

ZOOS VICTORIA

# Hippo Habitat at Werribee Open Range Zoo

Victoria, Australia



*Rather than polluting the coastal waters, this eco-friendly resort treats, stores and reuses wastewater to irrigate and enhance the local landscape.*

Zoos Victoria is committed to reducing water consumption while maintaining diverse environments for the animals at its three zoos and providing visitors with immersive experiences. Spanning over three hectares, the Kubu River Hippos Experience in the Werribee Open Range Zoo features eight adult hippos in three separate pools that are connected hydraulically.

Biohabitats designed a system to treat the exhibit's 2,000-cubic-meter pools and the organic waste from the hippos. Recognizing that hippos play a major role in the East African river ecology by providing nutrients for algae eating fish, Biohabitats considered a design which incorporated an Australian Ecosystem. Working with a local Australian design team

and U.S. partners Studio Hanson Roberts, we developed a marsh concept using a 6,000-square-meter wetland which provides treatment and habitat while enhancing the zoo exhibit. Because the treatment is passive, significant capital and energy savings were immediately realized, resulting in more money for animal care and the exhibit.

Using low head, high flow pumps water is circulated one time a day through the 6000 m<sup>2</sup> wetlands where suspended solids and nutrients are removed. The nutrients and suspended solids provide food for native micro and macro invertebrates and fish that feed on these organisms. The fish, in turn, become food for birds. A portion of the treated effluent water is used for irrigation. Make up water is provided from the Werribee River.

*conservation planning*  
*ecological restoration*  
***regenerative design***



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