

Odour Patrol Methodology

Odour patrol survey was to be conducted for the existing Tai O Sewage Treatment Work and proposed two new sewage pumping stations (Fan Kwai Tong SPS and Hang Mei SPS) to understand the existing odour condition in these area. The odour patrol survey was conducted 6 times during summer time by qualified odour panelists (certificate provided) using their olfactory sensors to sniff odour at different locations. The survey locations are shown in Figures A, B and C. The qualified panelists have their individual n-butanol thresholds within a required range of 20 to 80 ppb/v. During the odour patrol survey, the weather conditions of wind direction and wind speed were recorded by a handheld anemometer.

The odour intensity should be determined at 5 different levels according to the criteria below:

0	Not Detected	No odour perceived or an odour so weak that it can not be easily characterised or described
1	Slight	Identifiable odour, slight
2	Moderate	Identifiable odour, moderate
3	String	Identifiable odour, strong
4	Extreme	Severe odour

Panelist : Jacky Lee Site Location Tai O Weather Sunny
Date August 9 2012

Number	Location	Time	Wind Speed(m/s)	Wind Direction	Temperature, °C	Odour Intensity	On site Observation	
							Odour Nature	Possible Source
1		10:50	1.6	NW	32	2	Sewerage	Tai O STW
2		10:53	1.1	NW	32	0	0	0
3		10:55	2	NW	32	0	0	0
4		10:58	1.7	NW	32	0	0	0
16		11:25	1	SW	33	0	0	0
17		11:28	0	0	33	0	0	0
18		11:31	1	SW	33	0	0	0
19		11:36	1.5	NW	33	0	0	0
20		11:40	1.7	SE	33	0	0	0
13		11:50	0	0	33	0	0	0
14		11:52	0.6	SE	33	0	0	0
15		11:55	1	SE	33	0	0	0
5		13:25	0.1	SW	33	0	0	0
6		13:28	1.9	SW	33	0	0	0
7		13:31	0.8	W	33	0	0	0
8		13:32	1	SW	33	0	0	0
9		13:33	0.7	SW	33	0	0	0
10		13:35	1.2	SW	33	0	0	0
11		13:37	1.2	NW	33	0	0	0
12		13:39	1.1	NW	33	0	0	0

The odour intensity should be determined at 5 different levels according to the criteria below:

0	Not Detected	No odour perceived or an odour so weak that it can not be easily characterised or described
1	Slight	Identifiable odour, slight
2	Moderate	Identifiable odour, moderate
3	String	Identifiable odour, strong
4	Extreme	Severe odour

Panelist : Jacky Lee Site Location Tai O Weather Sunny
Date August 10 2012

Number	Location	Time	Wind Speed(m/s)	Wind Direction	Temperature, °C	Odour Intensity	On site Observation	
							Odour Nature	Possible Source
1		11:00	0.8	NW	32	2	Sewerage	Tai O STW
2		11:03	1.5	NW	32	0	0	0
3		11:05	2.2	NW	32	0	0	0
4		11:08	0.5	NW	32	0	0	0
16		11:32	1.6	SW	33	0	0	0
17		11:35	2	SW	33	0	0	0
18		11:37	1.2	SW	33	0	0	0
19		11:41	1.7	SW	33	0	0	0
20		11:46	2.2	SE	33	0	0	0
13		11:56	1.7	SE	33	0	0	0
14		11:59	1.9	SE	33	0	0	0
15								
5		13:35	0.8	SW	33	0	0	0
6		13:38	2.4	SW	33	0	0	0
7		13:42	1.6	SW	33	0	0	0
8		13:44	1.3	SW	33	0	0	0
9		13:46	2.1	SW	33	0	0	0
10		13:48	1.4	SW	33	0	0	0
11		13:51	2	SW	33	0	0	0
12		13:53	1.2	SW	33	0	0	0

The odour intensity should be determined at 5 different levels according to the criteria below:

0	Not Detected	No odour perceived or an odour so weak that it can not be easily characterised or described
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3	String	Identifiable odour, strong
4	Extreme	Severe odour

Weather: Sunny
Date: August 13 2012
Panellist: Jacky Lee Site Location: Tai O

Number	Location	Time	Wind Speed(m/s)	Wind Direction	Temperature, °C	Odour Intensity	On site Observation	
							Odour Nature	Possible Source
5		10:50	0.2	SW	30	0	0	0
6		10:52	1.5	SW	30	0	0	0
7		10:55	0.7	SW	30	0	0	0
8		10:58	1.4	W	30	0	0	0
9		11:00	0.5	W	30	0	0	0
10		11:02	1.1	W	30	0	0	0
11		11:05	1	W	30	0	0	0
12		11:08	2	NW	30	0	0	0
13		11:29	0.6	NE	31	0	0	0
14		11:31	0.3	NE	31	0	0	0
15		11:33	1.9	NE	31	0	0	0
16		11:37	0.4	SW	31	0	0	0
17		11:39	0.8	SW	31	0	0	0
18		11:41	1.3	SW	31	0	0	0
19		11:46	0	0	31	0	0	0
20		11:51	0.6	NE	31	0	0	0
1		13:20	2.3	NW	32	2	Sewerage	Tai O STW
2		13:23	2.1	NW	32	0	0	0
3		13:26	1.2	NW	32	0	0	0
4		13:28	0.5	NW	32	0	0	0

The odour intensity should be determined at 5 different levels according to the criteria below:

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3	String	Identifiable odour, strong
4	Extreme	Severe odour

Weather: Sunny
Date: August 14 2012
Panellist: Jacky Lee Site Location: Tai O

Number	Location	Time	Wind Speed(m/s)	Wind Direction	Temperature, °C	Odour Intensity	On site Observation	
							Odour Nature	Possible Source
5		10:58	0.5	SW	31	0	0	0
6		11:02	1.2	SW	31	0	0	0
7		11:05	0.4	SW	31	0	0	0
8		11:08	1.1	SW	31	0	0	0
9		11:10	1	SW	31	0	0	0
10		11:12	0.6	SW	31	0	0	0
11		11:13	0.9	SW	31	0	0	0
12		11:16	1.6	SW	31	0	0	0
13		11:46	1	NE	31	0	0	0
14		11:48	0.6	NE	31	0	0	0
15		11:51	1.2	NE	31	0	0	0
16		11:55	1	SW	31	0	0	0
17		11:57	1.3	SW	31	0	0	0
18		11:59	0.6	SW	31	0	0	0
19		12:04	0.8	NE	31	0	0	0
20		12:09	0.5	NE	31	0	0	0
1		13:22	2	NW	32	2	Sewerage	Tai O STW
2		13:26	1.8	NW	32	0	0	0
3		13:28	1.6	NW	32	0	0	0
4		13:31	0.5	NW	32	0	0	0

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1	Slight	Identifiable odour, slight
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3	String	Identifiable odour, strong
4	Extreme	Severe odour

Weather Sunny
Panellist : Jacky Lee & William Leung Site Location Tai O Date August 15 2012

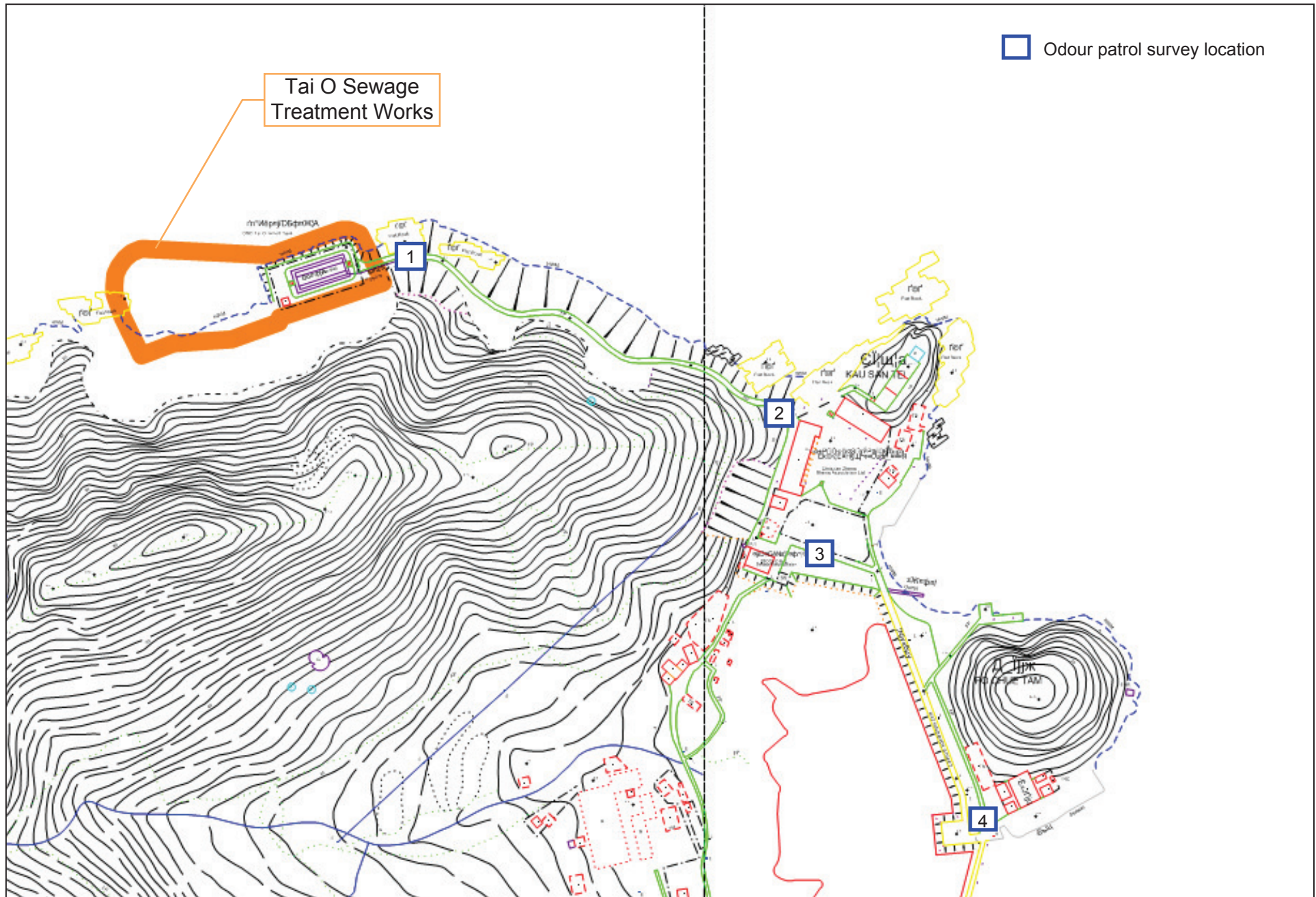
Number	Location	Time	Wind Speed(m/s)	Wind Direction	Temperature, °C	Odour Intensity	On site Observation	
							Odour Nature	Possible Source
13		10:53	3.5	NE	32	0	0	0
14		10:57	2.6	NE	32	0	0	0
15		11:00	2	NE	32	0	0	0
16		11:05	1.6	NE	32	0	0	0
17		11:08	1.2	NE	32	0	0	0
18		11:11	1.2	NE	32	0	0	0
19		11:15	1.3	NE	32	0	0	0
20		11:20	1.2	NE	32	0	0	0
1		11:52	1.2	NW	33	1	Sewerage	Tai O STW
2		11:57	1	NW	33	0	0	0
3		12:00	1	NW	33	0	0	0
4		12:03	1.1	NE	33	0	0	0
5		13:21	0.5	W	33	0	0	0
6		13:23	1.8	W	33	0	0	0
7		13:26	0.8	W	33	0	0	0
8		13:31	1.5	W	33	0	0	0
9		13:33	0.5	W	33	0	0	0
10		13:36	0.5	W	33	0	0	0
11		13:38	0.5	W	33	0	0	0
12		13:40	0.8	W	33	0	0	0

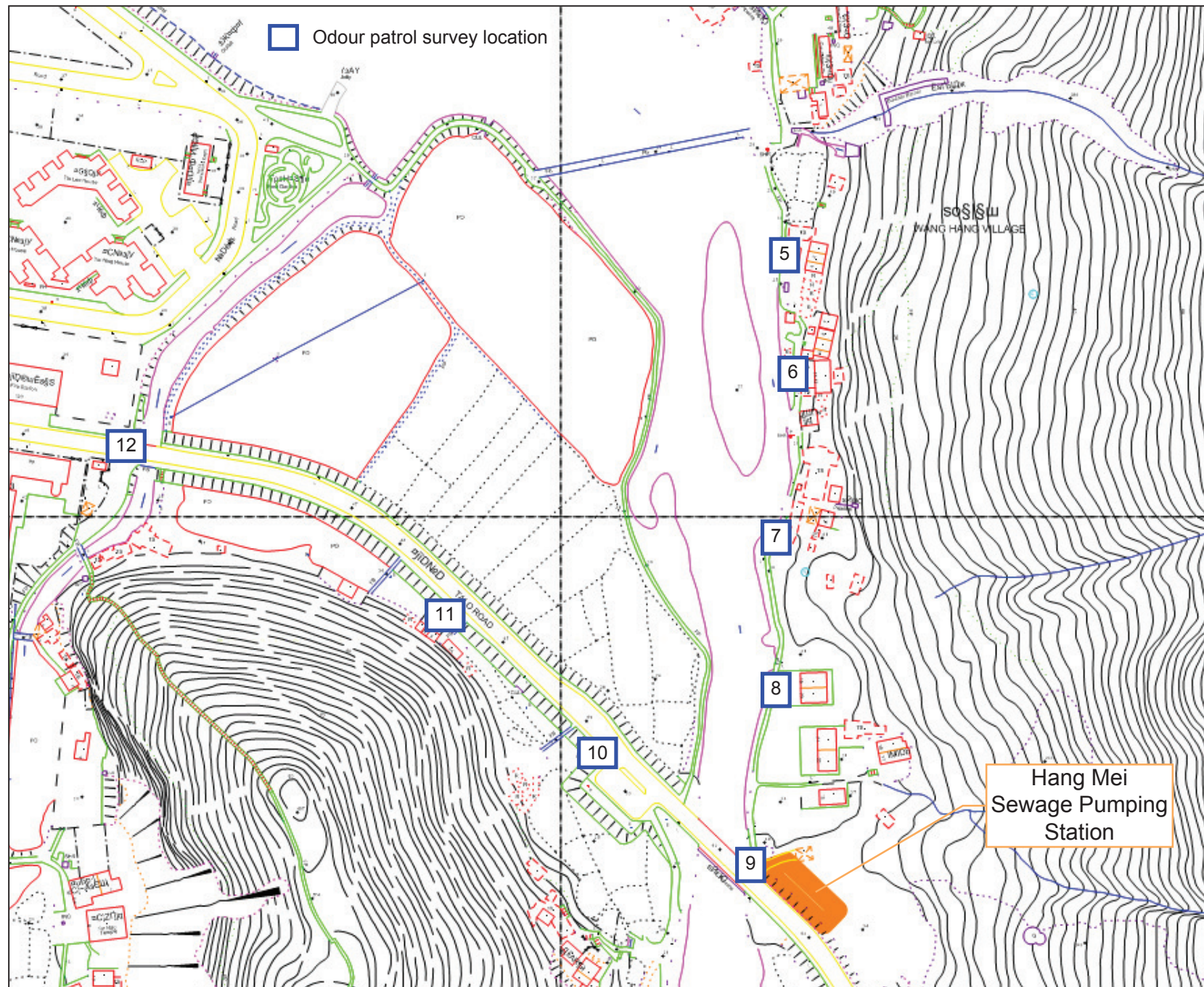
The odour intensity should be determined at 5 different levels according to the criteria below:

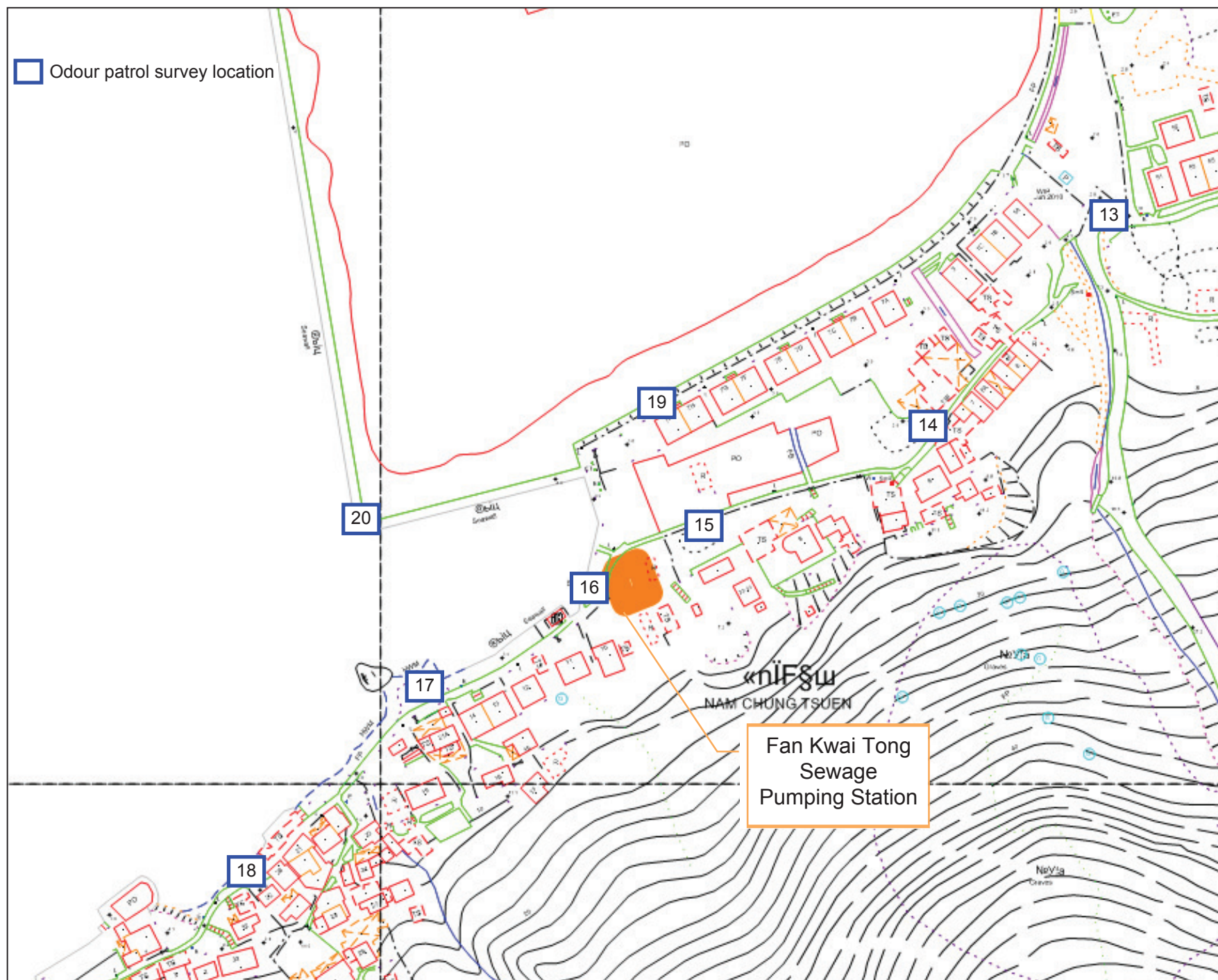
0	Not Detected	No odour perceived or an odour so weak that it can not be easily characterised or described
1	Slight	Identifiable odour, slight
2	Moderate	Identifiable odour, moderate
3	String	Identifiable odour, strong
4	Extreme	Severe odour

Weather Sunny
Panellist : William Leung Site Location Tai O Date August 15 2012

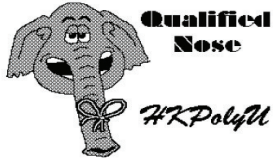
Number	Location	Time	Wind Speed(m/s)	Wind Direction	Temperature, °C	Odour Intensity	On site Observation	
							Odour Nature	Possible Source
13		10:54	1.4	NE	32	0	0	0
14		10:57	3.3	NE	32	0	0	0
15		11:01	0	NE	32	0	0	0
16		11:06	1.2	NE	32	0	0	0
17		11:08	1	NE	32	0	0	0
18		11:11	0.6	NE	32	0	0	0
19		11:16	1.4	NE	32	0	0	0
20		11:19	1.1	NW	32	0	0	0
1		11:52	0	-	32	1	Sewerage	Tai O STW
2		11:58	0.3	N	32	0	0	0
3		12:01	1.6	NE	32	0	0	0
4		12:03	0	-	32	0	0	0
5		13:21	0	-	33	0	0	0
6		13:23	1.5	W	33	0	0	0
7		13:27	1.2	W	33	0	0	0
8		13:30	1.5	W	33	0	0	0
9		13:32	0	-	33	0	0	0
10		13:34	1.5	W	33	0	0	0
11		13:38	0	-	33	0	0	0
12		13:42	1	W	33	0	0	0







Certification of Odour Panelist



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July 19, 2012

Mr. LEE M.H. and **Mr. LEUNG Hang-Wai** have demonstrate that his nose has a normal sensitivity to comply with the requirements of EN13725 by participating a set of screening tests carried out by odour Lab of HK PolyU, in which his individual thresholds (n-butanol) should be in the range of 20 to 80 ppb/v and a standard deviation of $R < 2.3$.

Test date: 28 May 2012 ~ 4 June 2012

issued by HK PolyU, Odour Lab.



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