### **INQUIRY INTO RECREATIONAL FISHING**

Organisation: Name: Position: Date received: South Sydney Amateur Fishing Association Mr Stan Konstantaras President 31/03/2010

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## South Sydney Amateur Fishing Association



# Submission to the Select Committee on Recreational Fishing March 2010

The following submission is from South Sydney Amateur Fishing Association (SSAFA) and is in accordance with the Terms of Reference as outlined by the Legislative Council. SSAFA has provided the inquiry with a submission that is balanced and presents well reasoned arguments.

Our submission focuses on the impacts of state significant developments and in particular:

(e) Ecologically sustainable development issues related to improving recreational fisheries around the Kurnell Desalination Plant.

Our submission highlights the potential for improving recreational fishing opportunities, the fishery and its management. We believe there is considerable scope for improvement and refinement which if implemented will see a win win outcome for both the government and recreational fishers.

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We also request an opportunity to present directly to the committee.

Yours sincerely

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Stan Konstantaras

President

## Kurnell Desalination Plant and Impacts on the Botany Bay Recreational Fishing Haven.

In 2002, 30 locations along the NSW coast were set aside for recreational fishing following the removal of commercial fishing effort. Approximately 27% of NSW estuarine waters are now substantially free from commercial fishing effort. The purpose of these areas is to improve opportunities for recreational fishing in key areas of significance to recreational fishers. Commercial fishers were treated fairly through a buy out process. The 30 locations were chosen after a transparent selection process, which ensured that the community's social, economic and ecological issues were considered. These have become our Recreational Fishing Havens (RFH) within NSW. The payments were funded through a \$20m loan and the NSW Recreational Fishing Trust is repaying the loan on an annual basis. This is funded through the sale of a recreational fishing fee in NSW.

The approximate cost of the Botany Bay commercial fisher buy out was over \$4 m, coupled with the ongoing investment through the NSW Trust for stocking and research in the Bay, the investment recreational anglers have made in Botany Bay is closer to \$5 million in 2009. In November 2006, the Minister for Planning gave concept approval for the desalination project (Desal) and project approval for the Desal at Kurnell and the seawater intake and outlet structures. The project was deemed to be a State Significant Major Project and as such approvals under the Threatened Species Conservation Act 1995 and the Fisheries Management Act 10097 were not required. Our *only* concerns about the desalination process focused on the location of the outlet pipe, which was 300 meters off Kurnell and at the doorstep of our Botany Bay RFH. This pipe would deliver the concentrated saline waste water and toxins back into the ocean well within sight of Botany Heads and Bate Bay off Port Hacking.

An assessment was undertaken of the outlet site in the Environmental Assessment which indicated "Fish were abundant and assemblages include species common to the area". We continually argued that the outlet should be moved off the reef and onto the sand to minimise the impacts to the reef habitats and associated problems this will bring. It would also allow greater dispensation of the waste by exposing it to more current movements. We were concerned with the location of the outlet and the lack of effective monitoring of fish in the vicinity that would use this area as a feeding ground before either entering or exiting the Botany Bay RFH.

The recreational fishing impacts to the RFH have not been addressed in any form by Sydney Water. The builder and eventual operators of the plant even conceded that the selection of the outlet location by Sydney Water "<u>has been based</u> <u>primarily on the engineering criterion of ease of construction"</u>.

When we asked about the impacts to the fish stocks around the outlet pipe and the nature of the Sydney Water monitoring program back in 2008, the answers we received were astounding. The Project Director goes on to say that only .... "3 main forms of testing will be undertaken: reef habitat surveys, settlement panels and water quality monitoring. This program does not require the capture of fish for testing purpose or conduct sampling of fish stocks once the plant is operational. Additionally, Sydney Water does not consider there to be a need to conduct testing of fish...... the desalination plant will not cause bioaccumulation or pathogens in the marine environment.." We are continually scrutinising all of the documentation associated with the Kurnell Desalination Plant project and are discovering that the information Sydney Water relied upon in 2002 when planning the Desal is outdated and superseded. Our initial argument focused on shifting the destructive outlet onto the sand and off the hard reef that they will be placing it on. The initial documentation that Sydney Water provided is littered with comments referring that the impacts were unknown.

In 2010, after many years of our own research, we have a better picture of the likely impacts involved, and can also benefit from advances in knowledge about the environmental impacts of desalination plants from research conducted in other areas of the world. We have found new scientific data that suggests that the intake and outlets designs and properties of the effluent brine discharge associated with the Kurnell desalination plant will most likely have unacceptable impacts on the areas biodiversity, and also human and aquatic animal health. We are concerned that Sydney Water has based its existing Environmental Impact Statement (EIS) (which was published in 2006), on data that is now outdated, and hence it is highly likely that, by today's standards, they did not conduct a sufficiently robust environmental risk assessment to protect our \$5m investment in Botany Bay. The proposed environmental monitoring may also require revision, based on newly available scientific data on desalination plant monitoring, in order for it to adequately measure the full extent of the likely impacts of the project on environmental, human and fish health off Kurnell and subsequently the Botany Bay recreational fishing haven.

Dr Ben Diggles had agreed to review the relevant sections of the original EIS and cross reference this to the most recent (post 2006) peer reviewed scientific information on this topic to complete an up to date assessment of the potential impacts the Kurnell desalination plant is likely to have on environmental, human and aquatic animal health. One major area of concern that Dr Diggles was to investigate is the likely impacts on larvae, juveniles and adults of key threatened species that were identified in the original EIS as inhabiting or potentially inhabiting the area, including the eastern blue devil fish, seahorses and black cod. Also of concern was the lack of research by Sydney Water, both pre and post commissioning of the plant into the impacts to recreational fishing in Botany Bay. We also note that the original EIS did not disclose what anti-scalents and biocides they will be using in the reverse osmosis process. We also consider that the full extent of possible impacts associated with salinity and increased output of ferric materials in the effluent discharge have not been adequately assessed, with the original EIS not considering many impacts that have subsequently been demonstrated in the scientific literature (nematodes, increased frequency of algal blooms etc). We also note that the increasing prevalence of whales passing in very close proximity to the proposed outlet has not been considered. Whales are the final host of anisakid nematode parasites and the NPWS count for 2009 indicated that 1902 whales passed Kurnell in 2009, 1493 in 2008 and 1695 passed in 2007.

Finally, the original EIS indicated that elevated salinity would not occur in Botany Bay, Bate Bay or Cronulla Beach but it did not address any recreational fishing impacts in the area. Our greatest fear is that the desalination plant will cause significant loss of biodiversity and irreversible damage to the reef area off Kurnell and impact our recreational fishing haven and as recreational anglers we needed an independent scientific assessment of the likely impacts, using the most up to date peer reviewed scientific literature available, to better understand the potential impacts of the Kurnell desalination plant as it is presently designed, and to assess the adequacy of the proposed environmental monitoring programme. We also reviewed the latest monitoring project and its reference to the ANZECC Guidelines. The key phrase is probably this one (page 13 of 36), from ANZECC Guidelines,2000), *"The boundary of the mixing zone is usually defined in terms of the concentrations of indicator species in the effluent. Where these are statistically indistinguishable from ambient water concentrations the mixing zone is presumed to have ended".* 

All of their modelling appears to only consider salinity to define the end of the mixing zone for the effluent. Of course, we are interested in everything that comes out, including biocides and the metals, and in reality we are probably the least interested in the salinity change. Of course, the background levels for these discharges/toxicants in the adjacent ocean and reef are much lower than the background levels for the salinity. So by definition, based on the ANZECC Guidelines they use, the area over which concentrations of these other components of the effluent (especially the biocides, which they are glossing over at the moment) are statistically different from ambient water concentration is likely to be over a much larger area, affecting much more of the surrounding reef area than they are letting on.

We wanted to perform a desktop assessment relating to examination of existing plans, EIS and other relevant documents relating to the brine discharge, conduct literature review and develop a client report detailing potential issues that may pertain to human health, aquatic animal health and environmental health associated with the brine discharged from the Kurnell Desalination Plant, Sydney and its potential impacts to recreational fishing in the area, however we did not or could not access the necessary funding to employ Dr Diggles.

There have been several recent reviews detailing advances in science and state of the art with respect to desalination. However, the EIS and other documents related to the Kurnell plant were completed in 2006 and are therefore outdated. It is highly likely that, by today's standards, the proponents did not conduct a sufficiently robust environmental risk assessment. We wanted to re-evaluate the original EIS and the proposed discharge monitoring programme in light of the recent scientific advances in knowledge regarding impacts of desalination on the environment as well as aquatic animal health and human health. We had collated over 1000 pages of current research, correspondence and scientific opinions on the impacts of desalination over the last several years, and these needed to be professionally appraised and summarised so that the recreational fishing industry has an updated report on the impacts of desalination plants at its disposal. Such a report would have assisted us in evaluating the potential effects of not only the Kurnell Plant, but also other plants that will undoubtedly follow in the near future as human populations in Australia's coastal areas continue to increase in the face of static or even declining natural water availability.

Other documents related to the Kurnell plant should have been be re-evaluated in

light of this. Whilst we have over 1000 pages of current research, correspondence and scientific opinions on the impacts of desalination, it is not possible to reference or attach all of them. The rebuttals to our requests that Sydney Water has provided have been peer reviewed and have found to inadequately answer our questions. In fact on many occasions, many questions have never been answered. We want to develop and an independent review document outlining the potential impacts of the Kurnell desalination plant on the environment, aquatic animal health and human health in the immediate vicinity of the discharge pipe.

Unfortunately for the anglers of Botany Bay our concerns were steamrolled by the NSW Government and its agencies. The plant is now operational and we plan to show the impacts of desalination to the biodiversity in the area and the impacts to our recreational fishing areas adjacent to the outlet pipes. Video and digital images will provide us a very tangible, visible indicator of the destruction caused by the outlet, it is hoped that by continually monitoring the situation we will have an improved understanding of the likely impacts of the Kurnell desalination plant on the health of the environment, fish assemblages and humans in the region.

#### South Sydney AFA Recommendations;

✓ SSAFA be funded to employ Dr Ben Diggles to complete an independent desktop assessment relating to examination of existing plans, EIS and other relevant documents relating to the brine discharge. Conduct literature review and develop a client report detailing potential issues that may pertain to human health, aquatic animal health and environmental health associated with the brine discharged from the Kurnell Desalination Plant, Sydney and its potential impacts to recreational fishing in the area

✓ The funding for this review be set at \$25,000.00

✓ That provision is made by Sydney Water to fund 3 new offshore artificial reefs off Botany Bay to compensate recreational anglers for the loss of habitat caused by the Desalination Plant at Kurnell.

✓ The funding for the offshore reefs be set at \$750,000.000