

FRANKSTON – STONY POINT RAIL CORRIDOR SUITABILITY FOR CONTAINER FREIGHT TO THE PROPOSED HASTINGS CONTAINER PORT



In May 2016 the Special Minister of State asked Infrastructure Victoria to provide advice on the future capacity of Victoria's commercial ports. Specifically, the Minister has asked for advice on when the need for a second container port is likely to arise and which variables may alter this timeline. The Minister has also asked for advice on where a second container port would ideally be located and under what conditions, including the suitability of, and barriers to investing in, sites at the Port of Hastings and the Bay West location.

In undertaking this task, Infrastructure Victoria reviewed work that was completed as part of the Port of Hastings development project before it was cancelled in 2014. This document forms part of the initial work undertaken for the proposed port development at Hastings. Infrastructure Victoria considers that much of the previous Hastings work, although preliminary in nature, is relevant and suitable for informing a strategic assessment. Therefore, Infrastructure Victoria has made the reports previously commissioned for the development project part of the evidence base on which Infrastructure Victoria will use in providing the Minister with advice.

The opinions, conclusions and any recommendations in this document are based on conditions encountered and information reviewed at the date of preparation of the document and for the purposes of the Port of Hastings Development Project.

Infrastructure Victoria and its consultants have used the information contained in these reports as an input but have not wholly relied on all the information presented in these reports.

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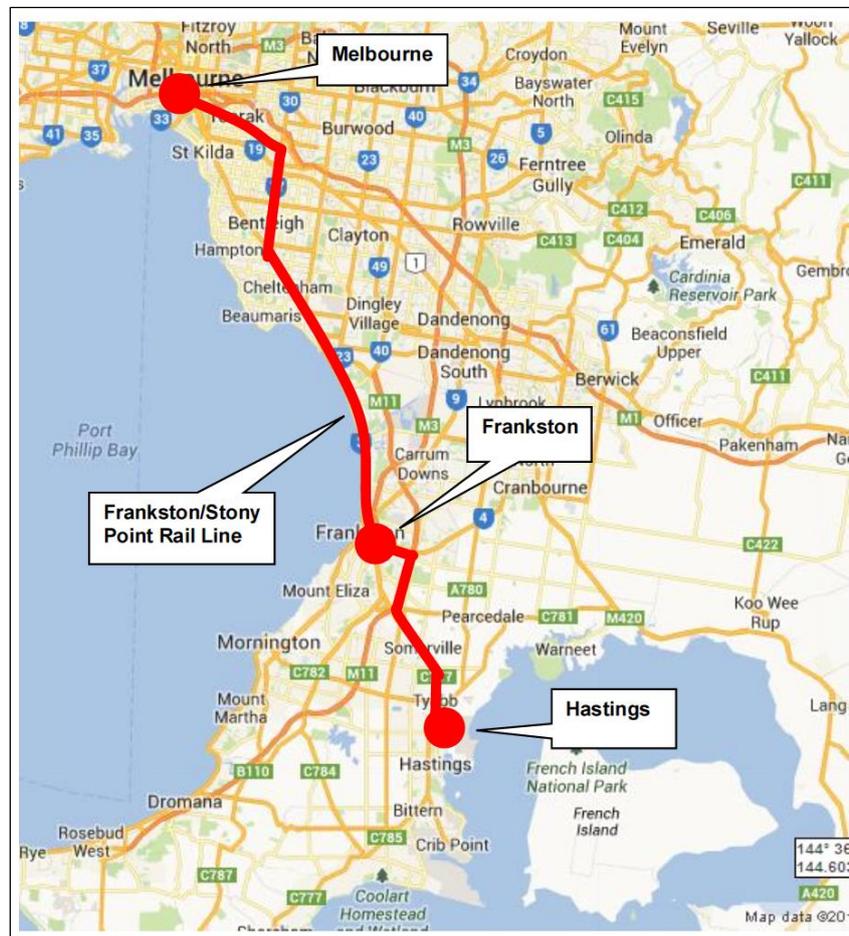
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1. Purpose of Report

The purpose of this report is to examine, at a high level, the feasibility of using and upgrading of the existing rail link to Hastings for the proposed container port at Hastings.

2. Existing Conditions

The Port of Hastings is undergoing planning for an expansion as Victoria's second container port with a potential ultimate capacity of 9 million TEU (twenty foot equivalent containers). With this large number of containers there will be a need to utilise both road and rail based transport options to service the port. The existing rail connection to the Port of Hastings is via the Frankston/Stony Point rail line which is shown diagrammatically below.



The Frankston/Stony Point line consists of three broad gauge tracks between Caulfield and Moorabbin. From Moorabbin to Frankston the line has double broad gauge tracks and from Frankston to Stony Point it is a single broad gauge track. From Frankston to Hastings the line is non-electrified with diesel passenger trains operating to Stony Point and diesel freight trains operating to BlueScope Steel at the existing Port of Hastings.

From the city to Hastings via the Frankston/Stony Point line there are 44 level crossings in comparison to rail line to Dandenong where there will be only 4 level crossings beyond Caulfield after the current grade separation projects are completed. The Frankston suburban line is one of Melbourne's most heavily trafficked railways, experiencing very high

passenger demand and it is constrained by various issues limiting the ability to run more services, including the impact on level crossings referred to above.

3. Rail Upgrading Requirements For Port Container Trains

It will be necessary to provide two independent freight tracks to cope with the anticipated container train demand well before the Hastings container port reaches its design capacity. These additional tracks will need to be dual gauge in order to provide access for suburban and regional broad gauge container trains as well as for standard gauge regional and interstate trains. Dual gauge track is a system where there are three rails per track as shown in the picture below.



4. Likely Impacts

If the Frankston/Stony Point line was used for the container train link to Hastings instead of the Government's preferred option along Western Port Highway it there would be a number of significant impacts.

Although it would be physically possible to provide the additional dual gauge lines along the Frankston/Stony Point rail line, the existing rail corridor along a significant portion of the line to Frankston is not wide enough to accommodate the additional tracks that will be required for the upgraded rail link to Hastings. A significant amount of additional land would be required for the rail link along this corridor and the resultant residential property impacts would be very significant.

Adding two extra tracks to the existing Frankston/Stony point line would cause significant issues at level crossings. If this line was used as the link to the container port at Hastings there would be five tracks to Mordialloc. There would also be four tracks to Frankston and ultimately to Baxter when the suburban electric services are extended and four problem. From Baxter to Stony Point there would be three tracks.

As well as causing significant traffic congestion due to increased closure times for the additional freight trains, there is also likely to be an unacceptable increase in risk of train/car collisions at what would become four and five track level crossings. This would mean that

most, if not all of the 44 level crossings need to be grade separated. This would have particular challenges on those parts of the line that run close to Port Phillip Bay due to the very high water table in those areas. This in turn would add something like \$4-5 billion extra to project costs. As well adding substantially to the cost of the link, the grade separations would be likely to require additional land and this would be likely to cause significant land acquisition impacts on adjacent properties.

5. Reduced Benefits Of Frankston/Stony Point Line Link

There are a number of substantial advantages in providing a new rail link to Hastings by constructing a separate dual gauge line on the Dandenong rail corridor and a new independent dual gauge link to Hastings via the Western Port Highway or via the Port Phillip link option which would use East Link and Peninsula Link. The diagram below shows the location of these links.



As well as providing a pathway for Port of Hastings container trains, either of the links via the Dandenong line would also provide a pathway for Gippsland passenger and freight trains between Dandenong and the City independently of the suburban electrified tracks where they currently face significant delays due to growing congestion problems. The new line via the Dandenong corridor would also provide a pathway for container shuttle trains between the proposed Lyndhurst Intermodal terminal and the city independently of the suburban electrified tracks. The alternative of providing a new independent dual gauge link to Hastings via the Frankston/Stony Point line does not give any of these three important additional benefits.

6. Port Phillip Rail Link Option

The Port Phillip option would utilise a relatively short section of the Stony Point line corridor between Langwarrin and Hastings. The short section concerned generally has a wider rail reservation than the section north of Frankston and there would therefore be far less land purchase requirements. This in turn would mean with far less property impacts on adjacent residents. The number of level crossings would also be substantially reduced.

The Port Phillip rail link option would be far less costly to construct than a Hastings container port rail link via the existing Frankston/Stony Point line. The Port Phillip link would however be approximately \$700 million more expensive to construct than Western Port Highway rail link option.

The additional cost is bought about by the need to build three complex and costly engineering structures as well as a number of grade separations. The first structure would be required at the junction of the existing Pakenham rail line and Eastlink, the second structure at the junction of Eastlink, and Peninsula link while the third structure at the junction of Peninsula link and the Stony Point rail line. A number of level crossings between Langwarrin and Hastings would also need to be replaced with grade separations.