

## Ground Breaks for World First Wastewater Bioremediation Treatment Facility in the Burdekin

*Renowned climate change activist and 2007 Australian of the Year, Professor Tim Flannery, joined civic leaders and dignitaries in Ayr, North Queensland, yesterday to do a site handover to Pacific Bio.*

Renowned climate change activist and 2007 Australian of the Year, Professor Tim Flannery, joined civic leaders and dignitaries in Ayr, North Queensland, yesterday to do a site handover to Pacific Bio who will start construction of the world's first municipal wastewater bioremediation treatment facility known as RegenAqua. The technology is an innovative water treatment solution that uses endemic seaweeds and river grasses to strip wastewater of environmentally harmful pollutants like nutrients and carbon dioxide before they enter the ecosystem.

Developed by Pacific Biotechnologies Australia (Pacific Bio) in collaboration with James Cook University (JCU), RegenAqua will play a major role in helping Queensland achieve reductions in nutrient pollution outflow providing protection for the Great Barrier Reef. The Burdekin RegenAqua facility is due for completion in March 2024, and will initially include 12 initial tertiary treatment ponds, with the potential to expand to 16 ponds to accommodate future growth needs.

Funding support from the State Government under the Building Our Regions (BOR) Program and Burdekin Shire Council helped fund initial earthworks for the facility pad. In August 2023, Burdekin Shire Council and Pacific Bio entered into a 13-year agreement to build and operate the facility. Pacific Bio's CEO Sam Bastounas praised the Council for their vision to adopt a tertiary water treatment solution to further reduce nutrient outflow and protect the Great Barrier Reef demonstrating their conviction to be a leading Reef Safe Council.

"Pacific Bio has been focussed on developing a solution for removing toxic nutrients and carbon dioxide from urban wastewater for a number of years," said Mr Bastounas.

"We have achieved a significant global breakthrough with RegenAqua that is carbon neutral, low cost and readily deployable.

"RegenAqua uses river grasses in an engineered solution to clean water and these grasses can then be converted into highly effective biostimulants for farmers, known as PlantJuice, and into drop in liquid biofuels like Sustainable Aviation Fuel and Bioethanol.

"Burdekin is the first council to recognise the importance of this breakthrough technology and has committed to the world's first commercial facility. We hope it will be the catalyst for other utilities and councils to adopt nature-based solutions like RegenAqua."

Prof. Flannery is currently driving the search for leadership on climate change in his soon to be released documentary Climate Changers. He said his partnership with RegenAqua will enable him to demonstrate how important it is that communities embrace bold, scalable solutions that can affect change, and this comes through conviction and leadership. Prof. Flannery is a passionate advocate for improved water quality on the reef and sees that RegenAqua can provide better sanitation and water quality outcomes across many Pacific Island nations who are in dire need to effective wastewater solutions.

"I've had a long association with Pacific Bio, and they really are climate leaders, taking risks to develop technology that is going to be globally significant," Prof. Flannery said.

"I've seen the innovation and determination that's gone into the development of RegenAqua, and it is now well placed to start making a difference in treating wastewater in an environmentally sustainable way.

"A significant amount of nutrients that are damaging the Great Barrier Reef are coming from poor sewerage plants in regional Queensland and agricultural runoff.

"If we can implement this technology in the highest volume sewerage treatment plants along the Queensland coast, this will remove tonnes of nitrogen and phosphorous currently discharged into the Great Barrier Reef catchment."

Burdekin Shire Council Mayor Lyn McLaughlin said she was delighted to see the legacy project come to fruition, and that in addition showcasing Council's innovation and environmental responsibility, it would provide long-term economic and growth opportunities for the shire.

"I have firmly believed in the process that uses algae to remove nutrients from the water and I have followed the development through trials being conducted in various areas," she said.

"With the partnership between JCU and Pacific Bio, I have confidence that the RegenAqua was developed with all stakeholders involved working locally and across North Queensland.

"For Burdekin Shire Council, there are many other positive outcomes including extending the life of our wastewater treatment plant which allows Council to postpone a significant capital upgrade of the present wastewater facility.

"The increased capacity of the wastewater treatment plant will unlock future residential and industrial development in the Shire, as the facility can process more residential and commercial waste."