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Submission: We are long term (20 years) owners of a cottage at Catherine Hill Bay. We strongly object to the proposed licence changes proposed by Solo Water for the new Beaches development. Attached is a submission made by another local - we have collaborated in the preparation of this submission and urge you to act to decline this application for the good of the local environment, the beach which serves a much wider area of residents, the township which is a heritage township, one of only 2 in NSW, the Beaches residents, who deserve to have their sewage disposed of properly, as well as the residents of NSW generally who do not deserve to be hoodwinked in this shocking manner. The developer seems to be employing common developer tricks of obtaining approval for a development and then applying for multiple amendments to their advantage. The original approved plan involved use of the Belmont of sewage works, this has already been amended to appoint a monopoly provider (Solo Water), to treat on site (but not impacting other adjacent areas). The current proposal would take us further again from the original plan, and involve polluting our wetlands. We note there is no proposal to release the fluids into Mooney Beach, a State Recreational Area, as presumably this would not be allowed.

Objection to Catherine Hill Bay-Network Operator Variation.

Currently Approved Licence 16_035

I object on the following grounds:

1. The applicant, Solo Water Pty Ltd does not give "sufficient information or demonstrate... the issues or impacts associated with these activities, and the processes required to address or manage these issues or impacts" (p1)

The current licence states that "All wastewater produced in the scheme is managed onsite within the footprint of the approved residential subdivision by a combination of non-potable reuse at individual lots and via controlled irrigation of public space" (see para.4.2.6, 4.3.6)

The public space that the operator is referring to is areas 6 & 7 of the residential subdivision owned by the developer Rose group.

Now that Rose group wishes to begin preparing this land for the sale of residential lots the spraying needs to go elsewhere. The operator knew that this issue would arise when the initial application was sought.

The original application showed no discharge of any liquid of any kind to the environment outside the residential development area. The licence was granted on this basis.

Now the operator is seeking a variation which will allow them to discharge more than 162,000 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 "wetland" and stream that ends up on the beach at Catherine Hill Bay. And yet the applicant states that," The additional flows due to SDRW release are unlikely to be significant under the proposed release management system."

The assertion that "the excess water will flow through a coastal lagoon which has been estimated to be open to the ocean some 73% of the time is totally untrue. I live here, I see it every day. The lagoon has not opened once this year.

Yet the operator ignores the request to provide a land capability assessment, with the answer N/A and denies that there is no Environmental Impact Study (EIS) needed for this variation request.

The application asserts "the proposed surplus recycled water release system will not result in significant impacts"

How can they possible say this when there has been no EIS. The original application did not address this issue as there was to be no discharge into the environment at all.



Above is a photo of the lagoon April 2018

Following is a description of how this treated effluent will be "managed".

Dry release will be to the beach lagoon at a rate at which inflow of the SDRW matches the beach lagoon outflow. Dry release is proposed to ensure that there is minimal disturbance of good quality aquatic environment during periods of naturally low or no flow. Dry release will occur when SDRW storage limits are approached and there is insufficient flow in the catchment to provide adequate SDRW dilution. The purpose of dry releases is to protect the more sensitive aquatic and riparian environments in the conservation area during periods of low flow. The dry release is direct to the lagoon.

What a distortion of reality, how cynical to claim this and yet refuse to have an Environmental Impact Study.

The applicant claims that the initial WICA licence application envisaged 3 stages; the third being the "inclusion of the existing villages of Catherine Hill Bay and Middle Camp." I could not find any reference to this in the original documents indeed we were informed by the developer that this would not be forthcoming. Is this proposed third stage now an attempt to cover up the fact that all of the treated effluent that is proposed to be discharged into the catchment of the heritage township of Catherine Hill Bay has been generated in the Beaches subdivision alone.

The application is also misleading. In para 4.2.4 states "All interconnections are as per existing licence 16_035". This is untrue as the existing licence is based on drawings showing no discharge into the environment (see process Flow diagrams H10052_PO4E and PO3E and P11A whereas the drawings attached to the revised applications show a discharge via a waterway and a wetland. Refer drawings 211688(13)-ESK-010 and 009.

Solo Water Pty Ltd does have a licence for a sewerage operation on the CHB Utility site however it does not have Approval for the release points under MP10_207 (Approval for Beaches Subdivision,) as claimed.

This Approval was based on connections with Swansea for water supply and sewerage. Once the developer Rose group achieved this Approval he entered into an agreement with Catherine Hill Bay Water Utilities Pty Ltd (Solo Water) to build an on- site sewerage system. This company achieved a WICA licence 16_035.

These release points for sewage were part of the initial plan to link to Swansea; they cannot just be transferred over to a different system just because it suits the applicant; the proposed release point and any associated works at the Lindsley Street culvert was never for release of treated effluent, but only stormwater.

- 2. The variation Application fails the first IPART licensing principle:
- the protection of public health, the environment, public safety and consumers generally (p2).

The current licence 16_035 uses a reverse osmosis system in the treatment of sewage.

This variation application proposes to downgrade this process such that there will be faecal matter released into the environment; an environment that is outside the approved development area.

162,000 litres a day is proposed to be discharged into a very small creek that becomes a lagoon on a pristine beach. Rarely does this lagoon break through into the sea. When the sea is too rough or dangerous children frequently play in this lagoon.

Even if the processing of the effluent were at the highest level of treatment known as reverse osmosis there are many unknowns as to the potential impacts that this amended proposal could bring to our ecosystems. These would include the gradual accumulation of pharmaceuticals, plastics, hormones, minerals and heavy metals within the creek systems.

But in this application the operator is also requesting approval for a **downgrading** of its processes for treating sewage:

"Replacing existing approved RO Reject Evaporation Ponds with a constructed wetland." (there will be a)," controlled release of wetland polished recycled water to the environment" Supporting Documentation Appendix 4.

There will be faecal matter discharged into a creek where it will have a great impact on the environment, public health and public safety.

Appendix 4 states that mosquito growth is likely. This means that there will be an increased risk of mosquito borne diseases, such as Ross River Fever and Dengue Fever, which is no longer a tropical disease. Yet p.38 of the Addendum to a Review of Environmental Impacts (REF) states "the location of SDRW release points in the association with stormwater flow paths is unlikely to compromise residential zone amenity. And I haven't even mentioned the odour!

They justify the dumping of 162,000 litres of treated effluent a day into "the lagoon (as it) already receives unmanaged drainage directly from CHB village, and the receiving waters were found to have likely adapted to the pollution loads"

The houses in the heritage village are either on pump out systems or Biocycle systems and undergo strict controls imposed by the Lake Macquarie City Council. There is no effluent getting into the creek system in the heritage township. LMCC make additional charges to rate payers in CHB for mandatory pump-outs and cartage off site of the effluent from **their** septic systems.

- 3. The Application for a variation of Licence 16_035 fails all principles of Ecologically Sustainable Development.
 - The precautionary principle. There is a threat of serious and irreversible environmental damage with the discharge of 162,00 litres a day of treated effluent onto a pristine beach.
 - Intergenerational equity. This beach is the only patrolled beach in the area. families come from Chain Valley Bay, Lake Munmorah, Gwandalan, Summerland Point, Nords Wharf, Murrays Beach, Catherine Hill Bay and more. Are these families to play and swim in water that has been polluted by treated effluent.
 - The proposed effluent discharge will degrade rather than provide for enhancement of the aquatic environment.
 - Conservation of biological diversity and ecological integrity will not be enhanced by this self- serving scheme.

4 Heritage Impact

Catherine Hill Bay is a State listed Heritage Township, one of only two such listed towns in NSW. I find it incomprehensible that any one would wish to dump treated effluent into the lagoon on the beach where this still body of water would in all likelihood become septic.

Catherine Hill Bay is a NSW Destination at local, regional, state and interstate level.

There would be a terrible outcome for this heritage township if this variation were to be allowed.

Conclusion

There should be no discharge into the environment at all. All treated effluent that cannot be reused on the residential site should be trucked to Swansea/Belmont where it can be discharged into the deep-sea outlets or the owners of the sewerage plant could build a pipeline that discharges their excess effluent into an existing wastewater system connected to an ocean outfall discharge system.

The Applicant states that "Changes are proposed to the CHB Utility STP to improve the sustainability of operations and allow completion of the approved Beaches subdivision" (. p56 REF). That is their sole stated purpose, ignoring that the proposed variation would appear to be a cost-cutting downgrading of the current approved and self-contained sewerage system.

Such is the potential impact on the environment if this proposal were to proceed, that a robust Environmental Impact Study should be mandatory.

All earthworks preparing the ground for sale of individual lots to the public, currently taking place in the spray area of areas 6 &7 of the residential development, should cease until Solo Water Pty Ltd develops an acceptable solution other than the cheap and nasty discharge into the environment proposed in this variation application.

The treated effluent generated by the new residential development should **never** be discharged into a totally different catchment area that is part of a State Heritage listed township, none of whose houses are connected to the water and sewerage system built and operated by Catherine Hill Bay Water Utilities Pty Ltd (Solo Water).

This variation application is deeply flawed and should not be granted.