

Runway kept in top shape

THE RAROTONGA International Airport runway is being kept in top working order thanks to some maintenance being conducted this week using innovative technology.

Since cracks first appeared in 2011, a dedicated team has been working to keep the planes landing flawlessly.

After applying a standard repair job and noticing the cracks kept returning, Airport Authority chief executive Joe Ngamata brought in an engineer from New Zealand-based engineering firm, Aecom, who said the problem needed a more effective solution.

The engineer recommended using a fancy yellow machine

called a heavy weight deflectometer (HWD).

An HWD is a device towed by a vehicle along the runway. Attached to the HWD is a heavy weight that is dropped on a selected slab of concrete. A series of sensors connected to a laptop computer then measure and record the way the surrounding pavement deforms or reacts to the heavy load being dropped. The greater the deformation, the greater need for maintenance.

After locating the areas susceptible to cracking, a line of 13-inch deep holes are then drilled adjacent to the suspect area, and an epoxy or glue is pumped into each hole.

The glue then hardens and a beam is formed underground, making the area more structurally sound.

"We can now find vulnerable areas before they crack," said Ngamata.

Dedicated local airport authority staff are joined by Janeck Czastka, a civil engineer with Aecom, and Paul Job, a data technician with Australian-based Pavement Management Services, to administer the repairs.

Preventative work is scheduled to continue for an additional four weeks.

Built 39 years ago, the concrete runway is 13 inches thick and measures 2328 metres long

and 45 metres wide.

An internal team and an external contractor perform a thorough examination of the runway twice a year.

Ngamata said while concrete is an ideal material to build a

runway, it still has its faults.

"Concrete is stronger than asphalt," said Ngamata. "But it's not as forgiving as other pavements."

The typical airport runway will usually start seeing cracks

after about 20 years, he said. But with Rarotonga's runway nearing 40 years in age, the chief executive was proud to say it has withstood the test of time.

"We've done well," he said.

■ Emmanuel Samoglou



From left to right: data technician Paul Job, civil engineer Janeck Czastka, and Airport Authority chief executive Joe Ngamata, pose with a heavy weight deflectometer, which is being used for runway maintenance. 1305720



Airport Authority chief executive Joe Ngamata points to areas on the Rarotonga International Airport runway that have been selected for pre-emptive maintenance.

Short hopes to follow father's vision

TUPE Taku Short, 72, remembers when the government introduced aquaponics to the Cook Islands in the '60s.

His father Sir Apenera Short, who passed away at age 96 in 2011, was once a government minister. Tupe Short said one of his father's projects in 1965 was starting aquaponics and hydroponics in the Cooks.

While hydroponics was a success – producing produce such as tomatoes and lettuce – the fish farming failed to get off the ground, said Short.

"In those days, fish farming didn't go ahead because of the workers. The local men working for marine kept pinching the fish," he said.

Short said his father's vision

was to grow the fish – such as mullet – in the aquaponics system that was close to Avana Harbour, and release them into Muri lagoon for the locals to enjoy.

"It wasn't commercial like it is today," said Short, who attended the recent three-day training workshop for tilapia fish farming at Te Kaurau Kain-gavai in Titikaveka.

He currently grows vanilla, bananas and cassava, and plans to develop his own fish farm following the workshop.

"I'm willing to go into aquaponics. It's going to be a good business for the future," he said.

"It's the way for us to go I think – the whole world is after our fish in our waters. The stock will start reducing, and the cost

of fish will increase. If I have my own fish farm, I don't have to worry about the stock reducing or the cost increasing."

Short said fish farming makes a good hobby for retired people. "It will keep my fitness up and is something to look forward to each day."

Sir Apenera was 49 when he entered the Cook Islands Legislative Assembly as a minister. He actively supported agriculture, and was instrumental in the establishment of commercial banana plantations on Aitutaki and pineapple plantations on Atiu, Mauke and Mangaia. He was knighted in the 1990s and served three terms as the Queens Representative (1990-2001).

■ Briar Douglas



Tupe Short is interested in starting his own fish farm after a three-day training workshop at the aquaponics facility in Titikaveka this week.

20% OFF TOOLS SALE

VONNIA'S BIRTHDAY



Warehouse, West & Aitutaki