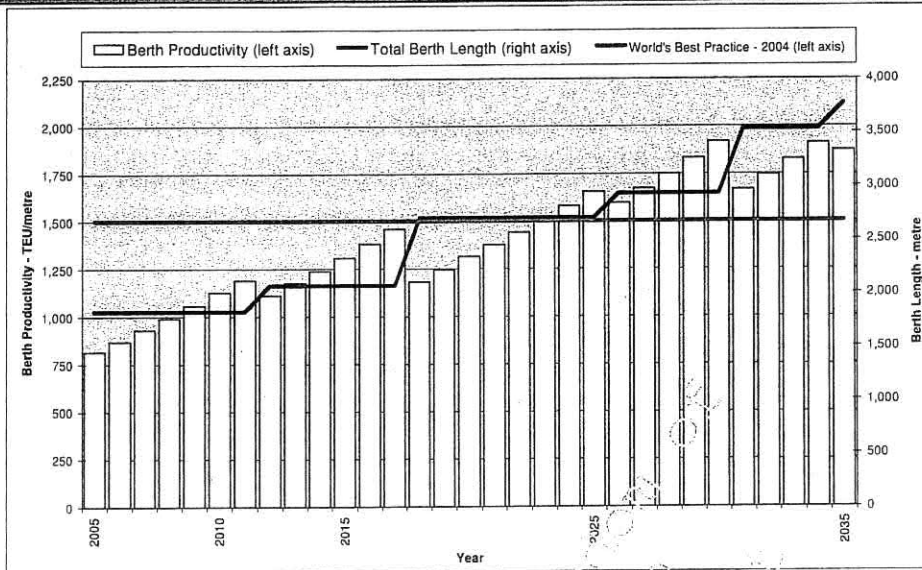
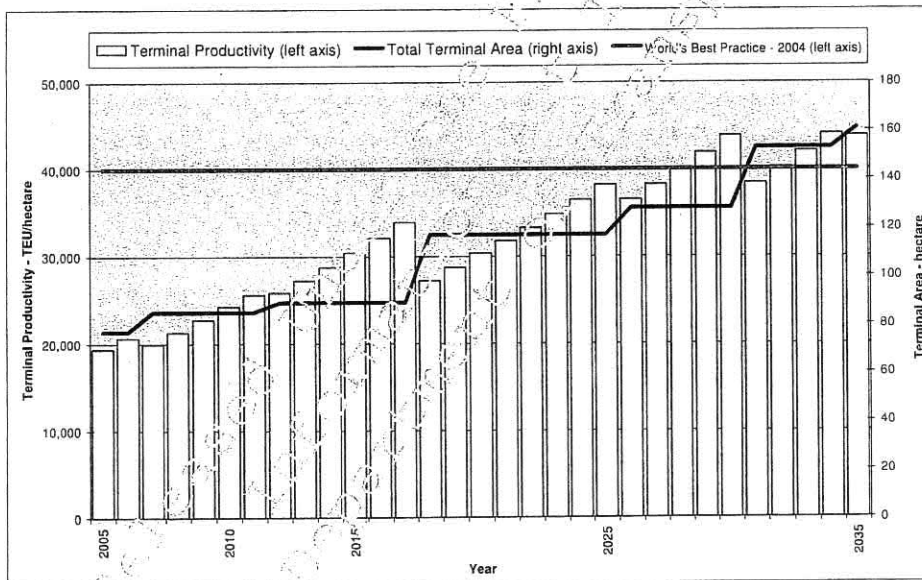


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International Container Berth Productivity Forecast (PDP 2006)



International Container Terminal Productivity Forecast (PDP 2006)

Just as there has been a tendency to underestimate container trade growth rates, there has also been a tendency to underestimate the rate of terminal productivity improvement. These two tendencies have tended to counterbalance each other such that predictions about the timing of the requirement for additional terminal capacity, at least in the medium term, have remained relatively stable. For example, the VPSS in 2000 predicted the need for new terminal capacity in the Port of Melbourne around 2015 (ie. consistent with current predictions), but this was based on lower than actual trade growth and lower than actual productivity improvements.

In the VPSF and PDP, development of major new container facilities at Webb Dock is predicated on the re-establishment of the Webb Dock Rail Link. This is a costly and, for a variety of social, environmental and operational reasons, a contentious proposal. If it were to be delayed or ultimately, not proceed, alternative locations may need to be considered to build additional terminal capacity to accommodate trade growth. The most obvious option would be Hastings which, based on the PDP trade forecasts, would be required to come on

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stream in the period 2015-2020.

Alternative scenarios could involve proceeding with Webb Dock development without a rail link (i.e. relying totally on road connections) or developing additional container terminal capacity 'up river' in the Swanson-Appleton-Victoria Dock precinct by relocating some existing non containerised trades and reconfiguring land and berth arrangements. Under these scenarios, it would be theoretically possible to achieve the same or similar ultimate container capacity for Melbourne as set out in the PDP strategy, but cost, technical and operational feasibility, amenity, environmental and other factors would need to be carefully assessed.

Under these scenarios, the requirement for Hastings for containers could be delayed beyond the 2015-20 period, but it would still be likely to be required by around 2030-35 at the latest, as currently projected. In the intervening period, it should also be noted that Hastings may be needed to accommodate bulk and break bulk trades (potentially including automotive trades) relocated from Melbourne to make way for more intensive container operations.

ASSESSMENT OF ALTERNATIVE PORT OPTIONS

As noted above, all major policy and strategy studies since the VPSS in 2000 have nominated Hastings as the preferred overflow port for containers in Victoria. In many respects, the precise timing of when an overflow port might be needed is less significant than deciding which location is most appropriate and then putting in place appropriate land use and transport corridor protections to ensure that the option is not built out before it is required.

This is essentially the purpose of the Hastings Port Land Use and Transport Strategy (PLUTS) work, which has been progressed by PortVIC and DOI in response to the requirement of the VPSF for all ports to develop long term strategic growth plans. Timing of actual construction of new facilities can then be determined by demand and commercial factors, without technical feasibility and implementation costs being unduly constrained by lack of planning foresight.

The VPSS provides the most comprehensive summary of the attributes, constraints and opportunities of the five trading ports it examined. Much of this assessment still remains relevant today. Aspects relevant to the potential to accommodate container handling facilities are drawn on in the commentary below.

Melbourne

Extracting the maximum possible utilisation out of the massive investment already made in Melbourne and avoiding inefficient duplication of infrastructure is a key objective of the VPSF.

As discussed above, Melbourne has the potential in terms of available land to accommodate container growth until around 2035. This assumes use of land at Webb Dock for containers, although, as noted, there may be potential to reconfigure the port upstream to gain a similar level of container capacity if Webb Dock were not to proceed. Beyond 2035, both of these developments would need to occur for Melbourne to continue to be the sole port for containers in Victoria. There is also the option canvassed in the VPSS of extending Webb Dock out into Hobson's Bay to create additional land area and berth length.

However, given the amenity pressures already being exerted on the port due to its central capital city location, the viability of further expansion of its footprint or intensification for containers beyond around 2035 could not be guaranteed. In fact, the bigger risk is the ability to manage these pressures until that time.

Geelong

The VPSS comments that "*except for the established port area, the waters in the Geelong area are very shallow, and there are no obvious sites for a major port development such as container terminals...*". Any development for containers within the Geelong area would require major dredging to deepen and widen shipping channels, which are currently at similar depths to the Port of Melbourne.

Within the main established port area, there is a scarcity of back up land to support

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container terminal operations and existing bulk and break bulk trades would need to be relocated.

There are potential sites outside the main port area, at Point Lillias and Point Wilson on the north shore of Corio Bay and at Point Henry to the south. Whilst these sites have better potential access to vacant land, each of them suffers from the problem of generally shallow water and the need for extensive dredging and reclamation. There are also major environmental and zoning constraints associated with Point Lillias and Point Wilson and existing Point Wilson infrastructure and land are owned by the Commonwealth Government for defence purposes and their availability for alternative port development in the future is uncertain.

Portland

The Port of Portland is a bulk port located midway between the capital city ports of Melbourne and Adelaide. It is a natural deepwater port protected by a man-made breakwater. There is already pressure on existing berth capacity and back up land to accommodate projected rapid growth in bulk commodities, particularly woodchips and mineral sands, and therefore no opportunity to create major new container terminal capacity within the confines of the existing harbour. The VPSS notes, however, that there is *"the opportunity to develop between the breakwater and the [Alcoa aluminium] smelter, though this would involve very major capital cost in coastal protection work"*.

However, the major reason that Portland cannot be considered as a viable contender for the container trade is its distance from Melbourne, the major centre of consumption and production of containerised commodities in the State. The extent of road and rail infrastructure upgrades required, additional freight costs and costs in time and reliability, particularly for delivery of imports, could not be justified.

Welshpool and Port of Corner Inlet & Port Albert

The VPSS comments that *"Future development of the Port Welshpool and Port of Corner Inlet onshore infrastructure is very much dependent upon the provision for deepwater access ... current channel depths and widths are very restrictive with respect to the maximum size of vessel that can be accommodated"*. It goes on to note that Corner Inlet forms part of a Marine Park, that it includes mangrove communities of world significance and that entry to the port is severely limited by sand bar depths and soft silts which would mean a requirement for significant ongoing maintenance dredging to keep approach channels clear.

For these reasons alone, whilst there is potential for some modest port development for break bulk/coastal trades, Welshpool is not suitable for major terminal development for containers or high volume bulk trades.

Hastings

As already discussed, the VPSS favoured the Port of Hastings as the preferred site for the development of additional container terminal capacity in Victoria, after Melbourne. The VPSS identified three potentially suitable sites: the Old Tyabb Reclamation area (between Long Island Point and the BlueScope Jetty, suitable as a multi-purpose facility); the BHP (now BlueScope) area with reclamation rights (to the north of the BlueScope Jetty, suitable for a major container terminal development) and the Bluff (further to the north, also suitable for major terminal development). The current PLUTS work on Hastings focuses on the first two of these sites.

To recap, the major advantages of Hastings are:

- Natural deepwater approaches (over 14 metres draught), meaning relatively modest requirements for capital dredging close to proposed berths and minimal maintenance dredging;
- Designated reclamation areas suitable for the creation of berths and berth aprons;
- Extensive areas of vacant land, zoned for port purpose, immediately adjacent to proposed berths;
- Absence of any significant residential encroachment at this stage and sufficient land capacity to create effective long term buffers;
- Proximity to the Melbourne market, particularly to the Dandenong regions which is a

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major industrial hub and origin/destination point for approximately one third of all metropolitan containers.

There are also very significant challenges associated with the development of Hastings, mainly revolving around resolution of environmental issues and transport infrastructure connections to the metropolitan, State and interstate networks. However, on balance, the natural advantages of Hastings are considered sufficient to make it the obvious successor to Melbourne as the next site for major port terminal development.

THE IMPORTANCE OF ADEQUATE RAIL CONNECTIONS TO HASTINGS

Just as it is considered essential that the Port of Melbourne be effectively connected to State and interstate rail networks and intermodal facilities in order to be able to efficiently manage its container handling, transfer and distribution operations, so it is essential that Hastings be provided with such connectivity if it is to serve a similar function in the future as a major container port.

The current rail connection to Hastings is via the broad gauge Frankston-Stony Point line. Whilst this line is capable of supporting limited freight volumes, it is not suitable to support a major container terminal development at Hastings as it does not connect directly to the standard gauge interstate network and its function is primarily as a passenger line, meaning that access to freight paths will be limited.

Identification and protection of a viable alternative rail corridor, with provision for both broad and standard gauge freight trains, is therefore vital to ensuring that Hastings can be developed and function as a sustainable container facility in the future.

The PLUTS planning work to date has focussed on corridor options which connect Hastings to the State and interstate rail freight networks at Dynon via the Dandenong line. It is recognised that there are significant implications of large increases in freight volumes on this line, which also primarily serves a passenger function, and that there are major infrastructure constraints which would need to be addressed from Caulfield, through the inner core areas, to Dynon.

These issues raise broader considerations of metropolitan and statewide rail network and intermodal facility planning which need to be progressively resolved. For example, the alternative of a standard gauge connection to the interstate network via EastLink and an alignment to the north of the inner metropolitan area may warrant further assessment. However, such broader network considerations do not negate the need to urgently identify and protect an appropriate corridor between Hastings and the Dandenong industrial hub, as this connection will be required under any long term network scenario.

ISSUES EMERGING SINCE THE RELEASE OF THE VPSF RELEVANT TO THE DEVELOPMENT OF THE PORT OF HASTINGS

There are no major new issues arising since the release of the VPSF in 2004 which impact on the fundamental need to prepare for the development of the Port of Hastings for containers, except perhaps for the more real prospect of needing to bring this development forward by up to 10-15 years as a result of increasing pressure on the Port of Melbourne's development plans (eg. difficulties likely to be encountered with re-establishing the Webb Dock Rail Link).

There have, however, also been recent discussions regarding the prospect of Hastings serving as the key port facility for the export of significant volumes of 'clean' brown coal from the Latrobe Valley, which potentially create a new demand imperative for developing bulk handling facilities at Hastings not anticipated by the VPSF. If this proposal was to proceed, the importance of an effective rail connection to Gippsland in the medium term also increases dramatically.

Community focus on environmental values and management of impacts was anticipated by the VPSF but, as demonstrated throughout the Channel Deepening EES/SEES and the PLUTS consultation processes, has arguably intensified since its release. Given this, there

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may be a need to consider project specific legislation to facilitate the development of Hastings, particularly if a requirement to fast track this development emerges.

CONCLUSIONS

As identified by the VPSS and confirmed by the VPSF, the Port of Hastings remains the logical preferred second (or overflow) container port for Victoria, after Melbourne reaches capacity. No other possible port locations offer the same overall advantages as Hastings, despite the considerable environmental hurdles to be faced there.

It will also be necessary to identify and protect a new rail corridor to connect Hastings to the metropolitan, State and interstate rail and intermodal terminal networks to support sustainable container terminal development at Hastings.

If anything, the need to progress planning for Hastings has been accentuated by the prospect of difficulties which may be faced by the Port of Melbourne in bringing on stream planned additional capacity in the Westgate-Webb Dock precinct, particularly in relation to establishing a viable rail connection.

It may be necessary to consider project specific legislation to facilitate the development of Hastings particularly if any fast tracking is required as a result of capacity constraint being reached earlier than anticipated at Melbourne.

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Stage 5: Option Generation	
Option 1	<p>Minimum Investment (Base Case).</p> <p>No reform or investment initiatives are proposed; only those studies and assessments that already have a commitment will be undertaken in 2009/10 – 2011/12), namely:</p> <ul style="list-style-type: none"> • Baseline environmental monitoring • Trade forecasts updated • Concept Design for overall port development (Stages 1 – 3) • Preliminary design for Stage 1 • Draft business case for EES
REFORM OPTIONS	
Option 2	<p>Creation of a new port corporation to address the coordinated development of the ports of Melbourne and Hastings</p> <p><i>Port Futures</i> proposes changes to port governance settings to improve the integration of Victoria's port system and its ability to coordinate effectively with freight network infrastructure servicing key international supply chains, particularly amending the Port Services Act 1995 in 2010 to allow the integration of the ports of Melbourne and Hastings.</p> <p>The integration will allow complementary development and operation of the two facilities which optimises their economic contribution to the Victorian economy. Specifically, integration will assist in preparing the Port of Hastings for expansion when required, eliminate the potential for duplication of resources and ensure that development strategies of both ports are fully integrated.</p>
INVESTMENT OPTIONS	
Option 3	<p>Environmental Assessment program to be ready for procurement by June 2015.</p> <p>To allow the Port of Hastings to be ready to accommodate displaced trades from the Port of Melbourne by 2017, the Base Case option would be extended to include:</p> <ul style="list-style-type: none"> • additional support for the preparation of an EES and detailed design for Stage 1 • strategic investigations into Stages 2 & 3 • investigations into rail corridors connecting the Port of Hastings to the metropolitan/national rail system, as well as identifying and protecting a preferred corridor for trades from Gippsland
Option 4	<p>Environmental Assessment program to be ready for procurement by 2013.</p> <p>Like Option 3, this option would enable the fast-tracking of development phase activities such that:</p> <ul style="list-style-type: none"> • an EES for Stage 1 could commence in 2010 and be completed by the end of 2011 • detailed design and business case development could proceed concurrently with the EES and be completed by the end of 2011 • procurement and construction of Stage 1 could commence in 2013 and operation of Stage 1 facility could commence in 2014 <p>However, this option also addresses the need to accelerate development phase planning should the Port of Hastings need to accommodate significant volumes of bulk trades, particularly brown coal derivative products, from Gippsland, as well as displaced trades from the Port of Melbourne.</p>

Stage 6: Options Assessment

Infrastructure Australia is not mandating a particular process for moving from a long list of potential options to a short list of lead candidates. The following three-step process is an indicative guide.

The options presented in Stage 5 are not mutually exclusive, and the optimal solution is likely to involve a combination of these options.

In particular, given that the Port of Hastings Stage 1 development is directed at providing capacity to handle trades displaced from the Port of Melbourne as that port increases its container task as well as potential trades related to development of the brown coal resource in Gippsland, the infrastructure options have considered the need to accelerate the development of bulk handling facilities as part of Stage 1.

Further, the development of Stages 2 and 3 of the Port of Hastings to a large extent will complement the international container role of the Port of Melbourne providing ongoing capacity to serve the metropolitan Melbourne and regional markets. Accordingly, the creation of new port corporation to address the coordinated long term development of both ports is proposed as a reform option during the life of this project.

Option 1: Minimum Investment (Base Case).

Completion of these activities would deliver the key outcomes sought by the VTP and Freight Futures, and would cost over three years, but would require new budget allocations before the next key phase of project development could commence, namely completion of EES processes.

The first funding decision point occurs in Year 2 (2010/11):

- the remaining of VTP funding could be allocated to further environmental studies or further design investigations in year 3 if desired, or
- alternatively, Government could elect to commence an EES in year 3, provided it is willing to commit further funding over years 4 and 5 to enable the EES process and other project development activities to be completed.

Further funding decision points occur in 2013/14 prior to committing funds to detailed design works and in 2014/15 prior to procurement and construction.

As a result, there is a risk that the Port of Hastings Stage 1 development would not be able to provide capacity to accommodate displaced trades from an increasingly constrained Port of Melbourne.

This option is not the preferred project.

Option 2: Creation of a new port corporation to address the coordinated development of the ports of Melbourne and Hastings

The Victorian Government will prepare amendments to the *Port Services Act 1995* to enable the Port of Hastings to be merged with the Port of Melbourne Corporation, allowing the knowledge and capabilities of the Port of Hastings Corporation to be combined with the resourcing capacity of the Port of Melbourne from 1 July 2010.

These target timelines would allow the Port of Hastings Stage 1 development project to make use of the environmental assessment expertise available developed within the Port of Melbourne Corporation as a result of the Channel Deepening Project.

In anticipation of the legislative arrangements, the Victorian Government has instructed the two port corporations to prepare a merger framework, to ensure there is a transition strategy in place. This strategy will also need to address planning for future development of Hastings.

Rather than providing an alternative, this option complements the preferred option, positioning resources and expertise to manage the sustained growth of Victoria's import and export trades.

This option is not the preferred project.

Option 3: Environmental Assessment program to be ready for procurement by June 2015.

This option would enable the fast-tracking of development phase activities such that:

- an EES for Stage 1 could commence in 2010 and be completed by the end of 2011
- detailed design and business case development could proceed concurrently with the EES and be completed by the end of 2011

Stage 6: Options Assessment

- procurement and construction of Stage 1 could commence in 2015 and operation of Stage 1 facility could commence in 2016

This option is the preferred project.

Option 4: Environmental Assessment program to be ready for procurement by 2013.

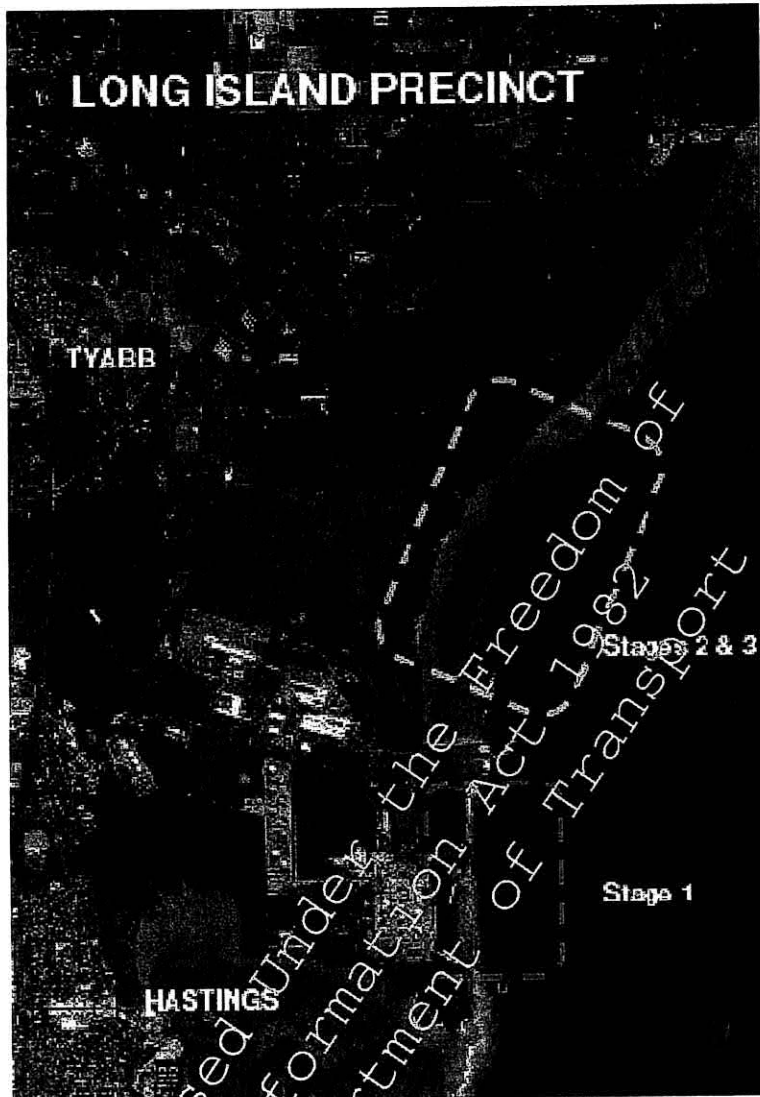
Given that a number of planning studies to inform a final Government position have yet to be completed, it would be premature to proceed with this option at this time. As noted earlier, this position is likely to be decided within the timeframe of this project and there may be future needs to adjust the scope of the preferred protect option. To proceed with this option may be premature.

This option is not the preferred project.

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ATTACHMENT 1

Figure 2: Aerial view of Port of Hastings Stage development areas



ATTACHMENT 1

Figure 2: Port of Hastings Strategic Land Use Plan

