Level exceedances were recorded.
- 3.1.4 No Notice of Exceedances (thereinafter referred as 'NOE'). Therefore, the associated NOE Investigation as well as remedial actions were not required during the Reporting Period.

3.2 Construction Noise

Monitoring Results

- 3.2.1 Construction noise monitoring during the Reporting Period was conducted following the agreed monitoring schedule.
- 3.2.2 Construction noise monitoring results of the Reporting Period are summarised in the following *Table 3-2-1*. Graphical plots of the parameter are illustrated in *Appendix K*.

Table 3-2-1 Summary of Construction Noise Monitoring Results at K11, dB(A)

Monitoring Date	Leq (30 min)	Action Level	Limit Level
3-July-18	68.1		
10-July-18	67.6		
17-July-18	67.9	Any documented	
24-July-18	66.9	complaint against	75
31-July-18	66.8	construction noise.	
Mean (Min – Max), Leq (30 min)	67.5 (66.8-68.1)		

Discussion

- 3.2.3 No environmental complaint against construction noise was registered during the Reporting Period, whereas Table 3-2-1 demonstrates that all construction noise results of the Reporting Period were fell below the Limit Level of the parameter. Neither exceedances of Action Level nor exceedances of Limit Level were recorded.
- 3.2.4 Neither NOE nor NOE investigation and the associated remedial actions were required during the Reporting Period.
- 3.2.5 The Contractor's attention is drawn to certain noisy construction activities, which were scheduled to be conducted during the coming month as listed in *Table 1-4-1* under **Section 1.4:** Construction Activities Undertaken during the Reporting Period and Up-Coming Month.
- 3.2.6 Attention is drawn to adequate mitigation measures to be implemented during the noisy construction activities in order to alleviate noise nuisance generated from the Project related construction activities.

Weather Conditions

- 3.2.7 No weather conditions or any other factors were identified to have significant effects on the air and noise monitoring results within the Reporting Period.
- 3.2.8 Weather information during the Reporting Period which is extracted from Hong Kong Observatory King's Park Weather Station and enclosed for reference in *Appendix H*.

3.3 Conclusions and Recommendations

Conclusions

- 3.3.1 No exceedances of A/L Levels of air quality and construction noise were registered during the Reporting Period.
- 3.3.2 No NOE and the associated NOE Investigation and corrected actions were required during the Reporting Period.

Recommendations

- 3.3.3 Full implementation of the environmental mitigation measures, which are required in the EM&A Plan and summarised in Implementation Schedule of *Appendix D*, is recommended. Where necessary, proper maintenance and improvement of the implemented mitigation measures are reminded.
- 3.3.4 Construction dust shall be suppressed during dusty construction activities under dry and windy conditions.
- 3.3.5 In addition, construction noise shall be eliminated to avoid adverse impacts on the nearby sensitive receivers.

4 ENVIRONMENTAL AUDIT

4.1 Site Inspection

- 4.1.1 Weekly site inspections during the Reporting Period were conducted by MTRC, MC and ET, whereas the monthly site inspection of the Reporting Period was jointly conducted by the IEC, MTRC, MC and ET. The site inspection follows strictly to the agreed Site Inspection Checklist, which covers all the site audit requirements stipulated in the EM&A Plan, PS and all relevant environmental laws.
- 4.1.2 The completed Site Inspection Checklists are distributed to relevant parties upon completion of the site inspection for agreement and signature of the relevant parties and, where appropriate, for implementation of the recommended corrected actions to promptly rectify the situation.
- 4.1.3 The site inspections during the Reporting Period were conducted on 03, 10, 17, 24 and 31 July 2018. A joint site inspection was conducted by IEC, MTRC, MC and ET on 17 July 2018.
- 4.1.4 As the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation has been enforced since December 2015, particular attention was paid to check EPD's Non-Road Mobile Machinery (NRMM) labels demonstrated on the regulated NRMM, except those which application is in progress. Deficiencies or findings of the site audit and the associated follow up actions are summarised in the following *Table 4-1-1*:

Table 4-1-1 Summary of Findings and Follow-Up Actions of the Site Inspection

Date	Deficiencies or findings	Follow-Up Action
03 - July -2018	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
10 - July -2018	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
17 - July -2018	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
24 – July -2018	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
31 – July -2018	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.

4.1.1 As shown in *Table 4-1-1*, no major deficiencies or non-compliance of environmental mitigation measures or adverse environmental impacts were observed during the Reporting Period.

4.2 Compliance with Legal/Contractual Requirement

4.2.1 Construction activities under the Project must comply with all environmental protection and pollution control laws in Hong Kong, as well as the contractual requirements of the Project. *Table 4-2-1* summarizes breaches of legal and contractual requirements.

Table 4-2-1 Summary of Breaches of Legal and Contractual Requirements

Month	No. of Breach(s)	Cumulative no. from March 2014 to the Reporting Period
July 2018	0	0

4.3 Environmental Complaints

- 4.3.1 Environmental complaints are handled following closely the flow chart of complaint response procedure which is enclosed in *Appendix L*.
- 4.3.2 Environmental complaints registered during the Reporting Period are summarised in *Table* **4-3-1** below:

Table 4-3-1 Summary of Complaint

Month	No. of Complaint(s)	Cumulative no. from March 2014 to the Reporting Period
July 2018	0	6

4.4 Notification of Summons/Successful Prosecutions

4.4.1 Notification of summons and successful prosecutions registered during the Reporting Period are summarised in *Table 4-4-1* below:

Table 4-4-1 Summary of Summon and Successful Prosecutions

Month	No. of Breach(s)	Cumulative no. from March 2014 to the Reporting Period
July 2018	0	0

5 CONSTRUCTION WASTE

5.1 Waste Management

5.1.1 Waste management under the Project is performed in accordance with the Waste Management Plan, which has been prepared for implementation of the construction waste mitigation measures in compliance with the requirements stipulated in the EM&A Plan, PS, Waste Disposal Ordinance and the associated subsidiary regulations.

5.2 Waste Management Status and Record

- 5.2.1 Updated waste management status is detailed in *Appendix M*, where the 3-R status of the construction waste generated from construction of the Project during the Reporting Period is presented.
- 5.2.2 Despite small scale of the Project and the amount of C&D material that needs to be hauled off site and disposed of is anticipated not to be significant, 3-R waste management i.e. Reduce, Reuse and Recycle, is adopted in order to minimize adverse environmental impacts to be generated from construction of the Project.

6 FUTURE ENVIRONMENTAL ISSUES

6.1 Key Environmental Issues

- 6.1.1 Future key environmental issues include:
 - 1) Air quality, in particular construction dust during dusty construction activities, e.g. handling of dusty materials under dry and windy conditions;
 - 2) Construction noise during noisy activities; and
 - 3) Site surface water run-off and construction wastewater discharge.

6.2 Mitigation Measures

- 6.2.1 To avoid potential adverse environmental impacts to be generated from future key environmental issues as stated above, full implementation of the mitigation measures as stipulated in the Implementation Schedule in *Appendix D* is required.
- 6.2.2 Mitigation measures for air quality, construction noise and water quality implemented to date shall be properly maintained.
- 6.2.3 Where appropriate, improvement of the implemented mitigation measures is reminded to ensure effectiveness of the mitigation measures.

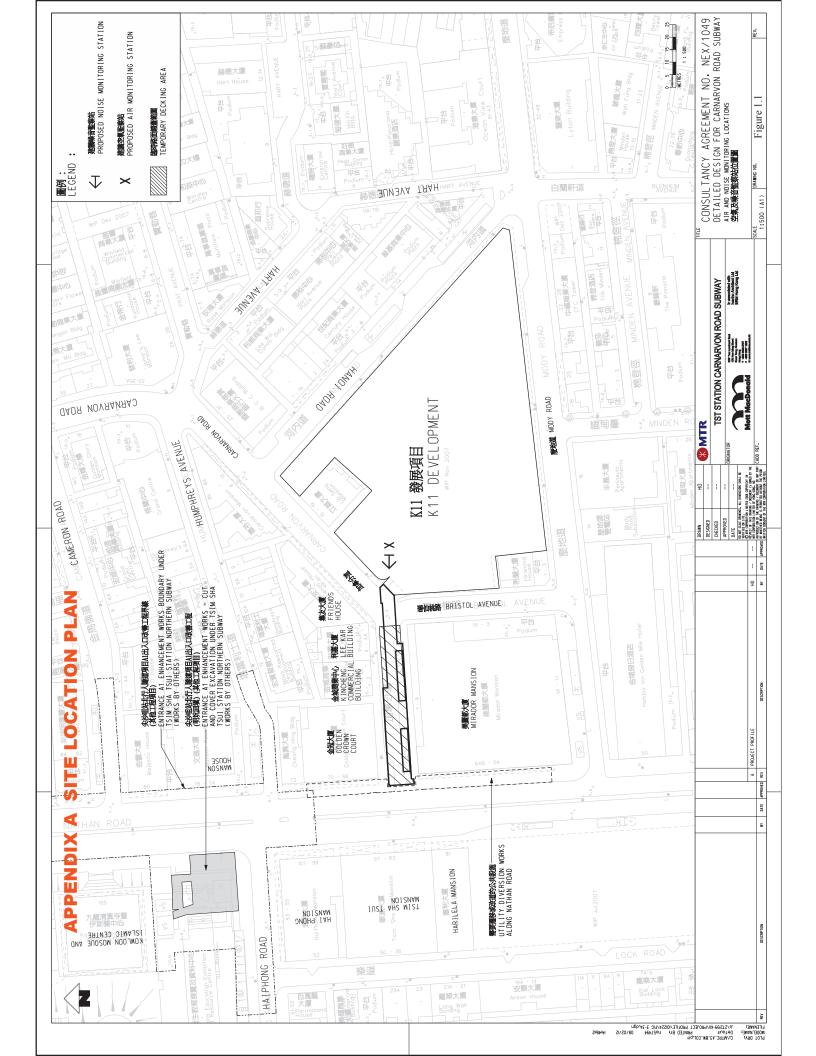
7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

- 7.1.1 EM&A results during the Reporting Period showed that adverse environmental impacts generated from construction activities under the Project was alleviated to acceptable levels via implementation of the environmental mitigation measures recommended in the EM&A Plan and summarised in the Implementation Schedule.
- 7.1.2 Neither NOE & the associated NOE investigation nor follow-up actions were required as the environmental monitoring results registered no exceedances of A/L Levels of air quality and construction noise during the Reporting Period.
- 7.1.3 No corrective actions were required as the environmental audit during the Reporting Period observed:
 - 1) No deficiencies with major environmental significance of the required environmental mitigation measures;
 - 2) No non-compliance with the required waste management; and
 - 3) No adverse environmental impacts on the sensitive receivers environed with the site of the Project.
- 7.1.4 In addition, no remedial actions were required as no notification of summons and successful prosecutions were reported during the Reporting Period.

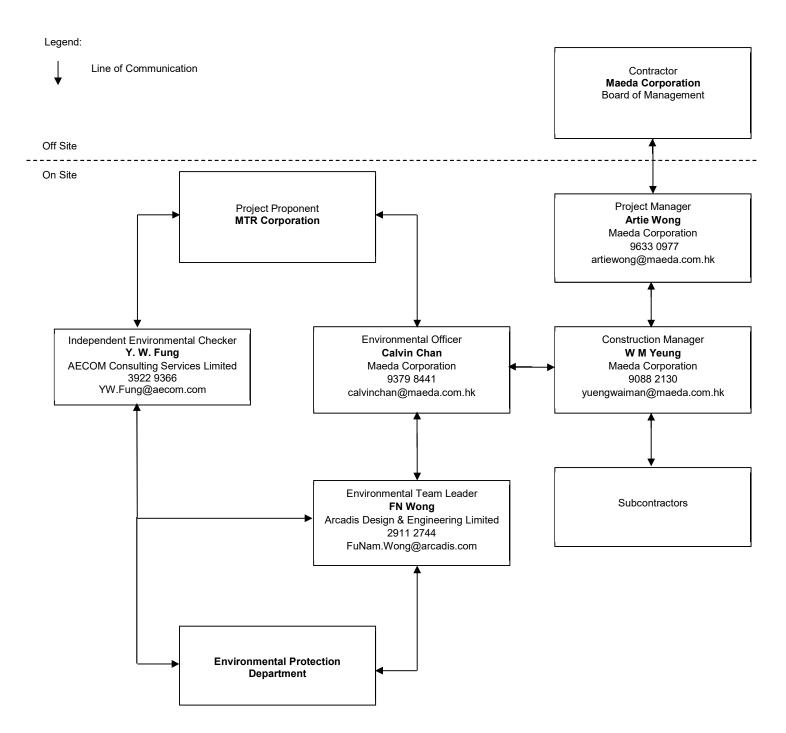
7.2 Recommendations

- 7.2.1 The existing environmental mitigation measures have been proven effective. They should be properly maintained.
- 7.2.2 Where appropriate, additional or improvement of the environmental mitigation measures should be implemented.
- 7.2.3 Particular attention should be paid to construction noise mitigation measures to ensure full compliance with statutory and non-statutory requirements and guidelines. Proactive review of working methods, careful selection and arrangement of the noisy equipment as well as effective noise mitigation measures are strongly recommended.
- 7.2.4 In addition, suppression of construction dust is reminded during dusty construction activities under dry and windy conditions.
- 7.2.5 Furthermore, monitoring of site water runoff is reminded to prevent any direct water discharge off site, especially when water usage is high during the construction period. When necessary, the Contractor is reminded to apply additional precautionary measures to prevent any possible environmental deficiency.



APPENDIX B MANAGEMENT STRUCTURE

Project Organization Chart in Environmental Management (Rev.05)



Note: In Compliance with

i) Clause.1.3 of Environmental Monitoring and Audit Manual (Appendix VII of Project Profile PP462/2012)

APPENDIX C

CONSTRUCTION PROGRAMME



Tsim Sha Tsui Station, Carnarvon Road Subway

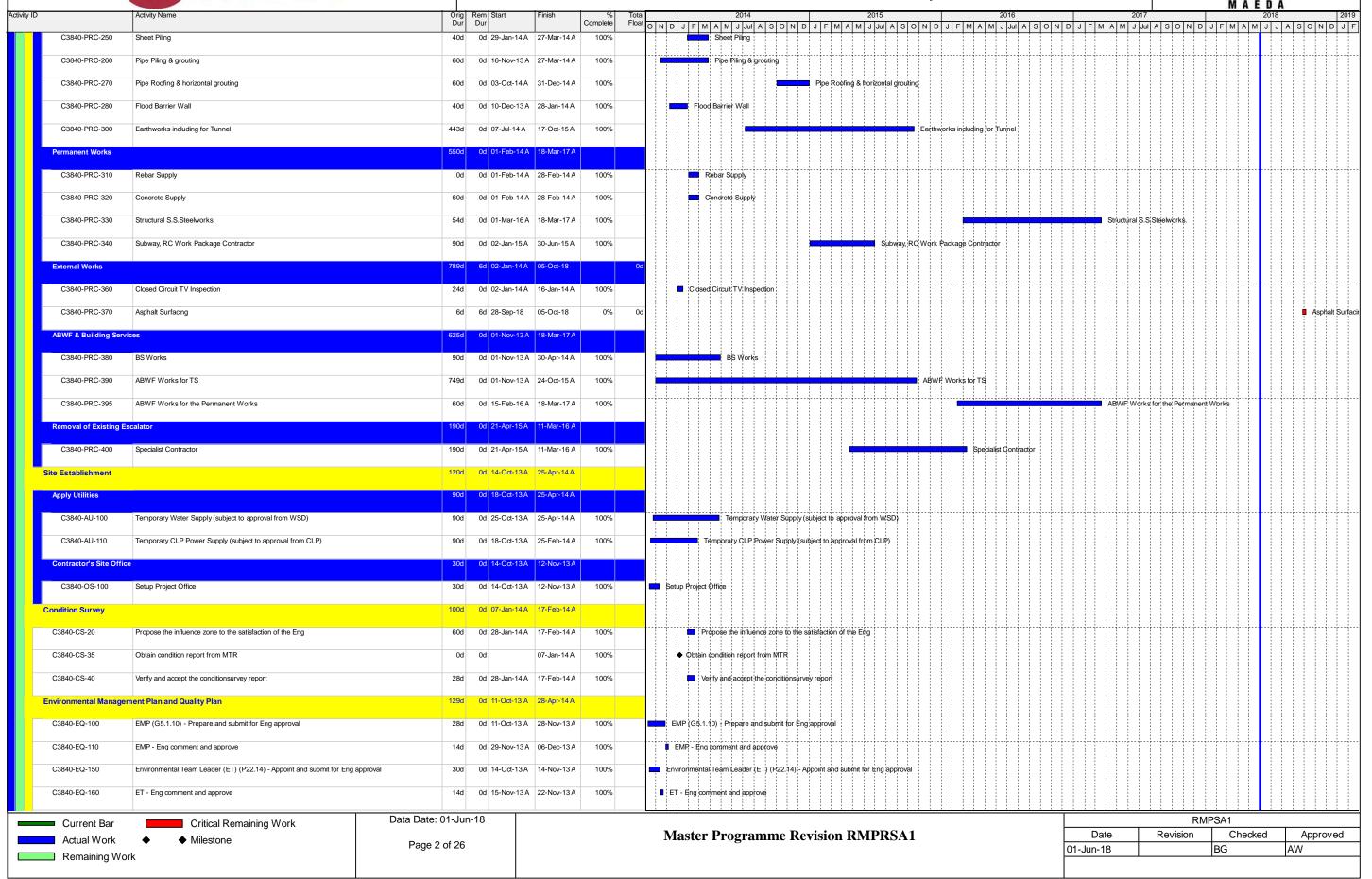


ity ID	Activity Name	Orio	Rem Start	Finish	0/ 1	Total				2014					2015			20	16		_		2017		IVI A	E D	A	
	·	Dur	Rem Start Dur		Complete	Float	0 N C	D J F	M A	2014 M J Ju		O N D	J F		2015 J Jul A	S O N	D J F	20 M A M J		0 N I	J F M	I A M	J Jul A S O	N D J	F M A	M J .	A S	0 N D
Master Programme Re	vision As Per SA1	1633d	175d 11-Oct-13 A	30-Dec-18		Od																						
Preliminaries		1633d	175d 11-Oct-13 A	30-Dec-18		0d																						
Contract Key Dates		1670d	0d 11-Oct-13 A	26-Oct-18		0d																						
C3840-CD-10	Date of Contract Award	0d	0d 11-Oct-13 A		100%		▶ Date o	of Contrac	ct Award	1																		
C3840-CD-20	Date of Commencement	04	0d 14-Oct-13 A		100%		♣ Doto	of Comme	onoomo	nt																		
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C3840-CD-30	Date for completion of the whole of the Works	0d	0d	26-Oct-18*	0%	0d																						Date for
Specified Degrees of Cor	npletion	107d	0d 08-Feb-18 A	13-Jun-18		200d																						
	Complete to Deg. 1 status for all civil engineering works and ABWF in Subway outside K11 Lot Boundary	0d	0d	26-Feb-18 A	100%																				♦ Com	lete to D	g. 1 statu	us for all civil
C3840-CD-2B	Comp. Deg. 1 for all civil & BS in Subw. inside K11, incl. works ass. with breakthro & make good K11	0d	0d	08-Feb-18 A	100%																				♦ Comp.	Deg. 1 fo	all civil &	BS in Subw.
	D. wall Complete energisation of the power isolator in the Telephone Equipment Rm	0d	0d	18-Apr-18 A	100%																					Complet	energisa	ation of the p
C3840-CD-2D	Complete energisation of MCCBs CRS1 and CRS2 in the Electrical Rm	Ua	0d	08-May-18 A	100%																					◆ Comp	ete energi	isation of MC
C3840-CD-2E	Complete all Works in the Subway and New Entrances D2 and D3	0d	0d	13-Jun-18	0%	16d																				◆ ic	mplete al	ll Works in t
Possession of Works Are	a As PS Clause P8 & PS Appendix G	0d	0d 31-Oct-13 A	31-Oct-13 A																								
C3840-AD-20	Access Date for Works Area 3840.W1 (subject to SLG/TMLG Approval)	0d	0d 31-Oct-13 A		100%		♦ Acc	ess Date	for Wor	ks Area	3840.W1	(subject t	o SLG/T	MLG Approv	/al)													
C3840-AD-30	Access Date for Works Areas 3840.W2 (subject to SLG/TMLG Approval)	0d	0d 31-Oct-13 A		100%		♦ Acc	ess Date	for Wor	ks Areas	384¢.W2	(subject	to SLG/	TMLG Appro	oval)													
Initial Site Survey		35d	0d 31-Oct-13 A	10-Dec-13 A																								
C3840-SS-20	Validate the survey record and carry out any necessary additional survey at Works Areas 3840.W1 & W2	35d	0d 31-Oct-13 A	10-Dec-13 A	100%			Validate	the sun	vey recor	d and car	ry but any	ynecess	ary additiona	al survey a	Works	reas 3840.V	/1 & W2 : :										
Vacation of Works Areas	as PS Clause P8 and PS Appendix G	0d	0d 26-Oct-18	26-Oct-18		65d																						
C3840-VD-20	Vacate Date for Works Area 3840.W1 (subject to SLG/TMLG Approval)	0d	0d	26-Oct-18	0%	65d																						♦ Vacate I
C3840-VD-30	Vacate Date for Works Area 3840.W2 (subject to SLG/TMLG Approval)	0d	0d	26-Oct-18	0%	65d																						◆ Vacate I
Procurement of Subcontr	ract Packages	1335d	6d 11-Oct-13 A	05-Oct-18		70d																						
Preliminaries and Utilitie	e Diversion	604	0d 11-Oct-13 A	12 lon 14 A																								
C3840-PRC-100	Hoardings, Fencing and Associated Metalwork	40d	0d 15-Oct-13 A	13-Jan-14 A	100%			Hoa	ardings,	Fencing	ahd Asso	ciated Me	etalwork															
C3840-PRC-110	Land Survey/Setting Out	5d	0d 15-Oct-13 A	19-Oct-13 A	100%		Land	Survey/S	Setting C	Out																		
C3840-PRC-120	Instrumentation and Monitoring	53d	0d 15-Oct-13 A	14-Dec-13 A	100%		\rightarrow	Instrum	entation	and Mo	nitoring																	
C3840-PRC-130	Advance Ground Works	28d	0d 15-Oct-13 A	15-Nov-13 A	100%		A	dvance G	round V	Vorks																	+	
C3840-PRC-140	Temporary Traffic Diversion (Consultant)	4d	0d 11-Oct-13 A	18-Oct-13 A	100%		Tem	pdrary Tra	affic Dive	ersion (C	ohsultant)																	
	Obtain Eng's Approval for Temporary Traffic Diversion (Consultant)		0d 19-Oct-13 A		100%								ateich (C	'ondultant)														
										ano iei	iiporary II	I AIRIU DIVE	U 3 3 1 1 (U	onsultant)														
C3840-PRC-160	Site Security	48d	0d 15-Oct-13 A	24-Dec-13 A	100%			Site Se	ecurity																			
C3840-PRC-200	Independent Checking Engineer (ICE)	6d	0d 18-Nov-13 A	27-Nov-13 A	100%			Independe	lent Che	cking En	gineer (IC	E)																
C3840-PRC-210	Obtain Eng's Approval for ICE	6d	0d 27-Nov-13 A	13-Dec-13 A	100%		+	Obtain F	Eng's Ar	oproval fo	or ICE		+														1-1-1	
C3840-PRC-220	Ground Investigation (Pre-drilling work)	60d	0d 15-Oct-13 A	28-Dec-13 A	100%		<u></u>	Groun	nd Ihves	tigation (Pre-drilling	g work)																
Temporary Works, ELS &	s Earthworks	512d	0d 16-Nov-13 A	17-Oct-15 A																								
					40001				0-	int D-	lidior 5	broot-																
C3840-PRC-240	Specialist Demolition Contractor	40d	0d 16-Dec-13 A	20-Feb-14 A	100%		'		Special	ist Demo	lition Cont	tractor						<u> </u>				<u> </u>						
Current Bar	Critical Remaining Work Data Date: 0	1-Jur	n-18																	Ī				RMPS				
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Tsim Sha Tsui Station, Carnarvon Road Subway









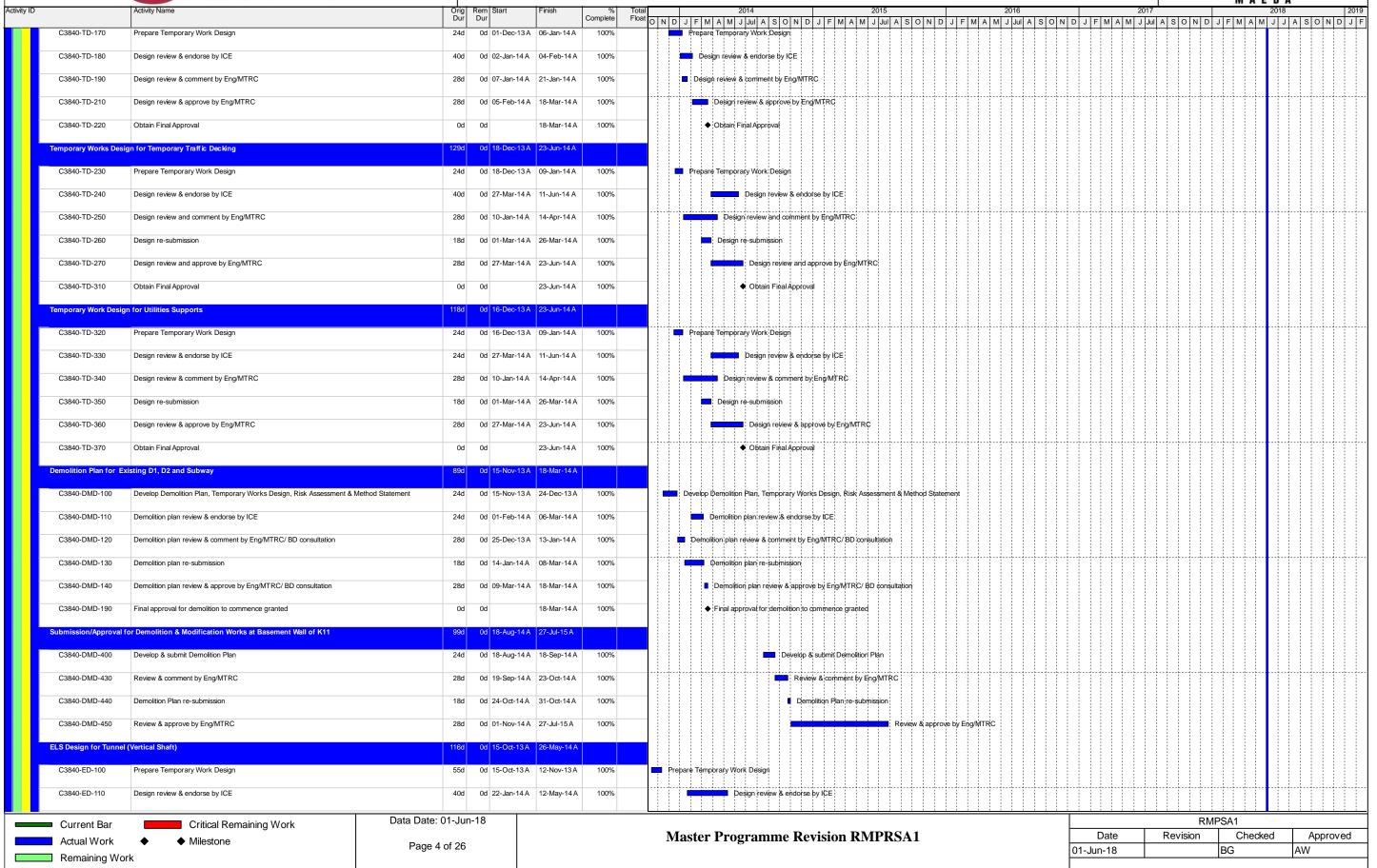


	Activity Name	Origi Rom Stort	Finish 0	Total		2014		2015		20	146		201	7		IVI A E		
	Activity Name	Orig Rem Start Dur Dur	Finish % Complete	Float O N	N D J	2014 F M A M J Jul A S O	N D J F M A M	2015 1 J Jul A	SONDJ		016 Jul A S O	N D J F I	201 M A M J J		N D J F	MAM	2018 J J A S	SOND
C3840-EQ-170	Confirm monitiroing location & setup noise monitoring deivices	30d 0d 17-Dec-	13 A 09-Jan-14 A 100%		<u> </u>	Confirm monitiroing location & set	up noise monitoring deiv	rices										
C3840-EQ-180	Baseline noise monitoring	14d 0d 10-Jan-	14 A 24-Jan-14 A 100%			Baseline hoise monitoring												
	J																	
C3840-EQ-190	Prepare baseline noise monitoring report & submit to Eng, ICE and EPD	7d 0d 25-Jan-	14 A 11-Feb-14 A 100%			Prepare baseline noise monito	oring report & submit to	Eng, ICE an	d EPD									
C3840-EQ-200	Baseline noise monitoring report review and approved by Eng, ICE and EPD	14d 0d 14-Feb-	14 A 01-Apr-14 A 100%			Baseline noise monitorin	g report review and app	proved by Er	g, ICE and EPD									
00040 FO 040	Confirm marketing backing 0 active of marketing daliding	204 04 47 De-	40.4 00 1== 44.4 4000															
C3840-EQ-210	Confirm monitoring location & setup air monitoring deivices	30d 0d 17-Dec-	13 A 09-Jan-14 A 100%			Confirm monitoring location & set	ip all monitoring delvice	5										
C3840-EQ-220	Baseline air monitoring	14d 0d 10-Jan-	14 A 25-Jan-14 A 100%		-	Baseline air monitoring												
C3840-EQ-230	Prepare baseline air monitoring report & submit to Eng, ICE and EPD	7d 0d 27-Jan-	14 A 11-Feb-14 A 100%			Prepare baseline air monitorin	ig report & submit to En	g, ICE and E	PD:									
										<u> </u>								
C3840-EQ-240	Baseline air monitoring report review and approved by Eng, ICE and EPD	14d 0d 14-Feb-	14 A 01-Apr-14 A 100%			Baseline air monitoring i	eport review and appro	ved by Eng,	ICE and EPD									
C3840-EQ-320	Quality Plan (G9.2.1) - Prepare and submit for Eng approval	28d 0d 14-Oct-	13 A 30-Dec-13 A 100%		Q	uality Plan (G9.2.1) - Prepare an	d submit for Eng approv	/al										
C3840-EQ-330	Quality Plan - Eng comment and approve	14d 0d 31-Dec-	13 A 28-Apr-14 A 100%			Quality Plan - Eng co	mment and approve											
	3																	
Health & Safety Plan		74d 0d 11-Oct-1	13 A 22-Jan-14 A															
C3840-HS-100	Health and Safety Plan (G3.6.1) - Prepare and submit for Eng approval	60d 0d 11-Oct-1	3 A 13-Dec-13 A 100%		Hea	llth and Safety Plan (\$3.6.1) - Pr	epare and submit for En	g approval										
C3840-HS-110	Health and Safety Plan - Eng comment and approve	14d 0d 14-Dec-	13 A 22-Jan-14 A 100%			Héalth and Safety Plan - Eng co	mment and arbrove											
33040 113-110	Ling comment and approve	144 00 14-060-	.57. 22 dail 177 1007			ca.ar and carety r tarr - Lify W	approve											
C3840-HS-130	System Assurance Plan as per App. K of PS - Prepare and submit for Eng appro	oval 28d 0d 11-Oct-1	3 A 20-Dec-13 A 100%		Sys	stem Assurance Plan as per App.	K of P\$ - Prepare and s	submit for Er	g approval									
C3840-HS-140	System Assurance Plan - Eng comment and approve	14d 0d 21-Dec-	13 A 09-Jan-14 A 100%		= \$	System Assurance Plan - Eng com	nment and approve											
Programme Managemen	nt en	116d 0d 11-Oct-1	30-Mar-14 A															
C3840-PM-100	Initial Three Month Rolling Programme (G4.8.1) - Prepare and submit for Eng re	review 14d 0d 11-Oct-1	13 A 28-Oct-13 A 100%		Initial Thre	ee Month Rolling Programme (G	4.8.1) - Prepare and sul	bmit for Eng	revlew									
C3840-PM-110	Preliminary Master Programme (G4.6.1) - Prepare and submit for Eng approval	al 60d 0d 11-Oct-1	3 A 12-Dec-13 A 100%		Preli	iminary Master Programme (G4.8	6.1) - Prepare and subm	nit for Eng ar	proval									
	3.47				$\top \sqcup 1$													
C3840-PM-120	Preliminary Master Programme (G4.6.1) - Eng comment	28d 0d 13-Dec-	13 A 13-Jan-14 A 100%		-	Preliminary Master Programme (G4 6.1) - Eng comment											
C3840-PM-130	Preliminary Master Programme (G4.6.1) - Re-submit for Eng approval	14d 0d 14-Jan-	14 A 11-Feb-14 A 100%	,	-	Preliminary Master Programm	ıe (G4.6.1) - Re-submit	for Eng app	roval									
C3840-PM-135	Preliminary Master Programme (G4.6.1) - Eng's further comment	14d 0d 12-Feb-	14 A 22-Feb-14 A 100%			■ Preliminary Master Program	me (G4.6.1) - Engle furt	her commer										
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C3840-PM-136	Preliminary Master Programme (G4.6.1) - Further re-submission	14d 0d 23-Feb-	14 A 27-Feb-14 A 100%			Preliminary Master Program	me (G4.6.1) - Further r	re-submissio	n									
C3840-PM-140	Preliminary Master Programme (G4.6.1) - Eng approval	14d 0d 28-Feb-	14 A 07-Mar-14 A 100%	,		Preliminary Master Progra	mme (G4.6.1) - Eng apr	oroval		 						+-+		
C3840-PM-170	Cubraignian Schodula (C42 44.4) Propose and submit for Eng approval	28d 0d 11-Oct-1	3 A 12-Nov-13 A 100%		Pulb min	sion Schedule (G12.11.1) - Prepa	us and authorid for English	and the last										
C3040-FW-170	Submission Schedule (G12.11.1) - Prepare and submit for Eng approval	280 00 11-00-	13 A 12-NOV-13 A 100 /	1 1	Submise		ire and submittor Engla	ipprovai										
C3840-PM-180	Submission Schedule - Eng comment and approve	28d 0d 13-Nov-	13 A 30-Mar-14 A 100%		+++	Submission Schedule -	Eng comment and appr	ove										
Temporary Works Design	n & Approval Process (Incl. Demolition)	1581d 175d 15-Oct-	13 A 30-Dec-18	Od														
Userdian Blan		044 0445 044	10 A 10 May 14 A															
Hoarding Plan		84d 0d 15-Oct-	13 A 18-War-14 A															
C3840-TD-100	Prepare Hoarding Plan	27d 0d 15-Oct-	13 A 11-Jan-14 A 100%			Prepare Hoarding Plah												
C3840-TD-110	Hoarding plan review & endorse by ICE	40d 0d 01-Feb-	14 A 08-Mar-14 A 100%			Hoarding plan review & en	dorse by ICE											
C3840-TD-120	Hoarding plan review & comment by Eng/MTRC	28d 0d 12-Jan-	14 A 23-Jan-14 A 100%			Hoarding plan review & commer	nt by Eng/MTRC											
C3840-TD-140	Hoarding plan re-submission	11d 0d 24-Jan-	14 A 28-Feb-14 A 100%		•	Hoarding plan re-submission	n											
C3840-TD-150	Hoarding plan review & approve by Eng/MTRC	28d 0d 01-Mar-	14 A 18-Mar-14 A 100%			☐ Hoarding plan review & a	oprove by Eng/MTRC											
								1 1 1										
C3840-TD-160	Obtain Final Approval	Od Od	18-Mar-14 A 100%			◆ Obtain Final Approval												
Flood Protection Wall		89d 0d 01-Dec-	13 A 18-Mar-14 A															
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Actual Work	◆ Milestone	Page 3 of 26			Mas	ter Programme	Revision R	MPRS	A1			01-Jun-	ate	Revision	on BO		AV	Approv



Tsim Sha Tsui Station, Carnarvon Road Subway

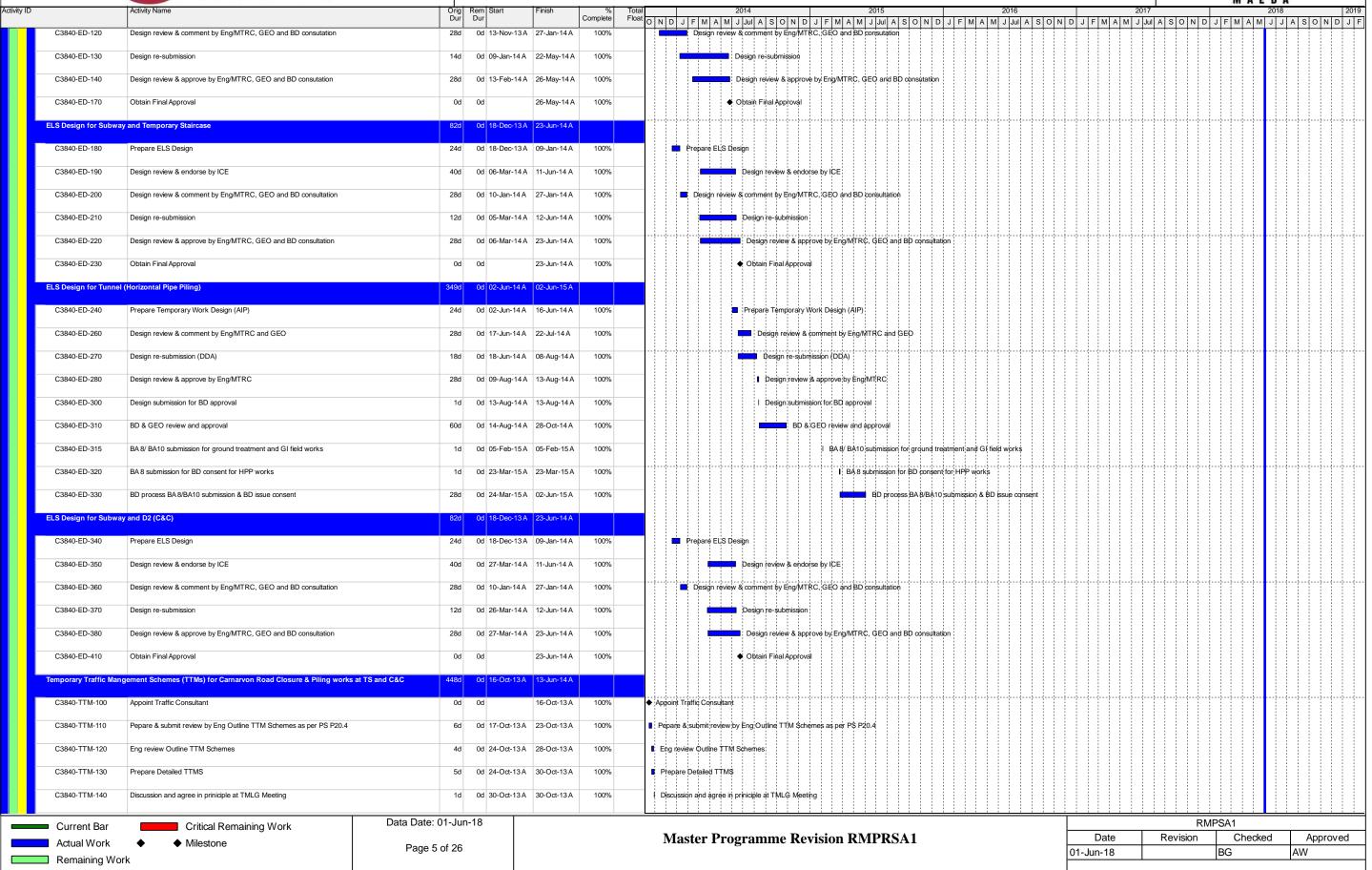






Tsim Sha Tsui Station, Carnarvon Road Subway









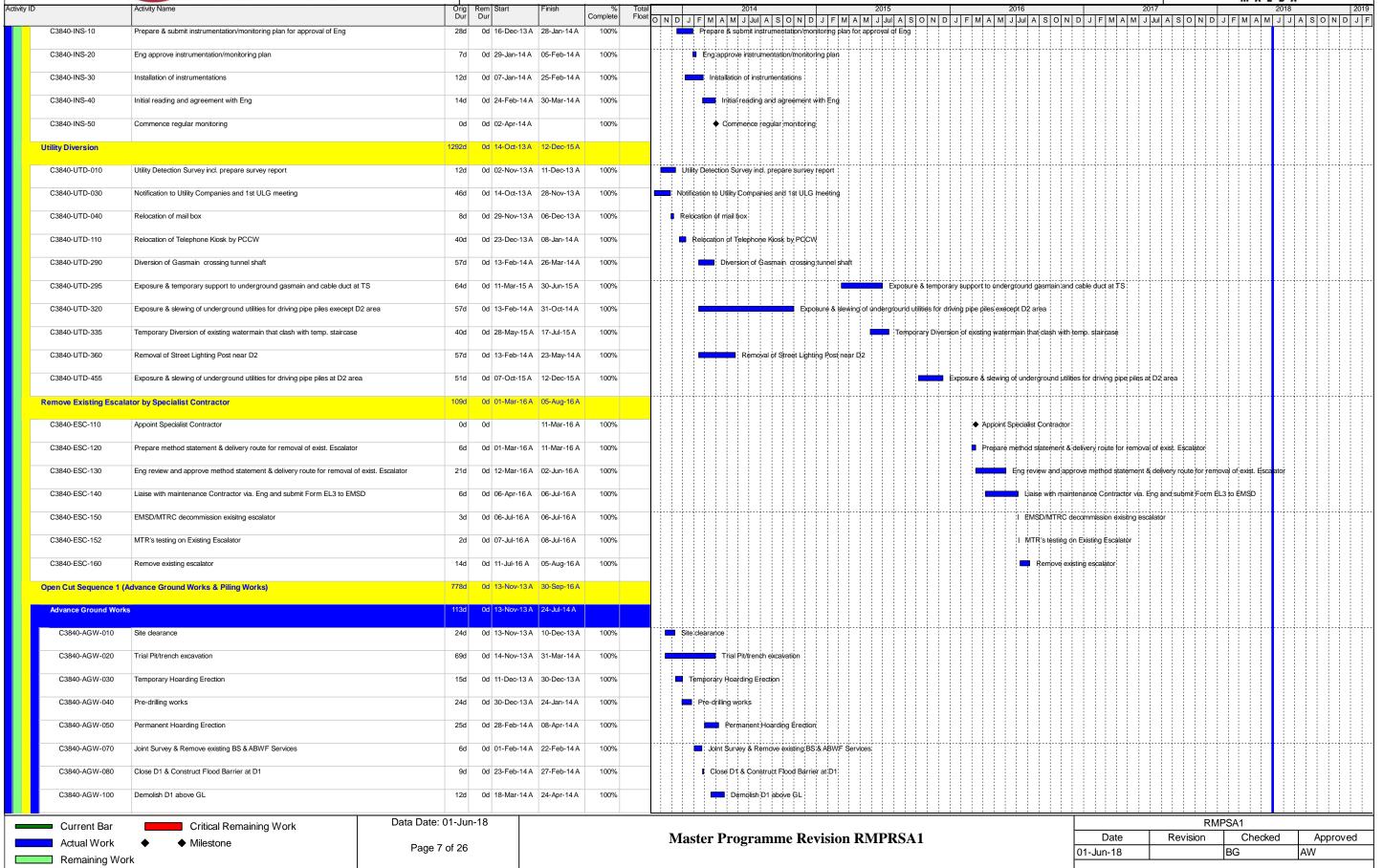


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D	Activity Name	Orig Rem Start Dur Dur	Finish	% To Complete Fi	tal 2014 Oat O N D J F M A M J Jul A	2015 S O N D J F M A M J Jul A	2016 S O N D J F M A M J Jul A S O	2017 2018 N D J F M A M J Jul A S O N D J F M A M J J A S O N
C3840-TTM-150	Final TTMS Drawings	4d 0d 31-Oct-13	3A 04-Nov-13 A	100%	Fina TTMS Drawings			
C3840-TTM-160	Eng endorse TTMS Drawings	2d 0d 05-Nov-1	3 A 06-Nov-13 A	100%	I Englendorse TTMS Drawings			
C3840-TTM-170	TTMs endorse by HKP & TD and obtain road work addvice from RMO	18d 0d 07-Nov-1	3 A 24-Nov-13 A	100%	TTMs endorse by HKP & TD an	d obtain road work addvice from RMO		
C3840-TTM-180	Obtain Gazette Notice	18d 0d 07-Nov-1	3 A 14-Nov-13 A	100%	Obtain Gazette Notice			
C3840-TTM-190	Notification to Bus Company	28d 0d 07-Nov-1	3 A 04-Dec-13 A	100%	Notification to Bus Company			
C3840-TTM-210	Relocate bus stop, trial run & TTMs implementation (road closure)	5d 0d 05-Dec-1		100%		TTMs implementation;(road closure);		
C3840-TTM-220	Application & Approval of TTM Schemes for Piling work for TS and C&C	42d 0d 24-Jan-14		100%	Applicati	tion & Approval of TTM Schemes for Piling wo	ork for 15 and C&C	
Excavation Permit (XP	?)	1581d 175d 15-Oct-13	3A 30-Dec-18					
C3840-XP-100	XP in hand of MTR	Od Od	15-Oct-13 A	100%	◆ XP in hand of MTR			
C3840-XP-110	Transfer XP permit holder from MTR to Maeda & XP payment arrangement	ent 15d 0d 15-Oct-13	31-Oct-13 A	100%	■ Transfer XP permit holder from MT	R to Maeda & XP payment arrangement		
C3840-XP-130	Implement 1st XP	0d 0d 01-Nov-1	ЗА	100%	♦ Implement 1st XP			
C3840-XP-140	Implement Period 1st XP	1422d Od 01-Nov-1	3 A 22-Sep-17 A	100%				Implement Period 1st XP
C3840-XP-150	Re-application and issue 2nd XP	180d Od 20-Apr-17	'A 09-Aug-17 A	100%	-			Re-application and issue 2nd XP
C3840-XP-160	Implement 2nd XP	0d 0d 23-Sep-1	7 A	100%	-			◆ Implement 2nd XP
C3840-XP-170	Implement Period for 2nd XP	464d 213d 23-Sep-1	7 A 30-Dec-18	40.95%	Dd .			
Milestones for Cost C	Centre A - Preliminaries	1525d 45d 29-Aug-1	4 A 03-Oct-18	.	Bd			 -
C3840-MS-A01	A1-Approval of PMP, S. P., ICE, ELS design for Cofferdam & temp decking		29-Aug-14 A	100%	4	A1-Approval of PMR, S.P., ICE, ELS design	tor Cofferdam & temp decking	
C3840-MS-A02	A2-Approval of ELS design of mined tunnel & Eng's confirmation of satisfa		28-Oct-14 A	100%	_		I tunnel & Eng's confirmation of satisfactory implem	of DM Sa
C3840-MS-A03	A3-Approval for mehod for demolition of K11 Diag. Wall & Eng's confirma P.		13-Nov-14 A	100%			ition of K11 Diag. Wall & Eng's confirmation of satis	
C3840-MS-A04	A4- Eng's confirmation of satisfactory implementation of Programming Ma	inagement System 0d 0d	30-Nov-14 A	100%		♦ A4- Eng's confirmation of satisfar	ctory implementation of Programming Manageme	pt System
C3840-MS-A05	A5- Eng's confirmation of satisfactory implementation of Specified Plans	Od Od	16-Mar-15 A	100%		◆ A5+ Eng's confirmat	tion of satisfactory implementation of Specified Pla	ns .
C3840-MS-A06	A6- Eng's confirmation of satisfactory implementation of Programming Ma	inagement System 0d 0d	19-May-15 A	100%		◆ A6- Eng's o	onfirmation of satisfactory implementation of Progr	amming Management System
C3840-MS-A07	A7- Eng's confirmation of satisfactory implementation of Specified Plans	Od Od	12-Aug-15 A	100%		◆ A	7- Eng's confirmation of satisfactory implementation	in of Specified Plans
C3840-MS-A08	A8- Eng's confirmation of satisfactory implementation of Programming Ma	inagement System 0d 0d	04-Jan-16 A	100%			A8- Eng's confirmation of satisfact	tory implementation of Programming Management System
C3840-MS-A09	A9- Eng's confirmation of satisfactory implementation of Specified Plans	Od Od	15-Mar-16 A	100%	-		◆ A9- Eng's confirmation of	satisfactory implementation of Specified Plans
C3840-MS-A10	A10- Eng's confirmation of satisfactory implementation of Programming M	lanagement System 0d 0d	29-May-16 A	100%			♦ A10- Eng's conf	irmation of satisfactory implementation of Programming Management System
C3840-MS-A11	A11- Eng's conf. of satisf. implem. of S. P. and approval of all procedures	for T&C of BS & ABWF 0d 0d	26-May-17 A	100%	-			◆ A11- Engls conf. of satisf. implem. of S. P. and approval of all pro
C3840-MS-A12	works A12- Eng's confirmation of satisfactory implementation of Programming M	lanagement System 0d 0d	27-Nov-16 A	100%				◆ A12- Eng's confirmation of satisfactory implementation of Programming Mahagement \$
C3840-MS-A13	A13- Eng's confirmation of satisfactory implementation of Specified Plans	Od Od	26-Feb-17 A	100%	_			◆ A13- Eng's confirmation of satisfactory implementation of Specified Plans
C3840-MS-A14	A14- Eng's confirmation of satisfactory implementation of Programming M		28-May-17 A	100%				♦ A14- Eng's confirmation of satisfactory implementation of Progra
C3840-MS-A15					24			
	A15- Approval in principle of draft O&M Manuals and draft As-built Drwgs		19-Aug-18					◆ A15- Appri
C3840-MS-A16	A16-Approval in principle of O&M Manuals and As-built Drwgs. for Whol		03-Oct-18		8d			♦ A16-
Carnarvon Road Sub	bway and Entrances	1352d 122d 14-Oct-13	3A 26-Oct-18		3d			
Instrumentation		52d Od 16-Dec-13	3A 02-Apr-14A		<mark>/</mark>			
		Data Date: 01-Jun-18					<u> </u>	RMPSA1
Current Bar	Critical Remaining Work	Data Date: 01-Juli-16						
Current Bar Actual Work	Critical Remaining Work ◆ Milestone	Page 6 of 26			Master Program	me Revision RMPRS	A1	Date Revision Checked Appro 01-Jun-18 BG AW











Tsim Sha Tsui Station, Carnarvon Road Subway



	Activity Name	Orig Re	em Start	Finish	- %	Total			20	014		2	2015				2016				201	7			2	.018	
C3840-AGW-120	Install temporary steel deek platform in D4 opening			22-May-14 A	Complete 100%		O N D	J F M	A M J	Jul A S O N	D J F N	M A M J	J Jul A S	OND	J F	M A N	/ J Jul	ASON	I D J	F M A	M J J	ul A S C	N D J	J F M	A M J	J A S	3 0
C3040-AGW-120	Install temporary steel deck platform in D1 opening	90	00 25-Api-14A	22-Way-14 A	100%					istali terriporary ste	ei deck platio		Jennig														
C3840-AGW-130	Relocate hoarding along south footpath	4d	0d 08-May-14 A	13-May-14 A	100%				I Rel	lbcate hoarding al	ong south foot	path															
C3840-AGW-140	Implement TTA stg 1 to expose utilities/left-in piles & slewing cables as necessary along south footpath	1d	0d 23-May-14 A	23-May-14 A	100%				l Im	nplement TTA stg	1 to expose ut	ilities/left-in	piles & slew	ing cables	as neces	sary alon	g south f	ootpath					1-1-1-	+++++			
C3840-AGW-150	Complete expose utilities/left-in piles & cable slewing as necessary	0d	0d	21-Jul-14 A	100%					◆ Complete ex	pose utilities/le	eft-in piles &	cable slew	ng as nece	ssary												
00040 4004 400		4.1	01 00 1144	00 11444	1000/																						
C3840-AGW-160	Implement TTA stg 2 (diversion of pedestrain route)	10	0d 22-Jul-14 A	22-Jul-14 A	100%					I Implement T	A Stg 2 (dive	rsion or pea	iestrain rou	(e)													
C3840-AGW-170	Relocate hoarding to suit pipe piling	4d	0d 23-Jul-14 A	24-Jul-14 A	100%					I Relocate ho	arding to suit p	oipe piling															
Piles & Grouting for	r Vertical Shaft	113d	0d 08-Apr-14 A	18-Oct-14 A																							
C3840-EVS-010	Mobilization for Piling Rig and Setup	4d	0d 08-Apr-14 A	28-Apr-14 A	100%				Mobil	illzation for Piling R	ig and Setub																
00040 EV0 045																											
C3840-EVS-015	1 no. test pile & 3 nos. performance piles	6d	00 08-May-14 F	22-May-14 A	100%				_ ''	no. test pile & 3 no	s. periorman	ce piles															
C3840-EVS-020	39 nos. pipe piles	35d	0d 23-May-14 A	09-Aug-14 A	100%				-	39 nos. pi	e piles																
C3840-EVS-040	Curtain Grouting at vertical shaft	18d	0d 25-Aug-14 A	18-Oct-14 A	100%					c	urtain Groutin	g at vertical	l shaft														
Piles & Grouting for	r Temporary Staricase & C&C Subway	685d	0d 14-Jun-14 A	24-Sep-16 A																							
_										<u> </u>	<u> </u>		J														
C3840-ETS-020	79 nos. pipe piles along Grid Line A	4/d	0d 15-Jul-14 A	05-Feb-15 A	100%						79	nos. pipe p	olles along G	irid Line A													
C3840-ETS-028	Curtain Grouting for C&C, stage 1	24d	0d 23-Dec-14 A	13-Mar-15 A	100%							Curtain G	Frouting for	C&C, stage	1												
C3840-ETS-029	Curtain Grouting for C&C, stage 2	30d	0d 09-Aug-16 A	24-Sep-16 A	100%													Curt	ain Groutii	ng for C&	C, stage	2					
C3840-ETS-032	3 nos. pipe piles between Grids 1 & 2	6d	0d 13-Oct-14 A	05-Nov-14 A	100%						3 nos. pipe pil	es between	Grids 1 &	2													
																									.		
C3840-ETS-042	Drill for H4 & H5 (exclude drilling for rock socket)	6d	0d 21-Oct-14 A	24-Oct-14 A	100%						rill for H4 &:H	5 (exclude o	drilling for re	ock sockiet)													
C3840-ETS-044	Drill for H5 (rock socket), H6, H7 & H8 and Install/grout for H4 to H8	17d	0d 02-Feb-15 A	25-Feb-15 A	100%							Drill for H5 ((rock socke	t), H6, H7	& H8 and	d Install/g	rout for F	4 to H8									
C3840-ETS-052	Implement TTM 803	6d	0d 21-Oct-14 A	22-Oct-14 A	100%					I Ir	nplement TTM	1 803															
C3840-ETS-053	Relocation of hoarding & Implement TTM 804	6d	0d 20-Nov-14 A	28-Nov-14 A	100%						Relocation	of hoarding	& Impleme	nt TTM 80	4												
C3840-ETS-054	Trial transh augustion for driving short all a class Nothern Dead	104	04 22 04 14 4	04-Nov-14 A	100%						Trial trench ex	ran ration for			Nother	n Dood											
C3040-E13-034	Trial trench excavation for driving sheet pile along Nathan Road	120	00 25-00-14A	04-NOV-14 A	100%						i, nai, ii en ur e	Cavalionio	i unving sin	set plie aloi	iy ivalila	II Koaq											
C3840-ETS-060	Type III Sheet Pile, 102m along Nathan Road	6d	0d 05-Nov-14 A	21-Nov-14 A	100%					-	Type III She	et Pile, 102	n along Na	than Road													
C3840-ETS-070	Type III Sheet Pile along Carnarvon Road	12d	0d 14-Jun-14 A	25-Jun-14 A	100%				•	Type III Sheet F	lle along Carr	narvon Road	d				1			1	1		1-1-1-				
C3840-ETS-075	Toe Grouting (only install grout pipe) along Carnarvon Road	8d	0d 27-Jun-14 A	07-Jul-14 A	100%				ı	Toe Grouting	only install gro	out pipe) alc	ong Carnar	on Road													
C3840-ETS-080	Toe Grouting for sheet piles along Nathan Road & Carnarvon Road	8d	0d 20-Nov-14 A	03-Dec-14.4	100%						Toe Grout	ing for shee	et niles alon	n Nathan R	oad & O	arnarvon	Road										
														J													
C3840-ETS-090	Mobilization; 2nd Piling Rig and Setup	4d	0d 05-Jul-14 A	14-Jul-14 A	100%					■ Mobilization; 2	and Piling Rig	and Setup															
C3840-ETS-091	Demobilization; 2nd Piling Rig	1d	0d 20-Sep-14 A	20-Sep-14 A	100%					I Dem	bilization; 2ho	l Piling Rig															
C3840-ETS-092	Mobilization; Drilling Rig for Curtain Grouting for TM800	1d	0d 26-Sep-14 A	26-Sep-14 A	100%					I Mob	lization; Drillin	g Rig for Cu	urtain Grou	ting for TM8	300		+			+							
C3840-ETS-093	Demobilization; Drilling Rig for Curtain Grouting	1d	0d 16-Oct-14 A	16-Oct-14 A	100%					l D	emobilization;	Drilling Ria 1	for Curtain	Grouting													
															Thanks										.		
C3840-ETS-094	Mobilization; Drilling Rig for Curtain Grouting for TM803	10	0d 22-Oct-14 A	22-Oct-14 A	100%					1 N	obilization; Dr	lling Rig for	r Curtain Gi	outing for	INS03												
C3840-ETS-095	Demobilization for Drilling Rig & Mobilization for Curtain Grouting Rig	1d	0d 12-Nov-14 A	12-Nov-14 A	100%						Demobilization	on for Drilling	g Rig & Mo	oilization for	Curtain	Grouting	Rig										
C3840-ETS-096	Demobilization: Curtain Grouting Rig	1d	0d 28-Nov-14 A	28-Nov-14 A	100%						Demobiliza	tion: Curtair	n Grouting	Rig													
C3840-ETS-097	Mobilization: Drilling Rig	1d	0d 29-Nov-14 A	29-Nov-14 A	100%						Mobilization	n: Drilling Ri	ig														
C3840-ETS-098	Demobilization: Drilling Rig	10	ou 12-Dec-14 A	12-Dec-14 A	100%						ı pemobiliz	zation: Drillir	ng Kiğ														
Current Bar	Critical Remaining Work Data Date: 0	01-Jun-1	8														_						RMP	2SA1			

Actual Work
Remaining Work

Critical Remaining WorkMilestone

Page 8 of 26

Master Programme Revision RMPRSA1

	RMF	PSA1	
Date	Revision	Checked	Approved
01-Jun-18		BG	AW

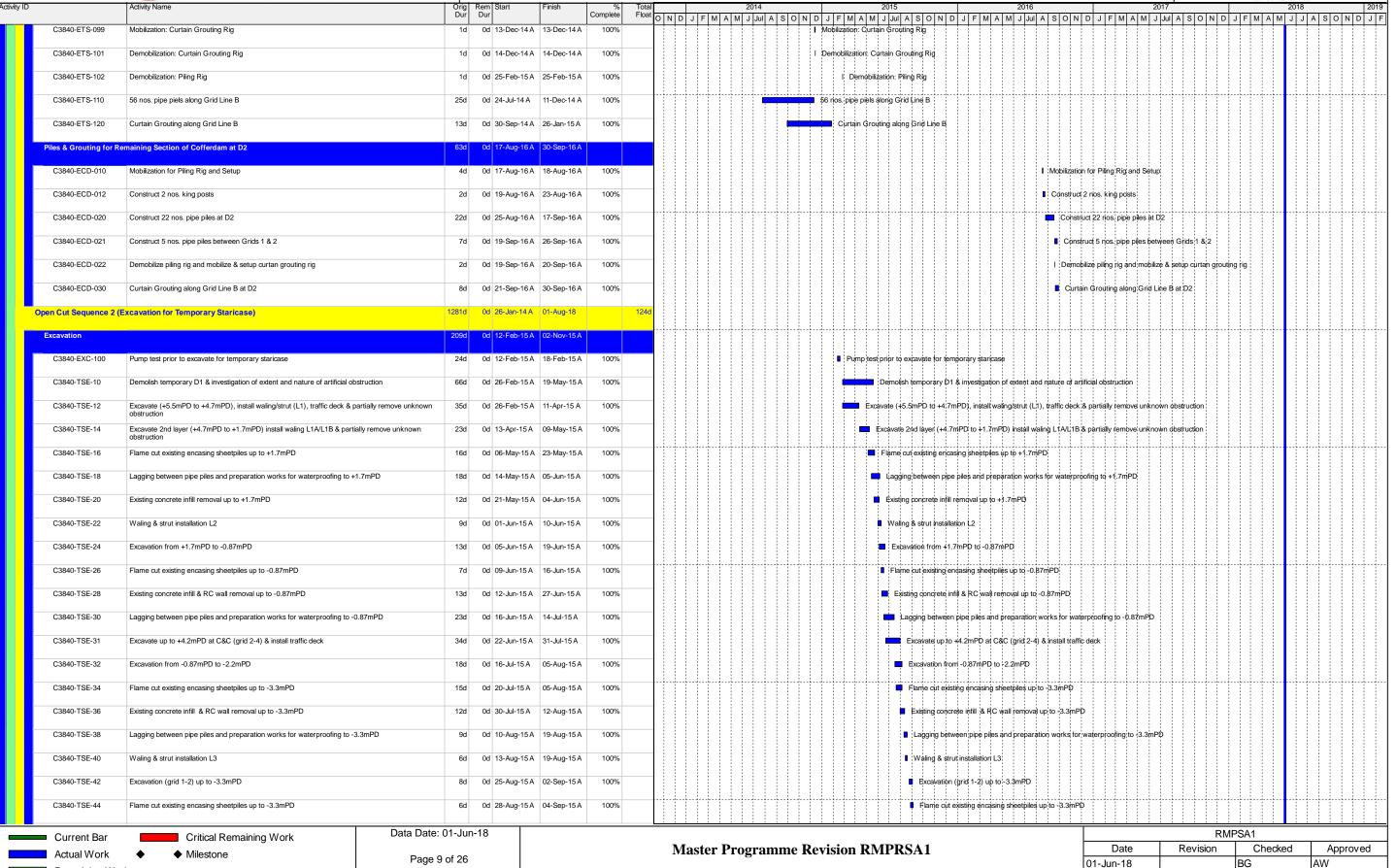


Remaining Work

Contract C3840-13C

Tsim Sha Tsui Station, Carnarvon Road Subway







Remaining Work

Contract C3840-13C





01-Jun-18

AW

Control Cont	ity ID	Activity Name	Orig	Rem Start	Finish	%	Total		2014 2015		2016	2	2017	201	8	201
Company Comp						Complete	Float O N [D J I	F M A M J Jul A S O N D J F M A M J Jul	A S O N D	J F M A M J Jul A S O	N D J F M A M .	J Jul A S O N	D J F M A M J	JASON	1 D J
	C3840-TSE-48	Lagging between pipe piles and preparation works for waterproofing to -3.3mPD	3d	0d 05-Sep-15 A	08-Sep-15 A	100%				Lagging bet	tween pipe piles and preparation wor	s for waterproofing to -3.3	lmPD:			
CREATION	C3840-TSE-50	Waling & strut installation L4	6d	0d 09-Sep-15 A	15-Sep-15 A	100%				■ Waling & s	strut installation L4					
Constitute	C3840-TSE-52	Excavation up to formation at grid 1-2 & up to +3.75mPD at grid 2-4	18d	0d 09-Sep-15 A	30-Sep-15 A	100%				Excavation	on up to formation at grid 1-2 & up to	-3.75mPD at grid 2-4				
	C3840-TSE-58	Lagging between pipe piles and preparation works for waterproofing to formation level	4d	0d 26-Oct-15 A	02-Nov-15 A	100%				■ Lagg	ing between pipe piles and preparation	n works for waterproofing	to formation level			
	C3840-TSE-60	Formation & place mass concrete foundation stage 1	2d	0d 24-Sep-15 A	26-Sep-15 A	100%				I Formation	n & place mass concrete foundation s	age 1				
	C3840-TSE-62	Place mass concrete formation (remaining)	3d	0d 28-Oct-15 A	02-Nov-15 A	100%				Place	e mass concrete formation (remaining					
Proposition																
California Cal	Additional Unforseel	n Obstruction	000	0d 03-Jul-15 A	27-Oct-15 A											
California Supervision and and it is in all intervision and and and and and and and and and an	C3840-AOB-100	Prepare MS and carryout trial for trimming bulged section of existing TST Stn wall	1d	0d 03-Jul-15 A	07-Jul-15 A	100%			1 F	Prepare MS and ca	arryout trial for trimming bulged section	of existing TST Stn wall				
Color-Strict Express Secure recognition processes and an expression processes an	C3840-AOB-102	Investigation, prepare MS and trimming to expose rebar at exising TST Stn wall	21d	0d 11-Jul-15 A	04-Aug-15 A	100%			-	Investigation, pr	repare MS and trimming to expose rel	ar at exising TST Stn wall				
Color-Off-10 Remons-control at all and analysis and programs (and a desire place) (and off-10 change) 10 change 14 10	C3840-AOB-104	Remove overpour section of TST Stn wall from +1.0mPD to -1.0mPD	4d	0d 07-Aug-15 A	11-Aug-15 A	100%				Remove overp	our section of TST Strp wall from +1.0	mPD to -1 0mPD				
Control Control Cont	C3840-AOB-106	Prepare MS and trimming to expose rebar at existing subway wall	5d	0d 07-Aug-15 A	12-Aug-15 A	100%				■ Prepare MS ar	nd trimming to expose rebar at existing	ı subway wall				
Column C					-	100%										
CDIGNATION																
Part	C3840-AOB-110	Remove overpour section of wall at existing subway from -2.0mPD to -3.5mPD	30d	0d 15-Aug-15 A	19-Sep-15 A	100%				Remove o	overpour section of wall at existing sub	way from -2.0mPD to -3.5r	mPD .			
Carporation Description	C3840-AOB-112	Remove overpour section of RC structure at TST Station from -3.5mPD to formation leve	el 29d	0d 21-Sep-15 A	27-Oct-15 A	100%				Remo	ove overpour section of RC structure	at TST Station from -3.5mF	PD to formation leve	1		
Copyright AcCast Copyright A	Removal of ACM by Otl	her	31d	0d 08-Oct-14 A	16-Nov-14 A											
Casion Acids 110 Remonstratify Secretarial (Assemble Secretarial) Secretarial (C3840-ACM-100	Diversion of existing BS & MCB at the breakthrogh location	6d	0d 08-Oct-14 A	18-Oct-14 A	100%			■ Diversion of existing BS & MCB	at the breakthrogh	location					
## C Structure (Temporery Resistancy) March 19	C3840-ACM-105	Relocation of existing EIB at Entrance D, Concourse Level (additional work)	9d	0d 08-Oct-14 A	24-Oct-14 A	100%			Rélocation of existing EIB at Ent	trance D, Concour	se Level (additlonal work)					
Section Lores on Circl 2 and 4 Set 10 Aug 15 A 20 Nov 15 A	C3840-ACM-110	Removal of ACM by other	6d	0d 16-Nov-14 A	16-Nov-14 A	100%			I Removal of ACM by other							
Section Lores on Circl 2 and 4 Set 10 Aug 15 A 20 Nov 15 A	RC Structure (Tempora	ry Staricase)	160d	0d 19-Aug-15 A	12-Mar-16 A											
Day 1 (Base Black at -4.158mPO)										ļļ ļ		-		ļļļļļļ		
California Ca	Section between Gri	o z ano 4	940	0d 19-Aug-15 A	20-N0V-15 A											
C3840-T5R-160 Retar filing 4d 0d 25-Aug-15A 26-Aug Fax 10 Valuer proofing system, erect fire & concreting (15-5m3) 10d 0d 25-Aug-15A 100% 8	Bay 1 (Base Slab a	at +0.18mPD)	15d	0d 19-Aug-15 A	31-Aug-15 A											
C3840-TSR-10 Water proofing system, ered Nx & Concreting (13,5m3) 100 00 20-Aug-15-A 100% 1 Number proofing system, ered Nx & Concreting (13,5m3) 100 00 20-Aug-15-A 100% 1 Number proofing system, ered Nx & Concreting (13,5m3) 100 100 20-Aug-15-A 100% 1 Number proofing system, ered Nx & Concreting (13,5m3) 100 100 20-Aug-15-A 100% 1 Number proofing system, ered Nx & Concreting (13,5m3) 100 100 20-Aug-15-A 100% 1 Number proofing system, ered Nx & Concreting (13,5m3) 100	C3840-TSR-100	Falsework & soffit fwk	4d	0d 19-Aug-15 A	22-Aug-15 A	100%				Falsework &	soffit fwk					
Bay 2 (Walls from -0.36m/PD to -2.2m/PD) 6d 0d 01-Sep-15A 02-Sep-15A 02	C3840-TSR-105	Rebar fixing	4d	0d 25-Aug-15 A	28-Aug-15 A	100%				Rebar fixing						
C3840-TSR-140 Retail form 4-2 to 4-£ mPD) 78	C3840-TSR-110	Water proofing system, erect fwk & concreting (13.5m3)	10d	0d 20-Aug-15 A	31-Aug-15 A	100%				■ Water proofi	ing system, erect fwk & concreting (1	.5m3)				
C3840-TSR-126 Install water proofing membrane, fivile erection & concreting (6.0m3) 4d 0d 03-Sep-15A 06-Sep-15A 10-Sep-15A 100% C3840-TSR-135 Falsework & softt fivile C3840-TSR-136 Falsework & softt fivile C3840-TSR-136 Falsework & softt fivile C3840-TSR-136 Falsework & softt fivile C3840-TSR-146 Water proofing, fivile and concreting (6.0m3) 3d 0d 15-Sep-15A 10-Sep-15A 100% Bay 4 (Staircase from +4.2 to +4.2mPD) 6d 0d 17-Sep-15A 10-Sep-15A 100% Bay 4 (Staircase from +4.2 to +6.1mPD) 6d 0d 17-Sep-15A 10-Sep-15A 1	Bay 2 (Walls from	-0.36mPD to +2.2mPD)	6d	0d 01-Sep-15 A	08-Sep-15 A									<u> </u>		
C3840-TSR-126 Install water proofing membrane, fivile erection & concreting (6.0m3) 4d 0d 03-Sep-15A 06-Sep-15A 10-Sep-15A 100% C3840-TSR-135 Falsework & softt fivile C3840-TSR-136 Falsework & softt fivile C3840-TSR-136 Falsework & softt fivile C3840-TSR-136 Falsework & softt fivile C3840-TSR-146 Water proofing, fivile and concreting (6.0m3) 3d 0d 15-Sep-15A 10-Sep-15A 100% Bay 4 (Staircase from +4.2 to +4.2mPD) 6d 0d 17-Sep-15A 10-Sep-15A 100% Bay 4 (Staircase from +4.2 to +6.1mPD) 6d 0d 17-Sep-15A 10-Sep-15A 1	C3840-TSR-120	Rebar fixing for sidewall and end wall	2d	0d 01-Sep-15 A	02-Sep-15 A	100%				Rebar fixing	for sidewall and end wall					
Bay 3 (Staircase at from +2.2 to -4.2mPD) C340-TSR-135 Falsework & sofit fwk 2d 0d 09-Sep-15A 10-Sep-15A 100% C3840-TSR-140 Rebar fixing 3d 0d 11-Sep-15A 100% Feeter lixing C3840-TSR-145 Water proofing, fwk and concreting (6.0m3) 3d 0d 14-Sep-15A 100% Bay 4 (Staircase from +4.2 to -4.5mPD) 6d 0d 17-Sep-15A 23-Sep-15A 100% C3840-TSR-185 Rebar fixing 4d 0d 17-Sep-15A 23-Sep-15A 100% C3840-TSR-180 Fwk & concreting (14.5m3) 3d 0d 21-Sep-15A 23-Sep-15A 100% C3840-TSR-180 Fwk & concreting (14.5m3) Add 0d 21-Sep-15A 23-Sep-15A 100% C1 Rebar fixing C2 Actual Work Master Programme Revision RMPRSA1 Date Revision Checked Approved					·											
C3840-TSR-135 Falsework & soffit fwk 2d 0d 09-Sep-15A 10-Sep-15A 100% 3d 0d 11-Sep-15A 100% C3840-TSR-145 Water proofing, fwk and concreting (6.0m3) 3d 0d 14-Sep-15A 100% 1 Water proofing, fwk and concreting (6.0m3) Bay 4 (Staircase from +4.2 to +6.1mPD) 6d 0d 17-Sep-15A 23-Sep-15A C3840-TSR-185 Rebar fixing 4d 0d 17-Sep-15A 21-Sep-15A 100% 1 Rebar fixing 1 Rebar fixing 1 Rebar fixing C3840-TSR-185 Rebar						100%				install water	r proofing memorane, two erection &	concrexing (5.0m3)				
C3840-TSR-140 Rebar fixing C3840-TSR-145 Water proofing, twk and concreting (6.0m3) 3d 0d 14-Sep-15A 14-Sep-15A 100% I Water proofing, twk and concreting (6.0m3) Bay 4 (Staircase from +4.2 to +6.1mPD) 6d 0d 17-Sep-15A 23-Sep-15A C3840-TSR-185 Rebar fixing C3840-TSR-180 Fwk & concreting (14.5m3) 3d 0d 21-Sep-15A 23-Sep-15A 100% I Rebar fixing	Bay 3 (Staircase a	t from +2.2 to +4.2mPD)	7d	0d 09-Sep-15 A	16-Sep-15 A											
C3840-TSR-145 Water proofing, fwk and concreting (6.0m3) Bay 4 (Staircase from +4.2 to +6.1mPD) C3840-TSR-185 Rebar fixing 4d 0d 17-Sep-15A 23-Sep-15A 100% C3840-TSR-190 Fwk & concreting (14.5m3) C3840-TSR-190 Fwk & concreting (14.5m3) Data Date: 01-Jun-18 Master Programme Revision RMPRSA1 Date Revision Checked Approved	C3840-TSR-135	Falsework & soffit fwk	2d	0d 09-Sep-15 A	10-Sep-15 A	100%				I Falsework	& soffit fwk					
Bay 4 (Staircase from +4.2 to +6.1mPD)	C3840-TSR-140	Rebar fixing	3d	0d 11-Sep-15 A	14-Sep-15 A	100%				■ Rebar fixin	ng					
C3840-TSR-185 Rebar fixing	C3840-TSR-145	Water proofing, fwk and concreting (6.0m3)	3d	0d 14-Sep-15 A	16-Sep-15 A	100%				Water prod	ofing, fwk and concreting (6.0m3)					
C3840-TSR-190 Fwk & concreting (14.5m3) Current Bar Critical Remaining Work Actual Work Actual Work Milestone C3840-TSR-190 Fwk & concreting (14.5m3) Data Date: 01-Jun-18 Master Programme Revision RMPRSA1 Date Revision Checked Approved	Bay 4 (Staircase fi	rom +4.2 to +6.1mPD)	6d	0d 17-Sep-15 A	23-Sep-15 A											
Current Bar Critical Remaining Work Actual Work Milestone Data Date: 01-Jun-18 Master Programme Revision RMPRSA1 Date Revision Checked Approved	C3840-TSR-185	Rebar fixing	4d	0d 17-Sep-15 A	21-Sep-15 A	100%				■ Rebar fixir	ng					
Current Bar Critical Remaining Work Actual Work Milestone Data Date: 01-Jun-18 Master Programme Revision RMPRSA1 Date Revision Checked Approved	C3840-TSR-190	Fwk & concreting (14.5m3)	3d	0d 21-Sep-15 A	23-Sep-15 A	100%				IFwk & ⇔	ncreting (14.5m3)					
Actual Work Milestone	55540 1610-190					. 5576								<u> </u>		
Actual Work • Milestone Master Programme Revision RMPRSA1 Date Revision Checked Approved	Current Bar	Critical Remaining Work	ta Date: 01-Jun-	-18												
	Actual Work	A Milantona	Page 10 of 26				N	Mast	ter Programme Revision RMPR	RSA1		Date 01lun-18	Revision	n Checked	Appr	oved

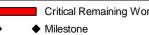






Activity ID	Activity Name	Orig Rem Start Dur Dur	Finish	% Total Complete Float	2014 O N D J F M A M J Jul A S O N	2015 D J F M A M J Jul A S O N E	2016 2017 D J F M A M J Jul A S O N D J F M A M J Jul A S	2018 2019
	Bay 5 (Staircase from +0.33 to 2.2mPD)	10d 0d 24-Sep-15 A	29-Sep-15 A					
	C3840-TSR-200 Soffit fwk	2d 0d 24-Sep-15 A	25-Sep-15 A	100%		I. Soffit fw	k	
	C3840-TSR-210 Rebar fixing, fwk for risers & concreting (2.0m3)	2d 0d 26-Sep-15 A	29-Sep-15 A	100%		■ R'ebair t	iving, fwk for risers & concreting (2.0m3)	
	Bay 6 (walls & roof from 2.2mPD to 4mPD)	12d 0d 02-Oct-15 A	12-Oct-15 A					
	C3840-TSR-150 Strike fwk, form cj, install waterproofing membrane & rebar fixing	4d 0d 02-Oct-15 A	06-Oct-15 A	100%		1 Strike	fwk, form cj. install waterproofing membrane & reban fixing	
	C3840-TSR-165 Erect fwk/working platform & concreting (16.0m3)	5d 0d 07-Oct-15 A	12-Oct-15 A	100%		■ Erept	fwk/working:platform & concreting (16,0m3)	
	Bay 7 (walls & roof from +4mPD to +5.7mPD)	6d 0d 13-Oct-15 A	19-Oct-15 A					
	C3840-TSR-215 Strike fwk, remove working platform, form cj & rebar fixing	2d 0d 13-Oct-15 A	14-Oct-15 A	100%		I Strike	flwk, remove working platform, form dj & rebår fixing	
	C3840-TSR-225 Falsework, fwk, working platform & concreting (13.5m3)	4d 0d 15-Oct-15 A	19-Oct-15 A	100%	-	I False	work, fwk, working platform & concreting (13.5m3)	
	Bay 8 (walls & roof above +5.7mPD)	45d 0d 20-Oct-15 A	20-Nov-15 A					
	C3840-TSR-230 Strike fwk, remove working platform, form cj , erect fwk & rebar fixing	10d 0d 20-Oct-15 A	31-Oct-15 A	100%		■ Stri	ke fwk, remove working platform, form cj. erect fwk & rebar fixing	
	C3840-TSR-235 Falsework, fwk, working platform & concreting (33.5m3)	10d 0d 20-Oct-15 A	02-Nov-15 A	100%	1	■ Fal	sework, twk, working platform & concreting (33.5m3)	
	C3840-TSR-236 Erect fwk and concreting (2m3) for upstand wall	2d 0d 03-Nov-15 A	05-Nov-15 A	100%		1 Ere	ct fwk and concreting (2m3) for upstand wall	
	C3840-TSR-237 Concrete curing and remove fwk/falsework	15d 0d 03-Nov-15 A	20-Nov-15 A	100%		= C	oncrete curing and remove fwk/falsework	
	Section between Grid 1 and 2	111d 0d 28-Oct-15 A	12-Mar-16 A					
	Bay 9 (Collar Frame up to -4.3mPD)	35d 0d 28-Oct-15 A	16-Nov-15 A					
	C3840-TSR-500 Coring dowel bars holes & form groove/cj	12d 0d 28-Oct-15 A	11-Nov-15 A	100%		b Co	oring blowel bars holes & form groove/cj	
	C3840-TSR-505 Install waterproofing membrane/dowel bars	5d 0d 04-Nov-15 A	09-Nov-15 A	100%		II Ins	stall waterproofing membrahe/dowel bars	
	C3840-TSR-510 Rebar fixing	2d 0d 11-Nov-15 A	12-Nov-15 A	100%		I R	əbar fixinig	
	C3840-TSR-515 End fwk shuttering & concreting collar to slab (2.5m3)	3d 0d 13-Nov-15 A	16-Nov-15 A	100%		I €	nd fwk shuttering & concreting collar to slab (2.5m3)	
	Bay 12 (Base Slab at -4.32mPD)	13d 0d 04-Nov-15 A	19-Nov-15 A					
	C3840-TSR-540 Construct base slab (20.0m3)	13d 0d 04-Nov-15 A	19-Nov-15 A	100%		□ C	onstruct base slab (20.0m3)	
	Bay 10 (Collar Frame up to -2mPD)	9d 0d 20-Nov-15 A	27-Nov-15 A					
	C3840-TSR-520 Erect working platform, install waterproofing membrane & rebar fixing	3d 0d 20-Nov-15 A	24-Nov-15 A	100%		0 E	rect working platform, inståll waterproofing membrane & rebar fixing	
	C3840-TSR-525 Fwk & concreting to -2.2mPD (1.5m3)	4d 0d 25-Nov-15 A				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fwk & concreting to -2.2mPD (1.5m3)	
	Bay 13 (Walls up to -3.2mPD)	7d 0d 27-Nov-15 A						
	C3840-TSR-550 Install water proofing system, rebar fixing for W1, W2, W3 & 250 mm partition wall	3d 0d 27-Nov-15 A					Iristali water probling system, rebai fixing for W1, W2, W3 & 250 mm partitio	n'wall
	C3840-TSR-555 Erect working platform, fwk shuttering & concreting (9.0m3)	4d 0d 01-Dec-15 A				•	Erect working platform, fwk shuttering & concreting (9.0m3)	
	Bay 11 (Collar Frame up to +1.2mPD)	12d 0d 30-Nov-15 A						
	C3840-TSR-530 Erect working platform, Install waterproofing membranne & rebar fixing	5d 0d 30-Nov-15 A					Erect working platform, Install waterproofing membranne & rebar fxing	
	C3840-TSR-535 Fwk & concreting to collar (4.0m3)	7d 0d 01-Dec-15 A				"	Fwk; & concreting to collar; (4.0m3)	
	Bay 14 (Walls up to -0.96mPD) and Bay 18a (Stair)	6d 0d 08-Dec-15 A						
	C3840-TSR-560 Construct bay 14 (18.5m3)	6d 0d 08-Dec-15 A					Construct bay 14 (18.5m3)	
	C3840-TSR-602 Construct bay 18a (3.5m3)	5d 0d 19-Dec-15 A	28-Dec-15 A	100%			Construct bay 1ệa (3.5ṁ3)	
	Current Bar Critical Remaining Work	ata Date: 01-Jun-18						RMPSA1





Data Date: 01-Jun-18

Page 11 of 26

Master Programme Revision RMPRSA1

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Date	Revision	Checked	Approved
01-Jun-18		BG	AW







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Activity ID		Activity Name			Rem Start Dur	Finish	% Complete	Total Float	2014 2015 O N D J F M A M J Jul A S O N D J F M A M J Jul A S O N D J F M A N	2016	2017	D JEMAN	2018	2019
	Bay 15 (Walls up to) +1.25mPD)		13d	0d 23-Dec	c-15 A 07-Jan-16 A	1			I J Jul A S O N D J F M	I M J Jul A S O N	DIJIFIMIAII	/ J J A S	TOLNIDIZI
		<u> </u>												
		Remove platform & strike fwk, propping, water proofing, re-bar fixing, fwk suttering (20m3)	ng & concreting	13d	0d 23-Dec	o-15 A 07-Jan-16 A	100%		Remové platfo	orm & strike fwk, propping, water proof	g, re-bar fixing, fwk sutterin	g & concreting (20r	n 3)	
	Bay 16 (Walls & Ro	of Slab)		32d	0d 08-Jan	-16 A 13-Feb-16	A							
	C3840-TSR-590	Remove fwk, form cj, install WPS, remove L2, re-propping & erect falsework		5d	0d 08-Jan	-16 A 16-Jan-16 A	100%	•	■ Remove fwk	form cj, install WP\$, remove L2, re-pro	oping & erect falsework			
	C3840-TSR-595	Construct wall & roof slab (31.5m3)		14d	0d 18-Jan	-16 A 23-Jan-16 A	100%		Construct w	all & roof slab (31.5m3)				
	C3840-TSR-600	Concrete curing, coring, saw cut & breakthrough, removal of scaffold/falsework/fw	wk. repropping	13d	0d 25-Jan	-16 A 13-Feb-16	A 100%		Concrete	curing, coring, saw;cut;& breakthrough	removal of scaffold/falsewor	k/fwk repropping		
			, 11 11 3						<u> </u>					
	Bays 17 and 18b (S	Stairs up to 2nd Landing)		/d	0d 15-Feb	o-16 A 20-Feb-16	4							
	C3840-TSR-585	Construct staircase (8.0m3)		7d	0d 15-Feb	o-16 A 20-Feb-16	A 100%	•	■ Constitut	t staircase (8.0rh3)				
	Construction of Re	fuse Bin		7d	0d 03-Mar	r-16 A 12-Mar-16	4							
	C3840-TSR-604	Construct Refuse Bin		7d	0d 03-Mar	r-16 A 12-Mar-16	A 100%		■ Const	uct Refuse Bin				
M	lestones for Cost Cen	tre D - Temporary Entrance		1584d	0d 26-Jan	1-14 A 01-Aug-18		151d						
	00040 NO 551				2.1	0.5	100				ļļļļļļii			
	C3840-MS-D01	D1 - Comp. removal of all overhead signs affecting Works for the Temp. Entrance		0d	0d	26-Jan-14 A	100%		Dtl - Comp. temoval of all overhead signs affecting Works for the Temp. Entrance					
	C3840-MS-D02	D2-Comp. 20% of cofferdam for T. E. and all U/G UU diversion/protection for T.E.	. cofferdam	0d	0d	06-Sep-14	A 100%		◆ D2-Comp. 20% of cofferdam for T. E. and all U/G UIU diversion/protectio	for T.E. cofferdam				
	C3840-MS-D03	D3 - Comp. temp. cofferdam and grouting (excl. satisf. comp. of pump test)		0d	0d	18-Feb-15	A 100%		◆ D3 - Comp. temp, cofferdam and grouting ∤exel. satis	f comp. of pump test)				
	C3840-MS-D04	D4-Comp. 66% const. of temp. stair measured by vol. of conc. poured & comp. for Stn	orm. open. into TST	0d	0d	13-Feb-16	A 100%		◆ D4-Comp	. 66% const. of temp. stair measured b	vol. of conc. poured & comp	o. form. open. into	ΓST \$tn	
	C3840-MS-D05	D5-Open Temporary Entrance for use		0d	0d	06-Jul-16 A	100%	1		◆ D5-Open Temporary Entrance	or use			
	C3840-MS-D06	D6-Comp. demolition of Temp. Entrance and disposal of all C&D waste arising the	ere from	0d	0d	01-Aug-18	0%	151d					♦ D6-C	Comp. demolition
Ope	n Cut Sequence 3 (Ac	dvance Ground Works at D2 & in front of D1)		178d	0d 17-Nov	v-15 A 17-Sep-16	A							
	10.40 Fl O 400			100.1	01 47 11	15.4 00.4 10.4	1000/							
C	8840-ELS-400	Expose underground UUs and provide support to UUs; at grid 1-4		132d	0d 17-Nov	v-15 A 30-Apr-16 A	100%			Expose underground UUs and provide	upport to UUs; at grid 1-4			
C:		Expose existing sewer & strom drainage/trim concrete surround for PCCW cable of PCCW cable ducts	ducts & 1st lift of	36d	0d 03-May	y-16 A 16-Jun-16 A	100%		•	Expose existing sewer & strom dra	nage/trim concrete surround	for PCCW cable	ducts & 1st lift of F	PC¢W cable du
C		Re-arrange existing sewer & strom drainage/ 2nd lift of PCCW cable ducts & providucts	vide support to cable	50d	0d 17-Jun	-16 A 09-Sep-16	A 100%	1		Re-arrange existing sev	er & strom drainage/ 2nd lift	of PCCW cable du	cts & provide sup	pport to cable du
C	840-ELS-430	Partial demolition of existing subway slab and coring through for two nos. king post	sts	12d	0d 28-Jul-	16 A 18-Aug-16	A 100%			Pattial demolition of existin	subway slab and coring thr	ough for two nos. k	ing posts	
C	840-ELS-450	Partial demolition of existing subway slab and coring through existing subway for pi PP179	oiling PP175 to	12d	0d 12-Sep	o-16 A 17-Sep-16	A 100%	1		Partial demolition of ex	ting subway slab and coring	through existing su	ıbway for piling P	PP175 to PP179
C	8840-ELS-510	Joint Survey & Remove existing BS & ABWF Services at D2		6d	0d 07-Jul-	16 A 16-Jul-16 A	100%			Joint Survey & Remove existin	BS & ABWF Services at D2			
C	840-ELS-520	Erect FRP hoarding and flood gate/scaffolding platform for demolish D2		9d	0d 12-Jul-	16 A 26-Jul-16 A	100%			■ Erect FRP hoarding and floor	gate/scaffolding platform for	demolish D2		
C	840-ELS-530	Demolish D2 above GL		12d	0d 14-Jul-	16 A 09-Aug-16	A 100%			Demolish D2 above GL				
C:	8840-ELS-540	Erect piling platform and shift hoarding		6d	0d 10-Aug	g-16 A 20-Aug-16	A 100%			■ Erect piling platform and s	ift holarding			
						16 A 09-Aug-17				_ · · · · · · · · · · · · · · · · · · ·	3			
	• •	xcavation for Subway in front of D1)												
C	840-ELSD1-102	Install support beam, load transfer & remove concrete support at grid 2		8d	0d 31-Jul-	16 A 14-Sep-16	A 100%			Install support beam, lo	d transfer & remove concre	te support at grid 2		
C	840-ELSD1-115	Complete excavation up to +1.0mPD including vertical blinding/install L2 & struts		74d	0d 03-Oct	-16 A 11-Jan-17 A	100%			Complete	excavation up to +1.0mPD i	ncluding vertical bli	nding/install L2 &	struts
C	8840-ELSD1-145	Remove existing subway 7.5m below G.L. and excavate to L3 (-2.0mPD) with unfo	foreseen infill	29d	0d 28-Dec	c-16 A 04-Mar-17	A 100%			Re	nove existing subway 7.5m, l	pelpw G.L. and exc	avate to L3 (-2.0	mPD) with unfo
C:	8840-ELSD1-155	Vertical blinding up to L3		8d	0d 09-Jan	-17 A 27-Feb-17	A 100%			Ver	cal blinding up to L3		1-1-1-1-1	
C	840-ELSD1-165	Install waling and strut for L3		6d	0d 25-Jan	-17 A 17-Mar-17	A 100%				stall waling and strut for L3			
C	8840-ELSD1-175	Remove existing subway 10.6m below G.L. and excavate to L4 (-5.3mPD) with un	nforeseen infill	29d	0d 14-Feb	o-17A 31-Mar-17	A 100%				Remove existing subway 10.	6m below G.L. and	d excavate to L4	(-5.3mPD) with
				\4 '	10	1						<u> </u>	<u> </u>	<u> </u>
	Current Bar	Critical Remaining Work	Data Date: 0)1-Jun	1-18				M (D D II DIEDDO) (-		MPSA1	(co.el	<u> </u>
		A 8.871 /							Master Programme Revision RMPRSA1	Date	Revision	Checl	kea A	Approved
	Actual Work	♦ Milestone	Page 12	of 26					6	01-Jun-18		BG	AW	•







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	Activity Name	Orig Ren Dur Du	n Start ır	Finish	% Complete	Total Float O	ND	JFN	MIAIM	2014 J Jul	AISIOINID	JF	MIAIMI.	2015 J Jul <i>A</i>	alsic	INIDIJIFIMIA	201i M J J	II A I S I O	NDJF	2 M A M J	017 2018 Jul A S O N D J F M A M J J A S O N
C3840-ELSD1-177	Breaking existing bottom slab to -6.0mPD at grid 1-2	1d 0d	d 20-Mar-17 A	13-Apr-17 A	100%															Break	ng existing bottom slab to -6.0mPD at grid 1-2
C3840-ELSD1-179	Mass concrete infill, install waling/strut L4 & vertical blinding at grid 1-2	1d 0d	d 18-Apr-17 A	28-Apr-17 A	100%															■ Mas	concrete infill, install waling/strut L4 & vertical blinding at grid 1
C3840-ELSD1-185	Vertical blinding up to L4 at grid 2-4	8d 0d	d 29-Apr-17 A	10-May-17 A	100%							+								■ Ver	tical blinding up to L4 at grid 2-4
C3840-ELSD1-195	Install waling and strut for L4 at grid 2-3.5	6d 0d	d 23-Mar-17 A	22-Apr-17 A	100%															Instal	waling and strut for L4 at grid 2-3.5
C3840-ELSD1-205	Excavate up to L5, from -5.3 to -7.0mPD at grid 2-3.5	27d 00	d 10-Apr-17 A	17-May-17 A	100%															- E	cavate up to L5, from -5.3 to -7.0mPD at grid 2-8.5
	Install waling and strut for L5		d 15-May-17 A	·	100%																stall waling and strut for L5
	·																				, i i i i i i i i i i i i i i i i i i i
	Excavation to formation level including for sump pit	48d 0d	d 18-May-17 A	02-Aug-17 A	100%																Excavation to formation level including for sump pit
C3840-ELSD1-245	Vertical blinding from L4 to bottom	8d 0d	d 26-Jun-17 A	09-Aug-17 A	100%																Vertical blinding from L4 to bottom
C3840-ELSD1-255	Install waling and strut for L6	6d 0d	d 13-Jun-17 A	30-Jun-17 A	100%															•	Install waling and strut for L6
C3840-ELSD1-330	Make formation and Blinding	4d 0d	d 26-Jun-17 A	05-Aug-17 A	100%																Make formation and Blinding
Open Cut Sequence 4 (Ex	cavation for D2 & Subway in front of D2)	201d 00	d 26-Sep-16 A	18-May-17 A																	
C3840-ELSD2-100	Pump test at C&C Cofferdam	24d 0d	d 26-Sep-16 A	11-Oct-16 A	100%													•	Pump test at C	&C Cofferdar	
C3840-ELSD2-115	Demolish D2 below GL with unforeseen infill & modification to traffic steel deck with L1 installation	40d 0d	d 04-Oct-16 A	25-Nov-16 A	100%													-	Démolish	D2 below GL	with unforeseeh infill & modification to traffic steel deck with L1
C3840-ELSD2-122	Temporary supports for relocated UUs at grid 4-5	15d 0d	d 05-Oct-16 A	09-Nov-16 A	100%													_	Temporary	supports for r	elocated UUs at grid 4-5
C3840-ELSD2-145	Excavate up to L2, from +4.0 to +1.0mPD	13d 0d	d 29-Oct-16 A	28-Nov-16 A	100%														Excavate	up to L2, fro	m +4.0 to +1.0mPD
C3840-ELSD2-155	Vertical blinding up to L2	8d 0d	d 01-Dec-16 A	15-Dec-16 A	100%														Vertica	blinding up to	12
	Install waling and strut for L2		d 22-Nov-16 A		100%															aling and stru	
							ļļ							-						[.]	
	Excavate up to L3, from +1.0 to -2.0mPD (23m3 rock + 485m3 soil)		d 13-Dec-16 A		100%																L3, from +1.0 to -2.0rhPD (23m3 rock + 485m3 soll)
C3840-ELSD2-185	Vertical blinding up to L3	8d 0d	d 22-Dec-16 A	04-Jan-17 A	100%														■ Verti	al blinding up	to L3
C3840-ELSD2-195	Install waling and strut for L3	6d 0d	d 19-Dec-16 A	10-Feb-17 A	100%															nstall waling a	nd strut for L3
C3840-ELSD2-205	Excavate up to L4, inspection for formation by MTRC (RGE) at grid 4.0-5.5	40d 0d	d 11-Feb-17 A	27-Mar-17 A	100%														-	Excavate	up to L4, inspection for formation by MTRC (RGE) at grid 4.0
C3840-ELSD2-207	El/005, replacement of CDG with mass concrete infill at grid 4.0-5.5	4d 0d	d 28-Mar-17 A	31-Mar-17 A	100%															EI/005,	eplacement of CDG with mass concrete infill at grid 4.0-5.5
C3840-ELSD2-215	Vertical blinding up to L4 at grid 4.0-5.5	10d 0d	d 03-Apr-17 A	22-Apr-17 A	100%							+ + + + +							+	Vertic	al blinding up to L4 at grid 4.0 5.5
C3840-ELSD2-225	Install waling for L4 at grid 3.5-4.0	6d 0d	d 23-Mar-17 A	22-Apr-17 A	100%															Instal	waling for L4 at grid 3,5-4.0
C3840-ELSD2-235	Excavate up to formation & inspection by MTRC (RGE) at grid 3.5-4.0	12d 0d	d 29-Mar-17 A	13-Apr-17 A	100%															Excava	te up to formation & inspection by MTRC (RGE) at grid 3.5-4.
C3840-ELSD2-237	El/005, replacement of CDG with mass concrete infill at grid 3.5-4.0	5d 0d	d 06-Apr-17 A	18-Apr-17 A	100%															■ EI/00	replacement of CDG with mass concrete infill at grid 3,5-4.0
C3840-ELSD2-240	Vertical blinding up to formation at grid 3.5-4.0	8d 0d	d 11-May-17 A	18-May-17 A	100%															■ Ve	rtical blinding up to formation at gtid 3.5-4.0
Open Cut Sequence 5 (Co	enstruction of Subway & D2)	366d 120	d 21-Mar-17 A	14-Jun-18		163d															
	Between Grids 1 and 1.8)	162d 0	d 21-Mar-17 A	26-Sep-17 A																	
	Coring and preparation works for TST Station wall		d 21-Mar-17 A		100%															Coring	and preparation works for TST Station val
	Construct Bay 1 (collar base)		d 12-Apr-17 A		100%																onstruct; Bay 1 (collar base)
	Construct Bay 2 (collar beam and C1 column)		d 31-May-17 A		100%																Construct Bay 2 (collar beam and C1 column)
C3840-STR-D1-112	Dismantle falsework & formwork including curing for bay 2	8d 0d	d 10-Jun-17 A	17-Jun-17 A	100%																Dismantle falsework & formwork including curing for bay 2
C3840-STR-D1-120	Construct Bay 3 (base slab for escalator pit)	13d 0d	d 10-May-17 A	22-May-17 A	100%															■ C	onstruct Bay 3 (base slab for escalator pit)
Current Bar	Critical Remaining Work Data Date:	01-Jun-18	3				<u>. i</u>	<u> i</u>		<u> i</u>	<u> </u>	<u></u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		, i i	RMPSA1
Actual Work	◆ Milestone Page 13						M	[aste	r Pro	gra	mme Re	visio	n RM	IPRS	SA1					ate	Revision Checked Appro





	Activity Name	Orial	Rem Start	Finish	%	Total		1 2	2014			2015			2016				2017		1	A E U	8
	·	Orig Dur			Complete	Float O	N D	J F M A M	J Jul A S	O N D	FMA	M J Jul A S	OND	J F M	A M J Jul	A S O	N D J	F M A M	1 Jul A	S O N D	JFM	A M J	JASON
C3840-STR-D1-130	Construct Bay 4 (concourse base slab)	12d	0d 23-May-17	A 29-May-17 A	100%														Construct	Bay 4 (conco	ourse base s	lab)	
C3840-STR-D1-132	Construct Bay 5a (TER room North Wall)	10d	0d 12-Jun-17	A 23-Jun-17 A	100%														Constr	uct Bay 5a (T	ΓER room N	orth Wall)	
C3840-STR-D1-132b	Construct Bay 5b (TER room bottom slab)	10d	0d 24-Jun-17	A 13-Jul-17 A	100%														Con	struct Bay 5b	(TER room	bottom slab	
C3840-STR-D1-133	Dismantle falsework for bay 5	2d	0d 25-Sep-17	A 26-Sep-17 A	100%															l Dismantl	le falsework	for bay 5	
C3840-STR-D1-134	Construct Bay 6a (TER room North & West Wall)	12d	0d 14-Jul-17	11-Aug-17 A	100%														= 0	Construct Bay	/6a (TER ro	om North &	West Wall)
C3840-STR-D1-135	Construct Bay 6b (TER room top slab)	17d	0d 12-Aug-17	A 31-Aug-17 A	100%														-	Construct B	Bay 6b (TER	room top sk	ab)
C3840-STR-D1-136	Dismantle falsework including curing time for bay 6	16d	0d 01-Sep-17	A 25-Sep-17 A	100%															Dismantl	le falsework	including cu	ring time for bay 6
Additional Remedial Wo	orks for Permanent Structures	30d	4d 09-Jan-18	A 05-Jun-18		171d																	
C3840-RMD-100	Issue Instruction (email) by MTRC for Additional Remedial Works for Permanent Structures	Od	0d	09-Jan-18 A	100%		ļļ														▲ (ssue In	struction (en	nail) by MTR¢ for
	Construct RC Cross Beam underneath ST-01		0d 10-Jan-18																		Con		ross Beam underr
C3840-RMD-120	Construct RC Collar Beam above +3.6mPD	30d	4d 10-Jan-18	A 05-Jun-18	63.3%	171d																Ç	onstruct RC Collar
C3840-RMD-130	Construct Steel Beam for Plant Room	30d	0d 10-Jan-18	A 12-Feb-18 A	100%																Con	struct Steel	Beam for Plant Ro
Reinstament Works in F	Front of Entrance D2	84d	12d 15-Mar-18	A 14-Jun-18		12d																	
C3840-STR-300	Backfilling up to +2.70mPD	76d	0d 15-Mar-18	A 24-Mar-18 A	100%																•	Backfilling i	up to +2.70mPD
C3840-STR-302	Reinstament of gasmain by HKG	8d	0d 26-Mar-18	A 10-Apr-18 A	100%																•	Reinstam	ent of gasmain by
C3840-STR-304	Backfilling & modification of traffic deck	12d	0d 11-Apr-18	A 30-Apr-18 A	100%																	■ Backfil	ling & modification
									1 1 1 1	: : : :			1 1 1	: : : :	1 1 1			: : : :		1 1 1			statement of DSD
C3840-STR-306	Reinstatement of DSD sewer and storm pipe & U/U reinstatement	12d	0d 02-May-18	A 16-May-18 A	100%																	Rein	
C3840-STR-306	Reinstatement of DSD sewer and storm pipe & U/U reinstatement Reinstatement of road kerbs and paving block		0d 02-May-18		100%	12d																	einstatement of ro
C3840-STR-308		24d		A 14-Jun-18	50%	12d																	einstatement of ro
C3840-STR-308 RC Structure at D1 Side	Reinstatement of road kerbs and paving block	24d	12d 17-May-18	A 14-Jun-18 07-Mar-18 A	50%	12d															■ Concrete	■ R	einstatement of ro
C3840-STR-308 RC Structure at D1 Side	Reinstatement of road kerbs and paving block	24d 209d 9d	12d 17-May-18	A 14-Jun-18 07-Mar-18 A A 27-Dec-17 A	100%	12d														_		curing (cond	
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30	24d 209d 9d 25d	12d 17-May-18 0d 22-Jul-17 / 0d 25-Nov-17	A 14-Jun-18 A 07-Mar-18 A 27-Dec-17 A A 07-Mar-18 A	100%	12d															- R	curing (con	rete strength reac
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit)	24d 209d 9d 25d 7d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17	A 14-Jun-18 A O7-Mar-18 A 27-Dec-17 A O7-Mar-18 A A 22-Aug-17 A	100% 100% 100%	12d														Construct Ba	aý 21 (báse s	curing (condemned to the condemned condemned to the curing the cur	rete strength reac erpinning (load tra room lexcept for p
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-150	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room)	24d 209d 9d 25d 7d 21d	12d 17-May-18 0d 22-Jul-17 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17	A 14-Jun-18 A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A	100% 100% 100% 100%	12d														Construct Ba	aỷ 21 (báse s t Bay 22a (sl	curing (con temove und slab of plant de walls of p	crete strength reac erpinning (load tra room lexcept for p laht room)
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-150 C3840-STR-D1-155	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway)	24d 209d 9d 25d 7d 21d	12d 17-May-18 0d 22-Jul-17 / 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 28-Aug-17	A 14-Jun-18 A 27-Dec-17 A A 07-Mar-18 A 22-Aug-17 A A 18-Sep-17 A A 22-Sep-17 A	100% 100% 100% 100% 100%	12d														Construct Ba Construct Construct	R ay 21 (báse t t Bay 22a (sl at Bay 22b (b	curing (con temove und slab of plant de walls of:	crete strength read erpinning (load tra room except for p laht room) subway)
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-D1-140 C3840-STR-D1-150 C3840-STR-D1-155 C3840-STR-D1-170	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework	24d 209d 9d 25d 7d 21d 10d 14d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 28-Aug-17 0d 23-Sep-17	A 14-Jun-18 A O7-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 22-Sep-17 A A 07-Oct-17 A	100% 100% 100% 100% 100%	12d														Construct:Ba Construct Construct Construct	R t Bay 22a (sl t Bay 22b (b st Bay 22b (b	curing (con temove und slab of plant de walls of ; asé slab of	crete strength read erpinning (load tra room except for p laht room) subway)
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-D1-140 C3840-STR-D1-150 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-180	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab	24d 209d 9d 25d 7d 21d 10d 14d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 28-Aug-17 0d 23-Sep-17	A 14-Jun-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 07-Oct-17 A A 30-Sep-17 A	100% 100% 100% 100% 100% 100%	12d														Construct Ba Construct Construct Curing Construct	ay 21 (base s t Bay 22a (sl ct Bay 22b (b & strike form	curing (con- temove und slab of plant de walls of p asses slab of nwork/falsev	crete strength readerpinning (load tra room except for polah traom) subway) vork /ent Wal & Slab
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-180 C3840-STR-D1-200	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab Construct Bay 23A (base slab for sump pit)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d	12d 17-May-18 0d 22-Jul-17 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17	A 14-Jun-18 A O7-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 22-Sep-17 A A 07-Oct-17 A A 30-Sep-17 A 28-Jul-17 A	100% 100% 100% 100% 100% 100%	12d													■ Cc	Construct Ba Construct Construct Construct Construct Construct Construct Construct Construct	pay 21 (base t t Bay 22a (si 3 Bay 22b (b 4 strike forn cd staircase s	curing (con- temove und temove und de walls of: pase slab of nwork/falsev ST05 & Air; ab for sump	crete strength read erpinning (load tra room lexcept for p laht room) subway) vork 'ent Wal & Slab
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-180 C3840-STR-D1-200	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 28-Aug-17 0d 23-Sep-17	A 14-Jun-18 A O7-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 22-Sep-17 A A 07-Oct-17 A A 30-Sep-17 A 28-Jul-17 A	100% 100% 100% 100% 100% 100%	12d													■ Cc	Construct Ba Construct Construct Construct Construct Construct Construct Construct Construct	pay 21 (base t t Bay 22a (si 3 Bay 22b (b 4 strike forn cd staircase s	curing (con- temove und temove und de walls of: pase slab of nwork/falsev ST05 & Air; ab for sump	crete strength readerpinning (load tra room except for polah traom) subway) vork /ent Wal & Slab
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-1200 C3840-STR-D1-210	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab Construct Bay 23A (base slab for sump pit)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d	12d 17-May-18 0d 22-Jul-17 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17	A 14-Jun-18 A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 07-Oct-17 A A 30-Sep-17 A A 22-Aug-17 A A 22-Aug-17 A A 30-Sep-17 A A 22-Aug-17 A	100% 100% 100% 100% 100% 100% 100%	12d													■ C:	Construct Ba Construct Construct Construct Bay 2 Construct Bay 2	Ray 21 (base t t Bay 22a (si t Bay 22b (b t strike; forn cd staircase t 23A (base sla ay 23B (fema	curing con- temove und temove und de walls of; asse slab of nwork/lalse ST 05 & Air; ab for sump	crete strength read erpinning (load tra room lexcept for p laht room) subway) vork 'ent Wal & Slab
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-156 C3840-STR-D1-170 C3840-STR-D1-1200 C3840-STR-D1-210 C3840-STR-D1-212	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 22-Jul-17/ 0d 14-Aug-17	A 14-Jun-18 A O7-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 07-Oct-17 A A 30-Sep-17 A A 22-Aug-17 A A 22-Aug-17 A A 18-Sep-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d													Ct	Construct Ba Construct Construct Construct Construct Bay 2 Construct Bay Construct Bay	Ray 21 (base t t Bay 22a (si st Bay 22b (b & strike forn cd staircase s 23A (base sia ay 23B (femi	curing (condition) temove und temove und temove und the walls of plant de walls of plant ase slab of nwork/lalsev ST05 & Air; the for sump aining base	crete strength read erpinning (load tra room except for p lant room) subway) vork /ent Wal & Slab pit)
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-180 C3840-STR-D1-210 C3840-STR-D1-210 C3840-STR-D1-212 C3840-STR-D1-214	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wal & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room) Construct Bay 24 (side walls of plant room up to L5)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d 9d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 22-Jul-17/ 0d 14-Aug-17 0d 04-Sep-17	A 14-Jun-18 O7-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 30-Sep-17 A A 22-Aug-17 A A 22-Aug-17 A A 18-Sep-17 A A 18-Sep-17 A A 18-Sep-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d													Ct	Construct Bay 2	Ray 21 (base t t Bay 22a (si st Bay 22b (b & strike forn cd staircase s 23A (base sia ay 23B (femi	curing (con- temove und temove und temove und to blant de walls of part assession of nwork/talses strip & Air \ ab for sump aining bases e walls of plant	crete strength readerpinning (load transcreen become become to provide the comment of the commen
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-210 C3840-STR-D1-212 C3840-STR-D1-214 C3840-STR-D1-215	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room) Construct Bay 24 (side walls of plant room up to L5) Construct Bay 25 (side walls of plant room & subway base slab)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d 9d 14d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17 0d 24-Aug-17 0d 04-Sep-17 0d 04-Sep-17	A 14-Jun-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 30-Sep-17 A A 22-Aug-17 A A 30-Sep-17 A A 22-Aug-17 A A 18-Sep-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d													Ct	Construct Bay 2	Ray 21 (base to the Bay 22b (bit Bay 22b (bit Bay 22b (bit Bay 23B (tement Bay 24 (side to Bay 25 (side & dismantle	curing (con- temove und temove und temove und temove state de walls of plant to wall to	crete strength readerpinning (load transcreen become become to provide the comment of the commen
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-210 C3840-STR-D1-212 C3840-STR-D1-214 C3840-STR-D1-215 C3840-STR-D1-215	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wal & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room) Construct Bay 24 (side walls of plant room up to L5) Construct Bay 25 (side walls of plant room & subway base slab) Curing & dismantle falsework for Bay 25	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d 9d 14d 9d	12d 17-May-18 0d 22-Jul-17, 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17 0d 24-Aug-17 0d 04-Sep-17 0d 04-Sep-17 0d 19-Sep-17	A 14-Jun-18 O7-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 30-Sep-17 A A 28-Jul-17 A A 28-Jul-17 A A 18-Sep-17 A A 18-Sep-17 A A 18-Sep-17 A A 18-Oct-17 A A 18-Oct-17 A A 18-Oct-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d													Ct	Construct Ba Construct Construct Construct Bay 2 Construct Construct	Ray 21 (base set Bay 22b (bit Bay 22b (bit Bay 22b (bit Bay 23b (fember 18ay 23b (fember 18ay 24 (side t Bay 25 (side set Bay 26 (side set Bay	curing (condition) temove und temove und temove und temove und to blant de walls of plant ase slab of nwork/falsev strop anining base e walls of plant falsework for	crete strength reace erpinning (load transcroom except for publish troom) subway) vork (ent Wall & Slab pit) slab for plant room ant room up to L5) ant room & subway
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-180 C3840-STR-D1-210 C3840-STR-D1-210 C3840-STR-D1-216 C3840-STR-D1-215 C3840-STR-D1-216 C3840-STR-D1-216 C3840-STR-D1-216	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room) Construct Bay 24 (side walls of plant room up to L5) Construct Bay 25 (side walls of plant room & subway base slab) Curing & dismantle falsework for Bay 25 Construct Bay 26 (side walls of subway up to escalator pit base slab)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d 9d 14d 9d 14d	12d 17-May-18 0d 22-Jul-17 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17 0d 04-Sep-17 0d 04-Sep-17 0d 19-Sep-17	A 14-Jun-18 A A 27-Dec-17 A A 07-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 07-Oct-17 A A 22-Aug-17 A A 18-Sep-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d													Ct	Construct Ba Construct Construct Construct Bay 2 Construct Bay	Ray 21 (base to the pay 22 to (since the pay 22 to (since the pay 23 to (femiliar) 23 to (femiliar) 24 (side the pay 24 (side the pay 25 (side the pay 26 (side	curing (concerning temove under the walls of plant de walls of plant assets as the walls of plant as the walls of the wall of the walls of the wall o	crete strength readerpinning (load transcreen except for polarit room) subway) vork /ent Wal & Slab pit) ant room up to L5) ant room & subway or Bay 25 subway up to esc
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-180 C3840-STR-D1-210 C3840-STR-D1-212 C3840-STR-D1-212 C3840-STR-D1-214 C3840-STR-D1-215 C3840-STR-D1-216 C3840-STR-D1-217 C3840-STR-D1-217	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wal & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room) Construct Bay 24 (side walls of plant room up to L5) Construct Bay 25 (side walls of plant room & subway base slab) Curing & dismantle falsework for Bay 25 Construct Bay 26 (side walls of subway up to escalator pit base slab) Curing & dismantle falsework for Bay 26 Construct Bay 27 (side walls of subway and mid level slab @0.18mPD)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d 9d 14d 9d 14d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17 0d 14-Aug-17 0d 04-Sep-17 0d 04-Sep-17 0d 19-Sep-17 0d 19-Sep-17 0d 05-Oct-17	A 14-Jun-18 A A 27-Dec-17 A A 07-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 07-Oct-17 A A 22-Aug-17 A A 18-Sep-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d													Ct	Construct Ba Construct Construct Construct Bay 2 Construct Bay	Ray 21 (base to the pay 22 to (since the pay 22 to (since the pay 23 to (since the pay 23 to (since the pay 24 (since the pay 25 (since the pay 26 (since th	curing (concerning temove under the walls of plant de walls of plant assets as the walls of plant as the walls of the wall of the walls of the wall o	crete strength reacerpinning (load tracerpinning (load tracerpinni
C3840-STR-308 RC Structure at D1 Side C3840-STR-290 C3840-STR-310 C3840-STR-D1-140 C3840-STR-D1-155 C3840-STR-D1-155 C3840-STR-D1-170 C3840-STR-D1-180 C3840-STR-D1-210 C3840-STR-D1-210 C3840-STR-D1-216 C3840-STR-D1-215 C3840-STR-D1-216 C3840-STR-D1-216 C3840-STR-D1-216	Reinstatement of road kerbs and paving block (Between Grids 1.8 and 3.3) Concrete curing (concrete strength reach 40mPa) & removal of falsework/fwk for bay 30 Remove underpinning (load transfer) at Plant Room Construct Bay 21 (base slab of plant room except for pump pit) Construct Bay 22a (side walls of plant room) Construct Bay 22b (base slab of subway) Curing & strike formwork/falsework Construct staircase ST05 & Air Vent Wall & Slab Construct Bay 23A (base slab for sump pit) Construct Bay 23B (remaining base slab for plant room) Construct Bay 24 (side walls of plant room up to L5) Construct Bay 25 (side walls of plant room & subway base slab) Curing & dismantle falsework for Bay 25 Construct Bay 26 (side walls of subway up to escalator pit base slab) Curing & dismantle falsework for Bay 26 Construct Bay 27 (side walls of subway and mid level slab @0.18mPD)	24d 209d 9d 25d 7d 21d 10d 14d 13d 3d 6d 10d 9d 14d 9d 14d	12d 17-May-18 0d 22-Jul-17/ 0d 25-Nov-17 0d 13-Feb-18 0d 07-Aug-17 0d 23-Aug-17 0d 23-Sep-17 0d 23-Sep-17 0d 23-Sep-17 0d 14-Aug-17 0d 04-Sep-17 0d 04-Sep-17 0d 19-Sep-17 0d 19-Sep-17 0d 05-Oct-17	A 14-Jun-18 A A 27-Dec-17 A A 07-Mar-18 A A 27-Dec-17 A A 07-Mar-18 A A 22-Aug-17 A A 18-Sep-17 A A 07-Oct-17 A A 22-Aug-17 A A 18-Sep-17 A	100% 100% 100% 100% 100% 100% 100% 100%	12d	M	Iaster Prog		ne Revi	sion	RMPRS	.1					Date	Co	Construct Ba Construct Construct Construct Bay 2 Construct Bay	Ray 21 (base to the bay 22 to (side staircase) and 23A (base staircase) and 23A (base staircase) and 23B (fembra) 24 (side staircase) and 24 (side staircase) and 25 (side staircase) and 26 (side sta	curing (concerning temove under the walls of plant de walls of plant assets as the walls of plant as the walls of the wall of the walls of the wall o	crete strength reacerpinning (load tracerpinning (load tracerpinni



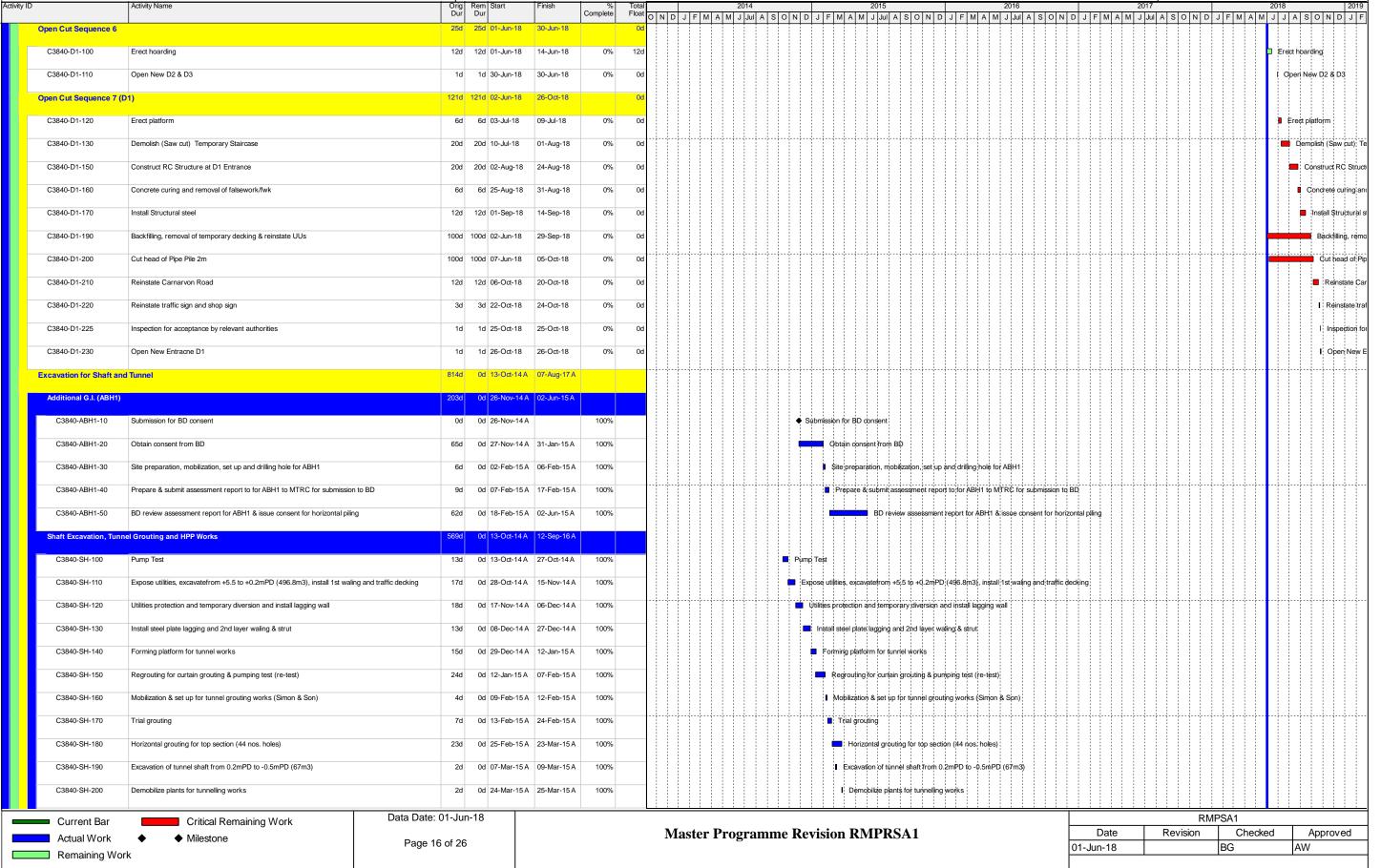


İA	activity Name	Orig Rem Start	Finish % Tota	al	2014			2015		2016	6			2017		A E D A 2018
		Dur Dur	Complete Floa	O N D	J F M A M J Jul	ASON	D J F M	A M J Jul A S	ONDJF	M A M J J	ul A S O	N D J	F M A M	J Jul A	SONDJFM	AMJJASON
C3840-STR-D1-223 C	curing & dismantle falsework for Bay 27	14d 0d 17-Oc	t-17 A 31-Oct-17 A 100%												☐ Curing & dismant	le falsework for Bay 27
C3840-STR-D1-230 C	Construct Bay 28 (side walls of subway up to -2.0mPD)	8d 0d 05-Oc	t-17 A 16-Oct-17 A 100%												Construct Bay 28 (side walls of subway up to -
C3840-STR-D1-240 C	Construct Bay 29 (subway side walls above -2.0mPD & mid level lab)	4d 0d 09-Oc	t-17 A 19-Oct-17 A 100%	+											Construct Bay 29 (subway side walls above -2
C3840-STP-D1-242 D	Delivery & installation of Escalator	11d 0d 01-No	v-17 A 13-Nov-17 A 100%	_											Delivery & instal	lation of Feralator
00040 01K B1 242	convery a installation of Escalator	110 00 01 110	1777 10 100 1777 10070													
C3840-STR-D1-245 C	Curing & dismantle formwork for Bay 29	14d 0d 20-Oc	1-17 A 31-Oct-17 A 100%												Ouring & dismant	le formwork for Bay 29
C3840-STR-D1-255 C	Construct Bay 30 (top slab & north wall)	10d 0d 14-No	v-17 A 24-Nov-17 A 100%												■ Construct Bay	30 (top slab & north wall)
RC Structure at D2 Side (B	Setween Grids 3.3 and 4.5)	179d 0d 25-Ma	y-17 A 30-Dec-17 A													
C2040 CTP D0 400	Construct Bay 7 (concourse base slab & drainage)	Cd 04 05 Ma	y-17 A 01-Jun-17 A 100%												Bay 7 (concourse base sl	-10
C3640-31K-D2-100	onstitut bay / (contourse base sab & drainage)	00 00 25-Wa	y-17 A 01-3dil-17 A 100 /6											Gorisirudi	bay / (Concourse base si	ab & Graniage)
C3840-STR-D2-110 C	Construct Bay 8a (ventilation duct base slab)	10d 0d 02-Jur	-17 A 08-Jun-17 A 100%											Construc	t Bay \$a (ventilation duct t	pase s <mark>l</mark> ab)
C3840-STR-D2-110b C	Construct Bay 8b (ventilation duct base slab)	10d 0d 09-Jur	-17 A 23-Jun-17 A 100%									}	111	Constr	uct Bay 8b (ventilation duc	t base slab)
C3840-STR-D2-120 C	Construct Bay 9a (side wall (W19) of ventilation duct)	10d 0d 19-Jur	i-17 A 27-Jun-17 A 100%	+										Constr	uct Bay 9a (side wall (W1	9) of ventilation duct)
C3840_STD D3 4305	Construct Ray Oh (hase slah & wall IMS of vantilation dust)	104 04 00 1	I-17 A 05-Jul-17 A 100%	4										Car	runt Rhy (th /hack alah e	wall W6 of ventilation duct)
	construct Bay 9b (base slab & wall W6 of ventilation duct)	Tou od 28-Jur	10070 17 A 10070													
C3840-STR-D2-122 C	Curing and dismantle falsework for bay 9	14d 0d 07-Jul	17 A 22-Jul-17 A 100%											Cur	ing and dismantle falsewo	rk for bay 9
C3840-STR-D2-125 Pi	reparation works (construct end walls) for backfilling behid bay 8b	1d 0d 27-Jur	-17 A 17-Jul-17 A 100%	1										Pre	aration works (construct	end walls) for backfilling bet
C3840-STR-D2-126 B	ackfilling behind bay 8b	11d Od 18-Jul	17 A 31-Jul-17 A 100%											■ Be	ckfilling behind bay 8b	
C2940 STP D2 120 C	Construct Bay 10 (mid level slab)	5d 0d 01 Au	g-17 A 05-Aug-17 A 100%												onstruct Bay 10 (mid level	clab)
C3640-31K-D2-130	oristruct bay 10 (mid level slab)	3d 0d 01-Adi	1-17 A 03-Aug-17 A 100 %												oristi det Bay 10 (mid lever	Sidu)
C3840-STR-D2-132 C	Curing and dismantle falsework for bay 10	16d 0d 06-Au	g-17 A 19-Aug-17 A 100%												Curing and dismantle false	work for bay 10
C3840-STR-D2-140 C	Construct Bay 11 (side walls up to vent duct soffit)	20d 0d 21-Au	g-17 A 22-Sep-17 A 100%												Construct Bay 11 (side	walls up to vent duct soffit
C3840-STR-D2-142 C	Curing and dismantle falsework for bay 11	16d 0d 23-Se	p-17 A 13-Oct-17 A 100%	-											Curing and disman	le falsework for bay 11
C2940 STP D2 150 C	Construct Bay 12 (mid level top slab)	164 04 35 90	p-17 A 13-Oct-17 A 100%									ļļļ	.		Construct Bay 12 (r	nid loval top globy
		100 00 25-36	5-17 A 13-00E-17 A 100 %													
C3840-STR-D2-152 C	Curing and dismantle falsework for bay 12	15d 0d 14-Oc	1-17 A 30-Oct-17 A 100%												Curing and disma	ntle falsework for bay 12
C3840-STR-D2-160 Ba	tackfilling works including modification of temporary traffic deck	23d 0d 16-Oc	-17 A 29-Nov-17 A 100%												Backfilling wo	ks including modification of
C3840-STR-D2-165 C	Construct Bay 35 (Entrance D2 & Vent Room); up to +4.3mPD	12d 0d 16-Oc	-17 A 24-Nov-17 A 100%	-											Construct Bay	35 (Entrance D2 & Vent Ro
C2940 STP D2 170 C	Construct Bay 35 (Entrance D2 & Vent Room); above +4.3mPD	21d 0d 25 No	v-17 A 19-Dec-17 A 100%	_											Construct	ay 35 (Entrance D2 & Vent
C3840-STR-D2-180 C	Concrete curing (concrete strength reaching 40mPa) and removal of falsew	ork/fwk 9d 0d 20-De	c-17 A 30-Dec-17 A 100%												■ Concrete	curing (concrete strength re
RC Structure at D2 Side (B	Setween Grids 4.5 and 5.9)	95d 0d 25-Jul	17 A 31-Oct-17 A													
C3840-STR-D2-200 C	Construct Bay 13 (subway base slab, by-pass corridor & drainage)	9d 0d 25-Jul	17 A 28-Jul-17 A 100%	-										I Co	nstruct Bay 13 (subway b	ase sl <mark>a</mark> b, by-pass conridor 8
C3840-STR-D2-210 C	Construct Bay 14a (subway North wall)	14d 0d 29lul	17 A 24-Aug-17 A 100%	-											Construct Bay 14a (subw	av North wall)
			-													
C3840-STR-D2-211 C	Construct Bay 14b (subway South wall & 300mm wall)	14d 0d 29-Jul	17 A 01-Sep-17 A 100%												Gonstruct Bay 14b (subv	vay South wall & 300mm w
C3840-STR-D2-212 C	Construct Bay 14c (subway top slab)	13d 0d 02-Se	p-17 A 20-Sep-17 A 100%	1-1-1-1-								^ 			Construct Bay 14c (su	oway top slab)
C3840-STR-D2-213 C	Construct Staircase ST04	7d 0d 11-Sep	o-17 A 22-Sep-17 A 100%												Construct Staircase S	ST04
C3840-STR-D2-215 C	Curing and dismantle falsework for bay 14	17d 0d 23-Sei	p-17 A 14-Oct-17 A 100%	-											Cuting and disman	le falsework for bav 14
C3840-STR-D2-220 C	Construct Bay 15 (top slab for by-pass corridor)	16d 0d 25-Se	o-17 A 13-Oct-17 A 100%												Construct Bay 15 (t	op sla <mark>b</mark> for by-pass corridor
C3840-STR-D2-222 C	curing and dismantle falsework for bay 15	15d 0d 14-Oc	t-17 A 31-Oct-17 A 100%												Curing and disma	intle falsework for bay 15
Current De-	Critical Remaining Wards	Data Date: 01-Jun-18	<u> </u>		<u> </u>	<u> </u>	1 1 1	<u> </u>	<u> </u>	<u> </u>	1 1 1	<u>: : : : </u>	<u> </u>	<u> </u>	RMPSA1	<u> </u>
Current Bar Actual Work	Critical Remaining Work Milestone			Ma	ster Prograi	nme R	evision	RMPRSA	1				Date	R		ecked Appro
ACCUAL WOLK	▼ WIIICOLOTIC	Page 15 of 26	1		8							04	Jun-18		BG	AW











Tsim Sha Tsui Station, Carnarvon Road Subway



Activity ID	Activity Name	Orig	Rem Start	Finish	- %	Total		2014		2015		2016			017		WAL	2018	201
00040 011 040	5 4 4 4 4 6 85 85 47 85 (370 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		Dur 05 M 45 A	00.4 45.4	Complete	Float	N C	J F M A M J Jul A S	O N D	J F M A M J Jul	A S O N	D J F M A M J Jul A	A S O N D	J F M A M J	Jul A S	O N D J F	M A M	J J A S	ONDJ
C3840-SH-210	Excavate tunnel shaft from -0.5mPD to -1.7mPD (soil 79m3, rock 34m3)	260	0d 25-Mar-15 A	28-Apr-15 A	100%					Excavate	tunnei snatt tro	om +0.5mPD to -1.7mPD (soil 7	9m3, rock 34m3						
C3840-SH-220	Install waling/strut/lagging	8d	0d 20-Apr-15 A	28-Apr-15 A	100%					■ Install wa	ling/strut/laggir	ig							
C3840-SH-230	Mobilize & set up tunnel plants/erect platform at -0.5mPD	3d	0d 29-Apr-15 A	02-May-15 A	100%					I Mobilize	& set up tunne	l plants/erect platform at -0.5ml	סי						
C3840-SH-240	Obtain consent from MTR/BD for test boring	28d	0d 24-Mar-15 A	02-May-15 A	100%					Obtain o	onsent from M	TR/BD for test boring							
C3840-SH-250	Test boring for horizontal pipe piling (HPP53 incl. BD inspection)	34	0d 04-May-15 A	06-May-15 A	100%					Testibon	ing for horizon	tal pipe piling (HPP53 incl. BD i	spection						
												La pipe piling ((iii 100 liioi, 22 li	ispecially						
C3840-SH-260	Install HPP16	/d	0d 03-Jun-15 A	10-Jun-15 A	100%					Insta	all HPP16								
C3840-SH-270	Extract misaligned HPP53	2d	0d 11-Jun-15 A	12-Jun-15 A	100%					l Extr	act misaligned	HPP53							
C3840-SH-280	Make good extracted casing,reinstall HPP53 & check alignment	8d	0d 13-Jun-15 A	23-Jun-15 A	100%					■ Ma	ake good extra	cted casing,reinstall HPP53 & c	heck alignment						
C3840-SH-290	Preparation work for drilling HPP54, drill HPP54 & drilling aborted due to problem detected with interlocking	6d	0d 24-Jun-15 A	30-Jun-15 A	100%					■ P	reparation wor	k for drilling HPP54, drill HPP5	1 & drilling aborte	d due to problem det	ected with in	terlocking			
C3840-SH-300	Demobilization HPP rig off site & remove platform at -0.5mPD	3d	0d 02-Jul-15 A	04-Jul-15 A	100%					10	emobilization I	HPP rig off site & remove platfo	m at -0.5mPD						
C3840-SH-310	Mobilization for excavation plant & excavate tunnel shaft from -1.7mPD to -2.8mPD (113.1m3)	39d	0d 06-Jul-15 A	20-Aug-15 A	100%						Mobilizatio	n for excavation plant & excava	te tunnel shaft fro	om +1.7mPD to -2.8m	PD (113.1m	3)			
C3840-SH-320	Demobilization of excavation plants and setting up for drilling platform		0d 21-Aug-15 A		100%					+		ation of excavation plants and s							
													stang ap ior ariiii	g platform					
C3840-SH-330	Mobilization for drilling rig & site set up	2d	0d 24-Aug-15 A	25-Aug-15 A	100%						I Mobilization	on for drilling rig & site set up							
C3840-SH-340	Extracction of HPP16	1d	0d 26-Aug-15 A	26-Aug-15 A	100%						l Extracctio	on of HPP16							
C3840-SH-350	Site preparation for drilling works	4d	0d 27-Aug-15 A	31-Aug-15 A	100%						Site prep	aration for drilling works							
C3840-SH-360	Horizontal pipe piling; 3 nos. (HPP16 to HPP18)	7d	0d 31-Aug-15 A	08-Sep-15 A	100%						■ Horizon	tal pipe piling; 3 nas. (HPP16 to	HPP18)						
C3840-SH-370	Extraction of HPP53 & HPP54	2d	0d 09-Sep-15 A	10-Sep-15 A	100%						l Extracti	on of HPP53 & HPP54							
C3840-SH-380	Horizontal pipe piling; 4 nos. (HPP19, HPP53 to HPP55)	8d	0d 11-Sep-15 A	19-Sep-15 A	100%						■ Horizo	ntal pipe piling, 4 nos. (HPP19,	HPP53 to HPP5	5)					
C3840-SH-390	Demobilization for drilling rig & setting up for horizontal grouting	34	0d 21-Sep-15 A	23-Sep-15 A	100%						I Demo	bilization for drilling rig & setting	un for harizanta	aroutina					
														groung					
C3840-SH-400	Drilling and horizontal grouting (19 nos.)	1/0	0d 24-Sep-15 A	15-Oct-15 A	100%						Urii	ling and horizontal grouting (19	nos.)						
C3840-SH-410	Demobilize grouting plants, remove rock fill, & mobilize & set up for rock excavation	17d	0d 16-Oct-15 A	23-Oct-15 A	100%						■ De	emobilize grouting plants, remov	e rock fill, & mob	lize & set up for rock	excavation				
C3840-SH-420	Installation of waling L2A, installation of steel plate and prepartion works for removal of vertical pipe piles	8d	0d 24-Oct-15 A	28-Oct-15 A	100%						I In	stallation of waling L2A, installa	ion of steel plate	and prepartion work	s for remova	l of vertical pipe pi	iles		
C3840-SH-430	Removal of vertical pipe pile PP84 ~ PP89a (7 numbers) & grouting for the gaps	9d	0d 29-Oct-15 A	07-Nov-15 A	100%						•	Removal of vertical pipe pile PP	34 ~ PP89a (7 nu	mbers) & grouting fo	r the gaps				
C3840-SH-440	Removal of temporary platform	1d	0d 09-Nov-15 A	09-Nov-15 A	100%						1 1	Removal of temporary platform							
C3840-SH-450	Shaft excavation;-2.8mPD ~ -3.5mPD (65.6m³)	31d	0d 24-Oct-15 A	28-Nov-15 A	100%						_	Shaft excavation;-2.8mPD ~	3.5mPD (65,6m)					
C3840-SH-460	Shaft excavation;-3.5mPD ~ -4.8mPD (122m³)	46d	0d 30-Nov-15 A	25-Jan-16 A	100%							Shaft excavation:-3.5n	PD ~ -4.8mPD	122m³)					
							ļļ.												
C3840-SH-470	Installation of additional waling L3A		0d 23-Jan-16 A		100%							Installation of addition							
C3840-SH-490	Shaft excavation;-4.8mPD ~ -6.0mPD (115m³)	36d	0d 18-Jul-16 A	11-Aug-16 A	100%							<u> </u>	Shalft excavatio	n;-4.8mPD ~ -6.0mPl	D (115m³)				
C3840-SH-500	Reinstall drilling platform	2d	0d 28-Jan-16 A	28-Jan-16 A	100%							l Reinstall drilling platfor	m						
C3840-SH-510	Mobilization & setup for drilling rig	4d	0d 29-Jan-16 A	02-Feb-16 A	100%							Mobilization & setup f	or drilling rig						
C3840-SH-520	Installation of HPP roof (31 nos.)	30d	0d 03-Feb-16 A	22-Mar-16 A	100%							Installation of H	PP roof (31 nos.)						
C3840-SH-530	Modification of working platform for drilling rig	1d	0d 23-Mar-16 A	24-Mar-16 A	100%							l Modification of	working platform	for drilling rig					
C3840-SH-540	Dismantling of waling L2B	1d	0d 29-Mar-16 A	30-Mar-16 A	100%							■ Dismantling of	waling L2B						
														20.					
C3840-SH-550	Installation of HPP wall (10 nos.)	100	0d 30-Mar-16 A	18-Apr-16 A	100%							Installation o	ii HPP Wall (10 N	JS.J					
Current Bar	Critical Remaining Work Data Date: 0	01-Jun-	-18					D		· · DMDD						RMPSA ²	1		

Actual Work •
Remaining Work

Critical Remaining WorkMilestone

Page 17 of 26

Master Programme Revision RMPRSA1

	RMF	PSA1	
Date	Revision	Checked	Approved
01-Jun-18		BG	AW



Remaining Work

Contract C3840-13C





Activity I)	Activity Name	Orio	Rem	Start	Finish	%	Total		2014	$\overline{}$	2015		2016	1 2	2017 W A	2018 201
, touvity .		, and the same	Dur	Dui	n Start r		Complete	Float O N	D J		OND		ASOND	J F M A M J Jul A S C		J Jul A S O N D J F M A N	A J J A S O N D J
	C3840-SH-560	Modification of drilling platform	2d	d Oc	19-Apr-16 A	21-Apr-16 A	100%							I Modification of drillin	g platform		
	C3840-SH-570	Installation of HPP wall (3 numbers)	8d	d Oc	d 18-Apr-16 A	25-Apr-16 A	100%							■ Installation of HPP	wall (3 numbers)		
	C3840-SH-572	Drilling for HPP64 & HPP25, cease drilling due to obstruction & extract HPP64	8d	d Oc	d 26-Apr-16 A	04-May-16 A	100%							■ Drilling for HPP64	& HPP25, cease drilling due	to obstruction & extract HPP64	+
	C3840-SH-620	Demobilize HPP rig, dismantle drilling platform, mobilization & setup for Horizontal Grouting works	2d	d 0c	d 05-May-16 A	16-May-16 A	100%							■ Demobilize HPP	ig, dismantle drilling platform	, mobilization & setup for Horizontal Gro	uting works
	C3840-SH-630	Drilling for horizontal grout hoels (13 nos.)	5d	d 0c	d 16-May-16 A	26-May-16 A	100%							■ Drilling for horiz	ontal grout hoels (13 nos.)		
	C3840-SH-632	Grouting for horizontal grout holes (13 nos.)	4d	d Oc	d 25-May-16 A	14-Jul-16 A	100%							Grauting t	or horizontal grout holes (13	nos.)	
	C3840-SH-640	Modification of drilling rig for HPP works & mobilization and set up HPP works	1d	d 0c	d 27-May-16 A	30-May-16 A	100%							Modification of	drilling rig for HPP works & m	ndbilization and set up HPP works	
	C3840-SH-642	Extract HPP25	2d	d 0c	d 30-May-16 A	31-May-16 A	100%							Extract HPP25			
	C3840-SH-644	Drilling for HPP wall (5 nos.) including extraction of casing for HPP64			d 01-Jun-16 A		100%								P wall (5 nos.) including extra	action of casing for HPP64	
	C3840-SH-646	Demolize drilling rig				13-Jun-16 A								l Demoliże drilli			
	C3840-SH-648	Modification of waling L3 & L3A/setting up drilling rig platform/mobilize & set up drilling rig			d 14-Jun-16 A		100%									drilling rig platform/mobilize & set up drill	ing rig
	C3840-SH-650	Drilling for HPP wall (8 nos.)	23d	00	d 17-Jun-16 A	14-Jul-16 A	100%							Drilling for	HPP wall (8 nds.)		
	C3840-SH-660	Demobilize drilling rig/Dismantle drilling platform	2d	d 0c	15-Jul-16 A	16-Jul-16 A	100%							I Demobiliz	e drilling rig/Dismantle drilling	platform	
	C3840-SH-665	Removal of vertical pipe piles PP89b	2d	d 0c	d 12-Aug-16 A	13-Aug-16 A	100%							I Remo	val of vertical pipe piles PP89	b	
	C3840-SH-668	Assembly of drilling platform for HPP rig	2d	d 0c	d 12-Aug-16 A	13-Aug-16 A	100%							I Assem	bly of drilling platform for HP	Prig	
	C3840-SH-670	Drilling and horizontal grouting (13 nos.)	18d	d Oc	d 13-Aug-16 A	24-Aug-16 A	100%							■ Drillir	g and horizontal grouting (13	3 nos;)	
	C3840-SH-680	Modification of drilling rig	2d	d 0c	d 24-Aug-16 A	25-Aug-16 A	100%							I Modi	fication of drilling rig		
	C3840-SH-690	Drilling for HPP wall (8 nos.)	8d	d Oc	d 25-Aug-16 A	10-Sep-16 A	100%							■ Dri	lling for HPP wall (8 nos.)		-
	C3840-SH-740	Modification of drilling rig	2d	d 0c	d 10-Sep-16 A	12-Sep-16 A	100%							I Mo	dification of drilling rig		
	Re-fabrication and Del	livery of Remaining Interlocking HPP Casing	87d	d Oc	d 07-Sep-15 A	12-Jan-16 A											
	C3840-CF-100	Fabrication for remaining casing (Roof); 1st batch	20d	d Oc	d 07-Sep-15 A	30-Sep-15 A	100%						Fabricatio	on for remaining casing (Roof); 1st l	patch		
	C3840-CF-102	Delivery of casing (Roof); 1st batch	7d	d Oc	d 02-Oct-15 A	15-Oct-15 A	100%						■ Deliver	of casing (Rdof); 1st batch			
	C3840-CF-104	Fabrication for remaining casing (Roof); 2nd batch	20d	d Oc	d 05-Oct-15 A	31-Oct-15 A	100%							cation for remaining casing (Roof);	2nd batch		
	C3840-CF-106					09-Nov-15 A								very of casing (roof); 2nd batch			
		Delivery of casing (roof); 2nd batch															
	C3840-CF-108	Fabrication for remaining casing; 3rd batch				17-Dec-15 A								Fabrication for remaining casing 3			
	C3840-CF-110	Delivery of casing (Wall); 3rd batch	7d			24-Dec-15 A	100%							Delivery of casing (Wall): 3rd batcl			
	C3840-CF-112	Fabrication for remaining casing (wall); 4th batch	12d	d Oc	d 18-Dec-15 A	02-Jan-16 A	100%							Fabrication for remaining casing (wall); 4th batch		
	C3840-CF-114	Delivery of casing (Wall); 4th batch	7d	00	04-Jan-16 A	12-Jan-16 A	100%							Delivery of casing (Wall); 4th ba	i¢h		
	BD Submissions Prior	to Tunnel Excavation	403d	00	23-Nov-15 A	20-Jan-17 A											
	C3840-BD-100	Submit piling record for phase 1 HPP	14d	d 0c	d 02-Jul-16 A	14-Jul-16 A	100%							■ Submit pil	ng record for phase 1 HPP		
	C3840-BD-102	Submit grouting record for pahse 1 grouting work	5d	d 0c	23-Nov-15 A	28-Nov-15 A	100%						D Su	ubmit grouting record for pahse 1 gi	outing work		
	C3840-BD-106	BA8 for phase 1 tunnel excavation	28d	d Oc	d 18-Jul-16 A	27-Sep-16 A	100%							E	BA8 for phase 1 tunnel excav	ation	
	C3840-BD-108	BA10 for pahse 1 tunnel excavation	7d	d Oc	d 19-Sep-16 A	27-Sep-16 A	100%								BA10 for pahse 1 tunnel exca	vation	-
	C3840-BD-109	Obtain consent from BD for commencing phase 1 tunnel excavation	Od	d Oc	b	28-Sep-16 A	100%							• (Obtain consent from BD for o	ommencing phase 1 tunnel excavation	
										<u> </u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>		
_	Current Bar	Critical Remaining Work Data Date	e: 01-Ju	ın-18	•											RMPSA1	
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C3840-BD-110	Submit piling record for pahse 2 HPP		3d 0d 30-Nov-	16 A 30-Nov-16 A	100%									S	Submit piling record for pahs	e 2 HPP			
C3840-BD-112	Submit grouting record for pahse 2 grouting work		5d 0d 30-Nov-	16 A 30-Nov-16 A	100%	\exists								İs	Submit grouting record for p	ahse 2 grouting wo	rk		
C3840-BD-114	BA14 for HPP works		1d 0d 15-Nov-	16 A 15-Nov-16 A	100%	+								I BA	A14 for HPP works				
C3840-BD-118	BA10 for pahse 2 tunnel excavation		7d 0d 20- lan-	17 A 20-Jan-17 A	100%		ļļ								I BA10 for pahse 2 tunn	ellexcavation			
															, Salo loi pane 2 tulli	S. SACAVATOIT			
Stage 1, Tunnel Excav		20	od 0d 11-Jun-	16 A 28-Feb-17 A															
C3840-SE-640	Additional grouting for Probe Hole		3d 0d 11-Jun-	16 A 11-Jun-16 A	100%								I Additional g	routing fo	r Probe Hole				
C3840-SE-650	Horizontal Probe Hole for Water Inflow Determination		1d 0d 11-Jun-	16 A 11-Jun-16 A	100%								I Horizontal F	Probe Hole	e for Water Inflow Determin	ation			
C3840-SE-651	Demobilize HPP plants, remove HPP spoils		1d 0d 14-Sep-	16 A 19-Sep-16 A	100%									Demobiliz	e HPP plants, remove HPP	spoils			
C3840-SE-652	Install working platform for tunnel excavation at -2.15mPD & additional por	ratal frame	4d 0d 20-Sep-	16 A 28-Sep-16 A	100%									Install wo	orking platform for tunnel ex	cavation at -2.15ml	PD & additional pora	atal frame	
C3840-SE-660	Removal of vertical pipe pile PP84 - PP89a (7 nos.)		9d 0d 29-Sep-	16 A 05-Oct-16 A	100%	-								Remova	al of vertical pipe pile PP84	PP89a (7 nos.)			
C3840-TE1-100	Bay 1; excavation, muckout, steel rib installation		9d 0d 29-Sep-	16 A 15-Oct-16 A	100%	+								■ Bay 1:	excavation, muckqut, steel	rib installation			
C3840-TE1-102	· ·			16 A 22-Oct-16 A	100%	4									excavation, muckbut, stee				
	Bay 2; excavation, muckout, steel rib installation																		
C3840-TE1-104	Bay 3; excavation, muckout, steel rib installation		4d 0d 24-Oct-	16 A 28-Oct-16 A	100%									Bay 3	3; excavatioh, muckout, stee	I rib installation			
C3840-TE1-106	Bay 4; excavation, muckout, steel rib installation		5d 0d 29-Oct-	16 A 04-Nov-16 A	100%									Bay	4; excavation, muckout, ste	el rib installation			
C3840-TE1-108	Bay 5; excavation, muckout, steel rib installation		5d 0d 05-Nov-	16 A 09-Nov-16 A	100%									I Bay	5; excavation, muckout, ste	el rib installation			
C3840-TE1-110	Bay 6; excavation, muckout, steel rib installation		5d 0d 10-Nov-	16 A 14-Nov-16 A	100%									■ Bay	y 6; excavation, muckqut, st	eel rib installation			
C3840-TE1-112	Bay 7; excavation, muckout, steel rib installation		5d 0d 15-Nov-	16 A 18-Nov-16 A	100%	+								I Ba	ay 7; excavation, muckout, s	teel rib installation			
C3840-TE1-114	Bay 8; excavation, muckout, steel rib installation		6d 0d 19-Nov-	16 A 24-Nov-16 A	100%	+								I Ba	ay 8; excavation, muckout,	steel rlb installation			
C3840-TE1-116	Bay 9; excavation, muckout, steel rib installation		6d 0d 25-Nov-	16 A 30-Nov-16 A	100%									↓ B	Bay 9; excavation, muckout,	steel rib installation			
C3840-TE1-118	Bay 10; excavation, muckout, steel rib installation		6d 0d 01-Dec-	16 A 08-Dec-16 A	100%	-									Bay 10; excavation, muck or				
C3840-TE1-120	Bay 11; excavation, muckout, steel rib installation			16 A 13-Dec-16 A		-									Bay 11; excavation, muckp				
C3840-TE1-122	Bay 12; excavation, muckout, steel rib installation		6d 0d 12-Dec-	16 A 17-Dec-16 A	100%										Bay 12; excavation, muck	out, steel rib installat	ion		
C3840-TE1-124	Bay 13; excavation, muckout, steel rib installation		6d 0d 19-Dec-	16 A 23-Dec-16 A	100%									1	Bay 13; excavation, muck	out, steel rib installa	tion		
C3840-TE1-126	Bay 14; excavation, muckout, steel rib installation		6d 0d 24-Dec-	16 A 30-Dec-16 A	100%			J							Bay 14; excavation, much	cout, steel rib install	ation		
C3840-TE1-128	Bay 15; excavation, muckout, steel rib installation		4d 0d 31-Dec-	16 A 05-Jan-17 A	100%										Bay 15; excavation muc	kout, steel rib instal	lation		
C3840-TE1-130	Bay 16; excavation, muckout, steel rib installation		1d 0d 05-Jan-	17 A 09-Jan-17 A	100%	+									Bay 16; excavation, mu	ckout, steel rib insta	llation		
C3840-TE1-132	Bay 17; excavation, muckout, steel rib installation		4d 0d 09-Jan-	17 A 12-Jan-17 A	100%	+									Bay 17; excavation, mu	cklout, stelel rib insta	allation		
C3840-TE1-133	Removal of unforeseen concrete pile		1d 0d 04-Jan-	17 A 12-Jan-17 A	100%	+									Removal of unforeseen	concrete pile			
C3840-TE1-134	Remove excavated material & working platform	1	0d 0d 09-Jan-	17 A 28-Feb-17 A	100%										Remove excavate	d material & worki	na platform		
																		uting	
C3840-TE1-136	Mass concrete infill in between steel ribs (roof) & back grouting			17 A 15-Feb-17 A											Mass concrete infill	in between steel fil	os (Tour) & Dack gro	udiiğ	
Stage 2, Tunnel Excav	ation	24	od 0d 13-Sep-	16 A 07-Aug-17 A															
C3840-SE-800	Probe hole for phase 2, tunnel excavation		1d 0d 13-Sep-	16 A 13-Sep-16 A	100%									Probe hole	e for phase 2, tunnel excava	ation			
C3840-SE-802	Removal of vertical pipe piles PP84 ~PP89a (7 nos.)		5d 0d 24-Feb-	17 A 27-Feb-17 A	100%										Removal of vertical	al pipe piles PP84 ~	PP89a (7 nos.)		
C3840-TE2-100	Bay 1; excavation, muckout, steel rib installation		5d 0d 28-Feb-	17 A 07-Mar-17 A	100%										Bay 1; excavation	n, muckout, steel rib	installation		
Occurs of Da	Oritical Democratica Wood	Data Date: 01-	lun-18				<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>: : : : : : : : : : : : : : : : : : : </u>	RMF	::::::::::::::::::::::::::::::::::::::	<u> </u>	<u> </u>
Current Bar Actual Work	Critical Remaining Work Milestone					I	Mas	ster Progran	nme R	evision	RMPRSA1				Date	Revision	Checked		Approved
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D Activity Name	Orig Rem Start Dur Dur	Complete Floar	al 2014 2015 2016 ^{tt} O N D J F M A M J Jul A S O N D J F M A M J Jul A S O N D J F M A M J Jul A S	2017 2018 2
				0 N D 3 F M A M 3 3 M A S O N D 3 F M A M 3 3 A S O N D 3
C3840-TE2-110 Bay 2; excavation, muckout, steel rib installation	5d 0d 06-Mar-17	A 09-Mar-17 A 100%		I Bay 2; excavation, muckout, steel rib installation
C3840-TE2-120 Bay 3; excavation, muckout, steel rib installation	6d 0d 09-Mar-17	A 13-Mar-17 A 100%		■ Bay 3; excavation, muckout, steel rib installation
C3840-TE2-130 Bay 4; excavation, muckout, steel rib installation	6d 0d 13-Mar-17	A 17-Mar-17 A 100%		■ Bay 4; excavation, muckdut, steel rib installation
C3840-TE2-140 Bay 5; excavation, muckout, steel rib installation	6d 0d 17-Mar-17	A 22-Mar-17 A 100%		■ Bay 5; ex¢avation, muckòut, steèl rib installation
C3840-TE2-150 Bay 6; excavation, muckout, steel rib installation	6d 0d 23-Mar-17	A 28-Mar-17 A 100%		II. Bay 6; excavation, muckout, steel rib installation
C3840-TE2-160 Bay 7; excavation, muckout, steel rib installation	6d 0d 28-Mar-17	A 03-Apr-17 A 100%		■ Bay 7; excavation, muckout, steel rib installation
C3840-TE2-170 Bay 8; excavation, muckout, steel rib installation	5d 0d 05-Apr-17	A 19-Apr-17 A 100%		. ■ Bay 8; excavation, mückout, steel rib installation
C3840-TE2-180 Bay 9; excavation, muckout, steel rib installation	5d 0d 20-Apr-17	A 25-Apr-17 A 100%		Bay 9: excavation, muckout, steel rib installation
C3840-TE2-190 Bay 10; excavation, muckout, steel rib installation	6d 0d 26-Apr-17	A 06-May-17 A 100%		Bay 10; excavation, muckout, steel rib installation
C3840-TE2-200 Bay 11; excavation, muckout, steel rib installation	6d 0d 08-May-17	A 12-May-17 A 100%		Bay 11; excavation, muckout, steel rib installation
C3840-TE2-210 Bay 12; excavation, muckout, steel rib installation	6d 0d 13-May-17	'A 18-May-17 A 100%		■ Bay 12; excavation, muckout; steel rib installation
C3840-TE2-220 Bay 13; excavation, muckout, steel rib installation	6d 0d 19-May-17	' A 24-May-17 A 100%		■ Bay 13: excavation, muckout, steel rib installation
C3840-TE2-230 Bay 14; excavation, muckout, steel rib installation	6d 0d 25-May-17	A 27-May-17 A 100%		I. Báy 14; excavatión, muckout, steel rib Installation
C3840-TE2-240 Bay 15; excavation, muckout, steel rib installation	6d 0d 29-May-17	A 31-May-17 A 100%		■ Bay 15; excavation, muckout, steel rib installation
C3840-TE2-250 Bay 16; excavation, muckout, steel rib installation	2d 0d 01-Jun-17	A 02-Jun-17 A 100%		l Bay 16; excavation, muckojut, steel rib installation
C3840-TE2-251 Void filling @ K11 underpinning wall	1d 0d 02-Jun-17	A 05-Jun-17 A 100%		1 Void-filling @ Kt1 underpinning wall
C3840-TE2-252 Bay 17; excavation, muckout, steel rib installation	6d 0d 06-Jun-17	A 08-Jun-17 A 100%		I Bay 17; excavation, muckout, steel rib installation
C3840-TE2-254 Mucking out for tunnel excavated material & blinding	4d 0d 09-Jun-17	A 28-Jun-17 A 100%		Mucking out for tunnel excavated material & blinding
C3840-TE2-256 Mass concrete infill between HPP and tunnel permanent works	15d 0d 10-Jul-17 A	A 07-Aug-17 A 100%]	Mass concrete infill between HPP and tunnel permanent work
Tunnel RC Works including Breakthrough to K11 Diaphragm Wall	224d 0d 17-May-17	'A 01-Feb-18 A		
C3840-TU-260 Back grouting	6d 0d 08-Jan-18	A 13-Jan-18 A 100%		■ Back grouting
C3840-TU-262 Install permanent flood gate including T&C	6d 0d 11-Jan-18	A 29-Jan-18 A 100%		■ Install permanent flood gate including T8
RC Works Between Grids 5.9 and 6.2	185d 0d 03-Jul-17 A	01-Feb-18 A		
C3840-TU-165 Modification of ELS at interface between CnC and Shaft incl. vertical blinding at s	haft 11d 0d 12-Jul-17 A	A 19-Jul-17 A 100%		■ Modification of ELS at invertace between CnC and Shaft ind. ve
C3840-TU-170 Cleaning & Blinding for shaft	2d 0d 03-Jul-17 A	A 11-Jul-17 A 100%		Cleaning & Blinding for shaft
C3840-TU-180 Construct Bay 16 (subway base slab & drainage)	9d 0d 25-Jul-17 A	A 28-Jul-17 A 100%		■: Construct Bay 16 (subway base slab & drainage)
C3840-TU-185 Construct Bay 17 (subway side walls)	21d 0d 16-Aug-17	A 08-Sep-17 A 100%		Construct Bay 17 (subway side walls)
C3840-TU-248 Construct Bay 17A (subway stop slab)	6d 0d 24-Jan-18	A 27-Jan-18 A 100%		II Construct Bay 17A (subway stop slab)
C3840-TU-250 Curing (concrete strength reach 40mPa) and remove falsework for bay 17A	5d 0d 28-Jan-18	A 01-Feb-18 A 100%	_	■ Guring (contrete strength reach 40mPa
RC Works Between Grids 6.2 and 8.5	125d 0d 07-Aug-17	A 28-Dec-17 A		
C3840-TU-282 Construct Bay 18 (subway bae slab & drainage)	9d 0d 07-Aug-17	A 15-Aug-17 A 100%		. ■ Construct Bay 18 (subway bae s <mark>a</mark> b & drainage)
C3840-TU-284 Construct Bay 19 (subway side walls)	15d Od 16-Aug-17	A 08-Sep-17 A 100%		Construct Bay 19 (subway sida walls)
C3840-TU-285 Dismantle formwork for bay 19	3d 0d 09-Sep-17	A 16-Sep-17 A 100%		■ Dismantte formwork for bay 19
C3840-TU-286 Construct Bay 20a (subway top slab)	26d 0d 06-Nov-17	A 05-Dec-17 A 100%		Çonştruct Bay 20a (subwayı toʻp slab)
	Data Date: 04 Jun 49			DMDGA
Current Bar Critical Remaining Work	Data Date: 01-Jun-18		Master Programme Revision RMPRSA1	RMPSA1 Date Revision Checked Approved
Actual Work ♦ Milestone	Page 20 of 26		Master I rugi amme nevisium nivii nsai	01-Jun-18 BG AW
Remaining Work				

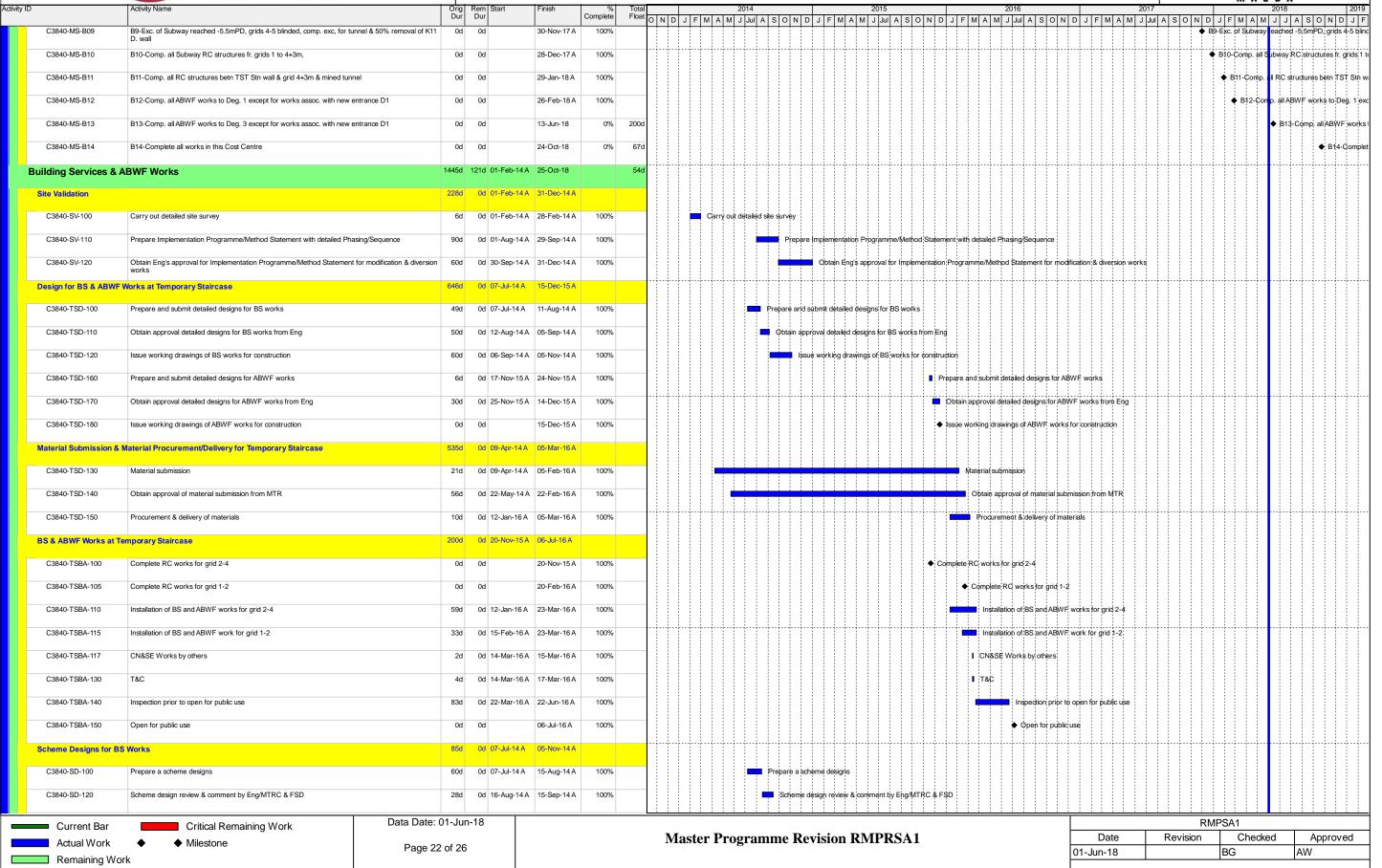




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ID	Activity Name	1	Orig R Dur [Rem Start Dur	Finish	Complete	Float	2014 2015 2016 O N D J F M A M J Jul A S O N D J F M A M J Jul A S O N D J F M A M J Jul A S	2017 2018 2 S O N D J F M A M J J A S O N D J F M A M J J A S O N D
C3840-TU-287	Construct Bay 20b (subway top slab)		9d	0d 06-Dec-17 A	15-Dec-17 A	100%			■ Construct Bay 201 (subway top slab)
C3840-TU-288	Curing (concrete strength reach 40mPa) & remove falsework for bay 20		9d	0d 16-Dec-17 A	28-Dec-17 A	100%	•		■: Curirig (concrete striength reach 40mPa) & r
RC Works Between G	rids 8.5 and 9 (BD Full Approval Zone)	10	133d	0d 14-Jun-17 A	21-Nov-17 A				
C3840-TU-290	Mobilization & set up for SI rig for coring CR1 proof core		2d	0d 14-Jun-17 A	14-Jun-17 A	100%	5		I Mobilization & set up for SI rig for coring CR1 proof core
C3840-TU-292	CR1 proof coring by specialist sub-contractor		4d	0d 15-Jun-17 A	16-Jun-17 A	100%	.		■ CR1 proof coring by specialist sub-contractor
C3840-TU-294	Demoblization of SI rig off site		1d	0d 17-Jun-17 A	17-Jun-17 A	100%	5		I Demoblization of \$I rig off site
C3840-TU-296	Preparation of SI report by specialist sub-contractor		6d	0d 17-Jun-17 A	19-Jun-17 A	100%	.		Preparation of SI report by specialist sup-contractor
C3840-TU-298	Inspection of formation (Stratum) by RGE		1d	0d 04-Jul-17 A	04-Jul-17 A	100%	5		I hispection of formation (Stratum) by FIGE
C3840-TU-300	Submit BA8 for tunnel permanent works		0d	0d	04-Jul-17 A	100%	b		♦ Submit BA8/for tunnel permanent/works
C3840-TU-302	BD assess and approves BA8		28d	0d 05-Jul-17 A	14-Sep-17 A	100%			BD assess and approves BA8
C3840-TU-304	BA10 for tunnel permanent works		0d		15-Sep-17 A				◆ BA10 for tunnel permanent works
C3840-TU-306	BD acknowledge BA10			0d 16-Sep-17 A					■ BD acknowledge BA10
C3840-TU-308	Erect falsework/workking platform, prepare cj, dowel bars, rebar fixing and			0d 15-Jul-17 A					Erect/falsework/workking platform, prépare cj. dowel
C3840-TU-310	Concreting for lintel beam (bay 31)		1d	0d 29-Sep-17 A	29-Sep-17 A	100%			Concreting for lintel beam (bay 31)
C3840-TU-312	Curing and dismantle formwork for bay 31		11d	0d 30-Sep-17 A	10-Oct-17 A	100%			 Curing and dismantle formwork for bay \$1
C3840-TU-316	Construct Bay 32 (base slab)		4d	0d 11-Oct-17 A	16-Oct-17 A	100%			■ Construct Bay 32 (başe s <mark>l</mark> ab)
C3840-TU-318	Construct Bay 33 (side walls)		8d	0d 17-Oct-17 A	24-Oct-17 A	100%	•		■ Construct Bay 33 (side valls)
C3840-TU-319	Dismantle formwork for bay 33		1d	0d 25-Oct-17 A	25-Oct-17 A	100%			II Dismaintle formwork for pay 33
C3840-TU-320	Construct Bay 34 (top slab)		8d	0d 26-Oct-17 A	04-Nov-17 A	100%	.		☐ Çonştruçt Bay 34 (lop slab)
C3840-TU-330	Curing & modification of falsework to suit the breakthrough work		5d	0d 05-Nov-17 A	12-Nov-17 A	100%	•		■ Curing & modification of falsework to suit the bre
C3840-TU-340	Remaining curing and dismanle falsework for bay 34		8d	0d 13-Nov-17 A	21-Nov-17 A	100%	.		■ Remaining curing and dismanle falsework for t
K11 Breakthroug		20	203d	0d 17-May-17 A	09-Jan-18 A				
C3840-TU-190	Erect temporary hoarding within K11 Lot (00.00-07:00)		1d	0d 17-May-17 A	17-May-17 A	100%			I Erect temporary hoarding within K11 Lot (00.00-07:00)
C3840-TU-200	Erect flood protection wall within K11 Lot		6d	0d 06-Sep-17 A	04-Oct-17 A	100%	.		Erect flood protection wall within K11 Lot
C3840-TU-210	Breakthrough (core & saw cut) into K11 Lot & associated works		40d	0d 13-Nov-17 A	09-Jan-18 A	100%	•		Breakthrough core & saw cut) into K11
Milestones for Cost Ce	entre B - Carnarvon Road Subway and Entrances	166	668d 13	33d 30-Apr-14 A	24-Oct-18		67d		
C3840-MS-B01	B1-Complete all U/G UU identif. & cables in north & south foot paths in Ca	rn. Rd. exposed	0d	0d	30-Apr-14 A	100%	5	♦ B1-Complete all;U/G UU identif. & cables in north & south foot paths in Cam. Rd. exposed	
C3840-MS-B02	B2-Close CR, hoarding erected, all pipes & UU diverted and all O/H signs	removed	0d	0d	01-Jun-14 A	100%	<u> </u>	◆ B2-Close CR, hbarding erected, all pipes & UU diverted and all O/H signs removed	
C3840-MS-B03	B3-All underground utilities affecting the Works satisfactorily removed or pr	rotected	0d	0d	31-Aug-14 A	100%	5	◆ B3-All underground utilities affecting the Works satisfactorily removed or protected	
C3840-MS-B04	B4-Comp. inst. of 75% of cofferdam wall for mined tunnel shaft installed, m		0d		30-Nov-14 A			◆ B4-Comp. injst. of 75% of cofferdam wall for mined tunnel shaft installed, meas	sure as a % of wall perimet.
C3840-MS-B05	perimet. B5-Exc. of mined tunnel shaft reached -3.0mPD level & comp. inst. 50% of		0d		28-Nov-15 A				ched:-3.6mPD level & comp. inst. 50% of cofferdam wall for Subway cofferdam
C3840-MS-B06	Subway cofferdam B6-Comp. exc./strut. works in mined tunnel shaft, formation blinded & tunnel shaft.		0d		30-Sep-16 A				◆ B6-Comp. exc./strut. works in mined tunnel shaft; formation blinded & tunnel portal prepared for n
C3840-MS-B07	mining exc. B7-Satisf, passed pump, test for subway cofferdam & comp. inst. of mined		0d		14-Nov-16 A				◆ B7-Satisf, passed pump, test for subway cofferdam & comp, inst. of mined tunnel canopy tut
C3840-MS-B08	grouted								
C304U-IVIS-BU8	B8-Comp. Subway cofferdam 1st level strutting & all utilities satisf. supporte		0d		16-Jan-17 A	100%			◆ B8-Comp. Subway cofferdam 1st level strutting & all utilities satisf, supported from it
		Data Date: 01-	lun 1	18					RMPSA1
Current Bar	Critical Remaining Work	Data Date. 01-	-Juli- i					Master Programme Revision RMPRSA1	Date Revision Checked Approve

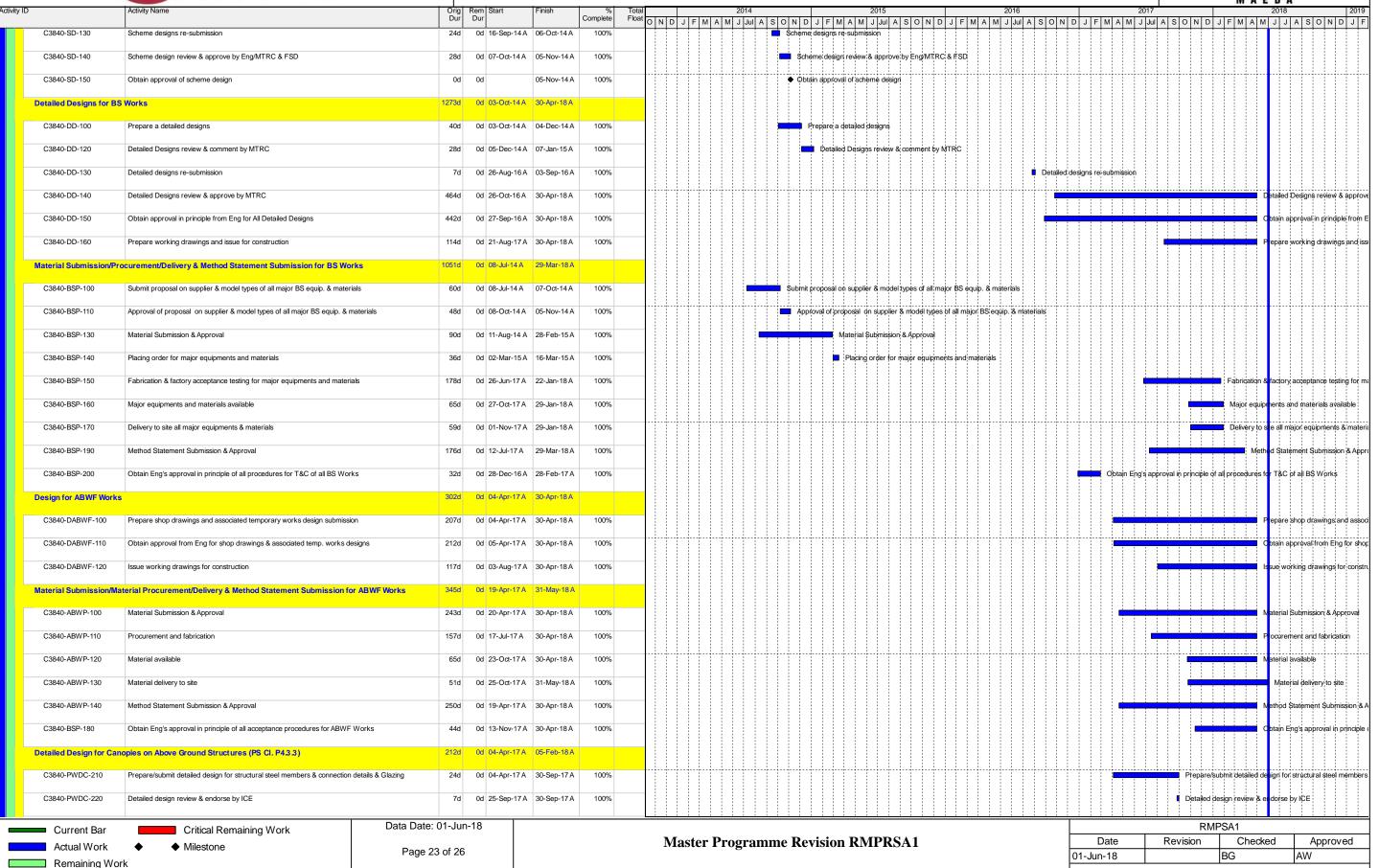






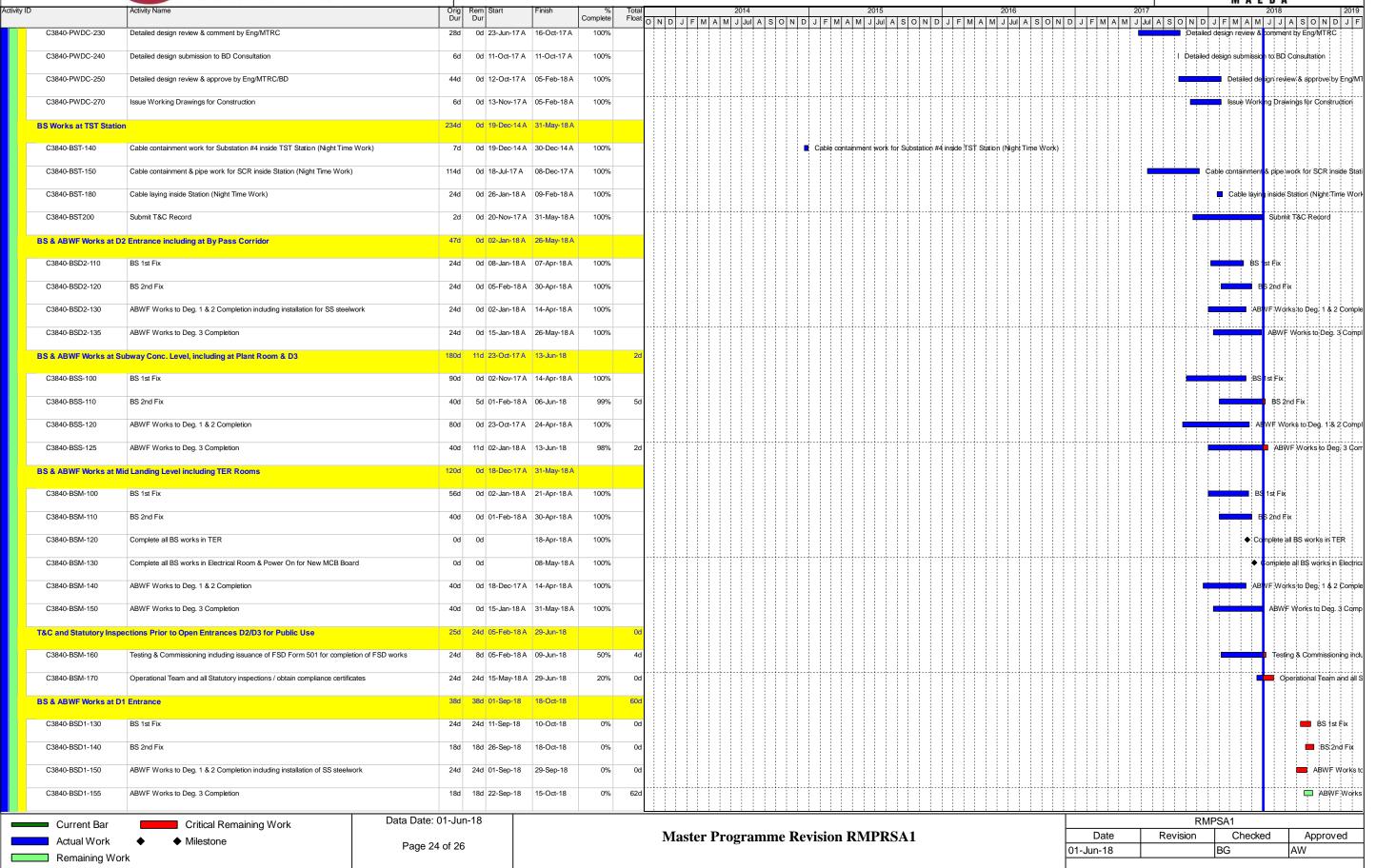






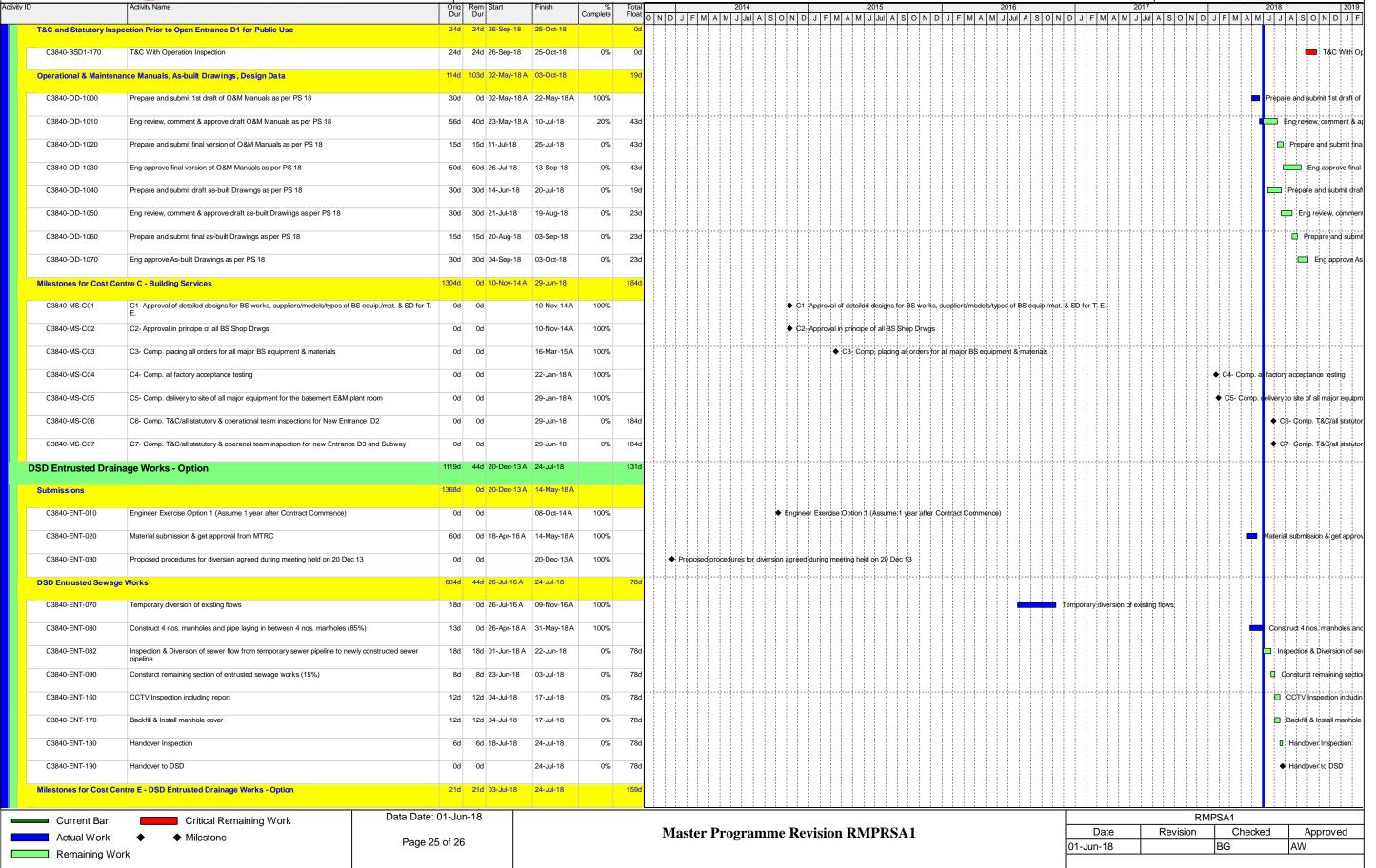












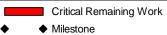


Tsim Sha Tsui Station, Carnarvon Road Subway



ctivity ID	Activity Name		Rem Start	Finish	%	Total	2014	2015	2016	2017	2018 2019
		Dur	Dur		Complete	Float	O N D J F M A M J Jul A S O N D	J F M A M J Jul A S O N E	J F M A M J Jul A S O N I	J F M A M J Jul A S O N D	J F M A M J J A S O N D J F
C3840-MS-E	E1 - Comp. all drainage works incl. pipes, manholes, bedding and etc.	0d	0d	03-Jul-18	0%	180d					♦ E1 - Comp. all drainage v
C3840-MS-E	E2 - Comp. all inspection works and handed over to DSD	0d	Od	24-Jul-18	0%	159d					♦ E2 - Comp. all inspect
Interface Red	quirements Associated with Designated Contracts	893d	0d 14-Mar-16 A	11-Oct-18		81d					
Access Date	s for Designated Contractors As PS Appendix B	893d	0d 14-Mar-16 A	11-Oct-18		81d					
C3840-DC-1	O CN&SE- Temp. stairs, temp. Entrance D and cable routing connecting to exist. TST Stn. at Temp Ent. D	0d	0d 14-Mar-16 A	\ <u> </u>	100%				◆ CN&SE- Temp. stairs, temp. Er	ntrance D and cable routing connecting to exist	
C3840-DC-2	CN&SE- All public areas, back of house areas and cable routings at New Entrance D1	0d	0d 11-Oct-18		0%	81d					◆ CN&SE-All
C3840-DC-3	CN&SE- New Telc. E. Rm, all pub. areas, back of house areas and cab. rout. at B. P. Rm, m.l., Subw& N.E. D2	0d	0d 02-May-18 A	A	100%						♦ CN&SE- New Telc. E. Rm, all p
C3840-DC-4	O CN&SE- All public areas, back of house areas & cable routings at Subway & new Ent. D3	0d	0d 02-May-18 A	A	100%						◆ CN&SE-All public areas, back o
C3840-DC-5	Security Access Management- Doors requiring security protection or door contacts at Basement P. Rm.	0d	0d 02-May-18 A	A	100%						♦ Security Access Management- D
C3840-DC-6	Escalators- Excalator zones, pits, machine rms and cable routes at Subway Ivl to mid-landing	0d	0d 01-Nov-17 A	\	100%					♦ Escala	ators- Excalator zones, pits, machine rms and cal
C3840-DC-7	K11 ABWF & BS-Subway & new Entrance D3 within K11 Lot Boundary at Subway within K11 Lot B.	0d	0d 08-Feb-18 A	\	100%						♦ K11 ABWF & BS-Subway & new Entrance





Data Date: 01-Jun-18
Page 26 of 26

Master Programme Revision RMPRSA1

	RM	PSA1	
Date	Revision	Checked	Approved
01-Jun-18		BG	AW

APPENDIX D IMPLEMENTATION SCHEDULE

Project Profile Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
S.3.1	Use of quieter plant	To minimise construction noise emissions	Contractor	Work site	Construction Stage	ProPECC PN2/93 and Noise Control Ordinance
S.3.1	Use of noise enclosure and movable barrier movable barrier can achieve a 5 dB(A) reduction for movable PME and 10 dB(A) reduction for stationary PME; noise enclosure can achieve 15dB(A) reduction for PME; A typical design barrier with a steel frame of vertical / cantilever type would be adopted and located close to the noise generating part of PME; Barrier material of surface mass in excess of 7kg/m² shall be required to achieve the maximum screening effect (and minimum 10kg/m² for noise enclosure); The length of barrier should generally be at least five times greater than its height and the minimum height of a barrier should be such that no part of the noise source will be visible from the noise sensitive receiver being protected.	To minimize construction noise emissions	Contractor	Work site	Construction Stage	ProPECC PN2/93, Noise Control Ordinance and EIAO Guidance Note NO. 9/2010
S.3.1	General Construction Noise Control Measures The Code of Practice on Good Management Practice	To minimize construction noise	Contractor	Work site	Construction Stage	ProPECC PN2/93 and Noise Control
	to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted; The statutory and non-statutory requirements and guidelines shall be complied with; Approval for the method of working, equipment and noise mitigation measures intended to be used at the site shall be granted from the Project Engineer before commencing any work; Working methods to minimize the noise impact on the surrounding NSRs shall be formulated and executed, and the implementation of these methods shall be monitored by experienced personnel with suitable training; Noisy equipment and noisy activities shall be located as far away from the NSRs as is practical; Unused equipment shall be turned off; PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided; All plant and equipment shall be maintained regularly; and Material stockpiles and other structures shall be effectively utilized as noise barriers, whenever practicable.	emissions				Ordinance
S.3.2	Air Quality Impact Construction Dust Control Measures • Decking will be provided subsequent to the	To minimise the dust impacts	Contractor	Work site	Construction Stage	Air Pollution Control
	completion of surface excavation works. The duration of decking is around 13 months after surface excavation works; Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather; Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers; Cover all excavated or stockpile of dusty material by impervious sheeting or spraying with water to maintain the entire surface wet; Provision of vehicle washing facilities at the exit points of the site; and Provision of tarpaulin covering of any dusty materials on a vehicle leaving the site.	arising from the construction works				(Construction Dust) Regulation

APPENDIX D IMPLEMENTATION SCHEDULE

Project Profile Ref.	Recommended Mitigation Measures Water Quality Impact	Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	Location of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
S.3.3	Construction Water Quality Impact Measures	To reduce water	Contractor	Work Site	Construction	ProPECC
5.5.5	 The Contractor should design and implement all the mitigation measures and practices specified in the ProPECC PN 1/94 "Construction Site Drainage" and "Recommended Pollution Control Clauses for Construction Contracts" issued by EPD. All runoffs arising from the construction site should be properly collected and treated to ensure the discharge standards as stipulated in WPCO are met. Silt trap and oil interceptor should be provided to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before being pumped to the public stormwater drainage system. The silt traps and oil interceptors should be cleaned and maintained regularly. 	quality impact induced by the construction work	Constant	Work die	Stage	PN1/94; Water Pollution Control Ordinance
	 Any foul effluent should not be discharged into any public sewer and stormwater drain, unless an effluent discharge permit is obtained under the WPCQ by the Contractor. Site toilet facilities, if needed, should be chemical toilets or should have the foul water effluent directed to a foul sewer. 					
	With His		,			
S.3.4	Waste Management Construction Waste Management Measures	To adopt waste	Contractor	Work Site	Construction	Waste Disposal
5.3.4	 Excavated material should be reused on site as far as possible to minimise off-site disposal. Scrap metals or abandoned equipment should be recycled if possible. Waste arising should be kept to a minimum and be handled, transported and disposed of in a suitable manner. The Contractor should adopt a trip ticket system for the disposal of C&D materials to any designated public filling facility and/or landfill. Independent audits of the Contractor and resident site staff will be undertaken to ensure that the correct procedures are being followed. Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. All general refuse should be segregated and stored in enclosed bins or compaction units and waste separation facilities for paper, aluminium cans, plastic bottles etc. should be provided to facilitate reuse or recycling of materials and their proper disposal. 	management measures in the way of avoiding, minimising, reusing and recycling so as to reduce waste generation	Contractor	Work Site	Stage	Waste Disposal Ordinance (Cap. 54); Waste Disposal (Chemical Waste (General) Regulation; ETWB TCW No. 31/2004; ETWB TCW No. 19/2005.
		1	1 - 1 -			
0.00	Landscape and Visual Impact	Taranta and		1-		LEMO
S.3.5	Landscape and Visual Measures • Screening of construction works by hoardings/noise barriers around works area with visually unobtrusive colours	To reduce visual impact by construction works.	Contractor	Temporary Storage Area at Salisbury Road	Construction Stage	EIAO
S.3.5	Reinstating the affected amenity planting area at Salisbury Road after the completion of works	To prevent loss of planter after construction	Contractor	Temporary Storage Area at Salisbury Road	Operation Stage	ETWB TOW No. 2/2004

APPENDIX E STATUS OF ENVIRONMENTAL LICENSES AND PERMITS



Maeda Corporation

Contract No. C3840-13C Tsim Sha Tsui Station Carnarvon Road Subway

Last Update: 07-May-2018

Licence Summary

the underground area	(Electric) or 1 drill for 24-hr; 4 drill & 4 grinder for 07:00-23:00					Permit: GW-RE0158-18	for a Construction Noise Permit	Permit				
Working Area includes	4nos Submersible Water pump	30 - 09 - 2018	01 - 04 - 2018	12 - 03 - 2018	26 - 02 - 2018	OSS Ref: 002069312	EPD74A(s) Form 1 - Application	Construction Noise	Permit	NCO	CNP#010	900
	סוו, אףפוונ טמנופו ץ						Negistration as a Chemical Waste Producer	i anno L			100#	
	Surplus paint, spent lubrucating	W/A	04 - 03 - 2014	04 - 03 - 2014	15 - 01 - 2014	5213-2214-M2446-16	EPD-129 Application for	Chemical Waste	WDO Registration	WDO	CWP	004
	30mg/L, COD 80mg/L											
	FlowRate 25m3/d, pH 6-9, SS						for a Licence of Water Discharge	Licence			#005	
	Quarterly Report	31 - 03 - 2019	01 - 09 - 2014	01 - 09 - 2014	24 - 07 - 2014	WT00019722-2014	EPD-117 (Form A) Application	Water Discharge	Licence	WPCO	WPCO	003
WFG12765							for a Billing Account for Disposal of Construction Waste	Billing Account			#005	
Application No.	Disposal of C&D Waste	W/A	25 - 10 - 2013	25 - 10 - 2013	18 - 10 - 2013	7018523	EPD-211 (Form 1) Application	Construction Waste	WDO Account	MDO	APCO	005
notified												
date of completion is							APCO (Construction Dust)	Notification			#005	
Change of anticipated	Road Construction Work	28 - 02 - 2019	01 - 11 - 2016	02 - 06 - 2016	27 - 05 - 2016	403252	Form NB – Notification S3(3) of	Construction Dust	Notification	APCO	APCO	001
nate of completion is	Simpling of a building						Arco (construction bast)				±00#	
Change of anticipated	Construction of the	31 - 12 - 2018	01 - 01 - 2016	07 - 05 - 2018	04 - 05 - 2018	433242	Form NB – Notification S3(3) of	Construction Dust	Notification	APCO	APCO	001
notified	any exit to the open air											
date of completion is	tunnel that is within 100m of						APCO (Construction Dust)	Notification			#005	
Change of anticipated	Work carried out in any part of a Change of anticipated	31 - 08 - 2018	01 - 08 - 2014	02 - 06 - 2016	27 - 05 - 2016	403252	Form NB – Notification S3(3) of	Construction Dust	Notification	APCO	APCO	001
date of completion is notified							APCO (Construction Dust)	Notification			#004	
Change of anticipated	Demolition of a Building	30 - 09 - 2018	01 - 02 - 2014	07 - 05 - 2018	04 - 05 - 2018	433242	Form NB – Notification S3(3) of	Construction Dust	Notification	APCO	APCO	100
	Monitoring											
	Baseline, Air & Noise Impact	N/A	18 - 07 - 2012	N/A	N/A	AEP-440/2012	N/A	Environmental Permit N/A	Permit	EIAO	000	000
		Yellow = expire this wk; Red = Expired		(DD-MM-YYYY)	(DD-MM-YYYY)				Notification / Registration & etc.)	5		
Remarks	Description	(DD-MM-YYYY) Green = expire next mth;	Date of Activation	Receipt (from EPD)	Submission (+o EDD)	Ref. No	Submission	Description	Account /	Govt.	Our Ref.	Item No.
		Date of Expiry		Date of Approval /	Date of				Type?			

APPENDIX F EVENT AND ACTION PLAN

Event and Action Plan for Construction Noise

ent		100		Action
Action	1. Notify IEC and Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC and Contractor. 4. Discuss with the Contractor and formulate remedial measures 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analyzed result submitted by ET. 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analysed noise problem 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC 2. Implement noise mitigation proposals
Limit Level	1. Notify IEC, ER, EPD and Contractor, and follow other actions 2. Identify source 3. Repeat measurement to confirm findings 4. Increase monitoring frequency 5. Check Contractor's working procedures to determine possible mitigation to be implemented 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD,	Discuss amongst ER, ET and Contractor on the potential remedial actions Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ET accordingly Supervise the implementation of remedial measures	Confirm receipt of notification of exceedances Notify Contractor Require Contractor to propose remedial measures Ensure remedial measures are properly implemented If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is	Take immediate action to avoid further exceedance Submit proposals for remedial actions to IEC within 3 working days of notifications Implement the agreed proposals Revise and resubmit proposals if problem still not under control Stop the relevant portion of works as determined by the ER until the exceedance is abated
	ER informed of the results 8. If exceedance stops, cease additional monitoring		abated.	
Action L Exceeds for one sample	****	Check monitoring data submitted by ET; Check	Notify Contractor	Rectify any unacceptable practice; Amend working methods if appropriate

APPENDIX F EVENT AND ACTION PLAN

Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and EPD; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. Discuss with IEC and Contractor on remedial action required; 6. If exceedance continues, arrange meeting with IEC and ER; 7. If exceedance stops, cease additional monitoring.	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervisor implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measure properly implemented.	Submit proposals for remedial action to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
Exceedance for one sample	Identify source; Inform ER and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and the Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented.	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
Exceedance for two or more consecutive samples	Notify IEC, ER, Contractor and EPD; Identify sources; Repeat measurement to confirm findings; Increase monitoring	Discuss amongst ER, ET and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever	Confirm receipt of notification of failure in writing; Notify Contractor; In consultation with IEC, agree with the Contractor on	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of
	frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	necessary to assure their effectiveness and advise the ET accordingly. 3. Supervise the implementation of remedial measures.	the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

APPENDIX G

ENVIRONMENTAL MONITORING SCHEDULE

			July 2018	ian concano		
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
		Noise				
		24-hr TSP				
		Weekly Site Audit				
8	9	10	11	12	13	14
	24-hr TSP	Noise				
		Weekly Site Audit				
15	16	17	18	19	20	21
	24-hr TSP	Noise				
		Weekly Site Audit				
22	23	24	25	26	27	28
	24-hr TSP	Noise				
		Weekly Site Audit				
29	30	31				
	24-hr TSP	Noise				
		Weekly Site Audit				

			tal Monitoring & A			
			August 2018			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
	24-hr TSP	Noise				
		Weekly Site Audit				
12	13	14	15	16	17	18
	24-hr TSP	Noise				
		Weekly Site Audit				
19	20	21	22	23	24	25
	24-hr TSP	Noise				
		Weekly Site Audit				
26	27	28	29	30	31	
	24-hr TSP	Noise				
		Weekly Site Audit				
nis schedule may be su	ubject to change due to unexp	ected circumstances (e.g. ac	dverse weather)			

APPENDIX H

WEATHER INFORMATION EXTRACTED FROM HK OBSERVATORY

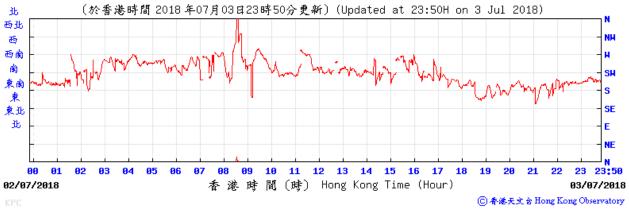
D	aily Total Rainfal	ll at King's I	Park HK	O Weather Monitoring Station - July 2018
Day	Total Rainfall, mm	24-hr TSP	Noise	Remarks
1	4.1			
2	2.1			
3	15.4	✓	✓	No significant rainfall during noise measurement
4	3.4			
5	1.5			
6	5			
7	5.2			
8	14.4			
9	11.3	✓		
10	1.3		✓	No significant rainfall during noise measurement
11	0			
12	Trace			
13	50.4			
14	52.7			
15	67.4			
16	5.8	✓		
17	6.5		✓	No significant rainfall during noise measurement
18	29.6			
19	17.3			
20	7.1			
21	0			
22	Trace			
23	30.8	✓		
24	0.1		✓	No significant rainfall during noise measurement
25	2.7			
26	3.4			
27	0.3			
28	0			
29	0			
30	0	✓		
31	3.3		✓	No significant rainfall during noise measurement
lean/Total	341.1			
Normal	376.5			

King's Park Weather Station - 03 July 2018

Temperature/Humidity:



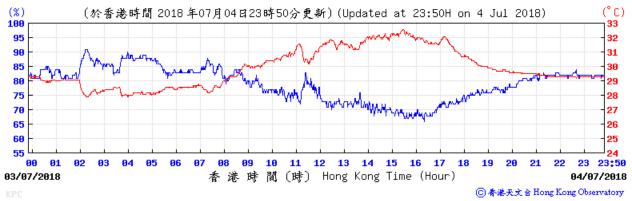
Wind Direction:



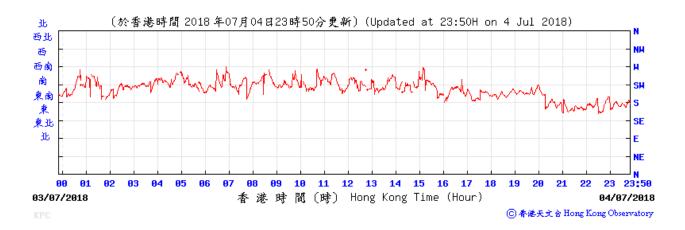


King's Park Weather Station - 04 July 2018

Temperature/Humidity:



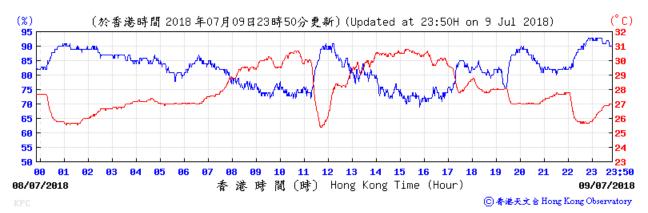
Wind Direction:



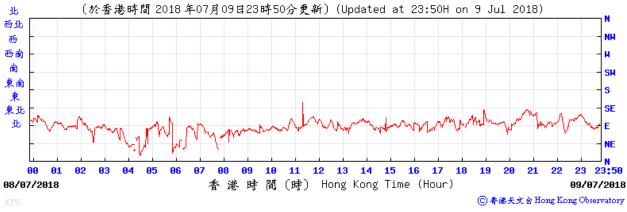


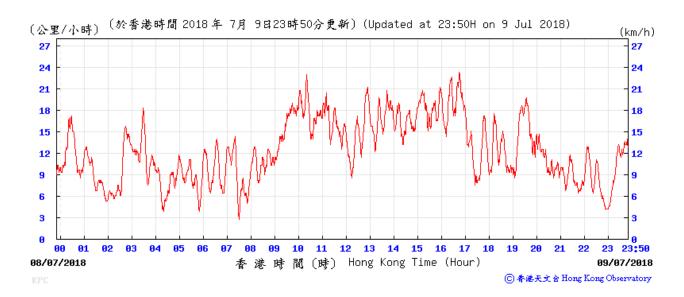
King's Park Weather Station - 9 July 2018

Temperature/Humidity:



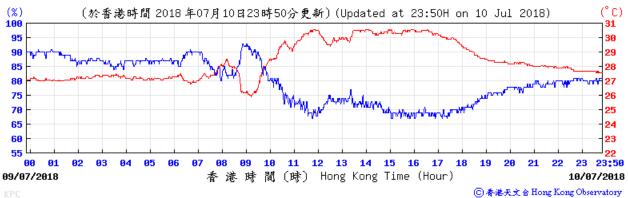
Wind Direction:





King's Park Weather Station - 10 July 2018

Temperature/Humidity:



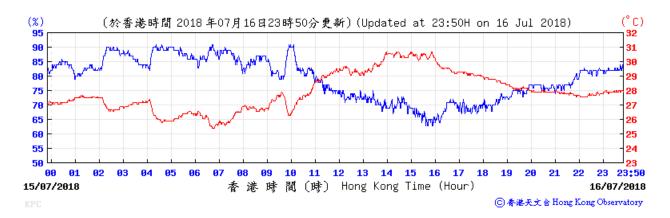
Wind Direction:



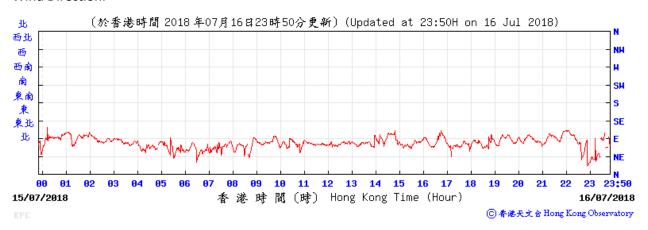


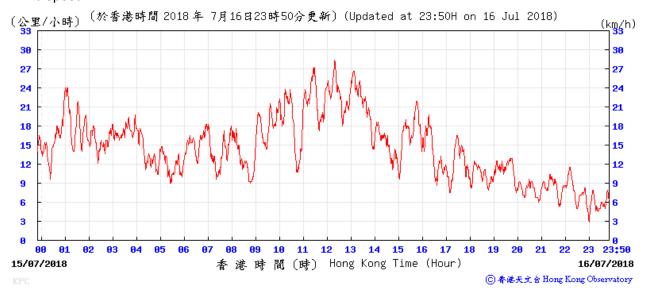
King's Park Weather Station - 16 July 2018

Temperature/Humidity:



Wind Direction:



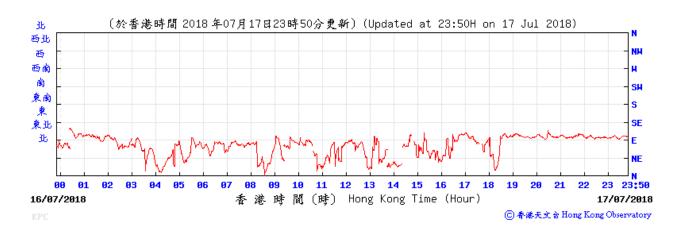


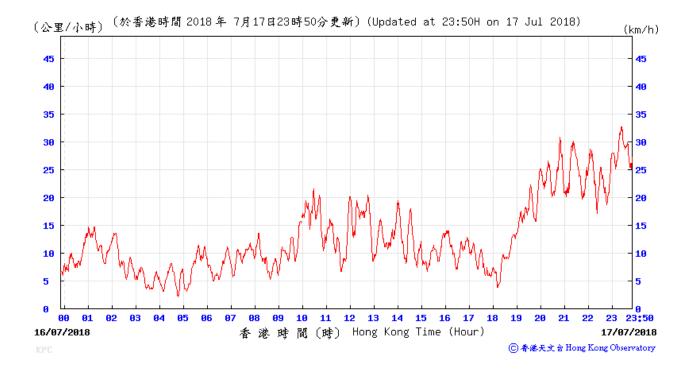
King's Park Weather Station - 17 July 2018

Temperature/Humidity:



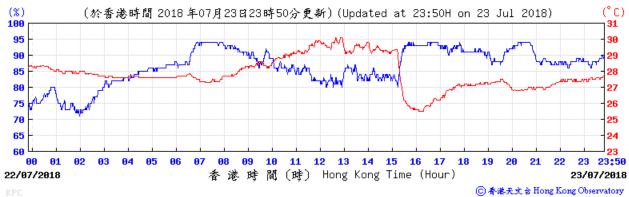
Wind Direction:





King's Park Weather Station - 23 July 2018

Temperature/Humidity:



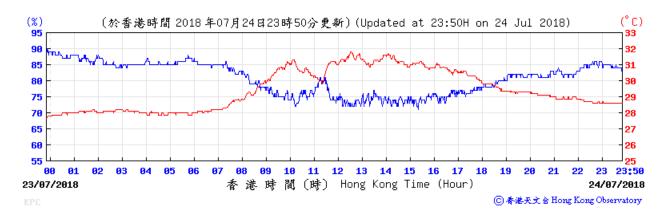
Wind Direction:



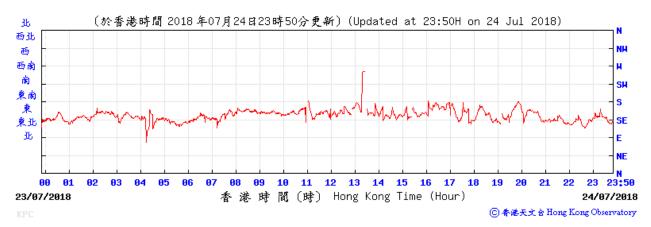


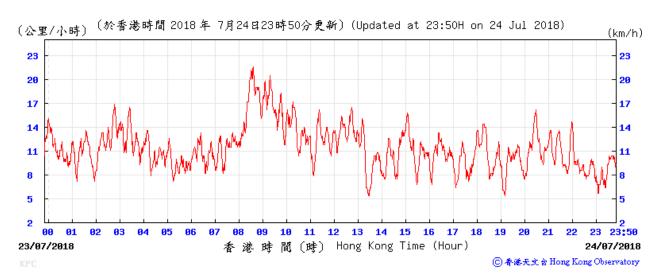
King's Park Weather Station - 24 July 2018

Temperature/Humidity:



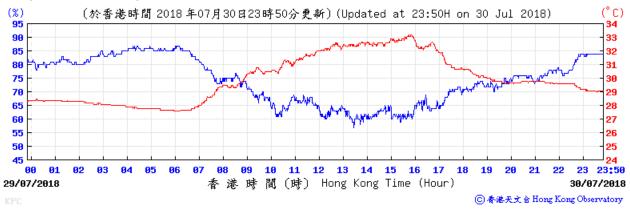
Wind Direction:



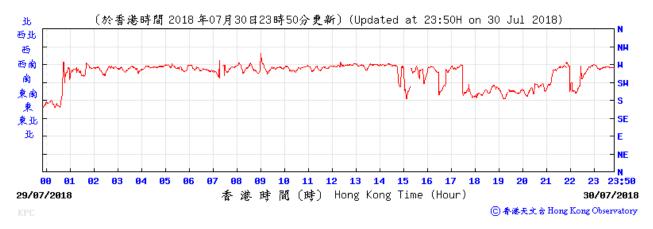


King's Park Weather Station – 30 July 2018

Temperature/Humidity:



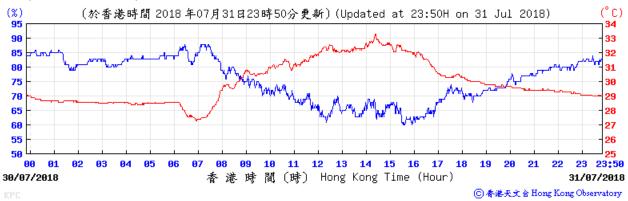
Wind Direction:



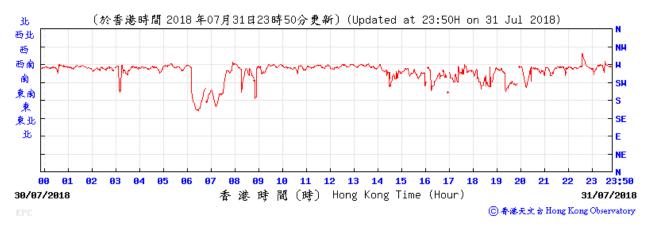


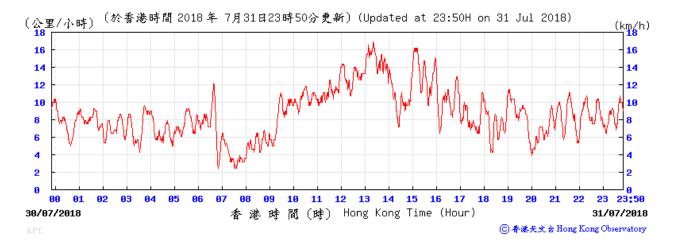
King's Park Weather Station – 31 July 2018

Temperature/Humidity:



Wind Direction:





APPENDIX I

CERTIFICATE OF LABORATORY AND EQUIPMENT CALIBRATION



RECALIBRATION DUE DATE:

May 1, 2019

Pertificate o

Calibration Certification Information

Cal. Date: May 1, 2018

Rootsmeter S/N: 438320

Ta: 294

°K

Operator: Jim Tisch

Pa: 755.7

mm Hg

Calibration Model #:

TE-5025A

Calibrator S/N: 1785

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3980	3.2	2.00
2	3	4	1	0.9880	6.4	4.00
3	5	6	1	0.8830	8.0	5.00
4	7	8	1	0.8410	8.8	5.50
5	9	10	1	0.6930	12.7	8.00

		Data Tabula	tion		
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	√∆H(Ta/Pa)
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)
1.0035	0.7178	1.4197	0.9958	0.7123	0.8821
0.9993	1.0114	2.0078	0.9915	1.0036	1.2475
0.9971	1.1293	2.2448	0.9894	1.1205	1.3948
0.9961	1.1844	2.3543	0.9884	1.1752	1.4628
0.9909	1.4298	2.8394	0.9832	1.4187	1.7642
	m=	1.99524		m=	1.24939
QSTD	b=	-0.01066	QA	b=	-0.00662
	r=	0.99999		r=	0.99999

Calculatio	ns
Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va= ΔVol((Pa-ΔP)/Pa)
Qstd= Vstd/ΔTime	Qa= Va/ΔTime
For subsequent flow ra	te calculations:
Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	$Qa = 1/m \left(\sqrt{\Delta H(Ta/Pa)} \right) - t$

	Standard Conditions
Tstd:	298.15 °K
Pstd:	760 mm Hg
	Key
ΔH: calibrator	manometer reading (in H2O)
ΔP: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric pressure (mm Hg)
b: intercept	
m: slone	

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

ch Environmental, Inc.

5 South Miami Avenue age of Cleves, OH 45002 www.tisch-env.com

TOLL FREE: (877)263-7610

FAX: (513)467-9009



Location :	4/F Roof top, K11 Commercial Complex
Sampler and Serial No.	TE-5170 MFC (0462)
Calibration Date & Time :	5/21/2018, 4:30 pm
Model:	TE-5025A
Calibrator Orifice no.:	1785
Slope (m):	1.99524
Intercept (b):	-0.01066
Date Certified :	1-May-18
Standard Temperature (Tstd)	298.00 K

Standard Temperature (Tstd)	298.00 K
Ambient Temperature (Ta)	301.50 K
Standard Pressure (Pstd)	760.00 mmHg
Ambient Pressure (Pa)	756.20 mmHg

Sample no.	H₂O (in)	Qstd (m ³ /min)	I (Flow Chat)	IC (corrected)
1	11.6	1.698	58.0	57.52
2	9.1	1.505	52.0	51.57
3	7.0	1.320	45.0	44.63
4	4.5	1.060	38.0	37.68
5	2.5	0.791	29.0	28.76

Linear Regression		
Slope (m) =	31.539	
Intercept (b) =	3.824	
Correlation Coefficient =	0.9980	

Calibrations

Qstd = 1/m(Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b)

IC = I[Sqrt((Pa/Pstd)(Tstd/Ta)))

Qstd = actual flow rate as indicticated by the calibrator orifice

H2O = orlice manometer reading during calibration
Ta = ambient temperature during calibration, K = 273 + °C
Tstd = standard temperature, a constant that never changes, 298 K

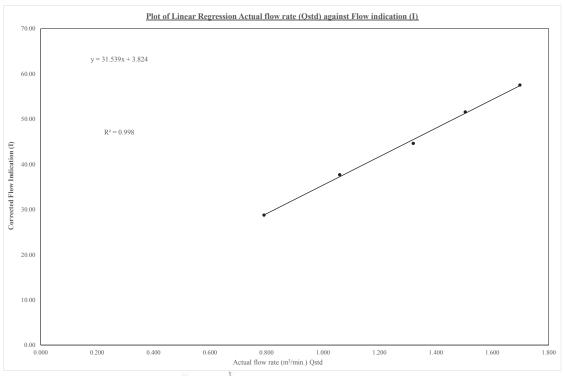
Pa = ambient barometric pressure during calibration, mmHg Pstd = standard barometric pressure, a constant that never changes, 760 mm Hg

m = Qstandard slope of orifice calibrator relationship

b = Qstandard intercept of orifice calibrator relationship

IC = continuous flow recorder readings corrected to current Ta and Pa

I = continuous flow recorder readings during calibration



Calibrated by :

Checked by :

Date: 21 May 2018

Date: 21 May 2018



Location :	4/F Roof top, K11 Commercial Complex	
Sampler and Serial No.	TE-5170 MFC (0462)	
Calibration Date & Time :	7/18/2018, 9:30	
Model:	TE-5025A	
Calibrator Orifice no.:	1785	
Slope (m):	1.99524	
Intercept (b):	-0.01066	
Date Certified :	1-May-18	

Standard Temperature (Tstd)	298.00 K
Ambient Temperature (Ta)	301.50 K
Standard Pressure (Pstd)	760.00 mmHg
Ambient Pressure (Pa)	754.50 mmHg

Sample no.	H ₂ O (in)	Qstd (m³/min)	I (Flow Chat)	IC (corrected)
1	11.4	1.682	59.0	58.44
2	8.8	1.478	53.0	52.50
3	6.8	1.300	45.2	44.77
4	4.5	1.059	40.0	39.62
5	2.6	0.806	30.1	29.82

Linear Regression		
Slope (m) =	32.246	
Intercept (b) =	4.246	
Correlation Coefficient =	0.9919	

Qstd = 1/m(Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b)IC = I[Sqrt((Pa/Pstd)(Tstd/Ta)))

Qstd = actual flow rate as indicticated by the calibrator orifice

H2O = orifice manometer reading during calibration

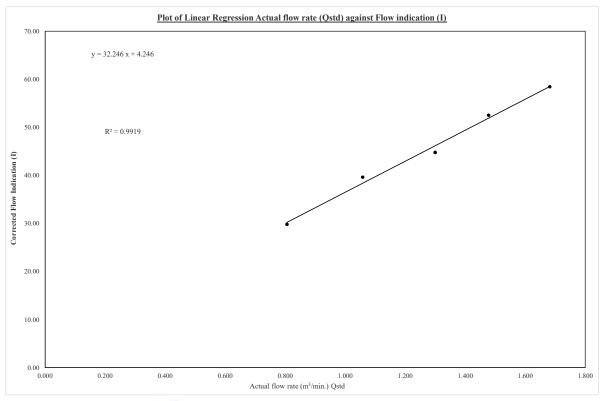
Ta = ambient temperature during calibration, K = 273 + $^{\circ}$ C Tstd = standard temperature, a constant that never changes, 298 K

Pa = ambient barometric pressure during calibration, mmHg
Pstd = standard barometric pressure, a constant that never changes, 760 mm Hg

m = Qstandard slope of orifice calibrator relationship

b = Qstandard intercept of orifice calibrator relationship IC = continuous flow recorder readings corrected to current Ta and Pa

I = continuous flow recorder readings during calibration



Calibrated by :

WONG Fu Nam

Checked by : Bonnie Ng

Date: 18 July 2018

Date: 18 July 2018

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



SUB-CONTRACTING REPORT

CONTACT

: FU NAM WONG

WORK ORDER

HK1815579

CLIENT

ARCADIS DESIGN & ENGINEERING LIMITED

SUB-BATCH

ADDRESS

20/F AXA TOWER, LANDMARK EAST, 100 HOW MING STREET,

DATE RECEIVED

: 5-FEB-2018

KWUN TONG

HONG KONG

DATE OF ISSUE

: 14-FEB-2018

PROJECT

NO. OF SAMPLES

: 4

. 1

CLIENT ORDER

General Comments

Sample(s) were received in ambient condition.

Sample(s) analysed and reported on an as received basis.

Calibration was subcontracted to and analysed by Action United Enviro Services.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories

Position

Richard Fung

General Manager

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER

: HK1815579

SUB-BATCH

: 1

CLIENT PROJECT : ARCADIS DESIGN & ENGINEERING LIMITED

.



ALS Lab	Client's Sample ID	Sample	Sample Date	External Lab Report No.
ID		Туре		
HK1815579-001	S/N: 456677	Equipments	05-Feb-2018	S/N: 456677
HK1815579-002	061929	FILTER (TSP/RSF	05-Feb-2018	S/N: 456677
HK1815579-003	061930	FILTER (TSP/RSF	05-Feb-2018	S/N: 456677
HK1815579-004	061931	FILTER (TSP/RSF	05-Feb-2018	S/N: 456677

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:

Laser Dust monitor

Manufacturer:

Sibata LD-3B

Serial No.

456677

Equipment Ref:

Nil

Job Order

HK1815579

Standard Equipment:

Standard Equipment:

Higher Volume Sampler

Location & Location ID:

AUES office (calibration room)

Equipment Ref:

HVS 018

Last Calibration Date:

1 December 2017

Equipment Verification Results:

Testing Date:

8 & 12 February 2018

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr05min	12:25 ~ 14:30	14.0	1018.8	0.023	2705	21.6
2hr07min	9:45 ~ 11:52	14.9	1026.4	0.027	3740	29.5
2hr32min	12:00 ~ 14:32	14.9	1026.4	0.024	3804	25.1

Linear Regression of Y or X

Slope (K-factor):

0.0009

Correlation Coefficient

0.9933

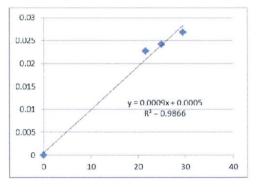
Date of Issue

14 February 2018

Remarks:

- 1. Strong Correlation (R>0.8)
- Factor 0.0009 should be applied for TSP monitoring 2.

*If R<0.5, repair or re-verification is required for the equipment



Operator: Martin Li

Signature:

Date: 14 February 2018

QC Reviewer : Ben Tam

___ Signature :

Date: ___14 February 2018



Certificate No. 804231

1 3 Pages

Customer: Arcadis Design & Engineering Limited

Address: 20/F, AXA Tower, Landmark East, 100 How Ming Street, Kwun Tong, Kowloon, Hong Kong,

Order No.: Q81642

Date of receipt

26-Apr-18

Item Tested

Description : Sound Level Meter

Manufacturer: B&K

LD.

Model : 2238 Serial No.

: 2562782

Test Conditions

Date of Test: 30-Apr-18

Supply Voltage

Ambient Temperature:

(23 ± 3)°C

Relative Humidity: (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z01, IEC 60651, IEC 60804.

Test Results

All results were within the IEC 60651 Type1 and IEC 60804 Type1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No. Description

Cert. No.

Traceable to

S017

Multi-Function Generator

C170120

SCL-HKSAR

S240

Sound Level Calibrator

803357

NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

Calibrated by :

Approved by:

30-Apr-18

This Certificate is issued by

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646



Certificate No. 804231

Page 2 of 3 Pages

Results:

1. SPL Accuracy

UUT Setting			Applied Value	UUT Reading	
Range	Freq. Wgt.	Bandwith	Center Freq.	(dB)	(dB)
28 ~ 108	A	BB/F	22	94.0	94.0
	A	BB/S			94.0
	С	BB/F	==		94.0
48 ~ 128	A	BB/F		94.0	94.0
	A	BB/F		114.0	114.1

IEC 60651 Type 1 Spec. : \pm 0.7 dB

Uncertainty: \pm 0.1 dB

2. Level Stability: 0.0 dB

IEC 60651 Type 1 Spec. : ± 0.3 dB

Uncertainty: ± 0.1 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 60651 Type 1 Spec. (Primary Indicator Range)
140	114.0	114.0	0.0	± 0.7 dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	88	
110	84.0	84.0	0.0	
100	74.0	74.1	+0.1	
90	64.0	64.0	0.0	
80	54.0	54.0	0.0	

Uncertainty: $\pm 0.1 \text{ dB}$



Certificate No. 804231

Page 3 of 3 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 60651 Type 1 Spec.
120	84.0	84.0	0.0	± 0.4 dB
	94.0	94.0 (Ref.)	12/2/	
Ī	95.0	95.0	0.0	± 0.2 dB

Uncertainty: ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 60651 Type 1 Spec.
31.5 Hz	-39.3	- 39.4 dB, ± 1.5 dB
63 Hz	-26.3	- 26.2 dB, ± 1.5 dB
125 Hz	-16.2	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.2	+ 1.2 dB, ± 1 dB
4 kHz	+0.9	+ 1.0 dB, ± 1 dB
8 kHz	-1.2	- 1.1 dB, + 1.5 dB ~ -3 dE
16 kHz	-6.7	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty: $\pm 0.1 \text{ dB}$

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 60804 Type 1 Spec.
continuous	40.0	40.0	
1/10	40.0	40.0	± 0.5 dB
$1/10^2$	40.0	40.0	
$1/10^3$	40.0	40.0	± 1.0 dB
1/104	40.0	40.0	

Uncertainty: ± 0.1 dB

Remarks: 1. UUT: Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric pressure: 1 014 hPa.
- 4. The UUT was adjusted with the laboratory's sound calibrator at the reference sound pressure level before the calibration.



Certificate No. 803788

Page 1 of 2 Pages

Customer: Arcadis Design & Engineering Limited

Address: 20/F, AXA Tower, Landmark East, 100 How Ming Street, Kwun Tong, Kowloon, Hong Kong.

Order No.: Q81484

Date of receipt

18-Apr-18

Item Tested

Description: Precision Acoustic Calibrator

Manufacturer: Larson Davis

I.D.

Model

: CAL200

Serial No.

: 10929

Test Conditions

Date of Test: 26-Apr-18

Supply Voltage : --

Ambient Temperature:

(23 ± 3)°C

Relative Humidity: (50 ± 25) %

Test Specifications

Calibration check

Ref. Document/Procedure: IEC 60942, F20, Z02.

Test Results

All results were within the IEC 60942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No	<u>Description</u>	Cert. No.	Traceable to
S014	Spectrum Analyzer	707126	NIM-PRC & SCL-HKSAR
S240	Sound Level Calibrator	803357	NIM-PRC & SCL-HKSAR
S041	Universal Counter	802061	SCL-HKSAR
S206	Sound Level Meter	707129	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

Calibrated by

Approved by:

This Certificate is issued by:

Hong Kong Calibration Ltd.

Date:

26-Apr-18

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong Tel: 2425 8801 Fax: 2425 8646



Certificate No. 803788

Page 2 of 2 Pages

Results:

1. Generated Sound Pressure Level

UUT Nominal Value (dB)	Measured Value (dB)	IEC 60942 Class 1 Spec.
94.0	93.7	± 0.4 dB
114.0	113.8	

Uncertainty: ± 0.2 dB

2. Short-term Level Fluctuation: 0.0 dB

IEC 60942 Class 1 Spec. : ± 0.1 dB

Uncertainty: ± 0.01 dB

3. Frequency

UUT Nominal Value (kHz)	Measured Value (kHz)	IEC 60942 Class 1 Spec.
1	0.999	± 1 %

Uncertainty: $\pm 3.6 \times 10^{-6}$

4. Total Distortion : < 0.4%

IEC 60942 Class 1 Spec. : < 4 %Uncertainty : $\pm 2.3 \%$ of reading

Remark: 1. UUT: Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure: 1 015 hPa.

----- END -----

APPENDIX J

SAMPLE DATA RECORD SHEET

Monitoring Location	4/F Roof top, K11	
Sampler Identification	TE-5170 MFC	
Start date & time of sampling	2018/07/03, 11:30	
Weather Conditions		Overcast
Abnormal Site Conditions		Nil
Flanced time Meter Bending	Start (Hours)	9658.89
Elapsed-time Meter Reading	Stop (Hours)	9683.90
Total Sampling Time (hrs.)		25.01
Total Sampling Time (min.)		1500.6
	Pi (mm Hg)	752.3
Initial Flow Data Cai	Ti (°C)	27.8
Initial Flow Rate, Qsi	Hi (cfm)	39
	Qsi (Std. m³)	1.358
	Pi (mm Hg)	752.3
Circl Class Data Oaf	Ti (°C)	30.2
Final Flow Rate, Qsf	Hf (cfm)	39
	Qsf (Std. m ³)	1.358
Average Flow Rate (Std. m³)	·	1.358
Total Volume (Std. m³)		2037.81
Initial Weight of Filter (g)		2.6651
Final Weight of Filter (g)		2.7486
Different Weight of Filter (g)		0.0835
Measured TSP Level (μg/m³)		41.0
Action Level (µg/m³)		221.6
Limit Level (µg/m³)	260.0	
Name & Designation	Date	<u>Signature</u>
Record by: Wong Fu Nam	2018/07/13	
Checked by: Bonnie Ng	2018/07/13	Bey.
		**

Monitoring Location	4/F Roof top, K11		
Sampler Identification		TE-5170 MFC	
Start date & time of sampling	2018/07/09, 10:00		
Elanged time Mater Deading	Start (Hours)	9683.90	
Elapsed-time Meter Reading	Stop (Hours)	9709.70	
Total Sampling Time (hrs.)		25.80	
Total Sampling Time (min.)		1548.0	
Weather Conditions		Sunny	
Abnormal Site Conditions		Nil	
	Pi (mm Hg)	754.7	
Initial Clay Data Cai	Ti (°C)	29.5	
Initial Flow Rate, Qsi	Hi (cfm)	39	
	Qsi (Std. m³)	1.358	
	Pi (mm Hg)	755.1	
E: 1EL D : 0 (Ti (°C)	28.5	
Final Flow Rate, Qsf	Hf (cfm)	39	
	Qsf (Std. m ³)	1.358	
Average Flow Rate (Std. m³)	,	1.358	
Total Volume (Std. m ³)		2102.18	
Initial Weight of Filter (g)		2.6713	
Final Weight of Filter (g)		2.7540	
Different Weight of Filter (g)		0.0827	
Measured TSP Level (µg/m³)		39.3	
Action Level (µg/m³)		221.6	
Limit Level (µg/m³)		260.0	
Name & Designation	Date	<u>Signature</u>	
Record by: Bonnie Ng	2018/07/13	Biely.	
Checked by: Wong Fu Nam	2018/07/13	000	

Monitoring Location		4/F Roof top, K11			
Sampler Identification		TE-5170 MFC			
Start date & time of sampling		2018/07/16, 10:00			
Flanced time Motor Deading	Start (Hours)	9709.70			
Elapsed-time Meter Reading	Stop (Hours)	9735.43			
Total Sampling Time (hrs.)		25.73			
Total Sampling Time (min.)		1543.8			
Weather Conditions	Overcast				
Abnormal Site Conditions		Nil			
	Pi (mm Hg)	753.8			
Initial Flow Poto Coi	Ti (°C)	26.2			
Initial Flow Rate, Qsi	Hi (cfm)	28			
	Qsi (Std. m³)	1.009			
	Pi (mm Hg)	751.8			
nal Flow Rate, Qsf	Ti (°C)	32.0			
Final Flow Rate, QST	Hf (cfm)	39			
	Qsf (Std. m ³)	1.358			
Average Flow Rate (Std. m³)		1.183			
Total Volume (Std. m³)		1826.32			
Initial Weight of Filter (g)		2.6823			
Final Weight of Filter (g)		2.7411			
Different Weight of Filter (g)		0.0588			
Measured TSP Level (µg/m³)		32.2			
Action Level (µg/m³)		221.6			
Limit Level (µg/m³)		260.0			
Name & Designation	Date	<u>Signature</u>			
Record by: Bonnie Ng	2018/07/27	Bely.			
Checked by: Wong Fu Nam	2018/07/27	ST.			

Monitoring Location		4/F Roof top, K11		
Sampler Identification		TE-5170 MFC		
Start date & time of sampling		2018/07/23, 10:00		
Elanged time Motor Deading	Start (Hours)	9735.52		
Elapsed-time Meter Reading	Stop (Hours)	9761.37		
Total Sampling Time (hrs.)		25.85		
Total Sampling Time (min.)	1551.0			
Weather Conditions		Rainy		
Abnormal Site Conditions	Nil			
	Pi (mm Hg)	751.9		
Initial Floor Data Cal	Ti (°C)	28.8		
Initial Flow Rate, Qsi	Hi (cfm)	38		
	Qsi (Std. m³)	1.310		
	Pi (mm Hg)	753.5		
Final Flow Rate, Qsf	Ti (°C)	31.2		
Final Flow Rate, Qsf	Hf (cfm)	36		
	Qsf (Std. m ³)	1.248		
Average Flow Rate (Std. m³)	1	1.279		
Total Volume (Std. m ³)		1983.73		
Initial Weight of Filter (g)		2.6679		
Final Weight of Filter (g)		2.7345		
Different Weight of Filter (g)		0.0666		
Measured TSP Level (μg/m³)		33.6		
Action Level (µg/m³)		221.6		
Limit Level (µg/m³)		260.0		
Name & Designation	Date	<u>Signature</u>		
Record by: Bonnie Ng	2018/07/27	Bee Ng.		
Checked by: Wong Fu Nam	2018/07/27	M.		

Monitoring Location		4/F Roof top, K11
Sampler Identification		TE-5170 MFC
Start date & time of sampling	9	2018/07/30, 10:00
Elanged time Mater Deading	Start (Hours)	9761.37
Elapsed-time Meter Reading	Stop (Hours)	9786.92
Total Sampling Time (hrs.)		25.55
Total Sampling Time (min.)	1533.0	
Weather Conditions		Sunny
Abnormal Site Conditions	Nil	
	Pi (mm Hg)	755.7
Initial Flow Rate Oci	Ti (°C)	32.0
Initial Flow Rate, Qsi	Hi (cfm)	40
	Qsi (Std. m³)	1.372
	Pi (mm Hg)	755.3
Final Flow Rate, Qsf	Ti (°C)	31.0
Final Flow Rate, Qsf	Hf (cfm)	40
	Qsf (Std. m ³)	1.372
Average Flow Rate (Std. m ³))	1.372
Total Volume (Std. m ³)		2103.28
Initial Weight of Filter (g)		2.6591
Final Weight of Filter (g)		2.7146
Different Weight of Filter (g)		0.0555
Measured TSP Level (µg/m³)	26.4
Action Level (µg/m³)		221.6
Limit Level (µg/m³)		260.0
Name & Designation	Date	<u>Signature</u>
Record by: Bonnie Ng	2018/08/03	Bie Ng.
Checked by: Wong Fu Nam	2018/08/03	

Monitoring Location		4/F Roof top, K11				
Date of Monitoring		03 July 2018				
Monitoring Start Time		11:34				
Monitoring Stop Time		12:04				
Measurement Time Length		30 mins				
Weather Condition		Sunny				
Wind Speed		4.5 m/s				
Noise Meter Model (Serial Number	-)	BK-2238 (2562783)				
Calibrator Model (Serial Number)		CAL-200 (10929)				
	Leq	68.1 dB(A)				
Measurement Results	L ₁₀	69.5 dB(A)				
	L ₉₀	63.0 dB(A)				
Limit Level		75.0 dB(A)				
Major Construction Noise Source(s	s) During Monitoring	On-site powered mechanical equipment				
Other Noise Source(s) During Mon	itoring	Wind and Neighbor Noise				
Name & Designation	<u>Date</u>	<u>Signature</u>				
Record by: Wong Fu Nam	03 July 2018					
Checked by: Bonnie Ng	03 July 2018	Bely.				

Monitoring Location		4/F Roof top, K11				
Date of Monitoring		10 July 2018				
Monitoring Start Time		10:54				
Monitoring Stop Time		11:24				
Measurement Time Length		30 mins				
Weather Condition		Overcast				
Wind Speed		2.5 m/s				
Noise Meter Model (Serial Number	-)	BK-2238 (2562783)				
Calibrator Model (Serial Number)		CAL-200 (10929)				
	Leq	67.6 dB(A)				
Measurement Results	L ₁₀	68.5 dB(A)				
	L ₉₀	64.0 dB(A)				
Limit Level		75.0 dB(A)				
Major Construction Noise Source(s	s) During Monitoring	On-site powered mechanical equipment				
Other Noise Source(s) During Mon	itoring	Traffic				
Name & Designation	<u>Date</u>	<u>Signature</u>				
Record by: Wong Fu Nam	10 July 2018					
Checked by: Bonnie Ng	10 July 2018	Bely.				

Monitoring Location		4/F Roof top, K11				
Date of Monitoring		17 July 2018				
Monitoring Start Time		10:59				
Monitoring Stop Time		11:29				
Measurement Time Length		30 mins				
Weather Condition		Sunny				
Wind Speed		3.5 m/s				
Noise Meter Model (Serial Number)	BK-2238 (2562783)				
Calibrator Model (Serial Number)		CAL-200 (10929)				
	Leq	67.9 dB(A)				
Measurement Results	L ₁₀	69.0 dB(A)				
	L ₉₀	64.5 dB(A)				
Limit Level		75.0 dB(A)				
Major Construction Noise Source(s	s) During Monitoring	On-site powered mechanical equipment				
Other Noise Source(s) During Mon	itoring	Traffic				
Name & Designation	<u>Date</u>	<u>Signature</u>				
Record by: Wong Fu Nam	17 July 2018	april 1 miles				
Checked by: Bonnie Ng	17 July 2018	Belg.				

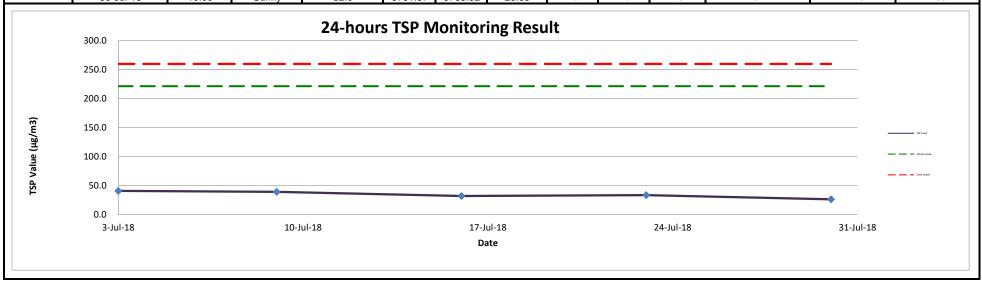
Monitoring Location		4/F Roof top, K11				
Date of Monitoring		24 July 2018				
Monitoring Start Time		13:17				
Monitoring Stop Time		13:47				
Measurement Time Length		30 mins				
Weather Condition		Sunny				
Wind Speed		3.6 m/s				
Noise Meter Model (Serial Number	·)	BK-2238 (2562783)				
Calibrator Model (Serial Number)		CAL-200 (10929)				
	Leq	66.9 dB(A)				
Measurement Results	L ₁₀	68.5 dB(A)				
	L ₉₀	64.0 dB(A)				
Limit Level		75.0 dB(A)				
Major Construction Noise Source(s	s) During Monitoring	On-site powered mechanical equipment				
Other Noise Source(s) During Mon	itoring	Traffic				
Name & Designation	<u>Date</u>	<u>Signature</u>				
Record by: Bonnie Ng	24 July 2018	Bey.				
Checked by: Wong Fu Nam	24 July 2018					

Monitoring Location		4/F Roof top, K11				
Date of Monitoring		31 July 2018				
Monitoring Start Time		10:16				
Monitoring Stop Time		10:46				
Measurement Time Length		30 mins				
Weather Condition		Sunny				
Wind Speed		2.3 m/s				
Noise Meter Model (Serial Number	·)	BK-2238 (2562783)				
Calibrator Model (Serial Number)		CAL-200 (10929)				
	Leq	66.8 dB(A)				
Measurement Results	L ₁₀	68.0 dB(A)				
	L ₉₀	64.0 dB(A)				
Limit Level		75.0 dB(A)				
Major Construction Noise Source(s	s) During Monitoring	On-site powered mechanical equipment				
Other Noise Source(s) During Mon	itoring	Traffic				
Name & Designation	<u>Date</u>	<u>Signature</u>				
Record by: Bonnie Ng	31 July 2018	Bieny.				
Checked by: Wong Fu Nam	31 July 2018					

APPENDIX K

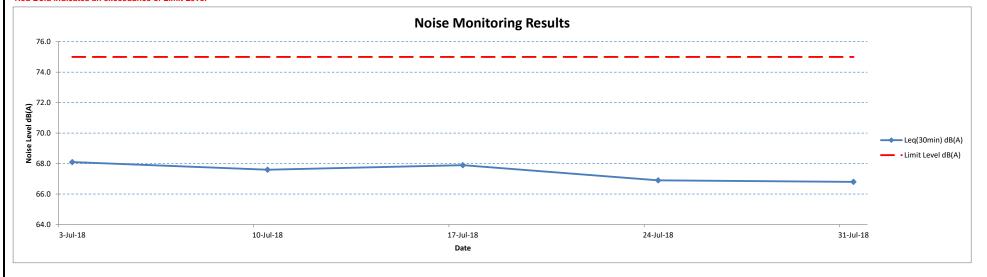
MONITORING RESULTS AND PLOTS

Impact Air Quality Monitoring : 24-hour TSP at K11													
Location	Monitoring Date	Start Time	Weather	Temperature	Elapse Time		Total Time	Flow Rate (cfm)		TSP Concentration	Action Levels	Limit Levels	
					Initial	Final	Ī	Initial	Final	Average	(µg/m3)		
	3-Jul-18	11:30	Overcast	27.8	9658.89	9683.90	25.01	39	39	39	41.0	221.6	260
K11 Art Mall	9-Jul-18	10:00	Sunny	29.5	9683.90	9709.70	25.80	39	39	39	39.3	221.6	260
KTT AIT Wall	16-Jul-18	10:00	Overcast	26.2	9709.70	9735.43	25.73	28	39	34	32.2	221.6	260
	23-Jul-18	10:00	Rainy	28.8	9735.52	9761.37	25.85	38	36	37	33.6	221.6	260
	30-Jul-18	10:00	Sunny	32.0	9761.37	9786.92	25.55	40	40	40	26.4	221.6	260



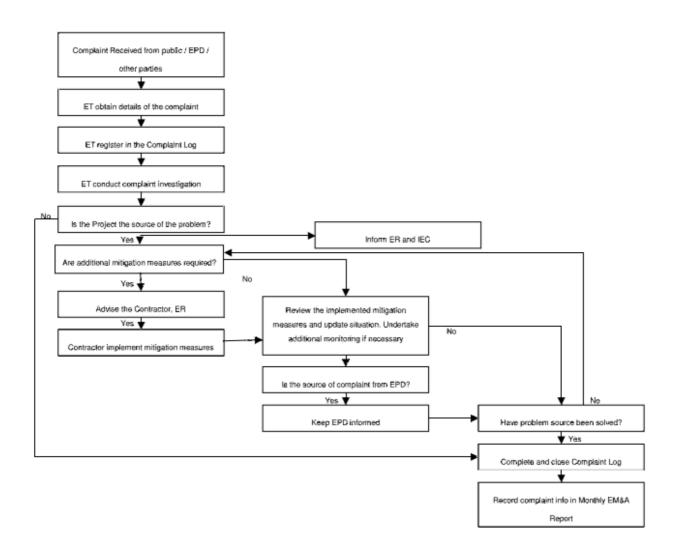
Noise Impact Monitoring Results at K11													
Monitoring Locations Date Weather Conditions Wind Speed (m/s) Start Time End Time Background Level dB(A) Limit Level dB(A) Leq(30min) dB(A) L10(30min) dB(A) L90(30min) dB(A)													
	3-Jul-18	Sunny	4.5	11:34	12:04	65.3	75	68.1	69.5	63.0			
	10-Jul-18	Overcast	2.5	10:54	11:24	65.3	75	67.6	68.5	64.0			
K11 Art Mall	17-Jul-18	Sunny	3.5	10:59	11:29	65.3	75	67.9	69.0	64.5			
	24-Jul-18	Sunny	3.6	13:17	13:47	65.3	75	66.9	68.5	64.0			
	31-Jul-18	Sunny	2.3	10:16	10:46	65.3	75	66.8	68.0	64.0			





APPENDIX L

Complaint Response Procedure



APPENDIX M WASTE MANAGEMENT RECORDS

Monthly Summary Waste Flow Table for 2018 (year)

Contract No: C3840-13C Tsim Sha Tsui Station Carnarvon Road Subway

Date Reported: 3-August-2018

		Actual Q	uantities of Inert C&	D Materials Generate	d Monthly		Actual Quantities of Non-inert C&D Wastes Generated Monthly				
Month	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
		(See Note 3)							(see Note 2)		
	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000m³)	(in '000kg)	(in '000kg)	(in '000kg)	(in'000kg)	(in '000m³/tonne)
Carried from Project Start	9.6228	-	-	-	9.6228	-	-	-	-	-	0.1930
Jan	0.0212	-	-	-	0.0212	-	-	-	-	-	0.0198
Feb	0.0033	-	-	-	0.0033	-	-	-	-	-	0.0090
Mar	0.0072	-	-	-	0.0072	-	-	-	-	-	0.0089
Apr	0.0024	-	-	-	0.0024	-	-	-	-	-	0.0048
May	0.0022	-	-	-	0.0022	-	-	-	-	-	0.0065
June	0.0000	-	-	-	0.0000	-	-	-	-	-	0.0192
Sub-total	0.0363	-	-	-	0.0363	-	-	-	-	-	0.0682
July	0.0540	-	-	-	0.0540	-	-	-	-	-	0.0081
Aug	i	-	1	-	-	-	1	-	-	1	-
Sept	-	-	-	-	-	-	-	-	-	1	-
Oct	-	-	-	-	-	-	-	-	-	1	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	0.0903	-	-	-	0.0903	-	-	-	-	-	0.0763
Acc. Total	9.7131	(accumulated quanti	ity of the project = ca	arried amount + this y					0.2693		

Notes:

- (1) The performance targets are given below:
 - All excavated materials to be sorted for recovering the inert portion of C&D materials, e.g. hard rocks, soil and broken concrete, for reuse on the Site or disposal to designated outlets;
 - All metallic waste to be recovered for collection by recycling contractors;
 - All cardboard and paper packaging (for plant, equipment and materials) to be recovered, properly stockpiled in dry and covered condition to prevent cross contamination;
 - All chemical wastes to be collected and properly disposed of by specialist contractors; and
 - All demolition debris to be stored to recover broken concrete, reinforcement bars, mechanical and electrical fittings, hardware as well as other fitting / materials that have established recycling outlets.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.
- (4) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.