

Peer Review of the Social Impact Assessment - Proposed Southern Seawater Desalination Project

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Overview

In Western Australia, proponents are not required to assess the social impacts of their proposals beyond the very limited aspects allowed as part of the EPA's formal impact assessment process. As a result, too often proposals do not undergo social impact assessment. The Water Corporation's decision to conduct a social impact assessment (SIA) of its proposed Southern Seawater Desalination Project, including the use of a peer reviewer, is commendable.

However, having decided to embark on an SIA, it is essential that the SIA practitioners are equipped by the proponent with sufficient technical outputs from associated studies (e.g. visual, noise, dust) to allow them to draw meaningful conclusions regarding the significance of potential impacts and the most appropriate impact management measures in response to the predicted impacts. Unfortunately, this has not occurred due to a mismatch in the timing of the technical studies and the SIA resulting in needed technical study outputs being unavailable for the SIA.

By their own assessment (p.7), the SIA practitioners were unable to evaluate the following social impact issues they identified:

- Impact on community Identity and Sense of Place
- Impact on community facilities and services
- Impact of power lines
- Impact of the construction of the plant on the visual amenity of the area
- Impact of the construction of the pipelines on the visual amenity of the area
- Impact of the construction of the tanks on the visual amenity of the area
- Increase in cost of labour for industries and businesses in the region
- Increased traffic in the area causing delays and increasing risk for local communities and commuters

The SIA practitioners attribute their inability to predict impacts to a combination of insufficient data inputs from the technical studies (discussed above) and insufficient time for the SIA. While the peer reviewer empathises with the SIA practitioners' regarding the tight timetable for the assessment, the reviewer cannot apply available time, as a criterion, in judging the quality of the SIA. In addition, the proponent defined the issue of impact on property values (potentially positive or negative) as outside the scope of the SIA, although it was an issue of concern to some stakeholders.

It is the opinion of the peer reviewer, that despite the outputs of some technical studies not being available to the practitioners, the SIA could have gone much further in informing decision makers and stakeholders about why certain social impact issues are important. Use of the social science literature would have assisted in supporting why certain social impact issues should be investigated and their potential effects.

There was also a missed opportunity to inform decision makers regarding the accommodation of construction workers. At this point in time, no candidate sites have been identified for a construction camp, nor has the need for such a camp been evaluated. This provided a valuable opportunity for the SIA to inform and influence decisions regarding how best to address this important impact issue. It could provide the following information to decision makers:

- What can be learned from the social science literature about construction camps and their social impact issues?
- What considerations/factors should be included in the site selection process if a construction camp is needed?
- Given the characteristics of the local community, what are the potential implications if the camp was situated close to the proposed plant site?
- Are the facilities and services in the immediate, local and regional study areas in a position to accommodate a construction camp in their area?

However, the SIA did not take advantage of this opportunity. It deferred the assessment of facilities and services to after the decision on the acceptability of the proposal and provided little guidance to decision makers regarding the siting of the construction camp or whether it is desirable to have a camp at all.

1 Introduction

1.1 Purpose of a Peer Review

The peer review involves an independent review of the social impact assessment by an appropriately credentialed third party. The peer review is used to:

- improve the quality of the assessment;
- ensure the assessment practitioner has met the best practice standards of their discipline; and
- build public trust in the legitimacy of the assessment.

A peer review is not a judgment of the acceptability of the proposal. It is an assessment of the SIA's quality in the opinion of the reviewer.

1.2 Review Criteria

In the case of the Social Impact Assessment of the Proposed Southern Seawater Desalination Project (GHD 2008), the client (i.e. Water Corporation) has left the selection of criteria for the peer review to the discretion of the peer reviewer.

The peer review focused on methodological considerations, rather than making judgments about the acceptability of the proposal. The following criteria were drawn from impact assessment best practice guidelines, including social impact assessment (e.g. International Association for Impact Assessment), and were used to guide the peer review:

Rigorous – The assessment should apply "best practicable" methodologies and techniques appropriate to address the problems being investigated.

Transparent – The SIA process should ensure public access to information; identify the factors that are to be taken into account in decision making; and acknowledge limitations and difficulties.

Focused – The SIA should concentrate on significant effects and key issues (i.e., the matters that need to be taken into account in making decisions).

Relevant – The SIA should provide sufficient, reliable and usable information for planning and decision making.

Practical – The SIA should result in information and outputs that assist with problem solving and are acceptable to and able to be implemented by proponents.

Participative – The assessment process should provide appropriate opportunities to inform and involve the interested and affected publics. Public inputs and concerns should be addressed explicitly in the documentation and decision making.

Adaptive – The SIA process should adjust to the realities, issues and circumstances of the proposals under review without compromising the integrity of the process.

Integrated – The SIA should delineate the relationships among social, economic and biophysical aspects of the proposal.

Systematic – The SIA should result in full consideration of all relevant information on:

- the affected social environment,
- the proposal, its alternatives, and their impacts
- the measures necessary to manage impacts, and
- the significance of any residual impacts.

Readability – The SIA document should be suitable as a stand-alone document. It should be in a format that facilitates public review and comment on the proposal. This includes being suitable for a lay member of the public to read and understand (e.g., technical terms are explained, document is no longer than necessary, clear writing style, does not require a university education to understand).

2. SIA Goals and Objectives

The SIA report (GHD, 2008) includes the following assessment objectives:

Social Impact Assessment is described as a “*systematic analysis in advance of impacts on the day to day quality of life of persons and communities whose environment is affected by a proposed plan, program, project or policy change*” (Pg 23).

The SIA notes that “*Social impacts will be identified and assessed for the immediate, local and regional study areas and for the Project’s construction and operation*” p.28.

The SIA describes the four Project components (plant, ocean and transport pipelines, summit tanks) and notes that “*other impacts relating to supporting infrastructure, such as powerlines and workforce camps will be considered although these are not part of the scope of the environmental approval submitted to the Environmental Protection Authority*” (pg 28).

Page 23 describes the objectives of the Social Impact Assessment as:

1. “To identify and assess how the construction and operation of the desalination project will change the lives of the community directly and indirectly affected by the Project;
2. To provide a list of likely social impacts and determine those that are significant; and
3. To identify mitigation, enhancement and monitoring measures to minimise the negative effects of the project and maximise positive impacts”.

In the opinion of the reviewer, the above is a reasonable set of objectives for this SIA.

3. Selection of Social Impact Issues for Evaluation

The consultant used the accepted technique of preparing an impact diagram to help develop an initial list of impact issues to be evaluated in the SIA. Appendix A includes Figures A1 and A2 web diagrams to “illustrate the interrelationships of potential social impacts” during the construction and operation phases of the proposed project. The potential impact on Aboriginal and non-Aboriginal heritage values could have been included in these diagrams.

In the section, ‘Stakeholders and Potential Social Impacts’, Table A1 presents, by stakeholder group, the “potential social impacts, concerns and issues identified by GHD during the Scoping Stage”. In addition, the SIA consultant used stakeholder meetings/interviews to identify potential social impact issues. Appendix G lists the stakeholders invited to an interview and those who accepted (Table G1 below). The results of Water Corporation resident surveys were also used.

The approach taken to identifying impact issues to be evaluated in the SIA was appropriate especially in its use of multiple sources of data (e.g. expert judgement, interviews, survey

data). However, one would expect a close relationship between Tables A1 and G1 with stakeholder interests identified in Table A1 included in the list of interviewed stakeholders. However, some stakeholder interests in Table A1 were either not invited for an interview or an interview could not be arranged (Table G1). This included the South West Development Commission, Fire and Emergency Services, WA Police, Department of Environment and Conservation, Health and Community Services, businesses in the immediate study area, fishing industry, and farmers.

Table G1 Stakeholders interviewed for the SIA by study area

Stakeholder Groups	Stakeholders Invited to Participate	Interviewed	Study Area
Councils	City of Bunbury		Regional
	Shire of Harvey	✓	Local
Businesses / Tourism	Binningup Real Estate Agent	✓	Immediate
	Bunbury Regional Chamber of Commerce, President	✓	Regional
	Harvey Visitors Centre	✓	Local
	South West Chamber of Commerce and Industry		Regional
Industry	Harvey Agricultural Association		Local
	Kemerton Industrial Park	✓	Local
	Harvey Beef	✓	Local
	Coastal Green Turf Supplies	✓	Local
Resident Groups / Local Leaders	Binningup Senior Citizens Association	✓	Immediate
	Harvey Community Association		Local
	Harvey Country Women's Association	✓	Local
	Harvey Senior Citizens Centre		Local
	Myalup Community Association	✓	Immediate
	Binningup Desalination Action Group (BDAG)	✓	Immediate
Education	Harvey Primary School	✓	Local
	Harvey Senior High School	✓	Local
	St. Anne's Primary School		Local
	The Escape Youth Centre / Mulgara Family Centre	✓	Local
Environmental Groups	Harvey River Land Conservation District Committee		Local
	Wellesley Land Conservation District Committee	✓	Local
Beach Users / Recreation	Binningup Surf Lifesaving Club Inc.		Immediate
	Harvey District Water Sports Association	✓	Local
	South West Licensed Fisherman's Co-Operative		Regional
	Walking Group – Be Active	✓	Local
	Harvey Recreational Centre (Harvey Community Radio)	✓	Local
Total Interviews for Immediate Study Area			4
Total Interviews for Local Study Area			12
Total Interviews for Regional Study Area			1
Total Interviews			18

Site Visits

Site visits can be useful for gathering data on impact issues and on page 29 the SIA states that “*a site visit was conducted to observe the services, housing and recreation facilities in the potentially affected areas (Binningup, Myalup, Harvey, proposed pipeline route between Wellesley and Wokalup)*” and that “*a site visit schedule was used to guide the observations (Appendix D)*”.

However, Appendix D gives no indication of the data collected for each of the services listed. What variables were being observed and why? Was any data collected other than confirming a facility’s existence? Where is the data documented?

SIA Stakeholder Input

A strength of the SIA is the consultation conducted with the local community and stakeholders during the scoping phase of the SIA. However, it should be made clear at which points in the SIA process that engagement occurred.

“*A stakeholder assessment was conducted to identify potentially affected and interested stakeholder groups*”. There is no documentation of the methodology employed for this assessment. How was the interview sample selected and are there any limitations to the methodology applied?

To gain an understanding of regional-scale impacts, only four stakeholders were identified for interviews and only one agreed to be interviewed (Table G1). One interview is insufficient to draw any conclusions about regional stakeholder perceptions.

Appendix H (Stakeholder Interview Schedule) describes the interview objectives as “*for the SIA team to gain an understanding of how different groups in the community could be affected by the proposed Southern Seawater Desalination Plant and measures that can be recommended to mitigate the negative and enhance the positive affects of the project*”. The SIA researchers provided each respondent with some background information on the project and the SIA study process. However the data collected from the interviews and other engagement activities is not documented in the SIA.

Aboriginal Stakeholders

The SIA Table G1 lists the stakeholders identified for the study. However it does not include any Aboriginal interests even though the area is part of a Native Title claim. The SW Aboriginal Land and Sea Council would have been an appropriate peak stakeholder group to contact.

3. Study Limitations

It is good practice to acknowledge study limitations and every impact assessment will have some limitations. It is not unusual for an SIA to require inputs from other disciplinary studies and then integrate these technical inputs (e.g. environmental, risk, noise, visual findings) into the SIA analysis. However, the extent of the limitations documented in the SIA puts into question the value of the SIA to decision makers and stakeholders. It is not sufficient to say that the outstanding social impact issues will be addressed through a later impact management plan as this does not assist decision-makers when considering the acceptability of the proposal.

3.1 Data availability

Pg 33 states that “the reader should consider the following limitations of this SIA:

The identification of social impacts relies heavily on the availability of data including social research, case studies, project information, relevant studies and past experience. Due to the short timeframe to conduct this assessment, it was not possible to obtain all the necessary information to comprehensively assess all the potential social impacts. Where there has

been some relevant data provided, the consultants have made some assumptions about the potential social impacts based on the available information and their experience with similar projects. Where sufficient information was not obtainable about potential social impacts, no assessment has been made. These impacts should be reviewed by Water Corporation as more information becomes available to ensure that these are assessed, monitored and evaluated. It is also recommended that the findings and recommendations of this report be monitored using a Social Impact Management Plan (SIMP) to ensure that new information about impacts is considered in gaining an understanding of the impact, its significance and the management actions required”.

The consultants note that an SIA relies on various sources of data including: social research, case studies, project information, relevant studies and past experience. It is not clear how the timeline affected each of these categories of data. Clearly, some project information was not available from the proponent (Water Corporation) and the outputs of some complementary technical analyses were not available for some impacts (e.g. noise, visual intrusion). However, there is no evidence that the timeline would inhibit the practitioners from accessing the social science literature or relevant studies.













The *Harvey Coastal Management Plan* prepared by Belton-Taylforth for the WAPC (2006) contains extensive information on the immediate study area including environmental and socio-economic characteristics, community objectives for the coastal area, land use planning issues, and coastal use survey data. This study does not appear to have been used in the SIA.





















Greater use of the social science literature would have assisted in supporting why certain social impact issues should be investigated and their potential effects. For instance, why is noise a social impact issue? Is it a health concern or is it a nuisance effect or both? Similarly, why is light spill, dust or visual intrusion a social impact issue?












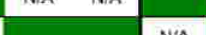








It is noted that, *“Where there has been some relevant data provided, the consultants have made some assumptions about the potential social impacts based on the available information and their experience with similar projects”*. What assumptions were made and on what basis?

“Where sufficient information was not obtainable about potential social impacts, no assessment has been made”. The reviewer agrees that if there is not a suitable basis for making a judgement a practitioner should not make an impact prediction. Despite these significant limitations, an SIA could still inform decision makers and stakeholders in a general way about these issues on the basis of the social science literature and cases with similar characteristics. In addition, later in the SIA the consultants indicate that both the noise and a preliminary visual analysis had been completed by the time of the final SIA and thus they should have been integrated into the SIA.

In the Executive Summary (p.8), the SIA provides a summary table of the social impact ratings (see table below). In the table, ID = Insufficient Data, and EIA / RA = An Impact dealt in an assessment separate from the SIA. Of the 30 impact issues in the table, the SIA did not include any assessment of 11 of the impact issues and only partial assessment of many others.

Potential Social Impact	Significance without Management Actions			Significance with Management Actions		
	Immediate Study Area	Local Study Area	Regional Study Area	Immediate Study Area	Local Study Area	Regional Study Area
 High Significance						
 Moderate Significance						
 Low Significance						
CONSTRUCTION						
Loss of trust in the Water Corporation			N/A	NI	NI	N/A
Impact on community character and amenity	ID	ID	ID	ID	ID	ID
Impact on community cohesion			N/A		NI	N/A
Change in beach and ocean-based recreational opportunities						
Impact of the construction of the plant on the visual amenity of the area	ID	N/A	N/A	ID	N/A	N/A
Impact of the construction of the pipelines on the visual amenity of the area	N/A	ID	N/A	N/A	ID	N/A
Impact of the construction of the tanks on the visual amenity of the area	N/A	ID	ID	N/A	ID	ID
Disruption to properties along the pipeline	N/A		N/A	N/A		N/A
The project could restrict the potential for future residential		N/A	N/A	NI	N/A	N/A

development						
The project could result in an increase in industries		N/A	ID		N/A	ID
Impacts of the overhead powerlines required to provide energy for the proposed desalination plant	ID	ID	ID	ID	ID	ID
Public Safety and Risk	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA
Increased demand on community facilities and services	ID	ID	ID	ID	ID	ID
Increase in economic activity (positive impact)						
Increase in cost of labour for industries and businesses in the region	ID	ID	ID	ID	ID	ID
Disruption to businesses during construction			N/A	NI		N/A
Unequal distribution of costs and benefits of the project						
Increased traffic in the area causing delays and increasing risk for local communities and commuters	ID		ID	ID		ID
Impacts from expanding the plant to 100 GL/yr			N/A			
Reduced tourism to Binningup and Myalup beaches						

OPERATION						
Increased provision and security of water supply to IWSS (positive impact)						
Communities living with uncertainty	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA
Change in beach and ocean-based recreational opportunities because of environmental impacts of brine release				NI	NI	NI
Impact on community character and amenity			NI			NI
Impact of the plant on the visual amenity		N/A	N/A		N/A	N/A
Impact of the summit tanks on the visual amenity	N/A				N/A	
Increase in economic activity						
Public safety and risks as a result of chemical and fuel spillage / leaks	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA
Risk of terrorist attack because of the presence of infrastructure of State significance	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA	EIA / RA
Increased traffic in the area increasing risk for local communities and commuters				NI	NI	NI

Section 4.2 of the SIA (p.52), identifies the impact themes that emerged from the stakeholder interviews. Of the 14 themes documented in the SIA, the SIA evaluated only four (Table 1). Thus, the SIA appears to have only partially satisfied its own objectives.

Table 1. Stakeholder themes assessed in the SIA

Stakeholder Theme	Significance assessed in the SIA
1. Lack of Community Consultation and Trust	Yes
2. Community Identity and Sense of Place	No
3. Facilities and Services	No
4. Environment and public health	Addressed in the EIA
5. Future Development and Land Values	No
6. Visual Impact	Addressed in the EIA but not integrated into SIA; also does not address the issue of light spill
7. Noise	Addressed in the EIA but not integrated into SIA
8. Dust	Addressed in the EIA but not integrated into SIA
9. Public Safety and Risk	Addressed in the EIA but not integrated into SIA
10. Closure between Binningup and Myalup Beach	Yes
11. Equity	Yes
12. Traffic	Partially
13. Powerlines	No
14. Secure Water Supply	Yes

3.2 Study Areas

The use of multiple study areas is appropriate for this type of SIA. However, the rationales for the four study areas (i.e. immediate, local, regional and state) are not clearly defined.

The SIA states that “in determining the immediate study area, the SIA’s objectives were to define the area that may experience most of the social impacts and opportunities and for which sociodemographic information is available”. Pg 29. This needs further explanation. What types of social impacts and what types of opportunities? It appears from Figure 8 that the immediate study area includes only the Binningup and Myalup townsites and not the area between which includes the plant site. Why is the plant site outside the immediate study area? Even if the ABS census boundaries place the plant site in a different census unit than the two towns, it does not seem reasonable to not include this area in the “immediate” study area.



This figure is a cropped version of Figure 8 in the SIA.

“In determining the local study area, the SIA’s objectives were to define an area that would include all of the project components (pipelines, plant and tanks) and the surrounding areas in which most of the impacts may be experienced and for which information was available.” It is not clear how and why the availability of information was used to define the study area other than through the ABS census boundaries for suburbs and collection districts. It is also not clear how the practitioners determined that this would be the area in which “most of the impacts may be experienced”. This appears to clash with the definition of the “immediate area”. There is no explanation for why the local study boundary runs along the pipeline route.

While not disagreeing with having a “regional” study area, it is not clear why local government boundaries were used other than for the ease of the demographic analysis. As shown below, parts of the “regional” study area (pale green colour) are closer to the plant site than parts of the “local” study area (blue hatching). What impacts are different for this study area that would indicate the need for a regional study area in addition to the “local” study area and why draw the boundaries in this manner to reflect a “regional” study area?



Overall, the setting of boundaries for the immediate, local and regional study areas appears to be primarily driven by keeping the demographic analysis straight forward by using ABS census unit boundaries for the study areas. It does make the analysis of demographic variables easier but at a cost to the SIA. The cost being that the study area boundaries do not have a strong relationship to many of the social impacts of interest. The clearest example is the location of the pipeline route along the boundary between the “local” and “regional” study areas as shown in Figure 8. As discussed later in this review, the study area boundaries become problematic with respect to some of the impact predictions and recommended impact management measures.

The SIA includes a “state” level study area but then indicates that, *“Impacts at the state level have not been assessed in this SIA because the effects of the project are expected to be contained within the regional area”*. That suggests there should not have been a state level study area.

Alternatively, one could argue that the desalination project is a project of state importance given its role in supplying water to the IWSS that extends well outside the regional study area. Social benefit at a state level was the reason for the project. This appears to be acknowledged by the community on page 48 *“The community was concerned that the desalination plant could become a terrorist target, as it is a public utility of state significance”*. While this does not mean a detailed state level assessment is necessary, the issue of state level social benefit needs to be addressed in the SIA.

3.3 Site selection

Facility location

Another limitation of the SIA is that the evaluation was initiated at a point in time when the only site under consideration was the Binningup location. As noted in GHD's SIA, "*On 15 May 2007, WA Premier, Alan Carpenter, announced that a new desalination plant had been proposed to be built at a site north of Binningup*". Best practice in impact assessment, including SIA, would have resulted in social impact factors being part of a systematic and transparent multidisciplinary evaluation of candidate sites. However, in this case, the consultant was only given one site to assess under the terms of reference from the Water Corporation. This limited GHD's analysis to an assessment of a single location and did not allow for a comparative analysis of the merits of candidate sites from an SIA perspective. This is unfortunate, as the early consideration of social impact factors can be beneficial to the site selection of a preferred site and in achieving greater local community acceptance of the outcome of the site selection process. The lack of an open multi-site assessment of candidate sites predictably resulted in some loss of trust in the proponent by the selected community.

Pipeline Route

The SIA's Appendix A (Preferred Pipeline Corridor) provides a map of the proposed pipeline route. The text indicates that "*The preferred route has been prepared based on field observations, aerial photographs and discussions with the community and seeks to have minimal impact on social, environmental and economic values of the area*". It is not clear how the siting of the route attempted to minimise social impact as there is no documentation included of what alternative routes or route segments were evaluated or on what basis. The preferred pipeline corridor provided the data used to assess several of the impact issues in the SIA (e.g. disruption to businesses during the construction phase). However, Appendix A also notes that the "*preferred route could be subject to change following discussions with affected landowners, and environmental and geological surveys*". What potential does this have to change the outcomes of the SIA for impact issues dependent on the data from the pipeline corridor studies?

Construction Workforce Accommodation

One of the impact issues identified in the stakeholder consultation process was the effect of a construction camp on the area and its facilities.

The SIA notes that the "*Water Corporation has advised that it is too early to determine the workforce accommodation options. However, it is a possibility that a workforce camp will need to be constructed to house construction workers during construction of the project. In the event that a workforce camp is needed, several options may be considered and a decision will be made in 2008 when consultation with the Shire of Harvey is complete. If there is a workforce camp, it is likely that workers will be transported from the camp to the construction site by bus to minimise traffic and related impacts on local roads and manage the demand for parking on the site*".

At this point in time, no candidate sites have been identified for a construction camp, nor has the need for such a camp been evaluated. This provides a valuable opportunity for the SIA to inform and influence decisions regarding how best to address this important impact issue. It could provide the following information to decision makers:

- What can be learned from the social science literature about construction camps and their social impact issues?
- What considerations/factors should be included in the site selection process if a construction camp is needed?
- Given the characteristics of the local community, what are the potential implications if the camp was situated close to the proposed plant site or at other locations in the vicinity?
- Are the facilities and services in the immediate, local and regional study areas in a position to accommodate a construction camp in their area?

However, the SIA does not take advantage of this opportunity. For instance, it defers the assessment of facilities and services, it does not use the social science literature or case studies, and provides little guidance to decision makers regarding the siting of the construction camp or whether it is desirable to have a camp at all.

3.4 Property Value Impacts

Page 54 of the SIA notes that “*Property values have not been included in our list of social impacts as it outside the scope of study outlined by the Water Corporation. However it is acknowledged that this is a very real concern to community members...*”. The potential impact of a project on property values is one of the most common concerns raised by area landowners. There is an extensive literature on this issue and it is an issue that warrants assessment.

It is understood that the SIA researchers could not examine this issue due to their TOR. The SIA makes reference to technical analyses by other disciplines for impact issues it cannot address (e.g. noise). However, there is no indication that there will be any assessment of potential property value impacts.

3.5 Noise Impacts

The SIA (p.30) notes that the *Herring Storer Acoustics*’ noise modelling study concluded that *noise emissions from the desalination plant will have negligible effect on noise levels at existing residential premises.*

The noise analysis (Herring Storer Acoustics 2008) also examined future land use scenarios for areas close to the site boundary, noting that:

The proposed desalination plant noise emissions are capable of complying with the requirements of the Environmental Protection (Noise) Regulations 1997 for the scenario of future residential being constructed up to the site boundary. As there would be a cost associated with increased levels of noise control, it is recommended that if possible planned land use for land immediately surrounding the proposed desalination plant site be determined prior to detailed design.

This finding should be integrated in the SIA discussion of impacts on future land uses. The results from the construction noise analysis should also be included.

3.6 Cumulative Impacts

It is not unusual for an SIA to require technical inputs from specialised assessments before it can use that data for the purpose of social impact prediction and assessment. This is one of the reasons why the SIA must be adequately integrated with the other impact assessment studies for the proposed project. That integration has largely not occurred in this case, as needed products from other studies were not available to the SIA practitioners or have not be integrated.

This is a problem not only with respect to the SIA commenting on the individual impacts but it severely limits its ability to look at cumulative social impacts which is an expectation of best practice in impact assessment. As the SIA consultants demonstrate in their impact webs (A1 and A2), many of the social impacts are the product of a combination of effects. To make a judgement on an impact issue such as change in sense of place, one would need to look across a number of impact categories to determine a cumulative impact judgment. This might include consideration of the following:

- Impact on the natural environment
- Impact on recreation access
- Impact on amenity (visual, noise, dust, traffic)
- Change in population characteristics

- Impact on land use patterns

4.0 Community Profile

To the reader, the importance of some of the described variables in determining the acceptability of the proposal is unclear (e.g. the top ten activities of domestic visitors).

The text on p40 states that the “*population growth being experienced by towns potentially affected by the SSDP means that there will be increasing needs for community and public services to sustain such population growth*”. For which services is a threshold being reached due to population growth? To determine the need for expanded or new services, you would need to know the growth profile, the existing capacity and levels of use of the services and any planned changes.

Are the community services and facilities reasonable given a population of 1,093 people and its proximity to a major regional centre (i.e. Bunbury)?

Pg.47. *“If the workforce construction camp were to be located in the immediate study area, attention would have to be given to providing enough recreation and community services for the workforce in order not to strain those services provided locally. Considering that the project would rapidly increase the population in the immediate study area, the SSDP Alliance would have to work with local providers of essential services (e.g. police, hospitals and emergency services) in order to find ways in which to improve the provision of essential services in the immediate study area”.*

Would this impact be any different if the workcamp was in the local study area or the regional study area rather than the immediate study area? On what basis is it concluded that the provision of essential services such as hospitals would need to improve in the immediate area if there was a workcamp there? Why couldn't they do what residents currently do and travel to the local and regional areas for these services? This section of the SIA makes a case for local providers of essential services to be considered as key stakeholders. Were these stakeholders consulted regarding the potential impact on their services and what were their assessments?

Community Identity and Cohesion – this section does not sufficiently inform the reader about either the community's identity or cohesion. The terms ‘community identity’ and ‘community cohesion’ should be defined for the benefit of the reader. For example, the ABS uses the following: “Social cohesion refers to the social ties and community commitments that bind people together. Closely related to the concept of social cohesion are the notions of 'social capital' and ‘social exclusion’”. Definitions of community identity can be drawn from the extensive literature on social well being. For example, community identity can be broadly defined as a community of interest or an emotional attachment or sense of belonging to a geographic area. There is also an extensive literature on the related concept of sense of place and approaches to its evaluation.

In appendix F, reference is made to the Australian Census of Population and Housing indicator ‘level of voluntary work’ as an indicator of cohesion. The reviewer agrees that ‘people volunteering time to organisations or groups in their communities’ can be used as a social indicator of community cohesion. However, typically multiple indicators would be applied rather than a single variable.

These variables are sometimes referred to as community cohesion indicators. They can be used to establish the baseline condition and facilitate the monitoring and evaluation of the impact of a project on community cohesion over time. Other approaches include data collected on resident perceptions through residents surveys (“what is the percentage of people surveyed who feel that their local area is a place where people from different backgrounds and communities can get on well together.”), focus groups and interviews.

Appendix F states that “the permanent population seem to be highly cohesive because they have chosen to live in these towns because of the lifestyle they offer”. That is what attracted them and why they may be satisfied with the area but is it an indicator of cohesion? A social science reference could help support this conclusion.

3.9 Health – “It is important to conduct a needs assessment of the construction workforce and a gap analysis to ensure that there are sufficient services to cater for the existing communities and the additional workforce”. The SIA should have included an assessment of the existing level of use and capacity of these and other community facilities and services. This would have provided useful information for decision makers to determine if a workcamp is appropriate and where it might best be situated.

3.10 Crime and Safety – This section is confusing with respect to construction camps and crime. “The Office of Crime Prevention (2004: 14) indicates that there is international research that associates rapid population growth with higher rates of crime. Although the construction of the SSDP is likely to be composed of a higher proportion of young males, this study has not identified any link between construction camps and higher rates of crime”. The only literature cited suggests there may be a concern but the SIA indicates that it did not identify a link to higher rates of crime. How was this conclusion drawn? There is a wealth of social science literature and cases that could speak to this issue.

The community profile relies primarily on census data and other statistics on various community variables from a range of documents. These are appropriate sources of information. However, the community profile could have been strengthened by including more information from the stakeholders and through the effective use of maps and photos to give the reader a better understanding of the affected communities, especially the ‘immediate’ study area. What will these communities be like in the future with or without the proposed desalination plant?

5. Impact Prediction and Significance

On page 7, the SIA provides the following table:

Significance table for social impacts

	Severity		
Likelihood	High Severity	Moderate Severity	Low Severity
Highly Likely	High Significance	High Significance	Moderate Significance
Moderately Likely	High Significance	Moderate Significance	Low Significance
Unlikely	Moderate Significance	Moderate Significance	Low Significance

This table is intended to show how the likelihood and severity attributes are combined to give an impact significance rating. On the last row, the third column should be a green ‘low significance’ rating rather than the yellow ‘moderate significance’ rating (i.e. unlikely occurrence and a moderate severity).

A minor point: Pg 42 uses the heading “Assessing and Ranking Social Impacts”, however, the impacts are rated not ranked.

5.1 Construction Phase

Impact issue: Loss of trust in the Water Corporation

It is not clear what the SIA researchers view as the impact associated with loss of trust. The text should explain why this is an impact issue. For instance, how could loss of trust affect project sustainability or success?

In terms of severity, it is given a rating of “moderate” with the statement that *“Lack of trust could affect the relationship between the Water Corporation and some stakeholder groups and could undermine some of the initiatives that would be undertaken by the Water Corporation to improve the project’s performance and achieve project success during the construction phase”*. Which initiatives would be undermined? This conclusion must be supported in some fashion. Are there any examples where the sustainability of a project has been negatively affected by loss of trust in the proponent and how do those example relate to this proposal?

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If it can be estimated that almost all communities / stakeholders are experiencing loss of trust	Moderately Likely If it can be estimated that segments/groups within communities / stakeholders are experiencing loss of trust	Unlikely If loss of trust was not identified as an issue
Severity	High Severity When loss of trust could affect project sustainability or success	Moderate Severity When loss of trust could present some difficulties for project sustainability or success	Low Severity When loss of trust has minor implications for project sustainability or success

The analysis in the Table on page 58 indicates that in terms of likelihood the researchers had no basis to determine with certainty that all community members in the immediate area have experienced loss of trust. *“Although the stakeholder consultation process was not designed to produce findings that are representative of all stakeholders and communities, loss of trust was identified as an issue during the consultation process. Therefore, it is estimated that segments/groups within communities/stakeholders are experiencing loss of trust”*. For this reason, the impact is given a likelihood rating of “Moderately Likely.” This is problematic since the researchers admit they did not have adequate data to make a judgement on the likelihood of the impact on the community.

At a regional scale, the SIA indicates there is no impact since the *“construction of the project will have minimal effects beyond the local study area and into the regional study area and trust will not be an issue for stakeholders located in the regional study area”*. The SIA has not demonstrated that the loss of trust was related to construction effects. Thus, it is not clear why it would be concluded that there would be no loss of trust in the proponent in the regional study area. On the basis of Figure 8 some “regional” locations are much closer to the plant site than some locations within the “local” study area.

Impact issue: Impact on community character and amenity

The impact significance scales applied for this impact are problematic in that they only take the perspective of the impact of the construction camp on Binningup or Myalup. However, wherever the camp is located it could have impacts. If the camp was sited in some other rural part of the Harvey Shire, then its impact on Binningup and Myalup would be reduced but what of the impact on the community that is selected?

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If the construction camp is located at Binningup or Myalup.	Moderately Likely If the construction camp is located in the vicinity of Binningup or Myalup.	Unlikely If the construction camp is located in a larger urban centre.
Severity	High Severity The construction workforce lives in Binningup or Myalup and desired lifestyle does not correspond to that of these towns.	Moderate Severity The construction workforce lives in close to Binningup or Myalup but satisfies some of their lifestyle needs from these towns.	Low Severity The construction workforce lives in a larger urban centre and satisfies its lifestyle needs there.

Impact issue: Impact on community cohesion

Pg62 “This issue is also observed in the almost equal split (56%) in overall support for the SSDP in communities along the pipeline corridor (Synovate 2007)”. Difference of opinion does not necessarily mean reduced community cohesion. If 50% of a community’s population votes Labour and 50% Liberal does that really say anything about the community’s cohesion? Uniformity of opinion was not identified as an indicator of cohesion earlier in the SIA.

“In 2006, volunteerism in Binningup and Myalup was 10% higher than the regional and state averages, suggesting greater cohesion and involvement in community life”. Are communities with higher levels of community cohesion more, or less, robust in the face of disruption? What does the literature say on this point? Doesn’t the hazards and crisis management literature indicate that adversity can increase community cohesion as well as decrease it?

Impact issue: Change in beach and ocean-based recreational opportunities

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely No beach alternatives and irreversible impact	Moderately Likely No beach alternatives and impacts are temporary	Unlikely There are beach alternatives and impacts are temporary
Severity	High Severity Existing and future residents would permanently not visit Binningup and Myalup beaches	Moderate Severity Existing and future residents would temporarily not visit Binningup and Myalup beaches	Low Severity Existing and future residents would continue to visit but will be temporarily inconvenienced when visiting Binningup and Myalup beaches

The likelihood and severity indicators appear to be confused in the significance scale above. The likelihood indicator would not be related to either the availability of beach alternatives or whether the impact is irreversible. It should focus on the probability of the impact occurring. It seems that the project characteristics as described by the Water Corporation indicate that the beach will be closed temporarily, thus changing the opportunities for certain recreation activities. Thus, the likelihood would appear to be high. The potential severity of the impact is tempered by the availability of alternatives and the temporary nature of the closure (although 18 months is not particularly short). The impact significance ratings are questionable based on the problems with the significance scale applied to this impact issue.

Impact issue: Impact of the construction of the plant on the visual amenity of the area

This impact discussion does not integrate the results of the visual assessment summarised on page 28 of the SIA.

Impact issue: Impact of the construction of the pipelines on the visual amenity of the area

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If the area impacted by visual intrusion and lighting extends to residences	Moderately Likely If the area impacted by visual intrusion and lighting extends to the immediate surroundings of residences	Unlikely If the area impacted by visual intrusion and lighting is at a distance of more than 200 m from residences
Severity	High Severity If the area affected is a high density residential area and for periods greater than 6 months.	Moderate Severity If the area affected is a moderately dense residential area and for periods greater between 2 and 6 months.	Low Severity If the impact affects only a few residences and for periods less than 1 month.

It is not clear to the reviewer why ‘lighting’ is an indicator of likelihood as lighting is not mentioned in the description of the impact.

The SIA rates the severity of the impact as “low” along the pipeline route when the SIA indicates that 98 properties are affected. The definition of “low severity” includes “if the impact affects only a few residences”. Does this mean these properties include only a few residences?

The severity scale is problematic in part because it has multiple dimensions that do not cover the full range of possibilities.

For the Regional study area it is concluded that “*it is expected that the construction of the pipelines will have minimal effects beyond the local study area and into the regional study area and visual intrusion and lighting from the construction of the pipeline would not affect stakeholders located in this study area*”. However, as shown on Figure 8, the pipeline route runs along the regional boundary.

Impact issue: Disruption to properties along the pipeline

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If the pipeline will cross properties	Moderately Likely If the pipeline will be constructed on the boundary of properties	Unlikely If the pipeline will be constructed close to properties
Severity	High Severity If the impact affects more than 100 properties and for periods greater than 6 months.	Moderate Severity If the impact affects between 25 and 100 properties and for periods between 2 and 6 months.	Low Severity If the impact affects less than 25 properties and for periods less than 1 month.

The severity scale is problematic because it has multiple dimensions that do not cover the full range of possibilities such as a large number of affected properties for less than a month. It is not clear why a different severity scale was applied for this impact than applied in the earlier pipeline visual impact

factor? Traffic is a concern for both factors and the number of affected properties is the same as is the duration of impact. The SIA notes for the disruption factor that the “majority of the effects will last less than a month as construction moves from one section of pipeline to the next. However, the increase in traffic on local roads could last longer”.

Impact issue: The project could restrict the potential for future residential development

On page 54 of the SIA it is noted that “*The community feel that the proposed site and the land surrounding it are likely to be residential development in the future*”.

Social Impact Significance - The project could restrict the potential for future residential development			
Study Area	Significance	Likelihood	Severity
IMMEDIATE	Low Significance	Unlikely The project will not result in any change of zoning or the creation of buffers	Low Severity The project would not create any restrictions for residential development in Binningup or Myalup and there are alternative areas for this purpose
LOCAL		Impact was not identified for this Study Area Impact on future potential residential development of the areas around the pipeline and tanks is not considered an issue	
REGIONAL		Impact was not identified for this Study Area The project will have no impact on the potential for residential development beyond the local study area and into the regional study area	

Some of the land around the proposed plant site falls in the ‘local’ study area and thus it is not clear why this is not covered in the above impact table.

Impact issue: The project could result in an increase in industries

The SIA states that “*At the regional study area level, the SSDP could result in an expansion of existing or creation of new industries as a result of the need for resources and services*”. What types of service industries might these be? Why would it be any more likely that complementary industries would be situated in the regional study area than at say Kemerton or another industrially zoned area in the local study area? Why wouldn’t the Binningup project use existing area industries and services or those in the Rockingham area?

As with the previous impact, some of the land around the proposed plant site falls in the ‘local’ study area and thus it is not clear why this is not covered in the impact table.

Impact: Increased demand on community facilities and services

This is a major impact issue for the SIA. The SIA should have been able to assess the extent to which immediate, local and regional study area facilities and services may be vulnerable to the effect of a significant construction workforce.

Impact: Increase in economic activity

The potential outcomes are well described in a generic sense but there is no analysis based on the characteristics of the project or the study area. Are there any examples of the types of policies that the SIA applies as its indicator of likelihood of impact? For example, the “unlikely” impact rating is defined as “*no policies are adopted to require or motivate sourcing employment and business from the immediate, local and/or regional study areas*”. What data supports the conclusion that without

such policies there would be no economic flow on? In the immediate study area, wouldn't for instance local food and petrol shops benefit?

Social Impact Significance - Increase in economic activity			
Study Area		Likelihood	Severity
Significance			
IMMEDIATE	Low Significance	Unlikely No policies exist to require or motivate sourcing employment and business from the immediate study area	Low Severity The immediate study area has limited opportunities to take advantage of the potential benefits of the project because of a low unemployment rate, lower labour force participation and smaller business and industry base
	Moderate Significance	Unlikely No policies exist to require or motivate sourcing employment and business from the local study area	Moderate Severity This study area has a larger business and industry sectors as to take greater advantage of opportunities brought by the project
	Moderate Significance	Unlikely No policies exist to require or motivate sourcing employment and business from the regional study area,	Moderate Severity This study area has a larger business and industry sectors as to take greater advantage of opportunities brought by the project

It would appear that the significance ratings for the 'local' and 'regional' study areas should be 'low' rather than 'moderate' (i.e. Low likelihood + moderate severity).

Impact: Disruption to businesses during construction (pg87)

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If the project crosses farms or businesses and disruption is for more than six months	Moderately Likely If the project borders farms or businesses, or affects accessibility to farms or businesses, and disruption is for a length of time between one and six months	Unlikely If the project does not cross farms or businesses, or affects key access routes to businesses/farms, or the duration of the impact is less than a month
Severity	High Severity The impact affects a key or disadvantaged industry or business in the study area; and/or the impact affects reputation or viability of businesses/industry	Moderate Severity The impact does not affect a key or disadvantaged industry or business in the study area; and impact can result in a moderate loss in profit	Low Severity The impact does not affect a key or disadvantaged industry or business in the study area; and impact can result in a minor loss in profit

Social Impact Significance - Disruption to businesses during construction			
Study Area		Likelihood	Severity
Significance			
IMMEDIATE	Low Significance	<p>Unlikely</p> <p>There are few businesses and farms that could be affected by the project in the immediate study area</p>	<p>Low Severity</p> <p>The impact will be experienced by very few businesses and farms along Taranto Road</p>
LOCAL	Moderate Significance	<p>Moderately Likely</p> <p>The project borders and could affect accessibility to farms and businesses along the pipeline. Some of the impacts (e.g. accessibility) could be experienced for more than a month</p>	<p>Moderate Severity</p> <p>Direct (e.g. physically crossing a farm) or indirect (e.g. road closures during harvest time and dust) impacts on businesses could result in loss of productivity/profit and business reputation.</p>

The impact description states that the “*Water Corporation estimates that the construction of the pipeline will impact directly (by crossing the property) on 26 properties and indirectly (pipeline along the road frontage) on 72 properties*”. However, it does not indicate how many of these properties fit into the “business” category. This also puts into question the number of affected (non-business) properties identified on page 63 for the earlier impact “Disruption to properties along the pipeline”. Do all of the 98 properties fall into both impact categories?

The “moderate” severity rating is unclear as it “would result in loss of productivity/profit and business reputation”. Why does this not meet the definition of ‘high’ severity in the significance scaling table.

Impact Name: Unequal distribution of costs and benefits of the project

The SIA notes that “the immediate study area will experience more impact from the construction of the project than other towns connected to the IWSS, simply because of its proximity to the site and construction activities. The local and regional study areas will also experience impact from construction of the project, albeit to a lesser degree”.

Social Impact Significance Scales for this Impact			
Likelihood	<p>Highly Likely</p> <p>If potentially affected communities in the study area perceive costs without any benefits from the project</p>	<p>Moderately Likely</p> <p>If potentially affected communities in the study area would perceive some costs and some benefits from the project</p>	<p>Unlikely</p> <p>If potentially affected communities in the study area would perceive benefits from the project</p>
Severity	<p>High Severity</p> <p>If the costs for potentially affected communities considerably outweigh the benefits</p>	<p>Moderate Severity</p> <p>If the costs for potentially affected communities slightly outweigh the benefits</p>	<p>Low Severity</p> <p>If the costs for potentially affected communities equal the benefits</p>

The SIA does not include any cost benefit analysis or other type of evaluation that would allow a person to determine the degree of severity based on the scale provided. Although it is stated in the impact description that the local and regional areas would experience an impact of a lesser degree, they received the same severity rating as the ‘immediate’ study area in the significance table.

The issue in terms of the likelihood scale should be whether they would ‘experience’ costs and benefits rather than simply “perceive” that they would.

Social Impact Significance - Unequal distribution of costs and benefits of the project			
Study Area Significance		Likelihood	Severity
IMMEDIATE	Moderate Significance	Moderately Likely The local study area will perceive some costs and some benefits from the project	Moderate severity The costs for the local study area slightly outweigh the benefits
LOCAL	Moderate Significance	Moderately Likely The local study area will perceive some costs and some benefits from the project	Moderate Severity The costs for the local study area slightly outweigh the benefits
REGIONAL	Moderate Significance	Moderately Likely The regional study area will perceive some costs and some benefits from the project	Moderate Severity The costs for the regional study area slightly outweigh the benefits

Impact Name: Increased traffic in the area causing delays and increasing risk for local communities and commuters

The SIA states that, “No traffic assessment data was available to understand the current condition, levels of traffic and capacity of the Old Coast Road”. Given this and the fact that the likelihood scale requires knowledge of the design capacity of the affected roads, it does not seem possible to determine an impact rating for the local study area. However, the SIA rates the likelihood as “unlikely”. While the Water Corporation may have avoided the “most important” roads in selecting the pipeline route, this is no guarantee of little impact on the selected roads. Are there any particularly sensitive road users such as school buses or movement of farm machinery? In addition, the Old Coast and Taranto Road are within the “local” study area. How the “moderate” severity rating was determined for the local study area without the data needed for the assessment is not clear.

Social Impact Significance - Increased traffic in the area causing delays and increasing risk for local communities and commuters			
Study Area Significance		Likelihood	Severity
IMMEDIATE	Insufficient data	Insufficient data as to assess the significance of this impact There was no data available on the condition, traffic levels, safety and capacity of the Old Coast Road and intersection with Taranto Road	
LOCAL	Moderate Significance	Unlikely The pipeline alignment has been chosen in order to avoid the most important roads connecting the Old Coast Road and the town of Harvey	Moderate Severity Increases in heavy and light vehicles could result in some increases in travel costs.
REGIONAL	Insufficient data	Insufficient data as to assess the significance of this impact There was no data available on the condition, traffic levels, safety and capacity of road network in the regional study area as to assess the significance of this impact	

Impact Name: Reduced tourism to Binningup and Myalup beaches

The availability of other beaches in the “region” cannot be used as a reason to support the prediction that an impact in the “immediate” study area is unlikely”. It is difficult to make a significant determination with respect to the severity of impact on the immediate area if “no data was available on the number of tourists that visit the section of beach/ocean in front of the project during the year”. Is there any evidence to support the idea that if tourists are unable to access a beach for two years that they would return to that beach when it reopened?

It is not clear why there is no difference between the study areas in terms of impact significance.

Social Impact Significance - Reduced tourism to Binningup and Myalup beaches		
Study Area	Likelihood	Severity
Significance		
IMMEDIATE	<p>Unlikely</p> <p>Although no data was available on the number of tourists that visit the section of beach/ocean in front of the project during the year, the data provided by the Water Corporation indicates that visitors will be inconvenienced by a small section of the beach that will be closed however there will continue to be access to the Binningup and Myalup Beach throughout the construction of the project. In addition, there are several other beaches in the region.</p>	<p>Low Severity</p> <p>Existing and future visitors should continue to visit the Binningup and Myalup beaches, as access to these beaches will not be restricted. Some beach users who currently use the portion of the beach that will have restricted access will be inconvenienced during the construction of the project.</p>
LOCAL	<p>Unlikely</p> <p>Although no data was available on the number of tourists that visit the section of beach/ocean in front of the project during the year, the data provided by the Water Corporation indicates that visitors will be inconvenienced by a small section of the beach that will be closed however there will continue to be access to the Binningup and Myalup Beach throughout the construction of the project. In addition, there are several other beaches in the region.</p>	<p>Low Severity</p> <p>Existing and future visitors should continue to visit the Binningup and Myalup beaches, as access to these beaches will not be restricted. Some beach users who currently use the portion of the beach that will have restricted access will be inconvenienced during the construction of the project.</p>
REGIONAL	<p>Unlikely</p> <p>Although no data was available on the number of tourists that visit the section of beach/ocean in front of the project during the year, the data provided by the Water Corporation indicates that visitors will be inconvenienced by a small section of the beach that will be closed however there will continue to be access to the Binningup and Myalup Beach throughout the construction of the project. In addition, there are several other beaches in the region.</p>	<p>Low Severity</p> <p>Existing and future visitors should continue to visit the Binningup and Myalup beaches, as access to these beaches will not be restricted. Some beach users who currently use the portion of the beach that will have restricted access will be inconvenienced during the construction of the project.</p>

5.2 Operations Phase

Impact Name: Change in beach and ocean-based recreational opportunities because of environmental impacts of brine release.

The moderately likely rating is problematic. An unknown likelihood should not be given a moderate likelihood rating. Again, problems with multiple dimensions in the severity scale (i.e. impact on

environment and level of recreational use). It would have been preferable to use the EIA study findings in addition to the Kwinana results.

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If assessments suggest that the marine environment could be impacted	Moderately Likely If assessments suggest that it is unknown whether the marine environment could be impacted	Unlikely If assessments suggest that it is unlikely that the marine environment could be impacted
Severity	High Severity Irreversible impacts on the marine environment and the area is heavily used for ocean and beach-based activities	Moderate Severity Temporary impacts on the marine environment and the area is heavily used for ocean and beach-based activities	Low Severity Temporary or no significant impacts on the marine environment and the area is not heavily used for ocean and beach-based activities

Impact Name: Impact on community character and amenity

Social Impact Significance Scales for this Impact			
Likelihood	Highly Likely If the areas impacted by noise, lighting, dust and traffic extend to properties in the study area.	Moderately Likely If the areas impacted by noise, lighting, dust and traffic extend to the immediate surroundings of properties in the study area.	Unlikely If the areas impacted by noise, lighting, dust and traffic are more than 200 m from properties in the study area.
Severity	High Severity More than 15% of properties in communities are directly affected by these impacts and for periods greater than 6 months.	Moderate Severity Between 5% and 15% of properties in communities are directly affected by these impacts and for periods between 2 and 6 months.	Low Severity Less than 5% of properties in communities are directly affected by these impacts and for periods less than 1 month.

Despite the above significance scale table, the impact significance ratings appear to only be based on the noise analysis.

Social Impact Significance - Impact on community character and amenity		
Study Area	Likelihood	Severity
IMMEDIATE	<i>Unlikely</i>	Low Severity
	The environmental noise assessment concluded that the noise emissions from the desalination plant will have negligible effect on noise levels at existing residential premises.	The environmental noise assessment concluded that the noise emissions from the desalination plant will have negligible effect on noise levels at existing residential premises.
LOCAL	<i>Unlikely</i> The environmental noise assessment concluded that the noise emissions from the desalination plant will have negligible effect on noise levels at existing residential premises.	Low Severity The environmental noise assessment concluded that the noise emissions from the desalination plant will have negligible effect on noise levels at existing residential premises.
REGIONAL	Impact was not identified for this Study Area The impact on community amenity and character is unlikely to effect the regional study area level	

Impact Name: Impact of the plant on the visual amenity

Social Impact Significance - Impact on community character and amenity		
Study Area	Likelihood	Severity
IMMEDIATE	Unlikely	Low Severity
	The operating plant will have negligible visual impact on surrounding residences as demonstrated by the visual impact assessment conducted by the Water Corporation.	The operating plant will have negligible visual impact on surrounding residences as demonstrated by the visual impact assessment conducted by the Water Corporation.
LOCAL	<i>Impact was not identified for this Study Area</i> Visual impact of the operating plant was not identified for the local study area.	
REGIONAL	<i>Impact was not identified for this Study Area</i> Visual impact of the operating plant was not identified for the regional study area.	

The SIA impact description states that the Water Corporation’s “visual impact assessment concluded that from the nine sight line points, the visual impact of the desalination plant was minimal, with only the 18 metre lime storage silo being visible above the existing vegetation and man-made berm”.

However, it is not clear from the data presented (page 29 and photo below), at which points the storage silo would be visible and whether these points are in the “immediate” or “local” study areas. Thus, it is unclear whether the no impact rating for the ‘local’ study area is warranted. Further, the issue of light spill does not appear to have been evaluated.



Impact Name: Increase in economic activity

The reviewer’s comments are the same as made for this impact in the construction phase.

Unequal distribution of costs and benefits of the project

It is not clear why this is an impact issue for the construction phase but not the operations phase.

6. SIA Impact Management

Table 8 (pg 116) lists each of the impact issues and recommends impact management measures to either reduce or enhance the predicted impact. This is a useful table, however, for some impact issues there is not a strong relationship between the predicted impact and the recommended impact management measures. In addition, the table contains impact issues for which the SIA researchers were unable to make a prediction of the impact or its significance due to insufficient information.

Table 8 recommends the creation of a “Stakeholder Advisory Group (SAG) for the plant stakeholders, pipeline stakeholders and summit tanks stakeholders and use these SAG as channels to communicate both ways”. When well structured and effectively facilitated/chaired such advisory groups can be an effective means of engaging with stakeholders in an ongoing way on impact management issues.

The description of the SAG membership contained in the footnote suggests a committee of 20 plus members. It would be useful to decision makers and stakeholders if the SIA described this recommendation further including a discussion of the strengths and weaknesses of establishing such a committee. For instance, what steps would need to be taken for a SAG to be able to provide the monitoring functions suggested?

6.2 Positive impacts

The positive impacts resulting from this project are:

- Increase in economic activity in the Immediate, Local and Regional study areas during construction and operations of the project (moderate positive impact for Immediate study area, high positive impact for Local Study area and Regional Study area); and

However, the impact ratings in Table 8 of the SIA for impact on economic activity are shown below. Clearly, moderate and high positive impacts are not predicted for the operations phase.

Study area	Construction		Operations	
	Pre-management	With management	Pre-management	With management
Immediate	L	M	L	L
Local	M	H	L	L
Regional	M	H	L	L

In addition, care must be taken when describing an impact in a manner that assumes that the recommended impact management measures have been successfully adopted. As shown in the table above, the elevated positive impacts on economic activity in the construction phase are contingent upon the management measures being successful.

6.3 Impacts that cannot be mitigated.

The SIA states that “There are no impacts that cannot be mitigated during the operation of the project”. However, as shown in Table 8 of the SIA, there would be no change in the significance rating of any of the operation phase social impacts after management, except in the case of traffic impacts.

Table 8 Impact Management Measures

P.116 Loss of trust - Given how difficult it can be to re-establish trust once damaged, is it reasonable to expect that there would be no residual impact even with the impact management measures recommended. It is also not explained why the impact issue “loss of trust” is not included for the operations phase but just the construction phase. Will the life of the advisory group extend past the construction phase?

Pg 117 Impact on community cohesion - The recommended management measures pertain to codes of behaviour for construction workers. However, the impact description and analysis of the impact on community cohesion makes no mention of the construction workers as an issue in relation to this impact.

Pipeline Impacts

Pg 26 describes the predicted social impact on the pipeline route. It identifies the number of affected properties and the Water Corporation’s approach to compensating landowners. The text states that “*there is no standard amount of compensation*” paid by the Water Corporation, “*it is determined on a case by case basis*”. Question – While it is reasonable for compensation to vary based on property characteristics, one might expect the Water Corporation to apply the same basic methodology for calculating the compensation. It is not clear from the SIA if this is the case or if there are issues of equity. What are the social impacts that are being compensated?

“There are a total of 72 properties indirectly impacted by the pipeline because the pipeline will be installed on their road frontage”. It is not clear why a pipeline situated just outside a property boundary is an “*indirect impact*” while a pipeline placed one metre inside the property boundary would be a “*direct impact*”. For instance if the impact is dust generated by excavation activities, the impact is not indirect because it is inside or outside a property boundary.

Pg 120. Disruption to properties along the pipeline.

The impact management recommendation in the SIA is to “Compensate affected property owners”. This indicates that all affected property owners should be compensated while the Water Corporation has indicated it only compensates directly affected owners. This is a big difference, as on page 62 the SIA states that “The Water Corporation estimates that the construction of the pipeline will impact directly (by crossing the property) on 26 properties and indirectly (pipeline along the road frontage) on 72 properties”. The reviewer is not in a position to comment on the appropriateness of the recommendation as there is insufficient information as to the nature of the potential impacts, the characteristics of the affected parties and the potential to manage the impacts through means other than compensation. On what basis should the amount of compensation be determined?

Pg. 121 Increased demand on community facilities and services.

The SIA was unable to make a prediction of impact due to insufficient data. Thus, it is not clear from the earlier analysis why the SIA focuses its recommendations on recreational features as opposed to other forms of community facilities and services. Will these recommendations be appropriate if there is no construction camp?

Pg 122 Disruption to businesses during construction.

SIA recommendations include:

- Provide fair compensation for any losses incurred.
- Monitor and estimate economic losses caused to businesses in the immediate and local study area as a result of the construction of the pipeline.

The issue of compensation is always challenging and can become the source of conflict. What advice can the SIA provide decision makers as to why compensation is warranted for “any losses” and on what basis and process should the “fair compensation” be determined? The impact analysis states that in the immediate study area there are “few businesses and farms that could be affected by the project in the immediate study area”. The severity assessment provides no indication of the magnitude of impact on individual businesses and thus it does not make a strong case for compensation. The reviewer is not in a position to make their own judgement on the issue as there is insufficient information provided about the impact. The reviewer recommends that to minimise the potential for conflict, any compensation policy be based on clearly stated and impact-based objective criteria.

Pg 122. Increase in economic activity.

The SIA recommends that “The Water Corporation / Alliance to consider giving priority to employment and businesses in the immediate and local study areas. Provide on the job training or traineeships where possible.” Based on these management measures the potential impact is significantly increased in terms of benefits to the three study areas. However, what level of confidence can one place in these measures actually being adopted in a manner that would have such a significant effect. After all, the recommendation states that the proponent “consider giving priority”.

	Immediate SA	Local SA	Regional SA	Mitigation or Enhancement	Monitoring Recommendations	Immediate SA	Local SA	Regional SA
Increase in economic activity	POSITIVE IMPACT	POSITIVE IMPACT	POSITIVE IMPACT	The Water Corporation / Alliance to consider giving priority to employment and businesses in the immediate and local study areas. Provide on the job training or traineeships where possible.	Monitor number of people and businesses working with the SSDP Alliance. Monitor the fair implementation of prioritising employment and businesses for the immediate and local study areas.	POSITIVE IMPACT	POSITIVE IMPACT	POSITIVE IMPACT

Pg 122. Unequal distribution of costs and benefits of the project.

See reviewer’s earlier comments in relation to the predicted impact. It needs to be clear for each study area, what impacts are to be redressed through benefits.

Pg. 124 Impacts from expanding the plant to 100 GL/yr

The SIA recommends the following: “*Reconvene a SAG to work together with the Water Corporation in order to improve the social performance of the expansion*”. This suggests that the earlier SAG is no longer functioning? The duration of the SAGs is not clear.

From a social impact perspective, would it be preferable to have the expansion phase occur sooner or later?

Pg 125. Impact on community character and amenity.

Earlier in the SIA (pg 103), the impact issue is described in the following manner: “*Stakeholders and residents expressed concern that the operation of the plant may create noise, dust and increased traffic. These impacts could change the character of Binningup and Myalup.*” It is not clear how the recommended “code of conduct for the construction workforce to prevent increases in crime and antisocial behaviour” addresses this impact. In addition, there would not be construction workers in the operations phase of the project.

Pg 126 Increase in economic activity.

“*The Water Corporation, through contractual arrangement, should request the successful SSDP Alliance to give priority to employment and businesses in the immediate and local study areas and provide on the job training or traineeships were possible*”. Given the issues associated with the definition of the various study areas applied in the SIA, are these study area boundaries appropriate

for this recommendation? For instance, someone living just north of Myalup would not benefit from such a policy while someone living in Yarloop would potentially benefit. Do the study area boundaries raise equity issues?

Interestingly, this recommendation uses stronger language such as “through contractual arrangement” while, for the same impact issue in the construction phase, the recommendation is that “The Water Corporation / Alliance consider giving priority to employment and businesses in the immediate and local study areas”. Despite this, for the operations phase, the mitigation measure is predicted to have no significant effect while the less strongly worded recommendation is predicted to have a significant impact.

Increase in economic activity		The Water Corporation, through contractual arrangement, should request the successful SSDP Alliance to give priority to employment and businesses in the immediate and local study areas and provide on-the-job training or traineeships where possible.	Monitor the fair implementation of prioritising employment and businesses in the immediate and local study areas.	
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Social Impact Management Plan Recommendations

The reviewer supports the recommendation for a Social Impact Management Plan. Typically, the SIA goes a long way toward providing the data for the baseline condition used in the monitoring programme. As documented in the SIA, there are currently many important information gaps that will need to be filled by the SIMP.

What is the recommended relationship between the SIMP and other impact management plans for the project as well as the SAG?