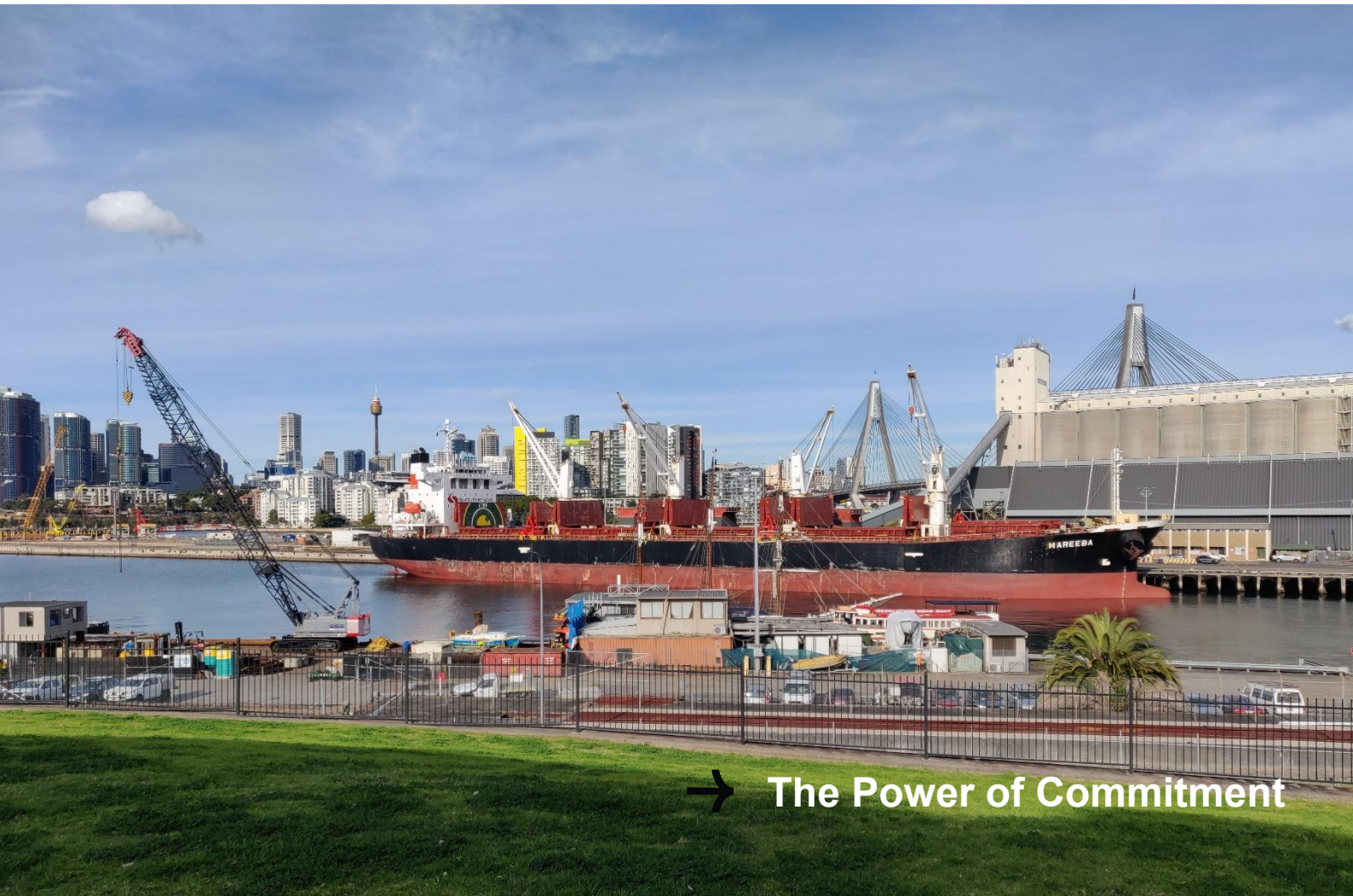
Monthly compliance noise monitoring report

Glebe Island / White Bay

Port Authority of New South Wales

September 2025



The Power of Commitment

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S4	0	C Gordon	C Doyle		E Milton		24/10/2025
S4	1	C Gordon	C Doyle		E Milton		18/12/2025
S4	2	C Gordon	C Doyle		E Milton		30/01/2026

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 September 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	14529642	**Initial calibration level 91.9 dBA** Min. deviation = 0.0 dB Max. deviation = 0.1 dB
		L02	Maintenance Building on White Bay		14529645	**Initial calibration level 91.3 dBA** Min. deviation = 0.0 dB Max. deviation = 0.1 dB
		L03	Adjacent to White Bay 2		14529644	**Initial calibration level 92.9 dBA** Min. deviation = 0.0 dB Max. deviation = 0.1 dB
		L04	Onsite at Glebe Island		14529646	**Initial calibration level 94.3 dBA** Min. deviation = 0.0 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				
Akuna	September 1, 2025 / 10:13	September 3, 2025 / 15:52	GLB8	L03
Luga	September 9, 2025 / 07:39	September 12, 2025 / 13:31	GLB8	L03

Vessel name	Arrival date and time	Departure date and time	Berth location	Applicable noise monitoring location/s
Pioneer	September 14, 2025 / 18:33	September 17, 2025 / 16:33	GLB7	L03
V Tre[1]	September 17, 2025 / 19:48	September 22, 2025 / 02:08	GLB7	L03
Pioneer	September 29, 2025 / 12:37	October 3, 2025 / 11:00	GLB7	L03
Cruise vessel				
Carnival Adventure	September 26, 2025 / 06:52	September 26, 2025 / 15:35	WBCT	L01

Notes:

1) A movement of V Tre was recorded at 10:55 on 19/09/2025, but the vessel did not leave GLB7

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}
Bulk vessels											
Akuna	Sep 1 – Sep 3	L03	54	51	65	60	55	65	Yes	Yes	Yes
Luga	Sep 9 – Sep 12	L03	54	54	61[4]	60	55	65	Yes	Yes	Yes
Pioneer	Sep 14 – Sep 17	L03	53	48	63	60	55	65	Yes	Yes	Yes
V Tre	Sep 17 – Sep 22	L03	56	53	70[5]	60	55	65	Yes	Yes	No[5]
Pioneer	Sep 29 – Oct 3	L03	54	56[6]	71[7]	60	55	65	Yes	No[6]	No[7]

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) There was a large number of maximum noise level events between 5:50 am and 6:10 am on September 12 (i.e., night-time of September 11). However, based on a review of the data, including the spectral data and additional data from L04, it is likely that the noise was from birds rather than the vessel. There were no other exceedances during the night period, therefore it has been deemed that the vessel was compliant during this period.
5) There were 2 maximum noise level events between 11:46 pm and 11:49 pm on September 18 above the vessel noise trigger level of 65 dBA.
6) Measurements determined that noise was tonal at 200 Hz for a 1 hour period during this night time period. It is likely that the increase at 200 Hz for a short period was related to the vessel. Given the short duration, it is unlikely this would result in an adverse impact
7) There were 4 maximum noise level events within 10 seconds at 5:24 am on October 3. These were from the general direction of the vessel

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[5]	Night
Carnival Adventure	Sept 26	L01	58	-	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

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) – September 1 – September 3, 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
September 1 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	54	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	48	No	Yes	55	Yes
			L_{Amax}	65	-	-	65	Yes
September 2 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	52	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	51	No	Yes	55	Yes
			L_{Amax}	63	-	-	65	Yes
September 3 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	54	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

3.1.2 Additional information

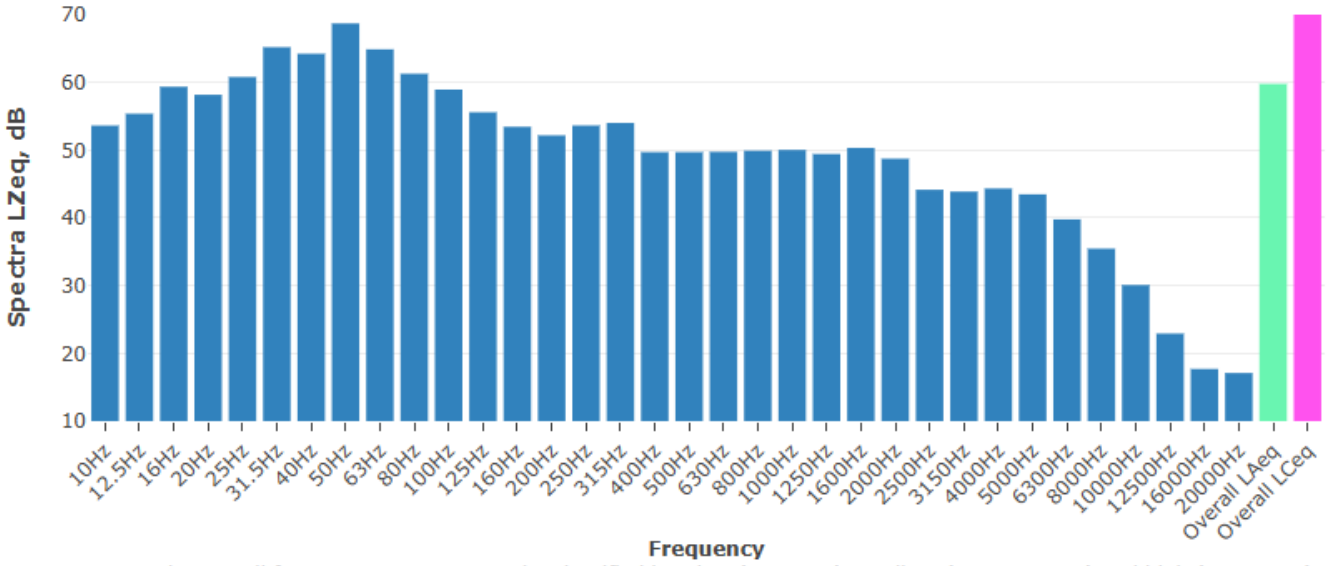


Figure 3.1 Typical vessel spectrum – noise level at L03

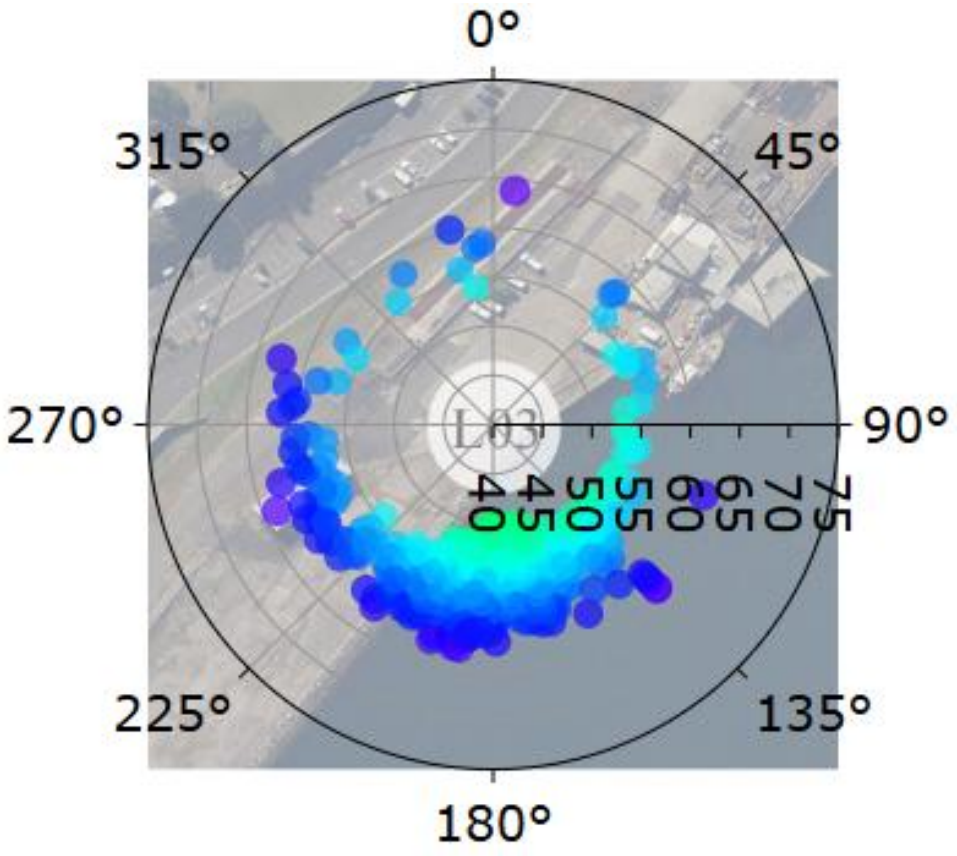


Figure 3.2 Typical vessel polar (directional) plot

3.2 Luga (GLB8) – September 9 – September 12, 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
September 9 2025	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}	61	-	-	65	Yes
September 10 2025	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}	59	-	-	65	Yes
September 11 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	54	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	52	No	Yes	55	Yes
			L_{Amax}	72[4]	-	-	65	Yes[4]
September 12 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	53	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) There was a large number of maximum noise level events between 5:50 am and 6:10 am on September 12 (i.e., night-time of September 11). However, based on a review of the data, including the spectral data and additional data from L04, it is likely that the noise was from birds rather than the vessel. There were no other exceedances during the night period, therefore it has been deemed that the vessel was compliant during this period.

3.2.2 Additional information

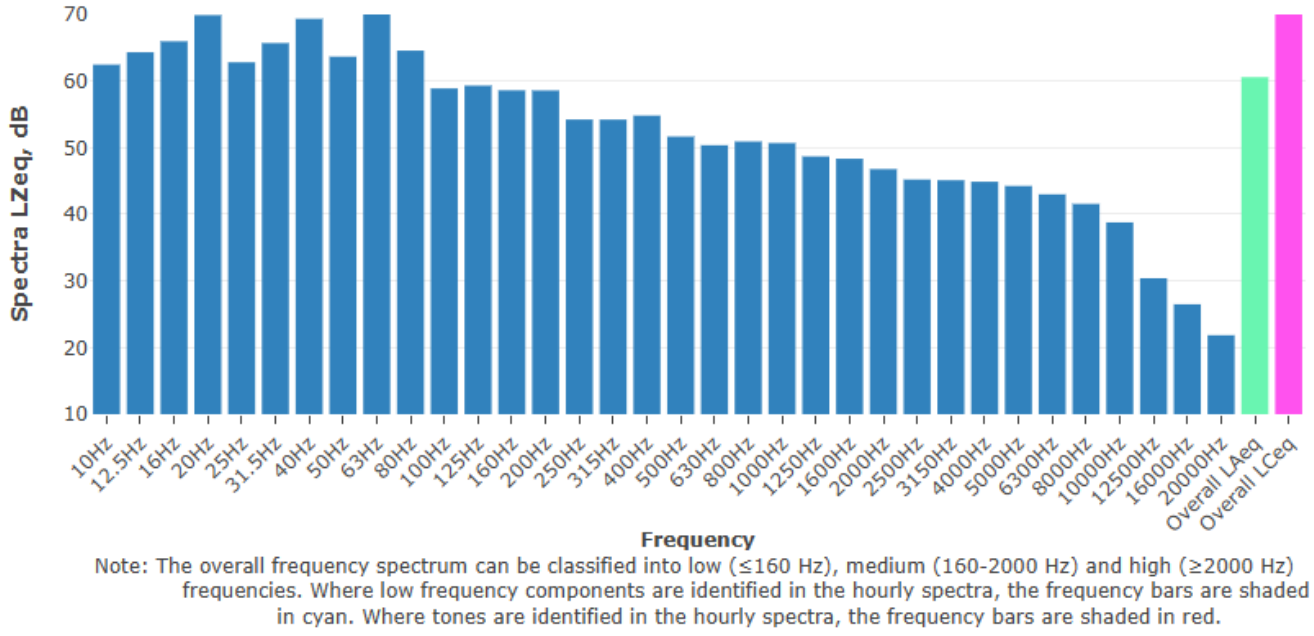


Figure 3.3 Typical vessel spectrum – noise level at L03

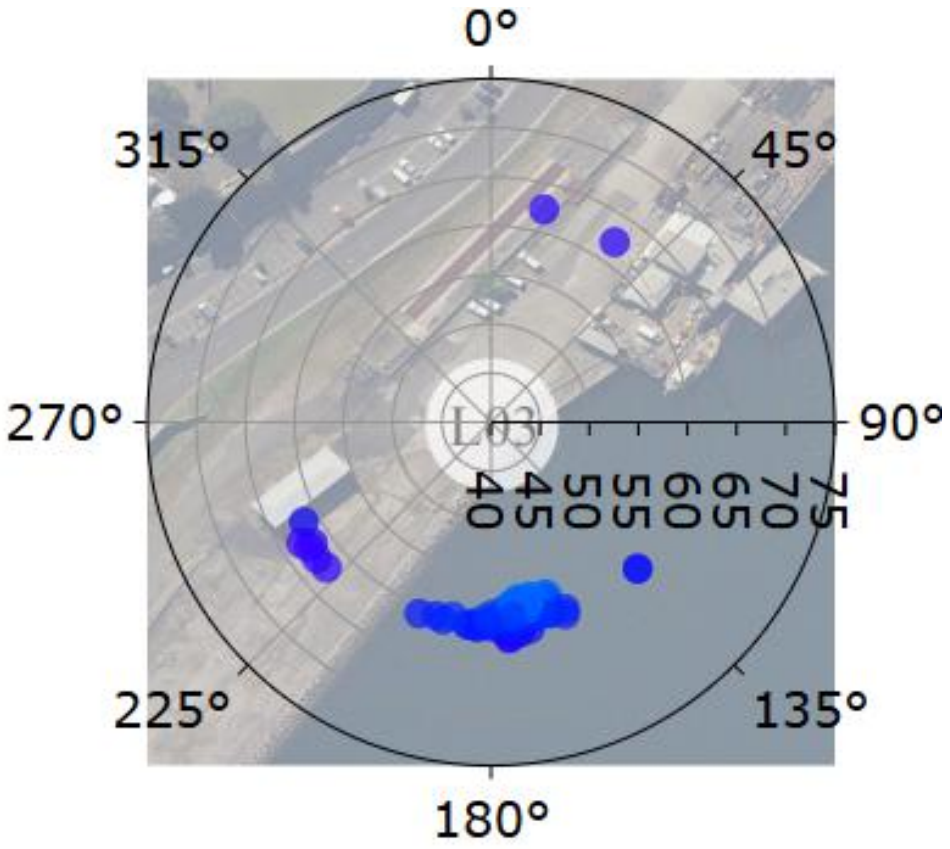


Figure 3.4 Typical vessel polar (directional) plot

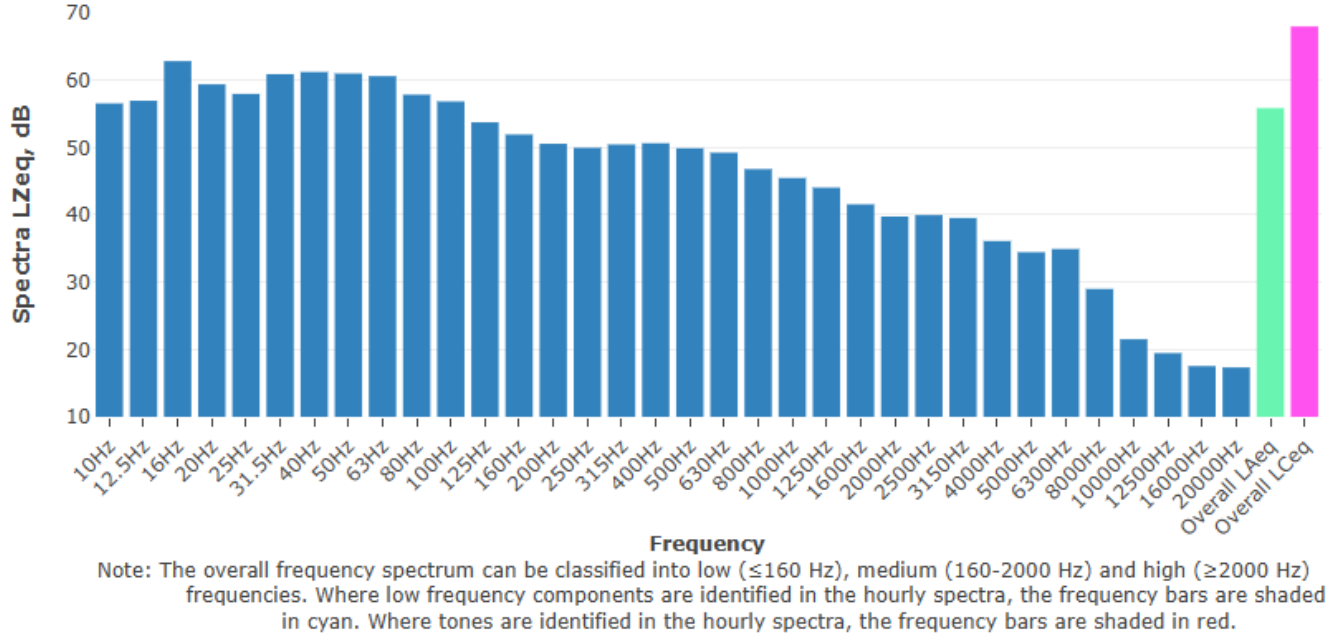
3.3 Pioneer (GLB7) – September 14– September 17, 2025

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
September 14 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	46	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	48	No	Yes	55	Yes
			L_{Amax}	61	-	-	65	Yes
September 15 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	49	No	No	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	47	No	No	55	Yes
			L_{Amax}	63	-	-	65	Yes
September 16 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	50	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	47	No	Yes	55	Yes
			L_{Amax}	62	-	-	65	Yes
September 17 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	53	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

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

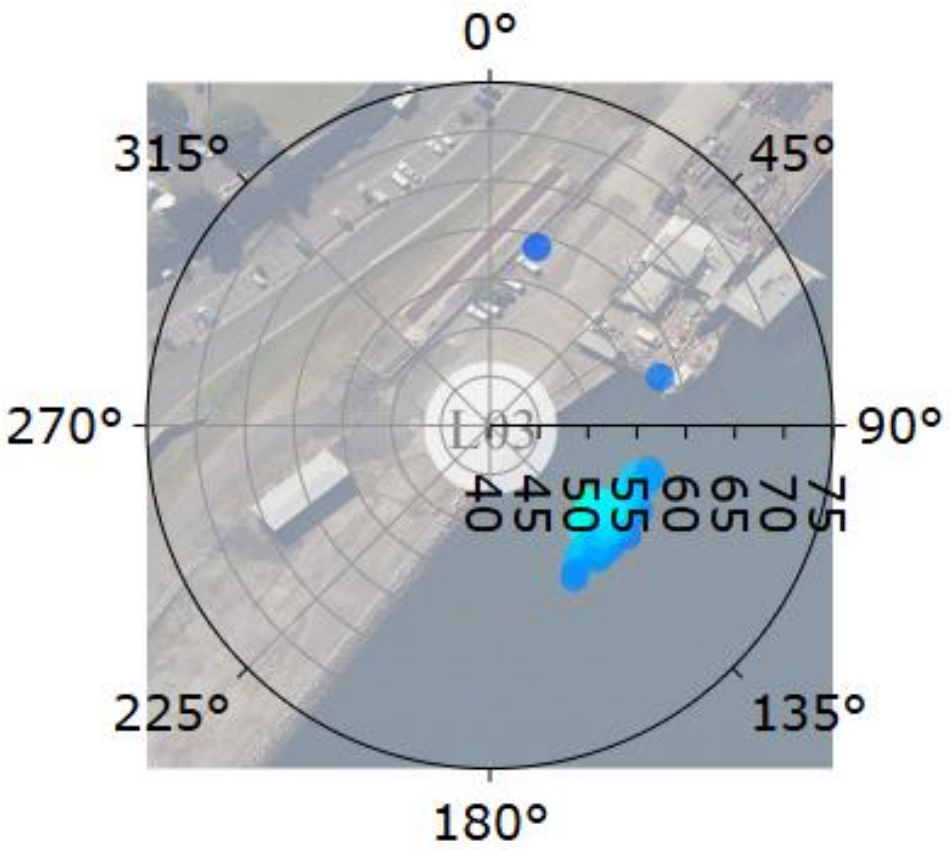


Figure 3.6 Typical vessel polar (directional) plot

3.4 V Tre (GLB7) – September 17 – September 22, 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
September 17 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	52	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	53	No	Yes	55	Yes
			L_{Amax}	66[4]	-	-	65	No[4]
September 18 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	56	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	51	No	Yes	55	Yes
			L_{Amax}	70[5]	-	-	65	No[5]
September 19 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	54	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	51	No	Yes	55	Yes
			L_{Amax}	61	-	-	65	Yes
September 20 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	54	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	52	No	Yes	55	Yes
			L_{Amax}	65	-	-	65	Yes
September 21 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	52	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	50	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

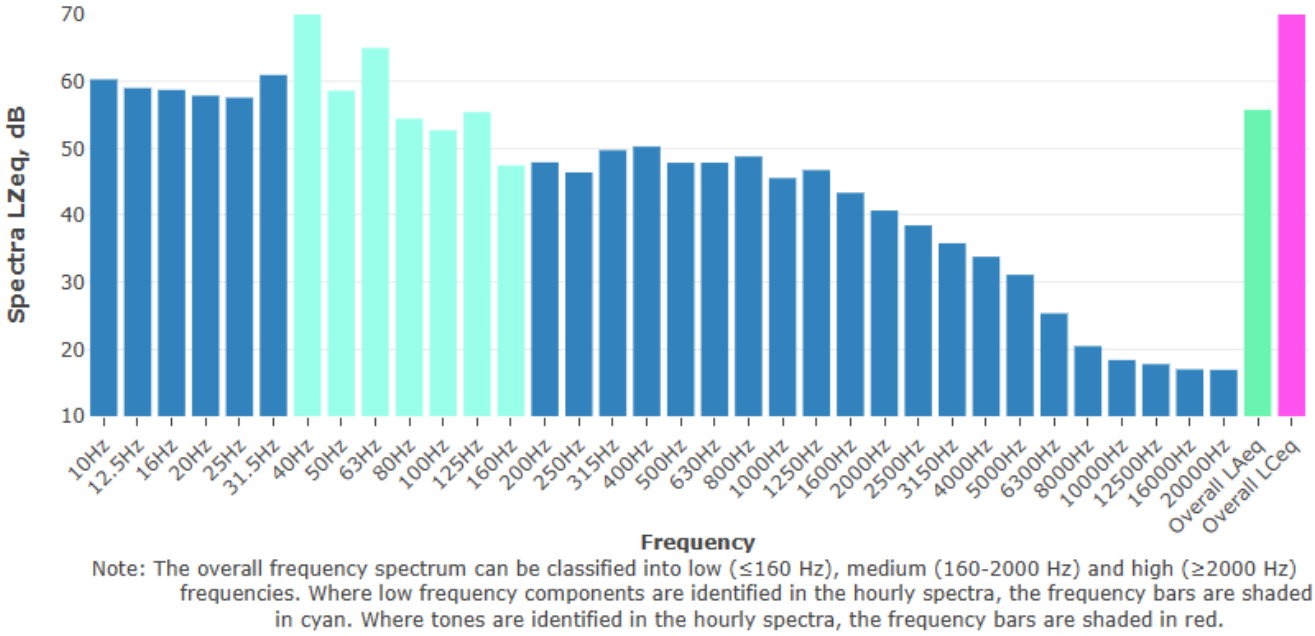
2) Inclusive of any penalties for modifying factors

3) LFN = Low Frequency Noise

4) This maximum level event occurred once during the night time period of June 17. Given the minor exceedance, the fact it only occurred once, and the vessel was compliant at all other times on this date, this is not considered a significant exceedance.

5) There were 2 maximum noise level events between 11:46 pm and 11:49 pm on September 18 above the vessel noise trigger level of 65 dBA.

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

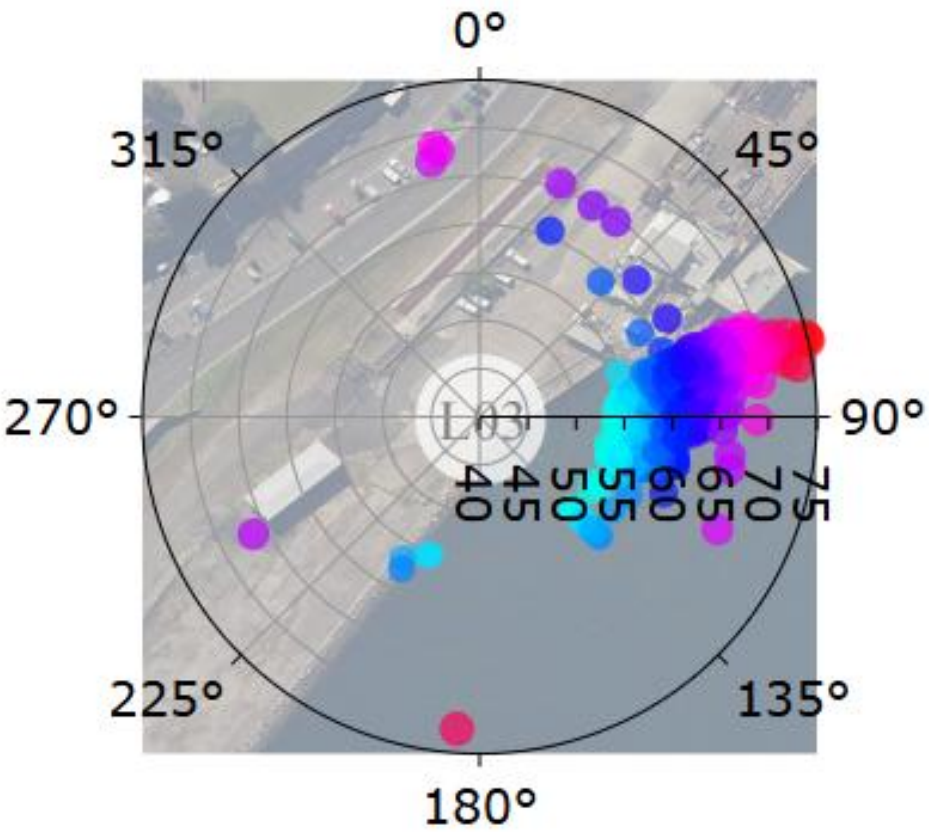


Figure 3.8 Typical vessel polar (directional) plot

3.5 Pioneer (GLB7) – September 29 – October 3, 2025

3.5.1 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
September 29 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	51	No	No	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	50	No	No	55	Yes
			L_{Amax}	59	-	-	65	Yes
September 30 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	51	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	56[4]	No[4]	Yes	55	No[4]
			L_{Amax}	58	-	-	65	Yes
October 1 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	52	No	No	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	50[5]	No[5]	No	55	Yes
			L_{Amax}	57	-	-	65	Yes
October 2 2025	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	51	No	Yes	60	Yes
	Night		$L_{Aeq,\ 1\ hour}$[1]	51	No	Yes	55	Yes
			L_{Amax}	71[6]	-	-	65	No[6]
October 3 2025[7]	Day	L03	$L_{Aeq,\ 15\ hour}$[1]	54	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

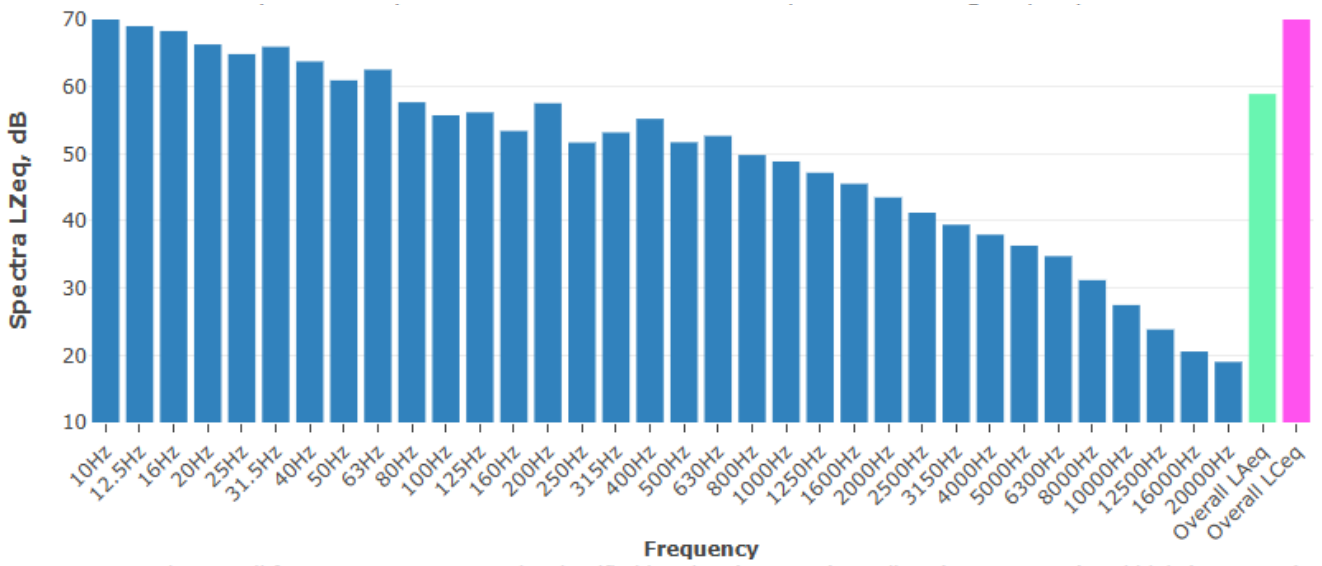
3) LFN = Low Frequency Noise

4) Measurements determined that noise was tonal at 200 Hz for a 1 hour period during this night time period. It is likely that the increase at 200 Hz for a short period was related to the vessel. Given the short duration, it is unlikely this would result in an adverse impact.

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) There were 4 maximum noise level events within 10 seconds at 5:24 am on October 3. These were from the general direction of the vessel. The system classifies October 2 as the period from 7 am on October 2 to 7 am on October 3. Therefore, the results were incorporated in the data for October 2

3.5.2 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 3.9 Typical vessel spectrum – noise level at L03

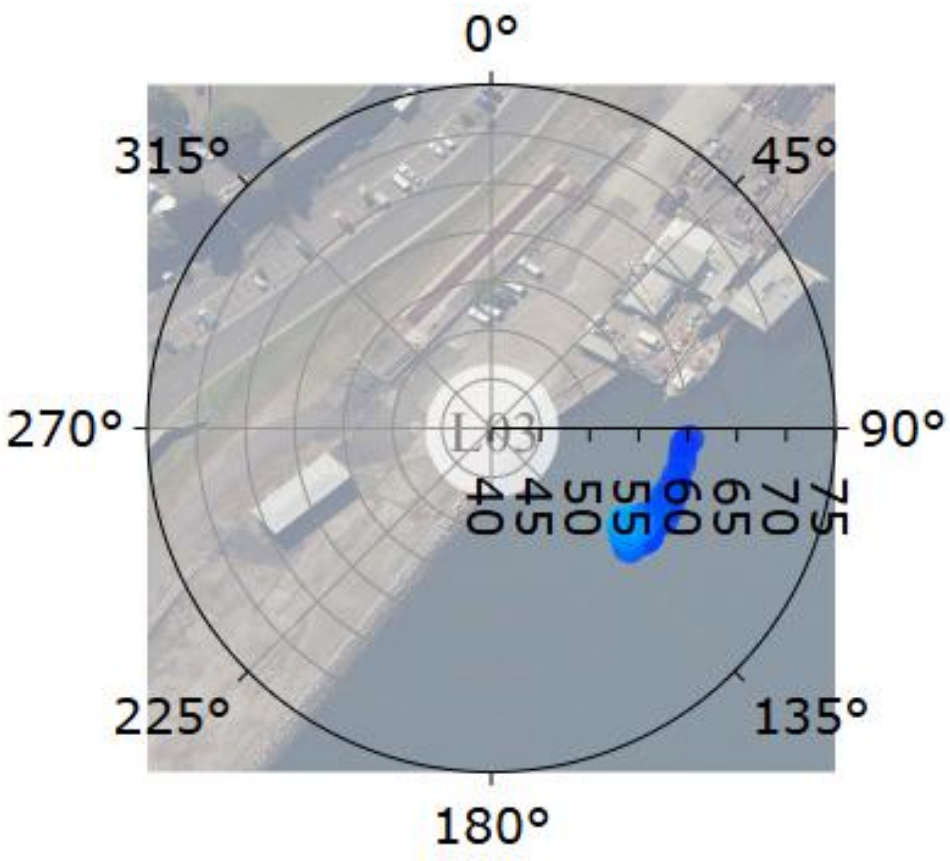


Figure 3.10 Typical vessel polar (directional) plot

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