Western Sydney International (Nancy-Bird Walton) Airport

Flight path design for single runway operations

Minister's message



The opening of Western Sydney International (Nancy-Bird Walton) Airport is an exciting opportunity for Western Sydney.

Designed as an ultra-modern, curfew-free airport that will meet the needs of Western Sydney and Australia for decades to come, the Airport is a catalyst for

infrastructure investment, economic activity and jobs growth for Western Sydney communities.

Western Sydney's new airport is already delivering benefits to the Western Sydney community. Around half of the jobs created during construction so far have gone to Western Sydney locals, and more than \$100 million has been contracted by WSA Co Limited to Western Sydney businesses, including small and medium enterprises, as well as family and First Nations businesses.

The Australian Government is currently working to design flight paths for Western Sydney International Airport. Designing flight paths for any airport is complex, highly technical and requires a careful and thorough process to ensure that it balances competing needs from the community, industry and existing airspace users, while maintaining safety as the priority. This is particularly true when it comes to a complex region like the Sydney Basin which already includes Sydney (Kingsford Smith) Airport, RAAF Richmond and other busy airports.

I am committed to ensuring the community are fully consulted on the impacts of the flight paths and that views are carefully considered as part of the draft Environmental Impact Statement (EIS) scheduled for release in mid-2023. In addition to setting out the preliminary flight paths, the EIS will help the community to understand the forecast environmental impacts from the flight paths, including aircraft noise and potential impacts on air quality, greenhouse gases and wildlife. The community will be invited to provide feedback on the flight paths during the public exhibition period, scheduled to begin in mid-2023.

This brochure is to provide you with the information of how we got to this point, the process from here, the principles used to develop the preliminary flight paths and how you can participate in the consultation process. Once the community consultation opens, I invite you to have your say. Your feedback is integral to ensuring we deliver the best possible outcome for communities across Western Sydney.

The Hon Catherine King MP

Minister for Infrastructure, Transport, Regional Development and Local Government

What's happening now?

The Australian Government is responsible for developing the flight paths for single runway operations at Western Sydney International (Nancy-Bird Walton) Airport (WSI) by the end of 2026.

We are currently in the preliminary design and environmental assessment phase for single runway operations, and are scheduled to release a draft EIS on WSI's flight paths in mid-2023. We will be seeking feedback from the community during this public exhibition period to guide the final flight path design.

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The Australian Government is committed to consulting the community on the WSI flight paths. This brochure provides an overview of the design process and outlines how you can be involved in the consultation process when the preliminary flight paths are released for environmental assessment.

Please refer to **www.westernsydneyairport.gov.au** or scan this QR code for additional information. You can also contact the project team via **WSIflightpaths@infrastructure.gov.au** or **1800 038 160**.



Developing flight paths for Western Sydney International (Nancy-Bird Walton) Airport

Who is developing the flight paths?

Flight paths for the Airport are being designed by a team of experts, guided by the 12 Airspace Design Principles from the Western Sydney Airport Plan. The principles were informed by and reflect community and industry feedback on the WSI Stage 1 Development EIS from 2015-16. The principles seek to maximise safety, efficiency and capacity, while minimising impacts on the community and the environment. For a full summary of the design principles, please see page 4.

An Expert Steering Group (ESG) oversees the technical design process and is led by the Department of Infrastructure, Transport, Regional Development, Communications and the Arts. It includes Airservices Australia, the Civil Aviation Safety Authority (CASA), the Department of Defence and WSA, the Airport operator. The operator of Sydney (Kingsford Smith) Airport and the Chair of the Forum on Western Sydney Airport (FOWSA) also attend ESG meetings.



Figure 1 & 2 Front cover of the current Airport Plan (left) and photo of a WSI flight paths design workshop (right)

What is the process and timeline?

Flight path design in Australia generally starts with developing proof-of-concept designs. This first step was completed as part of the WSI Stage 1 Development EIS and Airport Plan in 2016 to demonstrate that a new airport at Badgerys Creek could operate safely along with all other airspace movements in Greater Sydney. Since then, we've commenced planning for flight path design options and made significant changes to the design approach as a result of feedback received in 2015-16, including:

- minimising noise on residential areas
- minimising the impacts of air operations on natural and visually sensitive areas
- avoiding aircraft converging over a single merge point in a single residential area.

The flight paths are being developed over several stages – we are currently in Phase 2: Preliminary Design and Environmental Assessment. See the following pages for more information on what is involved in each phase.

Summary flight path design process



Airspace design principles

In response to feedback received during public exhibition of the draft EIS for the overall WSI Stage 1 Development in 2015, the Western Sydney Airport Plan sets out 12 Airspace Design Principles that the design process is required to follow:



How are the flight paths being designed?

Designing flight paths involves highly technical work and requires a careful and thorough process to get it right. The design must balance competing needs from the community, environment, industry and users of the Greater Sydney airspace, while maintaining safety as the priority.

Each flight path is designed following the 12 Airspace Design Principles, international rules and other factors (including those listed in the dot points below). The flight paths are then assessed in both flight and air traffic control simulators, and subject to a process of continual review as other flight paths are developed or changed.



Figure 3 & 4 The design team tests each flight path in a flight simulator (left) and air traffic control simulator (right)

In developing the preliminary flight paths, the design team and ESG are guided by a range of matters which determine what is technically feasible for the design. These include:

- The runway alignment is fixed: there will be no changes to the north-east/south-west runway alignment, which was approved in the 2016 EIS and is currently under construction by WSA.
- The final approach and initial departure paths are fixed: given the fixed runway alignment and the requirement for aircraft to approach and depart the Airport on a relatively straight trajectory, there will be some areas/suburbs directly connecting to the runway ends that will be impacted by aviation operations.
- The altitude of aircraft is constrained: the height at which aircraft operate is determined by a number of factors, including the aircraft type, weather conditions, safety requirements and international rules of aviation.
- The presence of existing airports in Greater Sydney: major changes cannot be made to the flight paths for Sydney (Kingsford Smith) Airport and considerations need to be made for operations at other airports, such as Camden, Bankstown, Richmond and Holsworthy. See Figure 5 for an example of current flight paths out of Sydney (Kingsford Smith) Airport and the location of other airports in the Sydney Basin.
- The Airport having 24-hour operations: the Airport has always been planned to operate 24-hours, and this is fundamental to the viability of its operations.



Figure 5 Current flight paths out of Sydney (Kingsford Smith) Airport and the location of the other airports in the Sydney Basin. This image depicts all flights arriving (gold) and departing (blue) Sydney (Kingsford Smith) Airport over a one-day period in 2017.

How will I know the flight paths meet international best practice?

The ESG includes CASA, which is Australia's safety regulator, and Airservices Australia, Australia's air navigation service provider. Both are world recognised experts in aviation safety and design. In addition, the airspace design process complies with International Civil Aviation Organization design standards.

A peer review of the flight path design process for WSI has been undertaken by NATS, an independent UK organisation with global expertise in air traffic management.



Figure 6 Front cover of the International Civil Aviation Organization RNP ARI Procedure Design Manual

How can I participate?

The Australian Government is committed to consulting the community on WSI flight paths.

Feedback received during public exhibition of the draft EIS for the overall WSI Stage 1 Development in 2015 continues to inform design development and environmental assessment of the preliminary flight paths.

The Government will be seeking further formal feedback from the community during public exhibition of the draft EIS in mid-2023. During this time there will be easy to access and meaningful opportunities for you to understand the preliminary flight paths and their impacts, and a wide range of channels for you to provide feedback.

Who can I contact for more information?

You can contact us about the project via WSIflightpaths@infrastructure.gov.au or 1800 038 160, or visit www.westernsydneyairport.gov.au.

For further information on design and construction of the Airport, please contact WSA via:

- www.westernsydney.com.au
- 1800 972 972
- Visit the Western Sydney International Airport Experience Centre (100 Eaton Rd, Luddenham).



Figure 7 & 8 Photos of past community engagement for WSI

Information in your language



Translating and Interpreting Service (TIS National)

If you require the services of an interpreter, please contact the Translating and Interpreting Service on **131 450** and ask them to call the WSI Flight Paths team on **1800 038 160**.

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如果您需要口译服务,请致电 **131 450** 联系笔译与口译服务署(Translating and Interpreting Service),并请他们拨打 **1800 038 160** 联系西悉尼国际机场飞行路径团队 (Western Sydney International Airport Flight Paths)

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The Australian Government acknowledges the Traditional Owners of Country throughout Australia. We pay our respects to Elders past, present and emerging.

