

## Questions and Answers

### Binningup Desalination Action Group, July 2007

- Q: In relation to the rejection of the East Rockingham / Port Kennedy sites:
- What were the significant environmental and social impacts that caused the rejection of a site that was cheaper to build and much closer to the main consumers rather than pumping the water 25 km to and then 140km in the integrated water scheme?
  - How was “social disruption” quantified?

A: The significant environmental and social constraints for the East Rockingham and Port Kennedy sites were:

- the brine discharge impacts on local penguin and whitebait nurseries;
- pipeline construction impacts on Lake Richmond; and
- significant social disruption associated with constructing large diameter pipes through built up urban areas.

The City of Rockingham indicated that it would not support the proposal because of these reasons. The Environmental Protection Authority (EPA) indicated that approval for additional saline discharges to Cockburn Sound would not be supported, so if the plant was located at East Rockingham, the brine discharge would need to travel south over 15 kilometres to Comet Bay, or Warnbro Sound, both semi-enclosed basins where brine mixing could become problematic. A potential fourth discharge site was then identified off Becher Point, however this would result in significant impacts on the Becher wetlands from the pipeline.

In relation to the Binningup Site:

Q: Has the cost of relocating the existing Waste Water Treatment Pond been included in the cost estimates?

A: The existing Binningup Wastewater Treatment Plant can co-exist on the Water Corporation site with the desalination plant, so costs of relocating the wastewater treatment plant have not been calculated.

Q: Why has the potential impact of the outfall from the Myalup Drain not been taken into consideration when the outfalls from the Buffalo Rd waste pipes appear to be a constraint?

A: The discharge from the Myalup Drain/Harvey Main Drain will be addressed in the environmental impact assessment. This is not considered to be an industrial discharge in the same way the Buffalo Road, Kemerton industrial waste outfalls are. The drain's water quantity and quality are not expected to impact on the desalination plant intake water quality.

Q: Why have the “Conservation Category Wetlands” adjacent to the site not been taken into consideration?

A: All wetlands in the study area (for both the site and potential pipeline routes) have been mapped (using a desktop method) and any impacted by the proposed site and/or potential pipe routes will be studied in more detail once the pipeline routes are finalised. A wetland management plan will be developed and assessed by the EPA and available for public review during the Public Environmental Review process.

- Q: Why has the land that is classed for “Future Urban” immediately adjacent to the site not been taken into consideration in the proposal?
- A: It is the Water Corporation’s understanding that privately owned land adjacent to the plant is zoned rural. The existing wastewater treatment plant at the Taranto Road site, and the associated odour buffer would be expected to have a bearing on any future zoning changes of adjacent land. The chlorine buffer required for the desalination plant is not expected to exceed the existing wastewater treatment plant buffer.
- Q: “The coastline between the Leschenault Estuary and Lake Preston has water quality and environmental constraints which restrict the ability to locate the intake and outlet pipework for a desalination plant anywhere along the coastline.”(*P11 Second Seawater Desalination Plant Site Considerations and Alternatives*). When did Binningup move out of this area and why does it not have the same constraints?
- A: The water quality and environmental constraints in this area restrict, but do not totally prevent, the location of inlet/outlets for desalination plant inlet/outlet pipework. The Water Corporation owned site at Taranto Road, Binningup is one area which is still located west of a major chain of conservation category wetlands but does not have significant water quality constraints as it is located at a suitable distance away from the Myalup Main Drain and Buffalo Road . It has excellent mixing conditions for the brine discharge.
- Q: Why is the proposal now to place the inlet at 300m offshore and the outlet 150 offshore when we were assured at the public meeting that the inlet/outlet would be 500-800m offshore?
- A: The information on the inlet and outlet pipes contained in the *Second Seawater Desalination Plant Site Considerations and Alternatives Report, 2007* have been misinterpreted. The comparison of sites within the report and the distances listed apply to the **onshore only** component between the seawater pump station and the plant itself. As previously noted this will see a marine outlet pipe length of 800m and inlet pipe length of 500m. The exact lengths and location is being determined by detailed marine survey and geological investigations.
- Q: Would you please supply a copy of “The preliminary environmental investigations that indicate favourable marine bathymetry and coastal processes” at the Binningup Site.
- A: The preliminary bathymetric (sea floor contours) data is shown in the attached map. Further mapping and coastal process analysis will be undertaken over the coming months for inclusion in the Public Environmental Review.
- Q: Would you please supply a copy of the data that indicates the water flow in the area over a representative period of time taking into consideration the influence of the Leeuwin current and the Geographe Bay circulation.
- A: Initial marine monitoring indicates that the general circulation of water is towards the northwest. The report for this work is still be completed by our consultants and will form part of the analysis for the Public Environmental Review (and made available for public comment at that time).

Q: As “There are many high value ecosystems between the coast and Kemerton Industrial Park. These systems include permanent and seasonal wetlands as well as terrestrial vegetation and ecosystems.” Would you please explain why there is no mention of these systems in the path of the proposed pipeline from Binningup to the IWSS.

A: The pipeline route from the Taranto Road site to Harvey is not yet determined. The final route will be selected to minimise impacts on wetlands. Because of the geographical extent of wetlands in the Kemerton area it would be much more difficult to avoid significant wetland impacts from the Kemerton to Taranto Road (inlet/outlet works) pipelines than for Taranto Road to Harvey. The wetlands between Kemerton and the coast will not be impacted by the Taranto Road to Harvey pipelines.

Q: Would you please explain in detail how the Water Corporation has planned to “Minimise and manage the potential risks to the marine and terrestrial environments”

A: The diffuser will be designed to meet stringent water quality criteria (set by the EPA) to ensure no adverse impact from the brine discharge. Any potential terrestrial impacts will be identified and quantified during the Public Environmental Review process. Any requiring ongoing management (for example dewatering, noise, dust, acid sulfate soils etc), will have management plans developed and these plans will be assessed by the EPA and available for public comment.

Q: In relation to the proposed process:

- What is the predicated volume/tonnage of the screenings per week?
- What is the composition of the screenings?
- What is the predicated volume/tonnage of the backwash solids per week?
- What is the composition of the solids?
- Where are the solid wastes to be transported to?
- What is the predicated volume/tonnage of the cleaning materials per week?
- What is the composition of the cleaning materials?

A: In regard to the proposed process, we can draw on information from the Perth Seawater Desalination Plant as follows:

- The predicted volume/tonnage of screenings per week is approximately 1/2 m3 per day
- The composition of screenings includes seaweed, plastic bags, rubbish and jellyfish
- The predicted volume/tonnage of the backwash solids per week is approximately 70 tonnes per week (two skip bins per day), approximately 25% solids
- The composition of the solids is organic content, silt, seaweed, ferric sulphate (coagulant)
- The solid waste (sludge) is removed by SITA to "Tox Free" who mix it with other wastes and dispose of to Miller Rd Landfill
- The cleaning chemicals used for reverse osmosis racks is 150,000L per reverse osmosis rack of a very dilute sodium hydroxide solution, NaOH, 0.03%. This is neutralised with HCl before being discharged. The reverse osmosis racks are cleaned once every 3-6 months.