August 30, 2023

Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop
NSW 1240

Dear Sir/Madam,

Re: Sydney Water Operating Licence, the Priority Sewerage Program (PSP) and Scotland Island

We wish to respond to the request for comment in the 2023 IPART review of the **Sydney Water Operating Licence** in relation to:

22. What are your views on retaining the current operating licence conditions requiring Sydney Water to cooperate in and implement any outcomes from a review of the Priority Sewerage Program?

The view of Scotland Island residents is that the existing obligations should be maintained, and a time frame adopted to implement the findings of the feasibility study (described below) into the supply of water and wastewater services to Scotland Island.

Background: Scotland Island is a well-established suburb, having been subdivided in 1924. There are now 358 dwellings (2021 census) with a growing number of residents working from home, placing additional pressure on existing septic systems. Over the past 35 years Scotland Island has transformed into a fully populated, albeit highly vegetated, suburb of Sydney. In recognition of this and with both government and community contributions, off-site parking has been improved, wharves have been upgraded to accommodate the growing population, and roads and drainage on the island is gradually being upgraded.

As with any suburb of Sydney, Scotland Island requires water and sewerage infrastructure that is standard to most Sydney suburbs and safeguards the health and safety of the population. Scotland Island's steep slopes, small blocks (many less than 10 metres wide) and clay soils are not well suited for on-site sewerage disposal and many properties are facing difficulties with their system. Contaminated pools of water on the roads and in the public parks are trip and health hazards.

Environmental Effects: Scotland Island is an area that has highly valued spotted gums which is negatively impacted by the nutrient rich ground water containing effluent flowing from the many onsite septic and aerobic systems. Particularly during rainstorms this nutrient rich effluent flows into the surrounding Pittwater and continues to significantly contribute to in an invasion of Caulerpa Taxifolia (a non-native sea grass) destroying fish habitat because of its production of toxic substances.

Die back of eucalypts and weed infestation has been evident and documented since the 1990's *(Scotland Island Wastewater Impact Study 1997).*

Previous Commitments and Promises: This issue has a long history with the local community, having being led to believe over many years that the installation of a sewerage system was promised and imminent. For example in January 2011, just prior to becoming the Premier of NSW Barry O'Farrell wrote (link): *"The NSW Liberals and Nationals will fast-track the connection of sewerage … clearing most of the Keneally Labor Government's Priority Sewerage Program backlog,… We will also ensure remaining areas*

*such as Austral, West Hoxton, Menangle, Menangle Park, Nattai and **Scotland Island** are connected to the sewer as a matter of priority..."*

In December 2012, the NSW Government's Northern Beaches Regional Action Plan (link) made a clear commitment to *"Better manage waste water and improve ocean water quality including upgrades to waste water and sewerage treatment facilities for **Scotland Island**",* (page 13). And also *"The provision of wastewater services to **Scotland Island** is a matter of priority …"* (page 14).

Feasibility Study: Consistent with the above commitments, Northern Beaches Council received State Government funding through the Stronger Communities Fund to conduct an independent investigation into the commercial feasibility of water and wastewater services to Scotland Island.

The feasibility study was conducted in 2019 with report available in mid 2020. Scotland Island Water and Wastewater Feasibility Study | Your Say Northern Beaches (nsw.gov.au)

The findings included:

"Scotland Island is steep-sided bedrock with shallow soils of sandy loam (highly permeable) with sandy clay loam sub-soils (highly impermeable). Both layers are highly acidic and encourage nutrients and contaminants to leach away from wastewater disposal areas. Previous mapping has indicated that up to 44 percent of the island is unsuitable for existing wastewater disposal systems due primarily to geological constraints" (Part 1 Page 10)

"It is possible that Scotland Island contributes in excess of 14 tonnes per hectare per year of suspended sediment to Pittwater, much of which is likely to be contaminated from exposure to on-site wastewater disposal.

Native vegetation responds poorly to elevated nutrient supplies and some dieback in Eucalypt species has been observed. When considering soils, drainage lines, slope, proximity to waterways etc, approximately 44 percent of the island is unsuitable or marginal for on-site wastewater disposal. (Part 1 P11)"

"A site visit was conducted during the preparation of this report (see Appendix C for photographs). Extensive and widespread weed growth was observed during the site visit. A failing wastewater system represents a concentrated source of not only faecal matter and bacteria but also nutrients. High nutrient loads are a likely contributing factor to the widespread weed issue and degradation of native vegetation through nutrient overload and weed propagation.) (Part 1 P21)

As part of the feasibility study, "an audit of existing systems was undertaken on the 21st February 2019.

Relevant site observations included:

- Wet soil patches in roadways below site disposal septic systems
- Prevalent odour during most times of the day
- Most areas plagued by mosquitos
- Water supply pipeline tied to trees, exposed on ground. Non-compliant installation
- No provision of compliant backflow protection to fill points. In places hoses are connected to the supply pipe outlet with outlet submerged in rainwater tanks with no backflow prevention.

Despite the inspection being conducted during a dry period a number of waterlogged areas downstream of septic systems were identified. Indicative photos follow.

Soil sampling identified elevated levels of Faecal coliform and Total Nitrogen at various sites around the island.

With regards to faecal coliform levels, it should be noted that the National Water Quality Management Strategy Guidelines for Sewerage Systems – Use of Reclaimed Water (November 2000) guideline levels recommend a guideline value of less than 10 coliforms per 100mL in reclaimed water used in high contact circumstances (ie urban gardens). Soil testing for faecal coliform levels in excess of 1,500 coliforms per gram of soil in five of the six sites tested." (Part 1 P26)

Following the assessment of several options, the study recommended that the preferred option is a networked water supply with a pressure sewerage system that discharges to Sydney Water sewerage infrastructure located at Church Point.

The study listed the key benefits of providing Scotland Island with a networked water supply and wastewater collection system as:

- addressing a long-standing community need for the services, which have been provided to similar communities in the past, and at a cost that is comparable to similar schemes
- improving the quality of water and wastewater service for island residents
- significantly improving the local environment, both on and off the island
- reducing public health risks
- upgrading currently non-compliant system.

Health Effects: The Martens and Associates study, *Australian On-site Waste Water Strategies: A case study of Scotland Island* conducted in 1996-97, reported that storm water run-off on the Island is contaminated with both nutrients and bacteria, indicating severe sewage run-off pollution. Bacterial levels are extremely high, significantly exceeding ANZECC guidelines for surface water and in the salt water estuaries:

- **Faecal Coliform levels** were measured at levels between 96,850 to 58,475 Colony Forming Units per 100 mL. The recommended ANZECC safety level being a maximum of 150 Units per 100 mL. That is **up to 645 times above the recommended safety level**.
- Even more concerning was that **Enterococci levels** (that can lead to urinary tract infections, bacteraemia, endocarditis, diverticulitis, and meningitis) were measured at levels between 91,207 to 51,869 organisms per 100 mL. The recommended safe level being a maximum of 35 Organisms per 100 mL. That is, up to **2,600 times above the ANZECC safety level**.

Development and Connection Costs: The Scotland Island Community is prepared to contribute to this project to the same extent as all other previous recipients of the Priority Sewerage Program. Specifically, to the cost of any necessary upgrade to domestic plumbing systems, the connection from the house to the mains system and the removal of redundant domestic septic systems. The community is neither prepared nor able to contribute to the capital cost of this project. We have no view as to whether this project should be funded directly by Sydney Water or by the NSW Government.

Sydney Water Responsibility: The vision of Sydney Water, as part of the Greater Sydney Water Strategy, articulated in their 2022 Annual Report is *"creating a better life with world class water services".* Two of their key research and innovation priorities are *"reliable and resilient water supply" and "healthy waterways and environment".* Through their Urban Plunge™ strategy, Sydney Water aims to "*to fast-track the delivery of more swimming and water recreation opportunities across Greater Sydney", "a clean safe place to swim…. to swim and play and provide access to recreational waterways for people across Greater Sydney".*

Sydney Water's plan, according to their annual report, is to deliver water security for the next 20 to 40 years. The residents of Scotland Island would like to receive world class water services and be part of their plans for water security for our homes and for the Pittwater environment.

Our strong view is that roads, parks and residences on Scotland Island and the waterway around the island should not be subject to sewerage runoff. Until the State government identifies an alternate delivery model and funding, Scotland Island should remain on the Priority Sewerage Program.

We again thank IPART for an opportunity to provide our submission and we hope that the outcome will be a positive step in the resolution of this long-standing issue.

Yours truly,

[redacted]

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