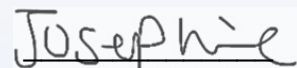


Contract No. CM 04/2024 – Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works – Environmental Team Services (2025 - 2027)

Monthly Environmental Monitoring and Audit
Report for:
March 2026
Revision 4

Certified By:

A handwritten signature in black ink that reads "Josephine".

Lau Hoi Wai, Josephine
Environmental Team Leader
Report Date: 16 April 2026



Drainage Services Department
The Government of the Hong Kong Special Administrative Region

Our Ref: 7076811/L33183/AC/KL/TK/KCL/jm

16 April 2026

Drainage Services Department
Sewage Services Branch
Consultants Management Division Group 4
18/F, Drainage Services Tower
8 Ying Wa Street
Cheung Sha Wan, Kowloon

By Email and Post
(kkchan06@dsd.gov.hk)

Attn: Mr. CHAN Ka Keung

Dear Sir

Contract No. SD 7/2020
Independent Environmental Checker (“IEC”) for Environmental Monitoring Work for
South Lantau Sewerage Works
Verification of Monthly EM&A Report (March 2026)

With reference to the Monthly EM&A Report (March 2026) Revision 4 dated and certified by the ET Leader on 16 April 2026, please note that we have no adverse comments on the captioned and we hereby verify the captioned in accordance with Condition 3.4 of the Environmental Permit No. EP-538/2017.

Should you have questions please do not hesitate to contact the undersigned at tel. 3995-8140 or by email to kitty.lee@smec.com; or our Mr Tommy KONG on tel. 3995-8123 or by email to tommy.kong@smec.com.

Yours faithfully



Kitty LEE
Independent Environmental Checker

CC	Binnies	- Mr. Kevin CHAN	by email
	Umwelt	- Ms. Josephine Lau / Mr. Ivan TING	by email
	KLCW-JV	- Mr. Daniel Chu	by email

Content:

1.	Introduction.....	1
1.1	Project Background	1
1.2	Environmental Monitoring & Audit Programme	1
1.3	Monthly Environmental Monitoring & Audit Report	2
2.	Basic project Information and Environmental Status	4
2.1	Basic Project Information.....	4
2.2	Construction Programme.....	4
2.3	Works undertaken during the Reporting Month	5
2.4	Drawing Showing the Project Area, Environmental Sensitive Receivers and Monitoring Locations	5
3.	Implementation Status	6
3.1	Advice on the Implementation Status of Environmental Protection and Pollution Control/Mitigation Measures 6	6
3.2	Environmental Mitigation Measures	6
3.3	Environmental Monitoring Requirements and Contractual Requirements	6
3.4	Site Inspection and Audit Reports	7
4.	Noise Monitoring	10
4.1	Monitoring Methodology	10
4.2	Monitoring Stations.....	11
4.3	Monitoring Date, Time, Frequency and Duration	12
4.4	Noise Monitoring Results.....	12
5.	Water Quality Monitoring.....	13
5.1	Completion of Water Quality Monitoring.....	13
6.	Ecology.....	14
6.1	Monitoring Methodology	14
6.2	Parameters Monitored	14
6.3	Monitoring Location	14
6.4	Monitoring Date, Time, Frequency and Duration	14
6.5	Monitoring Results	14
7.	Waste Management.....	15
8.	Complaints, Notification of Summons and Prosecution.....	16
9.	Future Key Issues.....	18
10.	Conclusion	19
10.1	Noise Monitoring.....	19
10.2	Water Quality Monitoring	19
10.3	Ecological Impact Monitoring	19
10.4	Review of the Reasons for and the Implications of Non-compliance	19
10.5	Summary of Action Taken in the Event of and Follow-Up on Non-Compliance.....	19

Tables:

Table 2.1:	Contact Details of Key Personnel
Table 3.1:	Summary of Submission Status under EP-538/2017
Table 3.2:	Summary of the Current Status on Licences and/or Permits on Environmental Protection Pertinent to The Project
Table 3.3:	Summary of Environmental Inspections
Table 4.1:	Noise Monitoring Equipment
Table 4.2:	Noise Monitoring Station
Table 7.1:	Summary of Quantities of Waste Material
Table 8.1:	Cumulative Statistics on Complaints
Table 8.2:	Summary of Complaints
Table 8.3:	Cumulative Statistics on Successful Prosecutions
Table 9.1:	Construction Activities and Recommended Mitigation Measures in Coming Reporting 3 Months
Table 10.1:	Summary of Ecological Impact Monitoring

Figures:

Figure 2.1	Master Layout Plan
Figure 2.2	Contract Layout Plan
Figure 2.3	Locations of Noise Monitoring Station
Figure 6.1	Mark up Figure 5.4i extracted from approved EIA Report (AEIAR-210/2017)
Figure 6.2	Location Plan for Temporary Holding Nursery

Appendices:

Appendix 4.1	Calibration Certificates for Noise Meter and Acoustic Calibrator
Appendix 4.2	Impact Monitoring Schedule for Construction Phase Noise Monitoring for the Reporting Month and Next Month
Appendix 4.3	Noise Monitoring Results and Graphical Presentations
Appendix 7.1	Monthly Summary Waste Flow Table
Appendix 9.1	3 Months Rolling Programme

Executive Summary

This Monthly Environmental Monitoring and Audit (“EM&A”) Report summarise project monitoring and auditing data, with full interpretation illustrating the acceptability or otherwise of any environmental impacts and identification or assessment of the implementation status of agreed mitigation measures, including monitoring results and findings of the EM&A Programme, along with findings recorded during the site Inspections and audits, reports of Complaints, Notifications of Summons and Successful Prosecutions, and other necessary observations obtained within this reporting month of March 2026.

In the reporting month, the principal work activities conducted are as follow:

- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road;
- Trenchless drilling works (Chi Ma Wan Road);
- Excavation and Excavation and Lateral Support (“ELS”) work at Pui O Sewage Pumping Station (“POSPS”);
- Superstructure Reinforced Concrete (“RC”) works at San Shek Wan Sewerage Treatment Works (“SSWSTW”);
- Waterproofing Work at SSWSTW;
- Excavation and Site formation at SSWSTW;
- Electrical and Mechanical (“E&M”) Installation at POSPS; and
- E&M Installation at SSWSTW

Noise Monitoring

Noise Monitoring has been conducted at 8 of the designated monitoring locations (N12a, N12b, N13, N14, N15b, N16a, N16b, and N17) where construction works has been conducted nearby during the reporting month.

During the reporting period, school examinations were held from 2 to 6 and 9 to 11 March 2026. Accordingly, the noise limit for monitoring station N17-Bui O Public School was temporarily reduced to 65 dB(A) on those examination.

No action or limit level exceedance was recorded in construction noise level in this reporting period.

Water Quality Monitoring

Subsequent to the completion of marine work on 24 May 2025, water quality monitoring was considered completed by 30 May 2025. No water quality monitoring is conducted in this reporting month.

Should marine works resume, water quality monitoring will be conducted in accordance with the requirement stipulated in the EM&A Manual accordingly.

Ecological Impact Monitoring

Transplanting of the trees of *Aquilaris sinensis* was completed on 26 April 2022. Maintenance works for trees in holding nursery have commenced.

As per latest version of PTP, 4 tree found (1 no. of *Aquilaria sinensis* and 3 nos. of *Gmelina chinensis*) within the site of SSWSTW which are considered to be the plant species with conservative importance for temporarily transplanted to the nursery at Kam Tin and eventually be transplanted to Pui O Pumping Station.

The weekly site audit was carried out by ET include checking whether good site practices are being properly implemented by the Contractor.

The extent of the work site boundaries was checked by the ET during the weekly site audit.

Complaints, Notification of Summons and Prosecution

No environmental complaint was recorded in the reporting month.

No notification of summons and successful prosecution regarding construction works were recorded in the reporting month.

Reporting Changes

Ms Lau Hoi Wai, Josephine has replaced Mr. Ting Po Chung, Ivan as the Environmental Team Leader of the subject project with effect from 1 March 2026. Her contact details have been updated in **Table 2.1**.

Future Key Issues

The construction works scheduled to be conducted in the coming 3 reporting months are listed as follows:

- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road;
- Excavation and site formation at SSWSTW;
- Trenchless drilling works (Chi Ma Wan Road);
- Excavation and ELS work at POSPS;
- Superstructure RC works at SSWSTW;
- Waterproofing Work at SSWSTW;
- Retaining wall construction at SSWSTW;
- E&M Installation at POSPS;
- E&M Installation at SSWSTW;
- Architectural Builders Works and Finishes Work (“ABWF”) at POSPS;
- ABWF at SSWSTW; and
- Slope Work near SSWSTW

Key construction activities for the next three months with the recommended mitigation measures to be implemented are presented as follows:

Key Construction Works	Recommended Mitigation Measures
• Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road; • Excavation and site formation at SSWSTW; • Trenchless drilling works (Chi Ma Wan Road); • Excavation and ELS work at POSPS; • Superstructure RC works at SSWSTW; • Waterproofing Work at SSWSTW; • Retaining wall construction at SSWSTW; • E&M Installation at POSPS; • E&M Installation at SSWSTW; • Architectural Builders Works and Finishes Work (“ABWF”) at POSPS; • ABWF at SSWSTW; and • Slope Work near SSWSTW	• Prevention of site runoff during heavy rainstorms. • Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; • Dust control during dust generating works; • Adopt surface drainage and sediment control facilities for sewage installation in village and public roads; • Adopt temporary drainage and sediment control facilities on Site; • Vehicle wheel-washing and body washing facilities should be provided at the site entrance; • Regular water spraying on excavation works for dust control; and • Proper waste handling, recycling and storage.

1. Introduction

1.1 Project Background

- 1.1.1 The Environmental Protection Department (“EPD”) completed the Outlying Islands Sewerage Master Plan (“SMP”) Study in 1994 and drew up a SMP for Lantau Island and other outlying islands. The proposed sewerage works of the SMP were divided into 2 stages. The Stage 2 Works of the SMP were subsequently reviewed by EPD under the Outlying Islands Sewerage Master Plan Stage 2 Review (SMP Review Study) in 2001.
- 1.1.2 The proposed sewerage works for South Lantau were further reviewed in 2008 under the Review of Sewerage Scheme for South Lantau (Review Study). According to the Review Study, the proposed sewerage works for South Lantau would serve the unsewered areas of Shui Hau, Tong Fuk, Cheung Sha, San Shek Wan, Pui O and Ham Tin.
- 1.1.3 The Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works, herein referred to as “the Project”, referred to the sewerage works for South Lantau that would serve the unsewered areas of Shui Hau, Tong Fuk, Cheung Sha, San Shek Wan, Pui O and Ham Tin.
- 1.1.4 The Project mainly comprises of the following items:
- a) Construction of a secondary sewage treatment works (“STW”) at San Shek Wan in South Lantau;
 - b) Construction of sewage pumping station (“SPS”) at Pui O, San Shek Wan, Cheung Sha, Cheung Fu Street, Shui Hau and Tong Fuk;
 - c) Construction of about 1.4km of twin submarine outfalls with a diameter of 350mm for the disposal of treated effluent from the STW at San Shek Wan;
 - d) Construction of about 10.1km of gravity sewers with diameters ranging from 150mm to 375mm along South Lantau Road and Chi Ma Wan Road and at Pui O; and
 - e) Construction of about 3.1km of twin rising mains with a diameter of 200mm to 250mm along South Lantau Road and Chi Ma Wan Road.

1.2 Environmental Monitoring & Audit Programme

- 1.2.1 An Environmental Impact Assessment (“EIA”) was subsequently prepared to review the potential environmental impact that would be due to the Project during its construction works and operational works. The EIA Report was submitted and approved on 24 April 2017, and Environmental Permit (“EP”) No. EP-538/2017 was subsequently granted on 13 July 2017.
- 1.2.2 Environmental Monitoring & Audit (“EM&A”) Programme is therefore implemented in accordance with the EM&A Manual under the EIA Report.
- 1.2.3 Umwelt Consulting Limited (“UCL”) has been appointed to work as the Environmental Team (“ET”) under EP No. EP-538/2017 to implement the Environmental Monitoring and Audit (“EM&A”) programme as stipulated in the EM&A Manual of the approved EIA Report for the Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works (Register No.: AEIAR-210/2017).

1.3 Monthly Environmental Monitoring & Audit Report

- 1.3.1 This Monthly EM&A Report summarise project monitoring and auditing data, with full interpretation illustrating the acceptability or otherwise of any environmental impacts and identification or assessment of the implementation status of agreed mitigation measures, including monitoring results and findings of the EM&A Programme, along with findings recorded during the site Inspections and audits, reports of Complaints, Notifications of Summons and Successful Prosecutions, and other necessary observations obtained within this reporting month of March 2026.
- 1.3.2 The structure of this Report is detailed as follows:
- a) **Section 1 Introduction –**
Details the scope and structure of the report.
 - b) **Section 2 Basic project Information and Environmental Status –**
Summarizes project organization and key personnel contact, construction programme and works undertaken for the month. Construction programme, works undertaken during the month with illustrations, drawing showing the project area, environmental sensitive receivers and monitoring locations.
 - c) **Section 3 Implementation Status –**
Advice on the implementation status of environmental protection and pollution control/mitigation measures, as recommended in the EIA Report and summarised in the updated implementation schedule.
 - d) **Section 4 Noise Monitoring –**
Summarizes the monitoring results obtained in the reporting period, including monitoring methodology, name of laboratory and equipment used and calibration details, parameters monitored, monitoring locations (and depth), monitoring date, frequency, and duration, for impact noise monitoring.
 - e) **Section 5 Water Quality Monitoring –**
Summarizes the monitoring results obtained in the reporting period, including monitoring methodology, name of laboratory and equipment used and calibration details, parameters monitored, monitoring locations (and depth), monitoring date, frequency, and duration, for impact water quality monitoring.
 - f) **Section 6 Ecology –**
Summarizes the audit findings during the reporting month on ecological aspects.
 - g) **Section 7 Waste Management –**
Summarizes the status of waste management, including the amount and types of waste generated, and respective treatment approach.
 - h) **Section 8 Report on Complaints, Notification of Summons and Successful Prosecutions –**
Summarizes:
 - Record of all complaints received (written or verbal) for each media, including locations and nature of complaints investigation, liaison and consultation undertaken, actions and follow-up procedures taken, results and summary.
 - Record of notifications of summons and successful prosecutions for breaches of the current environmental protection/pollution control legislations, including locations and nature of the breaches, investigation, follow-up actions taken, results and summary.

- Review of the reasons for and the implications of non-compliance, complaints, summons and prosecutions including review of pollution sources and working procedures; and
 - Description of the actions taken in the event of non-compliance and deficiency reporting and any follow-up procedures related to non-compliance.
- i) **Section 9 Future Key Issues –**
An account of the future key issues as reviewed from the works programme and work method statements.
- j) **Section 10 Conclusion –**
Summarises the findings conclusion drawn from the environmental monitoring and audit programme in this reporting month.

2. Basic project Information and Environmental Status

2.1 Basic Project Information

2.1.1 Drainage Services Department (“DSD”) is the project proponent and the permit holder of the Project. For the construction phase of the Project, Contractor(s), ET and Independent Environmental Checker (“IEC”) are appointed to manage and control environmental issues. Key personnel and contact particulars are summarized in **Table 2.1**.

2.1.2 Upon conclusion of Contract No: SD 15/2022 Outlying Island Sewerage Stage 2 – South Lantau Sewage Works – Environmental Team Services (2023 – 2024), the subsequent contract, Contract No. CM 04/2024 Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works – Environmental Team Services (2025–2027), was awarded to Umwelt Consulting Limited (“UCL”). Mr. Ting Po Chung, Ivan was appointed as the environmental team leader (“ETL”) for the Project with effect from 1 February 2025. With effect from 1 March 2026, Mr. Ting Po Chung, Ivan ceased to be the ETL and was replaced by Ms Lau Hoi Wai, Josephine as the Environmental Team Leader (“ETL”) of the subject project. Her contact details have been updated in **Table 2.1**.

Table 2.1: Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.	Contact Fax
Drainage Services Department	The Engineer for the Contract	Engineer	Mr. KK Chan	3965 8202	3104 6426
Binnies Hong Kong Limited	Engineer’s Representative	Resident Engineer	Mr. Kevin Chan	3529 3003	-
Kwan Lee – Chun Wo Joint Venture	Contractor	Sub Agent	Mr. Daniel Chu	6737 6701	2744 6937
		Environmental Supervisor	Ms. Joey Pang	6978 2876	
		Environmental Supervisor	Mr. Philip Wong	6908 8920	
SMEC Hong Kong	IEC	IEC	Ms. Kitty Lee	3995 8140	3422 3631
Umwelt Consulting Limited	ET	ET Leader	Ms. Josephine Lau	3756 9590	3582 3310

2.2 Construction Programme

2.2.1 The proposed sewerage works will collect the sewage generated from the unsewered areas of Shui Hau, Tong Fuk, Cheung Sha, San Shek Wan, Pui O and Ham Tin in South Lantau (i.e. within the Project Catchment Area) and convey it to a proposed sewage treatment works at San Shek Wan for treatment and disposal into outer bay of Pui O / Chi Ma Wan via a submarine outfall.

2.2.2 The Project was divided into 3 contracts. The current contract, Contract No. DC/2020/02 - Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works (“the Contract”) would have the following implementations. The works site of the Contract is also given in **Figure 2.1**.

2.2.3 The major components of the Contract under Environmental Permit (“EP”) (EP No. EP-538/2017) comprises:

- a) Construction of a secondary sewage treatment works (“STW”) at San Shek Wan in South Lantau;
- b) Construction of a sewage pumping station (“SPS”) at Pui O, San Shek Wan, Cheung Sha and Cheung Fu Street;
- c) Construction of about 1.4km of submarine outfall with a diameter of 350mm for the disposal of treated effluent from the STW at San Shek Wan;
- d) Construction of about 10.1km of gravity sewers with diameters ranging from 150mm to 375mm along South Lantau Road and Chi Ma Wan road and at Pui O; and
- e) Construction of about 3.1km twin rising mains with a diameter of 200mm to 250mm along South Lantau Road and Chi Ma Wan Road.

2.3 Works undertaken during the Reporting Month

2.3.1 In the reporting month, the principal work activities conducted are as follow:

- a) Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
- b) Trenchless drilling works (Chi Ma Wan Road)
- c) Excavation and ELS work at POSPS
- d) Superstructure RC works at SSWSTW
- e) Waterproofing Work at SSWSTW
- f) Excavation and Site formation at SSWSTW
- g) E&M Installation at POSPS
- h) E&M Installation at SSWSTW

2.3.2 The locations of the works are shown in **Figure 2.2**.

2.4 Drawing Showing the Project Area, Environmental Sensitive Receivers and Monitoring Locations

2.4.1 Noise monitoring location plans with sensitive receivers are shown in **Figure 2.3**.

3. Implementation Status

3.1 Advice on the Implementation Status of Environmental Protection and Pollution Control/Mitigation Measures

3.1.1 Mitigation measures according to the environmental mitigation implementation schedule in Annex A of EM&A Manual were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.

3.2 Environmental Mitigation Measures

3.2.1 Environmental mitigation measures mentioned the EIA Report were weekly reviewed and recorded in Weekly Environmental Site Audit Checklist. Also, a summary of the current status on submissions and measures mentioned in the EP No. EP-538/2017 are shown in **Table 3.1**.

Table 3.1: Summary of Submission Status under EP-538/2017

EP Condition	Submission and Revision No.	Date of Latest Submission
2.10	Waste Management Plan (Rev. 5) (electronic copy)	4 April 2022#
2.11	Preservation and/or Transplantation Plan for Plant Species of Conservation Importance (Rev. 23)	9 September 2022#
2.12	Compensatory Woodland Planting Plan (Rev. 23)	15 May 2023^
2.13	Silt Curtain Deployment Plan (Rev. 11)	1 June 2022#
2.14	Landscape Mitigation Plan	To be confirmed
2.15	Construction Noise Mitigation Plan (Rev. 20)	4 August 2022#

Note:

^ Submission was made to EPD

Approval from EPD was received

3.3 Environmental Monitoring Requirements and Contractual Requirements

3.3.1 A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in **Table 3.2**.

Table 3.2: Summary of the Current Status on Licences and/or Permits on Environmental Protection Pertinent to The Project

Permits and/or Licences	Permit. No. / Account No.	Issued Date	Valid Period & Expiry Date	Status
Notification of Works Under APCO	466408	14 Apr 2021	N/A	Valid
Wastewater Discharge Licence under Water Pollution Control Ordinance	SSWSTW: WT00039636-2021	30 Dec 2021	30 Dec 2021 to 31 Dec 2026	Valid
	POPS: WT00039820-2021	31 Dec 2021	31 Dec 2021 to 31 Dec 2026	Valid
	SSWSTW: Gravity Sewer & Raising Main: WT00042613-2022	09 Jan 2023	09 Jan 2023 to 31 Jan 2028	Valid

Permits and/or Licences	Permit. No. / Account No.	Issued Date	Valid Period & Expiry Date	Status
Billing account under Waste Disposal Ordinance	Account No.: 7040411	05 May 2021	N/A	Valid
Registration as a Chemical Waste Producer	0000-931-K3428-01	13 May 2021	N/A	Valid
Construction Noise Permit under Noise Control Ordinance for SSWSTW	GW-RS0087-26	30 Jan 2026	13 Feb 2026 to 12 Aug 2026	Valid
Construction Noise Permit under Noise Control Ordinance for POSPS	GW-RS0993-25	18 Sep 2025	27 Sep 2025 to 26 Mar 2026	Expired on 27 Mar 2026
	GW-RS0284-26	18 Mar 2026	27-03-2026 to 26-06-2026	Valid
Construction Noise Permit under Noise Control Ordinance for Chi Ma Wan Road	GW-RS0088-26	30 Jan 2026	13 Feb 2026 to 12 Aug 2026	Canceled on 27-03-2026

Note: Only valid permits or permits under applications within the reporting month are included.

3.4 Site Inspection and Audit Reports

- 3.4.1 Within this reporting month, weekly environmental site inspections were conducted on 2, 9, 16, 23 and 30 March 2026. IEC attended the SSEMC meeting held on 16 March 2026. The ET and contractor participated in the holding nursery visit for transplanted trees on 23 March 2026.
- 3.4.2 No non-compliance was found during the site inspections while reminders on environmental measures were recommended. Reminders and/or Observations recorded during site inspections in this reporting month are listed in **Table 3.3**.

Table 3.3: Summary of Environmental Inspections

Inspection Date	Reminder and Recommendations	Close-out Date / Status
16 February 2026	<u>Pui O Sewage Pumping Station</u> Reminder 1: The contractor is reminded to cover the sand piles or spray water for dust control. <u>San Shek Wan Sewage Treatment Works</u> Reminder 1: The contractor is reminded to maintain the housekeeping. Reminder 2: The contractor is reminded to cover the sand piles or spray water for dust control. Reminder 3: The contractor is reminded to carry out mosquito control.	Contractor has rectified the reminders on 23 February 2026
23 February 2026	<u>Pui O Sewage Pumping Station</u> No Reminder and/or Observation <u>San Shek Wan Sewage Treatment Works</u> Reminder 1: The contractor is reminded to cover the sand piles or spray water for dust control. <u>Kam Tin Nursery</u> Reminder 1: The contractor is reminded to remove weeds.	POSPS and SSWTW: Contractor has rectified the reminders on 4 March 2026 Kam Tin Nursery: Contractor has rectified the reminders on 13 March 2026
2 March 2026	<u>Pui O Sewage Pumping Station</u> No Reminder and/or Observation <u>San Shek Wan Sewage Treatment Works</u> Reminder 1: The contractor is reminded to maintain the housekeeping.	Contractor has rectified the reminders on 9 March 2026
9 March 2026	<u>Pui O Sewage Pumping Station</u> No Reminder and/or Observation <u>San Shek Wan Sewage Treatment Works</u> No Reminder and/or Observation	N/A

Inspection Date	Reminder and Recommendations	Close-out Date / Status
16 March 2026	<u>Pui O Sewage Pumping Station</u> Reminder 1: The contractor is reminded to provide drip trays for chemical stored on site. <u>San Shek Wan Sewage Treatment Works</u> No Reminder and/or Observation	Contractor has rectified the reminders on 23 March 2026
23 March 2026	<u>Pui O Sewage Pumping Station</u> Reminder 1: The contractor is reminded to properly cover the chemicals. <u>San Shek Wan Sewage Treatment Works</u> No Reminder and/or Observation <u>Kam Tin Nursey</u> No Reminder and/or Observation	Contractor has rectified the reminders on 30 March 2026
30 March 2026	<u>Pui O Sewage Pumping Station</u> No Reminder and/or Observation <u>San Shek Wan Sewage Treatment Works</u> Reminder1: The contractor is reminded to regular water spraying on exposed area.	To be verified in next inspection.

4. Noise Monitoring

4.1 Monitoring Methodology

Monitoring Procedure

- 4.1.1 The impact noise monitoring should be carried out at all the designated monitoring stations when there are project-related construction activities undertaken within a radius of 300m from the monitoring stations.
- 4.1.2 The monitoring station shall normally be at a point 1m from the exterior of the sensitive receiver's building façade and be at a position 1.2m above the ground.
- 4.1.3 Façade measurements were made at the monitoring locations. For free-field measurement, a correction factor of +3dB(A) will be applied.
- 4.1.4 The battery condition was checked to ensure the correct functioning of the meter.
- 4.1.5 Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
- a) Frequency weighting: A,
 - b) Time weighting: Fast,
 - c) Measurement time set: continuous 5 mins
- 4.1.6 Prior and after to the noise measurement, the meter was checked using the acoustic calibrator for 94dB (A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than ± 1.0 dB (A), the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
- 4.1.7 Noise measurements will be made in accordance with standard acoustical principles and shall not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Equipment Used for Noise Monitoring

- 4.1.8 Noise monitoring was performed using sound level meter at the designated monitoring locations. The sound level meters shall comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator shall be deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in **Table 4.1**.

Table 4.1: Noise Monitoring Equipment

Equipment	Brand and Model	Serial Number	Valid Until
Integrated Sound Level Meter	Rion – NL-52	1198668	19 Jan 2027
	Rion – NL-53	452008	23 Mar 2027
Acoustic Calibrator	Rion – NC-75	34202223	19 Jan 2027
	Rion – NC-75	34256525	23 Mar 2027

- 4.1.9 The calibration certificates of the noise monitoring equipment are attached in **Appendix 4.1**.

Calibration Details

- 4.1.10 The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- 4.1.11 The sound level meter and calibrator were calibrated at yearly intervals.

Parameters Monitored

- 4.1.12 The construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level (“ L_{eq} ”). $L_{eq(30min)}$ should be used as the monitoring parameter. Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
- 4.1.13 For impact monitoring for construction of village sewers / rising main, noise monitoring should be undertaken on weekly basis. 1 set of $L_{eq(30min)}$ noise level as 6 consecutive $L_{eq(5min)}$ between 07:00-19:00 hours on normal weekdays has been taken.

4.2 Monitoring Stations

- 4.2.1 The noise monitoring stations for the Project are listed and shown in **Table 4.2**. Impact noise monitoring was conducted once per week at the noise monitoring stations with construction works being conducted nearby. Noise monitoring has been conducted at 8 noise monitoring stations N12a, N12b, N13, N14, N15b, N16a, N16b and N17 in the reporting month.
- 4.2.2 Monitoring station N17 Bui O Public School is an institutional sensitive receiver. During the reporting month, school examinations were held from 2 to 6 and 9 to 11 March 2026. Accordingly, the noise limit for monitoring station N17-Bui O Public School was temporarily reduced to 65 dB(A) on that examination (2 to 6 and 9 to 11 March 2026). The standard noise limit of 70 dB(A) remained applicable for all other days outside this examination period.

Table 4.2: Noise Monitoring Station

Monitoring Station ID *	Monitoring Location	Measurement Type	Level (in terms of no. of floor)
N01a	Shui Hau Village	Free-Field	G/F
N01c	Shui Hau Village	Free-Field	G/F
N03a	Tong Fuk Village	Free-Field	G/F
N05a	Residences at Cheung Fu Street	Free-Field	G/F
N07	Government Holiday Bungalows	Free-Field	G/F
N08	Cheung Sha Ha Tsuen	Free-Field	G/F
N10	Cheung Sha Sheung Tsuen	Façade	G/F
N11b	San Shek Wan – Ming Garden	Free-Field	G/F
N12a *	Lo Uk Tsuen	Free-Field	G/F
N12b *	Lo Uk Tsuen	Free-Field	G/F
N13 *	Pui O San Wai Tsuen	Free-Field	G/F
N14 *	South Lantau Community Centre	Free-Field	G/F
N15b *	Pui O Lo Wai Tsuen	Façade	G/F

Monitoring Station ID *	Monitoring Location	Measurement Type	Level (in terms of no. of floor)
N16a *	Residences at Ham Tin	Façade	G/F
N16b *	Residences at Ham Tin	Free-Field	G/F
N17 *	Bui O Public School	Façade	R/F

NOTE:

* Fine adjustment of noise monitoring stations at all locations was proposed as per EP Condition 3.1.

* Measurement was conducted at the station in the reporting month.

4.3 Monitoring Date, Time, Frequency and Duration

4.3.1 For daytime construction work on normal weekdays, monitoring of $L_{eq(30min)}$ should be carried out at each station at 0700-1900 hours on normal weekdays at a frequency of once a week. Impact monitoring schedule can be referred to **Appendix 4.2**.

4.4 Noise Monitoring Results

4.4.1 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in **Appendix 4.3**.

4.4.2 No action or limit level exceedance was recorded in construction noise level in this reporting period.

5. Water Quality Monitoring

5.1 Completion of Water Quality Monitoring

- 5.1.1 Subsequent to the completion of marine work on 24 May 2025, water quality monitoring was considered completed by 30 May 2025. No water quality monitoring is conducted in this reporting month.
- 5.1.2 Should marine works resume, water quality monitoring will be conducted in accordance with the requirement stipulated in the EM&A Manual accordingly.

6. Ecology

6.1 Monitoring Methodology

- 6.1.1 The weekly site audit to be carried out by the ET should include checking whether good site practices are being properly implemented by the Contractor
- 6.1.2 Impact monitoring of the transplanted *Aquilaris sinensis* at holding nursery and 1 retain tree of *Aquilaris sinensis* in SSWSTW Project Site, establishment and after-establishment caring measures of the compensatory mixed woodland to ensure the affected tree would not be affected by any unacceptable construction works. The trees would be treated with establishment works immediately after transplanting.
- 6.1.3 Site inspection at the nursery was conducted on 23 March 2026. No reminder was recorded.

6.2 Parameters Monitored

- 6.2.1 The extent of the work site boundaries should be checked by the ET during the weekly site audit. Any disturbance by the Contractor outside the works area especially any damage to the vegetation and surrounding habitats outside the Project area shall be reported to ER and IEC.
- 6.2.2 To identify any unacceptable construction works for the trees of *Aquilaris sinensis* during transplanting, establishment and after-establishment caring measures of the compensatory mixed woodland.

6.3 Monitoring Location

- 6.3.1 As per latest version of PTP, 4 trees found (1 no. of *Aquilaria sinensis* and 3 nos. of *Gmelina chinensis*) within the site of SSWSTW (**Figure 6.1**) which are considered to be the plant species with conservative importance for temporarily transplanted to the nursery (**Figure 6.2**) at Kam Tin and eventually be transplanted to Pui O Pumping Station.

6.4 Monitoring Date, Time, Frequency and Duration

- 6.4.1 The recommended good site practices to be audited once every week as part of the site audit programme. The weekly site audit to be carried out by the ET includes checking whether good site practices are being properly implemented by the Contractor. Results are recorded in Weekly Environmental Site Audit Checklist.
- 6.4.2 Monitoring programme for post-transplantation was conducted on 23 March 2026.

6.5 Monitoring Results

- 6.5.1 The weekly site audit was carried out by ET include checking whether good site practices are being properly implemented by the Contractor.
- 6.5.2 The extent of the work site boundaries was checked by the ET during the weekly site audit.
- 6.5.3 Results and findings of site audit in this reporting month are listed in **Table 3.3**.

7. Waste Management

7.1.1 The quantities of waste for disposal in the Reporting Period are summarized in **Table 7.1**. The Monthly Summary Waste Flow Table is shown in **Appendix 7.1**.

Table 7.1: Summary of Quantities of Waste Material

Waste Type	Quantity this month	Quantity (the end of last month)	Cumulative Quantity-to-Date
Hard Rock and Large Broken Concrete (Inert), in '000m ³	0	0	0
Reused in this Contract (Inert), in '000m ³	0	0	0
Reused in other Projects (Inert), in '000m ³	0	0	0
Disposal as Public Fill (Inert), in '000m ³	0.12	0.06	31.578
Metals, in '000kg	8.302	0	142.257
Paper / Cardboard Packing, in '000kg	0.087	0	1.606
Plastics, in '000kg	0.003	0	0.124
Chemical Wastes, in '000kg	0.36	0	0.36
General Refuses, in '000kg	73.45	51.56	1479
Marine Sediment (Type 1 – Open Sea Disposal), m ³	0	0	1360.2

Remake

For the chemical waste: 400L of non-halogenated solvent was disposed of this month. Assume the density of the non-halogenated solvent is 0.9kg/L

8. Complaints, Notification of Summons and Prosecution

- 8.1.1 No environmental complaint was recorded in the reporting month.
- 8.1.2 No notification of summons and successful prosecution regarding construction works were recorded in the reporting month.
- 8.1.3 Cumulative statistic on complaints, summary of complaints and successful prosecutions are summarized in **Table 8.1**, **Table 8.2** and **Table 8.3** respectively.

Table 8.1: Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
Project commencement to the end of last reporting month	4
This Reporting Month (March 2026)	0
Total:	4

Table 8.2: Summary of Complaints

Date of Notification from EPD	Date of Complaint	Description of Complaint	Validity of Complaint	Close-Out Date / Status
26 May 2022	22 May 2022	A complaint is regarding to noise nuisance from marine site of San Shek Wan, Lantau Island.	Based on the investigation, the works activities of marine works did not result in any noise nuisance to Noise Sensitive Receivers (NSRs), noise nuisance from the Project is unlikely to be valid.	The interim report was submitted to EPD in June 2022. EPD replied no further comments on the final investigation report on 13 July 2022.
23 Dec 2022	21 Dec 2022	A complaint is regarding to the water quality for Pui O Beach, Lantau Island.	Based on the investigation, the works activities at POPS did not result in any water quality impacts to the Pui O Beach.	The interim report was submitted to EPD on 4 Jan 2023.
16 Aug 2024	15 Aug 2024	A complaint is regarding to the damaged silt curtain and potential water quality impact.	Based on the investigation, no marine works since Dec 2023 till present, the land based works activities at POPS did not result in any water quality impacts to the Pui O Wan	The interim report was submitted to EPD on 31 Aug 2024.

Date of Notification from EPD	Date of Complaint	Description of Complaint	Validity of Complaint	Close-Out Date / Status
16 Sep 2025	16 Sep 2025	A complaint is regarding to oil sheen observed at Pui O Wetland, Lantau Island.	Based on the investigation, no evidence of oil leakage within our project site, it is considered that the oil pollution would not due to our site operation. As such the case is considered closed.	The Final Investigation Report was submitted to EPD by 17 Oct 2025.

Table 8.3: Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	-	0	0
Noise	-	0	0
Water	-	0	0
Waste	-	0	0
Other	-	0	0
Total	-	0	0

9. Future Key Issues

9.1.1 In coming reporting 3 months, the scheduled construction activities are listed as follows:

- Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
- Excavation and site formation at SSWSTW
- Trenchless drilling works (Chi Ma Wan Road)
- Excavation and ELS work at POSPS
- Superstructure RC works at SSWSTW
- Waterproofing Work at SSWSTW
- Retaining wall construction at SSWSTW
- E&M Installation at POSPS
- E&M Installation at SSWSTW
- ABWF work at POSPS
- ABWF work at SSWSTW
- Slope Work near SSWSTW

9.1.2 The scheduled construction activities and the recommended mitigation measures for the coming 3 months are listed in **Table 9.1**. The major construction activities for the next 3 months are summarized in 3 Months Rolling Programme – April 2026 to June 2026 in **Appendix 9.1**

Table 9.1: Construction Activities and Recommended Mitigation Measures in Coming Reporting 3 Months

Key Construction Works	Recommended Mitigation Measures
• Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road • Excavation and site formation at SSWSTW • Trenchless drilling works (Chi Ma Wan Road) • Excavation and ELS work at POSPS • Superstructure RC works at SSWSTW • Waterproofing Work at SSWSTW • Retaining wall construction at SSWSTW • E&M Installation at POSPS • E&M Installation at SSWSTW • ABWF work at POSPS • ABWF work at SSWSTW • Slope Work near SSWSTW	• Prevention of site runoff during heavy rainstorms. • Implementation of noise pollution control in accordance with Construction Noise Mitigation Plan; • Dust control during dust generating works; • Adopt surface drainage and sediment control facilities for sewage installation in village and public roads; • Adopt temporary drainage and sediment control facilities on Site; • Vehicle wheel-washing and body washing facilities should be provided at the site entrance; • Regular water spraying on excavation works for dust control; and • Proper waste handling, recycling and storage.

10. Conclusion

10.1 Noise Monitoring

- 10.1.1 Noise Monitoring has been conducted at 8 of the designated monitoring locations where construction works has been conducted nearby during the reporting month.
- 10.1.2 Monitoring station N17 Bui O Public School is an institutional sensitive receiver. During the reporting month, school examinations were held from 2 to 6 and 9 to 11 March 2026. Accordingly, the noise limit for monitoring station N17-Bui O Public School was temporarily reduced to 65 dB(A) on that examination (2 to 6 and 9 to 11 March 2026). The standard noise limit of 70 dB(A) remained applicable for all other days outside this examination period.
- 10.1.3 No action or limit level exceedance was recorded in construction noise level in this reporting period.

10.2 Water Quality Monitoring

- 10.2.1 Subsequent to the completion of marine work on 24 May 2025, water quality monitoring was considered completed by 30 May 2025. No water quality monitoring is conducted in this reporting month.

10.3 Ecological Impact Monitoring

- 10.3.1 Transplanting of the trees of *Aquilaris sinensis* was completed on 26 April 2022. Maintenance works for trees in holding nursery have commenced.
- 10.3.2 As per latest version of PTP, 4 trees found (1 no. of *Aquilaria sinensis* and 3 nos. of *Gmelina chinensis*) within the site of SSWSTW which are considered to be the plant species with conservative importance for temporarily transplanted to the nursery at Kam Tin and eventually be transplanted to Pui O Pumping Station.
- 10.3.3 The weekly site audit was carried out by ET include checking whether good site practices are being properly implemented by the Contractor.
- 10.3.4 The extent of the work site boundaries was checked by the ET during the weekly site audit.
- 10.3.5 Within this reporting period, holding nursery visit for transplanted trees on 23 March 2026.
- 10.3.6 No non-compliance was found during the site inspection while reminders on environmental measures were recommended. Results and findings of these inspections in this reporting period are listed below in **Table 10.1**

Table 10.1: Summary of Ecological Impact Monitoring

Inspection Date	Reminder and Recommendations	Close-out Date / Status
23 February 2026	The contractor is reminded to remove weeds.	Contractor has rectified the reminders on 13 March 2026
23 March 2026	Nil	N/A

10.4 Review of the Reasons for and the Implications of Non-compliance

- 10.4.1 No environmental non-compliance was recorded in the reporting month.

10.5 Summary of Action Taken in the Event of and Follow-Up on Non-Compliance

- 10.5.1 There was no particular action taken since no non-compliance was recorded in the reporting month.
- 10.5.2 The performance of the environmental management system of the reporting period was generally satisfied. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.

10.6 Complaints, Notification of Summons and Prosecution

- 10.6.1 No complaints were recorded in the reporting month.
- 10.6.2 No notification of summons and successful prosecution regarding construction works were recorded in the reporting month.

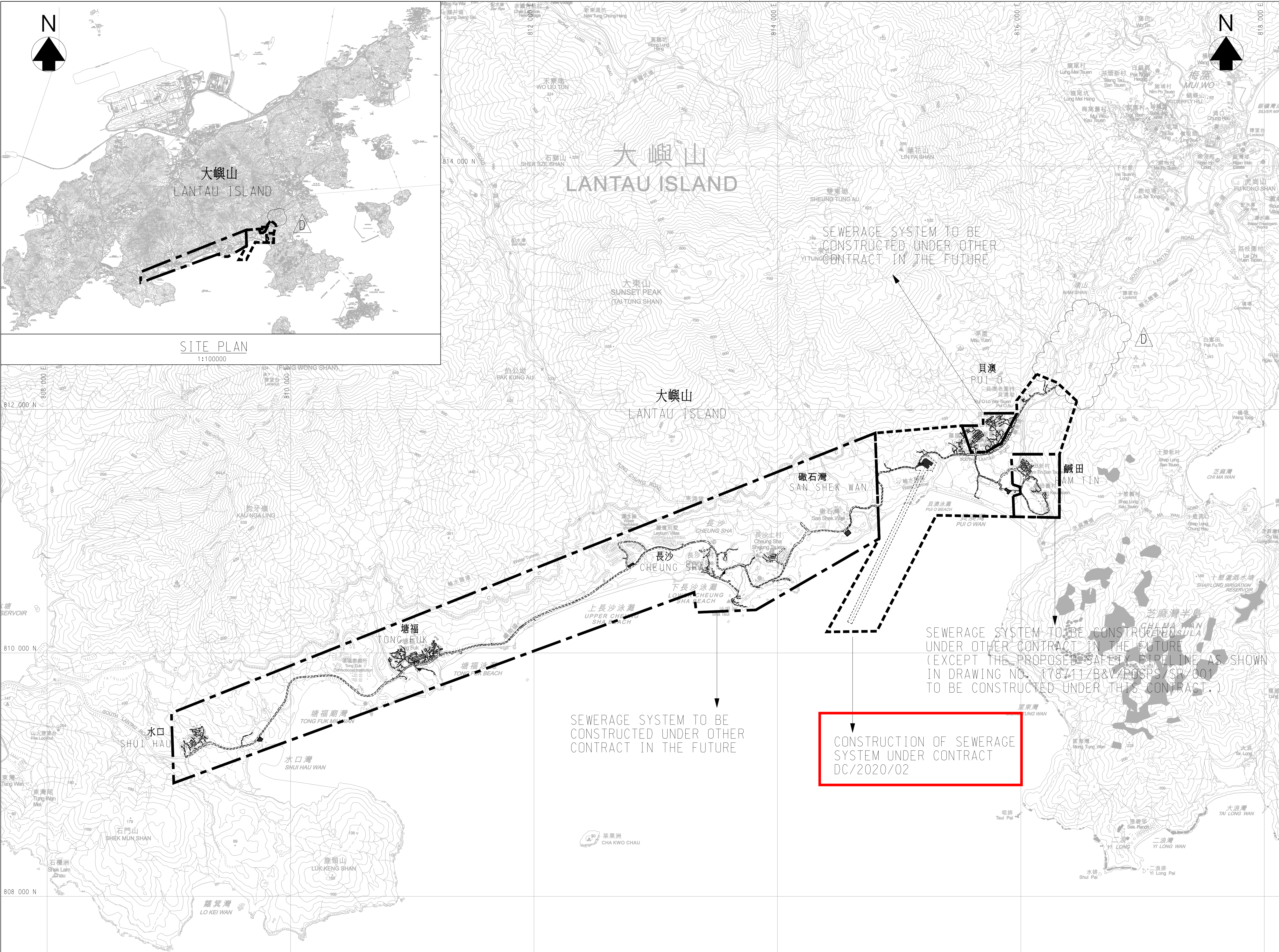


**Contract No. CM 04/2024 - Outlying Islands Sewerage
Stage 2 – South Lantau Sewerage Works –
Environmental Team Services (2025 - 2027)**

UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

Figures



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D	11/20	TENDER ADDENDUM NO.6	BL
C	11/20	TENDER ADDENDUM NO.5	BL
B	11/20	TENDER ADDENDUM NO.4	BL
A	09/20	TENDER ADDENDUM NO.2	TFL
Revision	Date	Description	Initial
	Designed	Checked	Drawn
Initial	TFL	BL	SZ
Date	04/20	04/20	04/20
Approved	Christina		

Contract no. DC/2020/02

Contract title
CONSTRUCTION OF SAN SHEK WAN
SEWAGE TREATMENT WORKS,
ASSOCIATED SUBMARINE OUTFALL
AND PUI O SEWAGE WORKS

Drawing title
SOUTH LANTAU SEWAGE
WORKS – MASTER LAYOUT PLAN

Drawing no.	Revision
178711/B&V/GN/001	D

Scale 1 : 15000

香港特別行政區政府渠務署
THE GOVERNMENT OF THE
HONG KONG
SPECIAL ADMINISTRATIVE REGION
DRAINAGE SERVICES DEPARTMENT

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Figure 2.1 - Master Layout Plan

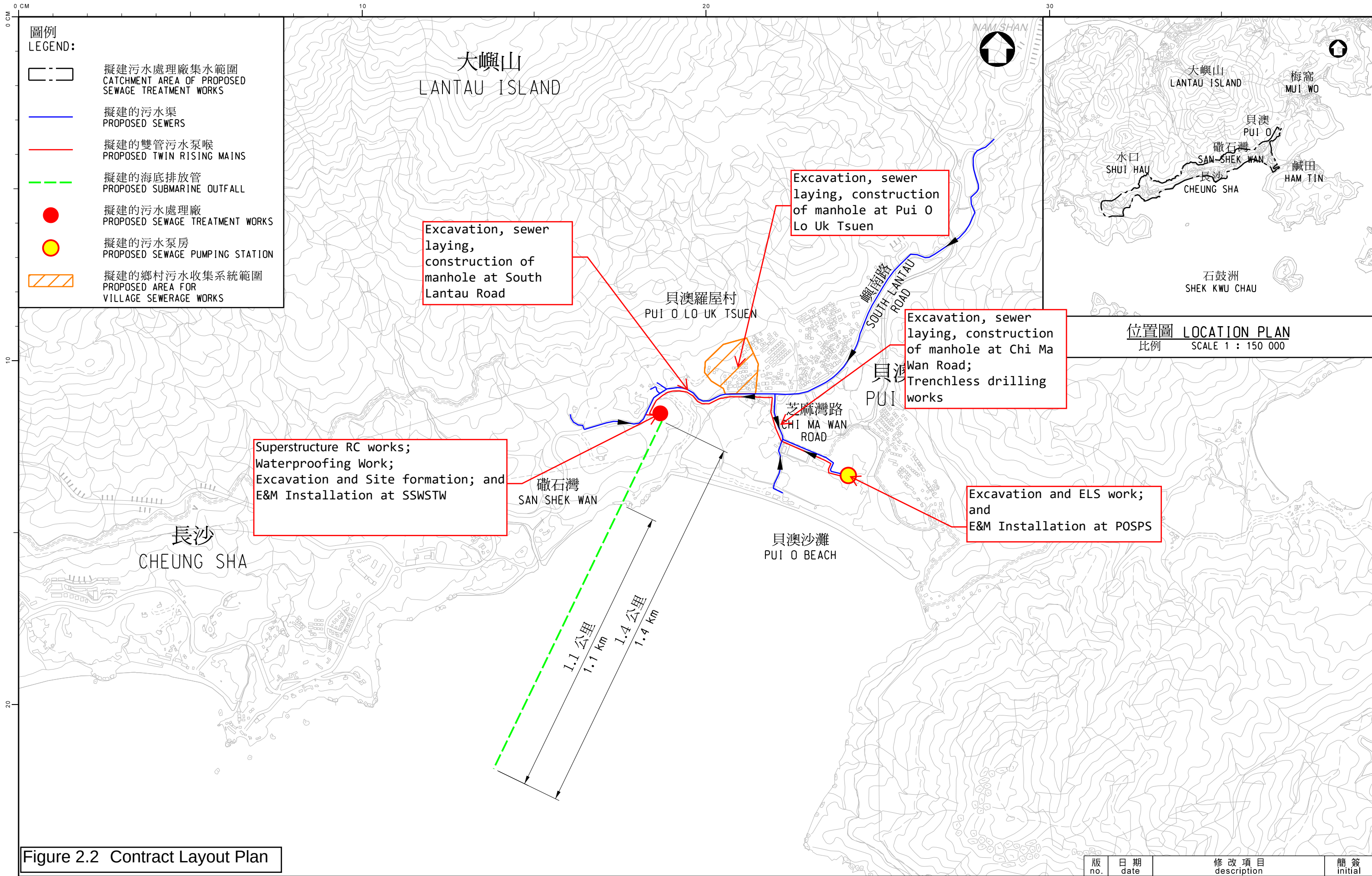


Figure 2.2 Contract Layout Plan

圖則名稱 drawing title

工務工程計劃編號331DS - 離島污水收集系統第2階段
- 南大嶼山污水收集系統工程
PWP ITEM NO.331DS - OUTLYING ISLANDS SEWERAGE, STAGE 2
- SOUTH LANTAU SEWERAGE WORKS

繪畫 drawn	W. H. CHAN	日期 date	27 APR 2020	修改項目 description	簡簽 initial
核對 checked	Ir K. S. CHAN	日期 date	27 APR 2020	圖則編號 drawing no.	比例 scale
批核 approved	Ir L. CHEN	日期 date	27 APR 2020	DVD/2020/001	1:12 500
部門 office	特別職務部 SPECIAL DUTY DIVISION			保留版權 COPYRIGHT RESERVED	
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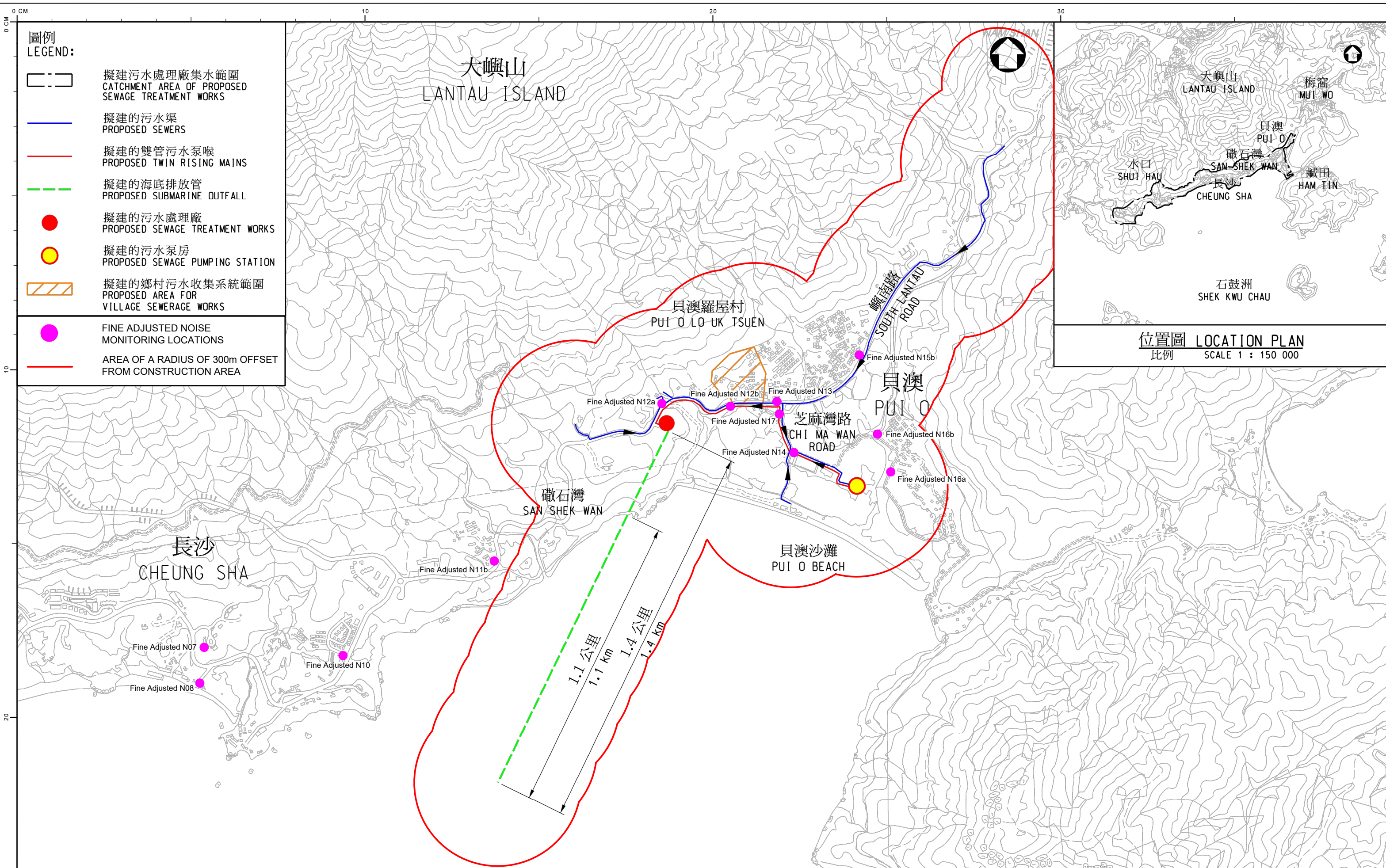
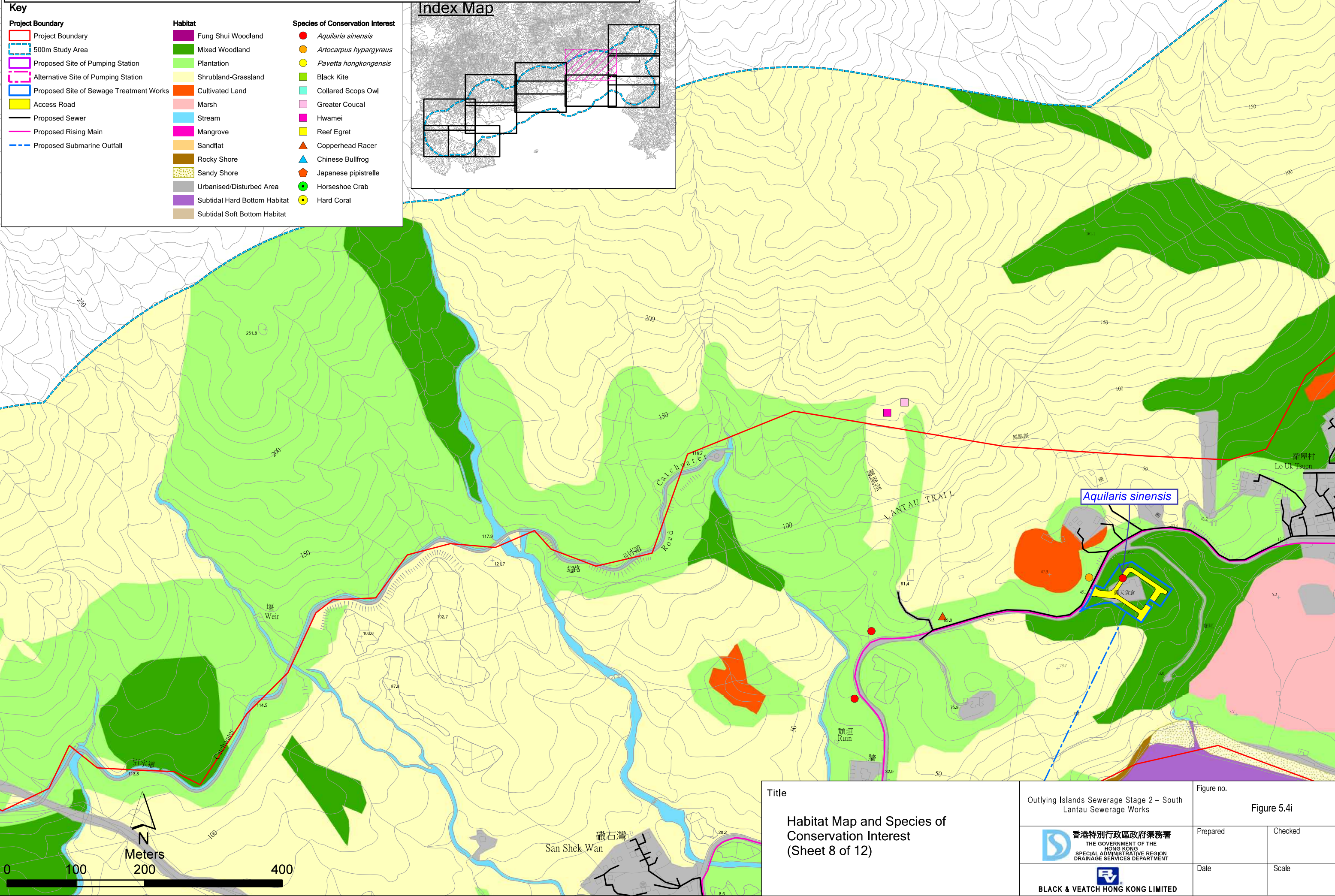


Figure 6.1 Mark up Figure 5.4i extracted from approved EIA Report (AEIAR-210/2017)



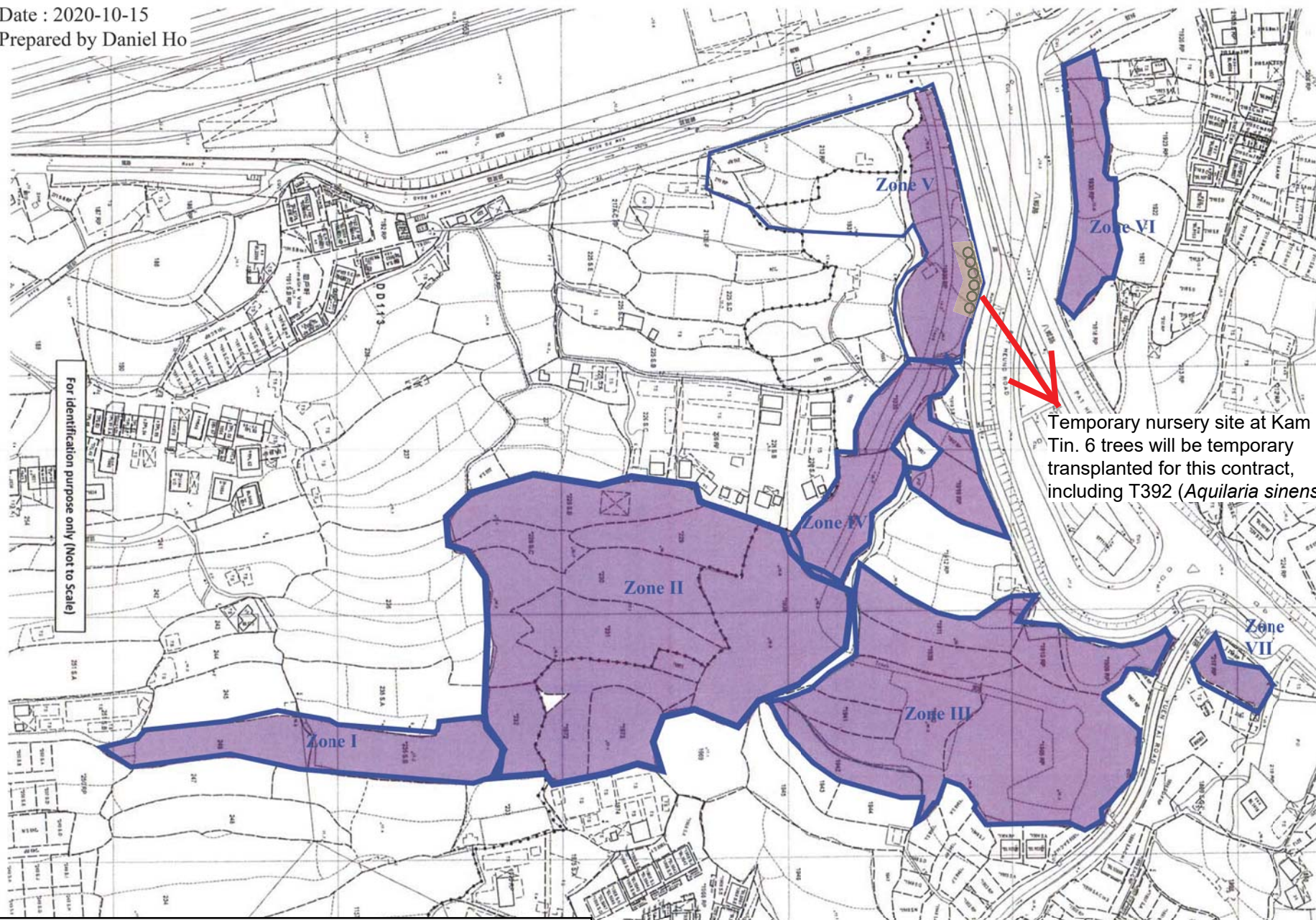


Figure 6.2 - Location Plan for Temporary Holding Nursery

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Project : Contract No.: DC/2020/02
Construction of San Shek Wan Sewage Treatment Works,
Associated Submarine Outfall and Pui O Sewerage Works

Drawing Title : Location Plan for 6 nos. Trees on Kam Tin Nursery



Toyo Greenland Co., Ltd.

Check : Ho Tat Pui, Daniel

Ref: C3109/22/TGD0164

Scale : N.T.S.

Date : 10 January 2022

Rev.

00

Appendix 4.1

Calibration Certificates for Noise Meter and Acoustic Calibrator



CERTIFICATE OF CALIBRATION

Certificate No.: 26CA0115 01-01

Page 1 of 2

Item tested

Description:	Sound Level Meter (Class 1)	,	Microphone	Preamp
Manufacturer:	Rion Co., Ltd.	,	Rion Co., Ltd.	Rion Co., Ltd.
Type/Model No.:	NL-52	,	UC-59	NH-25
Serial/Equipment No.:	01198668	,	16390	98882
Adaptors used:	-	,	-	-

Item submitted by

Customer Name: Umwelt Consulting Limited.
Address of Customer: -
Request No.: -
Date of receipt: 15-Jan-2026

Date of test: 19-Jan-2026

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	28-Aug-2026	CIGISMEC
Signal generator	DS 360	61227	24-Feb-2026	CEPREI

Ambient conditions

Temperature: 20.0~20.4 °C
Relative humidity: 62.2~62.7 %
Air pressure: 1005 ± 5 hPa

Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure response of the Sound Level Meter.

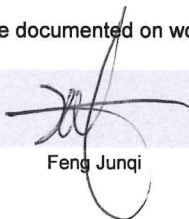
Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:



Feng Junqi

Date: 20-Jan-2026

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 26CA0115 01-01

Page 2 of 2

1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	
	Lin (Z)	Pass	1.6	
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Linearity range for SPL	A	Pass	0.3	
	C	Pass	0.3	
	Lin (Z)	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
	Single 100µs rectangular pulse	Pass	0.3	
Peak response	Crest factor of 3	Pass	0.3	
	Single burst 5 ms at 2000 Hz	N/A	N/A	
R.M.S. accuracy	Repeated at frequency of 100 Hz	N/A	N/A	
	1 ms burst duty factor 1/10 ³ at 4kHz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 ⁴ at 4kHz	Pass	0.3	
	Single burst 10 ms at 4 kHz	Pass	0.4	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	SPL	Pass	0.3	
Overload indication	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test results at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Date:

Fung Chi Yip
19-Jan-2026

Checked by:

Date:

Chan Yuk Yiu
20-Jan-2026

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



Test Data for Sound Level Meter

Page 1 of 5

Sound level meter type:	NL-52	Serial No.	01198668	Date	19-Jan-2026
Microphone type:	UC-59	Serial No.	16390		
Preamplifier type:	NH-25	Serial No.	98882	Report:	26CA0115 01-01

SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting	10.4	dB
Noise level in C weighting	14.2	dB
Noise level in Lin (Z)	19.6	dB

LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals. (SLM set to LEQ/SPL)

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
124.0	124.0	124.0	0.7	0.0	0.0
125.0	125.0	125.0	0.7	0.0	0.0
126.0	126.0	126.0	0.7	0.0	0.0
127.0	127.0	127.0	0.7	0.0	0.0
128.0	128.0	128.0	0.7	0.0	0.0
129.0	129.0	129.0	0.7	0.0	0.0
130.0	130.0	130.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	44.0	44.0	0.7	0.0	0.0
39.0	38.9	38.9	0.7	-0.1	-0.1



Test Data for Sound Level Meter

Page 2 of 5

Sound level meter type: NL-52 Serial No. 01198668 Date 19-Jan-2026
Microphone type: UC-59 Serial No. 16390
Preamp type: NH-25 Serial No. 98882 Report: 26CA0115 01-01

34.0	33.9	33.9	0.7	-0.1	-0.1
33.0	32.9	32.9	0.7	-0.1	-0.1
32.0	31.9	31.9	0.7	-0.1	-0.1
31.0	30.9	30.9	0.7	-0.1	-0.1
30.0	29.8	29.8	0.7	-0.2	-0.2

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
30-130	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
30-130	32.0	31.9	0.7	-0.1
	128.0	128.0	0.7	0.0

FREQUENCY WEIGHTING TEST

The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.5	1.5	1.5	-0.1
63.1	94.0	67.8	67.8	1.5	1.5	0.0
125.9	94.0	77.9	78.0	1.0	1.0	0.1
251.2	94.0	85.4	85.4	1.0	1.0	0.0
501.2	94.0	90.8	90.8	1.0	1.0	0.0
1995.0	94.0	95.2	95.1	1.0	1.0	-0.1
3981.0	94.0	95.0	94.7	1.0	1.0	-0.3
7943.0	94.0	92.9	92.8	1.5	3.0	-0.1
12590.0	94.0	89.7	89.6	3.0	6.0	-0.1

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	91.0	1.5	1.5	0.0
63.1	94.0	93.2	93.2	1.5	1.5	0.0
125.9	94.0	93.8	93.8	1.0	1.0	0.0



Test Data for Sound Level Meter

Page 3 of 5

Sound level meter type: NL-52 Serial No. 01198668 Date 19-Jan-2026
Microphone type: UC-59 Serial No. 16390
Preamp type: NH-25 Serial No. 98882 Report: 26CA0115 01-01

251.2	94.0	94.0	94.1	1.0	1.0	0.1
501.2	94.0	94.0	94.1	1.0	1.0	0.1
1995.0	94.0	93.8	93.7	1.0	1.0	-0.1
3981.0	94.0	93.2	92.9	1.0	1.0	-0.3
7943.0	94.0	91.0	91.0	1.5	3.0	0.0
12590.0	94.0	87.8	87.7	3.0	6.0	-0.1

Frequency weighting Lin:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	94.0	94.0	1.5	1.5	0.0
63.1	94.0	94.0	94.0	1.5	1.5	0.0
125.9	94.0	94.0	94.0	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.1	1.0	1.0	0.1
1995.0	94.0	94.0	93.8	1.0	1.0	-0.2
3981.0	94.0	94.0	93.7	1.0	1.0	-0.3
7943.0	94.0	94.0	94.0	1.5	3.0	0.0
12590.0	94.0	94.0	94.1	3.0	6.0	0.1

TIME WEIGHTING FAST TEST

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
126.0	125.0	125.0	1.0	1.0	0.0

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
126.0	121.9	121.9	1.0	1.0	0.0

PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range.

Positive polarities: (Weighting Z, set the generator signal to single, Lzpeak)

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
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Test Data for Sound Level Meter

Page 4 of 5

Sound level meter type: NL-52 Serial No. 01198668 Date 19-Jan-2026
Microphone type: UC-59 Serial No. 16390
Preamp type: NH-25 Serial No. 98882 Report: 26CA0115 01-01

dB	dB	dB	+/- dB	dB
129.0	129.0	129.6	2.0	0.6

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
129.0	129.0	129.6	2.0	0.6

RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency: 2000 Hz
Amplitude: 2 dB below the upper limit of the primary indicator range.
Burst repetition frequency: 40 Hz
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz. (Set to INT)

	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time weighting	dB	dB	indication(dB)	+/- dB	dB
Slow	128.0+6.6	128.0	127.9	0.5	-0.1

TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst: 4000 Hz

Duration of tone burst: 1 ms

Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	100.0	100.0	99.9	1.0	-0.1	60s integ.
10000	90.0	90.0	89.9	1.0	-0.1	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz

Integration time: 10 sec

The integrating sound level meter set to Leq:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	100.0	70.0	70.0	1.7	0.0

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	100.0	80.0	80.0	1.7	0.0

OVERLOAD INDICATION TEST



Test Data for Sound Level Meter

Page 5 of 5

Sound level meter type:	NL-52	Serial No.	01198668	Date	19-Jan-2026
Microphone type:	UC-59	Serial No.	16390		
Preamplifier type:	NH-25	Serial No.	98882	Report:	26CA0115 01-01

For SLM capable of operating in a non-integrating mode.

Test frequency: 2000 Hz
Amplitude: 2 dB below the upper limit of the primary indicator range.
Burst repetition frequency: 40 Hz
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz.

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
131.1	130.1	127.1	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following:

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz
Integration time: 10 sec
Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
138.3	137.3	97.3	97.3	2.2	0.0

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level	Tolerance (dB)		Deviation
Hz	dB	Measured (dB)	+	-	dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	78.1	1.0	1.0	0.2
8000	92.9	93.5	1.5	3.0	0.6

-----END-----



CERTIFICATE OF CALIBRATION

Certificate No.: 26CA0320 05-01

Page 1 of 2

Item tested

Description:	Sound Level Meter	Microphone	Preamp
Manufacturer:	Rion Co., Ltd.	Rion Co., Ltd.	Rion Co., Ltd.
Type/Model No.:	NL-53	UC-59	NH-25
Serial/Equipment No.:	00452008	29377	54988
Adaptors used:	-	-	-

Item submitted by

Customer Name: Umwelt Consulting Limited.
Address of Customer: -
Request No.: -
Date of receipt: 20-Mar-2026

Date of test: 23-Mar-2026

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	28-Aug-2026	CIGISMEC
Signal generator	DS 360	33873	12-Mar-2027	CEPREI

Ambient conditions

Temperature: 20.1~20.4 °C
Relative humidity: 64.2~64.7%
Air pressure: 1005 ± 5 hPa

Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of $\pm 20\%$.
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.

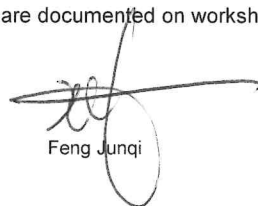
Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 (Type 1) for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:



Feng Junqi

Date: 24-Mar-2026

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 26CA0320 05-01

Page 2 of 2

1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	
	Lin	Pass	1.6	
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Frequency weightings			
	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 ³ at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 ⁴ at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Date:

Fung Chi Yip
23-Mar-2026

Checked by:

Date:

Chan Yuk Yiu
24-Mar-2026

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



Test Data for Sound Level Meter

Page 1 of 5

Sound level meter type: NL-53 Serial No. 00452008 Date 23-Mar-2026
Microphone type: UC-59 Serial No. 29377
Report: 26CA0320 05-01

SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting 11.2 dB
Noise level in C weighting 18.6 dB
Noise level in Lin 27.7 dB

LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals. (SLM set to LEQ/SPL)

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
124.0	124.0	124.0	0.7	0.0	0.0
125.0	125.0	125.0	0.7	0.0	0.0
126.0	126.0	126.0	0.7	0.0	0.0
127.0	127.0	127.0	0.7	0.0	0.0
128.0	128.0	128.0	0.7	0.0	0.0
129.0	129.0	129.0	0.7	0.0	0.0
130.0	130.0	130.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	44.0	44.0	0.7	0.0	0.0
39.0	39.0	39.0	0.7	0.0	0.0



Test Data for Sound Level Meter

Page 2 of 5

Sound level meter type: NL-53 Serial No. 00452008 Date 23-Mar-2026
Microphone type: UC-59 Serial No. 29377

Report: 26CA0320 05-01

34.0	34.0	34.0	0.7	0.0	0.0
33.0	33.0	33.0	0.7	0.0	0.0
32.0	31.9	31.9	0.7	-0.1	-0.1
31.0	30.9	30.9	0.7	-0.1	-0.1
30.0	29.9	29.9	0.7	-0.1	-0.1

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20-130	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20-130	30.0	29.9	0.7	-0.1
	128.0	128.0	0.7	0.0

FREQUENCY WEIGHTING TEST

The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.7	1.5	1.5	0.1
63.1	94.0	67.8	67.8	1.5	1.5	0.0
125.9	94.0	77.9	77.8	1.0	1.0	-0.1
251.2	94.0	85.4	85.3	1.0	1.0	-0.1
501.2	94.0	90.8	90.7	1.0	1.0	-0.1
1995.0	94.0	95.2	95.1	1.0	1.0	-0.1
3981.0	94.0	95.0	94.8	1.0	1.0	-0.2
7943.0	94.0	92.9	92.9	1.5	3.0	0.0
12590.0	94.0	89.7	89.6	3.0	6.0	-0.1

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	91.0	1.5	1.5	0.0
63.1	94.0	93.2	93.2	1.5	1.5	0.0
125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0



Test Data for Sound Level Meter

Page 3 of 5

Sound level meter type: NL-53 Serial No. 00452008 Date 23-Mar-2026
Microphone type: UC-59 Serial No. 29377
Report: 26CA0320 05-01

501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	93.8	93.7	1.0	1.0	-0.1
3981.0	94.0	93.2	93.0	1.0	1.0	-0.2
7943.0	94.0	91.0	91.0	1.5	3.0	0.0
12590.0	94.0	87.8	87.7	3.0	6.0	-0.1

Frequency weighting Lin:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
Hz	dB	dB	dB	+	-	dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	94.0	94.0	1.5	1.5	0.0
63.1	94.0	94.0	94.0	1.5	1.5	0.0
125.9	94.0	94.0	94.0	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	94.0	93.8	1.0	1.0	-0.2
3981.0	94.0	94.0	93.8	1.0	1.0	-0.2
7943.0	94.0	94.0	94.0	1.5	3.0	0.0
12590.0	94.0	94.0	94.2	3.0	6.0	0.2

Note: No corrections for the frequency response of the microphone, instrument case and windshield are made to the sound level meter.

TIME WEIGHTING FAST TEST

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
126.0	125.0	124.9	1.0	1.0	-0.1

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	dB
126.0	121.9	121.9	1.0	1.0	0.0

PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range.

Positive polarities: (Weighting C, set the generator signal to single, Lcpeak)



Test Data for Sound Level Meter

Page 4 of 5

Sound level meter type: NL-53

Serial No. 00452008

Date 23-Mar-2026

Microphone type: UC-59

Serial No. 29377

Report: 26CA0320 05-01

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
129.0	129.0	127.3	2.0	-1.7

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
129.0	129.0	127.3	2.0	-1.7

RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency: 2000 Hz

Amplitude: 2 dB below the upper limit of the primary indicator range.

Burst repetition frequency: 40 Hz

Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz. (Set to INT)

	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time weighting	dB	dB	indication(dB)	+/- dB	dB
Slow	128.0+6.6	128.0	127.9	0.5	-0.1

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)

Test frequency: 2000 Hz

Amplitude: The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

Ref. Level	Single burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
130.0	121.2	121.1	2.0	-0.1

Repeated at 100 Hz

Ref. Level	Repeated burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
130.0	127.3	127.2	1.0	-0.1

TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst: 4000 Hz

Duration of tone burst: 1 ms

Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	100.0	100.0	99.9	1.0	-0.1	60s integ.
10000	90.0	90.0	89.9	1.0	-0.1	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST



Test Data for Sound Level Meter

Page 5 of 5

Sound level meter type: NL-53 Serial No. 00452008 Date 23-Mar-2026
Microphone type: UC-59 Serial No. 29377
Report: 26CA0320 05-01

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz

Integration time: 10 sec

The integrating sound level meter set to Leq:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	100.0	70.0	70.0	1.7	0.0

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	100.0	80.0	80.0	1.7	0.0

OVERLOAD INDICATION TEST

For SLM capable of operating in a non-integrating mode.

Test frequency: 2000 Hz

Amplitude: 2 dB below the upper limit of the primary indicator range.

Burst repetition frequency: 40 Hz

Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz.

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
131.0	130.0	127.0	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following:

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz

Integration time: 10 sec

Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
138.4	137.4	97.4	97.4	2.2	0.0

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level	Tolerance (dB)		Deviation
Hz	dB	Measured (dB)	+	-	dB
1000	94.0	94.0	0.0	0.0	0.0
125	77.9	77.9	1.0	1.0	0.0
8000	92.9	92.2	1.5	3.0	-0.7

-----END-----



CERTIFICATE OF CALIBRATION

Certificate No.: 26CA0115 01-02

Page: 1 of 2

Item tested

Description: Acoustical Calibrator (Class 1)
Manufacturer: Rion
Type/Model No.: NC-75
Serial/Equipment No.: 34202223
Adaptors used: -

Item submitted by

Customer: Umwelt Consulting Limited.
Address of Customer: -
Request No.: -
Date of receipt: 15-Jan-2026

Date of test: 19-Jan-2026

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	3257856	17-Jul-2026	SCL
Preamplifier	B&K 2673	3353200	02-Jul-2026	CEPREI
Measuring amplifier	B&K 2610	2346941	04-Jul-2026	CEPREI
Signal generator	DS 360	61227	24-Feb-2026	CEPREI
Digital multi-meter	34401A	US36087050	22-Apr-2026	CEPREI
Audio analyzer	8903B	GB41300350	10-Jul-2026	CEPREI
Universal counter	53132A	MY40003662	07-Jul-2026	CEPREI

Ambient conditions

Temperature: 20.0~20.4 °C
Relative humidity: 62.2~62.7 %
Air pressure: 1005 ± 5 hPa

Test specifications

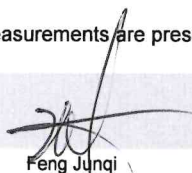
- The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

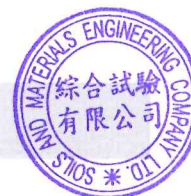
Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory:


Feng Junqi

Date: 20-Jan-2026

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 26CA0115 01-02

Page: 2 of 2

1, Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	(Output level in dB re 20 μ Pa)
			Estimated Expanded Uncertainty dB
1000	94.00	94.14	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz STF = 0.007 dB

Estimated expanded uncertainty 0.005 dB

3, Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz Actual Frequency = 1000.0 Hz

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4, Total Noise and Distortion

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz TND = 1.0 %

Estimated expanded uncertainty 0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Fung Chi Yip

Date:

19-Jan-2026

Checked by:

Chan Yuk Yiu

Date:

20-Jan-2026

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



CERTIFICATE OF CALIBRATION

Certificate No.: 26CA0320 05-02

Page: 1 of 2

Item tested

Description: Acoustical Calibrator (Class 1)
Manufacturer: Rion Co., Ltd.
Type/Model No.: NC-75
Serial/Equipment No.: 34256525
Adaptors used: -

Item submitted by

Customer: Umwelt Consulting Limited.
Address of Customer: -
Request No.: -
Date of receipt: 20-Mar-2026

Date of test: 23-Mar-2026

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	3257856	17-Jul-2026	SCL
Preamplifier	B&K 2673	3353200	02-Jul-2026	CEPREI
Measuring amplifier	B&K 2610	2346941	04-Jul-2026	CEPREI
Signal generator	DS 360	33873	11-Mar-2027	CEPREI
Digital multi-meter	34401A	US36087050	22-Apr-2026	CEPREI
Audio analyzer	8903B	GB41300350	10-Jul-2026	CEPREI
Universal counter	53132A	MY40003662	07-Jul-2026	CEPREI

Ambient conditions

Temperature: 20.1~20.4 °C
Relative humidity: 64.2~64.7%
Air pressure: 1005 ± 5 hPa

Test specifications

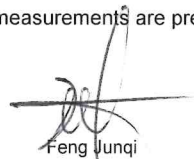
- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

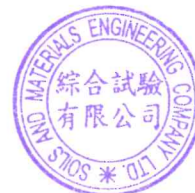
Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory:


Feng Junqi

Date: 24-Mar-2026

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 26CA0320 05-02

Page: 2 of 2

1, Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

(Output level in dB re 20 μ Pa)

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	93.97	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz STF = 0.016 dB

Estimated expanded uncertainty 0.005 dB

3, Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz Actual Frequency = 1000.0 Hz

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4, Total Noise and Distortion

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz TND = 0.4 %

Estimated expanded uncertainty 0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

Date:

Fung Chi Yip
23-Mar-2026

- End -

Checked by:

Date:

Chan Yuk Yiu
24-Mar-2026

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

Appendix 4.2

Impact Monitoring Schedule for Construction Phase Noise Monitoring for the Reporting Month and Next Month



Contract No. CM 04/2024

Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works – Environmental Team Services (2025 - 2027)

Environmental Monitoring Schedule

Month: March-2026

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			Noise Monitoring	Noise Monitoring		
1-Mar	2-Mar	3-Mar	4-Mar	5-Mar	6-Mar	7-Mar
		Noise Monitoring				
8-Mar	9-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar
Noise Monitoring						
15-Mar	16-Mar	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar
				Noise Monitoring		
22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
29-Mar	30-Mar	31-Mar				



Contract No. CM 04/2024

Outlying Islands Sewerage Stage 2 – South Lantau Sewerage Works – Environmental Team Services (2025 - 2027)

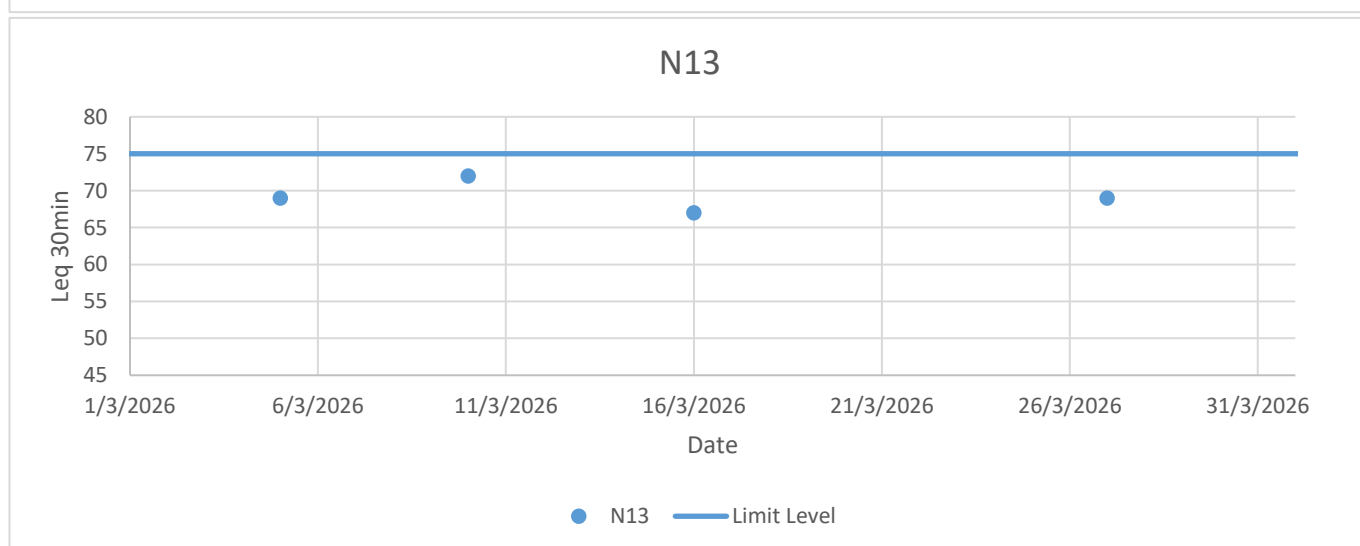
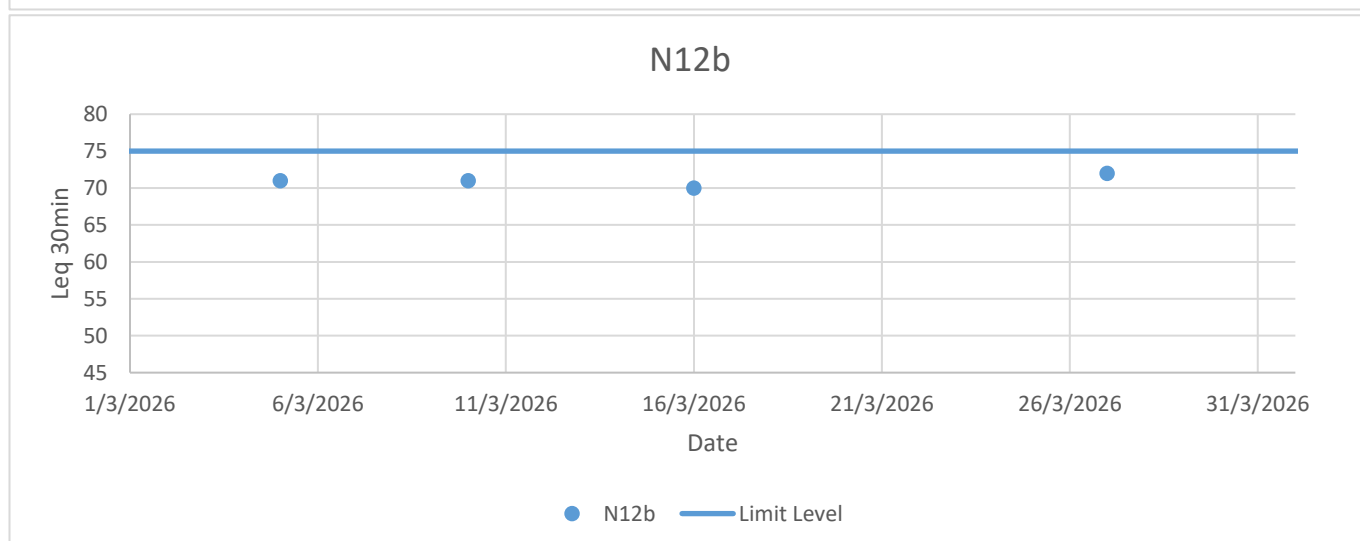
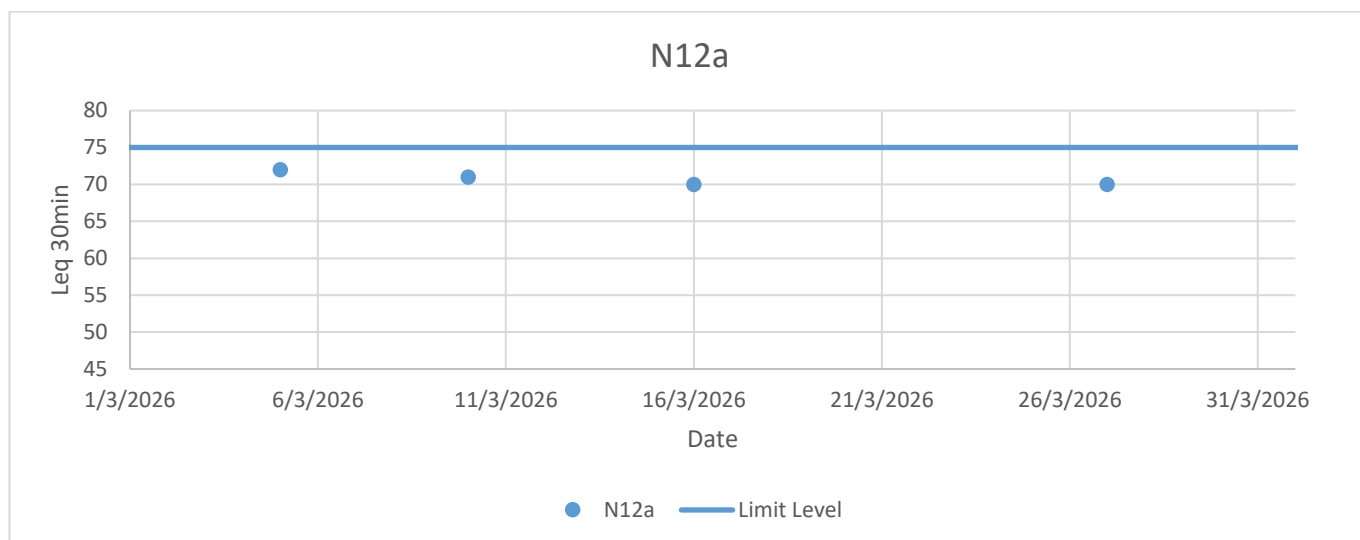
Environmental Monitoring Schedule

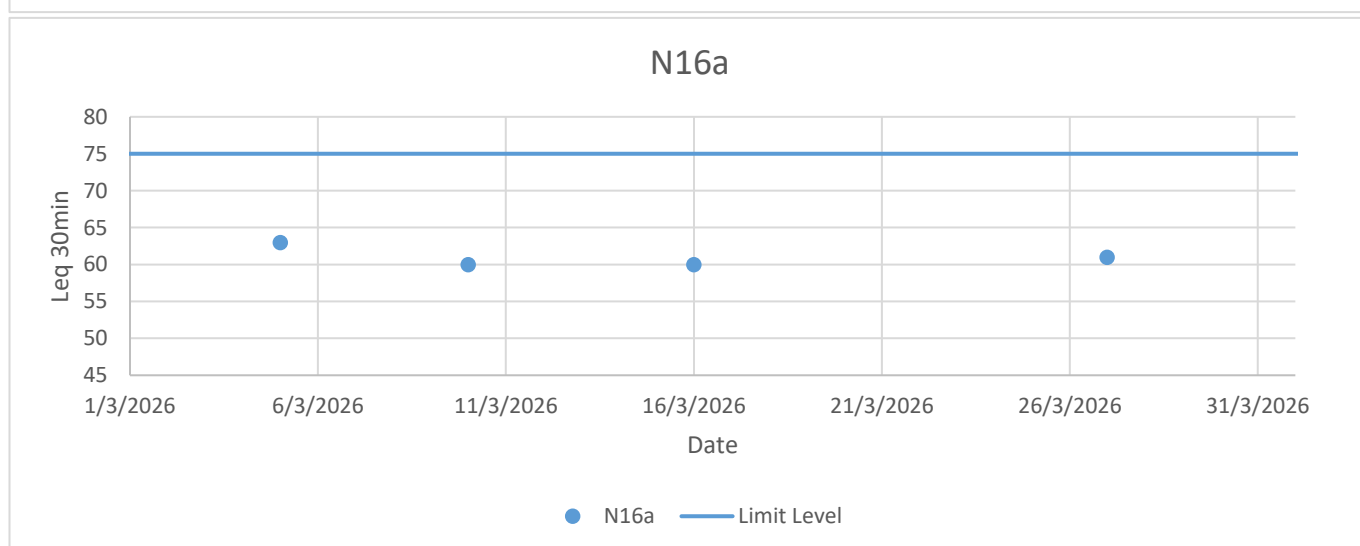
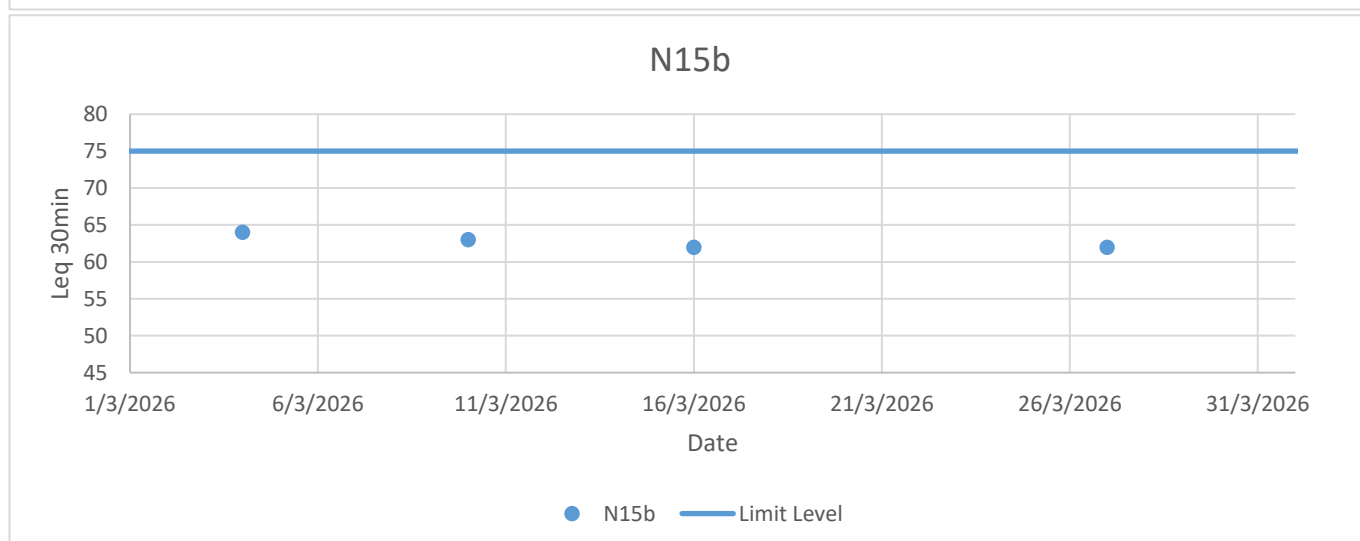
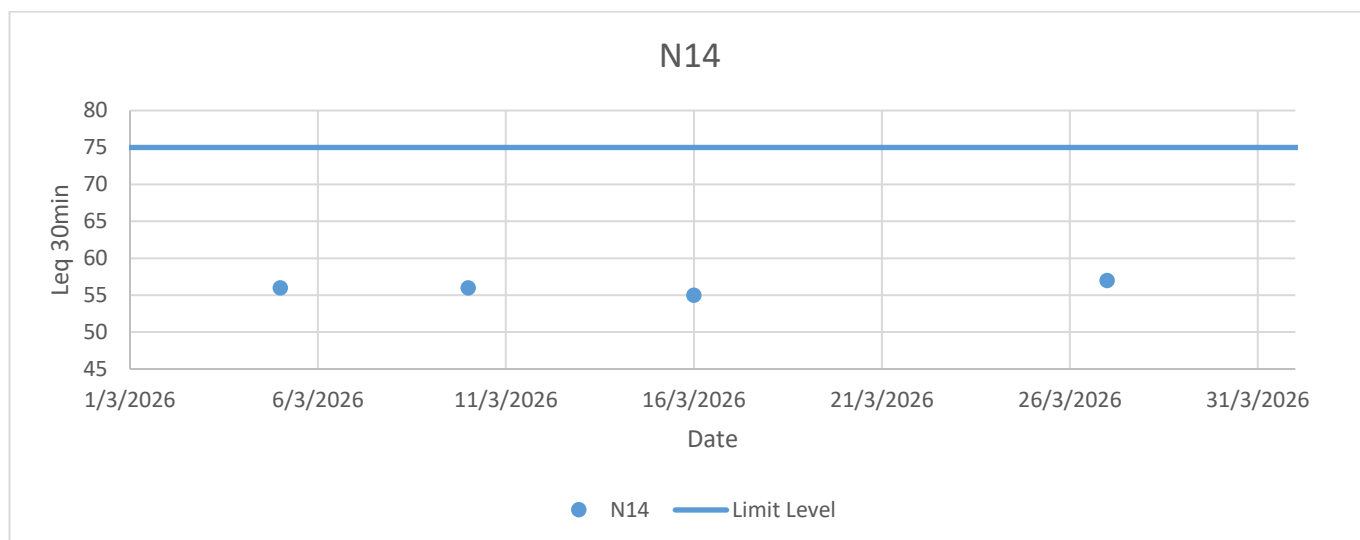
Month: April-2026

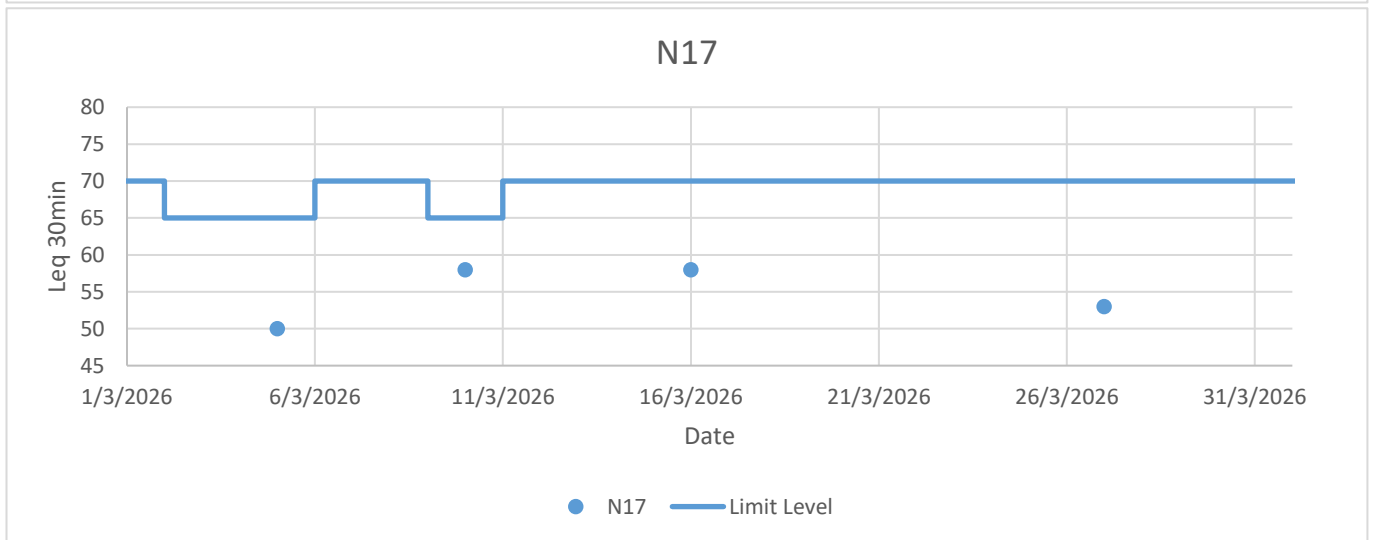
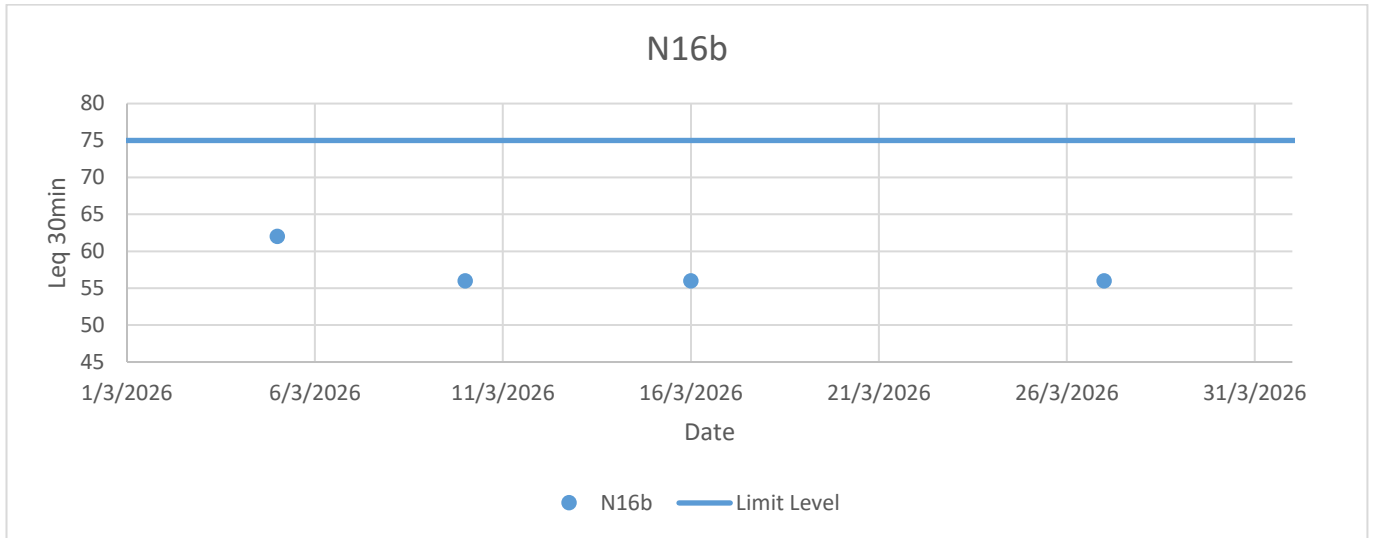
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				Noise Monitoring		
			1-Apr	2-Apr	Good Friday	The day following Good Friday
			Noise Monitoring			
5-Apr	Ching Ming Festival	The day following Easter Monday	8-Apr	9-Apr	10-Apr	11-Apr
		Noise Monitoring				
12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
	Noise Monitoring					
19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr
26-Apr	27-Apr	28-Apr	29-Apr	30-Apr		

Appendix 4.3

Noise Monitoring Results and Graphical Representations









UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

	Ref	Location Name			Level	Type of Measurement								
Location	N12a	Lo Uk Tsuen			G/F	Free-Field								
Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	09:26	09:56	62.7	66.7	48.0	69	3	72	75	Traffic, human activity, dog bark, bird	Not observed	--
					69.4	72.6	51.6							
					71.8	73.5	61.9							
					69.1	71.8	58.3							
					63.6	67.7	54.3							
					68.8	71.3	56.8							
10/3/2026	Cloudy	Calm	15:32	16:02	66.2	70.0	47.3	68	3	71	75	Traffic, human activity, dog bark, bird	Not observed	--
					65.3	68.7	56.0							
					69.3	70.7	52.9							
					71.8	73.2	56.4							
					69.2	72.6	55.3							
					62.5	65.5	50.1							
16/3/2026	Sunny	Calm	11:28	11:58	66.5	69.5	55.9	67	3	70	75	Traffic, human activity, dog bark, bird	Not observed	--
					69.3	70.0	51.0							
					67.3	70.8	54.2							
					67.4	70.3	52.8							
					65.8	70.5	52.2							
					64.0	65.5	44.2							
27/3/2026	Cloudy	Calm	16:25	16:55	66.4	69.4	61.3	67	3	70	75	Traffic, Dog Bark	Manual Works	--
					69.0	72.9	53.3							
					66.6	69.3	51.6							
					67.3	69.1	50.4							
					66.5	68.3	51.0							
					65.4	69.4	55.8							



UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

	Ref	Location Name			Level	Type of Measurement								
Location	N12b	Lo Uk Tsuen			G/F	Free-Field								
Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	09:59	10:29	68.3	71.3	49.3	68	3	71	75	Traffic , human activity	Not observed	--
					69.4	71.7	46.8							
					68.9	71.2	48.6							
					64.4	66.5	48.1							
					65.7	70.9	47.6							
					68.6	73.3	47.9							
10/3/2026	Cloudy	Calm	14:56	15:26	70.2	72.7	54.0	68	3	71	75	Traffic, human activity, birds	Not observed	--
					67.4	71.2	53.5							
					66.4	71.3	53.5							
					62.8	66.6	53.7							
					69.2	72.9	56.0							
					69.2	73.0	54.6							
16/3/2026	Sunny	Calm	12:06	12:36	66.6	69.6	52.7	67	3	70	75	Traffic, human activity, birds	Not observed	--
					66.2	70.0	53.4							
					68.4	73.1	52.8							
					68.2	71.5	53.8							
					66.1	70.1	53.2							
					64.2	68.0	53.3							
27/3/2026	Cloudy	Mild	15:26	15:56	69.0	73.0	58.7	69	3	72	75	Noise from 18/WSD/18, Traffic, human activity, birds	Not observed	--
					67.4	71.6	58.6							
					67.8	71.3	58.8							
					67.8	72.4	58.3							
					67.0	69.4	58.4							
					71.4	72.1	58.9							



UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

Ref Location Name Level Type of Measurement
N13 Pui O San Wai Tsuen G/F Free-Field

Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	10:32	11:02	68.8	72.5	54.0	66	3	69	75	Traffic , human activity, school bell, dog bark	Not observed	--
					59.9	64.3	50.7							
					65.1	68.7	51.9							
					64.6	70.1	49.9							
					68.6	71.2	50.0							
10/3/2026	Cloudy	Calm	14:23	14:53	65.5	67.8	53.7	69	3	72	75	Traffic, human activity, traffic	Not observed	--
					64.6	68.3	53.9							
					61.5	63.3	52.3							
					73.6	76.0	53.4							
					69.6	75.3	53.1							
16/3/2026	Sunny	Calm	12:44	13:14	66.3	70.7	54.6	64	3	67	75	Traffic, human activity, traffic	Not observed	--
					62.7	67.3	51.8							
					62.6	65.4	49.0							
					63.8	67.4	49.6							
					59.9	62.4	47.5							
27/3/2026	Sunny	Mild	12:24	12:54	65.4	65.6	46.9	66	3	69	75	Traffic, human activities, birds	Not observed	--
					65.4	69.2	49.3							
					67.8	71.1	57.9							
					64.4	68.9	56.3							
					67.1	70.2	56.4							
					66.0	68.8	56.6							
					66.7	70.3	56.9							
					63.7	67.6	58.2							



UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

Ref Location Name Level Type of Measurement
N14 Pui O San Wai Tsuen G/F Free-Field

Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	11:40	12:10	53.5	57.4	44.6	56	--	56	75	Birds, human activities, traffic	Not observed	--
					50.8	55.1	41.7							
					51.7	56.0	41.8							
					51.8	55.4	43.4							
					52.0	55.0	43.6							
					62.0	59.6	45.3							
10/3/2026	Cloudy	Calm	13:13	13:43	57.2	60.7	48.2	56	--	56	75	Human activity, birds, traffic	Not observed	--
					58.3	61.7	45.3							
					55.7	59.6	45.4							
					54.3	58.0	46.8							
					54.8	59.5	47.1							
					52.3	55.5	46.9							
16/3/2026	Sunny	Calm	14:16	14:46	54.8	58.4	50.0	55	--	55	75	Human activity, birds, traffic	Not observed	--
					55.5	58.5	49.9							
					55.0	56.8	49.0							
					53.6	55.9	48.8							
					53.7	56.9	48.9							
					54.5	55.2	48.4							
27/3/2026	Sunny	Calm	13:35	14:05	58.3	57.7	50.2	57	--	57	75	Birds, Traffic	Not observed	--
					56.3	60.4	46.1							
					54.1	56.8	46.4							
					59.3	52.2	46.6							
					57.2	61.3	46.2							
					55.0	57.8	46.9							

**UMWELT CONSULTING LIMITED**

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

Ref		Location Name			Level		Type of Measurement							
Location		N15b			Pui O San Wai Tsuen		G/F Free-Field							
Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
4/3/2026	Sunny	Calm	09:50	10:20	62.6	67.0	55.4	64	--	64	75	Traffic, human activity, dog bark	Not observed	--
					65.3	68.2	56.0							
					62.9	67.0	56.0							
					62.9	66.7	57.1							
					62.5	67.3	56.3							
					63.8	67.9	56.3							
10/3/2026	Cloudy	Calm	11:25	11:55	63.4	67.4	52.1	63	--	63	75	Traffic, human activity, dog bark	Not observed	--
					63.2	67.7	55.0							
					63.4	67.1	55.4							
					62.9	67.2	55.3							
					61.1	64.7	56.4							
					61.1	65.1	56.2							
16/3/2026	Sunny	Calm	16:23	16:53	61.3	65.4	55.2	62	--	62	75	Traffic, human activity, dog bark	Not observed	--
					63.5	67.9	56.0							
					60.8	63.8	55.5							
					63.7	68.8	56.0							
					61.4	64.9	55.7							
					60.9	64.6	55.5							
27/3/2026	Cloudy	Calm	17:07	17:37	61.6	65.8	54.2	62	--	62	75	Traffic, Human Activity, Bird	Not observed	--
					66.3	68.1	54.4							
					62.3	65.6	54.2							
					60.7	65.5	54.0							
					60.3	64.1	53.9							
					58.6	62.8	54.0							



UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

Ref Location Name Level Type of Measurement
N16a Residences at Ham Tin G/F Free-Field

Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	12:15	12:45	57.6	59.6	47.9	60	3	63	75	Birds, human activities, traffic, helicopter	Not observed	--
					56.9	60.3	47.6							
					61.6	63.9	57.9							
					58.0	60.6	46.1							
					63.7	58.2	47.1							
					54.5	53.7	44.6							
10/3/2026	Cloudy	Calm	12:06	12:36	53.7	53.0	41.8	57	3	60	75	Traffic, human activity, bird, helicopter	Not observed	--
					55.0	50.1	42.5							
					56.6	54.8	43.8							
					59.7	62.9	44.3							
					58.0	56.4	43.0							
					51.9	53.4	40.6							
16/3/2026	Sunny	Calm	15:31	16:01	50.0	51.0	39.8	57	3	60	75	Traffic, human activity, bird	Not observed	--
					55.4	53.9	41.6							
					56.7	58.0	41.2							
					53.9	54.6	40.4							
					58.2	57.6	40.7							
					60.9	63.9	44.3							
27/3/2026	Fine	1Calm	14:43	15:13	59.7	60.7	48.1	58	3	61	75	Birds, Traffic, Generator of another Project, Helicopter	Saw Cutting, Manual Works Noise	--
					52.5	52.9	42.6							
					54.7	55.2	44.7							
					60.4	64.8	46.7							
					60.1	61.8	45.5							
					53.8	59.7	44.9							



UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

Ref Location Name Level Type of Measurement
N16b Residences at Ham Tin G/F Free-Field

Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	13:09	13:39	60.6	66.0	46.6	59	3	62	75	Birds, human activities, traffic	Not observed	--
					56.0	59.5	45.5							
					52.5	52.1	47.3							
					58.6	62.7	45.9							
					53.7	56.8	46.4							
					62.1	65.3	49.1							
10/3/2026	Cloudy	Calm	12:40	13:10	56.3	58.8	45.3	53	3	56	75	Traffic, human activity, birds, helicopter	Not observed	--
					48.5	51.6	44.1							
					48.1	49.8	42.3							
					52.4	55.9	45.6							
					52.2	55.2	44.9							
					53.5	56.2	46.5							
16/3/2026	Sunny	Calm	14:55	15:25	58.4	60.9	44.1	53	3	56	75	Birds, human activities, traffic	Not observed	--
					46.2	49.8	41.2							
					48.6	50.9	42.5							
					52.1	55.6	45.1							
					51.7	54.2	44.6							
					50.4	53.9	44.7							
27/3/2026	Sunny	Calm	14:10	14:40	50.0	51.4	43.6	53	3	56	75	Birds, Traffic	Not observed	--
					50.9	54.7	42.7							
					51.6	53.9	44.7							
					53.2	56.2	44.9							
					52.7	55.9	45.4							
					55.2	56.7	45.4							



UMWELT CONSULTING LIMITED

23/F, On Hong Commercial Building, 145
Hennessy Road, Wan Chai, Hong Kong

	Ref	Location Name			Level	Type of Measurement								
Location	N17	Bui O Public School			R/F	Façade								
Date	Weather	Wind Condition	Start Time	End Time	Measured Noise Level			Leq30mins	Façade Correction	Corrected Leq30mins	Limit Level	Other Noise Sources	Construction Noise	Remake
					Leq	L10	L90							
5/3/2026	Sunny	Calm	11:05	11:35	48.8	50.7	45.3	50	--	50	65	Human activity, birds	Not observed	--
					47.9	50.6	44.2							
					50.1	52.4	45.1							
					48.8	51.4	44.7							
					49.1	52.0	44.4							
					54.0	56.8	47.3							
10/3/2026	Cloudy	Calm	13:48	14:18	65.3	61.7	47.8	58	--	58	65	Human activity, birds	Not observed	--
					49.4	50.8	45.9							
					48.5	51.3	44.7							
					46.7	49.8	42.4							
					49.5	53.2	44.3							
					47.8	50.1	44.7							
16/3/2026	Sunny	Calm	13:21	13:51	58.6	62.1	49.7	58	--	58	70	Human activity, birds	Not observed	--
					61.5	64.2	55.8							
					61.0	64.3	55.1							
					54.5	57.2	50.1							
					51.6	52.9	49.7							
					52.4	55.1	49.5							
27/3/2026	Sunny	Mild	12:58	13:28	53.0	54.1	51.0	53	--	53	70	Human activities, Traffic	Not observed	--
					52.1	53.4	50.8							
					52.6	54.1	51.4							
					52.8	53.9	51.2							
					53.3	54.2	50.8							
					52.3	53.4	51.2							

Appendix 7.1

Monthly Summary Waste Flow Table

Drainage Services Department
Contract No. DC/2020/02
Construction of San Shek Wan Sewage Treatment Works,
Associated Submarine Outfall and Pui O Sewerage Works

Monthly Summary Waste Flow Table for 2026

Month	Actual Quantities of Inert C&D Material Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated (a)	Hard Rocks and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill (a-b-c-d)	Imported Fill	Metals	Paper/card-board packaging	Plastics [see Note 5]	Chemical waste	Others. e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Jan	0.60	0.00	0.00	0.00	0.57	0.03	9.3827	0.0595	0.0026	0.00	114.33
Feb	0.06	0.00	0.00	0.00	0.06	0.003	0.0000	0.0000	0.0000	0.00	51.56
Mar	0.12	0.00	0.00	0.00	0.12	0.00	8.3022	0.0867	0.0026	0.40	73.45
Apr	0.00										
May	0.00										
Jun	0.00										
Sub-total	0.78	0.00	0.00	0.00	0.74	0.03	17.6849	0.1462	0.0052	0.36	239.34
July	0.00										
Aug	0.00										
Sept	0.00										
Oct	0.00										
Nov	0.00										
Dec	0.00										
Total	0.78	0.00	0.00	0.00	0.74	0.03	17.6849	0.1462	0.0052	0.36	239.34

Notes:

- (1) The inert C&D material except slurry and bentonite are disposed at Mui Wo Temporary Public Fill Bank (MW-PFRF) or Tuen Mun Area 38 Fill Bank (TM38-FB)
- (2) The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank (TKO137FB)
- (3) The non-inert waste is disposed at NENT or Outlying Islands Transfer Facilities
- (4) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (5) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (6) Assume the density of fill material is 2 tonne/m³.
- (7) For the chemical waste: 400L of non-halogenated solvent was disposed of this month. Assume the density of the non-halogenated solvent is 0.9kg/L.

Appendix 9.1

3 Months Rolling Programme

KL-CW JV

Tentative Three Months Construction Rolling Program Contract No.: DC/2020/02 Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works	Reference No. : DC/2020/02 Revision No. : -
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Construction Activities for the reporting period

Item	Construction Activities
1	Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
2	Trenchless drilling works (Chi Ma Wan Road)
3	Excavation and ELS work at POSPS
4	Superstructure RC works at SSWSTW
5	Waterproofing work at SSWSTW
6	Excavation and site formation at SSWSTW
7	E&M installation at POSPS
8	E&M installation at SSWSTW

KL-CW JV

Tentative Three Months Construction Rolling Program Contract No.: DC/2020/02 Construction of San Shek Wan Sewage Treatment Works, Associated Submarine Outfall and Pui O Sewerage Works	Reference No. : DC/2020/02 Revision No. : -
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Tentative Three Months (April, May and June 2026) Construction Rolling Program

Item	Construction Activities
1	Excavation, sewer laying, construction of manhole at Pui O Lo Uk Tsuen, South Lantau Road, Chi Ma Wan Road
2	Excavation and site formation at SSWSTW
3	Trenchless drilling works (Chi Ma Wan Road)
4	Excavation and ELS work at POSPS
5	Superstructure RC works at SSWSTW
6	Waterproofing Work at SSWSTW
7	Retaining wall construction at SSWSTW
8	E&M installation at POSPS
9	E&M installation at SSWSTW
10	ABWF work at POSPS
11	ABWF work at SSWSTW
12	Slope Work near SSWSTW