



Australian Government

Department of Infrastructure, Transport,
Regional Development, Communications and the Arts

August 2024

Western Sydney International (Nancy-Bird Walton) Airport

Flight path proposals for night time procedures







The new Western Sydney International (Nancy-Bird Walton) Airport (WSI) is set to open for domestic and international travellers, and freight by late 2026.

In response to the submissions to the draft Environmental Impact Statement (EIS) for the preliminary flight paths for WSI, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the department) is consulting impacted communities on 2 flight path proposals for night time procedures associated with Reciprocal Runway Operations (RRO):

1. revised flight paths for jets travelling east from WSI; and
2. a new noise abatement procedure.

Consultation will take place during August 2024.

Stay informed

-  Visit the **Aircraft Overflight Noise Tool** to view the preliminary flight paths in more detail at wsiflightpaths.gov.au
-  View the draft EIS and project information on our **Online Community Portal**: wsiflightpaths.gov.au
-  Stay updated about the project, or reach out to the project team at wsiflightpaths.gov.au
-  For questions, please contact the team at wsiflightpaths@infrastructure.gov.au or by calling **1800 038 160**

Consideration of submissions

During the draft EIS public exhibition period, the department received 8,477 submissions.

A brochure providing an overview of the issues raised in submissions is available online at wsiflightpaths.gov.au/resources.

The department is considering all submissions, including suggested changes to the preliminary flight paths and runway operating modes, to identify possible flight path improvements. The proposed redirection of jets travelling east from WSI at night and a proposed noise abatement procedure for night-time operations are outcomes from this process.

This brochure explains the proposals and the potential aircraft noise impacts associated with these 2 proposals.

Other suggested flight path changes that were raised in submissions are being considered separately, and will be outlined in the final EIS.

Runway modes of operation

WSI's runway will be in a north-east to south-west direction. Generally, aircraft land and take-off into the wind. The prevailing wind conditions influence which runway direction is used at any time during the day and evening.

Between 11 pm to 05:30 am, when air traffic demand is lower and weather conditions permit (generally in calm wind conditions with no rain), the 'head-to-head' or Reciprocal Runway Operations (RRO) runway mode can be used to minimise the impact of noise on the most heavily populated areas of Western Sydney. This means aircraft could land on Runway 05 – arriving from the south-west, and take-off on Runway 23 – departing to the south-west.

Both the 2016 EIS for the stage 1 development of WSI and the 2023 draft EIS described this possible 'head-to-head' or RRO operating mode. The Western Sydney Airport Plan also states the use of RRO, when safe to do so, will be the preferred option for managing aircraft noise at night. The 2023 draft EIS discusses RRO and notes that it would impact the least number of residences.

Figure 1: Proposed runway modes of operation at night



*RRO is suitable only at night (11pm to 05:30am) when traffic demand levels and weather conditions permit.

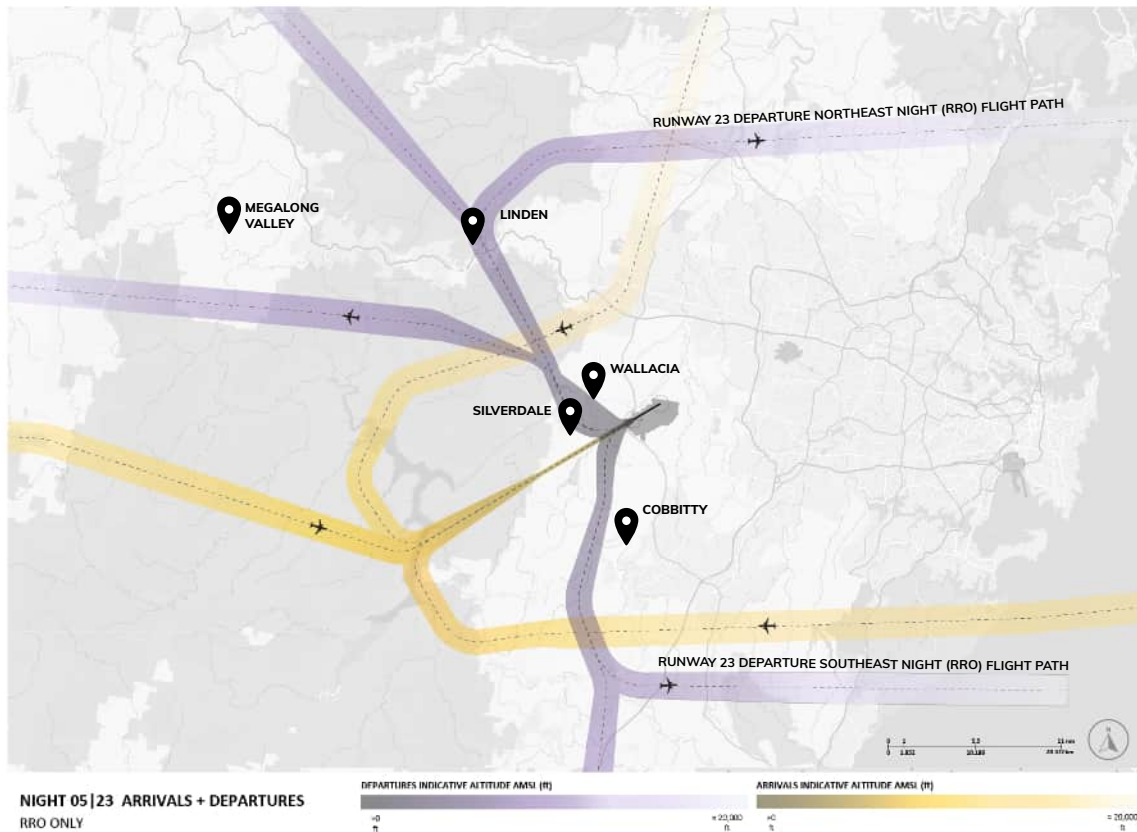
The proposals

The department is consulting on 2 proposals for the RRO flight paths.

1. Removing the flight path Runway 23 Departure Northeast Night (RRO) for jet aircraft and reallocating those aircraft to the flight path south of WSI (the Runway 23 Departure Southeast Night (RRO) flight path).
2. A RRO Noise Abatement Procedure for aircraft travelling to the north and west of the airport.

The RRO arrivals and departure flight paths released in June 2023 and included in the 2023 draft EIS are displayed in Figure 2.

Figure 2: RRO mode released in June 2023 and the 2023 draft EIS



In this RRO runway mode, departing aircraft would be required to turn as early as possible to avoid conflict with arriving aircraft, and to maintain sufficient arrival and departure capacity. Departures to the north were designed to cross the Great Western Highway at an area of lowest population density. Aircraft departing to the south and east would remain clear of Camden, The Oaks, Picton, Tahmoor and Wilton.

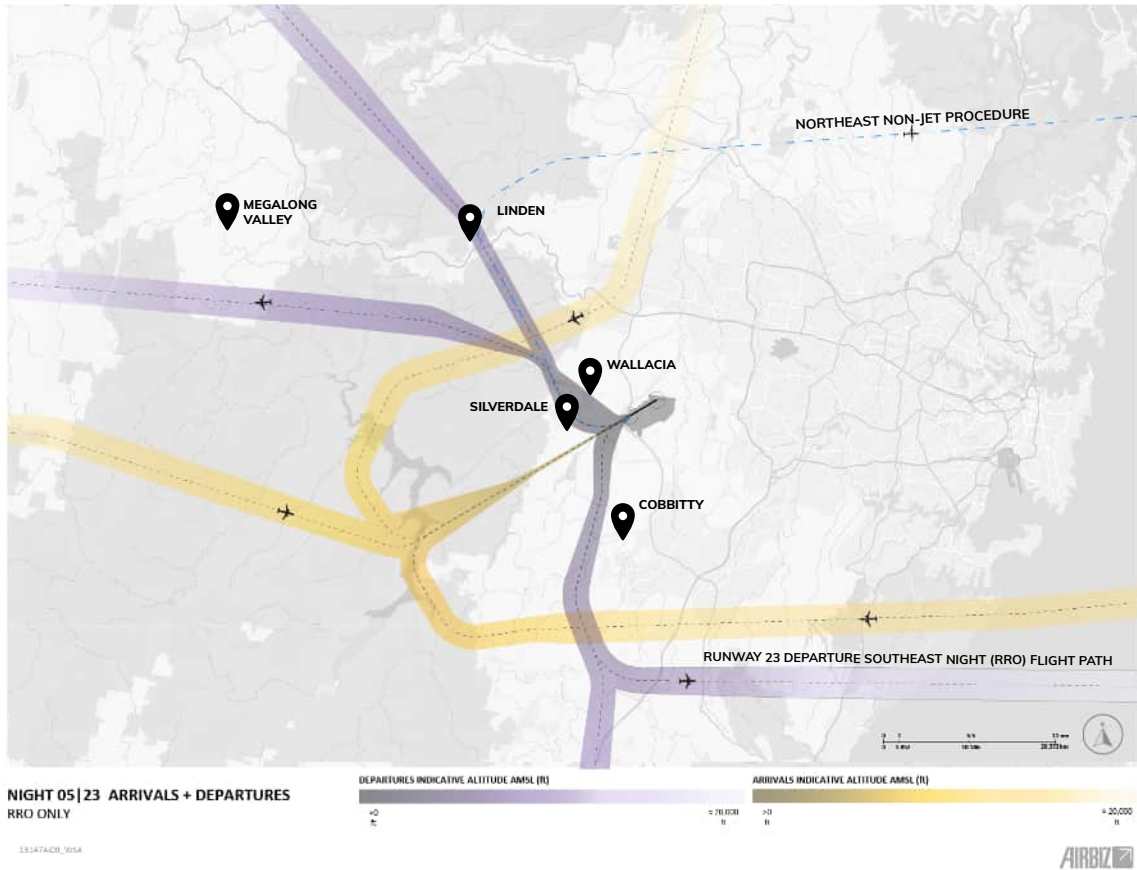
Proposal 1: Revised flight paths for jet aircraft travelling east from WSI during RRO

Residents north and north-east of WSI and in the mid-Blue Mountains expressed concern about night time aircraft overflights.

In response, the design team proposes removing the Runway 23 Departure Northeast Night (RRO) flight path for jets and reallocating those to the Runway 23 Southeast Night (RRO) flight path.

This change involves removing the Runway 23 Departure Northeast Night (RRO) flight path for jet aircraft as a procedure in the RRO mode (see Figures 2 and 3) and reallocating all jet departures that would use this flight path to the Runway 23 Southeast Night (RRO) flight path. There are currently no non-jet aircraft predicted to depart WSI to the north-east at night. As a contingency, a non-jet procedure to the north-east would be included in the RRO mode should one be required. This proposal is illustrated in Figure 3.

Figure 3: Proposed RRO mode with the removal of the Runway 23 Departure Northeast Night (RRO) flight path for jet aircraft, and inclusion of a non-jet procedure to the north-east in case this is needed.



Under this proposal, all jet aircraft bound for the north-east, east or south-east from WSI when the RRO mode is in use would take off from the south-west end of the runway, make a left hand turn and then travel along the Runway 23 Departure Southeast Night (RRO) flight path that heads south before heading east over the ocean.

The Runway 23 Departure Southeast Night (RRO) flight path has been designed so that aircraft would remain clear of high-density residential areas in Camden, The Oaks, Picton, Tahmoor and Wilton. Under this proposal, 1 additional departure flight is predicted to use this flight path at night in 2033. As such, in 2033 the difference in aircraft noise is not expected to be significant.

Proposal 2: RRO noise abatement procedure

Most major airports in Australia have noise abatement procedures designed to reduce the impact of aircraft noise on the community. You can read more at airservicesaustralia.com/about-us/about-our-operations/noise-abatement-procedures/

The RRO mode seeks to minimise the number of people and dwellings exposed to aircraft overflight noise at night when conditions allow it to be applied. Noise abatement procedures, other than what is shown in this brochure, will be further considered in the detailed design phase of the airspace design process.

Residents from Wallacia and Silverdale expressed concerns with the RRO departures making a right turn near their communities. They suggested the turn could be made later along runway centreline, to avoid overflight of their communities. Mid-Blue Mountains residents, specifically from Linden and Faulconbridge, suggested the flight paths could be moved west of Katoomba, to avoid overflight of their communities.

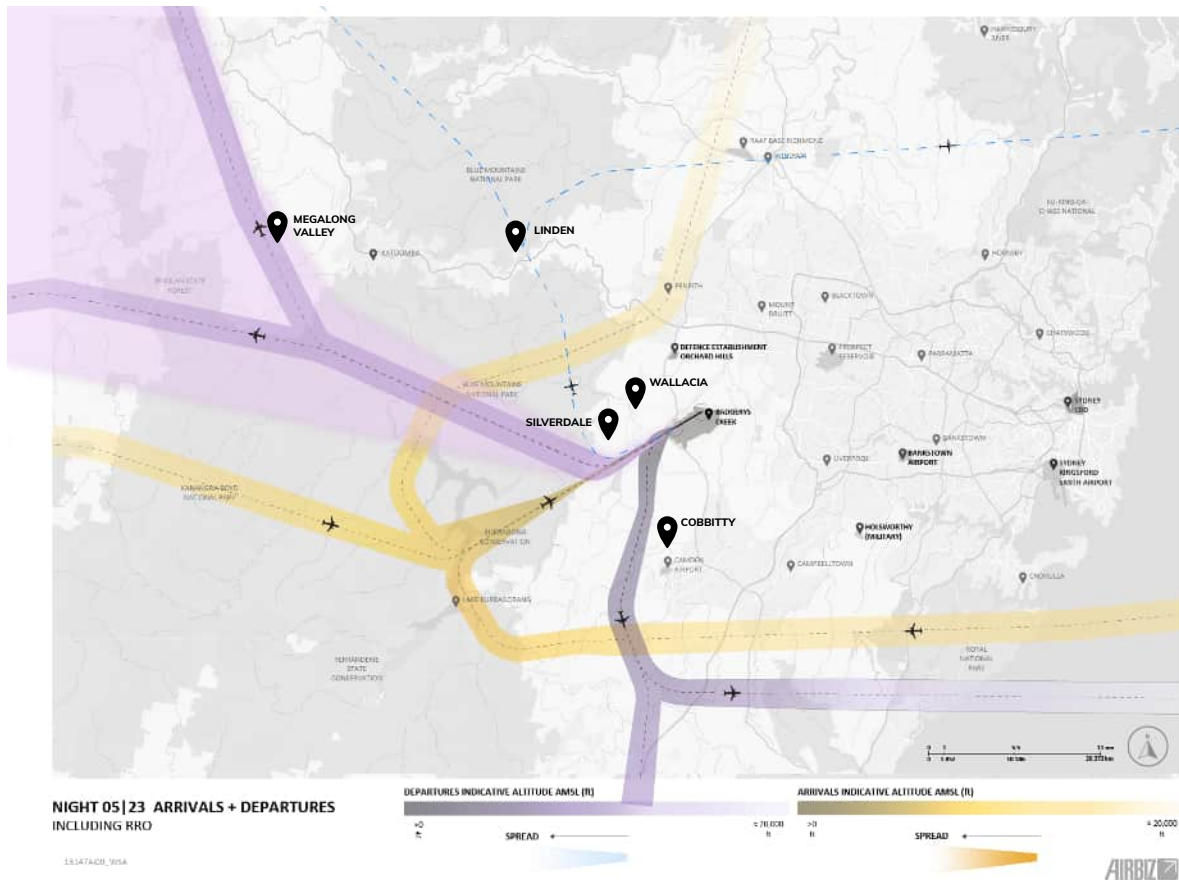
In response to the feedback, the design team developed a noise abatement procedure: the 'Reciprocal Runway Operations Noise Abatement Procedure' (RRO-NAP) for the night time period.

When there are no arriving aircraft within 30 nautical miles (about 55.5 km) of the runway, aircraft taking off in a south-west direction flying to destinations in the north and west, would be kept on runway heading for longer, until clear of Silverdale and Wallacia. Air traffic control (ATC) would then direct aircraft around noise sensitive areas to the south-west of the runway. Aircraft would be kept west of Katoomba and fly over the Megalong Valley before joining their on-route flight path. When aircraft fly over the Megalong Valley, they would be at a higher altitude than if they were crossing the Great Western Highway near Linden.

This procedure could divert up to 80% of night time movements from north and westbound tracks in 2033 when RRO is in use, reducing overflights of Wallacia, parts of Silverdale, and the Great Western Highway near Linden and Faulconbridge. As aircraft demand grows, this procedure could divert up to 40% of movements in 2055.

Figure 4 illustrates how the proposed RRO-NAP would operate in the RRO mode. When traffic permits, the purple shaded area would be the indicative space and route that ATC would use to process jet aircraft travelling to the north and west in the RRO-NAP. When traffic does not permit, jet aircraft would use the current RRO departures flight paths heading to the north and west when RRO mode is in use (see Figure 3).

Figure 4: Proposed RRO-NAP with the revised flight paths for jets travelling east from WSI at night



Non-jet aircraft require an alternative route as they perform differently to jet aircraft. Non-jet procedures have been included in the design (see blue dotted lines), but are currently not predicted to be used for night time departures.

Noise modelling

Noise modelling has been undertaken to assess the aircraft noise impacts of the 2 proposals outlined in this brochure. The assessment has considered the 3 reference years set out in the draft EIS: 2033, 2040 and 2055.

The next pages show the N60 night noise contours for each of the 3 reference years as a 'before' and 'after'. The 'before' images show the N60 night noise contours for the current RRO mode of operation that was published in the draft EIS. The 'after' images show the N60 night noise contours for the RRO mode of operation with the 2 proposals in this brochure included.

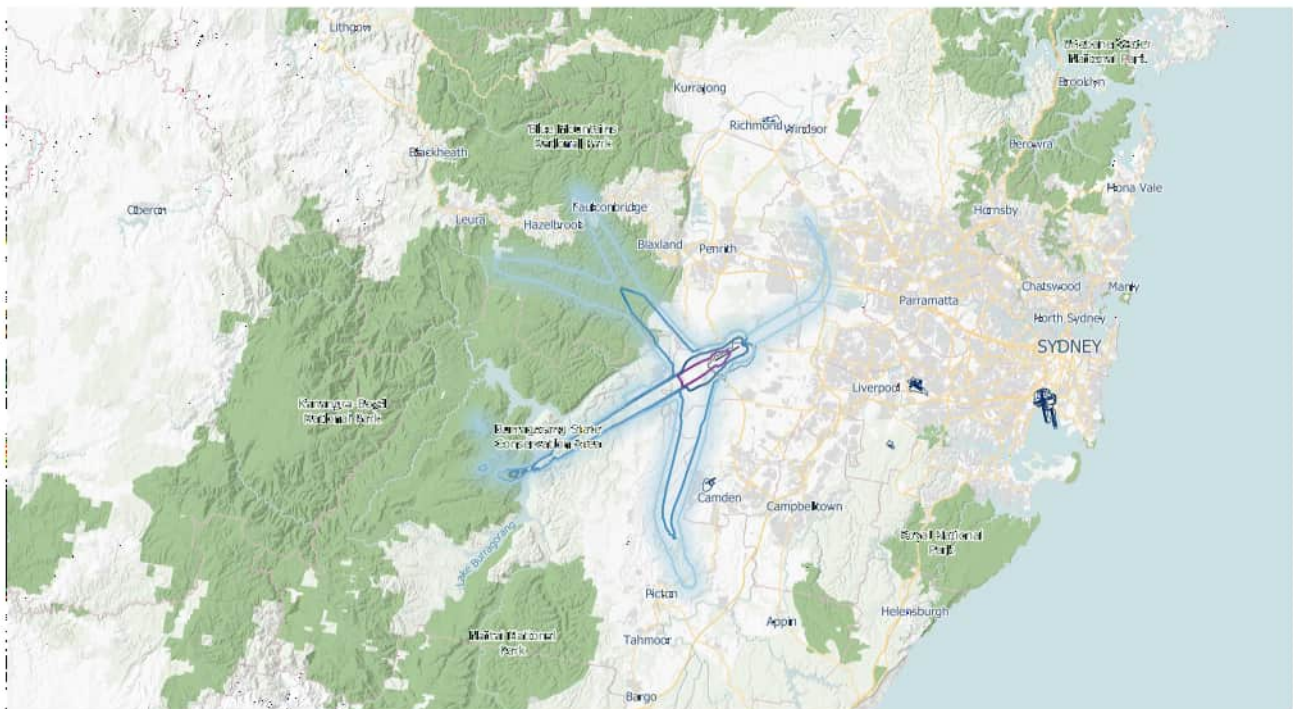
The N60 night measure shows the number of events at or above 60 decibels at ground level on an average night between 11pm and 05:30am. The N60 measure is generally used for night-time aircraft movements. For more information about how aircraft noise is modelled and the number above ('N-above') measure please see the noise assessment brochure published in October 2023, available at wsiflightpaths.gov.au/resources

Noise impacts - Proposals 1 and 2 - N60 night contours for 2033

2033 will be 7 years after WSI opens, when passenger numbers at WSI will reach the planned design capacity for the initial stage 1 terminal development of 10 million passengers per year.

Before

Figure 5: 2033 N60 night contour map published in June 2023 and in the 2023 draft EIS



RAIL 1 (2033)
 N60 - Night (11pm-5:30am)
 Scenario 4

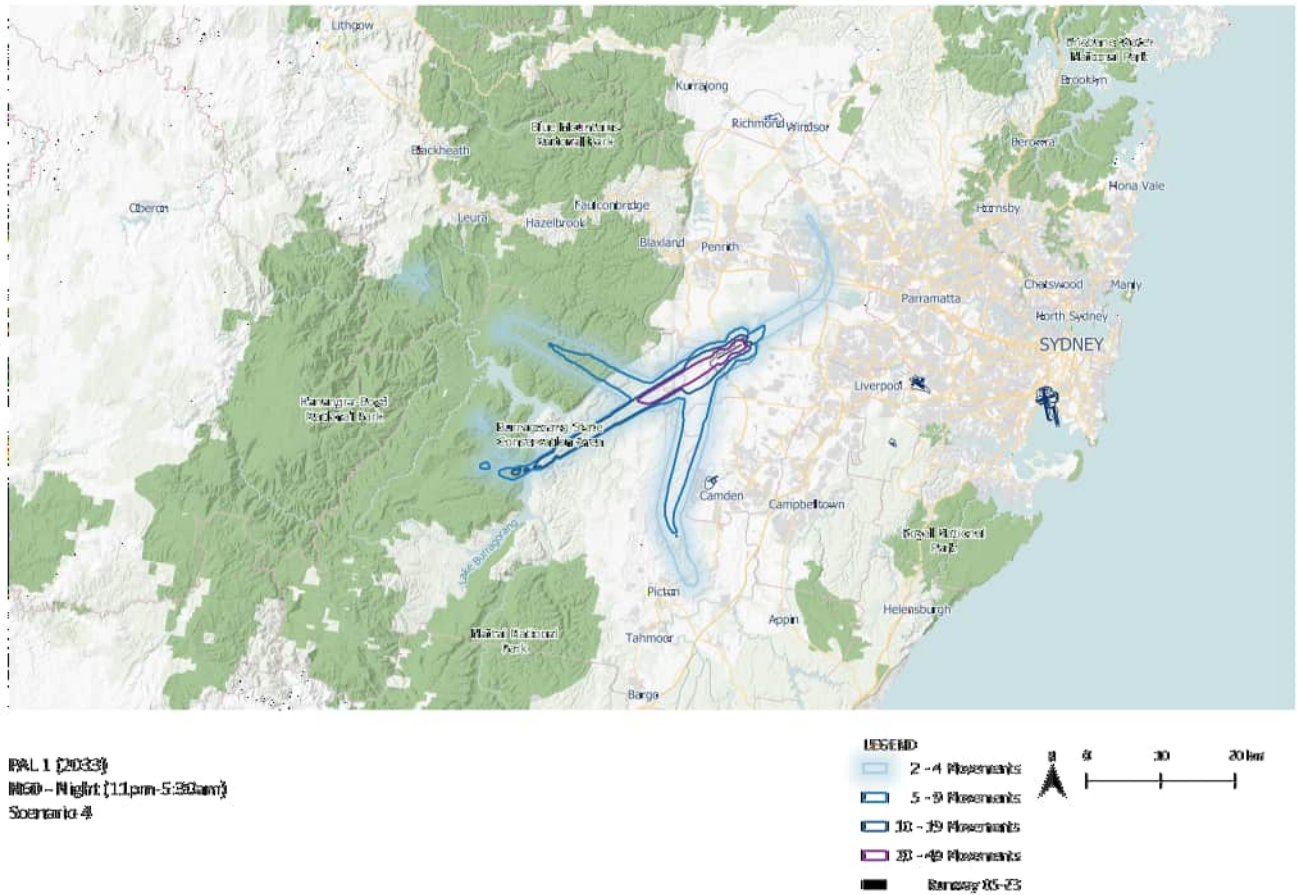
LEGEND

- 2-4 Movements
- 5-9 Movements
- 10-29 Movements
- 30+ Movements
- Density 05-25

0 10 20 km

After

Figure 6: 2033 N60 night contour map with the 2 proposals outlined in this brochure



Comparison of the 2033 'before' and 'after' contours

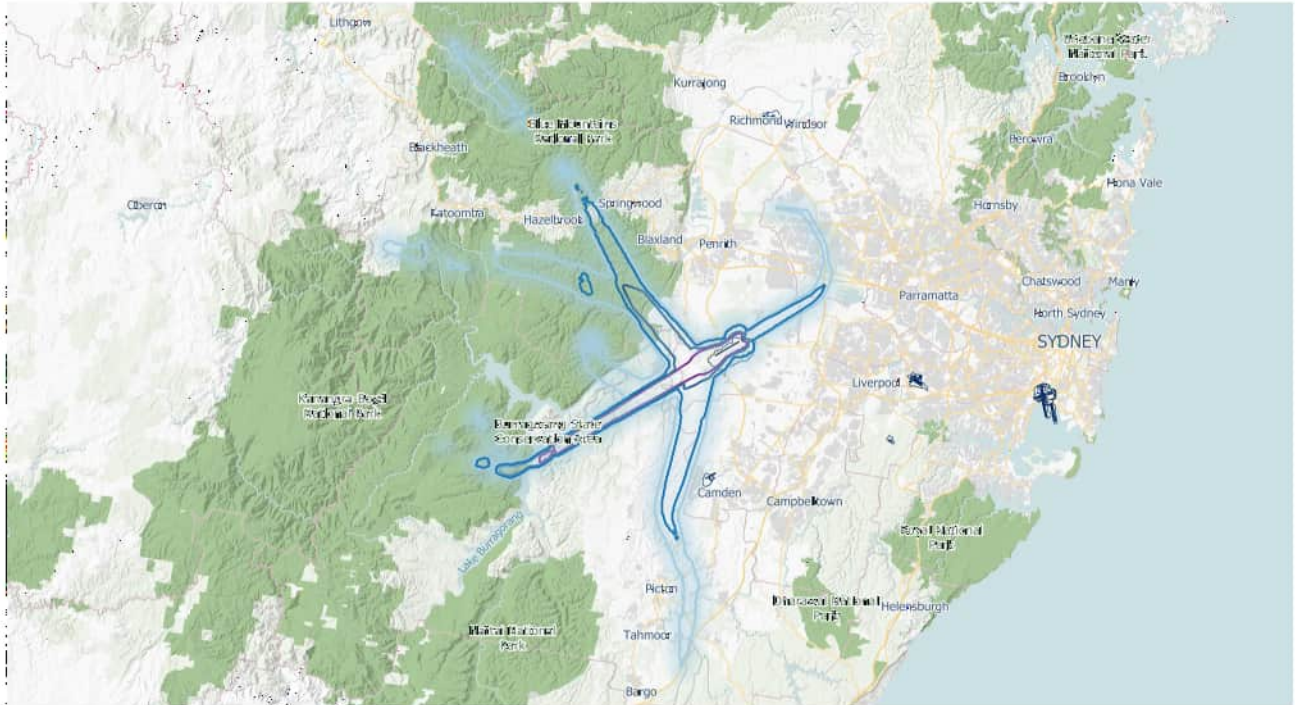
1. The contour no longer crosses the Great Western Highway due to the combination of eastbound jet aircraft flights being redirected to the south and the usage of the RRO-NAP. This means that these areas would no longer be predicted to experience 2 or more overflight events exceeding 60 decibels at night when RRO mode is in use.
2. The new contours displaying 2-4 and 5-9 movements extends further to the south-west of WSI before turning north. This change reflects the usage of the RRO-NAP.
3. Although there is no longer an N60 contour over the Great Western Highway, the area may still hear aircraft noise. The N60 contour does not show locations where there are less than 2 overflight events exceeding 60 decibels, or where there are overflight events that do not generate 60 decibels of noise on the ground.
4. There is no significant change to the southern N60 night contours.

Noise impacts - Proposals 1 and 2 - N60 night contours for 2040

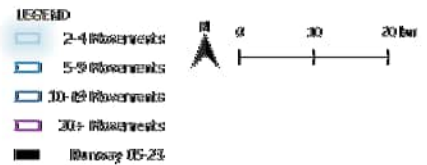
In 2040, WSI is expected to reach 15 million passengers per year.

Before

Figure 7: Original N60 night (11pm-5:30am) contour map for 2040 published in June 2023 and in the 2023 draft EIS

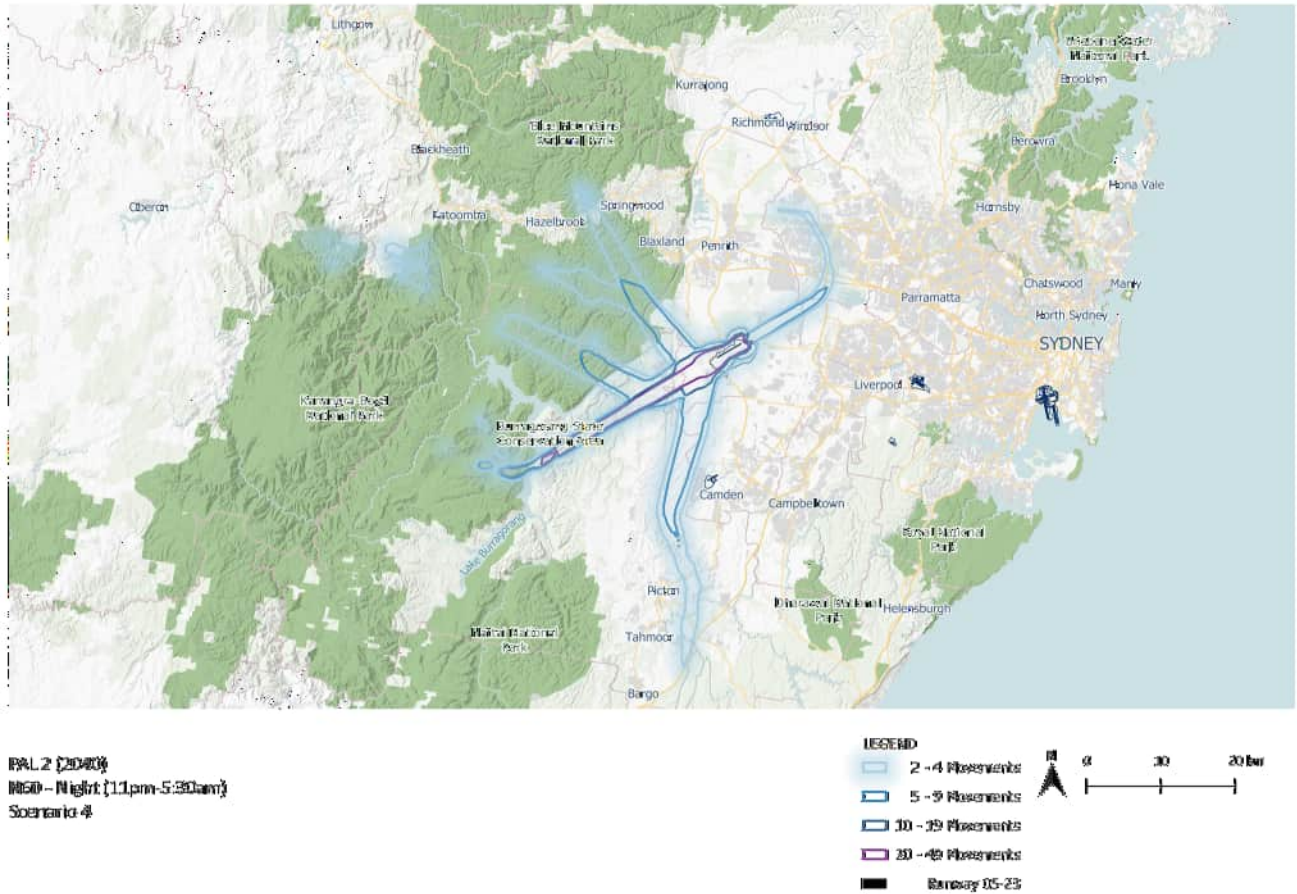


PA1.2 (2040)
 N60 - Night (11pm-5:30am)
 Scenario 4



After

Figure 8: N60 night contour map for reference year 2040 with the 2 proposals outlined in this brochure



Comparison of the 2040 ‘before’ and ‘after’ contours

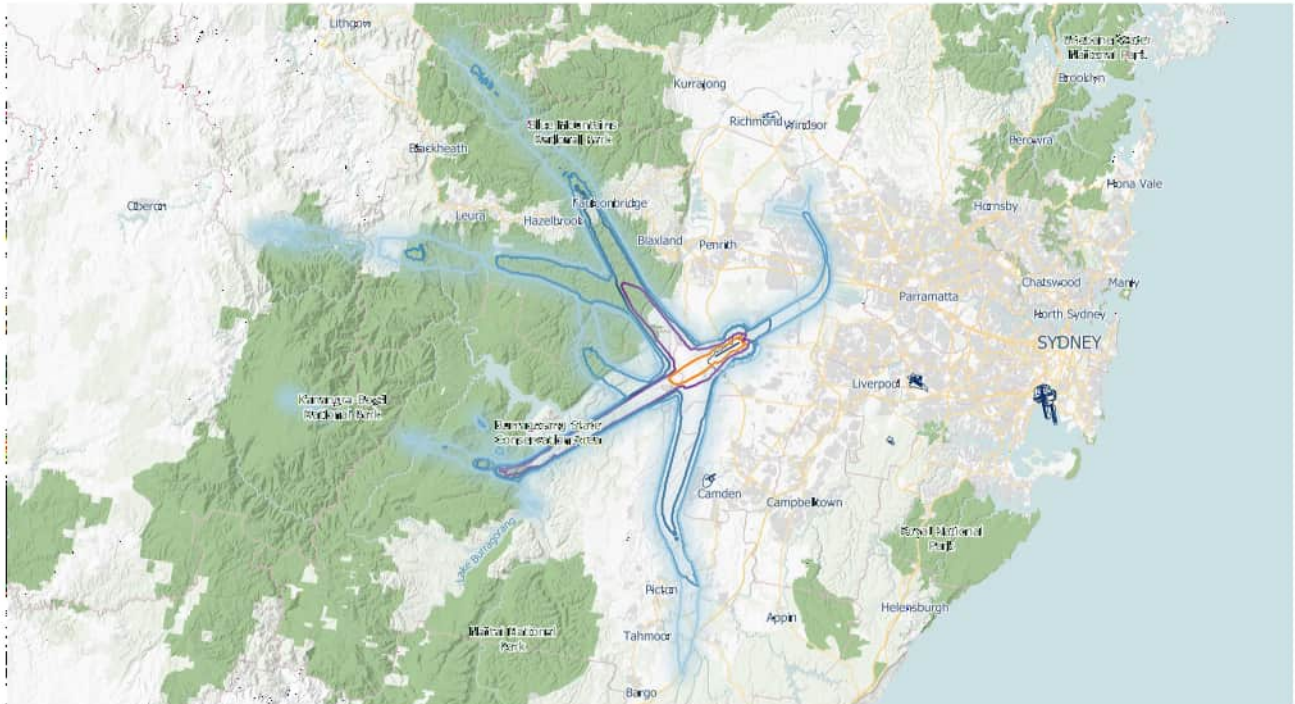
1. The contours displaying between 2–4 and 5–9 aircraft movements crossing the Great Western Highway have decreased in length due to the combination of eastbound jet aircraft flights being redirected to the south and the usage of the RRO-NAP.
2. The contours displaying 2–4 and 5–9 aircraft movements extending to the north-west of WSI and proceeding to the west, south of the Great Western Highway, have also reduced in extent.
3. New contours displaying 2–4 and 5–9 movements extend further to the south-west of WSI before turning north. This change reflects the usage of the RRO-NAP.
4. There is no significant change to the southern N60 night contours.

Noise impacts - Proposals 1 and 2 - N60 night contours for 2055

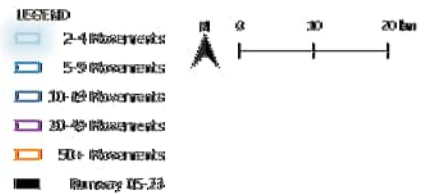
2055 represents the point when the single runway at WSI is expected to reach capacity at around 37 million passengers per year.

Before

Figure 9: 2055 N60 night contour map published in June 2023 and in the 2023 draft EIS

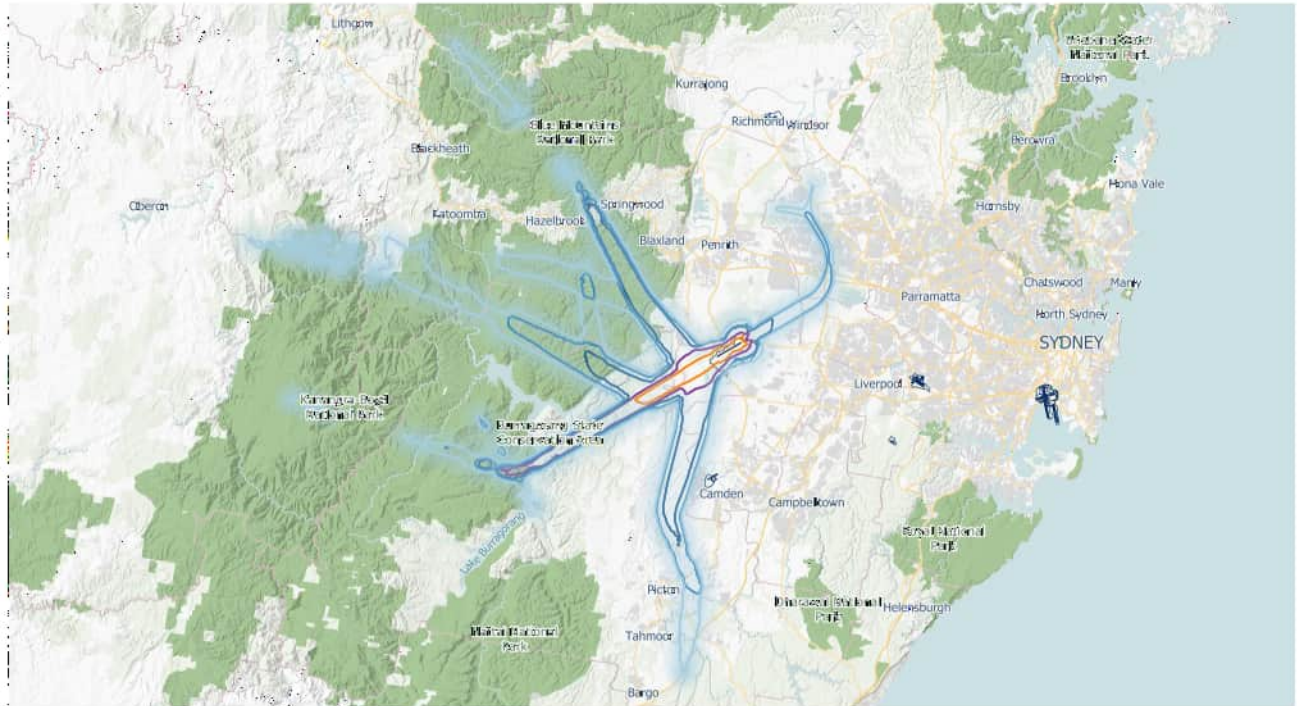


PA1.3 (2055)
N60 - Night (11pm-5:30am)
Scenario 4

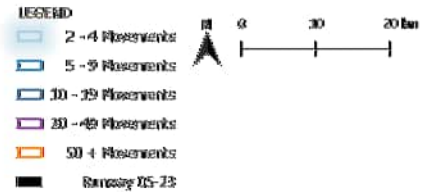


After

Figure 10: 2055 N60 night contour map with the 2 proposals outlined in this brochure



RAL3 (2055)
N60 - Night (11pm-5:30am)
Scenario 4



Comparison of the 2055 'before' and 'after' contours

1. As traffic at WSI increases, the usage of the RRO mode and the RRO-NAP will decrease. Some aircraft would continue to be able to use the RRO-NAP in RRO mode so that, overall, there would be less overflights of the Great Western Highway.
2. The increased length of contours to the south-west of WSI which extend to the north-west reflect the continued use of the RRO-NAP.
3. The contours displaying 2-4 and 5-9 aircraft movements extending to the north-west of WSI and proceeding to the west and south of the Great Western Highway have decreased.
4. There is no significant change to the southern N60 contours.

Feedback

Community information and feedback sessions for the proposals will be held in August 2024. Attend these sessions to learn more, speak with the flight paths team, and provide feedback. Details are available at wsiflightpaths.gov.au/visit-us or by calling **1800 038 160**.

There will be no formal submission process for this consultation. The department's preference is to receive verbal feedback at the information sessions. You can also provide written feedback on the proposals to wsiflightpaths@infrastructure.gov.au.

Consideration of feedback

The department will consider all feedback received at the information sessions in August in reviewing the proposals for inclusion in the final EIS. The department will endeavour to consider written feedback that it receives on the proposals. The final EIS is scheduled to be published in late 2024.

Next phase: detailed design and implementation

Following the finalisation of the EIS, Airservices Australia will begin detailed design and finalisation of the airspace and flight paths.

The department will then work with the Department of Climate Change, Energy, the Environment and Water on any conditions that may be attached to the final EIS to enable implementation of the final WSI flight paths and airspace design.

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**.

Nếu quý vị cần thông dịch viên, vui lòng gọi cho Dịch vụ Thông Phiên dịch (Translating and Interpreting Service) qua số **131 450** và yêu cầu họ gọi cho đội ngũ phụ trách Đường bay Sân bay Quốc tế Western Sydney (Western Sydney International Airport Flight Paths) qua số **1800 038 160**.

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)

यदि आपको दुभाषिए की सेवाओं की ज़रूरत है, तो कृपया **131 450** पर अनुवाद और दुभाषिया सेवा (Translating and Interpreting Service) से संपर्क करें और उनसे **1800 038 160** पर पश्चिमी सिडनी अंतरराष्ट्रीय हवाई अड्डा उड़ान पथ (Western Sydney International Airport Flight Paths) टीम को कॉल करने का अनुरोध करें।

إذا كنت بحاجة لخدمات الترجمة الشفوية, فيرجى الاتصال بخدمة الترجمة الكتابية والشفوية (Translating and Interpreting Service) على الرقم **١٣١ ٤٥٠** وأطلب منهم الاتصال بالفريق المعني بمسارات الطيران في مطار سيدني الغربية الدولي (Western Sydney International Airport Flight Paths) على الرقم **١٨٠٠ ٠٣٨ ١٦٠**.

Kung kailangan mo ng mga serbisyo ng isang tagasaling pasalita (interpreter), mangyaring makipag-ugnayan sa Serbisyo ng Pagsasalang Pasulat at Pasalita (Translating and Interpreting Service) sa **131 450** at hilingin sa kanila na tawagan ang pangkat ng Mga Landas ng Paglipad sa Paliparang Internasyonal ng Western Sydney (Western Sydney International Airport Flight Paths) sa **1800 038 160**.