

## **Studley/Offord Objection to Catherine Hill Bay Water Utility Pty Ltd - Network Operator Variation**

Currently Approved Licence 16\_035

[REDACTED]

**We object to the variation of the currently approved Licence 16\_035 by the operator Solo Water Pty Ltd on the grounds that they breach the following principles of the Water Industry Competition Act 2006 - Sect 7 (Licensing principles)**

### **1. 7: 1 (c) the ensuring of sustainability of water resources**

- 1.1. The original licence was granted on the basis of no discharge of any liquid to the environment outside the residential development area. Now the operator is seeking a variation which will allow them to discharge around 100,000 litres a day into the environment outside of the development area. The discharge will be in a different catchment area to the process plant, into a stream that ends up on the beach at Catherine Hill Bay. This creek is rarely open to the ocean which will lead to a build-up of effluent concentration.
- 1.2. In section 3.7 of the variation application, the applicant does not address the threat to the environment of the addition of higher than tolerable concentrations of nitrogen, phosphorus and other nutrients into the creek. As described in *Attachment A – Threat to the wetland from effluent nutrient levels*, the effluent is likely to have a seriously detrimental impact on the creek ecosystem, killing plant and wildlife species.
- 1.3. The applicant tries to justify the dumping of treated effluent into the creek by saying it “already receives unmanaged drainage directly from CHB village”. This is an unsubstantiated statement and is likely not to be true given that the houses in the heritage village are mainly either on pump out systems or Biocycle systems and undergo strict controls imposed by the Lake Macquarie City Council.
- 1.4. Despite this threat to the creek and beach, the applicant provides no Environmental Impact Statement for release of effluent to the creek. We believe IPART should assess whether the Applicant has purposely sought to avoid undertaking an EIS by obtaining their original licence on the basis that effluent be kept on the estate, then trying to obtain permission to release effluent into the ecosystem via this variation. In our opinion the only way to avoid an

environmental disaster is to connect the huge housing estate to the Swansea sewerage system.

**2. 7: 1 (a) the protection of public health, the environment, public safety and consumers generally**

2.1. In their application the operator appears to request approval for a downgrading of its processes for treating sewage, as follows: “Replacing existing approved RO Reject Evaporation Ponds with a constructed wetland” (Refer to the Catherine Hill Bay Progress Association Submission Section 2 for details). If true, we are concerned that water quality will be below levels approved within the original licence, and pose a risk to public health, particularly for children who frequently play in the lagoon which is rarely open to the sea.

2.2. Photograph – Children playing in the lagoon where sewage effluent is to be dumped (lagoon usually has less water than this and is rarely open to the ocean)



2.3. The applicant themselves noted the dangers threat to public health of releasing effluent into the creek ecosystem. For example, Section 4.3.2 of the Statement of Environmental Effects prepared by Planit Consulting (which accompanied the original licence application) cited “no discharges of surplus recycled water to waterways” as an advantage of the original proposal to process and keep effluent on site. It follows that that a variation to the licence which allows release of effluent must be harmful to the environment and to public health.

2.4. Appendix 4 of the Statement states that mosquito growth is likely due to the greater volume water. This means that there will be an increased risk of mosquito borne diseases, such as Ross River Fever and Dengue Fever. There is a further risk to public health and to the comfort of residents to the town.

### **3. Heritage impact**

3.1. Catherine Hill Bay is a State listed Heritage Township, one of only two such listed towns in NSW. It is a significant NSW tourism destination. We are very concerned that contamination of the environment could jeopardise this.

### **4. Conclusion**

4.1. On a personal note we are very concerned about this licence variation. Our house is within 60 metres of the creek. It appears that the developer of Beaches estate in partnership with Solo Water has undertaken a hugely profitable housing development adjacent to a pristine Heritage location with an original licence that did not allow dumping of sewage into the local environment. They appear to be going for the 'cheap option' rather than the better alternative in the long run of connecting to the Swansea sewage system. Releasing water into the local environment through a heritage township and onto one of Australia's most pristine beaches a hugely significant variation which poses a risk to public health and the environment.

4.2. We recommend IPART not approve the variation. We believe the only sustainable long term option is to connect the housing estate to the Swansea sewage system. The scale of the estate and the obvious risks mean a full Environmental Impact Statement is needed.

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7<sup>th</sup> May 2018

## **Attachment A – Threat to the wetland from effluent nutrient levels**

1. In section 3.7 of the variation application, the applicant does not address the threat to the environment of the addition of higher than tolerable concentrations of nitrogen, phosphorus and other nutrients into the creek. The effluent could have a seriously detrimental impact on the creek ecosystem.
2. The degrading effects of high nutrient levels on waterways and wetlands is well documented. High levels of Nitrogen and Phosphorus lead to Eutrophication. When “too much phosphate is present in the water the algae and weeds will grow rapidly, may choke the waterway, and use up large amounts of precious oxygen. The result may be the death of many fish and aquatic organisms” (Source: <https://www.water-research.net/index.php/phosphates> )
3. The levels of Nitrogen and Phosphorus in released from the sewage plant will be far in excess of the trigger levels which result in substantial degradation of aquatic systems.
4. For example, the Statement of Environmental Effects Sect. 3.3.5 Water Quality lodged with the original license application estimated average and maximum levels of Nitrogen in the sewage effluent of 10 mg/L and 20 mg/L respectively of Phosphorus and 0.3 mg/L and 2.0 mg/L respectively. These levels are more than ten times the trigger levels which are harmful to estuaries as outlined in Table 3.3.2 of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Nitrogen 0.30 mg/L and Phosphorus 0.03 mg/L).