PERTH NOISE IMPROVEMENTS 2015

Perth Airport is Australia's fourth-largest in terms of passenger numbers and operates 24-hours-a-day, seven-days-a-week. It is one of the most important transport facilities in Western Australia.

In recent years, Western Australia has become a major resources centre for the world and contributes 40 per cent of Australia's export income. Some 30 per cent of flights to and from Perth Airport are transporting fly-in, fly-out workers to mining and gas facilities in the north and southeast of the State. Additionally, the airport was a gateway for 807 000 international visitors in 2014, contributing 2.3 billion to the State's tourism economy.

Currently, Perth Airport sees about 150 000 aircraft movements (take-offs and landings) each year and this is expected to rise to 222 000 movements by 2034.

With three airports operating near Perth (Perth Airport, Jandakot Airport and RAAF Base Pearce) all areas of Perth experience noise from overhead aircraft from time-to-time to varying degrees. Even though new models of aircraft are continually designed to be quieter, growing public demand for more flights means many communities are exposed to increased aircraft noise.

Continuing air traffic growth over Perth, particularly since 2007, has resulted in an increased noise impact for residential areas, especially for those closest to the airport. As Australia's civil air navigation service provider, Airservices Australia has continued to closely monitor air traffic management practices over the Perth metropolitan area in order to better manage the resulting environmental impacts.

When considering air traffic management procedures, safety is Airservices first priority. Airservices must also balance its legislated responsibilities of fostering the growth of Australian aviation while mitigating its noise impacts as far as practicable.

Airservices considers Perth air traffic management holistically, with a view to implementing the best overall noise outcome for the community. Any changes proposed for one section of the community are not considered in isolation to other areas, nor are changes considered that potentially reduce the efficiency of the airport, particularly runway capacity and airline on-time performance.

COMMUNITY CONSULTATION

Airservices is committed to consulting with the community and providing appropriate information on changes that may affect them in relation to the impact of aircraft noise.

In 2015, Airservices will be holding community information sessions around Perth on an informal drop-in basis. Session times, locations and detailed information including fact sheets and animations will be progressively available at www.airservicesaustralia.com/projects/flight-path-changes/perth-noise-improvements-2015

Your feedback is welcomed by contacting the Noise Complaints and Information Service on 1800 802 584 (free call), email ncis@airservicesaustralia.com or by mail to PO Box 211, Mascot NSW 1460.

PERTH AIRPORT

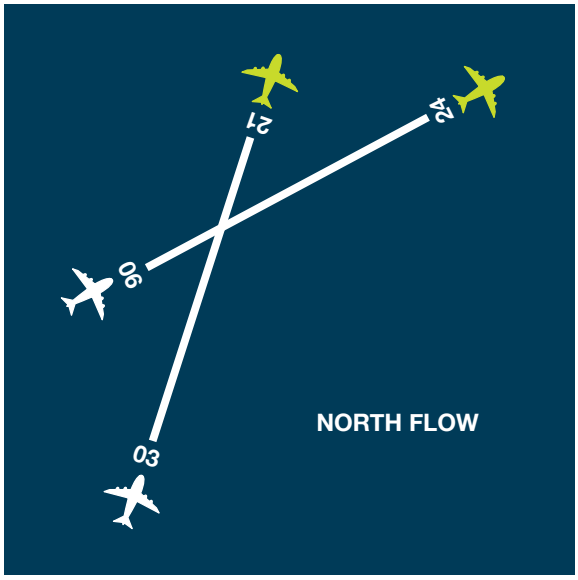
The main runway is aligned north/south, referred to as Runway 03/21, and can be used by all current commercial aircraft types. The secondary runway, referred to as Runway 06/24 or the cross runway, is aligned northeast to southwest. It is shorter than the main runway and not able to be used by all large aircraft as some need a longer distance to take-off and land safely.

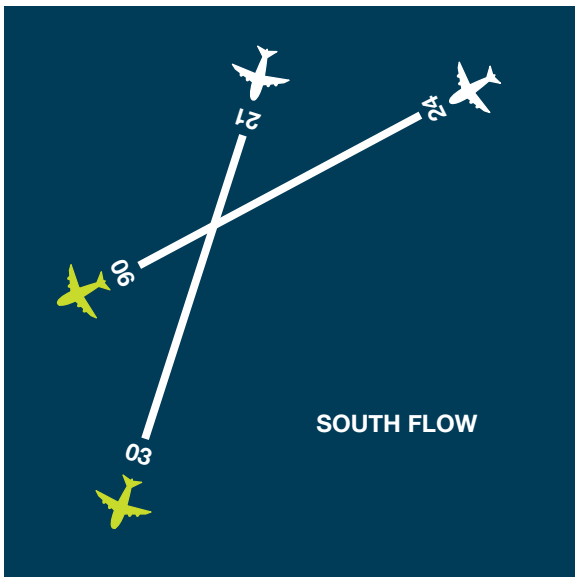
Runway use

- For safety reasons, aircraft generally take-off and land into the wind or with very little downwind on a dry runway.
- North flow:
  - land on Runway 03 over Queens Park
  - land on Runway 06 over Redcliffe
  - take-off from Runway 03 over Guildford
  - take-off from Runway 06 over Greenmount.
- South flow:
  - land on Runway 21 over Guildford
  - land on Runway 24 over Greenmount
  - take-off from Runway 21 over Queens Park
  - take-off from Runway 24 over Redcliffe.
- Air traffic control will generally nominate the runway with the most headwind, however, they may continue to use a runway with some downwind once the departure rate reaches 20 movements per hour.

Flight paths are often shown as a single line on a map, however, it is not possible for all aircraft to follow precisely along the line depicted. In practice, flight paths can vary in width by several kilometres and in height by several thousand feet.

Figure 1: On the opposite page illustrates the flight path structure for Perth Airport.





NOISE IMPROVEMENTS 2010–2014

Between 2010 and 2014, Airservices considered 21 proposed noise improvement opportunities for the greater Perth area. These proposals came from a variety of sources such as Airservices internal analysis, the Aircraft Noise Ombudsman, aviation industry and community feedback. As a result, six changes have been implemented and a further two are on schedule to be implemented in March 2015. The remaining proposals were unable to be safely implemented. Detailed information about the suitability of each proposal and those which were able to be progressed is available at www.airservicesaustralia.com/projects/flight-path-changes/perth-noise-improvements-2015

NOISE IMPROVEMENTS 2015

In early 2015, Airservices analysed a further 12 proposals for noise improvements with a view to achieving the best noise outcome for Perth based on current runway configuration prior to the construction of the proposed parallel runway. Based on the noise improvement outcomes achieved to date and the recent analysis, five of these proposals may be implemented in 2015.

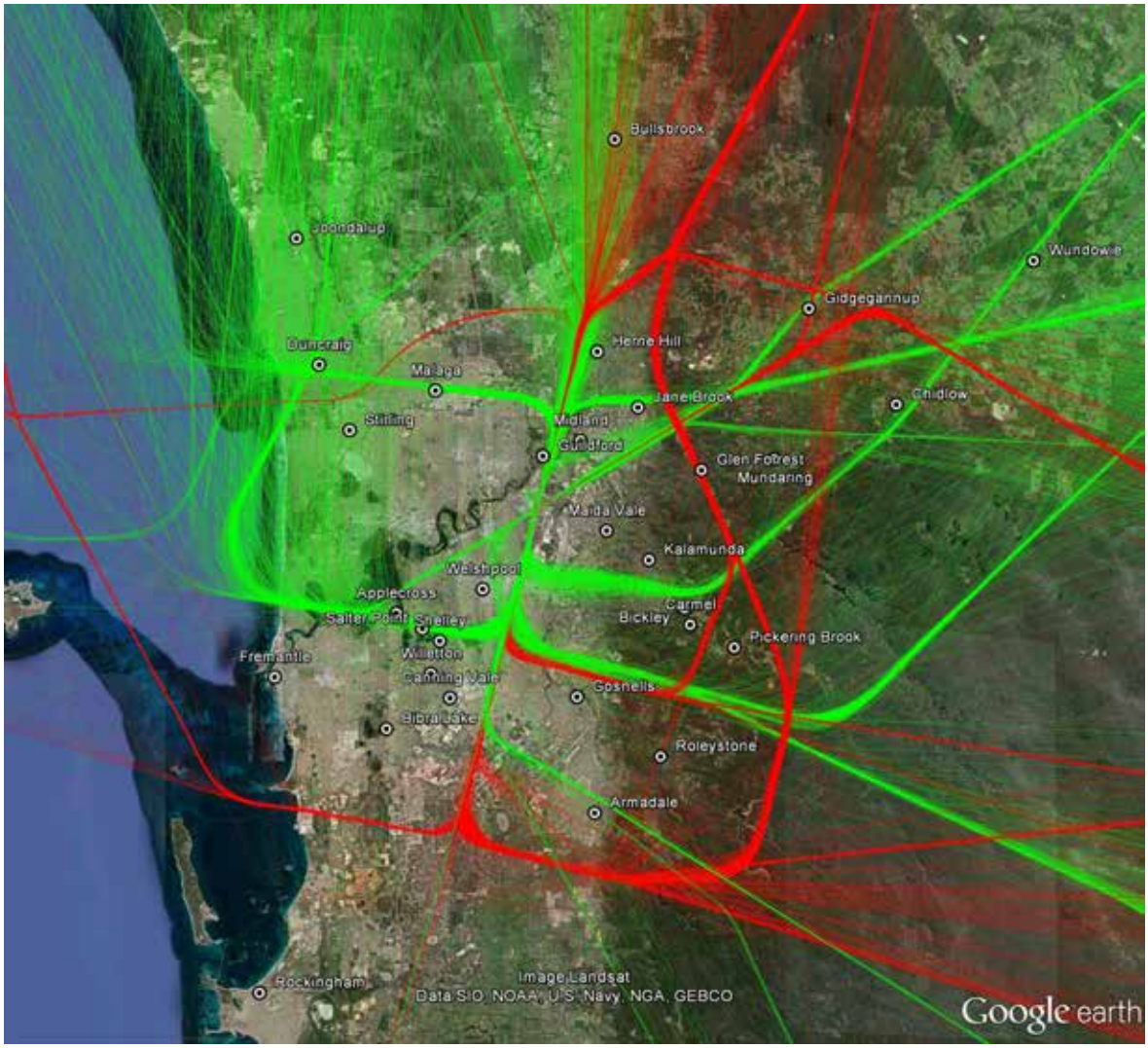


Figure 1: Perth Airport flight path structure. Arrivals shown in red, departures shown in green.

AIRSERVICES PROPOSED NOISE IMPROVEMENTS

1. Preferred runways

Perth Airport Noise Abatement Procedures are used by pilots and air traffic control to minimise the impact of aircraft noise on residential areas. The procedures nominate which runways and flight paths are preferred for arriving and departing aircraft.

The current procedures specify that Runway 21 (arriving over Guildford) and Runway 24 (arriving over Greenmount) are equally preferred for arrivals and Runway 21 (departing over Queens Park) is the only runway preferred for departures. Arrivals to Runway 06 (over Redcliffe) and departures from Runway 24 (over Redcliffe) are least-preferred due to the close proximity of residential areas at the southern end of the cross runway.

It is proposed to change the system of preferred runways for both arrivals and departures. For arrivals, equal preference would be given to Runway 21 (over Guildford), Runway 24 (over Greenmount) and Runway 03 (over Queens Park). For departures, equal preference would be given to Runway 21 (over Queens Park), Runway 03 (over Guildford) and Runway 06 (over Greenmount). Arrivals to Runway 06 and departures from Runway 24 (over Redcliffe) would be maintained as being least-preferred.

Airservices recent review of Perth Airport's noise abatement procedures (available at www.airservicesaustralia.com/publications/noise-reports/noise-abatement-procedure-reviews) found the current wording of runway preferences did not consistently match the operational requirement of managing the flow of aircraft to and from the airport (in the air and on the ground). The proposed change provides the community with clarity while retaining the flexibility that pilots and air traffic control need to manage operations as safely and efficiently as possible. It also provides a noise improvement opportunity for the community that is most affected by the current runway preference system, to the southwest of the airport.

Expected effects of this change

(note: numbers are average estimates only)

- There would be no change to runway use on weekdays from 5 am to 9 pm.
- All areas currently over flown by aircraft will continue to be so, however, the mix of arrivals and departures may change.
- On average, there may be 40 fewer nights a year when aircraft depart from Runway 21 (over Queens Park).
- Runway 03 arrivals and Runway 21 departures (Queens Park runway end):
  - during the day on the weekend there may be 12 more arrivals and 15 fewer departures each day
  - on all nights there may be three more arrivals and three fewer departures each night
  - Queens Park is expected to experience no perceptible difference in noise level between arrivals and departures, however, there is likely to be a noticeable reduction in noise level at Cannington.
- Runway 03 departures and Runway 21 arrivals (Guildford runway end):
  - during the day on the weekend there may be 11 more departures and nine fewer arrivals a day
  - on all nights there may be two more departures and three fewer arrivals a day
  - while departures recorded at the Guildford noise monitor are louder than arrivals for some aircraft types by between two and four decibels (dBA), the net increase of one additional aircraft a week over the area is not likely to be noticeable.
- Runway 06 departures and Runway 24 arrivals (Greenmount runway end):
  - during the day on the weekend there may be five more departures and three fewer arrivals a day
  - on all nights there may be one more departure and one fewer arrival a day
  - no perceptible difference in noise level between arrivals and departures is expected.
- Implemented 28 May 2015.

2. Introduce Smart Tracking

Aircraft arriving from the north and east of Perth to land on Runway 03 (southern end of the main runway) most often perform a visual turn in the vicinity of Carmel and Bickley in the Hills area. This is a standard procedure at airports and allows pilots to follow a shorter route to the airport in good weather rather than a longer, 10 nautical mile (18.5 km), straight-in flight path using an instrument approach.

Pilots flying a visual approach are often required to use a stepped approach where the aircraft repeatedly descends then levels out with increased engine thrust. This generates more noise than performing a continuous descent. The proposed introduction of a Smart Tracking (satellite-assisted navigation) approach over the Perth Hills to the southeast of the airport and moving the visual approach to the same flight path corridor as shown in the maps will allow most pilots to use minimal engine power on descent to the runway. Refer to figure 2 and 3 (on the following page).

Expected effects of this change

(note: numbers are estimates only)

- About 6000 aircraft will use Smart Tracking in the first year.
- There will be less overflown populated areas in the Perth Hills.
- It is expected there will be no further regular arrival flights over Bickley and Carmel.
- Smart Tracking will immediately result in about 1100 fewer flights a year at low level at night for suburbs between Canning Vale and Casuarina.
- Smart Tracking implementation was planned for 25 June 2015, however, it is now proposed for later this year.

3. Night-time respite (12-month trial)

There is a departures corridor from Runway 21 along the Swan River, southwest of the airport. Almost all of these aircraft are heading for destinations to the north of Perth. Use of this flight path has tripled since 2007 and providing night-time noise respite will deliver a noise improvement for residents living within this corridor on both sides of the river.

It is proposed that when Runway 21 is used between 10 pm and 5 am, aircraft departing to the southwest will continue flying in line with the runway without turning until they are adjacent to Jandakot Airport. There they will be turned by air traffic control towards the southwest until they reach 8000 feet at which point pilots may turn to the north. This flight path maximises the use of non-residential land around Jandakot Airport. Refer to figure 4 (on the rear page).

The hours of the proposed respite period are fixed and will not subsequently be changed. The altitude requirement for aircraft departing Perth Airport to the south over the top of the Jandakot Control Zone reduces by 500 feet at 10 pm which means all aircraft operating at night will safely be able to use the proposed flight path. Perth Airport's departures peak commences at 5 am on weekday mornings with aircraft taking-off every two to three minutes, meaning after this time the flow sequence cannot safely and efficiently be interrupted by a runway direction change.

Expected effects of this change

(note: numbers are estimates only)

- On average, Runway 21 would be used for departures on 285 nights a year.
- On those nights, an average of nine aircraft (within a range of five up to 13) would use this new flight path.
- It is expected aircraft on departure over Canning Vale will be above 4500 feet—the noise impact is likely to be noticeable, however, will be offset by 1100 fewer arrivals a year at 2000 feet over this area as a result of introducing Smart Tracking.
- Once past Canning Vale, it is expected most aircraft will be above 7000 feet when next flying over a residential area and are not likely to be noticeable.
- Aircraft flying at 8000 feet generate a noise level measured at ground level below 50 dBA (equivalent to a modern refrigerator), meaning once aircraft have turned to the north the noise impact is not expected to be noticeable.
- Proposed implementation of a 12-month trial starting in late 2015 subject to environmental assessment and consultation processes.

Introduce Smart Tracking

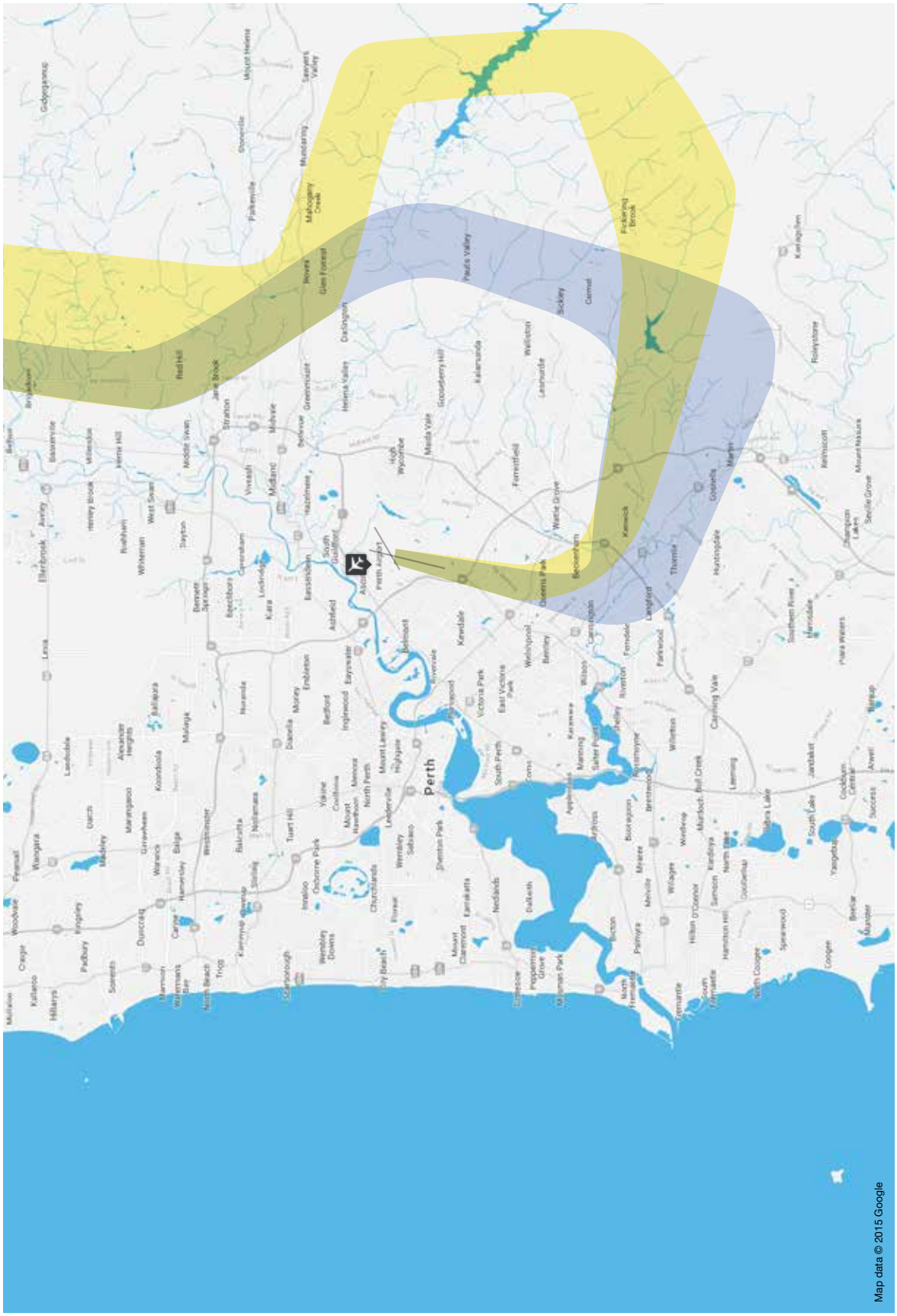


Figure 2: Current visual approach flight path shown in blue. New Smart Tracking and visual flight path shown in yellow.

Introduce Smart Tracking

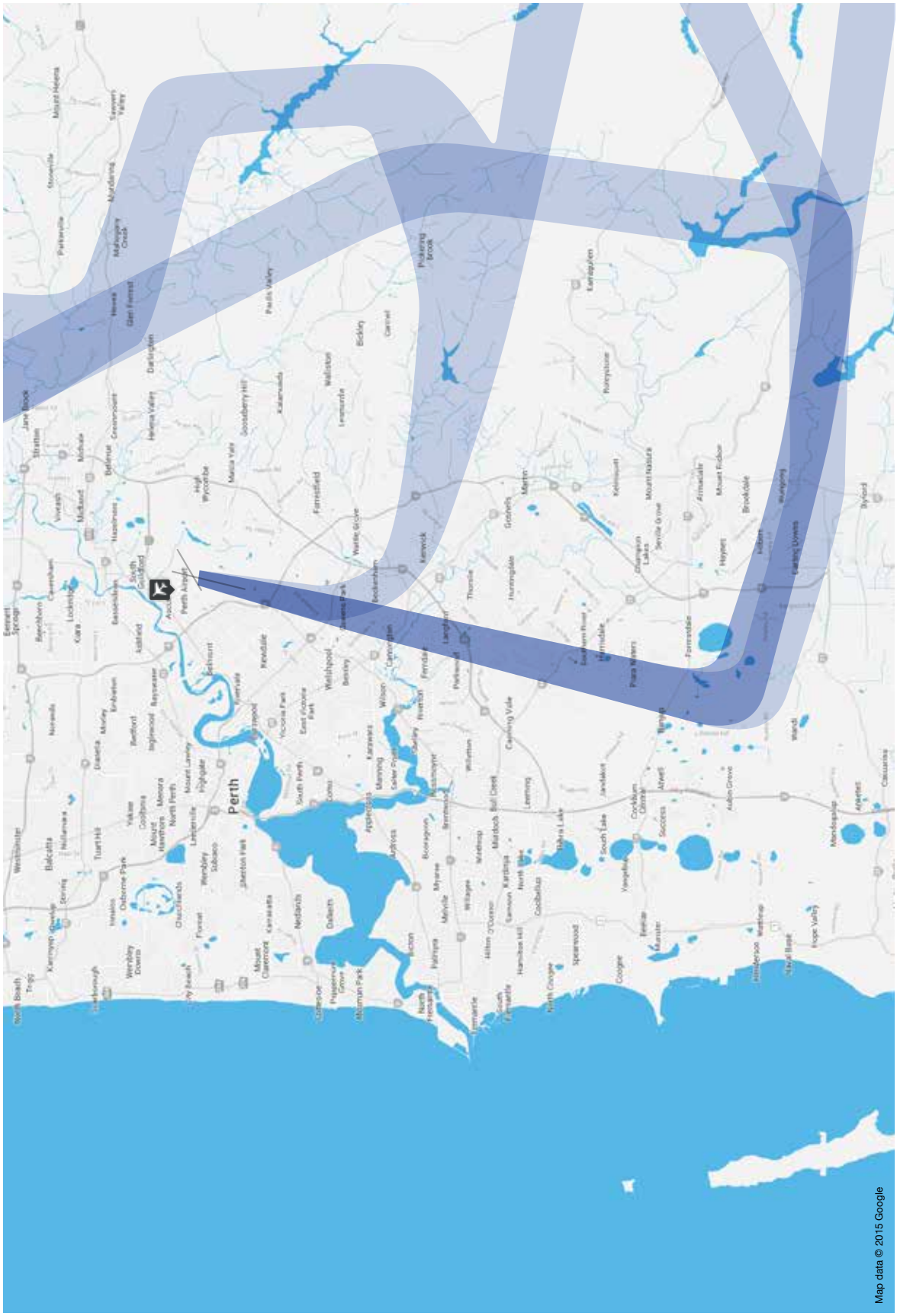


Figure 3: All southeast approach flight paths after the introduction of Smart Tracking (May 2015) shown in blue.

Night-time respite

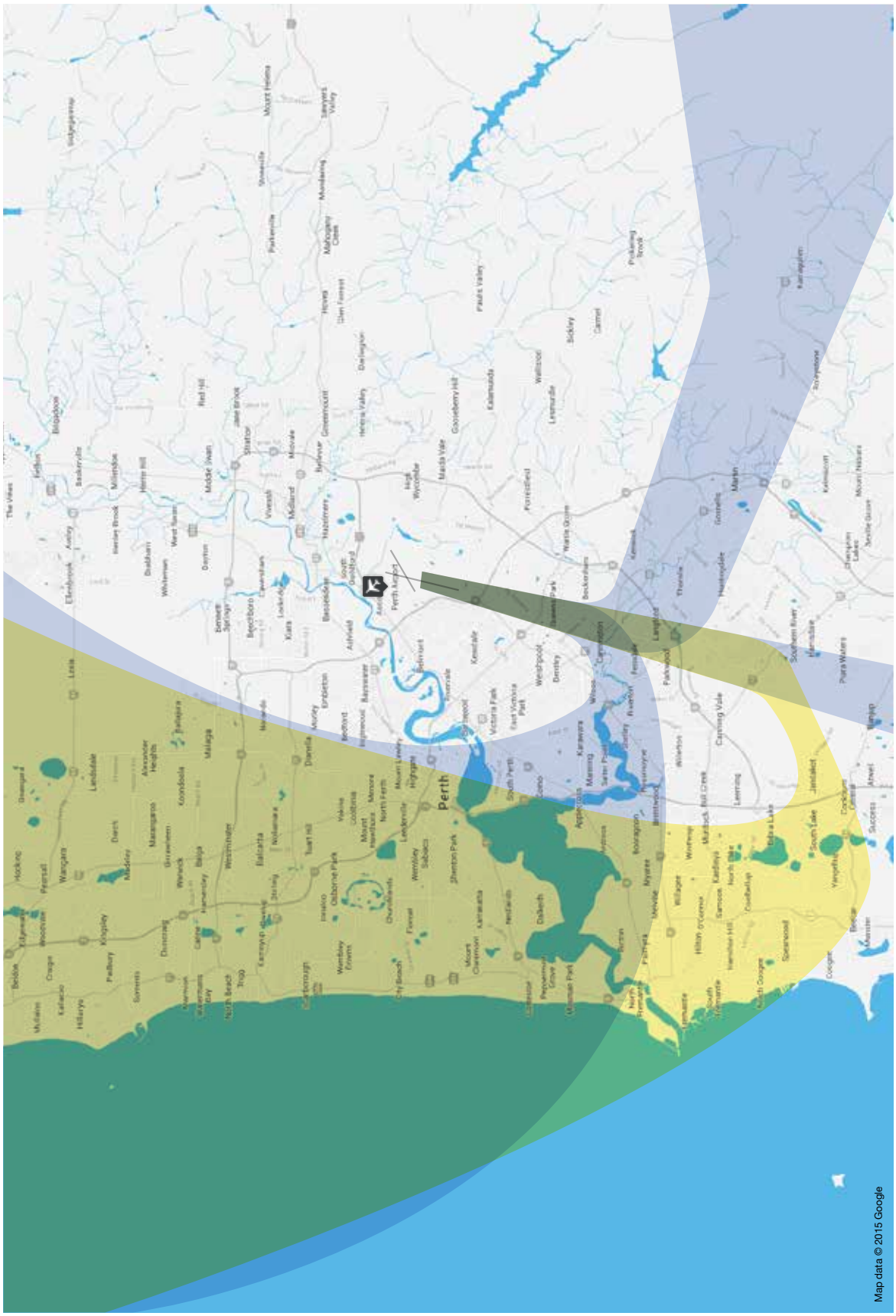


Figure 4: Current departure flight paths shown in blue. 10 pm – 5 am departure flight path shown in yellow. Note: night-time departures that normally turn east will remain the same (i.e no change).

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