LEGISLATIVE COUNCIL

STANDING COMMITTEE ON
FINANCE AND PUBLIC ADMINISTRATION

INQUIRY INTO:

PORT PHILLIP BAY:
CHANNEL DEEPENING

FINAL REPORT

SEPTEMBER 2008
LEGISLATIVE COUNCIL
STANDING COMMITTEE ON
FINANCE AND PUBLIC ADMINISTRATION

INQUIRY INTO
PORT PHILLIP BAY: CHANNEL DEEPENING

FINAL REPORT

SEPTEMBER 2008

Ordered to be Printed

By Authority
Government Printer for the State of Victoria

No 133 Session 2006-08
# CONTENTS

STANDING COMMITTEE ON FINANCE AND PUBLIC ADMINISTRATION...... 1

ESTABLISHMENT OF THE STANDING COMMITTEE................................................................. 2

CHAIRMAN’S FOREWORD............................................................................................................. 3

LIST OF ACRONYMS................................................................................................................. 5

CHAPTER 1: INTRODUCTION ...................................................................................... 7

1.1 Terms of Reference................................................................................................. 7
1.2 Inquiry Process ...................................................................................................... 7
  1.2.1 Written Submissions......................................................................................... 7
  1.2.2 Request for Channel Deepening Alliance Contract Documents ................. 8
  1.2.3 Public Hearings............................................................................................... 8
  1.2.4 Extension to Reporting Date ....................................................................... 9

CHAPTER 2: CHANNEL DEEPENING PROJECT..................................................... 11

CHAPTER 3: EVOLUTION OF THE BUSINESS CASE.......................................... 15

3.1 Preliminary Economic Impact Study ................................................................. 15
3.2 Preliminary Economic Benefit Study ................................................................. 16
3.3 Port Phillip Channel Deepening Project EES – Economic Impact Study ........ 16
3.4 Channel Deepening: Benefit-Cost Analysis ........................................................ 16
3.5 Subsequent Updates............................................................................................ 16

CHAPTER 4: OVERVIEW OF THE SEES BENEFIT-COST ANALYSIS............. 19

4.1 Overview of the SEES Benefit-Cost Analysis ..................................................... 19
  4.1.1 Key Assumptions......................................................................................... 19
  4.1.2 Quantified Benefits.................................................................................... 20
  4.1.3 Quantified Costs....................................................................................... 22
  4.1.4 Unquantifiable Costs & Benefits............................................................. 24
  4.1.5 Updated Cost Estimate........................................................................... 25
  4.1.6 Updated Benefit Cost Ratio and Net Present Value................................. 25

CHAPTER 5: ASSESSMENT OF THE SEES BENEFIT-COST ANALYSIS............. 27

5.1 Draught Constraints............................................................................................ 28
5.2 Costs of the Environmental Impact of the CDP............................................... 31
5.3 Discount Rate..................................................................................................... 32
5.4 Exchange Rate Forecast.................................................................................... 37
5.5 Exclusion of Maintenance Costs....................................................................... 39
5.6 Exclusion of Sunk Costs from Net Present Value and Benefit Cost Ratio Calculations................................................................................................................. 42
5.7 Greenhouse Gas Emission Reduction.................................................................. 44
STANDING COMMITTEE ON FINANCE AND PUBLIC ADMINISTRATION

Committee Members

Mr Gordon Rich-Phillips – Chairman
Member for South Eastern Metropolitan Region

Mr Matthew Viney – Deputy Chairman
Member for Eastern Victoria Region

Mr Greg Barber
Member for Northern Metropolitan Region

Ms Candy Broad
Member for Northern Victoria Region

Mr Peter Hall
Member for Eastern Victoria Region

Mr Matthew Guy
Member for Northern Metropolitan Region

Mr Peter Kavanagh
Member for Western Victoria Region

Substituted Members
From 2 – 10 June 2008, Mr Brian Tee substituted for Ms Candy Broad.

Committee Staff

Mr Richard Willis – Secretary to the Committee

Mr Anthony Walsh – Research Assistant

Address all correspondence to –

Council Committee Office
Department of the Legislative Council
Parliament of Victoria
Spring Street
EAST MELBOURNE VIC 3002

Telephone: (03) 9651 8696
Facsimile: (03) 9651 6799
ESTABLISHMENT OF THE STANDING COMMITTEE

On 21 November 2007, the Legislative Council resolved to appoint a Standing Committee on Finance and Public Administration with a Membership of seven Members. The Council’s resolution came into operation on 1 April 2008 and the Committee’s inaugural meeting was convened on 7 April 2008.

In accordance with the establishing resolution, the following Members were appointed to the Committee:

- Mr Greg Barber - Australian Greens,
- Ms Candy Broad - Australian Labor Party,
- Mr Peter Hall – Nationals,
- Mr Matthew Guy - Liberal Party,
- Mr Peter Kavanagh - Democratic Labor Party,
- Mr Gordon Rich-Phillips - Liberal Party, and
- Mr Matthew Viney - Australian Labor Party.

At its inaugural meeting the Committee elected Mr Rich-Phillips as Chairman, and Mr Viney as Deputy Chairman.

The establishing resolution provides the Committee with a wide range of powers. Some key features of the Standing Committee include:

- The Standing Committee exists until the Parliament is either prorogued or dissolved.
- Members of the Committee may be substituted by another Member from the same political party.
- The Committee has the power to inquire into any matter or thing, relevant to its functions, which is either referred to it by resolution of the Legislative Council, or determined by the Committee.
- The power to appoint sub-committees to inquire into matters.
CHAIRMAN’S FOREWORD

I am pleased to present the Final Report of the Standing Committee on Finance and Public Administration Inquiry into the business case of the Port Philip Bay Channel Deepening Project.

This is the first inquiry the Committee has undertaken since its formation in April 2008, and involved an examination of both the business case of the project as outlined in the Supplementary Environmental Effects Statement and consideration of the contractual arrangements between the Port of Melbourne Corporation, and the dredging operator Royal Boskalis Westminster NV.

The business case relies upon a number of forecasts and assumptions to project a Net Present Value and Benefit-Cost Ratio for the project over a 28 year period to 2035. While the assumptions used are reasonable, they represent only one point in a range which could equally and reasonably have been chosen. If other equally reasonable assumptions had been used, the results for the business case would have been dramatically lower. The business case thus relies upon assumptions to generate what is effectively a best case scenario.

As the project has proceeded, the cost has dramatically escalated, undermining the original Net Present Value and Benefit-Cost Ratio. Given the original business case was based on a best case scenario, it is concerning that this position has been further eroded.

As is evident from this report, the completion of the Inquiry has required the consideration of a number of complex and technical issues. If the Committee is to undertake further inquiries of this nature, additional resourcing for research capacity and expert consultancies will be required.

I would like to thank the thirty seven parties who made substantial written submissions to the Inquiry, and a further thirteen witnesses who appeared at public hearings.

The Channel Deepening Project has generated considerable debate among Victorians and this Inquiry had allowed some of the concerns about the viability of the project to be raised and examined through the Parliamentary Committee process.

On behalf of the Committee I would like to thank the Committee Secretary Mr Richard Willis, and the Research Assistant Mr Anthony Walsh for their hard work on this Inquiry.

Gordon Rich-Phillips MLC
Chairman
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET</td>
<td>Alliance Executive Team</td>
</tr>
<tr>
<td>BAH</td>
<td>Booz Allen Hamilton</td>
</tr>
<tr>
<td>BCR</td>
<td>Benefit-cost ratio</td>
</tr>
<tr>
<td>CAPM</td>
<td>Capital Asset Pricing Model</td>
</tr>
<tr>
<td>CDP</td>
<td>Channel Deepening Project</td>
</tr>
<tr>
<td>CVM</td>
<td>Contingent valuation method</td>
</tr>
<tr>
<td>DCF</td>
<td>Discounted cash flow</td>
</tr>
<tr>
<td>DSE</td>
<td>Department of Sustainability and Environment</td>
</tr>
<tr>
<td>DTF</td>
<td>Department of Treasury and Finance</td>
</tr>
<tr>
<td>EES</td>
<td>Environmental Effects Statement</td>
</tr>
<tr>
<td>EMP</td>
<td>Environmental Management Plan</td>
</tr>
<tr>
<td>GBE</td>
<td>Government Backed Enterprise</td>
</tr>
<tr>
<td>GRP</td>
<td>Gateway Review Process</td>
</tr>
<tr>
<td>IPAA</td>
<td>Interim project alliance agreement</td>
</tr>
<tr>
<td>NIEIR</td>
<td>National Institute of Economic and Industry Research</td>
</tr>
<tr>
<td>NOP</td>
<td>Non-Owner Participant</td>
</tr>
<tr>
<td>NPV</td>
<td>Net Present Value</td>
</tr>
<tr>
<td>PAA</td>
<td>Project Alliance Agreement</td>
</tr>
<tr>
<td>PoMC</td>
<td>Port of Melbourne Corporation</td>
</tr>
<tr>
<td>PV</td>
<td>Present Value</td>
</tr>
<tr>
<td>PWC</td>
<td>Price Waterhouse Coopers</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>SEES</td>
<td>Supplementary Environmental Effects Statement</td>
</tr>
<tr>
<td>TEU</td>
<td>Twenty-foot equivalent units</td>
</tr>
<tr>
<td>VCA</td>
<td>Victorian Channels Authority</td>
</tr>
<tr>
<td>VECCI</td>
<td>Victorian Employers’ Chamber of Commerce and Industry</td>
</tr>
<tr>
<td>WACC</td>
<td>Weighted average cost of capital</td>
</tr>
</tbody>
</table>
CHAPTER 1: INTRODUCTION

1.1 Terms of Reference

1. On 27 February 2008, the Legislative Council resolved to require the Standing Committee on Finance and Public Administration to:

Examine the business case for the Port Phillip Bay channel deepening project as presented by the Port of Melbourne Corporation (PoMC) and the Victorian government and the legal and financial arrangements between the PoMC and Boskalis Australia Pty Ltd and/or its parent company, Royal Boskalis Westminster NV, and report its findings by 30 June 2008.

1.2 Inquiry Process

2. The Committee’s Inquiry process involved three steps:

   • Call for written submissions;
   • Request for contract documents from Port of Melbourne Corporation (PoMC) and Boskalis Australia Pty Ltd; and,
   • Conduct of public hearings.

1.2.1 Written Submissions

3. On 7 April 2008, the Committee resolved to advertise its terms of reference and seek public submissions. Advertisements were placed in The Age and Herald-Sun newspapers and eight major regional newspapers.

4. Submissions closed on 28 April 2008 with extensions granted upon request, until 8 May 2008. A total of 37 written submissions were received. (see Appendix I). Several submitters requested an opportunity to appear at a public hearing to give further evidence.

5. In addition to the 37 substantive submissions, a further 210 pro-forma submissions (no.15) were also received.
1.2.2 Request for Channel Deepening Alliance Contract Documents

6. On 28 April 2008, the Committee resolved to write to the Port of Melbourne Corporation (PoMC) and Boskalis Australia Pty Ltd requesting copies of all contracts and appendices between the Port of Melbourne Corporation and Boskalis Australia Pty Ltd and/or Royal Boskalis Westminster NV related to the Port Philip Bay Channel Deepening Project (CDP).

7. In response, Boskalis Australia Pty Ltd, on behalf of the Alliance between it and the PoMC, provided the following documents:
   - Channel Deepening Project Alliance Agreement dated 5 July 2004
   - Deed of Guarantee and Indemnity dated 5 July 2004
   - Deed of Variation and Amendment dated 22 March 2005

8. The Alliance withheld the following information on the grounds that its public disclosure has the likelihood of causing substantial damage to Boskalis’ interests:
   - terms which reflect commercially negotiated positions between the PoMC and Boskalis Australia Pty Ltd as to the allocation of cost and risk;
   - financial information regarding revenue, costs and profit in relation to the project; and,
   - proprietary information of an intellectual property nature.

9. A copy of the correspondence received from the PoMC and Boskalis Australia Pty Ltd is attached in Appendix II.

10. In response to a request from the PoMC and Boskalis Australia Pty Ltd for confidentiality, the Committee resolved not to publicly release the Alliance Agreement documents.

1.2.3 Public Hearings

11. Following receipt of written submissions, and documents from Boskalis Australia Pty Ltd and the PoMC, the Committee proceeded to take evidence in public hearings on 5 and 6 June 2008. The hearings were
designed to compliment and expand on written submissions and to provide a balance of views and evidence relevant to the Committee’s terms of reference.

12. The Committee took evidence from the following witnesses:

- Australian Conservation Foundation;
- Australian Horticultural Exporters Association;
- Blue Wedges Coalition;
- Boskalis Australia Pty Ltd;
- Department of Transport;
- Dive Victoria Group;
- Economists@Large and Associates;
- Meyrick and Associates;
- Mr Richard McEncroe, consultant economist;
- Port of Melbourne Corporation;
- Victorian Employers’ Chamber of Commerce and Industry;
- Victorian Farmers Federation; and
- Victorian Freight and Logistics Council.

1.2.4 Extension to Reporting Date

13. On 24 June 2008, the Committee tabled an interim report advising of progress to date and seeking an extension to its final reporting date to 11 September 2008. The Legislative Council subsequently agreed to the extension. The purpose of the extension was to complete drafting of the final report; no further evidence was taken beyond 30 June 2008.
CHAPTER 2: CHANNEL DEEPENING PROJECT

14. The Channel Deepening Project (CDP) is a civil engineering project to deepen sections of the Port Phillip Bay shipping channels and upgrade port infrastructure to allow access for container vessels of up to 14 metres draught (the vertical distance measured from a vessel’s water line to the bottom of its keel). The Port can currently accommodate container vessels with draughts up to 11.6 metres, and up to 12.1 metres at high tide. Vessels with a draught exceeding 12.1 metres cannot enter Port Phillip Bay.

15. The Port of Melbourne Corporation (PoMC), in its evidence to the Committee, summarised the purpose of the project being:

.... to maintain the international competitiveness of the Port into the future. The Project includes port infrastructure development and upgrades to improve the capacity, efficiency and accessibility of the Port.

The Project involves modifying the channels within the existing alignment that lead to the Port and berth pockets within the Port, so as to accommodate vessels with a draught of up to 14 metres, at any tide conditions, subject to metocean conditions such as wave, tide and wind.¹

16. Since its initial conception in 1998, the project has evolved as outlined below:

- 1998 - The Victorian Channels Authority (VCA), the predecessor of the Port of Melbourne Corporation (PoMC) commissioned a formal study to examine the need for deeper channels in the approaches to the Port of Melbourne.

- January 2000 - A Victorian Government study, Victoria Ports Strategic Study, identified inadequate channel depth at the Port of Melbourne as a major emerging infrastructure constraint issue.

- 2000 - The VCA established a 4-stage process for the design, development and implementation of a CDP.

- February to June 2003 - The VCA identified six international dredging companies for their potential capability to undertake the CDP.

¹ Port of Melbourne Corporation, Transcript of Evidence, 6 June 2008, p 119.
August to October 2003 – The formal tender process commenced involving submissions from all six companies. Following initial responses, three companies were short listed for further assessment.

December 2003 - One short listed bidder was eliminated following the assessment of the three remaining bids for completeness and robustness of their proposals.

January 2004 - Final submissions were received from the two short listed companies and Boskalis Australia Pty Ltd was subsequently selected on the basis that its proposals presented the lowest risk option for the PoMC.

January 2004 - The PoMC and Boskalis Australia Pty Ltd executed the Alliance Agreement which established a formal legal framework for undertaking the CDP.

July 2004 – The PoMC released its Environment Effects Statement (EES) and public submissions were received by the Department of Sustainability and Environment (DSE) over the following six weeks.

September to December 2004 - An independent panel appointed by the Minister for Planning considered the EES and heard evidence in public hearings.

March 2005 - The independent panel’s report was released by the Minister for Planning. The report recommended that the PoMC undertake more investigations and prepare a Supplementary EES (SEES) and also recommended trial dredging.

June 2005 – The PoMC sought approvals for trial dredging.

July 2005 - The Minister for Planning announced Victorian Government approval for trial dredging and issued draft guidelines for the SEES for public consideration.

October 2005 - The final assessment guidelines for the SEES were released by the Minister for Planning.

March 2007 – The PoMC released its SEES for public exhibition on 21 March 2007. Public submissions were received by DSE over the following six weeks.

June to July 2007 - An independent panel appointed by the Minister for Planning considered the SEES and heard evidence in public hearings.

October 2007 - The Minister for Planning released his assessment of the SEES and concluded that the CDP could proceed on an ‘environmentally acceptable basis’.
December 2007 – The Minister for Environment and Climate Change granted the project approval under the *Coastal Management Act 1995*.

December 2007 – The Commonwealth Minister for Environment granted the project approval to proceed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. This was the final approval required for the CDP to proceed.

February 2008 - The *Queen of the Netherlands* commenced dredging operations in the South Channel.

March to April 2008 - Dredging commenced in the Port of Melbourne Channel on 1 March and continued until 3 April 2008. Works during this period included the use of the dredged materials (primarily clay) to construct a bunded area in the northern section of the Port of Melbourne Dredged Material Ground for the containment of contaminated materials dredged from the Yarra River channel. Construction works at Swanson Dock also commenced during this period.
CHAPTER 3: EVOLUTION OF THE BUSINESS CASE

17. The Committee’s primary duty in this Inquiry is to examine the business case for the Channel Deepening Project (CDP) as presented by the Port of Melbourne Corporation (PoMC) and the Victorian Government as justification for proceeding with the project.

18. Since the project was first conceived a number of different business case studies have been prepared in support of the proposal.

3.1 Preliminary Economic Impact Study

19. In the lead up to the Government giving in-principle support for the CDP, the National Institute of Economics and Industry Research (NIEIR) produced a Preliminary Economic Impact Study in November 2001 which compared three alternative options; firstly, deepening the Port Phillip Bay channels; secondly, developing container facilities at an alternative Victorian port such as Hastings; and thirdly, diverting draught constrained vessels to alternative ports interstate such as Adelaide or Sydney.

20. The NIEIR study assumed a capital cost for the CDP of $100 million and other options such as developing Hastings or diverting draught constrained vessels to interstate ports as more expensive. The report concluded that the CDP was unambiguously the most favourable scenario of the three for the Victorian economy.

21. Following the NIEIR study, in December 2001 the Government gave in-principle support to proceed with the CDP. Between that decision, and the commencement of dredging works in February 2008, a number of benefit-cost studies have been undertaken in relation to the project.
3.2 Preliminary Economic Benefit Study

22. In December 2001 a Preliminary Economic Benefit Study was undertaken by Booz Allen Hamilton (BAH). This study examined a range of project scenarios with present value (PV) costs ranging from $88.4 million to $295.0 million and PV benefits ranging from $278 million to $435 million. Benefit-cost ratios (BCRs) for the different scenarios were estimated between 1.5 and 3.2.

3.3 Port Phillip Channel Deepening Project EES – Economic Impact Study

23. In June 2004, Meyrick and Associates and Price Waterhouse Coopers (PWC) prepared the Port Phillip Channel Deepening Project EES – Economic Impact Study. This study which formed part of the Environment Effects Statement estimated the benefits of the project as $1,316.0 million and the costs at $377.0 million, both in PV terms. The BCR was estimated at 3.49.

3.4 Channel Deepening: Benefit-Cost Analysis

24. As part of the preparation for the Supplementary Environment Effects Statement (SEES) the PoMC commissioned Meyrick and Associates to update the June 2004 study. The subsequent report, Channel Deepening: Benefit-Cost Analysis, was completed in February 2007. On a PV basis, this update assessed project benefits to be $1,936.0 million and project costs to be $590.4 million. The resulting BCR was estimated at 3.28.

3.5 Subsequent Updates

25. In December 2007 following the granting of final approval for the CDP by the Commonwealth Government, an updated estimate of total project costs was established at $968.9 million. Net of sunk costs, the revised CDP cost was assessed as $790.9 million. Although no formal update of the February 2007 benefit-cost analysis was undertaken, the Victorian Government determined that the revised cost estimate was comparable
to a sensitivity analysis modelled in the February 2007 study which used a net cost assessment of $766.7 million to produce an estimated BCR of 2.7.²

26. On 4 June 2008 the PoMC, at its request, received from Meyrick and Associates an update of the benefit cost analysis which it had prepared for the SEES. In this update, benefits remained at a PV of $1,936.0 million and costs after deducting sunk costs to December 2007 were assessed as having a PV of $754.1 million. On this basis, the latest BCR is estimated as 2.57 (See Appendix III).

### Summary of Business Case Estimates

<table>
<thead>
<tr>
<th>Study</th>
<th>Date</th>
<th>PV Benefits</th>
<th>PV Costs</th>
<th>BCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAH</td>
<td>Dec 2001</td>
<td>$278 - $435m</td>
<td>$88.4 - $295m</td>
<td>1.5 – 3.2</td>
</tr>
<tr>
<td>Meyrick &amp; PWC</td>
<td>Jun 2004</td>
<td>$1,316.0m</td>
<td>$377.0m</td>
<td>3.49</td>
</tr>
<tr>
<td>Meyrick</td>
<td>Feb 2007</td>
<td>$1,936.0m</td>
<td>$590.4m</td>
<td>3.28</td>
</tr>
<tr>
<td>Meyrick</td>
<td>Jun 2008</td>
<td>$1,936.0m</td>
<td>$754.1m</td>
<td>2.57</td>
</tr>
</tbody>
</table>

CHAPTER 4: OVERVIEW OF THE SEES BENEFIT-COST ANALYSIS

27. As outlined in Chapter 3, a number of different benefit-cost analyses have been prepared throughout the planning and development of the Channel Deepening Project (CDP). The Committee’s inquiry has focussed on the benefit-cost analysis included in the Supplementary Environmental Effects Statement (SEES) which was the basis for the final CDP approvals.


4.1 Overview of the SEES Benefit-Cost Analysis

29. The SEES benefit-cost analysis for the CDP provides an assessment of the costs and benefits of the project over a 28 year period from 2007 to 2035. In PV terms it assesses the benefits as $1,936 million, the costs as $590 million and the Net Present Value as $1,346 million. The BCR arising from these estimates is 3.28.

4.1.1 Key Assumptions

30. The modelling of the SEES benefit-cost analysis is predicated on a number of assumptions as to the economic, trade and operational environment that will exist over the assessment period, and the timing of the cost and benefit flows. Appendix IV shows a flow chart of the methodology adopted by Meyrick and Associates in preparing the analysis. Key assumptions in the SEES benefit-cost analysis include:

- Costs of the CDP to be incurred between 2007 and 2011, and benefits of the CDP to accrue from 2010 to the end of the assessment period;
- Costs amounting to $137 million incurred to the end of 2006 are excluded from the analysis as they are already expended or irrevocably committed;

Present Value (PV) estimates are calculated by applying a discount rate of 6 percent real as required by the Department of Treasury and Finance (DTF). Elements sensitive to exchange rate movements have been calculated based on an Au$/US$ = 0.70 exchange rate;

World economic growth to remain buoyant over the next five years and that the growth rate from 2010 to 2035 will be slightly slower than the long-term growth rate experienced over the last thirty years;

The ratio of containerised trade growth to total merchandise trade growth to decline over the coming decades though remain greater than one;

Australian container trade growth to slow from 6.71 percent per annum in the period 2005-2010, to 4.68 percent per annum from 2021 onwards;

The maximum size of vessels used in the Australian trades to grow by 1.8 percent per annum to 2035, slightly below the historic long term average growth rate of 2.2 percent per annum;

The volume of international container traffic through the Port of Melbourne to increase from 2.06 million twenty-foot equivalent units (TEU) in 2010 to 7.06 million TEU in 2035; and,

Average size of vessels on the Australian trades to increase from 3,130 TEU in 2010 to 5,130 TEU in 2035.

4.1.2 Quantified Benefits

31. The SEES benefit-cost analysis classifies the estimated benefits of the CDP into three main categories: benefits accruing to the use of containerships; benefits accruing to the use of other vessels; and savings in environmental gas emissions.

32. The fundamental driver of the benefit estimates is the hypothesis that completing the CDP will result in vessels of up to 7,000 TEU servicing the container trade at Melbourne, compared with the current maximum size of 4,500 TEU, thus requiring a lower number of calls per year to carry the estimated container volume. Allied to this is the substantial decline in daily vessel operating costs per TEU as the size of vessels increase.4

33. Accordingly, the benefits of the CDP are expressed as cost savings. In the area of aggregate direct vessel operating costs, the savings are a

---

function of reduced vessel numbers and reduced operating costs per TEU. Additional savings are identified in the area of maritime services: pilotage; towage; and, mooring which are a function of reduced vessel numbers.

34. As noted in Chapter 2, the Port of Melbourne channels are currently able to accommodate vessels of 11.6 metre draught at all times, and vessels of 12.1 metres draught at high tide. Vessels requiring draughts between 11.6 and 12.1 metres must delay their entrance to Port Philip Bay until favourable tidal conditions exist. The CDP will eliminate the need for tidal assistance for these vessels, and accordingly savings through the avoidance of delays have been estimated as a function of the cost per hour of delay, the probability of delay, and the average duration of delay.

35. A related cost saving is identified in relation to vessels which have a draught exceeding 12.1 metres and currently use the Port of Melbourne, requiring them to enter and leave Port Philip Bay at less than full capacity. This leads to the repositioning of containers by land to other Australian ports (landbridging), or the addition of second calls at other Australian ports to pick up containers which cannot be carried through Melbourne due to draught constraints.

36. Operating cost savings in respect of grain ships, crude oil tankers, and petroleum product carriers have also been identified and estimated as benefits of the CDP, again driven by economies of scale from larger vessels requiring fewer calls to carry the bulk load demand.

37. Benefits of the CDP in the form of savings from environmental gas emissions have also been quantified. This is underpinned by the assumption that fewer, larger, more fuel-efficient vessels will produce lower emissions than continuing to service Melbourne with a larger number of smaller vessels. A value is assigned to the net reduction in emission volumes based on the European emission pricing regime and
assuming the need to hold emissions credits under a cap and trade system or pay an equivalent taxation amount.\(^5\)

38. The SEES benefit-cost analysis does not publish estimated benefits data for each year of the assessment period, or totals by benefit category. Date is provided at five year intervals, in terms, for sample years only.\(^6\) Benefit estimates by category, in PV terms, have been provided for the whole assessment period in the Victorian Government submission to this Inquiry and have been incorporated in the table below.\(^7\)

### Benefits by Calendar Year & Project Total ($ million)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>Total PV $m</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Containerships</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Savings due to the use of larger ships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Operating costs</td>
<td>6.3</td>
<td>27.7</td>
<td>56.2</td>
<td>151.2</td>
<td>261.6</td>
<td>1,005.0</td>
</tr>
<tr>
<td>- Maritime services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Pilotage</td>
<td>0.5</td>
<td>2.0</td>
<td>4.1</td>
<td>10.6</td>
<td>18.1</td>
<td>71.0</td>
</tr>
<tr>
<td>- Towage</td>
<td>0.5</td>
<td>2.3</td>
<td>4.6</td>
<td>12.1</td>
<td>20.8</td>
<td>81.0</td>
</tr>
<tr>
<td>- Mooring</td>
<td>0.1</td>
<td>0.3</td>
<td>0.5</td>
<td>1.3</td>
<td>2.2</td>
<td>9.0</td>
</tr>
<tr>
<td>Savings through improved vessel ops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Avoidance of delays</td>
<td>6.9</td>
<td>8.7</td>
<td>11.4</td>
<td>14.2</td>
<td>17.8</td>
<td>128.0</td>
</tr>
<tr>
<td>- Avoidance of landbridging &amp; duplication of port calls</td>
<td>11.9</td>
<td>21.0</td>
<td>33.6</td>
<td>45.6</td>
<td>61.2</td>
<td>367.0</td>
</tr>
<tr>
<td>Total for Containerships</td>
<td>26.2</td>
<td>62.0</td>
<td>110.4</td>
<td>235.0</td>
<td>381.7</td>
<td>1,661.0</td>
</tr>
<tr>
<td><strong>Other vessel operating cost savings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Grain ships</td>
<td>4.2</td>
<td>4.7</td>
<td>4.6</td>
<td>5.2</td>
<td>5.8</td>
<td>55.0</td>
</tr>
<tr>
<td>- Crude oil tankers</td>
<td>13.5</td>
<td>16.5</td>
<td>19.3</td>
<td>22.2</td>
<td>24.7</td>
<td>212.0</td>
</tr>
<tr>
<td>- Petroleum product carriers</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Environmental gas emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.9</td>
<td>1.6</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>44.3</td>
<td>83.6</td>
<td>134.7</td>
<td>263.7</td>
<td>414.2</td>
<td>1,936.0</td>
</tr>
</tbody>
</table>

#### 4.1.3 Quantified Costs

39. The SEES benefit-cost analysis quantifies the estimated costs of the CDP as direct and indirect. The direct costs include channel dredging, project management, procurement, environmental, and engineering costs. The total direct costs in the SEES were estimated at $763.2 million, from which $136.6 million in ‘sunk costs’ where excluded on the basis that they had been expended or irrevocably committed, to produce a net direct cost estimate of $626.6 million.

---

\(^{5}\) Ibid, p 36.


40. Indirect costs are those which are borne by participants other than the PoMC. The SEES benefit-cost analysis considered two primary drivers of indirect costs. The first is turbidity caused by dredging operations which has the potential to impact upon commercial fishing catches and visibility for the dive industry. The second driver is dredging operations, or an incident arising from dredging operations, creating delays for commercial shipping or causing a blockage of the channel preventing commercial shipping.

41. In relation to commercial fishing, the SEES benefit-cost analysis has estimated the cost based on the value of the commercial catch by species, and the proportion of each species resident in the shipping channels, with the assumption that that proportion is lost from the catch during the dredging operations and for up to 36 months after.

42. The cost to the dive industry is assumed to arise as a consequence of reduced visibility for diving due to turbidity and was assessed at $4.1 million by a study undertaken by Sinclair Knight Mertz.\(^8\)

43. Costs due to delays caused to shipping by the CDP works have been assessed as three separate elements: delays in the channels; delays at the heads; and delays in the Yarra River. Delays in the channels have been costed on the basis of $1,500 per day for container ships and $700 per day for bulk ships on days when dredging is taking place.

44. Costs associated with delays at the heads arise due to the need to restrict the passage of vessels with a draught of greater than 10.5 metres during the dredging operations due to the disturbed dredged material. These vessels will only be able to enter and exit Port Phillip Bay at high tide. Delays at the heads are estimated to cost container vessels $16,000 per day and bulk shipping $12,600 per day during the eight week period of dredging the heads.

45. Costs associated with delays in the Yarra arise from a decision by the PoMC to restrict operations in the Yarra during the hours 2200 to 0600 in order to facilitate works on the under river utility services. During the

\(^8\) Meyrick and Associates, above n 3, p 39.
period of restricted operations, delays in the Yarra have been estimated to cost $12,400 per day.

46. All direct and indirect costs of the CDP are estimated to be incurred between 2007 and 2011.

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{Costs by Calendar Year & Project Total ($ million)}^9 & 2007 & 2008 & 2009 & 2010 & 2011 & \text{Project Total} \\
\hline
\text{Direct project expenditure} & 46.7 & 310.7 & 265.7 & 3.5 & 626.6 & \\
\hline
\text{Indirect project expenditure} & & & & & & \\
- Recreational diving & 2.6 & 1.5 & & & 4.1 \\
- Commercial fishing & 0.4 & 0.5 & 0.3 & 0.3 & 1.5 \\
- Vessel delays in the channels & 0.8 & 0.4 & & & 1.2 \\
- Vessel delays at the heads & 0.8 & 0.8 & & & 1.6 \\
- Vessel delays in the Yarra River & 1.9 & 1.9 & & & 3.8 \\
\hline
\text{Total direct and indirect expenditure} & 46.7 & 317.2 & 270.9 & 3.8 & 0.3 & 638.9 \\
\hline
\end{array}
\]

4.1.4 Unquantifiable Costs & Benefits

47. Meyrick and Associates noted that a number of potential indirect costs arising from the CDP have not been accounted for in the cost-benefit analysis. Some of these are excluded on the basis that they are ‘zero-valued’ indirect effects, meaning that their costs will not have any measurable impact, while others are not able to be reliably quantified.

48. The impacts which have been assessed as being ‘zero-valued’ impacts include:

- impact on tourism and recreational activities;
- impact on the Newport Power Station arising from changes to water quality;
- changes to hydrodynamic processes (tidal levels, wave climate and currents);
- changes to denitrification processes;
- introduction and translocation of marine pests;
- mobilisation of containments accumulated on the sea bed;
- waste discharge into the Bay; and

---

\(^9\) \textit{Ibid}, p 51.
49. The second category of unquantifiable costs are those costs whose impact is difficult to precisely quantify, and which with appropriate risk mitigation strategies are expected to be extremely small. Costs in this category include the impact of:

- the mobilisation of nutrients and algal cysts;
- night lighting on species and coastal amenity;
- airborne noise;
- turbidity and sedimentation;
- underwater noise from dredging activities;
- physical removal of the seabed; and
- rock falls.

### 4.1.5 Updated Cost Estimate

50. In December 2007, prior to the commencement of dredging works, a further cost estimate for the CDP was prepared. This increased estimate took into account the cost impact of the outcomes of the Minister for Planning’s assessment of the CDP, the impact of fuel price and foreign currency movements, and the cost of additional environmental monitoring.\(^\text{10}\)

51. As a consequence, the total project direct costs were revised upward by $205.7 million to $968.9 million. Sunk costs were also revised up by $53.7 million to $190.3 million. After adding in-direct costs, the total project cost, net of sunk costs was estimated at $790.9 million.

### 4.1.6 Updated Benefit Cost Ratio and Net Present Value

52. For the SEES benefit-cost analysis Meyrick and Associates selected 2007 as its base year, with benefits and costs incurred in that year recorded at their real value. Benefits and costs in subsequent years are discounted to PV terms using a discount rate of 6 percent real per annum to reflect the

---

\(^{10}\) Victorian Government, Submission, p 18.
time value of money. This is distinct from inflation considerations which are eliminated from the analysis by the use of real dollars.

53. In June 2008, Meyrick and Associates provided an update of the Benefit Cost Analysis having regard to the updated cost estimate. The revised net cost estimate of $790.9 million was adjusted in PV terms to $754.1 million. The PV estimate of CDP benefits remained at $1,936.0 million. On this basis the Net Present Value of the CDP, that is PV benefits net of PV costs, is $1,181.9 million. The BCR, or PV benefits divided by PV costs, is 2.57.
CHAPTER 5: ASSESSMENT OF THE SEES BENEFIT-COST ANALYSIS

54. In both written submissions and public hearings, the Committee received evidence from a number of witnesses who raised concerns at the way in which the benefit-cost analysis had been prepared for the CDP. The nature of the concerns is that the business case has underestimated costs which may not be fully known, while the benefits are based on assumptions. The Committee has attempted to consider the SEES benefit-cost analysis in the context of those concerns.

55. Specific concerns examined by the Committee include the following claims:

- There is no evidence that trade growth is restrained due to current draught constraints.
- The economic costs related to environmental damage have not been included in the cost benefit analysis.
- The discount rate of 6 percent used in the SEES is inappropriate for such a high-risk project.
- The exchange rate of Au$/US$ = 0.70 used in the SEES is too low given prevailing exchange rates.
- Costs related to maintenance dredging and associated monitoring have been erroneously excluded from the cost estimate.
- ‘Sunk’ costs have been inappropriately excluded in calculating the NPV and BCR.
- The value of greenhouse gas emission reductions.
- Inaccurate estimates of costs and benefits overstate the final BCR of 2.57 and that a ratio of 1 would be more accurate, consequently calling into question to worth of the project.

56. The Committee notes that not all concerns expressed about the benefit-cost analysis related to an overstatement of benefit or an understatement of cost. Witnesses including the Victorian Employers Chamber of Commerce and Industry (VECCI), and the Victorian Freight and Logistics Council (VFLC), have expressed the view that the benefit-cost analysis
too narrowly estimates the benefits of the CDP and that benefits across the Victorian economy will be far greater than suggested.\textsuperscript{11}

\section*{5.1 Draught Constraints}

57. A number of witnesses expressed concern at the way in which the issue of draught constraint had been addressed in the SEES benefit-cost analysis. As outlined in paragraph 34, draught constraint refers to a situation where a vessel with a summer draught (maximum draught) exceeding 11.6 metres is required to enter and exit Port Philip Bay at less than full cargo capacity in order to reduce its actual draught to no more than 11.6 metres (or 12.1 metres if taking advantage of tidal assistance) while using the Port Philip shipping channels.

58. Several witnesses and submissions to the inquiry referred to a statistic of 44 percent of container vessels using the Port of Melbourne being draught constrained. This figure, based on December 2007 data, was sourced from the PoMC website.\textsuperscript{13}

59. In oral evidence, Mr Stephen Bradford, Chief Executive Officer, PoMC clarified that the 44 percent figure related to the proportion of vessels entering the Port of Melbourne with a summer draught (maximum draught) of greater than 11.6 metres, and as such were \textit{potentially} draught constrained should they desire to load to full capacity.

\begin{quote}
Mr BRADFORD — No, they were not draught-constrained. We have never said they were draught-constrained; we said they have a summer draught which is capable of greater than 11.6 metres. They effectively sailed inside either 11.6 or 12.1 fixed in agreement with the heads.

Mr BARBER — Of course they did, otherwise they would still be sitting at the wharf, wouldn’t they?

Mr BRADFORD — That is exactly right.

Mr BARBER — So what does 44 percent represent then?
\end{quote}

\begin{footnotesize}

\textsuperscript{13} VECCI, above n 11, p 6.
\end{footnotesize}
Mr BRADFORD — Forty-four percent represents the number of vessels in container trades only that entered or left the port of Melbourne with a summer draught of greater or equal to 11.6 metres.  

60. It is clear from evidence to the Committee that some witnesses believe the SEES benefit-cost analysis is erroneously based upon 44 percent of vessels actually being draught constrained when by the PoMC’s own evidence, that is not the case.

61. However, the SEES benefit-cost analysis has correctly made the distinction between vessels which are potentially and actually draught constrained. In calculating the benefits of the CDP, Meyrick and Associates note that while approximately 40 percent of vessels are potentially draught constrained, the proportion actually draught constrained is approximately 20 percent, or expressed in an alternative way, 50 percent of potentially draught constrained vessels are actually draught constrained.

62. The Committee notes that the Essential Services Commission in 2005-06 assessed the proportion of vessels actually draught constrained as 14.1 percent. Mr Mark Curry, Director – Ports and Marine, Department of Transport noted that the figure fluctuates from month to month, however the trend is upward.

63. In a subsequent letter to the Committee, Mr Bradford advised that the PoMC calculates the proportion of vessels that are potentially draught constrained by comparing the number of international container vessels visiting the Port of Melbourne with a draught up to 11.59 metres (the depth the port can accommodate) against those with draughts of 11.6 metres or greater. For the March 2008 quarter, the PoMC advised 393 vessels had a draught up to 11.59 metres, while 313 vessels had a draught of 11.6 metres or greater, again indicating a potential draught constraint for 44.3 percent of vessels.

---

14 PoMC, above n 1, p 134.
15 Meyrick and Associates, above n 3, p 32.
17 Department of Transport, Transcript of Evidence, 6 June 2008, p 93.
64. While 44.3 percent is the most recent published figure of potentially draught constrained vessels, the PoMC have advised the Committee that this figure erroneously incorporates 68 movements by a coastal container vessel which should (and in the future will) be excluded from the figures for vessels less than 11.6 meters. This correction would indicate that 49.1 percent of vessels are potentially draught constrained.

65. The Committee received evidence from the PoMC that shipping companies are slowly introducing ships with greater draughts on Australian trade routes. It was suggested that this trend has been impeded to a certain extent by the draught constraints at the Port of Melbourne, which is the largest container port in Australia. While the ports of Sydney and Brisbane can accommodate vessels of 14 metre draught, shipping companies will match their movements to the biggest port. Thus it is assumed that increasing the channel depth in Melbourne will result in an increase in the number of deeper draught ships visiting Australia.

**Finding 5.1**
Data published by the Port of Melbourne Corporation indicating that 44.3 percent of vessels are draught constrained refers to the proportion of vessels which are potentially draught constrained, not actually draught constrained.

**Finding 5.2**
The SEES benefit-cost analysis is based upon 20 percent of vessels being actually draught constrained; equivalent to 50 percent of vessels with a potential draught constraint.

**Finding 5.3**
The actual proportion of vessels subject to draught constraint in 2005-06 was 14.1 percent according to the Essential Services Commission.
5.2 **Costs of the Environmental Impact of the CDP**

66. The Committee heard criticism expressed at the way in which the SEES benefit-cost analysis dealt with the potential environmental costs of the CDP. As noted in paragraphs 47 – 49, eight potential environmental effects have been classified as ‘zero-valued’, meaning they have no measurable impact on the project cost, while a further seven environmental effects are assessed as unquantifiable.

67. The SEES benefit-cost analysis has relied upon a range of third party studies as well as the mitigation strategies in the Environmental Management Plan (EMP) for the CDP in forming the view that the ‘zero-valued’ environmental effects will have no measurable impact on the project cost.

68. In relation to the seven unquantified environmental effects, the SEES benefit-cost analysis notes that with mitigation measures in place, the economic impact of those effects will be ‘extremely small, though difficult to quantify with precision.’

69. The Australian Conservation Foundation (ACF) regarded this approach to potential environmental costs as unacceptable, and highlighted a technique of valuing environmental impacts known as the contingent valuation method (CVM) which was employed to assess the value of environmental damage arising from the *Exxon Valdez* oil spill in Alaska in 1989.

70. The CVM approach is used to value environmental effects where there is no market mechanism to establish a price. It is based on surveying a statistical population as to the value they ascribe to and would be willing to pay for environmental resources. The technique was refined by an expert panel established by the US National Oceanic and Atmospheric

---

18 Meyrick and Associates, above n 3, p 46.
Finding 5.4

The SEES benefit-cost analysis assessed eight environmental effects as ‘zero-valued’ and a further seven as unquantifiable.

Finding 5.5

The contingent valuation method is one accepted technique for valuing economic effects which cannot be costed via a market price mechanism; however it was not employed in the SEES benefit-cost analysis.

5.3 Discount Rate

71. In order to assess the value of future benefits and costs, it is necessary for future cash flows to be discounted back to present day terms using a discount rate to allow for the time value of money. The PV amounts calculated in the SEES benefit-cost analysis are based on a discount rate of 6 percent real per annum, with alternative sensitivity analysis prepared based on discount rates of 4 percent and 8 percent.

72. Evidence to the Inquiry indicated that the Department of Treasury and Finance (DTF) mandated the use of a 6 percent discount rate for cost benefit evaluations of all similar infrastructure projects in Victoria. Witnesses raised concern that Meyrick and Associates was not permitted to determine its own discount in preparing the benefit-cost analysis, and that as a consequence of using an artificially low discount rate, the PV benefits and thus NPV were overstated.

73. Economists@Large who undertook a benefit-cost analysis of the CDP at the request of the Blue Wedges Coalition, submitted to the Committee that a nominal discount rate of 12 percent based on weighted average cost of capital (WACC) should have been used.

74. Mr Steve Meyrick, CEO of Meyrick and Associates, responded to these concerns as follows:

Mr MEYRICK — The discount rate, we did not estimate. It was given to us, if you like, as the standard discount rate in Victoria, the real discount rate for this type of project. I am aware that that has been criticised in some quarters as too low. My personal view, for what it is worth — it was not my choice, but my personal view is it is pretty much on the money. It is a reasonable sort of discount rate.

... The Office of Best Practice Regulation, .... I think recommends 7 percent real and that is I think the New South Wales Treasury guidelines, if I am not incorrect. The European Community guidelines in the 2002 benefit cost manual were 5 percent real. The UK, in the early 2000s, brought down its discount rate for evaluations of projects to 3.5 percent. Germany uses, I think, 3 percent. The French revised theirs down also in the early 2000s from 8 to 4 percent. There is an immense literature on the appropriate discount rate to apply for economic evaluation of projects.

... We were given the discount rate as a mandated rate. It seems to me — and it is my personal view — it is quite a reasonable one given my understanding of the rates which are generally considered reasonable in other jurisdictions in developed countries.21

75. In further testimony, Mr Meyrick drew the distinction between a discount rate used to calculate benefits and costs related only to a discrete entity like a corporation, and a discount rate used (as in the SEES benefit-cost analysis), to calculate benefits and costs on a broader society/economy basis:

Mr MEYRICK — Well, we are, in fact and that is one of the reasons why I must admit I am really concerned about the proposition that we ought to use discount rates which are 12–15 percent because if you did that, you would count as nothing the benefits to your grandchildren, perhaps even more importantly to my grandchildren. So it is very important that we do not get stuck using excessively high discount rates. That means only what we get today matters, in the short term, and what flows down to our children and our children’s children would be valued at virtually nought.

21 Mr S Meyrick, Chief Executive Officer, Meyrick and Associates, Transcript of Evidence, 6 June 2008, pp 146-7.
Mr BARBER — So if you were doing a business case, you would have definitely gone with the weighted average cost of capital that a business or corporatised government entity does? They derive the equity returns from the market and they do the debt also from the debt market?

Mr MEYRICK — I certainly would have been focused on what is the cost of capital to the entity rather than to the society as a whole, yes.22

76. DTF has published only limited guidance on the use of discount rates in assessing government projects. The most contemporary DTF publication on the subject is *Partnerships Victoria: Use of Discount Rates in the Partnerships Victoria Process – Technical Note*. The Technical Note records that the accuracy of any discounted cash flow (DCF) analysis, such as that in the SEES benefit-cost analysis depends upon the accuracy of both the forecast cash flows and the discount rate.23

77. The Technical Note provides that discount rates for DCF analysis are to be determined based upon the Capital Asset Pricing Model (CAPM) calculation for cost of capital. The CAPM is expressed as:

\[ R_a = R_f + \beta_a (R_m - R_f) \]

where \( R_a \) is the cost of capital (or discount rate), \( R_f \) is the risk-free rate, taken as the 10 year Commonwealth Bond rate, \( \beta_a \) is the beta co-efficient (or systematic risk factor) for the asset, and \( (R_m - R_f) \) is the market risk premium that an investor would expect to receive if investing in an asset with average market risk.

78. The Technical Note provided three risk band categories for infrastructure projects, very low, low and medium, each with its own beta co-efficient. Water, transport and energy projects are classified low risk and assigned a \( \beta_a \) of 0.5. At the time of publication, the Technical Note provided that the risk-free rate \( R_f \) was 3.0 percent per annum real, while the market risk premium \( (R_m - R_f) \) was 6.0 percent. Using DTF’s preferred CAPM

---

approach, the published real discount rate was thus 6.0 percent per annum.

79. The most recent update on discount rates was published by DTF on the Partnerships Victoria website in January 2005. It provides an updated risk-free rate $R_f$ of 3.5 percent per annum real, with the market risk premium and beta co-efficient unchanged, and consequently produced a new published real discount rate of 6.5 percent per annum.\(^{24}\)

80. Since the last discount rate advice was published in January 2005, nominal yields on 10 year Commonwealth Bonds, DTF’s preferred measure for the risk-free rate $R_f$, have increased by more than 100 basis points to 6.3 per cent in July 2008.\(^{25}\) DTF has not published updated discount rate advice to reflect this rise in interest rates.

81. The Technical Note highlights the need to apply consistent methodology when working with DCF analysis, with both cash flows and discount rates needing to be applied in either nominal terms or real terms. DTF recommends that DCF analysis be performed using nominal (inclusive of inflation) terms.\(^{26}\)

82. As noted in paragraph 78, the DTF’s Technical Note required a 6 percent real discount rate to be applied to a DCF analysis for water, transport and energy projects. In his oral evidence, Mr Meyrick confirmed that a rate of 6 percent real was applied.\(^{27}\)

83. Table 37 of Meyrick and Associates’ Channel Deepening: Benefit-Cost Analysis outlines the CDP costs for each of the years 2007 to 2011 and converts them to PV terms using a 6 percent real discount rate.\(^{28}\) However, the Victorian Government submission to the inquiry states that these costs are expressed in nominal terms.\(^{29}\) As indicated in the Technical Note, the discounting of nominal cash flows using a real


\(^{27}\) Mr S Meyrick, above n 21, p 151.

\(^{28}\) Meyrick and Associates, above n 3, p 51.

\(^{29}\) Victorian Government, Submission, p.18
discount rate overstates the Net Present Value (NPV) and the Benefit-Cost Ratio (BCR) of the CDP.

84. Subsequent confirmation was obtained from Mr Meyrick indicating that all cash flows in the Channel Deepening: Benefit-Cost Analysis report are expressed in real dollars, and not nominal dollars as erroneously stated in the Victorian Government submission.

85. Given that project costs are expressed in real 2007 dollars and extend over the four year period 2007-2011, the total nominal project cost will exceed the published $968.9 million.

Finding 5.6
Different discount rates are appropriate depending upon whether they are used for an entity focused benefit-cost analysis or a broader social/economy focussed benefit-cost analysis.

Finding 5.7
Since January 2005, published DTF advice has specified the use of a 6.5 percent real discount rate for water, transport and energy projects.

Finding 5.8
DTF has not updated its published discount rate advice to reflect the rise in interest rates since January 2005.

Finding 5.9
The Channel Deepening: Benefit-Cost Analysis report has been prepared on the basis of all cash flows being expressed in real dollars, rather than nominal dollars as preferred by DTF.

Finding 5.10
The Victorian Government submission erroneously indicates that project cash flows are stated in nominal dollars.
Finding 5.11

Total project costs are $968.9 million in 2007 dollars, actual nominal costs will be higher after allowing for inflation.

5.4 Exchange Rate Forecast

86. Concerns were raised with the Committee in relation to the exchange rate forecasts underpinning the economic analysis in the SEES benefit-cost analysis, particularly in relation to the Au$/US$ exchange rate.

87. The base case in the SEES benefit-cost analysis assumes an exchange rate of Au$/US$0.70, with sensitivity analyses for each of Au$/US$0.60 and Au$/US$0.80. The low scenario increased the project NPV to $1,580 million and the BCR to 3.3, while the high scenario reduced the NPV to just $1,170 million and the BCR to 3.0. At the time of the Committee’s hearings, the exchange rate was approximately Au$/US$0.90.

88. The Committee notes that while some witnesses expressed concern in relation to the exchange rate assumptions used, they acknowledged the difficulty with making such assumptions given the project’s extended timeframe. Mr Barry Robinson of the Blue Wedges Coalition noted:

The CHAIRMAN — On the issue of exchange rates, given you are looking at a 30-year time frame, where would you say the estimate should be based, if you are saying that 70 cents is too low?

Mr ROBINSON — I am an ex-banker, and I would not like to make an assumption on that.

The CHAIRMAN — But an assumption has to be made.

Mr ROBINSON — But by the same token, 70 cents in my opinion in the current climate when the SEES was held was far too low.

The CHAIRMAN — But an assumption does have to be made for the purposes of the assessment.

Mr ROBINSON — Okay. I have got a figure here, an assumption of 80 cents, which he has used in his sensitivity basis, so we take
another $174 million off the benefits. So you can argue in terms of whether we use the 70, 80, 90 or parity, but it is certainly not 70.30

89. Mr Meyrick confirmed to the Committee that assumptions in relation to the exchange rate were some of the most difficult, given the Australian dollar has fluctuated between 54 cents and 95 cents.

Mr MEYRICK — The exchange rate assumptions are the most difficult ones to get any sense out of. I think we are all aware that during the time this project has been analysed the Australian dollar has fluctuated between 54 cents when we started, and it is 95 now. Really, the exchange rate level is very much judgemental. We just took it from our at-the-time review — and this was in late 2006 — of what appeared to be the market intelligence on what the long-run equilibrium rate for the exchange rate is, and that was around about 70 cents at the time.

I think people are still talking about the long-run rates, probably in the 70 to 80 cents band, but certainly recent movements in the exchange rate would give you some frights about that, but all I can say about that is it is a particularly volatile series. I do not think anybody really knows what the long-run exchange rates were. At the time about 70 cents seemed to be about central in market estimates. It is probably somewhat north of that now. They are probably not as high as the current level of the exchange rate.31

90. Other witnesses suggested that assumptions underlying the exchange rate were not a critical issue.

The CHAIRMAN — Do you have any comment to make on the exchange rate? We have heard this project was based on a 70 cents exchange rate as the base case, 80 cents on the sensitivity analysis and we are now 95 cents to the US dollar. Would you have your view on whether that 70 cents in the dollar is appropriate over that time frame?

Mr GREY — I would be inclined not to offer an observation. The reason being that on the benefits accruing to the ship owners, the argument is that those benefits are paid back to the people of Melbourne via cheaper shipping rates, both in and out, and the people of Melbourne are — as they should be — exporters and importers, so either direction is not going to matter overly much.

30 Blue Wedges Coalition, Transcript of Evidence, 5 June 2008, p 46.
31 Mr S Meyrick, above n 21, p 146.
The issue is back at the discount rate for exchange rates. I do not think exchange rates are significant in here for the moment.32

91. The Committee notes that since the floating of the Australian dollar in December 1983, it has traded between a low of Au$/US$0.48 in April 2001 to a high of Au$/US$0.98 in July 2008, and the average over that 25 year period has been Au$/US$0.72.33 As such the SEES benefit-cost analysis base-case of Au$/US$0.70 is consistent with the long term trend.

92. In the three months since the Committee’s hearings the Australian dollar has been particularly volatile, rising from Au$/US$0.95 to Au$/US$0.98 before rapidly declining to Au$/US$0.83.34

Finding 5.12
The SEES benefit-cost analysis is based upon an exchange rate of Au$/US$0.70, and is sensitive to exchange rate movements. Sensitivity analyses between Au$/US$0.80 and Au$/US$0.60, produce NPVs between $1,170 million and $1,580 million and BCRs between 3.0 and 3.7 respectively.

Finding 5.13
The SEES benefit-cost analysis base-case scenario of Au$/US$0.70 is consistent with the average exchange rate since the floating of the Australian dollar of Au$/US$0.72.

5.5 Exclusion of Maintenance Costs
93. The Committee notes that some costs, such as ongoing maintenance dredging and monitoring, are not included in the SEES benefit-cost analysis. A number of submissions have questioned this exclusion on the basis that it results in an overstatement of the project NPV and BCR.

---

32 Mr Francis Grey, principal, Economists@Large and Associates, Transcript of Evidence, 5 June 2008, p. 70.
34 Figure as at 8 September 2008.
94. The Committee received evidence from both the PoMC and Meyrick and Associates that maintenance dredging costs were excluded as some of these costs would have been incurred regardless of whether the project was undertaken. An estimate of the difference between the pre-CDP and post-CDP maintenance dredging cost could not be determined:

Mr MEYRICK — Maintenance dredging per se is not an attributable cost to the project. What is an attributable cost to the project is the difference in maintenance dredging that would occur with the project and the maintenance dredging that would occur without the project. My recollection of the advice at the time that we got from the engineers is that at that time there was no reliable estimate of any difference. The best guess was that it would have no material effect on the ongoing dredging program.

Yes, there are certainly maintenance dredging costs in order to maintain the deepening channel but there would be for the original channel anyway, and the best information at the time, as far as I recall it, was that there was no material difference between the two. I will check that for you and get back to you to make sure that my recollection is accurate.35

95. Mr Robinson from the Blue Wedges Coalition suggested to the Committee that maintenance dredging would involve the removal of an amount of material equal to that being removed for the CDP. Consequently he contended that maintenance costs will be significantly increased.

96. However, Mr Nick Easy, Executive General Manager – Channel Deepening Project, PoMC, suggested to the Committee that the maintenance costs will not increase significantly:

Mr EASY — In the assessment that was undertaken there was an examination of the volumes of material for maintenance dredging in the future, and there was an indication based on previous history of sedimentation rates that it would be generally consistent. What we do know, though, perhaps, is that the controls that might apply to those maintenance dredging programs will be similar to those imposed on this project, and that will only be determined once approvals have been issued for those programs in the future.36

97. Ms Warfe, President, Blue Wedges Coalition, advised the Committee that PoMC had not made any provision for the increased costs, (which she

35 Mr S Meyrick, above n 21, p 148.
36 POMC, above n 1, p 126.
believed to be significant), associated with ongoing monitoring of the mobile rock in the shipping channel or for the ongoing monitoring of the contaminated spoil ground.

98. Mr Bradford suggested to the Committee that maintenance costs were excluded on the basis that they were dependent upon the Environmental Management Plan (EMP) which would apply at the time, and that this would depend upon the outcomes under the existing EMP as it applied to the CDP:

Mr BRADFORD — The reason maintenance dredging was excluded — and we believe for the correct reason — it was considered by those who would give us approval and those who were doing the supplementary environment effects statement, would it not be best to determine the outcome of the capital projects, the major channel deepening project, before approval was given for maintenance dredging so that the conditions in the EMP, if required to be changed, could actually be reflected at the time? So that is why maintenance dredging was left out.37

99. The Committee notes that Meyrick and Associates and the PoMC offered different explanations as to why maintenance costs were excluded from the SEES benefit-cost analysis. The Committee further notes that although Meyrick and Associates excluded maintenance costs on the basis that there was no reliable estimate, it did not include them in the list of other unquantifiable costs.

Finding 5.14

Evidence from Meyrick and Associates and the PoMC differed as to why maintenance dredging and associated monitoring costs were excluded from the SEES benefit-cost analysis.

Finding 5.15

Although Meyrick and Associates regarded maintenance dredging and associated monitoring costs as unquantifiable, it did not include them among the other unquantifiable costs analysed in the SEES benefit-cost analysis.

37 Ibid, p 125.
5.6 Exclusion of Sunk Costs from Net Present Value and Benefit Cost Ratio Calculations

100. The headline NPV and BCR published in the SEES benefit-cost analysis are calculated using a project cost estimate which excludes ‘sunk costs’. These are defined as costs which have already been incurred or irrevocably committed.\(^{38}\)

101. NPVs and BCRs are often employed as tools for determining whether particular projects should proceed. NPV provides an estimate of the quantum of the benefits arising from a project while BCR provides an indication of the relative efficiency of an investment in the project when compared to the BCRs of alternative projects.

102. To the extent that NPVs and BCRs are used in deciding whether to commit to a particular investment, ‘sunk costs’ are generally irrelevant and thus appropriately excluded from the calculations. However, where the ‘sunk costs’ are associated with an asset that has an alternative use, the opportunity cost of foregoing that alternative use should be included in the cost estimate used in the calculations.\(^{39}\)

103. Evidence to the Committee suggested that the ‘sunk costs’ associated with the CDP were of the nature of studies such as the EES and SEES and various hearings and other proceedings.\(^{40}\) As such they are not likely to give rise to an opportunity cost meriting inclusion in the NPV or BCR calculations.

104. Of the $775.5 million in total direct and in-direct costs noted in the SEES benefit-cost analysis, $136.6 million were excluded from the NPV and BCR calculations on the basis of being ‘sunk costs’. Following the December 2007 cost update, total direct and in-direct costs were reassessed as $981.2 million of which $190.3 million were excluded as ‘sunk costs’.\(^{41}\)

\(^{38}\) Meyrick and Associates, above n 3, p 51.
\(^{40}\) VECCI, above n 11, p 13.
105. The Committee notes that while the exclusion of ‘sunk costs’ from NPV and BCR calculations is appropriate when they are to be used for decision making, this approach distorts any subsequent assessment of the overall soundness of the project.

106. As a project progresses to completion, the continual exclusion of ‘sunk costs’ from NPV and BCR calculations will result in notional project costs of zero, and consequential nonsense results from the calculations.

107. Accordingly, the Committee notes the relevance of also publishing NPV and BCR estimates inclusive of ‘sunk costs’. The SEES benefit-cost analysis provides NPV and BCR estimates inclusive of ‘sunk costs’, which reduces the NPV to $1,220 million and the BCR to 2.7. Following the December 2007 cost update the inclusion of ‘sunk costs’ further reduces the NPV to approximately $1,000 million and the BCR to approximately 2.0.

**Finding 5.16**

The exclusion of ‘sunk costs’ from NPV and BCR calculations is appropriate where the results are used for investment decision purposes, provided that any opportunity cost arising from the ‘sunk cost’ is taken into consideration.

**Finding 5.17**

If NPV and BCR calculations are not being used for decision making, the inclusion of ‘sunk costs’ provides a more meaningful overview of a project.

**Finding 5.18**

After allowing for the December 2007 cost update and the inclusion of ‘sunk costs’, the CDP Net Present Value is reduced to approximately $1,000 million and the Benefit-Cost ration to approximately 2.0.

---

42 Meyrick and Associates, above n 3, p 52.
5.7 Greenhouse Gas Emission Reduction

108. As outlined in paragraph 38, the SEES benefit-cost analysis forecasts savings in greenhouse gas emissions as a consequence of the CDP due to a reduction in fuel consumption for a given container volume. This is based upon:

- the use of larger vessels in place of a greater number of smaller vessels resulting in lower fuel consumption per unit of cargo carried; and,
- the larger vessels being newer and more modern and thus more fuel efficient.

109. The SEES benefit-cost analysis forecasts that annual fuel savings will range from 780 tonnes in 2010 to 51,200 tonnes by 2035, with consequential greenhouse gas emission savings of 2,500 to 163,700 tonnes of CO$_2$-equivalent respectively. Over the evaluation period aggregate savings are estimated at 1.5 megatonnes of CO$_2$-equivalent. However, these savings are offset by the generation of 227,000 tonnes of CO$_2$-equivalent during execution of the CDP. The value of the reduction in greenhouse gas emissions have been forecast as $3,370 in 2010, increasing to $242,000 in 2030, with an aggregate net value of $2.1 million over the assessment period.

110. The Committee notes that under the Kyoto protocol, shipping emissions are not allocated to individual countries, and as such savings achieved through the CDP project will not count towards Australia’s Kyoto targets.

Mr BARBER — Are greenhouse gas emissions from international shipping the responsibility of any particular country under the Kyoto protocol?

Mr O’CONNOR — They are exempt.

Mr BARBER — Completely exempt, which means it would make it very hard to put a value on them, given that nobody is going to end up paying for them?

---

43 Ibid, p 36.
44 Ibid., p.63
Mr O’CONNOR — That is correct. At this point in time there is no inclusion of shipping in any emissions trading scheme.\textsuperscript{45}

111. Notwithstanding the treatment of emissions under international protocols, or a domestic emissions trading scheme, the Committee acknowledges that the savings in the volume of CO\textsubscript{2}-equivalent emissions is a positive benefit of the CDP.

112. The Channel Deepening: Benefit-Cost Analysis report acknowledged that the source of emissions savings is both mobile and crosses international boundaries, and as such has not attempted to allocate the savings among different beneficiaries.

**Finding 5.19**

The SEES benefit-cost analysis forecasts net aggregate CO\textsubscript{2}-equivalent savings of 1.5 megatonnes valued on a European permit opportunity cost basis at $2.1 million.

**Finding 5.20**

The identified savings in CO\textsubscript{2}-equivalent emissions does not contribute towards Australia’s Kyoto protocol targets.

**Finding 5.21**

The Committee regards the savings in CO\textsubscript{2}-equivalent emissions as a positive benefit of the CDP.

### 5.8 Benefit-Cost Ratio Assessment

113. During the course of the inquiry the Committee received from the PoMC an updated base-case BCR estimate of 2.57 which took account of the December 2007 cost update; prior to that update the BCR was 2.7. The Committee heard mixed views as to whether a BCR at those levels was sufficient to justify the project proceeding.

114. The Department of Transport, and Meyrick and Associates both gave evidence suggesting that any social cost-benefit analysis with a BCR

\textsuperscript{45} ACF, above n 19, p 111.
above 2 would be considered positive with anything above 2.5 considered to be very positive.

115. Mr Jim Betts, Secretary, Department of Transport noted:

Mr BETTS — Clearly the BCRs for projects will vary very considerably depending on their purpose, scope and so on. We would generally regard a project with the BCR of greater than 1 as a project which should be given very serious consideration for implementation. In the scheme of things, a BCR of 2.5 to 2.57, for instance, would be regarded as a very healthy project in terms of its generation of benefits relative to cost.46

116. Mr Meyrick of Meyrick and Associates expressed a similar view:

Mr MEYRICK — I think 1.0 would be pretty tight, but I know that a number of road sector projects, for instance, have gone with BCRs of 1.2 to 1.6, that sort of thing. I would certainly regard 2 as a robust number, personally.47

117. An alternative view at the viability of the projects was put by the Australian Conservation Foundation which expressed the view that a BCR of 3.0 is required for a project to be commercially viable:

The CHAIRMAN — One of the points you make in your written submission on the second page is the reference to the benefit-cost ratio deteriorating from the original figure of 3.3:1 to 2:1. You then make the comment ‘in industry terms, an infrastructure project at less than 3:1 is deemed nonviable’. Can you explain on what basis anything less than 3:1 is not viable?

Mr O’CONNOR — Yes. This is an issue I guess in much the same way that there are many discussions around discount rates. These are the kind of back of the envelope figures that, if you are an infrastructure investor in an investment bank, you would have to achieve to proceed with a commercial investment. This kind of figure has been thrown around in the press and between discussions with investment banks — my own personal discussions with Macquarie Bank — that is what that is based on.48

118. Other witnesses questioned the accuracy of the SEES benefit-cost analysis which generated the published BCR. Mr Richard McEncroe, formerly of DTF expressed that view:

46  DOT, above n 17, p 86.
47  Mr S Meyrick, above n 21, p 148.
Mr McENCROE —My argument is not so much that 2.7 is right or wrong; it is that 2.7 is the figure that comes out of a cost-benefit analysis that is not thorough. My argument is if you actually calculate the real costs, that is probably getting down closer to 1, and maybe even under 1, and if it gets under 1 you have really got to ask the question whether it is worthwhile doing.  

119. The Committee notes that the assumptions underpinning the BCR calculations are considered elsewhere in this report.

Finding 5.22
The SEES benefit-cost analysis base-line BCR, updated for the December 2007 project cost increase, is now 2.57.

Finding 5.23
A range of views exist as to what BCR is required to deem a project viable. For the CDP these views range from 1.0 to more than 3.0. Higher BCRs are regarded as necessary for entity-based commercial assessments while lower BCRs are acceptable for broader social/economy based assessments.

5.9 Concluding Remarks
120. The SEES benefit-cost analysis is based upon a DCF model comprising large project costs over the initial four years of the assessment period, 2007 to 2011, and project benefits distributed over the twenty five year period 2010 to 2035, with the largest benefits weighted towards the end of the period.

121. As the benefits of the CDP are weighted toward the end of the assessment period their contribution to NPV and BCR calculations is heavily dependent upon the chosen discount rate.

122. In examining the SEES benefit-cost analysis, the Committee has formed the view that the assumptions it relies upon are reasonable. However, the Committee also notes that many of the alternative assumptions suggested by witnesses with respect to discount rates and exchange

---

49 Mr R McEncroe, Transcript of Evidendence, 5 June 2008, p 39.
rates could also have been used and their use would lower the NPV and BCR results compared to the published estimates. The Committee also acknowledges that the discount rate used was consistent with those used in the whole-of-Government analysis in similar projects.

123. Given the erosion of the SEES benefit-cost analysis NPV and BCR as cost estimates have increased, the Committee notes that the discount rate and the exchange rate assumptions are a significant component for the calculations on NPV and BCR. The Committee acknowledges that this is a risk that has to be taken in assuming a value for any project and there are various economic theories that can be applied.

124. Additionally, any further increase in project costs beyond the December 2007 update has a potential to reduce the NPV and BCR.
CHAPTER 6: ASSESSMENT OF THE ALLIANCE AGREEMENT

125. The second element of the Committee’s terms of reference required it to examine the legal and financial arrangements between the PoMC and Boskalis Australia Pty Ltd and/or its parent company, Royal Boskalis Westminster NV.

126. As discussed in paragraph 6, the Committee sought to obtain copies of all relevant contracts and agreements between the Port of Melbourne Corporation (PoMC) and Boskalis Australia Pty Ltd.

127. The Committee received redacted copies of the agreements between the two parties including:

- The Channel Deepening Project Alliance Agreement dated 5 July 2004;
- The Deed of Guarantee and Indemnity dated 5 July 2004; and,
- The Deed of Variation and Amendment dated 22 March 2005.

128. In 2000 the Victorian Government established a policy that required all Government contracts valued at over $10 million be published in full on the www.tenders.vic.gov.au website. The Committee notes that despite that policy no information has been published in relation to contracts between PoMC and Boskalis Australia Pty Ltd.

6.1 Background to the Alliance Agreement

129. Project alliances have not been widely used by the Victorian Government; however they have previously been used in a number of projects across Australia. These include major oil and gas projects in Western Australia.
during the 1990s as well as the North-side Storage Tunnel Project in New South Wales.\(^53\)

130. Project alliancing is an alternative to traditional procurement methods for infrastructure projects, with both benefits and risks.

131. Benefits arising from project alliancing include greater certainty over project costs, access to innovation, and improved performance in the delivery of the project. In addition, alliancing shares the risks and responsibilities of a project collectively between the alliance partners, and leads to greater disclosure and exchange of intellectual property among the alliance partners.

132. Risks and other issues associated with project alliancing include absence of legal recourse among alliance partners in the event of project failure, and the potential for significant and on-going costs as specialist expertise and input from senior managers is required to establish and maintain the alliance.

133. The Victorian Channels Authority (VCA), as predecessor to the PoMC, had experience of small scale dredging from regularly dredging in and around the Port of Melbourne shipping berths. However, the last major dredging project with which it was involved occurred in 1986 when the Port Phillip Heads were blasted. This approach was no longer considered appropriate, and therefore new technical expertise was deemed necessary to undertake the Channel Deepening Project (CDP).

134. In 2003, the VCA determined that a project alliance was the preferred procurement method for the CDP due to the scope and unique nature of the project. It was anticipated that an alliance would provide better value for money and improved project outcomes through an integrated approach between the VCA and the dredging company.\(^54\)


\(^{54}\) POMC, above n 1, p 83.
135. The formal tender process commenced in August 2003 and lasted for 15 months, with six international dredging companies being invited to participate. (It was determined that no local company had the capacity to undertake both the relevant research and development or carry out the actual works for a project of the size of the CDP.)

136. In December 2003 the list was shortened to two companies based on the completeness and robustness of the proposals submitted. These companies then made final submissions in January 2004 covering the following areas:

- Competency and capacity to undertake the work;
- A feasible proposal to carry out the work;
- An ability to manage the environmental requirements;
- An indicative program and estimate of costs; and,
- Commitment and culture to work within Australia.

137. From this process Boskalis Australia Pty Ltd was selected on the basis that its proposal presented the lowest risk to the PoMC, with the Alliance Agreement being executed in July 2004.55 As stated by Mr Stephen Bradford, Chief Executive Officer of PoMC:

Mr BRADFORD — Part of the due diligence we did on the Boskalis alliance was to examine its performance in other ports. I particularly looked at the port of Gothenburg. Whilst it was not directly related in that there is a lot more rock there than there is in Melbourne, it had certain very much key marine issues, such as the lobster industry and how that would be protected. The feedback from the port corporation of Gothenburg was very positive for Boskalis. That was done as part of our thinking and consideration of whom best to award this to.56

56 POMC, above n 1, p 139.
6.2 Alliance Agreement Overview

138. The PoMC, and Boskalis Australia Pty Ltd, a fully owner subsidiary of Royal Boskalis Westminster NV, are each parties to the Alliance Agreement entered into on 5 July 2004 to undertake key aspects of the CDP.

139. The purpose of the Alliance Agreement is to share the risks and responsibilities to delivery a successful outcome, provide better value for money and improve project outcomes through a more integrated approach between the public and private sectors working together towards project delivery to successfully complete the CDP.\textsuperscript{57}

140. Under the terms of the Alliance Agreement, PoMC is the Owner-Participant while Boskalis Australia Pty Ltd is the Non-Owner Participant.

141. The Alliance Agreement is structured in 21 Clauses, and a further ten Annexures. Key provisions of the Alliance Agreement include:

- principles, undertakings and organisational attitudes;
- alliance management and structure;
- project development and dredging stage outlines;
- payments, insurances and indemnities;
- dispute resolution and termination provisions;
- force majeure and security provisions; and,
- intellectual property rights.

142. On the same day as the Alliance Agreement was signed, PoMC, Boskalis Australia Pty Ltd and Boskalis Westminster Dredging BV, entered into a Deed of Guarantee and Indemnity. Under the deed, Boskalis Westminster Dredging BV irrevocably guarantees the performance of Boskalis Australia Pty Ltd with respect to its obligations under the Alliance Agreement. In the event that Boskalis Australia Pty Ltd defaults on its obligations, Boskalis Westminster Dredging BV agrees to indemnify PoMC against and

\textsuperscript{57} Boskalis Australia Pty Ltd, \textit{letter to Legislative Council Standing Committee on Finance and Public Administration, Parliamentary Inquiry into the Port Phillip Bay Channel Deepening Project}, May 2008, pp 2-3
from any damages, losses and expenses arising from Boskalis Australia Pty Ltd’s default.

143. In March 2005, PoMC, Boskalis Australia Pty Ltd and Boskalis Westminster Dredging BV agreed to a Deed of Variation and Amendment, amending the Alliance Agreement to reduce certain insurance obligations imposed upon Boskalis Australia Pty Ltd and PoMC.

6.2.1 Principles, Undertakings, and Organisational Attitudes

144. The Alliance Agreement commits the participants to work together to deliver the CDP through a ‘Best for Project’ philosophy, with the alliance to always be interpreted in those terms. The notion of ‘Best for Project” requires the participants to each deliver excellence in all aspects of the CDP work.

145. Safety is to be the first priority. Responsibility for risks is to be assigned to the area of the alliance best able to manage it. Rewards are to be commensurate with performance, and win-lose is not an acceptable business outcome, with participants agreeing to share the ‘pain’ of poor performance.

146. Both participants have agreed to an open book philosophy whereby all records and documents relevant to the CDP created by either party during or before the commencement of the work must be available on request to the other party, with the exception of documents subject to legal professional privilege.

147. The participants agree to be bound by the terms of the Alliance Agreement and agree to avoid any litigation or arbitration, except in the event of wilful default by a party, or where a statutory requirement prevents the right to litigate being excluded by the Agreement.

148. In relation to organisational attitude, the participants commit to open and honest communications, and to creating an ethical, positive and results-oriented culture.
6.2.2 Alliance Management and Structure

149. The Alliance Agreement is overseen by the Alliance Executive Team (AET) which has responsibility for ensuring that the Agreement runs as smoothly and efficiently as possible for the benefit of the participants. The AET is the final point of authority under the Agreement.

150. The AET comprises two representatives appointed by PoMC and two appointed by Boskalis Australia Pty Ltd, with one of the PoMC representatives appointed as chairperson. Decisions of the AET are required to be unanimous. If unanimity cannot be reached within 20 days, the Dispute Resolution mechanism described below is applied.

151. The AET is responsible for appointing the Alliance Manager, Alliance Deputy Manager and the Alliance Team drawn from employees of the two participants. The AET is to determine the functions of the Alliance Team. By agreement, members of the Alliance Team responsible for governmental liaison, communications and community and stakeholder relations are to be employees of PoMC. Additionally, the PoMC desires to use the Alliance Team for its employees to gain experience of alliancing and commercial channel dredging.

6.2.3 Project Development and Dredging Stage Outlines

152. The Project Development Clause of the Alliance Agreement requires the Alliance Team to prepare a Project Development Report which includes the following key parameters for the CDP:

- Direct Cost Estimate;
- Total Alliance Budget;
- Final Work Scope;
- Details of the Gain-share regime; and,
- Delivery program and completion schedule.

153. The PoMC is responsible for obtaining environmental approval for the project and any resulting conditions must feed into the Project Development Report. An independent estimator must verify all
assumptions, quantities, amounts, rates and estimations contained in the Project Development Report.

154. Following the environmental approval and the verification by an independent estimator, the Project Development Report is submitted for approval by the AET.

155. With the exception of the environmental approval, the Alliance Team is responsible for obtaining all necessary approvals prior to commencing the dredging. Following the receipt of all necessary approvals, the participants can carry out the dredging in accordance with the work scope agreed by the AET in the Project Development Plan.

156. The PoMC may direct the participants to amend the work scope. If the amendment to the work scope is major, the AET will determine whether the Direct Cost Estimate should be amended. The AET may also recommend that PoMC amend the work scope.

157. The Dredging Stage Clause also specifies terms for access and clean-up of the site, use of subcontracts, compliance with statutory requirements, project approvals and the EMP, health and safety, protection of Aboriginal heritage, industrial relations and community and stakeholder relations.

6.2.4 Payments, Insurances and Indemnities

158. The Alliance Agreement provides for the payment to Boskalis Australia Pty Ltd of:

- actual and reasonable Direct Costs incurred in carrying out the CDP;
- Corporate Overhead and Profit;
- a Gain-share Amount if applicable.

159. Direct Costs cover the following items: labour, staff and supervision; taxes fees and charges; legal expenses; subcontractors and consultancies; materials; participant facilities; site establishment and running costs; participants’ equipment; photocopying and printing; insurance; project office; rectification costs and IT costs. Direct Costs
exclude any mark up, overhead or profit. The sum of the verified Direct Costs is referred to as the Actual Cost.

160. The Corporate Overhead and Profit is determined as a proportion of either the Actual Cost or the Direct Cost Estimate, whichever is the lesser. This is taken to be inclusive of all overhead costs.

161. The Gain-Share regime incorporated in the Alliance Agreement requires a payment to Boskalis Australia Pty Ltd by PoMC and/or a payment to PoMC by Boskalis Australia Pty Ltd (as the case may be) depending upon the performance of the Alliance against pre-agreed targets. This serves as a motivating factor for the Alliance to perform at its best due to potential rewards. There are two elements to the Gain-share amount:

- The Actual Cost performance in comparison to the Direct Cost Estimate; and,
- The performance of the participants in the Pool Key Result Areas assessed using a balanced scorecard approach.

162. Where the Actual Cost is less than the Direct Cost Estimate a Cost Saving results. In this situation Boskalis Australia Pty Ltd is entitled to be paid a proportion of the Cost Saving. The proportion payable depends upon the size of the Cost Saving. Where the Actual Cost is greater than the Direct Cost Estimate a Cost Overrun results. In this situation Boskalis Australia Pty Ltd is required to pay PoMC a proportion of the Cost Overrun, up to a cap set as a proportion of the Direct Cost Estimate.

163. The Pool Key Results mechanism awards performance in each of three Pool Key Result Areas: environment; stakeholders and community; and, achievement of key milestone delivery dates. The PoMC established a Pool of funds, specified in the Project Development Report and capped as a proportion of the Direct Cost Estimate to be available to award performance against the Pool Key Results Areas.

164. Each quarter the AET assesses the project performance against weighted Key Performance Indicators in each of the Pool Key Result Areas. At the conclusion of the project the quarterly scores are aggregated to produce a final Performance Score.
165. Boskalis Australia Pty Ltd will be entitled to access the Pool provided the Performance Score reaches a predetermined target, and targets are also achieved in respect of each Pool Key Result Area. The size of Boskalis Australia Pty Ltd’ entitlement under this mechanism is dependent upon the size of the Pool relative to the Direct Cost Estimate and also whether a Cost Saving or Cost Overrun was achieved.

166. The Alliance Agreement as amended requires Boskalis Australia Pty Ltd to maintain insurance relating to dry risks (risks associated with land based activities), wet risks (risks connected with the operation of dredging vessels and associated marine activities), and crew liability insurance each of which indemnifies both PoMC and Boskalis Australia Pty Ltd.

167. Each participant must hold workers’ compensation insurance, motor vehicle insurance, insurance for loss or damage to unregistered plant and equipment, and professional indemnity insurance.

6.2.5 Dispute Resolution and Termination Provisions

168. One of the key principles of the AET is that its decisions must be unanimous. Where unanimity cannot be achieved on a decision within 20 business days, the Alliance Agreement allows for the appointment of an independent Expert, chosen either by agreement of the AET or by the President of the Law Institute of Victoria. The Expert does not act as an arbitrator, instead providing a determination of the issue for the consideration of the AET.

169. The Alliance Agreement empowers the PoMC to terminate the agreement at any time, subject to the payment of certain termination payments. In the event of either participant defaulting on its obligations, the Agreement provides certain remedies to the other participant including the suspension of payments or the termination of the Agreement.

6.2.6 Intellectual Property Rights

170. The two participants retain all rights to their respective intellectual property created before April 2004. PoMC gains the right to use Boskalis’ intellectual property for the purpose of completing the CDP. The rights to any intellectual property created by either participant in relation to the
CDP after April 2004 vests in Boskalis Australia Pty Ltd and PoMC is granted an irrevocable, royalty free licence to use that intellectual property.

6.3 Government Project Alliancing Requirements

171. In 2006 the Department of Treasury and Finance (DTF) published the *Project Alliancing Practitioners Guide* (April 2006) which defines a project alliance as:

> A commercial/legal framework between a department, agency or government-backed enterprise (GBE) as ‘owner’-participant and one or more private sector parties as ‘service provider’ or ‘non-owner participant (NOPs) for delivering one or more capital works projects.*

172. The purpose of releasing the *Project Alliancing Practitioners Guide* is to help ensure that project alliancing is used appropriately and successfully in Victoria. The guide sets out the Government’s preferred framework for selecting and establishing a project alliance. The guide does not intend to replace the need for specialist input and advice once establishing a project alliance.*

173. The *Project Alliancing Practitioners Guide* recommends that project alliancing should be considered for complex and high-risk infrastructure projects where risks are unpredictable. The CDP has been characterised as complex rather than high-risk given the different geological areas and unpredictable environmental factors where the works are to be undertaken.*

174. Although pre-dating the *Project Alliancing Practitioners Guide*, the CDP Alliance Agreement between PoMC and Boskalis Australia Pty Ltd closely mirrors the structure now recommended by DTF regarding the notion of ‘shared responsibility’ and ‘no blame’ culture (except when wilful default

---

58  DTF, above n 53, p 2.
59  ibid.
60  Ibid, p 3
61  DOT, above n 17, p 85.
occurs), and terms regarding termination of the alliance, gain/share payments, liability, and intellectual property rights.

175. The *Project Alliancing Practitioners Guide* sets out two possible approaches to the development of an Alliance Agreement:

- a two stage process involving an interim project alliance agreement (IPAA) and a final project alliance agreement framework (PAA); or,
- a single project alliance agreement.

176. The two stage IPAA and PAA process involves entering into an IPAA with two short listed bidders in order to bring competitive pressure to the task of developing performance targets and the pain/gain model of an alliance agreement, prior to selecting a final participant partner and executing a PAA.

177. In a single stage process, the participant partner is selected prior to undertaking the detailed performance target and pain/gain model development and is thus determined purely by negotiation between the Owner-Participant and the Non-Owner Participant.

178. The two stage approach can involve greater legal costs and longer preparation/negotiation time compared to implementing a single agreement. In addition, a single agreement can produce greater resolve as the two stage approach may be viewed as a trial. Accordingly, the *Project Alliancing Practitioners Guide* suggested that the single consolidated approach is recommended for most situations.62

179. Consistent with what is now the preferred approach, the alliance agreement for the CDP was developed as a single, consolidated agreement.

180. Integral to the *Project Alliancing Practitioners Guide* is the requirement that projects involving alliances be subjected to a review using the Gateway Review Process (GRP). The GRP is co-ordinated by the DTF on behalf of a project/program proponent. It is based on the Gateway

---

62 DTF, above n 53, p 105.
Program established by the United Kingdom’s Office of Government Commerce and now used by most Australian states.

181. The object of a Gateway Review is to provide the project/program proponent with independent and confidential recommendations at the key decision points. It is not a review process that seeks to inform DTF on a project.

182. Gateway Project Reviews are independent peer reviews, centred on six specific areas which relate to key decision points, and may be performed throughout a project’s lifecycle. The six review areas are:

- Gate 1 - Strategic Assessment;
- Gate 2 - Business Case;
- Gate 3 - Readiness for Market;
- Gate 4 - Tender Decision;
- Gate 5 - Readiness for Service; and
- Gate 6 - Benefits Evaluation.

183. The CDP was initiated prior to the establishment of the GRP, and GBEs such as the PoMC were not mandated to undergo Gateway Reviews for projects initiated pre 2004-5.

184. The CDP has undergone a voluntary review of the Business Case (Gate 2) from 26-30 April 2004 and the Tender Decision (Gate 4) from 17-20 September 2007.

185. The PoMC has advised that the most recent review conferred an overall Green status for the project, indicating that it is on track for completion, and the Review Team’s recommendations were adopted and incorporated into the project.

**Finding 6.1**

The Alliance Agreement between the PoMC and Boskalis Australia Pty Ltd was entered into prior to DTF publishing guidelines for alliancing. Nonetheless the CDP Alliance Agreement is broadly consistent with the current guidelines.
Finding 6.2

The CDP business case was not subject to a full Gateway Review Process as is now required for alliacing projects. The CDP has been subjected to Gate 2 and Gate 4 which have indicated the project is on track.

The Committee Room
8 September 2008
APPENDIX I: LIST OF WRITTEN SUBMISSIONS RECEIVED

1. Dr Robert Gunter
2. Mr Bill Chalkley & Mr Bill Dowling
3. Mr Colin Smith
4. Australian Peak Shippers Association Inc
5. Mr Peter Goad
6. Ms Jenny Rankin
7. Dr Jennifer McCraken
8. Mr Gary J Howard
9. Captain Frank Hart
10. Ms Catherine George-Sheahan
11. Ms Lynette Keleher
12. Port Phillip Conservation Council
13. Mr Jim Walker
14. Shipping Australia Limited
15. Blue Wedges Coalition supporters
16. Ms Jennifer Streaton
17. Ms Rosemary Baille
18. Blue Wedges Coalition
19. Alliance of Councils for Rail Freight Development
20. Ms Susannah Bell
21. Mr Wal Grahame
22. Frankston Beach Association
23. Ms Patsy Crotty
24. Victorian Farmers Federation
25. Australian Horticultural Exporters Association
26. The Dive Victoria Group
27. Mr Barry Robinson
28. Mr Terry Croft
29. Mr Robert Parry
30. Captain Fredrich Niemann
31. Victorian Freight and Logistics Council
32. Property Council of Australia
33. Victorian Employers’ Chamber of Commerce and Industry
34. Economists@Large and Associates
35. Australian Conservation Foundation
36. Infrastructure Partnerships Australia
APPENDIX II: CORRESPONDENCE RECEIVED FROM BOSKALIS AUSTRALIA PTY LTD

Dear Mr Willis,

I refer to your letter of 5 May 2008.

As I understand the Committee will be aware, Boskalis has been working cooperatively with the Port of Melbourne Corporation (PoMC) in all matters relating to our alliance agreement. We have reviewed the Channel Deepening Project Alliance Agreement, the Deed of Variation and Amendment, and the Deed of Guarantee and Indemnity in anticipation of the Committee’s request for the production of those documents.

That review has been carried out to identify the limited parts of those agreements which:

- reflect the outcome of commercial negotiation between PoMC and Boskalis as to the allocation of cost and risk;
- contain sensitive financial information as to revenue, costs and profit in relation to the Channel Deepening Project (Project); and
- contain details of proprietary information such as Boskalis’ intellectual property or trade secrets, for example information which discloses matters such as the production rates which Boskalis is able to achieve with its equipment.

That information, if put into the public domain has a real likelihood of causing substantial damage to Boskalis’ interests both in Australia and in the context of its worldwide operations. The information we have identified has significant value to Boskalis’ competitors and also to those with whom Boskalis may be invited to contract in future.
As the Committee is aware, the Project is being conducted as an alliance between the PoMC and Boskalis. Alliancing results in the sharing of risks and responsibilities for delivery of a successful outcome, and provides better value for money and improved project outcomes through a more integrated approach between the public and private sectors working together towards project delivery. The alliance model brings all of the stakeholders together with each having an incentive to complete the project as quickly, cheaply and successfully as possible.

As is clear from the Department of Treasury and Finance’s Guide to Alliancing, project alliances have the potential to produce many positive outcomes for the State including greater certainty over project costs, opportunities for innovation and improved performance in delivery of projects.

However, in order to achieve those beneficial outcomes for the State, companies such as Boskalis who contract in an alliance are required to disclose more commercially sensitive information relevant to the method by which the project is to be concluded than would be the case if a standard contracting approach were to be adopted.

The disclosure of that information would result in significant damage to Boskalis’ interests, and is likely to discourage the use of alliancing for future projects.

In those circumstances, I enclose copies of:

1. the Channel Deepening Project Alliance Agreement dated 5 July 2004;
2. the Deed of Guarantee and Indemnity dated 5 July 2004; and
3. the Deed of Variation and Amendment dated 22 March 2005,

with limited redactions so as not to expose Boskalis unreasonably to disadvantage.

Boskalis understands that:

• in general terms when having regard to the disclosure of commercial contracts, the State is guided by criteria established by Parliament and set out in the Victorian Freedom of Information Act 1982, and the matters set out in the policy statement issued by the then Premier entitled "Ensuring openness and probity in Victorian Government Contracts" dated 11 October 2000;

• the concepts expressed in the Freedom of Information Act and in that policy reflect the State’s understanding of the need to balance the interests of open government with the commercial interests of those with whom the State contracts, on the basis that if those real and significant interests are overlooked, the State may be prejudiced in future in its ability to contract with third parties on the best possible terms.

Consistently with those principles, we have not sought to exclude information which is already available to our competitors or information which could be disclosed without causing Boskalis’ competitive position substantial harm.
Boskalis Australia Pty Limited
Reference : 
Date : 13 May 2008

Our request to keep the redacted parts of those documents confidential is not made lightly and reflects the culmination of detailed analysis of the documents with a view to ensuring that disclosure is as broad as possible without being so broad as to damage Boskalis' commercial interests.

Please contact me if you require any additional information about the documents.

Yours sincerely,

Mattija Siebinga
Director
Boskalis Australia Pty Ltd
04 June 2006

Mr Nick Eady
Executive General Manager
Channel Deepening Project
Level 4, 530 Collins Street
Melbourne Victoria 3000

Dear Mr Eady,

Update of Benefit Cost Analysis

You have requested an update of the benefit cost analysis of the channel deepening project that we undertook for the SEES process, taking into account the most recent cost estimates. This letter is provided in response to that request.

My understanding is that you wished us to redo the analysis using, as far as possible, the same approach as we employed for the SEES. In undertaking the revised analysis, we have done this. But there is one issue that I would like to clarify. As we mentioned in our SEES report, benefit cost analysis is intended as a tool to inform a decision on whether to proceed with a particular course of action. Costs that have already been incurred or irrevocably committed are not relevant to that decision, and should therefore not be included in the analysis.

The results of a cost benefit analysis will therefore differ depending on the timing of the decision that it is intended to inform. In consultation with your staff, we formed the judgment that the most appropriate decision-point was the Treasurer’s evaluation of the business case in December 2007. The analysis reflects this judgement; all cost incurred prior to that date are regarded as sunk costs and excluded from the analysis.

The results of the analysis are recorded in the table below.

| PV Benefits | 1,936.0 |
| PV Costs    | 754.1  |
| NPV         | 1,181.9 |
| IRR         | 13.3%  |
| BCR         | 2.57   |

Please do not hesitate to call me if you need any clarification of these results.

Regards,

Steve Meyrick
Chief Executive Officer

Meyrick and Associates
Level 2, 83a Market St, Wollongong NSW 2500 Australia
TEL: +61 2 4227 1484 FAX: +61 2 4227 1516 EMAIL: inquiries@meyrick.com.au
NEW SOUTH WALES VICTORIA AUSTRALIAN CAPITAL TERRITORY
APPENDIX IV: MEYRICK AND ASSOCIATES
BENEFIT COST ANALYSIS OVERVIEW

Channel Deepening: Benefit-Cost Analysis

OVERVIEW OF EVALUATION PROCESS

Develop Trade Forecasts
(These forecasts are used in both base case and project case)

Estimate how the number and size of vessels for ships calling at Melbourne develops over time if the channel is not deepened.

Estimate ship operating costs and maritime services costs (e.g. pilotage, towage) with this vessel mix

Estimate change in number of voyages

Estimate ship operating costs and maritime services costs (e.g. pilotage, towage) with this vessel mix

Estimate the costs of delays waiting for tidal assistance on entry and departure

Estimate costs of adapting to limited depth by landbridging top-up cargo or adding second calls at other ports

Calculate the economic benefits of avoiding costs of adapting vessel operations to meet channel constraints

Estimate external benefits of reduced number of voyages (lower greenhouse gas emissions)

Estimate the benefits from lower operating costs resulting from economies of scale

Calculate the present value of the combined future benefits stream

Compare costs and benefits to obtain net present value and benefit cost ratio

Calculate the present value of the total direct and indirect costs of the project

Estimate the total direct costs of project implementation

Estimate where feasible the economic costs of any indirect impacts of the project
EXTRACTS OF THE PROCEEDINGS

Legislative Council Standing Order 24.08 requires the Committee to include in its report all the divisions which occurred during meetings and the names of Members voting for each side on a question. The Chairman of the Standing Committee can only vote when there is an equality of votes.

During its consideration of the Draft Report on 8 September 2008, the Committee divided on the following questions:

1. That paragraphs 122, 123 and 124 be amended.

2. That the Draft Final Report, together with Appendices and List of Acronyms, be adopted as the Final Report of the Committee.

The result of the divisions are detailed below.

Note: Ms C C Broad and Mr P D Kavanagh were absent during the adoption of the Committee’s report.

Paragraph 122

In examining the SEES benefit-cost analysis, the Committee has formed the view that the assumptions it relies upon are reasonable. However, the Committee also notes that many of the alternative assumptions suggested by witnesses with respect to discount rates and exchange rates are equally reasonable and their use would dramatically lower the NPV and BCR results compared to the published estimates.

Amendment moved by Mr M S Viney – That paragraph 122 be omitted with the view of inserting in its place the following ‘In examining the SEES benefit-cost analysis, the Committee has formed the view that the assumptions it relies upon are reasonable. However, the Committee also notes that many of the alternative assumptions suggested by witnesses with respect to discount rates and exchange rates could also have been used and their use would lower the NPV and BCR results compared to the published estimates. The Committee also acknowledges that the discount rate used was consistent with those used in the whole-of-Government analysis in similar projects.’

Question – That the amendment be agreed to – put.

The Committee divided.

**Ayes 3**
Mr M J Guy
Mr P R Hall
Mr M S Viney

**Noes 1**
Mr G J Barber

Amendment agreed to.
Paragraph 123

Given the erosion of the SEES benefit-cost analysis NPV and BCR as cost estimates have dramatically increased, the Committee notes that the viability of the CDP as measured by the NPV and BCR is now heavily reliant on the discount rate and exchange rate assumptions being accurate.

Amendment moved by Mr M S Viney – That paragraph 123 be omitted with the view of inserting in its place the following ‘Given the erosion of the SEES benefit-cost analysis NPV and BCR as cost estimates have increased, the Committee notes that the discount rate and the exchange rate assumptions are a significant component for the calculations on NPV and BCR. The Committee acknowledges that this is a risk that has to be taken in assuming a value for any project and there are various economic theories that can be applied.’

Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 3
Mr M J Guy
Mr P R Hall
Mr M S Viney

Noes 1
Mr G J Barber

Amendment agreed to.

Paragraph 124

Additionally, any further increase in project costs beyond the December 2007 update has the potential to critically undermine the viability of the CDP as measured by the NPV and BCR.

Amendment moved by Mr M S Viney – That paragraph 123 be omitted with the view of inserting in its place the following ‘Additionally, any further increase in project costs beyond the December 2007 update has a potential to reduce the NPV and BCR.’

Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 3
Mr M J Guy
Mr P R Hall
Mr M S Viney

Noes 1
Mr G J Barber

Amendment agreed to.
Adoption of Report

The Chairman put the question, That the Draft Final Report, together with Appendices and List of Acronyms, be adopted as the Final Report of the Committee.

The Committee divided.

**Ayes 3**  
Mr M J Guy  
Mr P R Hall  
Mr M S Viney

**Noes 1**  
Mr G J Barber

Question agreed to.
MINORITY REPORT
By Mr Mr G J Barber, MLC

The Committee has failed to fulfil the reference given to it by the Legislative Council.

The reference required the Committee to examine the business case for the Channel Deepening Project currently being undertaken by the Port of Melbourne Corporation (PoMC).

Instead the Committee has re-examined evidence in relation to the economic case that has for the most part been presented previously in the Environment Effects Statements for the project and in other fora. The Committee’s report provides a useful summary of that information, but it is not to the point.

While the economic case may look at the possible costs and benefits of the project to Victoria as a whole, the business case must look at the costs, revenues and rate of return internal to the commercial entity of the PoMC.

Mr BARBER — I guess you were not really asked to do a business case in some ways, were you?

Mr MEYRICK — Regrettably, no.

Mr BARBER — Why ‘regrettably’?

Mr MEYRICK — Because we do that line of work, and we have done it for other clients, and it would have been an interesting exercise to be involved in.¹

This is not a matter of mere semantics. Fundamental to the philosophy behind National Competition Policy is that the best way to maximise economic welfare is to ensure that investments in most sectors of the economy are made on a commercial basis. Exposing state owned enterprises in key economic sectors to commercial discipline is considered to be the best way to prevent over- or under- investment in key sectors of the economy, which could perhaps occur because of ‘political’ considerations. The PoMC itself states this;

Allocative efficiency and the interests of Victorians will be served best by PoMC funding most of this program on its balance sheet and recovering its costs, including a commercial return, over the long term through its prices. Competitive forces invariably lead to the efficiency benefits associated with improved port facilities being passed on to ultimate users.²

It was the responsibility of the Committee to examine whether the decision by the State Government and the PoMC to commence the Channel Deepening

¹ Mr S Meyrick, Chief Executive Officer, Meyrick and Associates, Transcript of Evidence, 6 June 2008, p 150.
Project was made according to established laws and policies and after commercial analysis with appropriate rigour.

The Committee did not follow through to require the relevant documents or call the necessary witnesses that would have allowed it to adequately complete the reference.

Documents held by Treasury on the business case, the existence of which are now disclosed as a result of a Freedom of Information request by my colleague Ms Sue Pennicuik MLC, include (see Exhibit 1):

- PoMC Channel Deepening Project Business Case Draft 21 August 2007,
- PoMC presentation to Project Review Committee 30 August 2007,

There are doubts about the commercial viability of the Channel Deepening Project business case

The PoMC is established under the Port Services Act 1995. Section 13 of that Act requires it to carry out its functions in a manner that:

(a) is safe and secure; and
(b) is environmentally sustainable; and
(c) is effective and efficient; and
(d) is commercially sound; and
(e) has regard for the persons living or working in the immediate neighbourhood of the port of Melbourne.

What does operating in a commercially sound manner mean?

The PoMC Pricing Policy Statement 31 May 2005 states that:

The Government, through the Department of Treasury and finance and the Department of Infrastructure, expects that PoMC will earn a return on capital that is at a minimum equal to its weighted average cost of capital. In doing so, PoMC will provide a return on capital that is appropriate for the risk profile of the Government’s investment.3

The PoMC’s fees and charges are regulated by the Essential Services Commission (ESC). As noted by the ESC in their Regulation of the Victorian Ports Final Report June 2004:

... the Port of Melbourne retains substantial market power in its core container and motor vehicle trades. These trades represent over 80% of the port’s wharfage revenue. The regional ports do not handle these cargoes, and there are high barriers to the entry of new container terminals.⁴

The ESC recommends that in setting prices, the PoMC should:

... generate expected revenue that is sufficient to meet the expected efficient longrun costs of providing the prescribed services, including a return on assets (appropriately defined and valued) commensurate with the risks involved;⁵

In short, the Treasurer as the sole shareholder in the company on behalf of the Victorian public, permits the PoMC to borrow funds or retain profits to undertake the Channel Deepening Project, expecting not only that the project will pay for itself from additional charges on port users, but will also generate a rate of return to compensate the public for the risks associated with the project.

What is the appropriate rate of return?

Again this is defined by the PoMC in its Pricing Statement. In May 2005, the Weighted Average Cost of Capital was determined to be 8.70% based on considerations such as the return required by the government on its equity invested in the port and the cost of debt if obtained on the open market (in reality, Treasury provides the borrowings, but at the prevailing commercial rate).

The PoMC confirms that the more uncertain financial conditions now being experienced require a higher rate of return than previously, although they were initially coy with the Committee on this issue.

Mr BARBER — Mr Bradford, can you tell me what the current weighted average cost of capital you use in your business planning is?

Mr BRADFORD — I think I will have to take that on notice, Mr Barber, because I am not sure that is a figure that is in the public domain.

Mr BARBER — Well, a figure that is in the public domain is from the information that you disclosed for the benefit of the Essential Services Commission in 2005 and as you noted, that is a five-year period — and you are coming to the end of that five-year period — and the figure then was 8.7.

Mr BRADFORD — Yes. I do not recall every document. As I said, I am not sure if it is in the public domain. If that is the figure in that report, that would be correct.

Mr BARBER — Okay, but at that time you also told us that the way you work that out is you take the commonwealth government 10-year bond

---


rate which was then 5.5, and is now about 6.5, and you then add to that the debt risk premium, which I gather is the investment rate bond premium, which was then 1 per cent and is now a 2 per cent premium. If all these other things have stayed the same, is it a fair bet that your weighted average cost of capital now is 10.7 or nearly 11 per cent?

Mr BRADFORD — Mr Easy?

Mr EASY — It is in that order of magnitude. That is correct.6

Later correspondence from the PoMC confirmed this figure.

The PoMC admits that the required rate of return it must achieve is now more than 2% higher than when the Channel Deepening Project was committed to. For a project with major expenditure up front and returns expected over the long term, this could have a significant impact on the viability of the project.

Who pays for the project?

The additional fees and revenues that the PoMC must collect to pay for the project will come from all ships using the Port, not just from those large ships that may benefit from the deeper channels. As noted in the Committee's report, the PoMC now acknowledges that while 40% of ships may be potentially draft constrained, only 11% currently are. Benefits from the project only arrive if there is a significant increase in the number of large ships and these operate in such a way that they are fully laden.

However the PoMC in 2005 stated:

... for major capital projects, such as the Channel Deepening Project, recovery may be achieved through specific charges ... based on the capability of the Port to define a distinct basis for applying such charges and the benefits to classes of Port uses.7

Nor surprisingly, those who do not benefit are unhappy about having to pay.

Mr SUMMERS — .... the decision to charge a channel deepening fee from 1 April is seen as charging a toll before the freeway is built and is very unpopular with port users at this point in time. The other part to that is that we have attached a copy of a bill of lading, and it is quite apparent that these fees are not transparent — the ones that are passed on by shipping lines. Often exporters are just not aware of what they are paying for. Fourthly, Australian exporters of fresh fruit and vegetables do not generate sufficient volumes of trade to justify larger ships servicing the port of Melbourne, in our opinion.8

---

6 Port of Melbourne Corporation, Transcript of Evidence, 6 June 2008, p 130-1.
A further concern is the lack of consultation over the charges:

Mr SUMMERS — First of all, the exporters of fresh fruit and vegetables have not been consulted by the Port of Melbourne about its plans to dredge the channels in Port Phillip Bay. In fact we had our first meeting with the CEO of the Port of Melbourne on 18 March of this year. I wanted to make that point. Secondly, it should be noted that the Victorian Farmers Federation does not represent the views of the horticultural exporters.\(^9\)

This contradicts the PoMC’s stated policy:

The cost recovery basis for major projects will be decided after consultation on pricing proposals with port users and other stakeholders.\(^10\)

Who might benefit?

The PoMC’s studies make estimates about the number of larger ships that will be in operation and wishing to call at Melbourne in the future. This is the entire basis of the benefits for the project and it cannot be know with any certainty.

Mr BARBER — Do you have an analysis or do you monitor which lines are currently building and commissioning ships that would benefit from this project?

Mr BRADFORD — Who would potentially put vessels on the trade routes?

Mr BARBER — Yes.

Mr BRADFORD — No, we do not. The reason is that most of the shipping lines treat that as commercial-in-confidence because if they predicted ahead — on the Australian trades we are talking about; this is not worldwide ship building?

Mr BARBER — Sure.

Mr BRADFORD — If they predicted ahead and telegraphed what they were doing, it actually would send a clear signal to their competitors that it is highly competitive.\(^11\)

However the consultants to the PoMC made their methodology clearer.

Mr MEYRICK — There are a number of sources we can rely on. Basically I would point you to three. There is no precise way of doing that; I am perfectly happy to admit that.\(^12\)

---

\(^9\) Ibid, p 105.


\(^11\) POMC, above n 6, p 135.

\(^12\) Mr S Meyrick, above n 1, p 155.
Mr Meyrick went on to describe his methodology as:

1. Projection of historical trends
2. Analysis of ship sizes on other trade routes
3. Looking at the order book for new ships by the major shipping lines and finally:

   ...you go out and have a yak to people in the industry. I do that with some caution because you have to be a little bit sceptical about what shipowners tell you about what is going on, because sometimes they have a vested interest in pushing a particular value.13

The number of large ships likely to be using the Port of Melbourne in the future, or the number of ships that would be excluded from the port without the Channel Deepening Project and the costs associated with this, is to this day one of the major uncertainties associated with this project.

**Exporting air!**

The reason that many ships which are potentially draught constrained do not in fact find current channel depths limiting, was made clear in testimony.

   Mr BARBER — Is it true that 20 per cent of all containers going through the port are empty, import-export?
   Ms ELPHICK — That is correct, yes.
   Mr BARBER — Forty per cent of those on the export side are actually empty containers?
   Ms ELPHICK — Yes, under current conditions where there is strong demand out of China, particularly for 40-foot containers. You think of it this way: for around $200 you can reposition an empty container; if you are a shipping line, it is your equipment. You can take that up into Asia, load it up and achieve maybe $1800 for shipping across to the US or to Europe, or you can take an export out of Victoria and perhaps receive less than that waiting for a heavy 20-foot box coming down from the country. That is the reason China needs those containers — to fill them and get them out. So it is a matter of profit.14

And further:

   Mr BEGLEY — I think there is something that we should qualify here too. The average person in the street sees a 20 and a 40-foot container and they simply see them as a 20-foot container and a 40-foot container. Within each of those sizes there is a variety of different types of boxes. Some are insulated, some are purely dry, some are food-grade containers, and there are restrictions as to what you can put in certain

---

13 POMC, above n 6, p 156.
containers. There are high-bulk containers. So you have got this complexity of containers — —

Mr BARBER — You have got to get them all in the right place at the right time.

Mr BEGLEY — That is exactly right. So that is why this movement of containers, of empty boxes, is there — simply because of the need to get the flat-rack or the open-top or whatever it might be to its destination, back to where it is going to be used effectively.

Mr BARBER — So Victoria’s single biggest export in containerised terms at the moment is air.

Ms ELPHICK — No.

Mr BEGLEY — No, it is not air; it is the shipping companies.

Mr BARBER — Not in dollar terms, but certainly in volume terms.15

The above illustrates one of a number of reasons why ships are leaving the port not fully laden, rather than because they are draft constrained.

The costs of the project continue to escalate

Since the project was first mooted, estimates of direct financial cost have risen significantly and the official statement of these continued to rise right up to commencement.

In 2001 the project was stated to cost between $200 million and $230 million; by 2004 that had risen to $337 million; by August 2004 it had risen to $498 million, and in another month it jumped to $545 million; after the 2007 SEES was released the project was estimated to cost $763 million; and it is now estimated at $969 million.

A range of costs have been excluded from the analysis

Of major concern to environmental groups and other bay users has been that environmental costs and risks have been excluded, or have been underestimated. The PoMC’s consultants admitted that some scenarios of environmental damage, assessed as having low probability but unknown impact if they occurred, are not included. They refer to such scenarios as ‘rubbery numbers’. Because they believe these cannot be estimated with sufficient precision, they are often valued at zero and thereby have low impact on the overall ‘cost-benefit’ of the project.

Mr MEYRICK — Let me start by saying it was our endeavour to include as many of the non-market effects of the project as we possibly could but not at the expense of undermining the estimates of those elements of the cost and benefits stream which can with some confidence be estimated.

15 Ibid.
...... [in some cases w]e cannot give you a reasonable estimate of probability nor can we specify with any clarity the magnitude of the effect. In those circumstances it is not possible for us to place a credible dollar value on the effect. The information is just not clear enough to do that. However, because we did not want to lose that material altogether, we actually put in those chapters in a cost-benefit analysis, although they did not impact on the numbers, just to alert people to the fact that these had been raised as issues, that the science has been done, and these were the comments we have gotten. That is basically how we distinguished it. Anything that passed the three gates, and there were not very many, as you can see, got included in the quantitative cost-benefit analysis.16

The Australian Conservation Foundation in its testimony noted there are more modern methods of looking at environmental costs and benefits than the approach adopted by Meyrick and Associates

Mr O’CONNOR - This is a method of valuation that has been prescribed in fact by Kenneth Arrow, a Nobel prize-winning economist, who asked that for the Exxon Valdez incident this be a valuation technique employed. So we really do need to be asking Victorians through a contingent valuation what is the bay worth to Victorians, what is the value of the bay, and then hold that up against the benefits and costs of the project. 17

Related to environmental costs were the impacts on nature based tourism businesses. A witness representing the Diving industry slammed the methodology used to estimate the impact on their businesses.

The CHAIR — Thank you, Mr Salter. I would like to ask you about— if I can find the actual assessment — and you would be aware of the dollar figure that was put on the impact to the dive industry in the business case. I think it was $4.1 million — I cannot find the reference immediately. Do you have a view on that dollar figure? I think it was over two years.

Mr SALTER — That was based on an estimate of the value of the dive industry over $44 million, I think. We did a survey for the EES which placed the value of the dive industry at around $60 million. There has been no real in-depth analysis of what the dive industry is worth. The cost that has been extrapolated out of those figures I really thought were underestimated. Again, there was no consultation with the major players in the industry as to what their market was made up and how it would be affected and what would be affected. There is an assumption by the Port of Melbourne and [Sinclair Knight Merz] that substitute sites can be inserted. I can assure you, having operated in the industry since 1980, there are no substitute spots. If there were, we would be exploiting them now.18

16  Mr S Meyrick, above n 1, p 149-50.
18  Mr Len Salter, Dive Victoria Group, Transcript of Evidence, 6 June 2008, p 161.
Committee should have released the ‘Alliance’ project agreement between the PoMC and Boskalis

As noted in the Committee’s report the Committee received a copy of the Alliance agreement with certain key data removed (such as the direct costs of dredging). As further noted, it is State Government policy to release such contracts.

The Alliance agreement undertakes a complicated and novel method of allocating risks between the PoMC and Boskalis. To a certain extent, it puts the two parties ‘in business together’. Scrutiny of this agreement is particularly important because the Channel Deepening Project is a major marine engineering undertaking, encompassing a different type of business risk to the PoMC’s day-to-day operations. Being unfamiliar with these operational risks, it is of concern if the PoMC might not understand how to allocate those risks between themselves and Boskalis, this latter having the advantage of carrying out such projects continuously and are therefore expert.

As the Alliance agreement was a key term of reference for the inquiry, the Committee could have appropriately released the document and sought public submissions, possibly obtaining much useful feedback. Candidly, the members of the Committee did not have the expertise to do this work for themselves.

Alternately, the Committee could have sourced expert opinion on the structuring of the Alliance agreement and the potential costs and benefits this has for the PoMC and ultimately for the public as its sole shareholder. Such opinion would have been an important source of advice for the Committee in its work, including the questioning of witnesses.

Conclusion

The Committee has not made a diligent attempt to examine the business case for the Channel Deepening Project being undertaken by the Port of Melbourne Corporation.

Neither the State Government nor the PoMC have released the basic information that comprises the business case for the project, although some elements have been exposed through a range of processes including this Committee.

Given the controversy over this project, if the business case was sound, we would imagine the Government would be keen to promote this fact and have its estimates independently scrutinised. The nature of the Alliance agreement makes this particularly important as the Government is now effectively in business with a third party, Boskalis.

It is highly problematical that a state owned enterprise, taking commercial risks on behalf of the public using public funds, fails to provide the information that private investors would expect and demand:
The financial and economic benefits of the Channel Deepening Project are sensitive to:
- escalating costs of the project,
- reduced rate of growth of trade through the port over the long term horizon of this project,
- future makeup of ship fleets which may or may not require deeper channels and finally,
- the risk-weighted costs of finance.

Since none of these can be known with certainty, in combination they make Channel Deepening a risky project. Alongside this are the environmental risks, which the PoMC has attempted to cast as uncertain, unlikely or manageable, but which many in the community consider unacceptable.

Mr G J Barber, MLC
Exhibit 1

Ms Susan Pennicuik MLC
210 Bay Street
BRIGHTON VIC 3186

Dear Ms Pennicuik

Freedom of Information Request re: Channel Deepening Project

I refer to your Freedom of Information request received in this office on 23 June 2008, seeking access to documents relating to the business case for the channel deepening project.

Following a search of the Department I have been provided with several documents which fit the description of your request. They are:

- Port of Melbourne Corporation (PoMC) Presentation to the Project Review Committee 30 August 2007;
- PoMC Channel Deepening Project Business Case Draft 21 August 2007;
- PoMC Channel Deepening Project Business Case 16 October 2007;
- Project Review Committee (PRC) Minutes 30 August 2007;
- Review of the PRC submission 16 October 2007;

I have assessed the documents under the provisions of the Freedom of Information Act 1982 (the Act) and advise that access is denied in full to all of the documents. Information withheld is considered exempt under the following provisions:

Section 28 (Cabinet in Confidence)

I have been advised that the PoMC Business Case was submitted to the Expenditure and Review Committee (ERC) of Cabinet meeting of 18 December 2007 as an attachment to a Cabinet Submission from the Minister for Roads and Ports. I understand that the Business Case itself, and not just the Cabinet Submission, was subject to deliberations of ERC and was the primary document considered by ERC in endorsing the channel deepening project. On this basis I
consider the document to be exempt pursuant to the provisions of section 28(1)(b) of the Act.

The draft Business Case dated 21 August is also exempt pursuant to section 28(1)(c) of the Act.

Section 30 (1) Internal Working documents

Section 30(1)(a) exempts information in the nature of opinion, advice or recommendations, prepared within an agency for the purposes of the deliberative processes of an agency/government, where release would be contrary to the public interest.

Whilst there is no ‘final report’ of the PRC for the channel deepening project as described in your request I have been provided with the minutes of the PRC meeting at which the draft Business Case was presented and discussed and a follow up report that addresses any concerns raised by PRC.

These documents contain the opinions, advice and recommendations of the PRC on the draft business case presented before the committee for review and fit the description of “conclusions” in the absence of a final report, as outlined in your request.

The Project Review Committee (PRC) is an internal review mechanism established by the Department of Transport (DoT) to review major project proposals. The PRC ensures that such projects within the DoT portfolio have been developed to a high standard.

The PRC endorsement process works by using both internal and whole of government processes to ensure peer and expert reviews are conducted at key decision points in the development and delivery of major capital works projects. In order for this function to operate effectively it is important that there is a frank and open exchange of opinions and recommendations.

Disclosure of documents which may lead to unnecessary confusion and debate regarding recommendations that were made in relation to a draft document, that were later addressed or remedied in a document that was presented to Cabinet, is not considered to be in the public interest.

Commercial Documents

Under section 34(1)(b) information acquired from a business, commercial or financial undertaking is exempt from release where disclosure of the information would be likely to expose the undertaking unreasonably to disadvantage.

The PoMC presentation to the PRC is a document pertaining specifically to the business/commercial affairs of the PoMC as they relate to the Channel Deepening Project and was acquired by the Department directly from the PoMC.
In arriving at my decision to exempt this information I have consulted with the PoMC to determine their views on disclosure of their business/financial information, as provided under section 34(3) of the Act.

The PoMC has confirmed that disclosure of the presentation, particularly the financial details, would unreasonably disadvantage the PoMC in future competitive tendering circumstances.

Under section 51 of the Act you have the right to request an internal review of my decision to exempt documents. Application for review should be in writing to the Secretary to the Department of Transport, PO Box 2797, Melbourne, 3001, and lodged within 28 days of receipt of this letter.

Yours sincerely

[Signature]

MICHELLE GRECH
Senior Freedom of Information Officer

27/8/2008