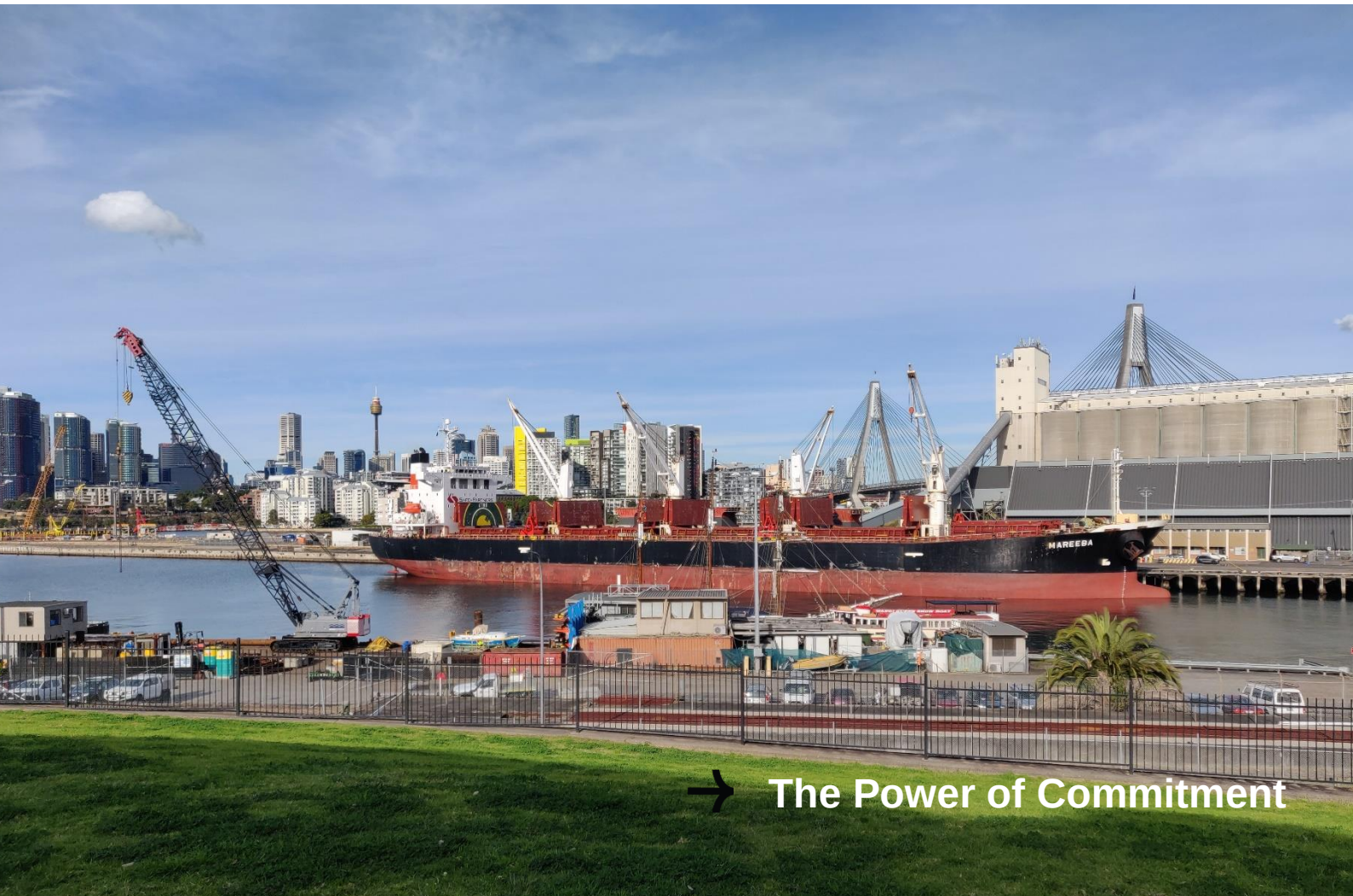
Monthly compliance noise monitoring report

Glebe Island / White Bay

Port Authority of New South Wales

February 2025



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 February 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 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 = 0.3 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 = -0.1 dB

Vessel name	Arrival date and time	Departure date and time	Berth location	Applicable noise monitoring location/s
Bulk vessels				
Pioneer[1]	January 29, 2025 / 19:37	February 2, 2025 / 8:00	GLB7	L03
Akuna	February 2, 2025 / 11:08	February 6, 2025 / 9:00	GLB8	L03

Vessel name	Arrival date and time	Departure date and time	Berth location	Applicable noise monitoring location/s
CSL Reliance	February 2, 2025 / 14:56	February 5, 2025 / 16:32	GLB7	L03
Akuna	February 14, 2025 / 23:34	February 17, 2025 / 18:45	GLB8	L03
CSL Reliance	February 20, 2025 / 02:00	February 23, 2025 / 00:03	GLB7	L03
Cruise vessel				
Westerdam	February 2, 2025 / 06:42	February 2, 2025 / 18:35	WCBT	L01
Asuka II[2]	February 3, 2025 / 07:50	February 4, 2025 / 16:59	WCBT	L01
Viking Sky	February 5, 2025 / 07:25	February 6, 2025 / 17:58	WBCT	L01
Disney Wonder	February 7, 2025 / 05:50	February 8, 2025 / 01:54	WBCT	L01
Regatta	February 10, 2025 / 06:52	February 10, 2025 / 17:55	WBCT	L01
Zuiderdam	February 11, 2025 / 05:44	February 12, 2025 / 01:25	WBCT	L01
Seabourn Quest	February 14, 2025 / 08:13	February 14, 2025 / 17:17	WBCT	L01
Silver Muse	February 16, 2025 / 07:16	February 16, 2025 / 18:26	WBCT	L01
Pacific Adventure	February 17, 2025 / 06:46	February 17, 2025 / 16:35	WBCT	L01
Azamara Onward	February 19, 2025 / 07:30	February 20, 2025 / 21:50	WBCT	L01
Azamara Pursuit	February 19, 2025 / 08:15	February 20, 2025 / 03:33	WHT4	L02
Viking Venus	February 20, 2025 / 06:44	February 20, 2025 / 22:49	WHT4	L02
Viking Orion	February 21, 2025 / 05:12	February 22, 2025 / 17:54	WHT4	L02
Pacific Adventure	February 21, 2025 / 07:20	February 21, 2025 / 16:00	WBCT	L01
Amadea[3]	February 24, 2025 / 07:21	February 25, 2025 / 21:53	WBCT	L01

Note: 1) Movement included in the January Noise Monitoring Report.

Note: 2) Noise complaint received by email on 03/02/2025 at 5:27 pm

Note: 3) Two noise complaints received by email on 25/02/2025 at 8:45 pm and 9:24 pm. Initial review of the noise data did not identify any exceedance

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 L_{Amax}	Day[2]	Night[3]
Pioneer[4]	Jan 29 – Feb 2	L03	56	49	66[5]	60	55	65	Yes	No[5]
Akuna	Feb 2 – Feb 6	L03	58	54	62	60	55	65	Yes	Yes
CSL Reliance	Feb 2 – Feb 5	L03	See discussion in Section 3.2			60	55	65	Yes	Yes
Akuna	Feb 14 – Feb 17	L03	56	50	67[6]	60	55	65	Yes	No[6]
CSL Reliance	Feb 20 – Feb 23	L03	56	51	64	60	55	65	Yes	Yes

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) Movement included in the January Noise Monitoring Report. Refer to this report for detailed noise information.

Note: 5) This maximum level event only occurred once during the entire night time period of January 30. 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: 6) This maximum level event only occurred once during the entire night time period of February 14. It couldn't be determined the source of the noise, however given it only occurred once and only a 2 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

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
Westerdam	Feb 2	L01	57	53	N/A	58	N/A	Yes
Asuka II	Feb 3	L01	56	54[5]	N/A	58	N/A	Yes
	Feb 4	L01	55	-	N/A	58	N/A	-
Viking Sky	Feb 5	L01	54	52	N/A	58	N/A	Yes
	Feb 6	L01	52	-	N/A	58	N/A	-
Disney Wonder	Feb 7	L01	55	52	N/A	58	N/A	Yes
	Feb 8	L01	55	-	N/A	58	N/A	-
Regatta	Feb 10	L01	54[6]	-	N/A	58	N/A	-
Zuiderdam	Feb 10[7]	L01	-	51	N/A	58	N/A	Yes
	Feb 11/12	L01	54	53	N/A	58	N/A	Yes
Seabourn Quest	Feb 14	L01	52	-	N/A	58	N/A	-
Silver Muse	Feb 16	L01	55	-	N/A	58	N/A	-
Pacific Adventure	Feb 17	L01	57	57	N/A	58	N/A	Yes
Azamara Onward	Feb 19	L01	53	54	N/A	58	N/A	Yes
	Feb 20	L01	57	-	N/A	58	N/A	-
Azamara Pursuit	Feb 19/20[8]	L02	56	53	N/A	58	N/A	Yes
Viking Venus	Feb 20	L02	56[9]	53[9]	N/A	58	N/A	Yes
Viking Orion	Feb 20[10]	L02	-	49[9]	N/A	58	N/A	Yes
	Feb 21	L02	55[9]	46[9]	N/A	58	N/A	Yes
	Feb 22	L02	52[9]	-	N/A	58	N/A	-
Pacific Adventure	Feb 21	L01	58	-	N/A	58	N/A	-
Amadea	Feb 24	L01	56	55	N/A	58	N/A	Yes
	Feb 25	L01	55	-	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) 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.

Note: 6) Weather affected data has been removed from the overall results.

Note: 7) Note that the system classifies February 10 as the period from 7 am on February 10 to 7 am on February 11. The Zuiderdam arrived at 5:54 am on February 11, and has been incorporated in the data for February 10.

Note: 8) Note that the system classifies February 19 as the period from 7 am on February 19 to 7 am on February 20. The Azamara Pursuit departed at 3:33 am on February 20, and has been incorporated in the data for February 19.

Note: 9) The data for this period has been analysed and extraneous noise has been excluded.

Note: 10) Note that the system classifies February 20 as the period from 7 am on February 20 to 7 am on February 21. The Viking Orion arrived at 5:12 am on February 21, and has been incorporated in the data for February 20.

3. Detailed results – bulk vessels

3.1 Akuna (GLB8) – February 2 – February 6, 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
February 2, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	54	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	52	No[4]	Yes	55	Yes
			L_{Amax}	58	-	-	65	Yes
February 3, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	57	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	54[4]	No[4]	Yes	55	Yes
			L_{Amax}	62	-	-	65	Yes
February 4, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	57	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	53[4]	No[4]	Yes	55	Yes
			L_{Amax}	61	-	-	65	Yes
February 5, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	58	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	51	No[4]	Yes	55	Yes
			L_{Amax}	61	-	-	65	Yes
February 6, 2025	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

4) 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.

5) Note that the CSL Reliance was also present during this visit until 16:32 on 5 February. As such, the noise results above are cumulative of both vessels. As there are no exceedances, a detailed assessment has not been undertaken.

3.1.2 Additional information

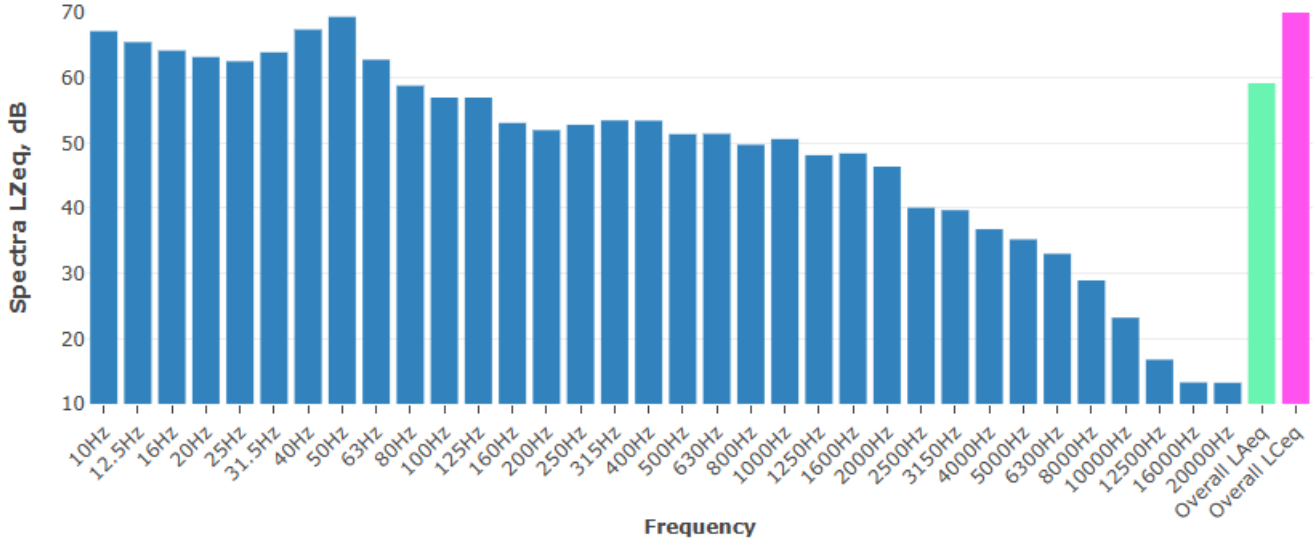

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Figure 3.1 Typical vessel spectrum – noise level at L03

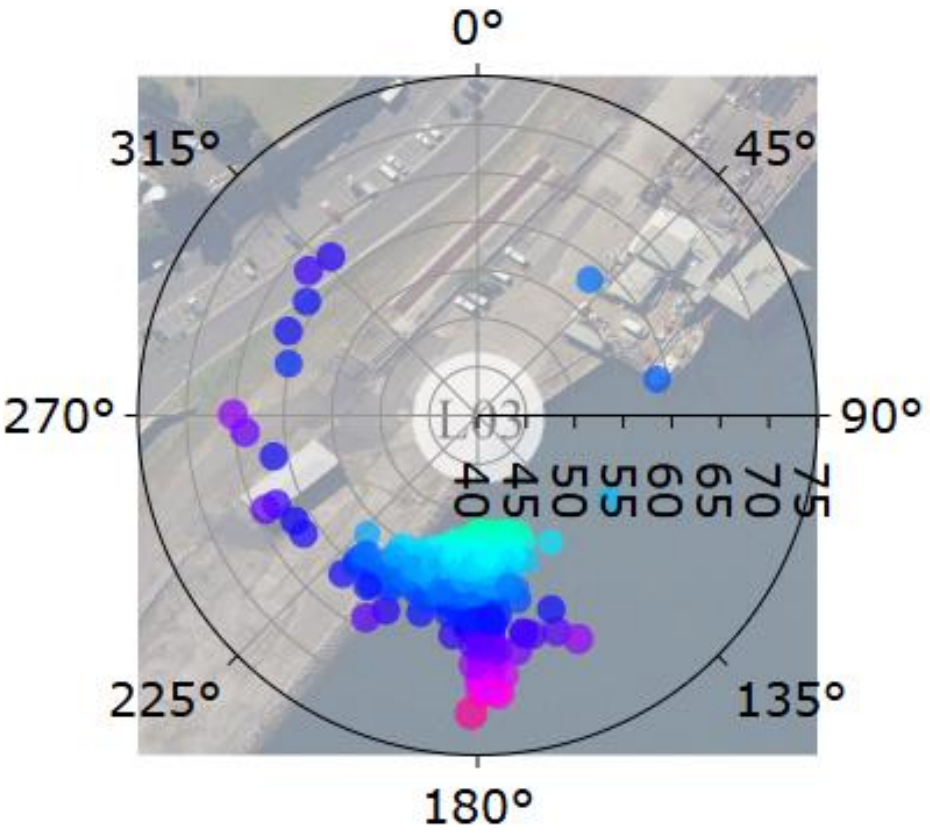

Figure 3.2 Typical vessel polar (directional) plot

3.2 CSL Reliance (GLB7) – February 2 – February 5, 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
February 2, 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	Akuna and CSL Reliance were berthed simultaneously at Glebe Island 7 and 8. Noise levels determined by the online noise system were assigned to the Akuna during this period, as this was the dominant noise source at the time. Note that noise from both vessels was compliant with the daytime $L_{Aeq\ (15\ hour)}$ and the $L_{Aeq\ (1hour)}$ criteria and therefore a detailed assessment is not required.				
	Night		$L_{Aeq,\ 1\ hour}$[1]					
			L_{Amax}					
February 3, 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]					
	Night		$L_{Aeq,\ 1\ hour}$[1]					
			L_{Amax}					
February 4, 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]					
	Night		$L_{Aeq,\ 1\ hour}$[1]					
			L_{Amax}					
February 5, 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]					
	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

3.3 Akuna (GLB8) – February 14 – February 17, 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
February 14, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	-	-	-	60	-
	Night		$L_{Aeq, 1\ hour}$[1]	50	No[5]	Yes	55	Yes
			L_{Amax}	67[4]	-	-	65	No[4]
February 15, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	53	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	49[5]	No[5]	Yes	55	Yes
			L_{Amax}	64	-	-	65	Yes
February 16, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	53[5]	No[5]	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	49[5]	No[5]	Yes	55	Yes
			L_{Amax}	64	-	-	65	Yes
February 17, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	56[5]	No[5]	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 of February 14. It couldn't be determined the source of the noise, however given it only occurred once and only a 2 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.

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.

3.3.2 Additional information

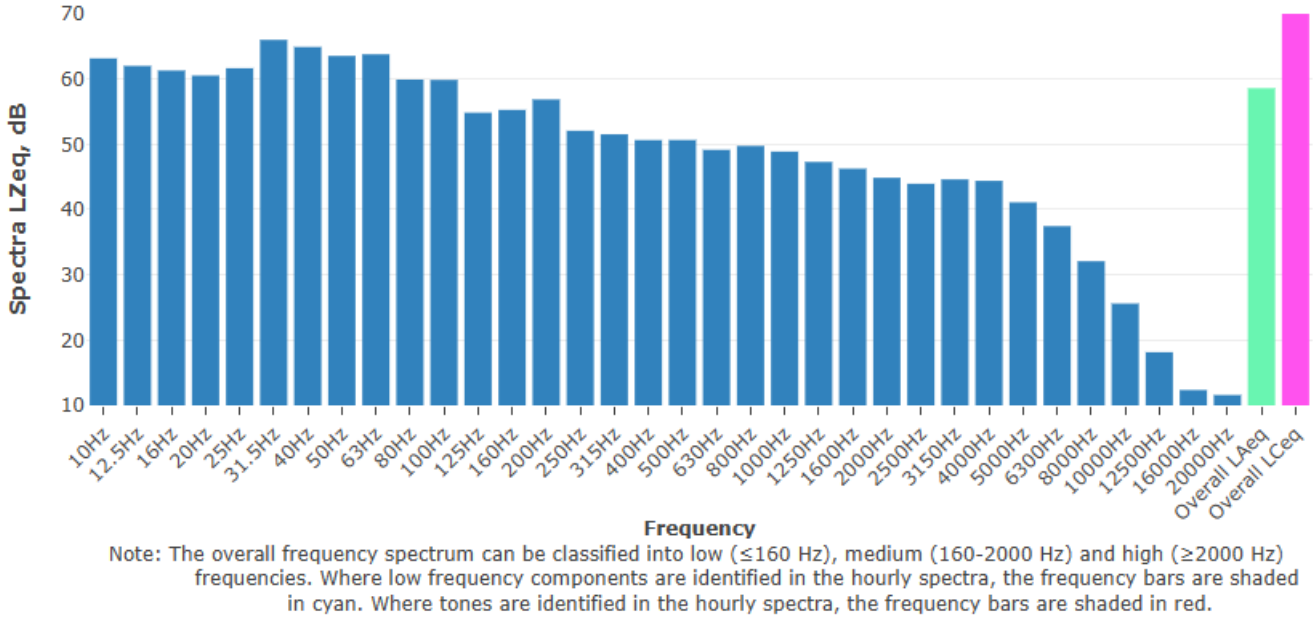

Figure 3.3 Typical vessel spectrum – noise level at L03

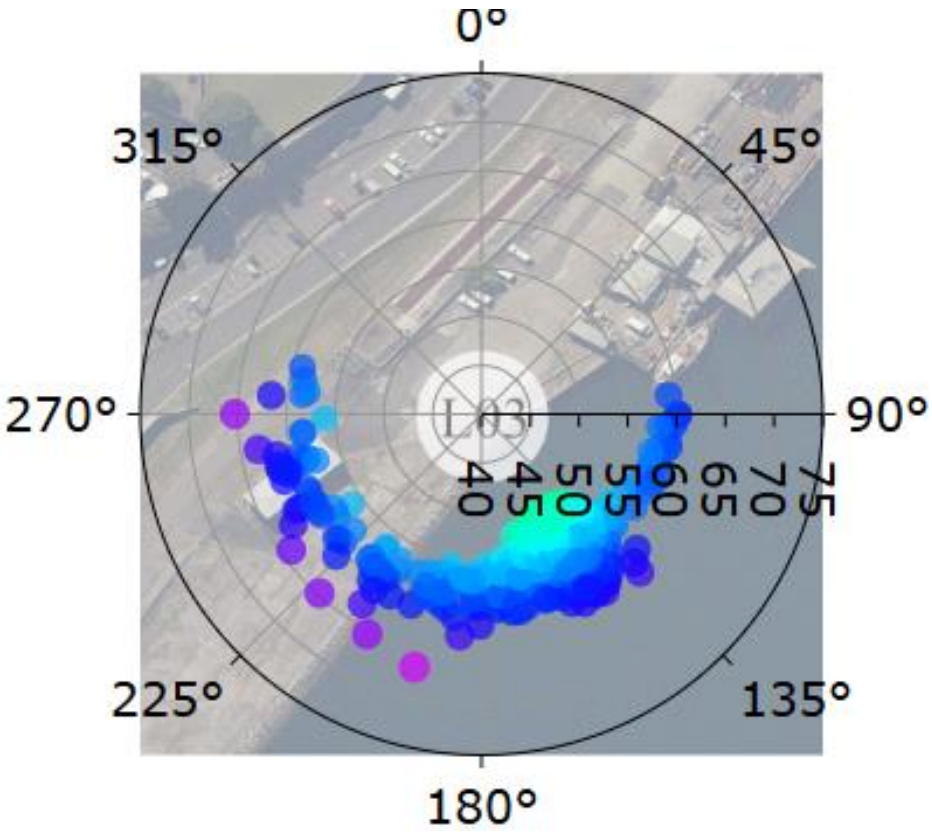

Figure 3.4 Typical vessel polar (directional) plot

3.4 CSL Reliance (GLB7) – February 20 – February 23, 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
February 19[4], 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]		-	-	60	-
	Night		$L_{Aeq, 1\ hour}$[1]	51	No[5]	Yes	55	Yes
			L_{Amax}	64[6]	-	-	65	Yes[6]
February 20, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	56	No	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	49[5]	No[5]	Yes	55	Yes
			L_{Amax}	64	-	-	65	Yes
February 21, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	53[5]	No[5]	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	48[5]	No[5]	Yes	55	Yes
			L_{Amax}	64	-	-	65	Yes
February 22/23, 2025	Day	L03	$L_{Aeq, 15\ hour}$[1]	51[5]	No[5]	Yes	60	Yes
	Night		$L_{Aeq, 1\ hour}$[1]	48[5]	No[5]	Yes	55	Yes
			L_{Amax}	59	-	-	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 February 19 as the period from 7 am on February 19 to 7 am on February 20. The CSL Reliance arrived at 2:00 am on February 20, and has been incorporated in the data for February 19

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) A maximum level event occurred at 6:20 am on February 20 which was 70 dBA. A review of the data showed that the event did not occur from the direction of the vessel, and has been excluded from the data. All other maximum noise level events were below the criteria, therefore this vessel has been deemed

3.4.2 Additional information

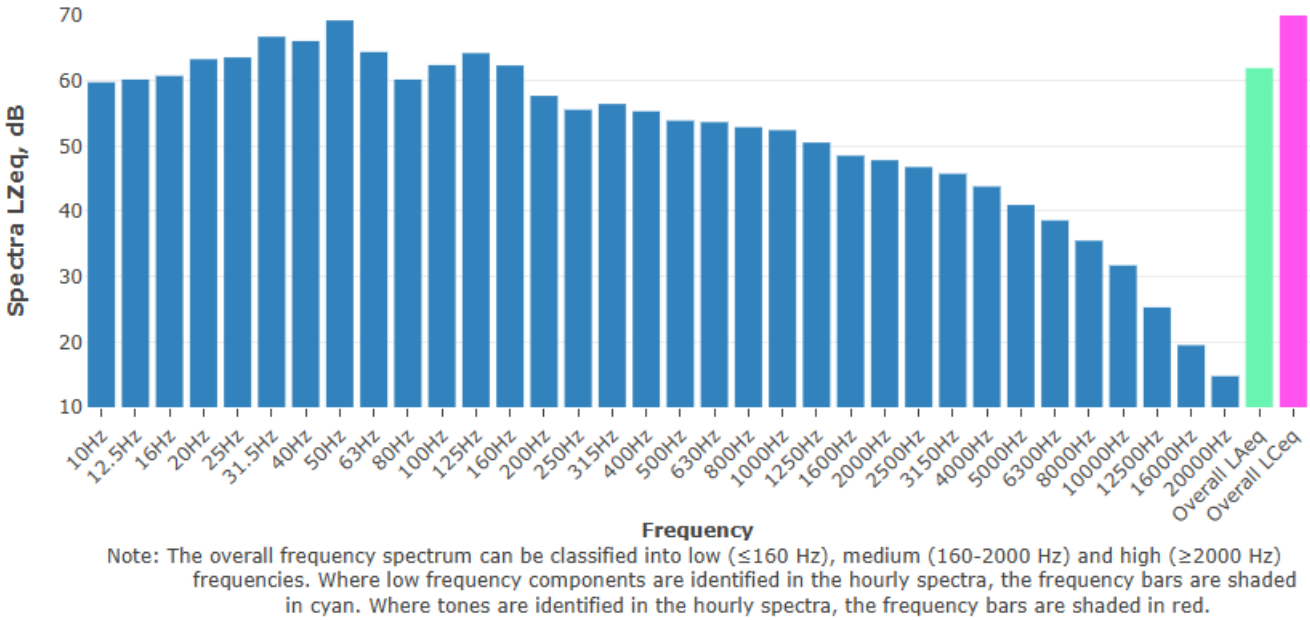

Figure 3.5 *Typical vessel spectrum – noise level at L03*

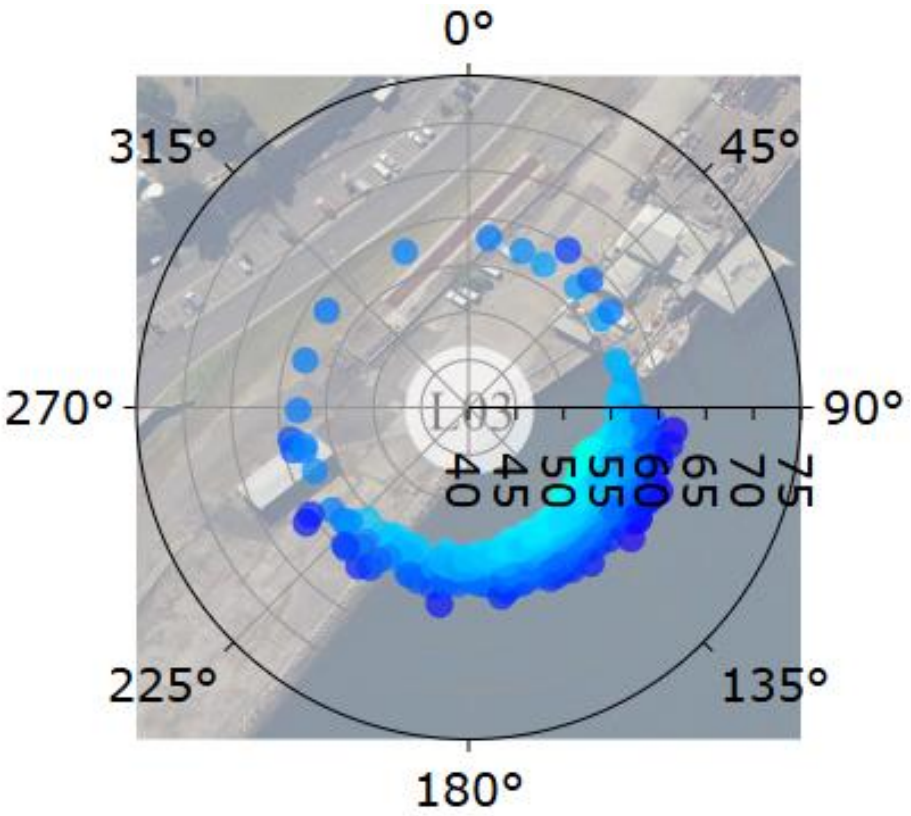

Figure 3.6 *Typical vessel polar (directional) plot*

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