

Performance Based Navigation Progress

As PBN procedures continue to roll out in New Zealand airspace, new guidance is available for GA pilots with instrument ratings on how to get approved to fly RNP1.

The mid-North Island aerodromes of Tauranga, Rotorua, Hamilton, Ohakea, Whanganui and Palmerston North are the latest to offer their customers Performance Based Navigation.

And as the number of PBN-equipped airports in New Zealand increases, revised Advisory Circulars are available on the CAA web site, to help General Aviation IFR pilots get approval.

Steve Kelly, Navigation Systems and Project Specialist with the New Southern Sky programme, says for everyone to take advantage of the system efficiencies offered by PBN, between 70 and 80 per cent of the IFR-equipped traffic at those aerodromes will need an approval.

"Anything less and we're going to have 'mixed mode', with some people flying to the VOR and others flying the RNAV," says Steve.

Airways' PBN Implementation Programme Manager, Phil Rakena, says 'mixed mode' operations will be accommodated, but it will make air traffic management significantly more complex.

"Non-PBN procedures will be kept at many places, allowing for contingency, onboard equipment failure, and non-PBN traffic.

"But the sooner aircraft operators become PBN-capable, the sooner they, and the wider aviation community, will experience its full benefits."

Phil Rakena says those benefits include improved air traffic flow management – including safer management of higher traffic densities – fewer holding delays and diversions, and environmental benefits associated with fewer track miles and better fuel efficiency.

"The most important of those benefits may be to safety. PBN has enabled one-way circular flow flightpaths between cities – rather than the head-to-head two-way routes of the past.

"ICAO data indicates that a straight-in approach is 25 times safer than a circling approach. An approach with vertical guidance is eight times safer than a lateral-only approach."

The CAA has approved Massey's School of Aviation to carry out Required Navigation Performance (RNP1) operations on its 12 Diamond DA40 single-engine trainers.

A well-attended New Southern Sky national roadshow in September was held in 12 locations from Auckland to Invercargill.

"It was the first opportunity that pilots and Airways staff have had to ask questions about PBN, and its benefits to General Aviation," says Steve Kelly.

"We had bumper turnouts everywhere: about a fifth up on what we had anticipated. So clearly the interest is there.

"It was a great opportunity to talk to pilots about RNP1 because the existing Advisory Circular gave them 'grandfather rights' to do RNAV1, RNAV2 and RNP Approach, but they have been excluded from RNP1."

David Harrison, CAA's Training Standards Development Officer, says Advisory Circular AC91-21 has been updated, improved and simplified to help GA IFR pilots and their aircraft get approval to fly RNP1.

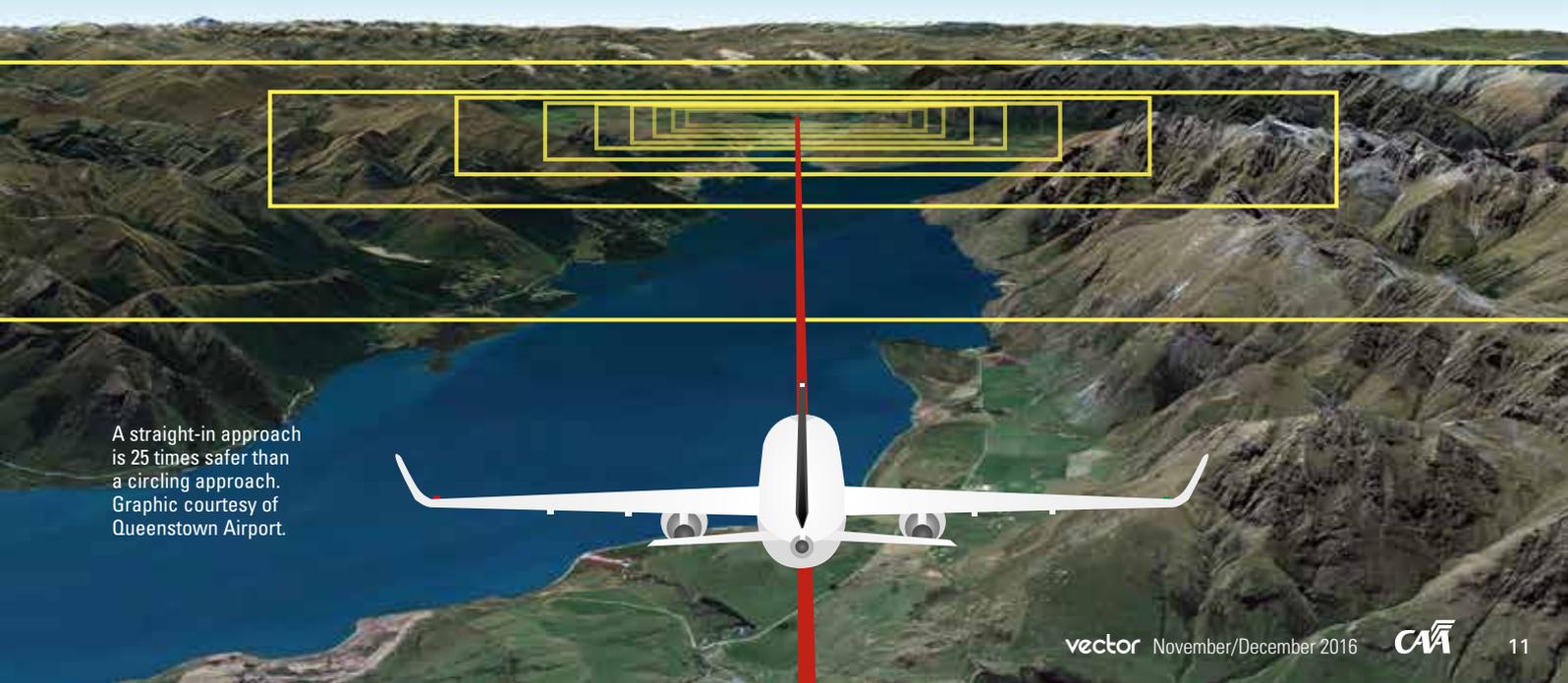
"It's accompanied by a revised AC61-17. Together, these provide guidance to a Part 91 operator on how to certify their aircraft for RNP1, and it also allows pilots to add RNP1 to their instrument rating.

"The new AC effectively says if you're a pilot who holds a current GNSS rating, then we'll let you do RNP1. Of course, that is as long as your aircraft is also certified to do RNP1.

"But during your next competency demonstration, you'll fly an RNP1 procedure to maintain the privilege.

"We decided that the risks associated with that move were acceptably low and that's led to this practical approach."

To help you, all the information has been put together, see www.caa.govt.nz, "Aviation Info > Pilots". ■



A straight-in approach is 25 times safer than a circling approach. Graphic courtesy of Queenstown Airport.