Callan Park Recreational Area: Human Health Risk Assessment

In 2022, a Human Health Risk Assessment (HHRA) for Callan Park was undertaken by Environmental Risk Sciences Pty Ltd (enRiskS) on behalf of Inner West Council. The objective was to assess potential risks posed by chemical pollution that may be present in the water and sediments at the proposed Callan Park recreational area, one of several foreshore areas on the Parramatta River proposed as a swim site in the Parramatta River Master Plan, *Duba, Budu, Barra. Ten Steps to a Living River* (2018).

Why was the risk assessment conducted?

The proposed recreational area is located along Iron Cove/Parramatta River. The Parramatta River has a long history of industrial activities that have resulted in a legacy of industrial development and contamination, particularly in sediments. In addition, the discharge of urban stormwater has the potential to affect water quality in this area. These are the main sources of pollution that have been considered in the risk assessment.

What is risk assessment?

The enRiskS human health risk assessment was conducted according to the guidance provided by Australian health authorities. For Callan Park, the human health risk assessment involved understanding what chemicals are present in the recreational area, if the public can be exposed to these chemicals and how that exposure can occur, and then assessing if the concentrations are high enough to be of concern.

What did the risk assessment find for the Callan Park recreational area?

The design of the recreational area means that the public could be exposed to chemicals in water when swimming and/or boating as well as other play/splashing activities. The chemicals would be present dissolved in the water as well attached to suspended sediment. These chemicals (dissolved and as sediment particles floating in the water) are measured when the surface water is sampled and analysed. This was done for water in the recreational area, with the water samples analysed for a large range of pollutants that could be present (as below).

The sediment at the bottom of the recreational area is always covered with water and any sediment that gets on the skin would be rapidly washed off. This means that there would not be any direct exposure with the sediments and data on what chemicals are in the sediments at the bottom of the recreational area is not relevant to assessing risk.

The concentrations of pollutants in water are all below government guidelines for recreational water (green in table) – i.e. guidelines used for all recreational use of water in Australia and protective of exposures by all members of the public conducting swimming, boating, splashing and other play activities in water. This means there were no risk issues of concern in relation to pollutants in the proposed recreational area.

Pollutants detected	**Metals**	**Dioxins and furans**	**Pesticides**	**Pharmaceuticals**	**PFAS**
Meets recreational guidelines	Yes	Yes	Yes	Yes	Yes

23 July 2024