14 May 2024

Committee Secretary
Senate Standing Committees on Rural and Regional Affairs and Transport
PO Box 6100
Parliament House
CANBERRA ACT 2600

By email: rrat.sen@aph.gov.au

Dear Committee Secretary,

QUESTIONS ON NOTICE – RURAL AND REGIONAL AFFAIRS AND TRANSPORT COMMITTEE INQUIRY INTO THE IMPACT AND MITIGATION OF AIRCRAFT NOISE

I refer to the Qantas Group's appearance before the Rural and Regional Affairs and Transport Committee (the **Committee**) on 15 April 2024.

Responses to the Questions on Notice posed at the hearing and subsequently are included at Appendix A. As discussed with the Committee, responses to questions 6 and 7 raised by Senator the Hon Bridget McKenzie (which are numbered 13 and 14 for the purposes of this document) will be provided in a subsequent submission.

Kind regards,

Danielle Keighery
Chief Corporate Affairs and Communications Officer

APPENDIX A

QUESTIONS POSED DURING THE HEARING

1. When will the fleet be 100% new aircraft?

In 2022, the Qantas Group announced the biggest aircraft order in Australian aviation history to shape its international and domestic networks over the next decade and beyond. This multi-billion-dollar investment will see the Group take delivery of a new aircraft every three weeks on average for the next few years.

As part of this renewal, orders for new aircraft include:

Qantas

- 29 A220-300 aircraft, with two already delivered. The A220s will replace the Boeing 717 aircraft;
- 28 Airbus A321XLRs, with deliveries starting in early 2025. The A321XLRs will replace the Boeing 737 fleet;
- 12 Boeing 787s (4 additional Boeing 787-9 and 8 Boeing 787-10 aircraft), with deliveries starting in FY2;
- 12 Airbus A350-1000ULRs for Project Sunrise, with deliveries starting in mid-2026; and
- 12 Airbus A350-1000LRs, with deliveries starting in FY28.

Jetstar – deliveries by the end of FY26

- 5 x A320NEOs by the end of FY26 (all deliveries scheduled in FY25); and
- 25 x A321LRs (NEO) by the end of FY26, with 11 aircraft already delivered (commenced in mid-2022).

The Group holds additional purchase right options further to these orders.

2. Have you had a meeting with Minister King, with the Prime Minister or their offices, and raised this issue—the specific issue plus the general issues with Airservices Australia?

Yes. Qantas has met with the offices of the Prime Minister and Minister King as well the offices of the Leader of the Opposition and the Shadow Minister for Transport and in the course of wide-ranging conversation raised Airservices Australia's performance, delays caused by staff shortages and a concerning rise in the use of Traffic Information Broadcast by Aircraft (**TIBA**).

The Qantas Group also addressed these issues in its submission to the Federal Government's Aviation Green Paper. A copy of the relevant chapter has been included in **Attachment A** for reference.

3. Does Qantas have a view on whether the noise ombudsman should be appointed by Airservices Australia?

To ensure Airservices' focus remains the delivery of safe and efficient air traffic control, the Qantas Group considers there is merit in considering shifting responsibility for aircraft noise and the Aircraft Noise Ombudsman away from Airservices.

Airservices is required to invest significant resources in the management of aircraft noise. Flight path changes typically only transfer aircraft noise from one area to another, putting Airservices in a protracted cycle of flight path change proposal and counter proposal. This creates an ongoing consultation and review burden for Airservices, which redirects resources away from the provision of air traffic control.

Further, the Qantas Group sees value in the Aircraft Noise Ombudsman having a direct reporting line to the Department of Infrastructure, Transport, Regional Development, Communication and the Arts to ensure that airport and runway design, land use and flight path design can be appropriately represented.

4. Will sub-PM2.5 emissions be improved with new fuels and new jets?

Yes. In addition to its ability to help decarbonise the aviation industry, sustainable aviation fuel (**SAF**) contains fewer impurities, such as sulphur, which enables an even greater reduction in sulphur dioxide and particulate matter emissions than present technology has achieved through traditional jet fuel.[1] As next generation aircraft burn less fuel per trip there is also therefore a reduction in particulate matter emissions. SAF represents the highest priority for the aviation sector in achieving net zero.

QUESTIONS POSED BY SENATOR WATERS AFTER THE HEARING

5. How is Qantas consulted on proposals from ASA?

Airservices Australia performs a critical role in the aviation ecosystem and consults regularly with the Qantas Group.

Qantas is regularly consulted on a range of proposals from Airservices Australia. For example, if a significant change to a flight path is being considered, relevant industry stakeholders – including Qantas – are invited by Airservices Australia to provide comment.

Qantas also participates in the Brisbane Airport Community Airspace Advisory Board (**AAB**) and the Brisbane Airport Community Aviation Consultation Group (**BACACG**) which bring together government, Airservices Australia, industry and the community to discuss a range of topics including aircraft noise.

6. What is the nature of Qantas' discussions with BAC, ASA regarding aircraft noise? Have you discussed particular proposals from the community?

As set out above, Qantas participates in the AAB and the BACACG, where issues, including aircraft noise, are discussed. For example, a proposal by the community to remove intersection departures for aircraft departing on the new parallel runway at Brisbane Airport has been considered, however it was found to increase emissions by over 600,000 kilograms per year, while not providing a material noise benefit.

The Qantas Group also provided input as part of the Brisbane new parallel runway flight path post implementation review, which considered a range of packages, including simultaneous opposite direction parallel runway operations (**SODPROPs**).

AAB and BACACG meeting minutes are published online.

7. Is it Qantas' view that a curfew at Brisbane Airport would have a negative effect on Qantas' business model? Have you communicated that view to BAC, ASA or the government?

A balanced approach to aircraft noise is required and must consider the impact some noise mitigation initiatives have on efficiency and sustainability targets.

Curfews reduce airline network efficiency and present operational challenges that have implications on the entire national network. Curfews (and caps) can also inhibit recovery from disruptions such as those caused by serious weather events or air traffic controller shortages.

For example, Airservices initiated a Ground Delay Program (**GDP**) on 5 April 2024 due to a significant weather event in Sydney. Once single runway operations commenced at Sydney Airport, airborne holding increased to 80 minutes and as a consequence, resulted in a number of flights being impacted by curfew restrictions. Four Qantas mainline flights carrying nearly 580 passengers were required to undertake an air return or were diverted to an alternate airport as they would not be able to land before the curfew (and did not receive a dispensation). Due to the impact of the significant weather event, GDP, and curfew limitations, a total of 28 flights for Qantas mainline were cancelled on 5 April, impacting 3,350 passengers.

[1] IATA, Sustainable Aviation Fuels Fact Sheet 5 https://www.iata.org/contentassets/d13875e9ed784f75bac90f000760e998/saf-and-sustainability.pdf

Curfews also reduce commercial flexibility to grow and develop a variety of destinations and markets. They can be disadvantageous to many airports, including rapidly growing regional ones, by curtailing and preventing opportunities for further dispersion, growth and development of air services, tourism and other economic benefits.

The Qantas Group believes there are other measures that can be implemented now to further reduce noise at Brisbane Airport. Expanded use of Required Navigation Performance – Authorisation Required (**RNP-AR**) in Brisbane is a significant opportunity to improve community noise outcomes and operational safety and efficiency. For flights using RNP-AR, we anticipate an increase in the time when the aircraft is sitting at idle during approach, which results in reduced thrust and therefore reduced aircraft noise.

Qantas aircraft have had the capability to use RNP-AR for 20 years and our flight crew are trained on most fleets to use them, however airlines have been inhibited from wide-scale use as a result of the design and management of Australian airspace.

QUESTIONS POSED BY SENATOR MCKENZIE AFTER THE HEARING

8. What are the most significant barriers to implementing more effective noise reduction measures at Brisbane Airport?

The most significant barrier to enhanced use of RNP-AR, which would lead to improved noise outcomes, is the lack of incentive to utilise the technology, which a large percentage of airline aircraft are capable of.

Current airspace management focuses on design criteria (both approach and departure) set for the lowest capability operator. If airspace procedural design focused on optimised use of technology and Airservices provided incentives for its use (for example, less holding fuel for operators and prioritisation if nominating/accepting RNP-AR operations), then controllers would have at their disposal the tools they need to optimally manage flights arriving from or departing in different directions using different approach and departure types.

9. What specific modifications can be made to aircraft approach procedures to further reduce noise over residential areas near Brisbane Airport?

As outlined above, expanded use of RNP-AR presents a significant opportunity to improve community noise outcomes and operational safety and efficiency at Brisbane Airport. Industry has had the capability to use RNP-AR for 20 years and flight crew are trained on most fleets to use them. The percentage of flights capable of using RNP-AR in Australia is higher than Europe and the United States. However, airlines have been prevented from wide-scale use of RNP-AR as a result of how Australian airspace is designed and managed.

10. Would you agree that delays and cancellations have a flow on noise impact on local communities?

Delays that result in a service arriving at its destination later than its scheduled arrival may mean that an aircraft arrives later in the evening, which the Qantas Group accepts may have a greater impact on the community versus a day flight. We do not agree that the same impact would occur for cancellations, however these would result in other impacts on local communities and businesses, such as delays to e-commerce, medical deliveries, and other freight items.

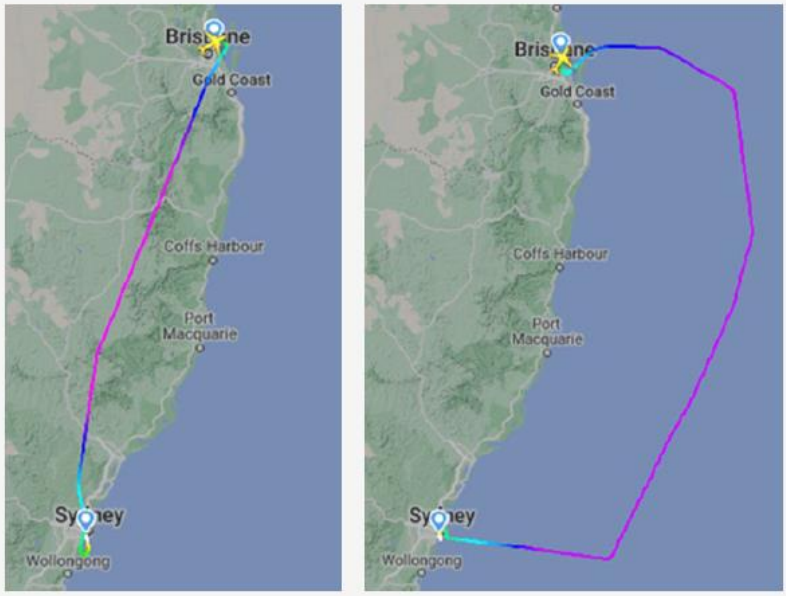
11. How many of your services have been <u>cancelled</u> due to TIBA events since 2020, broken down by month and year?

TIBA events occur when typical air traffic control services are unavailable, and pilots are responsible for self-separating their aircraft from other aircraft in airspace by broadcasting their whereabouts. TIBA was once an extremely rare event – almost unheard of in Australian airspace and even in a global context. It typically arose only in a crisis or other short-term outages (for example, fire alarms in control centres) or occasionally longer outages associated with protected industrial action.

Like all Australian aviation users, the Qantas Group has experienced a sustained increase in TIBA events since COVID-19 driven by air traffic control workforce shortages, which has led to multiple cancellations and delays.

For safety reasons, the Qantas Group will only operate in TIBA airspace when there are no other options or with appropriate additional procedures to manage the operation. If a TIBA event occurs, the Qantas Group will usually fly around the uncontrolled airspace and because of this, the number of cancellations are not as pronounced as the number of consequential delays. However, there is an impact on fuel burn and related emissions due to increase track miles. This is illustrated in the TIBA event below, which was included in the Qantas Group's submission to the Aviation Green Paper:

Figure 3: TIBA Event 29 June 2023



— QF507 usual route compared to 29 June
— Byron airspace enacted TIBA from 0600–1330
— 107 Qantas Group Flights impacted
— Required re-routing accounted for approximately 469,670 kilograms of additional emissions

Since 1 January 2020, there have been 456 TIBA events affecting Qantas Group flights. Over the same period, 46 Qantas Group services have been cancelled as a result of these TIBA events. A detailed breakdown of cancellations by month is set out below:

Year	Month	Qantas Group services cancelled due to a TIBA event	Month	Qantas Group services cancelled due to a TIBA event	Total by year
2020	January	Nil	July	Nil	4
	February	Nil	August	Nil	
	March	[4 Jetstar services]	September	Nil	
	April	Nil	October	Nil	
	May	Nil	November	Nil	
	June	Nil	December	Nil	
2021	January	Nil	July	Nil	Nil
	February	Nil	August	Nil	
	March	Nil	September	Nil	
	April	Nil	October	Nil	
	May	Nil	November	Nil	
	June	Nil	December	Nil	
2022	January	Nil	July	Nil	2
	February	Nil	August	Nil	
	March	Nil	September	Nil	
	April	Nil	October	[2 Jetstar services]	
	May	Nil	November	Nil	

	June	Nil	December	Nil	
2023	January	Nil	July	[2 Jetstar services]	39
	February	Nil	August	[1 Jetstar and 4 Qantas Link services]	
	March	[2 Jetstar services]	September	[1 Jetstar service]	
	April	Nil	October	Nil	
	May	[12 Qantas Link services]	November	Nil	
	June	[11 Jetstar, 6 Qantas Link services]	December	Nil	
2024	January	Nil			1
	February	[1 Jetstar service]			
	March	Nil			
	April	Nil			
TOTAL				46	46

12. How many services have been <u>delayed</u> due to TIBA events since 2020, broken down by month and year?

Since 1 January 2020, 2,531 Qantas Group services have been delayed due to a TIBA event. A detailed breakdown by month is set out below:

Year	**Month**	**Qantas Group services <u>delayed</u> due to a TIBA event**	**Month**	**Qantas Group services <u>delayed</u> due to a TIBA event**	**Total by year**
2020	January	Nil	July	Nil	Nil
	February	Nil	August	Nil	
	March	Nil	September	Nil	
	April	Nil	October	Nil	
	May	Nil	November	Nil	
	June	Nil	December	Nil	
2021	January	Nil	July	Nil	4
	February	Nil	August	Nil	
	March	Nil	September	3	
	April	Nil	October	1	
	May	Nil	November	Nil	
	June	Nil	December	Nil	
2022	January	10	July	84	534
	February	5	August	128	
	March	19	September	137	
	April	22	October	31	
	May	3	November	41	
	June	12	December	42	
2023	January	99	July	193	1,600
	February	3	August	160	
	March	77	September	114	
	April	213	October	30	
	May	192	November	104	
	June	235	December	180	
2024	January	152			393
	February	66			
	March	28			
	April	147			
TOTAL				2,531	2,531

15. How is Airservices Australia impacting on time performance and the customer experience?

The inconsistency of service by Airservices Australia is impacting Qantas Group on-time performance and the experience of our customers.

By way of illustration, over the Christmas and New Year period (between 25 December 2023 and 13 January 2024) the Qantas Group experienced 9 TIBA events, which impacted 139 flights carrying over 20,000 passengers.

In addition to the above, Airservices Australia performance also impacts fuel burn and emissions. For example, the Qantas Group will only operate in TIBA airspace when there are no other options or with appropriate additional procedures to manage the operation. Where pilots are forced to fly around uncontrolled airspace, this significantly increases fuel burn and emissions.

16. Is Airservices Australia delivering the service levels required to meet your timetable each day? If not, what is the average service level difference per day?

No. The recent history of 'Service Variations' (including TIBA events, rate reductions and reduced tower hours) shows Airservices Australia is currently not able to provide consistent air traffic control services to aviation users in Australia.

As demonstrated above, the Qantas Group implements a number of processes to avoid cancellations and minimise the impact to our customers as a result of these service variations. Please refer to the response to questions 11 and 12, which demonstrate the extent of service degradation.

17. Due to outdated restrictions at Sydney Airport, airlines are forced to use older, less efficient and noisier aircraft after curfew. How can the Australian Government improve outcomes for freight efficiency and for communities affected by noise?

Overnight freight is critical to the Australian economy and the national logistic freight infrastructure and network. Current restrictions on overnight freight operations at Sydney Airport date back to 1995 and specify two aircraft types that are allowed to operate these services – the BAe-146 and DC9. The more modern of the two, the BAe146, was designed in the 1970s, ceased production in 1993 and has been overtaken by newer, quieter aircraft that are already in Qantas Freight's fleet. Modernisation of these regulations to allow aircraft with a comparable noise footprint, including the A321, would deliver better noise and emissions outcomes for those residing in the airport's vicinity.

18. In 1985 the British Aerospace BAe 146 low-noise jet aircraft, was marketed as the "Whisperjet", are there any newer aircraft with lower noise profiles than this jet? If yes, please provide a list.

Aircraft technology has significantly advanced in the past 30 years and freight aircraft are now markedly quieter than the BAe-146.

Qantas Freight is currently modernising and simplifying its dedicated short-to-medium haul freighter fleet from six aircraft types to two, namely Airbus A321P2F and A330P2F aircraft, which both offer increased efficiency, greater capacity, and improved sustainability outcomes.

In terms of noise, the A321P2F and A330P2F aircraft are both Chapter 4 noise compliant (the strictest noise level set by ICAO). In contrast, the BAe-146 is Chapter 3 noise compliant, which is the standard that was introduced in 1977 and superseded by Chapter 4 in 2006. The A321P2F delivers a similar noise footprint to the BAe-146, but it has more than double the payload and a longer range. Additionally, the A321P2F and A330P2F aircraft offer significant operational efficiencies. They can carry 12 tonnes and 32 tonnes more freight per movement respectively than a BAe-146, reducing the number of total flights required to meet Australian domestic freight demand.

19. How would you improve the allocation of responsibilities between CASA and Airservices Australia?

Closer collaboration between CASA and Airservices on future growth and the associated overlay of safety requirements is required to facilitate appropriate prioritisation of infrastructure spend and agency resourcing.

A clear delineation of responsibility for safety oversight and direction between agencies is also essential to ensure a risk-based approach to safety regulations. There is currently a lack of clarity around the allocation of responsibilities on some issues between CASA and Airservices and a need for greater cross-Departmental synergy.

For example, in June 2022 an industry submission was made to CASA to increase the crosswind limitation at Sydney Airport (which drives the requirement to reduce to single runway operations) from 20 knots to 25 knots. Increasing parallel runway operations drives significant operational efficiency and cost savings and relieves delays and cancellations caused by single runway operations, while maintaining safe operations. In this case, neither agency considered the decision entirely within its remit, and there was no clear process to facilitate a joint decision. The result was no decision was taken and the question remains unresolved.

Future challenges in Australian aviation will require Airservices as the air navigation service provider to continue to focus on safety and efficiency with an emphasis on sustainability. In that context, the Qantas Group supports additional CASA regulatory oversight of Airservices to ensure air traffic management in Australia continues to achieve the highest safety standards as well as supporting industry efficiency and sustainability targets.

20. Is there a conflict of interest for Airservices Australia when it is supposed to be a fee for service provider and a regulator?

CASA is the government body that regulates Australian aviation, not Airservices Australia.

However, there are governance arrangements relating to the Aircraft Noise Ombudsman that can be improved to provide greater independence. Please refer to the Qantas Group response to question 3.

21. Do you believe the noise ombudsman should be appointed by Airservices Australia?

Please refer to the response to question 3.

22. How does Qantas balance the need for operational efficiency with noise reduction in its flight operations at Brisbane Airport?

The Qantas Group is committed to actively managing its noise emissions and welcomes the continued opportunity to explore, with the Government and the broader community, any procedures which balance noise considerations with operational requirements and sustainability targets.

Aircraft manufacturers design aircraft and airlines implement policies to ensure aircraft operate in the most efficient manner possible. This typically coincides with quieter operations and reduced emissions. Some of the procedures used by the Qantas Group include:

- **Noise Abatement Departure Procedures**, which include a combination of utilising runway directions when weather conditions permit and tracking the aircraft in specified directions over the ground after take-off to minimise the impact of noise during departure. Additionally, continuous climb procedures are utilised to minimise the time the aircraft is at a lower altitude during departure;
- **Noise Abatement Approach Procedures**, which include Continuous Descent Operations where an aircraft descends continuously toward the runway at a lower (and subsequently quieter) engine power setting, without having a requirement to temporarily level off which requires additional engine power. Additionally, flight paths for the arrival are designed to manoeuvre around residential areas;

- **Reduced Thrust Take-off**, which means using advanced aircraft performance software to calculate the minimum amount of engine power required for the aircraft to be able to take off, as opposed to using the maximum available power, thereby reducing the noise produced by the engines;
- **Minimum use of reverse thrust on engines after landing**, depending on the available length of the runway. Often, with more runway length available than the minimum distance required for the aircraft to stop after landing, there is no requirement to decelerate and stop the aircraft as soon as possible. By allowing the aircraft to decelerate at a slower rate after landing, reverse engine thrust is not required, removing the requirement for the engines to provide increased reverse power;
- **Single Engine Taxi In**' which involves shutting one of the aircrafts two engines down after landing and taxiing to the airport terminal using one engine only (or up to 2 engines out of 4 engines on an A380). This effectively halves the amount of noise the aircraft is making whilst taxiing on the ground; and
- **Participation in trial procedures at Brisbane Airport** in order to develop innovative new ways of reducing noise impacts. Some examples include the already run trial of taking off from different parts of the runway that are further away from residential areas, though it did not produce a benefit and led to increased emissions.

23. Could Airservices Australia explore more stringent noise abatement procedures during late-night and early-morning hours?

Flights that operate into Australian airports follow published ICAO noise abatement procedures.

Of the two ICAO noise abatement options for departure, one is focused on reducing noise very close into the airport (**NADP 1**) and the other on reducing noise further out (**NADP 2**). Overall, with engine and airframe development, there is minimal difference in noise footprint between them. However, NADP 1 comes at a slightly higher fuel/emissions cost as pilots don't "clean up" the wing as early.

Other options are Standard Instrument Departures (**SID**) gradients, however, as additional thrust is required to meet steeper requirements this means slightly more noise, particularly in warmer weather or with higher weights. By way of comparison, London Heathrow uses 4 per cent climb gradients and many around Brisbane are already at 5 per cent or more.

Please refer to the response to question 9, which outlines an opportunity for further noise improvement through an increased uptake of RNP-AR approaches.

24. How does Qantas ensure compliance with Brisbane Airport's noise management protocols, and are there areas for improvement?

Standard Operating Procedures (**SOP**) are a foundational aspect of safe flying operations. Flight Crew are trained in and comply with regulatory, company and airport requirements described on the navigation (Aerodrome and SID) charts and associated aeronautical publications.

Please refer to the response to question 9, which outlines an opportunity for further noise improvement through an increased uptake of RNP-AR approaches.

25. What ongoing training does Qantas provide to its pilots to ensure adherence to noise abatement procedures?

The Qantas Group is committed to providing its pilots with the highest standard of training.

As part of their training and recurrent checking, Flight Crew are assessed on their compliance with all procedural requirements, including noise abatement procedures.

26. How could Airservices Australia modify flight paths at Brisbane Airport to reduce noise without significantly impacting fuel efficiency?

Standard Instrument Departures (**SIDs**) and Standard Instrument Arrivals (**STARs**) at Brisbane are inefficient, with significant additional track miles with associated fuel/emissions and shallow gradients or

level segments, reflecting poor design standards. Improved design procedures that are linked to more efficient approaches – which provide predictability all the way to the runway – would allow flights to operate at idle thrust for much longer and closer to the runway (within about 4nm), resulting in less noise, less fuel, and less emissions.

27. How does Qantas plan to utilise its newer, quieter aircraft specifically to reduce noise impact at Brisbane Airport?

Please refer to the response to question 1.

The Qantas Group is rolling out new, next-generation aircraft across its domestic and international fleet as part of a multi-billion-dollar investment in its fleet renewal program. These new aircraft are already flying into Brisbane Airport, and this will progressively increase as more aircraft are delivered. For example, QantasLink is now operating its new A220 aircraft between Brisbane and Melbourne, which is up to 50 per cent quieter than its predecessor – the Boeing 717.

28. Can Qantas outline any technological advancements that might contribute to noise reduction at Brisbane Airport?

Please refer to the responses to questions 1 and 9.

In the Qantas Group's view, the most effective way of reducing aircraft noise at the source is continual renewal of aircraft fleet types. Technological advancements in modern aircraft mean they are markedly quieter than prior generations. For example, Qantas has taken delivery of two of a total 29 A220-300 aircraft, which replace the Boeing 717 fleet. These aircraft are up to 50 per cent quieter than the Boeing 717 and currently fly into Brisbane Airport from Melbourne. Jetstar also currently operates multiple flights per day into Brisbane with new A321 NEO aircraft, with 11 of these currently in the Jetstar fleet and another being delivered this month.

Qantas continues to invest in technologies that will help to further improve noise outcomes, including upgrading the avionics on its A330 fleet to allow them to fly RNP-AR, following appropriate training.

29. What role does Qantas see for alternative fuels or propulsion technologies in reducing noise or emissions levels?

Transport is a major contributor to carbon emissions and aviation was the first industry to voluntarily commit to emission reduction targets as far out as 2050. Until zero emission technology, like electric aircraft or green hydrogen, are available, sustainable aviation fuel represents the most significant tool airlines have to reduce their impact on the environment while still providing a critical service to the travelling public. IATA estimates that SAF will contribute 65 per cent of the decarbonisation required for aviation to reach net zero by 2050.[2]

Even as zero-emission electric and hydrogen propulsion technologies gradually progress, energy density, safety and operation limitations mean it is expected that the majority of emissions reductions in aviation will need to come from SAF and efficiency improvements. This is particularly the case for Australia, with its long domestic flight sectors and long-haul international routes.

The decarbonisation potential of SAFs is significant. SAF offers emissions reductions of up to 80 per cent for biogenic pathways and 100 per cent for power-to-liquid (synthetic) pathways and it is deployable now, working in existing turbine engines and distribution infrastructure.

While greater use of, and access to, SAF will help the sector and Australia achieve its decarbonisation ambition by reducing emissions, these emission reduction benefits should not be used to justify inefficient extended flight paths and procedures (which would result in greater fuel burn) to reduce noise.

[2] Net zero 2050: sustainable aviation fuels (iata.org). Link here.

30. What are the challenges airlines face in implementing more effective noise abatement procedures at Brisbane Airport, and how can they be overcome?

Please refer to the response to question 9.

31. What is the potential for using steeper descent and climb profiles to reduce noise, and what are the limitations at Brisbane Airport?

Approaches greater than 3.5 degrees require deployment of drag devices, like speed brakes, to stop the aircraft from accelerating. The use of drag devices can increase aerodynamic noise, reduce efficiency and increase fuel burn and emissions. This is because pilots need to deploy flaps earlier to keep the aircraft from speeding up, particularly in tailwinds.

London Heathrow uses 3.2 degree approaches, meaning the aircraft is slightly higher and the noise footprint below slightly less, particularly between 5-10nm from touchdown. However, this will mean that for many aircraft the approach will be flown with additional drag devices deployed to facilitate the increased angle, which will have the implications outlined above.

32. Do pilots use precision-based navigation tools to adhere more strictly to designated flight paths that avoid noise-sensitive areas? What's preventing their use?

Please refer to the response to question 9.

33. How do you integrate feedback from Brisbane Airport's noise management office into your operational strategies?

The Qantas Group complies with all published noise requirements for Brisbane Airport, as issued by Airservices Australia.

Brisbane Airport's noise management office provides feedback to Airservices Australia, which is then responsible for managing that information and following established process for any feedback item, including if it is a suggestion or a proposal. Should a change to a published noise requirement or procedure be determined as the desired outcome as a result of that feedback, this will be actioned via the required regulatory process and involve CASA in consultation with other industry stakeholders, including Qantas.

CHAPTER 7

Airport development planning processes and consultation mechanisms

Key points in this chapter:

Noise

— A balanced approach to aircraft noise is required which gives due consideration to the higher emissions and environmental impact resulting from inefficient flight paths and procedures.

— Government should incentivise industry to invest in quieter and cleaner aircraft.

— Minor amendments to the *Sydney Airport Curfew Act 1995* (Cth) are needed to deal with the increasing demand for overnight freight movements.

Flight Path and Airspace Planning

— Where possible, it is preferable to facilitate more fuel-efficient and less emission intensive flying through flight paths, air traffic management frameworks and resourcing.

— A comprehensive review of the Sydney Basin flight paths would deliver operational benefits and reduce related emissions.

— A broader introduction of Required Navigation Performance — Authorisation Required (RNP-AR) arrivals to Sydney and expanded use in Brisbane would improve community noise outcomes and operational efficiency.

Community Consultation

— A review of the community consultation process with respect to development and noise is needed to ensure the process is clearly defined and has a definitive end point.

Efficient Airport Planning

— A national register for Airport Master Plans and Major Development Plans and strengthening the guidelines within the *Airports Act 1996* (Cth) would improve the consultation process and increase transparency.

— The current monetary threshold of A$25 million for Major Development Plans should be maintained.

— The PFAS Investigation Program at Australian airports should be expanded to identify the source and responsibility for PFAS contamination.

Noise

The Qantas Group acknowledges community concerns about aircraft noise and continues to pursue efficiencies and implement the latest innovations in flight planning and air traffic management to mitigate its effect. Our aim is to optimise the flow of air traffic, reduce emissions and ensure that Australia's airspace remains safe, secure and efficient.

It is critical that the impact of noise mitigation initiatives on efficiency and emissions reduction are quantified and properly understood. Noise concerns and mitigations often result in inefficient flight paths and operating procedures that result in increased track miles, higher fuel burn and emissions, which work directly against the sustainability objectives of the industry and the broader community.

The Qantas Group's Approach

The Qantas Group is committed to actively managing its noise emissions. As Australia is an ICAO contracting state, the Qantas Group must consider noise around airports within the framework of ICAO's 'Balanced Approach to Aircraft Noise Management'.

This consists of identifying noise at an airport and analysing the measures available to reduce it as follows:

— Reduction at source;

— Land-use planning and management;

— Noise abatement operational procedures; and

— Aircraft operating restrictions.

The overriding objective is to address local noise issues in the most cost-effective manner, without implementing undue operating restrictions.

The Qantas Group supports continued alignment with international standards for aircraft noise.

Reduction at source

All Qantas Group aircraft meet or exceed ICAO's aircraft noise standards.

The most effective way of reducing aircraft noise at the source is continual renewal of aircraft fleet types. Modern aircraft are markedly quieter than prior generations, and investment in new aircraft will continue to play a significant role in management of aircraft noise.

The Qantas Group has a major fleet renewal program in place, with deliveries already underway and continuing for at least the next decade. These state-of-the-art aircraft include the Airbus A320NEO family, the Airbus A220-300, the Boeing 787-9, 787-10 and the Airbus A350-1000 and will deliver a range of benefits such as lower emissions and improved mechanical reliability, and importantly, up to a 50 per cent reduction in noise footprint.

Figure 1 below, prepared by Airbus, compares the noise footprint of the A321 versus the A321 NEO over Sydney Airport.

Figure 1: 50 per cent Reduction in Noise Footprint

Qantas has also commenced the retirement of the older B717 fleet, with the first aircraft exiting service in June 2023 after 19 years of flying.

Given the role of technology in addressing noise, and the high capital cost of fleet renewal, the Qantas Group supports incentives for industry to invest in quieter and cleaner aircraft, such as:

— A noise dividend, whereby flying quieter aircraft could facilitate increased movements and avoid of operating restrictions without increasing the overall noise burden on the community; and

— Investment allowances and improved accelerated depreciation concessions.

Land-use planning and management

Effective land-use planning and appropriate zoning is critical, particularly for greenfield sites, to ensure that noise impacted residences are minimised and balanced with community needs for commercial aviation and freight growth. Once developed, residential areas are unlikely to be relocated or re-zoned and, it is therefore important to take an early and realistic view of the potential impacts.

Effective land-use planning also ensures that development around airports supports the requirements of aviation operations. Failure to ensure coordinated airport planning will incrementally decrease the usefulness, efficiency and value of airport sites. Subsequent variations to matters such as noise sharing arrangements, movement caps, curfews and aircraft approaches can impose a significant economic impact on airports, airlines and the broader community.

The Qantas Group supports the principles outlined in the National Airports Safeguarding Framework (NASF) regarding noise, as well as other benefits to aviation including turbulence and wind shear. Inappropriate development around airports can have safety, operational and efficiency implications for airlines with flow on effects for the viability of airports in terms of ability to provide the economic benefits to the areas they service.

Increased implementation of NASF mechanisms by relevant authorities as airports develop their Major Development Plans is critical to prevent negative implications on sector users. This should occur at an early stage of development in order to prevent unintended impacts and subsequent restrictions being placed on both airports and airlines. Given the relatively long lead time for these developments, unintended impacts can eventuate many years from initial development planning.

The Qantas Group supports increased collaboration between all levels of Government to ensure implementation of NASF principles in planning decisions.

Noise Abatement Operational Procedures

Aircraft manufacturers design aircraft, and airlines implement policies, to ensure aircraft operate in the most efficient manner possible. This typically coincides with quieter operations and reduced emissions.

Noise abatement operational procedures are procedures which mitigate noise and include preferred flight tracks, runway nominations, tracking procedures and operation of the aircraft to minimise the impact of noise.

Some of the procedures used by the Qantas Group include:

— Noise Abatement Departure Procedures, which include a combination of utilising runway directions when weather conditions permit and tracking the aircraft in specified directions over the ground after take-off to minimise the impact of noise during departure. Additionally, continuous climb procedures are utilised to minimise the time the aircraft is at a lower altitude during departure;

— Noise Abatement Approach Procedures, which include Continuous Descent Operations where an aircraft descends continuously toward the runway at a lower (and subsequently quieter) engine power setting, without having a requirement to temporarily level off which requires additional engine power. Additionally, flight paths for the arrival are designed to manoeuvre around residential areas;

— Reduced Thrust Take-off, which means using advanced aircraft performance software to calculate the minimum amount of engine power required for the aircraft to be able to take off, as opposed to using the maximum available power, thereby reducing the noise produced by the engines;

— Minimum use of reverse thrust on engines after landing, depending on the available length of the runway. Often, with more runway length available than the minimum distance required for the aircraft to stop after landing, there is no requirement to decelerate and stop the aircraft as soon as possible. By allowing the aircraft to decelerate at a slower rate after landing, reverse engine thrust is not required, removing the requirement for the engines to provide increased reverse power;

— Single Engine Taxi In, which involves shutting one of the aircrafts two engines down after landing and taxiing to the airport terminal using one engine only. This effectively halves the amount of noise the aircraft is making whilst taxiing on the ground; and

— Participation in trial procedures at Brisbane Airport in order to develop innovative new ways of reducing noise impacts. Some examples include taking off from different parts of the runway that are further away from residential areas, as well as changing aircraft configurations and flap settings such that the aircraft can climb at a steeper angle after take off.

Sometimes the application of noise abatement operational procedures results in additional emissions, so the noise benefit must be carefully balanced with the impact to emission reduction targets. Some examples of this trade-off include:

— Noise Abatement Departure Procedure where take off is required in a certain direction in order to avoid residential areas. Often this requires taking off with a tailwind instead of the preferred option of departing into wind for performance and efficiency benefits. The tailwind component requires a higher engine power setting for the aircraft to be able to take off, resulting in increased emissions;

— Noise Abatement Approach Procedures often require the aircraft to track or manoeuvre laterally across the ground around residential areas to avoid the aircraft flying over them. This results in a greater distance the aircraft needs to fly in order to make its way to the landing runway and being airborne for a longer period, resulting in increased emissions for the flight than if the aircraft was able to fly a shorter, more efficient route to the runway. For example, Airservices estimates that manoeuvring aircraft over water at Brisbane Airport to minimise noise adds 37 nautical miles per flight and creates an additional 700 kilograms of carbon emissions per flight;[1] and

— Requirements to use 'full length' departures in the Brisbane trial, where the aircraft is required to take off from the far end of the runway results in a significant increase in taxi time for the aircraft and subsequently more emissions.

The Qantas Group welcomes continued opportunity to explore with the Government and the broader community any procedures which balance noise considerations with operational requirements and sustainability targets.

Aircraft Operating Restrictions

The Sydney Airport Long Term Operating Plan (LTOP) is a program which manages the aircraft noise associated with Sydney Airport. This plan was developed in the 1990s and there has been at least one complete refresh of airline fleets since that time, with another now underway. Notwithstanding this, there is no recognition of the actual aircraft noise footprint of aircraft since the LTOP was introduced and Qantas Group supports its review and modernisation.

The Qantas Group supports the Green Paper's view that additional restrictions or curfews are not warranted and agrees that there should not be any significant change to the underlying curfew principles. The Qantas Group strongly supports the Government's commitment to ensuring Western Sydney Airport will be curfew-free.

Balancing curfew requirements with the needs of the community and the broader aviation ecosystem can be challenging and community concerns about noise must be carefully considered.

Curfews reduce operational and commercial flexibility to grow and develop a variety of destinations and markets. They can be disadvantageous to many airports, including rapidly growing regional airports, by curtailing and inhibiting opportunities for further dispersion, growth and development of air services, tourism and other economic benefits.

The introduction of curfews across additional airports would reduce airline network efficiency and growth in capacity through higher aircraft utilisation, and drive duplication of infrastructure, likely leading to worse noise and environment outcomes.

The Qantas Group has long advocated for minor amendments to the *Sydney Airport Curfew Act 1995* (Cth) to deal with:

— The increasing demand for overnight freight movements, particularly given the curfew-free Western Sydney Airport is not scheduled to open until 2026; and

— Practical measures to deal with extraordinary weather and infrastructure events.

The Qantas Group operates to 14 domestic freight destinations across six States, directly connecting 14 international destinations with a dedicated freighter network. This is performed by dedicated freighters and complemented by belly space in passenger aircraft. The belly space of passenger aircraft on its own is insufficient to meet freight demand. For example, one A321P2F carries the equivalent of the belly space of around 14 narrow-body passenger aircraft.

Overnight freight is critical to the economy of New South Wales and the overall logistic freight infrastructure and network in Australia. It provides critical regional-to-city and regional-to-regional connectivity for express delivery, particularly next day delivery. Freight is generally lodged by customers during the day, delivered to the airport at the end of the retail day and flown overnight, and delivered by van the following day. This speed is particularly critical for supplies such as perishables, pharmaceuticals, medical equipment and human organs for transplant.

Overnight flying also reduces congestion during the peak daytime hours when passengers generally fly.

The demand for domestic overnight air freight in Australia has fundamentally changed over recent years. Qantas Freight overnight freighter volumes have increased by 22 per cent from a national perspective since financial year 2019 and 28 per cent in and out of Sydney Airport between financial years 2019 and 2023. Research conducted by Australia Post Group shows that e-commerce is continuing to grow, with 4.3 per cent more households shopping online in the first quarter of financial year 2024 compared to the previous quarter.[2]

Given Sydney Airport services Australia's largest city and is a critical domestic freight market, this demand cannot be met without some flexibility with respect to the curfew, particularly before Western Sydney Airport opens in 2026.

The current restrictions on aircraft permitted to conduct critical overnight express freighter operations into Sydney Airport are antiquated. At present, the only aircraft permitted to operate these services is the British Aerospace 146 (BAE-146), which was designed in the 1970s, manufactured in the early 1980s and ceased production in 1993. The aircraft has resultant

1 Article: Brisbane flight path changes push more aircraft out to sea. By Robyn Ironside, The Australian, 17 October 2023.
2 Australia Post Inside Australian Online Shopping Quarterly Update July-September 2023, dated 11 October 2023. Link here.

reliability constraints and as a smaller aircraft type, is particularly impacted by pilot shortages. For example, over the past six months, 82 per cent of freight services across the Qantas Freight domestic network that have been cancelled due to crew resourcing challenges were BAE-146.

Aircraft technology has significantly advanced in the past 30 years and freight aircraft are now markedly quieter than the BAE-146. Qantas Freight is currently modernising and simplifying its dedicated short-to-medium haul freighter fleet from six aircraft types to two, namely Airbus A321P2F and A330P2F aircraft, which both offer increased efficiency, greater capacity and improved sustainability outcomes.

In terms of noise, the A321P2F and A330P2F aircraft are both Chapter 4 noise compliant (the strictest noise level set by ICAO). In contrast, the BAE-146 is Chapter 3 noise compliant, which is the standard that was introduced in 1977 and superseded by Chapter 4 in 2006.

The A321P2F delivers a similar noise footprint to the BAE-146, but it has more than double the payload and a longer range. Figure 2 below, prepared by Airservices, compares the noise footprint of the A321P2F versus the BAE-146 over Sydney Airport.

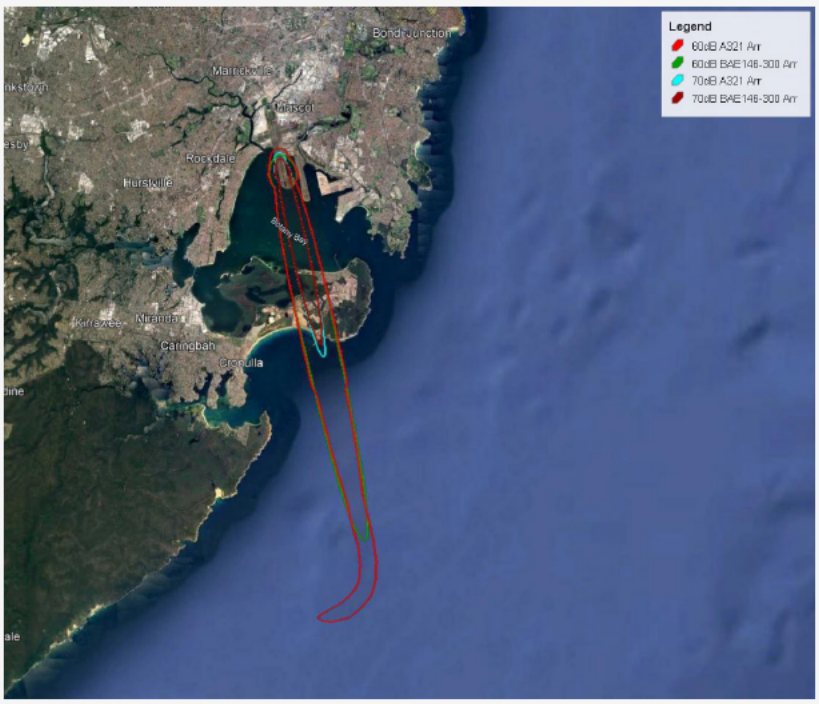
Additionally, the A321P2F and A330P2F aircraft offer significant operational efficiencies. They can carry 12 tonnes and 32 tonnes more freight per movement respectively than a BAE-146, reducing the number of total flights required to meet Australian domestic freight demand. Further, BAE-146 aircraft do not have the range to complete all required routes. For example, an A321P2F can fly Sydney to Perth direct and a BAE-146 cannot. To complete the same route would require two BAE-146 aircraft carrying freight via Melbourne and transferring to an A321P2F onwards to Perth.

In addition to lowering emissions through more direct flying, the A321P2F delivers a substantial emission improvement over the BAE-146. Based on the fuel burn per aircraft and accounting for capacity differences, the Qantas Group estimates that the A321P2F reduces emissions per tonne of capacity by at least 33 per cent (subject to the aircraft variants) compared to a BAE-146.

On this basis, there is scope to review and modify certain aspects of the curfew to deliver additional flexibility and improved productivity per movement, while still meeting the original policy objectives and reducing noise.

Rather than referring to specific aircraft, Section 13 of the *Sydney Airport Curfew Act 1995* (Cth) (which refers to "BAE-146 and DC9 Aircraft used for freight") should be amended to include noise criteria which would allow additional aircraft types to be utilised for overnight freight operations. The noise criteria could also be amended from time to time as technology and noise compliance standards evolve to ensure continuously improved outcomes. The result of this reform would be that all operating aircraft would feature a narrower noise footprint than the currently allowable BAE-146, emissions intensity per tonne of freight would reduce, and productivity would increase per aircraft movement.

Figure 2: Noise Footprint of A321P2F vs BAE-146



60 & 70 dB (A) Contour Arrival slide

Inputs and assumptions

- Modelled with AEDT v3e
- Standard arrival and departure profiles used
- Stage length 1 for departures (i.e. distance to destination <500NM)
- Base results for comparison purposes only, with no further attempt to calibrate outputs with measured data

This view was supported by the Productivity Commission's findings in their 2019 inquiry into the Economic Regulation of Airports. The report found that alternative types of freight aircraft should be allowed to operate during the curfew, provided aircraft noise and the number of movements are not increased above current levels.[3] The Productivity Commission also found that the Sydney Airport curfew was inefficient, exacerbates unexpected delays and leads to more noise, failing the needs of the community and the aviation industry more broadly.[4]

If the Government is not minded to make a permanent amendment, some additional flexibility could be provided to meet demand for the period until Western Sydney Airport opens in 2026.

The Harris Review considered options for recovery for events such as weather, aircraft serviceability, security, safety, airport infrastructure constraints and force majeure. The Qantas Group supports amending the Curfew Dispensation Guidelines at Sydney Airport to facilitate recovery and better serve air travellers and the community at large.

Questions

Do you have comments on how the operation and effectiveness of the Noise Complaints Information Service could be improved?

The use of parameters (distance from aerodrome and flight altitude) to define whether a case is recorded, investigated and reported on would ensure complaints are efficiently and appropriately prioritised.

How could the Australian Noise Exposure Forecast (ANEF), and use of the ANEF in Government planning processes, be improved?

While the ANEF system goes some way to providing an effective tool for planning purposes, it does not clearly articulate the impacts of aircraft noise around an airport.

This modelling is limited for two reasons, firstly as noise impacts vary on a personal level, and secondly, because the ANEF is an annual average figure, and actual daily impacts may vary greatly from the average.

In order to use the ANEF system for planning purposes, it must be supplemented with information that provides a more realistic representation of aircraft noise effects.

What are appropriate, modern noise metrics that should be used to communicate aircraft noise impacts?

'A-weighted decibels' (dBA) is the best available measurement of aviation noise, together with the use of Sound Exposure Level (SEL) footprint information.

How can Governments better communicate with potential purchasers of properties which will be affected by aircraft noise in the future?

The Qantas Group supports transparent measures to highlight noise implications to potential purchasers.

We are broadly supportive of obligations to place information on the title of noise-affected residences and for noise be included as a consideration in the sales process of any noise-affected residence and developers in the case of greenfield sites.

How can new and different types of noise impacts from projected growth in drone use best be managed?

Noise is just one impact of new technologies, which may extend beyond the boundaries of an airport.

Unmanned aerial systems and electric vertical take-off and landing aircraft introduce opportunities for the sector but represent challenges in terms of airspace, infrastructure planning and safety. A nationally harmonised airspace operational concept that accounts for new airspace users will ultimately be required to ensure the continued safe, efficient, fair and sustainable use of airspace.

What can be done to proactively mitigate noise impacts by better informing residents and land-use planners?

The Government has introduced the Brisbane Airport Community Airspace Advisory Board to better manage the question of aircraft noise in Brisbane and the Qantas Group welcomes the opportunity to provide specialist input to this forum.

The Qantas Group considers this an important forum to understand community concerns and to be able to inform and provide expertise on the technical drivers behind flight path planning, the impact of inefficient flying and initiatives to reduce noise.

What else can airlines and airports do to support better management of aircraft noise?

The Qantas Group's approach to aircraft noise management is outlined in detail in the section 'Noise' above.

The most effective way of reducing aircraft noise at the source is continual renewal of aircraft fleet types. The Qantas Group's significant investment in fleet will deliver up to a 50 per cent reduction in noise footprint and is an important contribution towards noise reduction.

As stated above, noise implications as set out in the National Airports Safeguarding Framework guidelines must be included in airport Major Development Plans to inform community expectations at an early stage of development and prevent unintended impacts and restrictions being placed on both airports and airlines at a later date.

What can be done to facilitate increased adoption and implementation of the National Airports Safeguarding Framework principles for land planning to optimise land-use activity and reduce community impacts?

Government agencies at all levels should maintain a record of proposed land-use for aviation, then

3 Productivity Commission. 2019. Economic Regulation of Airports – Productivity Commission Inquiry Report No.92, pg 2. Link here. 4 Productivity Commission. 2019. Economic Regulation of Airports – Productivity Commission Inquiry Report No.92, pg 29-32. Link here.

actively manage public awareness on a continuing basis because there is routinely a long time between initial announcements of land-use and eventual implementation, for example Western Sydney Airport.

Could governance arrangements for the Aircraft Noise Ombudsman be improved to provide greater independence, including publishing its findings and reports?

The Aircraft Noise Ombudsman has observed that increased complaints occur when flight paths change, and these are typically associated with new aviation projects such as new runways. Airservices is responsible for creating flight paths to new runways. Accordingly, a direct reporting line to the Minister may be more appropriate to ensure that airport and runway design, land use and flight path design can be represented.

Flight Path and Airspace Planning

Efficient Flying

Safety is the Qantas Group's number one priority and the overriding priority for the design of flight paths.

While noise is an important consideration, the Qantas Group is also committed to optimising flight operations through the most efficient flight paths. The Qantas Group's Climate Action Plan sets interim 2030 targets towards net zero, and this includes fuel efficiency of an average of 1.5 per cent per year by 2030.

While there are times when inefficient flying is unavoidable, for example where adverse weather means a longer flight path is required to maintain safe operations, inefficient flight paths result in much higher fuel burn and significantly increased emissions. Even seemingly modest changes to flight paths result in a significant increase.

Figure 3 is a real-world example of the additional carbon emissions caused by a Traffic Information Broadcast by Aircraft (TIBA) event affecting Qantas Group flights in June 2023. All aircraft were required to fly a longer route to avoid uncontrolled airspace and this generated over 450,000 additional kilograms of emissions.

Given the millions of flights taken each year, there is a cumulative environmental impact of inefficient flight paths.

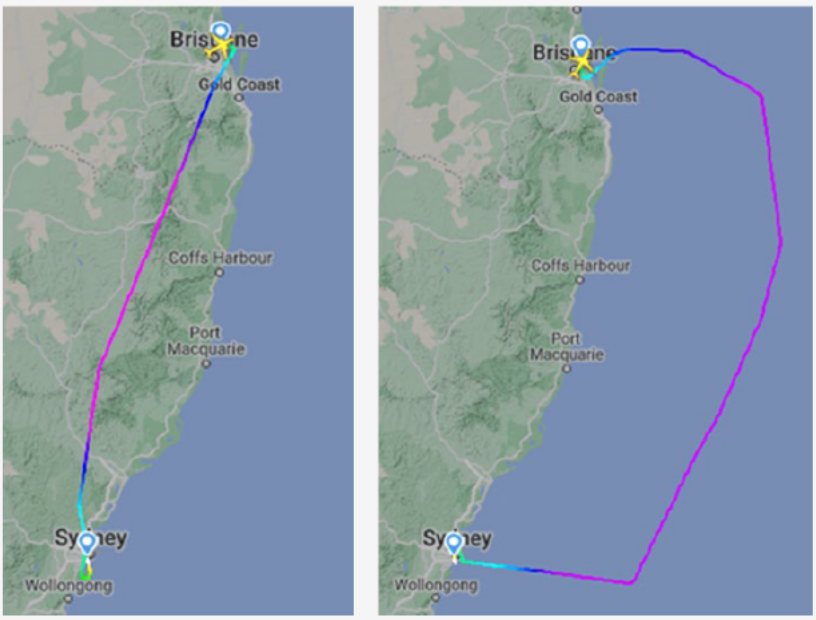
Some of the initiatives the Qantas Group has implemented to promote efficient flying include:

- Continual enhancement of airline operational fuel efficiency standard operating procedures and practices;
- Sophisticated applications which provide real time data on efficiencies and emissions on individual flights, enhancing day to day flight planning;
- Utilising FlightPulse, an analytical tool developed by Qantas and GE Aviation Digital which demonstrates the benefits associated with safely delivering operational efficiency, as a key pilot interface; and
- Rolling out 'Constellation', a flight planning system which enhances individual flight routes and altitudes based on actual weather and wind conditions to maximise efficiency.

The above initiatives have already reduced the Qantas Group's carbon footprint by tens of millions of kilograms per year.

Where possible, facilitating more fuel-efficient and less emission intensive flying through flight paths, air traffic management frameworks and resourcing should be preferred. Without a systemic change in approach, this issue will only compound as the global fleet grows to meet demand and population growth.

Figure 3: TIBA Event 29 June 2023



- QF507 usual route compared to 29 June
- Byron airspace enacted TIBA from 0600–1330
- 107 Qantas Group Flights impacted
- Required re-routing accounted for approximately 469,670 kilograms of additional emissions

Flight Path Design Principles

The Qantas Group supports Airservices' 'Flight Path Design Principles', including the key principles of Safety, Noise and Community, Efficiency and Environmental and Operational. As previously noted, where possible, more fuel-efficient and less emission intensive flight paths should be preferred.

Noise is an important consideration, but it should not have a disproportionate impact on Flight Path Design Principles, particularly given the significant environmental impact of additional emissions on sustainability targets.

Community Engagement Standard

The Qantas Group supports appropriate community engagement in the design of flight paths.

Airservices has released its Community Engagement Standard and is expecting to spend A$2 million per year on consultation, which will form part of the new pricing agreement with industry. Airservices should set clear and measurable targets associated with this spend to ensure it is achieving its aims.

The current timelines to engage are appropriate, but there is potential for this timeframe to be reset for every design iteration, even if the changes are moderate. This can create an open-ended consultation process without a clear end point. This should be revisited to ensure the duration of the consultation process is definitive and certain.

Sydney Basin

The Sydney Basin presents several challenges for air traffic management, including:

- Complexities associated with long-standing noise sharing at Sydney Kingsford Smith Airport mean that there are inefficiencies associated with flight paths aimed at providing more equitable noise outcomes to the community which in fact introduce negative environmental and noise impacts by inefficient flying;
- The busy Defence aerodrome (Richmond), two civilian Class D aerodromes (Bankstown and Camden) and a very busy small recreation and General Aviation aircraft aerodrome (Wedderburn); and
- The development of Western Sydney Airport which will come online with a single runway operation in 2026 and expand over the decades to include a second parallel runway.

While aiming to support all operations in the Sydney Basin, the airspace structure and flight paths are currently overly complex, inefficient and considerably below best practice.

The flight path design process for Western Sydney Airport has been compromised by the requirement not to encroach on flight paths for Kingsford Smith Airport. The Qantas Group considers it a missed opportunity to not review the Sydney Basin flightpaths wholistically.

The Qantas Group has already identified inefficiencies with the Western Sydney Airport flight paths which will negatively impact on the operations of the new airport and have broader environmental impacts. For example, city pair analysis shows significant additional track miles for the Melbourne and Auckland routes when compared to Kingsford Smith Airport.

While a review of the Sydney Basin will be completed when the second parallel runway is constructed at Western Sydney Airport, this is not scheduled until passenger numbers reach 37 million per annum which is projected to occur in around 25 years. A comprehensive review of the Sydney Basin flight paths now would deliver significant operational benefits, improve fuel efficiency and reduce related emissions.

Required Navigation Performance – Authorisation Required (RNP-AR)

Sydney Basin does not have RNP-AR procedures. Air traffic control in Sydney uses radar vectoring for arriving aircraft. The intention is to share noise and to more effectively manage the unique environment in Sydney resulting from the LTOP.

While QantasLink Dash 8 aircraft have the requisite technology, in Brisbane they are not able to participate in the full availability of more efficient and accurate RNP-AR procedures available due to the required flight path and noise impact raised as part of community consultation.

Since the introduction of RNP-AR Australia has seen marked improvements in safety and efficiency while delivering requisite environmental benefits. In many cases this has also resulted in improved noise outcomes for the community due to the ability to design flight paths that overfly less populated areas. Utilising RNP-AR, particularly for aircraft arriving in Sydney on runways 34L and 34R, would result in a significant reduction in community impact by allowing operators to avoid populous areas as well as operating on more efficient flight paths.

The Qantas Group supports the introduction of RNP-AR arrivals to Sydney and expansion of RNP-AR in Brisbane to improve community noise outcomes and operational safety and efficiency and seeks the Government's support to engage with Airservices to develop procedures to deliver this.

Questions

Are there opportunities to improve transparency by publishing information about other decisions made by CASA, Airservices or airports around flight paths, and how aircraft approach and depart airports?

The Qantas Group considers the current arrangements are fit-for-purpose.

How can the flight path design principles be improved?

A more detailed outline of the Qantas Group's position on flight path principles is provided in the section 'Flight Path and Airspace Planning' above. The key areas for improvement are:

— Efficient flying: Structuring the flight path and air traffic management frameworks and resourcing to facilitate more fuel-efficient and less emissions intensive flying;

— A wholistic review of the Sydney Basin flight paths and air traffic management to deliver significant operational benefits, improve fuel efficiency and reduce related emissions; and

— The broader introduction of RNP-AR.

How can the existing consultation framework be improved to facilitate efficient planning and development, while preventing environmental harm and ensuring continued access for aviation users?

One of the key challenges for industry is the uncertain nature of the process.

The current timelines to engage (up to 12 weeks for a level 1 change) are appropriate, however this can be reset for every design iteration, even if moderate.

The result can be an ongoing consultation process without a clear end point. This should be revisited to ensure the consultation process is definitive and certain for all stakeholders.

Are Community Aviation Consultation Groups (CACG) working for the community? What are good aspects, and what can be improved?

The Qantas Group understands the importance of noise impacts to the community and supports the current CACG process.

Broader discussion and understanding of the balances and trade-offs between noise and emissions (often directly opposing) is essential to this process.

Efficient Airport Planning

Airport Master Plans and Major Development Plans

Airport Master Plans (MPs) and Major Development Plans (MDPs) set out an airport's long-term strategic vision and plans for key developments and form a key communication tool between an airport and its stakeholders. They inform airlines and the broader community of the planning principles, strategies and developments that an airport proposes. Airlines rely on these documents to understand future amenities and services for customers. As airport developments are predominately funded by airport users, these documents also inform airlines of the investment proposals that may drive future costs.

Transparency and Process

In accordance with the *Airports Act 1996* (Cth), both MPs and MDPs must be released by airports as preliminary drafts for public consultation prior to being submitted to the Minister for approval. However, there is a general lack of transparency which has resulted in downstream issues and the process could be streamlined and improved.

An airport is only required to notify relevant stakeholders of an MP or MDP by publishing a notice in any newspaper within the State it operates and then posting the documents on their website. This is an outdated means of notification for such critical documentation and requires interested parties to regularly check the websites of individual airports to stay informed. As a result, stakeholders will not necessarily know a consultation process is underway.

Although the *Airports Act 1996* (Cth) provides guidelines around the types and form of consultation, the guidelines state that they are "not intended to be prescriptive nor exhaustive". In the absence of detail, consultation processes are determined by airports and are inconsistent.

There is no transparency over the final form of the MPs and MDPs that are submitted to the Minister until they are approved. There are frequently substantial changes from the preliminary drafts provided at consultation phase and there is no consultation on these changes. There are also examples where the approval given by the Minister differs from the submitted documents without a reason being given.

There is also a lack of transparency about how an airport has considered feedback received during the consultation phase. It is very common for Qantas Group to provide feedback, for concerns to not be addressed and to never receive guidance on why.

Shortcomings in the consultation process have led to instances of restrictions being applied after MDPs are approved and construction is complete. For example, the new runway at Brisbane Airport opened in 2020. In 2022, the Brisbane Airport Post Implementation Review Advisory Forum (an independent advisory body established by the Government to provide advice to Airservices) implemented restrictions to the use of infrastructure approved in the MDP in the form of a year-long trial to remove intersection departures for aircraft departing on the new parallel runway. This trial is still in place 19 months later. These restrictions don't provide a material noise benefit and the Qantas Group estimates it will increase emissions by over 600,000 kilograms per year.

The cost of construction of this infrastructure is recovered by the airport through charging airlines. In this instance, this means airlines are paying for infrastructure they are prevented from using. There are obvious inefficiencies, broad cost implications and environmental impact when restrictions are imposed after approval and construction. Further, the risk of future changes creates significant uncertainty over future investment.

Once approved, there is also a general lack of visibility of the progress of projects. Stakeholders are not informed if

an airport is unlikely to meet an approved timeframe or if there is a request for an extension of time. For example, in 2015 Sydney Airport received approval to construct a hotel and a carpark. Through monitoring documents posted on Sydney Airport's website, the Qantas Group is aware that in June 2021 a variation was approved, and in October 2021 the date to substantially complete the project was extended to March 2024. As construction has not commenced, it appears highly unlikely that either will be substantially complete by March 2024. We are not aware if a further extension will be sought or the intention for either of these projects, and Sydney Airport has only advised that both are under review.

The lack of transparency and inefficient process could be addressed by the following reforms:

— Strengthening the guidelines within the *Airports Act 1996* (Cth) to:
  - Set out a comprehensive and clear process for community and stakeholder consultation;
  - Require an airport's submission to the Minister to detail the feedback received in the consultation phase, how such feedback has been considered and/or addressed and with a right of response from critical stakeholders; and
  - Require that any significant variations from the preliminary drafts to be subject to further consultation; and
— A national register to inform when MDPs and MPs are available for consultation and provide key details of approved documents, such as the validity period. This would be a simple, cost-efficient measure.

The Green Paper notes that there is currently no requirement for an airport to consider the emission implications of airport development or how access to people with disability will be ensured. Given the criticality of both issues, the Qantas Group supports reform in this regard.

While the process of submitting an MP or MDP can be costly and time consuming, it is appropriate given the economic significance, criticality and potential community and environmental impacts of the projects in question, and only arises every five to eight years (depending on the airport). If the consultation guidelines and framework are strengthened, it will enhance collaboration on airport planning which should improve subsequent MPs and MDPs and other planning activities, delivering cost efficiency.

Monetary Thresholds

The current monetary threshold of A$25 million for an MDP is appropriate. This is an important trigger to ensure there is appropriate consultation with stakeholders and appropriate controls can be implemented. An MDP includes the requirement to consult on environment, traffic and wind impact (among other things). While airports may argue this goes beyond planning provisions for similar development off-airport, developments in and around airports can have unintended consequences on aeronautical operations. If the monetary threshold was removed or increased to A$50M, there is a high risk that negative impacts including indirect impacts would go unassessed and unmitigated. For example:

— It is common that development projects requiring an MDP will indirectly impact aeronautical operations by generating additional traffic in and around the airport. It is also common that airports recognise roads as primarily an aeronautical asset and that increasing traffic volumes drive a requirement for them to further invest in road infrastructure. In most cases the airports seek to recover this cost from airlines and ultimately flying customers.
— Wind turbulence can have a significant impact on the safety of the runway. The requirement to complete an MDP ensures that wind modelling is completed and that any negative impact on the runway system can be mitigated through the design process.

In 2018, the threshold was raised to the current A$25 million to account for the increase in construction costs since the initial threshold of A$20 million was set in 2007. This represented a 25 per cent increase over 11 years. An increase from A$25 million to A$50 million would represent a further 100 per cent increase in only five years.

The *Airports Act 1996 — Airports Amendment Act 2018 Guidelines* (Cth) also provides the Minister with the ability to increase the threshold every three years as required and specifies what items should be included and excluded when considering the cost of construction. This mechanism provides suitable protection against any rising construction costs. In 2021, the option to increase the threshold was not taken.

If the thresholds were to be increased, new and additional measures would need to be introduced to ensure critical matters such as traffic and wind are still assessed.

The dual till model

The Green Paper states that "The long-held, bipartisan policy enabling airports to draw income from non-aviation, commercial development has been accepted by past Governments as a way to enable investment in aviation infrastructure and has largely been successful."

The Qantas Group disputes that the dual till model in Australia has been largely successful. The dual till model results in higher aeronautical charges and effectively enables monopoly airports to charge unregulated rents for non-aeronautical assets such as car parking, retail and lounges. Revenue from non-aeronautical assets is not drawn on by monopoly airports to facilitate investment in aviation infrastructure, rather it facilitates the super-profits of monopoly airports.

The Qantas Group's position on the economic regulation of airports, including the profitability of airports, is outlined in detail in detail in Chapter 4 (Economic regulation of Australian airports) of this submission.

Coordination of freight on and off airports

The Qantas Group supports initiatives to better coordinate freight activities on and off the airport. The National Freight and Supply Chain Strategy aims to facilitate improved coordination and the Qantas Group welcomes further engagement with the Government as part of its ongoing review process.

The Qantas Group supports the sharing of non-commercially sensitive data within the freight community to improve processes. Digital technology advances and investment in platforms which facilitate the real-time flow of information and updates, such as the National Freight Data Hub, will allow freight stakeholders both on and off airport to more efficiently coordinate the movement of freight and respond better to operational issues. The European Cargo community has already established a collaborative hub to better align stakeholders with airport activities. It is essential that any platform is a 'single record' aligned with international data sharing standards, including IATA's One Record.

Airports also have existing processes in place to coordinate their operations (for example, that enable other airports to track delays which may impact their own operations) and these could be leveraged to activities beyond the airport such as freight.

Incompatible land-use around airports can impact freight operations and growth opportunities. The area around Sydney Airport is already congested which prevents significant expansion. Aligning land-use planning around airports, particularly newer airports such as Western Sydney Airport, will lead to greater freight movement efficiencies.

Additionally, aligning Government and Departmental resources to demand will also promote efficiency in the freight market. Many key Departmental officers associated with cargo operations are only available during traditional working hours. With varied resourcing and advances in technology and a risk-based approach to clearance activity (discussed in more detail in Chapter 8 (Fit-for-purpose agencies and regulations) of this submission), the Qantas Group contends that the process could be expedited to allow export and domestic freight to cleared and delivered more efficiently.

Environmental Regulation at Airports

The Qantas Group welcomes the Australian Government's efforts to conduct a nation-wide PFAS Investigation Program at Australian airports. However, the PFAS Airports Investigation Program in its current form is focused on identifying the extent and nature of PFAS impacts across Australian airports and does not seek to identify the source of PFAS contamination, determine responsibility for PFAS contamination or remediate source zones of PFAS contamination.

Without identifying, understanding or remediating the source zones of contamination, the program will be ineffective at managing and/or reducing the off-site migration of PFAS due to the well documented ineffectiveness of management measures at preventing PFAS from mobilising into the environment. Regulation and remediation of source zone areas is required for the program to be effective.

Occupiers of impacted sites should not be unfairly burdened with remediation costs to implement PFAS management solutions for contamination not caused by them.

Questions

How could the Australian Government improve regulation to facilitate efficient planning and development while preventing environmental harm and protecting airports for aviation use?

The Qantas Group recognises the value of a robust regulatory process for planning and development projects at Australian airports and appreciates the complexity associated achieving a more efficient development process that also maintains a focus on preventing environmental harm. While there are instances where these objectives conflict with one another, the Qantas Group has identified several opportunities that the Government may wish to consider to simultaneously improve environmental performance and facilitate a more efficient planning and development process across Australian airports, including:

— The planning and development approvals and permitting process varies significantly from one airport to another. The *Airports (Environmental Protection) Relations 1997* (Cth) (the Regulations) do not provide explicit requirements. This has led to airports developing their own policies, contaminated sites strategies, incident reporting and escalation processes. This creates confusion for operators that are operating across multiple ports, inefficiencies and increases the risk of non-compliances. Harmonising the planning and development process at Australian airports would significantly improve transparency and facilitate a more consistent and efficient planning and development process for airports tenants. The Government may wish to consider engaging with airports to discuss opportunities to develop a nationally consistent approach to simplify, streamline and harmonise the planning and development process;

— The Regulations include limits for pollutants in soil and water. This approach is inconsistent with the risk-based approach outlined with the National Environmental Protection (Assessment of Site Contamination) Measure as amended in 2013 (NEPM). The NEPM does not include limits for pollutants in soil and water, but instead includes investigation levels and screening levels which trigger the requirement for further investigation. The risk-based approach outlined within the NEPM also supports the development

of site-specific assessment criteria and favours a more proportional approach to contamination management. Transitioning away from the use of limits towards the application of screening levels would provide a framework that is sufficiently preventative of environmental harm whilst also supporting development practices more aligned with the principles of ecologically sustainable development;

- Currently there are no standards, screening criteria or guidelines that support the reuse of soil, surface water and groundwater on-site. Consistent with the principles of a circular economy, the Government may wish to consider engaging with airports to derive site-specific reuse suitability criteria for building materials, soil, surface water and groundwater. Such criteria would enable the principles of circular economy and ecologically sustainable development to be embedded with a development project at the design phase, ensure that adequate controls are in place to prevent environmental harm, assist the aviation industry to achieve its sustainability targets and enable a more transparent planning and development process across Australian airports. An example of a possible framework which may be suitably adapted to Australian airports is the New South Wales Environment Protection Authority Resource Recovery Orders and Exemptions, which clearly outline individual testing requirements for material reuse to support the principles of ecologically sustainability development without increasing the risk of land contamination; and
- Preventing environmental harm through efficient and proactive planning and development goes beyond just regulation. Government should encourage airports to work with airline tenants from the early planning and development stages to best incorporate key infrastructure to reduce potential future environmental harm as well as utilising airport space more effectively for aviation use.

With the Regulations sunsetting in 2025, the Qantas Group looks forward to participating in a broader consultation process in due course.

Is a monetary threshold still an appropriate mechanism for determining a 'major airport development' requiring a Major Development Plan (MDP)? What other significance tests could the Australian Government consider?

The Qantas Group supports maintaining the current monetary thresholds. We believe the current legislation provides suitable protection against rising construction costs and if the monetary threshold was removed or increased, there is a high risk that negative impacts would go unassessed and unmitigated. This point is addressed in more detail under the heading 'Airport Master Plans and Major Development Plans' above.

Do current master planning processes adequately account for climate risks and if not, how could they be improved?

Global warming is a shared challenge and one that requires action from all in the sector, including airports. Climate change has been identified as a material business risk to the Qantas Group and we are investing accordingly.

It is unclear how airports are actively accounting for climate related risks rather than just transferring these on to users of the airport.

While high level targets and overarching sustainability comments are often made in MDPs and MPs, there is no disclosure of how these are going to be tracked or met.

Sustainability targets and the risk posed by climate changed should be accounted for in planning documents as critical and capital intensive as MDPs and MPs, and there should be a mechanism to track progress against targets.

Do the current master planning processes support all airport users, including general aviation?

The lack of transparency in the MDP and MP process does not adequately support all airport users and all interested stakeholders would benefit from the reforms described in more detail under the heading 'Airport Master Plans and Major Development Plans' above.