



Monthly compliance noise monitoring report

Glebe Island / White Bay

Port Authority of New South Wales

October 2024



→ The Power of Commitment

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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 October 2024, 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 Member of the Association of Australasian Acoustical Consultants (AAAC) Lead staff are Members of the Australian Acoustical Society (AAS)	L01	Grafton Street, Balmain	Meter details Norsonic Nor145 Sound Level Meter with Nor1297 Noise Compass Meter settings A-weighted Fast time response 15 minute intervals	14529646	Initial calibration level 90.7 dBA Min. deviation = 0.0 dB Max. deviation = 0.1 dB
		L02	Maintenance Building on White Bay		14529643	Initial calibration level 91.9 dBA Min. deviation = 0.3 dB Max. deviation = 0.3 dB
		L03	Adjacent to White Bay 2		14529645	Initial calibration level 92.5 dBA Min. deviation = 0.2 dB Max. deviation = 0.3 dB
		L04	Onsite at Glebe Island		14529640	Initial calibration level 93.9 dBA Min. deviation = -0.1 dB Max. deviation = 0 dB
Vessel name	Arrival date and time	Departure date and time		Berth location	Applicable noise monitoring location/s	
Bulk vessels						
Pioneer ¹	September 30, 2024 / 20:03	October 4, 2024 / 10:57		GLB7	L03	
Elanora	October 4, 2024 / 14:26	October 7, 2024 / 17:52		GLB7	L03	

Vessel name	Arrival date and time	Departure date and time	Berth location	Applicable noise monitoring location/s
Kondili	October 11, 2024 / 06:01	October 13, 2024 / 10:55	GLB8	L03
Elanora	October 21, 2024 / 19:30	October 24, 2024 / 11:52	GLB7	L03
Kondili	October 27, 2024 / 16:48	October 28, 2024 / 21:02	GLB8	L03
Cruise vessel				
The World	October 10, 2024 / 00:35	October 10, 2024 / 23:05	WHT4	L01/L02
Pacific Adventure	October 10, 2024 / 06:55	October 10, 2024 / 17:01	WBCT	L01
Disney Wonder ²	October 18, 2024 / 04:39	October 19, 2024 / 20:00	WHT4/WBCT	L01/L02
Pacific Adventure	October 18, 2024 / 06:48	October 18, 2024 / 16:05	WBCT	L01

Note: 1) Detailed results for this visit of the Pioneer is provided in the September 2024 monthly report.

Note: 2) On 18/10/2024 at 18:45, Disney Wonder moved from WHT4 to WBCT. Then, it departed WBCT on 19/10/2024 at 20:00

2.1 Compliance summary

2.2 Bulk 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 ³ L _{Amax}	Day	Night
Pioneer ⁴	Sep 30 – Oct 4	L03	51	49	64	60	55	65	Yes	Yes
Elanora	Oct 4 – Oct 7	L03	51	52	64	60	55	65	Yes	Yes
Kondili	Oct 11 – Oct 13	L03	53	55	66 ⁵	60	55	65	Yes	No ⁵
Elanora	Oct 21 – Oct 24	L03	54	54	65	60	55	65	Yes	Yes
Kondili	Oct 27 – Oct 28	L03	57	49	66 ⁶	60	55	65	Yes	No ⁶

Note: 1) If non-compliance is detected, a detailed investigation of the results will be undertaken and reported separately if required

Note: 2) Daytime period (7 am to 10 pm) – 15 hour logarithmic average

Note: 3) Night-time (10 pm to 7 am) – loudest 1 hour period

Note: 4) This summary result is for the entire visit from September 30 to October 3. Detailed results for this visit of the Pioneer are provided in the September 2024 monthly report for the entire visit, including October.

Note: 5) This maximum level event only occurred once during the entire night time period of October 12, 2024. Given it only occurred once and only a 1 dB above the maximum noise trigger level, this is not considered an adverse impact. The vessel was compliant with the night time vessel noise trigger level at all other times during the night of October 12, 2024.

Note: 6) This maximum level event only occurred once during the entire night time period on 27 October 2024. Given it only occurred once and only a 1 dB above the maximum noise trigger level, this is not considered an adverse impact. The vessel was compliant with the night time vessel noise trigger level at all other times during the visit. Note that there was a minor exceedance for the Kondili during the visit earlier in the month.

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
The World	Oct 9 ⁵	L01/L02	-	51	N/A	58	N/A	Yes
	Oct 10	L01/L02	53 ⁶	53 ⁶	N/A	58	N/A	Yes
Pacific Adventure	Oct 10	L01	58	- ⁷	N/A	58	N/A	-
Disney Wonder	Oct 17 ⁸	L01/L02	-	51	N/A	58	N/A	Yes
Disney Wonder (WHT4)	Oct 18 ⁹	L01/L02	53	-	N/A	58	N/A	-

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
Disney Wonder (WBCT)	Oct 18 ⁹	L01	52	51	N/A	58	N/A	Yes
Disney Wonder	Oct 19	L01	55		N/A	58	N/A	-
Pacific Adventure	Oct 18	L01	58	-	N/A	58	N/A	-

Note: 1) If non-compliance is detected, a detailed investigation of the results will be undertaken and reported separately if required

Note: 2) Daytime period (7 am to 10 pm) – 15 hour logarithmic average

Note: 3) Night-time (10 pm to 7 am) – 9 hour logarithmic average

Note: 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.”

Note: 5) Note that the system classifies October 9 as the period from 7 am on October 9 to 7 am on October 10. The World arrived at 12:35 am on October 10, and has been incorporated in the data for October 9.

Note: 6) The data for this period has been analysed and extraneous noise has been excluded.

Note: 7) The Pacific Adventure arrived 5 minutes prior to the end of the night time period. As such, a noise level has not been provided for this period.

Note: 8) Note that the system classifies October 17 as the period from 7 am on October 17 to 7 am on October 18. The Disney Wonder arrived at 04:39 am on October 18, and has been incorporated in the data for October 17.

Note: 9) On 18/10/2024 at 18:45, Disney Wonder moved from WHT4 to WBCT. Then, it departed WBCT on 19/10/2024 at 20:00

3. Detailed results – bulk vessels

3.1 Elanora (GLB7) – October 4 – October 7, 2024

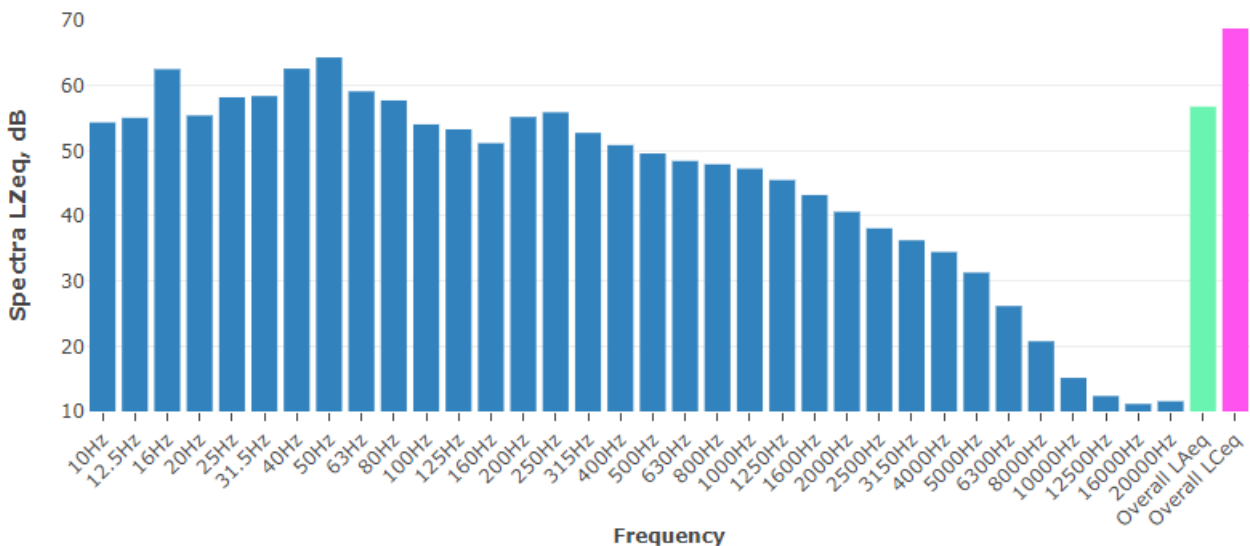
3.1.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ²	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
October 4, 2024	Day	L03	L _{Aeq} , 15 hour ¹	51	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	52	No	Yes	55	Yes
			L _{Amax}	60	-	-	65	Yes
October 5, 2024	Day	L03	L _{Aeq} , 15 hour ¹	51	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	52	No	Yes	55	Yes
			L _{Amax}	64	-	-	65	Yes
October 6, 2024	Day	L03	L _{Aeq} , 15 hour ¹	51	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	52	No	Yes	55	Yes
			L _{Amax}	64	-	-	65	Yes
October 7, 2024	Day	L03	L _{Aeq} , 15 hour ¹	49	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	-	-	-	55	-
			L _{Amax}	-	-	-	65	-

Notes

- Daytime period (7 am to 10 pm) – 15 hours
Night-time period (10 pm to 7 am) – worst case 1 hour
- Inclusive of any penalties for modifying factors
- LFN = Low Frequency Noise

3.1.2 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 3.1 Typical vessel spectrum – noise level at L03

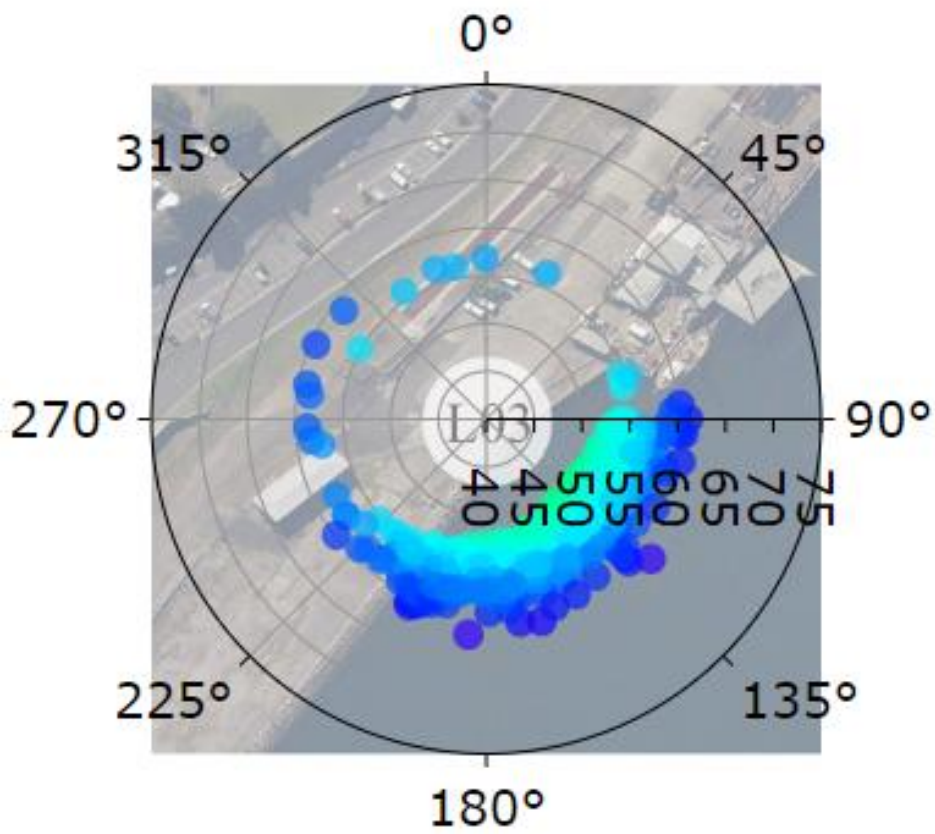


Figure 3.2 Typical vessel polar (directional) plot

3.2 Kondili (GLB8) – October 11 – October 13, 2024

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
October 10 ⁴ 2024	Day	L03	L _{Aeq} , 15 hour ¹	-	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	49	No	Yes	55	Yes
			L _{Amax}	57	-	-	65	Yes
October 11 2024	Day	L03	L _{Aeq} , 15 hour ¹	53	Yes	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	55	No	Yes	55	Yes
			L _{Amax}	64	-	-	65	Yes
October 12 2024	Day	L03	L _{Aeq} , 15 hour ¹	54	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	49	No	Yes	55	Yes
			L _{Amax}	66 ⁵	-	-	65	No ⁵
October 13 2024	Day	L03	L _{Aeq} , 15 hour ¹	50	No	No	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

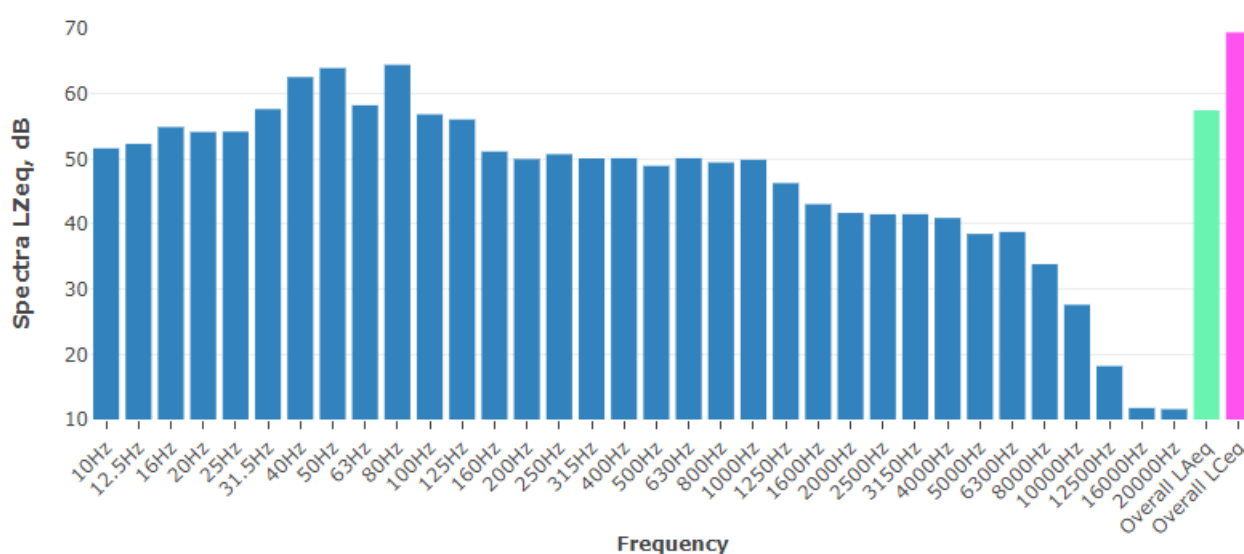
2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

4) Note that the system classifies October 10 as the period from 7 am on October 10 to 7 am on October 11. The Kondili arrived at 6:01 am on October 11, and has been incorporated in the data for October 10.

5) This maximum level event only occurred once during the entire night time period of October 12, 2024. Given it only occurred once and only a 1 dB above the maximum noise trigger level, this is not considered an adverse impact. The vessel was compliant with the night time vessel noise trigger level at all other times during the visit.

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

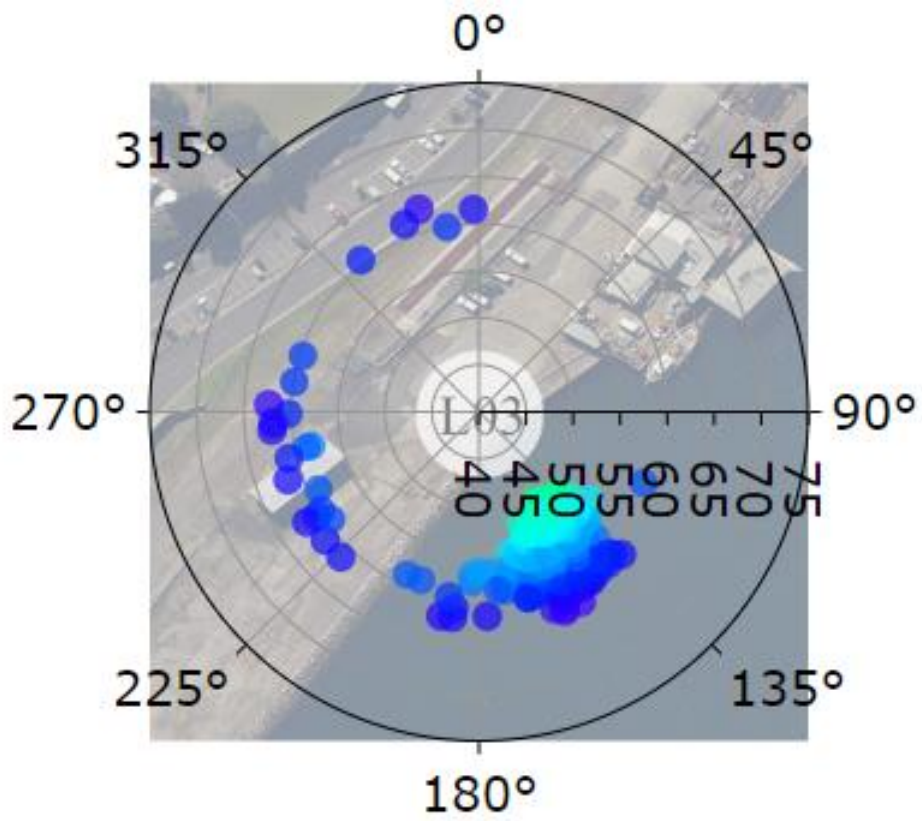


Figure 3.4 Typical vessel polar (directional) plot

3.3 Elanora (GLB7) – October 21– October 24, 2024

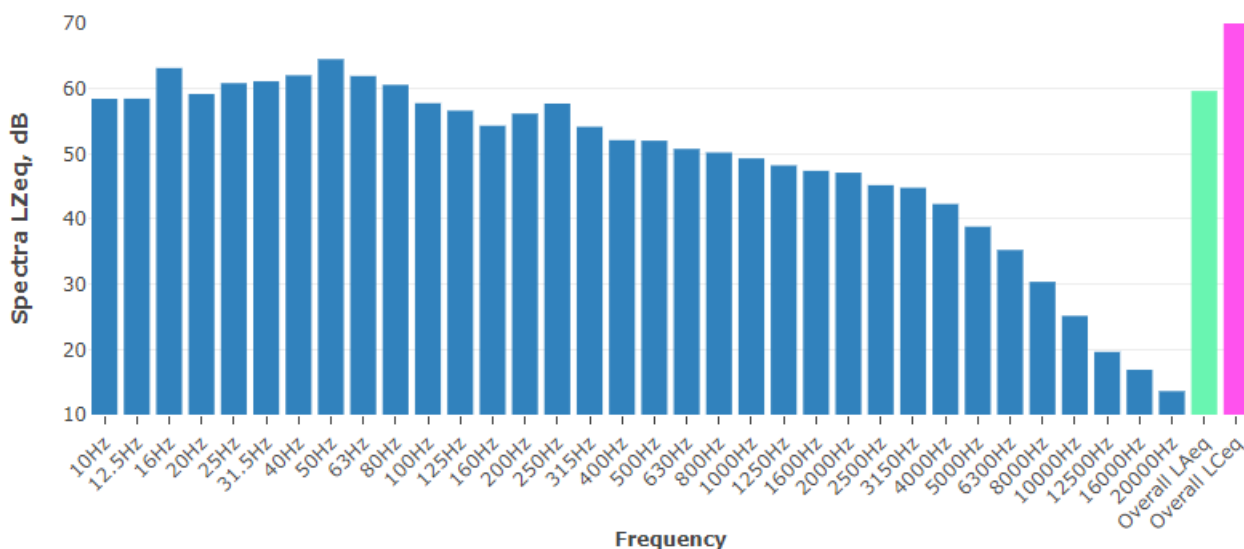
3.3.1 Daily noise monitoring results

Date	Time period ¹	Monitor location	Noise descriptor	Vessel noise level dBA ²	Tonal	LFN ³	Vessel Noise Trigger Levels, dBA	Compliance
October 21, 2024	Day	L03	L _{Aeq} , 15 hour ¹	52	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	52	No	Yes	55	Yes
			L _{Amax}	64	-	-	65	Yes
October 22, 2024	Day	L03	L _{Aeq} , 15 hour ¹	54	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	54	No	Yes	55	Yes
			L _{Amax}	62	-	-	65	Yes
October 23, 2024	Day	L03	L _{Aeq} , 15 hour ¹	53	No	Yes	60	Yes
	Night		L _{Aeq} , 1 hour ¹	54	No	Yes	55	Yes
			L _{Amax}	65	-	-	65	Yes
October 24, 2024	Day	L03	L _{Aeq} , 15 hour ¹	56	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

3.3.2 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

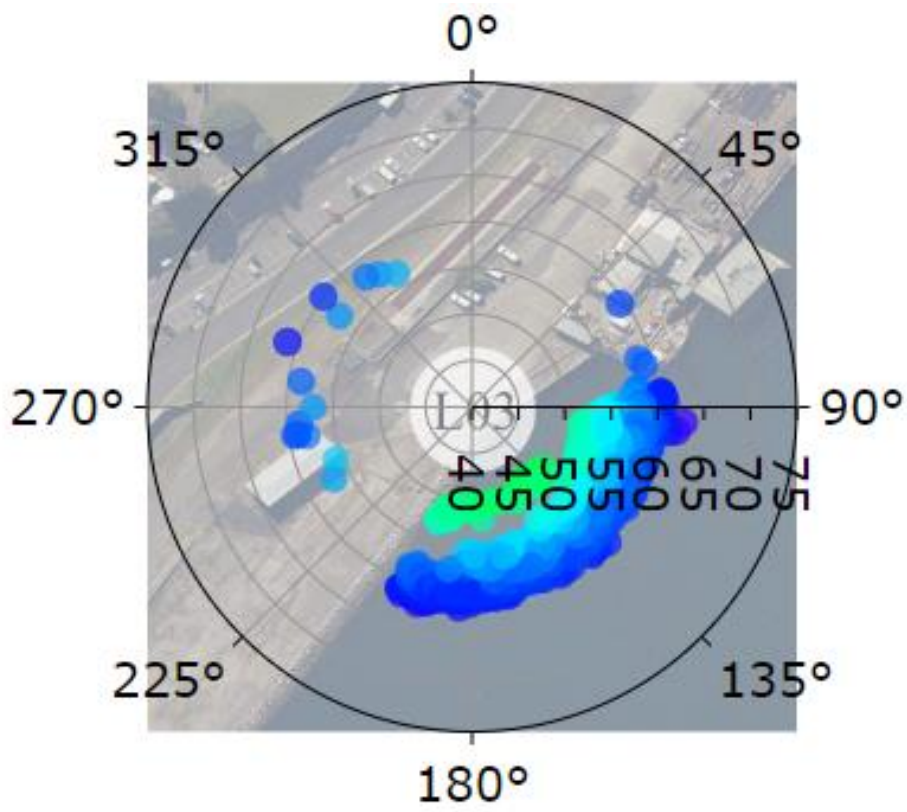


Figure 3.6 Typical vessel polar (directional) plot

3.4 Kondili (GLB8) – October 27 – October 28, 2024

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
October 27, 2024	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}	66 ⁴	-	-	65	No ⁴
October 28, 2024	Day	L03	L _{Aeq} , 15 hour ¹	57	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

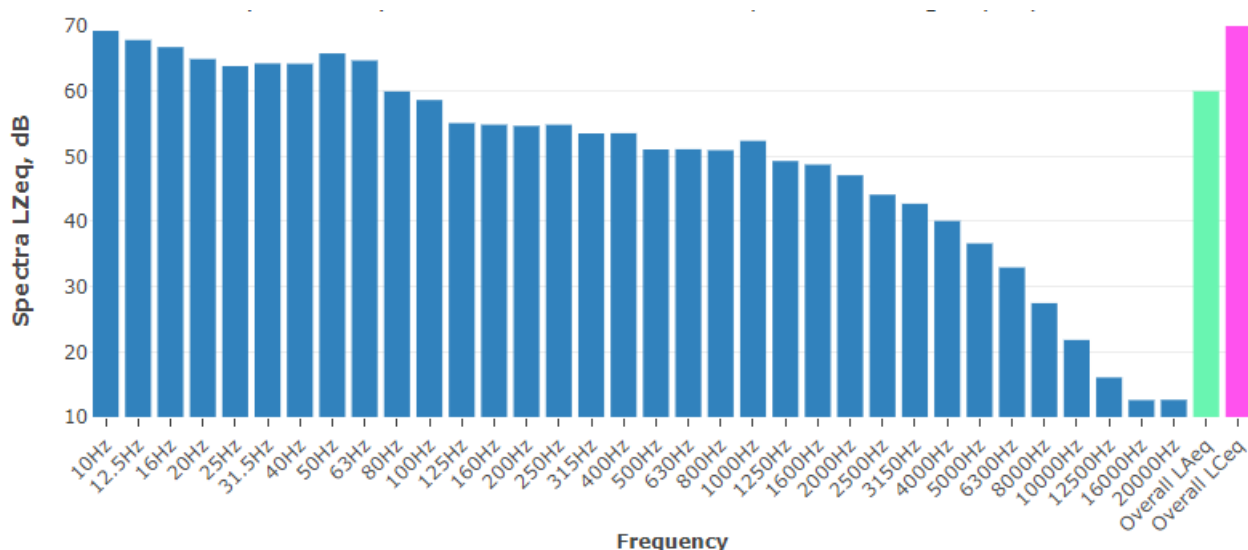
Night-time period (10 pm to 7 am) – worst case 1 hour

2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

4) This maximum level event only occurred once during the entire night time period on 27 October 2024. Given it only occurred once and only a 1 dB above the maximum noise trigger level, this is not considered an adverse impact. The vessel was compliant with the night time vessel noise trigger level at all other times during the visit. Note that there was a minor exceedance for the Kondili during the visit earlier in the month.

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 3.7 Typical vessel spectrum – noise level at L03

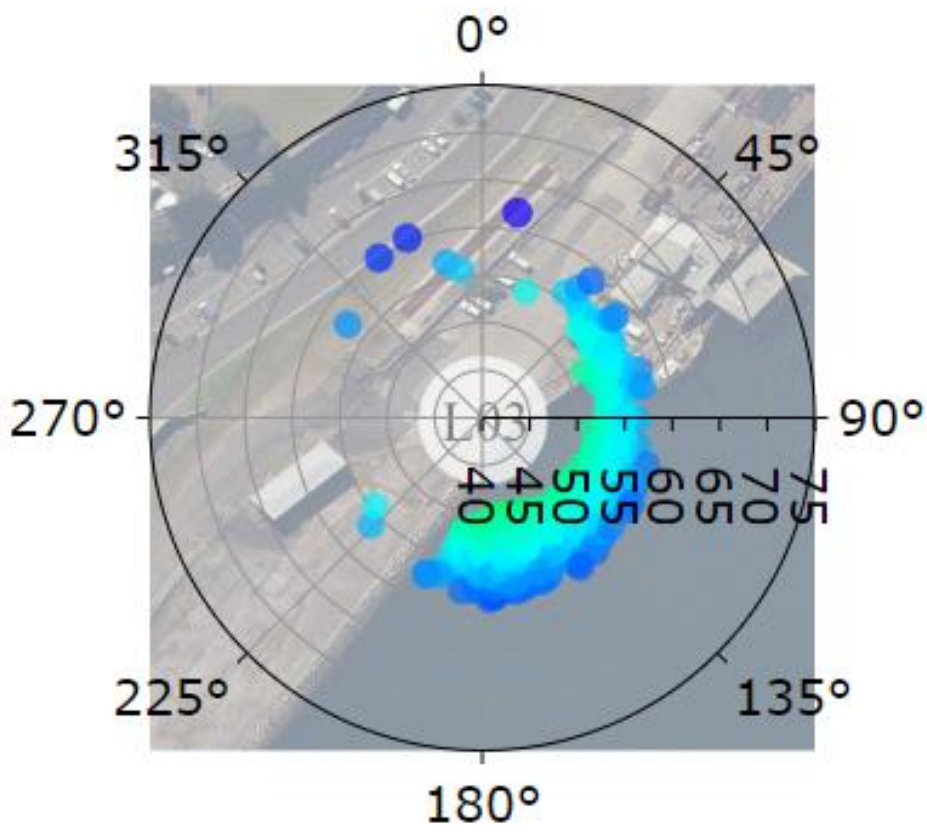


Figure 3.8 Typical vessel polar (directional) plot



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