

Plans to stop raw sewage being pumped into the sea off Cape Town

By [Steve Kretzmann](#)

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The City of Cape Town is considering treating up to 39-million litres of essentially raw sewage pumped out to sea daily via three marine outfalls, the first of which was built 122 years ago.



Up to 30-million litres of essentially raw sewage are pumped out to sea every day via a 1.7km pipe off the Green Point promenade. Photo: Steve Kretzmann/GroundUp

The release of sewage into a Marine Protected Area, as is the case with the Camps Bay and Hout Bay outfalls, has been a subject of controversy since photos of the sewage reaching the surface were [published in 2016](#).

The city's permits to discharge sewage at the outfalls at Green Point (which was built 122 years ago), Camps Bay and Hout Bay were renewed on 11 January by the Department of Forestry Fisheries and the Environment (DFFE), acting mayoral committee member for water and sanitation Siseko Mbandezi said. The Green Point and Camps Bay permits are valid for five years and the Hout Bay permit for 10 years.

But, Mbandezi said, at the same time the city was "assessing the feasibility of measures to further mitigate the environmental impact of the three coastal outfalls, including additional higher level pre-treatment on land prior to discharge".

Under the previous water and sanitation administration, questions from GroundUp as to whether the city was considering treating the sewage before pumping it out to sea, the answer was always: “no”.

However, the city continues to defend the existence of the marine sewage outfalls, citing studies by the Council for Scientific and Industrial Research (CSIR) which they commissioned in 2016. In a [report of September 2022](#) on the findings of CSIR studies since then, the city’s Coastal Management Branch states the “extensive data collected and analysed ... shows surprisingly low environmental impact”.

In fact, the report says, the marine sewage outfalls are less damaging than some of the land-based waste water treatment works.

“The land-based systems are contaminating and polluting multiple environmental systems (land, groundwater, river, estuary and the ocean) and often exceed the carrying/assimilative capacity of these much smaller systems... resulting in their ecological deterioration,” the report says. After seven years of data collection, the city had not found equivalent damage at any of the marine outfalls compared to some of the land-based environments where water treatment works discharge into small systems, “notably the [Diep River](#), [Black River](#) and [Eerste River](#)”.

Appeals against the permits

ActionSA and the National Sea Rescue Institute (NSRI) are appealing against the granting of discharge permits for the marine sewage outfalls, through which sewage and wastewater from industry and hospitals is pumped through a 20mm and 3mm sieve, without further treatment.

On 13 February, ActionSA provincial chairperson Michelle Wasserman paddled 1.7km out to sea to the end of the Green Point outfall pipe to photograph a slick of faeces that had risen 28m from the underwater outfall to float on the surface. The weather was mild with a [light south-south-west wind](#) in the morning.

Wasserman [posted photographs](#) and said she saw “islands of floating sewage, as well as sanitary pads, tampons and condoms”. She said it appeared that even the sieving of solid objects was ineffective. She said ActionSA disagreed with the department’s description of the effluent as “preliminary treated sewage” rather than raw sewage. “This term is purely designed to mislead the public,” she said.

“Any permit granted by the Department of Forestry, Fisheries and the Environment must ensure that, within the shortest possible time, the City of Cape Town establishes the infrastructure necessary to process the sewage so that all harmful elements, including chemicals, toxins and hormones, are removed before the remaining water is discharged into the sea.”



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Oversight visit

Two days after Wasserman’s paddle to the end of the Green Point outfall, deputy chair of the Water Quality in Wetlands and Waterways Advisory Committee Alex Lansdowne took a boat there.

Lansdowne released [a video](#) of his “oversight visit” on Twitter, showing the water was clean with no visible sewage or solids on the surface. In a statement, he said the coastline was “visibly healthy and ecologically functional”.

But, as noted in some [social media comments](#) on Lansdowne’s post, the sewage is dispersed in certain swell and wind conditions, such as rougher seas and south or southeast winds as on the day Lansdowne inspected the area, whereas many ocean users have reported it forming a slick on the surface on calmer days.

Lansdowne said in his statement the CSIR’s independent findings were that “there is no immediate ecological disaster or major risks to human health forthcoming as a result of the effluent discharged”.

However, he said, echoing Mbandezi: “Following the above-mentioned marine impact study, the City of Cape Town has commissioned a feasibility study into technologies and treatments to further improve the quality of discharge.” This was expected to be completed around the middle of 2023.

Pharmaceutical compounds

NSRI chief executive Cleeve Robertson said the institute was appealing against the granting of the permits “from a health and a conservation point of view”.

“I have to put rescue personnel into the water all the time,” he said.

Robertson said whenever the Hout Bay crew launched their boat, they travelled over the end of the Hout Bay outfall pipe.

“The sewage slick just drifts on top of the water, and it is known Hout Bay beach is one of the most polluted in the city.”

He said the city was neglecting to mention the industrial chemicals and pharmaceuticals released through sewage outfalls, although studies have shown these are accumulating in the marine environment and up the food chain.

“It’s a disaster,” he said.

The studies he referred to are those by Senior Professor Leslie Petrik at the University of the Western Cape’s Chemistry Department, and Cecilia Y. Ojemaye who found that fish caught by small-scale commercial fishers in Kalk Bay are contaminated by [antibiotics, pain killers, antiretrovirals, disinfectants, and industrial chemicals](#).

Studies by the CSIR on the behalf of the City of Cape Town have also found 37 pharmaceutical compounds off Cape Town’s coast during winter, and 45 in summer after analysing samples from 28 coastal sites during summer and winter. (This report can be found on the City of Cape Town website [here](#), under ‘Reports’.)

The pharmaceutical compounds found most often were acetaminophen (paracetamol); ofloxacin (an antibiotic used to treat bacterial infections); valsartan (used to treat high blood pressure, heart failure, and diabetic kidney disease); sulfamethoxazole (an antibiotic used to treat bacterial infections); codeine (an analgesic and anti-inflammatory drug); and bezafibrate (used to lower cholesterol levels in the blood).

The CSIR study notes that these are released into the environment from sewage as the drugs are not fully metabolised in the body before being excreted in faeces or urine.

The results tie in with a [2017 study](#) on pharmaceutical compounds and household chemicals in seawater near the Green Point sewage outfall conducted by Petrik, Lesley Green, Adeola P. Abegunde, Melissa Zackon, Cecilia Y. Sanusi, and Jo Barnes.

In its own report on the CSIR’s findings, the city says that even if the sewage was treated before being piped into the ocean, these “forever chemicals” would flow into the sea anyway. Current technology in waste water treatment plants does

not remove these chemical compounds, the city says.

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