Port Botany Noise Investigation Summary

NSW Ports

Port Botany Overview

As the largest container port in New South Wales and Australia's largest common user bulk liquids facility, Port Botany operates 24/7 to import goods to support the people and businesses of New South Wales and to export goods to international customers. Port Botany is an essential service and is vital to the economic well-being of the nation.

Port Botany is located within a busy industrial hub, the Botany Industrial Precinct, comprising land, sea and air transport activity as well as other industrial activity.

Noise Complaints

In April 2020, NSW Ports and the NSW Environment Protection Agency (EPA) recorded an increase in night-time noise complaints from residents of suburbs surrounding Port Botany and the Botany Industrial Precinct. The main cause of concern was described as a low frequency throbbing or humming sound. The complaints coincided with the period of COVID-19 'lockdown' in NSW.

In response NSW Ports:

- Established a 24/7 staffed phone line to receive complaints.
- Set up a new 24/7 communication pathway for logging environmental concerns on our website.
- Reviewed weather and shipping data.
- Reviewed noise levels from port noise monitors.
- Met regularly with EPA and Randwick Council; and with representatives from Department of Planning, Industry and Environment and Bayside Council.
- Communicated with port tenants to advise of the issue and request assistance in reviewing noise levels on site.
- Set up Facebook as an additional way to share news and directly engage with community members.

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as trustee for
NSW Ports Property Hold Trust
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NSW Ports Operations Hold Co
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Port Botany Operations
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Port Botany Unit Trust
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Port Kembla Operations
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As there had been no material change in port operations that might explain the increase in noise complaints, NSW Ports also engaged specialist acoustic consultants, Wilkinson Murray, to conduct a Noise Investigation to characterise the noise and identify likely sources.

Noise Investigation Scope:

The objectives of the Noise Investigation were to:

- Assess and characterise the noise experienced by residents.
- Identify and locate likely sources of noise causing complaint.
- Compare current and historical noise data to determine if problematic noise sources have increased or background noise has decreased such that noise has become more intrusive.
- Assess the significance of potential factors which may influence the transmission and perception of noise including wind speed and direction, temperature inversions, spectral characteristics (i.e. low frequency noise), impulsiveness, resonance, etc.

The Noise Investigation included:

- Unattended monitoring at affected receivers from 28 August – 28 September 2020 using noise loggers located at residential locations in Botany, Matraville and Little Bay (in addition to NSW Ports' existing network of three permanent noise loggers located closer to the Port).
- Attended monitoring at affected receivers from 28 August – 28 September 2020 to measure and describe noise.
- Review of existing noise monitoring data.
- Review of vessel berthing schedule and overall port utilisation.
- Review of weather data.

Noise Investigation Outcomes:

This Noise Investigation has been an important step in understanding the noise characteristics and identifying noise sources. The noise investigation found that:

- The period of increased noise complaints (April – September 2020) was representative of normal port activity, with berth occupancy during this period comparable with the year prior.
- Berth occupancy during the noise monitoring period (28 August – 28 September 2020) was higher than the average across the April – September 2020 period and consistent with occupancy levels in 2019, meaning that the noise monitoring period was also representative of normal port activity.
- Residential premises surrounding Port Botany are impacted by a range of noise sources including road traffic, construction works, industrial activities and port operations.
- There was a significant decrease in background and low frequency noise levels at the noise logger on Foreshore Road in 2020 compared to previous years – likely due to reduced activity at Sydney Airport and reduced road traffic volumes during COVID-19 'lock-down'. At the Botany Road (east) noise logger, background noise level differences were minor while increases in low frequency noise of up to 3 dB were measured. This logger is less impacted by airport and road traffic noise and more representative of industrial noise from the precinct.
- Based on attended measurements at locations near industrial and port facilities, the predominant source of the low frequency noise was ships berthed at Port Botany. There were other sources of low frequency noise from the industrial precinct surrounding Port Botany which have localised impacts. Intermittent crashes and bangs are also audible at some residences, but not all are attributable to the Port.
- The strongest correlation between nights with high perceived noise levels was noise enhancing weather conditions (generally low winds with speeds 0.5 – 3m/s and temperature inversions).

- There was no observable correlation between high perceived noise levels and number of vessels at berth.
- While most noise complaints were registered during evening/night hours, the noise level at the residential areas surrounding Port Botany typically decrease at night when compared to daytime.
- Lightweight housing construction has poorer noise attenuation for low frequency noise – meaning external low frequency noise sources can appear louder internally than other frequencies. Additionally, the size and shape of a room, its internal furnishings and the position of a person's head in the sleeping position can all influence the perception of noise by the resident.

Recommendations:

Based on the findings of the Noise Investigation, Wilkinson Murray have recommended the following:

- An additional permanent noise monitor be installed to capture noise levels in the south east residential area.
- A further study be conducted to measure at-source noise levels of the ships in Port Botany.

Next Steps:

NSW Ports takes noise complaints very seriously. We are committed to undertaking both recommendations from the Noise Investigation. We will advise on the timing for this work as it is further developed.

Whilst we undertake these further investigations, we encourage you to continue to report all noise concerns via our website at https://www.nswports.com.au/contact or 1300 922 524.

Port Botany Noise Investigation – Full Report:

To download a copy of the full Noise Investigation Report, visit https://www.nswports.com.au/resource/port-botany-noise-investigation-full-report