

SOUTHERN SEAWATER DESALINATION PLANT
BINNINGUP COMMUNITY MEETING – 29 MAY 2007

7.30pm, BINNINGUP COUNTRY CLUB

STICKY NOTE QUESTIONS AND ISSUES
WATER CORPORATION RESPONSES IN ITALIC

These questions were written on sticky notes by members of the community, and posted on noticeboards at the front of the room. The responses have been provided by the Water Corporation project team.

Technical

1. Who actually were specifically involved in choosing Binningup for the Desal 2 site?

The Water Corporation made the decision following investigations along the coast from Jurien Bay to Bunbury.

2. Can you guarantee the site won't be used in future for nuclear power alongside the Desal plant?

No. Our responsibility as a water utility is to provide water and wastewater services for Western Australia. Our commitment is to use renewable energy to power the plant. The issue of nuclear power and sites rests with the State Government.

3. What is the process of ridding the salt that is removed?

4. Will it be turned into a usable – recyclable

The discharge water from the desalination process is twice as salty as seawater. It goes back to the ocean through an (in this case) at least 800 metre pipeline into 10 metres of water. The final section of the pipeline consists of a series of holes through which the water is squeezed out into the ocean. Within 50 metres of the pipeline the water is back to seawater salt levels. This has been independently proven in Cockburn Sound where the water mixing is not as in the open ocean off Taranto Road

The potential for harvesting the salt was studied closely at Kwinana. It was established that the water was not sufficiently salty to efficiently extract the salt. That finding is likely also at Taranto Road. Harvesting salt in Western Australia is a phenomenon of the North West of the State.

5. What noise past 5pm can we expect?

The Water Corporation has committed to no noise at the plant at all times when it is operation above the sound of the ocean. It won't be heard from Binningup or Myalup. During the two year construction there is the potential for some noise impact on the local community, and the Corporation will work with the local community to minimise any construction impacts.

6. What light past 5pm can we expect?

When operational the Water Corporation has committed to lighting being the equivalent of normal street lighting. During the construction there will be a requirement to light some areas of the site and there may be some light impact on the local community. The Corporation will work with the local community to minimise any construction impacts.

7. What were the top 5 second to Binningup, Desal Number 2 sites considered by government?

There was no 'top five'. The Water Corporation investigated a number of potential sites from Jurien Bay to Bunbury.

8. Can Water Corp consider the impact of the Western Power and SCM (now different name) ocean outfall pipes south of Binningup on Desal number 2?

It is not considered feasible or cost effective to combine the desalination saline discharge outfall with the current industrial discharge pipe. The impacts of the existing outfall pipes will be considered as part of the water quality monitoring and the modelling of the discharge from the new desalination plant.

9. To pipe the water east to the IWSS can we place the pipe in the middle of secondary roads etc leaving road reserves for other services (The Shire Engineer, Peter Anderson suggested it) and I believe this 'concept' is worthy of consideration environmentally, practically. G Campbell Cr Harvey Shire

The Water Corporation will work with the Shire, community members and land owners in the development of the pipeline route to Harvey.

10. As I see from plant in Rockingham a simple process the only downside would be the 'sludge' as a bi-product

The 'sludge' is a solid waste comprising small pieces of seaweed and other organic material filtered from the seawater. It is salty contains a little iron, is not suitable for use in agriculture or industry and will be taken to a licensed landfill site by truck.

11. Effective water usage being enforced (i.e. water friendly gardens and water tanks) instead of desal plants.

The Corporation's Security Through Diversity strategy involves a range of measures to reduce water consumption. These measures include the two day sprinkler roster in the Integrated Scheme (more than three quarters of the State's drinking water consumers). This roster and a growing range of water demand measures, including heavily promoted 'water friendly gardening initiatives' and a rebate for the installation rain water tanks, have proved to be extremely successful. However, the booming growth of WA and the drying climate that has resulted in run-off to dams in the south of the State drop two thirds in the past 30 years requires another major water source for the Integrated Scheme in the immediate future, in addition to the successful water saving initiatives.

12. What is the exact location and why here so close to our coastal town site?

Taranto Rd, north of Binningup. This site, owned by the Water Corporation and the current location of the Binningup Wastewater Treatment Plant, was identified as the best location based on these social, environmental technical and economic factors:

- The location reduces energy and infrastructure requirements.*
- The open ocean ensures adequate water mixing*
- It is only 25 kilometres from a major Integrated Water Supply Scheme pipeline.*
- The power grid is only 10 kilometres away.*
- There will be minimal environmental impacts and these can be managed.*
- The Kwinana site of the Perth Seawater Desalination Plant can not be expanded. There is no room.*
- The 40-hectare site can easily accommodate a desalination plant.*
- The Water Corporation owns the site and currently uses it to provide a wastewater facility for Binningup.*

13. How far from closest houses at Binningup and Myalup?

850m from the closest house in Binningup and 2.3 kilometres from the closest house in Myalup.

14. What buffer zone is proposed?

The existing wastewater treatment plant legally requires an odour buffer restricting certain land uses within a 500 metre radius around the plant. The co-location of the wastewater plant and the desalination plant will result in the continuation of the current buffer zone.

Additionally, two specific buffers will apply to the desalination plant. These will be set by the Regulators. They are:

- Chlorine – A 250-350 metre residential exclusion zone around the chlorine storage facility. This facility will be located in the centre of the site which means the chlorine buffer will be within the Corporation's site boundary.*
- Noise – The edge of the site comprises the noise buffer. The Water Corporation's commitment is that the noise level at the boundary will be below the sound of the ocean.*

15. How big in area is the plant also how high? At 45 gigalitres? At 100 gigalitres?

The 45 gigalitre a year facility will require about 10 hectares, while a 100 gigalitres facility would need about 20 hectares.

The height and footprint of the plant will require approval from the EPA. The Water Corporation is committed to working closely with the communities in the finalisation of these key elements of the plant.

16. Are there any chemicals released back into the ocean with the salt?

Very small amounts of chemicals are used to keep the pipelines clean and free of marine growth. The quantities that reach the ocean are so low they are virtually undetectable and do not pose any environmental or human health risks. The use of chemicals and the restrictions placed on them are part of environmental conditions required by the Environmental Protection Agency.

17. What is the chemical makeup of the discharge water e.g. chlorine metals and salt?

Only two waste products are produced through the reverse osmosis desalination process. The first is concentrated seawater which is returned to the ocean (see answer to question 16)

The second waste product a solid waste or sludge made of small pieces of seaweed and other organic material filtered from the seawater. (See answer question 10)

18. What direction will the fresh water be piped i.e. what course will it take?

The drinking water will go to Harvey where it will transfer to a major pipeline to the Tamworth Reservoir at Rockingham. The 25-kilometre pipeline from Taranto Road will be developed in consultation with land owners, Harvey Shire and the community.

19. What is the true source of power coming from? Geothermal energy according to statistics available is not viable or proven in this area.

It will be renewable energy. Expressions of interest will be called for around August 2007.

20. Why hasn't the Agritech proposal been seriously considered and public feedback been considered on this?

The Water Corporation on a number of occasions in recent years and at the highest level in the utility has invited Agritech to provide it with a detailed submission of its proposal. No such proposal has eventuated.

21. No noise! How is that possible with pumps etc?

The Water Corporation has committed to ensuring that at the boundary of the plant noise levels will be below the sound of the ocean. The Corporation will work with the community to ensure that commitment is met. Largely, noise reduction is achieved through sound enclosures around buildings machinery. The community will have input to 'noise investigations' as they proceed in all weather conditions and full access for discussion of the results.

22. How far out will the intake and outtake pipes be in the ocean?

The intake pipe will be on the ocean floor out about 400 metres and the outlet pipe will be about 800 metres. The detailed locations will be determined through the design process.

23. What will happen to concentrated salt?

Please see answer 3 and 4 but essentially it returns to the ocean where it rapidly mixes with the seawater.

24. Could Water Corporation please explain the site selection process and selection criteria that resulted in Binningup being chosen? Specifically, why were the alternative sites disregarded:

- a. Port Kennedy
- b. Warnbro Sound South
- c. Secret Harbour
- d. Kwinana
- e. Kemerton
- f. Sites north of Perth
- g. Lake Clifton / Lake Preston

Lake Clifton/Lake Preston was not considered. In 2005 the Water Corporation referred for consideration by the Environmental Protection Authority(EPA) a proposal for a second desalination plant nominating three sites – two at East Rockingham and one at Port Kennedy. However, further investigations showed that the East Rockingham inlet/outlet pipe routes came with significant environmental and social impacts. Specifically, for both sites it was felt that the pipe route adjacent to Lake Richmond was unlikely to obtain EPA approval because of the environmental and social disruption its construction would cause (that is building through the suburbs. Additionally, the Port Kennedy inlet/outlet works were considered to have such serious impacts on penguin and whitebait nurseries that the Minister for the Environment made the decision that the second desalination plant would not be built in that area. The Water Corporation has now withdrawn its desalination proposal for these areas from the EPA approval process.

Potential desalination sites north of Perth were ruled out for now because of the distance to existing power and water supply infrastructure. Locating the plant at the Kemerton Industrial Estate was carefully considered but was considered not feasible because of major environmental and economic issues. Subsequently the Kemerton possibility was reviewed and it was reconfirmed that this was not feasible because of the substantial capital and operating costs (as opposed to other options) involved with locating the plant inland and the increased environmental risks associated with constructing the additional large pipelines that would be require for such a location. Specifically, in comparison to the Taranto Road site the capital cost increase as estimated by the Water Corporation to locate the plant at Kemerton as opposed to Taranto Road was approximately \$150 million. The energy requirements and operating costs would also increase significantly. Coupled with these economic issues there are major environmental concerns relating to wetlands in the area, additional energy requirements and clearing of vegetation for major additional pipelines that would be required.

In summary, the following criteria was used to assess potential desalination plant sites

The site must:

- *Have minimal impacts on environmentally sensitive areas*
- *Be close to the ocean*
- *Be at least 10 hectares.*
- *Have buffer zones required for chlorination facilities*
- *Have compatible surrounding land-uses*
- *Offer easy integration into the Integrated Water Supply Scheme*
- *Offer easy access to a suitable power source*
- *Ideally be owned by the Water Corporation..*

The site in Binningup was the clear preference based on the full range of social, environmental, technical and economic factors. In its investigations the Water Corporation did establish other sites with potential for future desalination plants, both south and north of Perth, but because it does own the land it can not comment on their location.

25. I wish to see detailed castings of placing the plant at Binningup, Kemerton and other short listed sites.

The Southern Seawater Desalination Plant at Taranto Road will cost \$644 million. The estimated increase in the capital cost to locate the plant at Kemerton is about \$150 million. Energy requirements and operating costs would also increase significantly for a Kemerton location.

Further information on the Kemerton Industrial Park option is contained in a letter and summary report on the Corporation's website at www.watercorporation.com.au.

26. Why not buy a site in an industrial area?

There are no other industrial areas in WA with land available that meet the social, environmental, technical and economic constraints.

27. Why not Geraldton? Ocean ➤ Power ➤ Industrial site ➤ Heavy swell ➤

The site must have easy integration into the Integrated Water Supply Scheme. Geraldton is more than 400 kilometres from the IWSS.

28. Is the 750m distance from the plant to the town measured from the centre of the plant or from the fence nearest the town? What will be the exact distance of the plant's last fence/boundary from the nearest town site property?

The closest house in Binningup is 850 metres from the southern boundary.

29. If the power comes from Emu Downs why do we not put the plant near the power source – surely the ocean is the same north of Perth.

Suitable sites north of Perth do not currently have easy access for fresh water to be fed into the IWSS. However, it is not necessary for a desalination plant (or any other facility) to be close to the power source because power is fed into the grid and generally taken out at a different place. It's a similar concept to how an ATM works. A person puts \$20 into an account and can withdraw it anywhere. It is not the exact same note, but is equivalent, the same as the energy generated is equivalent to the amount the plant uses.

Social

1. Why has a rural farming area been selected instead of a commercial industrial area closer to Perth, the area of need?

The Corporation investigated a range of sites from Jurien Bay to Bunbury. Its property at Taranto Road which already has a wastewater treatment plant was the identified as the best location. There are no other industrial areas in WA with land available that meet the social, environmental, technical and economic constraints.

2. What would be the expected number of employees at the plant once it is running (after construction)?

About 20. During the two year construction period up to 500 people will at times be on the site.

3. Should this plant go ahead where would the workforce be accommodated? How many?

This will be established with the construction contractor. At times up to 500 people will be on site.

4. Why Binningup when 3 other communities have already said no!

In 2005 the Water Corporation referred a proposal for Perth's second desalination plant containing three sites (two at East Rockingham and one at Port Kennedy) for consideration by the Environmental Protection Authority. After further investigation it was found that the East Rockingham sites inlet/outlet pipe routes had significant environmental and social impacts associated with them. In particular the pipe route adjacent to Lake Richmond was not likely to obtain approval due to the environmental and social disruption associated with its construction. Additionally, the Port Kennedy inlet/outlet works were considered to have such serious impacts on penguin and whitebait nursery areas that the Minister for the Environment made the decision that the second desalination plant would not be built there.

Taranto Road was identified as the best location based on social, environmental, technical and economic factors.

5. Why hasn't the local community been consulted and asked for info before this decision for Desal at Binningup was made?

The community was informed as soon as it was decided by the Government that that a seawater desalination plant at Taranto Road Binningup would be the next major water source. The Corporation is now working with the Shire and local community and will continue to do so throughout investigation, design, construction and operation of the plant to minimise any potential impacts and maximise benefits for the local community. This consultation process has just begun and will continue for some years.

6. During construction will access to building site be kept only to Taranto Road?

Yes, and traffic management will be a key component of construction management plans.

7. Why not put the new plant further north closer to Perth to a place with no population?

There were not sites closer to Perth that met the social, environmental, technical and economic constraints required for the plant.

8. During construction and after completion what impact will there be to the beach access along coast between Binningup and Myalup?

There will be no restriction to normal beach access or use. The pipelines will be buried and dunes restored once the plant is complete. There may be some restriction during construction and every effort will be made to ensure this is for the shortest possible time period and the restricted area limited. When the plant is complete there will be no impact on the beach.

9. Question from Rob Houlding: email address rgoulding@hotmail.com. There is a look out on the coast near the end of Carleen street and at the end of the path at the north end of Allan road. Would the proposed plant be visible from this look out – either during the day or at night by its lights?

The plant will not be visible from any residence in Binningup. Lighting will be no more intrusive than street lighting.

10. Is the WC aware of the planning in place by the local authorities for the Binningup/Myalup communities?

The Water Corporation will work closely with Harvey Shire to ensure the plant fits with existing local planning and any potential benefits for the local community are maximised.

11. Kwinana has areas of restricted boating/recreation, will similar restrictions be placed in Binningup?

There may be some restriction during construction but every effort will be made to ensure this is for the shortest possible time period and the restricted area limited. When construction is complete there will be no issues.

12. East Rockingham Industrial Park and several others was dismissed as a site during the feasibility study of Desalination one. The ultimate site selected is greater than 3km from an urban area. Why has not the same consideration/argument given in selecting Binningup as a site for a desalination plant?

In 2005 the Water Corporation referred a proposal for Perth's second desalination plant containing three sites (two at East Rockingham and one at Port Kennedy) for consideration by the Environmental Protection Authority. After more investigation it was found that the East Rockingham sites inlet/outlet pipe routes had significant environmental and social impacts associated with them. In particular the pipe route adjacent to Lake Richmond was not likely to obtain approval due to the environmental and social disruption associated with its construction. Additionally, the Port Kennedy inlet/outlet works were considered to have such serious impacts on penguin and whitebait nursery areas that the Minister for the Environment made the decision that the second desalination plant would not be built there. As stated earlier, the Water Corporation has withdrawn its proposal from the EPA approval process.

13. Would you have to purchase land at Kemerton to build Desal 2? If so, and if no future residential is planned, have you considered compromising by purchasing land near Coast Road Myalup Garage to cut costs of pipe compared to Kemerton?

The reasons the Kemerton Industrial Estate is not a feasible option for a desalination plant are provided in question (Technical) 24 above. We have not considered purchasing land near Coast Road Myalup Garage.

14. How many litres does the average person use a day? What will be done with the excess? How will the pipes be maintained?

The average Western Australian uses approximately 107 litres of water each day. A major new water source is required in the immediate future because of the booming growth in WA. The pipes will be maintained through the Water Corporation's operations and maintenance process.

15. What benefits are there for the local community? Have all alternatives been explored/dismitted?

The Water Corporation will work with Harvey Shire and local community to maximise benefits for the local community.

16. To enlighten us, could you please explain why Yarragadee was rejected given that:

- a. it satisfied all environmental concerns
- b. it was sustainable
- c. it underwent 6 years of review, investigation and studies and satisfied all concerns

d. it was the lowest cost option

e. until Tuesday 15^h May 2007, this option was still Water Corporations preferred solution. *The reasons the Government decided the South West Yarragadee would not be the next major water source for the Integrated Scheme were outlined in the Premier's media statement of 15 May 2007 when he announced that a second desalination plant would be built at Taranto Road . In part, the Premier said: "The internationally acclaimed Kwinana seawater desalinating plant has demonstrated that large quantities of water from an unlimited ocean supply can be provided using a clean and green process. Unlike the South West Yarragadee and other traditional sources, it is also climate independent. That is why the State Government has decided that the next major water source can be provided by the seawater desalination process"*

Mr Carpenter's media statement can be accessed through the State Government website – media statements.

Environmental

1. *Global impact study on environmental impact of multiple desalination plants.*

Reverse osmosis desalination is a proven technology worldwide. Dozens of similar desalination plants have been operating around the world over the past 30 years. There is no evidence at any plant that is properly run, of negative environmental impacts from the salt water discharge.

2. We would like to enquire about the increase in salt concentrations in the local water with the salt spray on the local crops in the rough weather. The spud farmers in the local area are concerned.

There will be no changes to the coastal environment and in particular the spray from the ocean. The site is alongside open ocean which has a swell that ensuring the discharged water from the plant will mix very quickly with the surrounding seawater.

3. Environmental impact study on Australind estuary (Leschenault) and Myalup lakes.

There will be no impact on the Leschenault Estuary or lakes systems because the ocean conditions adjacent to the site will ensure the concentrated seawater discharge mixes quickly with the surrounding seawater and will be at background salinity levels within 50 metres of the outlet pipe.

4. Why is Kemerton industrial park not an option?

5. I would like the reason and costings for not siting the plant at Kemerton.

Please see why the Kemerton Industrial Park is not a feasible option at Technical 24.

6. What will the long term effect have on the reef at Binningup?

There will be minimal impact on marine habitats, such as seagrasses and reef systems. The plant will be required to meet stringent environmental protection criteria and a comprehensive ocean monitoring program (that is in place in Cockburn Sound) will also provide 24-hour real time monitoring.

7. Having seen the existing plant I don't foresee any real issues.

Excellent. Thank you.

8. If desalination is to be the way of the future for WA, there'll be lots of Desal plants so how will this trend affect the environment and our beautiful swimming/ fishing beaches long term.

The Water Corporation operates a number of large and small desalination plants throughout Western Australia, including the largest plant at Kwinana. All are subject to stringent

environmental protection criteria, have passed thorough environmental approval processes and are subject to ongoing monitoring and reporting.

9. What will happen to the reefs, and the fish?
Please see answer at question 6.

10. What type of chemicals are going back into the ocean?
Please see answer at question (Technical) 10.

11. Mr David Luketina: Has the department of environment been approached to do noise pollution study. Are they to conduct test to "Temperature Inversion Condition" when temperatures are low then suddenly rise creating greater sounding propagation i.e. rising temperatures create greater noise pollution.
The Water Corporation will conduct noise studies in a range of locations, in different weather conditions before, during and after construction so we know exactly what normal noise levels are. We will work with the community and the regulators (including the Environmental Protection Authority) to decide on a noise level for the edge of the property, that is reasonable and meets world's best practice.

12. The government should not be building on land close to established houses. Desalination plants should be built in industrial areas. The government should be making all the households have rainwater tanks.

13. Why don't all new houses being built have rain water tanks made compulsory; Ashley Wilson.

Please see why the Kemerton Industrial Park is not a feasible option at Technical 24.

The Corporation's Security Through Diversity strategy involves a range of measures to reduce water consumption, including an initiative to encourage the purchase of rain water tanks. These measures have been very successful and will continue to be used. However, booming growth in Western Australia means that in addition to these measures a major new water source is now required as well.

14. A widened access road will be required for pipe and power more land that will encroach on the land owners. Check on wetlands on North side of Taranto road, this needs looking into.
The Corporation has begun environmental monitoring and has undertaken some terrestrial environmental surveys of the site and surrounding land. Further surveys will be undertaken before construction starts. When all information is available management plans will be developed to ensure impacts are minimised. There are no wetlands on the north side of Taranto Road.

15. Visual amenity was not a consideration of the environmental impact assessment for the Kwinana Desalination plant, what guarantee do the residents of Binningup have that these considerations will be part of the assessment at the Binningup site?
Visual impact will be considered in the formal environmental assessment process. The Corporation is committed to ensuring that the plant is virtually unnoticeable from the beach and it will not be seen from Binningup.

16. Why has the site location been set before the environmental impact assessment and what happens if it isn't acceptable.
The Taranto Road site was identified as the best location for the new plant. It will undergo a stringent formal environmental approvals process, including extensive environmental

investigation and impact assessment. The Corporation is confident that all environmental impacts will be appropriately managed and minimised.

17. What renewable energy source will you use? If this runs out then what source of energy will you use?

The power source has not yet been determined. The Corporation is actively investigating economic sources of renewable energy and will consider a range of options before deciding on a supply for the new desalination plant.

18. Will the WC guarantee that the noise received at any point in Binningup will not exceed 350 BA at night in accordance with the EP noise regulations?

Please see answer to question (Technical) 5.

19. On your website you now say that:

- a. the plant is about 1km from Binningup
- b. noise will be minimised
- c. visual impact will be minimised

Can you quantify:

- a. actual distance and whether there are similar plants in socially responsible societies with a buffer zone as little as this?
- b. actual noise levels (dB) ratings at the site boundary and whether or not this will be audible by nearby residents
- c. the extent of visual impact and the extent of site flood lighting on the site (as it is a 24/7 operation).

Please see answers at questions Technical 5, 6 and 14.

20. What is going to be the impact on the coastal reef system? Specifically, given the need to source water with sufficiently low turbidity levels it seems that the intake line is going to need to be much longer than Kwinana. How will the pipeline be anchored to the seabed and what will be the impact on the reef? Similar issues exist for the outfall. Could Water Corp please clarify in this regard.

None, aside from a short period during construction. The offshore discharge and intake pipelines will be located to minimise any effects on sensitive marine habitats, such as seagrasses and reef systems. Detailed design of the intake and outlet pipes has not yet been developed, however the intake pipe is expected to be located at a depth of 6-7m (approximately 400m from the shore) and the outlet pipe at a depth of 10m (approximately 800m from shore), well away from the reef system. The pipes will be buried underground out to these points. There will be some disturbance to dunes and the seabed during construction, however construction methods will minimise impact and any affected areas will be rehabilitated.

21. What, if any, benefits will flow to the Myalup/Binningup community, apart from the desal plant, ie. deep sewerage?

22. What, if any, benefits will flow to the Binningup / Myalup communities from construction of the desalination plant? For example, will the Water Corporation of the State government invest in or provide better services or even access to deep sewerage?

Both Binningup and Myalup are part of the Integrated Water Supply Scheme that provides more than three quarters of Western Australians with their drinking water. The need for an immediate expansion of the Scheme is the reason the Southern Seawater Desalination Plant is being built. The Corporation will work with Harvey Shire and the communities to maximize local benefits.

23. In which direction does the ocean water along the Binningup/Myalup beachfront ebb and flood? Where will the “salty” water from the plant go? (see lack of detail in ‘picture 6’ of brochure).

The current along the coast generally flows south to north but differs at certain times of the year depending on the Leeuwin and Capes Currents. Further investigation will be undertaken in the coming months to gain a better understanding of specific flows and water movement in the surrounding ocean. The site is alongside open ocean has an excellent water mixing swell that will ensure that the water discharge will mix quickly with the surrounding seawater. The discharge pipeline will be designed and located to ensure the discharge is rapidly mixed to background salinity levels.

24. Publish independent water quality readings from the Kwinana desalination plant.

The Water Corporation has implemented the most intensive ocean monitoring program of any desalination plant in the world at its Kwinana desalination plant. A comprehensive collection of data and reports is available on the Water Corporation website at

<http://www.watercorporation.com.au/D/desalination.cfm?uid=6545-1832-2410-1248>

A thorough monitoring program will also be used at the Binningup plant. Results of all monitoring is provided in regular reports to the Department of Environment and Conservation. These reports are all available to the public.

25. Reverse osmosis produces carcinogenic THMs and therefore should not be allowed to be integrated into the public supply.

THMs (Tri Halo Methanes) are caused when organic material comes into contact with chemicals including chlorine or bromine. All water supply has the potential to produce THMs, and this is an issue the Water Corporation takes very seriously. Desalinated water produced in WA has extremely low levels of organic material due to the fine filtration process. Therefore desalinated water has a much lower risk of producing THMs, than most other water sources.

26. Why did you come to this decision without environmental impact study, surely this is the most basic need in a project such as this. The second reason you give for your plant is environmental and yet you can not reasonably answer this???

Planning for the plant is at a very early stage. Preliminary environmental studies identified Binningup as the best site. The Corporation has begun environmental monitoring of the ocean environment and has undertaken some onshore environmental surveys. The next steps are directly associated with the environmental approvals process. This includes seeking a level of assessment from the Environmental Protection Authority (EPA) and agreeing a scoping document with the EPA to complete the environmental studies. Environmental approvals for the project to proceed will take more than 12 months. Extensive environmental studies and impact assessments are being undertaken as part of this process.

Economic

1. What mechanism does the Water Corporation have in place to compensate landowners if there are decreases in land values due to the proposed project?

Compensation arrangements may be available for landowners directly affected by the plant or pipelines and in these cases compensation will be negotiated on a case by case basis. No compensation is available for potential impacts on values of land not affected directly by the plant or pipelines.

2. Local employment (Binningup) for residents other than those already employed by the Water Corporation.

3. How many staff will the new plant employ?

It is expected that over the 24-month construction period there will be times when up to 500 people will be employed on the site. Plant operation will require 20 full time employees. Where appropriate, staff, contractors and materials will be sourced from the local area.

4. There was public discussion with the people of Rockingham and Port Kennedy in discussing a Desal Plant there. Binningup didn't have this. What was wrong with both of these sites? Please see answer at question (Technical) 24.

5. Enormous benefit to the state, we must address this water issue
Thank you. Yes, we agree.

6. Is there any commitment to the local community obtaining an economic benefit though local content in construction?

Where appropriate, staff, contractors and materials will be sourced from the local area. The issue of accommodation for the construction workforce will be addressed with the construction contractors prior to the start of construction, and this may also offer benefits to the local community.

7. Check on Native Title claim of the reserve – this may cost too.

All relevant Native Title Claims and heritage issues will be considered as part of the extensive investigation and approvals process. Aboriginal advisors will be consulted as part of this process.

8. Wouldn't the cost of bringing the power to Taranto Road be more expensive than taking the water to Kemerton?

Millions of litres of seawater will be pumped into the plant, and approximately half of that returned to the ocean. It is important to minimise the distance this water travels to reduce the energy required, the environmental impact, the disruption caused by construction of pipelines and the cost. If the plant were located at Kemerton Industrial Park it would require significantly more energy and cost to transport the energy. Bringing the power to Taranto Road is comparatively economical.

9. Will the landowner North of Taranto Road still be able to subdivide? The cost of this plant must include compensation to land owners. This will not be cheap.

The existing wastewater treatment plant requires an odour buffer, which restricts certain land uses in a 500 metre radius around the treatment facility. The co-location of the wastewater treatment facility and the desalination plant will mean the existing odour buffer restriction will continue to apply. The desalination plant buffers will not extend beyond the edge of the Corporation's land.

Compensation arrangements may be available for landowners affected directly by the plant or pipelines and in these cases compensation will be negotiated on a case by case basis.

10. Why are you making 2 Desal plants instead of accessing an abundant permanent water supply from up North?

11. Kimberley water supply costings by the Water Corporation are grossly incorrect, for example Kimberley water integration is costed at \$1.16 and desalination integration is costed at zero.

An independent review of the option of transporting water to the Integrated Water Supply Scheme from the Kimberley was undertaken in 2004/05. The report ruled all options out as economically, environmentally and socially unsustainable. The report can be accessed on website www.water.wa.gov.au

12. How many more and where will the next site be?

Ongoing water supply planning is continuing to determine future potential water sources. Potential future desalination plant sites have been identified but because the Water Corporation does not own the land as yet it can not comment on their location.

13. On your website you mention social, environmental and economic factors were assessed in the site selection. Obviously then, Binningup wasn't just chosen on cost. However, you also mention on your website the need to be near the sea, because of additional costs of pumping seawater to Kemerton. Could you please explain the incremental cost per kl of water based on a Kemerton option and how this is of greater significance than the environmental and social concerns and long-term impacts that are being raised? (I think it is in the order of 2cents /kl). Furthermore, the synergies of locating the plant near Kemerton (closer to power, offset costs by the sale of land at Binningup, closer to existing water infrastructure and closer to Wellington Dam should this ever progress) makes it seem that the Binningup option is not the best on a basic economic assessment let alone the triple bottom line assessment approach. Could Water Corp please clarify in this regard.

The reasons why the Kemerton Industrial Park is not a feasible option for the plant are outlined in answer to question 24 and 25 and also outlined in much further detail in a report on the Corporation's website www.watercorporation.com.au.

14. How will the development limit the future development of the communities of Myalup and Binningup? Given the new Peel Deviation, demand in Binningup for affordable coastal land will increase. Is it socially responsible to place a large scale industrial facility in such a location given that Water Corporation are aware of the need for more residential land such as this?

15. Change to Shire plans re housing development for Taranto Road.

All plant infrastructures will be contained within the site and the plant should have no impact on surrounding land use.

The Water Corporation's land currently houses a wastewater treatment plant, which services the town of Binningup and may ultimately require upgrading to provide local wastewater service as Binningup and Myalup grow. The existing wastewater treatment plant requires an odour buffer, which restricts certain land uses, including residential land uses, in a 500m radius zone around the treatment facility. Therefore the area surrounding the Corporation's land is unsuitable for residential use whether or not the desalination plant is built.