

Southern Seawater Desalination Project

Social Impact Management Plan

Prepared by Beckwith Environmental Planning
Pty Ltd

Prepared for the Water Corporation

June 2009

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Sincerely,



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Limitations

Beckwith Environmental Planning Pty Ltd has prepared this report for the use of the Community Reference Group and Water Corporation in accordance with the usual care and thoroughness of the consulting profession. It is based on generally accepted practices and standards at the time it was prepared. The methodology adopted and sources of information used by Beckwith Environmental Planning Pty Ltd are outlined in this report.

This report was prepared between December 2008 and June 2009 and is based on the conditions encountered and information reviewed at the time of preparation. Beckwith Environmental Planning Pty Ltd disclaims responsibility for any changes that may have occurred after this time. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

Report Authorship

This report has been prepared on behalf of and for the exclusive use of the Water Corporation, and is subject to and issued in accordance with the agreed terms and scope between the Community Reference Group, Water Corporation and Beckwith Environmental Planning Pty Ltd.

Abbreviations

ABS	Australian Bureau of Statistics
CEMF	Construction Environmental Management Framework
CRG	Community Reference Group
DoCEP	Department of Consumer and Employment Protection
DEC	Department of Environment and Conservation
DEWHA	Department of Environment, Water, Heritage and the Arts
DIA	Department of Indigenous Affairs
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
FESA	Fire and Emergency Service Agency
GL	Gigalitre
IWSS	Integrated Water Supply Scheme
LGAs	Local Government Authorities
MRWA	Main Roads Western Australia
MSDS	Material Safety Data Sheet
NTCG	Native Title Claimant Group
OEMF	Operational Environmental Management Framework
PER	Public Environmental Review
cPER	Commonwealth Public Environmental Review
SIA	Social Impact Assessment
SIMP	Social Impact Monitoring Plan
SSDP	Southern Seawater Desalination Plant
SSWA	Southern SeaWater Alliance
ToR	Terms of Reference
WAPC	Western Australian Planning Commission
WET	Whole Effluent Toxicity

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1 Introduction

1.1 Background

On 15 May 2007, the West Australian Government announced that, pending State and Federal environmental approvals, the State's second seawater desalination plant would be built at a location along the coast between the communities of Binningup and Myalup in the Shire of Harvey. The Southern Seawater Desalination Plant (SSDP) will produce 50 Gigalitres per year (GL/yr) of potable water (i.e. of drinking water quality) for the Water Corporation's Integrated Water Supply Scheme¹ (IWSS). Plant construction is scheduled to commence in 2009, with the plant starting operation by 2011.

The site chosen for the SSDP is located on Lots 32, 33 and Part 8 Taranto Road (Figure 1). The SSDP is located adjacent to the Water Corporation's existing Binningup Wastewater Treatment Plant.

From a social impact perspective, the key characteristics of the SSDP project include:

- The town site of Myalup is located approximately 1300 m north of the SSDP site. The town site of Binningup is located approximately 800 m south of the SSDP.
- The SSDP will include: two seawater intake structures, a seawater supply pipeline, a potable water production reverse osmosis desalination plant, and a brine discharge pipeline and diffuser.
- The potable water produced at the SSDP will be transported (approximately 28.5 km) via a buried pipeline to storage tanks (to be constructed) approximately 3 km north-east of the Harvey town site (Figure 1).
- The construction workforce will range from approximately 250 people to 500 people during peak times. The average worker is expected to remain on site between two months and one year.
- The operations workforce will consist of approximately 20 – 25 people.
- The nearest noise sensitive premise to the SSDP site is approximately 600 m to the south-east. The nearest noise sensitive premise to the Harvey Summit Tanks site is approximately 650 m to the north-east. A number of noise sensitive premises occur within 50 m of the Water Transfer Pipeline.
- During construction, it is estimated that 5,000 vehicle movements will occur each week. Of these movements, the ratio of trucks to cars is expected to be 1:5.

¹ The IWSS provides public water supply to the greater Perth metropolitan area, towns and farmlands in the Central Wheatbelt between Mundaring Weir and Kalgoorlie Boulder, and a number of communities in the Great Southern.

- The construction workforce will park their vehicles at an on-site lot.
- The tallest building on site will be the lime storage tower at 18 metres high.
- During construction a permanent stock fence will be constructed around Lots 32, 33 and Part Lot 8.
- The external light levels will be no greater than street lighting levels.
- The design of the SSDP provides the potential to increase plant production to 100 GL/yr at some future point in time. This potential increase has been allowed for in the current regulatory approvals.

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Figure 1 SSDP site and pipeline route

Blue: Water Transfer Pipeline Route
Red: Existing IWSS Distribution and Trunk Mains
Green: Harvey Summit Tanks Site
Yellow: SSDP Site

In November 2008, the Water Corporation selected the Southern SeaWater Alliance (SSWA or Alliance)² as the preferred consortium to construct and operate the SSDP for 25 years. The infrastructure will be handed over to the Water Corporation, at which time a decision will be made about the future operation of the SSDP. The Alliance, by contract, is required to fulfil all commitments made by the Water Corporation.

1.2 Social Impact Management Plan

As part of the project planning and regulatory approval processes, the Water Corporation commissioned technical studies to evaluate the potential positive and negative impacts of the proposed SSDP on the environment and community. This included a social impact assessment (SIA) by GHD in 2008.

The SIA identified a range of social and economic impacts that could occur during the construction and/or operations phases of the SSDP. The SIA evaluated the significance of the predicted impacts and identified management measures for the predicted impacts. This included a recommendation to prepare a Social Impact Management Plan (SIMP).

The SIA (GHD 2008) established the following objectives for the SIMP:

- To manage social impacts throughout the design, construction and operations phases of the SSDP.
- To ensure new information about social impacts is considered in evaluating impacts, their significance and the management actions required.
- To take into account the findings of those studies incomplete at the time of the SIA (e.g. noise and visual analysis).
- To further investigate the recommendations made in the SIA, in consultation with the SSDP Alliance and relevant stakeholders.
- To periodically evaluate the efficacy of mitigation, enhancement and monitoring measures.
- To be flexible and adaptive in order to identify unexpected impacts and manage them appropriately.
- To foster stronger working relationships between the community and the proponent.

2 Predicted social impacts and management

A key source document is the SIA (GHD 2008) and its proposed management measures. At the time the SIA was prepared, a number of key technical studies needed to support the social impact assessment had yet to be

² The SSWA is led by Tecnicas Reunidas and Valoriza Agua. The companies have partnered with local construction company AJ Lucas and engineering consultancy Worley Parsons. The Water Corporation is a part of the Alliance.

completed, including final project design and construction method(s). This meant that the significance of some impact issues could not be assessed in the SIA.

Results of the technical studies and their management measures are documented in the:

- Southern Seawater Desalination Project: Construction Environmental Management Framework (Water Corporation 2008a) (CEMF)
- Southern Seawater Desalination Project: Operational Environmental Management Framework (Water Corporation 2008b) (OEMF)
- Southern Seawater Desalination Project: Environmental Impact Assessment Public Environmental Review (Water Corporation 2008c) (PER)
- Southern Seawater Desalination Project: Commitments Register (Water Corporation 2009)
- Southern Seawater Desalination Project: Commonwealth Public Environment Report (URS 2009) (cPER)
- Statement that a proposal may be implemented (Pursuant to the Provisions of the *Environmental Protection Act 1986*) (Minister for Environment 2009) (Minister for Environment)

Following completion of the SIA, several modifications were made to the proposed project in an effort to remove or reduce potential negative impacts. Most notable from a social impact assessment and management perspective were the following:

- Originally, the worst case scenario impact assessment anticipated that the beach would need to be closed for up to 18 months for construction of the ocean discharge pipeline, including a temporary jetty. Instead, the ocean pipeline will be buried and constructed via a tunnelling process. As a result, 200 metres of the beach, either side of the pipeline, will be closed for only 2-3 weeks rather than 500 metres, either side of the pipeline, for up to 18 months.
- The worst case scenario impact assessment originally indicated that a camp would be built to house the construction workforce. A camp is not part of the preferred bidder's design for the construction phase. Instead, workers will either commute to work from existing residences or find their own temporary accommodation within the surrounding area (e.g. Binningup, Myalup, Australind, Eaton, Shire of Harvey, Greater Bunbury area).

Table 1 summarises the predicted social impacts and associated management measures as of May 2009. Where the predictions and management measures from earlier documents have been updated this is indicated in Table 1 under the heading 'May 2009'.

The SIMP is intended as a living document. Over time, the SIMP will be updated by the proponent to reflect:

- Any further changes in the project design
- Social impact monitoring results
- Adjustments made to the impact management measures
- Any additional technical studies

As of May 2009, several of the technical studies (e.g. traffic management plan) and baseline monitoring activities (e.g. cetacean monitoring) remain outstanding. Information regarding the timing of these studies is included in Table 1.

As a note of clarification, the SIA significance ratings in Table 1 apply the study areas used in the SIA (GHD 2009). These are:

- Immediate Study Area: Suburbs of Myalup and Binningup
- Local Study Area: State Suburbs of Myalup, Binningup, Wellesley, Wokalup and Harvey
- Regional Study Area: City of Bunbury and Shire of Harvey local government areas
- State: Western Australia

Table 1 Predicted social impacts and management measures

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
Local community trust in proponent	<p>SIA (p.58):</p> <ul style="list-style-type: none"> • Although no baseline data was available, the SIA indicated that some loss of trust was likely occurring in the immediate and local study areas. • Impact significance: Moderate significance in the immediate and local study areas <p>May 2009:</p> <ul style="list-style-type: none"> • Community survey conducted 02/09 established baseline trust data (Appendix A). • Local community trust in proponent will depend on performance of the project in the construction and operations phases. Trust should increase over time provided the project performs well. 	<p>SIA (p.116):</p> <ul style="list-style-type: none"> • Create a Community Reference Group (CRG), with representatives from the local community and Shire, as a mechanism for local community engagement during the construction phase. • Provide a communications officer for the duration of the design and construction phases. • Maintain a publically available commitments register of impact management measures and progress in meeting the commitments. • Implement a Social Impact Management Plan • Implement and monitor a communication strategy to provide effective communication channels between the proponent and the community. <p>Commitments Register (p.1):</p> <ul style="list-style-type: none"> • The Water Corporation communications officer will work with the Alliance to maintain open communication with the community. • The Water Corporation will communicate any extraordinary circumstances or events with the SSDP that might affect or interest the community. • The communications officer will establish and maintain a complaints register to ensure any concerns brought to the Water Corporation are resolved appropriately and in a timely manner. • The desalination hotline (1 800 810 075) and email address (desalination@watercorporation.com.au) will continue during the construction phase to facilitate community reporting of

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Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>problems or enquiries.</p> <ul style="list-style-type: none"> At commencement of the construction phase, signage will be posted at the plant site with the Water Corporation’s contact details. <p>May 2009:</p> <ul style="list-style-type: none"> Repeat the community survey at the end of the of the construction phase.
Impact on community character and satisfaction ³	<p>May 2009:</p> <ul style="list-style-type: none"> Local community trust in proponent will depend on performance of the project in the operations phases. Trust should increase over time provided the project performs well. <p>May 2009:</p> <ul style="list-style-type: none"> The proponent has decided a workforce construction camp is not required. Construction workers will commute from their homes or use available accommodation in the local (e.g. Binningup and Myalup) and surrounding area (e.g. Shire of Harvey, Eaton, Australind, City of Bunbury). Construction activities will have some impact on amenity in the immediate vicinity of the plant site. The nearest 	<p>May 2009:</p> <p>Repeat the community survey after several years of plant operation. Continue the CRG and commitments register into the operations phase of the project.</p> <p>SIA (p.117):</p> <ul style="list-style-type: none"> Provide construction employees with a community induction kit and monitor implementation. Develop and monitor implementation of a construction workforce code of conduct. Organise community events to encourage interaction between residents and construction employees. Contribute funds to environmental restoration efforts in the local community. Implement CEMF recommendations regarding dust, noise and light. Proponent to organise open days and tours to educate the community about the project <p>Commitments Register (p.1):</p> <ul style="list-style-type: none"> The Alliance will put in place agreed fire management plans that include FESA consultation and review.

³ Two of the impact issues identified in the SIA (impact on community cohesion and impact on community character and amenity) were merged to create ‘impact on community character and satisfaction’.

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p>residence to the site is 600 metres away. This buffer will reduce the potential for impact on residential amenity.</p> <ul style="list-style-type: none"> • The construction related effects that cumulatively could change community character and amenity are: <ul style="list-style-type: none"> ○ Noise and vibration ○ Dust due to land clearing ○ Visual impact and light spill ○ Traffic ○ Closure or restrictions on beach or marine access <p>These impact categories are discussed below.</p>	<ul style="list-style-type: none"> • The Water Corporation and the Alliance will use suitably qualified local persons and contractors where possible. <p>May 2009:</p> <ul style="list-style-type: none"> • Proponent to monitor the residency of the construction workforce and make LGAs aware of construction workforce numbers and timing. • Repeat the community survey at the end of construction phase. • It is important incompatible land uses not be established in proximity to the site. As with any proposals for new land uses in proximity to the site would be required to go through the Shire of Harvey’s planning use planning process. • The footprint of the SSDP facility will not be expanded after the initial construction phase.
	<p>SIA (p.103):</p> <ul style="list-style-type: none"> • There are community concerns that plant operations may create noise, dust and traffic issues. • Impact significance: Low significance in immediate and local study areas. <p>May 2009:</p> <ul style="list-style-type: none"> • Impacts on community character and amenity are likely to be minimal due to location of site, small permanent workforce and low number of vehicle 	<p>SIA (p.125):</p> <ul style="list-style-type: none"> • Conduct open days and tours of the SSDP facilities • Encourage employees to become part of the local community • Obtain feedback from CRG regarding implementation of mitigation measures <p>May 2009:</p> <ul style="list-style-type: none"> • Repeat the community survey after several years of plant operation. • It is important incompatible land uses not be established in proximity to the site. As with any proposals for new land uses in proximity to the site

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	movements.	would be required to go through the Shire of Harvey’s planning use planning process.
Noise impacts	<p><u>Construction Phase</u></p> <p>CEMF (p.78):</p> <ul style="list-style-type: none"> The nearest noise sensitive premise to the SSDP site is approximately 600 m to the south-east. The nearest noise sensitive premise to the Harvey Summit Tanks site is approximately 650 m to the north-east. A number of noise sensitive premises occur within 50 m of the Water Transfer Pipeline. <p>PER (p.219):</p> <ul style="list-style-type: none"> Construction works use heavy machinery that will create noise. This noise may interfere with the amenity of occupants of near residential properties. Under adverse wind conditions, it is predicted that pile driving could result in noise levels as high as 60 L_{max} at Binningup. It has yet to be determined if pile driving will be required. 	<p>CEMF (p.78):</p> <ul style="list-style-type: none"> Plant and practices that have the lowest possible noise emissions will be used where practicable. Portable noise generating equipment (e.g. generators) will be located as far away from noise sensitive premises as practicable. Noise screening will be installed where particularly noisy construction works are conducted adjacent to residential premises. Known noisy activities (e.g. rock breaking) will be scheduled during daylight hours (nominally 7 am to 7 pm) where they occur within 100 m of residential premises. Notice to the Landowner of the residential premises will be provided prior to the commencement of such works. The occupiers of each premises will be given written notice when emissions will be likely to exceed the specified noise levels at least 24 hours prior to such works for Sunday and Night Construction Works (7 pm to 7 am). Blasting will only be undertaken between 7 am and 6pm on any day. Blasting noise (air blast level) will be measured if blasting occurs within 100 m of any residential premises. Noise monitoring and contingency measures (See Table 2) <p>PER (p.219/220) ⁴:</p>

⁴ In many cases, the PER summarizes management measures specified the CEMF and OEMF. To reduce repetition, Table 1 identifies the management measures provided in the PER not already outlined by the CEMF and the OEMF.

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<ul style="list-style-type: none"> • When 24-hour construction works are required (e.g. continuous concrete pours) relevant Shire of Harvey approvals will be obtained and the affected communities will be notified. • Transport vehicles will use major transport routes, with movement restricted to the hours between 6 am and 8 pm. • An earth berm (bund) will be constructed on the southern and eastern boundaries of Part Lot 8. This will complement the natural sand ridge that exists at the southern boundary of Lots 32 and 33, which will function as a noise barrier. • Any required blasting will comply with the noise limits and blasting times stated in the <i>Environmental Protection (noise) regulations 1987</i> (WA). <p>Commitments Register (p.2):</p> <ul style="list-style-type: none"> • The Water Corporation will schedule construction activities between 7 am and 7 pm, with blasting to be undertaken only between the hours of 7 am and 6 pm. Shire of Harvey approvals will be obtained and the affected communities notified if noisy activities are to be undertaken outside of these working hours.

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p><u>Operations phase:</u> PER (p.230):</p> <ul style="list-style-type: none"> • Noise emissions from the SSDP will have negligible effect on noise levels at existing residential premises. • Predicted noise levels are lower than the required standard (30L_{A10}). • The plant is able to comply with the requirements of the <i>Environmental Protection (Noise) Regulations 1997</i> (WA) for future residential premises constructed up to the site boundary. • Noise will not be an issue during operation of the Water Transfer Pipeline or Harvey Summit Tanks. 	<p>PER (p.230):</p> <ul style="list-style-type: none"> • The main noise generating equipment (i.e. Seawater Pumping Station, Reverse Osmosis Buildings and the Potable Water Pump Station) will be located, as far as practicable, away from the site boundaries. • The proponent will comply with the noise limits specified in the <i>Environmental Protection (Noise) Regulations 1987</i> (WA). • Monitoring will be undertaken at the commencement of plant operations to confirm compliance with the noise regulations. Monitoring is not considered necessary beyond the 12-month period, as noise levels are not expected to change over time. • Transport vehicles will be restricted to major roads.
Vibration impacts	<p><u>Construction phase:</u> CEMF (p.83):</p> <ul style="list-style-type: none"> • Vibration caused by construction works (including earthmoving, rock breaking and blasting) has the potential to affect the integrity of buildings and their fittings. <p>PER (p.218):</p> <ul style="list-style-type: none"> • The construction works on the Water Transfer Pipeline route will cause ground vibrations that may affect buildings within 100 m of construction works, or within 1000 m of blasting. 	<p>CEMF (p.83):</p> <ul style="list-style-type: none"> • Vibrations standards will be met: 5 mm/s is not to be exceeded for 9 in 10 blasts and 10 mm/s is not to be exceeded at any time. • Landowners located within 100 m of all construction works, and within 1000 m of any blasting, will be offered a pre-construction property condition assessment. The assessment will be conducted by a Building Inspector in consultation with the Landowner to identify any existing building defects (e.g. cracking). The assessment will include use of a video and/or photographs to document any existing building defects. A Property Condition Report will be prepared by the Building Inspector and provided to the Landowner.

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<ul style="list-style-type: none"> • The Building Inspector will undertake a second property condition assessment in consultation with the Landowner following the completion of construction works near the property for comparison to the pre-construction property condition report. • Any new building defects, or worsened existing defects, that are caused by the construction works will be repaired. The repairs will be conducted in consultation with the Landowner and to a standard equivalent or better than the pre-construction condition. • No fee will be charged to the Landowner to undertake the property condition assessments, reports or any required repair works. • Vibration monitoring and contingency measures (See Table 2) <p>PER (p.222/223)</p> <ul style="list-style-type: none"> • The German Standard DIN 4150-3 (1999) will be used as the vibration objective given the absence of an Australian Standard for construction vibration on buildings.
	<p><u>Operations phase:</u> PER (p.230):</p> <ul style="list-style-type: none"> • Operation of the plant, pipeline and tanks will not cause any vibration impacts. 	<p>PER (p.230):</p> <ul style="list-style-type: none"> • None
Dust impacts	<p><u>Construction phase:</u> CEMF (p.23):</p> <ul style="list-style-type: none"> • Dust can be generated from land clearing activities, and from cleared areas exposed to wind. Dust generation has the potential to be a physical and health 	<p>CEMF (p.25):</p> <ul style="list-style-type: none"> • Dust generation will be minimised and controlled. • Daily weather forecasts will be obtained for temperature and wind speed (South West Land Division - Bureau of Meteorology).

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p>hazard, and can adversely affect the amenity of the construction staff, the community and agricultural crops.</p> <p>PER (p.208):</p> <ul style="list-style-type: none"> • Management actions for dust suppression for both the plant site and the pipeline are expected to control dust emissions effectively through dust suppression measures and prompt rehabilitation. 	<p>Forecast information will be made available to persons involved in dust generating and suppression activities.</p> <ul style="list-style-type: none"> • Water trucks and/or water cannons will be used to dampen areas identified as being potentially dust generating (sandy soils, soil stockpiles, unsealed access roads etc). The frequency of dampening will be determined based on weather conditions. • Dewatering water may be used for dust suppression activities if the dewatering water meets the criteria for discharge to land contained in the Dewatering and Acid Sulphate Soils Management Plan. • Other dust control measures may be implemented (such as hydro-mulching, wind fencing, hardstanding or chemical dust suppressants). • Vehicles transporting soils off-site will be covered to minimise dust generation during transport. <p>PER (p.209):</p> <ul style="list-style-type: none"> • Dust management actions during water transfer pipeline construction will include: <ul style="list-style-type: none"> ○ The Contractor will not burn cleared vegetation. ○ Prompt rehabilitation will be conducted on the disturbed corridor. ○ The Contractor will evenly re-spread any stockpiled topsoil over the construction area as soon as reasonably practicable following ripping and grading.
	<p><u>Operations phase:</u> OEMF: No impact predicted</p>	<p>OEMF: None</p>

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
<p>Impact of plant on visual amenity</p>	<p><u>Construction Phase</u> SIA (p.66):</p> <ul style="list-style-type: none"> Structures and activities associated with construction could diminish visual amenity if they are visible. Impact significance: No predicted impact on local and regional study area. Undefined impact on immediate study area due to absence of a visual assessment. <p>CEMF (p.23):</p> <ul style="list-style-type: none"> Construction of the SSDP, Water Transfer Pipeline and Summit Tanks will require the clearing of some land and native vegetation (agricultural land, road reserves and State Forest). <p>CEMF (p.110):</p> <ul style="list-style-type: none"> The density and diversity of rehabilitated native revegetation will change over time. It would be unlikely that rehabilitation of native vegetation could support a self-sustaining plant community with comparable species density and species diversity to the pre-existing vegetation within a period of 20 to 30 years. 	<p>SIA (p.119):</p> <ul style="list-style-type: none"> Implement the visual impact management strategies outlined in the CEMF and SIMP Rehabilitate the areas cleared as soon as reasonably practicable following the completion of construction works. <p>SIA (p.126)</p> <ul style="list-style-type: none"> Encourage a plant design that blends with the landscape. Use mature trees to create a screen, reducing the visual impact. <p>Commitments Register (p.1):</p> <ul style="list-style-type: none"> The location of the pilot plant is outside the proposed area of the SSDP plant. Any impacts on native vegetation from installing the pilot plant, which is likely to be housed in a shipping container, will be mitigated by fully re-instating the landforms and revegetation. <p>CEMF (p.23):</p> <ul style="list-style-type: none"> Limiting vegetation clearing to pre-determined clearing widths to reduce the area requiring rehabilitation. Topsoil removed during clearing will be returned after installation of infrastructure. Control of dust generation through watering, covering of vehicles transporting soils off-site. Other dust control measures may be implemented (e.g. hydro-mulching, wind fencing, hardstanding or chemical dust suppressants). Cleared vegetation will not be burned. Topsoil stock piles will not exceed 10m in height. <p>CEMF (p.107):</p> <ul style="list-style-type: none"> The Rehabilitation Plan objectives are:

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<ul style="list-style-type: none"> ○ To rehabilitate agricultural land disturbed during construction to a condition equal to the pre-construction condition and that is acceptable to the landowner. ○ To rehabilitate native vegetation (including dune vegetation) to a condition that supports a self-sustaining plant community with comparable density and diversity to the pre-existing vegetation. • Supplementary seeding, direct planting, fertilising and/or irrigation will be undertaken if the monitoring identifies poor growth in any revegetation area following the completion of spring monitoring. • Rehabilitation monitoring (See Table 2) <p>PER (p.238):</p> <ul style="list-style-type: none"> • A vegetated berm (or bund) will be constructed along the southern and eastern boundary of Part Lot 8. The berm will act as a visual screen between the site and exist and future southern/eastern properties and the Binningup township. • Visual impact assessment work will be undertaken while the plant design is finalised and shared with the community. <p>May 2009:</p> <ul style="list-style-type: none"> • The SSDP draft facility design will be completed by the end of the 2009. The draft facility design will be presented to the CRG for its review and comment before finalisation.

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	<p><u>Operations Phase</u> SIA (p.105)</p> <ul style="list-style-type: none"> The plant and its night time lighting may be visible from the beach and major roads. This could affect the way people experience the area. Impact significance rating: Low significance for immediate study area. <p>PER (p.237):</p> <ul style="list-style-type: none"> The SSDP could have some visual impact on the local area, given the nature and scale of the project. 	<p>SIA (p.126)</p> <ul style="list-style-type: none"> Work with the CRG to monitor implementation of the mitigation strategies. <p>PER (p.238):</p> <ul style="list-style-type: none"> The site will be revegetated post-construction. The dune immediately adjacent to the SSDP will be rehabilitated post-construction (CEMF Rehabilitation Management Plan p.107). The external light levels will be no greater than street lighting levels. Factors determining lighting impacts include: security requirements, safety requirements and operational requirements.
Impact of pipeline construction on visual amenity	<p><u>Construction phase:</u> SIA (p.68):</p> <ul style="list-style-type: none"> The visual impact resulting from the construction of the pipeline includes open trenches, vegetation clearing of the corridor, heavy machinery, areas for temporary storage of materials and equipment, traffic of heavy vehicles and parking space. The pipeline will impact directly (by crossing the property) on 26 properties and indirectly (pipeline along the road frontage) on 72 properties. Duration - Pipeline trench segments will remain open for up to 7 days. Impact significance rating: Not defined <p>CEMF (p.107):</p>	<p>SIA (p.119):</p> <ul style="list-style-type: none"> Notify the community in advance of major construction activities that will result in visual impacts Work with the CRG to identify potential problems and appropriate mitigation strategies Negotiate with landowners directly affected by the pipeline to minimise any disturbance to the landowners. <p>CEMF (p.107):</p> <ul style="list-style-type: none"> On agricultural properties once rehabilitation is completed, the growth success will be monitored for a period of one full spring following seeding and fertilising. The growth success will be measured by vegetation cover and vigour compared to pre-construction photographs. Where vegetation cover or vigour is not equal to or better than pre-construction conditions within the first 12 months following construction, seeding, fertilising and irrigation will be repeated. A report will be provided detailing the

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<ul style="list-style-type: none"> • Construction of the Seawater Desalination Plant, Water Transfer Pipeline and the Harvey Summit Tanks will involve clearing of agricultural land and native vegetation (located in agricultural land, road reserves and State Forest) (guided by the CEMF Land Clearing and Trench Management Plan p.23) CEMF (p.110): • The density and diversity of rehabilitated native revegetation will change over time. Such changes include: <ol style="list-style-type: none"> 1. increase in overstorey height. 2. development of understorey with increased overstorey height. 3. leaf litter drop from overstorey to suppress weed species. 4. species recruitment from adjacent vegetation. • It would be unlikely that rehabilitation of native vegetation could support a self-sustaining plant community with comparable species density and species diversity to the pre-existing vegetation within a period of 20 to 30 years. 	<p>monitoring undertaken and the results of growth success and soil consolidation.</p> <ul style="list-style-type: none"> • Soil consolidation in the construction areas will be monitored on all laser levelled irrigation paddocks and measure any soil consolidation. • Remedial works will be undertaken to correct soil consolidation for consolidation greater than 3cm in laser levelled irrigation paddocks or greater than 10cm in irrigated paddocks within the first 12 months following completion of construction works. • For areas rehabilitated with native vegetation a report on the monitoring will be prepared. The monitoring will assess the density and diversity of the rehabilitated areas compared to pre-construction photographs and reports. <p>Following, the first monitoring, if poor growth is identified, supplementary seeding, direct planting, fertilizing and/or irrigation will be undertaken.</p>
	<p><u>Operations phase:</u> SIA: No impact predicted.</p>	<p>SIA: None</p>

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
Impact of tank on visual amenity	<p><u>Construction Phase</u> SIA (p.70):</p> <ul style="list-style-type: none"> The tank site was selected, in consultation with the Shire of Harvey, to minimize visual impacts. Impact significance: Not defined; insufficient <p>CEMF (p.107):</p> <ul style="list-style-type: none"> See Impact of pipeline construction on visual amenity 	<p>SIA (p.119):</p> <ul style="list-style-type: none"> Notify affected residents and community in advance of construction works that will result in visual impacts Work with the CRG to identify potential problems and appropriate mitigation strategies <p>CEMF (p.107): See Impact of pipeline construction on visual amenity</p>
	<p><u>Operations phase:</u> Visual Impact Assessment (p.14):</p> <ul style="list-style-type: none"> The Harvey Summit Tank cannot be seen from the South West Highway, Honeymoon Road or the north east of Harvey Summit Tank. 	<p>Visual Impact Assessment:</p> <ul style="list-style-type: none"> No management measures needed
Impact on beach and ocean-based recreation	<p><u>Construction Phase</u> CEMF (p.36):</p> <ul style="list-style-type: none"> The intake pipelines will extend from the shore approximately 600 m offshore and the outlet pipelines to up to 1100 m offshore. The construction works may impact marine flora. Impacts relate to the suspension of sediments, which can reduce light available to marine flora for photosynthesis and settle onto marine flora. 	<p>SIA (p.118):</p> <ul style="list-style-type: none"> Provide clear and timely information about closures, including details about timeframes or potential dangers. Consult with CRG when determining timeframes and processes for construction activities. <p>Commitments Register (p.1):</p> <ul style="list-style-type: none"> The Water Corporation has already held discussions with the Binningup Surf Life Savers and will assist them to safely manage any risks associated with the project construction. The Water Corporation has commissioned Western Whale

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	<ul style="list-style-type: none"> Blasting has the potential to affect marine mammals (including whales and dolphins) if they are within the immediate vicinity of blasts. Specific construction methods for seawater pipeline installation have not yet been selected. <p>PER (p.225)</p> <ul style="list-style-type: none"> There will be permanent restrictions to Lots 32, 33 and Part Lot 8. <p>cPER (p.95)</p> <ul style="list-style-type: none"> The area of marine benthic habitat disturbed from construction will be limited to a 500 m long by 50 m wide area (2.5 hectares). Work will be undertaken for a period of up to 18 months. The site selected is generally devoid of habitat features (e.g. reefs, sponge gardens, algal beds) and has limited seagrass coverage. <p>May 2009:</p> <ul style="list-style-type: none"> The beach will be closed 200 metres either side of the pipeline for 2-3 weeks during construction. 	<p>Research to undertake a community marine mammal monitoring programme. Community members will have the opportunity to contribute sightings to this project.</p> <ul style="list-style-type: none"> Management Plans relating to matters of interest to the DEWHA will be included with the Public Environment Report submitted to the DEWHA. <p>CEMF (p.36):</p> <ul style="list-style-type: none"> A Marine Exclusion Area will be established with marine warning buoys installed nominally at 300m, 550m, 800m, 1050m and 1300m from the beach and nominally 500m north and south of the marine pipeline alignment. Offshore construction works will be contained within the Marine Exclusion Zone. A Beach Exclusion Area will be established at nominally 500m north and south of the marine pipeline alignment The public will be notified of the exclusion areas via: <ul style="list-style-type: none"> Installation of signage at the Binningup and Myalup beach car parks Installation of signage on each exclusion fence Placing a Notice to Mariners in the public notices section of the West Australian and Harvey Reporter Public notice signage will be installed on the Beach Exclusion Area fencing and at the entrance to the main public beach at both Binningup and Myalup on each day of blasting. An Ocean Watch Vessel will survey the ocean for a 1 hour period immediately prior to blasting with a 2 km radius of the blast site. Blasting will not be undertaken if whales or dolphins are within a 1 km radius of the blast area. Marine construction works will temporarily cease if whales or dolphins (cetaceans) are sighted within the Marine Exclusion

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>Zone.</p> <ul style="list-style-type: none"> • Seawater pipelines will be buried under the beach and offshore until a nominal 6 m seawater depth contour. • The beach profile will be monitored during and post-marine construction activities. Post-construction it will be restored consistent with the surrounding natural beach profile, which will start within 6 months of the marine works being completed. It will be monitored over a 12-month period following marine works; should the profiles show greater erosion in the vicinity of the marine works than elsewhere, an additional 12 months of profiling will be undertaken. • The Shire of Harvey will be informed prior to any underwater blasting. • Public notice signage will be installed on the Beach Exclusion Area fencing and at the entrance to the main public beach at both Binningup and Myalup on blasting days. • Blasting will not be undertaken if whales or dolphins are located within a 1 km radius of the blast area. As Ocean Watch Vessel will ensure other vessels do not come within 500 m of the blast site. An Underwater Blasting Log will be completed for each blast. Visible fish mortalities from within 500 m of the blast site will be removed immediately following blasting. • Post-construction all infrastructure and materials will be removed from the beach. • Disturbed beach areas will be rehabilitated in accordance with the Rehabilitation Management Plan. • Implement beach and marine monitoring commitments (Table 2).

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>PER (p.225/227):</p> <ul style="list-style-type: none"> • Lots 32, 33 and Part Lot 8 will be permanently fenced excluding any access. <p>cPER (p.96)</p> <ul style="list-style-type: none"> • Vessel crews engaged in marine construction activities will undertake a site induction about the potential impacts to significant marine fauna and appropriate risk avoidance and mitigation measures. • As far as practicable, any underwater blasting will be conducted outside of the recognised migration periods in the area for southern right whales and humpback whales. <p>Commitments Register (p.2):</p> <ul style="list-style-type: none"> • Tunnelling methodology will be utilised under the beach as opposed to open trenching. <p>Binningup Beach Mega-Fauna Line Transect Research Project:</p> <ul style="list-style-type: none"> • Conduct a line transect survey to provide baseline data on: <ul style="list-style-type: none"> ○ Age and sex classes of dolphins, ○ Dolphin abundance ○ Dolphin habitat use ○ Critical areas for dolphins ○ Seasonal presence and abundance of penguins, whales, seals, sea lions and turtles. • A final line transect survey report will be provided 27 months after field work commencement. • The project will commence in June 2009 and end in June 2011. The final report will be submitted in September 2011. <p>Minister for Environment (6-2):</p> <ul style="list-style-type: none"> • The proponent will prepare and implement a Marine

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p><u>Operations Phase</u></p> <p>SIA (p.102):</p> <ul style="list-style-type: none"> • Previous EIAs indicate that significant impacts on marine environment as a result of brine discharge is unlikely. The area affected by the discharge pipeline is not part of the main beaches of Binningup and Myalup. • Impact significance: Low significance for all study areas. <p>OEMF (p.14):</p> <ul style="list-style-type: none"> • Whole effluent toxicity (WET) is a reliable way to measure the potential biological impacts of the brine discharge on the surrounding environment. 	<p>Environment Monitoring Program to the satisfaction of the Chairman of the EPA. The program will establish baseline data and triggers for monitoring the marine environment.</p> <p>SIA (p.123):</p> <ul style="list-style-type: none"> • Provide signage to inform visitors of location and timing of beach/marine closures. <p>OEMF (p.14):</p> <ul style="list-style-type: none"> • WET testing of the desalination plant discharge will occur twice during operation using a sample obtained: (a) within three (3) months of establishment of a brine discharge, and (b) twelve (12) months after establishment of a brine discharge. • Testing will follow the WET methodology in the OEMF (p.14) • Grab samples will be collected at the outlet and 2 km south of the diffuser. The exact location will be recorded in accurate geographic coordinates. Modelling shows that the desalination effluent will be fully mixed within 2 km of the discharge point. • Reports will be submitted to the Department of Environment and Conservation (DEC) for the WET tests conducted. <p>cPER (p.96)</p> <ul style="list-style-type: none"> • The risk of entrapment of marina fauna will be minimised by design and operational safeguards. The intakes will comprise a cylinder or similar with a perimeter screen to prevent large fish, seaweed, marine mammals, seabirds, and turtles from being drawn in. • The risk of entrapment will be minimised by drawing in water at an intake velocity less than the higher water velocities that naturally occur in the Binningup area and to which 'swimming'

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>organisms have habituated.</p> <ul style="list-style-type: none"> • The brine discharge will be monitored for levels of nutrients toxicants and process additive chemicals as part of the Discharge Water Quality Monitoring Plan. • Benthic habitat monitoring will be conducted between 18 and 30 months of the initiation of brine discharge. • Regular cleaning of the intake screens will be conducted and live biota entrapped on the screens will be released in the area away from the intake pipelines. <p>Minister for Environment (6-2):</p> <ul style="list-style-type: none"> • The proponent will prepare and implement a Marine Environment Monitoring Program to the satisfaction of the Chairman of the EPA. The program will establish baseline data and triggers for monitoring the marine environment.
<p>Disruption to properties along the pipeline</p>	<p><u>Construction phase:</u> SIA (p.72):</p> <ul style="list-style-type: none"> • Impacts on properties could include removal of fences, earthworks, dust, lighting, noise, traffic, visual impact and increase in traffic on local roads. • Pipeline construction will impact directly (by crossing the property) on 26 properties and indirectly (pipeline along the road frontage) on 72 properties. • Impact significance rating: High significance for affected properties <p>CEMF (p.23):</p>	<p>SIA (p.120):</p> <ul style="list-style-type: none"> • Develop, maintain and evaluate a strategy to facilitate communication between the Water Corporation and the immediate and local study areas. This should include notifying affected residents in advance of construction works. • Keep the width of the pipeline construction corridor to a minimum where possible. • Pipeline trench segments will remain open for up to 7 days. • Use construction methods and machinery that produce the least amount of noise (e.g. no night time works). <p>SIA (p.26):</p>

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	<ul style="list-style-type: none"> • See Dust impacts CEMF(p.107): <ul style="list-style-type: none"> • See Impact of pipeline construction on visual amenity 	<ul style="list-style-type: none"> • Landowners directly impacted will be paid compensation: (1) for damages occurring during construction and (2) for taking an easement. For both forms of compensation the Water Corporation will use an independent assessor. If requested, the Water Corporation will pay for the landowner to obtain an independent assessment by an assessor of their choice. CEMF (p.23): <ul style="list-style-type: none"> • See Dust Impacts CEMF (p.107): <ul style="list-style-type: none"> • See Impact of pipeline construction on visual amenity
	<u>Operations phase:</u> SIA: No impact predicted.	SIA: None
Impact on future residential development	<u>Construction Phase:</u> SIA (p. 74): <ul style="list-style-type: none"> • The SSDP project will not result in any buffer zones that extent beyond the project boundary; therefore it does not result in any new strictions to residential development. • The lot purchased for the site is already disturbed by mining activity. • The project will not result in any change of zoning • Impact significance: Low significance in immediate study area 	SIA (p.120): <ul style="list-style-type: none"> • Implement and evaluate appropriate impact management measures (e.g. berm, noise management). • Implement a landscape management plan • Project design should consider future residential development

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Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<u>Operations Phase</u> SIA: No impact predicted	SIA: None
Impact on industrial development in the local area	<u>Construction phase:</u> SIA (p.76): <ul style="list-style-type: none"> • There is concern that the SSDP will attract industrial development to the area, negatively impacting the community identify. • The area surrounding the desalination plant site is not zoned for industrial land uses, and any intentions to place industrial or public utilities in the area would require town planning approvals. • The State Government can resume private land for public utilities. However, there are no known plans for this to occur. • Impact significance rating: Low significance impact rating for immediate study area 	SIA (p.120): <ul style="list-style-type: none"> • No mitigation or monitoring measures identified. May 2009: <ul style="list-style-type: none"> • It is important incompatible land uses not be established in proximity to the site. As with any proposals for new land uses in proximity to the site would be required to go through the Shire of Harvey’s planning use planning process. • The footprint of the SSDP facility will not be expanded after the initial construction phase.
	<u>Operations Phase</u> SIA: No impact predicted	SIA: None
Impact of overhead powerlines	<u>Construction Phase:</u> SIA (p.78): <ul style="list-style-type: none"> • A 132 KV transmission line from the 	SIA (p.121): <ul style="list-style-type: none"> • No mitigation or monitoring measures identified.

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required to provide energy for the plant	<p>Kemerton Industrial Estate to the plant site at Taranto Road is required to power the proposed desalination plant. Potential impacts including visual impact, land resumption, environmental impacts, noise, dust and visual intrusion.</p> <ul style="list-style-type: none"> Impact significance: Not defined. Insufficient information. <p>May 2009:</p> <ul style="list-style-type: none"> The preferred transmission line corridor has been submitted to the EPA and DEWHA. 	<ul style="list-style-type: none"> Western Power will be responsible for managing the powerlines. PER (p.109) The Water Corporation will work closely with Western Power to ensure that social impacts of the power line construction are mitigated and managed appropriately.
	<p><u>Operations Phase</u> SIA: No impact predicted</p>	<p>SIA: None</p>
Risk to public safety	<p><u>Construction Phase:</u> SIA (p. 79):</p> <ul style="list-style-type: none"> There could be a risk of contamination from the disturbance of acid-sulphate soils and organo-chloride contaminated soils. Impact significance: Not defined. Impact to be dealt with in the environmental impact assessment and risk assessment <p>CEMF (p.90):</p> <ul style="list-style-type: none"> Dangerous goods used and stored during construction works will include 	<p>SIA (p.121):</p> <ul style="list-style-type: none"> Develop risk management and emergency response plans. Evaluate the implementation of these post-incidents. Implement applicable risk management recommendations in the CEMF Implement safety procedures for safe management and storage of chemicals and fuel (see CEMF Dangerous Goods and Explosives Management Plan p.90) Raise community awareness about the public safety measures to be implemented

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p>hydrocarbons (fuels & oils), and chemicals for water treatment (chlorine, acids). Spillages of dangerous goods have the potential to:</p> <ul style="list-style-type: none"> ○ contaminate soil, surface water and groundwater. ○ impact personnel and public safety. ○ create an ignition source. <ul style="list-style-type: none"> • Explosives may also be stored and used for blasting of rock for pipeline installation. Explosives need to be contained to prevent unauthorised access and ignition. <p>PER (p.212):</p> <ul style="list-style-type: none"> • Chemicals, classified dangerous goods and explosives have the potential to harm human health and the environment, if released in an uncontrolled manner to land, water or the atmosphere. • The chemicals and dangerous goods (except for explosives) are safely used and managed by the Water Corporation in water treatment facilities throughout Western Australia. Accordingly, the relative risk on the use of chemicals and dangerous goods is considered manageable and low. 	<ul style="list-style-type: none"> • Provide a mechanism for the community to report public safety and risk concerns <p>Commitments Register (p.2):</p> <ul style="list-style-type: none"> • Advisory warning boards identifying hazards, risks, safety requirements and emergency phone numbers will be installed at each entry to all constructions areas. • Machinery (and plant) that is located in publicly accessible locations will be secured (in a locked compound where practicable) when the construction site is not occupied. <p>CEMF (p.90):</p> <ul style="list-style-type: none"> • Dangerous goods: <ul style="list-style-type: none"> ○ A licence will be obtained from the Chief Inspector of the DoCEP prior to storing any dangerous goods ○ Liquid dangerous goods will be stored in a bund or compound capable of containing 110% of the volume of the goods stored ○ Dangerous good to be stored in minimum quantities, where possible ○ Incompatible dangerous goods will be segregated ○ Dangerous goods will not be stored within 25 m of any watercourse or wetland • Explosives: <ul style="list-style-type: none"> ○ A permit will be obtained from the Chief Inspector of the DoCEP prior to storing or using explosives ○ A Shotfire’s Permit will be obtained for use of explosives ○ Construction within 20m of identified unexplored ordnances will cease until FESA has attended and confirmed the area safe • For each dangerous good and explosive, an MSDS will be located

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>outside its storage area and will be placarded in accordance with the DoCEP's <i>Guidance Note for Placarding</i></p> <ul style="list-style-type: none"> • A Dangerous Goods and Explosives Log will be maintained along with a site plan that identifies the storage location of each dangerous good • Dangerous goods and explosives will be stored in a locked compound. Ignition sources will be prohibited within any storage compound. • All construction staff will be trained on the identification, storage and handling of dangerous goods and explosives and response procedures for accidents, incidents and emergencies. • A Spill Response Kit will be installed and maintained at each construction site • The following will be notified of any accident involve explosives or dangerous goods <ul style="list-style-type: none"> ○ The Chief Inspector of the DoCEP ○ FESA if there has been, or the potential exists, for a significant impact on the environment or human safety • DEC if there has been, or the potential exists, for a significant impact on the environment <p>PER (p.212):</p> <ul style="list-style-type: none"> • If explosives are used during construction, specialist persons experienced in the handling and use of explosives will be required to achieve a low level of risk. • Storage facilities for dangerous goods will be located towards the centre of the SSDP site in order to provide a chemical buffer of approximately 250 m from all surrounding land uses. • The impacts of materials transport vehicles will be minimised by

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>using major roads (to minimise disturbance on local traffic and residences) and limiting large vehicle movements to within daylight hours (nominally 6 am to 8 pm). Traffic signage in accordance with Australian Standard 1742.3-2002 (Standards Australia 2002) and detours will be used where required for the protection of public safety from construction works and vehicle movements.</p> <ul style="list-style-type: none"> The public will be prevented from accessing terrestrial construction areas by security fencing around the SSDP Site (including an exclusion area 200 m to the north and the south of intake and outlet pipe construction corridors on the beach), Water Transfer Pipeline and the Harvey Summit Tanks. The SSDP site (excluding the beach) and the Harvey Summit Tanks will be permanently fenced to prevent public access during operations. No fencing is required of the Water Transfer Pipeline as it will be buried. <p>May 2009:</p> <ul style="list-style-type: none"> The Emergency Management Plan, Emergency Response Plan and Crisis Management and Recovery Plan will be completed prior to site mobilisation. This will include an emergency communication protocol for making the community aware of any emergencies and required actions.
	<p><u>Operations phase:</u> SIA (p. 111):</p> <ul style="list-style-type: none"> The presence of chemicals for the treatment of desalination water and maintenance of equipment during the 	<p>SIA (p.127):</p> <ul style="list-style-type: none"> Develop risk management and emergency response plans and evaluate the application of the plans Implement safety procedures for management and storage of

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p>operation of the plant create the risk of spillage or leaks.</p> <ul style="list-style-type: none"> Impact significance: Not defined. Impact to be dealt with in the EIA and Risk Assessment <p>OEMF (p.30):</p> <ul style="list-style-type: none"> A number of chemicals are used during the seawater desalination process and subsequent potibilisation process. Safe management of transport, storage and use of chemicals at the desalination plant site can prevent any safety or environmental incidents <p>PER (228):</p> <ul style="list-style-type: none"> Chemicals and classified dangerous goods have the potential to harm human health and the environment if released in an uncontrolled manner to land, water or the atmosphere. 	<p>chemicals</p> <ul style="list-style-type: none"> Provide opportunities for the community to report public safety issues and evaluate those reported Raise community awareness about the public safety and risks associated with the project Implementation of the CEMF Dangerous Goods and Explosives Management Plan (p.90) <p>OEMF (p.30):</p> <ul style="list-style-type: none"> All chemicals will be stored in areas meeting Australind Standards and regulatory requirements Dangerous goods: <ul style="list-style-type: none"> A licence will be obtained from the Chief Inspector of the DoCEP prior to storing any dangerous goods Liquid dangerous goods will be stored in a bund or compound capable of containing 110% of the volume of the goods stored Dangerous good to be stored in minimum quantities, where possible Incompatible dangerous goods will be segregated For each dangerous good, an MSDS will be located outside its storage area and will be placarded in accordance with the DoCEP's <i>Guidance Note for Placarding</i> A Dangerous Goods Log(s) will be maintained for all dangerous goods held on site. It will be stored at the site entrance of main office. A site plan will accompany the log indicating where each of the dangerous goods is stored. Measures will be put into place to prevent unauthorized access to dangerous goods.

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<ul style="list-style-type: none"> • Ignition sources will be prohibited within any storage compound. • All relevant operations staff will be trained on the identification, storage and handling of dangerous goods and explosives and response procedures for accidents, incidents and emergencies. • A Spill Response Kit will be installed and maintained at each construction site. Contaminated material from a spill will be disposed of in accordance with the Waste Management Plan. • The following will be notified of any accident involve explosives or dangerous goods: <ul style="list-style-type: none"> ○ The Chief Inspector of the DoCEP ○ FESA if there has been, or the potential exists, for a significant impact on the environment or human safety • DEC if there has been, or the potential exists, for a significant impact on the environment <p>PER (228):</p> <ul style="list-style-type: none"> • Storing and using dangerous goods in accordance with the <i>Explosives and Dangerous Goods Act 1961 (WA)</i>, <i>Explosives and Dangerous Goods (Dangerous Goods Handling and Storage) Regulations 1992 (WA)</i>, and <i>Explosives and Dangerous Goods (Explosives) Regulations 1963 (WA)</i>. • Locate storage facilities for chemicals and dangerous goods at the SSDP will towards the centre of the site to allow for the greatest buffers from surrounding sensitive receptors. The storage facilities will be signposted, locked, and with ignition sources not present/permitted. The buffers required will not extend beyond the boundaries of the Water Corporation owned site. • Use major roads to transport dangerous goods to minimise impacts on local traffic.

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
Impact of construction workforce on local community facilities and services	<p><u>Construction Phase:</u> SIA (p.81):</p> <ul style="list-style-type: none"> • The project may result in a temporary increase of the population at Binningup and/or Myalup during construction. • The local services and facilities could be affected. This could translate into an economic cost for local communities which may need to access alternative services located in other towns in the Shire of Harvey or Bunbury. • Impact significance rating: Not defined <p>May 2009:</p> <ul style="list-style-type: none"> • The proponent has decided a workforce construction camp is not required. Construction workers will commute from their homes or use available accommodation in the local (e.g. Binningup and Myalup) and surrounding area (e.g. Shire of Harvey, Eaton, Australind, City of Bunbury). • The extent of impact on local community facilities and services will depend on the number of construction workers that take up rental accommodation in the Binningup and Myalup areas. 	<p>May 2009:</p> <ul style="list-style-type: none"> • Proponent to monitor the residency of the construction workforce and make LGAs aware of construction workforce numbers and timing. • Notify the Shires of Harvey, Dardanup and the City of Bunbury before construction begins about the potential influx of people to the local area. • Feedback from the CRG (See Table 2)
	<u>Operations Phase:</u>	

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p>May 2009</p> <ul style="list-style-type: none"> Due to the small number of operations workers, the impact on local facilities and services is likely to be minimal with some of these workers choosing to reside outside the local area. 	<p>May 2009:</p> <ul style="list-style-type: none"> Proponent to monitor the residency of the operations workforce.
<p>Impact on local economic activity</p>	<p><u>Construction Phase:</u> SIA (p.83):</p> <ul style="list-style-type: none"> There could be economic benefits for the immediate, local and/or regional areas if the project promotes local employment, training opportunities, buying local resources and contracting local services. The immediate study area has a limited number of businesses to take advantage of the economic opportunities. Impact significance rating: low for immediate area; moderate for local and regional area. The impact is positive. 	<p>SIA (p.122):</p> <ul style="list-style-type: none"> Monitor the number of people and businesses working with the Alliance. The Alliance is to consider giving priority to employment and businesses in the immediate and local study areas and provide job training or traineeships where possible. <p>Commitments Register (p.1):</p> <ul style="list-style-type: none"> The Water Corporation and the Alliance will use suitably qualified local persons and contractors where possible.
	<p><u>Operations Phase:</u> SIA (p.109):</p> <ul style="list-style-type: none"> The immediate, local and/or regional areas could benefit if the project promotes local employment, training opportunities, buying local resources and contracting local services. Economic benefits may be limited 	<p>SIA (p.126):</p> <ul style="list-style-type: none"> The Alliance is to consider giving priority to employment and businesses in the immediate and local study areas and provide job training or traineeships where possible. <p>Commitments Register (p.1):</p> <ul style="list-style-type: none"> The Water Corporation and the Alliance will use suitably qualified local persons and contractors where possible.

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Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	because: <ul style="list-style-type: none"> ○ Of the 20 employees needed, some will need to have technical skills that may not be available in the study area. ○ In the local community unemployment rates and labour force participation rates are low. ○ The immediate study area has limited number of businesses to take advantage of the opportunities. 	
Impact on labour costs	<u>Construction Phase:</u> SIA (p.85): <ul style="list-style-type: none"> • Project may result in competition for scarce labour. This would result in an increase in the cost of labour affecting the performance and viability of some local businesses/industries. • Impact significance rating: Not defined. Insufficient information. May 2009: <ul style="list-style-type: none"> • The project may result in competition for labour. 	SIA (p.122): <ul style="list-style-type: none"> • SSDP Alliance to prioritise employing unemployed people in the immediate and local study area. • Consult with industries and businesses in the region to monitor any impacts on the cost of labour. May 2009: <ul style="list-style-type: none"> • There are a number of factors that may influence labour costs. It is difficult to separate these additional influences from that of the SSDP. Monitor via CRG feedback.
	<u>Operations Phase</u> SIA: No impact predicted	SIA: None
Disruption to	<u>Construction Phase</u>	

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Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
businesses during construction	<p>SIA (p.87):</p> <ul style="list-style-type: none"> • Pipeline construction could result in disruption of farming practices and productivity, and loss of capital invested in farms (e.g. preparation of land and irrigation systems). • Impact significance rating: Low in the immediate area; moderate in the local area 	<p>SIA (p.122):</p> <ul style="list-style-type: none"> • Monitor the complaints register. • Work with the CRG to identify unexpected impacts and additional mitigation measures. • Coordinate timing of construction works with affected landowners and business owners and keep them up to date on construction progress • Provide mechanisms for businesses to communicate with the proponent. • Inform the community of construction progress and any impacts in a timely manner. <p>SIA (p.26):</p> <ul style="list-style-type: none"> • Landowners along the pipeline, those directly impacted will be paid compensation: (1) for damages occurring during construction and (2) for taking an easement. For both forms of compensation the Water Corporation will use an independent assessor. If requested, the Water Corporation will pay for the landowner to obtain an independent assessment by an assessor of their choice.
	<p><u>Operations Phase:</u> SIA: No impact predicted</p>	SIA: None
Unequal distribution of project costs and benefits	<p><u>Construction Phase:</u> SIA (p.89):</p> <ul style="list-style-type: none"> • Western Australia is experiencing a difficult drought and the SSDP would provide an additional source of drinking water, increasing the security of supply 	<p>SIA (p.122):</p> <ul style="list-style-type: none"> • Develop a local/regional benefits package in consultation with the community and the CRG. <p>Commitments Register (p. 1):</p> <ul style="list-style-type: none"> • A local benefits package will be developed in consultation with

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p>for all IWSS users.</p> <ul style="list-style-type: none"> Impact significance rating: No impact <p><u>Operations Phase</u> SIA: No impact predicted</p>	<p>the CRG and the Shire of Harvey.</p> <p>SIA: None</p>
<p>Impact of construction on other road users</p>	<p><u>Construction Phase:</u> SIA (p.91):</p> <ul style="list-style-type: none"> Construction workforce and truck deliveries to construction sites could result in an increase in traffic movements in the area. The impact on the local study area has been reduced as a result of choosing a pipeline alignment that avoids the most important roads connecting the Old Coast Road and the town of Harvey. Impact significance: Moderate for local study area and insufficient information for immediate and regional study areas <p>CEMF (p.76):</p> <ul style="list-style-type: none"> Some partial road closures will be required, and increased traffic volumes from construction vehicles will result in short-term impacts on local traffic movement. 	<p>SIA (p.123):</p> <ul style="list-style-type: none"> Monitor the number, type, and consequence of traffic accidents and involvement of Alliance staff. Develop strategies to reduce incidents. Consult with CRG and affected groups to identify any additional potential traffic impacts <p>CEMF (p.76):</p> <ul style="list-style-type: none"> Traffic management activities on public roads will be coordinated with MRWA and the Shire of Harvey prior to construction. Construction vehicles will typically use the following roads for the transport of construction materials and equipment to minimise disturbance on local traffic and the community: <ul style="list-style-type: none"> South Western Highway Perth-Bunbury Highway (Old Coast Road) Government Road Forestry Road Local roads will be used to access the construction sites where major roads do not provide access. The use of local roads by semi-trailers and road trains will be limited for the transport of construction materials and equipment to daylight hours (nominally 6am-8pm) Road signage will be displayed within all construction areas in

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>accordance with Australian Standard 1742.3-2002 Manual of Uniform Traffic Control Devices - Part 3: Traffic control devices for works on roads.</p> <ul style="list-style-type: none"> • Road access in the construction area will be maintained by the use of signed detours and/or a single lane. Advisory signs will be installed sufficiently in advance of the construction works to allow road users to take alternative routes. • A temporary crossover(s) will be installed to maintain access by Landowners to their properties if the existing crossover is disturbed by the construction works. All disturbed crossovers will be repaired or replaced as soon as practicable following construction works affecting that property. • It will be ensured that construction vehicles do not exceed 50km/h on non-bituminised roads or access tracks outside of the active construction area. • A 15km/h speed limit will be imposed within the active construction area. Signage of the speed limit will be displayed within construction areas. • The public will be excluded from accessing all construction areas where practicable. Open excavations (such as trenches and dewatering pits) will be fenced or otherwise demarcated where there is a risk of public access. • Machinery and plant that is located in publicly accessible locations will be secured (in a locked compound where practicable) when the construction site is not occupied. • Advisory warning boards identifying hazards, risks, safety requirements and emergency phone numbers will be installed at each entry to all construction areas <p>May 2009:</p>

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	<p><u>Operations Phase:</u> SIA (p.113):</p> <ul style="list-style-type: none"> • Trucks delivering chemicals to the SSDP and removing waste could result in a higher road risk in the local area. • During operations, it is anticipated that there will be one truck movement per day and an average of 10 car movements per day. The potential impact of this increase would depend on the condition, traffic levels, safety and capacity of Old Coast Road and the intersection with Taranto Road. • Impact significance rating: Low for local, immediate and regional areas <p>PER (p.229):</p> <ul style="list-style-type: none"> • Deliveries of process chemicals will occur using major roads including the Perth-Bunbury Highway (Old Coast Road), with deliveries entering the Seawater Desalination Plant Site on Taranto Road, Binningup. The Perth-Bunbury Highway is currently used for the transport of various chemicals and the additional volumes of chemicals required for transport does not create any new risk for public safety for the Perth-Bunbury Highway. The delivery of process 	<ul style="list-style-type: none"> • A Traffic Management Plan will be completed in June 2009. <p>SIA (p.127):</p> <ul style="list-style-type: none"> • Undertake a traffic safety assessment of the Taranto Road and Old Coast Road Intersection. Liaise with Main Roads WA and the Shire of Harvey to improve safety of the intersection if required. • Implement a Traffic Management Plan • Monitor the number, type, and consequence of traffic accidents and involvement of SSDP staff; develop strategies to reduce incidences

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Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
	chemicals on Taranto Rd is a new risk, albeit low.	
Impacts from expanding plant to 100 GL/yr	<p><u>Construction Phase</u> SIA (p.93):</p> <ul style="list-style-type: none"> • All underground works on site, marine works offshore and buried pipes will be built to a capacity of 100 GL/year. • Expansion will require electrical upgrades, pumps, erection of on site buildings and construction of a second summit tank • Impact significance rating: Moderate for immediate and local area. 	<p>May 2009:</p> <ul style="list-style-type: none"> • Consult in the early planning stages with the community, including the CRG (if operating), if the capacity of the SSDP is to be increased.
	<p><u>Operations Phase:</u> SIA: No impact predicted.</p>	SIA: None
Impact on Aboriginal heritage	<p><u>Construction phase:</u> CEMF (p.73):</p> <ul style="list-style-type: none"> • The construction works avoid all existing registered sites on the Department of Indigenous Affairs database. • Despite preconstruction surveys, additional heritage materials or artefacts may also be identified during construction. 	<p>CEMF (p.73):</p> <ul style="list-style-type: none"> • Construction works will avoid all locations identified by the DIA site register. • Prior to construction, a heritage survey of plant site, water transfer pipeline and Harvey Summit Tanks will be conducted in consultation with the Gnaala Karla Booja NTCG • A Cultural Monitor to be employed in consultation with the Gnaala Karla Booja NTCG to monitor ground disturbing activities. Construction works will cease as soon as practicable within a

Impact Issue	Predicted Impact	Water Corporation Social Impact Management Measures
		<p>nominal 20 meters of any skeletal material identified in the construction area. The Harvey Police Station will be contacted to determine a resolution if skeletal material is found.</p> <ul style="list-style-type: none"> Construction works will cease as soon as practicable within a nominal 20 meters of any archaeological material identified in the construction area. An archaeologist will be engaged to record the identified material and to advise the DIA if the material is likely to be of Aboriginal heritage significance. If new sites are identified by the preconstruction survey, consent will be obtained from the Minister for Indigenous Affairs to interfere with those sites prior to construction.
	<p><u>Operations Phase:</u> SIA: No impact predicted.</p>	SIA: None
Risk of terrorist attack	<p><u>Construction Phase</u> SIA: No impact predicted</p>	SIA: None
	<p><u>Operations Phase:</u> SIA (p.112):</p> <ul style="list-style-type: none"> The SSDP could be a terrorist target because it is State significant infrastructure. Impact significance rating: Not defined. Impacts to be addressed through the EIA and Risk Assessment. 	SIA (p.127): Develop and test an anti-terrorism response plan



3 Social impact monitoring

Monitoring is the continuous or repeated measurement of indicators to determine whether management measures are being effective (i.e. minimising the predicted impacts). Systematic measurement through an impact monitoring programme can:

- Act as an 'early warning' system if impacts were not correctly predicted in the SIA (e.g. type of impact, significance).
- Provide proponents and the community with feedback on the progress being made in addressing issues of concern to local stakeholders.
- Apply the knowledge gained from this project to future projects.

3.1 Baseline conditions of local community

Baseline conditions are the starting point to monitor over time the changes to a community due to the introduction of a new project. The baseline conditions are a snapshot in time representing the pre-project conditions in the community.

The following summarises the pre-project baseline condition of the local community. In this context, the local community includes:

- Residents living within a 6 km radius of the SSDP site (Figure 2). This includes the communities of Myalup and Binningup. Myalup and Binningup are coastal town sites located north and south, respectively, of the SSDP site.

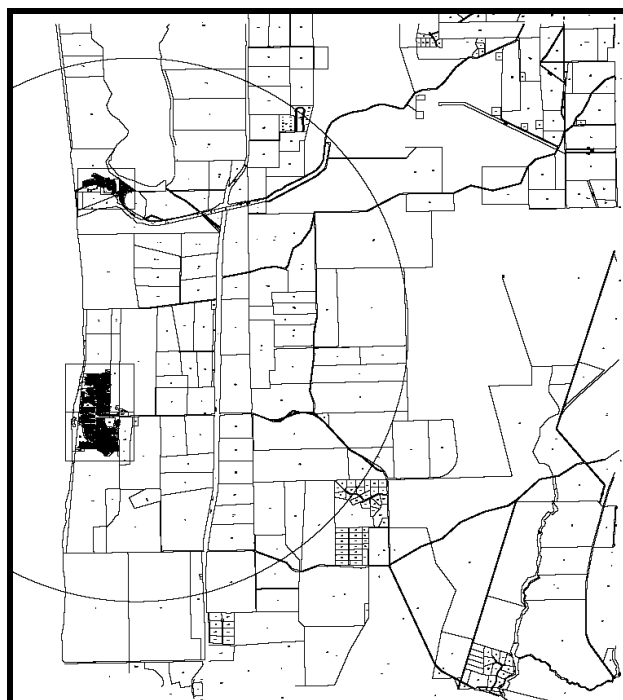


Figure 2 Six kilometre radius from the Taranto Road site

- Residents on properties directly affected by the pipeline route between Binningup and Harvey. There are approximately 26 properties that will be directly impacted by the pipeline and 72 properties that will indirectly be impacted (e.g. the pipeline will be built on their road frontage) (GHD 2008). Of the 26 directly affected properties, eight have residential homes.
- Residents living at Pamelup Estate, a gated community just to the north of Myalup. The estate is located along the western edge of Yalgorup National Park and has approximately 18 homes.

3.1.1 Binningup and Myalup population characteristics

In 2006, the Binningup town site had 951 residents and Myalup had 143 residents (Table 2). Most residents live in single dwellings, rather than flats, units or caravans (Table 3). There is a mixture owned and rented residents (Table 4).

Table 2 Population

Location	2001	2006	% Change
Binningup	749	951	27.0
Myalup	No data	143	Not applicable
Shire of Harvey	17,272	19,556	13.2
City of Bunbury	28,682	29,702	3.5

Source: ABS 2006a, ABS 2006b, ABS 2006c, ABS 2006d

Table 3 Type of (private occupied) dwelling

Location	Separate house	Semi-detached	Flat, unit or apartment	Caravan, cabin	Improvised home, tent, sleepers out	House/flat attached to shop/office
Binningup	302	0	0	4	0	0
Myalup	49	0	0	0	0	0
Shire of Harvey	6,104	88	189	91	14	11
City of Bunbury	8,660	1,736	814	106	5	0

Source: ABS 2006a, ABS 2006b, ABS 2006c, ABS 2006d

Table 4 Dwelling ownership

Location	Own	Being purchased	Rented	Other tenure type
Binningup	83	118	103	0
Myalup	22	13	15	0
Shire of Harvey	2,129	2,683	1,478	38
City of Bunbury	3,261	3,756	3,798	139

Source: ABS 2006a, ABS 2006b, ABS 2006c, ABS 2006d

There is potential for further residential development in Binningup. The area directly to the south of the town site is identified as 'urban'⁵ (peach in Figure 3) in the Greater Bunbury Region Scheme (WAPC 2000). Some of this area is already being developed as part of the Lakewood Shores Estate. The Harvey Coastal Management Plan identifies Binningup as a major coastal development node for the Shire of Harvey (Belton-Taylforth 2006).

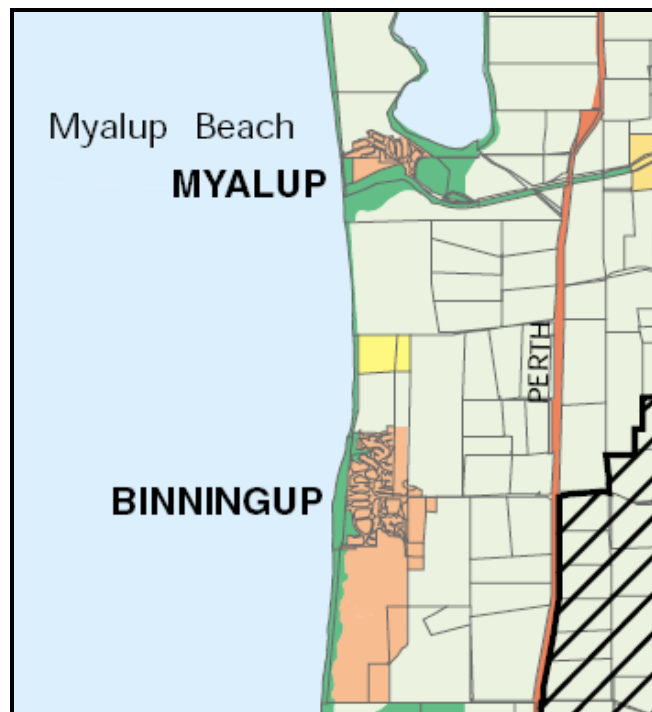


Figure 3 Land use plan (Source: WAPC 2000)

Expansion of Myalup is limited by the terrain and surrounding land uses. This includes the Yalgorup National Park, which limits the town sites ability to

⁵ Urban: Identifies "... those areas zone or that are proposed to be zoned under local government town planning schemes for residential and related land uses, which includes Special Residential areas, commercial, local recreation and in some circumstances, light industry" (WAPC 2000, p 12).

expand to the northwest, and the area identified as regional open space to the south of the town site (green in Figure 3).

Regional open space also extends along the coastline from south of Binningup to north of Myalup. Within this area, recreation facilities have been established at Binningup Beach and Myalup Beach. Popular activities include swimming, fishing and walking (Belton-Taylforth 2006). Four-wheel-drive vehicles, off-road vehicles, trail bikes and quad bikes use the local beaches and sand dunes. There are vehicle access points at Binningup Beach and Myalup Beach. Occasionally the surf breaks at Binningup Beach, attracting to surfers to the area (Water Corporation 2008c).

3.1.2 Local community perceptions

A local community survey was conducted in February 2009 to establish the baseline social conditions for the SIMP (Beckwith Environmental Planning 2009). An interviewer-administered, face-to-face questionnaire was used to collect data on resident perceptions of their community and the potential impacts of the Water Corporation's proposed SSDP. The full results are located in Appendix A.

Key findings from the survey include the following:

- Most respondents expressed a high level of satisfaction with their local community.
- The majority of respondents (55%) indicated some level of disapproval of the seawater desalination project, while 23 percent neither approved nor disapproved, and 22 percent indicated some level of approval.
- Only a small percentage of respondents (16%) indicated that their opinion of the desalination project had changed since it was announced.
- There is a significant positive relationship between a respondent's level of trust in the Water Corporation and their opinion of the Seawater Desalination Project.
- The same four impacts dominated the anticipated negative impacts during both the construction and operations phases of the project. These were the impact on the marine environment, noise impacts, impacts on the terrestrial environment and restricted beach access.
- There is a perception that recreational use of the beach will be negatively impacted during both the construction and operations phases of the project. Almost half of all respondents indicated that recreational use of the beach during the operations phase would be negatively impacted, including 25 percent who rated the impact as 'very negative'.
- The majority of respondents (61%) did not identify any positive impacts for the construction phase. However, about a third anticipated that the project would generate some employment opportunities in the construction phase.
- There was no evidence that the community feels over consulted regarding the project and about 16 percent of respondents indicated a desire for more information/communication about the project.

The survey is the first stage of a longitudinal study of resident perceptions. The intention is to repeat the survey near the end of the construction phase. The survey would be conducted a third time after the plant has been in operation for several years.

3.2 Description of monitoring variables and indicators

There are many different types of indicators for measuring social and economic change. Each has its own advantages and disadvantages, and some may be more appropriate than others depending on the context. Monitoring programmes typically include both objective and subjective indicators.

Objective indicators are based on statistical facts, such as income or population. Data for objective indicators is generally considered to be more reliable, but may be too abstract or aggregated to describe 'real life' situations.

Subjective indicators assess opinions, attitudes and values of the community, such as satisfaction with community, social trust or attitudes toward a management action. They are often more relevant in 'real life' situations, but rely on subjective descriptions of events through observations, interviews, or questionnaires.

The selected indicators followed the **SMART** principles:

- **Simple:** Is the indicator easily interpreted, monitored, and appropriate for community use?
- **Measurable:** Can it be statistically verified, reproduced and compared? Is it responsive to changes in management? Does it show trends over time?
- **Accessible:** Can it be regularly monitored? Is it cost-effective? Is it consistent with other data sources?
- **Relevant:** Is it related to the monitoring goals and priority issues?
- **Timely:** Does it provide an early warning of potential problems and highlight future needs or issues?

Table 5 identifies for each social impact issue: an indicator(s) to monitor the issue, the type of data, frequency of data collection, and any defined thresholds or performance indicators.

Table 5 Monitoring indicators

Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
Impact Issue: Local community trust in proponent				
Level of local community trust in proponent	C, O	<ul style="list-style-type: none"> Community perceptions survey 	<ul style="list-style-type: none"> Community survey <ul style="list-style-type: none"> Pre-construction 1-year of operation 3-years of operation 	<ul style="list-style-type: none"> Pre-construction survey of local community perceptions (Appendix A)
Complaints to WC		<ul style="list-style-type: none"> Feedback from CRG 	<ul style="list-style-type: none"> CRG meetings 	
		<ul style="list-style-type: none"> Complaints Management Process: <ul style="list-style-type: none"> Number and type of complaints Number of different complainants Ability to resolve complaints Actions taken in response to complaint 	<ul style="list-style-type: none"> Complaints Register during construction and operation 	<ul style="list-style-type: none"> None
Impact Issue: Impact on community character and satisfaction (including noise, vibration and dust impacts)				
Resident perceptions of impact on community amenity	C, O	<ul style="list-style-type: none"> Community perceptions survey 	<ul style="list-style-type: none"> Community survey <ul style="list-style-type: none"> Pre-construction 1-year of operation 3-years of operation 	<ul style="list-style-type: none"> Pre-construction survey of local community perceptions (Appendix A)
		<ul style="list-style-type: none"> Feedback from CRG 	<ul style="list-style-type: none"> CRG meetings 	
Public complaints about project's impacts on	C, O	<ul style="list-style-type: none"> Complaints Management Process <ul style="list-style-type: none"> Number and type of amenity 	<ul style="list-style-type: none"> Complaints Register during construction and 	<ul style="list-style-type: none"> None

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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
amenity		<ul style="list-style-type: none"> related complaints <ul style="list-style-type: none"> ○ Number of different complainants ○ Ability to resolve complaints ○ Actions taken in response to complaints 	operations	
Resident perceptions of satisfaction with living in community	C	<ul style="list-style-type: none"> • Feedback from CRG 	<ul style="list-style-type: none"> • CRG meetings 	<ul style="list-style-type: none"> • Pre-construction survey of local community perceptions (Appendix A)
	C, O	<ul style="list-style-type: none"> • Community perceptions survey 	<ul style="list-style-type: none"> • Community survey <ul style="list-style-type: none"> ○ Pre-construction ○ 1-year of operation ○ 3-years of operation 	
Workforce code of conduct violations	C	<ul style="list-style-type: none"> • Number and type of workforce conduct violations 	<ul style="list-style-type: none"> • Alliance/Water Corporation records during construction • Local police records on incidences of anti-social behaviour • Complaints Register during construction 	<ul style="list-style-type: none"> • Local police records on incidences of anti-social behaviour
Noise: Compliance with noise regulations and CEMF	C, O	<ul style="list-style-type: none"> • Number and location of exceedances of: <ul style="list-style-type: none"> ○ <i>Environmental Protection (Noise) Regulations 1997</i> (WA) regulation ○ CEMF noise objectives (p.79) ○ CEMF blasting noise criteria 	Noise levels will be measured at least once every 7 days during construction or in response to any complaint and recorded in a Noise and Vibration Monitoring Log.	<ul style="list-style-type: none"> • Noise regulations under the <i>Environmental Protection (Noise) Regulations 1997</i> (WA) CEMF noise objectives (p.79)

Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
		<p>(p.80)</p> <ul style="list-style-type: none"> Contingency actions employed (CEMF p.80) 		<ul style="list-style-type: none"> CEMF blasting noise criteria (p.80) Pre-construction noise studies
Vibration: Compliance with vibration criteria and CEMF	C	<ul style="list-style-type: none"> Number and location of exceedances of CEMF vibration standard within 100m of residential premises (p.83) Contingency actions employed (CEMF p.84) 	<ul style="list-style-type: none"> Vibration will be monitored at least once every 7 days if construction works are within 100 m of residential premises. Frequency may increase for residences within 20 m of construction works. 	<ul style="list-style-type: none"> CEMF vibration objectives (p.83) German Standard DIN 4150-3 (1999) for construction vibrations on buildings (PER p.223)
		<p>Number and type of damage to properties due to blasting</p> <ul style="list-style-type: none"> Number, location and types of repairs (proponent records) 	<ul style="list-style-type: none"> Pre- and post-construction property condition assessments 	<ul style="list-style-type: none"> Baseline established via pre-construction property condition assessment (CEMF p.83)
		<ul style="list-style-type: none"> Complaints Management Process: <ul style="list-style-type: none"> Number and type of complaints Number of different complainants Ability to resolve complaints Actions taken in response to 	<ul style="list-style-type: none"> Complaints Register during construction 	<ul style="list-style-type: none"> None

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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
		complaint		
Dust: Compliance with Land Clearing and Trench Management Plan (CEMF p.23)	C	<ul style="list-style-type: none"> • CEMF Land Clearing and Trench Management Plan monitoring results (CEMF p.23) • Contingency actions employed (CEMF p.29) 	<ul style="list-style-type: none"> • Complaints Register during construction 	<ul style="list-style-type: none"> • Baseline established via pre-construction surveys (CEMF p.24) CEMF dust objectives (p.24)
Visual : See below the impact of plant construction, pipeline and tanks on visual amenity				
Impact Issue: Impact of plant on visual amenity				
Perceived impact by residents	C, O	<ul style="list-style-type: none"> • Community perceptions survey 	<ul style="list-style-type: none"> • Community survey <ul style="list-style-type: none"> ○ Pre-construction ○ 1-year of operation ○ 3-years of operation 	<ul style="list-style-type: none"> • Pre-construction survey of local community perceptions
		<ul style="list-style-type: none"> • Feedback from CRG 	<ul style="list-style-type: none"> • CRG meetings 	
		<ul style="list-style-type: none"> • Complaints Management Process: <ul style="list-style-type: none"> ○ Number and type of complaints ○ Number of different complainants ○ Ability to resolve complaints ○ Actions taken in response to complaint 	<ul style="list-style-type: none"> • Complaints Register during construction and operations 	
Compliance with Land Clearing and Trench Management Plan (CEMF p.23)	C	<ul style="list-style-type: none"> • CEMF Land Clearing and Trench Management Plan monitoring results (CEMF p.23) • Contingency actions employed 	<ul style="list-style-type: none"> • Complaints Register during construction 	<ul style="list-style-type: none"> • Pre-construction surveys (CEMF p.24) • CEMF objectives (p.23)

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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
		(CEMF p.29)		
Success of CEMF Rehabilitation Management Plan	C, O	<ul style="list-style-type: none"> CEMF Rehabilitation Management Plan monitoring program results (CEMF p.107) Contingency actions employed (CEMF p.111) 	<p><u>Native vegetation</u></p> <ul style="list-style-type: none"> The revegetation works will be monitored for growth and vigour for a period of five springs following seeding and fertilizing. <p><u>Agricultural land</u></p> <ul style="list-style-type: none"> The growth success of rehabilitation works on agricultural land will be monitored for a period of one full spring following seeding and fertilizing 	<ul style="list-style-type: none"> Rehabilitate to objectives established in CEMF (p.107) Baseline established through pre-construction photographs and relevant pre-construction reports Pre-construction surveys (Minister for Environment 12-1)
Impact issue: Impact of pipeline construction on visual amenity				
Perceived impact by residents	C, O	<ul style="list-style-type: none"> Feedback from CRG Community perceptions survey 	<ul style="list-style-type: none"> CRG meetings Community survey <ul style="list-style-type: none"> Pre-construction 1-year of operation 3-years of operation 	<ul style="list-style-type: none"> Pre-construction survey of community perceptions
		<ul style="list-style-type: none"> Complaints Management Process 	<ul style="list-style-type: none"> Complaints register during construction and operations 	<ul style="list-style-type: none"> None
Compliance with Land Clearing and Trench	C, O	<ul style="list-style-type: none"> CEMF Land Clearing and Trench Management Plan 	<ul style="list-style-type: none"> Complaints Register 	<ul style="list-style-type: none"> Pre-construction

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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
Management Plan (CEMF p.23)		<ul style="list-style-type: none"> monitoring results Contingency actions employed (CEMF p.29) 	during construction	<ul style="list-style-type: none"> surveys (CEMF p.24) CEMF objectives (p.23)
Success of CEMF Rehabilitation Management Plan	C, O	<ul style="list-style-type: none"> CEMF Rehabilitation Management Plan monitoring results (CEMF p.107) Contingency actions employed (CEMF p.111) 	<p><u>Native vegetation</u></p> <ul style="list-style-type: none"> The revegetation works will be monitored for growth and vigour for a period of five springs following seeding and fertilizing. <p><u>Agricultural land</u></p> <ul style="list-style-type: none"> The growth success of rehabilitation works on agricultural land will be monitored for a period of one full spring following seeding and fertilizing 	<ul style="list-style-type: none"> Rehabilitate to a conditions established in CEMF (p.107) Baseline established through pre-construction photographs and relevant pre-construction reports Pre-construction surveys (Minister for Environment 12-1)
Impact issue: Impact of tank construction on visual amenity				
Perceived impact by residents	C, O	<ul style="list-style-type: none"> Community perceptions survey 	<ul style="list-style-type: none"> Community survey <ul style="list-style-type: none"> Pre-construction 1-year of operation 3-years of operation 	<ul style="list-style-type: none"> Pre-construction survey of local community perceptions (Appendix A)
		<ul style="list-style-type: none"> Feedback from CRG 	<ul style="list-style-type: none"> CRG meetings 	
		<ul style="list-style-type: none"> Complaints Management Process: <ul style="list-style-type: none"> Number and type of 	<ul style="list-style-type: none"> Complaints Register during construction and operations 	<ul style="list-style-type: none"> None

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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
		<ul style="list-style-type: none"> complaints <ul style="list-style-type: none"> ○ Number of different complainants ○ Ability to resolve complaints ○ Actions taken in response to complaint 		
Compliance with Land Clearing and Trench Management Plan (CEMF p.23)	C	<ul style="list-style-type: none"> • CEMF Land Clearing and Trench Management Plan monitoring results (CEMF p.23) • Contingency actions employed (CEMF p.29) 	<ul style="list-style-type: none"> • Complaints Register during construction 	<ul style="list-style-type: none"> • Pre-construction surveys (CEMF p.24) • CEMF objectives (p.23)
Success of CEMF Rehabilitation Management Plan	C, O	<ul style="list-style-type: none"> • CEMF Rehabilitation Management Plan monitoring program results • Contingency actions employed (CEMF p.111) 	<p><u>Native vegetation</u></p> <ul style="list-style-type: none"> • The revegetation works will be monitored for growth and vigour for a period of five springs following seeding and fertilizing. <p><u>Agricultural land</u></p> <ul style="list-style-type: none"> • The growth success of rehabilitation works on agricultural land will be monitored for a period of one full spring following seeding and fertilizing 	<ul style="list-style-type: none"> • Rehabilitate to a conditions established in CEMF (p.107) • Baseline established through pre-construction photographs and relevant pre-construction reports • Pre-construction surveys (EPA 12-1)
Impact issue: Impact on beach and ocean-based recreation				

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
Effectiveness of proponent provision of information to residents and visitors of beach closures and activities	C	<ul style="list-style-type: none"> • Feedback from CRG 	<ul style="list-style-type: none"> • CRG meetings 	<ul style="list-style-type: none"> • None
	C	<ul style="list-style-type: none"> • Complaints Management Process: <ul style="list-style-type: none"> ○ Number and type of complaints ○ Number of different complainants ○ Ability to resolve complaints ○ Actions taken in response to complaint 	<ul style="list-style-type: none"> • Complaints Register during construction 	<ul style="list-style-type: none"> • None
Frequency and duration of beach closures/disruptions	C, O	<ul style="list-style-type: none"> • Feedback from CRG 	<ul style="list-style-type: none"> • CRG meetings 	<ul style="list-style-type: none"> • None
		<ul style="list-style-type: none"> • Alliance/Water Corporation records 	<ul style="list-style-type: none"> • Alliance/Water Corporation records 	<ul style="list-style-type: none"> • None
Impact on marine fauna (including marine habitat)	C, O	<ul style="list-style-type: none"> • CEMF Seawater Pipeline Management Plan including Benthic Habitat Monitoring (p.37) <ul style="list-style-type: none"> • Pre-construction survey • Post-construction survey • Marine Environment Monitoring Program (Minister for Environment 6-2) 	<ul style="list-style-type: none"> • Pre-construction marine biological survey prior to commencement • Post-construction marine biological survey within 12 months of completed marine works • Turbidity and PAR monitoring during construction. Data will be recorded in the Marine Monitoring Log and submitted to the DEC monthly during offshore 	<ul style="list-style-type: none"> • Baseline established through pre-construction marine biological survey (CEMF p.37) • Pre-discharge data (Minister for Environment 6-2) • Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (Minister for Environment 6-2)

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
			construction. <ul style="list-style-type: none"> • Monitor benthic community composition and health annually after construction (Minister for Environment 6-2-3) 	
Impacts associated with discharges to marine environment (e.g. brine)	O	<ul style="list-style-type: none"> • OEMF water quality monitoring of desalination discharge (salinity, temperature, dissolved oxygen) (p.19) • Contingency actions employed (OEMF p.21) 	<ul style="list-style-type: none"> • Monitoring is to occur for a period of 12 months following: <ul style="list-style-type: none"> ○ Completion of commissioning phase or 6 months of commencement of commissioning phase, whichever is sooner, and ○ Initiation of full production (Minister for Environment 6-5) 	<ul style="list-style-type: none"> • OEMF performance indicator (p.19) • Background seawater salinity levels (p.20) • ANZECC/ARMCANZ 2000 standards (Minister for Environment 6-8)
	O	<ul style="list-style-type: none"> • Whole effluent toxicity (WET) testing results (OEMF p.14) • Contingency actions employed (OEMF p.18) 	<ul style="list-style-type: none"> • WET testing is to occur: <ul style="list-style-type: none"> ○ One month following commissioning ○ 12 or 18 months following commissioning ○ 12 months following commencement of full production 	<ul style="list-style-type: none"> • OEMF performance indicator (OEMF p.14)

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
			(Minister for Environment 6-9)	
Impact issue: Disruption to properties along the pipeline				
Level of disruption to pipeline properties, businesses and local road usage	C, O	<ul style="list-style-type: none"> • Alliance/Water Corporation data on: <ul style="list-style-type: none"> ○ Number of impacted properties and residences ○ Duration of disruption ○ Nature of disruption (e.g. fencing) ○ Location and duration of road closures ○ Impact management measures taken including compensation 	<ul style="list-style-type: none"> • Alliance/Water Corporation records 	<ul style="list-style-type: none"> • None
		Feedback from CRG	<ul style="list-style-type: none"> • CRG meetings 	
		<ul style="list-style-type: none"> • Complaints Management Process: <ul style="list-style-type: none"> ○ Number of complaints ○ Type of complaints ○ Number of different complainants ○ Ability to resolve complaints ○ Actions taken in response to complaint 	<ul style="list-style-type: none"> • Complaints Register during construction and operations 	

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
Compliance with Land Clearing and Trench Management Plan (CEMF p.23)	C	<ul style="list-style-type: none"> CEMF Land Clearing and Trench Management Plan monitoring results (CEMF p.23) Contingency actions employed (CEMF p.29) 	<ul style="list-style-type: none"> Complaints Register during construction 	<ul style="list-style-type: none"> Pre-construction surveys (CEMF p.24)
Impact issue: Impact on future residential development				
Residency of construction phase employees		<ul style="list-style-type: none"> Number of employees residing in: <ul style="list-style-type: none"> Binningup/Myalup Shire South West 	Alliance/Water Corporation workforce records	None
Impact issue: Impact on industrial development in the local area				
Change in land use pattern/zonings in vicinity of the plant site	C, O	<ul style="list-style-type: none"> CRG feedback 	<ul style="list-style-type: none"> CRG meetings 	<ul style="list-style-type: none"> Town planning scheme Pre-construction survey of local community perceptions (Appendix A)
		<ul style="list-style-type: none"> Consultation with Shire planners 	<ul style="list-style-type: none"> Meetings with Shire planners 	
		<ul style="list-style-type: none"> Community perceptions survey 	<ul style="list-style-type: none"> Community survey <ul style="list-style-type: none"> Pre-construction 1-year of operation 3-years of operation 	
Effectiveness of CEMF Rehabilitation Management Plan	C, O	<ul style="list-style-type: none"> CEMF Rehabilitation Management Plan monitoring program results (CEMF p.107) 	<u>Native vegetation</u> <ul style="list-style-type: none"> The revegetation works will be monitored for growth and vigour for a period of five springs following seeding and 	<ul style="list-style-type: none"> Rehabilitate to a conditions established in the CEMF (p.107) Baseline established through pre-construction

**Southern Seawater Desalination Project –
Social Impact Management Plan**

Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
			fertilizing. <u>Agricultural land</u> <ul style="list-style-type: none"> The growth success of rehabilitation works on agricultural land will be monitored for a period of one full spring following seeding and fertilizing 	photographs and relevant pre-construction reports <ul style="list-style-type: none"> Pre-construction surveys (EPA 12.1)
Impact issue: Risk to public safety - chemicals and dangerous goods				
Violations of the Dangerous Goods and Explosives Management Plan	C, O	<ul style="list-style-type: none"> Number and nature of incidents involving dangerous goods Number and nature of incidents with potential to negatively affect environment or human safety 	<ul style="list-style-type: none"> Alliance/Water Corporation records 	<ul style="list-style-type: none"> Performance indicators in CEMF (p.90) and OEMF (p.30)
Impact Issue: Impact of construction workforce on community facilities and services				
Level of use of local community facilities and services	C	CRG feedback	<ul style="list-style-type: none"> CRG meetings 	<ul style="list-style-type: none"> None
		Consultation with Shire planners	<ul style="list-style-type: none"> Meetings with Shire planners 	
		<ul style="list-style-type: none"> Alliance/Water Corporation records regarding temporary residency of workers 	<ul style="list-style-type: none"> Alliance/Water Corporation records 	
Impact issue: Impact on local economic activity				
Project purchasing and subcontracting	C, O	<ul style="list-style-type: none"> Number of vendors from: 	Alliance/Water Corporation purchasing and contracting	<ul style="list-style-type: none"> None

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
		<ul style="list-style-type: none"> ○ Binningup/Myalup ○ Shire ○ South West 	records	
		<ul style="list-style-type: none"> ● Value of purchases and contracted services from businesses in: <ul style="list-style-type: none"> ○ Binningup/Myalup ○ Shire ○ South West 	Alliance/Water Corporation purchasing and contracting records	<ul style="list-style-type: none"> ● None
Impact issue: Impact on labour costs				
Labour shortage for contract jobs in the local area (e.g. farm labour)	C, O	<ul style="list-style-type: none"> ● Feedback from CRG (anecdotal evidence) 	<ul style="list-style-type: none"> ● CRG meetings 	<ul style="list-style-type: none"> ● None
Impact issue: Unequal distribution of costs and benefits				
Success of impact management measures: Community benefits package	C	<ul style="list-style-type: none"> ● CRG feedback 	CRG meetings	<ul style="list-style-type: none"> ● Pre-construction survey of local community perceptions (Appendix A)
		<ul style="list-style-type: none"> ● Community perceptions survey 	<ul style="list-style-type: none"> ● Community survey <ul style="list-style-type: none"> ○ Pre-construction ○ 1-year of operation ○ 3-years of operation 	
Impact issue: Impact of construction related traffic (materials and workers)				
Compliance with CEMF Traffic and Public Safety Management Plan	C	<ul style="list-style-type: none"> ● Alliance/Water Corporation to report: <ul style="list-style-type: none"> ○ Number of vehicle movements 	Alliance/Water Corporation records	CEMF Traffic and Public Safety Management Plan (p.76)

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
(p.76). For example: <ul style="list-style-type: none"> ○ Use of designated routes ○ Hours of truck traffic ○ Road closures and signage ○ Designated routes ○ Traffic offences 		<ul style="list-style-type: none"> ○ Number of incidents of heavy vehicles not adhering to designated routes ○ Number of accidents involving project-related vehicles compared to non-project related accidents on local roads. ○ Number and duration of local road closures ○ Number of reported incidents of parking outside of designated areas ○ Any other violations of traffic plan 		Pre-construction traffic and accident levels
	C, O	CRG feedback	<ul style="list-style-type: none"> • CRG meetings 	
	C, O	<ul style="list-style-type: none"> • Complaints Management Process 	<ul style="list-style-type: none"> • Complaints Register during construction and operation 	
Impact issue: Impact on Aboriginal heritage				
Disruption of heritage sites	C	<ul style="list-style-type: none"> • Results of pre-construction heritage survey of plant site, water transfer pipeline and Harvey Summit Tanks (CEMF p.73) 	<ul style="list-style-type: none"> • Pre-construction heritage survey 	<ul style="list-style-type: none"> • Pre-construction heritage survey (CEMF p.73)
	C	<ul style="list-style-type: none"> • Presence of the Cultural Monitor during the ground disturbing activities at registered Aboriginal 	<ul style="list-style-type: none"> • Monitoring by Cultural Monitor throughout construction 	

**Southern Seawater Desalination Project –
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Impact Issue and Indicators	Phases* to Monitor	Data	Data Collection	Threshold or Performance Indicator
sites				
Impact issue: Risk of terrorist attack				
Violations of security protocols	C, O	<ul style="list-style-type: none"> • Number of violation of security protocols • Assessed seriousness of violations 	Alliance/Water Corporation security records	

*Project phases: C (construction) and O (operations)

4 Community Reference Group

Inline with recommendations from the SIA, a community reference group (CRG) was established in August 2008. The original CRG Terms of Reference (ToR) are provided as Appendix B. Under the ToR the CRG is to:

- Facilitate feedback to, and seek input from the community on the impacts of the construction and operations of the desalination project.
- Provide on-going information and advice on any impacts that may arise during the construction and operations of the desalination project
- Assist, in conjunction with the Shire of Harvey, in developing a local benefits package of enhancement projects the Water Corporation can support to add value to the community
- Provide advice to the Water Corporation on the community engagement process
- Be a representative group which can validate community responses and recommendations about the project
- Be a well-informed source of information on what's happening with the project

4.1 CRG structure

All 13 of the people who nominated became members of the CRG (Appendix C). This includes representatives from various Binningup and Myalup community groups, general Binningup and Myalup community members and representatives from the Shire of Harvey.

In addition to the 13 community members, there is an independent chair and a representative from the Water Corporation on the committee. Neither the chair nor the Water Corporation has voting rights. The Water Corporation also provides the CRG with administrative support (i.e. an executive officer).

According to the ToR, the CRG will continue to meet monthly during the construction phase of the SSDP. Under the ToR, pending a decision from the CRG, the group may continue to meet less frequently during the operations period of the project.

4.2 Relationship to the SIMP

The CRG has played an important role in development of the SIMP. The CRG endorsed the local community survey undertaken in February 2009 to provide baseline data for the social impact monitoring (See Section

3.1.2). The CRG also reviewed the social impact monitoring indicators and will provide data for some of the indicators (See Section 3.2).

The CRG has decided that the Water Corporation's Commitments Register will be a standing item on their agenda to track how and when each commitment is achieved. The register identifies the management measures to which the Water Corporation has committed and any other additional commitments the Water Corporation has made over time (see Section 5.1).

4.3 Future of the CRG

It is recommended that the CRG ToR be reviewed to address the following issues that are not currently contained in the ToR:

- Succession planning: CRG members should serve two year terms. Changing membership helps keep a committee fresh by introducing new ideas and new energy. The change over of members should be staggered to ensure the committee is able to retain some of its institutional knowledge.
- Membership: Members should continue to be drawn from the local community (as defined in Section 3.1). With the exception of the Shire of Harvey representatives, committee members should not serve more than two consecutive terms; provided there are others in the community willing to stand for a committee position.
- Resourcing: The group should continue to be served by an independent chair. This helps to avoid any conflict of interest. The Water Corporation should continue to support the CRF in the form of an executive officer.

5 Reporting

5.1 Commitments Register

Inline with recommendations of the SIA (GHD 2008) the Water Corporation agreed to create a commitments register to provide a single document against which the CRG and members of the public could monitor the progress of the Corporation in meeting its project commitments. As mentioned earlier, the commitments register will be a standing item at all CRG meetings. In addition, the commitments register will be posted on the Water Corporation's website and updated monthly.

The commitments register is provided as Appendix D. The commitments register provides a summarized version of contents of Table 1 as an easy reference guide to the status of the Water Corporation's commitments.

5.2 Complaints management

The SIA (GHD 2008) recommended that a mechanism be established to address complaints regarding the project. The Water Corporation has established a complaints management process to address any concerns raised by government agencies, directly effected landowners or any member of the public. The first steps of the process are to:

- Designate a communications officer to coordinate the receipt, investigation and resolution of complaints
- Establish a free-call telephone number and email address through which complaints can be made. These will be displayed at the external fence to each construction site

The designated communications officer will take the following actions when a complaint is received:

- Record all complaints in the Community Complaint Record (Appendix E).
- Acknowledge receipt of the emailed complaints within 48 hours via a letter.
- Provide the complaint record to the appropriate management personnel for the project. Investigations into the nature and cause for a complaint are to begin within 48 hours of receipt of the complaint.
- Provide the complainant with an update of the status of efforts to redress the complaint within 7 days of receipt of the complaint. This communication will come in the form of a letter.
- In situations where a complaint has not been fully resolved within 7 days the communications officer will continue to liaise with the complainant.
- Complete the community complaint record with details of how the complaint was addressed.
- Retain all community complaint records at the project office.
- A summary of the complaints received and the proponents action or response will be made available on a monthly basis on the Water Corporation's website and the at CRG meetings.

For complaints where a mutually satisfactory outcome cannot be achieved, the complaint can be referred to the Ombudsman.

The above complaints process will be reviewed at the end of the construction phase. Revisions may be made at that time for the operations phase.

5.3 Auditing

The SIMP will be audited annually during the life of the project. Table 1 provides the detailed list of predicted social impacts and proposed management measures against which the SIMP will be audited. Some of the impact issues in Table 1 will also be addressed through compliance and auditing mechanisms established for the CEMF and as required by the Minister for Environment (Table 6).

Table 6 Auditing relationships

Impact issue	SIMP	CEMF	OEMF	Minister for Environment
Local community trust in proponent	✓			
Impact on community character and satisfaction	✓			
Noise impacts	✓	✓		
Vibration impacts	✓	✓		
Dust impacts	✓	✓		
Impact of plant on visual amenity	✓	✓		✓
Impact of pipeline construction on visual amenity	✓	✓		✓
Impact of tank on visual amenity	✓	✓		✓
Impact on beach and ocean-based recreation	✓	✓	✓	✓
Disruption to properties along the pipeline	✓	✓		
Impact on future residential development	✓			
Impact on industrial development in the local area	✓	✓		
Risk to public safety	✓	✓	✓	
Impact of construction workforce on community facilities and services	✓			
Impact on local economic activity	✓			
Impact on labour costs	✓			
Disruption to businesses during construction	✓			
Unequal distribution of costs and benefits	✓			
Risk of terrorist attack	✓			

Impact issue	SIMP	CEMF	OEMF	Minister for Environment
Impact of construction on other road users	✓	✓		
Impacts from expanding plant to 100 GL/r	✓			
Impact on Aboriginal heritage	✓	✓		

The annual audit of the SIMP will be conducted by the Water Corporation/Alliance or its consultants. The annual auditing report will be provided in draft form for comment to the CRG and the final version made publicly available via the Water Corporation’s website.

Due to the high level of community concern regarding certain impact issues, the monitoring results for these issues will be publically reported more frequently than the annual audit. These impact issues are noise, terrestrial and marine fauna, community complaints and traffic. As shown in Table 7, the monitoring data will be made available on the Water Corporation’s website, through monthly reports to the CRG and the Water Corporation’s project newsletter.

Table 7 Public reporting of monitoring results

Impact issue	Project phase*	Reporting frequency ⁶	Report content
Noise	C	Weekly & Monthly	- Map of noise monitoring results - Identify locations where standards have been exceeded
Terrestrial fauna	C	Monthly	- Number and location of animals removed from trenches - Fauna injuries (i.e. type and location)
Marine fauna	C	Weekly & Monthly	- Number of times work is stopped due to sightings of cetaceans - Location and frequency of incidences where water quality standards are exceeded - Fish kill events
Community complaints	C, O	Monthly	- Summary of complaints received
Traffic	C	Monthly	- Number and location of traffic accidents resulting from the SSDP project

⁶ Data is reported less frequently during the operations phase.

Impact issue	Project phase*	Reporting frequency ⁶	Report content
			- Nature of accident (e.g. truck, chemical tanker, car)

*Construction: C; Operations: O

The potential for disruption to the community during the construction phase can be lessened by providing the community with advance notice of potentially intrusive activities. This will be achieved through the Water Corporation’s monthly newsletter to the Binningup and Myalup communities and the CRG.

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Appendix A Community Survey Results

1. Introduction

1.1 Purpose of Survey

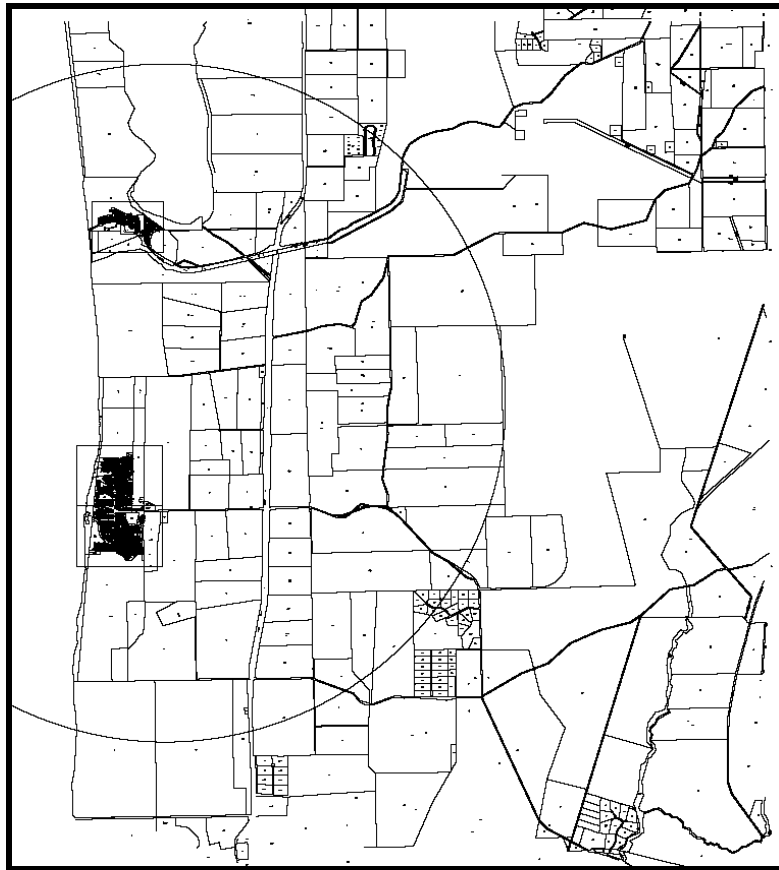
A local community survey was conducted to establish the baseline social conditions for the Social Impact Management Plan. An interviewer-administered questionnaire was used to collect data on resident perceptions of their community and the potential impacts of the Water Corporation's proposed Southern Seawater Desalination Plant. A copy of survey questionnaire is provided as the end of the results.

The survey is the first stage of a longitudinal study of resident perceptions. The intention is to repeat the survey near the end of the construction phase. The survey would be conducted a third time after the plant has been in operation for several years.

1.2 Study Area

The study area was defined as all residences within a six kilometre radius of the Taranto Road site proposed for the desalination plant (Figure 1). This included the communities of Myalup and Binningup. The study area also included residences on properties directly affected by the pipeline route between Binningup and Harvey. The Pamelup Estate, a gated community just to the north of Myalup, was included in the study area at the request of the Community Reference Group (CRG).

Figure 1: Study area within a 6 km radius of the Taranto Road site



1.3 Survey Administration

In advance of the survey, information flyers were placed in prominent locations in the Myalup and Binningup communities. Flyers were also distributed to Myalup and Binningup households via the Myalup newsletter and a Binningup 'junk mail' distributor.

A team of eleven interviewers went door-to-door to all residences in the Myalup and Binningup communities on the weekends of 14-15 and 21-22 February. Interviewers requested the participation in the survey of one adult member from each household. If there was no one home at the time of the door-knock, a card was left informing the household that another attempt would be made to contact them and providing a phone contact. Where there was no response, at least three attempts on different days and times were made to contact the household.

To gain access to the gated Pamelup Estate, a liaison person identified by the CRG was contacted. He indicated that door knocking on the estate would be difficult and unlikely to be successful due to the high proportion of holiday homes and physical constraints (large sand dunes). Instead, an email was sent to all Pamelup Estate residents. The email outlined the survey details and included an electronic copy of the information flyer. Interested residents were asked to contact Beckwith Environmental Planning, via telephone or email, to organise a date and time to complete the questionnaire.

The Pipeline Route residents live some distance apart making walking door-to-door impractical. For this reason, the pipeline route residents were contacted in advance to arrange appointments. Several people did not return our calls or were not at home at the arranged meeting time.

All but nine of the questionnaires were completed in-person rather than by telephone.

1.4 Response Rate

In total, 333 questionnaires were completed for a response rate of 51 percent of all households in the study area (Table 1). The highest response rate (57%) was achieved in Binningup (Figure 2).

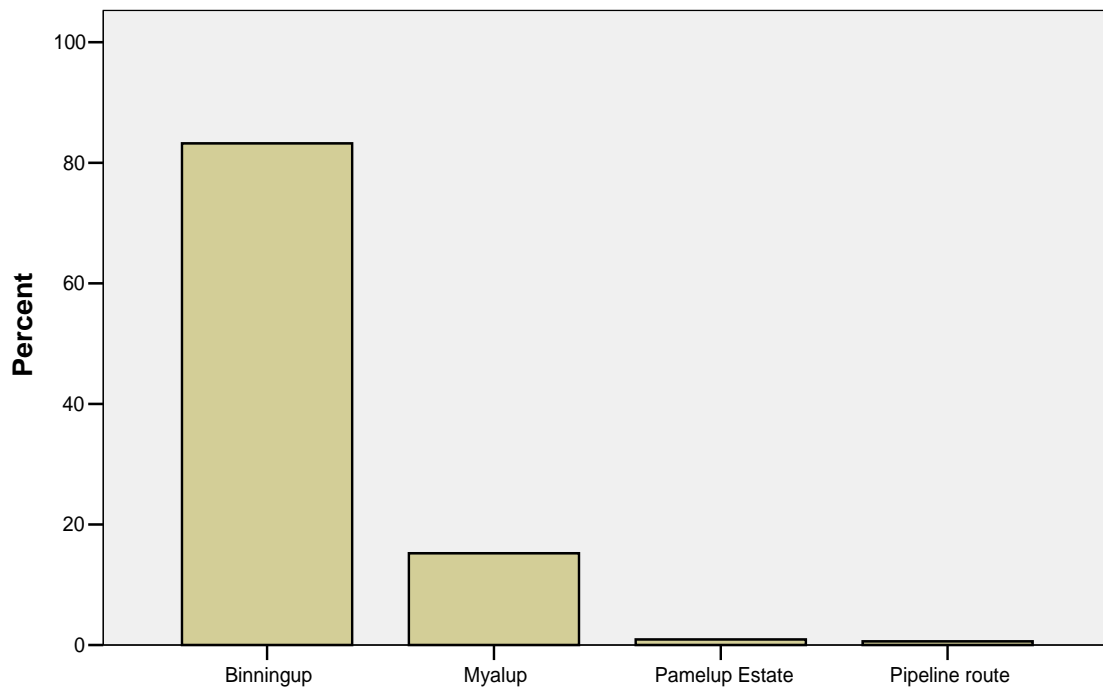
Despite multiple attempts to contact non-responsive households, 29 percent of Binningup households and 56 percent of Myalup households could not be contacted. At a minimum, 34 percent of the 'no response' residences in Binningup and 57 percent of the 'no response' residences in Myalup appeared to be holiday homes⁷. The lower participation rate in Myalup (38%) may reflect the higher percentage of holiday homes in that community.

Table 1 Survey response rate

Location	Estimated households	Households					
		Participated		Refused		No response	
		Number	%	Number	%	Number	%
Binningup	491	278	56.6	73	14.9	140	28.5
Myalup	129	49	38.0	8	6.0	72	56.0
Pamelup Estate	18	3	17.0	0	0.0	15	83.0
Pipeline route	8	3	37.5	1	12.5	4	50.0
Total study area	646	333	51.5	82	12.7	231	35.8

Figure 2: Location of Survey Respondents

⁷ Either neighbours identified the property as a holiday home or the 'call back card' was not been removed from the letterbox.



Only 20 percent of households at home at the time of the survey refused to complete the questionnaire. Most of the 82 individuals who declined to participate in the survey gave a reason, with the majority (60%) indicating they were simply not interested in taking part in the survey (Table 2).

Table 2 Reason for non-participation

Reason given for refusal	Frequency	Percent
Not interested	49	59.8
Too busy	5	6.1
Renting the residence for a one-off holiday	5	6.1
Do not own the residence	3	3.7
In the process of moving out	2	2.4
Completing the survey will not make a difference	2	2.4
No opinion on the desalination plant	2	2.4
Support the desalination plant but not interested in taking part in survey	2	2.4
Against the desalination plan but not interested in taking part in survey	1	1.2
Have already done enough	1	1.2
No reason provided	10	12.1
Total	82	100.0

Survey respondents were asked if they would be willing to participate in a similar survey in several years time in order to examine whether or not resident perceptions of the community and project have changed. Over ninety percent (94%) of those who completed the questionnaire indicated they were willing to participate in the next survey and provided their contact information (Table 3).

Table 3 Respondents willing to participate in the next survey

Future participation	Frequency	Percent
Yes	312	93.7
No	21	6.3
Total	333	100.0

2. Survey results

2.1 Respondent Characteristics

With respect to gender, 171 males and 162 females completed the questionnaire. More than three-quarters of respondent households (76%) own their residence, with only 24 percent renting their home. For most respondents (84%), their dwelling was their primary residence rather than a secondary or holiday home (Table 4).

Table 4 Primary residence or holiday home

Location	Primary residence		Holiday or secondary home	
	Frequency	Percent	Frequency	Percent
Binningup	235	84.5	42	77.7
Myalup	38	13.7	11	20.4
Pamelup Estate	2	0.7	1	1.9
Pipeline route	3	1.1	0	0.0
Total	278	100.0	54	100.0

Most respondents have lived in the local area for more than five years (57%). Only 18 percent have moved to the community in the last two years, while 13 percent have lived in the community for more than 20 years (Figure 3).

2.2 Perceptions of Community

Respondents were asked to rate on a scale from 1 (very dissatisfied) to 7 (very satisfied) how satisfied they were living in their community prior to the announcement of the seawater desalination plant (Figure 4). A large majority of respondents (83%) indicated that prior to the announcement

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of desalination project they were very satisfied with their community as a place to live (Table 5). Less than two percent of respondents indicated they were dissatisfied living in their community.

Figure 3: Years living in the community

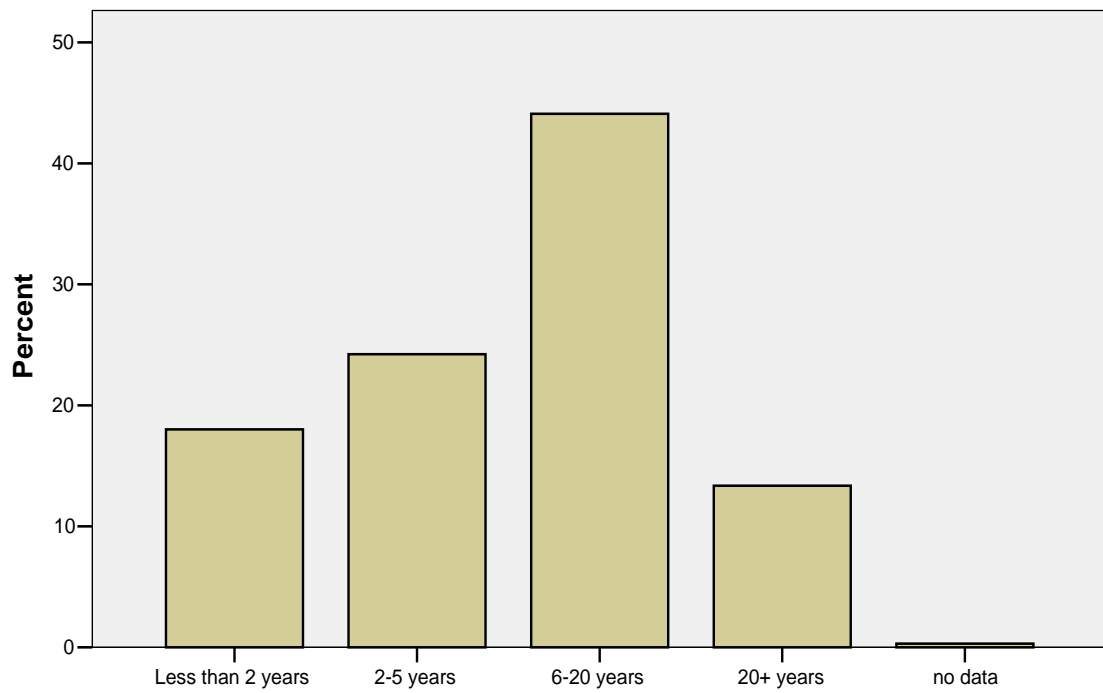


Figure 4: Satisfaction with community

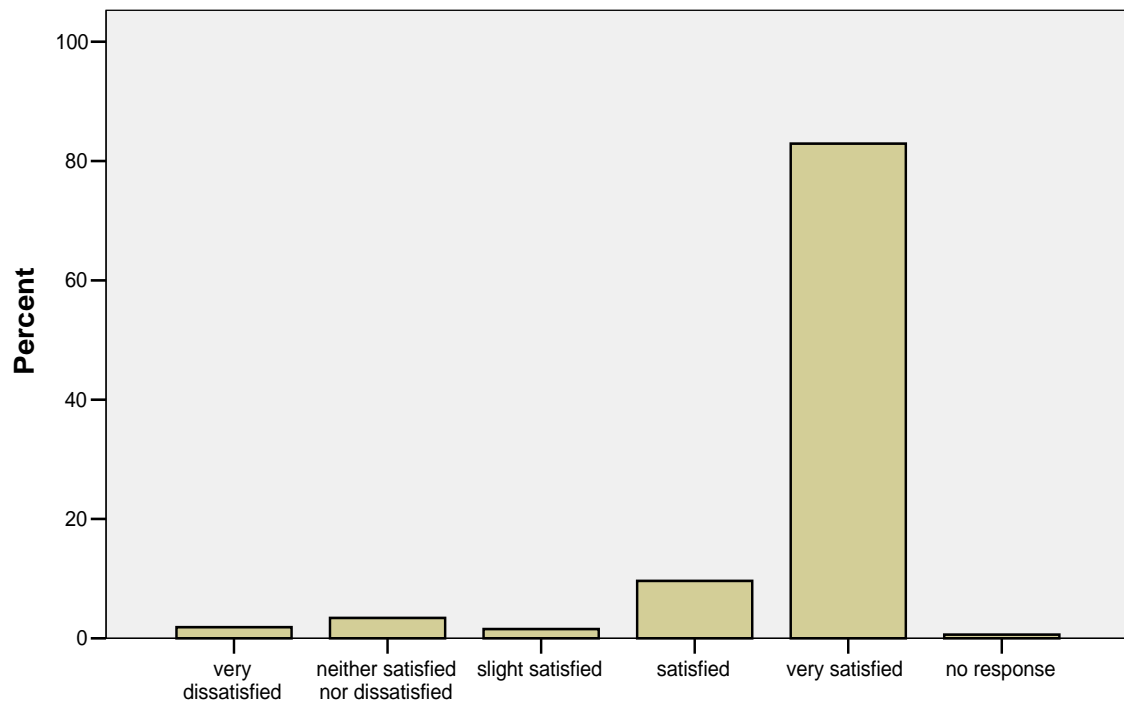


Table 5 Level of satisfaction with community

Level of satisfaction	Frequency	Percent
Very dissatisfied	6	1.8
Dissatisfied	0	0.0
Slightly dissatisfied	0	0.0
Neither satisfied nor dissatisfied	12	3.6
Slightly satisfied	5	1.5
Satisfied	31	9.3
Very satisfied	276	82.9
No response	3	0.9
Total	333	100.0

When asked to identify the three best characteristics of their community, the most frequent responses were:

- The community’s proximity to the beach (66%)
- It is a quiet and peaceful community (63%)
- The sense of community spirit (49%)
- The lifestyle offered (36%)
- The location of the community (18%)
- The natural environment (18%)

Respondents were also asked to identify any less desirable aspects of their community. The majority of respondents (55%) did not identify any less desirable characteristics. The most frequently cited characteristics were:

- Lack of community facilities/services (e.g. medical, schools) (13%)
- The isolated location (10%)
- Anti-social behaviour (e.g. ‘hoons on the dunes’) (10%)
- Tourists (7%)

2.3 Project Awareness, Approval and Trust

Not surprisingly, there is a very high level of awareness (98%) of the Water Corporation’s proposal to construct a seawater desalination plant in the vicinity. At the time of the survey, only five respondents (2%) were unaware of the proposal.

When asked to rate their level of approval of the seawater desalination project, only two respondents indicated they had no opinion (Figure 5). The majority of respondents (55%) indicated some level of disapproval, while 23 percent neither approved nor disapproved, and 22 percent indicated some level of approval of the project (Table 6).

Figure 5: Opinion of the seawater desalination project

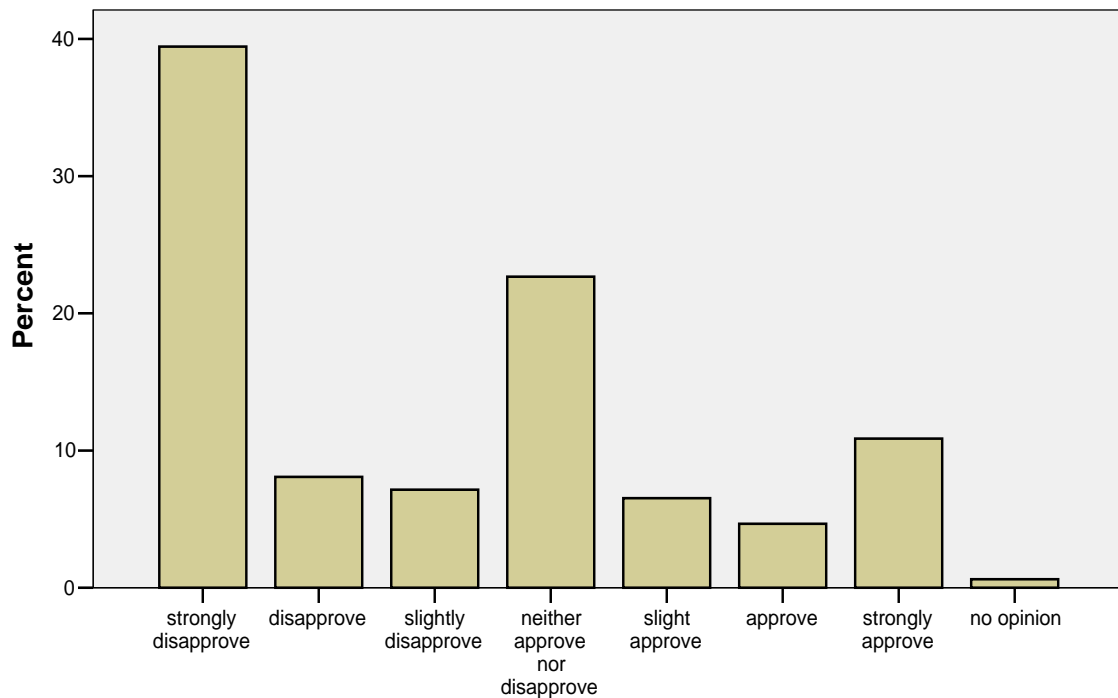


Table 6 Level of approval of the seawater desalination project

Level of approval	Frequency	Percent
Strongly disapprove	132	39.6
Disapprove	26	7.8
Slightly disapprove	24	7.2
Neither approve nor disapprove	76	22.8
Slightly approve	21	6.3
Approve	16	4.8
Strongly approve	36	10.8
No opinion	2	0.6
Total	333	100.0

When asked if their opinion of the seawater desalination project had changed since its announcement in 2008, a large majority (84%) indicated no change. A small number of respondents (23 or 7%) indicated that their opinion had become more favourable while a comparable number (29 or 9%) indicated their opinion had become less favourable.

The 52 respondents whose opinion of the project had changed were asked to provide the reason for the change of opinion. Three quarters of these respondents indicated that 'research' they had undertaken on the project was the reason for their change in opinion (Table 7). 'Research' included

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further examination of particular potential impacts (e.g. marine environment, beach closure), proposed mitigation measures, and alternatives to the desalination plant (e.g. desalination of Wellington Dam).

Table 7 Reasons for change in opinion of desalination project

Reason	Respondent's opinion became:	
	More favourable (n=23)	Less favourable (n=29)
Research	19	20
It is now more likely to go ahead	2	2
Only minimal data distributed to community	0	2
Visit to Kwinana desalination plant	1	1
Water Corporation is addressing the key concerns	1	0
The project has been forced on them	0	1
No reason provided	0	3

Respondents were asked to rate their current level of trust in the Water Corporation as the owner and operator of the seawater desalination plant (Figure 6). Almost 30 percent of respondents indicated they had a very low level of trust in the Water Corporation (Table 8). Another 28 percent neither trusted nor distrusted the Water Corporation. A quarter of respondents indicated they had some level of trust in the Water Corporation as compared with 45 percent that hold some level of distrust in the Water Corporation.

Figure 6: Level of trust in the Water Corporation

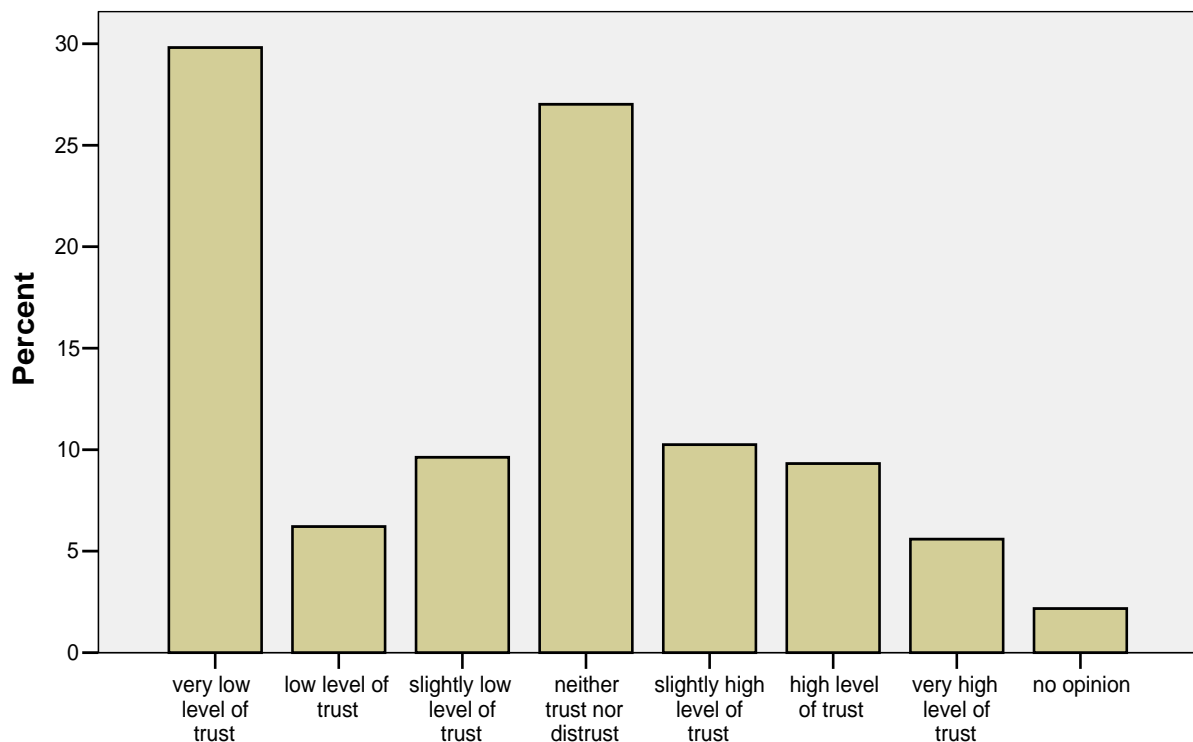


Table 8 Level of trust in the Water Corporation

Current level of trust	Frequency	Percent
Very low level of trust	100	30.0
Low level of trust	20	6.0
Slightly low level of trust	31	9.3
Neither trust nor distrust	93	27.9
Slightly high level of trust	33	9.9
High level of trust	31	9.3
Very high level of trust	18	5.4
No opinion	7	2.1
Total	333	100.0

Relationships

The survey data indicated a positive correlation ($r = .656$, $p < .01$) between a respondent’s level of trust in the Water Corporation and their opinion of the Seawater Desalination Project. In other words, respondents with a higher level of trust in the Water Corporation tended to give the project a higher approval rating.

Independent samples t-tests revealed that:

- Those respondents who rent rather than own their dwelling tend to have a higher level of trust in the Water Corporation and a more favourable view of the project (Table 9).
- Those respondents living in the community for 5 years or less tend to have a higher level of trust in the Water Corporation and a more favourable view of the project (Table 10).

There is a relationship between dwelling tenure (own/rent) and length of residency in the community. Almost three-quarters of the respondents living in the community for less than two years are renters (Table 11).

Table 9 Independent samples t-test for dwelling tenure (N=333)

Variable	t	significance	Mean value (1-7)	
			Own	Rent
Opinion of the desalination project	-3.013	.001	2.90	3.71
Trust in Water Corporation	-4.354	.001	3.16	4.25

Table 10 Independent samples t-test for years living in the community (N=333)

Variable	t	significance	Mean value (1-7)	
			5 years or less	Greater than 5 years
Opinion of the desalination project	3.041	.003	3.75	2.72
Trust in Water Corporation	3.480	.001	4.25	3.11

Table 11 Cross tabulation of dwelling tenure and years in community (N=333)

Years in community	Own		Rent	
	Frequency	Percent	Frequency	Percent
Less than 2 years	16	26.7	44	73.3
2-5 years	57	69.5	25	30.5
6-20 years	137	93.8	9	6.2
20+ years	43	97.7	1	0.3

There was no significant difference between males and females with respect to their level of trust in the Water Corporation or their level of approval of the project. Similarly, no significant differences were found between primary home respondents and holiday home respondents or between Binningup and Myalup respondents.

Comparison with Synovate Data

It is interesting to compare the project approval ratings obtained from Binningup and Myalup respondents in the three Synovate telephone surveys with the project approval ratings of respondents in the February 2009 community survey (Tables 12 and 13). Most notable is the significant increase in the percentage of respondents who 'neither approve nor disapprove' of the seawater desalination project.

Synovate conducted telephone surveys at three points during 2007-08. Survey respondents were asked to rate their level of support or opposition to the construction of the Desalination Plant north of Binningup. Table 12 displays the approval/disapproval ratings of Binningup residents in the Synovate surveys. The same table indicates the level of approval/disapproval of the desalination project reported during the February 2009 community survey. Table 13 provides a similar comparison of survey data for Myalup respondents.

Table 12 Comparison of Binningup residents' project approval ratings

	Synovate telephone surveys	Community door knock survey
--	----------------------------	-----------------------------

Project approval rating	Aug 2007 N=88	Nov 2007 N=94	Oct 2008 N=120	Feb 2009 N=278
Approve	29%	43%	26%	20.1%
Neither approve/disapprove	9%	12%	14%	22.3%
Disapprove	62%	45%	60%	57.2%
No opinion	0.0%	0.0%	0.0%	0.4%

Table 13 Comparison of Myalup residents' project approval ratings

Project approval rating	Synovate telephone surveys			Community door knock survey
	Aug 2007 N=38	Nov 2007 N=40	Oct 2008 N=37	Feb 2009 N=49
Approve	50%	56%	30%	28.6%
Neither approve/disapprove	3%	5%	11%	26.5%
Disapprove	47%	39%	59%	42.9%
No opinion	0.0%	0.0%	0.0%	2.0%

2.4 Anticipated Negative Impacts

In an open-ended question, the respondents were asked to identify the negative impacts they expect the desalination plant to have on the local community. They were also asked to indicate if they expected the impact to occur during the construction phase (Table 14) and/or the operations phase (Table 15) of the project.

The same four impacts dominated the anticipated negative impacts during both the construction and operation phases of the project. These were the impact on the marine environment, noise impacts, impacts on the terrestrial environment and restricted beach access.

Construction Phase

For the construction phase the dominant issue was the anticipated impact on the marine environment (51%), followed by noise (38%), the terrestrial environment (35%), restricted beach access (24%) and increased population (22%). Twenty-two percent of respondents did not anticipate any negative effects during the construction phase.

Table 14 Anticipated negative impacts during construction phase (N=333)

Predicted impact	Frequency	Percent
Marine environment	169	50.8

Predicted impact	Frequency	Percent
Noise	127	38.1
Terrestrial environment	117	35.1
Restricted beach access	79	23.7
Increased population	73	21.9
Visual amenity	31	9.3
Increased traffic	31	9.3
Decreased property values	31	9.3
Increased industrial development	26	7.8
Light spill	21	6.3
General disruption	19	5.7
Likely to divide the community	11	3.3
Dust	9	2.7
Vibrations	8	2.4
Chemical discharge to the ocean	6	1.8
Uses a lot of energy	6	1.8
Chemical spill during transport or storage on site	5	1.5
Decrease in number of tourists	4	1.2
Uncertainty – impacts unknown	2	0.6
No negative impacts during construction	74	22.2

Operations Phase

The marine environment (63%) was also the most frequently identified impact for the operations phase of the project (Table 15). This was followed by noise (38%), the terrestrial environment (36%), restricted beach access (18%) and increased population (12%). Twenty percent of respondents did not anticipate any negative impacts during the operations phase.

Table 15 Anticipated negative impacts during operations phase
(N=333)

Predicted impact	Frequency	Percent
Marine environment	210	63.1
Noise	126	37.8
Terrestrial environment	120	36.0
Restricted beach access	61	18.3
Increased population	40	12.0
Increased industrial development	39	11.7

Predicted impact	Frequency	Percent
Decreased property value	35	10.5
Visual amenity	32	9.6
Light spill	30	9.0
Chemical discharge to ocean	28	8.4
General disruption	23	6.9
Increased traffic	18	5.4
Uses a lot of energy	16	4.8
Likely to divide the community	15	4.5
Chemical spill during transport or storage on site	9	2.7
Decrease in number of tourists	7	2.1
Greenhouse gas emissions	6	1.8
Vibrations	5	1.5
Dust	4	1.2
Negative impact on agriculture	2	0.6
Uncertainty – impacts unknown	1	0.3
No negative impacts during operations	67	20.1

2.5 Anticipated Positive Impacts

In an open-ended question, the respondents were asked to identify the positive impacts they expect the desalination plant to have on the local community.

Construction Phase

The majority of respondents (61%) did not identify any positive impacts for the construction phase (Table 16). Most of the positive impacts identified were economic in nature, including local employment opportunities (29%) and increased spending in the local area (9%).

Table 16 Anticipated positive impacts during construction phase (N=333)

Predicted impact	Frequency	Percent
Local employment opportunities	98	29.4
Increased spending in the local area	29	8.7
Increased investment in the local area	14	4.2
Improved water supply availability	10	3.0
Binningup will become well known	3	0.9
No one knows what the impacts will be	5	1.5
No positive impacts anticipated during construction	203	61.0

Operations Phase

Almost a third of respondents (29%) indicated that the desalination plant would result in improved water supply availability for the state, region or locally (Table 17). Economic considerations again were dominant including local employment opportunities (27%) and increased spending (8%) and investment (6%) in the local area. Almost 43 percent of respondents did not identify any positive impacts for the operations phase of the project.

Table 17 Anticipated positive impacts during operations phase (N=333)

Predicted impact	Frequency	Percent
Improved water supply availability	97	29.1
Local employment opportunities	90	27.0
Increased spending in the local area	28	8.4
Increased investment in the local area	21	6.3
More residents	16	4.8
Increased property value	5	1.5
Encourage future residential development	3	0.9
Binningup will become well known	3	0.9
No one knows what the impacts will be	1	0.3
No positive impacts anticipated during operation	142	42.6

2.6 Impact Ratings

Respondents were read a number of statements regarding potential impacts. For each statement, the respondent used a scale from 1 (very negative) to 7 (very positive) to rate the impact (Table 18). A large majority of respondents indicated that the local marine environment would be negatively impacted during both the construction (77%) and operations (72%) phases of the project. This impact category also attracted the largest number of 'very negative impact' ratings for the construction (Table 19) or operations (Table 20) phases of the project.

As expected, the majority (67%) of respondents indicated that recreational use of the beach would be negatively impacted during the construction phase. There is also the perception that recreational use of the beach will be negatively impacted during the operations phase. Almost half of all respondents indicated that recreational use of the beach would be negatively impacted (Table 18), including 25 percent who rated the anticipated impact as 'very negative' (Table 21).

The only impact category with a mean value above 3.5 (i.e. positive) was the perceived impact on the local economy (Table 18). Almost half of respondents (47%) indicated that the project would generate some level of positive impact on the local economy during the construction phase.

For many of the impact categories, a significant percentage of respondents rated the impact as neither positive nor negative (Table 18). For example, half of the respondents gave a 'neither' rating for the impact on local visual amenity during either the construction (51%) or the operations (51%) phase. This can be interpreted in several ways. It may indicate that respondents felt that the impact would not be significant or it may reflect a 'wait and see' attitude in making a judgement of the impact.

Table 18 Summary of impact ratings (N=333)

Type of Impact	Phase	Mean	Impact Rating			
			Negative %	Neither %	Positive %	No opinion %
Impact on local marine and coastal environments	construction	2.35	76.5	17.7	3.0	2.7
	operation	2.50	71.8	21.6	3.9	2.7
Impact on recreational beach use	construction	2.50	67.3	28.2	3.3	1.2
	operation	3.06	48.6	44.1	4.5	2.7
Impact on local residents' satisfaction with community	construction	2.89	57.7	34.8	4.2	3.3
	operation	3.13	51.1	37.5	7.2	4.2
Impact on the visual amenity of local community	construction	3.04	45.9	50.5	2.1	1.5
	operation	3.13	44.1	51.4	2.7	1.8
Impact on noise levels at your residence	construction	3.08	49.8	44.4	2.1	3.6
	operation	3.19	47.1	46.5	2.4	3.9
Impact on future residential development	construction	3.12	54.1	28.8	14.1	3.0
	operation	3.21	50.5	31.8	14.4	3.3
Impact on the local economy	construction	4.56	16.2	33.9	46.5	3.3
	operation	4.14	18.3	52.3	26.7	2.7

Table 19 Anticipated impact on marine and coastal environments during construction phase

Impact rating (N=333)	Frequency	Percent
Very negative impact	152	45.6
Negative impact	47	14.1
Slightly negative impact	56	16.8
Neither positive nor negative	59	17.7

Slightly positive impact	2	0.6
Positive impact	7	2.1
Very positive impact	1	0.3
No opinion	9	2.7

Table 20 Anticipated impact on marine and coastal environments during operation phase

Impact rating (N=333)	Frequency	Percent
Very negative impact	138	41.4
Negative impact	43	12.9
Slightly negative impact	58	17.4
Neither positive nor negative	72	21.6
Slightly positive impact	6	1.8
Positive impact	6	1.8
Very positive impact	1	0.3
No opinion	9	2.7

Table 21 Anticipated impact on recreational use of beach during operations phase

Impact rating (N=333)	Frequency	Percent
Very negative impact	82	24.6
Negative impact	46	13.8
Slightly negative impact	34	10.2
Neither positive nor negative	147	44.1
Slightly positive impact	10	3.0
Positive impact	3	0.9
Very positive impact	2	0.6
No opinion	9	2.7

There was little difference between Binningup and Myalup residents in how they rated the various categories of potential impact. An exception was the impact on beach recreation during the construction phase. Binningup respondents (mean = 2.35) rated this impact more negatively than did Myalup respondents (mean = 3.12) ($t = -3.375, p = .001$).

Female respondents provided more negative ratings than their male counterparts with respect to the anticipated level of impact on the marine environment both in the construction and operations phases (Table 22). Those who own their residence tended to be more concerned about the

impacts on the marine environment and less optimistic about impacts on the local economy (Table 23).

Table 22 Independent samples t-test for gender

Impact category	t	significance	Mean value (1-7)	
			Male	Female
Marine environment (Construction)	2.641	.009	2.57	2.10
Marine environment (Operations)	2.774	.006	2.74	2.24

Table 23 Independent samples t-test for dwelling ownership

Impact category	t	significance	Mean value (1-7)	
			Own	Rent
Marine environment (Operations)	-2.660	.008	2.36	2.92
Local economy (Construction)	-3.414	.001	4.39	5.09
Local economy (Operations)	-3.349	.001	3.99	4.61

2.7 Respondent Proposed Actions

Respondents were asked to identify any actions the Water Corporation could take to ensure the desalination plant is the best possible fit for the local community (Table 24). The most frequently suggested action was for the Water Corporation to choose a different location for its desalination plant (41%).

Table 24 Ways to make the desalination project a better fit (N=333)

Suggested action	Frequency	Percent
Build the project elsewhere	136	40.8
Provide avenues for communication	54	16.2
Reduce the visual impact	39	11.7
Adaptive management	37	11.1
Reduce the noise impact	36	10.8
Reduce environmental impact	26	7.8
Water Corporation investment in community infrastructure	19	5.7
Conduct further research on the potential environmental problems	17	5.1
Provide employment opportunities for locals	12	3.6
Revegetate cleared areas	10	3.0

Suggested action	Frequency	Percent
Satisfied with the work that has been done	9	2.7
Reduce impact on beach recreation	6	1.8
Ensure no more industrial development occurs	4	1.2
Compensation for loss in property value	4	1.2
No actions suggested	57	17.1

2.8 Other Comments

Respondents were given an opportunity at the end of the questionnaire to provide any additional comments they wanted recorded. Over half of respondents (54%) provided additional comments (Table 25). Almost a quarter of respondents (24%) stated that the Water Corporation should find means other than desalination to meet the growing water demand for public water supply. Providing the community with more information (11%) and listening to public opinion (10%) were also raised as issues.

Table 25 Additional comments by respondents (N=333)

Additional comments	Frequency	Percent
Explore alternative means of meeting demand for public water supply	79	23.7
Provide access to more information	35	10.5
Listen to public opinion	32	9.6
Protect the marine environment	21	6.3
Manage the plant responsibly	20	6.0
It is a good idea. Move forward.	15	4.5
More water is needed	14	4.2
Maintain beach access	9	2.7
More thought is needed	8	2.4
The plant will consume large amounts of power	8	2.4
Protect the terrestrial environment	8	2.4
Compensate the community for bearing the burden	4	1.2
Water Corporation has not managed land appropriately	4	1.2
It will disrupt the peace and quiet of the community	3	0.9
The project will deter tourists	1	0.3
No comment provided	153	45.9

3. Conclusions

Key findings:

- Most respondents expressed a high level of satisfaction with their local community.
- The majority of respondents (55%) indicated some level of disapproval of the seawater desalination project, while 23 percent neither approved nor disapproved, and 22 percent indicated some level of approval.
- Only a small percentage of respondents (16%) indicated that their opinion of the desalination project had changed since it was announced.
- There is a significant positive relationship between a respondent's level of trust in the Water Corporation and their opinion of the Seawater Desalination Project.
- The same four impacts dominated the anticipated negative impacts during both the construction and operation phases of the project. These were the impact on the marine environment, noise impacts, impacts on the terrestrial environment and restricted beach access.
- The potential impact on the marine environment received the most 'very negative' impact ratings for both the construction (46%) and operations (41%) phases.
- There is a perception that recreational use of the beach will be negatively impacted during both the construction and operations phases of the project. Almost half of all respondents indicated that recreational use of the beach during the operations phase would be negatively impacted, including 25 percent who rated the impact as 'very negative'.
- The majority of respondents (61%) did not identify any positive impacts for the construction phase. However, about a third anticipated that the project would generate some employment opportunities in the construction phase.
- The respondent characteristics that most influenced perceptions of the desalination project and its potential impacts were home ownership and the number of years living in the community. Those who rent rather than own their dwelling tended to have a higher level of trust in the Water Corporation and a more favourable view of the desalination project. Those respondents living in the community for 5 years or less tend to have a higher level of trust in the Water Corporation and a more favourable view of the project.
- There was no evidence that the community feels over consulted regarding the project and about 16 percent of respondents indicated a desire for more information/communication about the project.

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- Almost all of those who completed the questionnaire would be willing to participate in a similar survey in several years time.

Survey questionnaire

SIMP Survey

Beckwith Environmental Planning

February 2009

INTERVIEWER TO COMPLETE

Interviewer's name: _____

Time of interview: _____

Date of interview: _____

Time of start of interview: _____

Dwelling address: _____

The respondent must be 18 years of age or older. If there is any doubt, please confirm that the respondent is 18 years or older.

Respondent is 18 years or older

Indicate the community where the dwelling is located (use the map provided):

- Binningup
- Myalup
- Pamelup Estate
- Pipeline route

Indicate the respondent's gender.

- male
- female

Did you leave the information handout with the respondent? Yes

Section A

1. Is this your primary residence or a holiday/secondary home?
 - Primary residence
 - Holiday/secondary home

2. Do you (or a member of this household) own or rent this home?
 - Own
 - Rent

3. **(Refer to card)** How many years have you/household lived in this **community**?
 - Less than 2 years
 - 2 – 5 years
 - 6 – 20 years
 - 20+ years

4. What are the three characteristics of this community?
 1.

 2.

 3.

No desirable characteristics identified by respondent

5. What, if any, are the less desirable characteristics of this community?

1. _____

2. _____

3. _____

There are no undesirable characteristics.

6. Before today, were you aware of the Water Corporation’s plans to construct a seawater desalination plant in the vicinity?

Yes

No

7. **(Refer to card)** Prior to the announcement of the seawater desalination plant, how satisfied were you living in this community?

1	2	3	4	5	6	7
Very dissatisfied			Neither satisfied nor dissatisfied			Very satisfied

8. **(Refer to card)** Using the card, please indicate your overall opinion of the seawater desalination project.

1	2	3	4	5	6	7
Strongly disapprove			Neither approve nor disapprove			Strongly approve

No opinion (Go to Question 11)

9. **(Refer to card)** Has your opinion of the seawater desalination project changed since it was announced in 2008?

My opinion has not changed (Go to Question 11)

My opinion is more favourable (Go to Question 10)

My opinion is less favourable (Go to Question 10)

10. What changed your opinion?

11. **(Refer to card)** How would you rate your current level of trust in the Water Corporation as the owner and operator of the seawater desalination plant?

1	2	3	4	5	6	7
Very low level of trust			Neither trust nor distrust			Very high level of trust

No opinion

Section B

I would like you to tell me what you think will be the impact of the desalination plant on the local community. First I'll ask about potential negative impacts and then about potential positive impacts.

12. What negative impacts, if any, do you expect the desalination plant to have on this community? (Note: prompt if in construction and/or operation phase)

Negative impacts:
Oper.

Con.

No negative impacts are anticipated

13. What positive impacts, if any, do you expect the desalination plant to have on this community? **(Note: prompt if in construction and/or operation phase)**

Positive impacts:

Con. Oper.

No positive impacts are anticipated.

I am going to read a number of statements to you. For each, use the card to indicate how positive or negative you believe the impact will be. (Refer to card)

14. The effect on **recreational beach use** during the construction phase:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

15. The effect on **recreational beach use** once the desalination plant is in operation:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

16. The effect of the construction phase on the **local economy**:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

17. The effect on the **local economy** once the desalination plant is in operation:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

18. The effect of the construction phase on local residents' **satisfaction with their community**:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

19. The effect of the desalination plant's operations on local residents' **satisfaction with their community:**

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

20. The effect of the construction phase on the **local marine and coastal environments:**

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

21. The effect of the desalination plant's operations on the **local marine and coastal environments:**

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

22. The effect of the plant's construction phase on **future residential development** in the local community:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

23. The effect of the desalination plant's operations on **future residential development** in the local community:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

24. The effect of the plant's construction phase on **noise levels at your residence:**

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

25. The effect of the desalination plant's operations on **noise levels at your residence:**

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

26. The effect of the plant's construction phase on the **visual amenity** of the local community:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

27. The effect of the desalination plant's operations on the **visual amenity** of the local community:

1	2	3	4	5	6	7
Very negative impact			Neither positive nor negative			Very positive impact

No opinion

28. What actions could the Water Corporation take to ensure the desalination plant is the best possible fit for this community?

No actions suggested.

29. Would you like to add any other comments?

To assist in monitoring the impacts of the project, we plan to conduct a second survey in a few years time to update community perceptions of the desalination project.

30. Would you be willing to complete a follow-up questionnaire at that time?

- Yes
- No

If **YES**, what is your name so that we can contact you:

Name: _____

Title: Mr Mrs Miss Ms. Dr Other:

Telephone: _____

Street/PO Box _____

Town _____ Postal
code: _____

Time at end of interview: _____

Thank you for participating in the community survey.

Appendix B CRG Terms of Reference

TERMS OF REFERENCE

SOUTHERN SEAWATER DESALINATION PROJECT

COMMUNITY REFERENCE GROUP

SEPTEMBER 2008

Background

The proposed Southern Seawater Desalination Project (SSDP) has been chosen as the next major water source for the South-West. The site identified lies between the coastal towns of Binningup and Myalup on the South-West coast.

The Water Corporation commissioned a Social Impact Assessment (SIA) to build on the knowledge of potential social impacts during construction and operation. One of the recommendations from the SIA was that a Community Reference Group (CRG) be established to enhance communication between the community and the project.

Following this, the Water Corporation is establishing the Southern Seawater Desalination Project Community Reference Group.

Membership

The group will be comprised of up to thirteen members. It is anticipated that this will include a broad range of representatives, one from each of the following, except for the Harvey Shire:

- Shire of Harvey (2 Reps)
- Binningup Desalination Action Group
- Binningup Community Association
- Myalup Community Association
- Binningup Senior Citizens Association
- Binningup Surf Life Saving Club
- Harvey District Water Sports Club
- The Myalup Community
- The Binningup Community

The Water Corporation will be represented at CRG meetings by the Manager, Southern Seawater Desalination Scheme (or nominee) but will not have voting rights.

Chairperson

The CRG will be facilitated by an independent chairperson. This chairperson will be endorsed by the CRG and will not have voting rights.

Resourcing

The Water Corporation will provide administrative support to the CRG in the form of an executive officer and will resource the Group with stationery materials and catering.

Terms of reference

Purpose

The SSDP is a major project that will see a significant Water Corporation presence in the local area for the long-term. The purpose of the CRG is to help build on the relationship between the communities impacted and the Water Corporation. The Water Corporation genuinely wants to understand the community's priorities and concerns that exist currently, through construction and on to operation. The CRG is a formal way for the Water Corporation to draw on the local knowledge to help build the most environmentally and socially sustainable plant possible.

However, the CRG is also a great opportunity for community members to ensure the local area remains the beautiful and idyllic place it is currently by raising issues of concern directly with the Water Corporation. The Water Corporation recognises that the desalination project will have an impact on the lives and lifestyles of local residents. The CRG is a way to ensure that impacts are minimised and the unique quality of the local area is preserved. Members of the CRG can request information from the Water Corporation and play a leading role in guaranteeing the project remains accountable to the community.

This Community Reference Group will provide a local focus on a State-level strategic resource project. The CRG will broadly facilitate an advisory and community feedback role. It will act as communications channel between the project and the community and will provide ongoing information and advice on any impacts that may arise during the construction and operation of the SSDP. This will help the Water Corporation to build on a robust community engagement process.

Specific roles of the CRG include:

- To facilitate feedback to, and seek input from the community on the impacts of the construction and operation of the desalination project
- To provide on-going information and advice on any impacts that may arise during the construction and operation of the desalination project
- In conjunction with the Shire of Harvey, assist in developing a local benefits package of enhancement projects the Water Corporation can support to add value to the community
- To provide advice to the Water Corporation on the community engagement process
- To be a representative group which can validate community responses and recommendations about the project
- To be a well-informed source of information on what's happening with the project

Accountability

The Community Reference Group is an independent group that reports its views to the Water Corporation SSDP project team. Deliberations of the Community Reference Group will be reported to the community through its members, through the project newsletter and through the Water Corporation website.

Responsibilities

The CRG will have the following responsibilities:

- 1) Identify and discuss local impacts from the project and ways in which the impacts might be mitigated or managed
- 2) Advise the Water Corporation on ways to engage the local communities to build strong community input and feedback to the project team
- 3) Act as a vehicle through which the local communities can voice their concerns and suggest ways to improve the project
- 4) Monitor community feedback and identify issues for action and/or discussion
- 5) Provide advice on the development of a local benefits package of enhancement projects that the Water Corporation can support
- 6) Help maximise community-wide support for the projects included in the local benefits package
- 7) Regularly report to the Water Corporation to help it assess overall progress on the project's community engagement process.

The Water Corporation's commitment to the group

The Water Corporation will undertake to:

- 1) Liaise with the CRG for advice on engaging with the community
- 2) Work with the CRG to ensure that community issues and concerns are understood and considered
- 3) Work with the CRG to help the needs and concerns of the community to be reflected in the solutions and strategies developed to manage impacts
- 4) Consider the CRG recommendations when developing a local benefits package, and work with the Shire of Harvey in finalising proposed projects
- 5) Provide feedback to the CRG, and to the broader community, on how the community's input has been used and incorporated into outcomes.

Term and meeting frequency

It is anticipated the CRG will meet monthly before and during the construction period of the SSDP, but meeting frequency will be endorsed by the group at the first meeting.

Pending a decision from the CRG, the group may continue to meet less frequently during the operation period of the project to monitor impacts and continue to provide feedback.

Meeting procedures and agenda

The agenda for each meeting will be formulated by the Executive Officer in consultation with the CRG. Agenda items should be sent to the Executive Officer one week prior to the meeting for inclusion in the Agenda. Agendas will be sent out to participants one week prior to the meeting.

Minutes will be circulated to participants within one week of the meeting. Minutes will be in the form of notes/action rather than a verbatim transcript, which may be posted on the Water Corporation website, subject to endorsement from the CRG.

The CRG Terms of Reference should be reviewed at least annually, or as determined, by the CRG.

Visitors and guests

Visitors are welcome to attend CRG meetings. Visitors are allowed to attend the CRG meetings as 'observers' and should not contribute to the discussion, until invited by the independent chairperson.

Guests are people invited to the CRG to provide advice or to give relevant presentations. Guests should be encouraged to contribute to the CRG discussion when appropriate.

Decision-making

Wherever possible, decision making will be by the consensus view of the CRG. A minimum of half the CRG is required to achieve a quorum. The CRG will then present a resolution to the Water Corporation for consideration. The Water Corporation is committed to considering the resolutions presented by the CRG, but is not bound to follow or implement them.

Appendix C Community Reference Group Members

Name	Affiliation
Adele Hobbs	Myalup community member
Dave Brindle	Myalup community member
Errol Harwood	Myalup Community Association
Paul Atherton	Binningup Community Association
Jan Nichols	Binningup community member
John Farnan	Binningup Senior Citizens
Julie Doyle	Binningup Surf Life Saving Club
Marie Dilley	Binnignup Deslination Action Group
Ken Brindley	Binningup Bowling Club
Andrew Rigg	Binningup Beach Christian Fellowship
Jess Puccio	Binningup community member
Peter Monagle	Shire of Harvey
Michael Parker	Shire of Harvey
Barry Oates	Independent Chair

Appendix D Commitments Register

SOUTHERN SEAWATER DESALINATION PROJECT

COMMITMENTS REGISTER

No.	ACTIONS	STATUS
1	Visual amenity and the inclusion of the earth bund has been undertaken to incorporate future nearby land use.	Complete – see design
2	No chemical buffers from the plant to extend beyond land owned by the Water Corporation.	Complete – see design
3	No infrastructure to be seen from beach.	Complete – see design
4	The Water Corporation will commission a marine mammal monitoring programme. Community members will have the opportunity to contribute sightings to this project.	Commenced
5	A Community Reference Group (CRG) will be established, with Terms of Reference to be agreed by the CRG. This group will play a major role in ensuring local concerns are communicated to the Water Corporation and that the Corporation is transparent in its dealings with the community.	Commenced
6	A local Benefits Package will be developed in consultation with the Community Reference Group and the Shire of Harvey.	Commenced consultation
7	A Social Impact Management Plan will be developed.	Commenced
8	A Water Corporation communications officer will work with the Alliance, when established, to maintain open communication with the community.	Commenced
9	The Communications Officer will establish and maintain a complaints mechanism, which ensures any concerns brought to the Water Corporation area resolved appropriately and in a timely manner.	In place
10	The desalination hotline (1800 810 075) and email address (desalination@watercorporation.com.au) will continue to operate during construction allowing easy access for the community to report problems or lodge enquiries.	In place
11	At the commencement of construction the Water Corporation will post signage at the plant site with the	

Southern Seawater Desalination Project – Social Impact Management Plan

No.	ACTIONS	STATUS
	Water Corporation's contact details.	
12	The Water Corporation will communicate any extraordinary circumstances or events with SSDP that might affect or interest the community.	
13	Management plans relating to matters of interest to the DEWHA will be included with the Public Environmental Report submitted to the DEWHA.	Complete – awaiting DEWHA
14	The location of the pilot plant is outside the proposed area of the SSDP plant. Any impacts on native vegetation from installing the pilot plant, which is likely to be housed in a shipping container, will be mitigated by fully re-instating the landforms and revegetation.	Environmental and planning approvals complete
15	Dust management will be in accordance with the Construction Environmental Management Framework.	
16	The Water Corporation Alliance will have to have in place agreed fire management plans that include FESA in their formulation.	
17	The Water Corporation will coordinate the Main Roads WA (MRWA), in particular any provisions or requirements at the intersection of any major roads such as Old Coast Road and South Western Highway.	In progress
18	Traffic Management Plans will be submitted for the works with the Shire of Harvey and the MRWA as appropriate.	
19	The Water Corporation has already held discussions with the Binningup Surf Life Savers and will assist them to safely manage any risks associated with the project construction.	In progress
20	The public will be excluded from accessing all construction areas. Open excavations (such as trenches and dewatering pits) will be fenced or otherwise demarcated where there is a risk of public access.	
21	Advisory warning boards identifying hazards, risks, safety requirements and emergency phone numbers will be installed at each entry to all construction areas.	
22	Machinery and plant that is located in publicly accessible locations will be secured (in a locked compound where practicable) when the construction site is not occupied.	
23	The Water Corporation will monitor construction noise weekly at all construction sites and compare	

Southern Seawater Desalination Project – Social Impact Management Plan

No.	ACTIONS	STATUS
	against noise level objectives.	
24	The Water Corporation will monitor construction blasting noise and compare and record against noise level criteria.	
25	The Water Corporation will schedule construction activities between 7am and 7pm, with blasting to be undertaken only between the hours of 7am and 6pm. Shire of Harvey approvals will be obtained and the affected communities notified if noisy activities are to be undertaken outside of these working hours.	
26	An earth berm (bund) at the southern and eastern boundaries of the plant site will be constructed as soon as practical to minimise noise transfer to the nearest residential premises and the Binningup town site (berm will remain during operation of the plant).	
27	Restricting materials transport vehicles to major transport routes and restricting their movements to between the hours of 6am and 8pm.	
28	A Construction Environmental Management Framework has been developed which details the environmental management activities that will be undertaken during construction.	Complete
29	Timely information on beach and marine closures will be given to the community.	
30	The Water Corporation and the Alliance do not require a construction camp.	
31	The Water Corporation will use major roads to transport dangerous goods to minimise impacts on local traffic.	
32	The Water Corporation will permanently fence the Seawater Desalination Plant Site and the Harvey Summit Tanks during operation.	
33	The Water Corporation commits to designing the Seawater Desalination Plant such that noisy components are located as far as practicable from noise sensitive premises (towards the centre of the site) and/or are fitted with noise attenuation components.	In proposal
34	Lighting levels to be consistent with street lighting.	
35	Tunnelling methodology will be utilised under the beach as opposed to open trenching.	

**Southern Seawater Desalination Project –
Social Impact Management Plan**

No.	ACTIONS	STATUS
36	The Water Corporation and the Alliance commit to utilising suitably qualified local persons and contractors where possible.	

Appendix E Complaints Record

[Add template](#)