

Statement by
the Minister for Planning

Current status of assessment process under the
Environment Effects Act 1978 for the proposed

Port Phillip Bay
Channel Deepening Project

March 2005

STATEMENT BY MINISTER FOR PLANNING

CURRENT STATUS OF ASSESSMENT PROCESS UNDER THE *ENVIRONMENT EFFECTS ACT 1978* FOR THE PROPOSED PORT PHILLIP BAY CHANNEL DEEPENING PROJECT

Introduction

The proposed deepening of the commercial shipping channels from Port Phillip Heads to the Port of Melbourne is a key infrastructure priority of the Victorian Government. The Port Phillip Bay Channel Deepening Project aims to enable access by a new generation of ships with a 14 metre draught. It is a central element in the Victorian Ports Strategic Framework, which sets out the Government's proposed sequence of port and freight transport developments to maintain and enhance Victoria's economic competitiveness. The Port of Melbourne is currently Australia's largest and busiest container port, handling 37 percent of the nation's container trade. It already has well-developed land transport links and these are being further developed.

Channel deepening in Port Phillip Bay has been found to be a superior economic option for Victoria to accommodate expected trade growth compared to alternatives such as developing the Port of Hastings and "land bridging" to move freight to and from other Australian ports.

The Government considers the Port of Hastings to be the preferred site for future container development, once capacity at the Port of Melbourne is reached. Hastings would supplement rather than replace Melbourne and both ports would continue to operate in parallel. Hastings has the advantage of naturally deep water (more than 14 metres), large areas of vacant land and proximity to the south east of Melbourne. However, the development of Hastings for international containers would require substantial supporting infrastructure expenditure and raises significant environmental management issues.

As a consequence of strategic investigations, the Channel Deepening project has been identified as the highest priority for the further development of Victoria's freight transport infrastructure. However, the Government's in-principle commitment to the Channel Deepening project is subject to three provisos:

- The satisfactory outcomes of Victorian environmental processes, including the *Environment Effects Act 1978*;
- The satisfactory resolution of all technical issues associated with the channel deepening; and
- The acceptance by the Government of a sound financing strategy for the project.

Attention here focuses on the first of these provisos, though the second proviso is also relevant in as much as many technical issues have environmental implications.

The Project

This project involves a major dredging program by world standards.

The project entails:

- Removing 500,000 cubic metres of rock from the Port Phillip Heads, one of the most difficult and dynamic stretches of water in the world.
- Dredging and disposing of over 1.7 million cubic metres of Yarra sediments from an area that has been subject to 150 years of industrial, commercial and domestic use.
- Dredging and placing in other parts of the Bay, some 30 million cubic metres of sediment, sand and clay while minimising the impact of turbidity plumes on the ecology of the Bay and on recreational and commercial users. In the 30 year operational phase of the project, a further 11 million cubic metres of material will need to be dredged.

It would be conducted in the unique setting of the Port Phillip Heads and in Port Phillip Bay, one of our most valuable environmental, recreational and commercial assets. Because of this, the study of the Environmental Effects to date has been extensive, with the scientific studies involved contributing to increased understanding of the Bay. Similarly, the inquiry into the EES has been very detailed. This inquiry has resulted in a Panel Report that has scrutinised every aspect of the project and provided a critical analysis of the project.

This report will be particularly useful to the proponent in revising its project proposal as well as to Government in considering outstanding issues.

EES Process to Date

The assessment process under the *Environment Effects Act 1978* has initially involved the preparation of an Environment Effects Statement (EES) by the Port of Melbourne Corporation (POMC) as the proponent. As strategic alternatives to this project have been considered as part of prior processes, the present EES process has focussed on the environmental feasibility of delivering the Channel Deepening project.

More than 900 public submissions were received in response to the Channel Deepening EES. After exhibition of the EES, a Panel of Inquiry was appointed under section 9(1) of *Environment Effects Act 1978* to hold public hearings and report to the Minister for Planning. The Panel of Inquiry submitted its report to me on 11 February 2005. This report has identified substantial issues with the proposal as put forward in the EES and other documents tabled at the Panel hearing on behalf of POMC. I am advised that many of these issues have been the subject of further work by POMC which will contribute to the overall assessment of the project.

The final step under the *Environment Effects Act 1978* will be the provision of an Assessment of the environmental effects of the proposal by the Minister for Planning to relevant decision-makers. Before decisions are made with respect to works subject to this Act, the decision-makers must have regard to the Minister's Assessment. In

this case, the Assessment will be forwarded to the Minister for Transport, the Minister for Environment and the Australian Minister for Environment and Heritage. The Minister for Transport will need to consider the Assessment, as well as financial and technical aspects of the project, and advise the Victorian Government whether the project should proceed. The Minister for Environment will need to decide whether to grant statutory consent for the use and development of coastal Crown land under the *Coastal Management Act 1995*.

In addition, the project is subject to approval under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*. The EES process has been accredited under this latter Act, and the Minister for Planning's Assessment will inform the Australian Minister for Environment and Heritage's decision.

An Extension of the EES Process

The issues identified in the Panel's recent report will necessitate a review and further analysis of various aspects of the Channel Deepening project. The Panel has made many recommendations which I do not propose to respond to in detail. However, my provisional view is that I accept them as issues that need further consideration. The broad thrust of the Panel's analysis raises significant issues and more specifically the aggregate effect of the various environmental issues identified precludes an adequate assessment of the environmental effects of the project, at least in the short-term. Recent studies and some future work need to be effectively integrated with the original EES to inform the resolution of key issues. Consequently, an Assessment of the project will not be completed under the *Environment Effects Act 1978* at this time.

In light of the Panel's findings and recommendations, as well as further substantial studies that have been conducted since the close of the Panel hearings, I intend to require POMC to prepare a "supplementary statement", ie. a Supplementary EES (SEES). This SEES will build upon the EES process to date, but require a number of additional analyses to be undertaken and documented, and then exhibited for public comment. A further inquiry will be appointed under the *Environment Effects Act 1978*, once the SEES is exhibited. Before I determine specific details of the SEES, I invite submitters on the EES, as well as POMC, to forward comments to me on the Panel's recommendations and my provisional response. I will take any comments I receive into account in future decisions concerning the SEES process.

Proposed Responses to the Panel Report

The Panel's concerns did not extend to the need or justification for the Channel Deepening project. Rather, they relate in large measure to the robustness of the proposed project design and management in the context of relevant environmental issues.

I shall briefly summarise the Panel's comments and then provide my provisional response (*in italics*). Some re-grouping of the Panel's key concerns under four themes will assist their consideration by readers and are as follows:

- Key areas of uncertainty: How can these best be addressed?
- Assessment of options: Have relevant options been adequately assessed?
- Risk and impact assessment: Have environmental risks and impacts been adequately assessed?
- Adaptive management: Is the proposed framework for environmental management sound?

1. Key Areas of Uncertainty

The Panel has identified several “threshold” issues affecting project feasibility, which relate to the key project components of deepening channels through the Heads, the south of the Bay and the lower Yarra:

- The proposed deepening of the Heads using a trailing hopper suction dredge in combination with a ripper drag head and hydrohammer is subject to some uncertainty, in terms of both technical feasibility and environmental performance. Until the viability of using this technology can be further tested, the ability of the project to be successfully implemented is uncertain. The Panel has recommended a trial using the proposed dredging technology in the Heads;
- The feasibility of implementing an overall dredging campaign while complying with environmental performance requirements had not been demonstrated through adequate “proof of concept” modelling at the stage of the Panel hearing;¹
- The calibration and verification of the hydrodynamic and sediment transport models used was not adequate to establish confidence in the outputs, which have been used to inform assessment of potential impacts on Bay ecosystems and Bay users, as well as being proposed for use as a management tool;
- If sediments are to be dredged from the Yarra using a trailing suction hopper dredge in ‘non-overflow’ mode, they would need to be effectively confined on placement in the spoil ground. However, the ability to securely confine contaminated sediments in a marine site had yet to be demonstrated by the proponent.

Especially in light of these “threshold” issues, the Panel has suggested that a staged approach to implementing the Channel Deepening project may be wise.

Provisional response:

The Panel’s recommendation for trial dredging in or near the Heads is prudent and should be considered by the proponent, and proceed if practicable, subject to statutory approvals.

If a trial dredging program proceeds in the Heads, it would also be helpful to conduct a short program of small scale dredging to assist the field testing and calibration of the computer turbidity and primary production models.

¹ I am advised that further work has been conducted on this since the EES.

With respect to the contaminated sediments to be dredged from the Yarra, in principle it should be possible to demonstrate on the basis of improved characterisation of these sediments and international dredging experience whether the sediments can be securely confined. While recent new studies prepared for POMC point towards this conclusion, this work now needs to be subject to public review.

Priority should be given by the proponent to the following steps in finalising the project design.

- *A small trial dredging program in the Heads to confirm technical feasibility, as well as the ability to control direct environmental effects;*
- *Resolution of the approach to dredging and confinement of contaminated sediments from the Yarra; and*
- *Optimal staging of dredging in the South Channel and the Heads to minimise the risk of long-term ecological impacts and maximise recovery of ecosystems.*

2. Assessment of options

The Panel identified the need for further assessment of project design as well as technological options for dredging and management of dredged material, ie. that might offer a better balance of environmental, economic and social outcomes. In the Panel's view, the project proposal can be optimised further. More specifically, there is a need to:

- Further develop the design for the deepening of the Heads, having regard to aspects of technical feasibility, shipping risk, environmental risk – including possible changes in sediment transport patterns - and cost;
- Further assess options:
 - that could reduce the volume of material to dredged, while offering adequate access for deeper draught ships (eg. channel route and design; use of computerised “underkeel clearance” technologies);
 - that would minimise the volume of dredged material to be placed in marine locations (eg. use for land reclamation), having regard to issues of cost and environmental effects;
 - for the placement of dredged material that would minimise environmental effects as well as being cost-effective (eg. disposal of some dredged material to Bass Strait; alternative locations for dredged material grounds within the Bay);
 - for the management of contaminated sediments (eg. secure bunding and capping of contaminated sediments on the seafloor; disposal of highly toxic sediments to land); and
 - for use of best practice dredging technologies that would minimise the generation of turbidity from specific sediment types.

Provisional response:

The Panel has correctly highlighted the need to evaluate a range of options to demonstrate that the chosen approach provides the optimum environmental, social and economic outcomes.

Relevant issues in this regard are the project design, best practice in dredging and the strategy for managing dredged material.

3. Risk and impact assessment

A core concern of the Panel was that various potential environmental risks and potential impacts need to be assessed in a transparent and integrated way. This is needed to inform sound decisions on further impact studies - as well as on project design, technology choice and environmental management. Key aspects of concern in this context are:

- The qualitative risk assessment framework underpinning the setting of priorities for impact studies and management responses in the Channel Deepening EES has inherent problems, as well as not being applied consistently to some issues;
- The quantitative assessment of risks associated with shipping movements, especially in the Heads, needs to be refined and verified to inform the finalisation of the channel design. Similarly, the assessment of risks to third party infrastructure in the lower Yarra and Hobsons Bay needs to be refined and verified, and addressed through either the channel design or mitigating measures;
- The characterisation in the EES of potentially contaminated sediments in the lower Yarra and Hobsons Bay was not sufficiently comprehensive or rigorous to inform decisions on dredging methods and management of dredged material, although the Panel noted that further work was continuing.
- The risk of significant ecological impacts remains uncertain²; with respect to:
 - The ability of seagrass, kelp, microphytobenthos and other marine communities to tolerate prolonged exposure to turbidity generated by dredging, as well as their likely rate of recovery;
 - Potential effects on higher trophic levels (fauna) as a result of reduced primary production, including species of conservation, commercial or recreational interest;
 - The potential for a significant disruption in the processing of nutrients in Bay-floor sediments, possibly affecting the ecological health of the Bay;
 - Potential effects on ecological communities and individual species of conservation significance;

² DSE has confirmed that several studies, including more detailed baseline monitoring studies, are now under way which will assist improved understanding of risks to denitrification processes and the impact of turbidity on seagrass and other communities. However some effects, for example the spread of the turbidity, will not be known for sure until some dredging occurs.

- The incomplete characterisation of environmental risks to some beneficial uses of Bay and lower Yarra waters, including for recreational, aquaculture, commercial fishing and industrial uses.

Provisional response:

Some of the EES baseline studies (eg. on marine ecology) have made an important contribution to documented knowledge of Port Phillip Bay's environment. At the same time, while considerable effort was expended in the EES studies, the Panel has identified several studies that require further work in terms of baseline studies or predictive modelling.

The risk assessment framework (which underpins the EES study program and proposed management responses) needs to be reviewed to ensure that it identifies and responds effectively to:

- *Relevant policy;*
- *Key ecological processes;*
- *Key interactions; and*
- *Uncertainty associated with current knowledge of environmental processes.*

4. Adaptive management

In complex projects with many interacting environmental factors, it is often prudent to take an adaptive management approach where feedback information from environmental monitoring is used to adaptively adjust management practices, in order to achieve or comply with nominated performance objectives. POMC has proposed that turbidity modelling and linked modelling of primary production, used in combination with feedback monitoring, would provide key elements of its “adaptive management” strategy for meeting environmental objectives.

While the Panel accepted that an “adaptive management” approach could be an important element in an overall environmental management strategy for implementing the Channel Deepening project, it has expressed strong concerns with what it perceives to be POMC’s over-reliance on this approach in the south of the Bay.

The Panel’s analysis has identified that, for an adaptive management approach to be effective in the Channel Deepening project, there needs to be:

- Best practice project design and technologies that provide a firm foundation for satisfactory environmental performance;
- A sound basis for defining acceptable environmental outcomes and setting consistent performance criteria to guide timely management action;
- Proof of concept modelling of the dredging campaign demonstrating an ability in principle to deliver required ecological outcomes;
- Known measures that have a demonstrated capacity to control immediate effects and, through their adaptive use, to ensure compliance with performance criteria;

- An effective and statistically valid monitoring program to both inform timely management responses and confirm environmental outcomes; and
- Demonstration of the validity of using the hydrodynamic, turbidity and primary production models as “real time” management tools based on forward projection from environmental monitoring.

Provisional response:

The Panel’s various observations on the pre-requisites for applying an adaptive management approach are generally supported.

I am advised that POMC is currently undertaking ‘proof of concept’ modelling and the results of this work will support the further assessment as well as refinement of the proposed environment management plan. Similarly, POMC is undertaking work to refine the monitoring program with the assistance of expert statistical advice. This work will need to be integrated with other studies and subject to public review.

Adaptive environmental management has the potential to be usefully applied to the Channel Deepening project. However, for it to be effective, the following need to be in place as part of the further assessment of the Channel Deepening project:

- *Disciplinary experts and other people with expert knowledge of the Bay environment and available management measures need to work together to build a shared understanding of the affected system, critical information gaps, relevant performance indicators and management options;*
- *Further baseline studies and research should be initiated quickly to address any critical information gaps;*
- *A range of scenarios of system changes that could arise from the project in response to environmental interventions should be examined to refine a strategy of project design and environmental management to minimise environmental risks;*
- *Environmental monitoring strategies, performance indicators and management responses should be designed to keep environmental impacts within acceptable limits.*

Further Assessment Process

The Panel has gone on to recommend key features of a further assessment process to address the various issues identified. Its recommendations in this regard are directed towards strengthening the management of the Channel Deepening project. Its two key underlying concerns are the need for, first, better coordination across government to support POMC in developing a robust proposal, and second, the availability of high-level independent expert advice on key issues.

I concur with the Panel’s conclusion that it is premature to formally assess the environmental effects of the Channel Deepening project, as is ultimately required under the *Environment Effects Act 1978*.

I consider the broad thrust of the Panel's recommendations A to I to be reasonable. I believe these 'practical' recommendations need to be considered in the context of the formal assessment process under the *Environment Effects Act 1978*. To enable the resolution of outstanding issues that will impinge on the Minister's Assessment under the Act, I now intend that:

- 1) A supplementary statement (or "Supplementary EES" (SEES)) be prepared by POMC in accordance with section 5 of the *Environment Effects Act 1978*;
- 2) Draft Assessment Guidelines for the scope of this SEES be exhibited for public comment for a period of four weeks;
- 3) The SEES be exhibited for public comment for a period of six weeks, after it is completed by POMC to a satisfactory quality; and
- 4) An inquiry be appointed under section 9(1) of the *Environment Effects Act 1978* to consider public submissions.

The Department of Sustainability and Environment (DSE) is responsible for advising the Minister for Planning with respect to decision-making under the *Environment Effects Act 1978* and for administering EES procedures on behalf of the Minister. In this context, I consider that it will be appropriate for DSE to:

- 1) Liaise with the Australian Department of Environment and Heritage to ensure that the requirements of the accredited EES process under the *Environment Protection and Biodiversity Conservation Act 1999* are met.
- 2) Prepare Draft Assessment Guidelines for the scope of the SEES, after considering public comments received in response to this Minister's Statement and the Panel Report:
- 3) Finalise Assessment Guidelines for the scope of the SEES, after exhibiting draft guidelines and then considering public comments received;
- 4) Coordinate advice to POMC on the preparation of the SEES, including any necessary clarification regarding the matters to be assessed and documented;
- 5) Consider the need for independent peer reviews of any aspect of the SEES studies, in light of the scope, standing and public availability of peer reviews initiated by POMC or other parties;
- 6) An Independent Expert Group should be appointed:
 - a) with expertise in the fields of shallow marine water ecosystems processes, shallow marine water hydrodynamics, and dredging, at a minimum;
 - b) to advise DSE and POMC on relevant study briefs and draft studies as part of the preparation of the SEES;
 - c) to assist DSE in the scoping of any necessary independent peer reviews of SEES studies outside the specialist expertise of the Expert Group; and
 - d) to advise on the adequacy of the SEES for exhibition, with respect to the specialist expertise of the Expert Group.

The appointment of an Independent Expert Group is an unusual measure in the context of an EES process. This step is warranted by the unique complexities of the environmental issues raised by the Channel Deepening project. The role of this group in the context of the SEES can build directly on the valuable contributions made by the two independent peer reviewers appointed by DSE during the EES process to date.

The Minister for Transport may wish to consider the merit of the Panel's recommendation that a high-level Project Management Group, representing interested government departments and agencies, as well as POMC, be appointed. In principle, such a "project taskforce" could play a critical role in advising and supporting POMC in taking forward its program of investigations for the Channel Deepening project. However, the role of any project group or taskforce would need to be clearly separated from the administration of the SEES process.

The Panel has recommended that a community liaison committee be established to facilitate direct communication between the proponent and key stakeholder communities. POMC and the project taskforce (if appointed) should consider this recommendation, in preparing the SEES. It is the responsibility of the proponent to inform and consult with stakeholders during the preparation of an EES (or SEES), ie. prior to the exhibition of the final document for formal public comment.

ROB HULLS MP
Minister of Planning

Note: This Statement by the Minister for Planning does not represent an assessment by the Minister pursuant to *Environment Effects Act, 1978*