# Australian Noise Exposure Forecast

The Airports Act 1996 requires that each airport Master Plan include an Australian Noise Exposure Forecast (ANEF) to determine likely noise exposure around the airport.

This system has been used by airports for over 30 years as the primary measure of aircraft noise in and around airports. The ANEF takes into account the expected number of aircraft movements, types of aircraft and their noise and performance characteristics, flight paths and the distribution of traffic by time period of arrivals and departures.

## Forecast of Noise

A new ANEF was produced in the preparation of the 2022 Master Plan for Melbourne Airport and the airport's third runway project. The 2022 ANEF is a long-range ANEF comprised of four Australian Noise Exposure Concepts (ANECs):

✓ ANEC 1 – Existing two runway system with 2046 demand

✓ ANEC 3 – Three runway system with 2046 demand

✓ ANEC 4 – Four runway system with 2052 demand

## Long-range ANEF

The 2022 Master Plan for Melbourne Airport has adopted a long-range ANEF covering 30 years.

Each update to the ANEF requires a refresh of the inputs and assumptions used to calculate the noise footprint. The main variables include weather, aircraft type, aircraft schedules, indicative flight corridors, airline operations and air traffic control procedures.

Changes in the inputs and assumptions can influence the noise contours, with the noise contours retracting in some areas and increasing in other areas.

## Noise Contours

Overall, there is a general contraction of the new ANEF contours in all directions when compared to the 2018 ANEF, except for a relatively small increase to the south. The area captured by the new ANEF contours, 20 and above, has decreased 24 per cent, reducing 37 square kilometres from 155.5 to 117.9 square kilometres, when compared to the 2018 ANEF.

Together, there are 8,255 dwellings and 34 public buildings within the new ANEF 20 contour, with 33 dwellings and one public building predicted to be in the 30 ANEF by 2052. The number of dwellings estimated within the ANEF 20 has decreased by 40 per cent from the 2018 Master Plan ANEF (13,848 dwellings).
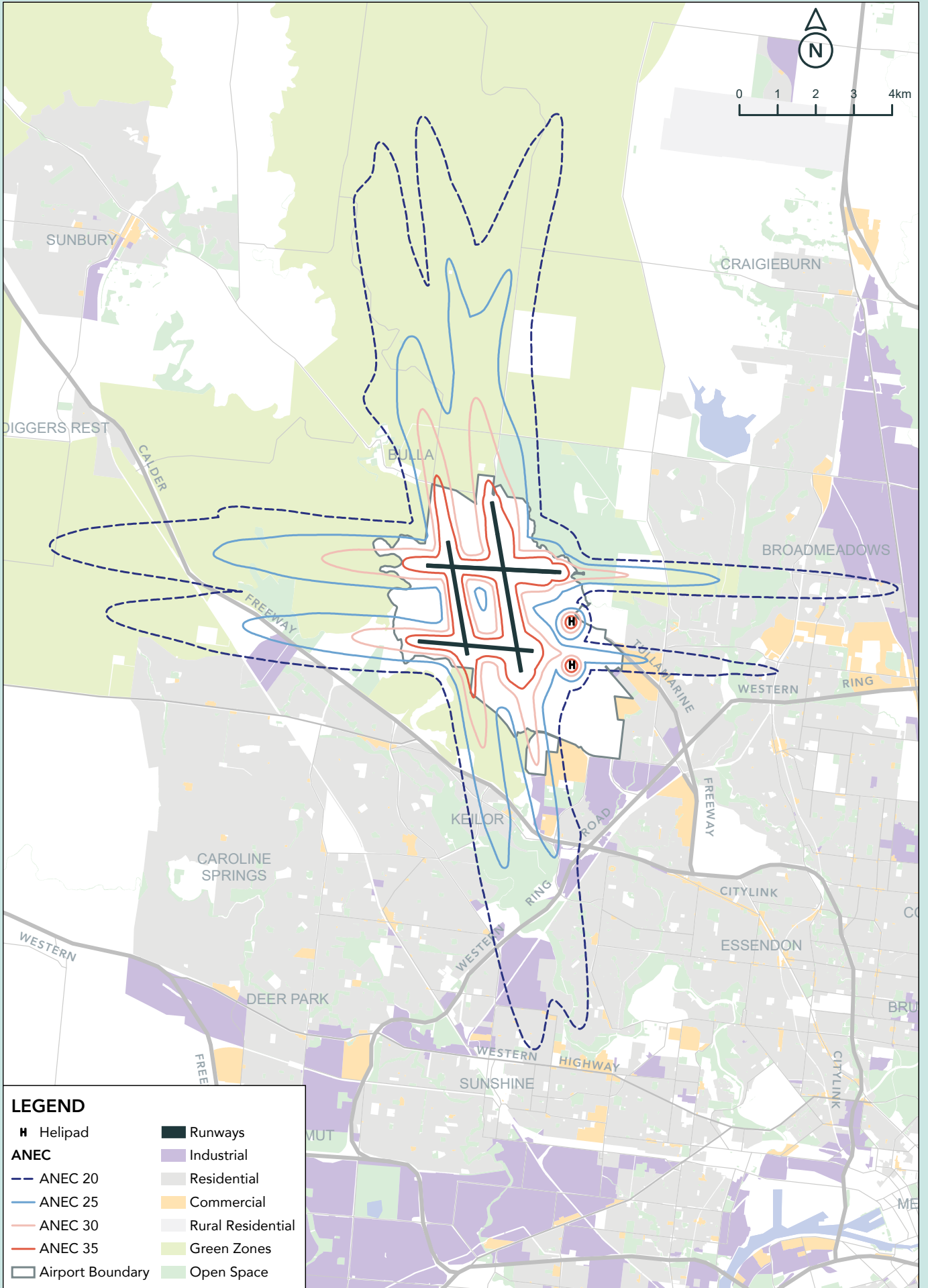
These changes in the ANEF have been driven primarily by two factors:
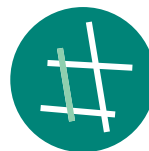
the decision to construct a new north-south runway as Melbourne Airport's third runway has resulted in lower noise emissions being forecast east and west of the airport; and

the increased accuracy in the noise modelling facilitated by the introduction of improved modeling software.

LEGEND

**H** Helipad

**ANEC**

- – – ANEC 20
- —— ANEC 25
- —— ANEC 30
- —— ANEC 35
- ☐ Airport Boundary

■ Runways
■ Industrial
■ Residential
■ Commercial
□ Rural Residential
■ Green Zones
■ Open Space

**MELBOURNE** AIRPORT

To view the airport's 2022 Master Plan go to **melbourneairport.com.au**