



Australian Government

Department of the Environment, Water, Heritage and the Arts

Statement of Reasons for Approval under the *Environment Protection and Biodiversity Conservation Act 1999*

I, PETER ROBERT GARRETT, Minister for the Environment, Heritage and the Arts, provide the following statement of reasons for my decision of 19 March 2009, under sections 130 and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), to approve the proposed action by the Victorian Department of Sustainability and Environment to construct and operate a 150 GL/ year (with capacity to expand to 200 GL/ year) seawater reverse osmosis desalination plant near Wonthaggi in Victoria and associated transfer pipeline and electricity infrastructure north of the plant connecting, respectively, to Melbourne Water infrastructure near Cardinia Reservoir and the existing high voltage electricity grid (EPBC 2008/3948).

Legislation

Section 130 of the EPBC Act relevantly provides:

Basic rule

- (1) The Minister must decide whether or not to approve, for the purposes of each controlling provision for a controlled action, the taking of the action.
- (1A) The Minister must make the decision within the relevant period specified in subsection (1B) that relates to the controlled action, or such longer period as the Minister specifies in writing.

Notice of extension of time

- (4) If the Minister specifies a longer period for the purposes of subsection (1A), he or she must:
 - (a) give a copy of the specification to the person proposing to take the action; and
 - (b) publish the specification in accordance with the regulations.

Section 131 of the EPBC Act provides:

- (1) Before the Minister (the **Environment Minister**) decides whether or not to approve, for the purposes of a controlling provision, the taking of an action, and what conditions (if any) to attach to an approval, he or she must:
 - (a) inform any other Minister whom the Environment Minister believes has administrative responsibilities relating to the action of the decision the Environment Minister proposes to make; and
 - (b) invite the other Minister to give the Environment Minister comments on the proposed decision within 10 business days.

- (2) A Minister invited to comment may make comments that:
- (a) relate to economic and social matters relating to the action; and
 - (b) may be considered by the Environment Minister consistently with the principles of ecologically sustainable development.
- This does not limit the comments such a Minister may give.

Section 131AA of the EPBC Act relevantly provides:

- (1) Before the Minister decides whether or not to approve, for the purposes of a controlling provision, the taking of an action, and what conditions (if any) to attach to an approval, he or she must:
- (a) inform the person proposing to take the action, and the designated proponent of the action (if the designated proponent is not the person proposing to take the action), of:
 - (i) the decision the Minister proposes to make; and
 - (ii) if the Minister proposes to approve the taking of the action—any conditions the Minister proposes to attach to the approval; and
 - (b) invite each person informed under paragraph (a) to give the Minister, within 10 business days (measured in Canberra), comments in writing on the proposed decision and any conditions.
- (2) If the Minister proposes not to approve, for the purposes of a controlling provision, the taking of the action, the Minister must provide to each person informed under paragraph (1)(a), with the invitation given under paragraph (1)(b):
- (a) a copy of whichever of the following documents applies to the action:
 - (i) an assessment report;
 - (ii) a finalised recommendation report given to the Minister under subsection 93(5);
 - (iii) a recommendation report given to the Minister under section 95C, 100 or 105; and
 - (b) any information relating to economic and social matters that the Minister has considered; and
 - (c) any information relating to the history of a person in relation to environmental matters that the Minister has considered under subsection 136(4); and
 - (d) a copy of any document, or part of a document, containing information of a kind referred to in paragraph 136(2)(e) that the Minister has considered.
- (3) The Minister is not required to provide under subsection (2):
- (a) information that is in the public domain; or
 - (b) a copy of so much of a document as is in the public domain; or
 - (c) in the case of information referred to in paragraph (2)(b) or (c)—any conclusions or recommendations relating to that information included in documents or other material prepared by the Secretary for the Minister.

- (6) In deciding whether or not to approve, for the purposes of a controlling provision, the taking of the action, the Minister must take into account any relevant comments given to the Minister in response to an invitation given under paragraph (1)(b).

Section 131A of the EPBC Act provides:

Before the Minister decides whether or not to approve, for the purposes of a controlling provision, the taking of an action, and what conditions (if any) to attach to an approval, he or she may publish on the Internet:

- (a) the proposed decision and, if the proposed decision is to approve the taking of the action, any conditions that the Minister proposes to attach to the approval; and
- (b) an invitation for anyone to give the Minister, within 10 business days (measured in Canberra), comments in writing on the proposed decision and any conditions.

Section 133 of the EPBC Act relevantly provides:

Approval

- (1) After receiving the assessment documentation relating to a controlled action, or the report of a commission that has conducted an inquiry relating to a controlled action, the Minister may approve for the purposes of a controlling provision the taking of the action by a person.
- (1A) If the referral of the proposal to take the action included alternative proposals relating to any of the matters referred to in subsection 72(3), the Minister may approve, for the purposes of subsection (1), one or more of the alternative proposals in relation to the taking of the action.

Content of approval

- (2) An approval must:
- (a) be in writing; and
 - (b) specify the action (including any alternative proposals approved under subsection (1A)) that may be taken; and
 - (c) name the person to whom the approval is granted; and
 - (d) specify each provision of Part 3 for which the approval has effect; and
 - (e) specify the period for which the approval has effect; and
 - (f) set out the conditions attached to the approval.

Persons who may take action covered by approval

- (2A) An approval granted under this section is an approval of the taking of the action specified in the approval by any of the following persons:
- (a) the holder of the approval;
 - (b) a person who is authorised, permitted or requested by the holder of the approval, or by another person with the consent or agreement of the holder of the approval, to take the action.

Notice of approval

(3) The Minister must:

- (a) give a copy of the approval to the person named in the approval under paragraph 133(2)(c); and
- (b) provide a copy of the approval to a person who asks for it (either free or for a reasonable charge determined by the Minister).

Notice of refusal of approval

(7) If the Minister refuses to approve for the purposes of a controlling provision the taking of an action by the person who proposed to take the action, the Minister must give the person notice of the refusal.

Section 134 of the EPBC Act provides:

Condition to inform persons taking action of conditions attached to approval

(1A) An approval of the taking of an action by a person (the **first person**) is subject to the condition that, if the first person authorises, permits or requests another person to undertake any part of the action, the first person must take all reasonable steps to ensure:

- (a) that the other person is informed of any condition attached to the approval that restricts or regulates the way in which that part of the action may be taken; and
- (b) that the other person complies with any such condition.

For the purposes of this Chapter, the condition imposed by this subsection is attached to the approval.

Generally

- (1) The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:
- (a) protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or
 - (b) repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage has been, will be or is likely to be caused by the action).

Conditions to protect matters from the approved action

- (2) The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:
- (a) protecting from the action any matter protected by a provision of Part 3 for which the approval has effect; or
 - (b) repairing or mitigating damage that may or will be, or has been, caused by the action to any matter protected by a provision of Part 3 for which the approval has effect.

This subsection does not limit subsection (1).

Examples of kinds of conditions that may be attached

- (3) The conditions that may be attached to an approval include:
- (aa) conditions requiring specified activities to be undertaken for:
 - (i) protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or
 - (ii) repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage may or will be, or has been, caused by the action); and
 - (ab) conditions requiring a specified financial contribution to be made to a person for the purpose of supporting activities of a kind mentioned in paragraph (aa); and
 - (a) conditions relating to any security to be given by the holder of the approval by bond, guarantee or cash deposit:
 - (i) to comply with this Act and the regulations; and
 - (ii) not to contravene a condition attached to the approval; and
 - (iii) to meet any liability of a person whose taking of the action is approved to the Commonwealth for measures taken by the Commonwealth under section 499 (which lets the Commonwealth repair and mitigate damage caused by a contravention of this Act) in relation to the action; and
 - (b) conditions requiring the holder of the approval to insure against any specified liability of the holder to the Commonwealth for measures taken by the Commonwealth under section 499 in relation to the approved action; and
 - (c) conditions requiring a person taking the action to comply with conditions specified in an instrument (including any kind of authorisation) made or granted under a law of a State or self-governing Territory or another law of the Commonwealth; and
 - (d) conditions requiring an environmental audit of the action to be carried out periodically by a person who can be regarded as being independent from any person whose taking of the action is approved; and
 - (e) conditions requiring the preparation, submission for approval by the Minister, and implementation of a plan for managing the impacts of the approved action on a matter protected by a provision of Part 3 for which the approval has effect such as a plan for conserving habitat of a species or ecological community; and
 - (f) conditions requiring specified environmental monitoring or testing to be carried out; and
 - (g) conditions requiring compliance with a specified industry standard or code of practice; and
 - (h) conditions relating to any alternative proposals in relation to the taking of the action covered by the approval (as permitted by subsection 133(1A)).

This subsection does not limit the kinds of conditions that may be attached to an approval.

Considerations in deciding on condition

- (4) In deciding whether to attach a condition to an approval, the Minister must consider:
- (a) any relevant conditions that have been imposed, or the Minister considers are likely to be imposed, under a law of a State or self-governing Territory or another law of the Commonwealth on the taking of the action; and
 - (aa) information provided by the person proposing to take the action or by the designated proponent of the action; and
 - (b) the desirability of ensuring as far as practicable that the condition is a cost-effective means for the Commonwealth and a person taking the action to achieve the object of the condition.

Effect of conditions requiring compliance with conditions specified in another instrument

- (4A) If:
- (a) a condition (the **principal condition**) attached to an approval under paragraph (3)(c) requires a person taking the action to comply with conditions (the **other conditions**) specified in an instrument of a kind referred to in that paragraph; and
 - (b) the other conditions are in excess of the power conferred by subsection (1);
- the principal condition is taken to require the person to comply with the other conditions only to the extent that they are not in excess of that power.

Validity of decision

- (5) A failure to consider information as required by paragraph (4)(aa) does not invalidate a decision about attaching a condition to the approval.

Section 136 of the EPBC Act provides:

Mandatory considerations

- (1) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must consider the following, so far as they are not inconsistent with any other requirement of this Subdivision:
- (a) matters relevant to any matter protected by a provision of Part 3 that the Minister has decided is a controlling provision for the action;
 - (b) economic and social matters.

Factors to be taken into account

- (2) In considering those matters, the Minister must take into account:
- (a) the principles of ecologically sustainable development; and
 - (b) the assessment report (if any) relating to the action; and
 - (ba) if Division 3A of Part 8 (assessment on referral information) applies to the action—the finalised recommendation report relating to the action given to the Minister under subsection 93(5); and
 - (bc) if Division 4 of Part 8 (assessment on preliminary documentation) applies to the action:
 - (i) the documents given to the Minister under subsection 95B(1), or the statement given to the Minister under subsection 95B(3), as the case requires, relating to the action; and
 - (ii) the recommendation report relating to the action given to the Minister under section 95C; and
 - (c) if Division 5 (public environment reports) of Part 8 applies to the action:
 - (i) the finalised public environment report relating to the action given to the Minister under section 99; and
 - (ii) the recommendation report relating to the action given to the Minister under section 100; and
 - (ca) if Division 6 (environmental impact statements) of Part 8 applies to the action:
 - (i) the finalised environmental impact statement relating to the action given to the Minister under section 104; and
 - (ii) the recommendation report relating to the action given to the Minister under section 105; and
 - (d) if an inquiry was conducted under Division 7 of Part 8 in relation to the action—the report of the commissioners; and
 - (e) any other information the Minister has on the relevant impacts of the action (including information in a report on the impacts of actions taken under a policy, plan or program under which the action is to be taken that was given to the Minister under an agreement under Part 10 (about strategic assessments)); and
 - (f) any relevant comments given to the Minister in accordance with an invitation under section 131 or 131A; and
 - (g) if a notice relating to the action was given to the Minister under subsection 132A(3)—the information in the notice.

Person's environmental history

- (4) In deciding whether or not to approve the taking of an action by a person, and what conditions to attach to an approval, the Minister may consider whether the person is a suitable person to be granted an approval, having regard to:
- (a) the person's history in relation to environmental matters; and
 - (b) if the person is a body corporate—the history of its executive officers in relation to environmental matters; and
 - (c) if the person is a body corporate that is a subsidiary of another body or company (the **parent body**)—the history in relation to environmental matters of the parent body and its executive officers.

Minister not to consider other matters

- (5) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must not consider any matters that the Minister is not required or permitted by this Division to consider.

Section 138 of the EPBC Act provides:

Requirements for decisions about Ramsar wetlands

In deciding whether or not to approve for the purposes of section 16 or 17B the taking of an action, and what conditions to attach to such an approval, the Minister must not act inconsistently with Australia's obligations under the Ramsar Convention.

Section 139 of the EPBC Act provides:

Requirements for decisions about threatened species and endangered communities

- (1) In deciding whether or not to approve for the purposes of a subsection of section 18 or section 18A the taking of an action, and what conditions to attach to such an approval, the Minister must not act inconsistently with:
- (a) Australia's obligations under:
 - (i) the Biodiversity Convention; or
 - (ii) the Apia Convention; or
 - (iii) CITES; or
 - (b) a recovery plan or threat abatement plan.
- (2) If:
- (a) the Minister is considering whether to approve, for the purposes of a subsection of section 18 or section 18A, the taking of an action; and
 - (b) the action has or will have, or is likely to have, a significant impact on a particular listed threatened species or a particular listed threatened ecological community;
- the Minister must, in deciding whether to so approve the taking of the action, have regard to any approved conservation advice for the species or community.

Background

1. The proposed action was referred under section 68 of the EPBC Act by the Victorian Department of Sustainability and Environment (DSE). The referral was received by the Department of the Environment, Water, Heritage and the Arts (the Department) on 4 January 2008. The referral indicated that, in the view of the DSE, the proposed action is not a controlled action.

2. The proposed action is to construct and operate a 150 GL/ year (with capacity to expand to 200 GL/ year) seawater reverse osmosis desalination plant and associated infrastructure, near Wonthaggi in Victoria. Seawater will be extracted from Bass Strait, desalinated and treated at the desalination plant, and then pumped into Melbourne's water supply network at Cardinia Reservoir. The proposed Victorian Desalination Project (VDP) works comprise the following components:
 - Desalination plant using reverse osmosis technology
 - Marine structures consisting of the seawater intake and the saline concentrate outlet structures
 - Transfer pipeline (approximately 85km in length) connecting the desalination plant to the Melbourne water supply network
 - Power supply infrastructure to supply electricity to the desalination plant and transfer pipeline.
3. On 4 February 2008, my delegate, Ms Catherine Skippington, Assistant Secretary, Environment Assessment Branch:
 - decided under s75 of the EPBC Act that the proposed action was a controlled action and the controlling provisions were sections 18 and 18A (listed threatened species and communities), and sections 16 and 17B (wetlands of international importance);
 - designated DSE as the proponent of the action under s75(3) of the EPBC Act;
 - decided under s87(1)(a) of the EPBC Act that the proposed action would be assessed by an accredited assessment process, being an Environment Effects Statement under the *Environment Effects Act 1978* (Vic).
4. In accordance with that accredited assessment process, on 13 January 2009, I received the Victorian Minister for Planning's Assessment Report. The report concluded that while the project will have unavoidable environmental impacts, these impacts could be substantially minimised through application of performance requirements that will determine how the project is ultimately delivered by the Project Company. The report noted that there is also scope to further mitigate and in some cases avoid the impact of certain components of the project through the use of alternate construction techniques, adjusting local siting of some works, minimising waste streams, and implementing social offset programs.
5. On 23 January 2009, my delegate requested further information from the proponent regarding the impacts on, and mitigation measures proposed for, listed threatened species and wetlands of international importance.
6. On 4 February 2009, the proponent provided information to the Department which included a report compiling all information about threatened species of terrestrial and freshwater flora and fauna and marine vertebrates (other than marine fishes) that are listed as threatened under provisions of the EPBC Act relative to the VDP (*'Assessment of EPBC Act threatened species for the Victorian Desalination Project, January 2009'*).

7. To allow for consideration of this substantial additional information, on 10 February 2009, my delegate, Ms Catherine Skippington, specified for the purposes of sections 130(1A), 130(1B) and 130(4) of the EPBC Act that the relevant period in which the Minister must make a decision whether or not to approve the controlled action be extended by 15 business days.
8. On 2 March 2009 I wrote to the Secretary of the Victorian Department of Sustainability and Environment, the Minister for Infrastructure, Transport, Regional Development and Local Government, and the delegated departmental contacts for the Minister for Climate Change and Water, and the Minister for Innovation, Industry, Science and Research, seeking comments on the proposed decision and conditions pursuant to sections 131(1) and 131AA(1) of the EPBC Act.
9. On 16 March 2009, the Department received comments from DSE on the proposed conditions of approval. The Minister for Infrastructure, Transport, Regional Development and Local Government, and the delegated departmental contacts for the Minister for Climate Change and Water, and the Minister for Innovation, Industry, Science and Research advised the Department that they would not be providing comment on the proposed decision and conditions.
10. On 19 March 2009, I approved the proposed action with conditions.

Evidence or other material on which my findings were based

11. The evidence or other material upon which my findings were based is listed below:
 - A brief from the Department, dated 24 February 2009 ('the proposed approval decision brief'), which included the following attachments:
 - VDP Assessment under the *Environment Effects Act 1978* (report prepared by Victorian Minister for Planning, January 2009) ('the Assessment Report')
 - VDP Environment Effects Statement Report of the Inquiry to Minister for Planning, 4 December 2008
 - Victorian Desalination Project Environment Effects Statement (EES)
 - A letter received from the proponent on 4 Feb 2009 in response to the Department's request for further information, which included the report '*Assessment of EPBC Act threatened species for the Victorian Desalination Project, January 2009*'
 - Legal considerations relating to decision-making under Part 9 of the EPBC Act
 - VDP Environmental Management Framework Performance Requirements as amended following the Minister for Planning's EES Report
 - Advice from Wetlands Section, DEWHA
 - Draft proposed approval decision
 - Listed threatened species impacts and mitigation measures - summary document
 - VDP description and possible impacts on matters of NES – summary document

- A second brief from the Department, dated 18 March 2009 ('the approval decision brief'), which included the following attachments:
 - The proposed approval decision brief (as described above)
 - Further advice from the Wetlands Section, DEWHA
 - Responses to invitation to comment on proposed decision from DSE
 - Summary of the proponent's comments on proposed approval conditions

Findings on material questions of fact

Project design and delivery

12. The Victorian Government has decided that the project will be delivered through a public-private partnership (PPP) arrangement and that the PPP tender process is being conducted concurrently with the Victorian EES process. Consequently, the EES is based on concept proposals for the works that comprise the project and that the final designs for the project works will not be available until mid 2009 after the successful bidder is chosen. The assessment of and responses to environmental effects in the EES is based on a combination of a 'Reference Project' and Variations of the Reference Project as well as Options that might be considered by a PPP bidder. This approach provided an appropriate basis for assessment of the expected range of impacts on wetlands of international importance and listed threatened species.
13. While broad preferred corridors for the transfer pipeline and power supply have been defined, the specific location of the pipeline/transmission line within the corridors and the form of the transmission line infrastructure (whether overhead or underground) is yet to be finalised.
14. Detailed impacts of the project, and therefore the specific site-based avoidance and mitigation measures to be implemented, will depend on the final project design. Therefore the development and implementation of an *EPBC Act Listed Flora and Fauna Strategy*, *Waterways Environmental Strategy* and *Emergency Incident Environmental Management Strategy* are important conditions of approval.

Wetlands of international importance

15. The proposed action could potentially impact on the Western Port Ramsar wetland ('the Ramsar site').
16. The proposed site for the desalination plant is approximately 13 kilometres from the nearest point of the Ramsar site. The Ramsar site is of national zoological significance as a foraging area and high tide roosting site for migratory waders, as well as for its population of the endangered Orange-bellied Parrot (OBP). The Ramsar site is of national botanical significance for its extensive saltmarsh communities and that there are also a number of areas of national and international geomorphological significance.
17. There will be no significant impacts on the Ramsar site arising from the entrainment of larvae in the intake and consequential food chain impacts, or from the discharge from the marine structures.

18. The most significant risk of impact on the ecological character of the Ramsar site is likely to arise from works required for waterway crossings for the transfer pipeline, and to a lesser extent works near waterways for the power supply infrastructure. In particular, the following actions relating to the proposed VDP may impact on the ecological character of the Ramsar site:
 - Long term changes in the catchment including clearing of indigenous vegetation (particularly in the lower catchment);
 - Construction of drains, channels and waterway crossings leading to erosion and siltation;
 - Disturbance of Acid Sulphate Soils (ASS) in areas which drain into the Western Port Ramsar site.
19. The proposed transfer pipeline alignment for the project passes through the lower catchment of the Ramsar site. Construction of the transfer pipeline would involve vegetation clearing, potential alteration in drainage and crossing of approximately 100 waterways including major tributaries of the Ramsar site. I found that none of the transfer pipeline infrastructure would be located within the boundaries of the Ramsar site.
20. The Victorian Performance Requirements (PRs) for the project include a number of requirements which will minimise impacts on the Ramsar site, particularly PRs 7, 13 and 14.
21. Consent under the *Water Act 1989* (Vic) will be required for waterways crossings in relation to the transfer pipeline and power supply.
22. I considered that the implementation of the PRs and the approvals for waterway crossings under the *Water Act 1989* (Vic) would reduce the impacts on the Ramsar site. However, I concluded that it was necessary to further strengthen and support these requirements and I therefore made the development and implementation of an *EPBC Act Listed Flora and Fauna Strategy, Waterways Environmental Management Strategy and Emergency Incident Environmental Management Strategy* conditions of approval.
23. The *Waterways Environmental Management Strategy* must include commitments to specific measures to avoid or reduce impacts on waterways that are identified as 'sensitive' in the context of potential impacts on the Ramsar site.

Listed threatened species

24. The proposed action could potentially impact on a number of listed threatened species, including: River Swamp Wallaby-grass (*Amphibromus fluitans*), the Southern Brown Bandicoot (*Isodon obesulus obesulus*), Growling Grass Frog (*Litoria raniformis*), Dwarf Galaxias (*Galaxiella pusilla*) and Giant Gippsland Earthworm (*Megacolides australis*).

25. Actions relating to the proposed VDP that could potentially impact on listed threatened species include:
- Native vegetation and habitat loss, damage and fragmentation;
 - Injury to and/or mortality of native fauna species;
 - Restriction on the movement of native fauna species;
 - Disturbance through noise and vibration arising from construction activities;
 - Disturbance from lighting; and
 - Habitat degradation through changes in hydrology, sedimentation, pollution dust, spillages, introduction of weeds and pests.
26. The objective of many of the Victorian Performance Requirements (PRs) for the VDP, particularly PRs 6, 28, 29, 30 and 31, is to minimise impacts on flora and fauna. These PRs provide an appropriate framework in which to address many of the likely impacts on EPBC-listed threatened species.
27. The proponent has provided a report, '*Assessment of EPBC Act Threatened Species for the Victorian Desalination Project, January 2009*', which contains options aimed at reduction or mitigation of impacts on listed threatened species and their habitat. While the actual avoidance and mitigation measures implemented by the proponent will be influenced by the final site design and the results of further surveys, I considered that impacts on listed threatened species are able to be minimised through the implementation of appropriate measures, such as those described in the report and discussed in paragraphs 30, 35, 39, 44, 49, 55, 61, 64, 70, 74, 81 and 87.
28. I made the development and implementation of an *EPBC Act Listed Flora and Fauna Strategy* a condition of approval. This strategy must include commitments to specific measures to avoid and/or mitigate impacts on listed threatened species.
29. No suitable habitat for the following species was identified within the footprint of any component of the project, and therefore no targeted surveys were undertaken:
- Swamp Everlasting (*Xerochrysum palustre*) (Vulnerable)
 - Matted Flax-lily (*Dianella amoena*) (Endangered)
 - Maroon Leek-orchid (*Prasophyllum frenchii*) (Endangered)
 - Metallic Sun-orchid (*Thelymitra epipactoides*) (Endangered)
 - Cream Spider-orchid (*Caladenia fragrantissima orientalis*) (Endangered)
30. The '*Assessment of EPBC Act Threatened Species for the Victorian Desalination Project, January 2009*', proposes the following measures in the event that further specimens or populations of EPBC-listed threatened flora species are detected prior to construction:
- In the event that any further specimens or populations of listed threatened flora species are detected prior to construction, consideration should be given in the first instance to minor realignment to avoid disturbance, where applicable. Translocation and/or propagation to appropriately protected public or private local reserves offering suitable habitat for the species should be undertaken if avoidance is not possible; and

- In the event that any further specimens or populations of listed threatened flora species are detected prior to construction, adjacent to the footprint of any component of the project, their location should be clearly marked and they should be protected from inadvertent disturbance during construction by temporary fencing and establishment of clearly defined 'no-go' area(s).

River Swamp Wallaby-grass (Amphibromus fluitans) (Vulnerable) (RSWG)

31. Targeted surveys for RSWG have been conducted at the desalination plant site and along the proposed alignments for the power supply and the transfer pipeline. A number of plants were identified within the desalination plant site at Property 336 (4 plants) and Property 48 (approximately 40 plants, subject to confirmation of identity). The VDP may result in the removal of the four RSWG plants on Property 336, and that as Property 48 is not part of the development footprint, the 40 RSWG plants present on the property are unlikely to be impacted.
32. The four RSWG plants present on Property 336 do not represent an important population, and the removal of these plants is not likely to have a significant impact on the species.

Strzelecki Gum (Eucalyptus strzeleckii) (Vulnerable) (SG)

33. Targeted surveys for SG have been conducted along the proposed power supply alignment. Approximately 35 SG trees were identified within the power supply alignment, and up to 36 'potential SG' were mapped along the power supply alignment. The removal of indigenous vegetation for the power supply might include the removal of SG.
34. Due to the small number of SG that may be impacted by the power supply the action is not likely to have a significant impact on the species.
35. Impacts of the action on SG could be further reduced or mitigated by implementation of measures such as the following:
 - In the design of the final alignment for the power supply route, minor re-alignments should be made so as to avoid loss or disturbance of SG wherever practicable;
 - In the event that any SG are to be removed or lopped, those individuals should be identified as early as possible. Such trees should be monitored so that seed can be harvested from them at appropriate times. Seed should be propagated and planted in appropriately protected public or private local reserves; and
 - In the event that any further specimens or populations of SG exist adjacent to the final alignment, their location should be clearly marked and they should be protected from inadvertent disturbance during construction by temporary fencing and establishment of clearly defined 'no go' area(s). These areas should be sufficiently large to protect the entire root zone of protected trees from any form of disturbance, including soil compaction.
36. I considered that impacts on SG are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 35. The *EPBC Act Listed Flora and Fauna Strategy*, required as a condition of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Green-striped Greenhood (Pterostylis chlorogramma) (Vulnerable) (GSG)

37. The proposed alignment for the transfer pipeline includes a firebreak at the Holden Proving Ground which has been identified as potential habitat for the GSG.
38. No GSG were recorded in surveys of the area during spring 2008; however, results of this survey do not preclude the possible presence of GSG within the transfer pipeline alignment, as it may have been dormant at the time of assessment. I found that if any GSG are present, the construction of the transfer pipeline may impact the species.
39. Impacts of the action on GSG could be reduced or mitigated, as a precautionary approach, by implementation of measures such as the following:
- Restrict the transfer pipeline alignment to the far western boundary of the Holden Proving Ground so as to incorporate the minimum amount of the firebreak; and
 - Exclude the easternmost 3m of the firebreak along its length within the Holden Proving Ground from the pipeline alignment and construction zone. This 3m wide zone should be clearly marked to protect its length as a 'no-go' area. No spoil or materials should be placed in this area.
40. I considered that impacts on GSG are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 39. The *EPBC Act Listed Flora and Fauna Strategy*, required as a condition of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Southern Brown Bandicoot (Isodon obesulus obesulus) (Endangered) (SBB)

41. The SBB is known from narrow corridors of habitat along roads, drains and rail easements in the Koo-wee-rup area traversed by the power supply and transfer pipeline alignments.
42. Targeted surveys for SBB were undertaken at sites along the proposed power supply and transfer pipeline alignments, and in the Kilcunda-Harmer's Haven Coastal Reserve (adjacent to the desalination plant site).
43. Three locations along the power supply alignment and two locations (five 'sites') along the transfer pipeline alignment have been confirmed to be inhabited by or support habitat for the SBB. It is likely that any potential effects of the VDP on the SBB would be confined to these locations. The most important habitat feature of these sites for SBB is dense understorey vegetation.
44. Impacts of the action on SBB could be reduced or mitigated by implementation of measures such as the following:
- Desalination Plant Site
 - Establish a fenced, 50 metre-wide buffer zone from the landward edge of the Kilcunda – Harmer's Haven Coastal Reserve adjacent to the desalination plant site. Ensure that this buffer is not used for any construction activity, including materials storage;
 - Inlet and outlet pipes connecting the desalination plant with the sea should be tunnelled as deep as is practical beneath the Kilcunda – Harmer's Haven Coastal Reserve; and
 - Set back entry and exit shafts for inlet and outlet tunnels connecting the desalination plant to the sea as far inland from the Kilcunda – Harmer's Haven Coastal Reserve as is practical.

- **Power Supply**

- Design should ensure that infrastructure for an overhead powerline, including poles, towers, tracks and construction zones, is sited outside of identified habitats for the SBB;
- Where unavoidable, removal of understorey vegetation should be kept to the absolute minimum and dense understorey vegetation should be re-established as soon as possible following completion of construction;
- Until such time as vegetation is re-established sufficiently to provide dense cover, artificial cover, such as culverts may be laid on the surface to provide artificial cover to facilitate movement by SBB across the alignment;
- Locations where habitat for SBB exists should be clearly marked and protected from inadvertent disturbance during construction by temporary fencing and establishment of clearly defined 'no - go' area(s); and
- At locations where habitat for SBB exists, all vegetation beneath 3 metres in height should, to the greatest extent practicable, be retained intact within the powerline easement subject to complying with Electricity Safety (Electric Line Clearance) Regulations (Vic.) and subject to controlling the total quantity of burnable materials on the easement.

- **Transfer Pipeline**

- At the two locations where the transfer pipeline intersects with major drain reserves that are habitats for SBB, loss of habitat may be avoided by the use of trenchless technology (e.g. pipe-jacking). However, prior to selection of a final construction technique, a full evaluation of the relative risks of various construction techniques should be undertaken to determine the method that presents the least risk to the species and its habitat.
- Where unavoidable, removal of understorey vegetation should be kept to the absolute minimum and dense understorey vegetation should be re-established as soon as possible following completion of construction;
- Until such time as vegetation is re-established sufficiently to provide dense cover, artificial cover, such as culverts may be laid on the surface to provide artificial cover to facilitate movement by SBB across the alignment;
- As a precautionary measure, in the event that SBB inhabit the area of the alignment at the Holden Proving Ground, the transfer pipeline alignment should be restricted to the far western boundary of the Holden Proving Ground so as to incorporate the minimum extent of the firebreak;
- During construction at locations of SBB habitat, trenches should be open for the minimum practical period. Whenever practical, trenches should be closed overnight. Ramps should be placed into open trenches overnight to facilitate escape by any animals that become trapped. Open trenches at such locations should be checked early each morning and a qualified zoologist should be engaged to remove any trapped animals; and
- If any populations of SBB are detected at any further locations, prior to construction of the project, the measures outlined above should be applied to such additional sites.

45. I considered that impacts on SBB are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 44. The *EPBC Act Listed Flora and Fauna Strategy*, required as a condition of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Growling Grass Frog (Litoria raniformis) (Vulnerable) (GGF)

46. Targeted surveys for the GGF were undertaken at a number of sites along the length of the transfer pipeline alignment and the co-located southern portion of the power supply alignment. The presence of GGF was confirmed on the desalination plant site, and at sites along the power supply and transfer pipeline alignment.
47. The GGF habitat on the desalination plant is located at Property 48 which is not part of the development footprint and habitat will remain intact. A total of six locations on the power supply alignment, and 16 locations on the transfer pipeline alignment are considered to provide habitat for the GGF.
48. Potential impacts of the VDP on GGF at these sites include minor loss of habitat, risk of frogs becoming trapped in trenches and short-term impacts on aquatic and riparian vegetation and/or water quality. These impacts are expected to be confined to the period of construction of the pipeline/powerline and subsequent rehabilitation of the habitat in a manner suitable for the species is proposed.
49. Impacts of the action on GGF could be reduced or mitigated by implementation of measures such as the following:
- Ensure infrastructure for an overhead powerline is sited outside of, and buffered from, the riparian zone of all waterways;
 - Retain riparian habitat intact beneath overhead electricity wires;
 - Utilise trenchless techniques (e.g. horizontal directional drilling) where appropriate for underground pipeline/powerline crossings of waterways;
 - If underground crossings of waterways are trenched, undertake trenching when flow is lowest, minimise disturbance to banks, stream bed and riparian zone, and rehabilitate disturbed areas;
 - During construction at locations of GGF habitat, trenches should be open for the minimum practical period. Whenever practical, trenches should be closed overnight. Ramps should be placed into open trenches overnight to facilitate escape by any animals that become trapped. Open trenches at such locations should be checked early each morning and a qualified zoologist should be engaged to remove any trapped animals;
 - If any populations of GGF are detected at any further locations prior to construction of the project, the measures outlined above should be applied to such additional sites;
 - If habitat is to be disturbed, impacts on the GGF can be reduced by avoiding construction during their active season between November and March;
 - If impacts on aquatic and riparian vegetation and/or water quality are unavoidable, losses should be kept to an absolute minimum and measures to avoid and reduce effects of construction on water quality must be implemented;
 - Any areas where vegetation is lost should be rehabilitated as soon as possible following completion of construction.

50. I considered that impacts on GGE are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 49. The *EPBC Act Listed Flora and Fauna Strategy*, *Waterways Environmental Management Strategy* and *Emergency Incident Environmental Management Strategy*, required as conditions of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Giant Gippsland Earthworm (Megascolides australis) (Vulnerable) (GGE)

51. Three active GGE populations were identified during targeted surveys along the power supply alignment. No evidence of GGE was found during targeted surveys of the transfer pipeline alignment, however, potential habitat was identified in the Almurta – Glen Forbes – Woolamai area of the Bass River Valley.
52. Mechanical earthworks such as excavation directly impact on GGE survival by physically damaging individual earthworms and their egg cocoons. The earthworms generally occur within the top 1.5m of soil at an average depth of 0.5m, while egg cocoons are found within 40cm of the soil surface. Individuals have no regenerative capacity and die if injured. GGE that are incidentally exposed during earthworks are subject to damage from UV radiation, desiccation and predation. Compaction caused by heavy machinery may affect burrow structure and the worm's ability to make new burrows.
53. Alteration of the watertable and natural drainage patterns are probably of the most serious threats to the GGE populations as soil moisture and hydrological conditions appear to influence distribution. Water balance within burrows is important for worm movement and respiration and burrows occupied by worms always have water within them. Potential impacts include physical disturbance to the soil habitat (physical and chemical) and local hydrological disturbance (local drainage patterns and water table levels).
54. Potential impacts on GGE in the power supply alignment may result from earthworks associated with construction of transmission towers and/or poles, along the access tracks leading to and from these sites, or through digging trenches for the underground powerline. The generally small size and discrete nature of GGE colonies is expected to permit micro-siting of the design so that the power supply avoids colonies with appropriate buffer distances.
55. Impacts of the action on GGE could be reduced or mitigated by implementation of measures such as the following:
- Investigate and map the extent of known GGE colonies at a fine level of detail in order to incorporate avoidance of colonies with appropriate buffer distances into a final, fully specified design for the powerline;
 - Site all transmission line infrastructure that entails soil disturbance outside, and buffered from, known colonies of GGE;
 - Survey final alignment prior to construction, targeting potential GGE habitat. If populations of the species are found, localised realignment of the placement of transmission towers and/or poles is recommended. For an overhead powerline this is feasible given the patchy distribution of the worm and the average transmission line span length of 380 metres. For an underground powerline this should also be feasible given a degree of flexibility in siting of an alignment;

- Ensure all GGE sites identified are protected by buffer zones. These sites need to be protected from all earthworks associated with the installation of the transmission towers and/or poles, and associated infrastructures such as access roads and storage of equipment. Recommended buffer zones are:
 - A minimum of 50 metres for sites where active GGE were identified;
 - A minimum of 30 metres for sites where old GGE burrows were identified; and
 - A minimum of 30 metres for all watercourses within the known range of the species.
- Consider horizontal directional drilling for underground powerline crossing of waterway;
- Ensure that local hydrological regimes around GGE sites are not altered;
- Ensure that a contingency plan, agreed upon and accepted by the relevant authorities, is developed and applies in the event that previously undetected populations of GGE are accidentally exposed during the construction of the power supply. This could include a plan for translocation of specimens encountered;
- Relocating the transfer pipeline alignment within the transfer pipeline corridor. This may be feasible given the generally patchy distribution of the species;
- Tunnelling the pipe underground in instances where GGE are found near creek banks or drainage lines. Pipes can be tunnelled below populations (minimum depth 3.0 m). Buffer zones from creek banks of 30-50m for benching and shaft (insertion points) are required to protect populations. Buffer distances can be determined from localised surveys;
- Translocation of GGE population. This method is time consuming and expensive with some population loss. In situ conservation is recommended under most circumstances. However, translocation may be considered when other forms of mitigation are not possible;
- If any populations of GGE are detected at any further locations prior to construction of the project, the measures outlined above should be applied to such additional sites.

56. I considered that impacts on GGE are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 55. The *EPBC Act Listed Flora and Fauna Strategy* and *Waterways Environmental Management Strategy*, required as conditions of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Orange-bellied Parrot (Neophema chrysogaster) (Critically Endangered) (OBP)

57. There have been six records of OBP within 5km of the VDP study area, and that all were recorded around the mouth of the Powlett River, with the most recent sighting in 2006. Potential habitat for the OBP includes the saltmarsh communities in the Kilcunda-Harmer's Haven Coastal Reserve near the mouth of the Powlett River (~1km from the desalination plant site).

58. Targeted surveys for the OBP were undertaken between March and October 2008.

59. The existence of documented food plants for the OBP at the desalination plant site and the close proximity of the site to the mouth of the Powlett River, suggests that OBP could occasionally occur in the area of the desalination plant. However, introduced species of known food plants recorded at the site are all abundant in agricultural land in the region and in southern Victoria generally and many of these are weeds. The desalination plant site does not offer resources to the OBP that are not abundant and widespread across similar agricultural landscapes within the local area and along much of the coastal zone of Victoria.
60. Impacts on the OBP would be confined to the period from March-September when the species is present in southern Victoria. Minor loss of habitat and disturbance could possibly occur during construction of the transfer pipeline and co-located underground power supply across the Powlett River and associated floodplain. An indirect impact might also arise from the increase number of people accessing the area near the mouth of the Powlett River during the construction period.
61. Impacts of the action on OBP could be reduced or mitigated by implementation of measures such as the following:
- Any potential direct impacts on the OBP from construction on the Powlett River floodplain could be avoided if construction takes place between April and August when the species is not present in Victoria;
 - Loss of OBP habitat on the Powlett River floodplain may be avoided by the use of trenchless technology (e.g. pipe-jacking). However, prior to selection of a final construction technique, a full evaluation of the relative risks of various construction techniques should be undertaken to determine the method that presents the least risk to the species;
 - Where unavoidable, removal of saltmarsh vegetation should be kept to the absolute minimum and appropriate saltmarsh vegetation should be re-established as soon as possible following completion of construction;
 - A program of regular monitoring for OBP in the vicinity of the site should occur during the period when the species occurs on the mainland (March to September inclusive). As a minimum, this should include low-lying portions of the Desalination Plant site and the Kilcunda - Harmer's Haven Coastal Reserve near the mouth of the Powlett River, and should be undertaken until the commencement of construction;
 - Provide all construction and operations personnel with education about conservation measures in place for the species.
62. I considered that impacts on OBP are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 61. The *EPBC Act Listed Flora and Fauna Strategy*, required as a condition of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Swift Parrot (Lathamus discolor) (Endangered) (SP)

63. The presence, or otherwise, of potential habitat for SP was assessed during flora and fauna fieldwork at all project locations. Potential habitat for SP occurs along the power supply and the transfer pipeline alignments. I found that no suitable habitat for SP was found to exist on the desalination plant site. I found that two SP were observed at the Holden Proving Ground; however, these birds were outside the proposed transfer pipeline alignment. I found that the VDP has the potential to remove a small amount of habitat for SP.

64. Impacts of the action on SP could be reduced or mitigated by implementation of measures such as the following:

- Wherever feasible, minor adjustments should be made to ensure that final alignment designs avoid losses of indigenous trees and that any unavoidable removal or lopping of indigenous trees is kept to the absolute minimum.

65. I considered that impacts on SP are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 64. The *EPBC Act Listed Flora and Fauna Strategy*, required as a condition of approval, must include commitments to specific measures to avoid and/or mitigate impacts on this species.

Dwarf Galaxias (Galaxiella pusilla) (Vulnerable) (DG), Australian Grayling (Prototroctes maraena) (Vulnerable) (AG)

66. DG were captured from 4 sites in the vicinity and downstream of the proposed transfer pipeline and power supply crossing points of two waterways (Yallock Creek and the Lang Lang River).

67. Although AG were not captured at any of the sites surveyed for the VDP, AG have been recorded upstream of the proposed transfer pipeline and power supply crossing points of Cardinia Creek, the Bunyip River and Lang Lang River.

68. Potential impacts on the AG and DG from the construction of the power supply and the transfer pipeline water crossings include a change to water regimes and water quality.

69. Potential impacts of the VDP on DG and AG may be largely avoided by provision of adequate buffer zones around the riparian zones of all waterways and identified as "no-go" areas. For the transfer pipeline and underground components of the power supply, employment of trenchless excavation methods at waterway crossings may offer a means to avoid impacts where the species is known or has potential to occur.

70. Impacts of the action on DG and AG could be reduced or mitigated by implementation of measures such as the following:

- Power Supply
 - Ensure infrastructure for an overhead powerline, is sited outside of, and buffered from, the riparian zone of all waterways;
 - Retain riparian habitat intact beneath overhead electricity wires;
 - Utilise trenchless techniques (e.g. horizontal directional drilling) where appropriate for underground powerline crossings of waterways;
 - If underground powerline crossings of waterways are trenched, undertake further surveys for all waterways, with a buffer width of 50m or more, that have not already been assessed. Trenching should occur when flow is lowest and should minimise disturbance to banks, stream bed and riparian zones, and include rehabilitation of disturbed areas;
 - Sediment and erosion control methods and management systems should be implemented consistent with EPA's Best Practice Environment Management - Environmental Guidelines for Major Construction Sites and EPA's Construction Techniques for sediment Pollution Control;
 - Buffer zones of all waterways are clearly marked and fenced as 'no-go' area(s) to protect from inadvertent disturbance during construction;

- Removal or lopping of riparian vegetation along Lang Lang River should be avoided if feasible;
- Keep any unavoidable removal of understorey vegetation to an absolute minimum. Re-established understorey vegetation as soon as possible after completion of construction;
- Vehicle access should be restricted to the minimum necessary within the proposed buffer distances from waterways.
- Transfer Pipeline
 - Use trenchless techniques where appropriate for underground crossings of waterways;
 - Where stream crossings are to be trenched this should be undertaken when flow is lowest, minimising disturbance to the banks, stream bed and riparian zone, and all disturbed areas should be rehabilitated immediately post construction.

71. I considered that impacts on DG and AG are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 70. The *EPBC Act Listed Flora and Fauna Strategy*, *Waterways Environmental Management Strategy* and *Emergency Incident Environmental Management Strategy*, required as conditions of approval, must include commitments to specific measures to avoid and/or mitigate impacts on these species.

EPBC listed Pelagic Birds

72. 17 species of pelagic birds listed under the EPBC Act could possibly occur within the VDP area. Of these, the following three species were recorded during surveys or considered as likely to occur – the Black-browed Albatross (*Thalassarche melanophris*) (Vulnerable), the Shy Albatross (*Diomedea cauta* s. lat.) (Vulnerable) and the Fairy Prion (*Pachyptila turtur* ssp. *subantarctica*) (Vulnerable).
73. Potential risks to the pelagic birds include accidental spillage of chemicals (which is considered as unlikely to occur) and bright lighting to be used to illuminate the terrestrial plant site and jack-up barges and vessels in the marine area of the VDP site if construction takes place during the night.
74. Impacts of the action on EPBC listed pelagic birds could be reduced or mitigated by implementation of measures such as the following:
- The VDP must develop and have capacity to implement response(s) to spills of chemicals according to the Australian Maritime Safety Authority's National Marine Chemical Spill Contingency Plan (ChemPlan), National Guidelines for the Development of Oiled Wildlife Response, Victoria Contingency Arrangements for Marine Chemical Spills, and Victoria's Wildlife Response Plan for Oil Spills;
 - All bright lights, especially floodlights, should be positioned as close to the ground or water as is practical and should be shielded so that light is directed toward the ground only. To the extent practicable, all external light sources should also be shielded to minimise light spill toward the foreshore, beach and the sea. This should be designed to take account of the fact that seabirds may fly high above the sea surface and that the foreshore dunes may not adequately screen lights at the plant site from flying birds;
 - In the event that a seabird collides with a structure and survives, where possible, it should be recovered and cared for by an experienced wildlife carer;

- Design of the plant should ensure that during operation, external lighting is kept to a minimum, that lights are positioned as low to the ground as is practicable and that they are shielded to avoid light spill upward and toward the foreshore, beach and the sea.

75. I considered that impacts on EPBC listed pelagic birds are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 74. The *EPBC Act Listed Flora and Fauna Strategy* and *Emergency Incident Environmental Management Strategy*, required as condition of approvals, must include commitments to specific measures to avoid and/or mitigate impacts on these species.

Grey-headed Flying-fox (Pteropus poliocephalus) (Vulnerable) (GHFF)

76. The presence, or otherwise, of potential habitat for GHFF was assessed during flora and fauna fieldwork at all project locations. The GHFF has not been recorded in the area of the VDP although it may fly-over or visit the power supply and transfer pipeline alignments on rare occasions. Potential habitat for GHFF along these alignments occurs as occasional scattered eucalypts. No suitable habitat exists at the desalination plant site.

77. Any loss of potential habitat for GHFF due to development of the power supply or transfer pipeline will be negligible and there is currently no evidence that the species passes through the area.

78. In the event that GHFF do fly through, there is a low potential for occasional collisions with overhead powerlines that could result in deaths of small numbers of GHFF. This risk would not be present if the power supply is underground rather than overhead. The probability of collisions is likely to be very low and it is not considered that the risk to GHFF alone warrants burying of the powerline, particularly in the light of other species for which this could cause a deleterious impact.

Australian Sea Lion (Neophoca cinerea) (Vulnerable) (ASL), Southern Elephant Seal (Mirounga leonine) (Vulnerable) (SES)

79. The ASL and SES are considered rare visitors to the Wonthaggi area.

80. The inlet structures could present a potential risk to ASL and SES and that if ASL or SES are able to enter the seawater inlets they could become trapped in the intake stream, and that if that were to occur they would be expected to be killed. However, both species can swim strongly against currents considerably greater than the intake flow rates of the VDP structures and are expected to have no difficulty swimming against intake flow rates and away from the inlets.

81. Impacts of the action on ASL and SES could be reduced or mitigated by implementation of measures such as the following:

- The reference design for the project provides for external grill spacings of seawater intakes of 100 mm x 100 mm, or a maximum of 50 mm if another dimension is greater than 100 mm. Dimensions such as these should be maintained as an element of design in order to prevent ASL and SES from entering the inlet structures.

82. I considered that impacts on ASL and SES are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 81. The *EPBC Act Listed Flora and Fauna Strategy*, required as a condition of approval, must include commitments to specific measures to avoid and/or mitigate impacts on these species.

Blue Whale (Balaenoptera musculus) (Endangered) (BW), Southern Right Whale (Eubalaena australis) (Endangered) (SRW), Humpback Whale (Megaptera novaeangliae) (Vulnerable) (HW)

83. It is likely that BW, SRW and HW may pass through coastal waters in the Wonthaggi region close to the desalination plant site, but the area is not known to be a biologically important habitat for these species.
84. Targeted surveys for BW, SRW and HW were not conducted, however incidental observations of marine mammals were made during the course of boat-based surveys for pelagic seabirds conducted during September and October 2008.
85. The principal likely effect of the VDP on whales would come from pre-construction seismic investigations. Activities associated with these investigations could have a potential adverse impact on whales in the immediate vicinity. The Victorian Performance Requirements require that seismic surveys be carried out in accordance with the *EPBC Act Policy Statement 2.1 – Interaction between offshore seismic exploration and whales*, which outlines specific management and mitigation measures that should be implemented in conducting seismic surveys in Australian waters, and which will prevent adverse impacts on whales as a consequence of seismic investigations.
86. Disturbance of whales may also be caused by movements of vessels and aircraft, including helicopters, during construction of the VDP. The construction and presence of seawater intake and saline discharge structures is not considered likely to significantly influence the behaviours, including migrations, of whales or have any other adverse impact on this species.
87. Impacts of the action on BW, SRW and HW could be reduced or mitigated by implementation of measures such as the following:
 - Undertake seismic surveys, if required, between January and April when SRW and HW are seasonally absent from waters of southern Australia. However, that period would conflict with seasonal avoidance for BW. SRW and HW are more likely to enter waters near the VDP area and should thus be given priority in adoption of a seasonal approach to seismic surveys;
 - Regardless of the timing of any potential seismic surveys, compliance with measures prescribed in the *EPBC Act Policy Statement 2.1 – Interaction between offshore seismic exploration and whales* and with the *Wildlife (Whale) Regulations 1998* will minimise potential impacts of seismic survey on the BW, SRW and HW; and
 - The *Wildlife (Whale) Regulations 1998* and Section 76 of the *Wildlife Act 1975* regulate movements of vessels in order to minimise negative effects on cetaceans and must be complied with.
88. I considered that impacts on BW, SRW and HW are able to be substantially reduced or mitigated through the implementation of appropriate measures, such as those described in paragraph 87. The *EPBC Act Listed Flora and Fauna Strategy* and *Emergency Incident Environmental Management Strategy*, required as conditions of approval, must include commitments to specific measures to avoid and/or mitigate impacts on these species.

Social and economic matters

89. The Victorian Government's Assessment Report contains information about the social and economic impacts of the VDP, including that:

- The implementation of the VDP is of critical importance for the orderly development of secure water supply infrastructure to meet the social and economic needs of Victorians;
- The implementation of the VDP will have an overall positive economic impact on regional income and employment, including increasing local industry participation in major infrastructure development;
- Economic impacts on regional agriculture and marine-based commercial activities would be relatively minor compared to the economic and social benefits of the project;
- The VDP is unlikely to have a significant economic impact on regional tourism; and
- While the VDP could have some adverse socio-economic effects in the Bass Coast region, these could be mitigated if sound strategies are developed and implemented expeditiously.

90. I found that the likely adverse social and economic effects of the VDP on residents and visitors in local towns, especially Wonthaggi, Dalyston and Kilcunda, include:

- Disruption to residents and businesses during construction of the underground transfer pipeline;
- Ongoing effects on perceptions of landscape quality from an overhead powerline; and
- Temporary impacts on accommodation availability and costs, as well as access to community services in Wonthaggi and nearby townships, during the construction period.

91. The Assessment Report proposes a number of measures to be implemented by the Victorian State Government to address the potentially significant impacts on social and economic well-being in the local region as a result of the VDP. These measures include:

- Establishment of a Community Reference Group to facilitate communication during the construction phase;
- Development and implementation of a Construction Workforce Accommodation Strategy;
- Establishment of a Regional Impact program and a social impact monitoring program;
- Augmenting or complementing existing health services and infrastructure, as well as education facilities and staffing and emergency services, in order to meet increased demands during the project construction period.

92. I concluded that the measures outlined in the Assessment Report would adequately address the social and economic impacts of the project.

Conclusion

93. In deciding whether or not to approve the taking of the proposed action for each of the controlling provisions, I took into account (among other matters) the principles of ecologically sustainable development as required under section 136(2)(a) of the EPBC Act, and the precautionary principle as required under section 391 of the EPBC Act.

94. In light of my findings, I concluded that the potential impacts of the action on wetlands of international importance and listed threatened species and communities are acceptable, if taken in accordance with the conditions of approval. I therefore decided on 19 March 2009 to approve, subject to conditions, the taking of the proposed action for the purposes of sections 16 and 17B (wetlands of international importance) and sections 18 and 18A (listed threatened species and communities).

Signed



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PETER ROBERT GARRETT

28 April 2009