Question No.: AA 01

**Division/Agency:** Airservices Australia **Topic: Wide Area Multilateration Hansard Page/s**: 67 (27/05/10)

### Senator O'Brien asked:

Senator O'BRIEN—And what about running costs—ongoing costs? Mr Russell—No, it is very much reduced. I do not have the exact numbers. Senator O'BRIEN—So Wide Area Multilateration is less expensive to maintain on an ongoing basis? Mr Russell—Yes it is, and it is a more effective surveillance mechanism. I can check those

**Mr Russell**—Yes it is, and it is a more effective surveillance mechanism. I can check those numbers and get back to you, but it is in that sort of broad area.

### Answer:

Airservices Australia has advised a direct comparison between the operational costs of Wide Area Multilateration (WAM) and conventional Secondary Surveillance Radar (SSR) installations in Australia is difficult due to variances in the capabilities, life span and economies of scale of the respective systems. Using Airservices new WAM system in Tasmania as an example, the annual ownership costs for WAM is forecast to be \$0.799 million against \$1.561 million for SSR (assumes 2.5 radars are required to achieve the same surveillance footprint as WAM and excludes depreciation).

Question No.: AA 02

**Division/Agency:** Airservices Australia **Topic:** Aircraft Noise Ombudsman Hansard Page/s: 70 (27/05/10)

#### Senator Nash asked:

Senator NASH—So will the appointment of the ombudsman be a fixed term? Has that been worked through?

**Mr Russell**—Yes, I think it will. I know it will, but I am just not sure—you are going to ask me how long and I just cannot give you that answer.

Senator NASH—I was not going to, but I will now: how long? Mr Russell—I will take it on notice.

### Answer:

The Aircraft Noise Ombudsman will be appointed for a three year fixed term.

Question No.: AA 03

**Division/Agency:** Airservices Australia **Topic:** Airport Noise Complaints Hansard Page/s: 72-73 (27/05/10)

### Senator Macdonald asked:

**Senator IAN MACDONALD**—Do you have statistics on noise complaints at Brisbane Airport?

**Mr Russell**—Yes, as it turns out I do. This is related to the complaints that we receive through our noise inquiry unit. I am not saying this is the total number of complaints, but it is the only gauge I have got. I can provide you with more precise statistics, but it was in the order of about a thousand complaints during 2009.

**Senator IAN MACDONALD**—Does your recorder indicate where they actually came from? **Mr Russell**—I know we keep detailed information like that for Sydney. I am just not quite sure if it is the same level of detail for Brisbane. Perhaps Mr Dudley might add to that. If not, we will take that question on notice, if you would not mind.

**Mr Dudley**—It is up to the individual complainant to provide details as to their physical address et cetera. If they are predisposed to providing those details when they make a complaint or inquiry, they are recorded. For privacy reasons, obviously we do not detail that information. We are able to break it down, however, suburb by suburb. If that is the sort of information you are after, I would need to take that on notice.

**Senator IAN MACDONALD**—It is, please. Perhaps we could get the percentage of those you received who did give an address and then, with those who gave their address, roughly what suburbs they came from.

Mr Russell—We will take that on notice, Senator.

**Senator IAN MACDONALD**—Is it easy enough to get the same question for Melbourne and Sydney?

**Mr Russell**—Yes, it is. Again, I can provide that information. Again, these are sort of round numbers for Melbourne: there is in the order of 1,500 complaints received by our noise inquiry unit in 2009. In Sydney the number was over 9,000 in 2009—9,200. But if you want further information on that I am happy to provide that.

## Answer:

Statistics on noise complaints at Sydney, Melbourne and Brisbane airports are at Attachments A, B and C.

## [AA 03 - Attachments A, B, and C]

Question No.: AA 04

**Division/Agency:** Airservices Australia **Topic: Sydney Noise Complaints Hansard Page/s**: 73 (27/05/10)

### Senator Macdonald asked:

**Senator IAN MACDONALD**—Okay. That is an interesting figure. In Sydney do you have any sort of statistics on how many of the complaints come from houses that would have been built since Sydney airport first started operation?

**Mr Russell**—I can give you statistics by suburb for Sydney. I guess if you look back on the 80- or 90-year history of Sydney airport you could probably work it out, but I just do not have that level of detail.

**Senator IAN MACDONALD**—Is your impression as Airservices that most of these complaints come from houses that have been built since airport noise became an issue or is that too generalised?

**Mr Russell**—I really think so, Senator. I am happy to help here, but I think I would be struggling to answer that reasonably.

Senator IAN MACDONALD—Okay. If you would, on notice, give me those details. Mr Russell—Yes.

#### Answer:

There is no breakdown of figures for noise complaints based on when houses were built. The overall statistics for Sydney are shown in the answer to question AA03 - Attachment A.

Question No.: AA 05

**Division/Agency:** Airservices Australia **Topic: Prime Minister Flights Hansard Page/s**: 74 (27/05/10)

### Senator Macdonald asked:

**Senator IAN MACDONALD**—Okay. That is fine. Let me ask the question, not what the numbers are. Do Airservices keep those records?

**Mr Russell**—Senator, I know that we keep data, of course, on the movement of aircraft in our system. Whether it specifically identifies an aircraft that the Prime Minister would use I would have to check, but I am happy to do that.

#### Answer:

Airservices Australia has advised that it does not hold information which indicates whether the Prime Minister was on board a VIP aircraft.

Question No.: AA 06

**Division/Agency:** Airservices Australia **Topic: Performance Based Navigation Hansard Page/s:** Written Question

#### Senator Back asked:

Explain the meaning of the terms / acronyms PBN, RNAV and RNP and how they relate to Australian airports?

### Answer:

Airservices Australia has advised:

<u>Performance Based Navigation (PBN)</u> is a term used to describe the broad range of technologies that use satellite navigation sources and reduce aircraft reliance on conventional, ground-based radio-navigation infrastructure. An aircraft flying a PBN path uses onboard equipment and procedures to follow a defined trajectory.

<u>Area Navigation (RNAV)</u> is a more basic form of PBN in which equipment onboard the aircraft calculates and follows a direct navigation path between two points, without the aircraft having to overfly intermediate, ground-based navigation aids.

<u>Required Navigation Performance (RNP)</u> is a more advanced form of PBN with the aircraft's onboard navigation system, combined with satellite navigation, as opposed to ground-based navigation, providing enhanced safety through performance monitoring and alerting.

Question No.: AA 07

**Division/Agency:** Airservices Australia **Topic: Required Navigation Performance - Melbourne Hansard Page/s:** Written Question

### Senator Back asked:

Qantas has announced that it is expanding use of the latest generation of GPS-based navigation systems to some Melbourne flights and that the technology presents "a perfect flight path, gate to gate". The technology is referred to as RNP (Required Navigational Performance).

- 1) What is the level of take-up of RNP systems in Australian aircrafts and internationally?
- 2) What airports are integrating use of this technology in arrival and departure procedures?
- 3) The media report indicated that Melbourne was going live that month (3/12/2009) and that Perth and Sydney would follow soon. Can you confirm this and any plans for adopting this technology at other airports?

### Answer:

Airservices Australia (Airservices) has advised RNP-Approval Required (RNP-AR) procedures have been used primarily by Qantas since 2006 as part of a Civil Aviation Safety Authority (CASA) trial.

While RNP offers potential safety and environmental benefits, the Government will only introduce this technology if it assists in fairer noise sharing.

Detailed examination and consultation will be carried by Airservices Australia into options for implementing RNP in ways that enhance noise sharing.

Question No.: AA 08

**Division/Agency:** Airservices Australia **Topic: Brisbane Green Project Hansard Page/s:** Written Question

#### Senator Back asked:

In 2006 ASA launched the "Brisbane Green trial" worked with Qantas, Naverus and in conjunction with CASA to trial use of satellite navigation and sophisticated cockpit systems to avoid terrain and weather constraints. These Green Approaches are a pre-programmed flight path. This is designed to reduce fuel burn, aircraft noise and emissions.

ASA notes that due to the success of the Brisbane Green Project, it is expected to be introduced at many of Australia's major airports. The implementation program will start with 15 airports. To date there have been in excess of 26,000 Green Approaches (and departures) conducted nationally.

1) How does the "success" of the Brisbane project fit in with Qantas's announcement of RNP take-up for their Melbourne flights and at other airports such as Perth and Sydney?

#### Answer:

Airservices Australia has advised the Brisbane Green initiative was part of the Civil Aviation Safety Authority (CASA) RNP-AR trial using existing flight path corridors.

Question No.: AA 09

**Division/Agency:** Airservices Australia **Topic: Required Navigation Performance – Approval Required Hansard Page/s:** Written Question

#### Senator Back asked:

What is RNP-AR? (Required Navigation Performance - Approval Required)?

### Answer:

RNP-AR is the highest performing type of Performance Based Navigation (PBN) procedure. It offers the most benefit to users by allowing for predetermined, precise, curved flight paths that optimally navigate within an airspace to reduce track miles, conserve fuel, preserve the environment, and increase airspace capacity. These procedures require specific aircraft functionality and pilot crew training in order to be used.

Question No.: AA 10

**Division/Agency:** Airservices Australia **Topic: RNP Design Process Hansard Page/s:** Written Question

### Senator Back asked:

The Airservices Quarterly Report to Industry (December 2009) indicated that Airservices had developed Required Navigation Performance (RNP) concept tracks for the first four airports (Brisbane, Melbourne, Adelaide and Sydney).

- 1) How much of the detailed design has already been produced?
- 2) How much of the \$10.7 million, that was set aside for this project has already been committed and to what parts of the project?
- 3) What is the current status of this project given the stated implementation of Q4 2010 for Brisbane, Melbourne, Adelaide and Sydney?
- 4) Can Airservices provide copies of the RNP-AR "Concept Tracks" which were referred to their Quarterly Report to Industry in December 2009 and any that may have been developed subsequently?

#### Answer:

Airservices Australia has advised that some RNP-AR procedures for Brisbane, Melbourne and Sydney have reached the preliminary design phase. Work at Adelaide is intended to follow over the next two years. \$4.2 million has been committed on the design process for eight identified airports.

The "concept track" is a visual representation of the technology's potential capability. It may not be flyable by airlines or compatible with air traffic control procedures from safety and efficiency perspectives. The "concept track" is not a preliminary design and public release would pre-empt the significant work required to construct a genuine proposal. It would be a misrepresentation to present a "concept track" as bearing any resemblance to a finalised RNP-AR procedure.

Question No.: AA 11

**Division/Agency:** Airservices Australia **Topic:** Performance Based Navigation Types Hansard Page/s: Written Question

### Senator Back asked:

What are the relationships between RNP-AR and both previously published and future procedures:

- 1) STAR (RNAV): Standard Arrival Route (Required Area Navigation)?
- 2) RNAV (GNSS): Global Navigation Satellite published on 11 March 2010 for major Australian airports?
- 3) PBN: Performance Based Navigation?

### Answer:

Airservices Australia has advised:

- <u>Standard terminal Arrival Routes (STAR)</u> are a designated Instrument Flight Rule linking a significant point, normally on an Air Traffic Service route, with a point from which a published instrument approach procedure can be commenced. Major aerodromes typically have a 'family' of STARs which link major air routes to instrument approach procedures. They have been conducted under either RNAV or RNP navigation specifications since the mid-1990s.
- 2) <u>Area Navigation (RNAV)</u> is a more basic form of PBN in which equipment onboard the aircraft calculates and follows a direct navigation path between two points, without the aircraft having to overfly intermediate, ground-based navigation aids.
- 3) <u>Performance Based Navigation</u> is a term used to describe the broad range of technologies that use satellite navigation sources and reduce aircraft reliance on conventional, ground-based radio-navigation infrastructure. An aircraft flying a PBN path uses onboard equipment and procedures to follow a defined trajectory.

**Question No.:** AA 12

**Division/Agency:** Airservices Australia **Topic: RNP Design and Consultation Hansard Page/s:** Written Question

#### Senator Back asked:

Naverus states that they provide "performance based navigation and required navigation performance".

- 1) What is the role of US firm Naverus in this project?
- 2) What are the details of Naverus' contract for detailed design of RNP-AR procedures for Brisbane, Melbourne, Adelaide and Sydney airports and its value?
- 3) If more than one contract has been entered into with Naverus please inform the Committee what are the relevant contract dates and details of each contract?
- 4) Airservices media release of June 2009 issued upon the signing of the Naverus contract mentioned 28 major airports –can you identify each of these airports?
- 5) For which other airports had 'planning for rollout' commenced in December 2009 and what is the current status of this work?
- 6) Will RNP-AR procedures need to be developed for Perth?
- 7) If so when will this occur, or do these procedures already exist under a different name?
- 8) Does Airservices Australia have plans for community consultation for the rollout of RNP-AR?
- 9) When does Airservices consider is the most appropriate stage and timing for community engagement and consultation with respect to RNP-AR's given that concept tracks were completed in December 2009 and detailed design should, by now, be well advanced if not complete for some tracks at some airports?
- 10) Has any community engagement with respect to this project already been undertaken with whom and when did this occur?
- 11) What information was provided and what were the outcomes?
- 12) Have any RNP-AR procedures been the subject of internal ASA or external environmental assessment and, if so, will Airservices provide copies of this assessment?
- 13) Have any RNP-AR procedures been referred to the Minister for Environment Protection under section 160 of the Environment Protection and Biodiversity Conservation (EPBC) Act and if so when?
- 14) Have Airservices Australia ever referred any matter to the Minister for the Environment under section 160 of the EPBC Act for reason of aircraft noise rather than heritage concerns? If so, where and when?

#### Answer:

Airservices Australia has provided a response to the above questions, which were taken on notice at the Perth Hearings of the *Senate Inquiry into the effectiveness of Airservices Australia's management of aircraft noise*. This response can be found on the Senate Committee Inquiry website at "Answers to Questions on Notice – Part 2 of 2".