



Development at West Kowloon Cultural District

Monthly Environmental Monitoring and Audit
(EM&A) Report for January 2017

February 2017

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Executive Summary

Mott MacDonald Hong Kong Limited (MMHK) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction of M+ Museum Main Works (Contract No.: CC/2015/3A/022) and Lyric Theatre Complex Foundation Works (Contract No.: CC/2015/3A/014) at West Kowloon Cultural District (WKCD) (The Project) as part of the WKCD development. The Project Proponent is the West Kowloon Cultural District Authority (WKGDA). The construction works and EM&A programme for M+ Museum and Lyric Theatre Complex commenced on 31 October 2015 and 1 March 2016 respectively.

The overall works for the WKCD fall under two separate categories of Designated Project (DP) of the Environmental Impact Assessment Ordinance (EIAO), namely an “engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000” (Item 3 of Schedule 3) and “an underpass more than 100m in length under the built areas” (Item A.9, Part I, Schedule 2). An Environmental Permit No. EP-453/2013/B (EP) was issued with respect to the “Underpass Road and Austin Road Flyover Serving the West Kowloon Cultural District” which specifically includes the abovementioned category of DP under Item A.9, Part I, Schedule 2 of the EIAO.

This Monthly EM&A Report presents the monitoring works at both the main works of M+ Museum and foundation works of Lyric Theatre Complex conducted from 1 January to 31 January 2017.

Exceedance of Action and Limit Levels

There was no breach of Action or Limit levels for Air Quality (1-hour TSP and 24-hour TSP) and Noise in this reporting month.

Implementation of Mitigation Measures

Construction phase weekly site inspections were carried out on 5, 13, 19 and 26 January 2017 for M+ Museum and 4, 11, 18 and 24 January 2017 for Lyric Theatre Complex to confirm the implementation measures undertaken by the Contractors in the reporting month. The outcomes are presented in Section 4 and the status of implementation of mitigation measures in the site is shown in **Appendix J**.

Landscape and visual impact inspections were conducted as part of the abovementioned weekly site inspections during the reporting month. No adverse comment on landscape and visual aspects was made during these inspections.

EPD site inspection with Contractor was conducted on 6 and 19 January 2017 at M+ Museum. No malpractice was observed.

Record of Complaints

No environmental complaint was recorded in the reporting month.

Record of Notification of Summons and Successful Prosecutions

The notification of summons received by the contractor of M+ Museum, Hsin Chong Construction Company Limited, in December 2016 is currently under review. The status of summons will be provided in the next reporting month.

No notification of summons and successful prosecution were recorded in the reporting month.

Future Key Issues

The major site works at M+ Museum scheduled to be commissioned in the coming month include:

- Construction of G/F, LGF, B1 and B2 slab
- Construction of column from B2 to B1, B1 to LGF and LGF to GF
- Installation of mega truss
- Construction of DCS structure from B1 to LGF
- M+ basement ABWF works and building services

The major site works at Lyric Theatre Complex scheduled to be commissioned in the coming month include:

- Installation of Monitoring Instrumentation
- Pre-grouting adjacent to Seawall
- Pipe Pile Construction
- Socket-H Pile Construction
- Bored Pile Construction

Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

1 Introduction

1.1 Background

Mott MacDonald Hong Kong Limited (MMHK) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction of M+ Museum Main Works (Contract No.: CC/2015/3A/022) and Lyric Theatre Complex Foundation Works (Contract No.: CC/2015/3A/014) at West Kowloon Cultural District (WKCD) (The Project) as part of the WKCD development. The Project Proponent is the West Kowloon Cultural District Authority (WKCDA). The construction works and EM&A programme for M+ Museum and Lyric Theatre Complex commenced on 31 October 2015 and 1 March 2016 respectively.

The overall works for the WKCD fall under two separate categories of Designated Project (DP) of the Environmental Impact Assessment Ordinance (EIAO), namely an “engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000” (Item 3 of Schedule 3) and “an underpass more than 100m in length under the built areas” (Item A.9, Part I, Schedule 2). An Environmental Permit No. EP-453/2013/B (EP) was issued with respect to the “Underpass Road and Austin Road Flyover Serving the West Kowloon Cultural District” which specifically includes the abovementioned category of DP under Item A.9, Part I, Schedule 2 of the EIAO. The captioned projects include part of the abovementioned underpass road located within the site boundary also falls under this same category.

The M+ museum development aims to provide an iconic presence for the M+ museum, semi-transparent vertical plane, housing education facilities, a public restaurant and museum offices. At ground and lower levels, generous access will be provided to the park and other West Kowloon Cultural District facilities, alongside a public resource centre, theatres, retail and dining, and back-of-house functions.

The 1,200-seat Lyric Theatre Complex will be Hong Kong’s first world-class facility for dance performances, including ballet, contemporary and Chinese dance forms. In the run up to the opening of further major performing arts venues in the WKCD, it will also be used for a wide variety of performing arts events including drama, opera and musical performances. The Lyric Theatre Complex will act as a platform for Hong Kong’s leading arts organisations, and be a new major venue to show programmes from Asia and worldwide.

The Monthly EM&A Report is prepared in accordance with the Condition 3.4 of the Environmental Permit No. EP-453/2013/B. This Monthly EM&A Report presents the monitoring works at both the main works of M+ Museum and foundation works of Lyric Theatre Complex conducted from 1 January to 31 January 2017. The purpose of this report is to summarise the findings in the EM&A of the project over the reporting period.

1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in **Appendix A**.

1.3 Environmental Status in the Reporting Period

During the reporting period, construction works at M+ Museum undertaken include:

- Construction of G/F, LGF, B1 and B2 slab

- Construction of column from B2 to B1, B1 to LGF and LGF to GF
- Installation of mega truss
- Construction of DCS structure from B1 to LGF
- Pile cap and sump pit construction at B2 and ICP

During the reporting period, construction works at Lyric Theatre Complex undertaken include:

- Installation of Monitoring Instrumentation
- Pre-grouting adjacent to Seawall
- Pipe Pile Construction
- Socket-H Pile Construction
- Bored Pile Construction

The Construction Works Programmes of M+ Museum and Lyric Theatre Complex are provided in **Appendix B**. A layout plan of the Project is provided in **Figure 1**. Please refer to **Table 4.3** on the status of the environmental licenses.

1.4 Summary of EM&A Requirements

The EM&A programme requires environmental monitoring of air quality, noise, landscape and visual as specified in the approved EM&A Manual.

A summary of impact EM&A requirements is presented in **Table 1.1**.

Table 1.1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies
Air Quality	24-Hour TSP	AM1 - International Commerce Centre	At least once every 6 days
	1-Hour TSP	AM1 - International Commerce Centre	At least 3 times every 6 days
	24-Hour TSP	AM2A – Austin Road West opposite to The Harbourside Tower 1	At least once every 6 days
	1-Hour TSP	AM2A – Austin Road West opposite to The Harbourside Tower 1	At least 3 times every 6 days
Noise	Leq, 30 minutes	NM1A- Podium level of The Harbourside Tower 1	Weekly
Landscape & Visual	Monitor implementation of proposed mitigation measures during the construction stage	As described in Table 9.1 and 9.2 of the EM&A Manual	Bi-weekly

Given that the Project covers only a small part of the whole WKCD area (i.e. M+ Museum, Lyric Theatre Complex and respective portions of underpass road), it was proposed that the EM&A programme for the Project should only require 1 noise monitoring station and 2 air quality monitoring stations located closest to the Project area. Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring stations AM1, AM2 and NM1 were set up. Other monitoring locations are too far away (i.e. AM3 to AM5 and NM2 to NM5) are not included in this EM&A programme until the construction of the corresponding area commences.

The Harbourside management office formally rejected our proposal of setting up air quality and noise monitoring equipment on its premises at the podium level of Tower 1 (AM2/NM1) on 10 November 2015. Alternative noise monitoring location was identified at The Arch (NM2), however The Arch management office formally rejected our proposal of setting up noise monitoring equipment on its premises on 23 November 2015. Nevertheless, suitable air quality monitoring location at AM2 was identified on the ground floor in front of The Harbourside Tower 1, which is at the same location as that of baseline monitoring for consistency. No management approval is required at the ground floor for conducting the air monitoring. However, the electricity supply at AM2 was suspended from 31 August 2016 and was no longer available. In order to have a more secure electricity supply, an alternative air

monitoring location (AM2A) was identified at Austin Road West opposite to The Harbourside Tower 1, which is close to Lyric Theatre Complex site entrance. This alternative air monitoring location was approved by EPD on 28 September 2016. Noise monitoring at G/F of Harbourside will not be representative. Approval from the management office of the International Commerce Centre has been granted on 29 February 2016 for conducting noise monitoring at the alternative noise monitoring location identified at the podium floor (NM1A) which is free from screening to the construction activities. Therefore, 2 air quality monitoring stations and 1 noise impact monitoring station were confirmed for the impact monitoring.

The Environmental Quality Performance Limits for air quality and noise are shown in **Appendix C**.

The Event and Action Plan for air quality, construction noise, landscape and visual are shown in **Appendix D**.

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements as well as the summary of implementation status of the environmental mitigation measures are provided in **Appendix J**.

2 Impact Monitoring Methodology

2.1 Introduction

For air quality and noise, the monitoring methodology, including the monitoring locations, monitoring equipment used, monitoring parameters, and frequency and duration etc., for air quality and noise are detailed in this Section. The environmental monitoring schedules for the reporting period and the tentative monitoring Schedule for the coming month are provided in **Appendix E**.

For landscape and audit impact, the relevant EM&A monitoring requirements and details are also presented in this Section.

2.2 Air Quality

2.2.1 Monitoring Parameters, Frequency and Duration

Table 2.1 summarizes the monitoring parameters, frequency and duration of the TSP monitoring.

Table 2.1: Air Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency	Duration
24-hour TSP	At least once in every six-days	24 hours
1-hour TSP	At least 3 times every six-days	60 minutes

2.2.2 Monitoring Locations

Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring stations AM1 and AM2A were set up at the proposed locations in accordance with updated EM&A Manual. Location of the monitoring station is given in **Table 2.2** and shown in **Figure 1**.

Table 2.2: Air Quality Monitoring Station

Monitoring Station	Location
AM1	International Commerce Centre (ICC)
AM2A	Austin Road West opposite to The Harbourside Tower 1

2.2.3 Monitoring Equipment

Continuous 24-hour TSP air quality monitoring was conducted using High Volume Sampler (HVS) (Model: TE-5170) located at the designated monitoring station. The HVS meets all the requirements stated in of the EM&A Manual. Portable direct reading dust meter was used to carry out the 1-hour TSP monitoring. **Table 2.3** summarizes the equipment used in the impact air quality monitoring. Copies of the calibration certificates for the HVS, calibration kit and portable dust meters are attached in **Appendix F**.

Table 2.3: TSP Monitoring Equipment

Equipment	Model
24-hour TSP monitoring	
High Volume Sampler	TE-5170 (Serial No.: 0767 and 8919)
Calibrator	TE-5025A (Orifice I.D.: 2454)
1-hour TSP monitoring	
Portable direct reading dust meter	Sibata LD-5R (Serial No.: 620401 and 620402)

Calibration of the HVS (five point calibration) using Calibration Kit was carried out every two months. The HVS calibration orifice will be calibrated annually. Calibration certificate of the TE-5025A Calibration Kit and the HVS are provided in **Appendix F**

The 1-hour TSP monitoring should be determined periodically (e.g. annually) by the HVS to check the validity and accuracy of the results measured by direct reading method.

2.2.4 Monitoring Methodology

24-hour TSP Monitoring

Installation

The HVS was installed at the site boundary. The following criteria were considered in the installation of the HVS.

- A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
- The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
- A minimum of 2 metres separation from walls, parapets and penthouse was required for rooftop sampler.
- A minimum of 2 metres separation from any supporting structure, measured horizontally was required.
- No furnace or incinerator flues or building vent were nearby.
- Airflow around the sampler was unrestricted.
- The sampler has been more than 20 metres from any drip line.
- Permission was obtained to set up the sampler and to obtain access to the monitoring station.
- A secured supply of electricity is needed to operate the sampler.

Preparation of Filter Papers

- Glass fibre filters were labelled and sufficient filters that were clean and without pinholes were selected.
- The filters used are specified to have a minimum collection efficiency of 99 percent for 0.3 µm (DOP) particles.
- All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C with relative humidity (RH) < 50% and was not variable by more than ±5 %. A convenient working RH was 40%. All preparation of filters was done by Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory.

Field Monitoring Procedures

- The power supply was checked to ensure the HVS works properly.
- The filter holder and the area surrounding the filter were cleaned.
- The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
- The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
- The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges.
- The shelter lid was closed and was secured with the aluminium strip.
- The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
- A new flow rate record sheet was set into the flow recorder.
- The flow rate of the HVS was checked and adjusted at around 1.3 m³/min. The range specified in the EM&A Manual was between 0.6-1.7 m³/min.

- The programmable timer was set for a sampling period of 24 hours, and the starting time, weather condition and the filter number were recorded.
- The initial elapsed time was recorded.
- At the end of sampling, the sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
- It was then placed in a clean plastic envelope and sealed.
- All monitoring information was recorded on a standard data sheet.
- Filters were sent to a Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory for analysis.

Maintenance and Calibration

- The HVS and its accessories are maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- HVSs were calibrated upon installation and thereafter at bi-monthly intervals. The calibration kits were calibrated annually.
- Calibration records for HVS and calibration kit are shown in **Appendix F**.

1-hour TSP Monitoring

Field Monitoring

The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

- Turn the power on.
- Close the air collecting opening cover.
- Push the "TIME SETTING" switch to [BG].
- Push "START/STOP" switch to perform background measurement for 6 seconds.
- Turn the knob at SENSI ADJ position to insert the light scattering plate.
- Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
- Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
- Pull out the knob and return it to MEASURE position.
- Setting time period of 1 hour for the 1-hour TSP measurement.
- Push "START/STOP" to start the 1-hour TSP measurement.
- Regular checking of the time period setting to ensure monitoring time of 1 hour.

Maintenance and Calibration

- The 1-hour dust meter would be checked at 3-month intervals and calibrated at 1-year intervals throughout all stages of the air quality monitoring.
- Calibration records for direct dust meters are shown in **Appendix F**.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

2.3 Noise

2.3.1 Monitoring Parameters, Frequency and Duration

Table 2.4 summarizes the monitoring parameters, frequency and duration of noise monitoring. The noise in A-weighted levels L_{eq} , L_{10} and L_{90} are recorded in a 30-minute interval between 0700 and 1900 hours.

Table 2.4: Noise Monitoring Parameters, Period and Frequency

Time Period	Parameters	Frequency
Daytime on normal weekdays (0700-1900 hours)	L_{eq} (30 min), L_{90} (30 min) & L_{10} (30 min)	Once every week

2.3.2 Monitoring Location

Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring station NM1A was set up at the proposed location in accordance with updated EM&A Manual. Location of the monitoring station is given in **Table 2.5** and shown in **Figure 1**.

Table 2.5: Noise Monitoring Station

Monitoring Station	Location
NM1A	Podium floor of International Commerce Centre (ICC)

2.3.3 Monitoring Equipment

Integrating Sound Level Meter was used for noise monitoring. It was a Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{Aeq}) and percentile sound pressure level (L_x). They comply with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). **Table 2.6** summarizes the noise monitoring equipment model being used.

Table 2.6: Noise Monitoring Equipments

Monitoring Station	Equipment Model	
	Integrating Sound Level Meter	Calibrator
NM1A	Rion NL-18 (Serial No.00360030)	Rion NC-73 (Serial No.10997142)

2.3.4 Monitoring Methodology

Field Monitoring

- The microphone of the Sound Level Meter was set at least 1.2 m above the ground.
- Free Field measurement was made at the monitoring locations.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting: A
 - time weighting: Fast
 - time measurement: 30 minutes intervals (between 0700-1900 on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1 kHz. If the difference in the calibration level before and after measurement was more than 1 dB, the measurement would be considered invalid and has to be repeated after re-calibration or repair of the equipment.
- During the monitoring period, the L_{eq} , L_{10} and L_{90} were recorded. In addition, any site observations and noise sources were recorded on a standard record sheet.
- A correction of +3dB(A) was made to the free field measurements.

Maintenance and Calibration

- The microphone head of the sound level meter and calibrator is cleaned with soft cloth at quarterly intervals.

- The sound level meter and calibrator are sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.
- Calibration records are shown in **Appendix F**.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

2.4 Landscape and Visual

2.4.1 Monitoring Program

Table 2.7 details the monitoring program (as proposed in the WKCD EIA report) for landscape and visual impact during the construction phase.

Table 2.7: Monitoring Program for Landscape and Visual Impact during Construction Phase

Stage	Monitoring Task	Frequency	Report	Approval
Construction	Monitor implementation of proposed mitigation measures during the construction stage.	Bi-weekly	ET to report on Contractor's compliance	Counter-signed by IEC

During the landscape and visual impact monitoring, any changes in relation to the landscape and visual amenity should be monitored with reference to the baseline conditions of the site. In addition, mitigation measures were proposed in the WKCD EIA report to minimise the landscape and visual impacts during the construction phase. The proposed mitigation measures as shown in Table 9.1 and Table 9.2 of the EM&A Manual should be checked for proper implementation.

3 Monitoring Results

3.1 Impact Monitoring

Construction impact monitoring for air quality, noise and landscape and visual impact was undertaken in compliance with the EM&A Manual during the reporting month.

3.2 Air Quality Monitoring

3.2.1 1-hour TSP

Results of 1-hour TSP at the monitoring location AM1 and AM2A are summarised in **Table 3.1**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.1: Summary of 1-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	1-hour TSP ($\mu\text{g}/\text{m}^3$)			Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1st Result	2nd Result	3rd Result			
AM1	03-Jan-17	10:48	81	89	96	52-102	273.7	500
	09-Jan-17	10:42	86	97	102			
	14-Jan-17	8:02	74	69	77			
	20-Jan-17	10:40	78	86	95			
	26-Jan-17	11:02	52	58	61			
AM2A	03-Jan-17	11:02	82	90	99	61-109	274.2	500
	09-Jan-17	10:54	88	98	109			
	14-Jan-17	8:14	86	91	75			
	20-Jan-17	10:54	80	88	98			
	26-Jan-17	11:14	64	61	70			

3.2.2 24-hour TSP

Results of 24-hour TSP at the monitoring location AM1 and AM2A are summarised in **Table 3.2**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.2: Summary of 24-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	Monitoring Results ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1	03-Jan-17	10:50	47	41-47	143.6	260
	09-Jan-17	10:40	42			
	14-Jan-17	08:00	41			
	20-Jan-17	10:42	43			
	26-Jan-17	11:00	42			
AM2A	03-Jan-17	11:00	86	52-86	151.1	260
	09-Jan-17	10:52	85			
	14-Jan-17	08:12	71			
	20-Jan-17	10:52	52			
	26-Jan-17	11:12	72			

No exceedance of 1-hour and 24-hour TSP (Action or Limit Level) was recorded in the reporting period.

3.3 Noise Monitoring

The construction noise monitoring results at the monitoring location NM1A are summarized in **Table 3.3**. Graphical plots of the monitoring data and the station set-up of a free-field measurement are shown in **Appendix G**.

Table 3.3: Summary of noise monitoring results during normal weekdays

Monitoring Date	Start Time	End Time	Leq (30 mins), dB(A)	Limit Level for Leq (dB(A))
03-Jan-17	14:00	14:30	70	75
09-Jan-17	14:00	14:30	69	
20-Jan-17	14:00	14:30	69	
26-Jan-17	14:00	14:30	68	

Remarks:

+3dB (A) correction was applied to free-field measurement.

No exceedance (Action/Limit Level) of construction noise was recorded in the reporting period as no noise related environmental complaint was received during the reporting period and noise levels recorded during the monitoring period were below 75 dB(A).

Construction works were extended to holidays on 7, 15 and 22 January 2017. In accordance with the EM&A Manual, additional monitoring was carried out during the restricted hours on 7, 15 and 22 January 2017. The L_{eq} (5 mins) is in the range of 70-71 dB(A). Major noise source includes traffic. Construction Noise Permits for the works carried out during restricted hours were obtained and listed in **Table 4.3** and **Table 4.4**.

3.4 Landscape and Visual Impact

Landscape and visual impact inspections were conducted as part of the weekly site inspections on 5 and 19 January 2017 for M+ Museum and 4 and 18 January 2017 for Lyric Theatre Complex during the reporting month. As reviewed by the registered Landscape Architect, no adverse comment on landscape and visual aspects was made during these inspections.

The landscape and visual mitigation measures were implemented during the reporting period. The summary of implementation status of the environmental mitigation measures are provided in **Appendix J**.

4 Environmental Site Inspection

4.1 Site Inspection

4.1.1 M+ Museum

Construction phase weekly site inspections were carried out on 5, 13, 19 and 26 January 2017. The joint site inspection with IEC, ET, ER and Contractor was held on 13 January 2017. EPD site inspection with Contractor was conducted on 6 and 19 January 2017. The discharge points and wastewater treatment facilities were inspected and no malpractice was observed. All observations have been recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary. The key observations from the site inspections and associated recommendations are summarized in **Table 4.1**.

Table 4.1: Summary of Site Inspections and Recommendations for M+ Museum

Inspection Date	Parameter	Observation / Recommendation	Contractor's Responses / Action(s) Undertaken	Close-out (Date)
30 Dec 2016	Waste management	Construction waste was observed in B2. The contractor was reminded to remove the construction waste regularly.	The contractor has removed the construction waste at B2.	4 Jan 2017
30 Dec 2016	Air quality	Stockpile was observed uncovered in B2. The contractor was reminded to well cover the stockpile to reduce dust impact.	The contractor has well covered the stockpile at B2.	4 Jan 2017
5 Jan 2017	Waste management	Construction waste found idled at B2. The contractor was reminded to remove the construction waste regularly.	The contractor has covered the construction waste at B2 with impervious sheet until it is removed.	13 Jan 2017
5 Jan 2017	Waste management	Chemical containers without drip trays were observed at ICP and B2. The contractor was reminded to provide drip trays for all chemical containers or remove them off site if not in use.	The chemical containers at ICP and B2 previously observed without drip trays were removed off site.	13 Jan 2017
5 Jan 2017	Waste management	Improper container was used for chemicals observed at gate 3. The contractor was reminded to use proper containers for all chemicals.	The chemicals with improper containers were removed off site.	13 Jan 2017
5 Jan 2017	Water Quality	Effluent quality at ICP sampling point and M+ wetseps was checked. They were visually clear when comparing with standard solution and within proper pH range.	N/A	N/A
13 Jan 2017	Air quality	Cement bags were observed uncovered at B2. The contractor was reminded to cover the cement bags with impervious sheet to reduce dust impact.	The contractor has covered the cement bags at B2 with impervious sheet.	16 Jan 2017
13 Jan 2017	Waste management	Chemical containers were observed without drip tray near Gate 1. The contractor was reminded to provide drip tray for the chemicals.	The chemicals previously observed without drip tray near Gate 1 were removed off site.	16 Jan 2017
13 Jan 2017	Water Quality	Muddy water was observed at Gate 1. The contractor was reminded to enhance wheel-	The contractor has removed the muddy water at Gate 1 and provided a bund at Gate 1 to direct	16 Jan 2017

Inspection Date	Parameter	Observation / Recommendation	Contractor's Responses / Action(s) Undertaken	Close-out (Date)
		washing for all vehicles before leaving the site and provide u-channels at Gate 1 for collecting the site runoff.	runoff from wheel-washing to pump and collected them for wastewater treatment.	
13 Jan 2017	Water Quality	Effluent quality at ICP sampling point and M+ wetseps was checked. They were visually clear when comparing with standard solution and within proper pH range.	N/A	N/A
19 Jan 2017	Waste management	Chemicals were found without drip tray near Gate 3. The contractor was reminded to provide drip trays for those chemicals.	The contractor has moved the chemicals to the drip tray.	19 Jan 2017
19 Jan 2017	Air quality	Cement bags were observed uncovered near Gate 1. The contractor was reminded to cover them with impervious sheet to reduce dust impact.	The contractor has covered the cement bags with impervious sheet near Gate 1.	24 Jan 2017
19 Jan 2017	Waste management	Construction waste was found accumulated near Gate 3. The contractor was reminded to remove the waste regularly.	The contractor has removed the construction waste previously accumulated near Gate 3.	24 Jan 2017
19 Jan 2017	Water Quality	Effluent quality at ICP sampling point and M+ wetseps was checked. They were visually clear when comparing with standard solution and within proper pH range. The contractor was also reminded to carry out regular checking and maintenance of wetseps to ensure the quality of effluent to comply with discharging standard of discharge license.	N/A	N/A
26 Jan 2017	Waste management	Chemical container was found without drip tray near Gate 3. The contractor was reminded to provide drip tray for all chemicals.	Follow-up status will be provided in the next reporting month	On-going
26 Jan 2017	Air quality	Cement bag was found left open at B2. The contractor was reminded to cover the cement bag with impervious sheet to reduce dust impact.	Follow-up status will be provided in the next reporting month	On-going
26 Jan 2017	Water Quality	Effluent quality at ICP sampling point and M+ wetseps was checked. They were all visually clear when comparing with standard solution and within proper pH range.	N/A	N/A

4.1.2 Lyric Theatre Complex

Construction phase weekly site inspections were carried out on 4, 11, 18 and 24 January 2017. The joint site inspection with IEC, ET, ER and Contractor was held on 18 January 2017. All observations have been recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary. The key observations from the site inspections and associated recommendations are summarized in **Table 4.2**.

Table 4.2: Summary of Site Inspections and Recommendations for Lyric Theatre Complex

Inspection Date	Parameter	Observation / Recommendation	Contractor's Responses / Action(s) Undertaken	Close-out (Date)
28 Dec 2016	Air quality	The Contractor was reminded to replace the NRMM label of the generator near seafront with colour one.	The Contractor was replaced with yellow NRMM label.	4 Jan 2017
28 Dec 2016	Water quality	Turbid treated effluent was observed at wetsep no. 1. The Contractor was reminded to check the performance of the wetsep and desludge more frequently.	De-sludge was arranged for the concerned wetsep and treated effluent was observed clearer.	4 Jan 2017
4 Jan 2017	Waste management	An oil drum was not properly placed in drip tray at Area L05. The Contractor was reminded to ensure sufficient drip trays are provided.	The Contractor was placed the oil drum into drip tray properly	6 Jan 2017
4 Jan 2017	Air quality	Haul road was observed dry at Area L02. The Contractor was reminded to increase water spraying frequency.	Water spraying on site haul road was conducted regularly.	6 Jan 2017
11 Jan 2017	Water quality	High PH value (i.e. 9.4 PH) was observed at the wetsep No. 2. The Contractor was reminded to monitor the PH value to an acceptable PH value (i.e. 6-9 PH).	The effluent in wetsep No. 2 was treated and the pH value of the effluent was within the permitted range.	11 Jan 2017
18 Jan 2017	Air quality	The Contractor was reminded that the NRMM labels on the applicable construction plants should be of the correct colour and securely displayed.	The NRMM labels on the applicable construction plants was replaced with correct colour and securely displayed.	19 Jan 2017
18 Jan 2017	Water quality	The filter at wetsep No. 2 had malfunctioned. The Contractor should repair the filter as soon as possible to prevent discharge of turbid site runoff.	The broken net at outlet of wetsep No.2 was replaced.	19 Jan 2017
24 Jan 2017	Waste management	The Contractor was reminded to clean the mud inside the drip tray of machine at Area L06 and treated as chemical waste.	The contractor has cleaned the drip tray of the machine at Area L06.	25 Jan 2017

4.2 Advice on the Solid and Liquid Waste Management Status

The Contractors have been registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting will be carried out on site. A sufficient number of receptacles were available for general refuse collection.

4.2.1 M+ Museum

As advised by the Contractor, 66.74 ton and 171.16 ton of inert C&D material were disposed of as public fill to Tuen Mun Area 38 and Tseung Kwan O Area 137 Public Fill respectively, while 79.7 ton of general refuse was disposed of at SENT landfill. 41.9 ton of metals (the total amount of metals generated in Jan 2017 will be updated in the Appendix I of the Monthly EM&A Report for the next reporting report), 1.0 ton of paper/cardboard packaging, 0 ton of plastic and 70.0 ton of timber were collected by recycling contractors in the reporting month. 0 ton of inert C&D materials was reused on site. 432.0 ton of inert C&D materials were reused in other projects and 5.3 ton of inert C&D materials were disposed to sorting facility. 0 ton of chemical waste was collected by licensed contractors in the reporting period.

The actual amounts of different types of waste generated by the activities of construction works at M+ Museum in the reporting month are shown in **Appendix I**.

4.2.2 Lyric Theatre Complex

As advised by the Contractor, 3,162.88 ton and 6,444.94 ton of inert C&D material were disposed of as public fill to Tuen Mun Area 38 and Tseung Kwan O Area 137 respectively, while 7.3 ton of general refuse was disposed of at SENT landfill. 29.5 ton of metals, 0 ton of paper/cardboard packaging, 0 ton of plastic and 0 ton of timber were collected by recycling contractors in the reporting month. 0 ton of inert C&D materials was reused on site. 0 ton of inert C&D materials was reused in other projects. 0 ton of chemical wastes was collected by licensed contractors in the reporting period.

The actual amounts of different types of waste generated by the activities of construction works at Lyric Theatre Complex in the reporting month are shown in **Appendix I**.

4.3 Status of Environmental Licenses and Permits

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period are summarised in **Table 4.3 and Table 4.4**.

4.3.1 M+ Museum

Table 4.3: Status of Environmental Submissions, Licenses and Permits for M+ Museum

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
5213-217-H2913-45	05-Nov-15	--	Valid	--
Billing Account Construction Waste Disposal				
7023393	13-Oct-15	--	Account Active	--
Construction Noise Permit				
GW-RE1058-16	4-Nov-16	3-May-17	Valid	--
Wastewater Discharge License				
WT00023633-2016	4-Mar-16	31-Mar-21	Valid	--
Notification under Air Pollution Control (Construction Dust) Regulation				
394083	7-Oct-15	--	Notified	--

4.3.2 Lyric Theatre Complex

Table 4.4: Status of Environmental Submissions, Licenses and Permits for Lyric Theatre Complex

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
5213-217-G2347-39	17-Feb-16	--	Valid	--
Billing Account Construction Waste Disposal				
7024189	25-Jan-16	--	Account Active	--
Construction Noise Permit				
GW-RE1113-16	23-Nov-16	20-May-17	Valid	--
Wastewater Discharge License				
WT00023648-2016	9-Mar-16	31-Mar-21	Valid	--
Notification under Air Pollution Control (Construction Dust) Regulation				
398075	18-Jan-16	--	Notified	--

4.4 Recommended Mitigation Measures

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements as well as the summary of implementation status of the environmental mitigation measures are provided in **Appendix J**. In particular, the following mitigation measures were brought to attention during the site inspections:

4.4.1 M+ Museum

Chemical and Waste Management

- All chemical drum/ containers stored on site should be provided with drip trays.
- Construction waste generated on site should be regularly removed.
- Proper containers should be used for all chemicals.

Air Quality

- Maintain high standard of housekeeping to prevent emission of fugitive dust.
- Dusty materials stored on site should be well covered to reduce dust impact.
- Conduct wheel-washing for all vehicles before leaving the site.

Water Quality

- Wetsep units should be regularly checked to ensure proper function of the system to treat wastewater or runoff before discharge.
- All site runoff from wheel-washing should be properly collected and treated.

4.4.2 Lyric Theatre Complex

Chemical and Waste Management

- All chemical drum/ containers stored on site should be provided with drip trays.
- Drip trays should be regularly cleaned up to avoid accumulation of chemical waste.

Air Quality

- Enhance water spraying for haul roads to reduce dust impact.
- Proper NRMM label should be provided to the plants.

Water Quality

- Wetsep units should be regularly checked to ensure proper function to treat wastewater or runoff before discharge.

5 Compliance with Environmental Permit

The status of the required submission under the EP during the reporting period is summarized in **Table 5.1**.

Table 5.1: Status of Submissions under the Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.4	Monthly EM&A Report for December 2016	13 January 2016

6 Report in Non-compliance, Complaints, Notification of Summons and Successful Prosecutions

6.1 Record on Non-compliance of Action and Limit Levels

There was no breach of Action or Limit Levels for Air Quality and Noise monitoring in the reporting month.

6.2 Record on Environmental Complaints Received

No environmental complaint was received this month. The cumulative statistics on complaints were provided in **Appendix K**.

6.3 Record on Notifications of Summons and Successful Prosecution

The notification of summons received by the contractor of M+ Museum, Hsin Chong Construction Company Limited, in December 2016 is currently under review. The status of summons will be provided in the next reporting month.

No notifications of summons or successful prosecution were received this month. The cumulative statistics on notifications of summons and successful prosecutions were provided in **Appendix K**.

7 Future Key Issues

7.1 Construction Works for the Coming Month(s)

7.1.1 M+ Museum

The major site works scheduled to be commissioned in the coming month include:

- Construction of G/F, LGF, B1 and B2 slab
- Construction of column from B2 to B1, B1 to LGF and LGF to GF
- Installation of mega truss
- Construction of DCS structure from B1 to LGF
- M+ basement ABWF works and building services

7.1.2 Lyric Theatre Complex

The major site works scheduled to be commissioned in the coming month include:

- Installation of Monitoring Instrumentation
- Pre-grouting adjacent to Seawall
- Pipe Pile Construction
- Socket-H Pile Construction
- Bored Pile Construction

7.2 Key Issues for the Coming Month

7.2.1 M+ Museum

Key issues to be considered in the coming month include:

- Generation of dust from construction works;
- Noise impact from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Management of stockpiles and slopes, particularly on rainy days;
- Sorting, recycling, storage and disposal of general refuse and construction waste; and
- Management of chemicals and avoidance of oil spillage on-site.

7.2.2 Lyric Theatre Complex

Key issues to be considered in the coming month include:

- Generation of dust from construction works;
- Noise impact from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Management of stockpiles and slopes, particularly on rainy days;
- Sorting, recycling, storage and disposal of general refuse and construction waste; and
- Management of chemicals and avoidance of oil spillage on-site.

7.3 Monitoring Schedule for the Coming Month

The environmental site inspection and environmental monitoring will be continued in the coming month. Impact monitoring for air quality and noise in accordance with the approved EM&A Manual has

commenced since 31 October 2015 and 5 March 2016 respectively. The tentative monitoring schedule for the coming month is shown in the **Appendix E**.

8 Conclusions and Recommendations

8.1 Conclusions

The EM&A programme as recommended in the EM&A Manual has been undertaken since the construction of M+ Museum main works commenced on 31 October 2015, and the construction of Lyric Theatre Complex foundation works commenced on 1 March 2016.

Monitoring of air quality and noise with respect to the Projects is underway. In particular, the 1-hour TSP, 24-hour TSP, noise level (as Leq, 30 minutes) under monitoring have been checked against established Action and Limit levels. There was no breach of Action and Limit Levels for 1-hour TSP, 24-hour TSP and noise in the reporting month.

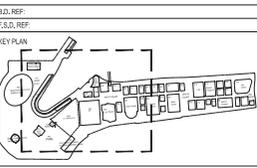
No environmental complaint and no notifications of summons or successful prosecution were received during the reporting month.

Weekly construction phase site inspections and bi-weekly landscape and visual impact inspections were conducted during the reporting month as required. It was observed that the Contractors had implemented all possible and feasible mitigation measures to mitigate the potential environmental impacts during construction phase works.

8.2 Recommendations

Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

Figure 1 Site Layout Plan and Monitoring Stations



- NOTES:
- WKCD BOUNDARY
 - M+ MUSEUM BOUNDARY
 - LYRIC THEATRE BOUNDARY
 - BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCD
 - CONSTRUCTION AIR/NOISE MONITORING STATION

REV.	DATE	DESCRIPTION	INITIAL

JOB TITLE: **M+ MUSEUM FOR VISUAL CULTURE (MAIN CONTRACT WORKS) & LYRIC THEATRE COMPLEX**

DRAWING TITLE: **PROPOSED LOCATIONS OF CONSTRUCTION AIR/NOISE MONITORING STATIONS**

SCALE	1:100	PRINTED	A1
CHECKED		DATE	
APPROVED		DATE	
DRAWN	TY	DATE	16-10-2015

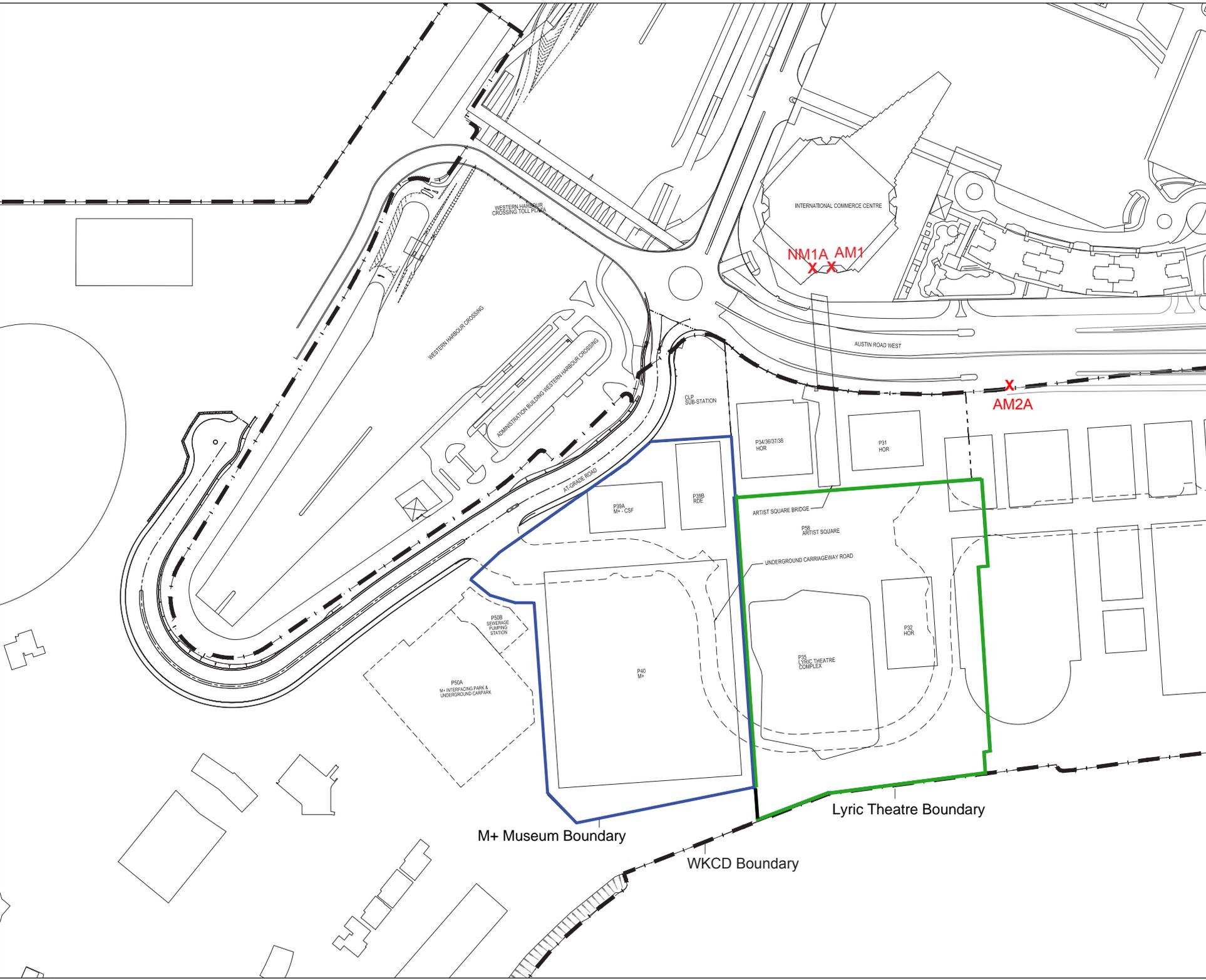
CONTRACT NO.:

DRAWING NO.	FIGURE 1	REV.	XA
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CAD REF NAME: XXXXX\AUT-PMS-DWG-POU\000000-XXX.dwg

AUTHORITY:

westKowloon
西九文化區



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A. Project Organisation

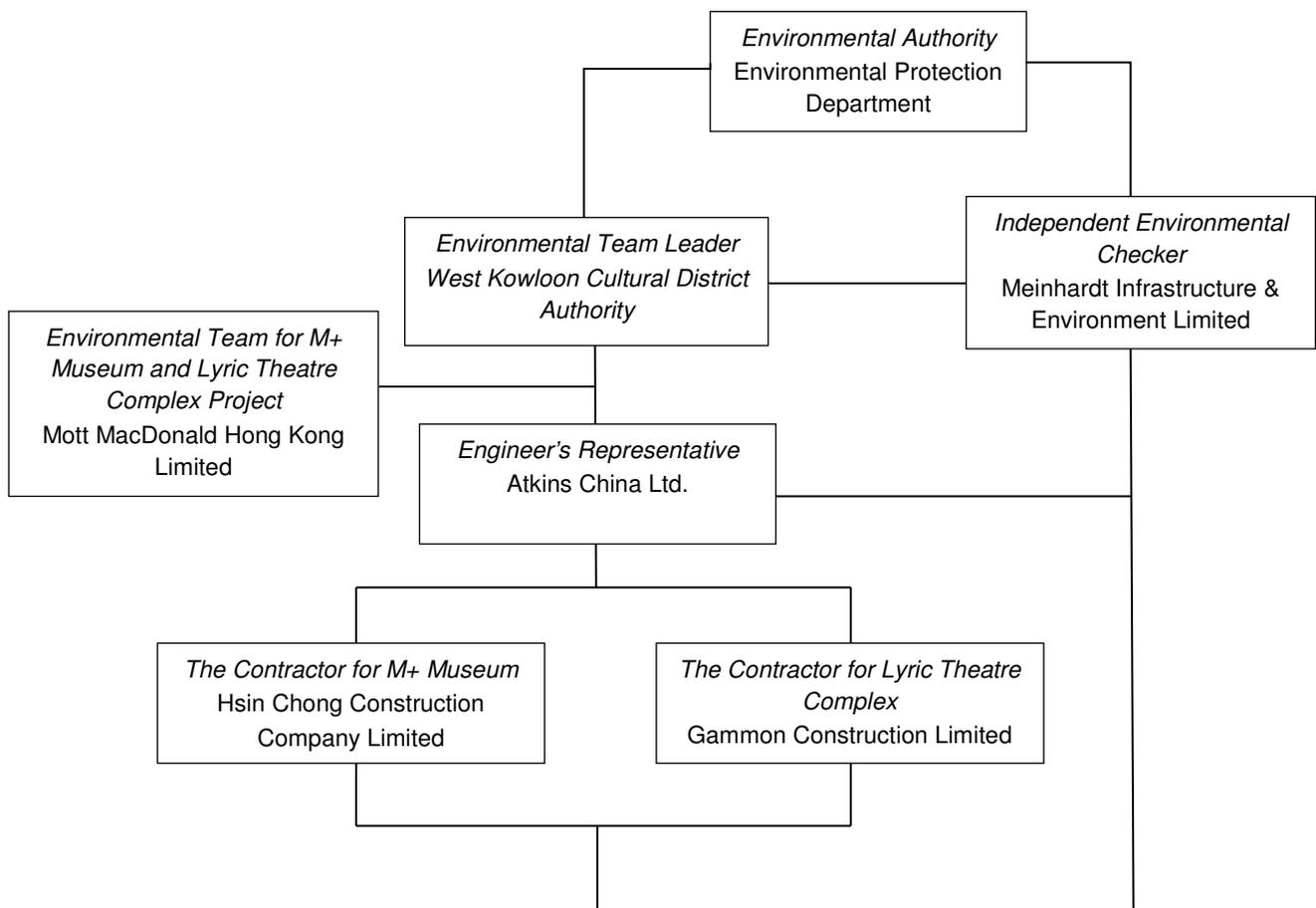


Table A-1: Contact information

Company Name	Role	Name	Telephone
Atkins China Ltd.	Senior Resident Engineer	Mr. Alfred Lee	5401 7289
Meinhardt Infrastructure & Environment Limited	IEC	Mr. Fredrick Leong	2859 1739
Hsin Chong Construction Company Limited	Environmental Manager	Mr. Leo Chow	9266 6855
Gammon Construction Limited	Environmental Manager	Ms. Michelle Tang	9267 8866
Mott MacDonald Hong Kong Ltd.	Contractor's Environmental Team Leader	Mr Brandon Wong	2828 5875
West kowloon Cultural District Authority	Senior Environmental Specialist	Mr. Brian Tam	2200 0059

B. Tentative Construction Programme

M+ Museum

(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017					
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09			
M+ MICP D14 OP3A - Month 16 - 27 Jan '17																															
M+																															
Contract Dates																															
CD01	Contract Remaining Period (770 days)			770	17-Dec-16	25-Jan-19	17-Dec-16 A	13-Jan-19	0%	12	12																				
M+ Mega Truss Column & Falseworks Construction																															
Mega Truss Falseworks Delivery																															
T1 & T2 Non-typical Truss at East Core Wall (GL 7-8/K-M)																															
A17490	T2C-4	0	01-Dec-16			01-Dec-16 A	100%	0				T2C-4, T2C-4, , T2C-4																			
A17530	T2-6	0	01-Dec-16			01-Dec-16 A	100%	0				T2-6, T2-6, , T2-6																			
A17420	Member 3, 5 & 6	0	18-Dec-16			18-Dec-16 A	100%	0				Member 3, 5 & 6, Member 3, 5 & 6, , Member 3, 5 & 6																			
A17600	T2-32	0	18-Dec-16			18-Dec-16 A	100%	0				T2-32, T2-32, , T2-32																			
T1 & T2 - 9M Spreader Truss (Total 7 Nos. Req'd)																															
A17700	TR9-4	0	18-Dec-16			18-Dec-16 A	100%	0				TR9-4, TR9-4, , TR9-4																			
T1 & T2 - 18M Spreader Truss (Total 6 Nos. Req'd)																															
A17720	TR18-15	0	04-Dec-16			04-Dec-16 A	100%	0				TR18-15, TR18-15, , TR18-15																			
A17730	TR18-16	0	05-Dec-16			05-Dec-16 A	100%	0				TR18-16, TR18-16, , TR18-16																			
A17710	TR18-2	0	06-Dec-16			06-Dec-16 A	100%	0				TR18-2, TR18-2, , TR18-2																			
A17890	TR18-19	0	06-Dec-16			06-Dec-16 A	100%	0				TR18-19, TR18-19, , TR18-19																			
A17900	TR18-20	0	06-Dec-16			06-Dec-16 A	100%	0				TR18-20, TR18-20, , TR18-20																			
A17910	TR18-21	0	06-Dec-16			06-Dec-16 A	100%	0				TR18-21, TR18-21, , TR18-21																			
A17740	TR18-6	0	07-Dec-16			07-Dec-16 A	100%	0				TR18-6, TR18-6, , TR18-6																			
A17750	TR18-17	0	07-Dec-16			07-Dec-16 A	100%	0				TR18-17, TR18-17, , TR18-17																			
A17760	TR18-18	0	08-Dec-16			08-Dec-16 A	100%	0				TR18-18, TR18-18, , TR18-18																			
A17810	TR18-9	0	10-Dec-16			10-Dec-16 A	100%	0				TR18-9, TR18-9, , TR18-9																			
A17800	TR18-4	0	13-Dec-16			13-Dec-16 A	100%	0				TR18-4, TR18-4, , TR18-4																			
A17770	TR18-1	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-1, TR18-1, , TR18-1																			
A17790	TR18-8	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-8, TR18-8, , TR18-8																			
A17820	TR18-10	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-10, TR18-10, , TR18-10																			
A17830	TR18-3	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-3, TR18-3, , TR18-3																			
A17840	TR18-11	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-11, TR18-11, , TR18-11																			
A17850	TR18-12	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-12, TR18-12, , TR18-12																			
A17860	TR18-5	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-5, TR18-5, , TR18-5																			
A17870	TR18-13	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-13, TR18-13, , TR18-13																			
A17880	TR18-14	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-14, TR18-14, , TR18-14																			
A17780	TR18-7	0	18-Dec-16			18-Dec-16 A	100%	0				TR18-7, TR18-7, , TR18-7																			
T18 - I-beam Upper Working Platform																															
A17610	T18IBeam-1	0	10-Dec-16			10-Dec-16 A	100%	0				T18IBeam-1, T18IBeam-1, , T18IBeam-1																			
Truss 1 & 2 - Composite Columns & Temporary Works																															
East Core Wall from B1F to 1MF																															
East Core Wall -1/F to 1M/F Lvl @ +16.0mPD to +19.7 mPD (3.7m)																															

- ◆ Baseline Milestone
- Primary Baseline
- ◆ Milestone
- ▬ Non-Critical
- ▬ Critical Bar
- ▬ Actual Work

West Kowloon Cultural District Authority (3MRP-16) 3-Months Rolling Prog Status



CMWP-12			
Date	Revision	Checked	Approved
06-Oct-16	(3MRP12) 3-Months Rolling Prog Status at 30 Sep 2016	Chris / Jojo	Ricky Lau / Chris Chau
08-Nov-16	(3MRP13) 3-Months Rolling Prog Status at 31 Oct 2016	Chris / Jojo	Ricky Lau / Chris Chau
05-Dec-16	(3MRP14) 3-Months Rolling Prog Status at 30 Nov 2016	Chris / Jojo	Ricky Lau / Chris Chau
07-Jan-17	(3MRP15) 3-Months Rolling Prog Status at 31 Dec 2016	Chris / Jojo	Ricky Lau / Chris Chau
03-Feb-17	(3MRP16) 3-Months Rolling Prog Status at 31 Jan 2017	Chris / Jojo	Ricky Lau / Chris Chau

(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017			
										04	11	18	25	01	08	15	22	29	05	12	19	26	02	09	16	23	30	06	13
A42290	Re-bar fixing C96 to +19.7mPD	4	07-Dec-16	10-Dec-16	07-Dec-16 A	10-Dec-16 A	100%	0																					
A42280	Formwork column C96 to +19.7mPD	2	12-Dec-16	13-Dec-16	12-Dec-16 A	13-Dec-16 A	100%	0																					
A42270	Concreting column C96 to +19.7mPD	1	14-Dec-16	14-Dec-16	14-Dec-16 A	14-Dec-16 A	100%	0																					
A42880	C96 concrete curing 60mPa @ +19.7mPD	5	15-Dec-16	19-Dec-16	15-Dec-16 A	21-Jan-17 A	100%	-32																					
A42640	T4-Install non-typical trusses at C96	2	20-Dec-16	21-Dec-16	26-Jan-17 A	02-Feb-17	0%	-31	18																				
Truss 4 Falseworks																													
A40480	T4-Erect 9m spreader trusses & connect top layer bracings	12	09-Feb-17	22-Feb-17	04-Jan-17 A	04-Feb-17	70%	15	17																				
A40470	T4-Install non-typical trusses at Column C94 (after C94 is completed)	2	09-Feb-17	22-Feb-17	01-Feb-17	02-Feb-17	0%	17	18																				
A40490	T4-Install temporary working platform	3	23-Feb-17	25-Feb-17	06-Feb-17	08-Feb-17	0%	15	17																				
M+ Podium Structure RC Works																													
Podium Structure Zone A, M, N & H (Non-deferred Zone Parallel w/ Trusses)																													
Zone A Structure																													
B1 Level (updated as of 16 Dec 2016)																													
A10970	Complete Zone A B1 Slab	0		13-Jan-17		07-Jan-17 A	100%	6																					
B1-GF Level																													
A10980	Zone A1 Wall, Column & GF Slab	15	28-Dec-16	14-Jan-17	12-Oct-16 A	08-Feb-17	90%	-18	127																				
A11010	Zone A4 Wall, Column & GF Slab	15	22-Mar-17	08-Apr-17	10-Feb-17	27-Feb-17	0%	34	244																				
GF-1F-1MF Level																													
A11050	Zone A3 Wall, Column & 1MF Slab	21	20-Dec-16	16-Jan-17	23-Dec-16 A	21-Feb-17	10%	-28	274																				
A11040	Zone A2 Wall, Column & 1MF Slab	21	06-Jan-17	02-Feb-17	23-Jan-17 A	21-Feb-17	0%	-16	274																				
A11030	Zone A1 Wall, Column & 1MF Slab	21	16-Jan-17	11-Feb-17	09-Feb-17	04-Mar-17	0%	-18	127																				
A11060	Zone A4 Wall, Column & 1MF Slab	21	10-Apr-17	09-May-17	28-Feb-17	23-Mar-17	0%	34	244																				
1MF-2F Level																													
A11090	Zone A2 Wall, Column & 2F Slab	21	03-Feb-17	27-Feb-17	22-Feb-17	17-Mar-17	0%	-16	274																				
A11100	Zone A3 Wall, Column & 2F Slab	21	17-Jan-17	13-Feb-17	22-Feb-17	17-Mar-17	0%	-28	274																				
A11080	Zone A1 Wall, Column & 2F Slab	21	13-Feb-17	08-Mar-17	06-Mar-17	29-Mar-17	0%	-18	264																				
A11160	Zone A4 Wall, Column & 2F Slab	21	10-May-17	03-Jun-17	24-Mar-17	21-Apr-17	0%	34	244																				
2F-3F Level																													
A11400	Zone A2 Wall, Column & 3F Slab	21	28-Feb-17	23-Mar-17	18-Mar-17	12-Apr-17	0%	-16	274																				
A11480	Zone A3 Wall, Column & 3F Slab	21	14-Feb-17	09-Mar-17	18-Mar-17	12-Apr-17	0%	-28	274																				
A11320	Zone A1 Wall, Column & 3F Slab	21	09-Mar-17	01-Apr-17	30-Mar-17	27-Apr-17	0%	-18	264																				
Zone H Structure																													
GL-3F Level																													
A10880	Podium Wall, Column & GF slab (GL 11-14/L-M)	82	03-Oct-16	10-Jan-17	03-Oct-16 A	20-Mar-17	20%	-56	212																				
A10890	Podium Wall, Column & 1F slab (GL 11-14/L-M)	14	11-Jan-17	26-Jan-17	21-Mar-17	06-Apr-17	0%	-56	212																				
West Core Wall (Zone M) @ GL 7-8/A-E																													
A43070	B1-GF Wall, Column & GF slab (GL 7-8/A-E)	13	03-Jan-17	17-Jan-17	19-Dec-16 A	09-Jan-17 A	100%	8																					
A43080	GF-1F Wall, Column & 1F slab (GL 7-8/A-E)	11	18-Jan-17	02-Feb-17	09-Jan-17 A	04-Feb-17	0%	-2	11																				
A43090	1F-1MF Wall, Column & 1MF slab (GL 7-8/A-E)	11	03-Feb-17	15-Feb-17	06-Feb-17	17-Feb-17	0%	-2	11																				
A43100	1MF-2F Wall, Column & 2F slab (GL 7-8/A-D)	21	16-Feb-17	11-Mar-17	18-Feb-17	14-Mar-17	0%	-2	11																				
A43110	2F-3F Wall, Column & 3F slab (GL 7-8/A-D)	21	13-Mar-17	06-Apr-17	15-Mar-17	08-Apr-17	0%	-2	11																				
Podium Structure Zone B, C, D & Q (Deferred Zone @ T5 & T1)																													
Zone C @ GL 1-5/H-K																													
A15920	Stage 2 - Construct wall, column & GF slab (GL 7'-5/H-K)	18	13-Feb-17	04-Mar-17	01-Feb-17	21-Feb-17	0%	10	118																				
A15930	Stage 3/4 - Construct hanging columns, wall, beam & slab @ 1MF, 1F (GL	22	27-Feb-17	23-Mar-17	15-Feb-17	11-Mar-17	0%	10	118																				
A15940	Stage 5 - Construct wall, column & 2F slab (GL 1-5/H-K)	20	13-Mar-17	05-Apr-17	01-Mar-17	23-Mar-17	0%	10	118																				

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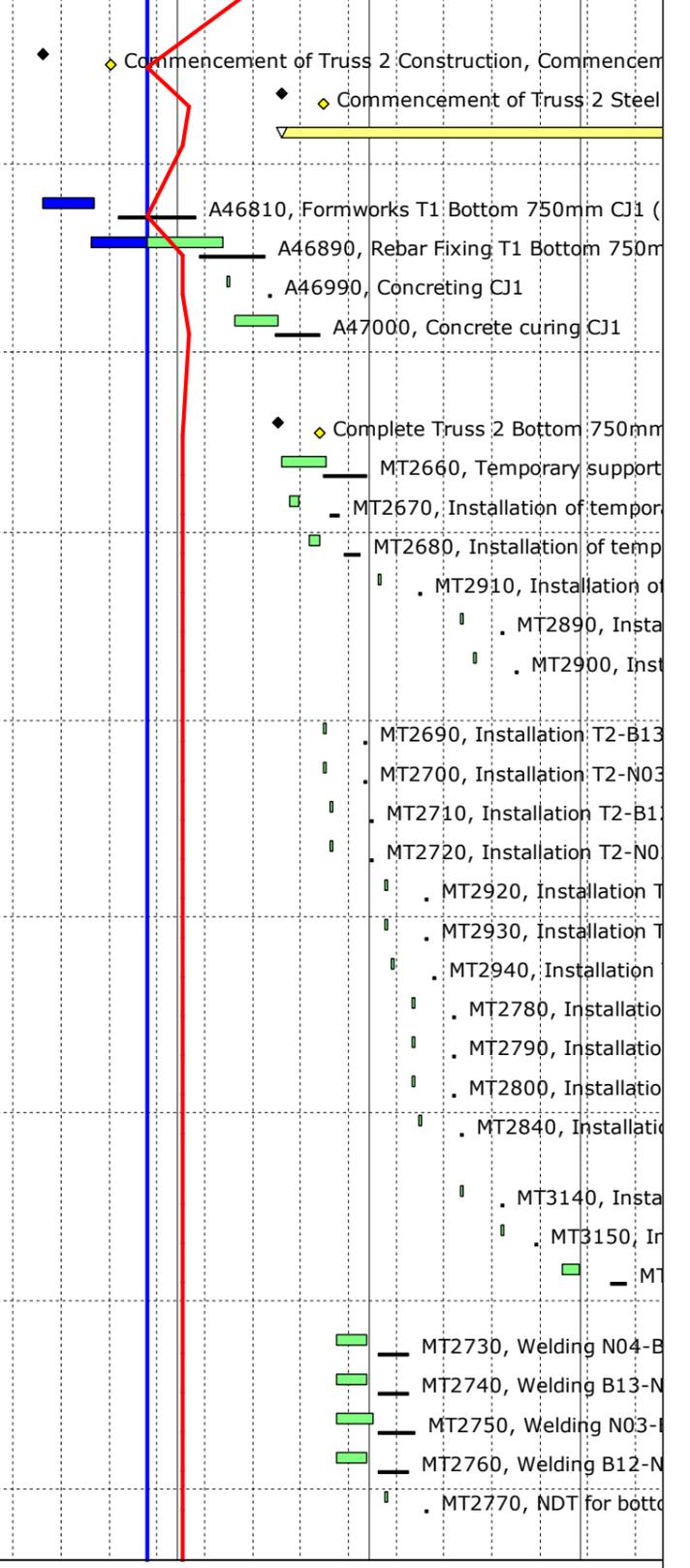
Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017		April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19
A15950	Stage 5 - Complete Zone C for T5 stability prop installation	0		05-Apr-17		23-Mar-17	0%	10	140																
A42900	Stage 5 - Construct wall, column & 3F slab (GL 1-5/H-K)	22	06-Apr-17	06-May-17	24-Mar-17	22-Apr-17	0%	10	118																
Podium Structure Zone E, G & J (Deferred Zone Near T3 & T4)																									
Zone E & E1 @GL 10-8/A-E (not within deferred zone)																									
A16810	Stage 1 - Construct wall, column & B1 slab (GL 12-8/A-C: incl. Area E1)	45	01-Dec-16	25-Jan-17	01-Dec-16 A	27-Jan-17 A	100%	-1																	
A16820	Stage 1 - Construct wall, column & B1 slab (GL 10-8/C-E: incl. Area E2)	11	15-Dec-16	29-Dec-16	15-Dec-16 A	28-Dec-16 A	100%	2																	
A16840	Stage 2 - Construct wall, column & GF slab (GL 10-8/C-E)	21	30-Dec-16	24-Jan-17	29-Dec-16 A	10-Feb-17	0%	-12	103																
A16830	Stage 2 - Construct wall, column & GF slab (GL 12-8/A-C)	21	26-Jan-17	22-Feb-17	01-Feb-17	24-Feb-17	0%	-2	142																
A16860	Stage 3 - Construct 1MF beam & slab (GL 10-8/C-E)	21	25-Jan-17	21-Feb-17	11-Feb-17	07-Mar-17	0%	-12	103																
A16850	Stage 3 - Construct 1MF beam & slab (GL 12-8/A-C)	21	23-Feb-17	18-Mar-17	25-Feb-17	21-Mar-17	0%	-2	142																
A16880	Stage 4 - Construct 2F beam & slab (GL 10-8/C-E)	21	22-Feb-17	17-Mar-17	08-Mar-17	31-Mar-17	0%	-12	103																
A16870	Stage 4 - Construct 2F beam & slab (GL 12-8/A-C)	20	20-Mar-17	12-Apr-17	22-Mar-17	18-Apr-17	0%	-2	142																
M+ Mega Truss Site Construction																									
Site Construction of Truss 5																									
A50500	Commencement of Truss 5 Construction	0	12-Dec-16		12-Dec-16 A		100%	0																	
A50520	T5 Steel Truss Erection - Part 1 (except T5N04, T5-D21 & T5-B14) (LoE)	0	11-Jan-17	21-Mar-17	23-Dec-16 A	09-Feb-17	100%	34	244																
A50510	Commencement of Truss 5 Steel Works Erection	0	11-Jan-17		28-Dec-16 A		100%	14																	
A50525	T5 Steel Truss Concrete Encasement (LoE)	139	13-Mar-17	28-Jul-17	08-Feb-17	28-Jul-17	0%	0	39																
RC Works for CJ1 to +20.45mPD (Prior to Bottom Chord Erection)																									
A50530	Formworks T5 Bottom 350mm CJ1 (+20.45 mPD)	10	12-Dec-16	22-Dec-16	02-Dec-16 A	10-Dec-16 A	100%	10																	
A50540	Rebar Fixing T5 Bottom 350mm CJ1 (+20.45 mPD)	6	23-Dec-16	31-Dec-16	11-Dec-16 A	21-Dec-16 A	100%	7																	
A50550	Concreting CJ1	1	03-Jan-17	03-Jan-17	22-Dec-16 A	22-Dec-16 A	100%	7																	
A50560	Concrete curing CJ1	7	04-Jan-17	10-Jan-17	23-Dec-16 A	28-Dec-16 A	100%	13																	
T5 Steel Erection (incl. Modular Towers & Working Platform)																									
Temporary Supports & Modular Towers																									
MT1040	Temporary support of bottom chord	6	11-Jan-17	17-Jan-17	23-Dec-16 A	31-Dec-16 A	100%	13																	
MT1240	Installation of temporary support towers (G21 & G22)	2	11-Jan-17	12-Jan-17	23-Dec-16 A	24-Dec-16 A	100%	13																	
MT1030	Complete Truss 5 Bottom Chord Bedding (350mm RC strength reach 45MP)	0		10-Jan-17		28-Dec-16 A	100%	10																	
MT1270	Installation of temporary support towers (G20)	1	16-Jan-17	16-Jan-17	29-Dec-16 A	29-Dec-16 A	100%	14																	
MT1300	Installation of temporary support towers (G19)	2	19-Jan-17	20-Jan-17	29-Dec-16 A	30-Dec-16 A	100%	17																	
MT1330	Installation of temporary support towers (G18)	1	26-Jan-17	26-Jan-17	29-Dec-16 A	29-Dec-16 A	100%	23																	
Installation of Bottom Chords, Bracings & Top Chords																									
MT1050	Installation T5-N02	1	12-Jan-17	12-Jan-17	28-Dec-16 A	28-Dec-16 A	100%	12																	
MT1060	Installation T5-B12	1	12-Jan-17	12-Jan-17	28-Dec-16 A	28-Dec-16 A	100%	12																	
MT1070	Installation T5-B11	1	13-Jan-17	13-Jan-17	28-Dec-16 A	28-Dec-16 A	100%	13																	
MT1080	Installation T5-N01	1	13-Jan-17	13-Jan-17	28-Dec-16 A	28-Dec-16 A	100%	13																	
MT1290	Installation T5-D24	1	14-Jan-17	14-Jan-17	30-Dec-16 A	30-Dec-16 A	100%	12																	
MT1250	Installation T5-D22	1	14-Jan-17	14-Jan-17	31-Dec-16 A	31-Dec-16 A	100%	11																	
MT1260	Installation T5-D23	1	14-Jan-17	14-Jan-17	31-Dec-16 A	31-Dec-16 A	100%	11																	
MT1280	Installation T5-N05	1	17-Jan-17	17-Jan-17	31-Dec-16 A	31-Dec-16 A	100%	13																	
MT1090	Installation T5-B13	1	24-Jan-17	24-Jan-17	12-Jan-17 A	12-Jan-17 A	100%	10																	
MT1170	Installation window plate B11-B12	1	06-Feb-17	06-Feb-17	12-Jan-17 A	12-Jan-17 A	100%	18																	
MT1310	Installation T5-D26	1	24-Jan-17	24-Jan-17	12-Jan-17 A	12-Jan-17 A	100%	10																	
MT1320	Installation T5-D25	1	25-Jan-17	25-Jan-17	12-Jan-17 A	12-Jan-17 A	100%	11																	
MT1180	Installation window plate B12-N02	1	06-Feb-17	06-Feb-17	13-Jan-17 A	13-Jan-17 A	100%	17																	

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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017								
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09						
MT1340	Installation T5-N07	1	27-Jan-17	27-Jan-17	13-Jan-17 A	13-Jan-17 A	100%	12																										
MT1360	Installation T5-D27	1	02-Feb-17	02-Feb-17	13-Jan-17 A	13-Jan-17 A	100%	14																										
MT1160	Installation window plates N01-B11	1	07-Feb-17	07-Feb-17	16-Jan-17 A	16-Jan-17 A	100%	16																										
Top Chords & Bracing Windows Plates																																		
MT1670	Installation of TCB bolts and shaped plates for T5-D26	4	06-Mar-17	09-Mar-17	12-Jan-17 A	12-Jan-17 A	100%	45																										
MT1350	Installation T5-N06	1	01-Feb-17	01-Feb-17	13-Jan-17 A	13-Jan-17 A	100%	13																										
MT1370	Installation T5-B15	1	03-Feb-17	03-Feb-17	14-Jan-17 A	14-Jan-17 A	100%	14																										
MT1490	Installation window plate D25-N02	1	01-Mar-17	01-Mar-17	19-Jan-17 A	19-Jan-17 A	100%	32																										
MT1500	Installation window plate D25-N07	1	01-Mar-17	01-Mar-17	19-Jan-17 A	19-Jan-17 A	100%	32																										
MT1600	Installation window plate B15-N07	1	11-Mar-17	11-Mar-17	19-Jan-17 A	19-Jan-17 A	100%	41																										
MT1610	Installation window plate N07-N06	1	11-Mar-17	11-Mar-17	20-Jan-17 A	20-Jan-17 A	100%	40																										
MT1620	Installation window plate N06-N05	1	11-Mar-17	11-Mar-17	20-Jan-17 A	20-Jan-17 A	100%	40																										
Welding and NDT of Bottom Chords																																		
MT1100	Welding N01-B11	4	25-Jan-17	01-Feb-17	06-Jan-17 A	11-Jan-17 A	100%	15																										
MT1110	Welding B11-B12	4	25-Jan-17	01-Feb-17	06-Jan-17 A	13-Jan-17 A	100%	13																										
MT1120	Welding B12-N02	4	25-Jan-17	01-Feb-17	06-Jan-17 A	06-Jan-17 A	100%	19																										
MT1150	NDT for bottom chord (main)	14	04-Feb-17	20-Feb-17	09-Jan-17 A	15-Feb-17	0%	4	559																									
MT1130	Welding N02-B13	4	07-Feb-17	10-Feb-17	20-Jan-17 A	23-Jan-17 A	100%	13																										
MT1140	Welding B13-N03	4	07-Feb-17	10-Feb-17	20-Jan-17 A	23-Jan-17 A	100%	13																										
Welding and NDT of Bottom Chords Window plates																																		
MT1200	Welding of window plates B11-B12	8	07-Feb-17	15-Feb-17	13-Jan-17 A	03-Feb-17	70%	10	588																									
MT1210	Welding of window plates B12-N02	8	11-Feb-17	20-Feb-17	14-Jan-17 A	03-Feb-17	70%	14	588																									
MT1190	Welding of window plates N01-B11	8	11-Feb-17	20-Feb-17	01-Feb-17	09-Feb-17	0%	9	583																									
MT1220	NDT for bottom chord (window plate)	5	15-Feb-17	20-Feb-17	04-Feb-17	09-Feb-17	0%	9	583																									
MT1230	Survey check for bottom chord	1	17-Feb-17	17-Feb-17	07-Feb-17	07-Feb-17	0%	9	585																									
Welding and NDT of Main Bracings																																		
MT1380	Welding D24-N02	4	02-Feb-17	06-Feb-17	11-Jan-17 A	11-Jan-17 A	100%	20																										
MT1410	Welding D22-N01	4	02-Feb-17	06-Feb-17	24-Jan-17 A	02-Feb-17	0%	3	570																									
MT1390	Welding D23-N05	4	02-Feb-17	06-Feb-17	01-Feb-17	04-Feb-17	0%	1	558																									
MT1400	Welding D23-N02	4	02-Feb-17	06-Feb-17	01-Feb-17	04-Feb-17	0%	1	587																									
MT1480	NDT for bracing (main)	26	09-Feb-17	10-Mar-17	06-Feb-17	07-Mar-17	0%	3	558																									
MT1420	Welding D22-N05	5	21-Feb-17	24-Feb-17	16-Feb-17	21-Feb-17	0%	3	559																									
MT1430	Welding D25-N02	5	21-Feb-17	24-Feb-17	16-Feb-17	21-Feb-17	0%	3	559																									
MT1440	Welding D25-N07	4	21-Feb-17	24-Feb-17	16-Feb-17	20-Feb-17	0%	4	559																									
MT1450	Welding D23-N05	4	21-Feb-17	24-Feb-17	16-Feb-17	20-Feb-17	0%	4	559																									
MT1590	NDT for bracing (top chord)	13	04-Mar-17	18-Mar-17	20-Feb-17	06-Mar-17	0%	11	559																									
MT1460	Welding D26-N07	4	25-Feb-17	01-Mar-17	21-Feb-17	24-Feb-17	0%	4	559																									
MT1470	Welding D26-N03	4	25-Feb-17	01-Mar-17	21-Feb-17	24-Feb-17	0%	4	559																									
MT1540	Welding D27-N03	4	25-Feb-17	01-Mar-17	21-Feb-17	24-Feb-17	0%	4	559																									
MT1550	Welding D27-B15	4	02-Mar-17	06-Mar-17	25-Feb-17	01-Mar-17	0%	4	559																									
MT1560	Welding N07-B15	4	02-Mar-17	06-Mar-17	25-Feb-17	01-Mar-17	0%	4	559																									
MT1570	Welding N07-N06	4	07-Mar-17	10-Mar-17	02-Mar-17	06-Mar-17	0%	4	559																									
MT1580	Welding N06-N05	4	07-Mar-17	10-Mar-17	02-Mar-17	06-Mar-17	0%	4	559																									
Welding and NDT for cover and shaped plates																																		
MT1680	Welding of TCB bolts and shaped plates for T5-D26	4	06-Mar-17	09-Mar-17	01-Feb-17	04-Feb-17	0%	28	120																									

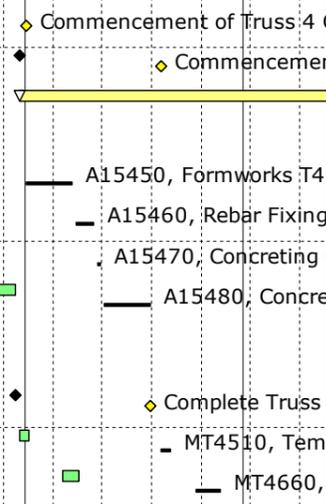
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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017		April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19
A40580	Formworks CJ2 @GL M-K	1	06-Apr-17	06-Apr-17	22-Mar-17	22-Mar-17	0%	12	47																
A40610	Rebar Fixing CJ2 @GL K-H	9	06-Apr-17	19-Apr-17	22-Mar-17	31-Mar-17	0%	12	33																
A40590	Concreting CJ2 @GL M-K	1	07-Apr-17	07-Apr-17	23-Mar-17	23-Mar-17	0%	12	47																
A40600	Concrete Curing CJ2 @GL M-K	7	08-Apr-17	14-Apr-17	24-Mar-17	30-Mar-17	0%	15	62																
Site Construction of Truss 2																									
A46560	Commencement of Truss 2 Construction	0	22-Jan-17		12-Jan-17 A		100%	10																	
A46660	Commencement of Truss 2 Steel Works Erection	0	22-Feb-17		16-Feb-17		0%	6	709																
A46665	T2 Steel Truss Erection (LoE)	69	22-Feb-17	19-May-17	16-Feb-17	13-May-17	0%	5	188																
RC Works for CJ1 to +20.45mPD (Prior to Bottom Chord Erection)																									
A46810	Formworks T1 Bottom 750mm CJ1 (+20.45 mPD)	8	23-Jan-17	03-Feb-17	12-Jan-17 A	19-Jan-17 A	100%	10																	
A46890	Rebar Fixing T1 Bottom 750mm CJ1 (+20.45 mPD)	8	04-Feb-17	13-Feb-17	19-Jan-17 A	07-Feb-17	0%	5	19																
A46990	Concreting CJ1	1	14-Feb-17	14-Feb-17	08-Feb-17	08-Feb-17	0%	5	19																
A47000	Concrete curing CJ1	7	15-Feb-17	21-Feb-17	09-Feb-17	15-Feb-17	0%	6	22																
T2 Steel Erection (incl. Modular Towers & Working Platform)																									
Temporary Supports & Modular Towers																									
MT2650	Complete Truss 2 Bottom 750mm Bedding (RC strength reach 45MPa)	0		21-Feb-17		15-Feb-17	0%	5	19																
MT2660	Temporary support of bottom chord	6	22-Feb-17	28-Feb-17	16-Feb-17	22-Feb-17	0%	5	19																
MT2670	Installation of temporary support towers 6&7	2	23-Feb-17	24-Feb-17	17-Feb-17	18-Feb-17	0%	5	19																
MT2680	Installation of temporary support towers 4&5	2	25-Feb-17	27-Feb-17	20-Feb-17	21-Feb-17	0%	5	19																
MT2910	Installation of hanger platform 6&7	1	08-Mar-17	08-Mar-17	02-Mar-17	02-Mar-17	0%	5	565																
MT2890	Installation of temporary support towers 3	1	20-Mar-17	20-Mar-17	14-Mar-17	14-Mar-17	0%	5	553																
MT2900	Installation of temporary support towers 2	1	22-Mar-17	22-Mar-17	16-Mar-17	16-Mar-17	0%	5	553																
Installation of Bottom Chords, Bracings & Top Chords																									
MT2690	Installation T2-B13	1	28-Feb-17	28-Feb-17	22-Feb-17	22-Feb-17	0%	5	19																
MT2700	Installation T2-N03	1	28-Feb-17	28-Feb-17	22-Feb-17	22-Feb-17	0%	5	19																
MT2710	Installation T2-B12	1	01-Mar-17	01-Mar-17	23-Feb-17	23-Feb-17	0%	5	19																
MT2720	Installation T2-N02	1	01-Mar-17	01-Mar-17	23-Feb-17	23-Feb-17	0%	5	19																
MT2920	Installation T2-N08	1	09-Mar-17	09-Mar-17	03-Mar-17	03-Mar-17	0%	5	19																
MT2930	Installation T2-D25	1	09-Mar-17	09-Mar-17	03-Mar-17	03-Mar-17	0%	5	19																
MT2940	Installation T2-D24	1	10-Mar-17	10-Mar-17	04-Mar-17	04-Mar-17	0%	5	188																
MT2780	Installation window plate T2-B12-1	1	13-Mar-17	13-Mar-17	07-Mar-17	07-Mar-17	0%	5	541																
MT2790	Installation window plate T2-B12-4	1	13-Mar-17	13-Mar-17	07-Mar-17	07-Mar-17	0%	5	541																
MT2800	Installation window plate T2-B12-5	1	13-Mar-17	13-Mar-17	07-Mar-17	07-Mar-17	0%	5	561																
MT2840	Installation T2-B11	1	14-Mar-17	14-Mar-17	08-Mar-17	08-Mar-17	0%	5	553																
Top Chords & Bracing Windows Plates																									
MT3140	Installation T2-D25-1A(O)	1	20-Mar-17	20-Mar-17	14-Mar-17	14-Mar-17	0%	5	19																
MT3150	Installation T2-D24-1C(I)	1	25-Mar-17	25-Mar-17	20-Mar-17	20-Mar-17	0%	5	189																
MT3230	Installation of cover plate for T2-D25	3	05-Apr-17	07-Apr-17	29-Mar-17	31-Mar-17	0%	5	19																
Welding and NDT for Bottom chords																									
MT2730	Welding N04-B13	4	02-Mar-17	06-Mar-17	24-Feb-17	28-Feb-17	0%	5	19																
MT2740	Welding B13-N03	4	02-Mar-17	06-Mar-17	24-Feb-17	28-Feb-17	0%	5	19																
MT2750	Welding N03-B12	5	02-Mar-17	07-Mar-17	24-Feb-17	01-Mar-17	0%	5	19																
MT2760	Welding B12-N02	4	02-Mar-17	06-Mar-17	24-Feb-17	28-Feb-17	0%	5	566																
MT2770	NDT for bottom chord (main)	1	09-Mar-17	09-Mar-17	03-Mar-17	03-Mar-17	0%	5	19																
Welding and NDT for Bottom chords window plates																									



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										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26
MT3670	Installation window plate B12-N03	1	21-Apr-17	21-Apr-17	23-Mar-17	23-Mar-17	0%	21	25																	
MT3680	Installation window plates N02-B12	1	22-Apr-17	22-Apr-17	24-Mar-17	24-Mar-17	0%	21	25																	
MT3800	Installation T3-D26	1	22-Apr-17	22-Apr-17	24-Mar-17	24-Mar-17	0%	21	21																	
MT3810	Installation T3-D25	1	24-Apr-17	24-Apr-17	25-Mar-17	25-Mar-17	0%	21	23																	
MT3830	Installation T3-N07	1	26-Apr-17	26-Apr-17	28-Mar-17	28-Mar-17	0%	21	23																	
MT3840	Installation T3-B18	1	28-Apr-17	28-Apr-17	30-Mar-17	30-Mar-17	0%	21	23																	
Top Chords & Bracing Windows Plates																										
MT4180	Installation window plate D27-N04	1	27-Apr-17	27-Apr-17	29-Mar-17	29-Mar-17	0%	21	24																	
MT4190	Installation window plate D27-N08	1	28-Apr-17	28-Apr-17	30-Mar-17	30-Mar-17	0%	21	52																	
Welding and NDT of bottom Chords																										
MT3560	Welding B12-N03	5	05-Apr-17	10-Apr-17	10-Mar-17	15-Mar-17	0%	21	31																	
MT3570	Welding N03-B13	5	05-Apr-17	10-Apr-17	10-Mar-17	15-Mar-17	0%	21	30																	
MT3580	Welding B13-B14	5	05-Apr-17	10-Apr-17	10-Mar-17	15-Mar-17	0%	21	29																	
MT3590	Welding B14-N04	5	05-Apr-17	10-Apr-17	10-Mar-17	15-Mar-17	0%	21	25																	
MT3600	Welding N02-B12	4	10-Apr-17	13-Apr-17	15-Mar-17	18-Mar-17	0%	21	29																	
MT3610	Welding N01-B11	4	11-Apr-17	18-Apr-17	16-Mar-17	20-Mar-17	0%	21	36																	
MT3620	Welding B11-N02	4	11-Apr-17	18-Apr-17	16-Mar-17	20-Mar-17	0%	21	36																	
MT3630	NDT for bottom chord (main)	5	13-Apr-17	21-Apr-17	18-Mar-17	23-Mar-17	0%	21	36																	
Welding and NDT of window plates																										
MT3690	Welding of window plates B14-N04	8	19-Apr-17	27-Apr-17	21-Mar-17	29-Mar-17	0%	21	27																	
MT3700	Welding of window plates B13-B14	8	20-Apr-17	28-Apr-17	22-Mar-17	30-Mar-17	0%	21	29																	
MT3710	Welding of window plates N03-B13	8	21-Apr-17	29-Apr-17	23-Mar-17	31-Mar-17	0%	21	28																	
MT3720	Welding of window plates B12-N03	8	22-Apr-17	02-May-17	24-Mar-17	01-Apr-17	0%	21	27																	
MT3730	Welding of window plates N02-B12	8	24-Apr-17	04-May-17	25-Mar-17	03-Apr-17	0%	21	25																	
Welding and NDT of Main Bracings																										
MT3950	Welding N08-N09	4	13-Apr-17	20-Apr-17	18-Mar-17	22-Mar-17	0%	21	23																	
MT3960	Welding D27-N08	5	18-Apr-17	22-Apr-17	20-Mar-17	24-Mar-17	0%	21	23																	
MT3970	Welding D27-N04	4	18-Apr-17	21-Apr-17	20-Mar-17	23-Mar-17	0%	21	24																	
MT4170	NDT for bracing (main)	31	22-Apr-17	31-May-17	24-Mar-17	05-May-17	0%	21	24																	
Welding and NDT of top Chords																										
MT4270	Welding window plates D27-N04	8	28-Apr-17	09-May-17	30-Mar-17	08-Apr-17	0%	21	24																	
Site Construction of Truss 4																										
A15430	Commencement of Truss 4 Construction	0	01-Mar-17		09-Feb-17		0%	20	20																	
A15440	Commencement of Truss 4 Steel Works Erection	0	20-Mar-17		28-Feb-17		0%	20	697																	
A15490	T4 Steel Truss Erection (LoE)	65	20-Mar-17	10-Jun-17	28-Feb-17	20-May-17	0%	17	19																	
RC Works for CJ1 to +20.45mPD (Prior to Bottom Chord Erection)																										
A15450	Formworks T4 Bottom 450mm CJ1 (+20.45 mPD)	6	01-Mar-17	07-Mar-17	09-Feb-17	15-Feb-17	0%	17	17																	
A15460	Rebar Fixing T4 Bottom 450mm CJ1 (+20.45 mPD)	3	08-Mar-17	10-Mar-17	16-Feb-17	18-Feb-17	0%	17	17																	
A15470	Concreting CJ1	1	11-Mar-17	11-Mar-17	20-Feb-17	20-Feb-17	0%	17	17																	
A15480	Concrete curing CJ1	7	12-Mar-17	18-Mar-17	21-Feb-17	27-Feb-17	0%	19	19																	
T4 Steel Erection (incl. Modular Towers & Working Platform)																										
Temporary Supports & Modular Towers																										
MT4500	Complete Truss 4 Bottom 450mm Bedding (RC strength reach 45MPa)	0		18-Mar-17		27-Feb-17	0%	17	17																	
MT4510	Temporary support of bottom chord	2	20-Mar-17	21-Mar-17	28-Feb-17	01-Mar-17	0%	17	17																	
MT4660	Installation of temporary support towers	3	25-Mar-17	28-Mar-17	06-Mar-17	08-Mar-17	0%	17	32																	



(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017				
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09		
A51460	4th Shopdrawing Submission	46	02-Nov-16	17-Dec-16	02-Nov-16 A	28-Jan-17	0%	-42	671	A51460, 4th Shopdrawing Submission, 4th Shopdrawing Submission																				
A51470	4th Shopdrawing Submission - Review & Approval	21	18-Dec-16	07-Jan-17	29-Jan-17	18-Feb-17	0%	-42	671	A51470, 4th Shopdrawing Submission - Review & Approval																				
A51480	5th Shopdrawing Submission	14	08-Jan-17	21-Jan-17	19-Feb-17	04-Mar-17	0%	-42	671	A51480, 5th Shopdrawing Submission																				
A51490	5th Shopdrawing Submission - Review & Approval	21	22-Jan-17	11-Feb-17	05-Mar-17	25-Mar-17	0%	-42	671	A51490, 5th Shopdrawing Submission - Review & Approval																				
SHOP DRAWING SUBMISSIONS FACADE SYSTEM & EMBEDS																														
SHOP DRAWING - Tower Facade Panel																														
A51230	Concept - 3rd Shopdrawing Submission - Review & Approval	14	17-Dec-16	30-Dec-16	28-Jan-17	10-Feb-17	0%	-42	355	A51230, Concept - 3rd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Podium Facade Panel																														
A51250	Concept - 2nd Shopdrawing Submission - Review & Approval	14	17-Dec-16	30-Dec-16	28-Jan-17	10-Feb-17	0%	-42	714	A51250, Concept - 2nd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Glass Wall with T Mullion																														
A51270	Concept - 2nd Shopdrawing Submission (Embed)	40	21-Nov-16	30-Dec-16	21-Nov-16 A	10-Feb-17	100%	-42	334	A51270, Concept - 2nd Shopdrawing Submission (Embed)																				
A51280	Concept - 2nd Shopdrawing Submission - Review & Approval	21	31-Dec-16	20-Jan-17	11-Feb-17	03-Mar-17	0%	-42	334	A51280, Concept - 2nd Shopdrawing Submission - Review & Approval																				
SHOP DWG - Glass Wall with Ceramic/Precast Concrete Mullion,Ceramic Concrete Tube & Perforated Clada																														
A51300	Concept - 1st Shopdrawing Submission (Embed)	24	07-Dec-16	30-Dec-16	07-Dec-16 A	10-Feb-17	0%	-42	334	A51300, Concept - 1st Shopdrawing Submission (Embed)																				
A51310	Concept - 1st Shopdrawing Submission - Review & Approval	21	31-Dec-16	20-Jan-17	11-Feb-17	03-Mar-17	0%	-42	334	A51310, Concept - 1st Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Strip Glazing at Skylight Gallery																														
A51320	Concept - 2nd Shopdrawing Submission	76	05-Oct-16	19-Dec-16	05-Oct-16 A	30-Jan-17	0%	-42	345	A51320, Concept - 2nd Shopdrawing Submission																				
A51330	Concept - 2nd Shopdrawing Submission - Review & Approval	21	20-Dec-16	09-Jan-17	31-Jan-17	20-Feb-17	0%	-42	345	A51330, Concept - 2nd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Plaza Skylight at L3																														
A51340	Concept - 2nd Shopdrawing Submission	83	28-Sep-16	19-Dec-16	28-Sep-16 A	30-Jan-17	0%	-42	345	A51340, Concept - 2nd Shopdrawing Submission																				
A51350	Concept - 2nd Shopdrawing Submission - Review & Approval	21	20-Dec-16	09-Jan-17	31-Jan-17	20-Feb-17	0%	-42	345	A51350, Concept - 2nd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - L3 Storefront																														
A51360	Concept - 3rd Shopdrawing Submission	40	08-Nov-16	17-Dec-16	08-Nov-16 A	28-Jan-17	0%	-42	347	A51360, Concept - 3rd Shopdrawing Submission																				
A51370	Concept - 3rd Shopdrawing Submission - Review & Approval	21	18-Dec-16	07-Jan-17	29-Jan-17	18-Feb-17	0%	-42	347	A51370, Concept - 3rd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Garden Gallery Ceramic Cladding																														
A51380	Concept - 2nd Shopdrawing Submission	79	05-Oct-16	22-Dec-16	05-Oct-16 A	02-Feb-17	0%	-42	342	A51380, Concept - 2nd Shopdrawing Submission																				
A51390	Concept - 2nd Shopdrawing Submission - Review & Approval	21	23-Dec-16	12-Jan-17	03-Feb-17	23-Feb-17	0%	-42	342	A51390, Concept - 2nd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Metal Cladding FAC-LV-01a/FAC-LV-01b (Additional Scope)																														
A51400	Concept - 1st Shopdrawing Submission	32	17-Dec-16	17-Jan-17	28-Jan-17	28-Feb-17	0%	-42	281	A51400, Concept - 1st Shopdrawing Submission																				
A51410	Concept - 1st Shopdrawing Submission - Review & Approval	21	18-Jan-17	07-Feb-17	01-Mar-17	21-Mar-17	0%	-42	281	A51410, Concept - 1st Shopdrawing Submission - Review & Approval																				
A51420	Concept - 2nd Shopdrawing Submission	14	08-Feb-17	21-Feb-17	22-Mar-17	04-Apr-17	0%	-42	281	A51420, Concept - 2nd Shopdrawing Submission																				
SHOP DRAWING - Tower Facade Lighting																														
A51450	Concept - 3rd Shopdrawing Submission - Review & Approval	31	30-Nov-16	30-Dec-16	30-Nov-16 A	10-Feb-17	0%	-42	355	A51450, Concept - 3rd Shopdrawing Submission - Review & Approval																				
SHOP DRAWING - Tower Facade Lighting, Electrical Works																														
A39330	Concept - 1st Shopdrawing Submission - Review & Approval	49	12-Nov-16	30-Dec-16	12-Nov-16 A	10-Feb-17	0%	-42	714	A39330, Concept - 1st Shopdrawing Submission - Review & Approval																				
BD SUBMISSIONS FACADE SYSTEM & EMBEDS																														
BD Submission - L3 Storefront																														
A51520	2nd Submission	28	26-Nov-16	23-Dec-16	26-Nov-16 A	03-Feb-17	0%	-42	348	A51520, 2nd Submission, 2nd Submission																				
A51530	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	24-Dec-16	06-Jan-17	04-Feb-17	17-Feb-17	0%	-42	348	A51530, 2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)																				
A51540	L3 Storefront Embeds - Submission to BD	0		09-Jan-17		20-Feb-17	0%	-33	282	L3 Storefront Embeds - Submission to BD																				
A51550	L3 Storefront Embeds - BD Approval	60	10-Jan-17	10-Mar-17	21-Feb-17	21-Apr-17	0%	-42	345	A51550, L3 Storefront Embeds - BD Approval																				
BD Submission - Tower Precast Facade Embed & Shopdrawings																														
A51590	2nd Submission	7	17-Dec-16	23-Dec-16	28-Jan-17	03-Feb-17	0%	-42	348	A51590, 2nd Submission																				
A51600	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	24-Dec-16	06-Jan-17	04-Feb-17	17-Feb-17	0%	-42	348	A51600, 2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)																				
BD Submission - Podium Precast Facade Embed & Shopdrawings																														
A51660	2nd Submission	7	17-Dec-16	23-Dec-16	28-Jan-17	03-Feb-17	0%	-42	348	A51660, 2nd Submission																				
A51670	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	24-Dec-16	06-Jan-17	04-Feb-17	17-Feb-17	0%	-42	348	A51670, 2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)																				

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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017			
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09	
A51680	Podium Precast Facade Embeds - Submission to BD	0		06-Jan-17		17-Feb-17	0%	-33	284																				
A51690	Podium Precast Facade Embeds - BD Approval	60	07-Jan-17	07-Mar-17	18-Feb-17	18-Apr-17	0%	-42	348																				
BD Submission - Garden Gallery Ceramic Cladding																													
A51750	2nd Submission	7	17-Dec-16	23-Dec-16	28-Jan-17	03-Feb-17	0%	-42	348																				
A51760	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	24-Dec-16	06-Jan-17	04-Feb-17	17-Feb-17	0%	-42	348																				
A51770	Garden Gallery Ceramic - Submission to BD	0		12-Jan-17		23-Feb-17	0%	-33	279																				
A51780	Garden Gallery Ceramic - BD Approval	60	13-Jan-17	13-Mar-17	24-Feb-17	24-Apr-17	0%	-42	342																				
BD Submission - Glass Wall with T Mullion																													
A51800	1st Submission	6	17-Dec-16	22-Dec-16	28-Jan-17	02-Feb-17	0%	-42	328																				
A51810	1st Submission - Review & Approval by MJV	14	23-Dec-16	05-Jan-17	03-Feb-17	16-Feb-17	0%	-42	328																				
A51820	2nd Submission	7	06-Jan-17	12-Jan-17	17-Feb-17	23-Feb-17	0%	-42	328																				
A51830	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	13-Jan-17	26-Jan-17	24-Feb-17	09-Mar-17	0%	-42	328																				
A51850	Glass Wall with T Mullion - Submission to BD	0		26-Jan-17		09-Mar-17	0%	-33	267																				
A51860	Glass Wall with T Mullion - BD Approval	60	27-Jan-17	27-Mar-17	10-Mar-17	08-May-17	0%	-42	328																				
BD Submission - Strip Glazing at Skylight Gallery & Plaza Skylight at L3																													
A51900	2nd Submission	7	17-Dec-16	23-Dec-16	28-Jan-17	03-Feb-17	0%	-42	348																				
A51910	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	24-Dec-16	06-Jan-17	04-Feb-17	17-Feb-17	0%	-42	348																				
A51920	Strip Glazing at Skylight Gallery & Plaza Skylight - Submission to BD	0		09-Jan-17		20-Feb-17	0%	-33	282																				
A51930	Strip Glazing at Skylight Gallery & Plaza Skylight - BD Approval	60	10-Jan-17	10-Mar-17	21-Feb-17	21-Apr-17	0%	-42	345																				
BD Submission - Glass Wall with Ceramic/Precast Concrete Mullion, Concrete Tube & Perforated Claddin																													
A51960	1st Submission	12	17-Dec-16	28-Dec-16	28-Jan-17	08-Feb-17	0%	-42	322																				
A51970	1st Submission - Review & Approval by MJV	14	29-Dec-16	11-Jan-17	09-Feb-17	22-Feb-17	0%	-42	322																				
A51980	2nd Submission	7	12-Jan-17	18-Jan-17	23-Feb-17	01-Mar-17	0%	-42	322																				
A51990	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	19-Jan-17	01-Feb-17	02-Mar-17	15-Mar-17	0%	-42	322																				
A52000	Glass Wall with Ceramic & Precast Concrete Mullion - Submission to BD	0		01-Feb-17		15-Mar-17	0%	-36	262																				
A52010	Glass Wall with Ceramic & Precast Concrete Mullion - BD Approval	60	02-Feb-17	02-Apr-17	16-Mar-17	14-May-17	0%	-42	322																				
BD Submission - Metal Cladding FAC-LV-01a/FAC-LV-01b (North Perimeter Rd)																													
A52040	1st Submission	40	17-Dec-16	25-Jan-17	28-Jan-17	08-Mar-17	0%	-42	294																				
A52050	1st Submission - Review & Approval by MJV	14	26-Jan-17	08-Feb-17	09-Mar-17	22-Mar-17	0%	-42	294																				
A52070	2nd Submission	7	09-Feb-17	15-Feb-17	23-Mar-17	29-Mar-17	0%	-42	294																				
A52080	2nd Submission - Review & Approval by MJV (w/ RSE Endorsement)	14	16-Feb-17	01-Mar-17	30-Mar-17	12-Apr-17	0%	-42	294																				
SHOPDRAWING SUBMISSIONS - FACADE DOORS																													
Facade Doors Package #1 - Glazed door between Ceramic Concrete Mullion - Total No. of Doors = 53																													
A52120	1st Shopdrawing Submission	67	17-Dec-16	21-Feb-17	28-Jan-17*	04-Apr-17	0%	-42	605																				
Facade Doors Package #2 - Sliding door at L3 Storefront - Total No. of Doors = 4																													
A52170	1st Shopdrawing Submission	67	17-Dec-16	21-Feb-17	28-Jan-17*	04-Apr-17	0%	-42	605																				
Facade Doors Package #3 - Swing Door at L3 Cafe- Total No. of Doors = 1																													
A52210	1st Shopdrawing Submission	74	17-Dec-16	28-Feb-17	28-Jan-17*	11-Apr-17	0%	-42	598																				
Facade Doors Package #4 - Swing Door mounted in GW with T Mullion - Total No. of Doors = 29																													
A52260	1st Shopdrawing Submission	74	17-Dec-16	28-Feb-17	28-Jan-17*	11-Apr-17	0%	-42	598																				
Facade Doors Package #5 - Large double door at B1 Transformer Room - Total No. of Doors = 1																													
A52300	1st Shopdrawing Submission	81	17-Dec-16	07-Mar-17	28-Jan-17*	18-Apr-17	0%	-42	591																				
Facade Doors Package #6 - B1 Exit Door - Total No. of Doors = 7 (7 x Manual)																													
A52350	1st Shopdrawing Submission	81	17-Dec-16	07-Mar-17	28-Jan-17*	18-Apr-17	0%	-42	591																				
Facade Doors Package #7 - Garden Gallery Door - Total No. of Doors = 2 (2 x Manual)																													
A52390	1st Shopdrawing Submission	88	17-Dec-16	14-Mar-17	28-Jan-17*	25-Apr-17	0%	-42	584																				

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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017		April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19
Facade Doors Package #8 - Doors located in Metal Cladding - Total No.of Doors =20 (20 x Manual)																									
A52440	1st Shopdrawing Submission	88	17-Dec-16	14-Mar-17	28-Jan-17*	25-Apr-17	0%	-42	584	[Gantt bar: 28-Jan-17 to 25-Apr-17]															
Facade Doors Package #9 - GF Lobby Access Door in Ceramic Tube - Total No.of Doors = 8																									
A52480	1st Shopdrawing Submission	88	17-Dec-16	14-Mar-17	28-Jan-17*	25-Apr-17	0%	-42	584	[Gantt bar: 28-Jan-17 to 25-Apr-17]															
Facade Doors Package #10 - B1 Carriageway Access Panel & Doors - Total No. of Doors = 24																									
A52530	1st Shopdrawing Submission	95	17-Dec-16	21-Mar-17	28-Jan-17*	02-May-17	0%	-42	577	[Gantt bar: 28-Jan-17 to 02-May-17]															
Facade Doors Package #12 - B1 Smoke Vent Panel - Total No. of Doors = 1																									
A52580	1st Shopdrawing Submission	96	17-Dec-16	22-Mar-17	28-Jan-17*	03-May-17	0%	-42	576	[Gantt bar: 28-Jan-17 to 03-May-17]															
PERFORMANCE TEST - SHOPDRAWING SUBMISSION, FABRICATION, INSTALLATION & TEST																									
PMU SHOPDRAWING SUBMISSION & TEST - Tower Facade Precast Panel																									
A52620	Perf MU - 2nd Shopdrawing Submission	14	05-Dec-16	18-Dec-16	05-Dec-16 A	29-Jan-17	0%	-42	726	[Gantt bar: 05-Dec-16 to 29-Jan-17]															
A52630	Perf MU - 2nd Shopdrawing Submission - Review & Approval	21	07-Dec-16	27-Dec-16	07-Dec-16 A	07-Feb-17	0%	-42	316	[Gantt bar: 07-Dec-16 to 07-Feb-17]															
A54620	Perf MU - Precast Concrete Facade Ordering & Production	173	07-Dec-16	28-May-17	07-Dec-16 A	09-Jul-17	0%	-42	199	[Gantt bar: 07-Dec-16 to 09-Jul-17]															
A52650	Perf MU - 3rd Shopdrawing Submission	14	28-Dec-16	10-Jan-17	08-Feb-17	21-Feb-17	0%	-42	316	[Gantt bar: 08-Feb-17 to 21-Feb-17]															
A52660	Perf MU - 3rd Shopdrawing Submission - Review & Approval	21	11-Jan-17	31-Jan-17	22-Feb-17	14-Mar-17	0%	-42	316	[Gantt bar: 22-Feb-17 to 14-Mar-17]															
PMU SHOPDRAWING SUBMISSION & TEST - Podium Facade Precast Panel																									
A52670	Perf MU - 1st Shopdrawing Submission	4	02-Dec-16	05-Dec-16	02-Dec-16 A	05-Dec-16 A	100%	0		[Gantt bar: 02-Dec-16 to 05-Dec-16]															
A52680	Perf MU - 1st Shopdrawing Submission - Review & Approval	22	06-Dec-16	27-Dec-16	06-Dec-16 A	07-Feb-17	0%	-42	372	[Gantt bar: 06-Dec-16 to 07-Feb-17]															
A54650	Perf MU - Podium Facade Precast Concrete + Curtain Wall Ordering & Produ	187	17-Dec-16	21-Jun-17	28-Jan-17	02-Aug-17	0%	-42	231	[Gantt bar: 28-Jan-17 to 02-Aug-17]															
A52690	Perf MU - 2nd Shopdrawing Submission	14	28-Dec-16	10-Jan-17	08-Feb-17	21-Feb-17	0%	-42	372	[Gantt bar: 08-Feb-17 to 21-Feb-17]															
A52700	Perf MU - 2nd Shopdrawing Submission - Review & Approval	21	11-Jan-17	31-Jan-17	22-Feb-17	14-Mar-17	0%	-42	372	[Gantt bar: 22-Feb-17 to 14-Mar-17]															
PMU SHOPDRAWING SUBMISSION & TEST - Kinked Glass with T Mullion																									
A52710	Perf MU - 1st Shopdrawing Submission	33	17-Dec-16	18-Jan-17	28-Jan-17*	01-Mar-17	0%	-42	332	[Gantt bar: 28-Jan-17 to 01-Mar-17]															
A52720	Perf MU - 1st Shopdrawing Submission - Review & Approval	21	19-Jan-17	08-Feb-17	02-Mar-17	22-Mar-17	0%	-42	399	[Gantt bar: 02-Mar-17 to 22-Mar-17]															
A54700	Perf MU - GW with T Mullion + Reflective Glass Ordering & Production	123	19-Jan-17	21-May-17	02-Mar-17	02-Jul-17	0%	-42	332	[Gantt bar: 02-Mar-17 to 02-Jul-17]															
A52730	Perf MU - 2nd Shopdrawing Submission	14	09-Feb-17	22-Feb-17	23-Mar-17	05-Apr-17	0%	-42	399	[Gantt bar: 23-Mar-17 to 05-Apr-17]															
PMU SHOPDRAWING SUBMISSION & TEST - Glass Wall with Ceramic Mullions at GF																									
A52750	Perf MU - 1st Shopdrawing Submission	33	17-Dec-16	18-Jan-17	28-Jan-17*	01-Mar-17	0%	-42	320	[Gantt bar: 28-Jan-17 to 01-Mar-17]															
A52760	Perf MU - 1st Shopdrawing Submission - Review & Approval	21	19-Jan-17	08-Feb-17	02-Mar-17	22-Mar-17	0%	-42	320	[Gantt bar: 02-Mar-17 to 22-Mar-17]															
A52770	Perf MU - 2nd Shopdrawing Submission	14	09-Feb-17	22-Feb-17	23-Mar-17	05-Apr-17	0%	-42	482	[Gantt bar: 23-Mar-17 to 05-Apr-17]															
A54740	Perf MU - GW with Ceramic Mullion G/F Production & Fabrication	197	09-Feb-17	24-Aug-17	23-Mar-17	05-Oct-17	0%	-42	320	[Gantt bar: 23-Mar-17 to 05-Oct-17]															
PMU SHOPDRAWING SUBMISSION & TEST - Vertical Glass Wall at Skylight Gallery																									
A52790	Perf MU - 1st Shopdrawing Submission	12	17-Dec-16	28-Dec-16	28-Jan-17*	08-Feb-17	0%	-42	503	[Gantt bar: 28-Jan-17 to 08-Feb-17]															
A52800	Perf MU - 1st Shopdrawing Submission - Review & Approval	21	29-Dec-16	18-Jan-17	09-Feb-17	01-Mar-17	0%	-42	503	[Gantt bar: 09-Feb-17 to 01-Mar-17]															
A52810	Perf MU - 2nd Shopdrawing Submission	14	19-Jan-17	01-Feb-17	02-Mar-17	15-Mar-17	0%	-42	602	[Gantt bar: 02-Mar-17 to 15-Mar-17]															
A54820	Perf MU - Vertical Glass Wall Skylight Gallery Production & Fabrication	134	19-Jan-17	01-Jun-17	02-Mar-17	13-Jul-17	0%	-42	503	[Gantt bar: 02-Mar-17 to 13-Jul-17]															
A52820	Perf MU - 2nd Shopdrawing Submission - Review & Approval	21	02-Feb-17	22-Feb-17	16-Mar-17	05-Apr-17	0%	-42	602	[Gantt bar: 16-Mar-17 to 05-Apr-17]															
PMU SHOPDRAWING SUBMISSION & TEST - Plaza Skylight 3/F Terrace																									
A52830	Perf MU - 1st Shopdrawing Submission	12	17-Dec-16	28-Dec-16	28-Jan-17*	08-Feb-17	0%	-42	527	[Gantt bar: 28-Jan-17 to 08-Feb-17]															
A52840	Perf MU - 1st Shopdrawing Submission - Review & Approval	21	29-Dec-16	18-Jan-17	09-Feb-17	01-Mar-17	0%	-42	527	[Gantt bar: 09-Feb-17 to 01-Mar-17]															
A52850	Perf MU - 2nd Shopdrawing Submission	14	19-Jan-17	01-Feb-17	02-Mar-17	15-Mar-17	0%	-42	609	[Gantt bar: 02-Mar-17 to 15-Mar-17]															
A54780	Perf MU - Plaza Skylight 3/F Terrace Production & Fabrication	117	19-Jan-17	15-May-17	02-Mar-17	26-Jun-17	0%	-42	527	[Gantt bar: 02-Mar-17 to 26-Jun-17]															
A52860	Perf MU - 2nd Shopdrawing Submission - Review & Approval	21	02-Feb-17	22-Feb-17	16-Mar-17	05-Apr-17	0%	-42	609	[Gantt bar: 16-Mar-17 to 05-Apr-17]															
PMU SHOPDRAWING SUBMISSION & TEST - Acoustic Mock up																									
A52870	Perf MU - 2nd Shopdrawing Submission	12	17-Dec-16	28-Dec-16	28-Jan-17*	08-Feb-17	0%	-42	660	[Gantt bar: 28-Jan-17 to 08-Feb-17]															
A52880	Perf MU - 2nd Shopdrawing Submission - Review & Approval	21	29-Dec-16	18-Jan-17	09-Feb-17	01-Mar-17	0%	-42	660	[Gantt bar: 09-Feb-17 to 01-Mar-17]															

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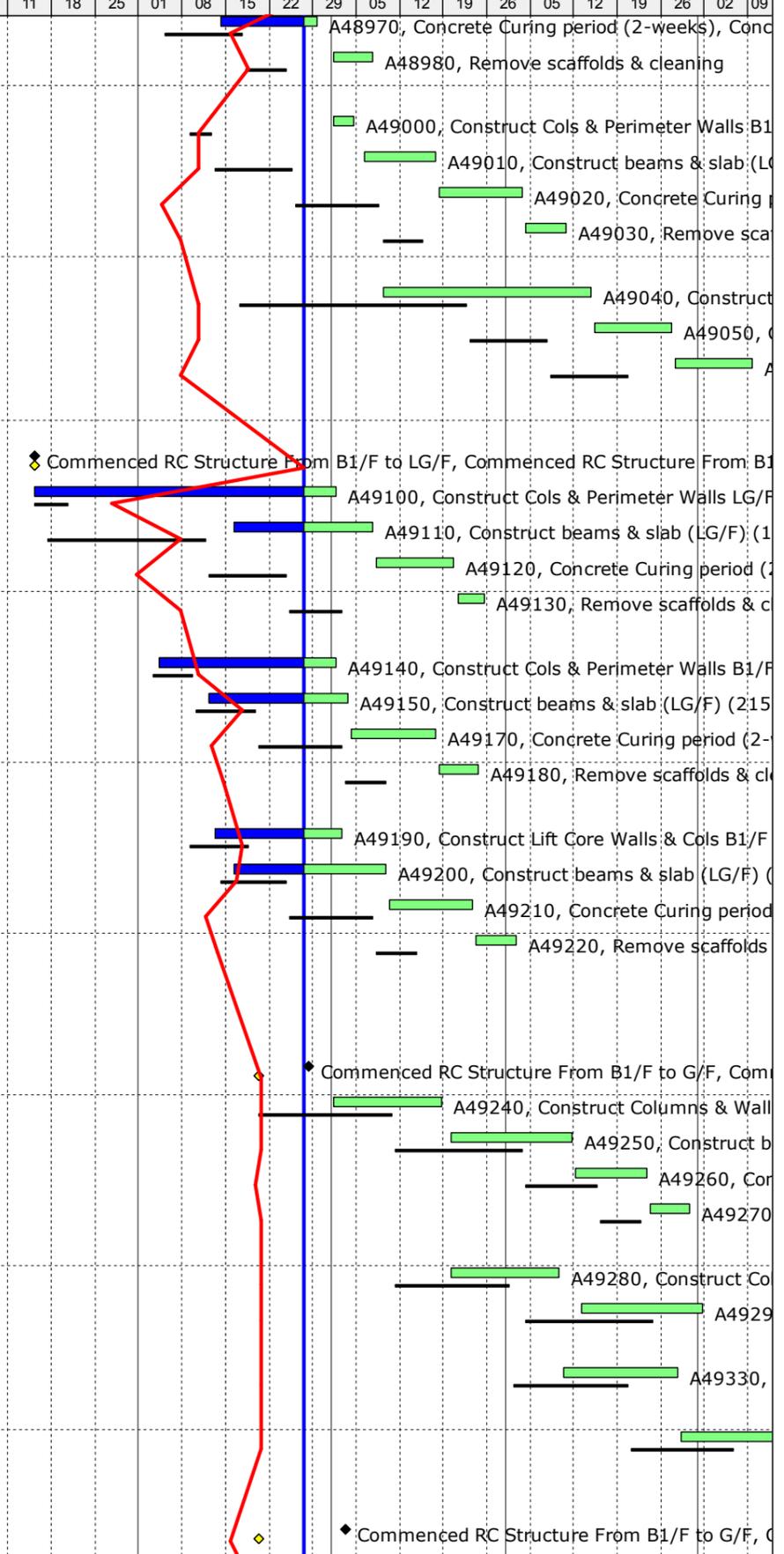
Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017						
										04	11	18	25	01	08	15	22	29	05	12	19	26	02	09								
A52890	Perf MU - 3rd Shopdrawing Submission	14	19-Jan-17	01-Feb-17	02-Mar-17	15-Mar-17	0%	-42	660																							
A52900	Perf MU - 3rd Shopdrawing Submission - Review & Approval	21	02-Feb-17	22-Feb-17	16-Mar-17	05-Apr-17	0%	-42	660																							
BIM MODEL SUBMISSION																																
BIM MODEL SUBMISSION - Tower Facade Precast Panel (MPLUS-BIM-D003)																																
A52920	5th BIM Model Submission	149	20-Sep-16	15-Feb-17	20-Sep-16 A	29-Mar-17	0%	-42	285																							
A52930	5th BIM Model Submission - Review & Approval	21	16-Feb-17	08-Mar-17	30-Mar-17	19-Apr-17	0%	-42	285																							
BIM MODEL SUBMISSION - Podium Facade Panel (MPLUS-BIM-D004)																																
A52960	3rd BIM Model Submission	209	15-Jul-16	08-Feb-17	15-Jul-16 A	22-Mar-17	0%	-42	292																							
A52970	3rd BIM Model Submission - Review & Approval	21	09-Feb-17	01-Mar-17	23-Mar-17	12-Apr-17	0%	-42	292																							
BIM MODEL SUBMISSION - Glass Wall with T Mullion																																
A53000	1st BIM Model Submission	56	23-Nov-16	17-Jan-17	23-Nov-16 A	28-Feb-17	0%	-42	314																							
A53010	1st BIM Model Submission - Review & Approval	21	18-Jan-17	07-Feb-17	01-Mar-17	21-Mar-17	0%	-42	314																							
A53020	2nd BIM Model Submission	14	08-Feb-17	21-Feb-17	22-Mar-17	04-Apr-17	0%	-42	314																							
BIM MODEL SUBMISSION - Glass Wall with Ceramic Mullion & Precast Concrete Mullion																																
A53040	1st BIM Model Submission	46	17-Dec-16	31-Jan-17	28-Jan-17*	14-Mar-17	0%	-42	300																							
A53050	1st BIM Model Submission - Review & Approval	21	01-Feb-17	21-Feb-17	15-Mar-17	04-Apr-17	0%	-42	300																							
BIM MODEL SUBMISSION - Ceramic Concrete Tubes & Perforated Cladding																																
A53080	1st BIM Model Submission	46	17-Dec-16	31-Jan-17	28-Jan-17*	14-Mar-17	0%	-42	300																							
A53090	1st BIM Model Submission - Review & Approval	21	01-Feb-17	21-Feb-17	15-Mar-17	04-Apr-17	0%	-42	300																							
BIM MODEL SUBMISSION - Strip Glazing at Skylight Gallery & Plaza Skylight at L3 (MPLUS-BIM-D006) & (
A53120	3rd BIM Model Submission	76	06-Oct-16	20-Dec-16	06-Oct-16 A	31-Jan-17	100%	-42	342																							
A53130	3rd BIM Model Submission - Review & Approval	21	21-Dec-16	10-Jan-17	01-Feb-17	21-Feb-17	0%	-42	342																							
A53140	4th BIM Model Submission	14	11-Jan-17	24-Jan-17	22-Feb-17	07-Mar-17	0%	-42	342																							
A53150	4th BIM Model Submission - Review & Approval	21	25-Jan-17	14-Feb-17	08-Mar-17	28-Mar-17	0%	-42	342																							
BIM MODEL SUBMISSION -L3 Storefront (MPLUS-BIM-D001)																																
A53160	5th BIM Model Submission	98	14-Sep-16	20-Dec-16	14-Sep-16 A	31-Jan-17	100%	-42	342																							
A53170	5th BIM Model Submission - Review & Approval	21	21-Dec-16	10-Jan-17	01-Feb-17	21-Feb-17	0%	-42	342																							
A53180	6th BIM Model Submission	14	11-Jan-17	24-Jan-17	22-Feb-17	07-Mar-17	0%	-42	342																							
A53190	6th BIM Model Submission - Review & Approval	21	25-Jan-17	14-Feb-17	08-Mar-17	28-Mar-17	0%	-42	342																							
BIM MODEL SUBMISSION - Garden Gallery Ceramic Cladding (MPLUS-BIM-D002)																																
A53200	1st BIM Model Submission	76	06-Oct-16	20-Dec-16	06-Oct-16 A	31-Jan-17	0%	-42	342																							
A53210	1st BIM Model Submission - Review & Approval	21	21-Dec-16	10-Jan-17	01-Feb-17	21-Feb-17	0%	-42	342																							
A53220	2nd BIM Model Submission	14	11-Jan-17	24-Jan-17	22-Feb-17	07-Mar-17	0%	-42	342																							
A53230	2nd BIM Model Submission - Review & Approval	21	25-Jan-17	14-Feb-17	08-Mar-17	28-Mar-17	0%	-42	342																							
BIM MODEL SUBMISSION - Metal Cladding FAC-LV-01a/FAC-LV-01b (Additional Scope)																																
A53250	1st BIM Model Submission	70	17-Dec-16	24-Feb-17	28-Jan-17*	07-Apr-17	0%	-42	276																							
FABRICATION & DELIVERY OF M+ TOWER & PODIUM FACADE SYSTEM																																
01A Tower Facade PC+CW (Bulk)																																
A54880	Production & Fabrication - Precast Panel for Tower - Summary	229	19-Nov-16	05-Jul-17	19-Nov-16 A	16-Aug-17	0%	-42	201																							
Glass Production & Fabrication																																
A54450	Coated Glass Production	108	19-Nov-16	31-Mar-17	19-Nov-16 A	16-May-17	0%	-33	370																							
A54460	Fabrication of Glass Panel	206	18-Feb-17	27-Oct-17	18-Feb-17	27-Oct-17	0%	0	370																							
CW Glazed Panel Production & Fabrication																																
A54900	Die Making - Bulk Production	68	22-Nov-16	15-Feb-17	22-Nov-16 A	25-Mar-17	0%	-33	274																							
A54910	Aluminium Extrusion Production	201	16-Feb-17	19-Oct-17	27-Mar-17	28-Nov-17	0%	-33	294																							
Terracotta Production																																

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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017				
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09		
A54930	Die Making	36	19-Nov-16	03-Jan-17	19-Nov-16 A	14-Feb-17	0%	-33	314	A54930, Die Making, Die Making																				
A54940	Terracotta Production - Tower (Bulk)	222	04-Jan-17	03-Oct-17	15-Feb-17	13-Nov-17	0%	-33	314																					
01B Tower Lighting (Bulk)																														
Procurement & Production (3F to Roof) & Shipment																														
A55010	Procurement - Tower Lighting Bar	128	26-Oct-16	30-Mar-17	26-Oct-16 A	15-May-17	0%	-33	274																					
02 Podium Facade PC + CW (Bulk)																														
A54470	Production & Fabrication - Precast Panel for Podium	262	12-Nov-16	31-Jul-17	12-Nov-16 A	11-Sep-17	0%	-42	232																					
Glass Production & Fabrication																														
A10020	Ordering of Coated Glass	106	12-Nov-16	22-Mar-17	12-Nov-16 A	06-May-17	0%	-33	331																					
CW Glazed Panel Production & Fabrication																														
A10040	Die Making - Bulk Production	46	17-Feb-17	12-Apr-17	17-Feb-17	12-Apr-17	0%	0	331																					
Terracotta Production																														
A10080	Ordering of Terracotta - Podium (Bulk)	11	24-Dec-16	09-Jan-17	01-Feb-17	13-Feb-17	0%	-27	359	A10080, Ordering of Terracotta - Podiu																				
A10090	Die Making - Terracotta Production	55	10-Jan-17	17-Mar-17	14-Feb-17	22-Apr-17	0%	-27	359																					
A10100	Terracotta Production - Tower (Bulk)	165	16-Feb-17	05-Sep-17	20-Mar-17	09-Oct-17	0%	-27	359																					
03 GW with T Mullion (Kinked & Straight B1F to GF) (Bulk)																														
A54490	Production & Fabrication - GW with T Mullion (Kinked & Straight B1F to GF)	187	25-Feb-17	30-Aug-17	25-Feb-17*	30-Aug-17	0%	0	310																					
Glass Production & Fabrication																														
A10190	Coated Glass Production	94	25-Feb-17	22-Jun-17	25-Feb-17	22-Jun-17	0%	0	333																					
05 Ceramic Concrete Tubes & Perforated Cladding (Bulk)																														
A54600	Production & Fabrication - Ceramic Concrete Tubes & Perforated Cladding	229	25-Mar-17	08-Nov-17	25-Mar-17*	08-Nov-17	0%	0	292																					
Terracotta Production																														
A10680	Die Making - Bulk Production	77	25-Mar-17	30-Jun-17	25-Mar-17	30-Jun-17	0%	0	275																					
06A Plaza Skylight 3F (Bulk)																														
A19130	Production & Fabrication - Plaza Skylight 3F	207	18-Mar-17	10-Oct-17	18-Mar-17	10-Oct-17	0%	0	472																					
Alum Frame Production & Fabrication																														
A18770	Die Making - Bulk Production	72	18-Mar-17	17-Jun-17	18-Mar-17*	17-Jun-17	0%	0	379																					
06B STRip CW Skylight Gallery 3F (Bulk)																														
A18810	Production & Fabrication - Strip CW Skylight Gallery 3F	151	17-Mar-17	14-Aug-17	17-Mar-17*	14-Aug-17	0%	0	529																					
Glass Production & Fabrication																														
A19150	Coated Glass Production	68	17-Mar-17	12-Jun-17	17-Mar-17*	12-Jun-17	0%	0	432																					
Alum Frame Production & Fabrication																														
A18830	Die Making - Bulk Production	44	18-Mar-17	15-May-17	18-Mar-17	15-May-17	0%	0	432																					
10 Doors (Bulk)																														
A19230	Production & Fabrication - Doors	332	06-Mar-17	31-Jan-18	06-Mar-17	31-Jan-18	0%	0	359																					
Doors Production & Fabrication																														
A19060	Die Making	89	06-Mar-17	24-Jun-17	06-Mar-17*	24-Jun-17	0%	0	290																					
M+ Podium External Envelope (By RedLand, Permasteelisa)																														
B1/F to G/F Level																														
(By Redland) Precast Concrete Panel																														
A41140	Handover Zone A - B1/F Working Areas	0		16-Dec-16		27-Jan-17	0%	-33	577	♦				♦ Handover Zone A - B1/F Working Areas, Handover																
(By Permasteelisa) Glass Wall with T Mullion																														
Zone A																														
A41160	Handover Zone A - B1/F Working Areas	0		16-Dec-16		27-Jan-17	0%	-33	436	♦				♦ Handover Zone A - B1/F Working Areas, Handover																
3/F Roof Level																														
(By Permasteelisa) Skylight/Ceramic Cladding/Storefront																														
Zone M, F & N																														
A47610	Handover Zone F - 3/F Working Area	0		16-Dec-16		27-Jan-17	0%	-33	566	♦				♦ Handover Zone F - 3/F Working Area, Handover Zo																

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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017		
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09
A48970	Concrete Curing period (2-weeks)	13	05-Jan-17	17-Jan-17	14-Jan-17 A	29-Jan-17	100%	-12	719																			
A48980	Remove scaffolds & cleaning	6	18-Jan-17	24-Jan-17	01-Feb-17	07-Feb-17	0%	-9	585																			
Portion LGT4 @ Grid Line B' to D' / 3' to 5'																												
A49000	Construct Cols & Perimeter Walls B1/F to LG/F @ GL B'-D' / 3'-5'	4	09-Jan-17	12-Jan-17	01-Feb-17	04-Feb-17	0%	-17	108																			
A49010	Construct beams & slab (LG/F) (145 m3)	11	13-Jan-17	25-Jan-17	06-Feb-17	17-Feb-17	0%	-17	108																			
A49020	Concrete Curing period (2-weeks)	14	26-Jan-17	08-Feb-17	18-Feb-17	03-Mar-17	0%	-23	686																			
A49030	Remove scaffolds & cleaning	6	09-Feb-17	15-Feb-17	04-Mar-17	10-Mar-17	0%	-20	558																			
Portion LGT5 @ Grid Line A' to D' / 5' to 6'																												
A49040	Construct Columns & Walls B1/F to LG/F @ GL A'-D' / 5'-6'	29	17-Jan-17	22-Feb-17	09-Feb-17	14-Mar-17	0%	-17	528																			
A49050	Construct beams & slab (LG/F) (135 m3)	11	23-Feb-17	07-Mar-17	15-Mar-17	27-Mar-17	0%	-17	528																			
A49060	Concrete Curing period (2-weeks)	13	08-Mar-17	20-Mar-17	28-Mar-17	09-Apr-17	0%	-20	651																			
RDE Zoning @ Portion - U																												
Portion LGU1 @ Grid Line H' to J' / 1' to 3'																												
A49090	Commenced RC Structure From B1/F to LG/F	0	15-Dec-16		15-Dec-16 A		100%	0																				
A49100	Construct Cols & Perimeter Walls LG/F to G/F @ GL H'-J' / 1'-3'	5	15-Dec-16	20-Dec-16	15-Dec-16 A	01-Feb-17	0%	-31	590																			
A49110	Construct beams & slab (LG/F) (164 m3)	19	17-Dec-16	11-Jan-17	16-Jan-17 A	07-Feb-17	0%	-20	11																			
A49120	Concrete Curing period (2-weeks)	13	12-Jan-17	24-Jan-17	08-Feb-17	20-Feb-17	0%	-27	699																			
A49130	Remove scaffolds & cleaning	5	25-Jan-17	02-Feb-17	21-Feb-17	25-Feb-17	0%	-20	569																			
Portion LGU2 @ Grid Line F' to H' / 1' to 3'																												
A49140	Construct Cols & Perimeter Walls B1/F to LG/F @ GL F'-H' / 1'-3'	6	03-Jan-17	09-Jan-17	04-Jan-17 A	01-Feb-17	0%	-17	590																			
A49150	Construct beams & slab (LG/F) (215 m3)	9	10-Jan-17	19-Jan-17	12-Jan-17 A	03-Feb-17	0%	-10	20																			
A49170	Concrete Curing period (2-weeks)	14	20-Jan-17	02-Feb-17	04-Feb-17	17-Feb-17	0%	-15	700																			
A49180	Remove scaffolds & cleaning	6	03-Feb-17	09-Feb-17	18-Feb-17	24-Feb-17	0%	-13	570																			
Portion LGU3 @ Grid Line F' to J' / 3' to 6'																												
A49190	Construct Lift Core Walls & Cols B1/F to LG/F @ GL F'-I' / 3'-6'	9	09-Jan-17	18-Jan-17	13-Jan-17 A	02-Feb-17	0%	-10	589																			
A49200	Construct beams & slab (LG/F) (352 m3)	9	14-Jan-17	24-Jan-17	16-Jan-17 A	09-Feb-17	0%	-11	26																			
A49210	Concrete Curing period (2-weeks)	14	25-Jan-17	07-Feb-17	10-Feb-17	23-Feb-17	0%	-16	694																			
A49220	Remove scaffolds & cleaning	6	08-Feb-17	14-Feb-17	24-Feb-17	02-Mar-17	0%	-14	565																			
G/F Level																												
North Zoning @ Portion - R (B1/F to G/F)																												
Portion GFR1 @ Grid Line I' to J' / 5' to 1																												
A49230	Commenced RC Structure From B1/F to G/F	0	20-Jan-17		28-Jan-17		0%	-7	436																			
A49240	Construct Columns & Walls & Cols B1/F to G/F @ GL I'-J' / 5'-1	16	20-Jan-17	10-Feb-17	01-Feb-17	18-Feb-17	0%	-7	409																			
A49250	Construct beams & slab (G/F) (180 m3)	18	11-Feb-17	03-Mar-17	20-Feb-17	11-Mar-17	0%	-7	468																			
A49260	Concrete Curing period (2-weeks)	12	04-Mar-17	15-Mar-17	12-Mar-17	23-Mar-17	0%	-8	652																			
A49270	Remove scaffolds & cleaning	6	16-Mar-17	22-Mar-17	24-Mar-17	30-Mar-17	0%	-7	529																			
Portion GFR2 @ Grid Line F' to H' / 5' to 1																												
A49280	Construct Columns & Walls & Cols B1/F to G/F @ GL F'-H' / 5'-1	16	11-Feb-17	01-Mar-17	20-Feb-17	09-Mar-17	0%	-7	409																			
A49290	Construct beams & slab (G/F) (175 m3)	18	04-Mar-17	24-Mar-17	13-Mar-17	01-Apr-17	0%	-7	468																			
Portion GFR3 & GFR4 @ Grid Line E' to F' / 6' to 2																												
A49330	Construct Columns & Walls & Cols B1/F to G/F @ GL F'-H' / 5'-1	16	02-Mar-17	20-Mar-17	10-Mar-17	28-Mar-17	0%	-7	409																			
Portion GFR5 @ Grid Line C' to E' / 1 to 2																												
A49370	Construct Columns & Walls & Cols B1/F to G/F @ GL C'-E' / 1-2	14	21-Mar-17	06-Apr-17	29-Mar-17	18-Apr-17	0%	-7	409																			
CSF Zoning @ Portion - T (LG/F to G/F)																												
Portion GFT1 (LG/F to G/F) @ Grid Line D' to F' / 1' to 3'																												
A49780	Commenced RC Structure From B1/F to G/F	0	20-Jan-17		03-Feb-17		0%	-12	562																			



(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017								
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09						
A49790	Construct Columns & Walls & Cols B1/F to G/F @ GL D'-F' / 1'-3'	3	20-Jan-17	23-Jan-17	03-Feb-17	06-Feb-17	0%	-9	534																									
A49800	Construct beams & slab (G/F) (141 m3)	25	24-Jan-17	24-Feb-17	07-Feb-17	07-Mar-17	0%	-9	534																									
A49810	Concrete Curing period (2-weeks)	12	25-Feb-17	08-Mar-17	08-Mar-17	19-Mar-17	0%	-11	656																									
A49820	Remove scaffolds & cleaning	6	09-Mar-17	15-Mar-17	20-Mar-17	25-Mar-17	0%	-9	533																									
A49830	Complete RDE Trx Room and Give Access to ABWF & MEP	0	16-Mar-17		27-Mar-17		0%	-9	533																									
Portion GFT2 (LG/F to G/F) @ Grid Line D' to F' / 3' to 5'																																		
A49840	Commence RC Structure From LG/F to G/F	0	11-Jan-17		28-Jan-17		0%	-15	569																									
A49850	Construct CSF Lift Corewalls & Cols LG/F to G/F @ GL D'-F' / 3'-5'	7	11-Jan-17	18-Jan-17	01-Feb-17	08-Feb-17	0%	-15	538																									
A49860	Construct beams & slab (G/F) (260 m3)	20	19-Jan-17	14-Feb-17	09-Feb-17	03-Mar-17	0%	-15	538																									
A49870	Concrete Curing period (2-weeks)	13	15-Feb-17	27-Feb-17	04-Mar-17	16-Mar-17	0%	-17	661																									
A49880	Remove scaffolds & cleaning	5	28-Feb-17	04-Mar-17	17-Mar-17	22-Mar-17	0%	-15	536																									
Portion GFT3 (LG/F to G/F) @ Grid Line D' to G' / 5' to 6'																																		
A49890	Construct Walls & Cols LG/F to G/F @ GL D'-G' / 5'-6'	6	06-Jan-17	12-Jan-17	01-Feb-17	07-Feb-17	0%	-19	117																									
A49900	Construct beams & slab (G/F) (156 m3)	9	13-Jan-17	23-Jan-17	08-Feb-17	17-Feb-17	0%	-19	216																									
A49910	Concrete Curing period (2-weeks)	14	24-Jan-17	06-Feb-17	18-Feb-17	03-Mar-17	0%	-25	674																									
A49920	Remove scaffolds & cleaning	5	07-Feb-17	11-Feb-17	04-Mar-17	09-Mar-17	0%	-22	547																									
Portion GFT4 (LG/F to G/F) @ Grid Line B' to D' / 3' to 6'																																		
A49930	Construct Walls & Cols LG/F to G/F @ GL B'-D' / 3'-6'	10	26-Jan-17	09-Feb-17	18-Feb-17	01-Mar-17	0%	-17	108																									
A49940	Construct beams & slab (G/F) (284 m3)	12	10-Feb-17	23-Feb-17	02-Mar-17	15-Mar-17	0%	-17	108																									
A49970	Commence CSF Building From G/F to 8/F (CMWP - 24 Mar 17)	0	20-Feb-17		11-Mar-17		0%	-17	108																									
A49950	Concrete Curing period (2-weeks)	13	24-Feb-17	08-Mar-17	16-Mar-17	28-Mar-17	0%	-20	647																									
A49960	Remove scaffolds & cleaning	6	09-Mar-17	15-Mar-17	29-Mar-17	05-Apr-17	0%	-17	525																									
Portion GFT5 (B1/F to G/F) @ Grid Line A' to B' / 3' to 6'																																		
A49980	Construct Walls & Cols B1/F to G/F @ GL A'-B' / 3'-6'	10	23-Jan-17	06-Feb-17	17-Feb-17	28-Feb-17	0%	-19	216																									
A49990	Construct beams & slab (G/F) (170 m3)	12	07-Feb-17	20-Feb-17	01-Mar-17	14-Mar-17	0%	-19	216																									
A50010	Concrete Curing period (2-weeks)	14	21-Feb-17	06-Mar-17	15-Mar-17	28-Mar-17	0%	-22	279																									
A50020	Remove scaffolds & cleaning	5	07-Mar-17	11-Mar-17	29-Mar-17	03-Apr-17	0%	-19	225																									
Portion GFT6 (B1/F to G/F) @ Grid Line A to A' / 5' to 6'																																		
A50030	Construct Walls & Cols B1/F to G/F @ GL A-A' / 5'-6'	7	06-Mar-17	13-Mar-17	28-Mar-17	05-Apr-17	0%	-19	216																									
RDE Zoning @ Portion - U (LG/F to G/F)																																		
Portion GFU1 (LG/F to G/F) @ Grid Line H' to J' / 1' to 4'																																		
A50070	Commence RC Structure From LG/F to G/F	0	12-Jan-17		08-Feb-17		0%	-23	11																									
A50090	Construct Columns & Walls LG/F to G/F @ GL H'-J' / 1'-4'	6	12-Jan-17	18-Jan-17	08-Feb-17	14-Feb-17	0%	-20	11																									
A50100	Construct beams & slab (G/F) (206 m3)	25	19-Jan-17	20-Feb-17	15-Feb-17	15-Mar-17	0%	-20	323																									
A50110	Concrete Curing period (2-weeks)	12	21-Feb-17	04-Mar-17	16-Mar-17	27-Mar-17	0%	-23	401																									
A50120	Remove scaffolds & cleaning	6	06-Mar-17	11-Mar-17	28-Mar-17	03-Apr-17	0%	-19	322																									
Portion GFU2 (LG/F to G/F) @ Grid Line I' to J' / 4' to 6'																																		
A50130	Construct Columns & Walls LG/F to G/F @ GL I'-J' / 4'-6'	7	03-Jan-17	10-Jan-17	01-Feb-17	08-Feb-17	0%	-22	236																									
A50140	Construct beams & slab (G/F) (178 m3)-Deferred due to hoisting steel plat	13	11-Jan-17	25-Jan-17	09-Feb-17	23-Feb-17	0%	-22	236																									
A50150	Concrete Curing period (2-weeks)	12	26-Jan-17	06-Feb-17	24-Feb-17	07-Mar-17	0%	-29	288																									
A50160	Remove scaffolds & cleaning	6	07-Feb-17	13-Feb-17	08-Mar-17	14-Mar-17	0%	-25	236																									
Portion GFU3 (LG/F to G/F) @ Grid Line F' to I' / 1' to 3'																																		
A50170	Construct Columns & Walls LG/F to G/F @ GL F'-I' / 1'-3'	5	20-Jan-17	25-Jan-17	15-Feb-17	20-Feb-17	0%	-19	11																									
A50180	Construct beams & slab (G/F) (269 m3)	14	06-Feb-17	21-Feb-17	28-Feb-17	15-Mar-17	0%	-19	527																									
A50190	Concrete Curing period (2-weeks)	12	22-Feb-17	05-Mar-17	16-Mar-17	27-Mar-17	0%	-22	648																									

(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017				
										04	11	18	25	01	08	15	22	29	05	12	19	26	02	09	04	11				
A19760	2nd BIM Model Submission	14	19-Jan-17	01-Feb-17	02-Mar-17	15-Mar-17	0%	-42	305																					
A19770	2nd BIM Model Submission - Review & Approval	21	02-Feb-17	22-Feb-17	16-Mar-17	05-Apr-17	0%	-42	305																					
BIM MODEL SUBMISSION - CSF Louvre FAC-LV-03 (Additional Scope)																														
A19780	1st BIM Model Submission	12	17-Dec-16	28-Dec-16	28-Jan-17*	08-Feb-17	0%	-42	305																					
A19790	1st BIM Model Submission - Review & Approval	21	29-Dec-16	18-Jan-17	09-Feb-17	01-Mar-17	0%	-42	305																					
A19800	2nd BIM Model Submission	14	19-Jan-17	01-Feb-17	02-Mar-17	15-Mar-17	0%	-42	305																					
A19810	2nd BIM Model Submission - Review & Approval	21	02-Feb-17	22-Feb-17	16-Mar-17	05-Apr-17	0%	-42	305																					
Fabrication & Delivery of CSF Facade System																														
A19560	Glass Wall Production and Fabrication	221	15-Feb-17	11-Nov-17	15-Feb-17	11-Nov-17	0%	0	113																					
A19570	Glass Production and Fabrication	127	23-Mar-17	26-Aug-17	23-Mar-17	26-Aug-17	0%	0	113																					
Glass Production & Fabrication																														
A19590	Ordering of Coated Glass	68	23-Mar-17	17-Jun-17	23-Mar-17	17-Jun-17	0%	0	113																					
Glass Wall Production & Fabrication																														
A19610	Die Making	51	15-Feb-17	19-Apr-17	15-Feb-17*	19-Apr-17	0%	0	72																					
A19630	PVF2 Paint Ordering	51	23-Mar-17	27-May-17	23-Mar-17	27-May-17	0%	0	72																					
RDE Super-Structure RC Works																														
RDE Building																														
RDE Structure @ Portion - U (G/F to 15M/F)																														
Block A Grid Line G' to J' / 1' to 6'																														
A50830	Commence RDE Structure (Block-A) From G/F to 15M/F	0	02-Mar-17		24-Mar-17		0%	-19	11																					
A50840	RDE - Walls, Columns & 1/F Slab	24	02-Mar-17	29-Mar-17	25-Mar-17	26-Apr-17	0%	-20	10																					
RDE Building FACADE Preliminaries																														
SCHEMATIC DRAWINGS																														
SCHEMATIC DRAWING SUBMISSION - by Redland																														
A53290	1st Schematic Drawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	672																					
A53300	1st Schematic Drawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	672																					
A53310	2nd Schematic Drawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	672																					
A53320	2nd Schematic Drawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	672																					
SCHEMATIC DRAWING SUBMISSION - by PISA																														
A53330	1st Schematic Drawing for Window Wall, Facade Window, Louvre and opera	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	672																					
A53370	1st Schematic Drawing for Window Wall & Louvre at 2F to 14F	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	672																					
A53410	1st Schematic Drawing for Window Wall & Louvre at 15F to RF	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	672																					
A53340	1st Schematic Drawing for Window Wall, Facade Window, Louvre and opera	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	672																					
A53380	1st Schematic Drawing for Window Wall & Louvre at 2F to 14F - Review & A	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	672																					
A53420	1st Schematic Drawing for Window Wall & Louvre at 15F to RF - Review & A	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	672																					
A53350	2nd Schematic Drawing for Window Wall, Facade Window, Louvre and opera	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	672																					
A53390	2nd Schematic Drawing for Window Wall & Louvre at 2F to 14F	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	672																					
A53430	2nd Schematic Drawing for Window Wall & Louvre at 15F to RF	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	672																					
A53360	2nd Schematic Drawing for Window Wall, Facade Window, Louvre and opera	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	672																					
A53400	2nd Schematic Drawing for Window Wall & Louvre at 2F to 14F - Review & A	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	672																					
A53440	2nd Schematic Drawing for Window Wall & Louvre at 15F to RF - Review & A	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	672																					
SHOP DRAWINGS + DESIGN CALCULATION																														
SHOPDRAWING + DESIGN CALCULATION - by Redland																														
A53450	1st Shopdrawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	644																					
A53460	1st Shopdrawing for PreCast Tubes, Columns and Roof Panel (FC-PC) - Revi	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	644																					

(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017		
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09
A53470	2nd Shopdrawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	644																			
A53480	2nd Shopdrawing for PreCast Tubes, Columns and Roof Panel (FC-PC) - Rev	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	644																			
A53490	3rd Shopdrawing for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	11-Feb-17	24-Feb-17	25-Mar-17	07-Apr-17	0%	-42	644																			
SHOPDRAWING + DESIGN CALCULATION - by PISA																												
A53510	1st Shopdrawing Cast-in Embed for Window Wall, Facade Window, Louver a	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	644																			
A53570	1st Shopdrawing Cast-in Embed for Window Wall & Louver at 2F to 14F	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	644																			
A53630	1st Shopdrawing Cast-in Embed for Window Wall & Louver at 15F to RF	14	02-Jan-17	15-Jan-17	28-Jan-17*	10-Feb-17	0%	-26	644																			
A53690	1st Shopdrawing for Window Wall, Facade Window, Louver and operable pai	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	644																			
A53750	1st Shopdrawing for Window Wall & Louver at 2F to 14F	14	28-Dec-16	10-Jan-17	28-Jan-17*	10-Feb-17	0%	-31	644																			
A53810	1st Shopdrawing for Window Wall & Louver at 15F to RF	14	21-Jan-17	03-Feb-17	28-Jan-17*	10-Feb-17	0%	-7	644																			
A53520	1st Shopdrawing Cast-in Embed for Window Wall, Facade Window, Louver a	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	644																			
A53580	1st Shopdrawing Cast-in Embed for Window Wall & Louver at 2F to 14F - R	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	644																			
A53640	1st Shopdrawing Cast-in Embed for Window Wall & Louver at 15F to RF - R	14	16-Jan-17	29-Jan-17	11-Feb-17	24-Feb-17	0%	-26	644																			
A53700	1st Shopdrawing for Window Wall, Facade Window, Louver and operable pai	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	644																			
A53760	1st Shopdrawing for Window Wall & Louver at 2F to 14F - Review & Approv	14	11-Jan-17	24-Jan-17	11-Feb-17	24-Feb-17	0%	-31	644																			
A53820	1st Shopdrawing for Window Wall & Louver at 15F to RF - Review & Approv	14	04-Feb-17	17-Feb-17	11-Feb-17	24-Feb-17	0%	-7	644																			
A53530	2nd Shopdrawing Cast-in Embed for Window Wall, Facade Window, Louver .	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	644																			
A53590	2nd Shopdrawing Cast-in Embed for Window Wall & Louver at 2F to 14F	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	644																			
A53650	2nd Shopdrawing Cast-in Embed for Window Wall & Louver at 15F to RF	14	30-Jan-17	12-Feb-17	25-Feb-17	10-Mar-17	0%	-26	644																			
A53710	2nd Shopdrawing for Window Wall, Facade Window, Louver and operable pa	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	644																			
A53770	2nd Shopdrawing for Window Wall & Louver at 2F to 14F	14	25-Jan-17	07-Feb-17	25-Feb-17	10-Mar-17	0%	-31	644																			
A53830	2nd Shopdrawing for Window Wall & Louver at 15F to RF	14	18-Feb-17	03-Mar-17	25-Feb-17	10-Mar-17	0%	-7	644																			
A53540	2nd Shopdrawing Cast-in Embed for Window Wall, Facade Window, Louver .	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	644																			
A53600	2nd Shopdrawing Cast-in Embed for Window Wall & Louver at 2F to 14F - R	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	644																			
A53660	2nd Shopdrawing Cast-in Embed for Window Wall & Louver at 15F to RF - R	14	13-Feb-17	26-Feb-17	11-Mar-17	24-Mar-17	0%	-26	644																			
A53720	2nd Shopdrawing for Window Wall, Facade Window, Louver and operable pa	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	644																			
A53780	2nd Shopdrawing for Window Wall & Louver at 2F to 14F - Review & Approv	14	08-Feb-17	21-Feb-17	11-Mar-17	24-Mar-17	0%	-31	644																			
A53840	2nd Shopdrawing for Window Wall & Louver at 15F to RF - Review & Approv	14	04-Mar-17	17-Mar-17	11-Mar-17	24-Mar-17	0%	-7	644																			
A53550	3rd Shopdrawing Cast-in Embed for Window Wall, Facade Window, Louver a	14	11-Feb-17	24-Feb-17	25-Mar-17	07-Apr-17	0%	-42	644																			
A53610	3rd Shopdrawing Cast-in Embed for Window Wall & Louver at 2F to 14F	14	11-Feb-17	24-Feb-17	25-Mar-17	07-Apr-17	0%	-42	644																			
A53670	3rd Shopdrawing Cast-in Embed for Window Wall & Louver at 15F to RF	14	27-Feb-17	12-Mar-17	25-Mar-17	07-Apr-17	0%	-26	644																			
A53730	3rd Shopdrawing for Window Wall, Facade Window, Louver and operable pa	14	11-Feb-17	24-Feb-17	25-Mar-17	07-Apr-17	0%	-42	644																			
A53790	3rd Shopdrawing for Window Wall & Louver at 2F to 14F	14	22-Feb-17	07-Mar-17	25-Mar-17	07-Apr-17	0%	-31	644																			
A53850	3rd Shopdrawing for Window Wall & Louver at 15F to RF	14	18-Mar-17	31-Mar-17	25-Mar-17	07-Apr-17	0%	-7	644																			
PERFORMANCE MOCK UP TEST																												
PERFORMANCE MOCK UP TEST - by PISA																												
A53870	1st Performance Mock Up Test Design Submission of Window Wall (FC-WW	14	19-Dec-16	01-Jan-17	28-Jan-17*	10-Feb-17	0%	-40	111																			
A53930	1st Performance Mock Up Test Design Submission of Window Wall (FC-WW	14	31-Jan-17	13-Feb-17	31-Jan-17*	13-Feb-17	0%	0	108																			
A53990	1st Performance Mock Up Test Design Submission of Window Wall (FC-WW	14	04-Feb-17	17-Feb-17	04-Feb-17*	17-Feb-17	0%	0	104																			
A53880	1st Performance Mock Up Test Design Submission of Window Wall (FC-WW	14	02-Jan-17	15-Jan-17	11-Feb-17	24-Feb-17	0%	-40	111																			
A53940	1st Performance Mock Up Test Design Submission of Window Wall (FC-WW	14	14-Feb-17	27-Feb-17	14-Feb-17	27-Feb-17	0%	0	108																			
A54000	1st Performance Mock Up Test Design Submission of Window Wall (FC-WW	14	18-Feb-17	03-Mar-17	18-Feb-17	03-Mar-17	0%	0	104																			
A53890	2nd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	16-Jan-17	29-Jan-17	25-Feb-17	10-Mar-17	0%	-40	111																			
A53950	2nd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	28-Feb-17	13-Mar-17	28-Feb-17	13-Mar-17	0%	0	108																			

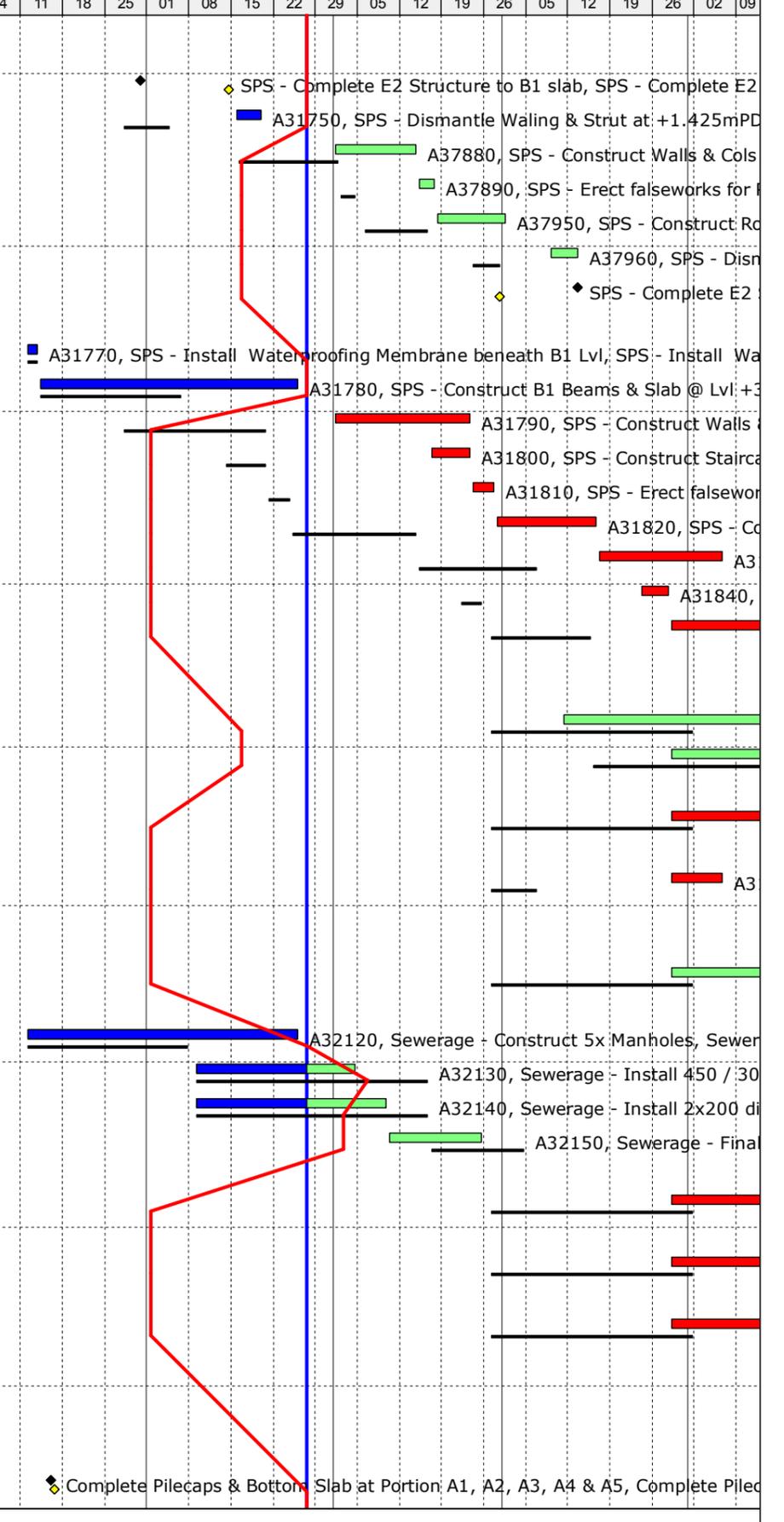
(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017						
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09				
A54010	2nd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	04-Mar-17	17-Mar-17	04-Mar-17	17-Mar-17	0%	0	104																							
A53900	2nd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	30-Jan-17	12-Feb-17	11-Mar-17	24-Mar-17	0%	-40	111																							
A53960	2nd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	14-Mar-17	27-Mar-17	14-Mar-17	27-Mar-17	0%	0	108																							
A54020	2nd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	18-Mar-17	31-Mar-17	18-Mar-17	31-Mar-17	0%	0	104																							
A53910	3rd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	13-Feb-17	26-Feb-17	25-Mar-17	07-Apr-17	0%	-40	111																							
A53970	3rd Performance Mock Up Test Design Submission of Window Wall (FC-WV	14	28-Mar-17	10-Apr-17	28-Mar-17	10-Apr-17	0%	0	108																							
BD DRAWING + DESIGN CALCULATION																																
BD DRAWING + DESIGN CALCULATION - by Redland																																
A54050	1st BD Submission for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	13																							
A54060	1st BD submission for PreCast Tubes, Columns and Roof Panel (FC-PC) - R	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	13																							
A54070	2nd BD Submission for PreCast Tubes, Columns and Roof Panel (FC-PC)	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	13																							
A54080	2nd BD Submission for PreCast Tubes, Columns and Roof Panel (FC-PC) - R	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	13																							
BD DRAWING + DESIGN CALCULATION - by PISA																																
A54090	1st BD Submission Cast-in Embed for Window Wall, Facade Window, Louve	14	17-Dec-16	30-Dec-16	28-Jan-17*	10-Feb-17	0%	-42	19																							
A54150	1st BD Submission Cast-in Embed for Window Wall & Louver at 2F to 14F	14	28-Dec-16	10-Jan-17	28-Jan-17*	10-Feb-17	0%	-31	19																							
A54270	1st BD Submission for Window Wall, Facade Window, Louver and operable	14	03-Jan-17	16-Jan-17	28-Jan-17*	10-Feb-17	0%	-25	111																							
A54210	1st BD Submission Cast-in Embed for Window Wall & Louver at 15F to RF	14	31-Jan-17	13-Feb-17	31-Jan-17*	13-Feb-17	0%	0	211																							
A54100	1st BD Submission Cast-in Embed for Window Wall, Facade Window, Louve	14	31-Dec-16	13-Jan-17	11-Feb-17	24-Feb-17	0%	-42	19																							
A54160	1st BD Submission Cast-in Embed for Window Wall & Louver at 2F to 14F -	14	11-Jan-17	24-Jan-17	11-Feb-17	24-Feb-17	0%	-31	19																							
A54280	1st BD Submission for Window Wall, Facade Window, Louver and operable	14	17-Jan-17	30-Jan-17	11-Feb-17	24-Feb-17	0%	-25	111																							
A54220	1st BD Submission Cast-in Embed for Window Wall & Louver at 15F to RF -	14	14-Feb-17	27-Feb-17	14-Feb-17	27-Feb-17	0%	0	211																							
A54110	2nd BD Submission Cast-in Embed for Window Wall, Facade Window, Louve	14	14-Jan-17	27-Jan-17	25-Feb-17	10-Mar-17	0%	-42	19																							
A54170	2nd BD Submission Cast-in Embed for Window Wall & Louver at 2F to 14F	14	25-Jan-17	07-Feb-17	25-Feb-17	10-Mar-17	0%	-31	19																							
A54290	2nd BD Submission for Window Wall, Facade Window, Louver and operable	14	31-Jan-17	13-Feb-17	25-Feb-17	10-Mar-17	0%	-25	111																							
A54330	1st BD Submission for Window Wall & Louver at 2F to 14F	14	25-Feb-17	10-Mar-17	25-Feb-17*	10-Mar-17	0%	0	83																							
A54230	2nd BD Submission Cast-in Embed for Window Wall & Louver at 15F to RF	14	28-Feb-17	13-Mar-17	28-Feb-17	13-Mar-17	0%	0	211																							
A54120	2nd BD Submission Cast-in Embed for Window Wall, Facade Window, Louve	14	28-Jan-17	10-Feb-17	11-Mar-17	24-Mar-17	0%	-42	19																							
A54180	2nd BD Submission Cast-in Embed for Window Wall & Louver at 2F to 14F -	14	08-Feb-17	21-Feb-17	11-Mar-17	24-Mar-17	0%	-31	19																							
A54300	2nd BD Submission for Window Wall, Facade Window, Louver and operable	14	14-Feb-17	27-Feb-17	11-Mar-17	24-Mar-17	0%	-25	111																							
A54340	1st BD Submission for Window Wall & Louver at 2F to 14F - Review & Appr	14	11-Mar-17	24-Mar-17	11-Mar-17	24-Mar-17	0%	0	83																							
A54240	2nd BD Submission Cast-in Embed for Window Wall & Louver at 15F to RF -	14	14-Mar-17	27-Mar-17	14-Mar-17	27-Mar-17	0%	0	211																							
A54390	1st BD Submission for Window Wall & Louver at 15F to RF	14	15-Mar-17	28-Mar-17	15-Mar-17*	28-Mar-17	0%	0	65																							
A54130	3rd BD Submission Cast-in Embed for Window Wall, Facade Window, Louve	14	11-Feb-17	24-Feb-17	25-Mar-17	07-Apr-17	0%	-42	19																							
A54190	3rd BD Submission Cast-in Embed for Window Wall & Louver at 2F to 14F	14	22-Feb-17	07-Mar-17	25-Mar-17	07-Apr-17	0%	-31	19																							
A54310	3rd BD Submission for Window Wall, Facade Window, Louver and operable	14	28-Feb-17	13-Mar-17	25-Mar-17	07-Apr-17	0%	-25	111																							
A54350	2nd BD Submission for Window Wall & Louver at 2F to 14F	14	25-Mar-17	07-Apr-17	25-Mar-17	07-Apr-17	0%	0	83																							
A54250	3rd BD Submission Cast-in Embed for Window Wall & Louver at 15F to RF	14	28-Mar-17	10-Apr-17	28-Mar-17	10-Apr-17	0%	0	211																							
A54400	1st BD Submission for Window Wall & Louver at 15F to RF - Review & Apprc	14	29-Mar-17	11-Apr-17	29-Mar-17	11-Apr-17	0%	0	65																							
ICP & SPS Construction																																
SPS WORKS (Sewerage Pumping Station)																																
ELS, Excavation and Pilecaps																																
Portion E1 - Plant Room Excavation & B1 Slab																																
A31650	SPS - Construct Pilecaps & Tie Beam @ B1 Level	6	09-Dec-16	15-Dec-16	09-Dec-16 A	15-Dec-16 A	100%	0																								
A31700	SPS - Backfill to formation of B1 slab Construction	7	17-Dec-16	24-Dec-16	03-Jan-17 A	12-Jan-17 A	100%	-12																								

█ A31650, SPS - Construct Pilecaps & Tie Beam @ B1 Level, SPS - Construct Pileca
█ A31700, SPS - Backfill to formation of B1 slab Construction, S

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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02
RC Structures																											
Portion E2 - Pump Station B2/F & B1/F																											
A37680	SPS - Complete E2 Structure to B1 slab	0		14-Jan-17		31-Dec-16 A	100%	12																			
A31750	SPS - Dismantle Waling & Strut at +1.425mPD	6	28-Dec-16	04-Jan-17	16-Jan-17 A	20-Jan-17 A	100%	-13																			
A37880	SPS - Construct Walls & Cols (B1/F to G/F) @ Lvl +10.00mPD	12	16-Jan-17	01-Feb-17	01-Feb-17	14-Feb-17	0%	-11	509																		
A37890	SPS - Erect falseworks for Roof Slab	3	02-Feb-17	04-Feb-17	15-Feb-17	17-Feb-17	0%	-11	509																		
A37950	SPS - Construct Roof Beam & Slab	10	06-Feb-17	16-Feb-17	18-Feb-17	01-Mar-17	0%	-11	509																		
A37960	SPS - Dismantle Falseworks & Clean area Below Roof Slab	4	24-Feb-17	28-Feb-17	09-Mar-17	13-Mar-17	0%	-11	509																		
A37970	SPS - Complete E2 Structure to G/F Level +10.00mPD	0		28-Feb-17		13-Mar-17	0%	-11	556																		
Portion E1 - Plant Room B1/F																											
A31770	SPS - Install Waterproofing Membrane beneath B1 Lvl	2	12-Dec-16	13-Dec-16	12-Dec-16 A	13-Dec-16 A	100%	0																			
A31780	SPS - Construct B1 Beams & Slab @ Lvl +3.800mPD	18	14-Dec-16	06-Jan-17	14-Dec-16 A	26-Jan-17 A	100%	-16																			
A31790	SPS - Construct Walls & Cols From (B1/F to G/F) @ Lvl +10.00mPD	20	28-Dec-16	20-Jan-17	01-Feb-17	23-Feb-17	0%	-26	-26																		
A31800	SPS - Construct Staircase @ GL 3-5 / A1-A2	6	14-Jan-17	20-Jan-17	17-Feb-17	23-Feb-17	0%	-26	-26																		
A31810	SPS - Erect falseworks for Roof Slab	3	21-Jan-17	24-Jan-17	24-Feb-17	27-Feb-17	0%	-26	-26																		
A31820	SPS - Construct Roof Beam & Slab	15	25-Jan-17	14-Feb-17	28-Feb-17	16-Mar-17	0%	-26	-26																		
A31830	SPS - Construct Concrete Vent Duct Above Roof Slab	17	15-Feb-17	06-Mar-17	17-Mar-17	06-Apr-17	0%	-26	-18																		
A31840	SPS - Dismantle Falseworks & Clean area Below Roof Slab	4	22-Feb-17	25-Feb-17	24-Mar-17	28-Mar-17	0%	-26	-26																		
A31850	SPS - Construct Sprinkler Tank and FS Water Tank	15	27-Feb-17	15-Mar-17	29-Mar-17	19-Apr-17	0%	-26	-26																		
SPS - ABWF Works																											
Pump Station																											
A37980	Pump Station - Ceiling / Wall Plastering (Wet Trades)	30	27-Feb-17	01-Apr-17	11-Mar-17	19-Apr-17	0%	-11	509																		
A37990	Pump Station - Ceiling & Wall Painting	27	16-Mar-17	20-Apr-17	29-Mar-17	05-May-17	0%	-11	509																		
General Area																											
A31880	Ceiling / Wall Plastering (Wet Trades)	30	27-Feb-17	01-Apr-17	29-Mar-17	09-May-17	0%	-26	-26																		
CLP Meter Cabinet Room																											
A31920	CLP Cabinet Room - Ceiling & Wall Plastering (Wet Trades)	7	27-Feb-17	06-Mar-17	29-Mar-17	06-Apr-17	0%	-26	-14																		
SPS - Building Services																											
Mechanical Works																											
A32100	MVAC - Install MEP (1st/Fix)	30	27-Feb-17	01-Apr-17	29-Mar-17	09-May-17	0%	-26	491																		
Storm Drain / Sewage Pipes (Outside SPS)																											
A32120	Sewerage - Construct 5x Manholes	21	12-Dec-16	07-Jan-17	12-Dec-16 A	26-Jan-17 A	100%	-15																			
A32130	Sewerage - Install 450 / 300 Drainage Pipes & Testing	31	09-Jan-17	16-Feb-17	09-Jan-17 A	04-Feb-17	0%	10	48																		
A32140	Sewerage - Install 2x200 dia Raising Main Pipes & Testing	31	09-Jan-17	16-Feb-17	09-Jan-17 A	09-Feb-17	0%	6	44																		
A32150	Sewerage - Final Connection to PIW Main Pipes	14	17-Feb-17	04-Mar-17	10-Feb-17	25-Feb-17	0%	6	44																		
Plumbing and Drainage																											
A32160	SPS (P&D) - Install Pumps, Valves & Equipment	30	27-Feb-17	01-Apr-17	29-Mar-17	09-May-17	0%	-26	-11																		
FS Pipeworks																											
A32180	SPS (FS) - B1/F MEP (1st Fix)	30	27-Feb-17	01-Apr-17	29-Mar-17	09-May-17	0%	-26	-26																		
ELV Works																											
A32200	SPS (ELV) - B1/F MEP (1st Fix)	30	27-Feb-17	01-Apr-17	29-Mar-17	09-May-17	0%	-26	-26																		
ICP WORKS (Interfacing Car Park)																											
Stage 2A																											
Portion A																											
Portion A																											
A32420	Complete Pilecaps & Bottom Slab at Portion A1, A2, A3, A4 & A5	0		16-Dec-16		16-Dec-16 A	100%	1																			



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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017						
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09				
Portion A5 - Pilecaps & Bottom slab																																
A32500	Portion A5 - BD Inspection & Approval for drainages	0		10-Dec-16		10-Dec-16 A	100%	0		◆ Portion A5 - BD Inspection & Approval for drainages, Portion A5 - BD Inspection & A																						
Portion B																																
Portion B																																
A32520	Complete Pilecaps & Bottom Slab at Portion B1, B2, B3, B4 & B6	0		11-Feb-17		05-Jan-17 A	100%	30		◆ Complete Pilecaps & Bottom Slab at Port																						
Portion B3 - Pilecaps & Bottom slab																																
A32590	Portion B3 - BD Inspection & Approval for drainages	0		08-Dec-16		08-Dec-16 A	100%	0		◆ Portion B3 - BD Inspection & Approval for drainages, Portion B3 - BD Inspection & App																						
Portion B4 - Pilecaps & Bottom slab																																
A32710	Portion B4 - Cutting of H-Piles and Install capping plate	4	17-Jan-17	20-Jan-17	09-Dec-16 A	12-Dec-16 A	100%	32		— A32710, Portion B4 - Cutting of H-Piles and Install capp																						
A32720	Portion B4 - Construct Manholes	2	21-Jan-17	23-Jan-17	13-Dec-16 A	16-Dec-16 A	100%	30		— A32720, Portion B4 - Construct Manholes, Portion B4																						
A32730	Portion B4 - Pile Caps & ground beam	6	21-Jan-17	27-Jan-17	13-Dec-16 A	23-Dec-16 A	100%	28		— A32730, Portion B4 - Pile Caps & ground beam, Po																						
A32740	Portion B4 - Remove formworks, backfill and blinding concrete	1	01-Feb-17	01-Feb-17	24-Dec-16 A	26-Dec-16 A	100%	27		— A32740, Portion B4 - Remove formworks, back																						
A32750	Portion B4 - Install under slab drain pipe	2	02-Feb-17	03-Feb-17	27-Dec-16 A	27-Dec-16 A	100%	29		— A32750, Portion B4 - Install under slab drain p																						
A32760	Portion B4 - BD Inspection & Approval for drainages	0		08-Feb-17		28-Dec-16 A	100%	33		◆ Portion B4 - BD Inspection & Approval for c																						
A32770	Portion B4 - Construct Secondary beam and bottom slab @ Lvl -0.6mPD	9	02-Feb-17	11-Feb-17	29-Dec-16 A	05-Jan-17 A	100%	30		— A32770, Portion B4 - Construct Second																						
Waling and Strut																																
@ Sheet Pile Type A and Type A2																																
A32780	Portion B8 - Install waling and Strut @ +4.6mPD	2	17-Dec-16	19-Dec-16	15-Dec-16 A	21-Dec-16 A	100%	-1		— A32780, Portion B8 - Install waling and Strut @ +4.6mPD, Portion B8 - Insta																						
A32800	Portion A7 - Install waling and Strut @ +4.6mPD	2	17-Dec-16	19-Dec-16	16-Dec-16 A	21-Dec-16 A	100%	-1		— A32800, Portion A7 - Install waling and Strut @ +4.6mPD, Portion A7 - Insta																						
A32790	Portion B11 - Install waling and Strut @ +4.6mPD	2	20-Dec-16	21-Dec-16	07-Jan-17 A	12-Jan-17 A	100%	-18		— A32790, Portion B11 - Install waling and Strut @ +4.6mPD, P																						
A32820	Portion B10 - Install waling and Strut @ +4.6mPD	2	14-Feb-17	15-Feb-17	07-Jan-17 A	10-Jan-17 A	100%	32		— A32820, Portion B10 - Install waling a																						
A32830	Portion B13 - Install waling and Strut @ +4.6mPD	3	16-Feb-17	18-Feb-17	07-Jan-17 A	13-Jan-17 A	100%	29		— A32830, Portion B13 - Install walin																						
Sheet Pile Type A1 between ICP and SPS																																
A32840	Cut Type A1 Sheet Pile at +1.725mPD	6	17-Dec-16	23-Dec-16	17-Dec-16 A	23-Dec-16 A	100%	1		— A32840, Cut Type A1 Sheet Pile at +1.725mPD, Cut Type A1 Sheet Pile at																						
A32850	Excavate down to +1.2mPD	3	24-Dec-16	29-Dec-16	24-Dec-16 A	29-Dec-16 A	100%	1		— A32850, Excavate down to +1.2mPD, Excavate down to +1.2mPD																						
Stage 2B																																
Install waling and Strut at +1.5mPD for Sheet Pile Type A1																																
A32870	Portion B7 - Install waling and Strut @ +1.5mPD	2	10-Feb-17	11-Feb-17	07-Dec-16 A	17-Dec-16 A	100%	43		— A32870, Portion B7 - Install waling and																						
A32880	Portion B10 - Install waling and Strut @ +1.5mPD	2	13-Feb-17	14-Feb-17	06-Jan-17 A	14-Jan-17 A	100%	24		— A32880, Portion B10 - Install waling a																						
Stage 3																																
ELS and Pile cap construction																																
Portion A6																																
A32890	Portion A6 - 2nd Layer Excavation @ +0.7mPD	2	13-Feb-17	14-Feb-17	11-Jan-17 A	14-Jan-17 A	100%	24		— A32890, Portion A6 - 2nd Layer Excav																						
A32900	Portion A6 - 2nd layer lateral support Installation @ +1.0mPD	4	15-Feb-17	18-Feb-17	16-Jan-17 A	18-Jan-17 A	100%	25		— A32900, Portion A6 - 2nd layer late																						
A32910	Portion A6 - Excavate to pile cap and grade beam formation level to -2.075	6	20-Feb-17	25-Feb-17	18-Jan-17 A	18-Jan-17 A	100%	31		— A32910, Portion A6 - Excavate																						
A32920	Portion A6 - Construct remaining pile cap and grade beam	7	27-Feb-17	06-Mar-17	18-Jan-17 A	07-Feb-17	0%	23	204	— A32920, Portion A6 - Co																						
Portion B6																																
A32930	Portion B6 - 2nd Layer Excavation @ +0.7mPD	2	15-Feb-17	16-Feb-17	06-Jan-17 A	14-Jan-17 A	100%	26		— A32930, Portion B6 - 2nd Layer Exca																						
A32940	Portion B6 - 2nd layer lateral support Installation @ +1.0mPD	4	17-Feb-17	21-Feb-17	18-Jan-17 A	22-Jan-17 A	100%	23		— A32940, Portion B6 - 2nd layer la																						
A32950	Portion B6 - Excavate to pile cap and grade beam formation level to -2.075	2	22-Feb-17	23-Feb-17	23-Jan-17 A	02-Feb-17	0%	18	589	— A32950, Portion B6 - Excavate f																						
A32960	Portion B6 - Construct remaining pile cap and grade beam	6	24-Feb-17	02-Mar-17	06-Feb-17 A	07-Feb-17	0%	20	208	— A32960, Portion B6 - Const																						
Portion A7																																
A32970	Portion A7 - 2nd Layer Excavation @ +0.7mPD	2	13-Feb-17	14-Feb-17	09-Jan-17 A	11-Jan-17 A	100%	27		— A32970, Portion A7 - 2nd Layer Excav																						
A32980	Portion A7 - 2nd layer lateral support Installation @ +1.0mPD	4	15-Feb-17	18-Feb-17	12-Jan-17 A	17-Jan-17 A	100%	26		— A32980, Portion A7 - 2nd layer late																						
A32990	Portion A7 - Excavate to pile cap and grade beam formation level to -2.075	2	20-Feb-17	21-Feb-17	18-Jan-17 A	25-Jan-17 A	100%	21		— A32990, Portion A7 - Excavate to																						
A33000	Portion A7 - Construct remaining pile cap and grade beam	7	22-Feb-17	01-Mar-17	01-Feb-17	08-Feb-17	0%	18	207	— A33000, Portion A7 - Const																						
Portion B7																																

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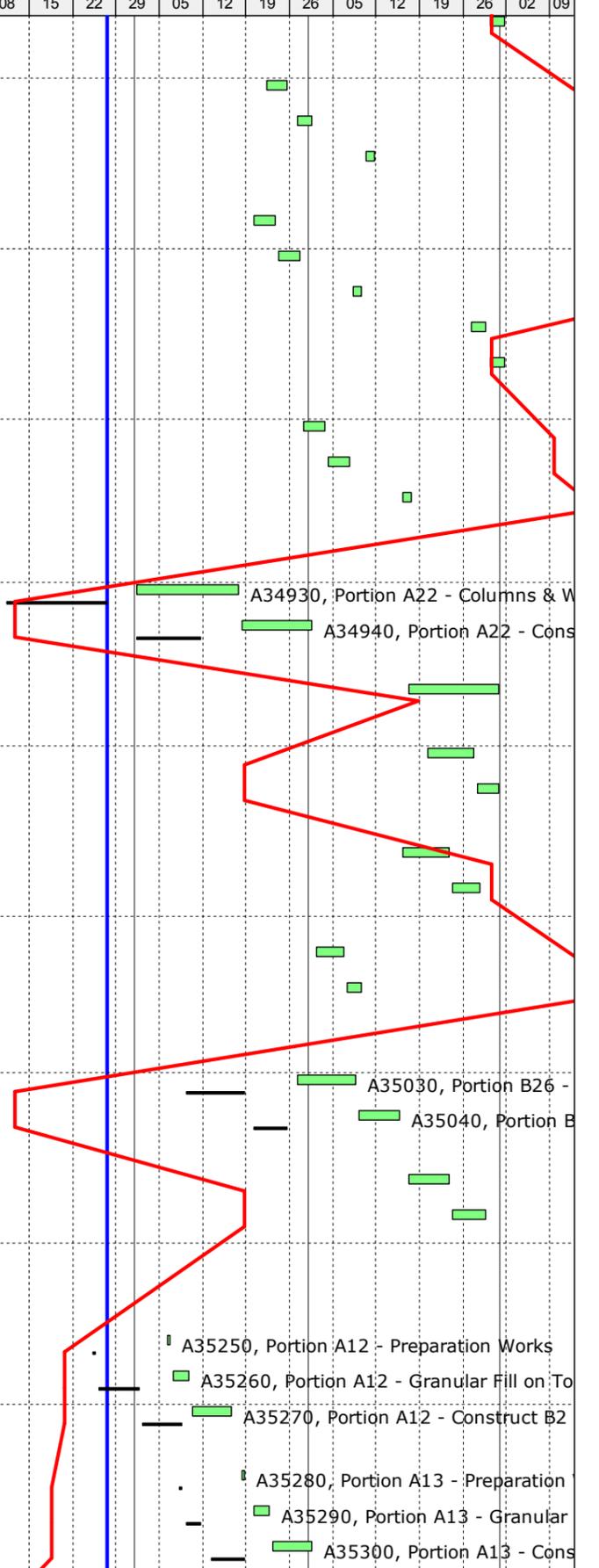
Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017						
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09				
A33380	Portion B12 - 2nd layer lateral support Installation @ +1.0mPD	4	04-May-17	08-May-17	02-Feb-17	06-Feb-17	0%	72	259																							
A33390	Portion B12 - Excavate to pile cap and grade beam formation level to -2.07	2	09-May-17	10-May-17	07-Feb-17	08-Feb-17	0%	72	259																							
A33400	Portion B12 - Construct remaining pile cap and grade beam	4	11-May-17	15-May-17	09-Feb-17	13-Feb-17	0%	72	259																							
Secondary Beam and Bottom Slab Construction																																
Portion A6																																
A33450	Portion A6 - Lay under slab drainages, backfill, blinding & waterproofing	6	07-Mar-17	13-Mar-17	08-Feb-17	14-Feb-17	0%	23	204																							
A33460	Portion A6 - Construct Manholes & Sump Pits	6	07-Mar-17	13-Mar-17	08-Feb-17	14-Feb-17	0%	23	204																							
A33470	Portion A6 - BD Inspection & Approval for drainages	1	13-Mar-17	13-Mar-17	14-Feb-17	14-Feb-17	0%	23	204																							
A33480	Portion A6 - Cast blinding layer and rebar fixing for secondary beam and bo	14	14-Mar-17	29-Mar-17	15-Feb-17	02-Mar-17	0%	23	204																							
A33490	Portion A6 - Cast concrete	1	30-Mar-17	30-Mar-17	03-Mar-17	03-Mar-17	0%	23	204																							
Portion B6																																
A33500	Portion B6 - Lay under slab drainages, backfill, blinding & waterproofing	4	03-Mar-17	07-Mar-17	08-Feb-17	11-Feb-17	0%	20	284																							
A33510	Portion B6 - Construct Manholes & Sump Pits	4	03-Mar-17	07-Mar-17	08-Feb-17	11-Feb-17	0%	20	286																							
A33520	Portion B6 - BD Inspection & Approval for drainages	1	09-Mar-17	09-Mar-17	14-Feb-17	14-Feb-17	0%	20	284																							
A33530	Portion B6 - Cast blinding layer and rebar fixing for secondary beam and bo	9	10-Mar-17	20-Mar-17	15-Feb-17	24-Feb-17	0%	20	284																							
A33540	Portion B6 - Cast concrete	1	21-Mar-17	21-Mar-17	25-Feb-17	25-Feb-17	0%	20	284																							
Portion A7																																
A33550	Portion A7 - Lay under slab drainages, backfill, blinding & waterproofing	6	07-Mar-17	13-Mar-17	09-Feb-17	15-Feb-17	0%	22	250																							
A33560	Portion A7 - Construct Manholes & Sump Pits	6	07-Mar-17	13-Mar-17	09-Feb-17	15-Feb-17	0%	22	250																							
A33570	Portion A7 - BD Inspection & Approval for drainages	1	13-Mar-17	13-Mar-17	15-Feb-17	15-Feb-17	0%	22	250																							
A33580	Portion A7 - Cast blinding layer and rebar fixing for secondary beam and bo	14	14-Mar-17	29-Mar-17	16-Feb-17	03-Mar-17	0%	22	250																							
A33590	Portion A7 - Cast concrete	1	30-Mar-17	30-Mar-17	04-Mar-17	04-Mar-17	0%	22	250																							
Portion B7																																
A33600	Portion B7 - Lay under slab drainages, backfill, blinding & waterproofing	4	07-Mar-17	10-Mar-17	18-Feb-17	22-Feb-17	0%	14	560																							
A33610	Portion B7 - Construct Manholes & Sump Pits	4	07-Mar-17	10-Mar-17	18-Feb-17	22-Feb-17	0%	14	562																							
A33620	Portion B7 - BD Inspection & Approval for drainages	1	13-Mar-17	13-Mar-17	24-Feb-17	24-Feb-17	0%	14	560																							
A33630	Portion B7 - Cast blinding layer and rebar fixing for secondary beam and bo	9	14-Mar-17	23-Mar-17	25-Feb-17	07-Mar-17	0%	14	560																							
A33640	Portion B7 - Cast concrete	1	24-Mar-17	24-Mar-17	08-Mar-17	08-Mar-17	0%	14	560																							
Portion A8																																
A33650	Portion A8 - Lay under slab drainages, backfill, blinding & waterproofing	4	23-Mar-17	27-Mar-17	07-Feb-17	10-Feb-17	0%	38	283																							
A33660	Portion A8 - Construct Manholes & Sump Pits	4	23-Mar-17	27-Mar-17	07-Feb-17	10-Feb-17	0%	38	285																							
A33670	Portion A8 - BD Inspection & Approval for drainages	1	29-Mar-17	29-Mar-17	13-Feb-17	13-Feb-17	0%	38	283																							
A33680	Portion A8 - Cast blinding layer and rebar fixing for secondary beam and bo	10	30-Mar-17	11-Apr-17	14-Feb-17	24-Feb-17	0%	38	283																							
A33690	Portion A8 - Cast concrete	1	12-Apr-17	12-Apr-17	25-Feb-17	25-Feb-17	0%	38	283																							
Portion B8																																
A33700	Portion B8 - Lay under slab drainages, backfill, blinding & waterproofing	4	23-Mar-17	27-Mar-17	07-Mar-17	10-Mar-17	0%	14	302																							
A33710	Portion B8 - Construct Manholes & Sump Pits	4	23-Mar-17	27-Mar-17	07-Mar-17	10-Mar-17	0%	14	304																							
A33720	Portion B8 - BD Inspection & Approval for drainages	1	29-Mar-17	29-Mar-17	13-Mar-17	13-Mar-17	0%	14	302																							
A33730	Portion B8 - Cast blinding layer and rebar fixing for secondary beam and bo	10	30-Mar-17	11-Apr-17	14-Mar-17	24-Mar-17	0%	14	302																							
A33740	Portion B8 - Cast concrete	1	12-Apr-17	12-Apr-17	25-Mar-17	25-Mar-17	0%	14	302																							
Portion B9																																
A33750	Portion B9 - Lay under slab drainages, backfill, blinding & waterproofing	3	10-Apr-17	12-Apr-17	15-Feb-17	17-Feb-17	0%	45	255																							
A33760	Portion B9 - Construct Manholes & Sump Pits	3	10-Apr-17	12-Apr-17	15-Feb-17	17-Feb-17	0%	45	258																							
A33770	Portion B9 - BD Inspection & Approval for drainages	1	19-Apr-17	19-Apr-17	21-Feb-17	21-Feb-17	0%	45	255																							
A33780	Portion B9 - Cast blinding layer and rebar fixing for secondary beam and bo	9	20-Apr-17	29-Apr-17	22-Feb-17	03-Mar-17	0%	45	255																							

(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017						
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09				
A34260	Portion A15 - Columns & Walls Construction	14	22-Apr-17	10-May-17	01-Feb-17	16-Feb-17	0%	65	272																							
A34270	Portion A15 - Construct B1 Slab	9	11-May-17	20-May-17	17-Feb-17	27-Feb-17	0%	65	282																							
Portion B17																																
A34300	Portion B17 - Columns & Walls Construction	11	26-Apr-17	10-May-17	28-Feb-17	11-Mar-17	0%	45	249																							
A34310	Portion B17 - Construct B1 Slab	7	11-May-17	18-May-17	13-Mar-17	20-Mar-17	0%	45	249																							
B1 Slab Construction (Phase 3) - Construct B2/F to B1/F Cols, Walls & B1 Slab and Remove Struts																																
Portion A16																																
A34320	Portion A16 - Columns & Walls Construction	5	31-Mar-17	06-Apr-17	04-Mar-17	09-Mar-17	0%	23	204																							
A34330	Portion A16 - Construct B1 Slab	4	07-Apr-17	11-Apr-17	10-Mar-17	14-Mar-17	0%	23	204																							
A34340	Portion A6 - Removal of Lateral Support	2	24-Apr-17	25-Apr-17	23-Mar-17	24-Mar-17	0%	23	204																							
A34350	Portion A16 - Columns & Walls Construction (Deffered Area)	4	26-Apr-17	29-Apr-17	25-Mar-17	29-Mar-17	0%	23	204																							
A34360	Portion A16 - Construct B1 Slab (Deffered Area)	3	02-May-17	05-May-17	30-Mar-17	01-Apr-17	0%	23	204																							
Portion B18																																
A34370	Portion B18 - Columns & Walls Construction	6	31-Mar-17	07-Apr-17	04-Mar-17	10-Mar-17	0%	23	279																							
A34380	Portion B18 - Construct B1 Slab	4	08-Apr-17	12-Apr-17	11-Mar-17	15-Mar-17	0%	23	279																							
A34390	Portion B6 - Removal of Lateral Support	2	25-Apr-17	26-Apr-17	24-Mar-17	25-Mar-17	0%	23	279																							
A34400	Portion B18 - Columns & Walls Construction (Deffered Area)	3	27-Apr-17	29-Apr-17	27-Mar-17	29-Mar-17	0%	23	279																							
A34410	Portion B18 - Construct B1 Slab (Deffered Area)	3	02-May-17	05-May-17	30-Mar-17	01-Apr-17	0%	23	279																							
Portion A17																																
A34420	Portion A17 - Columns & Walls Construction	7	31-Mar-17	08-Apr-17	06-Mar-17	13-Mar-17	0%	22	250																							
A34430	Portion A17 - Construct B1 Slab	5	10-Apr-17	18-Apr-17	14-Mar-17	18-Mar-17	0%	22	250																							
A34440	Portion A7- Removal of Lateral Support	2	27-Apr-17	28-Apr-17	28-Mar-17	29-Mar-17	0%	22	542																							
Portion B19																																
A34450	Portion B19 - Columns & Walls Construction	6	31-Mar-17	07-Apr-17	06-Mar-17	11-Mar-17	0%	22	252																							
A34460	Portion B19 - Construct B1 Slab	4	08-Apr-17	12-Apr-17	13-Mar-17	16-Mar-17	0%	22	252																							
A34470	Portion B7 - Removal of Lateral Support	2	25-Apr-17	26-Apr-17	25-Mar-17	27-Mar-17	0%	22	278																							
A34480	Portion B19 - Columns & Walls Construction (Deffered Area)	3	27-Apr-17	29-Apr-17	28-Mar-17	30-Mar-17	0%	22	278																							
Portion A18																																
A34500	Portion A18 - Columns & Walls Construction	7	13-Apr-17	24-Apr-17	27-Feb-17	06-Mar-17	0%	38	283																							
A34510	Portion A18 - Construct B1 Slab	4	25-Apr-17	28-Apr-17	07-Mar-17	10-Mar-17	0%	38	283																							
A34520	Portion A8 - Removal of Lateral Support	2	10-May-17	11-May-17	20-Mar-17	21-Mar-17	0%	38	283																							
A34530	Portion A18 - Columns & Walls Construction (Deffered Area)	3	12-May-17	15-May-17	22-Mar-17	24-Mar-17	0%	38	283																							
A34540	Portion A18 - Construct B1 Slab (Deffered Area)	3	16-May-17	18-May-17	25-Mar-17	28-Mar-17	0%	38	283																							
Portion B20																																
A34550	Portion B20 - Columns & Walls Construction	6	13-Apr-17	22-Apr-17	27-Mar-17	01-Apr-17	0%	14	302																							
Portion B21																																
A34580	Portion B21 - Columns & Walls Construction	4	04-May-17	08-May-17	06-Mar-17	09-Mar-17	0%	45	255																							
A34590	Portion B21 - Construct B1 Slab	3	09-May-17	11-May-17	10-Mar-17	13-Mar-17	0%	45	281																							
A34600	Portion B9 - Removal of Lateral Support	2	20-May-17	22-May-17	22-Mar-17	23-Mar-17	0%	45	281																							
A34610	Portion B21 - Columns & Walls Construction (Deffered Area)	3	23-May-17	25-May-17	24-Mar-17	27-Mar-17	0%	45	281																							
A34620	Portion B21 - Construct B1 Slab (Deffered Area)	3	26-May-17	29-May-17	28-Mar-17	30-Mar-17	0%	45	281																							
Portion A19																																
A34680	Portion A19 - Columns & Walls Construction	7	22-May-17	29-May-17	03-Mar-17	10-Mar-17	0%	62	247																							
A34690	Portion A19 - Construct B1 Slab	4	31-May-17	03-Jun-17	11-Mar-17	15-Mar-17	0%	62	247																							
A34700	Portion A9 - Removal of Lateral Support	2	13-Jun-17	14-Jun-17	24-Mar-17	25-Mar-17	0%	62	247																							
A34710	Portion A19 - Columns & Walls Construction (Deffered Area)	3	15-Jun-17	17-Jun-17	27-Mar-17	29-Mar-17	0%	62	257																							

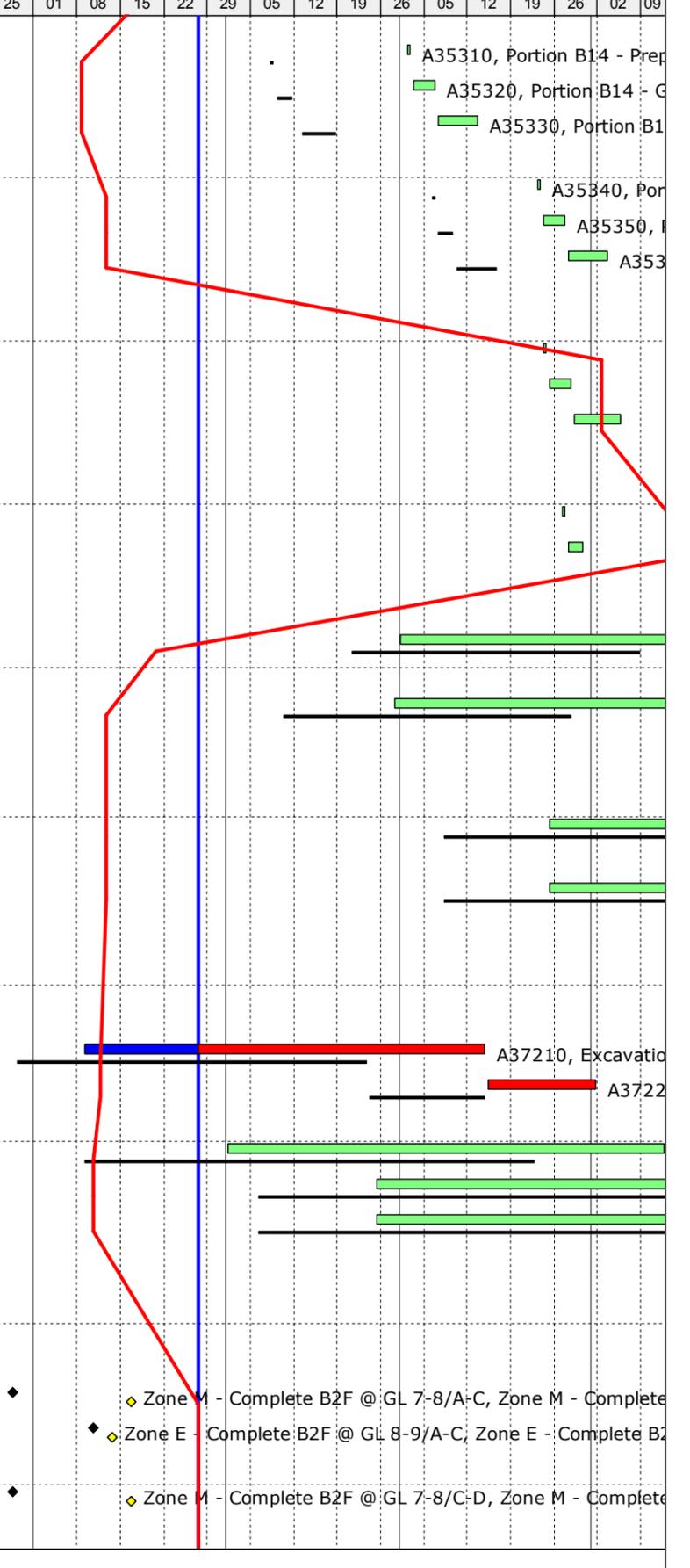
(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017		April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19
A34720	Portion A19 - Construct B1 Slab (Deffered Area)	3	19-Jun-17	21-Jun-17	30-Mar-17	01-Apr-17	0%	62	257																
Portion A20																									
A34760	Portion A20 - Columns & Walls Construction	4	31-May-17	03-Jun-17	22-Feb-17	25-Feb-17	0%	77	275																
A34770	Portion A20 - Construct B1 Slab	3	05-Jun-17	07-Jun-17	27-Feb-17	01-Mar-17	0%	77	275																
A34780	Portion A10 - Removal of Lateral Support	2	16-Jun-17	17-Jun-17	10-Mar-17	11-Mar-17	0%	84	289																
Portion A21																									
A34790	Portion A21 - Columns & Walls Construction	4	31-May-17	03-Jun-17	20-Feb-17	23-Feb-17	0%	79	559																
A34800	Portion A21 - Construct B1 Slab	3	05-Jun-17	07-Jun-17	24-Feb-17	27-Feb-17	0%	79	559																
A34810	Portion A11 - Removal of Lateral Support	2	16-Jun-17	17-Jun-17	08-Mar-17	09-Mar-17	0%	86	589																
A34820	Portion A21 - Columns & Walls Construction (Deffered Area)	3	15-Jun-17	17-Jun-17	27-Mar-17	29-Mar-17	0%	62	247																
A34830	Portion A21 - Construct B1 Slab (Deffered Area)	3	19-Jun-17	21-Jun-17	30-Mar-17	01-Apr-17	0%	62	247																
Portion B24																									
A34840	Portion B24 - Columns & Walls Construction	4	31-May-17	03-Jun-17	28-Feb-17	03-Mar-17	0%	72	259																
A34850	Portion B24 - Construct B1 Slab	3	05-Jun-17	07-Jun-17	04-Mar-17	07-Mar-17	0%	72	337																
A34860	Portion B12 - Removal of Lateral Support	2	16-Jun-17	17-Jun-17	16-Mar-17	17-Mar-17	0%	79	582																
Roof Slab (Portion A) - Construct B1/F to Roof Lvl Cols, Walls & Roof Slab																									
Portion A22																									
A34930	Portion A22 - Columns & Walls Construction	15	11-Jan-17	27-Jan-17	01-Feb-17	17-Feb-17	0%	-15	167																
A34940	Portion A22 - Construct Roof Slab	10	01-Feb-17	11-Feb-17	18-Feb-17	01-Mar-17	0%	-15	167																
Portion A23																									
A34950	Portion A23 - Columns & Walls Construction	13	22-May-17	06-Jun-17	17-Mar-17	31-Mar-17	0%	50	250																
Portion A24																									
A34970	Portion A24 - Columns & Walls Construction	7	19-Apr-17	26-Apr-17	20-Mar-17	27-Mar-17	0%	22	262																
A34980	Portion A24 - Construct Roof Slab	4	27-Apr-17	02-May-17	28-Mar-17	31-Mar-17	0%	22	262																
Portion A25																									
A34990	Portion A25 - Columns & Walls Construction	7	05-Jun-17	12-Jun-17	16-Mar-17	23-Mar-17	0%	62	284																
A35000	Portion A25 - Construct Roof Slab	4	13-Jun-17	16-Jun-17	24-Mar-17	28-Mar-17	0%	62	284																
Portion A26																									
A35010	Portion A26 - Columns & Walls Construction	4	08-Jun-17	12-Jun-17	02-Mar-17	06-Mar-17	0%	77	303																
A35020	Portion A26 - Construct Roof Slab	3	13-Jun-17	15-Jun-17	07-Mar-17	09-Mar-17	0%	77	303																
Roof Slab (Portion B) - Construct B1/F to Roof Lvl Cols, Walls & Roof Slab																									
Portion B26																									
A35030	Portion B26 - Columns & Walls Construction	9	09-Feb-17	18-Feb-17	27-Feb-17	08-Mar-17	0%	-15	232																
A35040	Portion B26 - Construct Roof Slab	6	20-Feb-17	25-Feb-17	09-Mar-17	15-Mar-17	0%	-15	232																
Portion B28																									
A35070	Portion B28 - Columns & Walls Construction	6	13-Apr-17	22-Apr-17	17-Mar-17	23-Mar-17	0%	22	341																
A35080	Portion B28 - Construct Roof Slab	5	24-Apr-17	28-Apr-17	24-Mar-17	29-Mar-17	0%	22	341																
ICP - ABWF Works																									
B2 Slab Construction (Phase 1)																									
Portion A12 - B2 Slab (200 thk) @ Lvl -0.05mPD																									
A35250	Portion A12 - Preparation Works	1	25-Jan-17	25-Jan-17	06-Feb-17	06-Feb-17	0%	-7	255																
A35260	Portion A12 - Granular Fill on Top of Pilecaps & Bottom slab	3	26-Jan-17	01-Feb-17	07-Feb-17	09-Feb-17	0%	-7	255																
A35270	Portion A12 - Construct B2 Slab	6	02-Feb-17	08-Feb-17	10-Feb-17	16-Feb-17	0%	-7	255																
Portion A13 - B2 Slab (200 thk) @ Lvl -0.05mPD																									
A35280	Portion A13 - Preparation Works	1	08-Feb-17	08-Feb-17	18-Feb-17	18-Feb-17	0%	-9	284																
A35290	Portion A13 - Granular Fill on Top of Pilecaps & Bottom slab	3	09-Feb-17	11-Feb-17	20-Feb-17	22-Feb-17	0%	-9	284																
A35300	Portion A13 - Construct B2 Slab	6	13-Feb-17	18-Feb-17	23-Feb-17	01-Mar-17	0%	-9	284																



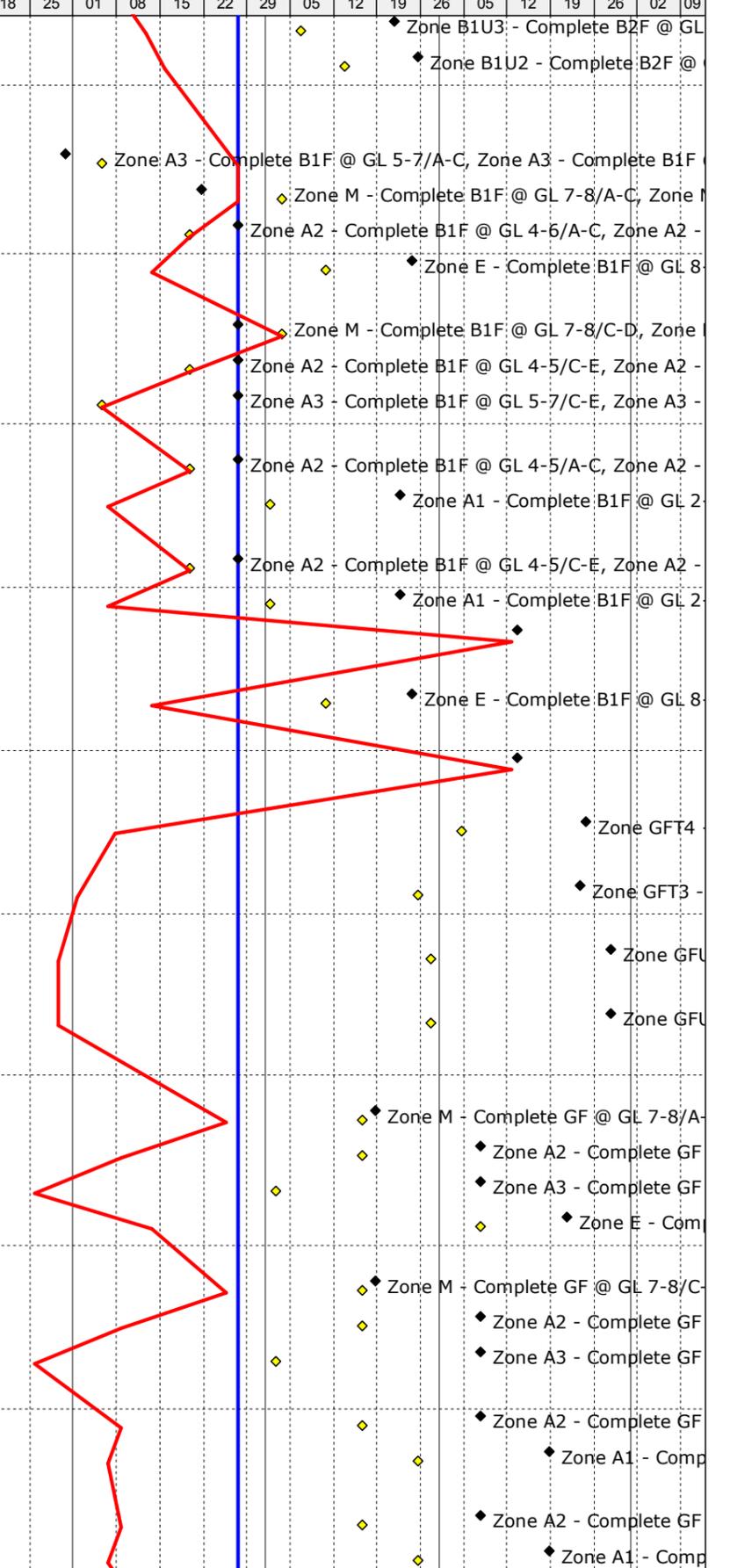
(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017				
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09		
Portion B14 - B2 Slab (200 thk) @ Lvl -0.05mPD																														
A35310	Portion B14 - Preparation Works	1	08-Feb-17	08-Feb-17	02-Mar-17	02-Mar-17	0%	-19	556																					
A35320	Portion B14 - Granular Fill on Top of Pilecaps & Bottom slab	3	09-Feb-17	11-Feb-17	03-Mar-17	06-Mar-17	0%	-19	556																					
A35330	Portion B14 - Construct B2 Slab	6	13-Feb-17	18-Feb-17	07-Mar-17	13-Mar-17	0%	-19	556																					
Portion B15 - B2 Slab (200 thk) @ Lvl -0.05mPD																														
A35340	Portion B15 - Preparation Works	1	06-Mar-17	06-Mar-17	23-Mar-17	23-Mar-17	0%	-15	376																					
A35350	Portion B15 - Granular Fill on Top of Pilecaps & Bottom slab	3	07-Mar-17	09-Mar-17	24-Mar-17	27-Mar-17	0%	-15	376																					
A35360	Portion B15 - Construct B2 Slab	6	10-Mar-17	16-Mar-17	28-Mar-17	03-Apr-17	0%	-15	376																					
B2 Slab Construction (Phase 2)																														
Portion A15 - B2 Slab (200 thk) @ Lvl -0.05mPD																														
A35400	Portion A15 - Preparation Works	1	16-Jun-17	16-Jun-17	24-Mar-17	24-Mar-17	0%	65	282																					
A35410	Portion A15 - Granular Fill on Top of Pilecaps & Bottom slab	3	17-Jun-17	20-Jun-17	25-Mar-17	28-Mar-17	0%	65	282																					
A35420	Portion A15 - Construct B2 Slab	6	21-Jun-17	27-Jun-17	29-Mar-17	05-Apr-17	0%	65	282																					
B2 Slab Construction (Phase 3)																														
Portion A20 - B2 Slab (200 thk) @ Lvl -0.05mPD																														
A35790	Portion A20 - Preparation Works	1	04-Jul-17	04-Jul-17	27-Mar-17	27-Mar-17	0%	77	535																					
A35800	Portion A20 - Granular Fill on Top of Pilecaps & Bottom slab	3	05-Jul-17	07-Jul-17	28-Mar-17	30-Mar-17	0%	77	535																					
B2/F to B1/F ABWF and Fitout Works																														
Portion A (Phase 1)																														
A35880	ABWF Works - Internal Ceiling & Wall Plastering (Wet Trades)	40	21-Feb-17	08-Apr-17	01-Mar-17	20-Apr-17	0%	-7	255																					
Portion B (Phase 1)																														
A36030	ABWF Works - Internal Ceiling & Wall Plastering (Wet Trades)	40	10-Feb-17	28-Mar-17	28-Feb-17	19-Apr-17	0%	-15	376																					
B1/F to Roof ABWF and Fitout Works																														
Portion A																														
Phase 1 & 2																														
A36150	ABWF Works - Internal Ceiling & Wall Plastering (Wet Trades)	60	08-Mar-17	23-May-17	25-Mar-17	10-Jun-17	0%	-15	167																					
Phase 3																														
A36190	ABWF Works - Internal Ceiling & Wall Plastering (Wet Trades)	60	08-Mar-17	23-May-17	25-Mar-17	10-Jun-17	0%	-15	167																					
External Works																														
SPS																														
SPS - G/F External Utilities & Roadworks																														
Grd Lvl - Watermain / FS Pipes Connection (Outside SPS) to PIW																														
A37210	Excavation Across Main Road From SPS Site to PIW Main pipes	45	29-Dec-16	23-Feb-17	09-Jan-17 A	14-Mar-17	0%	-16	-9																					
A37220	Construct Trench & Valve Pit	16	24-Feb-17	14-Mar-17	15-Mar-17	01-Apr-17	0%	-16	-9																					
Grd Lvl - Storm / Drainage Connection (Outside SPS)																														
A37250	Sewerage - Construct 5x Manholes	60	09-Jan-17	22-Mar-17	01-Feb-17	12-Apr-17	0%	-17	2																					
A37260	Sewerage - Install 450 / 300 Storm Drainage Pipes & Testing	60	06-Feb-17	20-Apr-17	25-Feb-17	12-May-17	0%	-17	2																					
A37270	Sewerage - Install 2x200 dia Raising Main Pipes & Testing	60	06-Feb-17	20-Apr-17	25-Feb-17	12-May-17	0%	-17	2																					
M+ ABWF, MEP and Fit-Out Works																														
RC Structure Completion & ABWF Access Dates																														
B2F-B1F Access																														
Sector C1 Access																														
A11120	Zone M - Complete B2F @ GL 7-8/A-C	0		16-Jan-17		28-Dec-16 A	100%	19																						
A11130	Zone E - Complete B2F @ GL 8-9/A-C	0		13-Jan-17		10-Jan-17 A	100%	3																						
Sector C2 Access																														
A11150	Zone M - Complete B2F @ GL 7-8/C-D	0		16-Jan-17		28-Dec-16 A	100%	19																						
Sector C3 Access																														



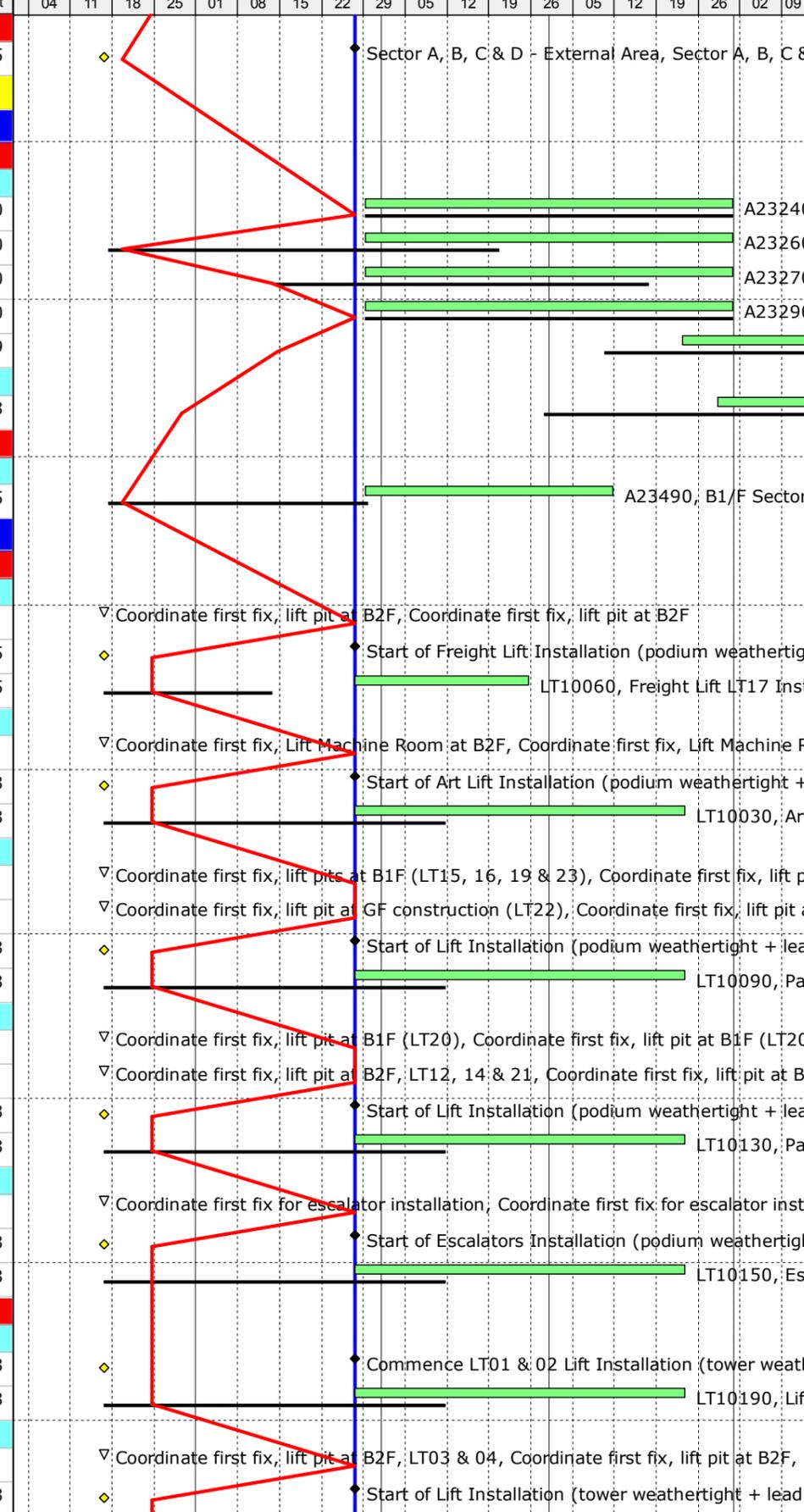
(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017							
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09					
A11650	Zone B1U3 - Complete B2F @ GL 1'-3'/H'-J'	0		06-Feb-17		21-Feb-17	0%	-15	703																								
A11640	Zone B1U2 - Complete B2F @ GL 4'/I'-J'	0		13-Feb-17		25-Feb-17	0%	-12	699																								
B1F-GF Access																																	
Sector C1 Access																																	
A11920	Zone A3 - Complete B1F @ GL 5-7/A-C	0		05-Jan-17		30-Dec-16 A	100%	6																									
A11930	Zone M - Complete B1F @ GL 7-8/A-C	0		03-Feb-17		21-Jan-17 A	100%	13																									
A12390	Zone A2 - Complete B1F @ GL 4-6/A-C	0		19-Jan-17		27-Jan-17	0%	-8	728																								
A11940	Zone E - Complete B1F @ GL 8-9/A-C	0		10-Feb-17		24-Feb-17	0%	-14	700																								
Sector C2 Access																																	
A11960	Zone M - Complete B1F @ GL 7-8/C-D	0		03-Feb-17		27-Jan-17	0%	7	728																								
A11950	Zone A2 - Complete B1F @ GL 4-5/C-E	0		19-Jan-17		27-Jan-17	0%	-8	728																								
A12400	Zone A3 - Complete B1F @ GL 5-7/C-E	0		05-Jan-17		27-Jan-17	0%	-22	728																								
Sector C3 Access																																	
A12420	Zone A2 - Complete B1F @ GL 4-5/A-C	0		19-Jan-17		27-Jan-17	0%	-8	728																								
A11990	Zone A1 - Complete B1F @ GL 2-4/A-C	0		01-Feb-17		22-Feb-17	0%	-21	702																								
Sector C4 Access																																	
A12470	Zone A2 - Complete B1F @ GL 4-5/C-E	0		19-Jan-17		27-Jan-17	0%	-8	728																								
A12460	Zone A1 - Complete B1F @ GL 2-4/C-E	0		01-Feb-17		22-Feb-17	0%	-21	702																								
A12010	Zone A4 - Complete B1F @ GL 2-4/E-H	0		26-Apr-17		13-Mar-17	0%	44	683																								
Sector A3 Access																																	
A12020	Zone E - Complete B1F @ GL 8-11/A-C	0		10-Feb-17		24-Feb-17	0%	-14	700																								
Sector D3 Access																																	
A12110	Zone A4 - Complete B1F @ GL 2-4/F-H	0		26-Apr-17		13-Mar-17	0%	44	683																								
Sector F2 Access																																	
A12190	Zone GFT4 - Complete B1F @ GL 4'-6'/B'-D'	0		04-Mar-17		24-Mar-17	0%	-20	672																								
Sector G1 Access																																	
A12240	Zone GFT3 - Complete B1F @ GL 5'-6'/D'-G'	0		25-Feb-17		23-Mar-17	0%	-26	673																								
Sector G2 Access																																	
A12280	Zone GFU2 - Complete B1F @ GL 4'-6'/I'-J'	0		27-Feb-17		28-Mar-17	0%	-29	292																								
Sector G4 Access																																	
A12380	Zone GFU2 - Complete B1F @ GL 4'/I'-J'	0		27-Feb-17		28-Mar-17	0%	-29	668																								
GF-1F Access																																	
Sector C1 Access																																	
A12720	Zone M - Complete GF @ GL 7-8/A-C	0		16-Feb-17		18-Feb-17	0%	-2	706																								
A12730	Zone A2 - Complete GF @ GL 4-6/A-C	0		16-Feb-17		07-Mar-17	0%	-19	689																								
A12740	Zone A3 - Complete GF @ GL 5-7/A-C	0		02-Feb-17		07-Mar-17	0%	-33	689																								
A12750	Zone E - Complete GF @ GL 8-9/A-C	0		07-Mar-17		21-Mar-17	0%	-14	675																								
Sector C2 Access																																	
A12770	Zone M - Complete GF @ GL 7-8/C-D	0		16-Feb-17		18-Feb-17	0%	-2	706																								
A12780	Zone A2 - Complete GF @ GL 4-5/C-E	0		16-Feb-17		07-Mar-17	0%	-19	689																								
A12790	Zone A3 - Complete GF @ GL 5-7/C-E	0		02-Feb-17		07-Mar-17	0%	-33	689																								
Sector C3 Access																																	
A12840	Zone A2 - Complete GF @ GL 4-5/A-C	0		16-Feb-17		07-Mar-17	0%	-19	689																								
A12830	Zone A1 - Complete GF @ GL 2-4/A-C	0		25-Feb-17		18-Mar-17	0%	-21	678																								
Sector C4 Access																																	
A12870	Zone A2 - Complete GF @ GL 4-5/C-E	0		16-Feb-17		07-Mar-17	0%	-19	689																								
A12860	Zone A1 - Complete GF @ GL 2-4/C-E	0		25-Feb-17		18-Mar-17	0%	-21	678																								



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Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02
3/F																											
A20700	Sector A, B, C & D - External Area	0		16-Dec-16		27-Jan-17	0%	-39	695																		
ABWF Works Summary																											
M+ Basement ABWF & Building Services																											
Builders' Works																											
B2F																											
A23240	B2/F Sector C Builder's Works	60	29-Jan-17	31-Mar-17	29-Jan-17	31-Mar-17	0%	0	380																		
A23260	B2/F Sector B Builder's Works	60	17-Dec-16	20-Feb-17	29-Jan-17	31-Mar-17	0%	-39	380																		
A23270	B2/F Sector A Builder's Works	60	14-Jan-17	17-Mar-17	29-Jan-17	31-Mar-17	0%	-14	380																		
A23290	B2/F Sector D Builder's Works	60	29-Jan-17	31-Mar-17	29-Jan-17	31-Mar-17	0%	0	380																		
A24500	B2/F Sector F Builder's Works	60	10-Mar-17	14-May-17	23-Mar-17	27-May-17	0%	-13	329																		
B1F																											
A24510	B1/F Sector G Builder's Works	60	28-Feb-17	04-May-17	29-Mar-17	03-Jun-17	0%	-29	323																		
Building Services Installation																											
B1F																											
A23490	B1/F Sector C Building Services (late access area)	40	17-Dec-16	29-Jan-17	29-Jan-17	11-Mar-17	0%	-39	655																		
Lifts and Escalators																											
Podium																											
Freight Lift (LT17)																											
LT10070	Coordinate first fix, lift pit at B2F	127	20-Nov-15	30-Apr-16	16-Dec-16 A	16-Dec-16 A	100%	-164																			
LT10050	Start of Freight Lift Installation (podium weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	515																		
LT10060	Freight Lift LT17 Installation Period	22	16-Dec-16	13-Jan-17	27-Jan-17	25-Feb-17	0%	-34	515																		
Art Lifts (LT11 & 13)																											
LT10040	Coordinate first fix, Lift Machine Room at B2F	127	20-Nov-15	30-Apr-16	16-Dec-16 A	16-Dec-16 A	100%	-164																			
LT10020	Start of Art Lift Installation (podium weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493																		
LT10030	Art Lifts LT11 & 13 Installation Period	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493																		
Passenger Lifts, with disabled access (LT15, 16, 19, 22 & 23)																											
LT10000a	Coordinate first fix, lift pits at B1F (LT15, 16, 19 & 23)	77	11-Mar-16	23-Jun-16	16-Dec-16 A	16-Dec-16 A	100%	-127																			
LT10100	Coordinate first fix, lift pit at GF construction (LT22)	434	20-Jan-16	02-Sep-17	16-Dec-16 A	16-Dec-16 A	100%	192																			
LT10080	Start of Lift Installation (podium weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493																		
LT10090	Passenger Lifts LT 15,16,19,22 & 23 Installation Period	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493																		
Passenger Lifts, FS (LT12, 14, 20 & 21)																											
LT10010a	Coordinate first fix, lift pit at B1F (LT20)	115	20-Jan-16	23-Jun-16	16-Dec-16 A	16-Dec-16 A	100%	-127																			
LT10110	Coordinate first fix, lift pit at B2F, LT12, 14 & 21	127	20-Nov-15	30-Apr-16	16-Dec-16 A	16-Dec-16 A	100%	-164																			
LT10120	Start of Lift Installation (podium weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493																		
LT10130	Passenger Lifts LT12, 14,20&21 Installation Period	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493																		
Escalators (A, B, C, D & E)																											
LT10160	Coordinate first fix for escalator installation	127	20-Nov-15	30-Apr-16	16-Dec-16 A	16-Dec-16 A	100%	-164																			
LT10140	Start of Escalators Installation (podium weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493																		
LT10150	Escalators A,B,C,D&E Installation Period	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493																		
Tower																											
Service Lifts (LT01 & 02)																											
LT10180	Commence LT01 & 02 Lift Installation (tower weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493																		
LT10190	Lift Installation Period (LT01 & 02)	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493																		
Staff Lifts (LT03 & 04)																											
LT10200	Coordinate first fix, lift pit at B2F, LT03 & 04	127	20-Nov-15	30-Apr-16	16-Dec-16 A	16-Dec-16 A	100%	-164																			
LT10210	Start of Lift Installation (tower weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493																		



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										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09		
LT10220	Lift Installation Period (LT03 & 04)	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493	LT10220, Lif																				
Public Lifts (LT05 to 08, 4nos, pit in B2F)																														
LT10230	Coordinate first fix, lift pit at B2F, LT05 to LT08	127	20-Nov-15	30-Apr-16	16-Dec-16 A	16-Dec-16 A	100%	-164		▽ Coordinate first fix, lift pit at B2F, LT05 to LT08, Coordinate first fix, lift pit at B2																				
LT10240	Start of Lift Installation (tower weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493	◆ Start of Lift Installation (tower weathertight + lead																				
LT10250	Lift Installation Period, LT05 & 06, LT05 - 08	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493	LT10250, Lif																				
LT10260	Earliest lift installation for LT07 & 08, if necessary	0		16-Dec-16		27-Jan-17	0%	-34	493	◆ Earliest lift installation for LT07 & 08, if necessary,																				
LT10270	Lift Installation Period, LT07 & 08	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493	LT10270, Lif																				
Public Lifts (LT09 & 10, pit in GF)																														
LT10280	Coordinate first fix, lift pit at GF construction (LT09 & 10)	317	27-Jun-16	02-Sep-17	16-Dec-16 A	16-Dec-16 A	100%	192		▽ Coordinate first fix, lift pit at GF construction (LT09 & 10); Coordinate first fix, lif																				
LT10290	Start of Lift Installation (tower weathertight + lead time)	0		16-Dec-16		27-Jan-17	0%	-34	493	◆ Start of Lift Installation (tower weathertight + lead																				
LT10300	Lift Installation Period, LT09 & 10	44	16-Dec-16	11-Feb-17	27-Jan-17	23-Mar-17	0%	-34	493	LT10300, Lif																				
Co-ordinated External Works & Utilities Services Installation																														
Interface Dates																														
Access Dates																														
A24720	M12 - Lyric Interface North (2nd access) (30Nov16)	0	13-Jan-17		28-Jan-17*		0%	-15	467	◆ M12 - Lyric Interface North (2nd access) (30Nov1																				
A25010	M44 - At-grade Road Footpath at ICP / SPS Frontage (from PIW) (1Jun2016)	0	17-Dec-16		28-Jan-17		0%	-42	461	◆ M44 - At-grade Road Footpath at ICP / SPS Fronta																				
A25020	M45 - At-grade Road Footpath along M+ Basement (from PIW) (1Jun2016)	0	17-Dec-16		28-Jan-17		0%	-42	728	◆ M45 - At-grade Road Footpath along M+ Basemen																				
A25130	M70 - Arts Pavilion Area on M+ side of M+ / Park Interface (t.b.a.)	0	17-Dec-16		28-Jan-17		0%	-42	728	◆ M70 - Arts Pavilion Area on M+ side of M+ / Park I																				
A25000	M43 - At-grade Road Footpath at ICP / SPS Entrance Portal (from PIW) (15)	0	15-Feb-17		15-Feb-17*		0%	0	710	◆ M43 - At-grade Road Footpath at ICP,																				
Vacation Date																														
A25840	M71 - Area Within Initial M+ Hoarding, but on Park Side of M+/Park Interfa	0		16-Dec-16		27-Jan-17*	0%	-42	728	◆ M71 - Area Within Initial M+ Hoarding, but on Park																				
Interface Schedule (Appedix D1 - 16 December 2015)																														
Lyric Theatre Complex and Extended Basement (Lyric)																														
Along Interface North of AEL																														
A25950	Complete excavation north of AEL for B2/F slab and vacate M12	0		16-Dec-16		27-Jan-17*	0%	-33	591	◆ Complete excavation north of AEL for B2/F slab and																				
A25960	Take possession of M12 for external wall construction (30 Nov 2016)	0	13-Jan-17		01-Feb-17		0%	-13	375	◆ Take possession of M12 for external wall constr																				
PIW Phase 1																														
M+ Portal Road Interface PIW at Grade Road																														
A26180	Access Portion M43	0	15-Feb-17		15-Feb-17		0%	0	579	◆ Access Portion M43, Access Portion M																				
M+ Drain Connection to PIW Drainage MH WHC6_1f																														
A26190	Commencement of drainage work for WHC6_1f	0	06-Jan-17		01-Feb-17*		0%	-19	384	◆ Commencement of drainage work for WHC6_1f,																				
A26200	Complete of drainage work for WHC6_1f	0		10-Feb-17		04-Mar-17*	0%	-19	563	◆ Complete of drainage work																				
Park																														
Telecoms Interface w/ Park PIW (W of M+)																														
A26520	Allow Access to Park Contractor to connect ICT Cable Ducts to M+ Draw-pit	0	17-Dec-16		01-Feb-17		0%	-33	591	◆ Allow Access to Park Contractor to connect ICT																				
A26530	Allow Access to Park Contractor to connect ELV Cable Ducts to M+ Draw-pit	0	17-Dec-16		01-Feb-17		0%	-33	591	◆ Allow Access to Park Contractor to connect ELV																				
A26540	Allow Access to Park Contractor to construct & connect FTNS Cable Ducts at	0	17-Dec-16		01-Feb-17		0%	-33	591	◆ Allow Access to Park Contractor to construct & c																				
CLP																														
A26560	Handover M+ - Transformer Room Trx B to CLP	0		03-Mar-17		03-Mar-17*	0%	0	693	◆ Handover M+ - Transforme																				
Construction																														
Seawater Outfall Pipe																														
Submissions & Approval																														
A26620	RSS Review & Approve Trench Detail Design and Method Statement	109	12-Aug-16	20-Dec-16	12-Aug-16 A	03-Feb-17	0%	-33	588	A26620, RSS Review & Approve Trench Detail																				
A26600	BD Review & Approve ELS Design	87	08-Sep-16	21-Dec-16	08-Sep-16 A	04-Feb-17	100%	-33	283	A26600, BD Review & Approve ELS Design, B																				
Construction at CH0+66 to CH0+108																														
Trench Excavation & Pipe works (CH0+66 to CH0+102)																														

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										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09
A26660	Install Strut & Wailing @ +3.5mPD	12	17-Dec-16	03-Jan-17	01-Feb-17	14-Feb-17	0%	-33	275																			
A26670	Trench Excavation@+3.0mPD to Final excavation Lvl	3	04-Jan-17	06-Jan-17	15-Feb-17	17-Feb-17	0%	-33	275																			
A26680	Pipe Laying & Associated Works	6	07-Jan-17	13-Jan-17	18-Feb-17	24-Feb-17	0%	-33	275																			
A26690	Construct Bend Blocks	6	14-Jan-17	20-Jan-17	25-Feb-17	03-Mar-17	0%	-33	275																			
A26700	Pressure Test	6	21-Jan-17	27-Jan-17	04-Mar-17	10-Mar-17	0%	-33	275																			
A26710	Back Filling to Struts & Wailing Lvl	6	01-Feb-17	07-Feb-17	11-Mar-17	17-Mar-17	0%	-33	275																			
A26720	Dismantle Struts & Wailing	3	08-Feb-17	10-Feb-17	18-Mar-17	21-Mar-17	0%	-33	275																			
A26730	Back Filling to GL	6	11-Feb-17	17-Feb-17	22-Mar-17	28-Mar-17	0%	-33	275																			
A26740	Extract Sheetpiles	3	18-Feb-17	21-Feb-17	29-Mar-17	31-Mar-17	0%	-33	275																			
Construct Cofferdam & Pipe works for Lead In (CH0+102 to CH0+108)																												
A26750	Drive in Sheetpiles (Cofferdam) @ 18m depth	9	22-Dec-16	04-Jan-17	06-Feb-17	15-Feb-17	0%	-33	283																			
A26760	Curtain Grouting (where required)	12	05-Jan-17	18-Jan-17	16-Feb-17	01-Mar-17	0%	-33	283																			
A26770	Dewatering	1	19-Jan-17	19-Jan-17	02-Mar-17	02-Mar-17	0%	-33	283																			
A26780	ELS Excavation (Cofferdam)@GL +5.0mPD to +3.0mPD	3	20-Jan-17	23-Jan-17	03-Mar-17	06-Mar-17	0%	-33	283																			
A26790	Install 1st Layer Strut & Wailing (Cofferdam) @ +3.5mPD	6	24-Jan-17	02-Feb-17	07-Mar-17	13-Mar-17	0%	-33	283																			
A26800	ELS Excavation (Cofferdam)@+3.0mPD to +0.275mPD	3	03-Feb-17	06-Feb-17	14-Mar-17	16-Mar-17	0%	-33	283																			
A26810	Install 2nd Layer Strut & Wailing (Cofferdam) @ +0.775mPD	6	07-Feb-17	13-Feb-17	17-Mar-17	23-Mar-17	0%	-33	283																			
A26820	ELS Excavation (Cofferdam)@+0.275mPD to -2.45mPD	3	14-Feb-17	16-Feb-17	24-Mar-17	27-Mar-17	0%	-33	283																			
A26830	Install 3rd Layer Strut & Wailing (Cofferdam) @ -1.95mPD	6	17-Feb-17	23-Feb-17	28-Mar-17	03-Apr-17	0%	-33	283																			
Construction at CH0+0 to CH66																												
DCS Box (Portion M15&M16)																												
A27270	Strip Formwork	1	17-Dec-16	17-Dec-16	01-Feb-17	01-Feb-17	0%	-33	392																			
Seawater Intake Pipe Works																												
A27370	Prepare & Submit Detailed Design and Modification Works to RSS	10	17-Dec-16	30-Dec-16	01-Feb-17	11-Feb-17	0%	-33	154																			
A27380	RSS Review & Approve Detail Design and Modification Works	12	31-Dec-16	14-Jan-17	13-Feb-17	25-Feb-17	0%	-33	154																			
Construction of Seawater Intake Pipe																												
A27390	Form Access Road / Traffic Diversion (Along Seawall)	6	16-Jan-17	21-Jan-17	27-Feb-17	04-Mar-17	0%	-33	154																			
A27400	Install UU Supports	12	23-Jan-17	08-Feb-17	06-Mar-17	18-Mar-17	0%	-33	154																			
A27410	Drill holes, Inject Curtain Grout & backfill	24	09-Feb-17	08-Mar-17	20-Mar-17	20-Apr-17	0%	-33	154																			
Sewerage																												
Sewerage Interface with PIW & F2 Contractor																												
Sewerage at Austin Road West (Portion L08)																												
A27790	PIW Implement TTMS & Allow Access to Manhole F1.2 to HCC	0	01-Feb-17		01-Feb-17*		0%	0	358																			
A27800	Excavate Trial Trench for UU within Austin Road West Area	12	01-Feb-17	14-Feb-17	01-Feb-17	14-Feb-17	0%	0	358																			
A27810	Demolished Existing Planter	10	15-Feb-17	25-Feb-17	15-Feb-17	25-Feb-17	0%	0	358																			
A27820	Excavate & Install Lateral Support	10	27-Feb-17	09-Mar-17	27-Feb-17	09-Mar-17	0%	0	358																			
A27830	Construct M+ Terminal Manhole F1.3A	6	10-Mar-17	16-Mar-17	10-Mar-17	16-Mar-17	0%	0	358																			
A27840	Lay down DN375 F1.3B to F1.3A to F1.2	3	17-Mar-17	20-Mar-17	17-Mar-17	20-Mar-17	0%	0	358																			
A27850	Pressure Test	3	21-Mar-17	23-Mar-17	21-Mar-17	23-Mar-17	0%	0	358																			
A27860	Back fill & Reinstate pavement / Reinstate Planter	9	24-Mar-17	03-Apr-17	24-Mar-17	03-Apr-17	0%	0	358																			
Sewerage adjacent to CLP Station (Portion L19)																												
A27880	F2 (Gammon's) allow access to HCC at Portion L06	0	01-Feb-17		01-Feb-17*		0%	0	370																			
A27890	Excavate Trench and install shoring for sewer drain along CLP Station	14	01-Feb-17	16-Feb-17	01-Feb-17	16-Feb-17	0%	0	370																			
A27900	Construct manholes F1.3C and F1.3B	10	17-Feb-17	28-Feb-17	17-Feb-17	28-Feb-17	0%	0	370																			
A27910	Lay down DN375 from F1.3C to F1.3B (approx. 39m)	7	01-Mar-17	08-Mar-17	01-Mar-17	08-Mar-17	0%	0	370																			

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										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02	09		
A29420	Backfill and reinstate pavement	95	26-Aug-16	19-Dec-16	26-Aug-16 A	02-Feb-17	0%	-34	410	A29420, Backfill and reinstate pavement, Back																				
A29380	Formation and Construct MH S3.4	8	17-Dec-16	28-Dec-16	01-Feb-17	09-Feb-17	0%	-33	583	A29380, Formation and Construct MH S3.																				
A29410	Pressure Test	3	20-Dec-16	23-Dec-16	04-Feb-17	07-Feb-17	0%	-34	585	A29410, Pressure Test																				
Storm Drain along Gridline E'-G' / 1'-2' (MH S3.4 to S3.3 to S3.2)																														
A29430	Complete B1 Slab, Columns & Walls at GL F' to H' / 1'-3'	0		19-Jan-17		07-Feb-17	0%	-13	346	A29430, Complete B1 Slab, Columns & Walls at GL F' to H' / 1'-3'																				
A29440	Formation & Construct MH S3.3 & S3.2	10	20-Jan-17	03-Feb-17	08-Feb-17	18-Feb-17	0%	-13	346	A29440, Formation & Construct MH																				
A29470	Formation & Lay DN600 pipe from S3.4 to S3.3 to S3.2 (Approx 7m)	3	20-Jan-17	23-Jan-17	08-Feb-17	10-Feb-17	0%	-13	353	A29470, Formation & Lay DN600 pipe fro																				
A29450	Connect DN250 pipe x 3Nos to MH S3.3	1	03-Feb-17	03-Feb-17	18-Feb-17	18-Feb-17	0%	-13	346	A29450, Connect DN250 pipe x 3N																				
A29460	Connect DN250 pipe x 2Nos to MH S3.2	1	03-Feb-17	03-Feb-17	18-Feb-17	18-Feb-17	0%	-13	346	A29460, Connect DN250 pipe x 2N																				
A29480	Pressure Test	3	04-Feb-17	07-Feb-17	20-Feb-17	22-Feb-17	0%	-13	346	A29480, Pressure Test																				
A29490	Backfill trench to Ground Level	0	08-Feb-17		23-Feb-17		0%	-13	346	A29490, Backfill trench to Ground Level,																				
Storm Drain DN450 at Portion M01																														
Storm Drain along Gridline G'-J' /1'-2 (MH S3.2 to S3.1 to S3.1b to S3.1a)																														
A29500	Formation & Construct MH S3.1, S3.1b & S3.1a	15	08-Feb-17	24-Feb-17	23-Feb-17	11-Mar-17	0%	-13	373	A29500, Formation &																				
A29540	Formation & Lay DN450 pipe from MH3.2 to S3.1a (Approx. 39m)	4	08-Feb-17	11-Feb-17	23-Feb-17	27-Feb-17	0%	-13	384	A29540, Formation & Lay DN																				
A29510	Connect DN200 pipe to MH S3.1	1	24-Feb-17	24-Feb-17	11-Mar-17	11-Mar-17	0%	-13	373	A29510, Connect DN																				
A29520	Connect DN200 pipe to MH S3.1b	1	24-Feb-17	24-Feb-17	11-Mar-17	11-Mar-17	0%	-13	373	A29520, Connect DN																				
A29530	Connect DN300 & DN400 pipe to MH S3.1a	1	24-Feb-17	24-Feb-17	11-Mar-17	11-Mar-17	0%	-13	373	A29530, Connect DN																				
A29550	Pressure Test	3	25-Feb-17	28-Feb-17	13-Mar-17	15-Mar-17	0%	-13	373	A29550, Pressure																				
A29560	Backfill trench to Ground Level	2	01-Mar-17	02-Mar-17	16-Mar-17	17-Mar-17	0%	-13	373	A29560, Backfill																				
Storm Drain DN375 at Portion M45																														
Storm Drain along Gridline A-K' / 5' (S1.1 to S1.2 to WHC6_1e)																														
A29610	Excavate trench for DN375 and install shoring	50	03-Nov-16	03-Jan-17	03-Nov-16 A	14-Feb-17	20%	-33	579	A29610, Excavate trench for DN375 a																				
A29620	Construct Manhole S1.1 & S1.2	41	07-Nov-16	23-Dec-16	07-Nov-16 A	07-Feb-17	0%	-33	585	A29620, Construct Manhole S1.1 & S1.2, C																				
A29630	Lay down DN375 pipe between WHC6_1e to S1.1 to S1.2 (Approx.55m)	40	12-Nov-16	30-Dec-16	12-Nov-16 A	11-Feb-17	0%	-33	581	A29630, Lay down DN375 pipe between																				
A29640	Pressure Test	29	16-Nov-16	19-Dec-16	16-Nov-16 A	02-Feb-17	0%	-34	589	A29640, Pressure Test, Pressure Test																				
A29650	Backfill and reinstate pavement	24	22-Nov-16	19-Dec-16	22-Nov-16 A	02-Feb-17	0%	-33	410	A29650, Backfill and reinstate pavement, Back																				
A29590	Excavate Trial Trench for existing Underground Utilities	14	17-Dec-16	05-Jan-17	01-Feb-17	16-Feb-17	0%	-33	563	A29590, Excavate Trial Trench for ex																				
A29600	Install support to existing underground Utilities	14	06-Jan-17	21-Jan-17	17-Feb-17	04-Mar-17	0%	-33	563	A29600, Install support to																				
Storm Drain DN150 at Portion M04																														
Storm Drain for MH WHC6_1f																														
A29660	PIW allow access to WHC6_1f for M+ connection	0	06-Jan-17		01-Feb-17*		0%	-19	384	A29660, PIW allow access to WHC6_1f for M+ connection																				
A29670	Fence off work area for DN150 storm drain excavation	1	06-Jan-17	06-Jan-17	01-Feb-17	01-Feb-17	0%	-19	384	A29670, Fence off work area for DN150 storm																				
A29680	Excavate Trial Trench fo existing Underground Utilities	14	06-Jan-17	21-Jan-17	01-Feb-17	16-Feb-17	0%	-19	384	A29680, Excavate Trial Trench fo exi																				
A29690	Excavate trench for DN150 and install shoring	7	23-Jan-17	02-Feb-17	17-Feb-17	24-Feb-17	0%	-19	384	A29690, Excavate trench for D																				
A29700	Lay down DN150 and connect to WHC6_1f (approx. 11m)	4	03-Feb-17	07-Feb-17	25-Feb-17	01-Mar-17	0%	-19	384	A29700, Lay down DN150 a																				
A29710	Backfill and reinstate pavement	3	08-Feb-17	10-Feb-17	02-Mar-17	04-Mar-17	0%	-19	384	A29710, Backfill and reins																				
Storm Drain DN300 at Portion M44 (MH6_2a.1 to DM65)																														
Adjacent SPS to Center of At Grade Road																														
A29720	Agreed with PIW dates for Pipe Laying	0		03-Jan-17		27-Jan-17*	0%	-21	355	A29720, Agreed with PIW dates for Pipe Laying, Agreed with																				
A29730	Excavate trial trench for existing underground utilities	6	04-Jan-17	10-Jan-17	01-Feb-17	07-Feb-17	0%	-21	355	A29730, Excavate trial trench for existing u																				
A29740	Drive In Sheet Piles	3	11-Jan-17	13-Jan-17	08-Feb-17	10-Feb-17	0%	-21	355	A29740, Drive In Sheet Piles																				
A29750	Excavate to invert level and install struts	6	14-Jan-17	20-Jan-17	11-Feb-17	17-Feb-17	0%	-21	355	A29750, Excavate to invert level an																				
A29760	Construct Manhole DM65	6	21-Jan-17	27-Jan-17	18-Feb-17	24-Feb-17	0%	-21	355	A29760, Construct Manhole DM																				
A29770	Laydown DN300 between DM65 to Center of at Grade Road (Approx. 12m)	3	21-Jan-17	24-Jan-17	18-Feb-17	21-Feb-17	0%	-21	358	A29770, Laydown DN300 between																				

(3MRP-16) 3-Months Rolling Prog Status

Activity ID	Activity Name	Ori. Dur.	BaseLine Start	BaseLine Finish	Forecast / Actual Start	Forecast / Actual Finish	% Compl.	Finish Variance	Current Float	December 2016				January 2017				February 2017				March 2017				April 2017	
										04	11	18	25	01	08	15	22	29	05	12	19	26	05	12	19	26	02
A29780	Pressure Test	3	01-Feb-17	03-Feb-17	25-Feb-17	28-Feb-17	0%	-21	355																		
A29790	Backfill, Extract Sheet Piles and Reinstate Pavement	6	04-Feb-17	10-Feb-17	01-Mar-17	07-Mar-17	0%	-21	355																		
Center of At Grade Road to MH_2a.1																											
A55050	Agreed with PIW dates for Pipe Laying	0		13-Feb-17		07-Mar-17*	0%	-20	355																		
A38030	Excavate trial trench for existing underground utilities	6	13-Feb-17	18-Feb-17	08-Mar-17	14-Mar-17	0%	-20	355																		
A38040	Drive In Sheet Piles	3	20-Feb-17	22-Feb-17	15-Mar-17	17-Mar-17	0%	-20	355																		
A38050	Excavate to invert level and install struts	6	23-Feb-17	01-Mar-17	18-Mar-17	24-Mar-17	0%	-20	355																		
A38060	Laydown DN300 between MH6_2a.1 to Center of at Grade Road (Approx. 9	3	02-Mar-17	04-Mar-17	25-Mar-17	28-Mar-17	0%	-20	355																		
A38070	Pressure Test	3	06-Mar-17	08-Mar-17	29-Mar-17	31-Mar-17	0%	-20	355																		
WSD																											
Water Main Works at Portion M01 (Refer to M+ MEP Programme)																											
A29800	PIW Contractor Allow Access to Portion M45 to HCC (IS Appendix D1, item 3	0	17-Dec-16		01-Feb-17*		0%	-33	98																		
A29810	Complete Master Meter Room Structure B1 Slab, Wall & Column (Refer to M	0		21-Mar-17		21-Mar-17*	0%	0	56																		
A29820	Remove existing hoarding fixed to Sheet pile	6	22-Mar-17	28-Mar-17	22-Mar-17	28-Mar-17	0%	0	56																		
A29830	Install a new hoarding with 500mm clearance from roadside	6	29-Mar-17	05-Apr-17	29-Mar-17	05-Apr-17	0%	0	56																		
Power																											
Power Cable 11kV at Footpath adjacent to Entrance Portal (Interface with PIW)																											
A30260	Excavate trench in footway for the 11kV direct buried cables	15	01-Feb-17	17-Feb-17	01-Feb-17*	17-Feb-17	0%	0	370																		
A30270	Lay Lead-in Cable (by CLP) & Inspection	30	18-Feb-17	19-Mar-17	18-Feb-17	19-Mar-17	0%	0	458																		
A30280	Backfilling footway to adjacent ground level	3	20-Mar-17	22-Mar-17	20-Mar-17	22-Mar-17	0%	0	369																		
Power Cable 11Kv at Gridline A / 1-3																											
A30290	Complete Riser Room Structure at Adjacent to Transformer Room A	0	13-Feb-17		06-Mar-17		0%	-18	127																		
A30300	Construct 2600mm x 1500mm cable trench & Install Cable Ducts	5	13-Feb-17	17-Feb-17	06-Mar-17	10-Mar-17	0%	-18	127																		
A30310	Lay Lead-in Cable (by CLP) & connect to district-wide system	30	18-Feb-17	19-Mar-17	11-Mar-17	09-Apr-17	0%	-21	158																		
Gas																											
Gas Main at Portion M01																											
Gas Main RDE connection along Gridline E' - I' / 1'																											
A30700	Trial Trench for Underground Utilities	10	08-Feb-17	18-Feb-17	23-Feb-17	06-Mar-17	0%	-13	346																		
A30710	Install support for existing Underground Utilities	6	20-Feb-17	25-Feb-17	07-Mar-17	13-Mar-17	0%	-13	346																		
A30720	Excavate Trench for Main Gas 100mm and install shoring	8	27-Feb-17	07-Mar-17	14-Mar-17	22-Mar-17	0%	-13	346																		
A30730	Lay down Main Gas 100mm (by Towngas Specialist Contractor)	14	08-Mar-17	23-Mar-17	23-Mar-17	08-Apr-17	0%	-13	346																		

Lyric Theatre Complex

C. Action and Limit Levels for Construction Phase

Air Quality

The Action and Limit Levels for 1-hour and 24-hour TSP for the monitoring station are presented in following tables:

Table C-1: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level (mg/m ³)	Limit Level (mg/m ³)
AM1	273.7	500
AM2A	274.2	500

Table C-2: Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level (µg/m ³)	Limit Level (µg/m ³)
AM1	143.6	260
AM2A	151.1	260

Noise

The Action and Limit Levels for Noise for the monitoring stations are presented in following table:

Table C-3: Action and Limit Levels for Construction Noise

Time Period & Monitoring Locations	Action Level	Limit Level
NM1A		
0700-1900 hours on normal weekdays	When one documented complaint is received from any one of the sensitive receivers	75 dB(A)

D. Event and Action Plan for Air Quality, Noise, Landscape and Visual Impact

Air Quality

In case the Action and Limit Levels are not complied during construction stage, the following Event and Action Plan should be followed:

Table D-1: Event and Action Plan for Air Quality

Event	Action			
	ET	IEC	WKCD	Contractor
Action Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and WKCD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and WKCD; 3. Advise the WKCD on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and WKCD; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial to WKCD within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform WKCD, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCD informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the WKCD on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

Event**Action**

2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none">1. Notify IEC, WKCDA, Contractor and EPD;2. Identify source;3. Repeat measurement to confirm findings;4. Increase monitoring 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 WKCDA to discuss the remedial actions to be taken;7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results;8. If exceedance stops, cease additional monitoring.	<ol style="list-style-type: none">1. Check monitoring data submitted by ET;2. Check Contractor's working method;3. Discuss amongst WKCDA, ET, and Contractor on the potential remedial actions;4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCDA accordingly;5. Monitor the implementation of remedial measures.	<ol style="list-style-type: none">1. Confirm receipt of notification of failure in writing;2. Notify Contractor;3. In consolidation with the IEC, agree on 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.	<ol style="list-style-type: none">1. Take immediate action to avoid further exceedance;2. Submit proposals for remedial actions to IEC within three working days of 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 WKCDA until the exceedance is abated.
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Construction Noise

In case the Action and Limit Levels are not complied during construction stage, the following Event and Action Plan should be followed:

Table D-2: Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	WKCD	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify WKCD, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, WKCD and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the WKCD accordingly; 3. Advise the WKCD on the effectiveness of the proposed remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC and WKCD; 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Inform IEC, WKCD, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and WKCD on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCD informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst WKCD, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCD accordingly. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and WKCD within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the WKCD until the exceedance is abated.

Landscape and Visual Impact

In case of non-compliance of landscape and visual impacts, procedures in accordance with the Event and Action Plan should be followed:

Table D-3: Event and Action Plan for Landscape and Visual Impact

Event	Action			
	ET	IEC	WKCD A	Contractor
Design Check	<ol style="list-style-type: none"> 1. Design check to make sure the design complies with all the proposed mitigation measures in the EIA report; 2. Prepare and submit report. 	<ol style="list-style-type: none"> 1. Check report submitted by ET; 2. Recommend remedial design if necessary. 	<ol style="list-style-type: none"> 1. Undertake remedial design if necessary. 	-
Non-conformity on one occasion	<ol style="list-style-type: none"> 1. Identify source of non-conformity; 2. Report to IEC and WKCD A; 3. Discuss remedial actions with IEC, WKCD A and Contractor; 4. Monitor remedial actions until rectification has been completed. 	<ol style="list-style-type: none"> 1. Check and verify source of non-conformity; 2. Discuss remedial actions with ET and Contractor; 3. Advise WKCD A on effectiveness of proposed remedial actions; 4. Check implementation of remedial actions. 	<ol style="list-style-type: none"> 1. Notify Contractor; 2. Ensure remedial actions are properly implemented. 	<ol style="list-style-type: none"> 1. Amend working method as necessary; 2. Rectify damage and undertake necessary replacement and remedial actions.
Repeated conformity	<ol style="list-style-type: none"> 1. Identify source of non-conformity; 2. Report to IEC and WKCD A; 3. Increase monitoring frequency; 4. Discuss remedial actions with IEC, WKCD A and Contractor; 5. Monitor remedial actions until rectification has been completed; 6. If non-conformity rectified, reduce monitoring frequency back to normal. 	<ol style="list-style-type: none"> 1. Check and verify source of non-conformity; 2. Check Contractor's working method; 3. Discuss remedial actions with ET and Contractor; 4. Advise WKCD A on effectiveness of proposed remedial actions; 5. Supervise implementation of remedial actions. 	<ol style="list-style-type: none"> 1. Notify Contractor; 2. Ensure remedial actions are properly implemented. 	<ol style="list-style-type: none"> 1. Amend working method as necessary; 2. Rectify damage and undertake necessary replacement and remedial actions.

E. Monitoring Schedule

JANUARY 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	4	5	6	7
8	9 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	10	11	12	13	14 AM1, AM2A - 24hrTSP, 1hr TSP x3
15	16	17	18	19	20 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	21
22	23	24	25	26 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	27	28
29	30	31				
		Notes: AM1 - International Commerce Centre (ICC) AM2A - Austin Road West (Opposite to The Harbourside) NM1A - International Commerce Centre (ICC)				

FEBRUARY 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	2	3	4
5	6 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	7	8	9	10 AM1, AM2A - 24hrTSP, 1hr TSP x3	11
12	13	14	15	16 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	17	18
19	20	21	22 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	23	24	25
26	27	28 AM1, AM2A - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring				
		Notes: AM1 - International Commerce Centre (ICC) AM2A - Austin Road West (Opposite to The Harbourside) NM1A - International Commerce Centre (ICC)				

F. Calibration Certifications

High-Volume TSP Sampler
5-Point Calibration Record

Location : AM1(ICC)
 Calibrated by : K.T.Ho
 Date : 16/12/2016

Sampler

Model : TE-5170
 Serial Number : S/N 0767

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2016
 Slope (m) : 2.09532
 Intercept (b) : -0.03812
 Correlation Coefficient(r) : 0.99994

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1020
 Ta(K) : 295

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	11.2	3.375	1.637	58	58.50
2 13 holes	8.6	2.958	1.438	48	48.41
3 10 holes	6.4	2.551	1.245	40	40.34
4 7 holes	4.4	2.116	1.038	31	31.26
5 5 holes	2.6	1.626	0.805	20	20.17

Notes: $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$, $X = Z/m - b$, $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

Sampler Calibration Relationship

Slope(m): 45.463 Intercept(b): -16.295 Correlation Coefficient(r): 0.9995

Checked by: 
 Magnum Fan

Date: 19/12/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location : AM2A (Harbourside)
 Calibrated by : K.T.Ho
 Date : 16/12/2016

Sampler

Model : TE-5170
 Serial Number : S/N 8919

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2016
 Slope (m) : 2.10326
 Intercept (b) : -0.06696
 Correlation Coefficient(r) : 0.99989

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1020
 Ta(K) : 295

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	12.4	3.551	1.720	62	62.53
2 13 holes	9.4	3.092	1.502	54	54.46
3 10 holes	7.2	2.706	1.319	48	48.41
4 7 holes	4.4	2.116	1.038	38	38.32
5 5 holes	2.6	1.626	0.805	28	28.24

Notes: $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$, $X = Z/m - b$, $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

Sampler Calibration Relationship

Slope(m): 36.964 Intercept(b): -0.799 Correlation Coefficient(r): 0.9990

Checked by: 
 Magnum Fan

Date: 19/12/2016



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE
 VILLAGE OF CLEVELAND, OH
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 877.263.7610 TOLL FREE
 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 14, 2016 Rootsmeter S/N 0438320 Ta (K) - 295
 Operator Tisch Orifice I.D. - 2454 Pa (mm) - 745.49

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4020	3.2	2.00
2	NA	NA	1.00	1.0060	6.4	4.00
3	NA	NA	1.00	0.9010	7.9	5.00
4	NA	NA	1.00	0.8590	8.8	5.50
5	NA	NA	1.00	0.7090	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9866	0.7037	1.4078	0.9957	0.7102	0.8896
0.9824	0.9765	1.9909	0.9914	0.9855	1.2581
0.9803	1.0880	2.2259	0.9893	1.0980	1.4066
0.9792	1.1399	2.3345	0.9882	1.1504	1.4753
0.9738	1.3735	2.8155	0.9828	1.3862	1.7792
Qstd slope (m) = 2.10326			Qa slope (m) = 1.31703		
intercept (b) = -0.06696			intercept (b) = -0.04232		
coefficient (r) = 0.99989			coefficient (r) = 0.99989		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
 Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{ [SQRT(H2O(Pa/760) (298/Ta))] - b}
 Qa = 1/m{ [SQRT H2O(Ta/Pa)] - b}

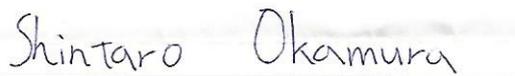
CALIBRATION CERTIFICATE

Date: February 17, 2016

Equipment Name	:	Digital Dust Indicator, Model LD-5R
Code No.	:	080000-72
Quantity	:	1 unit
Serial No.	:	620401
Sensitivity	:	0.001 mg/m ³
Sensitivity Adjustment	:	758CPM
Scale Setting	:	February 8, 2016

We hereby certify that the above mentioned instrument has been calibrated satisfactorily.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

Shintaro Okamura

Overseas Sales Division


REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

REPORT NO. : HK1610284
PROJECT NAME : PERFORMANCE CHECK / CALIBRATION OF DUST METER
DATE OF ISSUE : 15/6/2016

CUSTOMER : ENVIROTECH SERVICES COMPANY
ADDRESS : RM. 113, 1/F., MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T.

REPORT NO. : HK1610284
PROJECT ITEM NO. : HK1610284-01
PERFORMANCE CHECK / CALIBRATED EQUIPMENT
TYPE : LASER DUST MONITOR
MANUFACTURER : SIBATA
MODEL NO. : LD-5R
SERIAL NO. : 620401
EQUIPMENT NO. : ---
RECEIPT DATE : 3/6/2016
PERFORMANCE CHECK / CALIBRATION DATE : 7/6/2016

PERFORMANCE CHECK / CALIBRATION Information

CODE	Calibration Parameter	Method Procedure	Reference Method
Dust PC/CAL	Performance Check / Calibration of Dust Meter	CAL003	General Technical Requirements of Environmental Monitoring, Environmental Monitoring & Audit Guidelines for Development Projects in HK

- Notes :
1. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
 2. Performance Check / Calibration result relates to performance check / calibration item(s) as received.

Approved Signatory

 Wong Po Yan Pauline
 (Testing Engineer)

Issue Date:

15/6/2016


REPORT OF PERFORMANCE CHECK / CALIBRATION

PROJECT NAME : PERFORMANCE CHECK / CALIBRATION OF DUST METER
 DATE OF ISSUE : 15/6/2016
 REPORT NO. : HK1610284

PERFORMANCE CHECK / CALIBRATED EQUIPMENT

TYPE : LASER DUST MONITOR
 MANUFACTURER : SIBATA
 MODEL NO. : LD-5R
 SERIAL NO. : 620401
 EQUIPMENT NO. : —
 SENSITIVITY ADJUSTMENT : 758 CPM
 SETTING :
 PERFORMANCE CHECK / CALIBRATION DATE : 7/6/2016

STANDARD EQUIPMENT

TYPE : HIGH VOLUME AIR SAMPLER
 MANUFACTURER : TISCH
 MODEL NO. : TE-5170
 EQUIPMENT REF NO. : PTL_HV002
 LAST CALIBRATION DATE : 30/5/2016

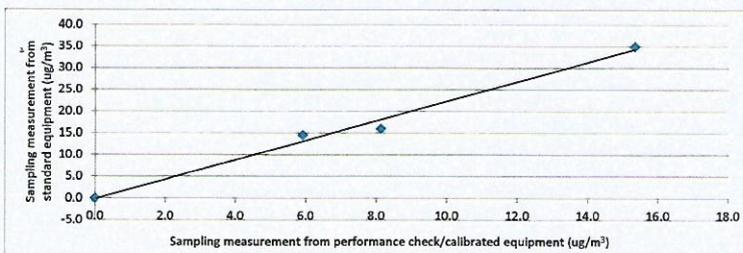
EQUIPMENT PERFORMANCE CHECK / CALIBRATION RESULTS:

Sensitivity Adjustment Scale Setting (Before Performance check / Calibration): 758 CPM
 Sensitivity Adjustment Scale Setting (After Performance check / Calibration): 758 CPM

Trial no. in 1-hr period	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard equipment) (Y - Axis)	Total Count ² (Performance Check / Calibrated equipment)	Concentration in Count/Minute ³ (Performance Check / Calibrated equipment) (X - Axis)
Zero Check ¹	7/6/2016, 08:00	28.1	1008	0.0	0	0.0
1	7/6/2016, 10:22 - 11:22	28.1	1008	34.9	921	15.4
2	7/6/2016, 15:22 - 16:22	28.1	1008	16.0	488	8.1
3	7/6/2016, 16:50 - 17:50	28.1	1008	14.5	355	5.9

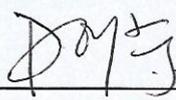
Linear Regression of Y on X

Slope (K- factor) : 2.2
 Correlation Coefficient : 0.9944
 Validity of Performance Check / Calibration Record : 7/6/2017



- Notes : 1. Zero check conducted as per CAL003 SOP and manufacturer's manual as appropriate.
 2. Total Count was measured by laser dust monitor.
 3. Count/minute was calculated by (Total Count/60).
 4. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
 5. Performance Check / Calibration result relates to performance check / calibration item(s) as received.

Operator: Kong Wing Yan, Emily Signature:  Date: 7/6/2016

Checked by: Wong Po Yan, Pauline Signature:  Date: 15/6/2016

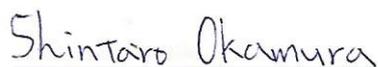
CALIBRATION CERTIFICATE

Date: February 17, 2016

Equipment Name	:	Digital Dust Indicator, Model LD-5R
Code No.	:	080000-72
Quantity	:	1 unit
Serial No.	:	620402
Sensitivity	:	0.001 mg/m ³
Sensitivity Adjustment	:	783CPM
Scale Setting	:	February 8, 2016

We hereby certify that the above mentioned instrument has been calibrated satisfactory.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

Shintaro Okamura

Overseas Sales Division


REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

REPORT NO. : HK1610285
 PROJECT NAME : PERFORMANCE CHECK / CALIBRATION OF DUST METER
 DATE OF ISSUE : 15/6/2016

CUSTOMER : ENVIROTECH SERVICES COMPANY
 ADDRESS : RM. 113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T.

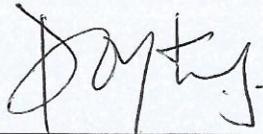
REPORT NO. : HK1610285
 PROJECT ITEM NO. : HK1610285-01
PERFORMANCE CHECK / CALIBRATED EQUIPMENT
 TYPE : LASER DUST MONITOR
 MANUFACTURER : SIBATA
 MODEL NO. : LD-5R
 SERIAL NO. : 620402
 EQUIPMENT NO. : ---
 RECEIPT DATE : 3/6/2016
 PERFORMANCE CHECK / CALIBRATION DATE : 7/6/2016

PERFORMANCE CHECK / CALIBRATION Information

CODE	Calibration Parameter	Method Procedure	Reference Method
Dust PC/CAL	Performance Check / Calibration of Dust Meter	CAL003	General Technical Requirements of Environmental Monitoring, Environmental Monitoring & Audit Guidelines for Development Projects in HK

- Notes : 1. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
 2. Performance Check / Calibration result relates to performance check / calibration item(s) as received.

Approved Signatory :



 Wong Po Yan Pauline
 (Testing Engineer)

 Issue Date: 15/6/2016


REPORT OF PERFORMANCE CHECK / CALIBRATION

PROJECT NAME : PERFORMANCE CHECK / CALIBRATION OF DUST METER
 DATE OF ISSUE : 15/6/2016
 REPORT NO. : HK1610285

PERFORMANCE CHECK / CALIBRATED EQUIPMENT

TYPE : LASER DUST MONITOR
 MANUFACTURER : SIBATA
 MODEL NO. : LD-5R
 SERIAL NO. : 620402
 EQUIPMENT NO. : ---
 SENSITIVITY ADJUSTMENT : 783 CPM
 SETTING :
 PERFORMANCE CHECK / CALIBRATION DATE : 7/6/2016

STANDARD EQUIPMENT

TYPE : HIGH VOLUME AIR SAMPLER
 MANUFACTURER : TISCH
 MODEL NO. : TE-5170
 EQUIPMENT REF NO. : PTL_HV002
 LAST CALIBRATION DATE : 30/5/2016

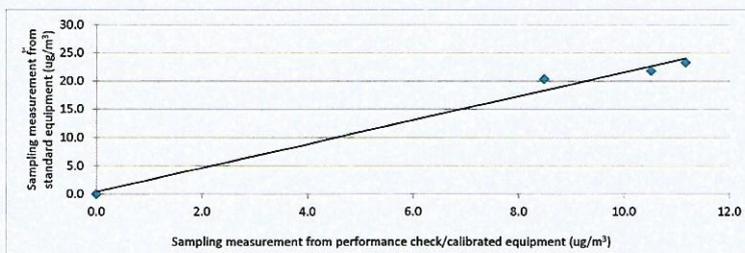
EQUIPMENT PERFORMANCE CHECK / CALIBRATION RESULTS:

Sensitivity Adjustment Scale Setting (Before Performance check / Calibration): 783 CPM
 Sensitivity Adjustment Scale Setting (After Performance check / Calibration): 783 CPM

Trial no. in 1-hr period	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m ³ (Standard equipment) (Y - Axis)	Total Count ² (Performance Check / Calibrated equipment)	Concentration in Count/Minute ³ (Performance Check / Calibrated equipment) (X - Axis)
Zero Check ¹	7/6/2016, 08:00	28.1	1008	0.0	0	0.0
1	7/6/2016, 09:10 - 10:10	28.1	1008	21.8	631	10.5
2	7/6/2016, 12:59 - 13:59	28.1	1008	23.3	670	11.2
3	7/6/2016, 14:17 - 15:17	28.1	1008	20.4	509	8.5

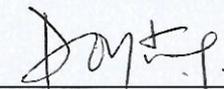
Linear Regression of Y on X

Slope (K- factor) : 2.1
 Correlation Coefficient : 0.9924
 Validity of Performance Check / Calibration Record : 7/6/2017



- Notes : 1. Zero check conducted as per CAL003 SOP and manufacturer's manual as appropriate.
 2. Total Count was measured by laser dust monitor.
 3. Count/minute was calculated by (Total Count/60).
 4. This report shall not be reproduced, except in full, without prior approval from Pilot Testing Limited.
 5. Performance Check / Calibration result relates to performance check / calibration item(s) as received.

Operator: Kong Wing Yan, Emily Signature:  Date: 7/6/2016

Checked by: Wong Po Yan, Pauline Signature:  Date: 15/6/2016



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

Certificate of Calibration

校正證書

Certificate No. : C164166
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1465) Date of Receipt / 收件日期 : 20 July 2016

Description / 儀器名稱 : Precision Integrating Sound Level Meter
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-18
Serial No. / 編號 : 00360030
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(55 \pm 20)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

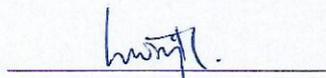
DATE OF TEST / 測試日期 : 29 July 2016

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By : 
測試 : H T Wong
Technical Officer

Certified By : 
核證 : K C Lee
Project Engineer

Date of Issue : 1 August 2016
簽發日期

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

輝創工程有限公司 – 校正及檢測實驗室

c/o 香港新界屯門興安里一號青山灣機樓四樓

Tel/電話: 2927 2606 Fax/傳真: 2744 8986

E-mail/電郵: callab@suncreation.com

Website/網址: www.suncreation.com

Certificate of Calibration

校正證書

Certificate No. : C164166
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
2. Self-calibration was performed before the test.
3. The results presented are the mean of 3 measurements at each calibration point.
4. Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL280	40 MHz Arbitrary Waveform Generator	C160077
CL281	Multifunction Acoustic Calibrator	PA160023

5. Test procedure : MA101N.

6. Results :

- 6.1 Sound Pressure Level

- 6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 110	LA	A	Fast	94.00	1	94.4	± 0.7

- 6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
60 - 120	LA	A	Fast	94.00	1	94.4 (Ref.)
				104.00		104.4
				114.00		114.4

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

- 6.2 Time Weighting

- 6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 110	LA	A	Fast	94.00	1	94.4	Ref.
			Slow			94.4	± 0.1

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室所書面批准。

Certificate of Calibration

校正證書

Certificate No. : C164166
證書編號

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
50 -110	LA	A	Fast	106.00	Continuous	106.0	Ref.
	LAmx				200 ms	105.1	-1.0 ± 1.0
	LA	Slow	Continuous		106.0	Ref.	
	LAmx		500 ms		102.4	-4.1 ± 1.0	

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 110	LA	A	Fast	94.00	31.5 Hz	54.7	-39.4 ± 1.5
					63 Hz	68.0	-26.2 ± 1.5
					125 Hz	78.0	-16.1 ± 1.0
					250 Hz	85.6	-8.6 ± 1.0
					500 Hz	91.1	-3.2 ± 1.0
					1 kHz	94.4	Ref.
					2 kHz	95.7	+1.2 ± 1.0
					4 kHz	95.5	+1.0 ± 1.0
					8 kHz	93.3	-1.1 (+1.5 ; -3.0)
					12.5 kHz	90.1	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 110	LC	C	Fast	94.00	31.5 Hz	91.3	-3.0 ± 1.5
					63 Hz	93.5	-0.8 ± 1.5
					125 Hz	94.2	-0.2 ± 1.0
					250 Hz	94.4	0.0 ± 1.0
					500 Hz	94.5	0.0 ± 1.0
					1 kHz	94.4	Ref.
					2 kHz	94.3	-0.2 ± 1.0
					4 kHz	93.6	-0.8 ± 1.0
					8 kHz	91.4	-3.0 (+1.5 ; -3.0)
					12.5 kHz	88.1	-6.2 (+3.0 ; -6.0)

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室書面批准。

Certificate of Calibration

校正證書

Certificate No. : C164166

證書編號

6.4 Time Averaging

UUT Setting				Applied Value					UUT	IEC 60804
Range (dB)	Mode	Frequency Weighting	Integrating Time	Freq. (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)	Reading (dB)	Type 1 Spec. (dB)
50 - 110	LAeq	A	10 sec.	4	1		110	100	100.1	± 0.5
			60 sec.					90	89.9	± 0.5
			5 min.					80	79.6	± 1.0
								70	69.7	± 1.0

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 307435

- Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
	Burst equivalent level	: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :

The values given in this 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

Certificate of Calibration

校正證書

Certificate No. : C163248
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1307) Date of Receipt / 收件日期 : 10 June 2016

Description / 儀器名稱 : Sound Level Calibrator
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10997142
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(55 \pm 20)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

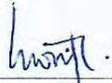
DATE OF TEST / 測試日期 : 15 June 2016

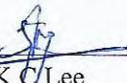
TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By : 
測試 : H T Wong
Technical Officer

Certified By : 
核證 : K C Lee
Project Engineer

Date of Issue : 17 June 2016
簽發日期

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Certificate of Calibration

校正證書

Certificate No. : C163248
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C153519
CL281	Multifunction Acoustic Calibrator	PA160023
TST150A	Measuring Amplifier	C161175

- Test procedure : MA100N.

- Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.7	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.985	1 kHz $\pm 2\%$	± 1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :

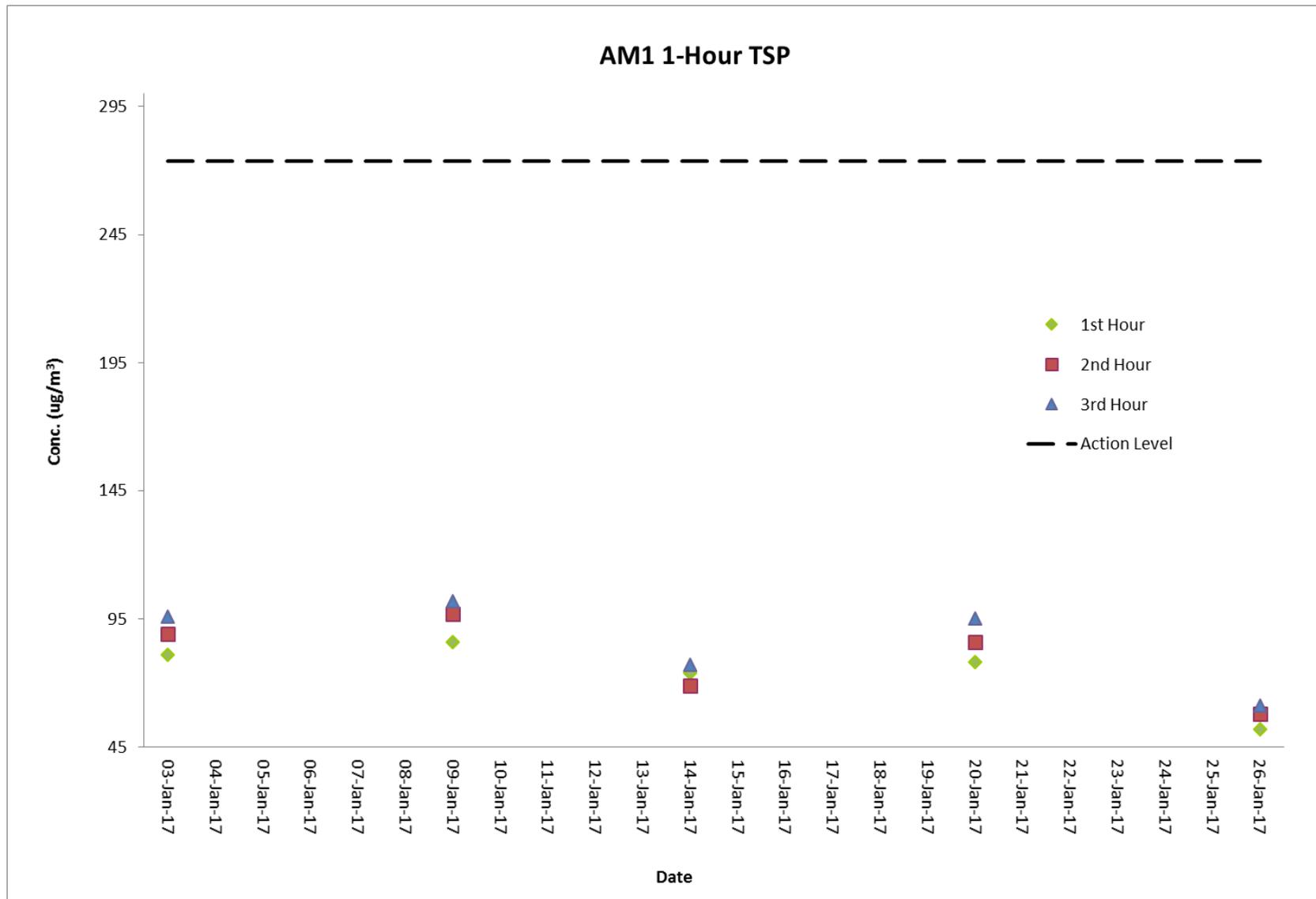
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the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

G. Graphical Plots of the Monitoring Results

Air Quality Monitoring Result at Station AM1 (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
03-Jan-17	Sunny	10:48 - 16:00	81	89	96	273.7	500
09-Jan-17	Cloudy	10:42 - 16:00	86	97	102	273.7	500
14-Jan-17	Cloudy	8:02 - 11:02	74	69	77	273.7	500
20-Jan-17	Sunny	10:40 - 16:00	78	86	95	273.7	500
26-Jan-17	Sunny	11:02 - 16:00	52	58	61	273.7	500

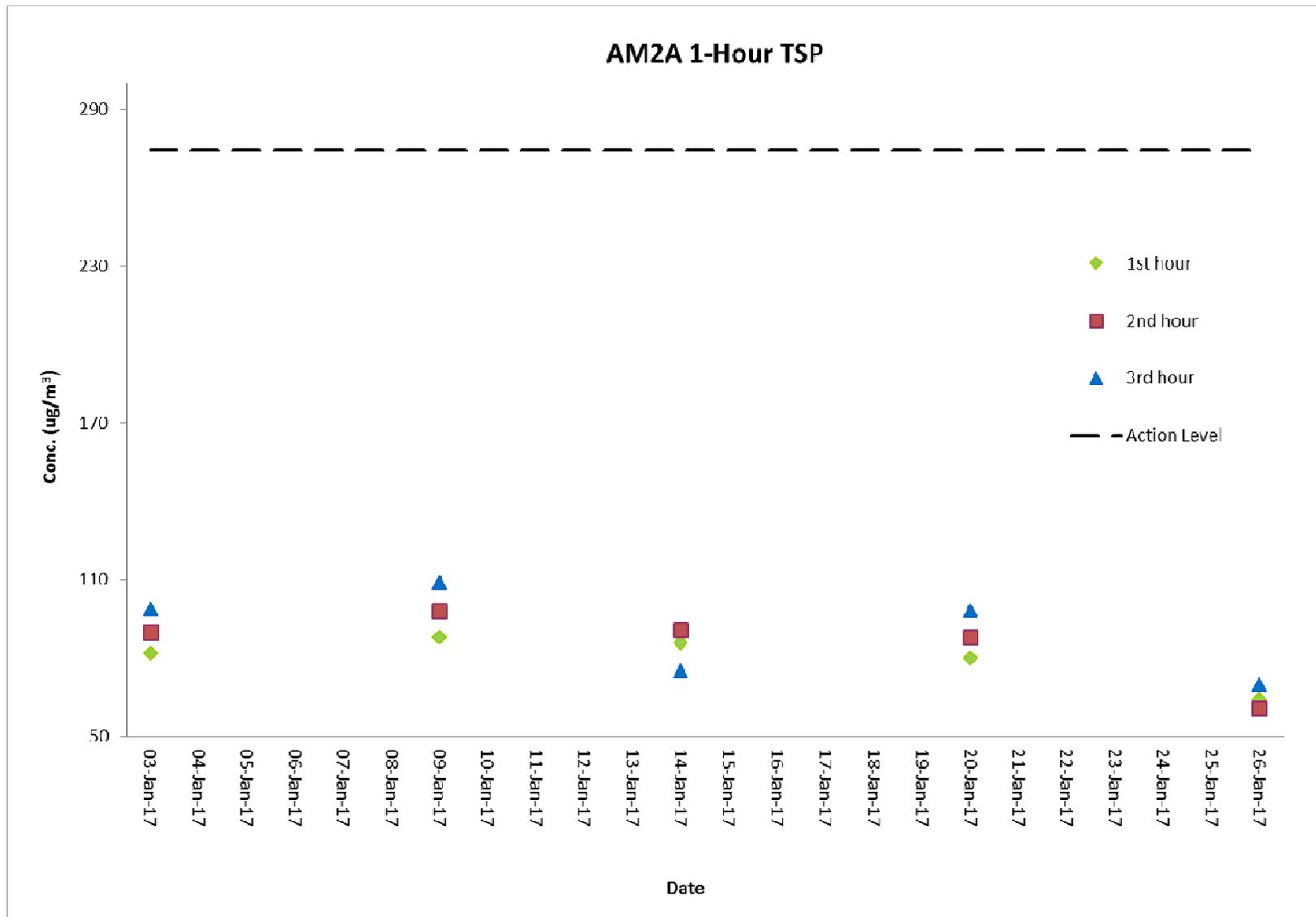
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



Air Quality Monitoring Result at Station AM2A (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
03-Jan-17	Sunny	11:02 - 16:10	82	90	99	274.2	500
09-Jan-17	Cloudy	10:54 - 16:10	88	98	109	274.2	500
14-Jan-17	Cloudy	8:14 - 11:14	86	91	75	274.2	500
20-Jan-17	Sunny	10:54 - 16:10	80	88	98	274.2	500
26-Jan-17	Sunny	11:14 - 16:10	64	61	70	274.2	500

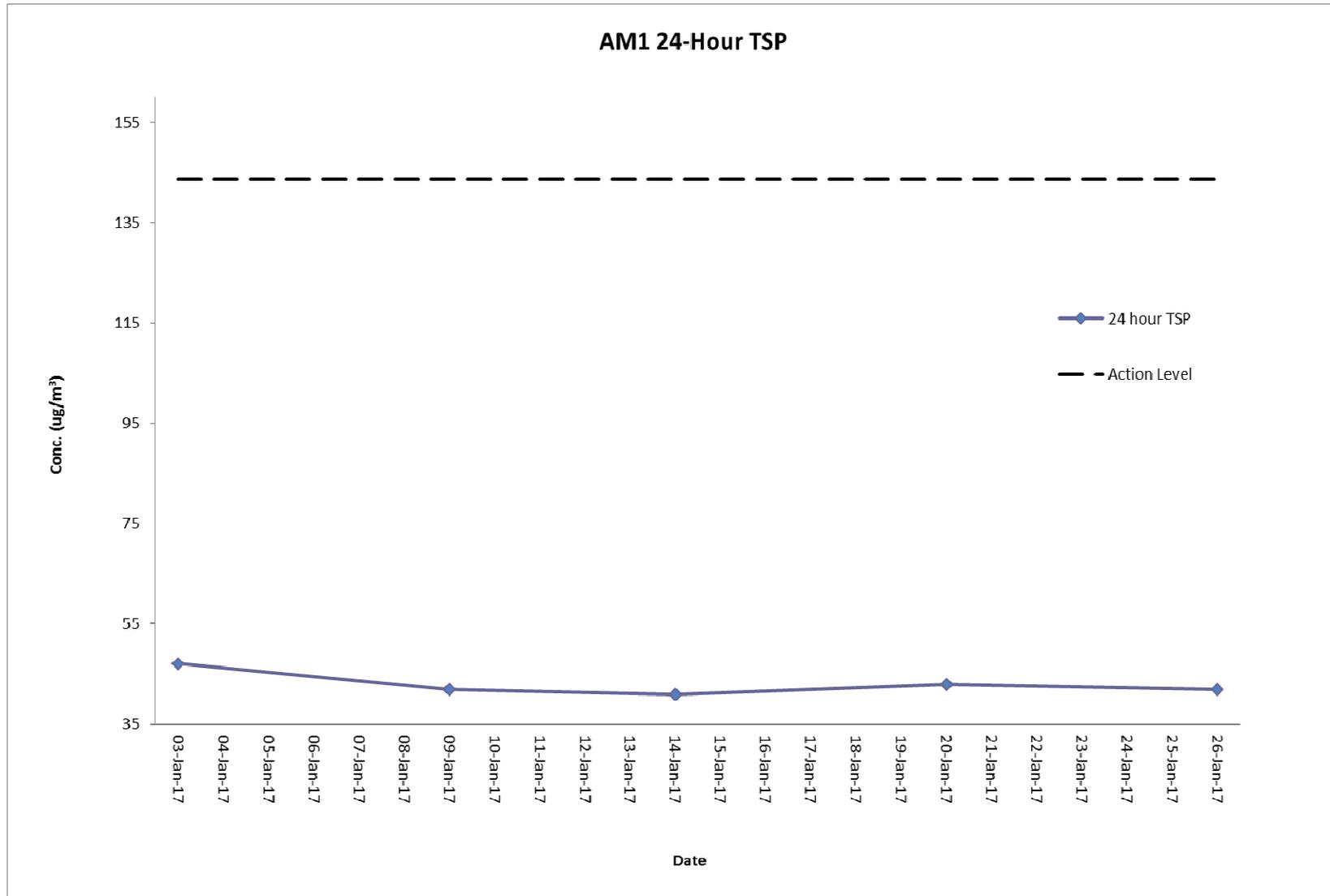
Graphical Presentation of Air Quality Monitoring Result at Station AM2A (1-hour TSP)



Air Quality Monitoring Result at Station AM1 (24-hour TSP)

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Jan-17	10:50	04-Jan-17	10:50	2.7919	2.8821	20472.38	20496.38	24	1.33	1.33	1.33	47	Sunny	143.6	260
09-Jan-17	10:40	10-Jan-17	10:40	2.8149	2.895	20496.38	20520.38	24	1.33	1.33	1.33	42	Cloudy	143.6	260
14-Jan-17	08:00	15-Jan-17	08:00	2.8029	2.8815	20520.38	20544.38	24	1.33	1.33	1.33	41	Cloudy	143.6	260
20-Jan-17	10:42	21-Jan-17	10:42	2.8192	2.9009	20544.38	20568.38	24	1.33	1.33	1.33	43	Sunny	143.6	260
26-Jan-17	11:00	27-Jan-17	11:00	2.81	2.89	20568.38	20592.38	24	1.33	1.33	1.33	42	Sunny	143.6	260

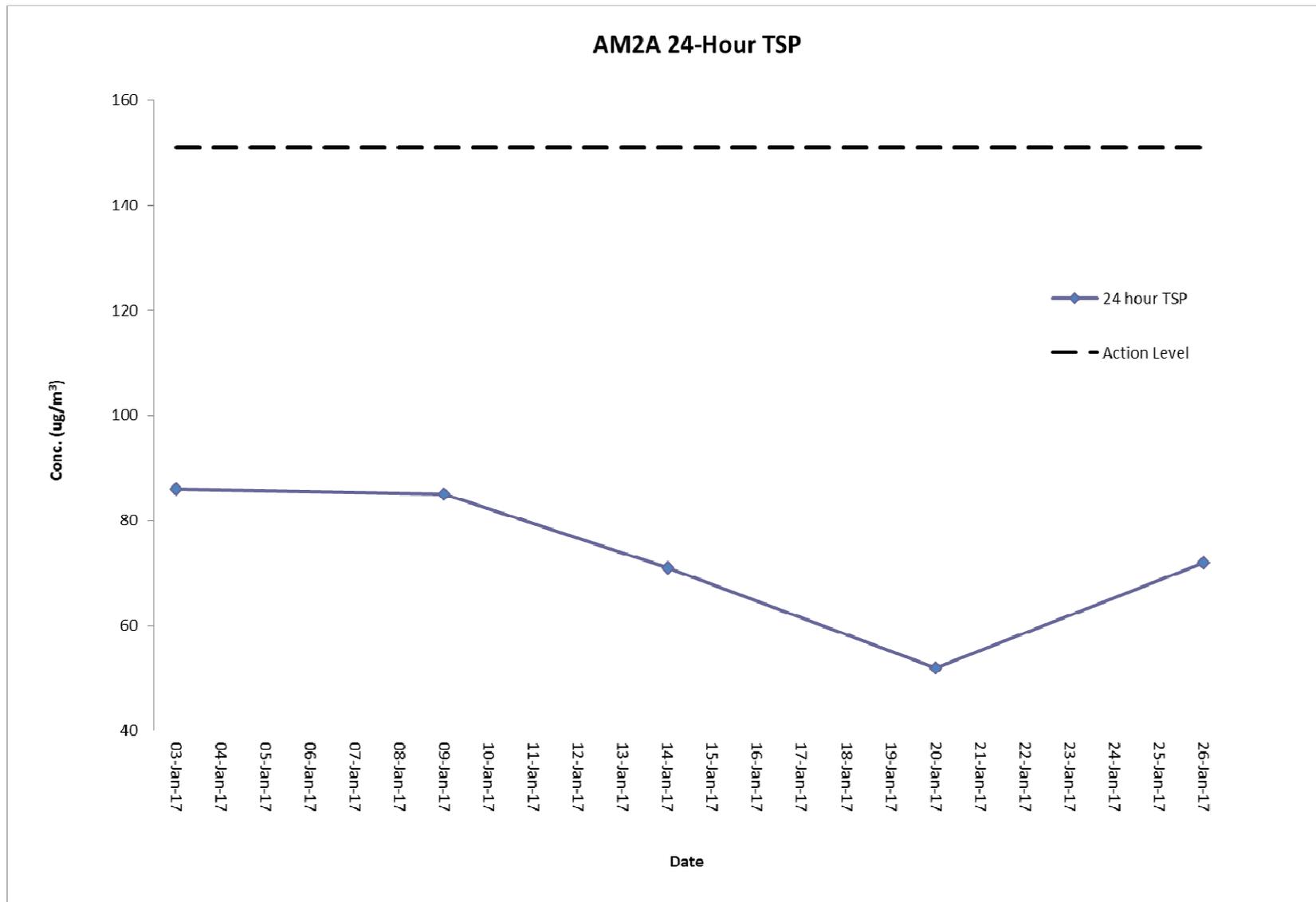
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



Air Quality Monitoring Result at Station AM2A (24-hour TSP)

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Jan-17	11:00	04-Jan-17	11:00	2.7952	2.9442	16127.59	16151.59	24	1.21	1.21	1.21	86	Sunny	151.1	260
09-Jan-17	10:52	10-Jan-17	10:52	2.8032	2.9515	16151.59	16175.59	24	1.21	1.21	1.21	85	Cloudy	151.1	260
14-Jan-17	08:12	15-Jan-17	08:12	2.8320	2.9550	16175.59	16199.59	24	1.21	1.21	1.21	71	Cloudy	151.1	260
20-Jan-17	10:52	21-Jan-17	10:52	2.8099	2.8997	16199.59	16223.59	24	1.21	1.21	1.21	52	Sunny	151.1	260
26-Jan-17	11:12	27-Jan-17	11:12	2.8057	2.9315	16223.59	16247.59	24	1.21	1.21	1.21	72	Sunny	151.1	260

Graphical Presentation of Air Quality Monitoring Result at Station AM2A (24-hour TSP)



Noise Monitoring Result at Station NM1A

Date	Time	Measured L ₁₀ dB(A)	Measured L ₉₀ dB(A)	L _{eq} (30 min.) dB(A)
03-Jan-17	14:00	67.9	62.9	70
03-Jan-17	14:05	68.8	63.2	
03-Jan-17	14:10	68.9	63.4	
03-Jan-17	14:15	70.0	63.8	
03-Jan-17	14:20	70.7	62.8	
03-Jan-17	14:25	69.9	62.9	
09-Jan-17	14:00	67.9	62.1	69
09-Jan-17	14:05	68.0	63.7	
09-Jan-17	14:10	69.4	64.0	
09-Jan-17	14:15	68.0	63.9	
09-Jan-17	14:20	68.4	63.1	
09-Jan-17	14:25	68.8	64.2	
20-Jan-17	14:00	68.0	62.1	69
20-Jan-17	14:05	68.8	62.4	
20-Jan-17	14:10	67.8	62.0	
20-Jan-17	14:15	68.9	62.7	
20-Jan-17	14:20	67.7	62.2	
20-Jan-17	14:25	69.0	62.9	
26-Jan-17	14:00	66.0	62.1	68
26-Jan-17	14:05	67.7	63.4	
26-Jan-17	14:10	68.0	64.0	
26-Jan-17	14:15	68.4	64.0	
26-Jan-17	14:20	67.1	63.7	
26-Jan-17	14:25	66.2	62.9	

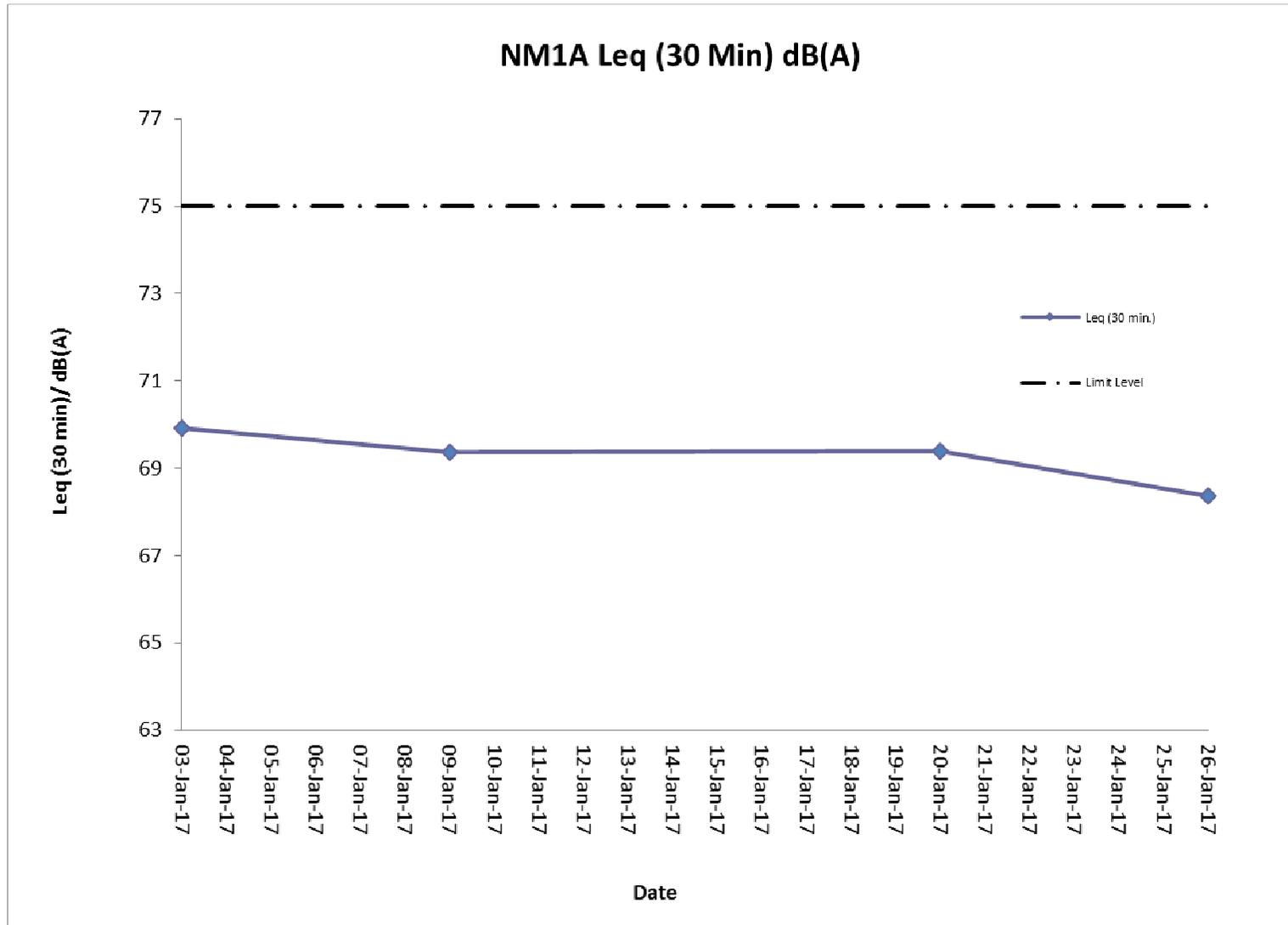
Remarks:

+3dB (A) correction was applied to free-field measurement.



The station set-up of a free-field measurement at Station NM1A.

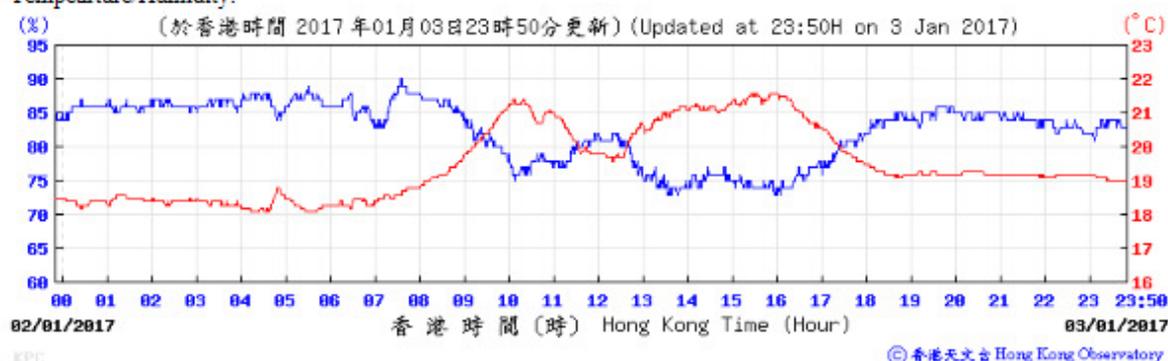
Graphical Presentation Noise Monitoring Result at Station NM1A



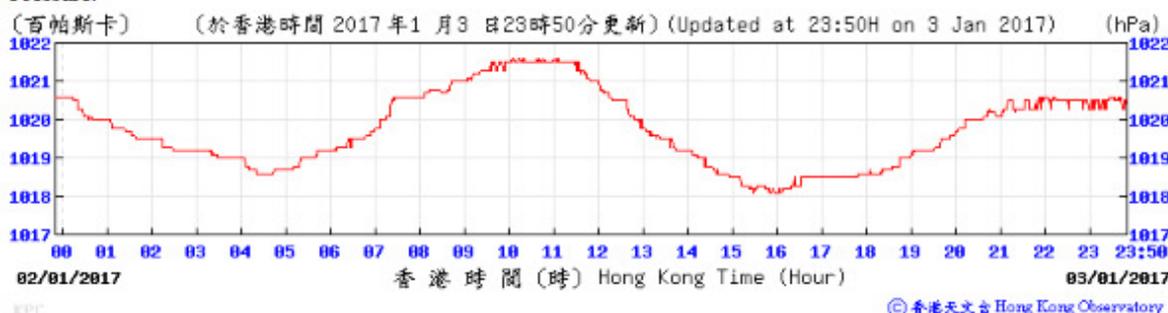
H. Meteorological Data Extracted from Hong Kong Observatory

Extract of Meteorological Observations for King's Park Automatic Weather Station, January 2017

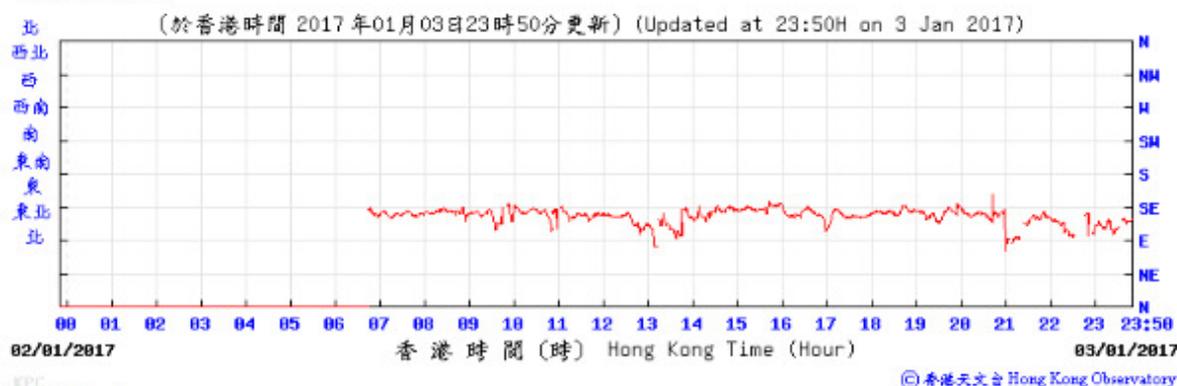
Temperature/Humidity:



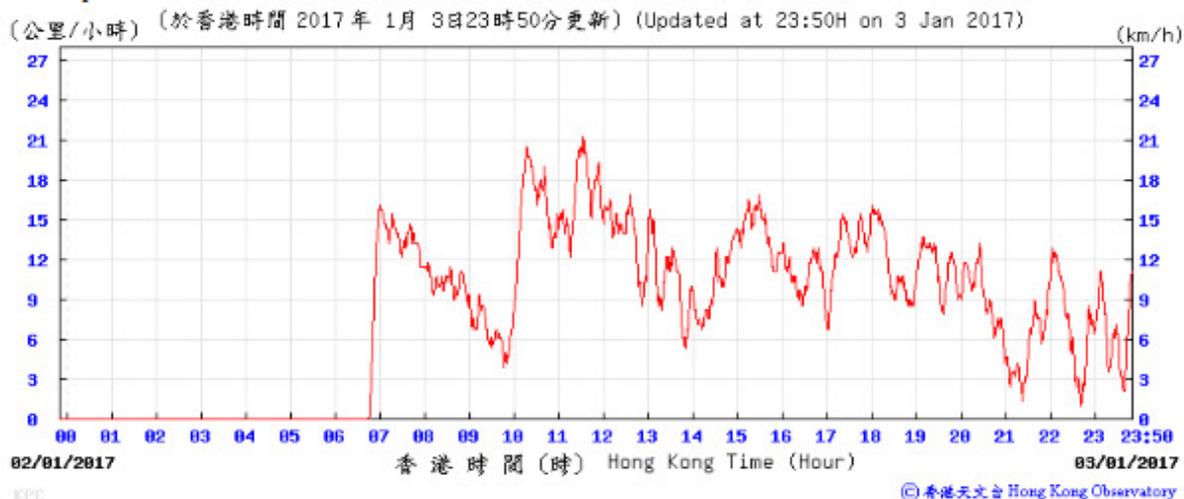
Pressure:



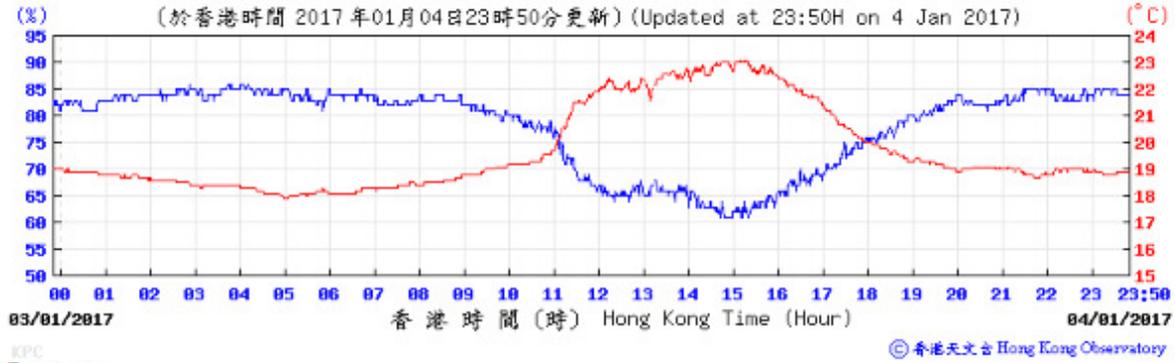
Wind Direction:



Wind Speed:



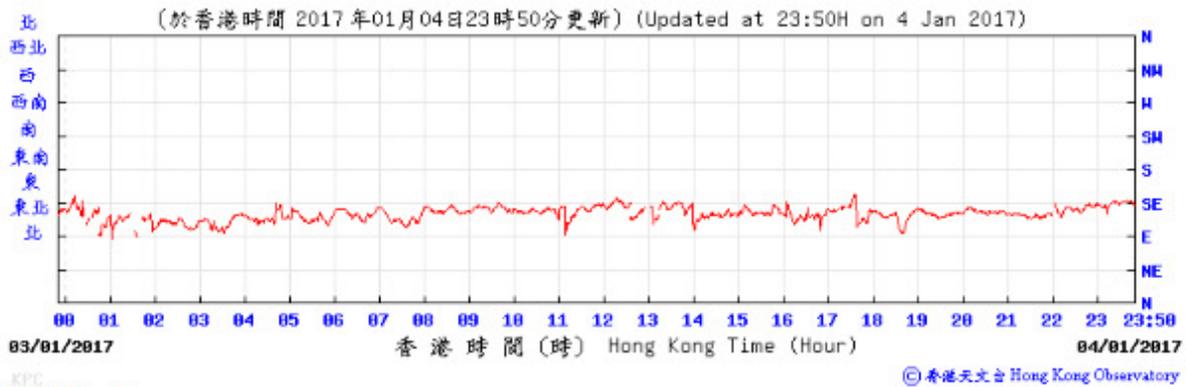
Temperature/Humidity:



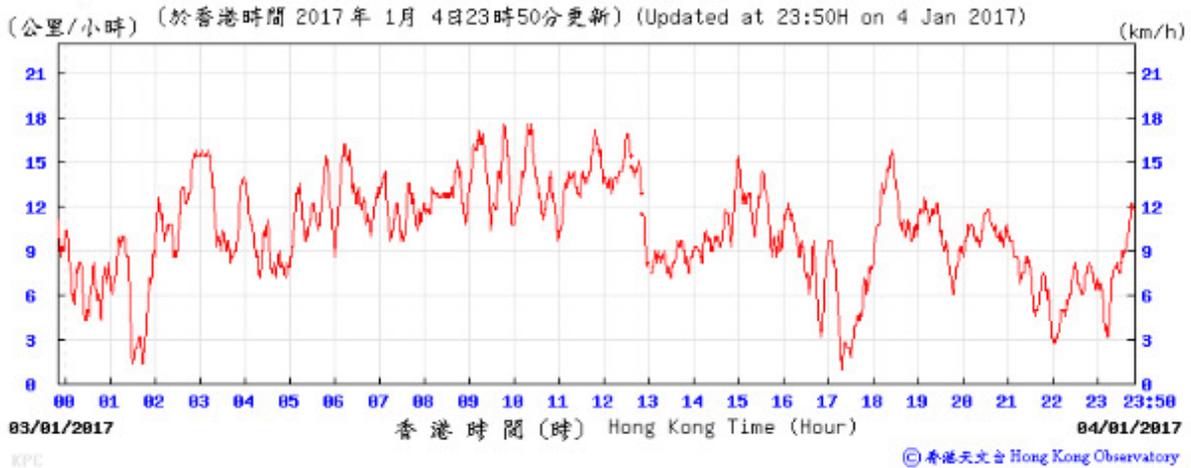
Pressure:



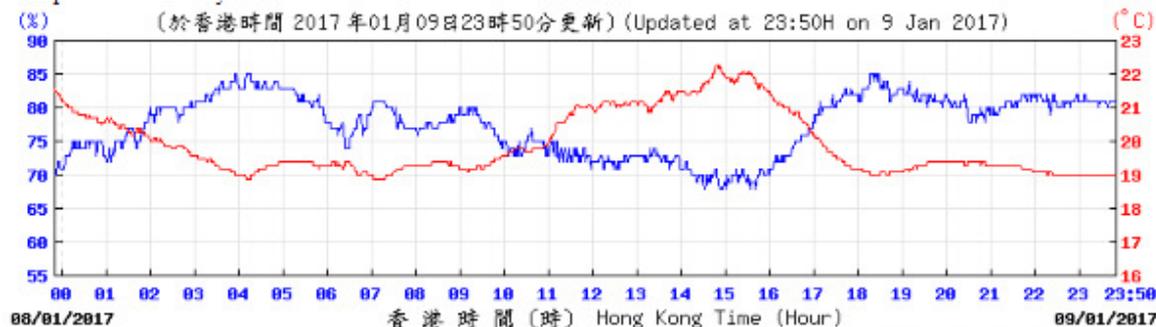
Wind Direction:



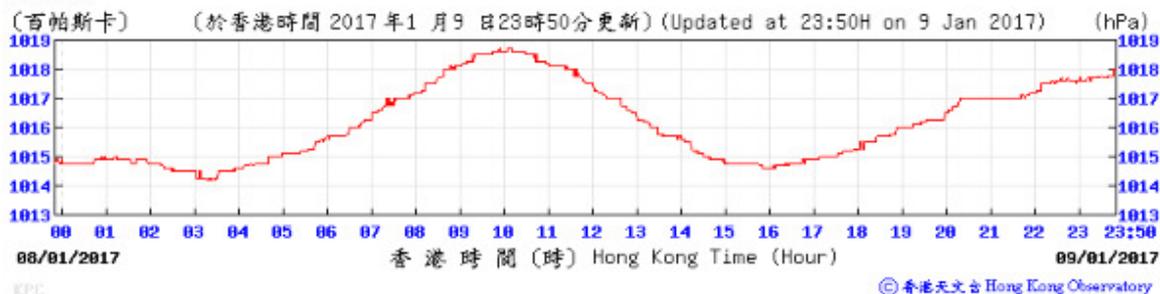
Wind Speed:



Temperature/Humidity:



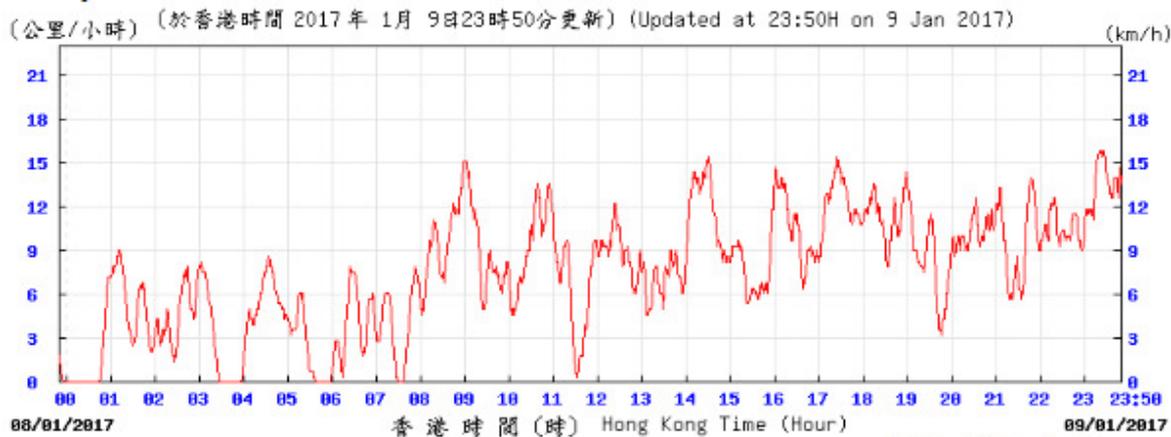
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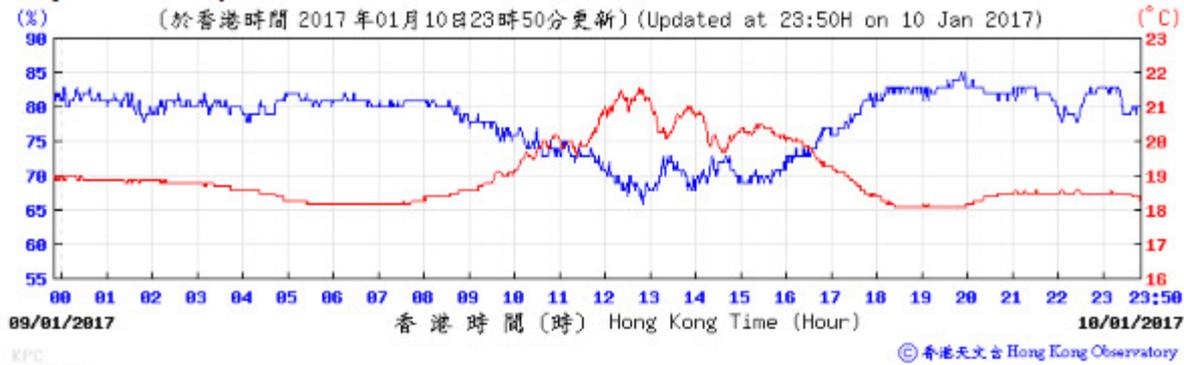
Wind Direction:



Wind Speed:



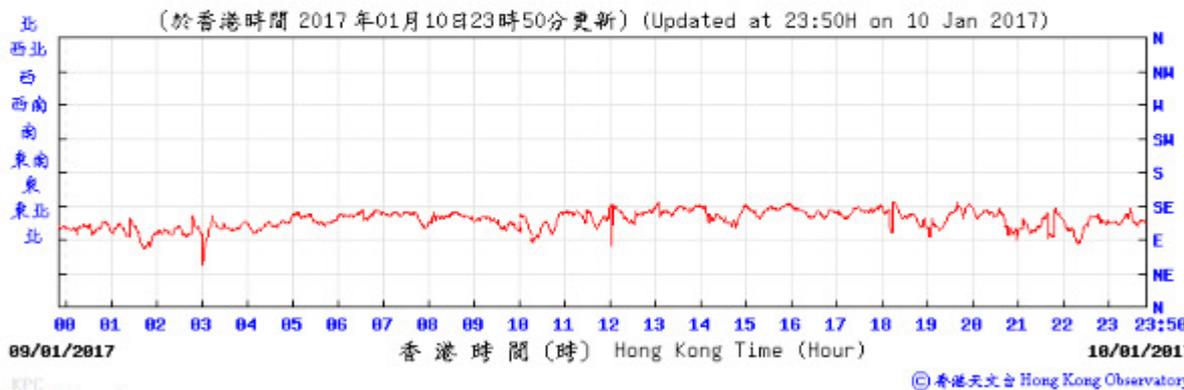
Temperature/Humidity:



Pressure:



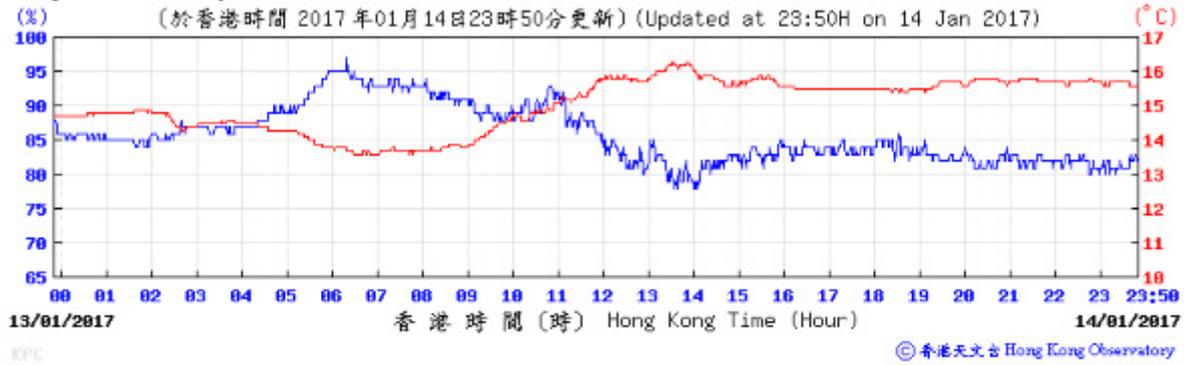
Wind Direction:



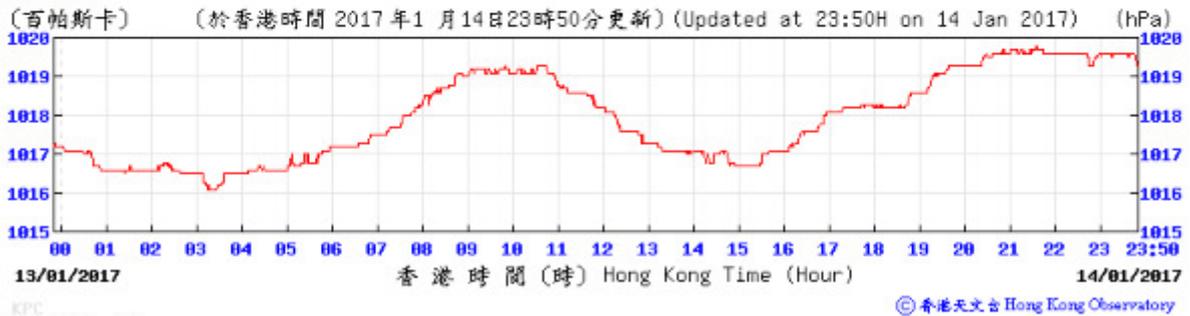
Wind Speed:



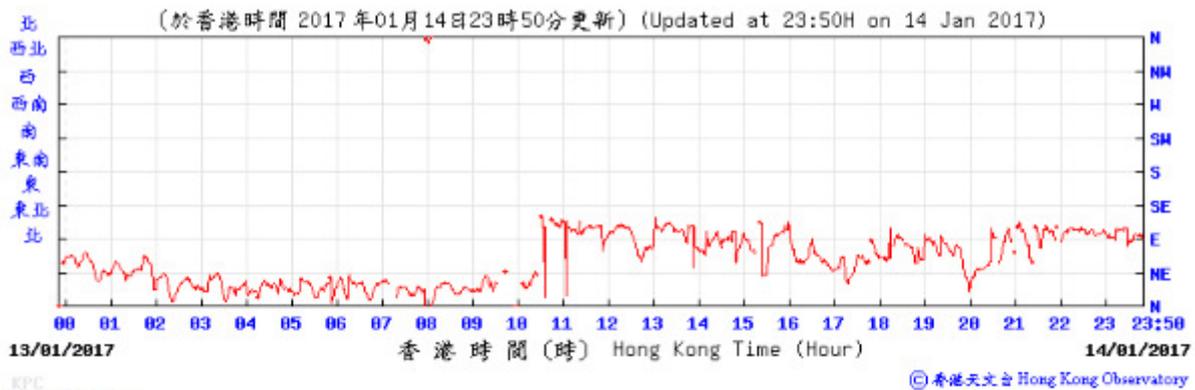
Temperature/Humidity:



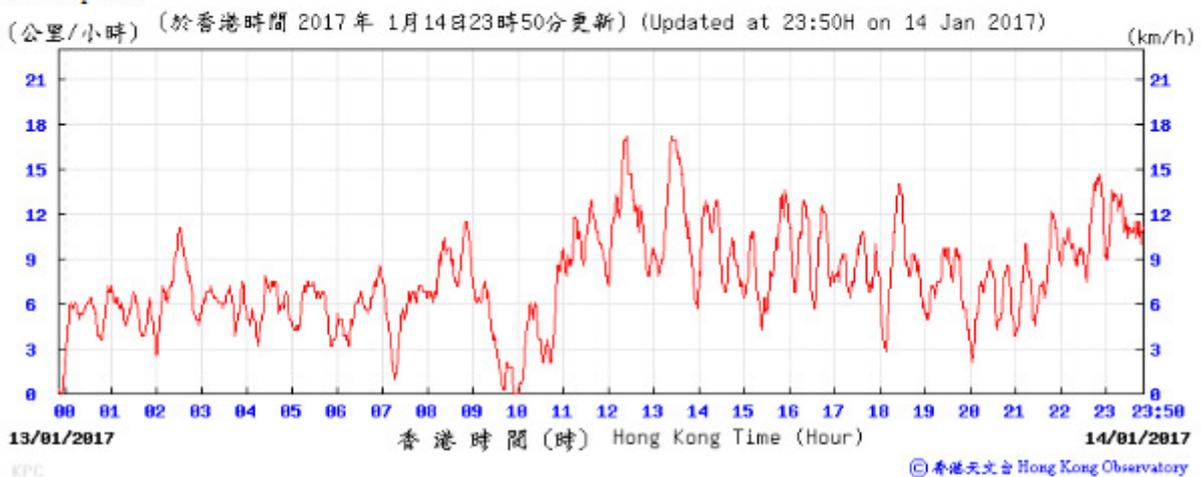
Pressure:



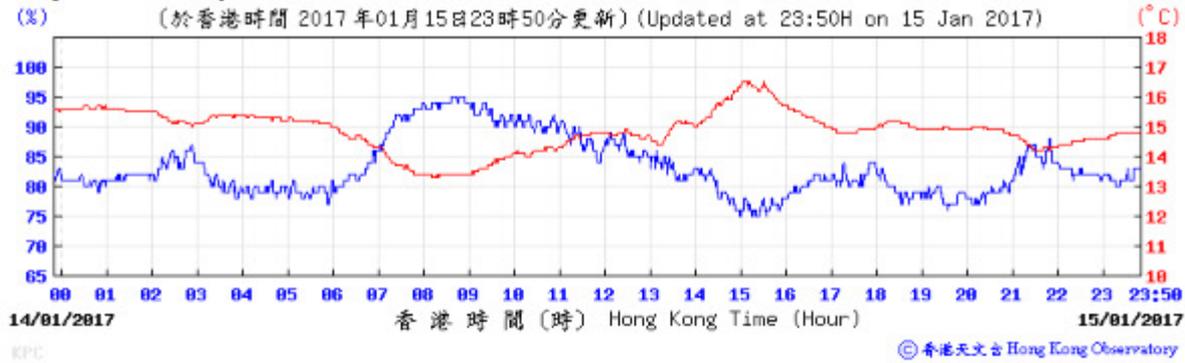
Wind Direction:



Wind Speed:



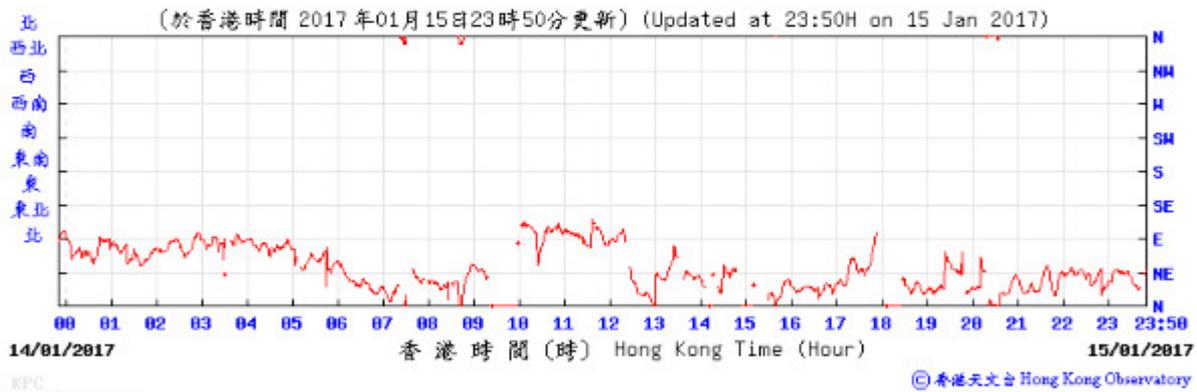
Temperature Humidity:



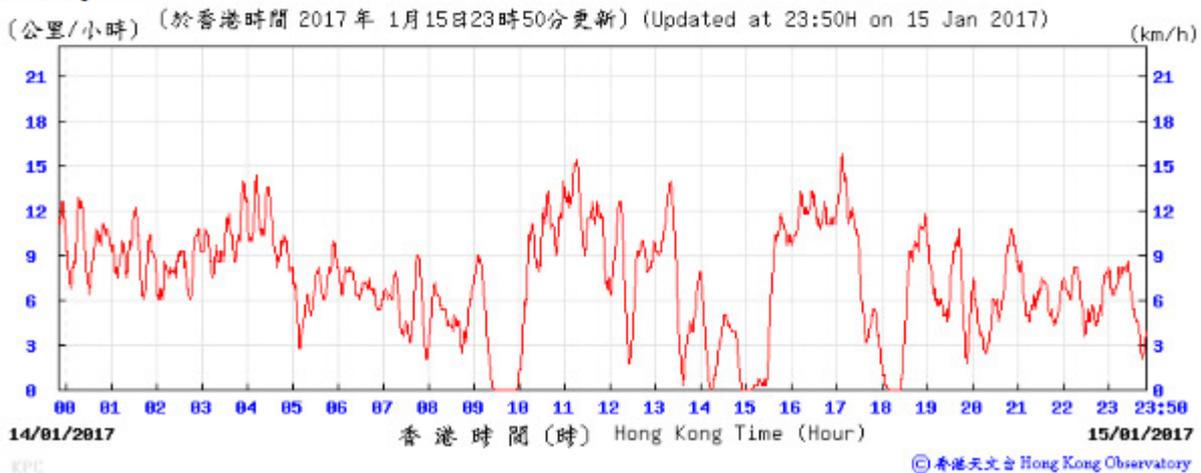
Pressure:



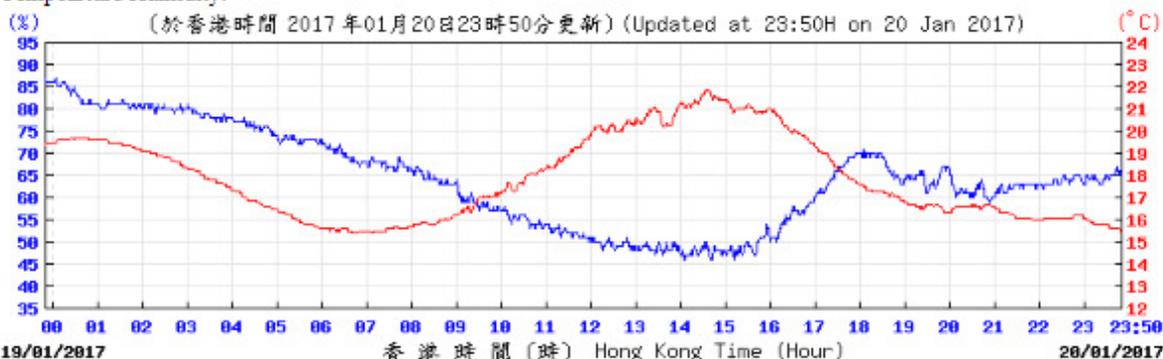
Wind Direction:



Wind Speed:

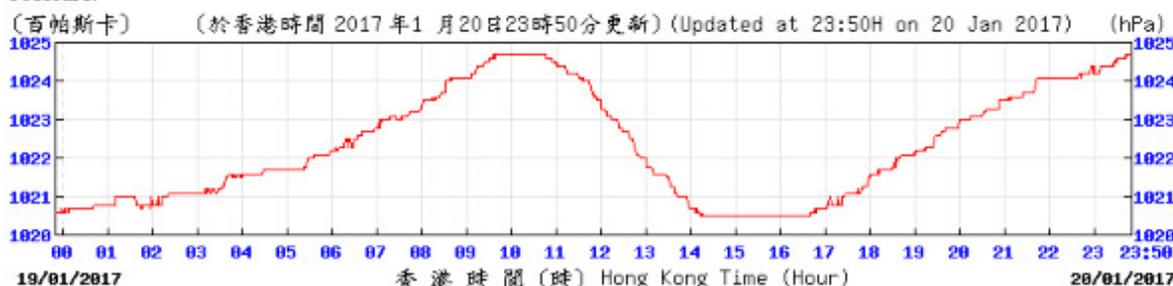


Temperature/Humidity:



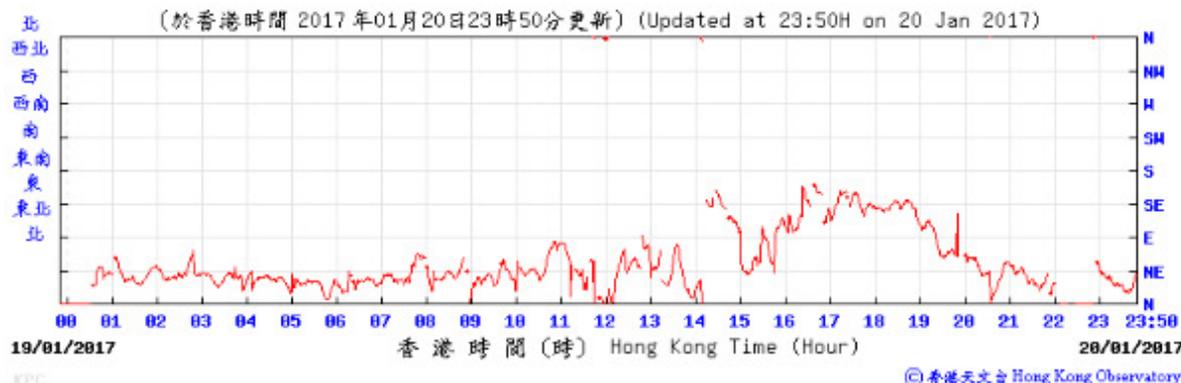
KPC

Pressure:



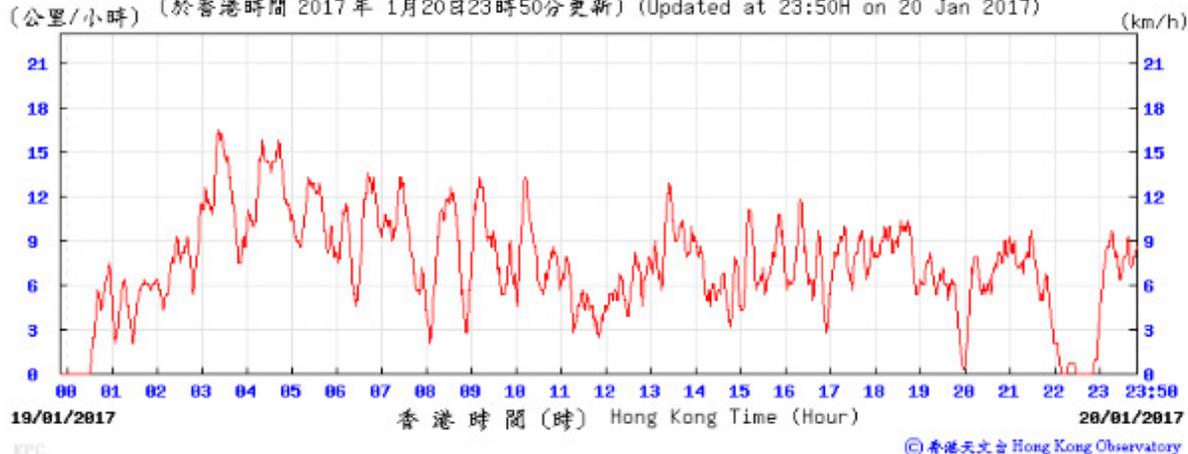
KPC

Wind Direction:



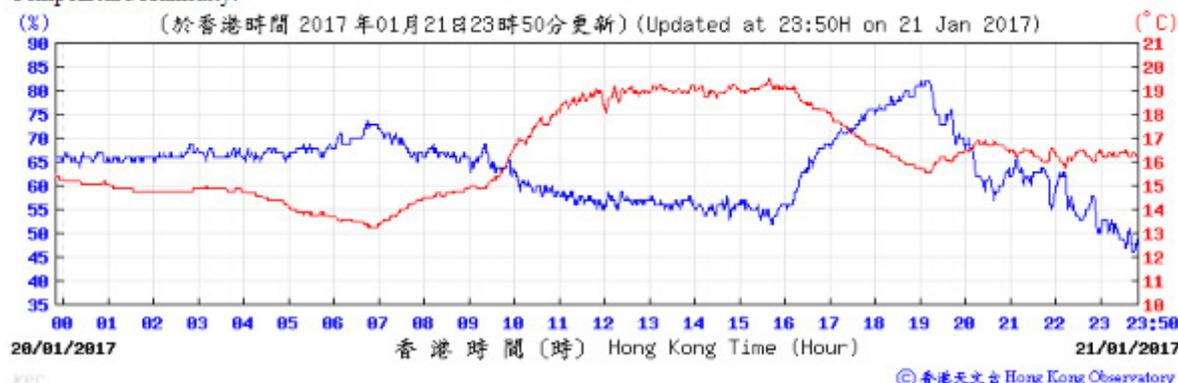
KPC

Wind Speed:

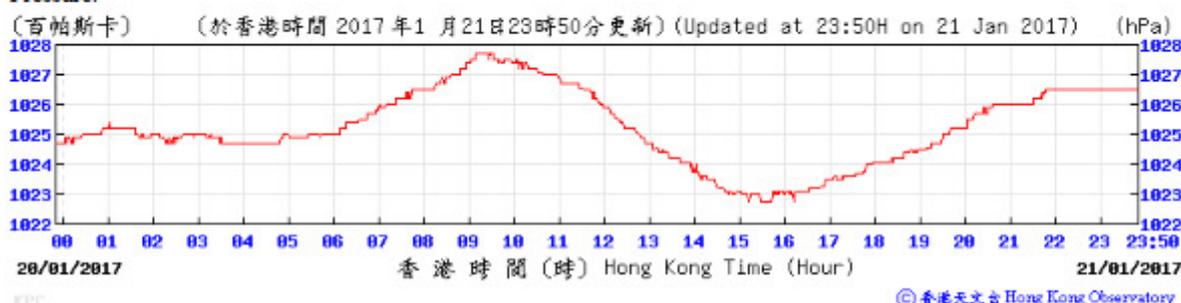


KPC

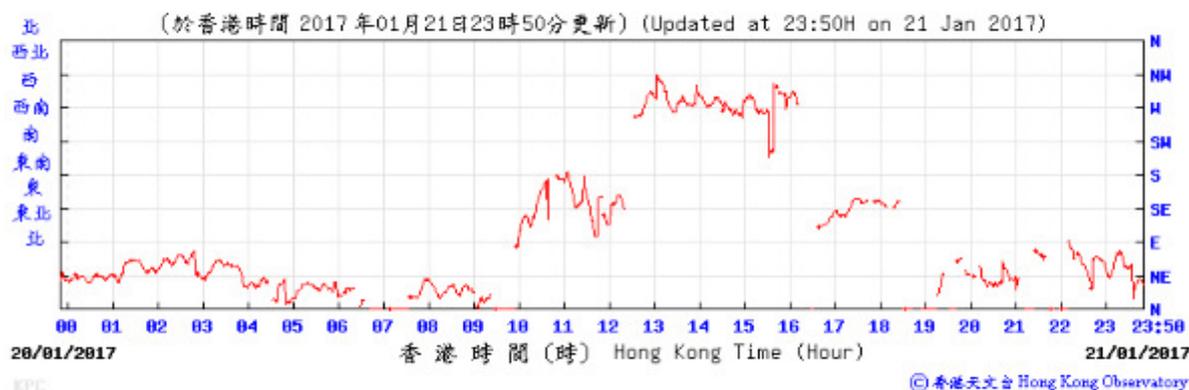
Temperature/Humidity:



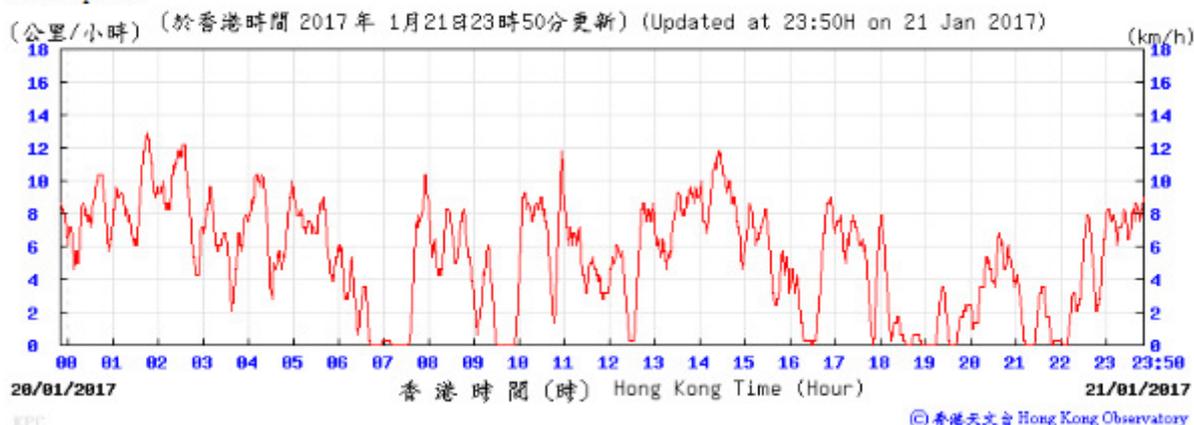
Pressure:



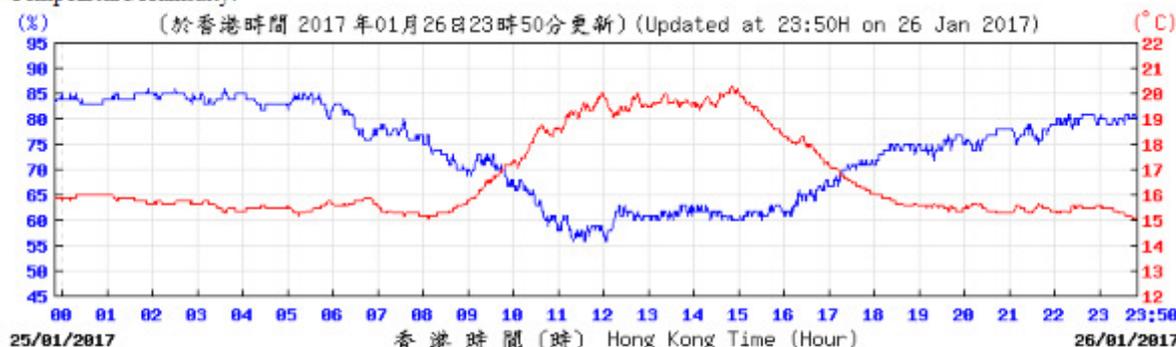
Wind Direction:



Wind Speed:

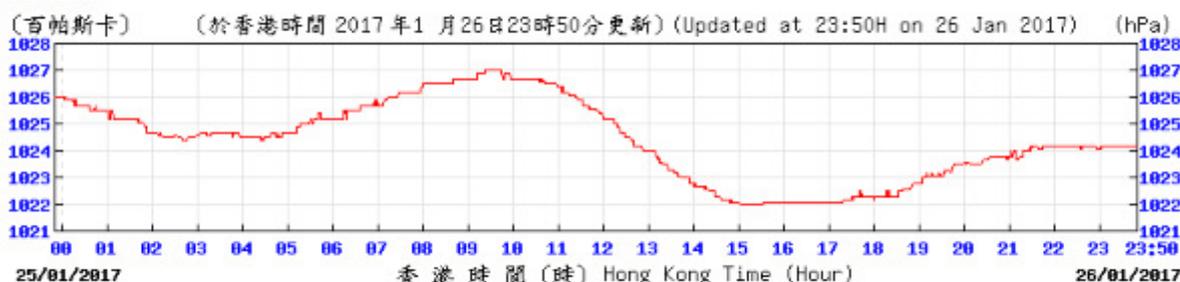


Temperature/Humidity:



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Pressure:



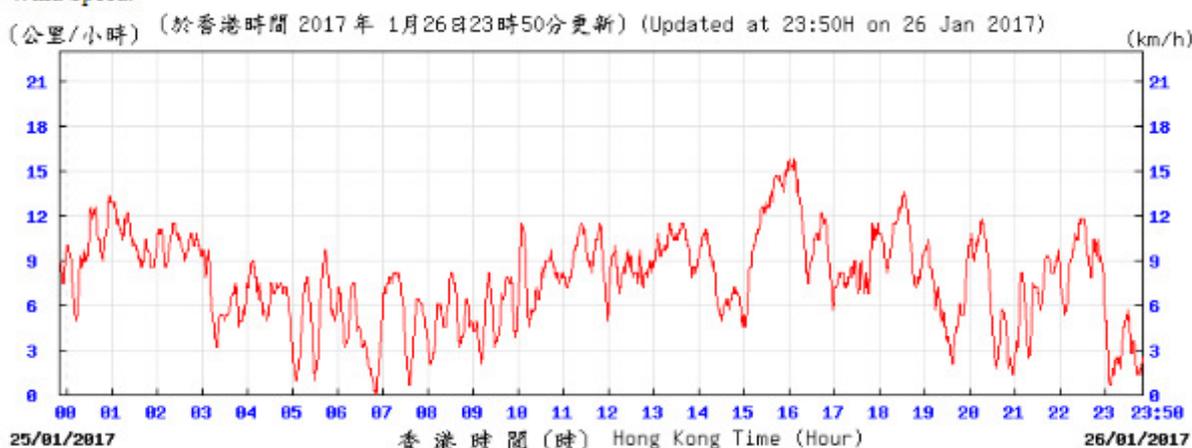
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Wind Direction:



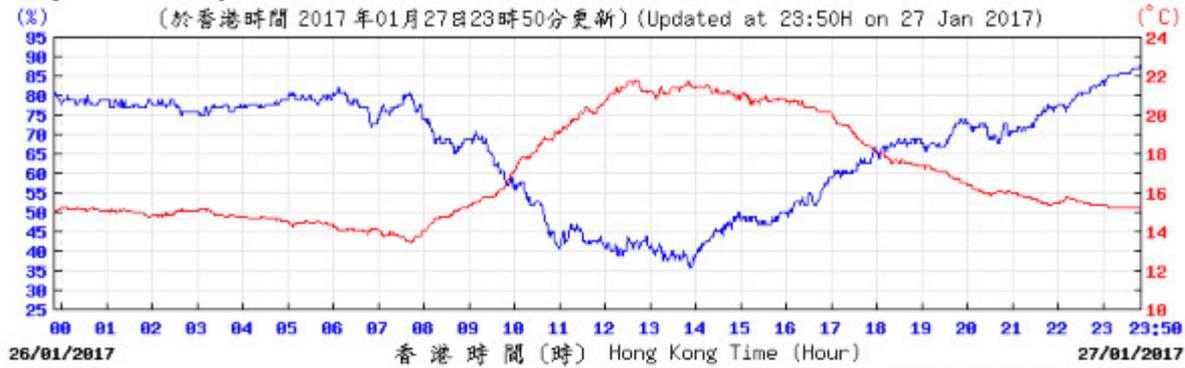
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Wind Speed:



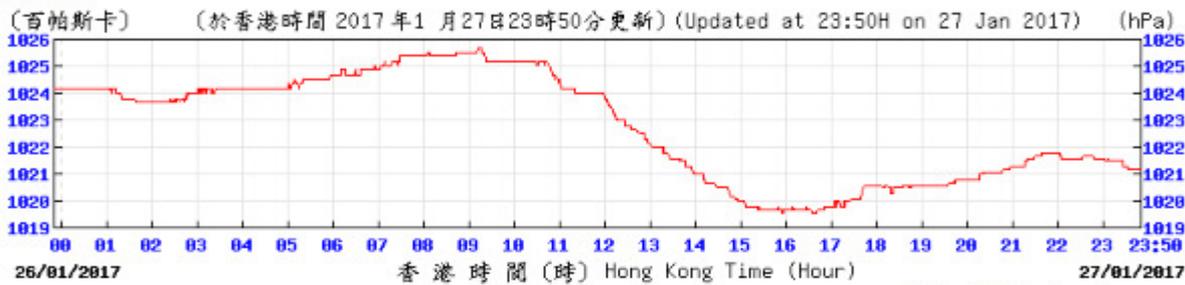
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Temperature Humidity:



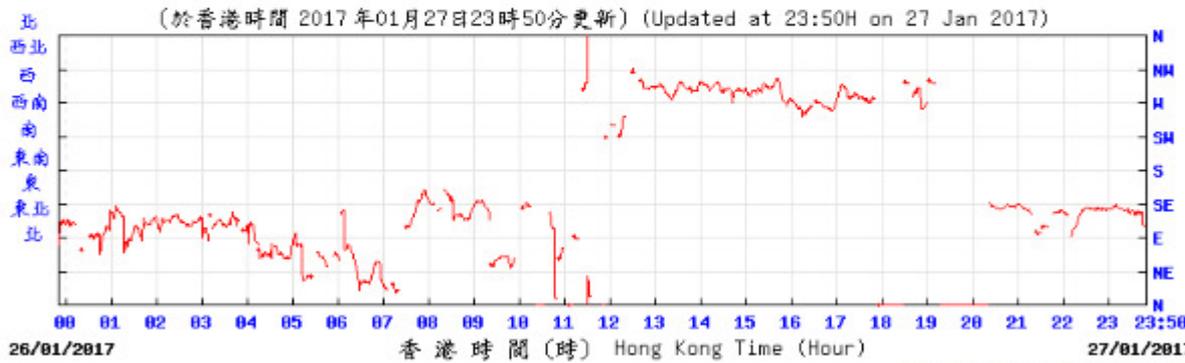
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Pressure:



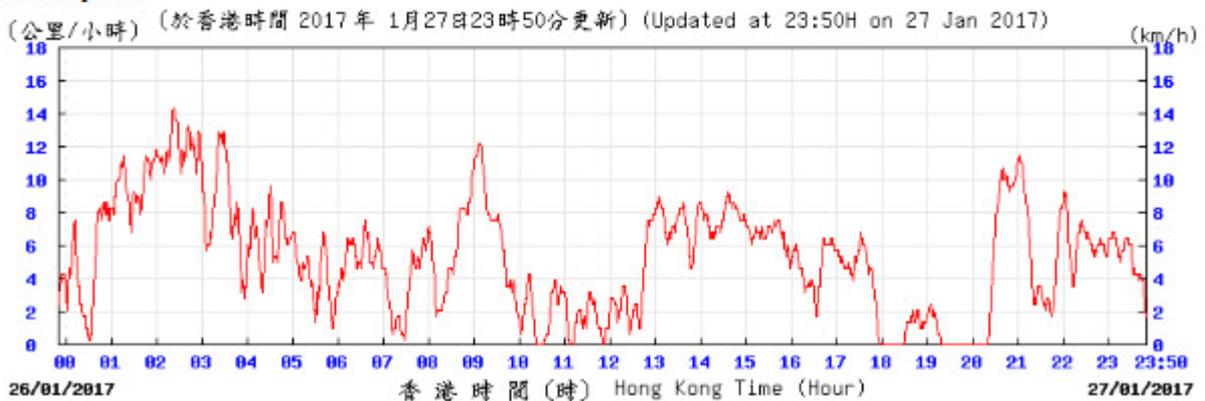
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Wind Direction:



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Wind Speed:



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I. Waste Flow table

M+ Museum

Table I-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)
2015													
Nov	46607.4	0.0	0.0	8240.0	38367.4	0.0	0.0	76.2	0.0	0.0	0.0	0.0	67.6
Dec	29652.9	0.0	0.0	29621.4	31.5	0.0	0.0	26.3	0.0	0.0	0.0	1.0	66.0
Sub-total (2015)	76260.3	0.0	0.0	37861.4	38398.9	0.0	0.0	102.5	0.0	0.0	0.0	1.0	133.6
2016													
Jan	21077.4	0.0	6352.0	14576.0	149.4	0.0	0.0	18.8	0.0	0.0	0.0	0.0	23.2
Feb	7626.2	0.0	3424.0	4048.0	154.2	0.0	0.0	59.8	0.0	0.0	0.0	0.0	20.5
Mar	10442.5	0.0	1600.0	7888.0	954.5	0.0	0.0	29.7	0.0	0.0	0.0	0.0	46.3
Apr	30413.2	0.0	6352.0	23408.0	653.2	0.0	0.0	25.8	0.1	0.0	27.8	0.0	34.5
May	24083.5	0.0	112.0	23216.0	755.5	0.0	0.0	61.5	0.4	0.0	33.6	0.0	62.3
Jun	7880.1	0.0	4736.0	2384.0	760.1	0.0	0.0	106.6	0.1	0.0	14.6	0.0	52.8
Jul	5893.1	0.0	2656.0	2240.0	997.1	0.0	0.0	77.6	0.0	0.0	33.6	0.0	83.1
Aug	13709.6	0.0	0.0	12432.0	1277.6	0.0	0.0	111.3	0.3	0.0	38.5	0.0	104.9
Sep	6702.0	0.0	0.0	5648.0	1000.1	53.9	0.0	104.2	0.0	0.0	45.5	0.2	107.9
Oct	2103.6	0.0	0.0	496.0	1595.4	12.2	0.0	83.0	0.4	0.0	73.5	0.0	108.2
Nov	3302.7	0.0	0.0	2384.0	855.5	63.2	0.0	88.4	0.6	0.0	63.0	0.0	129.1
Dec	899.8	0.0	0.0	736.0	126.8	37.0	0.0	48.3	0.6	0.0	70.0	0.0	89.0
Sub-total (2016)	134133.6	0.0	25232.0	99456.0	9279.3	166.3	0.0	814.9	2.5	0.0	400.1	0.2	861.8
Total	210393.9	0.0	25232.0	137317.4	47678.2	166.3	0.0	917.4	2.5	0.0	400.1	1.2	995.4
2017													
Jan	675.2	0.0	0.0	432.0	237.9	5.3	0.0	41.9*	1.0	0.0	70.0	0.0	79.7
Feb													
Mar													
Apr													
Sub-total (2017)	675.2	0.0	0.0	432.0	237.9	5.3	0.0	41.9	1.0	0.0	70.0	0.0	79.7

Note:

*The total amount of metals generated in Jan 2017 will be updated in the next reporting month.

-66.74 ton and 171.16 ton of inert C&D material were disposed of as public fill to Tuen Mun Area 38 and Tseung Kwan O Area 137 Public Fill respectively in the reporting month.

-For inert C&D materials reused in other projects, the projects refer to (1) Green Valley; (2) Advance Works for Shek Wu Hui Sewage Treatment Works (3) Design and Construction of Kai Tak Cable Tunnel, CLP; (4) MTR Contract 1002 Whampoa Station and Overrun Tunnel; (5) CEDD Tuen Mun Area 54 Contract No. CV/2015/03; (6) Union Construction Ltd.'s site; (7) Foundation Works at Marriot Hotel at Ocean Park.

Lyric Theatre Complex

Table I-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)
2016													
Mar	2702.1	0.0	0.0	0.0	2702.1	0.0	0.0	4.5	0.1	0.0	0.0	0.0	30.6
Apr	8631.5	0.0	0.0	0.0	8631.5	0.0	0.0	16.0	0.0	0.0	0.0	0.0	19.2
May	12487.8	0.0	0.0	0.0	12487.8	0.0	0.0	34.0	0.0	0.0	0.0	0.7	60.5
Jun	8600.8	0.0	0.0	0.0	8600.8	0.0	0.0	31.4	0.2	0.0	0.0	0.5	13.5
Jul	12624.2	0.0	0.0	0.0	12624.2	0.0	0.0	19.6	0.0	0.0	0.0	2.0	9.9
Aug	14419.9	0.0	0.0	0.0	14419.9	0.0	0.0	43.9	0.0	0.0	0.0	0.0	11.1
Sep	13671.3	0.0	0.0	0.0	13671.3	0.0	0.0	59.8	0.0	0.0	0.0	1.6	12.4
Oct	13088.9	0.0	0.0	0.0	13088.9	0.0	0.0	37.1	0.2	1.5	0.0	0.0	15.2
Nov	12424.7	0.0	0.0	0.0	12424.7	0.0	0.0	74.7	0.0	0.0	0.0	1.4	10.2
Dec	12487.6	0.0	0.0	0.0	12487.6	0.0	0.0	13.9	0.0	0.0	0.0	1.3	9.0
Sub-total (2016)	111138.8	0.0	0.0	0.0	111138.8	0.0	0.0	334.7	0.4	1.5	0.0	7.6	191.6
2017													
Jan	9607.8	0.0	0.0	0.0	9607.8	0.0	0.0	29.5	0.0	0.0	0.0	0.0	7.3
Feb	0.0												
Mar	0.0												
Apr	0.0												
May	0.0												
Jun	0.0												
Sub-total (2017)	9607.8	0.0	0.0	0.0	9607.8	0.0	0.0	29.5	0.0	0.0	0.0	0.0	7.3
Total	120746.6	0.0	0.0	0.0	120746.6	0.0	0.0	364.2	0.4	1.5	0.0	7.6	198.9

Note:

-3,162.88 ton and 6,444.94 ton of inert C&D material were disposed of as public fill to Tuen Mun Area 38 and Tseung Kwan O Area 137 respectively in the reporting month.

J. Environmental Mitigation Measures – Implementation Status

Table J-1: Environmental Mitigation Measures Implementation Status

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
Air Quality Impact (Construction)			
2.1 & 10.3.1	<p>General Dust Control Measures</p> <p>Frequent water spraying for active construction areas (12 times a day or once every one hour), including Heavy construction activities such as construction of buildings or roads, drilling, ground excavation, cut and fill operations (i.e., earth moving)</p>	✓	Obs
2.1 & 10.3.1	<p>Best Practice For Dust Control</p> <p>The relevant best practices for dust control as stipulated in the Air Pollution Control (construction Dust) Regulation should be adopted to further reduce the construction dust impacts from the Project. These best practices include:</p> <p><i>Good Site Management</i></p> <ul style="list-style-type: none"> • Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. <p><i>Disturbed Parts of the Roads</i></p> <ul style="list-style-type: none"> • Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or • Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. <p><i>Exposed Earth</i></p> <ul style="list-style-type: none"> • Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. <p><i>Loading, Unloading or Transfer of Dusty Materials</i></p> <ul style="list-style-type: none"> • All dusty materials should be sprayed with water immediately prior to any loading or transfer operation 	Obs	✓
		✓	✓
		N/A	N/A
		✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
	so as to keep the dusty material wet.		
	<i>Debris Handling</i>		
	<ul style="list-style-type: none"> Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. 	✓	✓
	<ul style="list-style-type: none"> Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. 	✓	✓
	<i>Transport of Dusty Materials</i>		
	<ul style="list-style-type: none"> Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. 	✓	✓
	<i>Wheel washing</i>		
	<ul style="list-style-type: none"> Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 	Obs	✓
	<i>Use of vehicles</i>		
	<ul style="list-style-type: none"> The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. 	✓	✓
	<ul style="list-style-type: none"> Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 	Obs	✓
	<ul style="list-style-type: none"> Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle. 	✓	✓
	<i>Site hoarding</i>		
	<ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	✓	✓
2.1 & 10.3.1	<p>Best Practicable Means for Cement Works (Concrete Batching Plant)</p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93) should be followed and implemented to further reduce the construction dust impacts of the Project. These best practices include:</p> <p>Exhaust from Dust Arrestment Plant</p>		

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
	<ul style="list-style-type: none"> Wherever possible the final discharge point from particulate matter arrestment plant, where is not necessary to achieve dispersion from residual pollutants, should be at low level to minimise the effect on the local community in the case of abnormal emissions and to facilitate maintenance and inspection 	✓	✓
	Emission Limits		
	<ul style="list-style-type: none"> All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke 	✓	✓
	Engineering Design/Technical Requirements		
	<ul style="list-style-type: none"> As a general guidance, the loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should be carried out in a manner so as to prevent the release of visible dust and/or other noxious or offensive emissions 	✓	✓
-	<p>Non-Road Mobile Machinery (NRMM):</p> <p>All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.</p>	✓	Rem
Noise Impact (Construction)			
3.1 & 10.4.1	<p>Good Site Practice</p> <p>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <ul style="list-style-type: none"> only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; mobile plant should be sited as far away from NSRs as possible; and material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓	✓
3.1 & 10.4.1	<p>Adoption of Quieter PME</p> <p>The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and "Sound Power Levels of Other Commonly Used PME" are presented in Table 4.26 in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.</p>	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
3.1 & 10.4.1	Use of Movable Noise Barriers Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.	✓	✓
3.1 & 10.4.1	Use of Noise Enclosure/ Acoustic Shed The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No.9/2010.	N/A	N/A
3.1 & 10.4.1	Use of Noise Insulating Fabric Noise insulating fabric can also be adopted for certain PME (e.g. drill rig, pilling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.	✓	✓
3.1 & 10.4.1	Scheduling of Construction Works outside School Examination Periods During construction phase, the contractor should liaise with the educational institutions (including NSRs LCS and CRGPS) to obtain the examination schedule and avoid the noisy construction activities during school examination periods.	N/A	N/A
Water Quality Impact (Construction)			
4.1 & 10.5.1	Construction site runoff and drainage The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:		
	<ul style="list-style-type: none"> At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the WKCDA's Contractor prior to the commencement of construction; Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the WKCDA's Contractor prior to the commencement of construction. All drainage facilities and erosion and sediment control structures should be regularly inspected and 	✓	✓
		✓	✓
		✓	Obs

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
	maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.		
	<ul style="list-style-type: none"> Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. 	✓	✓
	<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. 	✓	✓
	<ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. 	✓	✓
	<ul style="list-style-type: none"> Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. 	✓	✓
	<ul style="list-style-type: none"> Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. 	✓	✓
	<ul style="list-style-type: none"> Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	N/A	N/A
	Barging facilities and activities		
	Recommendations for good site practices during operation of the proposed barging point include:		
	<ul style="list-style-type: none"> All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; 	N/A	N/A
	<ul style="list-style-type: none"> Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of 	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
	materials or polluted water during loading or transportation;		
	<ul style="list-style-type: none"> All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. 	N/A	N/A
		N/A	N/A
4.1 & 10.5.1	Sewage effluent from construction workforce Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	✓	✓
4.1 & 10.5.1	General construction activities <ul style="list-style-type: none"> Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. 	✓	✓
		Obs	Obs
Waste Management Implications (Construction)			
6.1 & 10.7.1	Good Site Practices Recommendations for good site practices during the construction activities include:		
	<ul style="list-style-type: none"> Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site Training of site personnel in proper waste management and chemical handling procedures Provision of sufficient waste disposal points and regular collection of waste Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated 	✓	✓
		✓	✓
		Obs	✓
		✓	✓
		Obs	✓
		✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
6.1 & 10.7.1	Waste Reduction Measures		
	Recommendations to achieve waste reduction include:		
	• Sort inert C&D material to recover any recyclable portions such as metals	✓	✓
	• Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal	✓	✓
	• Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force	✓	✓
	• Proper site practices to minimise the potential for damage or contamination of inert C&D materials	✓	✓
	• Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste	✓	✓
6.1 & 10.7.1	Inert and Non-inert C&D Materials		
	In order to minimise impacts resulting from collection and transportation of inert C&D material for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D material generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.	✓	✓
	• The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.	✓	✓
	• Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.	✓	✓
	• The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site.	✓	✓
	• In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No.6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site.	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
6.1 & 10.7.1	<p>Chemical Waste</p> <ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the “Code of Practice on the Packaging Labelling and Storage of Chemical Wastes”. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended. 	Obs	Obs
6.1 & 10.7.1	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	✓	✓
Land Contamination (Construction)			
7.1 & 10.8.1	<p>The potential for land contamination issues at the TST Fire Station due to its future relocation will be confirmed by site investigation after land acquisition. Where necessary, mitigation measures for minimising potential exposure to contaminated materials (if any) or remediation measures will be identified. If contaminated land is identified (e.g., during decommissioning of fuel oil storage tanks) after the commencement of works, mitigation measures are proposed in order to minimise the potentially adverse effects on the health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials.</p> <p>The following measures are proposed for excavation and transportation of contaminated material:</p> <ul style="list-style-type: none"> To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when interacting directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; Stockpiling of contaminated excavated materials on site should be avoided as far as possible; 	N/A	N/A
		N/A	N/A
		N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
	<ul style="list-style-type: none"> The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; Truck bodies and tailgates should be sealed to stop any discharge; Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; Speed control for trucks carrying contaminated materials should be exercised; Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354) and obtain all necessary permits where required; and Maintain records of waste generation and disposal quantities and disposal arrangements. 	N/A	N/A
Ecological Impact (Construction)			
No mitigation measure is required.			
Landscape and Visual Impact (Construction)			
Table 9.1 & 10.8 (CM1)	Trees should be retained in situ on site as far as possible. Should tree removal be unavoidable due to construction impacts, trees will be transplanted or felled with reference to the stated criteria in the Tree Removal Applications to be submitted to relevant government departments for approval in accordance to ETWB TCW No. 29/2004 and 3/2006.	✓	N/A
Table 9.1 & 10.8 (CM2)	Compensatory tree planting shall be incorporated to the proposed project and maximize the new tree, shrubs and other vegetation planting to compensate tree felled and vegetation removed. Also, implementation of compensatory planting should be of a ratio not less than 1:1 in terms of quality and quantity within the site.	N/A	N/A
Table 9.1 & 10.8 (CM3)	Buffer trees for screening purposes to soften the hard architectural and engineering structures and facilities.	N/A	N/A
Table 9.1 & 10.8 (CM4)	Softscape treatments such as vertical green wall panel /planting of climbing and/or weeping plants, etc, to maximize the green coverage and soften the hard architectural and engineering structures and facilities.	N/A	N/A
Table 9.1 & 10.8 (CM5)	Roof greening by means of intensive and extensive green roof to maximize the green coverage and improve aesthetic appeal and visual quality of the building/structure.	N/A	N/A
Table 9.1 & 10.8 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage	
		M+ Museum	Lyric Theatre Complex
Table 9.1 & 10.8 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	N/A	N/A
Table 9.1 & 10.8 (CM8)	Landscape design shall be incorporated to architectural and engineering structures in order to provide aesthetically pleasing designs.	N/A	N/A
Table 9.1 (CM9)	Minimize the structure of marine facilities to built on the seabed and foreshore in order to minimize the affected extent to the waterbody	N/A	N/A
Table 9.2 & 10.9 (MCP1)	Use of decorative screen hoarding/boards	✓	✓
Table 9.2 & 10.9 (MCP2)	Early introduction of landscape treatments	N/A	N/A
Table 9.2 & 10.9 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A	N/A
Table 9.2 & 10.9 (MCP4)	Control of night time lighting	✓	✓
Table 9.2 & 10.9 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften the hard edges of the structures.	N/A	N/A

N/A - Not Applicable

✓ - Implemented

Obs - Observed

Rem - Reminder

K. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 31 October 2015 for M+ Museum main works and 1 March 2016 for Lyric Theatre Complex foundation works) to the end of the reporting month and are summarized in the **Table K-1** and **Table K-2** below respectively.

Table K-1: Statistics for complaints, notifications of summons and successful prosecutions for M+ Museum Main Works

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting month	0	0	0
From 31 October 2015 to end of the reporting month	3	1	0

Table K-2: Statistics for complaints, notifications of summons and successful prosecutions for Lyric Theatre Complex Foundation Works

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting month	0	0	0
From 1 March 2016 to end of the reporting month	4	0	0