



ABSTRACT

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MEETING COUNTRY RAIL FREIGHT DEMAND

By

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Planning for country rail freight infrastructure in New South Wales to meet future needs requires an understanding of both demand and capacity. Rail freight demand depends upon the volume of commodities and the likelihood of rail mode choice. Rail network capacity depends upon the infrastructure and operational characteristics of lines such as track standards, axle loads, speed profiles, control systems and available passing loops which in turn, constrain the type and number of trains which can use the line (train paths).

Studies of specific rail routes have therefore combined detailed operational modelling with in-depth consideration of demand. System wide estimations of future rail freight traffic have instead generally applied simplified operational assumptions. In contrast to such well developed approaches this paper describes a research framework for a mesoscopic level investigation of demand and supply to cover 19 separate country rail routes in NSW.

The paper begins with a brief description of the study context covering the scope of the NSW country rail network and the major commodities it carries. A description then follows of the freight demand forecasts available from the Bureau of Freight Statistics NSW Strategic Freight Model, potential adjustments for seasonal fluctuations, and consideration of local mode share issues. Capacity modelling, using the NSW Rail Freight Model in the RailSys platform, is then addressed. This capacity model must be designed to provide sufficient local operational detail.

The approach combines the scope of a system wide approach with the local detail needed for prioritisation of routes for action or further study.

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