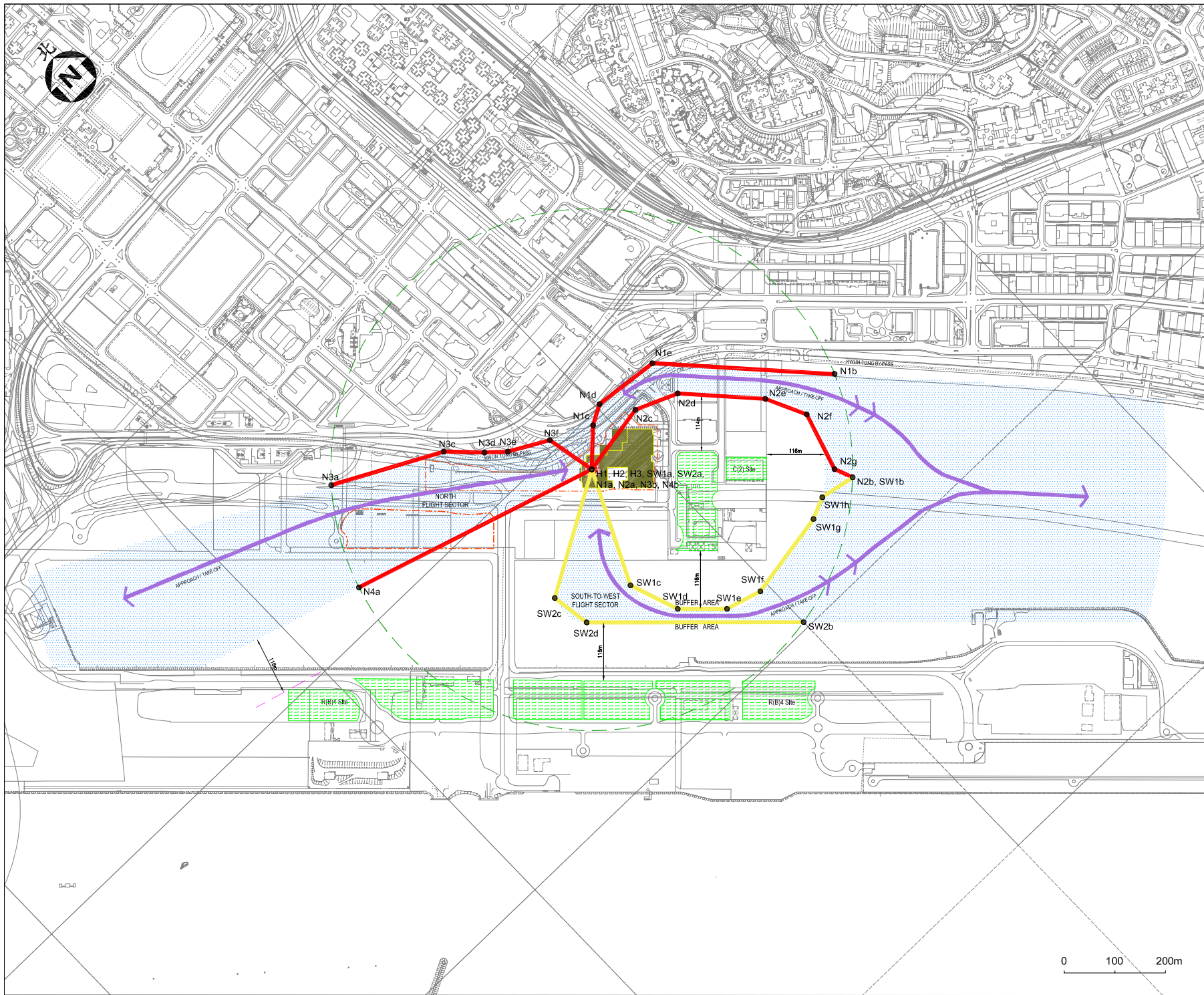


Appendix 3O1 - Helicopter SO2 Emission Source and Input Parameters

No.	Source ID	Type	Description	Coordinates				Base Elevation (unmitigated) (m)	Release Height above Ground (m)	Gas Exit Temperature (K)	Stack Inside Diameter (m)	Gas Exit Velocity (m/s)	Width (Y) (m)	Emission Rate (g/s)	Averaged Emission Rate in an Hour (g/s)	Effective area of the line source (m2)	Effective area of flight path (m2)	Averaged Emission Rate in an Hour (g/s-m2)
				X1	Y1	X2	Y2											
01	H1	Point	Idling Mode	839657.8	819721.3	--	--	4.6	114.55	373.2	0.3	6.0	--	0.282190917	0.02351591	--	--	--
02	H2	Point	Hovering (Approach) and Touchdown Mode	839657.8	819721.3	--	--	4.6	117.05	373.2	0.3	6.0	--	1.269072615	0.00282016	--	--	--
03	H3	Point	Hovering (Take Off) and Lift-Off Mode	839657.8	819721.3	--	--	4.6	117.05	373.2	0.3	6.0	--	1.269072615	0.00282016	--	--	--
04	SW1a SW1c	Line	Take-off or Approach mode for SW1	839657.8	819721.3	839553.9	819503.0	4.1	117.55	--	--	--	2.85	1.269072615	0.02115121	689.20	2320.71	9.1141E-06
05	SW1c SW1d	Line	Take-off or Approach mode for SW1	839553.9	819503.0	839589.0	819404.6	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	297.71		
06	SW1d SW1e	Line	Take-off or Approach mode for SW1	839589.0	819404.6	839659.2	819336.9	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	277.93		
07	SW1e SW1f	Line	Take-off or Approach mode for SW1	839659.2	819336.9	839730.9	819316.2	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	212.62		
08	SW1f SW1g	Line	Take-off or Approach mode for SW1	839730.9	819316.2	839905.8	819346.4	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	505.88		
09	SW1g SW1h	Line	Take-off or Approach mode for SW1	839905.8	819346.4	839948.3	819365.3	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	132.51		
10	SW1h SW1b	Line	Take-off or Approach mode for SW1	839948.3	819365.3	840019.0	819352.1	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	204.86		
11	SW2a SW2c	Line	Take-off or Approach mode for SW2	839657.8	819721.3	839428.5	819588.9	4.2	117.45	--	--	--	2.85	1.269072615	0.02115121	754.73		
12	SW2c SW2d	Line	Take-off or Approach mode for SW2	839428.5	819588.9	839440.6	819510.3	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	226.68		
13	SW2d SW2b	Line	Take-off or Approach mode for SW2	839440.6	819510.3	839750.2	819212.9	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	1223.44		
14	N1a N1c	Line	Take-off or Approach mode for N1	839657.8	819721.3	839720.3	819782.6	6.0	115.65	--	--	--	2.85	1.269072615	0.02115121	249.39	1780.43	1.1880E-05
15	N1c N1d	Line	Take-off or Approach mode for N1	839720.3	819782.6	839758.6	819804.0	6.0	115.65	--	--	--	2.85	1.269072615	0.02115121	124.87		
16	N1d N1e	Line	Take-off or Approach mode for N1	839758.6	819804.0	839890.0	819789.6	5.3	116.35	--	--	--	2.85	1.269072615	0.02115121	376.75		
17	N1e N1b	Line	Take-off or Approach mode for N1	839890.0	819789.6	840135.2	819524.4	4.4	117.25	--	--	--	2.85	1.269072615	0.02115121	1029.42		
18	N2a N2c	Line	Take-off or Approach mode for N2	839657.8	819721.3	839801.6	819746.5	5.7	115.95	--	--	--	2.85	1.269072615	0.02115121	416.04	1875.77	1.1276E-05
19	N2c N2d	Line	Take-off or Approach mode for N2	839801.6	819746.5	839884.7	819711.8	5.3	116.35	--	--	--	2.85	1.269072615	0.02115121	256.54		
20	N2d N2e	Line	Take-off or Approach mode for N2	839884.7	819711.8	840002.2	819583.8	4.0	117.65	--	--	--	2.85	1.269072615	0.02115121	495.26		
21	N2e N2f	Line	Take-off or Approach mode for N2	840002.2	819583.8	840040.0	819505.0	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	248.90		
22	N2f N2g	Line	Take-off or Approach mode for N2	840040.0	819505.0	840004.4	819388.7	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	346.79		
23	N2g N2b	Line	Take-off or Approach mode for N2	840004.4	819388.7	840019.0	819352.1	1.3	120.35	--	--	--	2.85	1.269072615	0.02115121	112.24		
24	N3a N3c	Line	Take-off or Approach mode for N3	839264.8	820056.5	839471.2	819950.0	5.0	116.65	--	--	--	2.85	1.269072615	0.02115121	661.92	1557.92	1.3577E-05
25	N3c N3d	Line	Take-off or Approach mode for N3	839471.2	819950.0	839527.9	819892.6	6.0	115.70	--	--	--	2.85	1.269072615	0.02115121	230.00		
26	N3d N3e	Line	Take-off or Approach mode for N3	839527.9	819892.6	839562.8	819861.9	6.5	115.15	--	--	--	2.85	1.269072615	0.02115121	132.36		
27	N3e N3f	Line	Take-off or Approach mode for N3	839562.8	819861.9	839638.1	819820.9	6.8	114.85	--	--	--	2.85	1.269072615	0.02115121	244.44		
28	N3f N3b	Line	Take-off or Approach mode for N3	839638.1	819820.9	839657.8	819721.3	5.7	116.00	--	--	--	2.85	1.269072615	0.02115121	289.20		
29	N4a N4b	Line	Take-off or Approach mode for N4	839163.8	819872.6	839657.8	819721.3	4.6	117.05	--	--	--	2.85	1.269072615	0.02115121	1472.51		

Notes

- Input parameters (gas exit temperature, stack inside diameters, gas exit velocity) of all sources, and average emission rate in an hour of point sources (H1, H2 and H3) are made reference to Appendix 3.2 of the approved EIA Report of "A Rooftop Helipad at the Proposed New Block of Queen Mary Hospital" (Register No.: AEIAR - 208/2017).
- The width of the line sources is assumed to be the same as the width of Airbus H175, 2.85m. Since the helicopter model of this project is the same as the approved EIA Report of "A Rooftop Helipad at the Proposed New Block of Queen Mary Hospital" (Register No.: AEIAR - 208/2017).



- LEGEND:**
- Assessment Area
 - Indicative Flight Path
 - Assumed flight path at North Flight Sector
 - Assumed flight path at South-to-West Flight Sector

Rev	Amendment	By	Chk.	App.	Date

Client



醫院管理局
HOSPITAL
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Project



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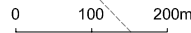
A ROOFTOP HELIPAD AT
NEW ACUTE HOSPITAL AT
KAI TAK DEVELOPMENT AREA

Title

Location of Helicopter Source
Points

Status

Drawn	Checked	Approved
Scale	CAD File Name	First Issued
As Shown		July 2020
	Drawing No.	Rev.
	Appendix 302	1



Appendix 303 - Input Summary

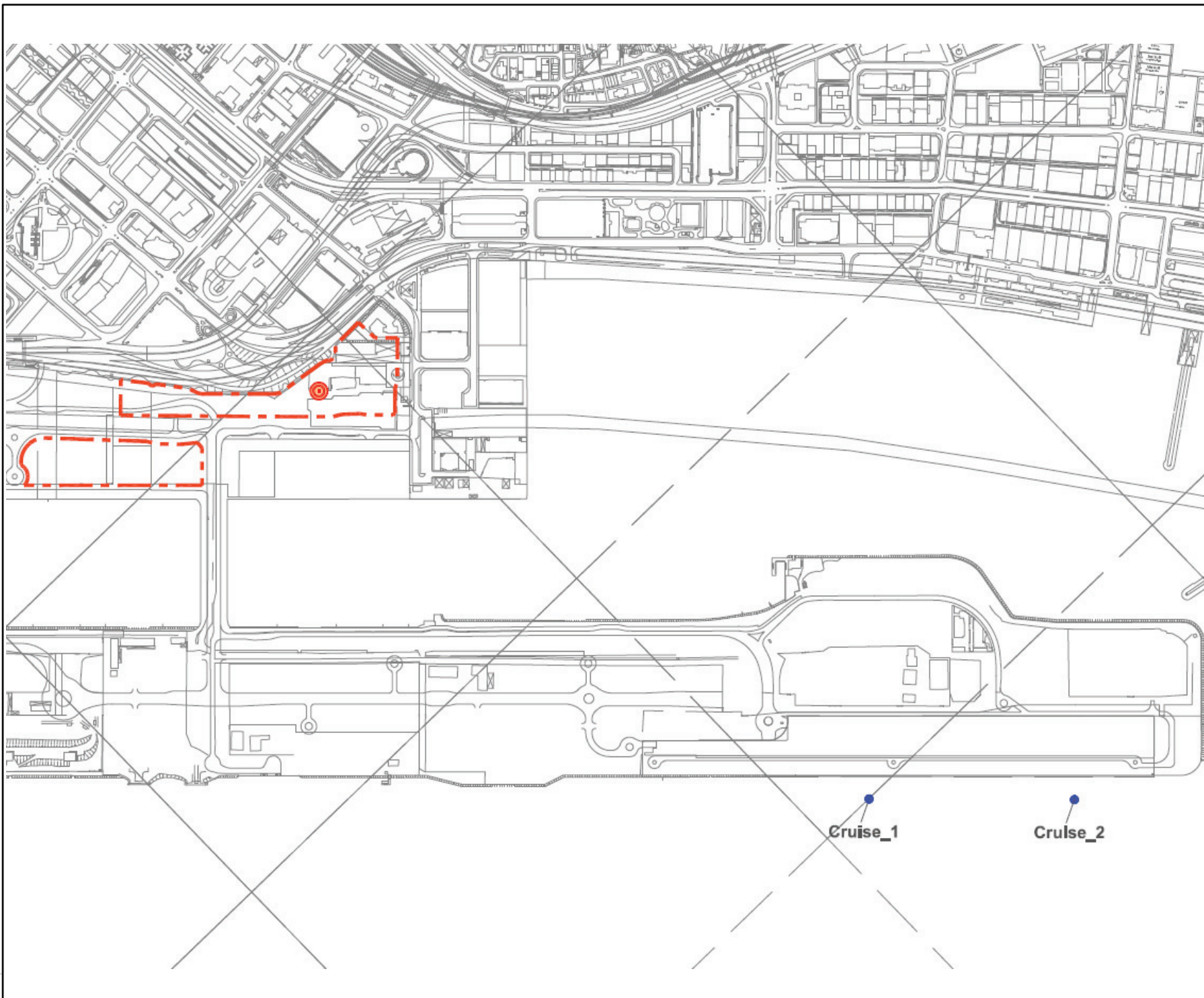
Type	ID	Base Elevation	Stack Height	Stack Diameter	Exit Velocity	Exit Temperature	Emission Rate	X1	Y1
		[m]	[m]	[m]	[m/s]	[K]	[g/s]	[m]	[m]
POINT	T2_T1 ^[1]	0	9	0.15	8	795	0.0000376	839849.00	819417.00
POINT	T2_T2 ^[1]	0	9	0.15	8	795	0.0000376	839880.16	819377.90
POINT	T2_T3 ^[1]	0	9	0.15	8	795	0.0000376	839868.68	819322.71
POINT	T2_T4 ^[1]	0	9	0.15	8	795	0.0000376	839838.74	819282.67
POINT	T2_T5 ^[1]	0	9	0.15	8	795	0.0000376	839829.82	819233.47
POINT	RE_T1 ^[1]	0	9	0.15	8	795	0.0002202	839943.63	819513.61
POINT	RE_T2 ^[1]	0	9	0.15	8	795	0.0002202	839981.63	819481.12
POINT	RE_T3 ^[1]	0	9	0.15	8	795	0.0002202	839970.81	819432.31
POINT	RE_T4 ^[1]	0	9	0.15	8	795	0.0002202	839939.41	819393.40
POINT	RE_T5 ^[1]	0	9	0.15	8	795	0.0002202	839903.79	819358.31
POINT	RE_T6 ^[1]	0	9	0.15	8	795	0.0002202	839868.68	819322.71
POINT	RE_T7 ^[1]	0	9	0.15	8	795	0.0002202	839838.74	819282.67
POINT	RE_T8 ^[1]	0	9	0.15	8	795	0.0002202	839829.82	819233.47
POINT	Cruise_1 ^{[2][3]}	0	34.2	1.9	24.6	537	1.2032969	839845.54	818599.40
POINT	Cruise_2 ^{[2][3]}	0	34.2	1.9	24.6	537	1.0725376	840090.23	818361.78
POINT	Barge_RE ^[1]	0	15	0.3	8	803	0.0028820	839943.63	819513.61

Note:

[1] Stack height, stack diameter, exit velocity and exit temperature for barge and tugboat were made reference to report for First Annual Air Quality Impact Assessment Review under EP-210/2005/C.

[2] Stack diameter, exit velocity and exit temperature for cruise were made reference to EIA Report for Kai Tak Development (AEIAR-130/2009).

[3] According to Kai Tak Development (AEIAR-130/2009), stack height for ocean-going vessels (including cruise vessels) range from 34.2m to 62m. For a conservative approach, stack height of 34.2m was adopted.



Legend

- ▭ Boundary Line of New Acute Hospital at Kai Tak Development Area
- ⊙ Proposed Rooftop Helipad
- Cruise Source Point

No.	Amendment	By	Chk.	App.	Date

Client



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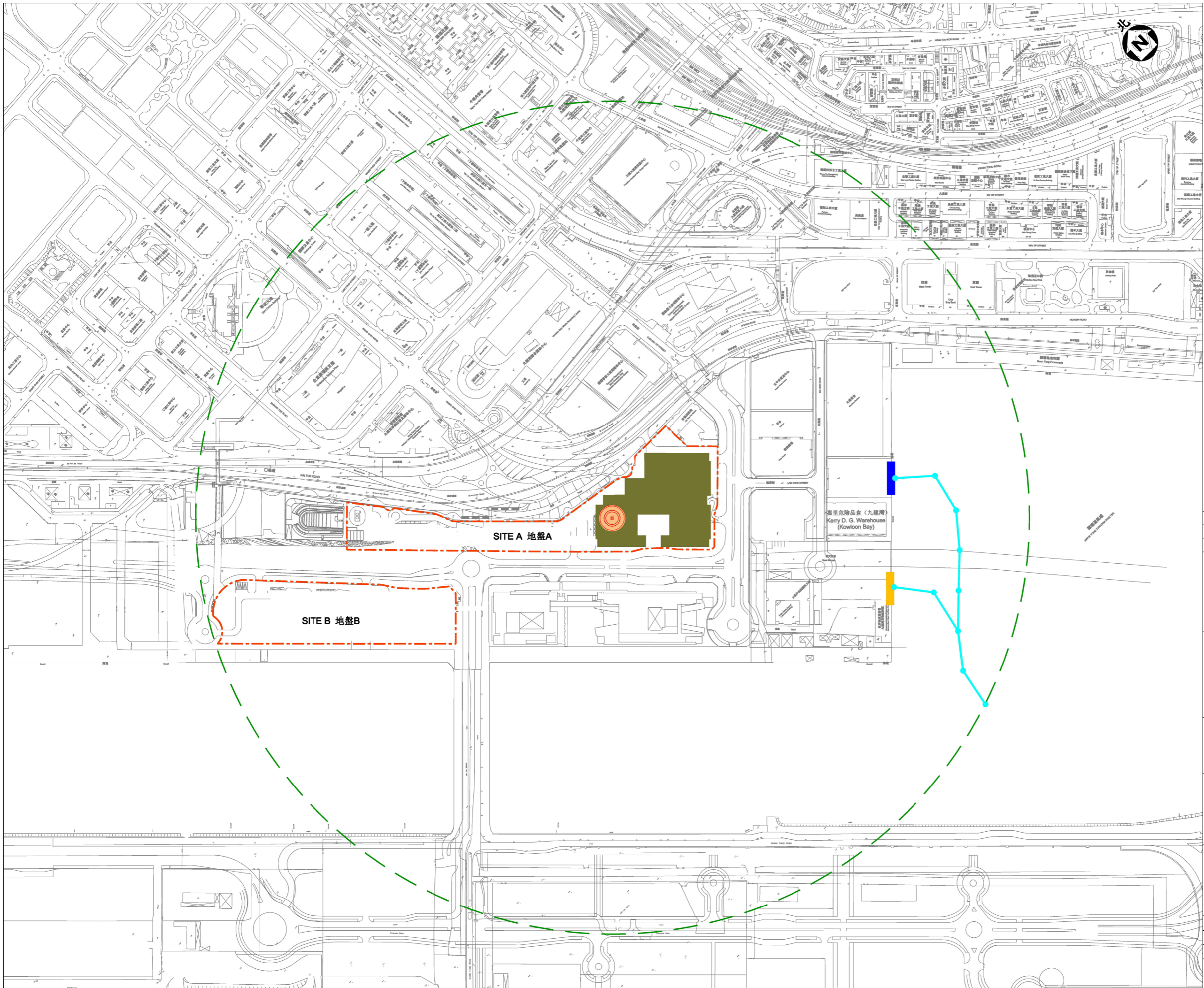
**A ROOFTOP HELIPAD AT
NEW ACUTE HOSPITAL AT
KAI TAK DEVELOPMENT AREA**

Site

Location of Cruise Terminal Source Points

Drawn	Checked	Approved

Scale: Not to Scale



- LEGEND :**
- - - BOUNDARY LINE OF NEW ACUTE HOSPITAL AT KAI TAK DEVELOPMENT AREA
 - PROPOSED ROOFTOP HELIPAD
 - ACUTE BLOCK
 - - - 500m ASSESSMENT BOUNDARY
 - BARGING POINT FOR TRUNK ROAD T2
 - BARGING POINT FOR XUN XIANG METALWARE CO. LTD.
 - MARINE ROUTE

Rev	Amendment	By	Chk.	App.	Date

Client



醫院管理局
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A ROOFTOP HELIPAD AT NEW ACUTE HOSPITAL AT KAI TAK DEVELOPMENT AREA

Title

MARINE ROUTE

Status

Drawn	CAD	Checked	-	Approved	-
Scale	1 : 10000 (A3)	CAD File Name	First Issued	MAY 2019	
		Drawing No.			Rev.

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Appendix 3 O5

Appendix 3O6 - Schedule for Barge

Schedule for Barge

Time Period	T2 Maneuvering ^[1]	Xun Xiang Recycling ^[2]	
		Hotelling	RE Maneuvering
0000 - 0100	1	0	0
0100 - 0200	1	0	0
0200 - 0300	1	0	0
0300 - 0400	1	0	0
0400 - 0500	1	0	0
0500 - 0600	1	0	0
0600 - 0700	1	0	0
0700 - 0800	1	0	1
0800 - 0900	1	1	0
0900 - 1000	1	1	0
1000 - 1100	1	1	0
1100 - 1200	1	1	0
1200 - 1300	1	1	0
1300 - 1400	1	1	0
1400 - 1500	1	1	0
1500 - 1600	1	1	0
1600 - 1700	1	1	0
1700 - 1800	1	1	0
1800 - 1900	1	1	0
1900 - 2000	1	1	0
2000 - 2100	1	1	0
2100 - 2200	1	1	0
2200 - 2300	1	0	1
2300 - 2400	1	0	0
Total	24	14	2

Note:

[1] According to the reply from T2 Engineer (i.e. Appendix 3I), there are 4.5 barges per day and operating hours of the barging point may extend up to 20 hours. As such, one barge per hour was assumed in the model under a conservation approach.

[2] No confirmed barge schedule, the frequency is based on site observation to determine a reasonable worst case assumption.