

<b>Notice Type:</b>	Route Access Condition Notice	
Subject Title:	Operation of QUBE steel train	
Operator(s):	Qube Logistics	
Corridor/line:	Moss Vale to Unanderra	
Effective From:	20/06/2024	Effective To: 20/12/2024

**Reference Documents:**

Route Access Standard:	RAS Section Page D52
TOC Manual	TOC Manual Section 03

**General Details / Operating Condition:**

An extension to TOC Waiver 24031 is issued to Qube Logistics for ongoing trials as follows:

This RACN Waiver permits the operation of QUBE steel train from Melbourne to Port Kembla via the Moss Vale to Unanderra Line and return. These services are single pipe trains loaded up to 2400t, with a train length up to 1250m and axle loads at the front third of the train less than 10 tonne.

This waiver shall be read in conjunction with TfNSW TOC Waiver TW: 203-1462.

Operating conditions shall be as follows.

1. This RACN Waiver shall be provided to the crew of the train.
2. The maximum trailing load of the train shall not exceed 2400t and shall not exceed 1250m.
3. The trailing load shall be hauled by either 2 or 3 QL class (or CF Class) locomotives in a head end consist.
4. Up to two additional dead engine/offline locomotive is permitted as part of the 2400 tonne trailing load. This locomotive maybe of any class however the locomotive that is coupled to the wagons shall be a QL/CF class locomotive.
5. The dead engine/offline locomotive shall have air brakes cut-in, the remainder of the train shall comply with RAS General Information section 4.7 "Train Braking Requirements".
6. Allowable wagons will be CQPY, CQZY, NCFE, RCAF, RCBF, RCKF, RCQF, RCSF, RKPF, RKQF, RKXF, RKVY, RKYY, RQTY, SKBY, SKLY, SKPY and SQSY class wagons.
7. The maximum load on RCBF, RKVY, and RKYY wagons shall not exceed 84 tonnes.
8. The load and position limits for wagons are as follows:
  - a) The trailing mass shall consist of at least 1/3 empty wagons, for example, a train hauling 2400t shall comprise of at least 800t of empty wagons (not to include any locomotives). Empty wagons are any wagons at tare load and SQSY / CQPY / CQZY fitted with empty coil cradles or empty butter boxes (maximum 21.54t / 21.4t / 22.2t mass).

- b) All loaded wagons shall be marshalled at the front of the train. Loaded wagons are considered any wagons that is loaded to 10TAL (40 tonne gross) or greater.
  - c) Where SQSY, CQPY or CQZY class wagons are fitted coil cradles or butter boxes (without product) or loaded to the equivalent gross mass of 21.54t (SQSY), 21.4t (CQPY) and 22.2t (CQZY), they may be marshalled anywhere in the train, but shall be behind any loaded wagons.
  - d) Where SQSY, CQPY or CQZY class wagons are empty (not loaded with cradles, butter boxes, or product) they shall not be marshalled in the first 1/3 of the train.
  - e) Where NCFE, RKXF, SKBY, SKLY class wagons are empty or loaded to less than 10TAL (40t), they shall not be marshalled within the first third 1/3 of the train.
9. Prior to passing Moss Vale an "HP inspection" shall be carried out, and the following confirmed:
- a) Ensure that all SKBY, SKLY, SKPY and SQSY class wagons have their variable exhaust chokes locked out in the NSW position (for 30 - 50 sec).
  - b) All other vehicles with a grade control valve shall be securely set in the "IP" position. The following vehicle classes are known to have grade control valve NCFE, RCKF, RCQF, RCSF, RKPF, RKQF and RKXF.
10. A brake time release test shall be conducted after leaving Summit Tank with the train on the falling gradient.
11. Dynamic brake shall be operated as follows:
- a) Dynamic brake shall be used and supplemented with air brake as required to control the speed of the train.
  - b) The total dynamic brake force shall be limited to a combined 690kN.
  - c) All locomotives shall have operable extended range dynamic brake.
12. If a dynamic brake fails in service, the train may continue with at least a single dynamic brake.
- a) If the driver has any trouble in adequately recharging the brake pipe, the train shall be brought to a stand and held on the locomotive independent brake and sufficient handbrakes and the brake pipe fully recharged.
  - b) The train may then continue under the control of the remaining dynamic brake(s) and supplemented with larger air brake applications to compensate for the lost dynamic brake.
  - c) If the driver again has trouble in adequately recharging the brake pipe, the train shall be brought to a stand and secured by handbrakes.
  - d) The train may be subsequently moved only by dividing the train or attaching additional locomotive/s with operable dynamic brake.

13. During the descent if the speed of the train exceeds 25 km/h and the driver has not implemented actions to slow down or stop the train prior to reaching 25 km/h, the train crew shall immediately implement actions to slow down or stop the train. However, if the train speed continues to increase and exceeds 30 km/h, the train shall be brought to a stand and held until the brake pipe is fully recharged before continuing.
14. Stopping distance tests shall be conducted on at least the first 5 trains operating over 1000m and 2200t trailing mass. The following test details and information shall be recorded, retained in a report and made available to ARTC on request.
- a) Stopping distance test shall be conducted between Robertson and Summit Tank (on the 1 in 60 descending gradient), the driver shall apply a full-service brake application (bail off locomotive brakes) and bring the train to a stand from 40 km/h.
  - b) Train operating information such as the train marshalling order, train gross mass and total length, speed, dynamic brake settings and general braking performance.
  - c) The Data Logger records from Robertson to Unanderra shall be exported and converted to a format that is readable with current Microsoft Office 365 software.
15. Approval to operate under this waiver on the ARTC network is subject to an approved path request.

**Approval:**

Prepared by:  Date:

Approved by:  Date: