



City of Greater Geelong

Response to Infrastructure Victoria's Second Container Port Advice – evidence base discussion paper

March 2017
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1 Introduction

The City of Greater Geelong is pleased to make a submission to Infrastructure Victoria on the Second Container Port Advice Evidence Base Discussion Paper. This coordinated response has input from key stakeholders the Geelong Chamber of Commerce, G21 – Geelong Regional Alliance, Committee for Geelong, Committee for Wyndham, Wyndham City Council, Western Transport Alliance, Avalon Airport, LeadWest, Geelong Manufacturing Council and the Victorian Regional Channels Authority (Technical matters only). The submission will address those questions posed by the discussion paper and provide additional commentary where applicable.

2 Background

The debate regarding the capacity of the Port of Melbourne (PoM), the need for a second container port and where it should be located has occurred since 2014. Infrastructure Victoria have adopted a vigorous and systematic process to inform this debate via an evidence base ultimately to provide advice to the Victorian Government on these two issues.

The City of Greater Geelong and stakeholders maintained from the outset that the PoM would reach capacity within a 20 year time span, that the west of Melbourne is a logical place to locate a second container port and that ships will inevitable get larger. Further that a firm decision should be made on these matters given the lead time required to provide for such infrastructure and the investment risk that uncertainty brings.

3 Future Demand, Channel Capacity and Ship Size

3.1 Future Demand

Infrastructure Victoria acknowledge the shortcomings of any demand forecast and the fact that any forecast will inevitably be wrong ...”Demand forecasting is not exact but is a valuable and credible tool in capacity planning”. They also make mention of the unknown technology changes that might shape operations in the future. The forecasts chosen by Infrastructure Victoria are in line with what has been done before and the approach seems logical, concluding that by 2031 the PoM will be dealing with 4.2m TEU per year.

3.2 Channel Capacity

The limiting factor for shipping entering Port Phillip Bay is the capacity of the Heads and the ability of shipping to transit safely. It would appear from the evidence carried out by Infrastructure Victoria that the existing channels can accommodate vessels capable of 14,000 TEU. In addition the numbers of ships visiting and the likely congestion issue is very unlikely to be a constraint on port operations. However capacity in the Geelong channel is an issue in so much as channel depths are not sufficient to cater for vessels with a draft above 12m. This is significant if non container traffic from the PoM is to be diverted to Geelong allowing greater use of PoM for containers and thus extending its life. Further work and investigation would be helpful to clarify this issue, for example what might the effect be on PoM capacity of increasing the Geelong channel depth beyond 14m.

3.3 Ship size

Ships have increased in size and it is reasonable to assume that this will continue. However the ability of the PoM or indeed any port to accept ever larger ships depends on the inter relationship between all the factors that are needed to service a ship. Namely channel capacity, wharf facilities, and other dockside infrastructure and ultimately the supply chain from the port to end users. The analysis Infrastructure Victoria has applied again appears thorough and logical, the balance of probabilities would indicate that 14,000 TEU ships are likely to be the largest to visit PoM on a regular basis.

4 When a second port will be required

4.1 PoM Supply Chains

In terms of land and buildings available to service both imports and exports and how such movements are achieved is well articulated in the discussion paper. It would appear that both the west and south of Melbourne are well serviced, although there is no indication of the quality of space available, however it is assumed that this would not be a constraint should demand be sufficient. The more important question is the ability of road and rail infrastructure to accommodate increases in volume. There appears to be no analysis of the present and future origin and destination of containers from the PoM and the impact this may have on supply chains.

The modelling undertaken demonstrates that both Swanson and Webb docks can increase container traffic to in excess of 4m TEU. In the case of Swanson Dock this requires no increase in night operations once the western distributor is in place. Webb dock however will need 50% night operations which will have significant social implications and require a very substantial change to current supply chain operations. Existing traffic congestion in the port area is already perceived as high and begs the question as to how confident Infrastructure Victoria is, that increased volumes can be satisfactorily managed.



Evidence presented investigates the potential feasibility of increasing capacity but does not articulate clearly if this might result in a higher TEU cost. Further what effects this might have on specific trades. For example commodities such as grain are particularly price sensitive thus changes in the cost structure may make container usage uncompetitive. Although the workings of specific trades and commodities are difficult to encompass in the evidence base it is necessary to recognize what the flow on effects might be and how significant. For example current container trade could be diverted to another interstate container port or lost. Similar reasoning could apply to other commodities that could adversely affect producers further down the supply chain in the regions.

Perhaps what is required is a changed mind set in relation to freight mode in favour of rail, the 30% share quoted as an aggressive target is achievable, if a more optimistic target were set coupled with the forward development of the Western Interstate Freight Terminal (WIFT) truck congestion would be less and more manageable. It is also worth noting that such a change would benefit Melbourne's west by generating jobs in the Western Industrial Node and add to the advantages of a Bay West second port location. In this regard further work could be undertaken to cost the proposed rail system connections to both port alternatives.

4.2 PoM capacity

Maritime approaches, terminal operations and landside transport networks constrain the PoM to a greater or lesser extent and depending on the mix of improvements the likely capacity of PoM is set to fall between 4 and 9 million TEU. Many of these actions depend on a significant number of activities occurring in a correct sequence and are not within the control of any one body or authority, the chance of such a complex and inter related set of actions working as predicted is not great.

The ability of other ports in Victoria particularly Geelong and Hastings to increase bulk volumes and potentially other cargos will depend on maritime and landside infrastructure improvements. For example the use of high productivity freight vehicles requires highway and bridge strengthening works between Geelong and Werribee. Such investment would need to be undertaken in the context of an examination of the effect increased usage of high productivity freight vehicles might have on capacity and thus the efficiency of the supply chain. It is also necessary to ensure that the Victoria planning provisions appropriately zone land at alternative bulk ports and further that the relevant authorities work with existing owners and the community to make sure that enough land is available to accommodate growth. These examples emphasize the point that capacity improvements are complex and changes in one element has a knock on effect and thus a systemic approach is required. It is unlikely that the cost of such improvements can be met without some form of government intervention. It will also be necessary to coordinate agencies to program and deliver such infrastructure improvements..

The conflict between port and residential uses is likely to continue particularly as volumes increase, with little or no methods available to ameliorate the adverse amenity issues of noise and air quality. In some senses the PoM's land constraint can be overcome but proximity issues with residential uses is far less easily dealt with.



The discussion paper considers a number of trigger points that would lead to investment in a second container port, these are;

- Expansion is economically inefficient
- Ship size
- Transport network impacts
- The opportunity cost of alternative land uses
- Ability to achieve a return on investment
- Social Amenity

It is difficult to predict the interplay between these factors and what ultimately becomes the most important factor. In some senses this uncertainty is even more reason to decide upon a time frame and location for a second port. In terms of the factors identified they are comprehensive, environment and heritage could be made explicit rather than implicit under the social amenity heading, however this is a minor point.

5 Where a second container port should be located.

Infrastructure Victoria have identified a number of key port design features as they relate to the type of port, terminal design and operation, transport access, environmental and social impacts. Enabling both Hastings and Bay West to be compared on an equal footing. Further detailed work is required for both locations to evaluate and recommend a final design that best responds to the conditions of each.

5.1 Hastings

Hastings has been a port since the 1900's and developed in the 1960's and 70's as an oil terminal. The government of the day identified and zoned land for future port development to preserve the state's ability to expand port facilities if necessary. Current industrial facilities, a variety of land uses, and protected areas around Hastings constrain port development.

Terminal location and design is taken as technically feasible and sensible however, it will require land acquisition and cooperation of existing land owners and users. It is noted that no land acquisition costs are included in the overall cost estimate. Transport corridors to Hastings particularly rail are problematic. The solution to rail access "Regional Rail East" as described is very complex with several possible options all of which impact on Melbourne CBD in terms of brown field development, modification of heritage buildings, tunneling and the inevitable disruption that this would cause over a prolonged period of time during the construction phase. Predicting public reaction is difficult as indeed is the ability to accurately estimate the cost of provision.

Hastings despite the land constraints alluded to earlier does have sufficient space to provide the necessary port and a logistics services such as warehousing. However while there is sufficient land and space there are no actual facilities available at present.



The notion of Hastings as a natural deep water port is only partly the case, significant dredging is required to provide berths and swing basins with only minor modification to the channel. The volumes of dredge material is 24 million cubic metres, significantly the vast majority of this material cannot be reused to create the reclamation necessary, thus material needs to be imported and waste disposed of. In total the dredge volume would be 47 million cubic metres. The estimated total cost of the project is \$12,886 million.

Environmental issues are significant and while Infrastructure Victoria based their evidence on existing information rather than new studies that might identify possible mitigating works they are not to be underestimated. In total 24 environmental issues are identified of which 7 are thought to be major differentiators between Hastings and Bay West. The risk of impact on the 7 factors are rated from low to high, of the 7, 4 are rated as high with the other 3 as medium. Furthermore the proposal would result in the direct loss of habitat within the Ramsar Wetland in the order of 10 square kilometres. No alternative terminal design can be offered that avoids a substantial land take of Ramsar Wetland. Approvals required under existing environmental legislation will be challenging to achieve. The provision of offsets to the necessary standard will not be easy. They are not readily available within Western Port and the creation of new habitats takes time, potential acquisition of private land and extensive monitoring to ensure that the habitat created is equal to that lost.

5.2 Bay West

Bay West unlike Hastings began as an area of search extending from Point Cook to Point Liliias as such it has an immediate advantage in so far as the eventual location of a new port can be changed to minimise adverse effects on social and environmental issues while maximising the ability to fulfill other operational needs such as transport connections and access. By effectively applying an attribute/constraint matrix the “Werribee River” option was determined.

Terminal location and design is based on a reclaimed island and is situated south of Werribee River mouth, 1.5 kilometres offshore of the Western Treatment Plant. Road access to the planned Outer Metropolitan Ring Road is provided via a causeway and the two alternative alignments both minimise impact on Melbourne Waters treatment plant. Rail follows the main corridor and links with the main Geelong-Melbourne line at the future Outer Metropolitan Ring Road junction, the new ring road proposal includes a rail link to the proposed Western Interstate Freight Terminal at Truganina. The transport corridor is already in the ownership of the State, but the rail marshalling yard west of the future Outer Metropolitan Ring Road would need to be acquired.

Port and logistics services can be provided as part of the terminal construction but also much of the existing logistics industry is already located in the western suburbs as is sufficient suitable industrial land to allow for expansion to serve a new port without the need for relocation.



The above comments are prefaced on the premise that a location further south than that proposed is due to the presence of rock extending as far south as the Geelong channel and the difficulty this causes from a dredging point of view. No technical studies appear to have been undertaken to verify this situation and should be done on the basis that there could be advantages from locating the terminal further south. For example the ability to share the first part of the existing Geelong channel which assists the economic case for deepening the access in the port of Geelong.

The Geelong Economic Futures 2016 report a collaboration between Deakin University, the City of Greater Geelong and the G21 Regional Alliance identifies a number of credible large scale economic growth opportunities in the Geelong region. One of these opportunities is “Avalon Victoria’s future inland freight precinct”. The proposal is a site adjacent to Avalon airport which offers the most efficient long term inland freight terminal for Melbourne and Victoria, the southern terminal of any viable inland rail and potentially the land component of a new port.

The proximity of existing infrastructure and land have been identified in the Bay West option but an Avalon solution brings wider benefits. The concept of a direct rail freight link between Melbourne and Brisbane’s ports, a 20 year old idea has faltered as there is no southern rail hub allowing the appropriate scale of rail freight movement to compete with interstate east coast trucking forcing a mode shift, Avalon provides such a hub.

Freight terminals of the size and scale envisaged brings with it significant numbers of jobs of a type that would assist in transitioning some of Geelong’s legacy workforce. Similar opportunities would also be available for the Wyndham community. At a practical level the location is an easy commute for both Wyndham and Geelong.

The business case for the development of Avalon International airport would also be strengthened. A passenger rail link to Avalon, for which a masterplan already exists could be constructed more cost effectively as part of a wider project to construct a port shuttle rail corridor to Dynon Road at PoM. In essence the freight terminal hastens the viable development of Melbourne’s second airport at Avalon.

The location of ports within major cities almost inevitably leads to questions of opportunity costs for the rare land that they occupy. The PoM is no exception, it is conceivable that the freight terminal at Avalon would free existing rail yards in Melbourne and North Geelong allowing them to transition to better public uses. An early decision on these matters would again allow for the proper planning of these areas as they become available.

As in the case of Hastings, Bay West dredging will be needed to create basins, berths and channel improvements. In total 29 million cubic metres of dredge material would be required however, approximately 20 million cubic metres would be reused to construct the reclaimed port terminal. The estimated total cost of the project is \$6,420 million.



The 7 major environmental differentiators identified have a significantly reduced risk profile than Hastings of the 7 identified 4 are low, 2 high and the remaining one, mangroves is not present in the proposal area. The loss of Ramsar wetland is estimated to be 1 square kilometre and suitable offsets are likely to be required under the approvals process. The potential for offsets are readily available within the Western Treatment Plant.

6 Conclusion

The PoM will reach capacity, the question is when and how much adverse amenity can be tolerated by those in the community affected by the inevitable capacity improvements. Design and development of a new container port is known to take a significant amount of time, up to 10 years, it therefore seems reasonable to decide that a new port is required and the location, thus providing community certainty.

The evidence clearly demonstrates that Bay West is the better option on the grounds of;

- Environmental impact
- Social impact
- Complexity
- Land acquisition
- Cost
- Feasibility

This submission is about Infrastructure Victoria' evidence base, is it correct, sufficiently robust or lacking in some way and offers the opportunity to add to the evidence if at all possible. Infrastructure Victoria have undertaken a rigorous and thorough process making use of existing information supplementing knowledge gaps were necessary. While the depth of analysis might be questionable as acknowledged by Infrastructure Victoria the scope is adequate and no significant gaps are identified. Although suggestions have been made about topics and issues that should be investigated further. However, the paper offers no evidence or commentary in relation to the need or effect a new port facility might have on the region in which it is located. Clearly the party's involved in this submission are greatly interested in this element of the issue and thus it is deserving of some comment.

The west of Melbourne and the corridor through Werribee to Geelong is an area of change, experiencing rapid population growth and residential development. It also provides for much of the logistics industry and potentially an alternative source of employment for people in the west of Melbourne and Geelong. Growth in this locality can provide balance to a growing Melbourne and conceivably an alternative place to live and work reducing stresses on an already strained Melbourne in terms of services provision. The catalyst to this scenario would be a new container port and all the economic activity that this would attract. Such change will also bring about conflicts with existing land uses and question community thinking in terms of the potential for settlement coalescence and sense of identity. Yet it offers opportunity to manage the growth of Melbourne and stimulate a regional economy.