

NEW ZEALAND SHIP NOISE SPECIFICATION - COMMUNITY SUMMARY

Introduction

Low frequency ‘rumble’ from ship auxiliary engines is a major source of community noise complaints at NZ ports. NZ ports committed to a ‘Ship Noise Specification’ in December 2022. This is a summary of the subsequent NZ Ship Noise Specification¹. The objective is to encourage shipping lines to prioritise quieter ships on NZ shipping routes. It uses NEPTUNES guidance to benchmark ship noise levels.

The specification enables:

- Quantification of noise emissions (is the ship ‘normal’)
- Identification of ‘noisy ships’ (those with a higher likelihood of community response)
- Engagement with vessel owners to encourage noise mitigation (see case study below) or deny future entry

New Zealand Ship Noise Specification Requirements

From 1 June 2024, all new container vessels visiting a New Zealand port will be required to provide a certified ‘NEPTUNES Noise Label Score’ or confirm that a reactive silencer is fitted to one of ancillary engines used while at berth. If neither of these requirements are met, the vessel will be refused entry to any New Zealand port. The higher the score, the quieter the ship. This specification requires a minimum net score of 0.

Interim Arrangements Now – June 2024

Each new container vessel entering a NZ service during this interim period will be asked to provide a certified NEPTUNES Noise Label Score or confirm that a reactive silencer is fitted on the exhaust of each ancillary engine used while at berth. If neither are available, then a ‘simplified measurement procedure’ is used to establish a ‘derived Noise Label score’. This monitoring will be undertaken at a convenient time at one of the vessels NZ port calls, ideally on its first visit. All vessels must have a positive derived Noise Label score or equivalent.

Derived Noise Label score actions

The following table summarises the interim actions based on the derived Noise Label score.

Derived Noise Label Score	Interim Actions
High (+30 to +50):	Low likelihood of community complaints.
Medium (+10 to +30):	No further action required. Only be revisited in response to community complaints.
Low (0 to +10):	Mitigation is encouraged and vessel to continue service and berthing location and timing managed by each port individually. Further monitored may be required if issues continue or re-testing is required to confirm the derived label score under different vessel operating or weather conditions.
Negative (less than 0)	A negative score is highly likely to generate community concerns. The shipping line / vessel owner will be notified and a timeline of not more than 6 months agreed for mitigation to be implemented. If after this the derived noise label score continues to be negative, the vessel will be denied entry to NZ ports.

Case Study: Rio Class ‘rumble’ mitigation

Rio Class ships generated a large volume of noise complaints about low frequency ‘rumble’ at all the communities they visited. The ‘rumble’ was mitigated by fitting a reactive silencer between the auxiliary engine and exhaust funnel. The derived Noise Label score improved from -23 to +41. The improvement can be experienced by listening to this [YouTube clip](#)²). The community noise complaints stopped.

¹ Lt 010 r03 20181103 CMF (NZ Ship Noise Specification Leaflet)

² https://www.youtube.com/watch?v=eW3nedQivPY&ab_channel=MarshallDayAcoustics