

Appendix J

Cumulative Statistics on  
Exceedances, Complaints,  
Notifications of Summons  
and Successful Prosecutions

**Table J1** *Cumulative Statistics on Exceedances*

<b>Monitoring Parameters</b>	<b>Action/Limit Level</b>	<b>Total No. recorded in this reporting quarter</b>	<b>Total No. recorded since Contract commencement</b>
1-Hr TSP	Action	4	105
	Limit	1	12
24-Hr TSP	Action	0	10
	Limit	0	4
Water Quality	Action	0	167
	Limit	0	19
Impact Dolphin Monitoring	Action	0	11
	Limit	1	18

**Table J2** *Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

<b>Reporting Period</b>	<b>Cumulative Statistics</b>		
	<b>Complaints</b>	<b>Notifications of Summons</b>	<b>Successful Prosecutions</b>
This Reporting Period (December 2019 to February 2020)	0	0	0
Total No. received since Contract commencement	17	1	0

Email  
message

**Environmental  
Resources  
Management**

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

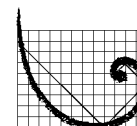
**From** ERM- Hong Kong, Limited

**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** 21 December 2019

2507, 25/F One Harbourfront  
18 Tak Fung Street  
Hunghom, Kowloon  
Hong Kong  
Telephone: (852) 2271 3000  
Facsimile: (852) 2723 5660



**ERM**

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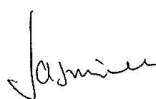
Dear Sir or Madam,

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

0212330\_1December2019\_1hrTSP\_Station ASR1  
0212330\_1December2019\_1hrTSP\_Station ASR10  
0212330\_1December2019\_1hrTSP\_Station ASR5

One Limit Level and Two Action Level Exceedances were recorded on 1  
December 2019.

Regards,



Dr Jasmine Ng  
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.	<p style="text-align: center;"><u>Action Level Exceedance</u>          0212330_1December2019_1hrTSP_Station ASR10          0212330_1December2019_1hrTSP_Station ASR5  <u>Limit Level Exceedance</u>          0212330_1December2019_1hrTSP_Station ASR1          [Total No. of Exceedances = 3]</p>	
Date	<p style="text-align: center;">1 December 2019 (Measured)          16 December 2019 (Laboratory results received by ERM)</p>	
Monitoring Station	<p style="text-align: center;">ASR1, ASR5, ASR6, ASR10 and AQMS1</p>	
Parameter(s) with Exceedance(s)	<p style="text-align: center;">1-hr TSP</p>	
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	<p>Action Level Exceedance for 1-hr TSP is observed at ASR10 (<math>407 \mu\text{g}/\text{m}^3</math>) during 1515- 1615.          Action Level Exceedance for 1-hr TSP is observed at ASR5 (<math>377 \mu\text{g}/\text{m}^3</math>) during 1540- 1640.          Limit Level Exceedance for 1-hr TSP is observed at ASR1 (<math>747 \mu\text{g}/\text{m}^3</math>) during 1551- 1651.</p>	
Works Undertaken (at the time of monitoring event)	<p>On 1 December 2019, no construction works were carried out on site.</p>	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance is unlikely to be due to this Contract, in view of the following:</p> <ul style="list-style-type: none"> <li>• According to the construction information provided by the Contractor, no construction works were carried out on site on 1 December 2019.</li> <li>• The exceedance is unlikely to be due to this Contract as dust suppression measures were implemented properly on site. Water spraying was applied on site to prevent dust. Water spraying was also applied on exposed soil within the Contract site and associated works areas.</li> <li>• With reference to the recorded wind direction (ranged between <math>272^\circ</math> and <math>302^\circ</math>, blowing from a north-westerly direction) and wind speed (0.9 – 1.8 m/s) during the works period, Stations ASR5 and ASR1 are located upstream to the site. Stations ASR10 are located downstream to the site. However, since there were no construction works carried out on site, the exceedances are unlikely to be due to the site activities of this contract.</li> </ul> <p>Based on the above, the exceedance is unlikely to be due to this Contract.</p>	

<b>Actions Taken/ To Be Taken</b>	The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&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 Contract site throughout the construction period.
<b>Remarks</b>	The monitoring results, wind data and the locations of air quality monitoring stations are attached.

Air quality monitoring results on 1/12/2019

Project	Contract	Date	Station	Weather	Start time	Parameters	Results	Unit
TMCLKL	HY/2012/08	2019-12-01	AQMS1	Sunny	13:58	1-hour TSP	185	ug/m3
TMCLKL	HY/2012/08	2019-12-01	AQMS1	Sunny	15:00	1-hour TSP	117	ug/m3
TMCLKL	HY/2012/08	2019-12-01	AQMS1	Sunny	16:02	1-hour TSP	161	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR1	Sunny	13:47	1-hour TSP	231	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR1	Sunny	14:49	1-hour TSP	209	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR1	Sunny	15:51	1-hour TSP	747	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR10	Sunny	13:11	1-hour TSP	137	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR10	Sunny	14:13	1-hour TSP	129	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR10	Sunny	15:15	1-hour TSP	407	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR5	Sunny	13:36	1-hour TSP	196	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR5	Sunny	14:38	1-hour TSP	127	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR5	Sunny	15:40	1-hour TSP	377	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR6	Sunny	13:23	1-hour TSP	216	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR6	Sunny	14:25	1-hour TSP	149	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR6	Sunny	15:27	1-hour TSP	160	ug/m3
TMCLKL	HY/2012/08	2019-12-01	AQMS1	Sunny	17:04	24-hour TSP	107	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR1	Sunny	16:53	24-hour TSP	168	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR10	Sunny	16:17	24-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR5	Sunny	16:42	24-hour TSP	110	ug/m3
TMCLKL	HY/2012/08	2019-12-01	ASR6	Sunny	16:29	24-hour TSP	134	ug/m3

<b>Meteorological Data for Impact Monitoring in the reporting period</b>			
<b>Date (yy-mm-dd)</b>	<b>Time (24hrs)</b>	<b>Average of Wind Speed (m/s)</b>	<b>Average of Wind Direction(degree)</b>
19/12/01	1:00	1.3	304
19/12/01	2:00	1.3	319
19/12/01	3:00	0.9	303
19/12/01	4:00	0.4	290
19/12/01	5:00	0.4	339
19/12/01	6:00	0	-
19/12/01	7:00	0	-
19/12/01	8:00	1.3	28
19/12/01	9:00	1.3	28
19/12/01	10:00	1.8	207
19/12/01	11:00	1.3	210
19/12/01	12:00	1.8	309
19/12/01	13:00	2.7	273
19/12/01	14:00	2.2	288
19/12/01	15:00	1.8	272
19/12/01	16:00	0.9	302
19/12/01	17:00	0.9	319
19/12/01	18:00	0.9	288
19/12/01	19:00	1.3	289
19/12/01	20:00	1.3	315
19/12/01	21:00	2.2	309
19/12/01	22:00	1.8	311
19/12/01	23:00	1.3	318

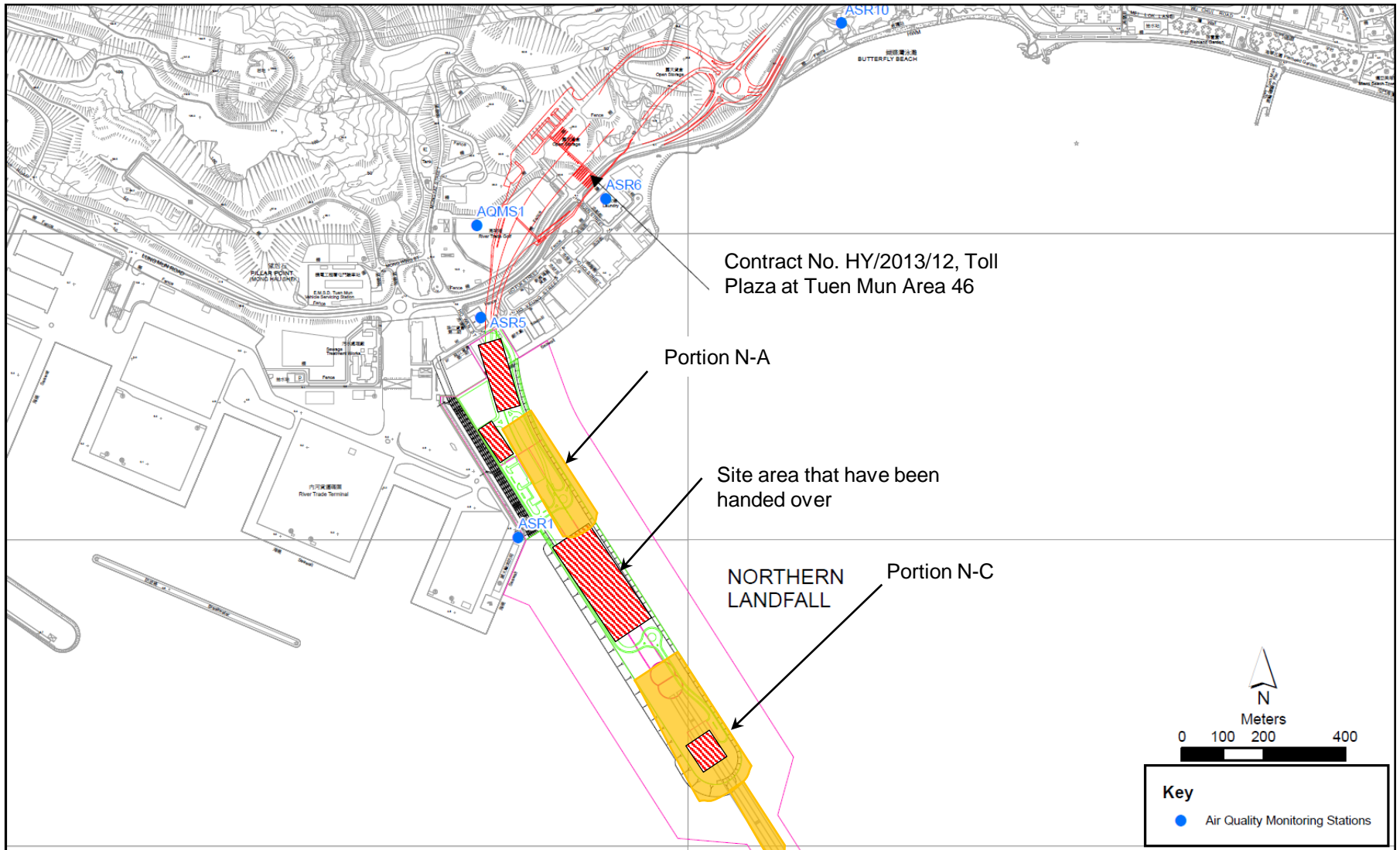


Figure 1

Indicative Construction Works Area on 1 December 2019



Site Location 地盤位置: Northern Landfall  
Date 日期: 25 Nov 2019 to 至 01 Dec 2019

	Time 時間	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	Friday 星期五	Saturday 星期六	Sunday 星期日
1	8:00 - 8:45	✓	✓	✓	✓	✓	✓	✓
2	8:45 - 9:30	✓	✓	✓	✓	✓	✓	✓
3	9:30 - 10:15	✓	✓	✓	✓	✓	✓	✓
4	10:15 - 11:00	✓	✓	✓	✓	✓	✓	✓
5	11:00 - 11:45	✓	✓	✓	✓	✓	✓	✓
6	11:45 - 12:30	✓	✓	✓	✓	✓	✓	✓
7	12:30 - 13:15	✓	✓	✓	✓	✓	✓	✓
8	13:15 - 14:00	✓	✓	✓	✓	✓	✓	✓
9	14:00 - 14:45	✓	✓	✓	✓	✓	✓	✓
10	14:45 - 15:30	✓	✓	✓	✓	✓	✓	✓
11	15:30 - 16:45	✓	✓	✓	✓	✓	✓	✓
12	16:45 - 17:30	✓	✓	✓	✓	✓	✓	✓
	Verified by Site Foreman 地盤科文簽署確認	子	子	子	子	子	子	子

Night shift 夜間工作 (if necessary 如需要)

17:30 - 19:00								
19:00 - 20:30								
20:30 - 22:00								
22:00 - 23:00								

\*Please - tick (✓) in the box if complete the spraying of water.  
circle (O) in the box if it is raining.

\*如果 - 已經完成灑水, 請於方格內加上剔號(✓)。  
是下雨天, 請於方格內加上圓圈(O)。

Remarks:

- Pursuant to EP Clause 3.15, the Permit Holder shall undertake watering at least 12 times per day on all exposed soil within the Project site and associated work areas in Tuen Mun area throughout the construction phase.
- Spraying position includes the main haul road, open area, slopes, stockpiles and any other dusty materials.
- If it is raining, no water spraying is needed.
- The no of spraying will be increased due to site condition.

備註:

- 根據環境許可證 3.15 條例, 在整個施工階段內, 許可證持有人須每天至少 12 次在屯門區項目工地和相關的工作區域內的所有暴露土壤灑水。
- 灑水位置包括主要運輸道路, 空曠地帶, 斜坡, 存料堆, 以及任何其他產生塵埃物料。
- 當下雨時, 地盤將不需要灑水。
- 如果地盤情況更改或有需要時, 灑水次數會相應增加。

Email  
message

Environmental  
Resources  
Management

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

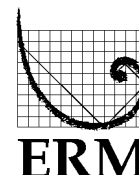
**From** ERM- Hong Kong, Limited

**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** 21 December 2019

2507, 25/F One Harbourfront  
18 Tak Fung Street  
Hung Hom, Kowloon  
Hong Kong  
Telephone: (852) 2271 3000  
Facsimile: (852) 2723 5660



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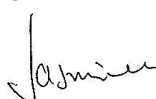
Dear Sir or Madam,

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

0212330\_4December2019\_1hrTSP\_Station ASR1  
0212330\_4December2019\_1hrTSP\_Station ASR5

Two Action Level Exceedances were recorded on 4 December 2019.

Regards,



Dr Jasmine Ng  
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.	<u>Action Level Exceedance</u> 0212330_4December2019_1hrTSP_Station ASR1 0212330_4December2019_1hrTSP_Station ASR5 [Total No. of Exceedances = 2]	
Date	4 December 2019 (Measured) 16 December 2019 (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 ( $366 \mu\text{g}/\text{m}^3$ ) during 0837 - 0937. Action Level Exceedance for 1-hr TSP is observed at ASR5 ( $380 \mu\text{g}/\text{m}^3$ ) during 0825 - 0925.	
Works Undertaken (at the time of monitoring event)	On 4 December 2019, Road and Drainage Works were carried out on site.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance is unlikely to be due to this Contract, in view of the following:</p> <ul style="list-style-type: none"> <li>• According to the construction information provided by the Contractor, only Road and Drainage Works were carried out on site on 4 December 2019.</li> <li>• The exceedance is unlikely to be due to this Contract as dust suppression measures were implemented properly on site. Water spraying was applied on site to prevent dust. Water spraying was also applied on exposed soil within the Contract site and associated works areas.</li> <li>• With reference to the recorded wind direction (ranged between <math>356^\circ</math> and <math>14^\circ</math>, blowing from a northern direction) and wind speed (<math>2.7 - 3.1 \text{ m/s}</math>) during the works period, Stations ASR5 are located upstream to the construction works at Portion N-A. Stations ASR1 are located downstream to the construction works at Portion N-A. However, Road &amp; Drainage Works carried out at Portion N-A with implementation of dust mitigation measures are unlikely to cause significant dust impact.</li> </ul> <p>Based on the above, the exceedance is unlikely to be due to this Contract.</p>	

<b>Actions Taken/ To Be Taken</b>	The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&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 Contract site throughout the construction period.
<b>Remarks</b>	The monitoring results, wind data and the locations of air quality monitoring stations are attached.

## Air quality monitoring results on 4/12/2019

Project	Contract	Date	Station	Weather	Start time	Parameters	Results	Unit
TMCLKL	HY/2012/08	2019-12-04	AQMS1	Sunny	8:44	1-hour TSP	156	ug/m3
TMCLKL	HY/2012/08	2019-12-04	AQMS1	Sunny	9:51	1-hour TSP	160	ug/m3
TMCLKL	HY/2012/08	2019-12-04	AQMS1	Sunny	10:53	1-hour TSP	116	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR1	Sunny	8:37	1-hour TSP	366	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR1	Sunny	9:39	1-hour TSP	220	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR1	Sunny	10:41	1-hour TSP	100	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR10	Sunny	8:02	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR10	Sunny	9:04	1-hour TSP	113	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR10	Sunny	10:06	1-hour TSP	101	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR5	Sunny	8:25	1-hour TSP	380	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR5	Sunny	9:27	1-hour TSP	180	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR5	Sunny	10:29	1-hour TSP	202	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR6	Sunny	8:13	1-hour TSP	150	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR6	Sunny	9:15	1-hour TSP	163	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR6	Sunny	10:17	1-hour TSP	169	ug/m3
TMCLKL	HY/2012/08	2019-12-04	AQMS1	Sunny	11:55	24-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR1	Sunny	11:43	24-hour TSP	164	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR10	Sunny	11:08	24-hour TSP	84	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR5	Sunny	11:31	24-hour TSP	190	ug/m3
TMCLKL	HY/2012/08	2019-12-04	ASR6	Sunny	11:19	24-hour TSP	118	ug/m3

<b>Meteorological Data for Impact Monitoring in the reporting period</b>			
<b>Date (yy-mm-dd)</b>	<b>Time (24hrs)</b>	<b>Average of Wind Speed (m/s)</b>	<b>Average of Wind Direction(degree)</b>
19/12/04	0:00	1.8	328
19/12/04	1:00	2.7	30
19/12/04	2:00	2.2	25
19/12/04	3:00	1.8	13
19/12/04	4:00	1.8	19
19/12/04	5:00	2.7	355
19/12/04	6:00	1.8	339
19/12/04	7:00	1.8	339
19/12/04	8:00	3.1	356
19/12/04	9:00	2.7	14
19/12/04	10:00	2.2	28
19/12/04	11:00	2.2	16
19/12/04	12:00	1.8	31
19/12/04	13:00	1.8	31
19/12/04	14:00	1.3	306
19/12/04	15:00	2.2	325
19/12/04	16:00	1.8	345
19/12/04	17:00	1.8	341
19/12/04	18:00	0.9	306
19/12/04	19:00	0.4	292
19/12/04	20:00	0.4	311
19/12/04	21:00	1.3	14
19/12/04	22:00	1.3	56
19/12/04	23:00	1.8	28

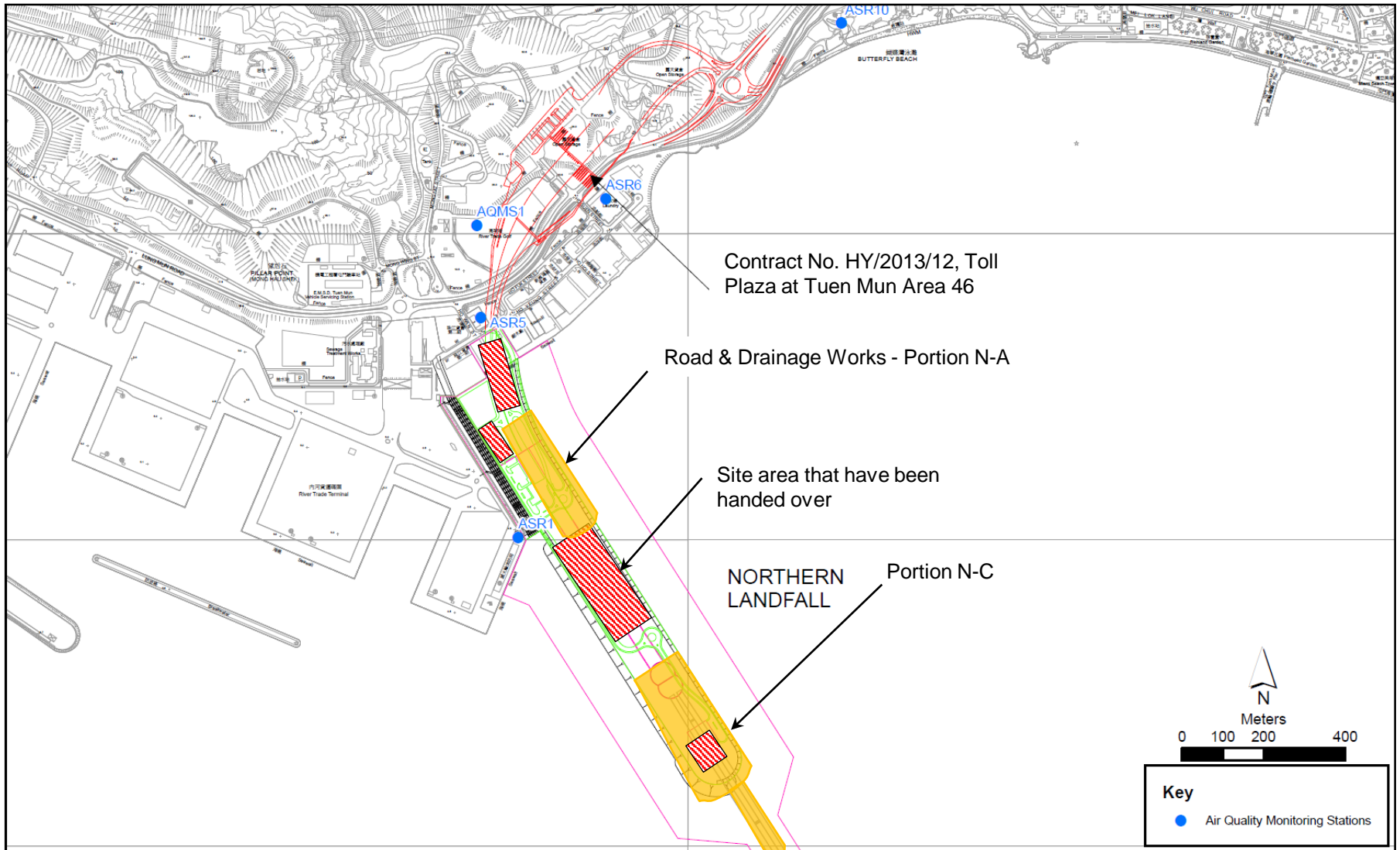


Figure 1

Indicative Construction Works Area on 4 December 2019

Site Location 地盤位置: Northern Landfall  
Date 日期: 02 Dec 2019 to 至 08 Dec 2019

	Time 時間	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	Friday 星期五	Saturday 星期六	Sunday 星期日
1	8:00 – 8:45	✓	✓	✓	✓	✓	✓	✓
2	8:45 – 9:30	✓	✓	✓	✓	✓	✓	✓
3	9:30 – 10:15	✓	✓	✓	✓	✓	✓	✓
4	10:15 – 11:00	✓	✓	✓	✓	✓	✓	✓
5	11:00 – 11:45	✓	✓	✓	✓	✓	✓	✓
6	11:45 – 12:30	✓	✓	✓	✓	✓	✓	✓
7	12:30 – 13:15	✓	✓	✓	✓	✓	✓	✓
8	13:15 – 14:00	✓	✓	✓	✓	✓	✓	✓
9	14:00 – 14:45	✓	✓	✓	✓	✓	✓	✓
10	14:45 – 15:30	✓	✓	✓	✓	✓	✓	✓
11	15:30 – 16:45	✓	✓	✓	✓	✓	✓	✓
12	16:45 – 17:30	✓	✓	✓	✓	✓	✓	✓
	Verified by Site Foreman 地盤科文簽署確認	7	8	8	8	8	8	8

Night shift 夜間工作 (if necessary 如需要)								
	17:30 – 19:00							
	19:00 – 20:30							
	20:30 – 22:00							
	22:00 – 23:00							

\*Please - tick (✓) in the box if complete the spraying of water.  
circle (O) in the box if it is raining.

\*如果 - 已經完成灑水, 請於方格內加上剔號(✓)。  
是下雨天, 請於方格內加上圓圈(O)。

**Remarks:**

- Pursuant to EP Clause 3.15, the Permit Holder shall undertake watering at least 12 times per day on all exposed soil within the Project site and associated work areas in Tuen Mun area throughout the construction phase.
- Spraying position includes the main haul road, open area, slopes, stockpiles and any other dusty materials.
- If it is raining, no water spraying is needed.
- The no of spraying will be increased due to site condition.

**備註:**

- 根據環境許可證 3.15 條例, 在整個施工階段內, 許可證持有人須每天至少 12 次在屯門區項目工地和相關的工作區域內的所有暴露土壤灑水。
- 灑水位置包括主要運輸道路, 空曠地帶, 斜坡, 存料堆, 以及任何其他產生塵埃物料。
- 當下雨時, 地盤將不需要灑水。
- 如果地盤情況更改或有需要時, 灑水次數會相應增加。



**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 Impact Dolphin  
Monitoring

**Date** 23 April 2020

2507, 25/F One Harbourfront  
18 Tak Fung Street  
Hung Hom, Kowloon  
Hong Kong  
Telephone: (852) 2271 3000  
Facsimile: (852) 2723 5660



**ERM**

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Dear Sir or Madam,

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

0212330\_Dec2019/Feb2020\_dolphin\_STG&ANI\_NEL&NWL

A total of one limit level exceedance was recorded in the quarterly impact  
dolphin monitoring data between December 2019 and February 2020.

Regards,

A handwritten signature in cursive script that reads "Jasmine".

Dr Jasmine Ng  
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

Impact Dolphin Monitoring  
Notification of Exceedance

Log No.	0212330_ Dec2019/Feb2020_dolphin_STG&ANI_NEL&NWL [Total No. of Exceedances = 1 Limit Level Exceedance]	
Date	December 2019 – February 2020 (monitored) 22 April 2020 (results received by ERM)	
Monitoring Area	Northeast Lantau (NEL) and Northwest Lantau (NWL)	
Parameter(s) with Exceedance(s)	Quarterly encounter rate of dolphin sightings (STG) Quarterly encounter rate of total number of dolphins (ANI)	
Action Levels	North Lantau Social cluster	NEL: STG < 4.2 & ANI < 15.5 or NWL: STG < 6.9 & ANI < 31.3
Limit Levels		NEL: STG < 2.4 & ANI < 8.9 and NWL: STG < 3.9 & ANI < 17.9
Recorded Levels	NEL	STG = 0 & ANI = 0
	NWL	STG = 0.62 & ANI = 1.55
	One Limit Level Exceedance was recorded in the quarterly impact dolphin monitoring at NEL and NWL between December 2019 to February 2020. The exceedance was reported in the approved <i>Seventy-sixth Monthly EM&amp;A Report</i> dated 13 March 2020.	
Statistical Analyses	<p>Further to the review of the available and relevant dolphin monitoring data in the EM&amp;A programme by this Contract, statistical analyses were conducted as follows:</p> <ul style="list-style-type: none"> <li>A two-way ANOVA with repeated measures and unequal sample size was conducted using Period (2 levels: baseline vs impact – present impact quarter, December 2019 to February 2020) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and present impact monitoring quarter. By setting <math>\alpha = 0.05</math> as the significance level in the statistical tests, significant differences in STG (<math>p = 0.0035</math>) and ANI (<math>p = 0.0239</math>) were detected between Periods.</li> <li>A two-way ANOVA with repeated measures and unequal sample size was conducted using Cumulative Period (2 levels: baseline vs impact – cumulative quarters, December 2012 to February 2020) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and cumulative impact monitoring quarter. By setting <math>\alpha = 0.00001</math> as the significance level in the statistical tests, significant difference in STG (<math>p = 0.000000</math>) and in ANI (<math>p = 0.00001</math>) between Cumulative Period and Location were detected.</li> </ul> <p>*Note: The commencement date under <i>Contract No. HY/2012/08</i> is 1 November 2013.</p>	
Works Undertaken (in the monitoring quarter)	Seawall Modification Works was undertaken in December 2019 under Contract No. HY/2012/08. No marine works was undertaken in January and February 2020.	

<p><b>Possible Reason for Action or Limit Level Exceedance(s)</b></p>	<p>The potential factors that may have contributed to the observed exceedance are reviewed below:</p> <ul style="list-style-type: none"> <li>• Blocking of CWD travelling corridor: The <i>Monitoring of Marine Mammals in Hong Kong Waters (2018 – 19)</i> <sup>(1)</sup> reported that dolphin usage and traveling activities to the northern side of the airport (dolphin traveling corridor) are affected by frequent high-speed ferry traffic from Sky Pier (not related to this Contract), which is likely a major factor resulting in the decrease in dolphin abundances in North Lantau.</li> <li>• Marine works of the Contract: As per the findings from the EIA report (<i>Section 8.11.9</i>), the major influences on the Chinese White Dolphin (CWD) <i>Sousa chinensis</i> under this Contract are marine traffics, reclamation and dredging works. The Contractor implemented the marine traffic control in the reporting period as per the requirements in the <i>EP-354/2009/D</i> and the updated <i>EM&amp;A Manual</i>. Most of the vessels of this Contract also worked within the site boundary, in which the area is seldom used by CWD. Disturbance from vessels of this Contract is considered minor. During this quarter of dolphin monitoring, no adverse impact on CWD due to the activities under this Contract was observed.</li> <li>• Impact on water quality: According to the findings in the water quality monitoring results at the impact monitoring stations in December 2019, no exceedance was recorded in the water quality monitoring in December 2019. No water quality monitoring was undertaken in January and February 2020 as there were no marine works.</li> </ul> <p>In view of the above, marine ecological mitigation measures were considered properly implemented, and thus no unacceptable impact on CWD or its habitat was associated with this Contract in this quarter.</p>
<p><b>Actions Taken / To Be Taken</b></p>	<p>Seawall Modification Works was undertaken in December 2019 under Contract No. HY/2012/08. No marine works was undertaken in January and February 2020.</p> <p>The existing mitigation measures are recommended to be continuously implemented. Furthermore, it is also recommended to reduce the vessels for marine works as much as possible. The ET will monitor for future trends in exceedance(s).</p> <p>ET shall keep reviewing the implementation status of the dolphin related mitigation measures and remind the contractors to ensure the relevant measures are fully implemented. The marine works of HZMB projects should be completed as soon as possible to reduce the overall duration of impacts and allow the dolphins population to recover as early as possible. The protection measures (e.g. speed limit control) for the BMP shall be implemented so as to provide a better habitat for dolphin recovery. It is noted that even though marine vessels may moor within the mooring site of BMP, commercial activities including loading / unloading / transshipment are not allowed except a permit is obtained. The HZMB works vessels should avoid the BMP. The marine works footprint and vessels for the marine works should also be reduced as much as possible, and vessels idling / mooring in other part of the North Lantau shall be avoided whenever possible.</p> <p>Dolphin specialists of the Projects confirmed that the CWD sighting nearby north of Sha Chau and Lung Kwu Chau Marine Park has significantly declined. The reason for the decline was likely related to the re-routing of high-speed ferry from Sky Pier. The CWDs in the area should be closely followed.</p>
<p><b>Remarks</b></p>	<p>The results of impact dolphin monitoring, the status of implemented marine ecological mitigation measures are documented in the approved <i>Seventy-Fourth to Seventy-Sixth Monthly EM&amp;A Reports</i>.</p>

(1) Hung S K Y (2019). Prepared for AFCD. Available at: [https://www.afcd.gov.hk/english/conservation/con\\_mar/con\\_mar\\_chi/con\\_mar\\_chi\\_chi/files/Final\\_Report\\_2018\\_19.pdf](https://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_chi_chi/files/Final_Report_2018_19.pdf)