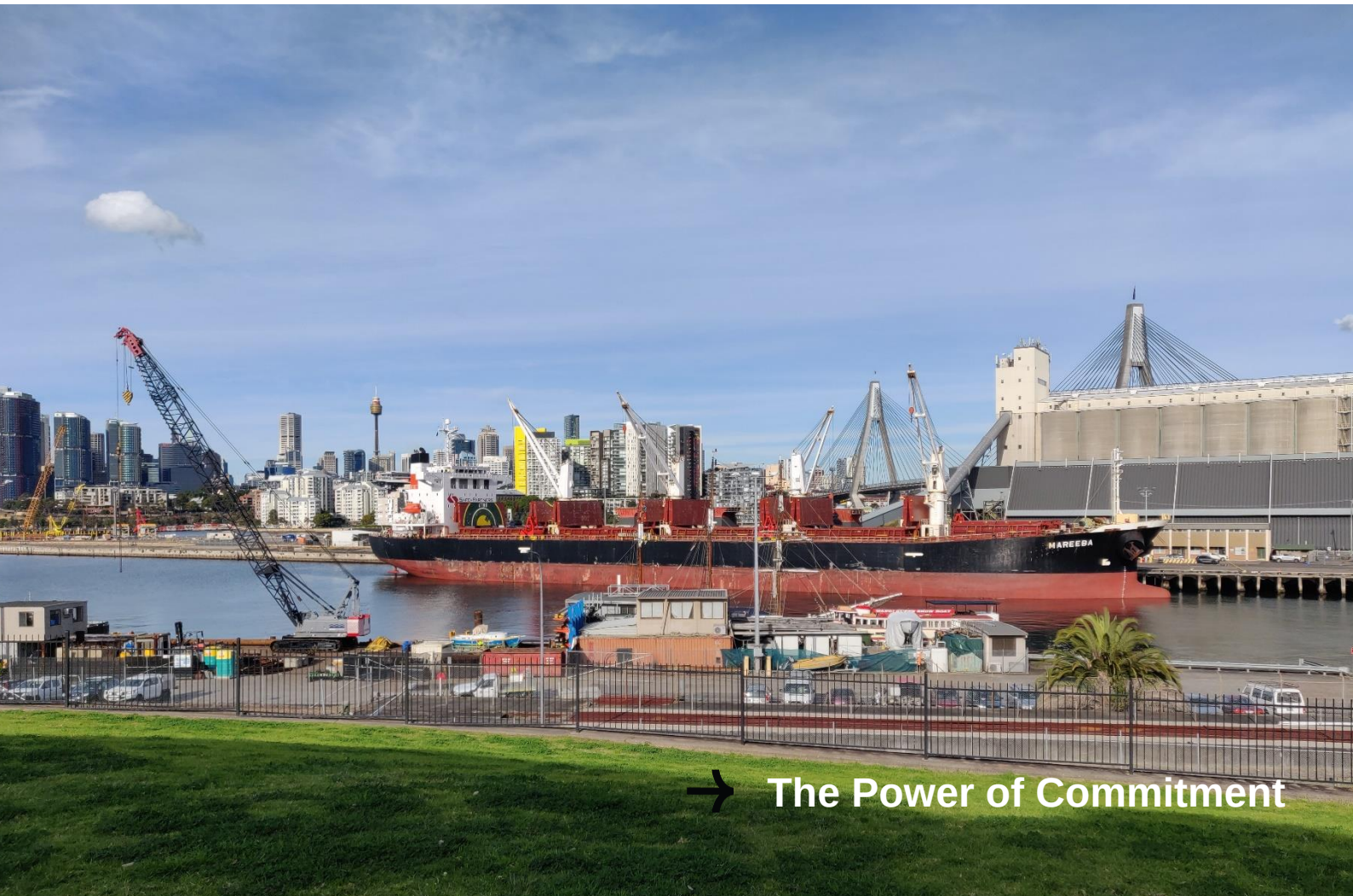
Monthly compliance noise monitoring report

Glebe Island / White Bay

Port Authority of New South Wales

December 2024



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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 December 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 = 0.1 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 = 0.2 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				
Wyuna	December 12, 2024 / 06:31	December 14, 2024 / 06:03	GLB8	L03
Luga	December 24, 2024 / 03:49	December 28, 2024 / 07:06	GLB8	L03

Vessel name	Arrival date and time	Departure date and time	Berth location	Applicable noise monitoring location/s
Cruise vessel				
Regatta	December 2, 2024 / 10:40	December 3, 2024 / 14:10	WBCT	L01
Silver Nova[1]	December 4, 2024 / 06:23	December 4, 2024 / 19:02	WBCT	L01
Pacific Adventure	December 10, 2024 / 07:29	December 10, 2024 / 18:38	WBCT	L01
Pacific Adventure	December 14, 2024 / 05:30	December 14, 2024 / 16:19	WBCT	L01
Seven Seas Explorer	December 19, 2024 / 07:48	December 20, 2024 / 17:46	WBCT	L01
Silver Muse	December 20, 2024 / 06:57	December 20, 2024 / 18:57	WHT4	L02
Disney Wonder[2]	December 21, 2024 / 06:13	December 21, 2024 / 16:59	WBCT	L01
Regatta	December 22, 2024 / 06:22	December 22, 2024 / 17:47	WBCT	L01
Viking Venus	December 23, 2024 / 05:38	December 24, 2024 / 13:59	WBCT	L01
Viking Orion	December 26, 2024 / 07:45	December 28, 2024 / 18:00	WHT4	L02
Pacific Adventure	December 27, 2024 / 04:35	December 27, 2024 / 15:58	WBCT	L01
Disney Wonder	December 28, 2024 / 04:52	December 28, 2024 / 16:59	WBCT	L01
Aidasol	December 29, 2024 / 00:22	December 30, 2024 / 00:01	WBCT	L01
Pacific Adventure	December 30, 2024 / 05:54	December 30, 2024 / 16:00	WBCT	L01
Azamara Pursuit	December 31, 2024 / 08:20	January 2, 2025 / 15:54	WBCT	L01

Note: 1) Complaint received regarding noise potentially related to alarms and announcements at around 7am on 04/12/2024. Port Authority's investigation has confirmed it was a safety announcement, which is acceptable under the Noise Restriction Policy.

Note: 2) A noise complaint for Disney Wonder on 21 December which was found to be a breach of our noise policy for White Bay. Disney Wonder played music on deck on 21 December 2024. They were issued a notice of the non-compliance, which was recorded on Port Authority's database. As it is the first non-compliance no further action required at this stage.

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 $L_{Aeq(15\ hr)}$	Night $L_{Aeq(1\ hr)}$	Night L_{Amax}	Day[2] $L_{Aeq(15\ hr)}$	Night $L_{Aeq(1\ hr)}$	Night L_{Amax}	Day	Night
Wyuna	Dec 12 – Dec 14	L03	55	52	69[4]	60	55	65	Yes	No[4]
Luga	Dec 24 – Dec 28	L03	54	54	68[5]	60	55	65	Yes	No[5]

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 maximum level event only occurred once during the entire night time period of December 12. Given it only occurred once, 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: 5) This maximum level event only occurred once during the entire night time period of December 25. Given it only occurred once, 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.

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
Regatta	Dec 2	L01	52	47	N/A	58	N/A	Yes
	Dec 3	L01	51	-	N/A	58	N/A	-
Silver Nova	Dec 4	L01	57	56	N/A	58	N/A	Yes
Pacific Adventure	Dec 10	L01	57	-	N/A	58	N/A	-
Pacific Adventure	Dec 14	L01	56	52	N/A	58	N/A	Yes
Seven Seas Explorer	Dec 19	L01	56	55	N/A	58	N/A	Yes
	Dec 20	L01	58	-	N/A	58	N/A	-
Silver Muse	Dec 20	L02	52	53	N/A	58	N/A	Yes
Disney Wonder	Dec 21	L01	58	53	N/A	58	N/A	Yes
Regatta	Dec 22	L01	52	53	N/A	58	N/A	Yes
Viking Venus	Dec 23	L01	55	51	N/A	58	N/A	Yes
	Dec 24	L01	54	-	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
Viking Orion	Dec 26	L02	51	50	N/A	58	N/A	Yes
	Dec 27	L02	55	51	N/A	58	N/A	Yes
	Dec 28	L02	54	-	N/A	58	N/A	-
Pacific Adventure	Dec 27	L01	58	55	N/A	58	N/A	Yes
Disney Wonder	Dec 28	L01	57	56	N/A	58	N/A	Yes
Aidasol	Dec 29	L01	55	50	N/A	58	N/A	Yes
Pacific Adventure	Dec 30	L01	57	58	N/A	58	N/A	Yes
Azamara Pursuit	Dec 31	L01	57	50[5]	N/A	58	N/A	Yes
	Jan 1	L01	51	51	N/A	58	N/A	Yes
	Jan 2	L01	54	-	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) Noise levels were impacted by the New Year's Eve fireworks. These have excluded from these results.

3. Detailed results – bulk vessels

3.1 Wyuna (GLB8) – December 12 – December 14, 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
December 11, 2024[4]	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	-	-	-	60	-
	Night		$L_{Aeq,\ 1\ hour}$[1]	51	No	Yes	55	Yes
			L_{Amax}	63	-	-	65	Yes
December 12, 2024	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	55	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	52[5]	No	Yes	55	Yes
			L_{Amax}	69[6]	-	-	65	No[6]
December 13, 2024[7]	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	55	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	52[5]	No	Yes	55	Yes
			L_{Amax}	63	-	-	65	Yes

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

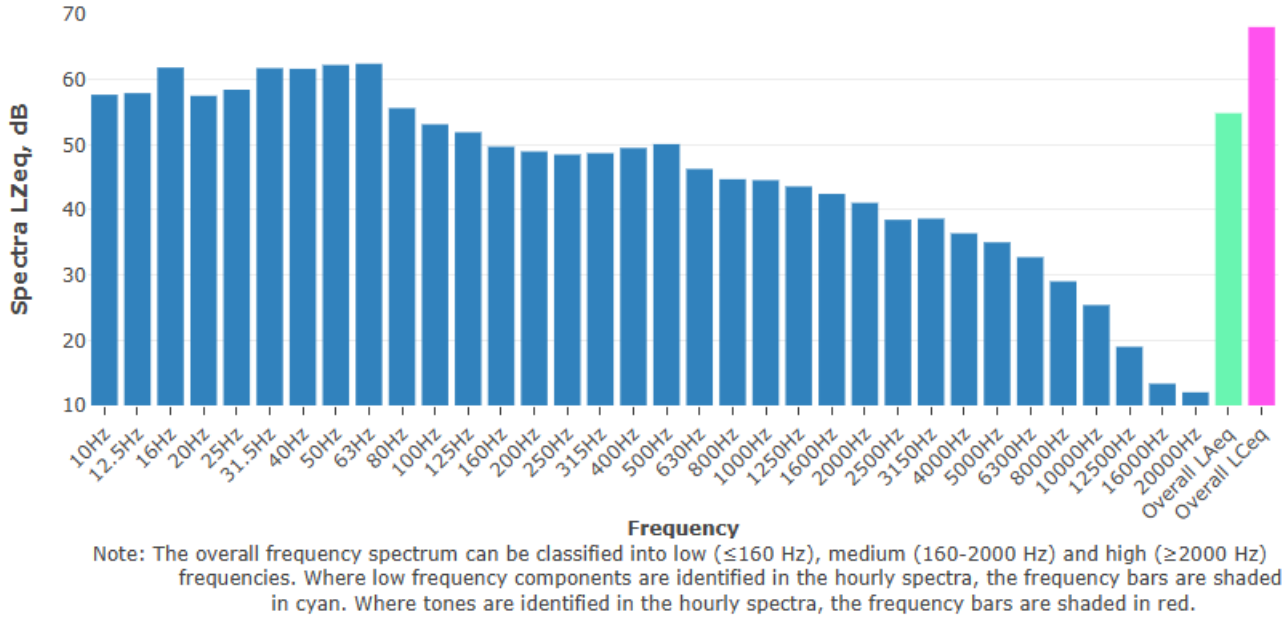
4) Note that the system classifies December 11 as the period from 7 am on December 11 to 7 am on December 12. The Wyuna arrived at 6:31 am on December 12, and has been incorporated in the data for December 11.

5) Measurements determined that noise was tonal at 6,300 Hz for periods during this night time 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.

6) This maximum level event only occurred once during the entire night time period of December 12. Given it only occurred once, 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.

7) Note that the system classifies December 13 as the period from 7 am on December 13 to 7 am on December 14. The Wyuna departed at 6:03 am on December 14, and has been incorporated in the data for December 13.

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

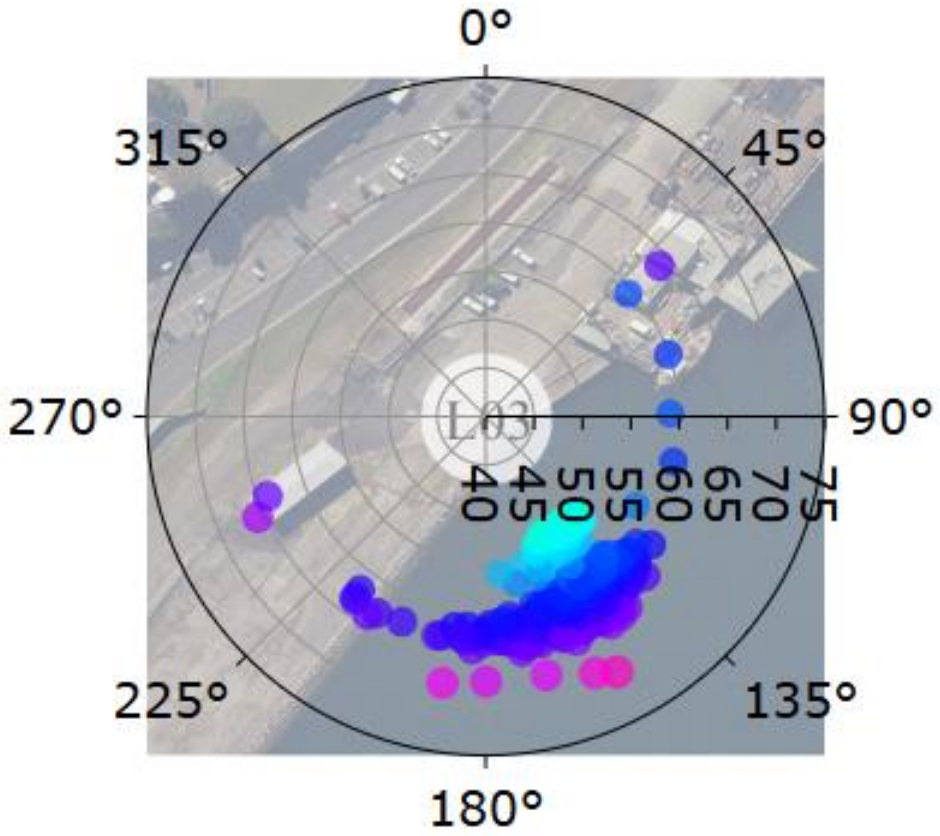


Figure 3.2 Typical vessel polar (directional) plot

3.2 Luga (GLB8) – December 24 – December 28, 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
December 23, 2024[4]	Day	L03	$L_{Aeq, 15\ hour}$[1]	-	No	Yes	60	-
	Night		$L_{Aeq, 1\ hour}$[1]	54[5]	No	Yes	55	Yes
			L_{Amax}	62	-	-	65	Yes
December 24, 2024	Day	L03	$L_{Aeq, 15\ hour}$[1]	53	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	53	No	Yes	55	Yes
			L_{Amax}	65	-	-	65	Yes
December 25, 2024	Day	L03	$L_{Aeq, 15\ hour}$[1]	49	Yes	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	53	No	Yes	55	Yes
			L_{Amax}	68[6]	-	-	65	No[6]
December 26, 2024	Day	L03	$L_{Aeq, 15\ hour}$[1]	54	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	54[5]	No	Yes	55	Yes
			L_{Amax}	59	-	-	65	Yes
December 27, 2024	Day	L03	$L_{Aeq, 15\ hour}$[1]	53	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	54[5]	No	Yes	55	Yes
			L_{Amax}	59	-	-	65	Yes
December 28, 2024	Day	L03	The Luga departed at 7:06 on December 28. The data after 7 am was influenced by the tug and is therefore not valid.					
	Night							

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

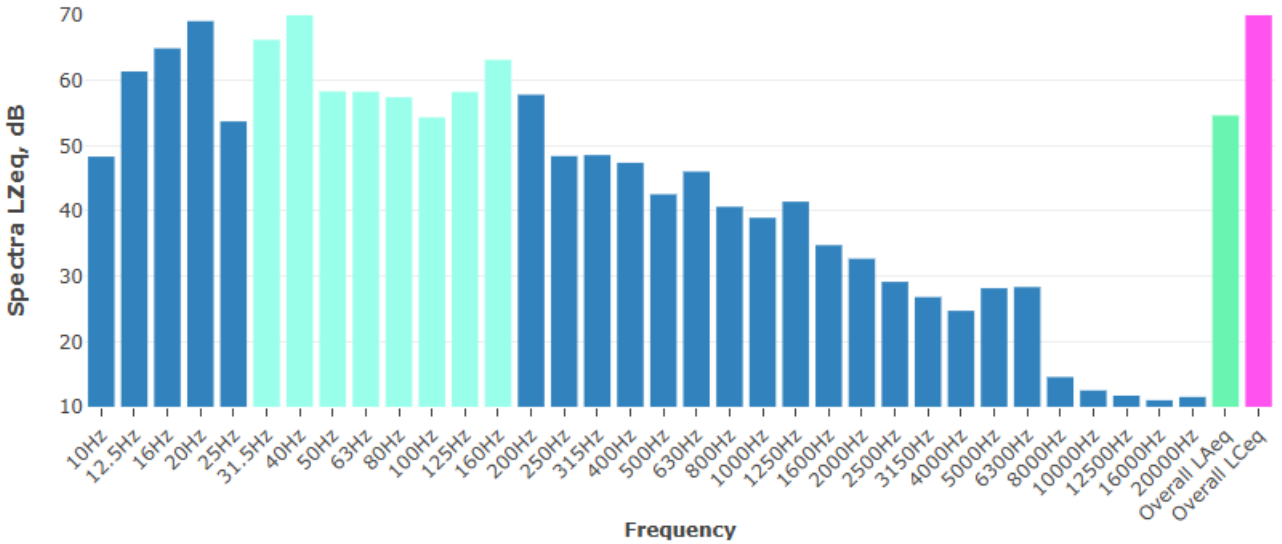
3) LFN = Low Frequency Noise

4) Note that the system classifies December 23 as the period from 7 am on December 23 to 7 am on December 24. The Luga arrived at 3:49 am on December 24, and has been incorporated in the data for December 23.

5) Measurements determined that noise was tonal at 6,300 Hz for periods during this night time 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.

6) This maximum level event only occurred once during the entire night time period of December 25. Given it only occurred once, 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

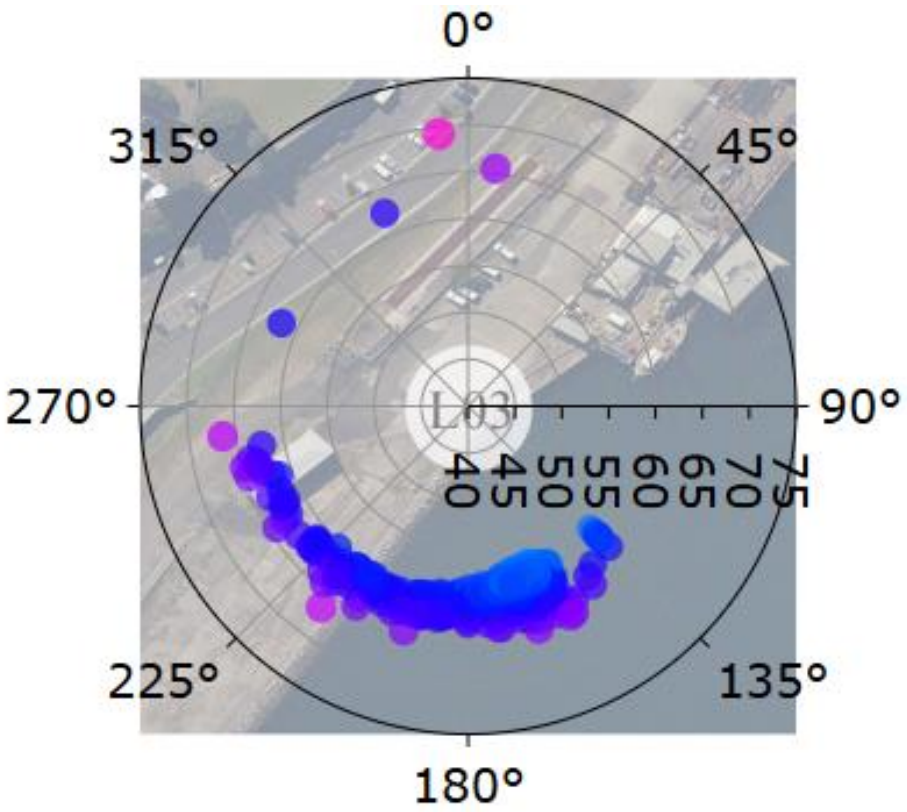


Figure 3.4 Typical vessel polar (directional) plot

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