



# O’Phee Super B Double, Double Stacked Container Vehicle at Port of Brisbane

## The vehicle

In June 2023 after extensive and rigorous safety assessments, Qube was granted a permit from the National Heavy Vehicle Regulator (NHVR) and consent from Port of Brisbane Pty Ltd (PBPL) to operate its new double stacked container vehicle on a specific route, predominantly within Qube’s own facilities and on limited port roads.

The vehicle operates under strict safety and operational controls.

## KEY VEHICLE FACTS

### FULL NAME

O’Phee Super B Double,  
Double Stacked Container Vehicle

### TOTAL CONTAINERS

Up to 8 empty containers

### SIZE

32m long, maximum 7.4m high

### CONTROLS

Wind monitoring and design to prioritise stability

### SPEED LIMIT

Speed limited, corner speed of 15kmph

### ROUTE

Operates on a specific route, predominantly within Qube’s port facilities and on limited port roads

Designed and manufactured  
in Brisbane  
FIRST OF ITS KIND IN THE WORLD!



## Safety during design and construction

The vehicle underwent extensive safety consultation and assessments during its design and its operational trial to ensure it is safe to operate under its permit conditions.

During the design phase, the vehicle was subject to regulatory and independent safety and operational assessments, including:

- NHVR's Performance Based Standards (PBS) Framework and own computer simulation to evaluate performance under various loading scenarios
- Wind monitoring and wind loading assessments
- Road infrastructure and traffic management assessments of the route
- Load restraint assessments
- Swept path analysis.

Once constructed, the vehicle was subject to further safety tests and assessments including physical tilt tests and desktop assessments relating to its stability.

During the on-road trial of the vehicle, NHVR fitted instrumentation to the combination which monitored vehicle speed, location and lateral acceleration data.

Both the physical stability testing and on-road trials validated the results of computer modelling and assessed the real-world stability performance of the combination.

The trial of the vehicle in June was attended and observed by:

- National Heavy Vehicle Regulator, as the regulator
- Australian Road Research Board, to conduct the road safety audit
- Port of Brisbane Pty Ltd, as the Port's Road Manager.

## Safety on port roads

Further measures are in place to ensure the safety of the vehicle within the Port of Brisbane:

- Infrastructure improvement works were undertaken along the vehicle's route to further support safety
- Additional signage planned for installation, alerting road users to the new vehicle where it may enter or exit facilities
- The vehicle has real-time wind monitoring in place
- Speed limited, corner speed of 15kmph
- Vehicle drivers undergo specific training and inductions.

## Innovation

This is a significant innovation from Qube together with its vehicle designer and manufacturer O'Phee Trailers, a division of The Drake Group.

Qube has confirmed that the new vehicle will increase productivity and efficiency for Qube while prioritising safety for the vehicle driver and road users. By reducing the number of vehicle movements to transport containers, it will also ultimately help reduce emissions.

## More Information

The Drake Group  
[www.thedrakegroup.com.au](http://www.thedrakegroup.com.au)

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