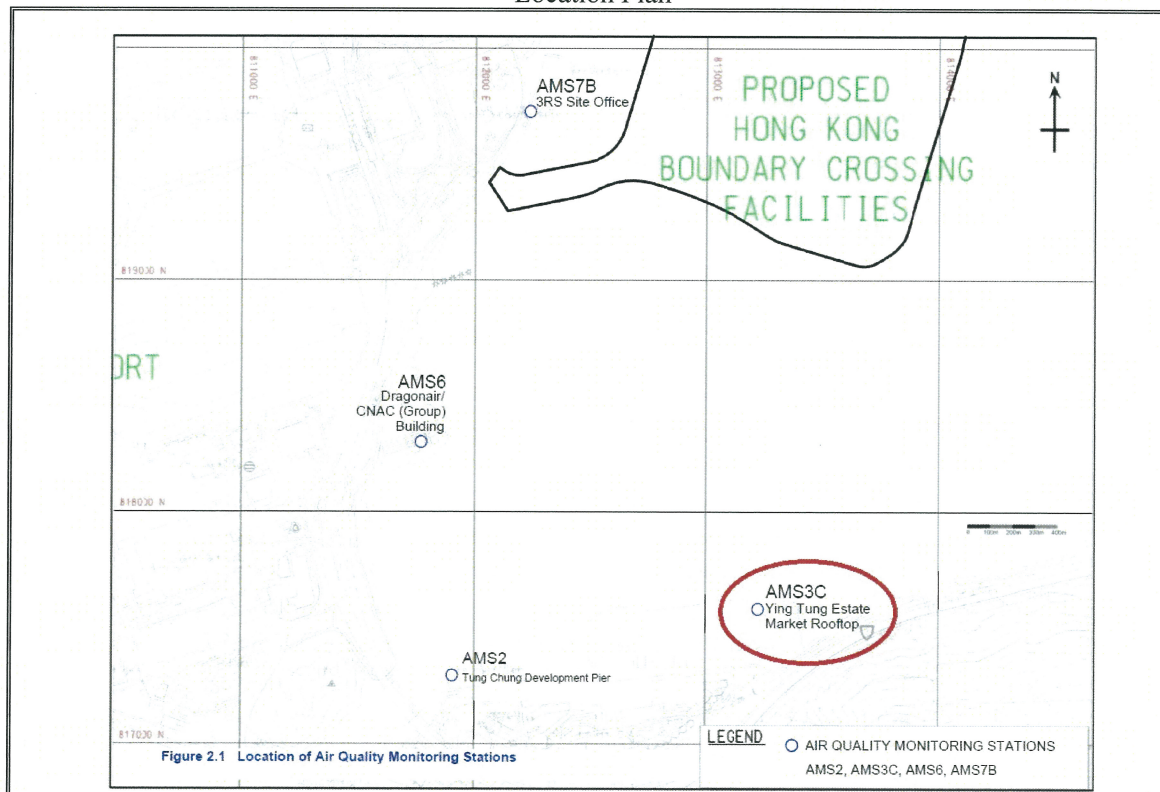


**Incident Report on Action Level or Limit Level Non-compliance**

Contract	Contract No. HY/2013/04 HZMB HKBCF – Infrastructure Works Stage II (Southern Portion)																											
Ref. No.	E103																											
Date	4 November 2019																											
Time (hh:mm)	Start time: 12:43 (p.m.)																											
Monitoring Location	AMS3C																											
Parameter	Air Quality – 24-hour TSP ( $\mu\text{g}/\text{m}^3$ )																											
Action Level	See below																											
Limit Level	See below																											
Measured Level	<table border="1"> <thead> <tr> <th colspan="7">Action &amp; Limit Level (AL &amp; LL) / Measured Level:</th> </tr> <tr> <th>Param.</th><th>Unit</th><th>Station ID</th><th>Description</th><th>Action Level</th><th>Limit Level</th><th>Measured Level</th></tr> </thead> <tbody> <tr> <td>24-hr TSP</td><td><math>\mu\text{g}/\text{m}^3</math></td><td>AMS3C</td><td>Ying Tung Estate Market Rooftop</td><td>167</td><td>260</td><td>170</td></tr> </tbody> </table> <p>Remarks: Bold means AL exceedance <u>Bold with underline</u> means LL exceedance</p>							Action & Limit Level (AL & LL) / Measured Level:							Param.	Unit	Station ID	Description	Action Level	Limit Level	Measured Level	24-hr TSP	$\mu\text{g}/\text{m}^3$	AMS3C	Ying Tung Estate Market Rooftop	167	260	170
Action & Limit Level (AL & LL) / Measured Level:																												
Param.	Unit	Station ID	Description	Action Level	Limit Level	Measured Level																						
24-hr TSP	$\mu\text{g}/\text{m}^3$	AMS3C	Ying Tung Estate Market Rooftop	167	260	170																						
Possible reason for Action or Limit Level Non-compliance	<p>According to the Contractor of HY/2013/04, the major construction activities conducted under the Contract during the monitoring period included aggregate placement for seawall capping layer, formation of remaining works, construction of utilities cross-over frame under Bridge D9c, trimming of fill slopes, U-channel casting works and concrete defect rectification at bridge external face and deck voids.</p> <p>As informed by the Contractor of HY/2013/04, watering of all main haul roads was provided in accordance with the HY/2013/04 site watering plan (as presented in <b>Attachment 1</b>). This plan schedules water spraying for at least 8 times per day which follows the recommended mitigation measures in the EM&amp;A Manual and Environmental Permit.</p> <p>During ET's regular weekly site inspections on 30 October 2019 (between 14:15 and 15:00) and 6 November 2019 (14:15-15:00), one air quality observation was recorded: namely, an exposed works area was observed dry and dusty.</p> <p>Photos relating to the Contractor's site watering on 4-6 November 2019 and abovementioned site inspections are presented in <b>Attachment 2</b>.</p> <p>The wind data collected at the AMS3C wind station at Ying Tung Estate during the abovementioned 24-hour monitoring period (as presented in <b>Attachment 3</b>) shows that winds were mostly from the northeast/east during the 24-hour TSP monitoring. This indicates that it was unlikely that the source of exceedance could be attributed to HY/2013/04.</p> <p>Information available on EPD's Air Quality Health Index (AQHI) website shows that the short-term health risk of air pollution between 12:00 p.m. on 4 November 2019 and 12:00 p.m. on 5 November 2019 was moderate to very high in Tung Chung (with maximum AQHI of 8 at 15:00-16:00 on 4 November 2019). This, combined with the winds recorded at the abovementioned wind stations, indicates that the background air pollution was relatively high during part of the monitoring period and may have contributed to the high level of TSP recorded. The AQHI data is available online at:</p> <ul style="list-style-type: none"> <li><a href="http://www.aqhi.gov.hk/epd/ddata/html/history/2019/201911_Eng.csv">http://www.aqhi.gov.hk/epd/ddata/html/history/2019/201911_Eng.csv</a></li> </ul>																											

	It was concluded that the exceedance was not due to HY/2013/04.
Actions taken / to be taken	Although the exceedance was considered not due to HY/2013/04, the Contractor is reminded to continue the proper implementation of the site watering plan for the Contract and implement all necessary air quality mitigation measures identified in the EM&A Manual.
Remarks	<p>ET of HY/2013/04 issued notification of exceedance (NOE) as follows:</p> <ul style="list-style-type: none"> <li>• <u>24-hour TSP</u>: 29 November 2019 (Notification No. 20191128_Air_24hr).</li> </ul> <p>Attachments to this report are as follows:</p> <ol style="list-style-type: none"> <li>1. Site watering plan for HY/2013/04.</li> <li>2. Photos of Contractor's site watering on 4-6 November 2019, plus site mitigation measures and air quality observations on 30 October and 6 November 2019.</li> <li>3. Wind data during the 24-hour TSP monitoring period at AMS3C wind station at Ying Tung Estate.</li> </ol>

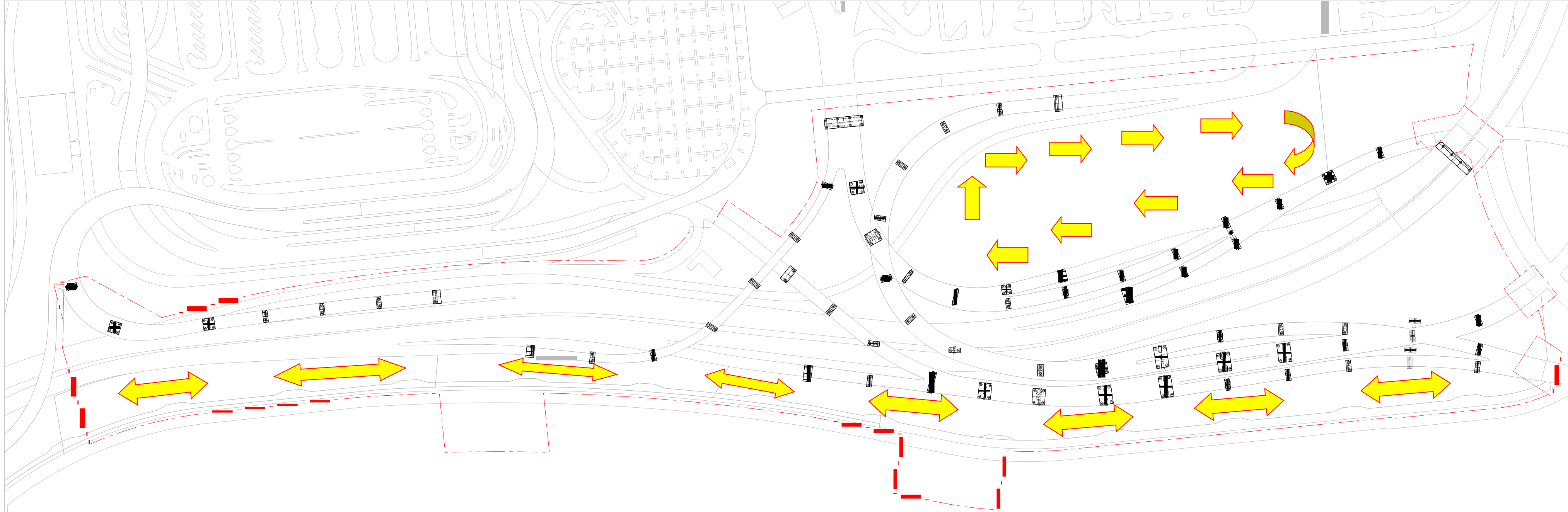
#### Location Plan



Prepared by: Gary Chow  
Designation: Environmental Team Leader (Contract No. HY/2013/04)  
Signature: *Gary Chow*

Date: 30 December 2019

## **Attachment 1**



1:500 ( A0 Banner )

**HY/2013/04 Site Watering Plan**



## **Attachment 2**

Photos of dust mitigation measures during the period of 4 – 6 Nov 2019









**Photo record of site mitigation measures and air quality observations  
during weekly environmental site inspection**

**30 October 2019**



1. Water spray provided for haul roads in the HY/2013/04 site area. No fugitive dust generation was observed at haul roads.

2. Air quality observation: The exposed works area was observed dry and dusty.

**6 November 2019**



1. Water spray provided for haul roads in the HY/2013/04 site area. No fugitive dust generation was observed at haul roads.

2. Air quality observation: The exposed works area was observed dry and dusty.

## **Attachment 3**



### Wind Data at AMS3C

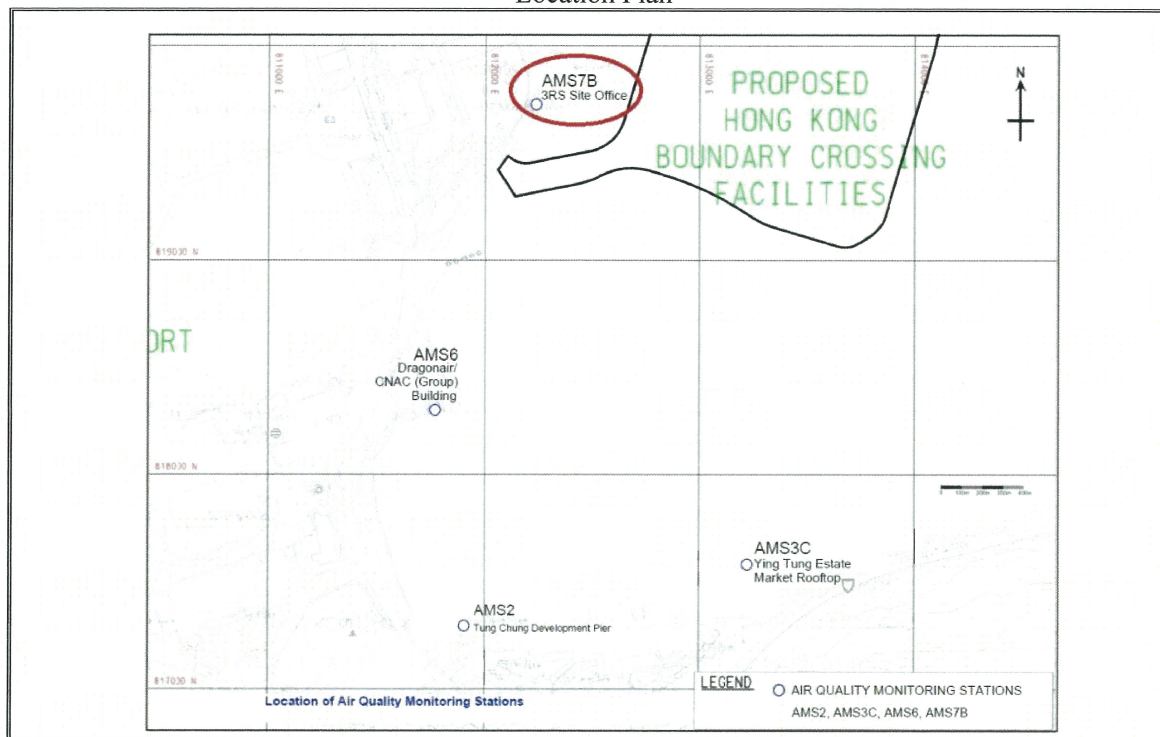
Date	Time	Wind Speed (m/s)	Wind Direction
04/11/2019	12:00 PM	2.2	ENE
04/11/2019	1:00 PM	2.7	NE
04/11/2019	2:00 PM	2.2	NE
04/11/2019	3:00 PM	2.2	NE
04/11/2019	4:00 PM	2.2	NNE
04/11/2019	5:00 PM	3.6	E
04/11/2019	6:00 PM	1.8	E
04/11/2019	7:00 PM	0.9	E
04/11/2019	8:00 PM	0.4	ENE
04/11/2019	9:00 PM	0.4	NNW
04/11/2019	10:00 PM	0.4	NNW
04/11/2019	11:00 PM	0.4	W
05/11/2019	12:00 AM	1.3	E
05/11/2019	1:00 AM	0.9	SSE
05/11/2019	2:00 AM	1.3	E
05/11/2019	3:00 AM	1.3	E
05/11/2019	4:00 AM	0.4	SE
05/11/2019	5:00 AM	0.4	ESE
05/11/2019	6:00 AM	1.8	ENE
05/11/2019	7:00 AM	0.4	NE
05/11/2019	8:00 AM	0.9	ENE
05/11/2019	9:00 AM	0.9	E
05/11/2019	10:00 AM	1.3	ENE
05/11/2019	11:00 AM	0.9	NE
05/11/2019	12:00 PM	1.8	ENE

**Incident Report on Action Level or Limit Level Non-compliance**

Contract	Contract No. HY/2013/04 HZMB HKBCF – Infrastructure Works Stage II (Southern Portion)																											
Ref. No.	E104																											
Date	21 November 2019																											
Time (hh:mm)	Start time: 08:23 (a.m.)																											
Monitoring Location	AMS7B																											
Parameter	Air Quality – 24-hour TSP ( $\mu\text{g}/\text{m}^3$ )																											
Action Level	See below																											
Limit Level	See below																											
Measured Level	<table border="1"> <thead> <tr> <th colspan="7">Action &amp; Limit Level (AL &amp; LL) / Measured Level:</th> </tr> <tr> <th>Param.</th><th>Unit</th><th>Station ID</th><th>Description</th><th>Action Level</th><th>Limit Level</th><th>Measured Level</th></tr> </thead> <tbody> <tr> <td>24-hr TSP</td><td><math>\mu\text{g}/\text{m}^3</math></td><td>AMS7B</td><td>3RS Site Office</td><td>183</td><td>260</td><td>218</td></tr> </tbody> </table> <p>Remarks: Bold means AL exceedance <u>Bold with underline</u> means LL exceedance</p>							Action & Limit Level (AL & LL) / Measured Level:							Param.	Unit	Station ID	Description	Action Level	Limit Level	Measured Level	24-hr TSP	$\mu\text{g}/\text{m}^3$	AMS7B	3RS Site Office	183	260	218
Action & Limit Level (AL & LL) / Measured Level:																												
Param.	Unit	Station ID	Description	Action Level	Limit Level	Measured Level																						
24-hr TSP	$\mu\text{g}/\text{m}^3$	AMS7B	3RS Site Office	183	260	218																						
Possible reason for Action or Limit Level Non-compliance	<p>According to the Contractor of HY/2013/04, the major construction activities conducted under the Contract during the monitoring period included aggregate placement for seawall capping layer, formation of remaining works, construction of utilities cross-over frame under Bridge D9c, trimming of fill slopes, U-channel casting works and concrete defect rectification at bridge external face and deck voids.</p> <p>As informed by the Contractor of HY/2013/04, watering of all main haul roads was provided in accordance with the HY/2013/04 site watering plan (as presented in <b>Attachment 1</b>). This plan schedules water spraying for at least 8 times per day which follows the recommended mitigation measures in the EM&amp;A Manual and Environmental Permit.</p> <p>During ET's regular weekly site inspections on 18 November 2019 (14:30-15:30) and 27 November 2019 (14:45-15:45), one air quality observation was recorded: namely, an exposed works area was observed dry and dusty.</p> <p>Photos relating to the Contractor's site watering on 21-23 November 2019 and abovementioned site inspections are presented in <b>Attachment 2</b>.</p> <p>The wind data collected at the AMS3C wind station at Ying Tung Estate and the Hong Kong Observatory wind station at Chek Lap Kok during the abovementioned 24-hour monitoring period (as presented in <b>Attachment 3</b>) shows that winds were initially from the north then more variable during the 24-hour TSP monitoring. This indicates that it was unlikely that the source of exceedance could be attributed to HY/2013/04.</p> <p>Information available on EPD's Air Quality Health Index (AQHI) website shows that the short-term health risk of air pollution between 8:00 a.m. on 21 November 2019 and 8:00 a.m. on 22 November 2019 was low to very high Tung Chung (with maximum AQHI of 8 at 17:00-18:00 on 21 November 2019). This, combined with the winds recorded at the abovementioned wind stations, indicates that the background air pollution was relatively high during part of the monitoring period and may have contributed to the high level of TSP recorded. The AQHI data is available online at:</p>																											

	<ul style="list-style-type: none"> <li><a href="http://www.aqhi.gov.hk/epd/ddata/html/history/2019/201911_Eng.csv">http://www.aqhi.gov.hk/epd/ddata/html/history/2019/201911_Eng.csv</a></li> </ul> <p>It was concluded that the exceedance was not due to HY/2013/04.</p>
Actions taken / to be taken	Although the exceedance was considered not due to HY/2013/04, the Contractor is reminded to continue the proper implementation of the site watering plan for the Contract and implement all necessary air quality mitigation measures identified in the EM&A Manual.
Remarks	<p>ET of HY/2013/04 issued notification of exceedance (NOE) as follows:</p> <ul style="list-style-type: none"> <li><u>24-hour TSP</u>: 9 December 2019 (Notification No. 20191121_Air_24hr).</li> </ul> <p>Attachments to this report are as follows:</p> <ol style="list-style-type: none"> <li>Site watering plan for HY/2013/04.</li> <li>Photos of Contractor's site watering on 21-23 November 2019, plus site mitigation measures and air quality observations on 18 and 27 November 2019.</li> <li>Wind data during the 24-hour TSP monitoring period at AMS3C wind station at Ying Tung Estate and Hong Kong Observatory Chek Lap Kok wind station.</li> </ol>

Location Plan

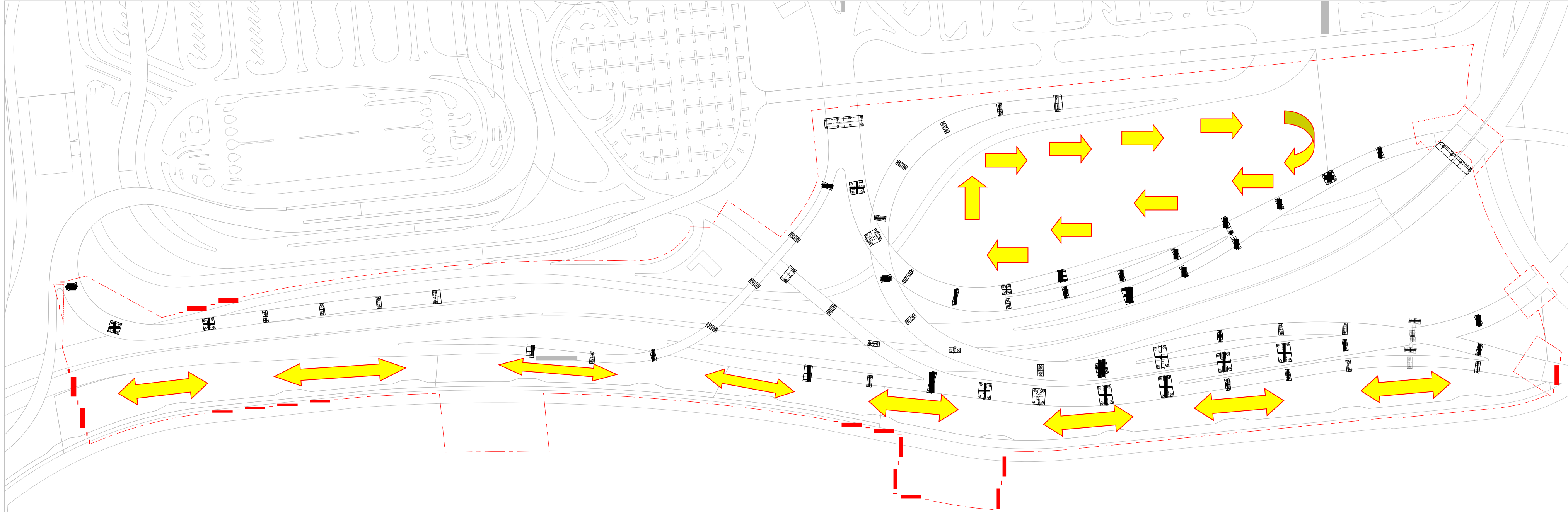


Prepared by: Gary Chow  
Designation: Environmental Team Leader (Contract No. HY/2013/04)  
Signature:

*Gary Chow*

Date: 30 December 2019

## **Attachment 1**



1:500 ( A0 Banner )

**HY/2013/04 Site Watering Plan**



## **Attachment 2**

Photos of dust mitigation measures during the period of 21 – 23 Nov 2019







**Photo record of site mitigation measures and air quality observations  
during weekly environmental site inspection**

**18 November 2019**



1. Water spray provided for haul roads in the HY/2013/04 site area. No fugitive dust generation was observed at haul roads.



2. Air quality observation: The exposed works area was observed dry and dusty.

**27 November 2019**



1. Air quality observation: The exposed works area was observed dry and dusty.

## **Attachment 3**



### Wind Data at AMS3C

Date	Time	Wind Speed (m/s)	Wind Direction
21/11/2019	8:00 AM	0	NNE
21/11/2019	9:00 AM	0.4	ENE
21/11/2019	10:00 AM	0.9	NE
21/11/2019	11:00 AM	0.9	NNW
21/11/2019	12:00 PM	0.9	NW
21/11/2019	1:00 PM	1.3	NW
21/11/2019	2:00 PM	0.9	NW
21/11/2019	3:00 PM	0.9	NW
21/11/2019	4:00 PM	0.4	NW
21/11/2019	5:00 PM	0.4	NW
21/11/2019	6:00 PM	0.9	S
21/11/2019	7:00 PM	0.4	S
22/11/2019	8:00 PM	0	S
22/11/2019	9:00 PM	0	S
22/11/2019	10:00 PM	0	---
22/11/2019	11:00 PM	0	---
22/11/2019	12:00 AM	0	---
22/11/2019	1:00 AM	0	---
22/11/2019	2:00 AM	0	---
22/11/2019	3:00 AM	0	---
22/11/2019	4:00 AM	0	---
22/11/2019	5:00 AM	0	S
22/11/2019	6:00 AM	0	SSW
22/11/2019	7:00 AM	0	---
22/11/2019	8:00 AM	0	S

**Wind Data at Chek Lap Kok Collected by the Hong Kong Observatory**

<b>Date &amp; Time</b>	<b>Wind Speed (km/h)</b>	<b>Wind Speed (m/s)</b>	<b>Wind Direction (degrees)</b>
21/11/2019 08:00	13.0	3.6	58
21/11/2019 09:00	10.8	3.0	52
21/11/2019 10:00	8.3	2.3	28
21/11/2019 11:00	11.2	3.1	346
21/11/2019 12:00	16.2	4.5	328
21/11/2019 13:00	15.5	4.3	309
21/11/2019 14:00	11.9	3.3	289
21/11/2019 15:00	13.7	3.8	287
21/11/2019 16:00	15.8	4.4	312
21/11/2019 17:00	17.6	4.9	312
21/11/2019 18:00	14.4	4.0	307
21/11/2019 19:00	15.5	4.3	351
21/11/2019 20:00	12.6	3.5	50
21/11/2019 21:00	9.7	2.7	71
21/11/2019 22:00	9.0	2.5	90
21/11/2019 23:00	10.1	2.8	126
22/11/2019 00:00	7.2	2.0	130
22/11/2019 01:00	10.8	3.0	76
22/11/2019 02:00	11.5	3.2	80
22/11/2019 03:00	8.3	2.3	111
22/11/2019 04:00	10.1	2.8	119
22/11/2019 05:00	6.8	1.9	126
22/11/2019 06:00	13.0	3.6	45
22/11/2019 07:00	12.6	3.5	63
22/11/2019 08:00	12.2	3.4	74