

**Summary of key outcomes:**

Sydney's ports comprise one of NSW's major trade infrastructure assets and handle around \$42 billion worth of trade each year which represents more than half of the international air and sea cargo trade in NSW. Sydney's ports currently employ more than 17,000 people directly and indirectly which is 0.6% of total NSW employment. Sydney's ports therefore provide a valuable contribution to the NSW economy.

The development of the proposed Port Botany Expansion would assist Sydney Ports Corporation to maintain its valuable contribution to the NSW economy and would generate over \$16 billion in output, with an estimated \$8.9 billion in value added and an additional \$4.8 billion in household income by 2024/25. The economic activity generated by the new terminal would provide more than 9000 full time equivalent jobs in 2024/25.

The construction of the proposal would generate \$818 million in output for the NSW economy over the total construction period and employ more than 400 people directly or indirectly in the peak year of construction.

The construction and operation of the proposed Port Botany Expansion would therefore contribute to improved living standards and strengthen NSW's position as the State making the greatest contribution to the Australian economy.



## 27.1 Introduction

A study was undertaken by EconSearch Pty Ltd in order to assess the economic impacts of the proposed Port Botany Expansion on the NSW economy (**Appendix V**). The study included an assessment of the contribution of Sydney's ports to the NSW economy and an assessment of the specific construction and operational economic impacts of the proposed Port Botany Expansion.

## 27.2 Methodology

The study aimed to measure the economic impact on the NSW economy of the proposed Port Botany Expansion and of port related activity generally. For the purposes of this study, port-related activity was defined as the activity undertaken by firms and organisations in moving cargo through Sydney's ports and in providing goods and services to directly facilitate the movement of cargo through the ports. Port impact was measured in terms of the direct and indirect impact on output, value added, household income and employment as defined in **Box 27.1**.

The study was undertaken using the general framework for port impact studies developed by the Bureau of Transport Economics (2000). This is based on an input-output economic analysis technique. This technique describes, through a set of multipliers, the effect of a change in one sector of the economy on another sector. For example, an investment in the ports sector may have a 10% impact (reflected by a 10% multiplier) on the construction sector. Therefore for every \$10 invested in ports an additional \$1 would go to the construction sector. A generic input-output table, describing the sector by sector multipliers, has been produced for the Sydney region by the Centre of Agricultural and Regional Economics.

The table was modified to ensure that it could be used to address port related activities, by referring to other statistical data, and by analysing the responses to questionnaires from 70 firms in the port sector. The questionnaires targeted firms and government agencies that undertake economic activity in, or related to, Sydney's port. The questions were designed to elicit the scale of the respondent's port related activity, the amounts paid by the respondent to other parties for the labour and other inputs used in such port-related work and the amounts of revenue received from customers in payment for such work. For both payments and receipts, information was sought on how the amounts were divided between parties located within, and parties located outside, New South Wales.

**BOX 27.1. DEFINITIONS**

**Direct impact** – the initial stimulus of the impact analysis, felt in the sector of the economy which is the subject of the analysis. For example, if \$100 million is invested in port related infrastructure, that has a direct impact of \$100 million on the port sector.

**Flow-on effects** – economic activity in other sectors of the economy on response to the initial stimulus. For example, if \$100 million is invested in port related infrastructure, that may cause additional revenue to enter the transportation sector, amongst others, as firms in that sector may be required to transport construction material

**Output** – the impact of the stimulus on total revenue, sales or turnover of firms in that sector.

**Value added** - the impact of the stimulus on the total salary/wage bill and profits (earning before interest and taxes) of firms in that sector. This is the most appropriate indicator of the sector's relative contribution to the State's Gross State Product.

**Household Income** - the impact of the stimulus on the total salary/wage bill of firms in that sector.

**Employment** – number of full time equivalent jobs created.

## 27.3 Economic Impact of Sydney's Ports

Sydney's ports are one of NSW's major assets and handle approximately \$42 billion worth of trade each year. Sydney's ports include the second largest container and one of the largest general cargo ports in Australia. As such, these ports make a substantial contribution to the NSW Gross State Product (GSP) and to the general health of the State's economy. The economic impact of Sydney's ports on the NSW economy in 2001/2002 is shown in **Table 27.1**.

### 27.3.1 Total Economic Impact of Sydney's Ports

The operation of Sydney's ports generated a total impact on the NSW economy of \$2,509 million in output in 2001/02. Value added attributable to the operation of the ports was almost \$1,380 million. This was equivalent to approximately 0.5% of the 2001/2002 GSP.

Household income generated by the operation of the ports totalled over \$738 million. Employment was estimated at around 17,020 jobs (full time equivalent), which represented 0.6% of total employment in NSW. There were 2,189 ship visits to Sydney's ports by commercial cargo vessels in 2001/02. The results of the

analysis indicate that, on average, each ship visit at Sydney's ports contributes to the economy of NSW as follows:

- \$1,146,000 of output;
- \$630,000 of value added;
- \$337,000 of household income; and
- 7.8 full time equivalent jobs for one year.

**Table 27.1 Economic Impact of Sydney's Ports, 2001/2002**

MEASURE	DIRECT IMPACT	FLOW-ON EFFECTS	TOTAL IMPACT
Output (\$m)	1,163	1,346	2,509
Value added (\$m)	641	738	1,379
Household income (\$m)	385	354	739
Employment (no. of full time equivalent jobs)	6,945	10,075	17,020

### 27.3.2 Direct Impacts

The direct impact of port related activity on output was estimated to be \$1,163 million in the 2001/02 financial year (**Table 27.1**).

The value added from port related activity can be used to describe the contribution of an industry to GSP. This was estimated to be \$641 million for 2001/02, representing approximately 0.3% of NSW's estimated GSP.

Direct employment was estimated to be 6,945 persons, and corresponding household income was \$385 million. This indicates an average gross annual income of around \$55,000 for those employed in firms and organisations directly engaged in port related activity.

### 27.3.3 Flow-On Effects

The flow-on effects of port related activity totalled \$1,346 million in output, \$738 million in value added, and 10,075 jobs with \$354 million in corresponding household income (**Table 27.1**). Flow-on impacts from port related activity occur in many sectors of the NSW economy. The size of the flow-on multiplier and the extent of the impact in each of the other sectors in the local economy were calculated. The sectoral distribution and ranking of the indirect impacts, in terms of output, value added, employment and household income, are contained in **Appendix V**.

The ranking of sectors is determined, to a certain extent, by the labour intensity of the port sector in Sydney. Generally, if the industry is labour intensive with relatively small direct purchases of goods and services by firms in the industry (such as port related activities), then the flow-on effects will occur predominantly in those sectors providing goods and services to households (i.e. those sectors where households spend the wages and salaries earned working in the impacting sector).

As households traditionally spend a large proportion of their income on banking services (interest, service charges), home ownership (mortgages) and in the retail sector, it is not surprising that finance and business services, wholesale and retail trade and private housing are the three sectors where port related activity has

the largest impact. For all four measures of economic impact (output, value added, employment and income), approximately 50% of the total flow-on effect occurred in these three sectors. For employment, the combined impact in these sectors was more than 56% (5,694 jobs) of the total employment flow-on from port related activity (10,075 jobs).

## 27.4 Economic Impact of the Port Botany Expansion

### 27.4.1 Construction Impact

The proposed Port Botany Expansion would give rise to substantial infrastructure requirements. Expenditure on the Port Botany Expansion would be incurred by Sydney Ports Corporation and other private operators. The \$576 million development (including construction and operator and fit out costs), scheduled over the 24 year period 2001/02 to 2024/25, would have a significant impact on the economy of NSW. The direct and flow-on effects of the construction of the Port Botany Expansion during key years are shown in **Table 27.2**.

**Table 27.2 Economic Impact of Construction of the Proposed Port Botany Expansion (all in 2002 prices)**

PERIOD	ECONOMIC IMPACT	OUTPUT (\$M)	VALUE ADDED (\$M)	HOUSEHOLD INCOME (\$M)	EMPLOYMENT (NUMBER)
2005/06	Direct Impact	90	14	5	121
	Flow on effects	38	20	10	263
	<b>Total</b>	<b>128</b>	<b>34</b>	<b>15</b>	<b>384</b>
2008/09	Direct Impact	45	7	1	20
	Flow on effects	19	10	5	123
	<b>Total</b>	<b>64</b>	<b>17</b>	<b>6</b>	<b>143</b>
2014/15	Direct Impact	12	2	1	15
	Flow on effects	5	2	1	30
	<b>Total</b>	<b>17</b>	<b>4</b>	<b>2</b>	<b>45</b>
2019/20	Direct Impact	12	2	1	15
	Flow on effects	5	2	1	27
	<b>Total</b>	<b>17</b>	<b>4</b>	<b>2</b>	<b>42</b>
2024/25	Direct Impact	13	2	1	15
	Flow on effects	4	2	1	25
	<b>Total</b>	<b>17</b>	<b>4</b>	<b>2</b>	<b>40</b>
<b>Total for entire life of project</b>		<b>818</b>	<b>220</b>	<b>86</b>	

The construction program for the project discussed in **Chapter 8 Construction** has construction commencing in 2005, assuming that planning approval is granted by mid 2004. The economic impact from these activities is therefore expected to be first felt at that time, peaking over the years 2004/05 to 2006/07 when a number of major construction tasks such as reclamation, pile driving, deck construction and road and rail works would be undertaken. It is expected that the construction phase economic effects would therefore be greatest at this time.

The construction of the proposed Port Botany Expansion would generate \$818 million in output for the NSW economy over the total construction period. Value added attributable to the construction of the new terminal would be \$220 million and household income generated would be \$86 million through the life of the project.

Household income generated directly from construction activities during the peak impact year (2006/07) is anticipated to be around \$6.5 million, with 155 jobs. Indirect household income would be \$9.6 million with an associated 258 jobs, giving total employment (direct plus flow-on) of 413 in the peak year of construction.

### 27.4.2 Operational Impact

The direct and flow-on effects of the operation of the Port Botany Expansion are shown in **Table 27.3**.

The value of output generated directly by port-related activity is the sum of gross business revenue of firms engaged in moving containers through the proposed new container terminal at Port Botany. These are revenues generated and expenditure incurred in NSW.

**Table 27.3 Economic Impact of the Operation of the Proposed Port Botany Expansion (all in 2002 prices)**

PERIOD	ECONOMIC IMPACT	OUTPUT (\$M)	VALUE ADDED (\$M)	HOUSEHOLD INCOME (\$M)	EMPLOYMENT (NUMBER)
2009/10	Direct Impact	193	107	65	1,159
	Flow on effects	223	122	58	1,164
	<b>Total</b>	<b>416</b>	<b>229</b>	<b>123</b>	<b>2,823</b>
2014/15	Direct Impact	460	255	154	2,754
	Flow on effects	528	290	138	3,958
	<b>Total</b>	<b>988</b>	<b>545</b>	<b>292</b>	<b>6,712</b>
2019/20	Direct Impact	546	303	182	3,274
	Flow on effects	628	345	166	4,705
	<b>Total</b>	<b>1174</b>	<b>648</b>	<b>348</b>	<b>7,979</b>
2024/25	Direct Impact	623	346	208	3,737
	Flow on effects	717	393	189	5,369
	<b>Total</b>	<b>1340</b>	<b>739</b>	<b>397</b>	<b>9106</b>
<b>Total for entire life of project</b>		<b>16,078</b>	<b>8,865</b>	<b>4,760</b>	

**Table 27.3** shows that the operation of the proposed Port Botany Expansion would generate a total impact on the NSW economy of over \$16 billion in output, over the life of the project to 2024/25. Value added attributable to the operation of the new terminal would be approximately \$8.9 billion and household income generated would be around \$4.8 billion over the life of the project.

In 2024/25, once the new terminal was fully operational, total employment would be 9,106 jobs (full time equivalent).

As can be seen in **Table 27.3**, the impact of the Port Botany Expansion would increase substantially as container throughput increases with the construction and development of additional berths to meet growth in container trade.

## 27.5 Conclusion

This assessment has shown that the development of the proposed Port Botany Expansion would have a substantial benefit to the NSW GSP, employment levels and household income of those employed directly and indirectly in port related activities. Over the life of the project, up to 2024/25, the operation of the proposed Port Botany Expansion would generate over \$16 billion in output for the NSW economy, with an estimated \$8.9 billion in value added and an additional \$4.8 billion in household income.

The construction of the proposal would generate \$818 million in output for the NSW economy over the total construction period and employ more than 400 people directly or indirectly in the peak year of construction.

The construction and operation of the proposed Port Botany Expansion would contribute to improved living standards and strengthen NSW's position as the State making the greatest contribution to the Australian economy.