

## Questions and Answers

### 1. Why is the flight path trial required?

The New Zealand Government, through the Civil Aviation Authority, is implementing a new global standard for aviation navigation systems across New Zealand airports.

Performance Based Navigation (PBN) moves New Zealand away from the current ground-based navigation aids and procedures, to a more accurate satellite-based system and the performance and capabilities of equipment on board the aircraft.

PBN flight paths are part of a worldwide drive by regulators and the aviation industry to improve flight paths and support the aviation industry in managing the growth in travel, trade and tourism in an environmentally friendly and socially responsible manner.

This purpose of the trial is to determine how PBN will be implemented at Christchurch Airport. The trial outcomes will help identify future flight paths.

### 2. When will the Christchurch trial begin?

The trial will begin on Thursday 9 November and run for 12 months.

### 3. Will every flight be using the trial flights paths?

No. The PBN trials will only apply to scheduled passenger aircraft arrivals and will be trialled by approximately a quarter of flights arriving into Christchurch. Airways' figures reveal the most aircraft using PBN approaches into Christchurch in one day is likely to be 28.

### 4. What is PBN?

Performance Based Navigation (PBN) is a term used to describe the broad range of technologies that are moving aviation away from a ground-based navigation system toward a system that relies more on the performance and capabilities of equipment on board the aircraft utilising Global Positioning Systems and Global Navigation Satellite Systems.

The new PBN system is much more accurate and allows for shorter, more direct routes, as well as more efficient take-offs and landings. This reduces airport and airspace congestion, which helps manage noise, fuel burn and aircraft emissions.

## **5. Are other areas of New Zealand implementing PBN?**

Airways New Zealand, Board of Airline Representatives New Zealand (BARNZ) and the Civil Aviation Authority (CAA) and are working with airports around the country to introduce PBN flight paths in a programme called New Southern Sky.

Other countries such as the US, Canada and those in the European Union are also implementing PBN and are providing valuable lessons on aviation system modernisation best practice to our own New Southern Sky programme.

## **6. What are the expected benefits of PBN?**

The new technology allows for shorter, more direct flight paths, which lowers fuel burn and exhaust emissions, which will benefit the air quality in areas local to the airports. There will also be a significant improvement in air traffic management meaning more efficient arrivals and departures to avoid 'stacking' aircrafts in a holding pattern. More efficient take-off and landing should also reduce noise levels.

## **7. How exactly does PBN help to reduce noise levels?**

The current approach procedure for landing (called Vectored Step Down Approach) requires intermittent thrusts to keep the aircraft level in flight before the next step down. The same applies to departure procedures as well. This procedure typically uses more fuel and increases the overall flight time.

The new PBN-based "Continual Descent Procedure" allows the aircraft to fly higher longer, descend at a constant rate and reduce engine noise through idle thrust descent power settings. This procedure uses less fuel, reduces flight times and reduces the overall impact on the environment through lower fuel emissions.

There will also be a significant improvement in air traffic management meaning more efficient arrivals and departures to avoid 'stacking' aircrafts in a holding pattern.

## **8. What likely impacts will the Christchurch trial have?**

We are hoping to see all the expected benefits of PBN in terms of lower fuel burn and exhaust emissions, and significant improvement in air traffic management. We are also hoping to see a reduction in noise levels across some areas.

All the new trial flight paths will operate within the existing approved noise contours for Christchurch Airport.

The trial flight paths have been developed following research, noise monitoring and industry input, to maximise satellite-based technology, the capability of modern aircraft, and research into how best to manage safety, noise and emissions.

An extensive noise data set, based on existing approaches, has already been gathered to compare with trial data. The trial will collect technical data including noise monitoring and community feedback and will determine the best balance of safety, airspace management and environmental benefits, such as fuel and carbon emission savings.

The information we aim to gather over the trial will feed into the final analysis and decision making.

**9. Will the community have a say?**

Yes. We will be working closely with the local community throughout the trial to gather data and seek their feedback. We will also undertake noise monitoring throughout the trial.

**10. Will there be a consent process for the changed flight paths?**

A consent process is not required for this trial as the trial has been designed to comply with the operational noise contours for Christchurch Airport. However, community feedback will play a key part in the decision making on the future of PBN flight paths at Christchurch Airport.

**11. How long will the testing of the new flight paths take?**

The trial will run for 12 months.

**12. What happens when testing is finished?**

When the trial ends, the options and information gathered will be assessed and the public will be informed of any decision.

**13. How can the public access information about the trial?**

[www.christchurchflightpathstrial.co.nz](http://www.christchurchflightpathstrial.co.nz)