NSW Ports

NSW Ports Submission to the Draft Report

Lifting productivity at Australia's container ports: between water, wharf and warehouse

November 2022

Executive Summary

NSW Ports is the manager of Port Botany and Port Kembla and two rail intermodal terminals (Enfield Intermodal Logistics Centre and Cooks River Intermodal Terminal) in NSW. These assets are key gateways for maritime trade in NSW, handling millions of tonnes of diversified trade each year.

This submission forms NSW Ports' response to the Productivity Commission Inquiry's Draft Report *Lifting productivity at Australia's container ports: between water, wharf and warehouse* (the Draft Report).

NSW Ports appreciates the opportunity that has been afforded by the Productivity Commission Commissioners and staff to engage throughout the development and following the release of the Draft Report.

Our focus for this submission is primarily on draft findings or report content that we consider are not well founded or able to be justified by the available evidence. Broadly, these relate to: port performance data analysis and findings; assessment of potential economic efficiency savings which we consider to be inflated; industrial lands protection; and the role of ports and port privatisation.

In this submission we raise concerns with the reliance on data provided by external sources including IHS Markit and the ACCC. In particular, data captured by IHS Markit in relation to waterside productivity does not align with NSW Ports data on matters like steam-in times and berth hours and the data presented in relation to landside productivity is not consistently measured across the ports by the ACCC. As a result, we estimate that the potential economic efficiency savings have are significantly inflated.

We note the findings made in the Draft Report in relation to port regulation and workplace relations. We concur with the Draft Report's finding that no further port regulation is required. Port Botany and NSW Ports is presently subject to substantial regulatory requirements across State and Federal jurisdictions. We also support findings to minimise port disruptions such as implementing processes to reduce lengthy enterprise agreement bargaining and protected industrial action periods.

Lack of Comprehensive Data to Support Rigorous Data Analysis (Draft Findings 3.2 and 3.3)

The Draft Report correctly identifies that there is a lack of data capturing the performance of ports across each of the key steps in moving a container. We therefore agree with Draft findings 3.2 and 3.3 in this regard (3.2: Data gaps limit assessment of port performance and 3.3: The framework for measuring Australian container port performance could be enhanced).

Further, the analysis undertaken does not recognise the broader operational context nor the inter-connections across the port supply chains and how these influence performance for the relevant period.

We contend therefore that many of the observations and draft findings regarding container port performance and the assessment of potential cost savings presented in the Draft Report are not sound due to the limitations of the data and data analysis.

For example: vessel anchorage time is influenced by 'on-time' arrival of vessels; quayside performance is impacted by industrial action; and vessel turnaround time is affected by requests from shipping lines for vessels to remain at berth for longer periods than required to service the vessel, due to off-schedule arrivals or delays at the next port.

Ports are part of an interconnected supply chain where a disruption in one part of the chain has an effect on other parts of the system, including ports. Understanding the environmental and operational context associated with the data is important for accurately assessing performance and identifying the root cause of any performance issues.

The starting point is therefore to identify appropriate port performance metrics for Australian ports. This does not currently exist. Ports Australia (as the peak body representing all container ports in Australia) is working with the Bureau of Infrastructure, Transport, and Regional Economics (BITRE) to develop a suite of metrics. The timeline for the establishment of these measures does not align with the timing of the Productivity Commission's work.

In light of the lack of suitable data with which to reliably assess port performance, draft findings and commentary provided in the Draft Report should be revised or deleted until such data is available – specifically associated with Draft Findings 3.6, 3.7, 3.8 and 3.9.

Incorrect Data Assumptions / Incomplete Data Analysis (Draft Finding 3.6)

NSW Ports considers that the conclusions arrived at in Draft Finding 3.6 for Port Botany in respect of steam-in times, truck utilisation rates and truck turnaround times are **incorrect.** These conclusions have been drawn from incorrect assumptions associated with the available data and the use of incomplete data sets in the analysis. Specifically:

- Steam-in time: NSW Ports considers steam in time to be a representation of the pilotage time of a vessel ie. the time for a ship to depart anchor to 'all lines fast'. Port Botany's pilotage times **are** significantly shorter than Port of Melbourne and Port of Brisbane (1-1.5hours compared with c. 3+ hours and 5+ hours respectively) due to the shorter distance associated with the geography of the port. As such, Port Botany's 'steam-in' times should be significantly shorter than the other east coast ports. The data presented in the Draft Report shows the opposite. We believe this is due to the fact that the methodology used is not consistent across the ports. With Port Botany's data showing the full pilotage time whereas only a part of the pilotage time is adopted for Port of Melbourne and Port of Brisbane.
- Anchorage time: Given the steam in times are not being measured on a comparable basis, it is likely that anchorage time is also not being measured consistently across ports. Further, the anchorage time does not factor in whether the vessel is off-schedule. Where a vessel is off-schedule it may need to wait in order for a berth and labour to become available. This delay should not adversely affect port performance parameters as the cause was not a result of the port.
- Truck turnaround time: Port Botany has world class truck turnaround times that are measured in a unique way by Transport for NSW. Port Botany truck turnaround times are measured from the point at which the truck begins to queue in the port– this is outside the stevedore gate – until the truck exits the stevedore gate. This is a true reading of the time a truck is spending in port. Truck turnaround time at other ports in Australia (and globally) is measured only from the time a truck enters the stevedore gate until the truck picks up a container – a subset of the time measured at Port Botany. On this basis Port Botany **outperforms** other ports in Australia ad ports globally.
- Truck utilisation: Measuring truck utilisation at the stevedore gate is not an accurate measure of truck utilisation at Port Botany as many trucks drop off an empty container at an empty container park within the port precinct before arriving at a stevedore terminal to collect a full container. True truck utilisation analysis at Port Botany therefore requires triangulation of data between empty container parks and stevedore terminals – which is not presently available.

Our analysis also highlights issues with the adoption of the Waterline data on which the Productivity Commission has relied upon to make its Draft Findings.

In light of the use of incorrect data assumptions and incomplete data set analysis, this draft finding and its supporting analyses requires reconsideration and revision.

Further data interrogation is required (Draft Findings 3.7 and 3.8)

Average Vessel Visit Time (Draft Finding 3.7)

Based on an analysis of NSW Ports' data for Port Botany for the same time period as used in the Draft Report, NSW Ports has found that the average vessel visit time calculated for Port Botany in the Draft Report has been over-estimated. The Draft Report presented an average vessel visit time of 41.9 hours compared with actual average vessel visit time of 32.9 hours over the same period.

This is due to the sample of ships used in the analysis for the Draft Report comprising only about 63% of total vessel visits to Port Botany, with the sample size being heavily skewed to larger ships which naturally have longer visit times. The majority of the data omitted were vessels in the predominant size range calling Port Botany.

This impacts the calculation of potential economic efficiency savings (at draft finding 3.9) which may be overstated by more than $100 million when based on using only a portion of the vessel data set.

Other factors influencing vessel visit time and not considered in the Draft Report include: disruptions to port operations including from industrial action and global supply chain disruptions during the Covid-19 pandemic; and stevedores permitting vessels to berth early (before servicing is scheduled) or depart late (after servicing is completed) in order to facilitate requests by shipping lines to have vessels at berth instead of at anchor where a vessel is off-schedule or there is delay at the next port.

Technical Efficiency Score (Draft Finding 3.8)

NSW Ports is concerned that the 'technical efficiency score' calculated for Port Botany is not using the appropriate data representative of Port Botany's actual available infrastructure. NSW Ports did not provide the data underpinning the analysis and has not seen the data that was used. We believe that the data may have come from publicly available information, which is likely to have included undeveloped berths allocated future expansion, thus resulting in an over-estimate of the available berth length, inappropriately reducing Port Botany's technical efficiency score.

Potential economic efficiency savings are over-estimated (Draft Finding 3.9)

NSW Ports' analysis has identified that the potential economic efficiency savings identified in the Draft Report are substantially over-estimated as a result of the identified limitations in the data analysis.

Using the full vessel data set (as per our response to draft finding 3.7), the estimated savings would reduce by **at least $100m**.

Revising the economic efficiency model to only include savings for those 'selected components' that are actually influenced by faster vessel turnaround time further reduces the estimated savings.

Combined, these two changes would see potential economic efficiency savings for Port Botany drop from $316 million per year ($112/TEU) to **$23 million per year** ($9/TEU).

However, investment required to facilitate faster vessel turnarounds may in fact outweigh such forecast savings. A more detailed analysis of the additional capital investment / additional labour allocation associated with faster vessel turnaround is needed to determine whether net savings would actually be realised. Such analysis would assist in determining the most economically efficient productivity level and capital investment for vessel servicing.

A review of the model assumptions and inputs is therefore required.

Role of Ports (Draft Finding 5.1)

The findings in relation to Sydney demonstrates a lack of understanding of NSW Container Supply Chains and the need to consider total system costs which benefit consumers and businesses more broadly. NSW Government port policy is premised on utilising existing capacity before investing in new capacity. This is to reduce the cost of moving containers for the benefit of industry, consumers and taxpayers.

The arguments presented with this finding also fail to recognise that Port Botany's capacity is less than 40% utilised, and that it is projected to take more than 20 years for the port to approach capacity.

Further, it fails to acknowledge the important role of industrial lands as service or employment lands that deliver value to the community beyond the value of the land. Industrial lands should be valued for their supply chain service to the community.

NSW Ports submits that this finding and its content require amendment.

Port Privatisation (Draft Finding 5.2)

Finding 5.2 is presented without supporting evidence. The Federal Court is the only body that has given this matter rigorous consideration. The Federal Court judgement in 2021 found the exact opposite to the draft Finding presented by the Productivity Commission. Due to the absence of any supporting evidence presented by the Productivity Commission **and** the fact that this is diametrically opposite to the Federal Court finding, NSW Ports considers that such a finding can not be justified and must be removed.

The importance of industrial lands (Draft Finding 7.3)

Given the recent detailed review into industrial lands by NSW Greater Cities Commission, we consider it a significant omission by the Productivity Commission to not focus on the outcomes of this review and incorporate the findings into the Draft Report. The NSW review concluded that **a 'Retain and Manage Policy' is needed** for the protection of industrial lands in Greater Sydney.

The analysis in the Draft Report demonstrates a lack of understanding of how to build a productive, efficient city with the right lands to provide manufacturing, supply chain services and other productive and ongoing employment to a growing city.

Industrial lands should be valued differently to competing land uses as they are an input cost for a productive output that also requires additional and ongoing capital investment to make the land efficient, productive and provide a return to the investor. Industrial lands are not an end consumer product requiring a one-off investment and delivering a one-off benefit, as residential lands are. Rather than 'on principle' using residential land value as a means of valuing industrial lands, the Productivity Commission should find a more valid and appropriate way to assess the ongoing benefit of industrial lands to the community – particularly around ports. The continued loss of industrial lands will undermine the productivity and efficiency of Sydney as a city and NSW as a State.

NSW Ports recommends that the last sentence of Draft Finding 7.3 be amended to read "Planning decisions should be made that consider the wider context of the land and its use, particularly in the case of industrial lands. Industrial lands are pivotal to the functioning of the supply chain and should be retained against competing land uses".

Contents

1. Introduction

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2. Container Port Performance

2.1. Lack of Comprehensive Data to Support Rigorous Data Analysis (Draft Findings 3.2 and 3.3)

The Draft Report correctly identifies that there is a lack of data capturing the performance of ports across each of the key steps in moving a container. We therefore agree with Draft findings 3.2 and 3.3 in this regard (3.2: Data gaps limit assessment of port performance and 3.3: The framework for measuring Australian container port performance could be enhanced).

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For example: vessel anchorage time is influenced by 'on-time' arrival of vessels; quayside performance is impacted by industrial action; and vessel turnaround time is affected by requests from shipping lines for vessels to remain at berth for longer periods than required to service the vessel, due to off-schedule arrivals or delays at the next port.

Ports are part of an interconnected supply chain where a disruption in one part of the chain has an effect on other parts of the system, including ports. Understanding the environmental and operational context associated with the data is important for accurately assessing performance and identifying the root cause of any performance issues.

The starting point is therefore to identify appropriate port performance metrics for Australian ports. This does not currently exist. Ports Australia (as the peak body representing all container ports in Australia) is working with the Bureau of Infrastructure, Transport, and Regional Economics (BITRE) to develop a suite of metrics. The timeline for the establishment of these measures does not align with the timing of the Productivity Commission's work.

In light of the lack of suitable data with which to reliably assess port performance, draft findings and commentary provided in the Draft Report should be revised or deleted until such data is available – specifically associated with Draft Findings 3.6, 3.7, 3.8 and 3.9 (as set out further below).

2.2. Incorrect Data Assumptions / Incomplete Data Analysis (Draft Finding 3.6)

Draft Finding 3.6 states *"…Sydney, Brisbane and Adelaide recorded longer anchorage and steam-in times – potentially indicating port congestion and/or port inefficiency. Sydney underperformed on truck utilisation rates and turnaround times."*

NSW Ports considers this statement to be **incorrect**, as it is based on incorrect assumptions associated with the available data. This brings into question all of the Waterline data on which the Productivity Commission has relied upon to make its Draft Findings.

It is therefore recommended that this Draft Finding be amended in respect of Sydney's performance on steam-in times, truck utilisation rates and truck turnaround times.

Further detail is set out below.

2.2.1. Steam In Times & Anchorage

It appears that the Steam In and/or Anchorage times are not being measured consistently across all ports.

For **steam in times**, Figure 4 of the Draft Report shows steam in time in Sydney (Port Botany) that is significantly longer than Brisbane and Melbourne. This does not make sense given the steam in times are essentially a representation of when a ship departs anchor to 'all lines fast' - equivalent to what is otherwise known as the pilotage time.

As pilotage times at Port Botany are on average 1-1.5 hours, by far the shortest of the three east-coast container ports, compared with Port of Melbourne of c. 3+ hours and Port of Brisbane of c. 5+ hours, there is clearly an issue with the data used to calculate this factor.

We believe that this issue may stem from the fact that the measurement of 'steam in time' at Brisbane and Melbourne does not commence at the port limits where pilots board (some c.44.5 nautical miles from berth[1,2]), whereas Port Botany's measurement commences from its port limit at c. 7.5 nautical miles from berth. If measured on a comparable basis, Port Botany's steam in time would be significantly shorter than both Port of Melbourne and Port of Brisbane due to the shorter pilotage distance associated with the geography of the port.

Regarding **anchorage times**, Port Botany's anchorage is measured from beyond the port limits (at 5 nautical miles) not at port limits. The approach taken at other ports needs to be understood clearly to ensure that ports are being compared on a comparable basis. Given the point at which 'steam-in' times are being measured at the ports is not commensurate with the actual port limits, there is a likelihood that anchorage time is also not being properly measured.

Further, the anchorage time does not factor in whether the vessel is off-schedule. Where a vessel is off-schedule it may need to wait in order for a berth and labour to become available. This delay should not adversely affect port performance parameters as the cause was not a result of the port.

The data supporting this analysis and finding requires further interrogation.

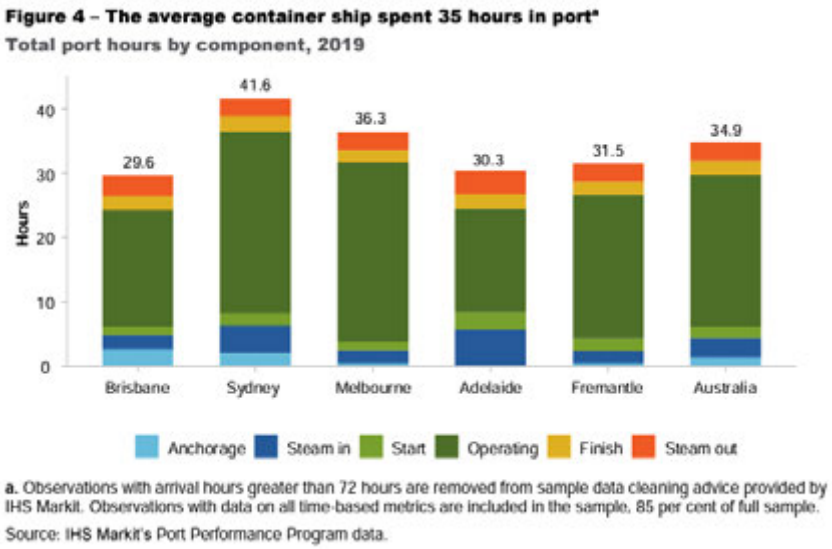

Figure 1 - Average Container Ship Port Hours Components per Draft Report

[1] Ports Victoria. *Port Information Guide for the port waters of the Port of Melbourne*. March 2022

[2] Queensland Department of Transport and Main Roads. *Port Procedures and Information for Shipping – Port of Brisbane*. October 2022

2.2.2. Truck Turnaround Times

We note the Draft Report's finding that *"Sydney underperformed on truck utilisation rates and turnaround times"*. We consider this statement to be incorrect in respect of truck turnaround times.

Port Botany has world class truck turnaround times due to its regulated system, with the 12-month average being 30mins. Port Botany's truck turnaround times are actually measured from the point at which the truck begins to queue in the port (i.e.. outside of the stevedore gate) until the truck exits the gate and is therefore a true reading of the time a truck spends at the port. Other ports in Australia likely use the framework as presented in the graphic from the Technical Report, copied below i.e.. they are measured from the time the truck enters the gate, not the time the truck arrives at a gate, until the time the truck collects the container, and not the time the truck exits the gate.

As such, data from other ports is not comparable with Port Botany as they do not include the 'waiting time' or the 'exit time' as defined in the below graphic – whereas the Port Botany truck turnaround time does include these components. On this basis Port Botany **outperforms** other ports in Australia and ports globally.

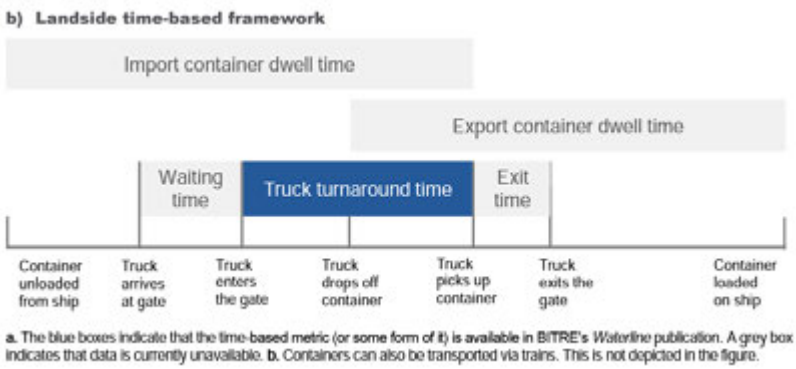

Figure 2 - Productivity Commission Truck Turnaround Time Definition

Even if other ports are measured in the same way as for Port Botany, it matters not whether Port Botany's truck turnaround time is longer than the other ports, as 30mins is world class and should not be considered to be 'underperforming'.

The Productivity Commission has adopted a comparison approach between ports to determine whether a port is 'underperforming'. This approach is flawed, as it does not recognise the actual metric and whether the value of that metric in and of itself is a good outcome – such as assuming that with a truck turnaround time of 30mins Port Botany is 'underperforming'.

It should also be noted that the data presented in Waterline 67 (on which the Draft Report is based) shows an average truck turnaround time for Port Botany comparable with Adelaide and Brisbane (and actually shorter than the latter – as per Figure 13 of the Technical Paper) yet for some reason Sydney has been specifically called out in this draft finding. This alone does not appear justified.

2.2.3. Truck Utilisation

We note the Draft Report's finding that *"Sydney underperformed on truck utilisation rates….."*.

We believe that it is not possible to form this view as there is insufficient data to be able to determine truck utilisation rates at Port Botany. We know this because both NSW Ports and Transport for NSW have attempted to make such assessment in the past but the data is not available.

At Port Botany, many trucks drop containers at an empty container park within the port precinct before entering a stevedore terminal. The majority of empty container storage in Sydney is within the port precinct. Given that the data being used is based on truck arrivals at the stevedore terminal, the data does not capture whether a truck delivered an empty container to an empty container park at the port prior to entering the stevedore terminal. As such, the true truck utilisation at Port Botany is not known as it requires triangulation of data from an empty container park and a stevedore terminal – which is not presently accessible.

Therefore the draft finding made in relation to Port Botany's truck utilisation rates is not justified.

2.3. Further data interrogation relating to ship turnaround times is required (Draft Finding 3.7)

The Draft Report states that "Australian ports do not compare well against international ports on measures of ship turnaround times…."

2.3.1. International Comparisons

Whilst the Productivity Commission has endeavoured to find comparable international ports against which to benchmark Australian ports, we contend that even this assessment is challenged by unique attributes of each port – as noted by the Productivity Commission itself in respect of identifying that Yokohama port is not a suitable comparator port, despite its similar throughput, due to its over-investment in infrastructure.

In fact, it is questionable whether Yokohama would even be a comparable port without this over-investment given that the average number of containers loaded/unloaded from a vessel (vessel exchange) at Yokohama is less than one-quarter of Port Botany's and that Yokohama has thousands of movements by barge. Greater container exchanges naturally result in longer times at berth.

Table 1: Port Botany and Port of Yokohama TEU Exchange Comparison

	2020 Volume (TEU)	Ships	Avg Exchange (TEU)
Port Botany	2,490,000	1,072	2323
Yokohama (oceangoing ships)	2,410,000	4,610	523
Yokohama (domestic)	249,450	20,470	12

(source: https://www.city.yokohama.lg.jp/lang/overseas/port/tokei/statistics.html)

This analysis shows that each port has unique attributes making international port comparisons questionable. There are very few ports in the World that perform the same role as Port Botany – import dominant, servicing primarily smaller vessels.

2.3.2. Incomplete set of vessel data used in the analysis

The Draft Report found that the average vessel visit time at Port Botany was 41.6 hours. NSW Ports has reviewed this analysis and identified significant limitations that result in an over-estimate of the vessel turnaround time as follows:

1. The data used in the Draft Report is the same as the sample of ships used in the World Bank / IHS Markit Global Container Port Performance Index (IHS Markit data).
2. The IHS Markit data used to inform the Container Port Performance Index only captures about 63% of total vessel visits to Port Botany – with the sample being heavily skewed towards the larger ships as a proportion of the total sample used.
3. A 63% sample size would be acceptable if it were representative of the balance of vessel TEU bands that visit Port Botany, however this is not the case as shown in Table 2 below. The majority of the data omitted were the vessels less than 8.500 TEU – which are the predominant vessel sizes calling Port Botany.
4. The larger vessels have longer turnaround times, as one would expect. These vessels are significantly over-represented in the data sample used in the Draft Report.

Table 2: Ship Visit Comparison – NSW Ports data vs IHS Markit/Productivity Commission Data

	FY2020 Vessel Visits Port Botany (Number of vessels)			
TEU Band	NSW Ports Data	IHS Markit/ Productivity Commission Data	Variance	Variance (%)
<1501	112	35	-77	-69%
1500-5000	498	316	-182	-37%
5001-8500	400	266	-134	-34%
8500-13500	51	40	-11	-22%
Total	**1,061**	**657**	**-404**	**-38%**

Note: Excludes >72h wait times as per the Productivity Commission methodology

When the same analysis is conducted on the full set of ships that visited Port Botany in 2020, the results are markedly different to the results shown in Figure 4 of the Draft Report. The average vessel visit time drops from 41.6 hours (as presented in the Draft Report) to 32.9 hours (refer Table 3 below).

This impacts the calculation of potential economic efficiency savings (at draft finding 3.9) which may be overstated by more than $100 million when based on using only a portion of the vessel data set.

Table 3: NSW Ports Assessment of Average Vessel Visit Time at Port Botany – FY2020

	FY2020 Average Vessel Visit Times (hours)				
TEU Band	Average of Wait Time	Average of Steam In Time	Average of Berth Time	Average of Steam Out Time	Total
<1501	2.9	1.4	31.2	1.2	**36.7**
1500-5000	4.5	1.4	18.9	1.2	**26.1**
5001-8500	4.9	1.5	28.8	1.3	**36.5**
8500-13500	4.3	1.6	56.0	1.3	**63.2**
Total	**4.5**	**1.5**	**25.7**	**1.2**	**32.9**

Note: Excludes >72h wait times as per the Productivity Commission methodology

2.3.3. Other factors affecting vessel turnaround time not considered

The data assessed in the Draft Report is from the financial year 2019-2020 period. This period comprised industrial action at Port Botany as well as the start of the Covid-19 pandemic global supply chain disruptions. These disruptions have the potential to impact on port productivity however they are not called out in the report. For example, a ship arriving out of schedule can result in potentially longer times at anchor.

Further, delays at a subsequent east-coast port can manifest in additional hours waiting at berth in Port Botany prior to departure, to avoid waiting at anchor at the next port. The analysis does not consider these 'agreements' made with stevedores to assist shipping lines.

For example, there are occasions a berth may be available but no labour to service the vessel as the vessel was off-schedule. The shipping line has requested to come into berth early – rather than wait at anchorage as this is more beneficial to the shipping line – and the stevedore has obliged. The vessel then sits alongside the berth for a length of time before being serviced. Despite this being done to assist the shipping line, the vessel's arrival at berth will trigger the commencement of the calculation of 'berth hours' disadvantaging Port Botany's average in order to assist a shipping line. In two recent examples in August and September 2022, the time from vessel arrival to first lift was 41 and 39 hours respectively. This time should therefore not be captured in the total vessel turnaround but would be, as the data does not distinguish such 'favours' for shipping lines and these situations have not been removed from the data assessed in the Draft Report.

In other examples, due to the vessel schedule integrity issues shipping lines are requesting for their vessel to remain at berth in Port Botany post 'last lift', rather than have the ship depart immediately to its next port where it would need to wait at anchor. The stevedore obliges where the berth is available – however this will inflate the vessel turnaround time at Port Botany. This also means that the delay at the next port – either Melbourne or Brisbane – will not be picked up in the data for those ports but instead it will be reflected in the Port Botany numbers. This issue is more common to Port Botany due to the order of east-coast port visits in a vessel's rotation.

These agreements between the stevedores and shipping lines, to support the shipping lines, are actually disadvantaging Port Botany's performance parameters as they are not excluded from the data analysis.

2.4. Benchmarking details need further interrogation (Draft Finding 3.8)

The Draft Report includes a benchmarking analysis using a 'technical efficiency score'. This 'technical efficiency score' was determined principally based on the number of terminal operators and berths, total berth length, maximum draft and number of container cranes.

It should be noted that in the case of Port Botany, these numbers require further investigation as the reliance by the Productivity Commission on Port Characteristics data used by IHS Markit may not be representative of Port Botany's actual available infrastructure. We have not been able to ascertain the data used by IHS Markit in calculating the technical efficiency score for Port Botany, as it was not sought from NSW Ports. We believe that the data used may have come from publicly available information, without considering the current situation at Port Botany. This would result in an over-estimate of the available berth length and reduce Port Botany's technical efficiency score.

Port Botany (and specifically the Port Botany Expansion area) is being developed systematically to meet demand (and reduce over-capitalisation). Port Botany therefore has berth length that is currently not operational and will be brought on-line as demand increases. The number of cranes is therefore disproportionately low when compared to the constructed berth length as not all berths are presently operational. Port Botany would be disadvantaged in the technical efficiency score by having berths that are yet to be operational included in the analysis.

Additionally, the number of berths is not an appropriate measure as it does not reflect current ship sizes. Berth numbering was allocated many years ago based on smaller vessels. As vessels have increased in length, three berths may not function as three separate berths anymore but rather only two berths. Using the entire berth length for calculations of technical efficiency would not be representative of the actual berth capabilities based on current ship sizes.

2.5. Potential economic efficiency savings are over-estimated (Draft Finding 3.9)

Draft Finding 3.9 states "*Inefficiencies at Australia's major container ports are estimated to directly cost the Australian economy around $605 million a year.*" NSW Ports' analysis has identified that these savings are substantially over-estimated as a result of limitations in the data analysis conducted. We contend that based on the Productivity Commissions analysis, estimated savings associated with faster vessel turnaround time at Port Botany would drop from $316 million per year to **$23 million per year**.

However, capital investment required to facilitate faster vessel turnarounds may in fact outweigh such forecast savings. A more detailed analysis of the additional capital investment / additional labour allocation associated with faster vessel turnaround is needed to determine whether net savings would actually be realised. Such analysis would assist in determining the most economically efficient productivity level and capital investment for vessel servicing.

2.5.1. Economic efficiency saving calculations need to be reviewed

In the Draft Report, the Productivity Commission attributes the majority of the potential economic efficiency savings to faster vessel turnaround time – most prominently in Table 3.8 – economy-wide impacts of improving port productivity. The Draft Report suggests that by Port Botany increasing vessel turnaround time by 12 hours (i.e. from 40 to 28 hours) $316 million per year would be saved ($112 per TEU).

If, however the complete set of vessel data was used (as per our response in Section 2.3 above), the potential economic efficiency savings would reduce by **at least $100m**.

The inputs to the economic model are also a matter in contention. The model provides a sum of selected components that contribute to cost and for which savings would occur with faster vessel turnaround time.

The 'selected components' however include costs that would not be affected by vessel turnaround time such as:

- Towage, pilotage and lines: these are all charged on **a ship movement basis** ie. for each vessel arriving and departing
- Wharfage: this is charged on a **TEU basis** ie. for each container handled
- Terminal handling charges: these are charged on a **lift basis** ie. for each container handled.

None of these charges will be reduced by faster vessel turnaround – in fact, terminal handling charges could potentially increase if investment in additional handling equipment is required. Therefore, savings in these components are not real and should be removed from the analysis. If removed from the analysis**, we estimate that the savings estimate for Port Botany would drop from $313 million per year to 23 million per year** ($9 per TEU**)**.

Further, any additional capital investment in equipment / labour required to achieve the faster ship turnaround should be included in the analysis to determine the net outcome – so as to ensure that the overall outcome is a net saving. It may result in a net overall higher cost of servicing which is passed on to the importer / exporter.

A review of the model assumptions and inputs is therefore required.

3. Understanding NSW Container Supply Chains (Draft findings 5.1 and 5.2)

3.1. Role of Ports (Draft Finding 5.1)

The Draft Report states: *"Indeed, it is far from clear that it is economically efficient to have a single container port in some Australian cities including Melbourne and Sydney either today or in the near future."*

The findings in relation to Sydney demonstrates a lack of understanding of NSW Container Supply Chains and the need to consider total system costs which benefit consumers and businesses more broadly. NSW Government port policy is premised on utilising existing capacity before investing in new capacity. This is to **reduce the cost of moving containers for the benefit of industry, consumers and taxpayers.** This is achieved by:

- Making better use of existing investments in roads, rail lines, intermodal terminals and warehouses
- Reducing the distance, cost and complexity for moving freight due to Port Botany's proximity to customers and distribution centres
- Increasing the proportion of containers moved by rail to improve efficiency and reduce growth of trucks on roads
- Planning for container port capacity into the future to avoid unnecessary investment by taxpayers
- Providing certainty and confidence for investment

Many major cities around the world are serviced by a single container port.

Port Botany has been strategically and purposefully developed by both government and the private sector as the State's container port, with significant investment in supply chain infrastructure having been spent over 40 years. The intent of focussing investment at a single port is to optimise the efficient use of sunk capital investment, thereby minimising supply chain costs to the population of NSW.

Draft Finding 5.1 fails to recognise that NSW is an import dominant market for containers.

- NSW is an import dominant state – for every 10 full import containers, we only export 4 full containers (the remaining 6 containers are exported empty).
- NSW's container imports are filled with goods for the people and businesses of NSW. 42% of all items in a Sydney household arrive in an import container through Port Botany.
- The majority of the goods imported into NSW are destined for Greater Sydney, where 60% of NSW's population and the major business centres are located. For this reason, 80% of all import containers have a destination within 40km of Port Botany. 90% of import containers stay within 60km of Port Botany.
- Ships will only stop at one port in NSW on a journey, given the costs associated with a port stop. To maximise efficiency and minimise costs, these ships drop off imports and pick up exports. Given the significant imbalance in import vs export full containers (75% full imports vs 25% full exports) it is most efficient to locate the port close to the destination of imports.
- Locating container ports close to population and business centres reduces travel distances, minimising costs and maximising sustainability. If container ships were to visit regional ports on the basis of an export market, these ships would also have to land import containers. This would add significant cost (and additional emissions) to the supply chain and consumers as the majority of imports (either containerised or unpacked goods) then have to be transported to the location of the majority of consumers – Sydney – some 200km from Newcastle and 90km from Port Kembla.
- There needs to be a sufficiently large volume of containers at a port for there to be frequent shipping services and direct calls to a wider range of overseas ports. Container port scale is therefore beneficial to exporters and importers.
- Container ports need efficient road and rail connections for containers to be distributed from the port to their end destination. Government has developed this infrastructure to service Port Botany over 40 years.
- Premature development of additional port infrastructure will add cost to NSW's container supply chains. It will also necessitate additional connectivity investment by government in road and rail prematurely, at significant public expense.

NSW Ports also strongly disagrees with the statement at page 155 of the Draft Report:

> *"However, some ports — particularly in Melbourne and Sydney — use high value land and are subject to capacity limitations. Growing demand for container port services will mean that the development of new ports to replace or compete against existing ports in some markets, most notably Melbourne and Sydney, will be economically efficient."*

This statement fails to recognise:

1. Industrial lands are **service** or **employment** lands. The value they deliver to the community should not be based on the value of the land if converted to residential, rather it should be valued by the value of the service it performs for the community in the **productivity of the overall supply chain**. This includes logistics as well as manufacturing supply chains. See further comment on Draft Finding 7.3.
2. It is self-evident that all capital assets – even ports – have capacity limitations. Port Botany, however, is currently operating at less than 40% capacity. It is projected to take more than 20 years before Port Botany approaches capacity. In the meantime, significant value will be lost to the productivity and supply chain of NSW if a second container port is developed prematurely. Note that more container ports do not generate more trade, they are simply there to service the trade generated by other sectors of the economy. So given that more terminals do not generate more trade, unnecessary or premature capital investment means that incremental costs are simply spread across the existing trade base.

NSW Ports submits that these statements require amendment.

3.2. Port Privatisation (Draft Finding 5.2)

Draft Finding 5.2 states: *"Privatisation processes in New South Wales have conferred protection on port lessees that are impeding economically efficient outcomes in the development of the state's ports system."*

This finding is presented with no supporting evidence.

Instead, privatisation has encouraged the growth of productive, flexible and commercial operations, brought about through the discipline and accessibility of private capital delivered against long term strategic plans. NSW Ports and its tenants have invested $2.3 billion in port infrastructure since privatisation (over the past 9 years).

In fact, the only comprehensive review of this matter was undertaken by the Federal Court. In its 2021 judgement it found the exact opposite outcome to that presented in the Draft Report.

The Federal Court did "*[937]…not accept… that the purpose of the compensation provisions was to: (a) prevent or hinder the development of a container terminal at the Port of Newcastle, (b) make Port Botany and/or Port Kembla immune from competition (by the threat of or actual entry into the market for Container Port Services) from the Port of Newcastle, or (c) enable NSW Ports to act without any constraint from competition that the Port of Newcastle would otherwise provide*."

Contrary to Draft Finding 5.2, the Federal Court found that the arrangements that were agreed to at privatisation by NSW Ports and Port of Newcastle separately with the NSW Government were to reflect the container port policy established by the State Government. The NSW container port policy was based on sound economic principles and consistency with the policy was designed to not distort the container import / export market.

It should also be noted that there is no prohibition on Port of Newcastle building a container terminal. As the Federal Court found:

- *"Port of Newcastle did not pay the State any sum for the potential to develop a container terminal at the Port of Newcastle contrary to the State policy…..Port of Newcastle is seeking a windfall"*
- Port of Newcastle lacked a credible business case for development of a container terminal and that such development had not been supported by its Board *"…in nearly seven years… Port of Newcastle has not formulated a definitive or cogent proposal capable of being put to its own board, its shareholders or the NSW government…."*

Due to the absence of any supporting evidence for this draft finding in the Draft Report **and** the fact that this is diametrically opposite to the Federal Court finding, NSW Ports considers that such a finding can not be justified and must be removed.

4. The importance of industrial lands (Draft Finding 7.3)

The Draft Report states: *"Urban encroachment is an issue at all of Australia's major container ports except Brisbane. Industrial land around some ports is gradually being redeveloped for higher value commercial and residential uses and this can create conflict with some port users. Planning decisions should support the use of land in its highest value."* [underline is our emphasis]

NSW Ports is concerned with the statement that "Planning decisions should support the use of land in its highest value". It is not clear what the Productivity Commission intended in its reference, however it is noted that there is also reference to the NSW Productivity Commission White Paper recommendation 7.5 to "Evaluate the retain-and-manage approach to managing industrial and urban services land in Greater Sydney against alternative approaches, to identify what would maximise net benefits to the State. Adopt the approach that maximises the State's welfare in the next update to the Greater Sydney Region Plan".

Given the recent detailed review into industrial lands by NSW Greater Cities Commission, it is disappointing that the Draft Report did not refer to the outcomes of this review and instead only referred to the recommendation by the NSW Productivity Commission.

Industrial lands make up only 8% of all land in Sydney and 4% of all land in Eastern Sydney. Further erosion of industrial lands will create issues with supply chain productivity and efficiency – particularly as the city grows. Industrial lands are required as service lands as well as for employment generation.

There have been recent attempts to argue that the highest value of land is potentially the use that creates the most return for developers and the State through immediate tax income rather than valuing the land over the life of its use and the role it plays in supply chains. This has ultimately led some to believe that if residential uses provide the greatest return then that use should be prioritised over scarce industrial land for freight/logistics and manufacturing.

In response to the NSW Productivity Commission White Paper recommendation the Greater Cities Commission undertook a comprehensive review of the industrial lands 'retain and manage policy'. The Commission's evidence-based approach to the Review included stakeholder engagement, in-depth interviews with businesses, a peer review by international experts and technical analysis including a multi-criteria analysis, strategic transport modelling and a cost-benefit analysis.

The Review found that **a 'Retain and Manage Policy' is needed** for the protection of industrial lands in Greater Sydney.

As such, we consider it remiss of the Commission to not focus on the outcomes of this review and to incorporate this outcome into the Draft Report.

The following statement in the Draft Report is also highly concerning.

> *This growth in the share of land being zoned for residential use reflects the higher relative value of residential land use. In the case of land around Port Botany, an industrially zoned block used to service the port was valued at $676 per square metre in 2021, while a neighbouring residentially zoned block was valued at $1756 (figure 7.7). The stark differences in land values between similarly located but differently zoned properties suggest that the lower-valued land is not being used in a way that*

maximises community wellbeing. In this case, the difference in land values near Port Botany suggests that some land currently used to service the port could be better used for housing, even low-density housing.

This statement demonstrates a lack of understanding of how to build a productive, efficient city with the right lands to provide manufacturing, supply chain services and other productive and ongoing employment to a growing city.

Put simply, industrial lands should be valued differently as they are an input cost for a productive output that also requires additional and ongoing capital investment to make the land efficient, productive and provide a return to the investor. Industrial lands are not an end consumer product requiring a one-off investment and delivering a one off benefit, as residential lands are. Rather than 'on principle' using residential land value as a means of valuing industrial lands the Productivity Commission should find a more valid and appropriate way to assess the ongoing benefit of industrial lands to the community. The continued loss of industrial lands will undermine the productivity and efficiency of Sydney as a city and NSW as a State.

NSW Ports recommends that the last sentence of Draft Finding 7.3 be amended to read "Planning decisions should be made that consider the wider context of the land and its use, particularly in the case of industrial lands. Industrial lands are pivotal to the functioning of the supply chain and should be retained against competing land uses".

Currently the Draft Finding does not recognise the significant strategic planning work that has been undertaken in NSW. This is a significant omission in the Draft Report.

Conclusion

Our submission has focussed primarily on draft findings or report content that we consider are not well founded or able to be justified by the available evidence. Broadly, these relate to: port performance data analysis and findings; assessment of potential economic efficiency savings which we consider to be inflated; industrial lands protection; and the role of ports and port privatisation.

Our assessment has identified limitations with the data used in the report. In particular it has become even more apparent through this process that the ACCC Waterline Report and the IHS Markit data require further scrutiny.

Whilst NSW Ports understands that this is a Draft Report, in general we are concerned with the Productivity Commission's reliance on data from these third party external sources without a more comprehensive analysis of the data. Some data is incomplete, or not comparable across ports, and there has not been consideration given to the interconnected nature of the container supply chain in interpreting the data.

We have gone to considerable effort to assess actual performance data from Port Botany in order to prepare this comprehensive submission. We would encourage the Productivity Commission to consider this submission carefully and to make appropriate amendments to the Draft Report in light of the evidence presented here.

NSW Ports is happy to discuss this submission further with the Productivity Commission, and can provide further details if required.

Further information

Greg Walls
Planning Manager