

**Table K1**      ***Cumulative Statistics on Exceedances***

Parameters	Level of Exceedance	Total No. recorded in this reporting month	Total No. recorded since project commencement
1-hr TSP	Action	2	66
	Limit	0	4
24-hr TSP	Action	0	7
	Limit	0	4
Water Quality	Action	0	20
	Limit	0	1
Impact Dolphin Monitoring	Action	0	11
	Limit	0	11

**Table K2**      ***Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions***

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (March 2018)	0	0	0
Total No. received since project commencement	16	1	0

Email  
message

Environmental  
Resources  
Management

**To** Ramboll Hong Kong, Limited (ENPO)

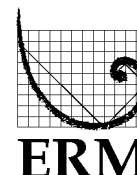
**From** ERM- Hong Kong, Limited

**Ref/Project number** Contract No. HY/2012/08 Tuen Mun–Chek Lap  
Kok Link–Northern Connection Sub-sea Tunnel  
Section

**Subject** Notification of Exceedance for Air Quality  
Impact Monitoring

**Date** 16 March 2018

16/F Berkshire House,  
25 Westlands Road  
Quarry Bay, Hong Kong  
Telephone: (852) 2271 3113  
Facsimile: (852) 2723 5660  
E-mail: jovy.tam@erm.com



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Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following  
Log no.:

0212330\_2March2018\_1hrTSP\_Station ASR1

One Action Level Exceedance was recorded on 2 March 2018.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam', written in a cursive style.

Mr Jovy Tam  
Environmental Team Leader

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# ERM-Hong Kong, Limited

## CONTRACT NO. HY/2012/08 TUEN MUN – CHEK LAP KOK LINK – NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

### Air Quality Impact Monitoring Notification of Exceedance

Log No.	0212330_2March2018_1hrTSP_Station ASR1 [Total No. of Exceedances = 1]	
Date	2 March 2018 (Measured) 16 March 2018 (Laboratory results received by ERM)	
Monitoring Station	ASR1, ASR5, ASR6, ASR10 and AQMS1	
Parameter(s) with Exceedance(s)	1-hr TSP	
Action Levels	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	ASR1 = 213 ASR5 = 238 AQMS1 = 213 ASR6 = 238 ASR10 = 214
	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	ASR1 = 331 ASR5 = 340 AQMS1 = 335 ASR6 = 338 ASR10 = 337
Limit Levels	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	500
	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	260
Measured Levels	Action Level Exceedance for 1-hr TSP is observed at ASR1 ( $460 \mu\text{g}/\text{m}^3$ ) during 0957 – 1057 hrs.	
Works Undertaken (at the time of monitoring event)	On 2 March 2018, box culvert extension was carried out at Works Area Portion N-A and Construction of Ventilation Building at Portion N-C.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance is unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>According to the construction information provided by the Contractor, the majority of ground construction works on 2 March 2018 were box culvert extension at Works Area Portion N-A and Construction of Ventilation Building at Portions N-C. During the period of the land-based construction works, the Contractor has implemented the required mitigation measures as per the EP, approved EIA and Updated EM&amp;A Manual (e.g. water spraying on exposed soil within the Project site and associated works areas; exposed soil covered by tarpaulin sheets).</li> <li>The exceedances are unlikely to be due to the project as dust suppression measures were implemented properly on site. Water spraying was applied. Exposed soil at Portion N-A was also covered by tarpaulin sheets.</li> </ul> <p>Based on the above, the exceedances are unlikely to be due to the project.</p>	

<b>Actions Taken/ To Be Taken</b>	<p>According to the photo record on 2 March 2018, the Contractor has properly implemented dust suppression measures on site. Follow up site inspection was carried out on 19 March 2018. Box culvert extension was carried out at Works Area Portion N-A and Construction of Ventilation Building was carried out at Portion N-C. Water spraying was applied to prevent dust. Photo record is provided in Annex A. Photos taken during AQM were also provided. No significant dust impact was observed at ASR1. Dust suppression measures were properly implemented during the site inspections.</p> <p>The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&amp;A Manual including watering to maintain all exposed road surfaces and dust sources wet, use of sprinklers for water spraying, covering the materials having the potential to create dust by clean tarpaulin, use of water truck and watering on all exposed soil within the Project site) throughout the construction period. The Contractor was also reminded to ensure all dust mitigation measures are provided at Portion N-A and Portion N-C, where the construction works are carried out.</p> <p>As occasional exceedances were observed at ASR1, the Contractor has been reminded to enhance their dust mitigation measures at the works area, especially Portion N-A, which is closest to ASR1. Water spraying should be applied more frequently to prevent dust. The Contractor should also ensure that the exposed soil at Portion N-A was covered by tarpaulin sheets.</p>
<b>Remarks</b>	<p>The monitoring results and the locations of air quality monitoring stations are attached.</p>



## Annex A      Photos provided by the Contractor

\*Note: Photos taken on 2/3/2018



Water spraying was applied frequently on site.  
(Works Area Portion N-A)



Exposed soil at Portion N-A was covered by tarpaulin sheets. (Works Area Portion N-A)





## Annex A      Photos taken during site inspection

\*Note: Photos taken on 19/3/2018



Water spraying was applied frequently on site.  
(Works Area Portion N-C)



Water spraying was applied frequently on site.  
(Works Area Portion N-B)



## Annex A      Photos taken during AQM monitoring

\*Note: Photos taken on 2/3/2018



ASR1



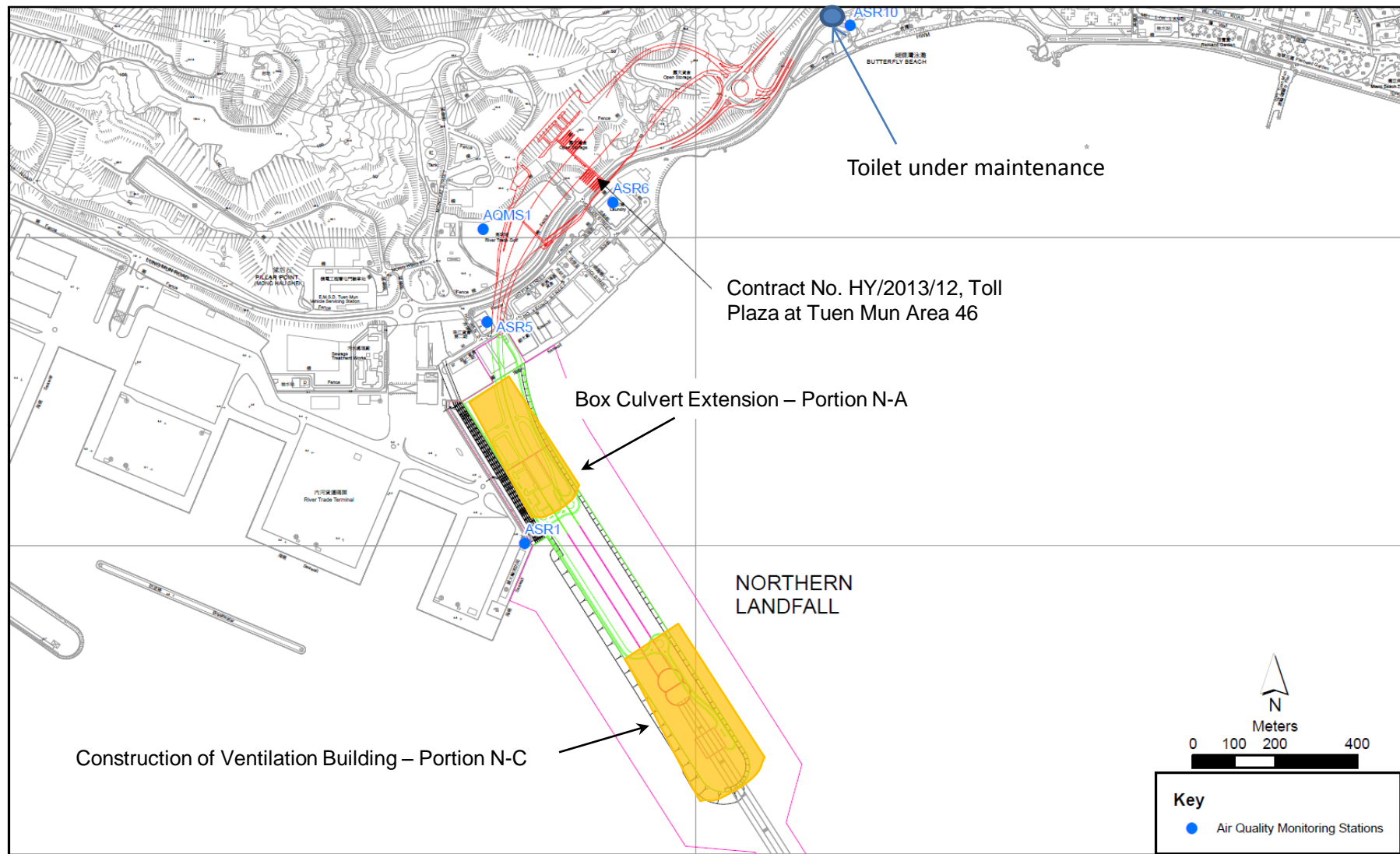


Figure 1

Indicative Construction Works Area on 2 March 2018



TMCLKL	HY/2012/08	2/3/2018	AQMS1	Sunny	9:07	1-hour TSP	156	ug/m3
TMCLKL	HY/2012/08	2/3/2018	AQMS1	Sunny	10:09	1-hour TSP	172	ug/m3
TMCLKL	HY/2012/08	2/3/2018	AQMS1	Sunny	11:11	1-hour TSP	131	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR1	Sunny	8:55	1-hour TSP	125	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR1	Sunny	9:57	1-hour TSP	460	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR1	Sunny	10:59	1-hour TSP	157	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR10	Sunny	8:22	1-hour TSP	63	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR10	Sunny	9:24	1-hour TSP	52	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR10	Sunny	10:26	1-hour TSP	59	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR5	Sunny	8:44	1-hour TSP	222	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR5	Sunny	9:46	1-hour TSP	183	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR5	Sunny	10:48	1-hour TSP	219	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR6	Sunny	8:32	1-hour TSP	92	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR6	Sunny	9:34	1-hour TSP	77	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR6	Sunny	10:36	1-hour TSP	81	ug/m3
TMCLKL	HY/2012/08	2/3/2018	AQMS1	Sunny	12:13	24-hour TSP	85	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR1	Sunny	12:01	24-hour TSP	108	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR10	Sunny	11:28	24-hour TSP	55	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR5	Sunny	11:50	24-hour TSP	130	ug/m3
TMCLKL	HY/2012/08	2/3/2018	ASR6	Sunny	11:38	24-hour TSP	71	ug/m3

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction(degree)
18/03/02	0:00	1.8	92
18/03/02	1:00	1.8	95
18/03/02	2:00	1.3	70
18/03/02	3:00	1.3	46
18/03/02	4:00	1.3	92
18/03/02	5:00	1.3	44
18/03/02	6:00	1.8	93
18/03/02	7:00	1.3	65
18/03/02	8:00	2.2	92
18/03/02	9:00	2.2	81
18/03/02	10:00	2.7	93
18/03/02	11:00	2.7	96
18/03/02	12:00	1.8	97
18/03/02	13:00	1.8	75
18/03/02	14:00	1.3	70
18/03/02	15:00	1.8	93
18/03/02	16:00	1.8	71
18/03/02	17:00	1.3	46
18/03/02	18:00	1.8	50
18/03/02	19:00	1.8	42
18/03/02	20:00	1.8	43
18/03/02	21:00	1.3	52
18/03/02	22:00	1.3	51
18/03/02	23:00	1.8	93

Email  
message

Environmental  
Resources  
Management

**To** Ramboll Hong Kong, Limited (ENPO)

**From** ERM- Hong Kong, Limited

**Ref/Project number** Contract No. HY/2012/08 Tuen Mun–Chek Lap  
Kok Link–Northern Connection Sub-sea Tunnel  
Section

**Subject** Notification of Exceedance for Air Quality  
Impact Monitoring

**Date** 3 April 2018

16/F Berkshire House,  
25 Westlands Road  
Quarry Bay, Hong Kong  
Telephone: (852) 2271 3113  
Facsimile: (852) 2723 5660  
E-mail: jovy.tam@erm.com



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Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following  
Log no.:

0212330\_20March2018\_1hrTSP\_Station ASR1

One Action Level Exceedance was recorded on 20 March 2018.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam', written over a light blue horizontal line.

Mr Jovy Tam  
Environmental Team Leader

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**ERM-Hong Kong, Limited**

**CONTRACT NO. HY/2012/08  
TUEN MUN – CHEK LAP KOK LINK –  
NORTHERN CONNECTION SUB-SEA TUNNEL SECTION**

**Air Quality Impact Monitoring  
Notification of Exceedance**

<b>Log No.</b>	0212330_20March2018_1hrTSP_Station ASR1 [Total No. of Exceedances = 1]	
<b>Date</b>	20 March 2018 (Measured) 1 April 2018 (Laboratory results received by ERM)	
<b>Monitoring Station</b>	ASR1, ASR5, ASR6, ASR10 and AQMS1	
<b>Parameter(s) with Exceedance(s)</b>	1-hr TSP	
<b>Action Levels</b>	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	ASR1 = 213 ASR5 = 238 AQMS1 = 213 ASR6 = 238 ASR10 = 214
	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	ASR1 = 331 ASR5 = 340 AQMS1 = 335 ASR6 = 338 ASR10 = 337
<b>Limit Levels</b>	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	500
	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	260
<b>Measured Levels</b>	Action Level Exceedance for 1-hr TSP is observed at ASR1 ( $446 \mu\text{g}/\text{m}^3$ ) during 1552 – 1652 hrs.	
<b>Works Undertaken (at the time of monitoring event)</b>	On 20 March 2018, box culvert extension was carried out at Works Area Portion N-A and Construction of Ventilation Building at Portion N-C.	
<b>Possible Reason for Action or Limit Level Exceedance(s)</b>	<p>The exceedance is unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>According to the construction information provided by the Contractor, the majority of ground construction works on 20 March 2018 were box culvert extension at Works Area Portion N-A and Construction of Ventilation Building at Portions N-C. During the period of the land-based construction works, the Contractor has implemented the required mitigation measures as per the EP, approved EIA and Updated EM&amp;A Manual (e.g. water spraying on exposed soil within the Project site and associated works areas; exposed soil covered by tarpaulin sheets).</li> <li>The exceedances are unlikely to be due to the project as dust suppression measures were implemented properly on site. Water spraying was applied on site to prevent dust.</li> </ul> <p>Based on the above, the exceedances are unlikely to be due to the project.</p>	

<b>Actions Taken/ To Be Taken</b>	<p>Follow up site inspection was carried out on 5 April 2018. Box culvert extension was carried out at Works Area Portion N-A and Construction of Ventilation Building was carried out at Portion N-C. Water spraying was applied to prevent dust. Photo record is provided in Annex A. Photos taken during AQM were also provided. No significant dust impact was observed at ASR1. Dust suppression measures were properly implemented during the site inspections. Based on the above, no additional action is required.</p> <p>The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&amp;A Manual including watering to maintain all exposed road surfaces and dust sources wet, use of sprinklers for water spraying, covering the materials having the potential to create dust by clean tarpaulin, use of water truck and watering on all exposed soil within the Project site) throughout the construction period. The Contractor was also reminded to ensure all dust mitigation measures are provided at Portion N-A and Portion N-C, where the construction works are carried out.</p>
<b>Remarks</b>	The monitoring results and the locations of air quality monitoring stations are attached.



## Annex A      Photos taken during site inspection

\*Note: Photos taken on 5/4/2018



Water spraying was applied frequently on site.  
(Works Area Portion N-A)



Water spraying was applied frequently on site.  
(Works Area Portion N-C)





## Annex A      Photos taken during site inspection

\*Note: Photos taken on 5/4/2018



Water spraying was applied frequently on site.  
(Works Area Portion N-C)



Water spraying was applied frequently on site.  
(Works Area Portion N-C)



## Annex A      Photos taken during AQM

\*Note: Photos taken on 20/3/2018



ASR1



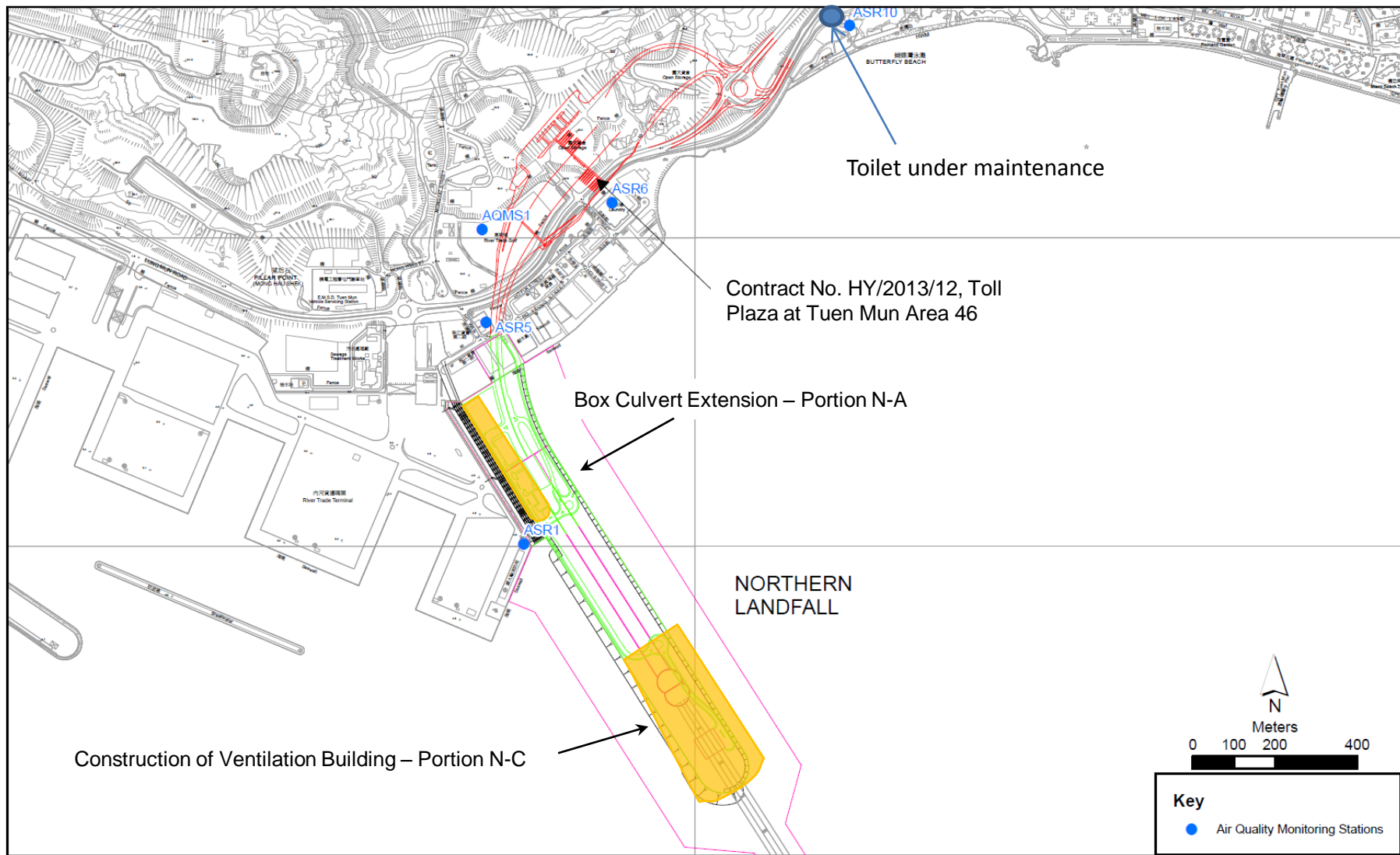


Figure 1

Indicative Construction Works Area on 20 March 2018



TMCLKL	HY/2012/08	20/3/2018	AQMS1	Sunny	14:00	1-hour TSP	85	ug/m3
TMCLKL	HY/2012/08	20/3/2018	AQMS1	Sunny	15:02	1-hour TSP	52	ug/m3
TMCLKL	HY/2012/08	20/3/2018	AQMS1	Sunny	16:04	1-hour TSP	51	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR1	Sunny	13:48	1-hour TSP	210	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR1	Sunny	14:50	1-hour TSP	233	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR1	Sunny	15:52	1-hour TSP	446	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR10	Sunny	13:16	1-hour TSP	69	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR10	Sunny	14:18	1-hour TSP	44	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR10	Sunny	15:20	1-hour TSP	48	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR5	Sunny	13:37	1-hour TSP	234	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR5	Sunny	14:39	1-hour TSP	180	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR5	Sunny	15:41	1-hour TSP	250	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR6	Sunny	13:27	1-hour TSP	169	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR6	Sunny	14:29	1-hour TSP	201	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR6	Sunny	15:31	1-hour TSP	163	ug/m3
TMCLKL	HY/2012/08	20/3/2018	AQMS1	Sunny	17:06	24-hour TSP	53	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR1	Sunny	16:54	24-hour TSP	123	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR10	Sunny	16:22	24-hour TSP	42	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR5	Sunny	16:43	24-hour TSP	90	ug/m3
TMCLKL	HY/2012/08	20/3/2018	ASR6	Sunny	16:33	24-hour TSP	82	ug/m3

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction(degree)
18/03/20	0:00	0	-
18/03/20	1:00	0.4	194
18/03/20	2:00	1.3	312
18/03/20	3:00	1.3	311
18/03/20	4:00	2.2	310
18/03/20	5:00	1.8	284
18/03/20	6:00	0.9	277
18/03/20	7:00	2.2	294
18/03/20	8:00	1.8	291
18/03/20	9:00	1.3	274
18/03/20	10:00	1.8	349
18/03/20	11:00	2.7	351
18/03/20	12:00	2.7	339
18/03/20	13:00	3.1	345
18/03/20	14:00	3.1	351
18/03/20	15:00	3.6	339
18/03/20	16:00	3.6	350
18/03/20	17:00	2.7	354
18/03/20	18:00	1.3	352
18/03/20	19:00	1.3	305
18/03/20	20:00	1.3	314
18/03/20	21:00	1.3	311
18/03/20	22:00	1.3	352
18/03/20	23:00	0.9	350