
Independent Panel

**Major Project: Kurnell Desalination Plant and
Associated Infrastructure**

**Report to the NSW Minister for Planning, the Hon
Frank Sartor MP, on the Kurnell Desalination Plant
and Associated Infrastructure submitted in
accordance with the terms of the Ministerial
appointment issued on 29 November 2005.**

8 September 2006

**Panel Members:
Emeritus Professor Rolf Prince
Mr Tony Wright
Dr Gary Cox**

INDEPENDENT PANEL - MAJOR PROJECT: KURNELL DESALINATION PLANT AND ASSOCIATED INFRASTRUCTURE

The Hon Frank Sartor MP
Minister for Planning

8 September 2006

Dear Minister,

Report on Kurnell Desalination Plant and Associated Infrastructure

You appointed an Independent Panel on 29 November 2005 to review certain matters regarding the proposed Kurnell Desalination Plant and Associated Infrastructure. Herewith is the Panel's report. The conclusions of the Panel are as follows.

(i) The first Term of Reference stated that the Panel was to ensure that all issues raised by the community and stakeholders in submissions to the publicly exhibited Environmental Assessment Report prepared by Sydney Water are adequately addressed and responded to by Sydney Water. In our opinion, this Term of Reference has been adequately achieved.

(ii) The second Term of Reference stated that the Panel was to monitor other forms of community input (other than direct written submissions), issue compilation and assessment, so as to ensure all relevant matters are adequately addressed by the Department in its advice to the Minister. In our opinion, this Term of Reference has been adequately achieved.

(iii) The third Term of Reference stated that the Panel was to ensure that issues raised in community and stakeholder submissions and Sydney Water responses thereto are adequately addressed and included in the Department of Planning assessment of the proposal and in the Department's advice to the Minister. In our opinion, this Term of Reference has been adequately achieved.

There were no substantive outstanding issues. However, it is the Panel's view that more could have been done by Sydney Water to demonstrate best practice in its assessment of the options for greenhouse gas reduction and, in particular, more analysis of the market for renewable energy could have been carried out. There is a considerable body of expertise in this field that could have been called upon to provide a fuller evaluation of the potential impacts a desalination plant might have on future renewable energy markets. This was a missed opportunity to demonstrate best practice and to further public understanding of the issues involved.

Emeritus Professor Rolf Prince AO (chair)

Dr Gary Cox

Mr Tony Wright

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1 Introduction

1.1 Appointment

On 29 November 2005, the Minister for Planning, the Hon Frank Sartor MP, directed that an Independent Panel be established into the Kurnell desalination project and associated infrastructure.

The Independent Panel comprised:

Emeritus Professor Rolf Prince AO (chair),
Mr Tony Wright,
Dr Gary Cox.

1.2 Terms of Reference

The Minister specified that the Terms of Reference for the Independent Panel be:

1. To ensure that all issues raised by the community and stakeholders in submissions to the publicly exhibited Environmental Assessment Report prepared by Sydney Water are adequately addressed and responded to by Sydney Water.
2. To monitor other forms of community input (other than direct written submissions), issue compilation and assessment, so as to ensure all relevant matters are adequately addressed by the Department in its advice to the Minister.
3. To ensure that issues raised in community and stakeholder submissions and Sydney Water responses thereto are adequately addressed and included in the Department of Planning assessment of the proposal and in the Department's advice to the Minister.

1.3 Constitution of the Panel

The Independent Panel was not established as an Independent Hearing and Assessment Panel as described at Section 75G of the *Environmental Planning and Assessment Act 1979*. Consequently, the Independent Panel was not empowered to conduct hearings, or to assess the merits or technical aspects of the Kurnell desalination project. The Independent Panel did not call for and neither did it receive separate submissions. The only submissions the Independent Panel reviewed were those submitted to the Department of Planning during the exhibition period of the Environmental Assessment. Some public submissions were lodged directly with Sydney Water Corporation and these were regarded as public submissions submitted as part of the exhibition process of the Environmental Assessment. The Environmental Assessment was on public exhibition from Thursday 24 November 2005 until Friday 3 February 2006. A number of late submissions were accepted by the Department of Planning. A letter from Sutherland Shire Council was received by

the Panel on 20 February 2006 and a supplementary submission on 18 April 2006. The response from the Panel is attached at Appendix D.

The Independent Panel's terms of reference were advertised in the major Sydney daily papers and also in a number of local papers. The dates and publications were as follows:

Sydney Morning Herald	Wednesday 11 January 2006
Daily Telegraph	Wednesday 11 January 2006
Cooks River Valley Times	Thursday 12 January 2006
The Glebe	Thursday 12 January 2006
Inner Western Suburbs Courier	Tuesday 10 January 2006
Sydney Weekly	Wednesday 11 January 2006
Inner West Weekly	Thursday 12 January 2006
City Weekly	Thursday 12 January 2006
Southern Courier	Tuesday 10 January 2006
St George Leader	Tuesday 10 January 2006
Wentworth Courier	Wednesday 11 January 2006

1.4 Undertaking the Panel's Task

The Independent Panel commenced its work on 22 December 2005 and submitted its report to the Minister on 8 September 2006. The Independent Panel met periodically throughout the nine months of its commission. The Independent Panel met with Sydney Water Corporation (SWC) on a number of occasions and reviewed the Panel's internal systems for tracking public submissions and monitoring other forms of community input. The Independent Panel met with the officers of the NSW Department of Planning regularly throughout the period of its commission. The Independent Panel held a joint session with SWC and the NSW Department of Planning on 18 April 2006. This session was to provide feedback on SWC's first draft of its Preferred Project Report (PPR). No other agencies were formally contacted by the Independent Panel.

One Independent Panel member attended each of the Community Workshops held by SWC in January 2006. Dr Gary Cox attended the Marrickville Community Workshop on 17 January 2006 and the Rockdale Community Workshop on 18 January 2006. Mr Tony Wright attended the Sutherland Community Workshop on 19 January 2006. Independent Panel members were observers at these meetings and took no active role in the proceedings. In addition, the Independent Panel had access to a number of internal documents collated by SWC, namely records of stakeholder meetings and joint Government agency meetings.

The Panel sought to establish a process that would ensure both full compilation of issues raised by community and stakeholders and an adequate response to each issue. This was achieved using three separate procedures: direct review by the Panel of submissions on the Environmental Assessment; audit of Sydney Water's compilation and consideration of issues; and scrutiny of project development analysis being undertaken by Sydney Water.

The main vehicle for Sydney Water's response to issues raised was a Preferred Project Report (PPR) – a final expression of project intent, detailed response to issues, and a comprehensive statement of proposed arrangements to mitigate environmental impacts. The PPR formed the main basis for the Panel to assess the extent to which issues raised by the community and stakeholders were adequately

addressed and responded to by Sydney Water. Likewise, the Department of Planning drew on the PPR to complete its assessment review and to provide advice to the Minister for Planning in making a determination on the project. The latter Director-General's Environmental Assessment Report provided the basis for the Panel to judge the adequacy of the Department's own response under the third Term of Reference.

2 Understanding of the Terms of Reference

The Panel's Terms of Reference differ in style from those issued to Independent Hearing and Assessment Panels established under Part 3A of the NSW Environmental Planning and Assessment Act. The Independent Panel for the Kurnell Desalination Project was not requested to assess all aspects of the proposal. It was directed to ensuring that all issues raised by the community and stakeholders during the exhibition period for the Environmental Assessment Report were *adequately addressed* by the project proponent (Sydney Water Corporation) and by the NSW Department of Planning. Consequently, the Terms of Reference did not include any basis for a 'merit assessment' of the project.

The Independent Panel's Terms of Reference are analysed below.

2.1 First Term of Reference

To ensure that all issues raised by the community and stakeholders in submissions to the publicly exhibited Environmental Assessment Report prepared by Sydney Water are adequately addressed and responded to by Sydney Water.

The First Term of Reference relates to the process whereby Sydney Water, as the proponent, responds to written submissions. These submissions are those received by the Director-General during the exhibition period. However, given that some members of the public sent submissions directly to Sydney Water and not to the Department of Planning, the Panel understood the scope of the First Term of Reference to be *all written submissions* received during the exhibition period, or shortly thereafter. No distinction was made between community/individual submissions and those from Government agencies. These were regarded as having equal weight.

2.2 Second Term of Reference

To monitor other forms of community input (other than direct written submissions), issue compilation and assessment, so as to ensure all relevant matters are adequately addressed by the Department in its advice to the Minister.

A range of other community input into the public consultation on the Environmental Assessment was initiated during the public exhibition period. This included:

- Three Community Workshops held in January 2006;
- Feedback via the Sydney Water website;
- Feedback via the Sydney Water dedicated phone-line;
- Feedback from shopping centre information stands.

The scope of this Term of Reference relates to recording and tracking of this other community input by Sydney Water and the communication of this information to the Department of Planning for their own assessment purposes.

2.3 Third Term of Reference

To ensure that issues raised in community and stakeholder submissions and Sydney Water responses thereto are adequately addressed and included in the Department of Planning assessment of the proposal and in the Department's advice to the Minister.

The Third Term of Reference relates to the preparation of the Director-General's Environmental Assessment Report prepared under the provisions of Section 75I of the NSW Environmental Planning and Assessment Act. It is noted that the Independent Panel's report will be submitted to the Minister alongside the Director-General's Environmental Assessment Report.

2.4 Understanding of Key Words in the Terms of Reference

Ensure

This is probably the most problematic word in the Terms of Reference. The Independent Panel had no special powers. The Panel had to operate on a consensus basis and rely on a high degree of co-operation amongst key stakeholders. The Independent Panel reports to the Minister through the Director-General of the NSW Department of Planning. In particular, the Panel had no powers 'to ensure' and no powers of subpoena. Hence, it is advisory only.

After some deliberation, the Independent Panel took the view that 'ensure' could only practically mean 'best efforts'. This implied active engagement with both Sydney Water Corporation and the NSW Department of Planning throughout the process. The Independent Panel provided specific and precise advice to both Sydney Water Corporation and the NSW Department Planning. The Panel's process in this regard has been documented and can be viewed in the Appendices to this report.

All issues

This phrase indicated that the Panel was not to take the view that only a sub-set of significant issues required response by Sydney Water. All issues had to be addressed in some way. The Panel was not to be selective about which issues required a response. This was consistent with the principles of public participation that all submissions be considered.

Community and stakeholders

In the environmental assessment and consultation disciplines, 'community and stakeholders' is generally understood to mean any member of the public, non-government organisation, private sector company, or government agency (at whatever level). Another designation is 'interested and affected parties', which encompasses those who might be affected in some way by the proposal and those who are interested in the outcome. Section 75H(4) of the NSW Environmental Planning and Assessment Act states that during the public exhibition period 'any person (including a public authority) may make a written submission to the Director-General concerning the matter'. Section 4 of the Act defines 'person' as including an unincorporated group of persons or a person authorised to represent that group.

Adequately addressed

The word 'addressed' implies that the issue is to be responded to by the proponent in some meaningful way. The precise nature of the consideration had to be tested as to

whether it was 'adequate' or not. To clarify this process, the Panel developed a 6 Point Test of adequacy (see page 7 below).

It was necessary for the Panel to determine a consistent basis on which to judge whether each response was *adequate* and *sufficient*. The Panel took the view that this meant that, at least:

- Issues raised by community and stakeholders should be subjected to reasoned analysis resulting in adoption of plausible positions;
- Substantive project decisions and actions should be based on transparent, objective analysis of reasonable options;
- Responses should take account of the views of regulatory authorities.

Adequately responded to

This phrase relates to the actions proposed for the project. A range of possible responses was considered valid, depending on the issues raised in submissions. The most direct action would be to modify the project. However, action taken by the proponent could take a number of forms:

- No action necessary;
- Further research and/or analysis of options;
- Monitoring the issue or impact in some way;
- Mitigation of the impact;
- Modification of the project.

The precise nature of the response had to be tested as to whether it was 'adequate' or not. Fundamentally, did the respondent give a full, precise and unambiguous account of how the issues had been, or would be dealt with? This is also considered in the Panel's 6 Point Test.

This was a demanding test. The Panel has made its advice as far as possible consistent with the views and requirements of regulatory authorities. However, that advice could not imply any judgment as to the potential effectiveness of the actions or investigations proposed, nor their acceptability to the submitter, the community, regulatory authorities, or the Government.

Monitor

The term monitor implies the repeated or continuous measurement, recording or testing of certain variables or processes. Continuous monitoring was beyond the resources of the Panel. The Panel understood the term to relate to the examination of Sydney Water's processes and procedures for tracking, recording and analysing the other forms of community input into the public consultation process.

Community input, issue compilation and assessment

This is understood as being the internal process whereby community input was received by Sydney Water (in a variety of formats), issues from the input compiled (recorded and categorised), and then assessed.

All relevant matters

This term occurs in the Second Term of Reference. It is a slightly different test than under the First Term of Reference. By contrast to 'all issues', this Term of Reference commits the Panel to testing for issue relevance prior to assessing whether the issue was adequately addressed or not. For instance, some of the phone inquiries may relate to requests for information by members of the public; such are not relevant for consideration in the assessment.

Sydney Water responses

This is understood to encompass the Director-General's requirement under Section 75H(6) for the proponent to submit:

- A response to the issues raised in submissions;
- A Preferred Project Report that outlines any proposed changes to the project to minimise its environmental impact; and,
- Any revised Statement of Commitments.

Department of Planning assessment of the proposal

This is the Director-General's report on the project to the Minister under Section 75I(1) for the purposes of the Minister's consideration of the application for approval to carry out the project. Note that the assessment report is to include 'advice provided by public authorities on the project' (Section 75I(2)(b)).

The Department's advice to the Minister

This relates to the Director-General's recommendations on the project relating to the issues in the NSW Environmental Planning and Assessment Act relating to Ministerial approval of Part 3A projects. These are contained in Section 75J.

2.5 Test Procedure

To put the above criteria into effect, we set up, followed, advised, and have reported in terms of a 6 Point Test for each relevant issue raised:

1. Has the issue been framed accurately in terms of the public submissions?
2. Does the response adequately address the issue?
3. What justification is made for Sydney Water's response in the Draft PPR?
4. What evidence is used to back Sydney Water's claims?
5. In the opinion of the Panel, is the response *adequate* and *sufficient*?
6. If not, what further response is needed to address the issue?

The Terms of Reference will now be addressed in turn.

3 First Term of Reference

To ensure that all issues raised by the community and stakeholders in submissions to the publicly exhibited Environmental Assessment Report prepared by Sydney Water are adequately addressed and responded to by Sydney Water.

3.1 Issue Identification

The Panel reviewed each of the 762 submissions and compiled its own schedule of issues. The outcome was a schedule of more than 500 issues raised by the community and stakeholders. This analysis is document in Appendix A – Content Analysis of Public Submissions.

Armed with its own interpretation of issues, the Panel commenced a process of reviewing Sydney Water's definition and compilation of issues raised in submissions. This involved reviewing Sydney Water's process of analysing submissions and capturing issues, and auditing the compilation of issues by Sydney Water against the Panel's own issue list.

This process resulted in a schedule of issues to be addressed and responded to by Sydney Water in preparing the Preferred Project Report. These issues are documented in Appendices B and E.

The Panel distilled seven broad areas as a convenient definition of the main issues of concern to the community and stakeholders. These cover both the planning and consultation activities and the potential environment and social impacts arising from constructing and operating the facility and associated infrastructure. The issues of concern extend beyond those directly associated with the desalination plant. The potential impacts of the main sub-projects rated substantial interest and concern. The seven issues headings are as follows:

Project planning and consultation

- The planning and assessment process.
- Greenhouse gas emissions.
- Community consultation on local issues associated with the project.

Construction and operation of the facility

- The desalination plant (terrestrial ecology, cultural and heritage values).
- Seawater intake and wastewater outlet structures (seawater quality and aquatic ecology).
- Treated water delivery and distribution infrastructure (water quality and aquatic ecology).
- Construction impacts (noise, vibration, dust/air quality, traffic).

3.2 Review of Sydney Water's Initial Response to Issues

The Panel received a Draft Preferred Project Report in March 2006 and examined the response to the issues raised by community and stakeholders following the exhibition of the Environmental Assessment. This draft report dealt with more than 200 issues by firstly defining and clarifying each issue, then setting out Sydney Water's analysis of the issue, and the reasons for adopting a particular position. The draft report also set out commitments made by Sydney Water in response to submissions received and further project assessment. These commitments described changes to the project or management initiatives to mitigate environmental impacts.

The Panel reviewed Sydney Water's response to each issue by using the procedure and criteria described at Section 2.5 above. This is documented in the two submissions to Sydney Water of April and May 2006 (see Appendices B and E).

The outcome of this review was an assessment of the *adequacy* and *sufficiency* of Sydney Water's response to each issue raised in submissions by community and stakeholders. The Panel found satisfactory the response to most issues. On the other hand, clear recommendations for action were made on a number of issues regarded by the Panel as warranting further analysis or deeper consideration of points made in submissions. The Panel's Review Report, dated 7 April 2006 (Appendix B – Submission to Sydney Water Corporation) was passed to Sydney Water for action and submitted the Department of Planning for information. The Panel subsequently held a joint session with Sydney Water Corporation and the Department of Planning on 18 April 2006 to explain the Panel's assessment procedure and clarify the position taken on some issues. This meeting is documented in Appendix C.

3.3 Review of Revised Response to Issues

Sydney Water responded to the Panel's recommendations and presented a revised Preferred Project Report on 25 May 2006. This report was compared with the detailed review earlier submitted to Sydney Water in order to discern the extent to which the Panel's review recommendations had been adopted. Arising from this review, the Panel requested inclusion in the PPR of further information on plans for greenhouse gas offsets in accordance with the Environmental Assessment Requirements. This additional submission was directed to the NSW Department of Planning. This is documented in Appendix H.

The submission included a review of the submissions to Sydney Water and whether the Panel's comments and observations had been acted upon. There were particular concerns about greenhouse gas mitigation measures and the wording some of the Statement of Commitment. It is noteworthy that most of the Panel's recommendations had been met, substantially or at least sufficiently.

3.4 Key Findings

The Final Preferred Project Report (dated 9 August 2006) has essentially adopted the Panel's recommendations and presented reasoned arguments for the positions adopted on issues of concern. The position taken by Sydney Water on every issue raised in community and stakeholder submissions may not entirely resolve all underlying concerns to the satisfaction of all who wrote submissions. However, the

Panel is satisfied that issues raised have been adequately addressed and responded to in the Final Preferred Project Report.

The Panel's detailed findings are set out below.

3.4.1 The Planning and Assessment Process

There were specific and general responses in the public submissions to the planning and assessment process. These ranged from the general (that the decision to build the plant was predetermined) to the specific (that, for instance, a triple bottom line assessment had not been undertaken). Though the Panel considered and noted all these views, the Panel considered that a detailed consideration of the merits of the planning process was beyond the scope of its Terms of Reference. The Panel noted that the procedures laid down in Part 3A of the NSW Environmental Planning and Assessment Act had been duly carried out by both the proponent and the NSW Department of Planning.

3.4.2 Implementation of Greenhouse Gas Reduction Commitments

The issue of greenhouse gas emissions was a major issue raised in submissions. According to Sydney Water's catalogue of issues, 450 submissions raised the issue of greenhouse gas emissions and 221 mentioned the high energy use of the plant (although it should be noted that a substantial number, over 100, were fully or largely based on one specific letter). The Panel judged concerns about greenhouse gas emissions to be a most significant issue in the public submissions.

The original Environmental Assessment Report was based on a Government commitment to a 50% offset of emissions and consequently the public submissions were based on this understanding. The Premier's announcement of 8 February 2006 stated that the desalination plant, should it be constructed, would be operated using '100% renewable energy – meaning no net greenhouse gas emissions'. The Final PPR incorporated the changed policy framework into its response and Statement of Commitments. However, at that time, the Panel was not satisfied with the level of detail provided by Sydney Water. This was communicated to the proponent via a letter sent by the Panel to the NSW Department of Planning on 1 June 2006 (see Appendix G).

On 21 June 2006, Sydney Water provided additional material by way of an amendment to the PPR. This more clearly outlined the measures to be used to procure energy to meet the zero net emissions target. These were the purchase of renewable energy via the accredited Green Power scheme or through dedicated power supply through a Power Purchase Agreement. The response correctly pointed to uncertainty in the electricity markets and in the State and Federal Government frameworks surrounding carbon emissions reductions. However, given the extremely high demand a desalination plant would place on the existing level of renewable energy supply, the Panel considered it warranted that further analysis be provided as to the plant's medium term impact on the renewable energy market. Though this was requested, this was not forthcoming. On balance, the Panel was satisfied with the final response in the PPR. However, it is the Panel's view that the proponent missed a major opportunity to demonstrate best practice in this regard.

3.4.3 Community Consultation on Local Issues Associated with the Project

Sydney Water undertook an extensive consultation process comprising information displays, static displays, community workshops and meetings with key stakeholder groups. Much of this consultation took place in settings in which many in the community, particularly in the Sutherland Shire, were broadly opposed *in principle* to the desalination project. As a result, Sydney Water found it necessary to spend considerable consultation time explaining the context of the decision taken by the Government and in particular the validity of the 2004 Metropolitan Water Plan's commitment to a desalination plant. This limited the opportunity for more meaningful engagement on the potential local impacts of a substantial construction and operating project.

Stakeholders and councils around Sutherland, Rockdale, Ashfield, Marrickville expressed concern in submissions to the Environmental Assessment Report that inadequate information was available on the proposed delivery infrastructure across Botany Bay and distribution pipeline routes for connection to the Sydney Water Pressure Tunnel and the City Tunnel.

It should be noted that Sydney Water has not at this stage sought Project Approval for these infrastructure items. It is entirely feasible and appropriate for full consultation to be initiated with these communities if the Desalination Project is ultimately approved and planning is further developed for the proposed distribution and delivery systems. Sydney Water has committed, in the Final PPR, to preparation of an Environmental Assessment Report for this infrastructure and a related consultation process.

3.4.4 The Desalination Plant (Terrestrial Ecology, Culture and Heritage Values)

A number of submissions mentioned the desalination plant's potential impact on terrestrial ecology and its effect on heritage values, including indigenous heritage. The culture and heritage issues were raised largely in submissions from the local Kurnell residents and more widely Sutherland Shire residents. These related to the significance of the locality in the European history of the area, notably Captain Cook's Landing. The ecological issues were various, such as the impact on the nearby Ramsar-listed Towra Point wetland from runoff, the proximity to Botany Bay National Park, the existence of a bat colony on the site, and the proposed habitat corridor. Some of these potential impacts were more relevant to the construction phase of the project.

The Panel took the view that most of these issues could be adequately and sufficiently managed through conditions of consent and the application of appropriate management plans in conjunction with the appropriate regulatory agency, such as the NSW Department for Environment and Conservation. The Panel sought to make more rigorous Sydney Water's proposed impact management and monitoring procedures contained in their initial Statement of Commitments.

3.4.5 Seawater Intake and Wastewater Outlet Structures (Seawater Quality and Aquatic Ecology)

These aspects of the project were strongly based in the Environmental Assessment Report and the PPR on two independent reports: the *Ocean Modelling Report* by the University of NSW Water Research Laboratory, and the *Marine Ecological Assessment* by The Ecology Lab P/L. These were attached as appendices to the Environmental Assessment Report.

These studies covered the issues eventually raised in response to the EAR in large measure. While the predictions and assessments were necessarily limited in some aspects, meaningful conservative estimates could be made to cover these. Hence, the Panel found that the PPR in the relevant sections only in places clarification of what was proposed, and some further specification of proposed testing, and eventual monitoring programs.

3.4.6 Treated Water Delivery and Distribution Infrastructure (Water Quality, Aquatic Ecology and Terrestrial Ecology)

Substantial pipeline infrastructure would be needed for delivery of treated water across Botany Bay and beyond to connect with Sydney Water's bulk water distribution system. The PPR presents a valid assessment of the delivery infrastructure options – responding to issues raised by stakeholders and the Panel. Assessment of ecological impacts is necessarily broad, at this stage, as a preferred distribution scheme and route are yet to be finalised. Sydney Water has sought only Concept Approval for this sub-project (rather than full Project Approval).

Should the project proceed, the delivery and distribution infrastructure would be the subject of further scrutiny as a separate Environmental Assessment Report would be prepared for Desalinated Water Distribution Infrastructure. This would provide evaluation of alternative schemes and routes, and provide assessment of environmental impacts and mitigation measures.

3.4.7 Construction Impacts (Noise, Vibration, Dust/Air Quality, Traffic)

Numerous submissions raised concerns about potential impacts arising from construction activities. Sydney Water has acknowledged in the PPR that temporary local impacts would inevitably arise during construction of the desalination plant and its associated infrastructure – the intake and outlet structures, and the treated water delivery and distribution infrastructure.

The PPR identifies the nature of the potential impacts and responds to the issues raised by setting out proposals to minimise impacts in consultation with local communities. Commitments include preparation of a Construction Noise Management Plan; a Construction Traffic Management Plan; a Construction Dust Management Plan; and a Construction Spoil Traffic Management Plan.

The PPR thus outlines the basis for mitigating the intrusive impacts of construction activities. It is understandable that, in the absence of specific designs, the proponent does not provide specific details of impact management proposals. It is notable that neither preferred construction method, nor route has yet been determined for the treated water delivery and distribution infrastructure. This infrastructure is to be the subject of a separate Assessment for Project Approval.

4 Second Term of Reference

To monitor other forms of community input (other than direct written submissions), issue compilation and assessment, so as to ensure all relevant matters are adequately addressed by the Department in its advice to the Minister.

Formal written submissions were supplemented by a number of other community consultation processes. These were:

- The three community workshops held in mid-January;
- Displays at shopping centres;
- Members of the public communicating with Sydney Water about the project via a website and a telephone hotline;
- Letters to Sydney Water from members of the public.

There were also letters to Ministers and Members of Parliament. These were responded to in the normal manner by the relevant Ministerial office or Member's office.

The Panel reviewed the community responses to these other forms of consultation. None of these channels revealed additional issues that were not raised in the public written submissions. As well, the balance of issues in these other forms of input was broadly in line with that seen in the formal written submissions.

The Panel was satisfied after an examination of Sydney Water's internal recording procedures that the systems in place were adequate and sufficient for the task of documenting these other forms of community input. Given that no additional issues were raised, there is no need for further commentary under this Term of Reference.

5 Third Term of Reference

To ensure that issues raised in community and stakeholder submissions and Sydney Water responses thereto are adequately addressed and included in the Department of Planning assessment of the proposal and in the Department's advice to the Minister.

5.1 The Panel's Method

The essential task before the Panel to address this Term of Reference was to determine whether the NSW Department of Planning had identified the community and stakeholder issues, assessed the adequacy of Sydney Water's response in the PPR to these issues and potential impacts, and that the Department's advice to the Minister incorporated the Department's position on the issues. As noted in the introduction to this report, the Panel's task was not to weigh-up the strength of arguments put forward by the parties; rather, it was to ensure that the issues were adequately addressed.

The main subject of the Panel's review at this stage was the Director-General's *Environmental Assessment Report: Major Project Assessment Kurnell Desalination Plant and Associated Infrastructure* dated August 2006 (hereafter, the Director-General's Report).

The Panel reviewed this report against the seven broad areas of concern described above under the First Term of Reference (see pages 8 and 9) using the following three-part test based on the earlier definition of adequately addressed:

- Has the NSW Department of Planning identified the issues of concern to the community and stakeholders including regulatory bodies?
- Does the Director-General's Report contain reasoned analysis of each issue and its potential impacts, and consideration of Sydney Water's response contained in the Final Preferred Project Report?
- Does the Department advise the Minister of its considered position on each issue after weighing-up the arguments and setting out a transparent, objective analysis in the Director-General's Report?

5.2 Key Findings

The Director-General's Report meets the three-part test described above. The Department's assessment of potential environmental and social impacts and the Statement of Commitments is thorough and well reasoned. The Panel's review, using the three-part test, is summarised below:

5.2.1 Issue Identification

The Department nominated ten main issue categories based on its review of submissions to the proponent's Environmental Assessment Report. For each main

issue category identified, the Department has included a summary of community and stakeholder concerns which the Department has distilled from the submissions. The report further draws out the key potential environmental impacts associated with these issues. The main issue-impact set covers the issues earlier identified by the Panel.

5.2.2 Reasoned Analysis

The Director-General's Report outlines Sydney Water's preferred position on relevant aspects of each main issue and each key potential environmental impact. Commitments made in the PPR by Sydney Water are noted and discussed. The concerns raised in submissions related to main issues are documented, and the Department's reasoned analysis of the issues and Sydney Water's position follows.

The Department's analysis is generally reflective of, and comprehensive of, the community and stakeholder concerns, without dealing specifically with the detail of each and every concern. Certainly, the key potential environmental impacts are analysed in detail. The Panel regards this approach as reasonable and is satisfied that all substantive, specific concerns are addressed.

In the case of issues related to the proposed Desalinated Water Distribution Infrastructure, for which Concept Approval is requested only, the level of analysis is directed essentially at pointing to requirements that would be assessed at the future Project Approval stage.

5.2.3 Advice to the Minister

The analysis of each main issue categories is completed with clear statements of the Department's position and firm recommendations to the Minister on conditions of consent.

5.3 Assessment against Broad Areas of Concern

The following is an assessment of the NSW Department of Planning's responses as they relate to the Panel's identified broad areas of concern (see page 8, above).

5.3.1 The Planning and Assessment Process

The Director-General's Report notes that nearly 12 percent of the submissions received during the exhibition of the Environmental Assessment related to the Environmental Planning and Assessment process itself. Many of the concerns related to the Part 3A and critical infrastructure process and/or to the scope of the Director-General's requirements for the project. The Director-General's Report explains the position on these issues.

5.3.2 Implementation of Greenhouse Gas Reduction Commitments

The Director-General's Report analyses both the energy intensity of the proposed plant and the commitment by Sydney Water to a Greenhouse Reduction Plan to ensure the proposed plant is effectively powered by 100 percent renewable energy.

Following a detailed consideration of arguments made in submissions, and Sydney Water's position on the issues, the Department recommends conditions of consent that would require Sydney Water to:

- Incorporate energy efficient equipment and energy recovery systems to optimise energy efficiency;
- Develop and implement a Greenhouse Gas Reduction Plan to achieve the Government's requirement of effectively operating the plant with 100 percent renewable energy.

These recommendations are consistent with the analysis.

5.3.3 Community Consultation on Local Issues Associated with the Project

Around 10 percent of submissions to the proponent's Environmental Assessment Report raised concerns about the adequacy of community consultation. Many reflected concern regarding the level of consultation about inclusion of desalination as an initiative within a water resource portfolio for Sydney. The Department has determined in the Director-General's Report that this issue was beyond the scope of the project's environmental assessment process. Within this framework, the Department indicates, opportunities for public input have been maximised.

5.3.4 The Desalination Plant (Terrestrial Ecology, Culture and Heritage Values)

The Director-General's Report broadly supports the conclusions made in the EAR and the Final PPR. Attention is drawn to Sydney Water's proposal to retain and manage the 15 hectare conservation area within the site, and arrangements to protect threatened species and ecological communities. Recognising Sydney Water's commitments, the Department includes the following recommendations for conditions of consent:

- Preparation of a Conservation Area Management Plan;
- Re-vegetation of degraded parts of the conservation area;
- Oversight during construction by a qualified ecologist during the Grey-headed Flying Fox gestation period;
- Preparation of a Surface Water Management Plan; and
- Preparation of Construction and Operation Noise Management Plans.

The Department notes the concerns registered over heritage issues and examines the nature and basis of these concerns. On balance, the Department supports the commitments made by Sydney Water for sensitive design and construction management in respect of heritage impacts.

5.3.5 Seawater Intake and Wastewater Outlet Structures (Seawater Quality and Aquatic Ecology)

The Director-General's Report highlights four ways in which key potential aquatic ecology and water quality impacts may arise:

- As a direct result of construction activities for the intake/outlet infrastructure;
- Through entrainment of marine biota in the seawater intake;
- From water quality impacts associated with seawater concentrate discharge and from discharge of backwash solids; and,
- From management of the near-field mixing zone.

Following detailed analysis of these issues, the Department recommends conditions of consent that include:

- A requirement to meet ANZECC water quality guidelines during construction and operation;
- Sensitive scheduling of construction works and inclusion of intake/outlet structures in a required Construction Management Plan;
- Consultation with the NSW Department of Primary Industries on the design of the intake/outlet structures;
- Monitoring of ecological health impacts through a Marine Water Quality Ecosystem Monitoring Program;
- Discharge of backwash solids to be prohibited unless peer-reviewed evidence is provided to demonstrate that such discharge can be undertaken in a way which is '...consistent with acceptable environmental outcomes'.

5.3.6 Treated Water Delivery and Distribution Infrastructure (Water Quality, Aquatic Ecology and Terrestrial Ecology)

The Department regards the potential impact on seagrass beds in Botany Bay, and water quality in near-shore locations as the key issues associated with the proposed cross-bay pipeline system. Noting Sydney Water's submission seeks Concept Approval for this infrastructure; the Department recommends that the Minister sets conditions of consent which require both water quality and seagrass offsets to be specifically addressed in any future Project Approval application.

5.3.7 Construction Impacts (Noise, Vibration, Dust/Air Quality, Traffic)

A range of construction impacts were identified in submissions. These included noise, vibration, dust/air quality, traffic, and sedimentation. The Department broadly concurs with Sydney Water's proposed approach to minimising construction impact through a series of specific management plans.

6 Conclusion

The Panel considers that the following conclusions are justified following its nine month period of appointment.

6.1 First Term of Reference

The first Term of Reference stated that the Panel:

Ensure that all issues raised by the community and stakeholders in submissions to the publicly exhibited Environmental Assessment Report prepared by Sydney Water are adequately addressed and responded to by Sydney Water.

In the opinion of the Panel, this Term of Reference has been adequately achieved.

6.2 Second Term of Reference

The second Term of Reference stated that the Panel:

Monitor other forms of community input (other than direct written submissions), issue compilation and assessment, so as to ensure all relevant matters are adequately addressed by the Department in its advice to the Minister.

In the opinion of the Panel, this Term of Reference has been adequately achieved.

6.3 Third Term of Reference

The third Term of Reference stated that the Panel:

Ensure that issues raised in community and stakeholder submissions and Sydney Water responses thereto are adequately addressed and included in the Department of Planning assessment of the proposal and in the Department's advice to the Minister.

In the opinion of the Panel, this Term of Reference has been adequately achieved.

6.4 Outstanding Issues

There were no substantive outstanding issues. However, it is the Panel's view that more could have been done by Sydney Water to demonstrate best practice in its assessment of the options for greenhouse gas reduction and, in particular, more analysis of the market for renewable energy could have been carried out. There is a considerable body of expertise in this field that could have been called upon to provide a fuller evaluation of the potential impacts a desalination plant might have on future renewable energy markets. This was a missed opportunity to demonstrate best practice and to further public understanding of the issues involved.