

## LIMITING CRITERIA FOR SMALL WHEELED FREIGHT VEHICLES ON BR EXISTING TRACK – AXLE LOADS, WHEEL DIAMETERS AND OPERATING SPEEDS

The report investigates in detail the restrictions due to loading gauge, negotiation of obtuse crossings, axle load, speed, braking and materials on the minimum size of small wheels that can be fitted to freight vehicles to run on existing track.

The report shows that for 2 axles/bogie wagons the minimum wheel diameter feasible is 510mm but this would necessitate the installation of raised check rails at obtuse crossings which are 25mm ARL. With 3 or 4 axles/bogie 510mm diameter is possible without the use of raised check rails. Diameters down to 400mm are technically possible but would incur a severe economic penalty due to the large amount of work involved in increasing the gauge width at rail level.