

**The Government of
The Hong Kong Special Administrative Region**

Environmental Protection Department

Contract No. EP/SP/68/12

Outlying Islands Transfer Facilities Follow-on Contract

Sok Kwu Wan Transfer Facility

Annual Environmental Audit Report (Operation)

April 2021 – March 2022

Prepared by



19 APR 2022

Ted CHAN / Manager / Swire Waste Management Limited

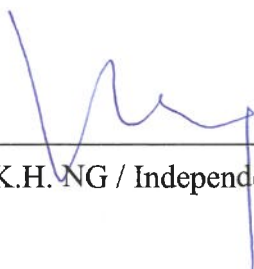
Checked by



19.4.2022

Patrick YEUNG / Senior Environmental Protection Inspector
/ Environmental Protection Department

Audited by



19 APR 2022

K.H. NG / Independent Auditor

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1. INTRODUCTION

Under the requirements of Section 4 of Environmental Permit No EP-014/1998/A, the measures were undertaken to assure the Sok Kwu Wan Transfer Facility was operated in accordance with the permit.

This report documents the findings of environmental monitoring and audit works for the facility from April 2021 to March 2022.

Environmental monitoring for the odour, noise and water quality was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Full details of the above environmental monitoring tests are described in the **Section 2**. In addition, the environmental complaint handling procedures were also checked and reported in **Section 4** of this report.

2. DESCRIPTION OF ENVIRONMENTAL MONITORING TESTS

Table 1: Summary of Environmental Monitoring Parameters

<u>Test</u>	<u>Location</u>	<u>Frequency</u>	<u>Parameter</u>	<u>Limits</u>
Odour	Site Boundary See Map (Appendix A1)	Monthly	Odour	Odour strength not exceed “Slight” odour intensity
Noise	Nearest Sensitive Receiver See Map (Appendix B1)	Monthly	L _{Aeq} (30min)	55 dBA (07:00-23:00) 45 dBA (23:00-07:00)
Marine Water	Four monitoring locations and two control sites. See Map (Appendix C1)	Weekly	Dissolved Oxygen (DO)	<u>Surface & Middle</u> 4 mg/L except 5 mg/L for FCZ or 1%-ile of baseline data for surface and middle layer <u>Bottom</u> 2 mg/L and or 1%-ile of baseline data for bottom layer
			Water Turbidity (Turbidity)	99%-ile of baseline or 130% of upstream control station's Turbidity at the same tide of the same day
			Suspended Solids (SS)	99%-ile of baseline or 130% of upstream control station's SS of the same tide of the same day

2.1 Odour

2.1.1 Monitoring Location

The monitoring takes place at the boundary of the facility. The patrol route is shown in **Appendix A1**.

2.1.2 Monitoring Frequency

The odour monitoring is conducted once (1) per month.

2.1.3 Monitoring Methodology

The odour patrol is conducted by a sensory team, which includes a representative (1) from Independent Third-party Accredited Laboratory, one (1) from the Contractor and one (1) from the EPD. The test consists of three (3) person patrolling the site boundary and recording the location and strength of odour identifiable as arising from the facility. The odour intensity is categorized into five (5) classes:

Table 2: Odour Intensity Classification

Class	Remarks
Not detected	No odour perceived or an odour so weak that it cannot be readily characterized or described
Slight	Identifiable odour, slight
Moderate	Identifiable odour, moderate
Strong	Identifiable odour, strong
Extreme	Severe odour

The odour patrol record is set out in **Appendix A2**.

2.2 Noise

2.2.1 Monitoring Location

Noise monitoring is carried out at the nearest Noise Sensitive Receiver (NSR) in accordance with the EM&A Manual. **Appendix B1** shows the location of this monitoring position.

2.2.2 Monitoring Frequency

The noise monitoring is conducted once (1) per month.

2.2.3 Monitoring Methodology

The noise monitoring during the Operations phase for the SKWTF was performed in accordance with the “Technical Memorandum for the Assessment of Noise from places other than Domestic, Public or Construction Sites”. The monitoring requirements are summarized as follow:

- The Sound Level Meters in compliance with the IEC61672: 2002 Class 1 and 2 for carrying out the noise monitoring.
- The Sound Level Meter will be set on a tripod at a height of 1.2 m above the ground, subject to local monitoring condition.
- The battery condition will be checked to ensure the correct functioning of the meter.
- Noise monitoring $Leq_{(30\text{ min})}$ to be taken on a monthly basis for daytime measurements.
- Prior to and after each noise measurement, the meter will be calibrated using a Calibrator for 94.0 dB at 1000 Hz. The measurement may be accepted as valid only if the calibration level agrees to within 1.0 dB.
- The wind speed will be frequently checked with the portable wind meter.
- Site conditions and interference noise sources will be recorded.
- Noise monitoring will be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

The Noise monitoring record is set out in **Appendix B2**.

2.3 Water quality

2.3.1 Monitoring Location

The number of marine water monitoring stations for Sok Kwu Wan Transfer Facility is shown in **Table 3** and **Appendix C1** shows the locations of the marine water quality monitoring stations.

Table 3: Locations of the marine water quality monitoring stations

Facility	Station ID	No. of Stations
Sok Kwu Wan	Control Stations: SC1 & SC2 Impact Stations: S1, S2, S3 & S4	6

2.3.2 Monitoring Methodology

The marine water quality monitoring during the Operations phase for the SKWTF was performed in accordance with the EM&A Manual. The following set out the methods of measurement to be used during the environmental monitoring.

Dissolved Oxygen and Turbidity

The in-situ measurements of dissolved oxygen and turbidity are carried out using an In-situ Aqua Troll 600 Multi-parameter Sonde.

Where the depth of water is less than 3m, duplicate measurements of D.O. are to be taken at one depth to obtain an average reading.

With depths between 3m and 6m, measurements will be taken at 1m below the surface and 1m above the sea bed. In each depth, duplicate readings will be taken and an average value will be calculated.

With a water depth greater than 6m, measurements will be taken at 1m below surface, the mid-depth and 1m above the sea bed. In each depth, duplicate readings will be taken and an average value will be calculated.

Suspended solids

The suspended solids monitoring is carried out in according to the in-house method (E-T-053) with reference to the standard method APHA 17ed 2540 D. The testing method is summarized as below:

A well-mixed sea water sample is filtered through a weighed standard glass-fiber filter and wash thoroughly with water to remove dissolved solids on the filter. The non-filterable residue retained on the filter is dried at 103 to 105°C. The increase in weight of the filter represents the suspended solids content.

3 **RESULTS**

3.1 **Odour**

3.1.1 Summary of Number of Monitoring Events and Exceedances for Odour monitoring

Table 4: Summary of Number of Monitoring Events and Exceedances for Odour monitoring

Monitoring Parameter	Location	No. of monitoring events	No. of Exceedance
		April 2021 – March 2022	
Odour	Point 1	12	0
	Point 2	12	0
	Point 3	12	0
	Point 4	12	0
	Point 5	12	0
	Point 6	12	0
Total		72	0

3.1.2 Conclusion

No odour could be detected during the odour patrols. The results show compliance with the odour objectives.

Please refer to the **Appendix A2** for the odour monitoring record.

3.2 **Noise**

3.2.1 Summary of Number of Monitoring Events and Exceedances for Noise monitoring

Table 5: Summary of Number of Monitoring Events and Exceedances for Noise monitoring

Monitoring Parameter	Location	No. of monitoring events	No. of Exceedance
		April 2021 – March 2022	
Noise	NSR	13	7
Total		13	7

3.2.2 Conclusion

During the reporting period, some of noise monitoring results have exceeded the compliance objectives. According to the notes recorded by the field operator of the Independent Third-party Accredited Laboratory, the major noise source was identified from road traffic, marine traffic, construction works at other site, and natural sound of birds and insects, etc. Noise emanated from the SKWTF was considered insignificant.

In addition, EPD site staff conducted random checking of on-site CCTV record and confirmed no operational activities were being carried out at the facility during night time. Hence, it is reasonable to believe that the night-time noise level at SKWTF is insignificant.

The noise level monitoring record taken at the NSR of SKWTF is set out in **Appendix B2**.

3.3 Water Quality

3.3.1 Summary of Number of Monitoring Events and Exceedances for Water quality monitoring

A total of 136 sets of water samples were collected in 4 sampling days during the reporting period. A summary of exceedance of dissolved oxygen, turbidity and suspended solids at SKWTF is shown in the following **Table 6**.

Table 6: Summary of exceedance of Marine Water Quality at SKWTF

Sampling Point	Type of Exceedance		
	DO	Turbidity	SS
S1	0	1	0
S2	0	0	0

S3	0	0	0
S4	2	0	0
Total	2	1	0

The laboratory analysis shows that 2 water samples exceed the limit level of dissolved oxygen, and 1 water sample exceeds the limit level of Turbidity.

3.3.2 Conclusion

Since there is no wastewater discharged from the SKWTF and no construction activities during the reporting period, the exceedance of compliance objectives for dissolved oxygen and turbidity were not caused by the operation activities at SKWTF.

The water quality monitoring record is set out in **Appendix C2**

4 **STATUS OF ENVIRONMENTAL COMPLAINT HANDLING**

No verbal or written complaints were received during the reporting period.

5 **CONCLUSION**

Based on the monitoring results during the audit period as well as a review of our observations the following can be concluded.

The environmental protection systems that are currently in use, when combined with the existing level of environmental awareness at the facility, are sufficient to meet current regulatory constraints relating to the environment.

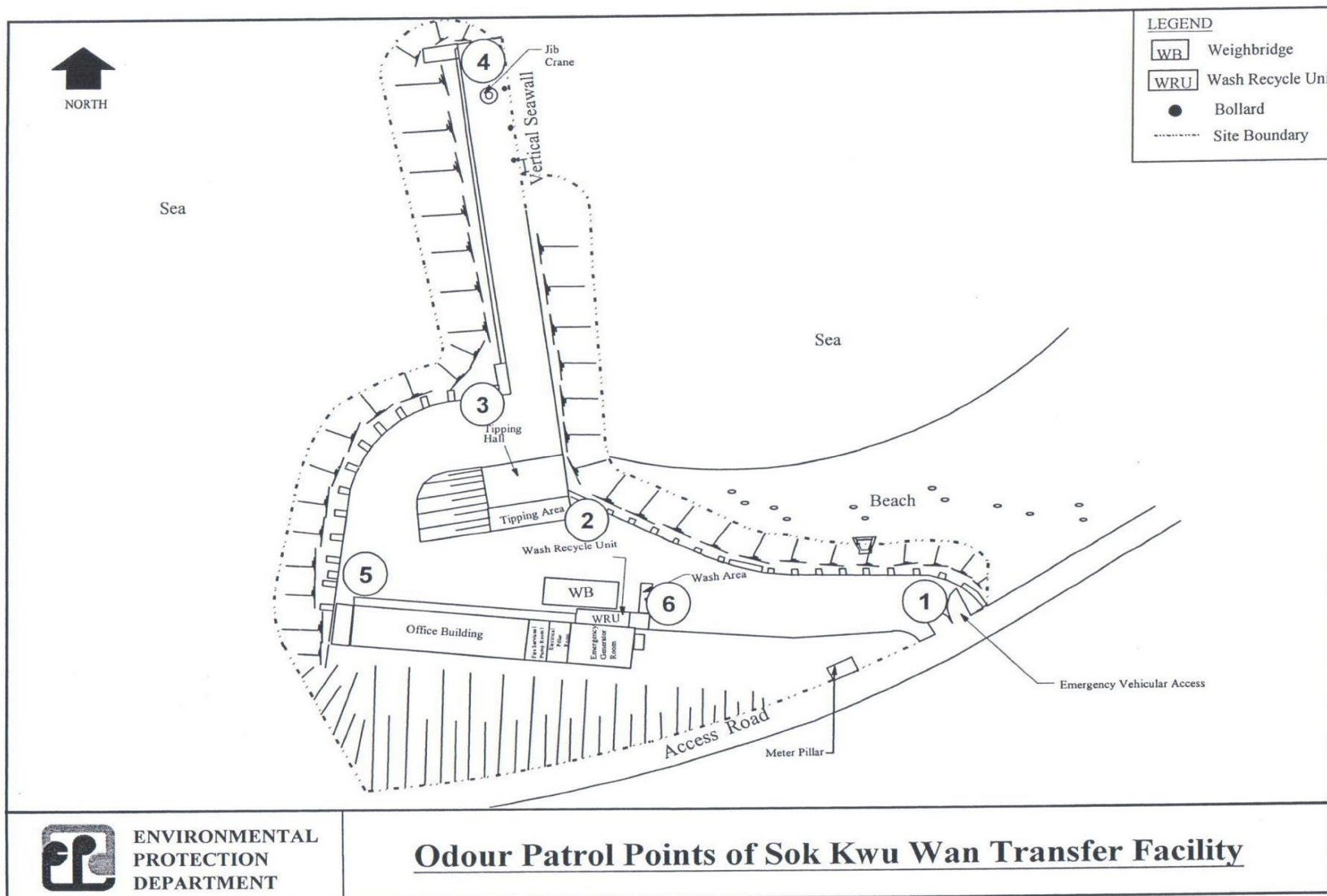
The methods and frequency of environmental monitoring produce a data base that is adequate to assist station management in making accurate and timely decisions relating to the modification of environmental systems or operational practices if needed.

The current environmental management systems and performance provide a good foundation to develop a positive relationship with the community.

Appendix A

Appendix A1

Odour patrol points of Sok Kwu Wan Transfer Facility



Appendix A2

Odour Patrol Record

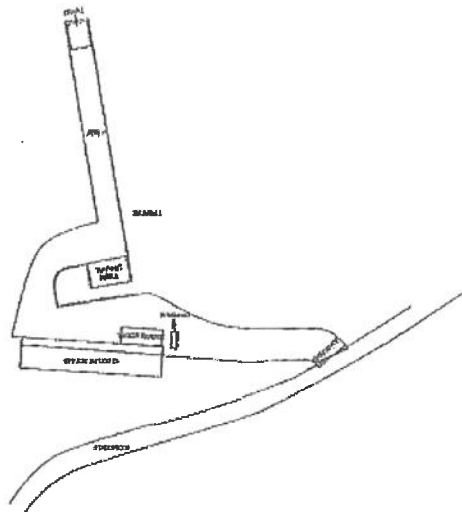


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0.8

Wind Direction: E

Measurement Date 15-4-2021

Start Time: 15:00 End Time: 15:15

Sensory Patrol Included: Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD [Signature]

Classification	Location
<input checked="" type="checkbox"/> Not detected	All
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

Legend : () :Containers nearby the indicated location
 → :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

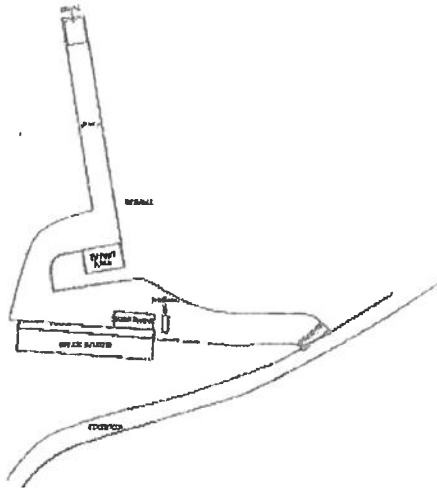


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0.6

Wind Direction: NE

Measurement Date 13-5-2011

Start Time: 15:15 End Time: 15:30

Sensory Patrol Included:

Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD _____

Classification	Location
<input checked="" type="checkbox"/> Not detected	A11
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

- Legend : () :Containers nearby the indicated location
- : → :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

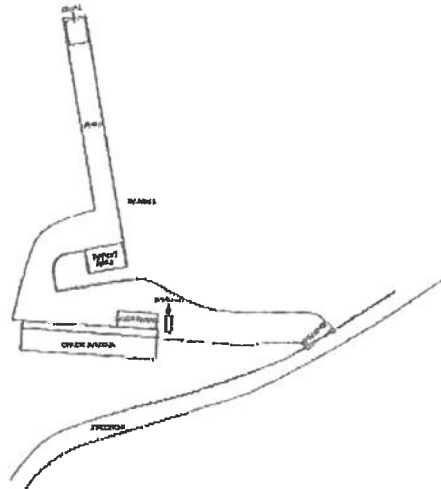


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SWIRE WASTE MANAGEMENT LTD SOK KWU WAN TRANSFER FACILITY Odour Measurement Record



Wind Speed: 2.7 ms⁻¹

Wind Direction: SW

Measurement Date 17.6.2021

Start Time: 14:00 End Time: 14:15

Sensory Patrol Included:

Representative of FUGRO Staff h n

Representative of SWIRE WASTE MANAGEMENT LTD 1/20

Representative of EPD _____

Classification	Location
<input checked="" type="checkbox"/> Not detected	A1
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.

Slight :Identifiable odour, slight

Moderate :Identifiable odour, moderate

Strong :Identifiable odour, strong

Extreme :Severe odour

Legend : () :Containers nearby the indicated location

→ :Direction of wind

Remarks:

Please Call the on duty supervisor when arrived.

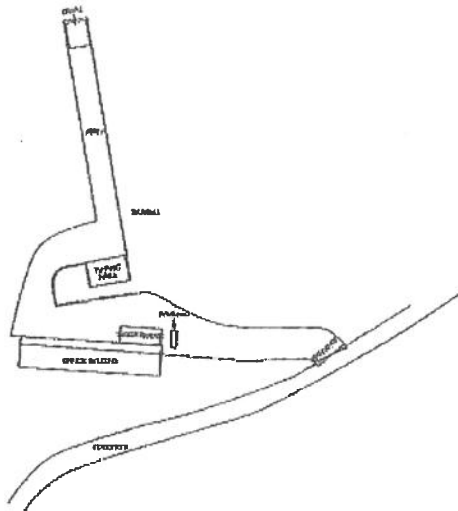


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0.3 m/s

Wind Direction: NE

Measurement Date 16-7-2011

Start Time: 15:15 End Time: 15:30

Sensory Patrol Included:

Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD 16713(70)212

Classification	Location
<input checked="" type="checkbox"/> Not detected	All
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

- Legend : () :Containers nearby the indicated location
- :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

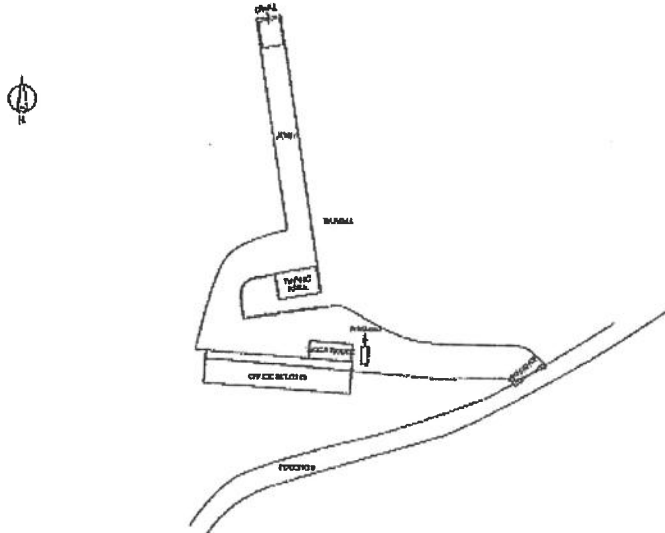


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0.9 m/s

Wind Direction: S

Measurement Date 19-8-2001

Start Time: 15:40 End Time: 15:55

Sensory Patrol Included: Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD _____

Representative of EPD _____

Classification	Location
<input checked="" type="checkbox"/> Not detected	<u>All</u>
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

Legend : () :Containers nearby the indicated location
→ :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

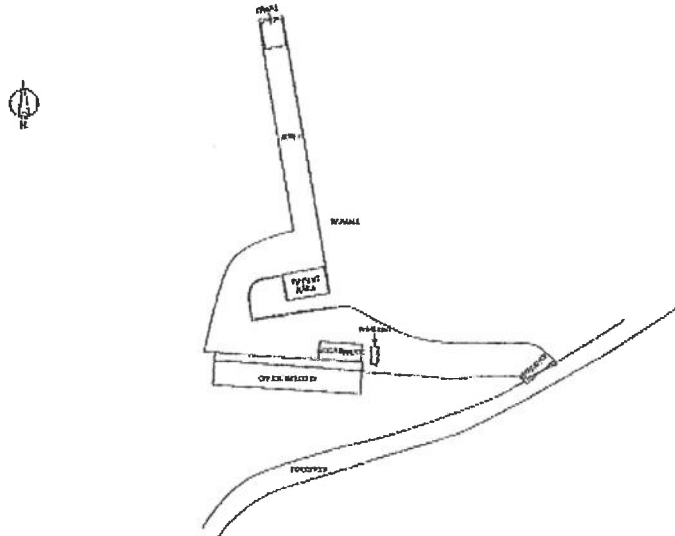


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: _____

Wind Direction: _____

Measurement Date 16-9-2021

Start Time: 13:55 End Time: 14:10

Sensory Patrol Included:

Representative of FUGRO Staff _____

Representative of SWIRE WASTE MANAGEMENT LTD _____

Representative of EPD KWai Z (70)211

Classification	Location
<input checked="" type="checkbox"/> Not detected	AV
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

Legend : () :Containers nearby the indicated location
 → :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

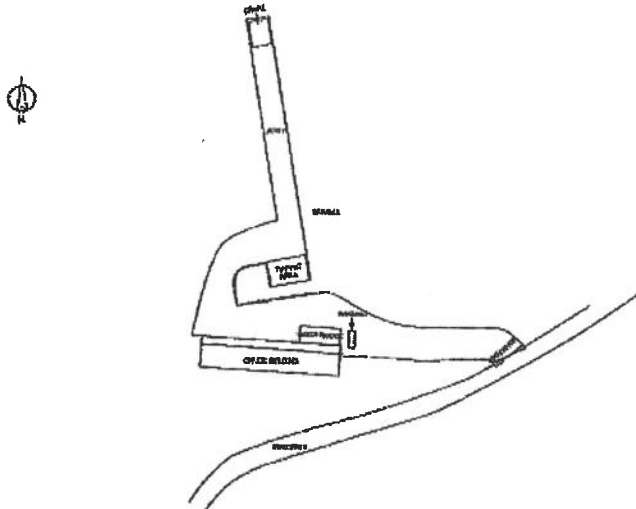


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 1.0 m s⁻¹

Wind Direction: E

Measurement Date 15 OCT 2021 Start Time: 1105 End Time: 1120

Sensory Patrol Included: Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD _____

Classification	Location
<input checked="" type="checkbox"/> Not detected	ALL
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

Legend : () :Containers nearby the indicated location
→ :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

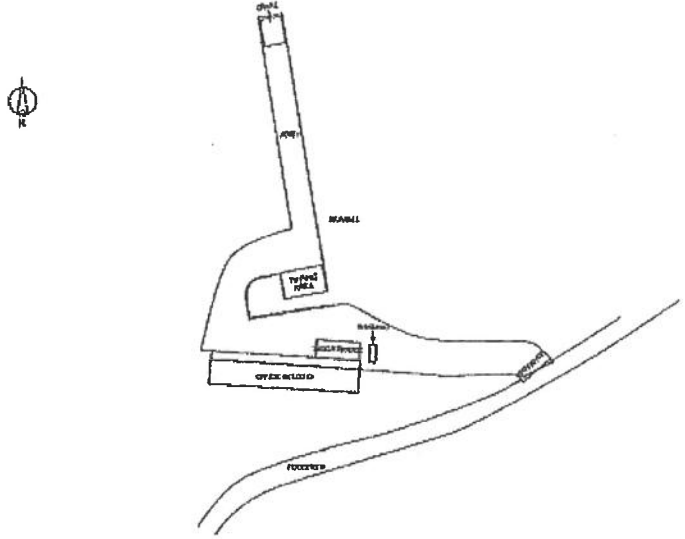


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 2.3 m/s

Wind Direction: SE

Measurement Date 18-11-2014

Start Time: 10:05 End Time: 10:20

Sensory Patrol Included: Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD [Signature]

Classification	Location
<input checked="" type="checkbox"/> Not detected	A1
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight :Identifiable odour, slight
- Moderate :Identifiable odour, moderate
- Strong :Identifiable odour, strong
- Extreme :Severe odour

Legend : () :Containers nearby the indicated location
 → :Direction of wind

Remarks:
Please Call the on duty supervisor when arrived.

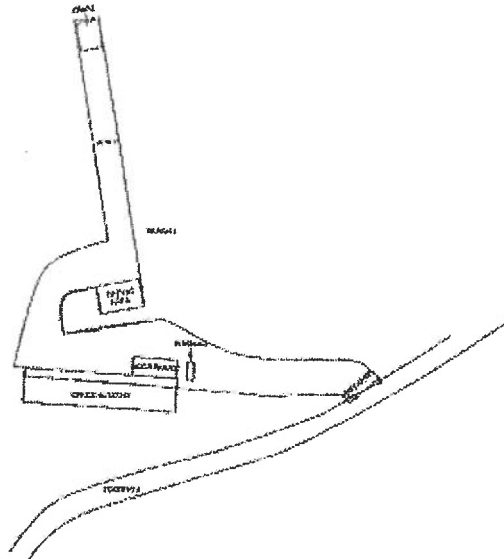


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SWIRE WASTE MANAGEMENT LTD SOK KWU WAN TRANSFER FACILITY Odour Measurement Record



Wind Speed: 0.6 m/s

Wind Direction: NE

Measurement Date 6 DEC 2021

Start Time: 09:50 End Time: 10:00

Sensory Patrol Included:

Representative of FUGRO Staff A. Ly

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD KW - 2(TD)211

Classification	Location
<input checked="" type="checkbox"/> Not detected	All }
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected : No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight : Identifiable odour, slight
- Moderate : Identifiable odour, moderate
- Strong : Identifiable odour, strong
- Extreme : Severe odour

Legend : () : Containers nearby the indicated location
 → : Direction of wind

Remarks:
 Please Call the on duty supervisor when arrived.

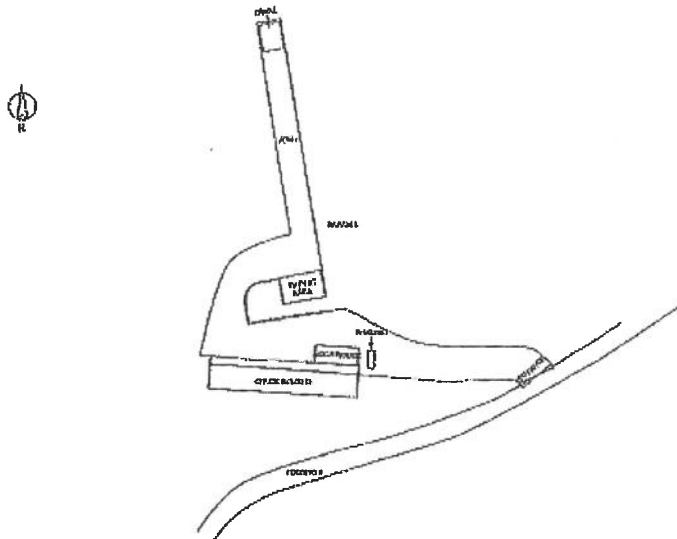


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0 m/s Wind Direction: /
 Measurement Date 18 JAN 2022 Start Time: 10:10 End Time: 10:25
 Sensory Patrol Included: Representative of FUGRO Staff [Signature]
 Representative of SWIRE WASTE MANAGEMENT LTD [Signature]
 Representative of EPD [Signature] 2600211

Classification	Location
<input checked="" type="checkbox"/> Not detected	ALL
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:
 Not detected :No odour perceived or an odour so weak that it cannot be readily characterised or described.
 Slight :Identifiable odour, slight
 Moderate :Identifiable odour, moderate
 Strong :Identifiable odour, strong
 Extreme :Severe odour

Legend : () :Containers nearby the indicated location
 → :Direction of wind

Remarks:
 Please Call the on duty supervisor when arrived.

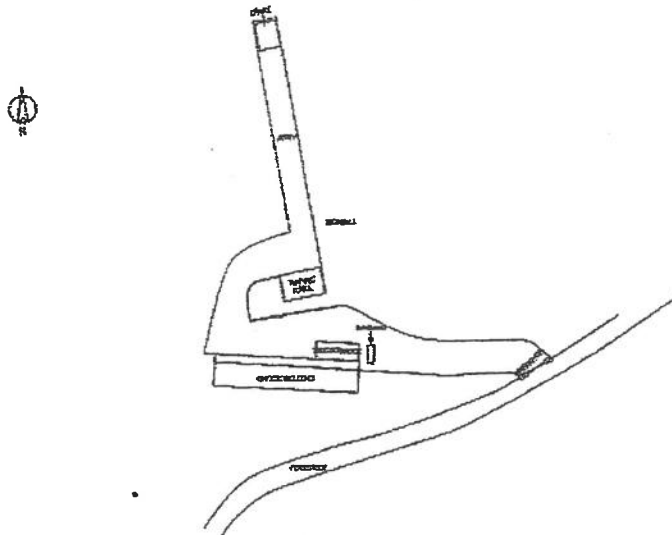


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0.4 m/s

Wind Direction: NE

Measurement Date: 14 Feb 2022

Start Time: 10:55 End Time: 11:02

Sensory Patrol Included:

Representative of FUGRO Staff: [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD: [Signature]

Representative of EPD: _____

Classification	Location
<input checked="" type="checkbox"/> Not detected	ALL
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected : No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight : Identifiable odour, slight
- Moderate : Identifiable odour, moderate
- Strong : Identifiable odour, strong
- Extreme : Severe odour

- Legend : () : Containers nearby the indicated location
- : Direction of wind

Remarks:

Please Call the on duty supervisor when arrived.

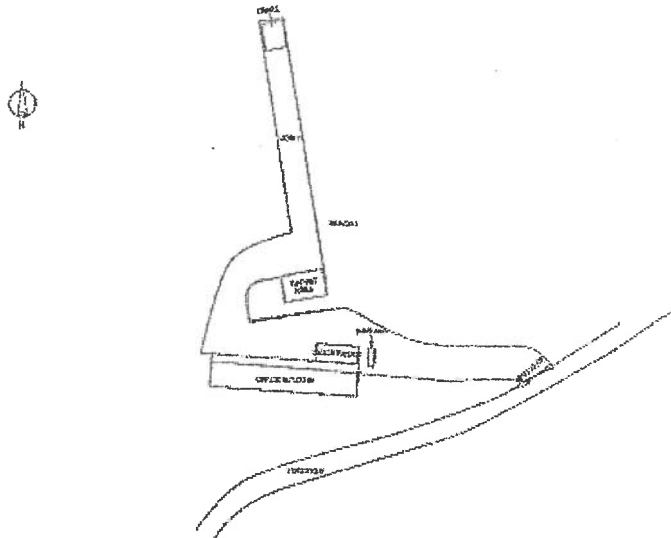


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**SWIRE WASTE MANAGEMENT LTD
SOK KWU WAN TRANSFER FACILITY
Odour Measurement Record**



Wind Speed: 0.3 m/s

Wind Direction: NE

Measurement Date 17 MAR 2022 Start Time: 10:05 End Time: 10:20

Sensory Patrol Included:

Representative of FUGRO Staff [Signature]

Representative of SWIRE WASTE MANAGEMENT LTD [Signature]

Representative of EPD _____

Classification	Location
<input checked="" type="checkbox"/> Not detected	ALL
<input type="checkbox"/> Slight	
<input type="checkbox"/> Moderate	
<input type="checkbox"/> Strong	
<input type="checkbox"/> Extreme	

Classification Criteria:

- Not detected : No odour perceived or an odour so weak that it cannot be readily characterised or described.
- Slight : Identifiable odour, slight
- Moderate : Identifiable odour, moderate
- Strong : Identifiable odour, strong
- Extreme : Severe odour

- Legend : () : Containers nearby the indicated location
- : → : Direction of wind

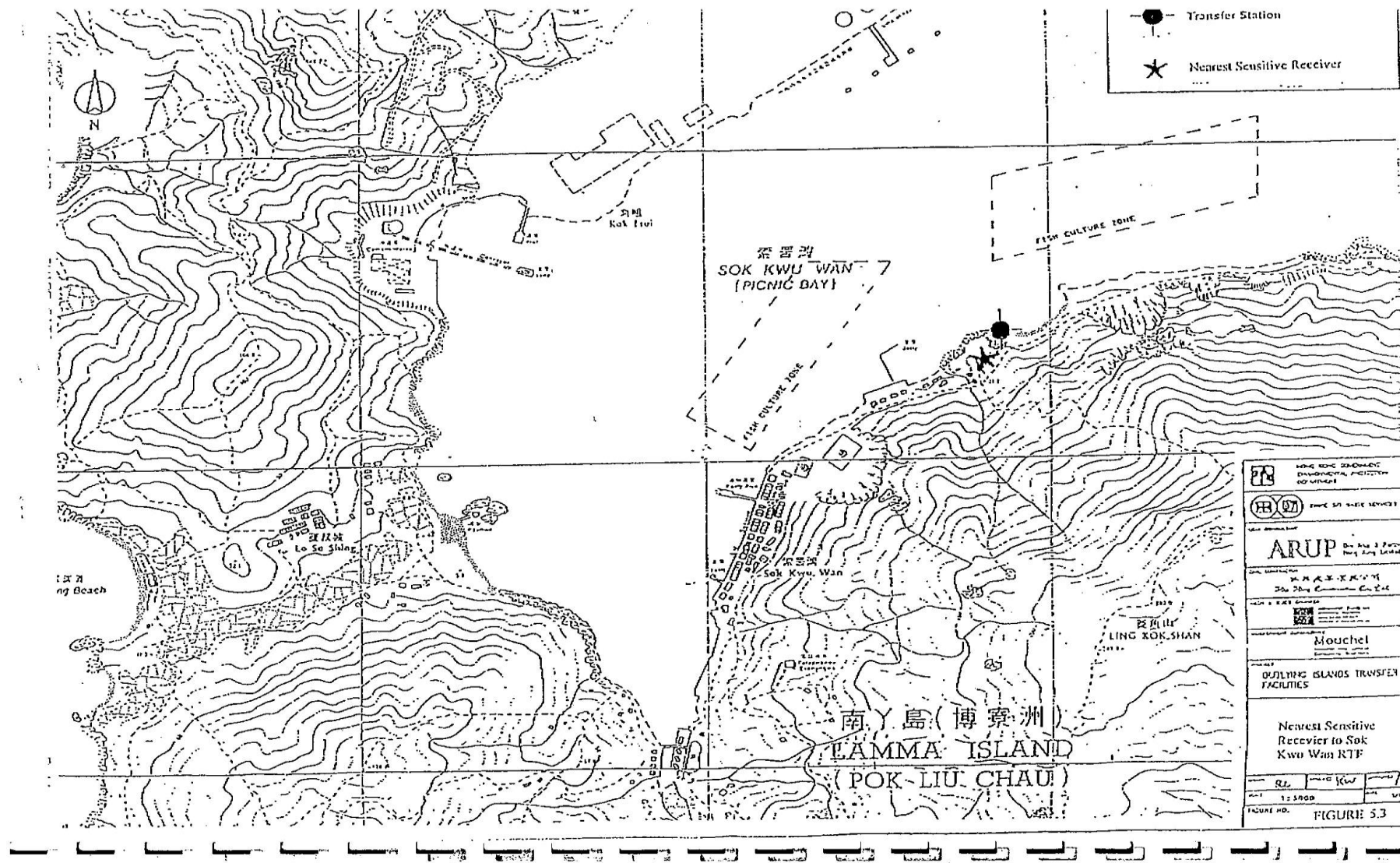
Remarks:

Please Call the on duty supervisor when arrived.

Appendix B

Appendix B1

Location of Noise Sensitive Receiver (NSR)



Appendix B2

Noise monitoring record (NSR)

Appendix B2 – Noise monitoring record (NSR)

Sok Kwu Wan Transfer Facility

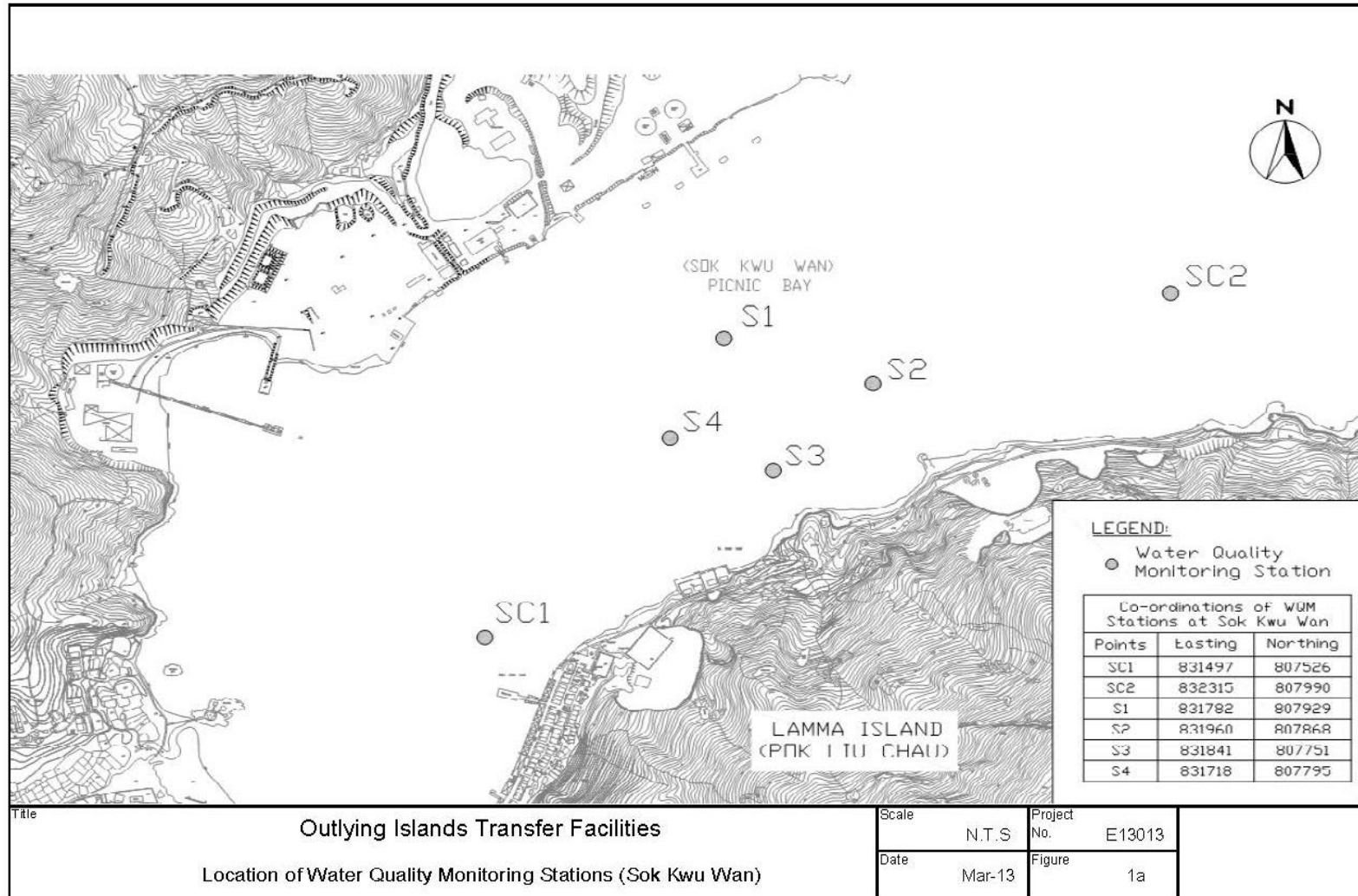
Measurement Date and Time	Noise Level Leq A(30 min) / (dB(A))	Remarks
15 April 2021 (14:50 – 15:20)	55.9	The major noise source was identified from road traffic, and natural sound of birds. The noise generated by the Transfer Facility was considered to be insignificant.
13 May 2021 (13:18 – 13:48)	55.7	The major noise source was identified from road traffic and natural sound of birds. The noise generated by the Transfer Facility was considered to be insignificant.
17 June 2021 (13:00 – 13:30)	54.9	N/A
16 July 2021 (14:50 – 15:20)	48.8	N/A
19 August 2021 (15:00 – 15:30)	56.6	The major noise source was identified from road traffic and natural sound of birds. The noise generated by the Transfer Facility was considered to be insignificant.
16 Sep 2021 (12:50 – 13:20)	52.8	N/A
15 Oct 2021 (11:25 – 11:55)	52.5	N/A
18 Nov 2021 (09:32 – 10:02)	60.8	The major noise source was identified from road traffic, and natural sound of birds. The noise generated by the Transfer Facility was considered to be insignificant.
8 Dec 2021 (09:33 – 10:03)	64.6	The major noise source was identified from road traffic, wind flow, construction works at other site and natural sound of birds. The noise generated by the Transfer Facility was considered to be insignificant.
08 Dec 2021 (23:00 – 23:30)	40.6	N/A
18 Jan 2022 (09:32 – 10:02)	60.9	The major noise source was identified from road traffic, natural sound of birds and marine traffic. The

		noise generated by the Transfer Facility was considered to be insignificant.
24 Feb 2022 (09:38 – 10:08)	63.0	The major noise source was identified from road traffic, natural sound of birds and insects. The noise generated by the Transfer Facility was considered to be insignificant.
17 Mar 2022 (09:27 – 09:57)	53.5	N/A

Appendix C

Appendix C1

Locations of Marine Water Monitoring Stations



Appendix C2

Marine Water Monitoring Record



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Report No: 0015/17/ED/634

TEST REPORT

Results:

Sampling Date	Sampling Point	Level	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Total Suspended Solids (mg/L)
Sok Kwu Wan (4 June 2021) (08:02) Flood Tide	S1	S	8.29	1.7	5
		M	7.04	1.7	4
		B	5.24	1.9	4
	S2	S	7.84	1.6	5
		M	6.82	1.8	4
		B	5.64	1.9	4
	S3	S	8.22	1.6	5
		B	7.04	1.7	4
	S4	S	8.59	1.6	4
		M	7.99	1.7	4
	SC1	B	6.26	1.9	4
		S	8.95	1.6	5
		M	7.91	1.6	5
	SC2	B	6.26	1.7	7
		S	7.97	1.5	5
M		7.33	1.6	4	
Sok Kwu Wan (4 June 2021) (13:10) Ebb Tide	S1	B	5.39	1.7	4
		S	8.60	1.6	6
		M	7.37	1.7	5
	S2	B	6.25	1.9	5
		S	7.94	1.6	5
		M	7.23	1.7	4
	S3	B	5.82	1.9	5
		S	8.63	1.6	5
		B	7.32	1.7	4
	S4	S	8.92	1.7	4
		M	8.25	1.7	7
		B	6.71	1.8	5
	SC1	S	9.33	1.6	4
		M	8.25	1.7	4
		B	6.67	1.7	4
SC2	S	7.81	1.5	4	
	M	6.86	1.6	5	
	B	5.46	1.8	8	

ReJunk: 1) <= less than



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Email : matlab@fugro.com

Report No: 0015/17/ED/634

TEST REPORT

Photo Records of Sok Kwu Wan Junine Water Quality Monitoring:



4 June 2021 Flood Tide
(No construction activities)



4 June 2021 Ebb Tide
(No construction activities)



FUGRO TECHNICAL SERVICES LIMITED

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Email : matlab@fugro.com

Report No: 0015/17/ED/644

TEST REPORT

Results:

Sampling Date	Sampling Point	Level	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Total Suspended Solids (mg/L)
Sok Kwu Wan (17 Sep 2021) (16:33) Flood Tide	S1	S	5.84	0.3	4
		M	4.93	1.1	4
		B	4.42	2.7	4
	S2	S	5.89	0.2	4
		M	5.10	0.8	3
		B	4.22	2.5	4
	S3	S	5.75	0.2	5
		B	4.65	1.9	4
	S4	S	5.77	0.2	6
		M	4.80	0.7	4
		B	4.36	2.0	3
	SC1	S	5.96	0.2	2
		M	5.86	0.4	3
		B	4.61	2.0	3
	SC2	S	5.65	0.1	2
M		4.60	0.6	3	
B		4.42	1.6	3	
Sok Kwu Wan (17 Sep 2021) (08:49) Ebb Tide	S1	S	5.88	0.2	3
		M	4.91	0.9	2
		B	4.22	2.6	2
	S2	S	5.89	0.3	3
		M	5.12	0.7	2
		B	4.28	2.3	2
	S3	S	5.78	0.1	4
		B	4.60	1.8	3
	S4	S	5.76	0.2	4
		M	4.87	0.6	3
		B	4.38	1.8	4
	SC1	S	5.99	0.2	4
		M	5.94	0.3	3
		B	4.69	1.9	3
	SC2	S	5.63	0.1	3
M		4.57	0.6	3	
B		4.35	1.5	3	

Remark: 1) < = less than



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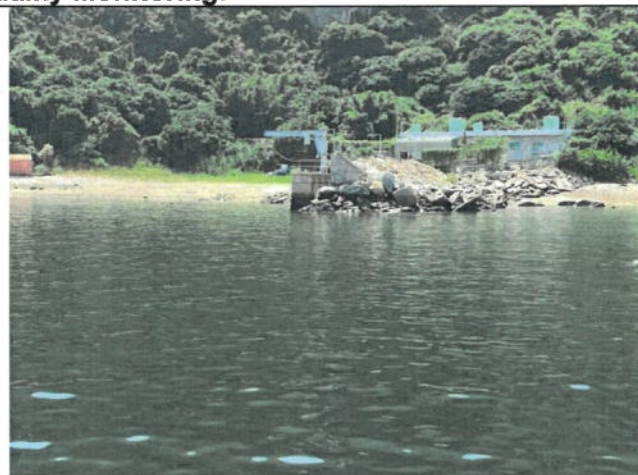
Report No: 0015/17/ED/644

TEST REPORT

Photo Records of Sok Kwu Wan Marine Water Quality Monitoring:



17 September 2021 Flood Tide
(No construction activities)



17 September 2021 Ebb Tide
(No construction activities)



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Report No: 0015/17/ED/654

TEST REPORT

Results:

Sampling Date	Sampling Point	Level	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Total Suspended Solids (mg/L)
Sok Kwu Wan (8 Dec 2021) (10:10) Flood Tide	S1	S	6.56	1.8	7
		M	6.55	1.8	7
		B	6.53	1.8	5
	S2	S	6.56	1.6	5
		M	6.55	1.7	5
		B	6.53	1.8	4
	S3	S	6.57	1.5	6
		B	6.53	1.7	5
	S4	S	6.22	2.0	4
		M	6.17	1.8	4
		B	6.17	2.0	5
	SC1	S	6.17	2.2	5
		M	6.16	2.3	5
		B	6.15	2.0	5
	SC2	S	6.65	1.5	6
M		6.64	2.3	5	
B		6.61	2.0	7	
Sok Kwu Wan (8 Dec 2021) (14:45) Ebb Tide	S1	S	6.63	2.0	4
		M	6.56	1.9	4
		B	6.55	1.9	5
	S2	S	6.54	1.8	3
		M	6.41	1.8	3
		B	6.38	1.9	4
	S3	S	6.45	1.8	4
		B	6.49	1.8	4
	S4	S	6.30	2.1	5
		M	6.21	2.2	4
		B	6.20	3.1	4
	SC1	S	6.23	2.3	6
		M	6.20	2.1	6
		B	6.17	1.9	6
	SC2	S	6.65	1.8	5
M		6.61	2.1	5	
B		6.62	1.8	5	

Remark: 1) < = less than



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Report No: 0015/17/ED/654

TEST REPORT

Photo Records of Sok Kwu Wan Marine Water Quality Monitoring:



8 December 2021 Flood Tide
(No construction activities)



8 December 2021 Ebb Tide
(No construction activities)



FUGRO TECHNICAL SERVICES LIMITED

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Report No: 0015/17/ED/666

TEST REPORT

Results:

Sampling Date	Sampling Point	Level	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Total Suspended Solids (mg/L)
Sok Kwu Wan (21 Mar 2022) (07:20) Flood Tide	S1	S	8.37	2.2	4
		M	8.32	2.2	2
		B	8.02	2.1	2
	S2	S	8.31	2.2	3
		M	8.13	2.2	2
		B	7.98	2.1	2
	S3	S	8.39	2.2	3
		B	7.87	2.1	2
	S4	S	8.43	2.2	3
		M	8.39	2.1	2
		B	8.00	2.1	3
	SC1	S	8.18	5.3	7
		M	8.13	5.2	6
		B	8.06	4.1	3
	SC2	S	8.41	2.2	2
M		8.34	2.2	3	
B		7.82	2.1	3	
Sok Kwu Wan (21 Mar 2022) (14:07) Ebb Tide	S1	S	8.28	5.2	6
		M	8.23	5.2	5
		B	7.98	5.1	5
	S2	S	8.15	2.2	3
		M	8.06	2.2	2
		B	7.87	2.1	2
	S3	S	8.40	3.3	3
		B	7.90	3.1	4
	S4	S	8.39	3.2	4
		M	8.29	3.2	5
		B	8.00	3.1	4
	SC1	S	8.12	3.3	3
		M	8.08	3.2	3
		B	8.03	3.1	3
	SC2	S	8.31	4.3	4
M		8.22	4.2	3	
B		7.80	4.1	3	

Remark: 1) < = less than



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Report No: 0015/17/ED/666

TEST REPORT

Photo Records of Sok Kwu Wan Marine Water Quality Monitoring:



21 March 2022 Flood Tide
(No construction activities)



21 March 2022 Ebb Tide
(No construction activities)