

Community Reference Group

Thursday 8 June 2023



Welcome

Agenda

5.30pm – Welcome

5.35pm – General business update

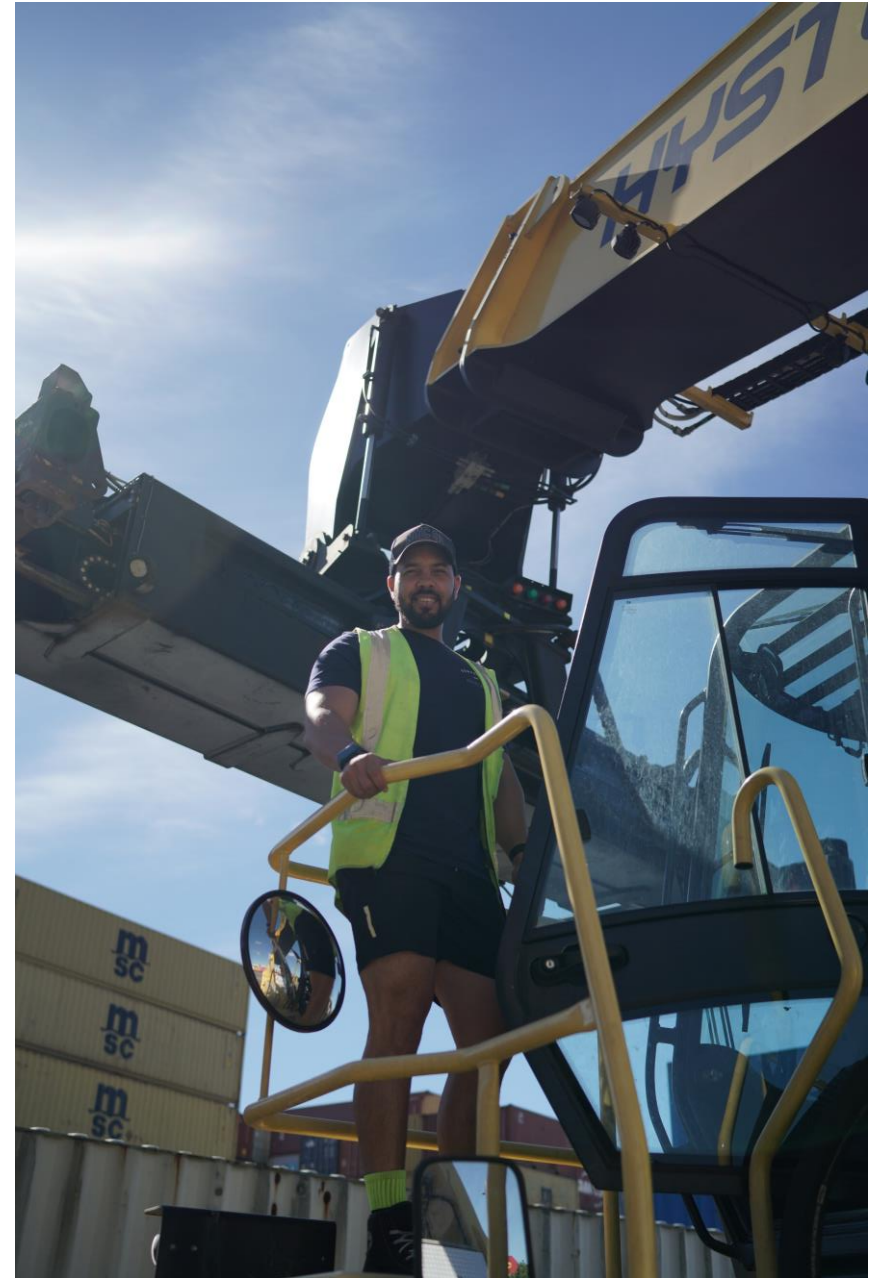
6.00pm – Berthing Process

6:20pm – Infrastructure Update

6.30pm – Environmental Update

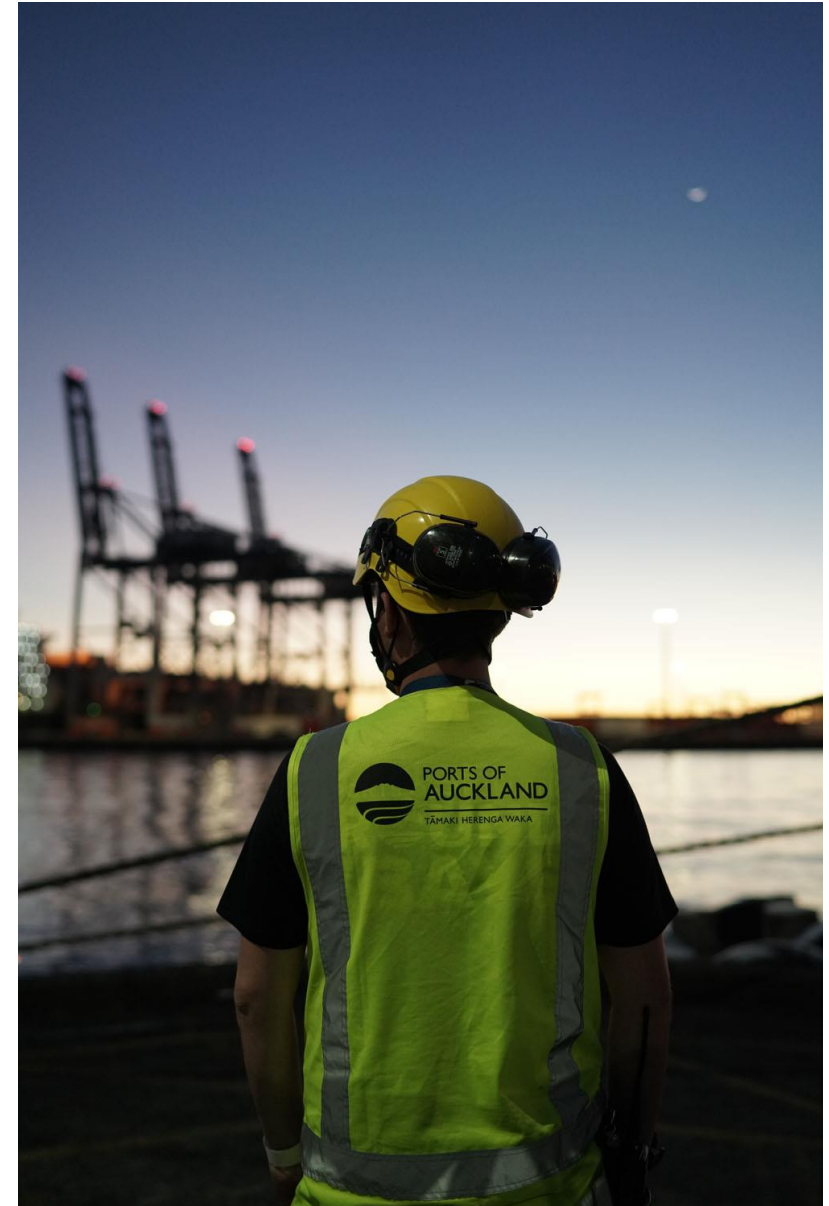
6.45pm – AOB

7:00pm – Close



General Business Update

- Four high straddle carriers
- Council engagement
- Safety Award finalists



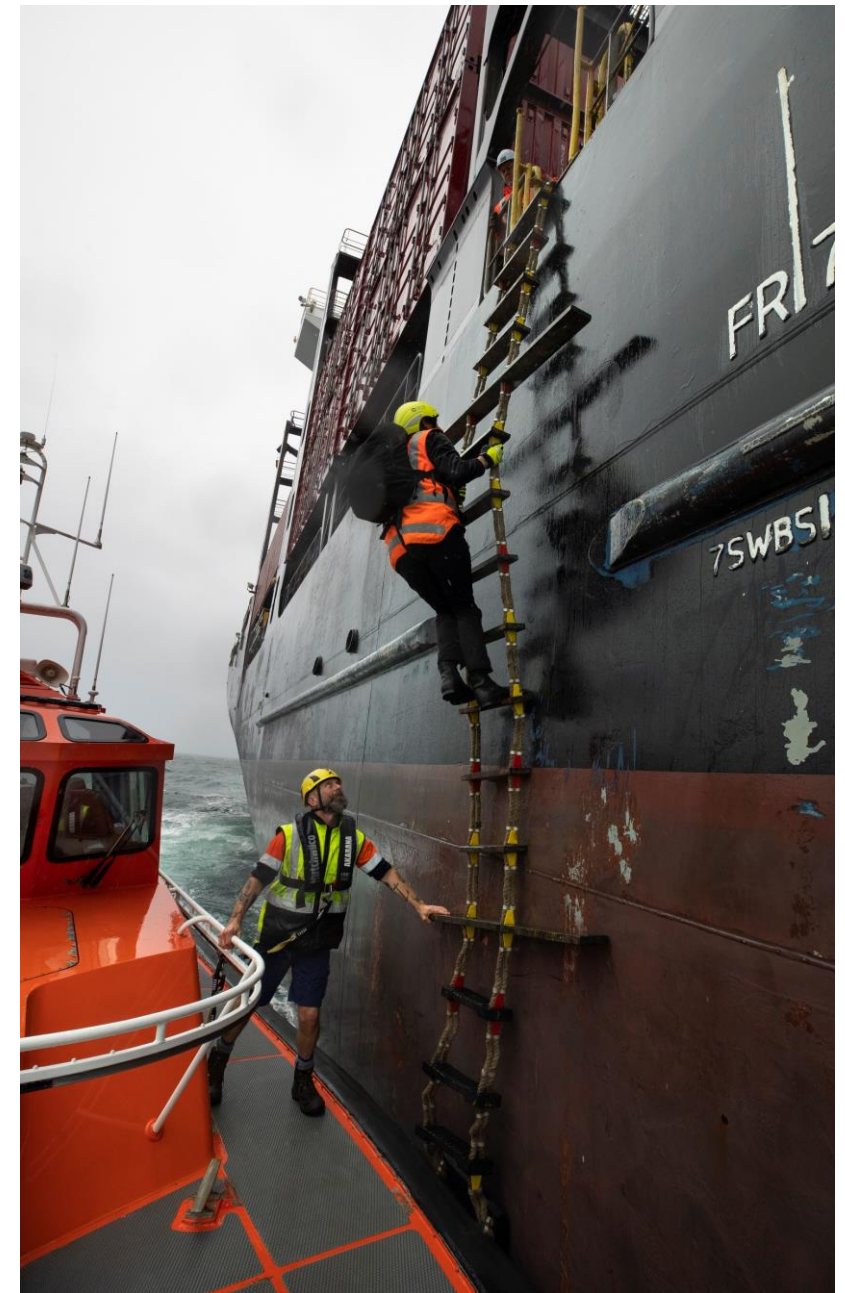
Pilotage and Berthing Process

Allan D'Souza – GM Marine and Multi-Cargo and Matthew Holbrook – Senior Pilot



Pilot Responsibilities

- Pilotage is compulsory.
- Governed under the Maritime Transport Act & Maritime Rules Part 90.
- Safe and efficient passage of a vessel within the Auckland Pilotage District generally Pilot Station to Commercial Wharf and vice versa.

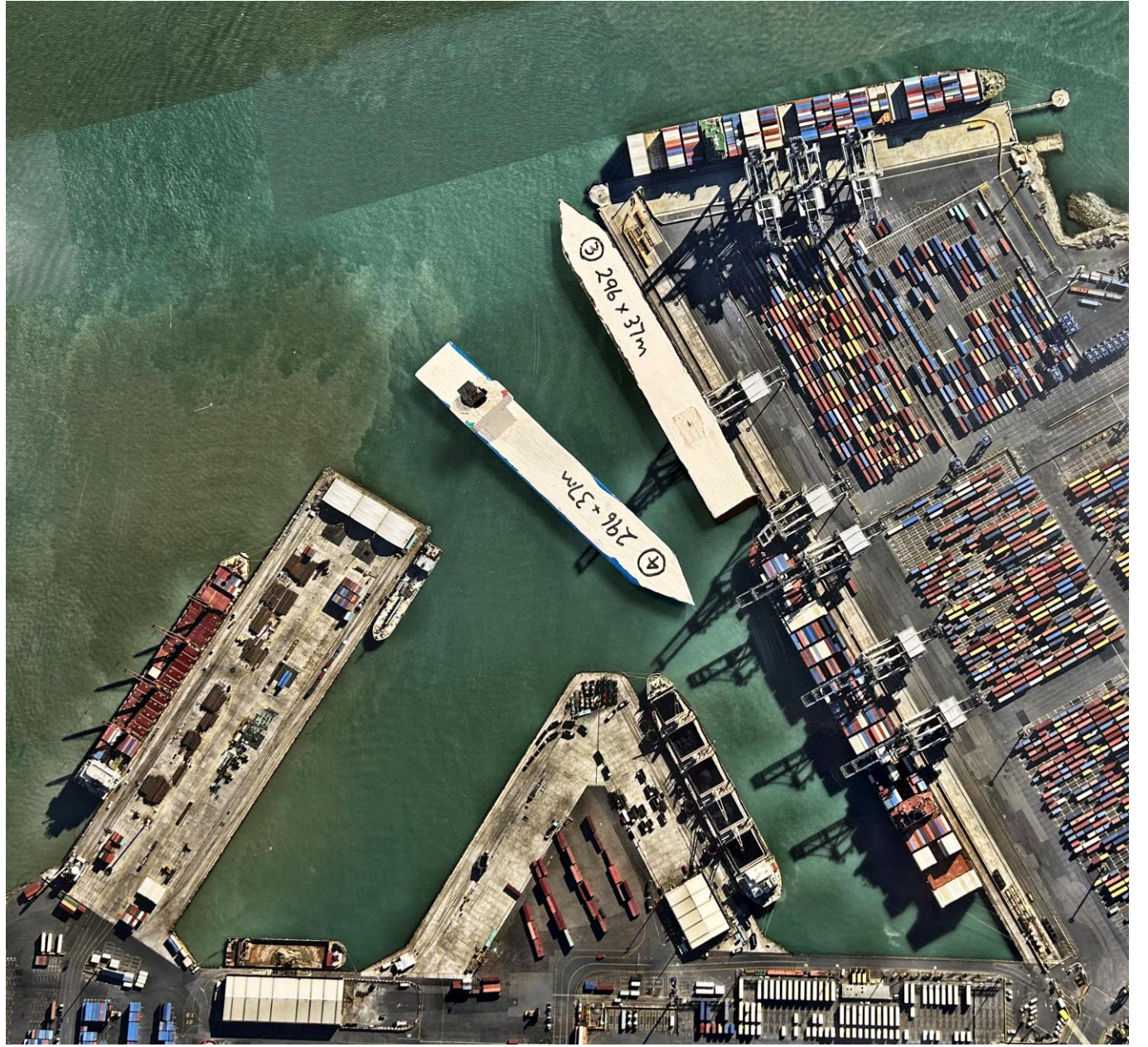


Berth Arrangement

- Main wharf (FX & FZ) lies in an approximate North/South direction with an approximate usable length of 600m
- North wharf (FN) lies in an approximate East/West direction with an approximate usable length of 300m
- Southern berth (FX) has a limiting width of 150m of navigable water (perpendicular to its direction).
- This space can be further limited by vessels occupying the berth opposite (FD).

Vessel Type

- The Fergusson Container Terminal services Container Vessels.
- Regularly servicing vessels of approximately 300m in length and 32-40m beam. Larger vessels can likely be expected in the future.
- Vast majority of container vessels are equipped with:
 - One direct drive/reversing main engine;
 - Single shaft with a 'fixed right-handed' propeller;
 - Single rudder;
 - One bow thruster (can be non-operational/unavailable).



Maneuvering Characteristics

- Transverse Thrust
 - Effect due to rotation of propeller
 - Most pronounced when vessel/propeller is going astern
 - 'Drags' the vessels stern to port or to the left.
- Astern Power only 35% of Ahead Power.
- Rudder not effective/usable when going astern.
- Tugs (x2) utilized forward and aft to assist berthing process.
- Propeller prone to cavitation when operating astern in minimal UKC conditions.

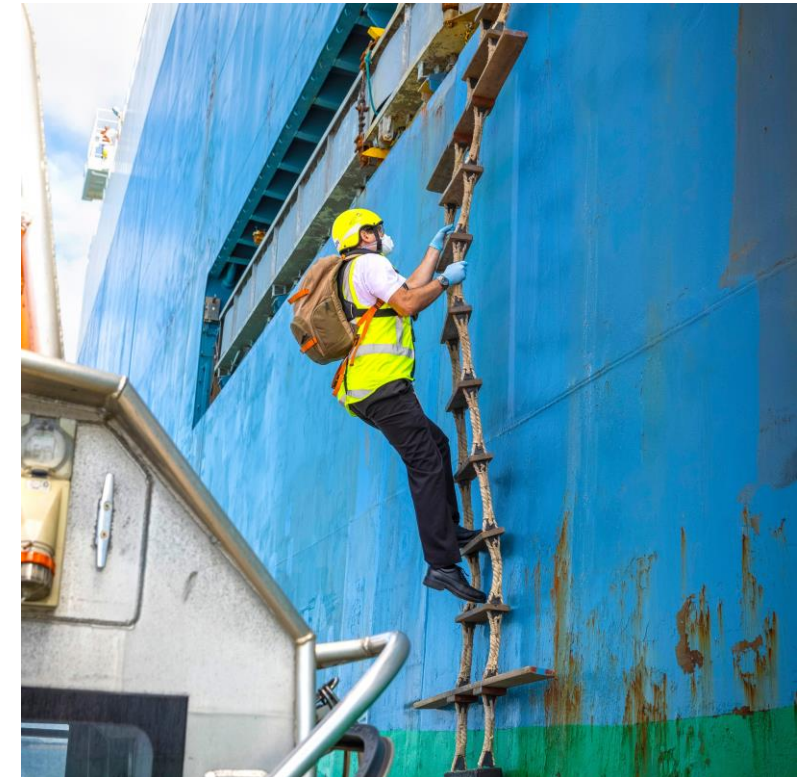
Limiting Factors

Weather

- Wind
- Depth Under Keel
 - (minimum 0.4m) limits propeller effectiveness further i.e does not stop.
- Berth Design
 - FX, adjacent 'breastworks' is not perpendicular and berthing parallel is not achievable.
 - Navigable water of a width of 150m has not increased in decades yet vessel size, length, width and mass has increased steadily.
 - Adjacent vessels further reduce width to 100m (SOP minimum); vessel 32, tug 22 therefore occupies 56m of this space allowing remaining 28m either side. This does not allow for tugs line for towing/pulling.
- Crane Positioning
 - Cranes clear of vessel
 - Vessel bow 'flare' exposes southern cranes when bow south.

Berthing - Bow North

- Cut/transverse thrust assists turn first part of maneuver
- Stop engine track astern
- Better ability to:
 - Stop
 - Control direction with rudder
 - Control bow with thruster – pivot point/lever
 - Abort maneuver high chance of success
 - Visibility – pilot in aft part of vessel with better visibility to danger points/obstructions



Berthing – Bow South

- Controlling speed can be problem – some vessels 9kts at DSAH.
- Slowing/stopping can affect control of vessels movement through critical points.
- Bow thruster less effective when moving ahead – pivot point/lever.
- Less ability to:
 - Stop – 35% power, cavitation.
 - Control vessel with rudder.
 - Control bow with thruster – pivot point/lever.
 - Abort – low chance of success.
 - Visibility, ascertain dangers due to distance from bow.
 - Avoid bow flare over wharf.
 - Ebb tide exacerbates transverse thrust on departure against required direction.

Pilotage and Berthing Process



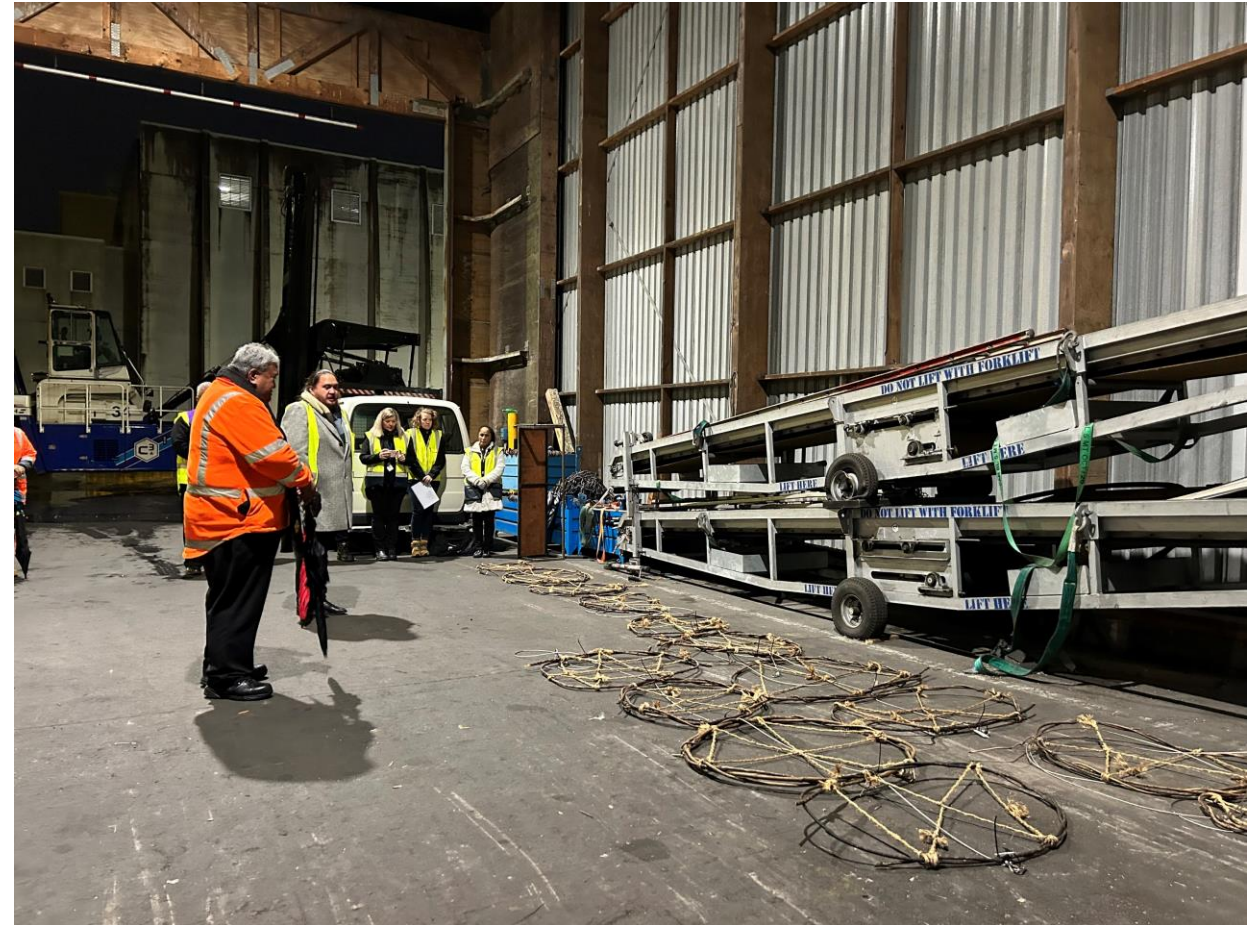
Any questions?

Infrastructure Update



Environmental Update – Harbour Health Initiative

Nigel Ironside



Noise specification process

Existing Container Vessel

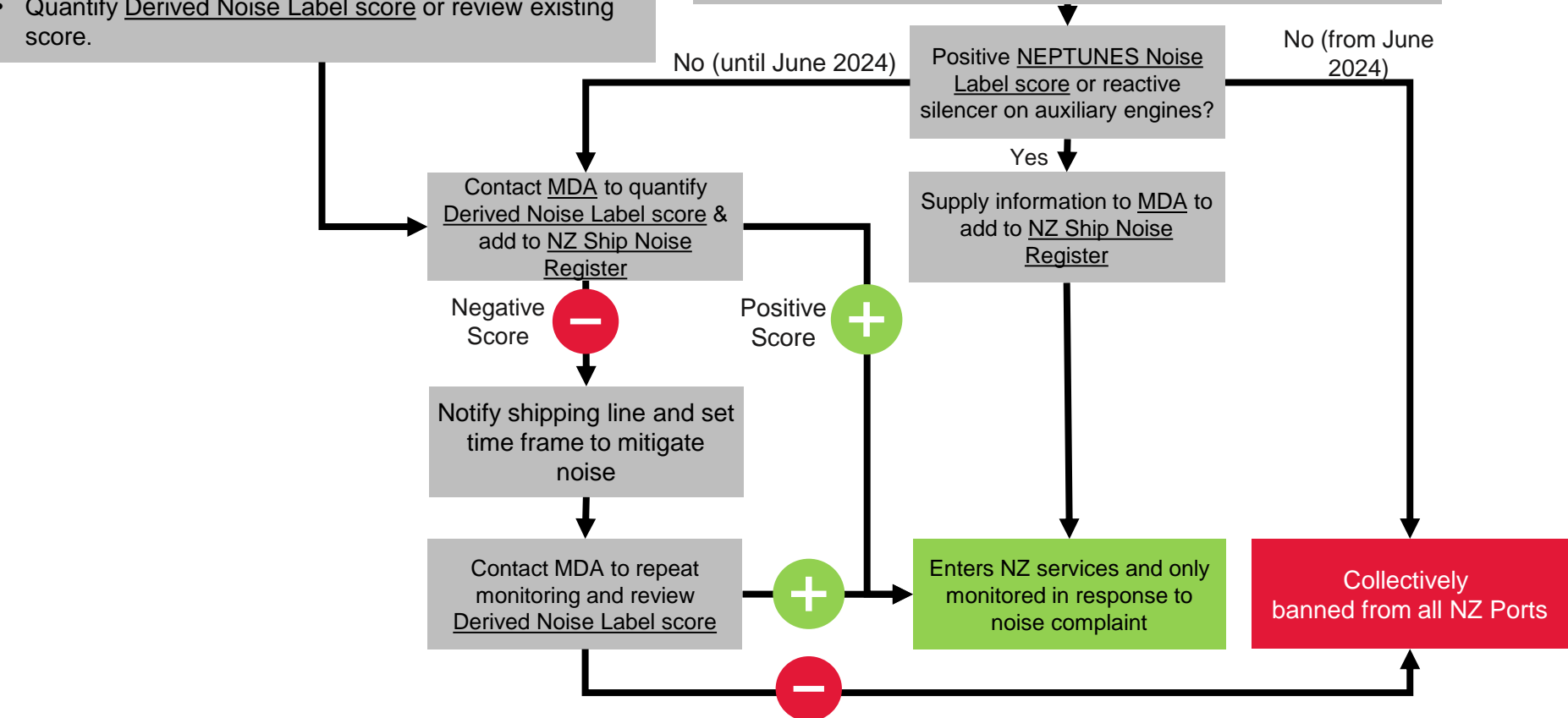
In response to a noise complaint:

- First check if the vessel listed on the [NZ Ship Noise Register](#);
- If not, request information listed for a new vessel (right); and
- Quantify [Derived Noise Label score](#) or review existing score.

New Container Vessel

Request the following in advance of the first visit:

- A certified positive [NEPTUNES Noise Label score](#) ; or
- A reactive silencer fitted is fitted on auxiliary engines that will be used while at berth (evidence may include a photo or specification).



NZ ports introduce new noise compliance rule

The low frequency 'rumble' from ship auxiliary engines has been a major source of community noise complaints at New Zealand's ports for many years but over the past year has emerged as a problem that had to be addressed.

Managing responses to the complaints from individual ports has taken time to evolve. Shipping lines have responded to separate incidents as they occurred.

However, in response to the ongoing significant problems from a limited number of vessels and the reduced tolerances of communities across New Zealand to impacts of such noise sources, the country's ports have now agreed to adopt a common approach to the management of low frequency vessel noise.

This week, Ports of Auckland delivered a letter to vessel operators and agents on behalf of the ports regarding noise from vessels.

"We are implementing a noise specification called NEPTUNE," it stated, and was accompanied by a

noise specification brochure.

The New Zealand Low Frequency Vessel Noise Specification is aimed primarily at container vessels and its introduction by Ports in NZ will relate only to container vessels in the first instance.

"This is going to be an important piece of work for port communities and local residents also provide clarity and consistency across the ports for the lines," says the note. This common approach is based on the NEPTUNES Noise Label Score.

The recipients have been provided with a twelve-month window to undertake a remedial response. The noise code will come into force on June 1, 2024.

From June 1, 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 either of these requirements are not met, then from June 1, 2024 the vessel will be refused entry to any New Zealand port.

Compliance with this new noise specification will be managed by Marshall Day Acoustics Ltd on behalf of all NZ ports.

NZ ports have been monitoring problem vessels for several years and comparing the results with a derived NEPTUNES noise label score. "This work has confirmed that a vessel with a NEPTUNES noise label score greater than +30 will be extremely unlikely to give rise to any low frequency noise complaints from our adjacent communities."



Any other business



Thank you!

**Working for Auckland
Kia Kaha, Kia Maia**

Haere rā

**Community Reference Group
Thursday 8 June
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