



Monthly compliance noise monitoring report

Glebe Island / White Bay

Port Authority of New South Wales

May 2025



→ The Power of Commitment

GHD Pty Ltd | ABN 39 008 488 373

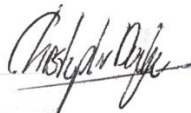



133 Castlereagh Street, Level 15

Sydney, New South Wales 2000, Australia

T +61 2 9239 7100 | F +61 2 9239 7199 | E sydmal@ghd.com | ghd.com

Author	Chris Gordon
Client name	Port Authority of New South Wales
Document title	Monthly compliance noise monitoring report – May 2025
Revision version	Rev 1
Project number	12540862

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S4	0	C Gordon	C Doyle		E Milton		01/07/2025
S4	1	C Gordon	C Doyle		E Milton		13/08/2025

© GHD 2025

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

1. Introduction

GHD Pty Ltd (GHD) has been engaged by Port Authority of New South Wales (Port Authority) to undertake compliance noise monitoring, as required by the *Port Noise Policy (Port Authority, 2020)*.

This report provides the details of the compliance noise monitoring for all vessels at berth during May 2025, as determined using the noise monitoring system. A detailed description of the permanent noise monitoring system including a map of monitoring locations is provided in the Noise Monitoring Plan, available on Port Authority's website.

2. Noise monitoring details and vessel schedule

Client	Company details	Noise monitor name	Noise monitor location	Noise monitor details / settings	Noise monitor serial numbers	Monthly calibration variance
Port Authority of New South Wales	GHD Pty Ltd	L01	Grafton Street, Balmain	Meter details Norsonic Nor145 Sound Level Meter with Nor1297 Noise Compass	14529646	Initial calibration level 90.7 dBA Min. deviation = 0.1 dB Max. deviation = 0.2 dB
	Member of the Association of Australasian Acoustical Consultants (AAAC)	L02	Maintenance Building on White Bay		14529643	Initial calibration level 91.9 dBA Min. deviation = 0.3 dB Max. deviation = 0.3 dB
	Lead staff are Members of the Australian Acoustical Society (AAS)	L03	Adjacent to White Bay 2	Meter settings A-weighted Fast time response 15 minute intervals	14529645	Initial calibration level 92.5 dBA Min. deviation = 0.3 dB Max. deviation = 0.4 dB
		L04	Onsite at Glebe Island		14529640	Initial calibration level 93.9 dBA Min. deviation = -0.1 dB Max. deviation = 0.0 dB
Vessel name	Arrival date and time	Departure date and time		Berth location	Applicable noise monitoring location/s	
Bulk vessels						
Akuna	May 10, 2025 / 06:01	May 13, 2025 / 17:44		GLB8	L03	
Crown Trader ¹	May 19, 2025 / 20:56	May 24, 2025 / 09:57		GLB7	L02/L03 ²	

Vessel name	Arrival date and time	Departure date and time	Berth location	Applicable noise monitoring location/s
Pioneer ³	May 26, 2025 / 13:48	May 29, 2025 / 09:53	GLB7	L02 ²
Kondili	May 27, 2025 / 09:26	May 29, 2025 / 12:06	GLB8	L02 ²
Cruise vessel				
Insignia	May 17, 2025 / 07:46	May 18, 2025 / 17:45	WCBT	L01
Other vessels				
Ocean Titan	May 30, 2025 / 13:24	June 4, 2025 / 19:01	WHT4	L02

Notes:

- 1) A movement of the Crown Trader was recorded at 10:15 on 24/05/2025, but the vessel did not leave GLB7
- 2) L02 was used to calculate noise levels during periods of time when L03 was not operational.
- 3) Pioneer moved from GLB7 to WHT4 at 07:48 on 27/05/2025 and returned to GLB7 at 10:18 the same day.

2.1 Compliance summary

2.2 Bulk vessels / other vessels

Vessel	Dates at berth	Monitor location	Vessel Noise Level, dBA (inclusive of any modifying factor penalties)			Vessel Noise Trigger Levels, dBA			Compliance ¹		
			Day ² L _{Aeq} (15 hr)	Night ³ L _{Aeq} (1 hr)	Night L _{Amax}	Day ² L _{Aeq} (15 hr)	Night ³ L _{Aeq} (1 hr)	Night L _{Amax}	Day ² L _{Aeq} (15 hr)	Night ³ L _{Aeq} (1 hr)	Night L _{Amax}
Akuna	May 10 – May 13	L03	52	49	64	60	55	65	Yes	Yes	Yes
Crown Trader	May 19 – May 24	L03	53	54	59	60	55	65	Yes	Yes	Yes
Pioneer ⁴	May 26 – May 29	L02	57	54	63	60	55	65	Yes	Yes	Yes
Kondili ⁴	May 27 – May 29	L02				60	55	65			
Ocean Titan	May 30 – June 4	L02	55	52	66 ⁵	60	55	65	Yes	Yes	Yes ⁵

Notes:

- 1) If non-compliance is detected, a detailed investigation of the results will be undertaken and reported separately if required
- 2) Daytime period (7 am to 10 pm) – 15 hour logarithmic average
- 3) Night-time (10 pm to 7 am) – loudest 1 hour period
- 4) Pioneer (GLB7) and Kondili (GLB8) both present simultaneously. Noise was attributed to the Kondili at this time and is included below in Section 3.4. Given noise levels were compliant, no further analysis has been undertaken
- 5) This maximum level event occurred once during the night time period of June 3. Given the minor exceedance, the fact it only occurred once, and the vessel was compliant at all other times, therefore this is not considered a significant exceedance.

2.3 Cruise vessels

Vessel	Dates at berth	Monitor location	Vessel Noise Level, dBA (inclusive of any modifying factor penalties)		Vessel Noise Trigger Levels, dBA		Compliance ¹	
			Day ² L _{Aeq} (15 hr)	Night ³ L _{Aeq} (9 hr)	Day ² L _{Aeq} (15 hr)	Night ³ L _{Aeq} (9 hr)	Day ⁴	Night
Insignia	May 17	L01	53	54	N/A	58	N/A	Yes
	May 18		55	-	N/A	58	N/A	-

Notes:

- 1) If non-compliance is detected, a detailed investigation of the results will be undertaken and reported separately if required
- 2) Daytime period (7 am to 10 pm) – 15 hour logarithmic average
- 3) Night-time (10 pm to 7 am) – 9 hour logarithmic average
- 4) Port Authority provides attenuation to a defined area of residences where noise modelling indicates that current noise levels reach or exceed 55 dBA **at night** ('attenuation eligibility trigger'). Under the White Bay Cruise Terminal Noise Restriction Policy, cruise ship noise which causes further residences than those currently identified to exceed the attenuation eligibility trigger is considered to be Excessive Noise. Hence under the Noise Restriction Policy a day time trigger level does not apply. The area of residences currently offered attenuation (ie meeting the 'attenuation eligibility trigger') is based on a reference cruise vessel intrusive noise level of 58 dBA at the nearest residence, which sets the Vessel Noise Trigger Level for assessing compliance at night.

Excessive noise is defined as "any noise including but not limited to engine, generator or ventilation noise which causes further residences than those currently identified to exceed the attenuation eligibility trigger."

3. Detailed results – bulk vessels / other vessels

3.1 Akuna (GLB8) – May 10 – May 13, 2025

3.1.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ²	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
May 9, 2025 ⁴	Day	L03	L _{Aeq} , 15 hour ¹	-	-	-	-	-
	Night		L _{Aeq} , 1 hour ¹	48	No	Yes	55	Yes
			L _{Amax}	54	-	-	65	Yes
May 10, 2025	Day	L03	L _{Aeq} , 15 hour ¹	50	No ⁵	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	49	No	Yes	55	Yes
			L _{Amax}	64	-	-	65	Yes
May 11, 2025	Day	L03	L _{Aeq} , 15 hour ¹	49	No ⁵	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	46	No	Yes	55	Yes
			L _{Amax}	58	-	-	65	Yes
May 12, 2025	Day	L03	L _{Aeq} , 15 hour ¹	52	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	47	No	Yes	55	Yes
			L _{Amax}	58	-	-	65	Yes
May 13, 2025	Day	L03	L _{Aeq} , 15 hour ¹	49	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	-	-	-	-	-
			L _{Amax}	-	-	-	-	-

Notes

1) Daytime period (7 am to 10 pm) – 15 hours

Night-time period (10 pm to 7 am) – worst case 1 hour

2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

4) Note that the system classifies May 9 as the period from 7 am on May 9 to 7 am on May 10. The Akuna arrived at 06:01 am on May 10, and has been incorporated in the data for May 9

5) Measurements determined that noise was tonal at 6,300 Hz for periods during this nighttime period. A further review into the data determined that this was likely associated with extraneous noise in the area rather than the vessel. As such, no tonal correction has been applied.

3.1.2 Additional information

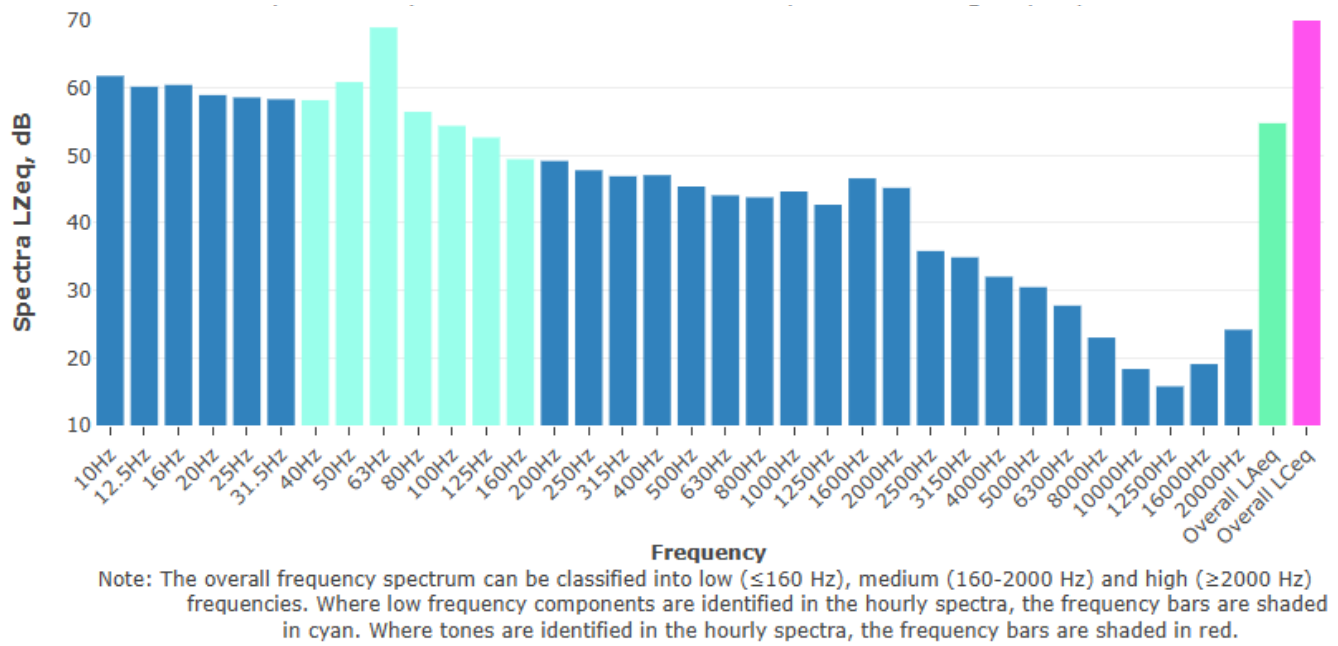


Figure 3.1 Typical vessel spectrum – noise level at L03

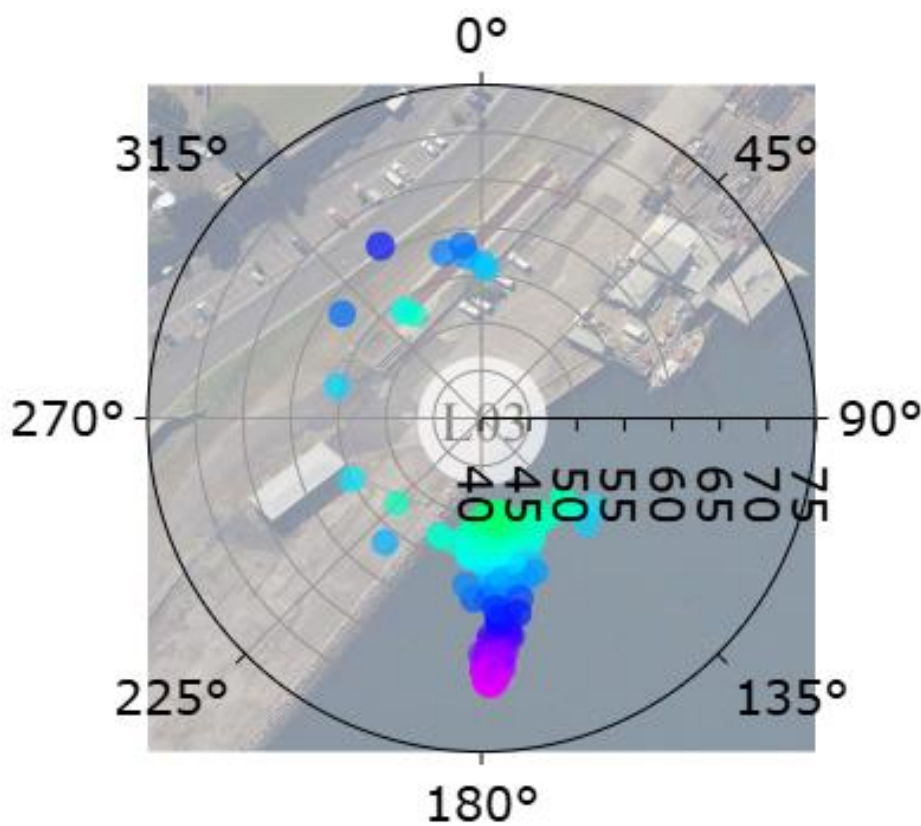


Figure 3.2 Typical vessel polar (directional) plot

3.2 Crown Trader (GLB7) – May 19 – May 24, 2025

3.2.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ²	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
May 19, 2025	Day	L03	L _{Aeq} , 15 hour ¹	48	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	49	No	Yes	55	Yes
			L _{Amax}	69 ⁴	-	-	65	Yes ⁴
May 20, 2025	Day	L03	L _{Aeq} , 15 hour ¹	48	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	52	No	Yes	55	Yes
			L _{Amax}	62	-	-	65	Yes
May 21, 2025	Day	L03	L _{Aeq} , 15 hour ¹	49	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	50	No	Yes	55	Yes
			L _{Amax}	73 ⁵	-	-	65	Yes ⁵
May 22, 2025	Day	L03	L _{Aeq} , 15 hour ¹	51	No	Yes	60	NA
	Night		L _{Aeq} , 1 hour ¹	_ ⁶	No	Yes	55	NA
			L _{Amax}	_ ⁶	-	-	65	NA
May 23, 2025	Day	L02 ⁷	L _{Aeq} , 15 hour ¹	53	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	54	No	Yes	55	Yes
			L _{Amax}	59	-	-	65	Yes
May 24, 2025	Day	L02 ⁷	L _{Aeq} , 15 hour ¹	51	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	-	-	-	55	-
			L _{Amax}	-	-	-	65	-

Notes

1) Daytime period (7 am to 10 pm) – 15 hours

Night-time period (10 pm to 7 am) – worst case 1 hour

2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

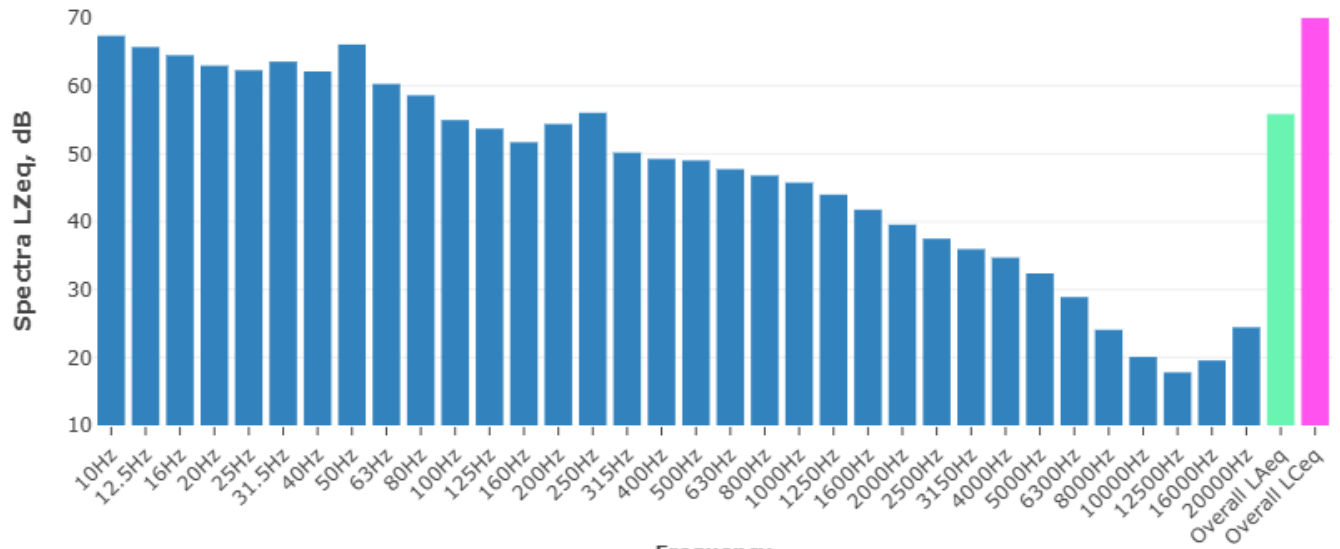
4) Maximum noise level events were impacted by high winds during this period. The measured levels were not associated with the vessel, therefore compliance is achieved during this period

5) A review of the audio files indicated that the measured noise levels were not associated with the vessel during this period, and seemed to indicate interference at the microphone, potentially from wind

6) No data during this period due to rain and high winds

7) L03 was not operational at this time. L02 has been used to determine noise levels from the vessel.

3.2.2 Additional Information



Note: The overall frequency spectrum can be classified into low (≤ 160 Hz), medium (160-2000 Hz) and high (≥ 2000 Hz) frequencies. Where low frequency components are identified in the hourly spectra, the frequency bars are shaded in cyan. Where tones are identified in the hourly spectra, the frequency bars are shaded in red.

Figure 3.3 Typical vessel spectrum – noise level at L03

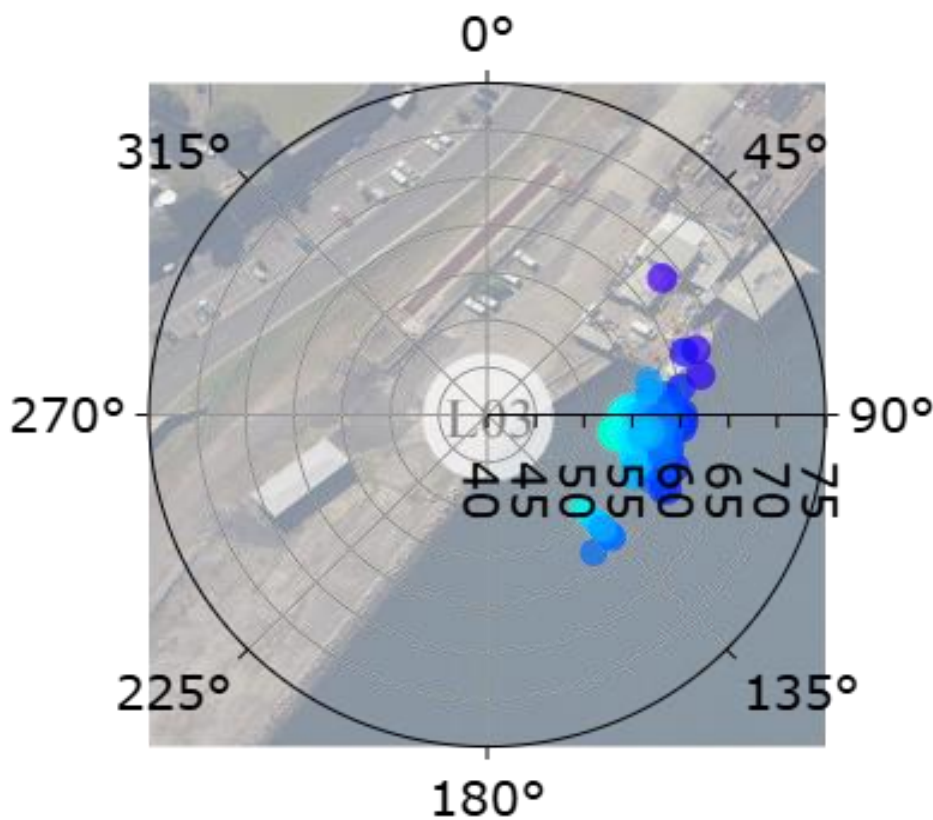


Figure 3.4 Typical vessel polar (directional) plot

3.3 Pioneer (GLB7) – May 26 – May 29, 2025

3.3.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ²	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
May 26, 2025	Day	L03						The system was not operational during this period. Given the vessel was compliant between May 27 and May 29 with the Kondili also present, it is likely that the vessel was also compliant on May 26.
	Night							
May 27, 2025	Day	L02						
	Night							
May 28, 2025	Day	L02						Pioneer (GLB7) and Kondili (GLB8) were both present at this time. Noise was attributed to the Kondili at this time and is included below in Section 3.4. Given noise levels were compliant, no further analysis has been undertaken.
	Night							
May 29, 2025	Day	L02						
	Night							
<p>Notes</p> <p>1) Daytime period (7 am to 10 pm) – 15 hours Night-time period (10 pm to 7 am) – worst case 1 hour</p> <p>2) Inclusive of any penalties for modifying factors</p> <p>3) LFN = Low Frequency Noise</p>								

3.4 Kondili (GLB8) – May 27 – May 29, 2025

3.4.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ²	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
May 27, 2025	Day	L02 ⁴	L _{Aeq} , 15 hour ¹	55	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	53	No	Yes	55	Yes
			L _{Amax}	63	-	-	65	Yes
May 28, 2025	Day	L02 ⁴	L _{Aeq} , 15 hour ¹	57	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	54	No	Yes	55	Yes
			L _{Amax}	62	-	-	65	Yes
May 29, 2025	Day	L02 ⁴	L _{Aeq} , 15 hour ¹	- ⁵	-	-	60	-
	Night		L _{Aeq} , 1 hour ¹	-	-	-	55	-
			L _{Amax}	-	-	-	65	-

Notes

1) Daytime period (7 am to 10 pm) – 15 hours

Night-time period (10 pm to 7 am) – worst case 1 hour

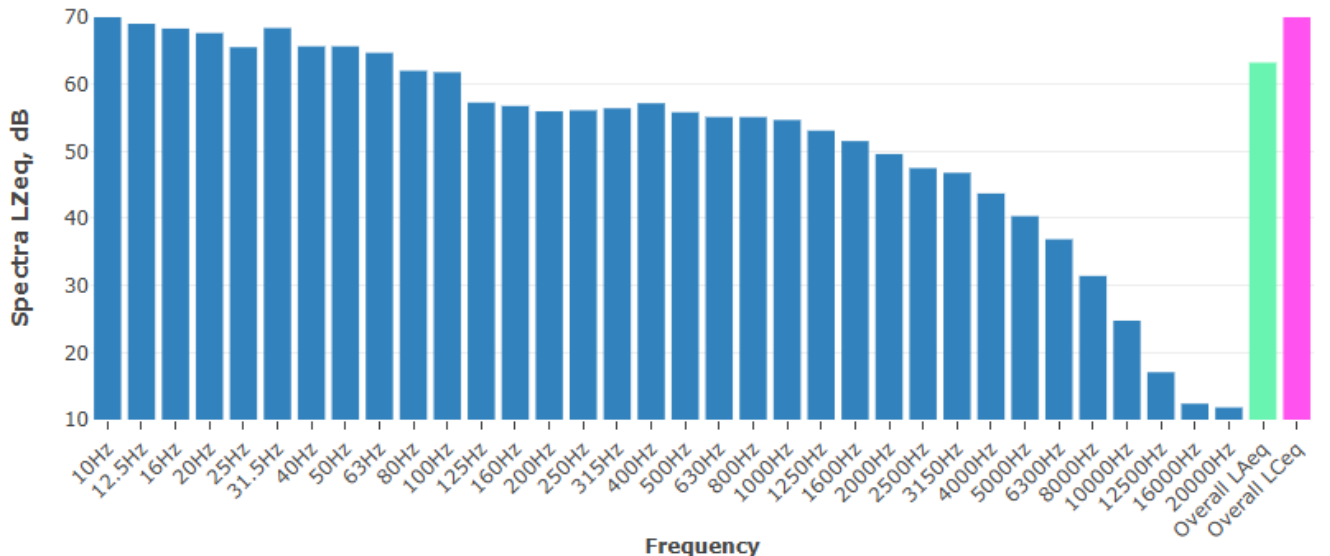
2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

4) L03 was not operational during this period. Noise levels at L02 were used to determine noise impacts from the vessel.

5) No data during this period due to high winds

3.4.2 Additional information



Note: The overall frequency spectrum can be classified into low (≤ 160 Hz), medium (160-2000 Hz) and high (≥ 2000 Hz) frequencies. Where low frequency components are identified in the hourly spectra, the frequency bars are shaded in cyan. Where tones are identified in the hourly spectra, the frequency bars are shaded in red.

Figure 3.5 Typical vessel spectrum – noise level at L03

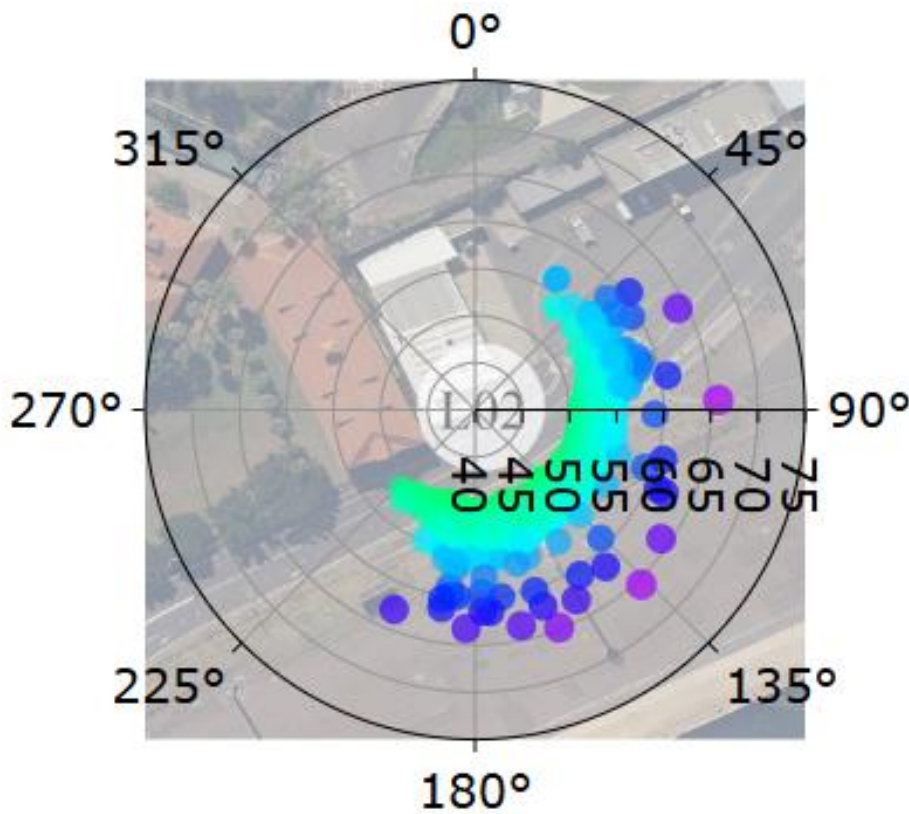


Figure 3.6 Typical vessel polar (directional) plot – L02

3.5 Ocean Titan (WHT4) – May 30 – June 4, 2025

3.5.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ^{2,4}	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
May 30, 2025 ⁴	Day	L02	L _{Aeq} , 15 hour ¹	52	No	No	60	Yes
	Night		L _{Aeq} , 1 hour ¹	50	No	Yes	55	Yes
			L _{Amax}	65	-	-	65	Yes
May 31, 2025	Day	L02	L _{Aeq} , 15 hour ¹	51	No	No	60	Yes
	Night		L _{Aeq} , 1 hour ¹	51	No	No	55	Yes
			L _{Amax}	64	-	-	65	Yes
June 1, 2025	Day	L02	L _{Aeq} , 15 hour ¹	52	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	51	No	Yes	55	Yes
			L _{Amax}	61	-	-	65	Yes
June 2, 2025	Day	L02	L _{Aeq} , 15 hour ¹	51	No	No	60	Yes
	Night		L _{Aeq} , 1 hour ¹	51	No	No	55	Yes
			L _{Amax}	65	-	-	65	Yes
June 3, 2025	Day	L02	L _{Aeq} , 15 hour ¹	53	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	52	No	Yes	60	Yes
			L _{Amax}	66 ⁵	-	-	-	Yes ⁵
June 4, 2025	Day	L02	L _{Aeq} , 15 hour ¹	55	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	-	-	-	-	-
			L _{Amax}	-	-	-	-	-

Notes

1) Daytime period (7 am to 10 pm) – 15 hours

Night-time period (10 pm to 7 am) – worst case 1 hour

2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

4) Due to extraneous noise, L90 statistical data has been used to determine the L_{Aeq}

5) This maximum level event occurred once during the night time period of June 3. Given the minor exceedance, the fact it only occurred once, and the vessel was compliant at all other times, therefore this is not considered a significant exceedance.

3.5.2 Additional information

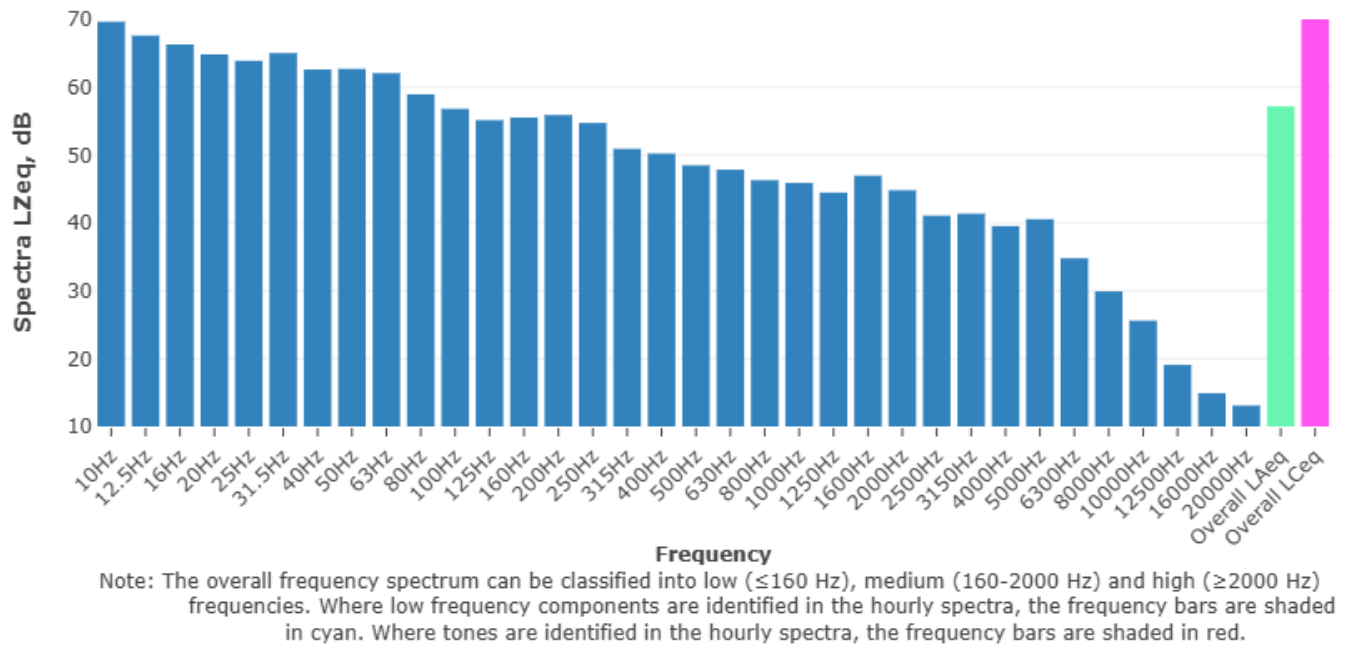


Figure 3.7 Typical vessel spectrum – noise level at L02

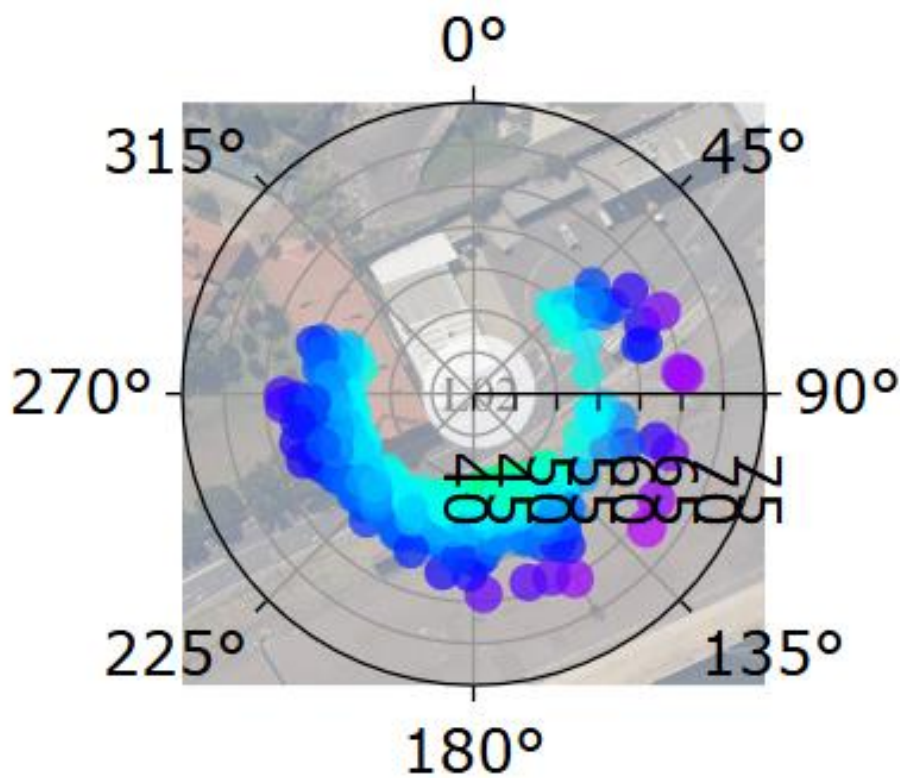


Figure 3.8 Typical vessel polar (directional) plot



ghd.com

→ **The Power of Commitment**