

APPENDIX

**AIRCRAFT
NOISE
METRICS**

B

Figure B1. Aircraft noise metrics
2013 ANEI (Endorsed)

Figure B2. Aircraft noise metrics

2034 ANEF (Endorsed)

Table B2: : Total Numbers of Aircraft Movements used for INM Modelling for 2034 ANEF

[illegible]

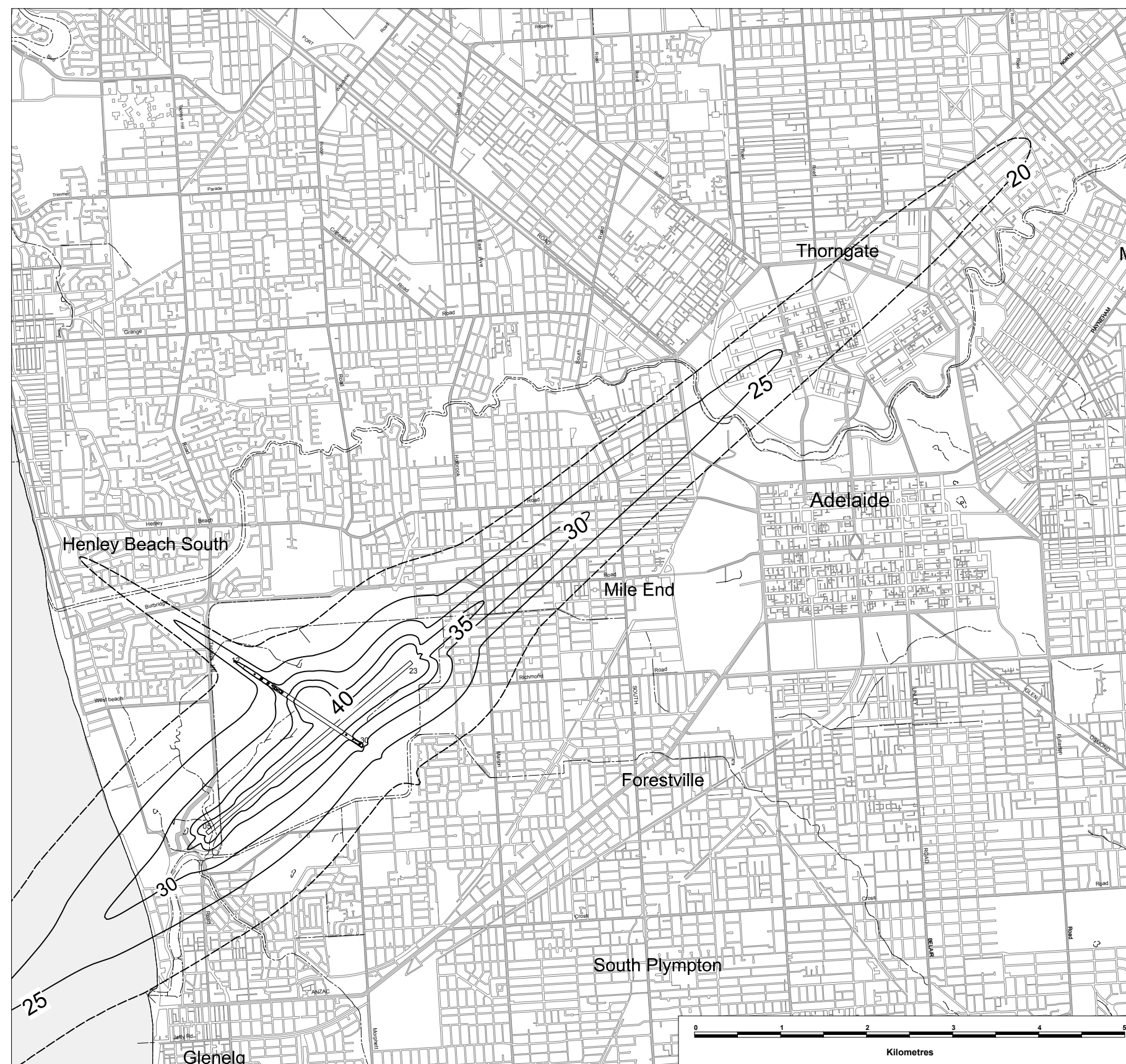
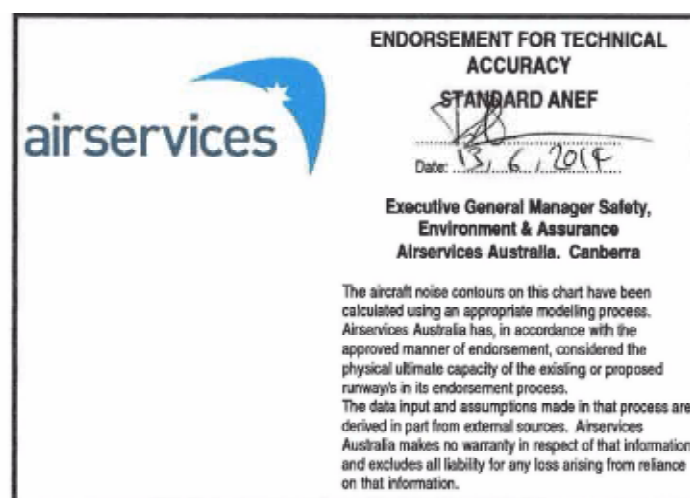
^a Except for Helicopter, touch go/ circuit operations represent a single operation in the billing data. Such operations for Helicopters are modelled a 1 arrival and 1 departure in IN.

BUILDING SITE ACCEPTABILITY BASED ON ANEF ZONES
(To be used in conjunction with Table 3.3 of AS2013-2009)

Building type	ANEF zone of site		
	Acceptable	Conditionally acceptable	Unacceptable
House, house with flat, terrace, etc.	Less than 28 ANEF (Note 1)	28 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hotel, motel, hotel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 28 ANEF (Note 1)	28 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hospital, nursing home	Less than 28 ANEF (Note 1)	28 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 28 ANEF (Note 1)	28 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 28 ANEF	28 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 38 ANEF	38 to 40 ANEF	Greater than 40 ANEF
Other industrial	Accordable to all ANEF zones		

PAGES

- The actual behavior of the 20 ASSET cases is difficult to define accurately, mainly because of variations in aircraft flight paths. Because of this, the probability of Class 2.2.2 was not followed. Within this outside but near to the 20 ASSET cases:
- 10 ASSET to 25 ASSET: some people may find that the level is not appropriate with residential or industrial sites. Local use authorities may consider that the incorporation of aircraft noise from the 20 ASSET cases is not appropriate.
 - There will be cases where a building of a particular type will contain spaces used for activities which would generally be found in a different type of building (e.g. an office in an industrial building), but none given Table 2.2 should be used to determine the acceptability, but internal design noise levels should be given special consideration.
 - This Standard does not recommend development in unsuitable areas. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas adjacent to unsuitability, it is recommended that the development should address the required noise level in accordance with the relevant noise assessment, etc., the effect of aircraft noise on outdoor areas associated with the buildings should be considered.



Contours produced using INM 7.0d, settings of refinement = 10.0, and tolerance = 0.1 dB, and using terrain in calculations. Results exported from INM as lat/long using WGS84 datum.

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5th Jun. 2014	AP	RC

ADELAIDE AIRPORT

Australian Noise Exposure Forecast

2034 ANEF



Figure B3. Aircraft noise metrics

Ultimate Practical Capacity ANEC

Table B3: : Total Numbers of Aircraft Movements used for INM Modelling for Ultimate Capacity ANEC

[illegible]

^a Tough on circuit operations are counted as two movements with respect to the forecast numbers.

* Where figures have been rounded discrepancies may occur between totals and the sum of component items.

BUILDING SITE ACCEPTABILITY BASED ON ANEF ZONES
(To be used in conjunction with Table 3.3 of AS2021-2009)

(To be used in conjunction with Table 3.2 of AS 3001:2000)

Building type	ASFR since its site		
	Acceptable	Consistently acceptable	Unacceptable
House, horse unit, flat, caravan park	Less than 25 ASFR (Note 1)	26 to 25 ASFR (Note 2)	Greater than 25 ASFR
Hotel, motel, hotel	Less than 25 ASFR	25 to 30 ASFR	Greater than 30 ASFR
School, university	Less than 28 ASFR (Note 1)	28 to 25 ASFR (Note 2)	Greater than 25 ASFR
Hospital, nursing home	Less than 25 ASFR (Note 1)	26 to 25 ASFR	Greater than 25 ASFR
Public building	Less than 25 ASFR (Note 1)	26 to 30 ASFR	Greater than 30 ASFR
Commercial building	Less than 25 ASFR	25 to 35 ASFR	Greater than 35 ASFR
Light industrial	Less than 38 ASFR	38 to 40 ASFR	Greater than 40 ASFR

QUESTIONS

- The actual benefits of the 20 ASMET centers will be difficult to define accurately, mostly because of variations in overall flight paths. Because of this, the procedure of Change 2.3.2 may be followed for these flight paths instead of having to use the 20 ASMET centers.
- With all 20 ASMET centers, some people have said that the flow is not compatible with existing traffic flows. Land use planning is not a simple matter, but the flow is not incompatible with existing traffic flows. The construction of buildings on school is appropriate (see the figure in Figure A of Appendix A).
- There will be cases where a building of a particular type will contain spaces used for activities which would normally be found in a different type of building (e.g., an office in an industrial building). In these cases, Table 2.1 should be used to determine if compatibility, but internal design issues involving space use are not a concern.
- These standards do not recommend development in unsuitable areas. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas, development is unacceptable, it is recommended the new development should observe the required standards. The second part of the standards, which are more detailed, are the effect of aircraft noise on outdoor areas associated with the buildings should be considered.



Contours produced using INM 7.0d, settings of refinement = 10.0, and tolerance = 0.1 dB, and using terrain in calculations. Results exported from INM as lat/long using WGS84 datum.

ADELAIDE AIRPORT

ULTIMATE PRACTICAL CAPACITY

ANEC

Figure B4. Aircraft noise metrics

2034 ANEF compared to the 2013 ANEI

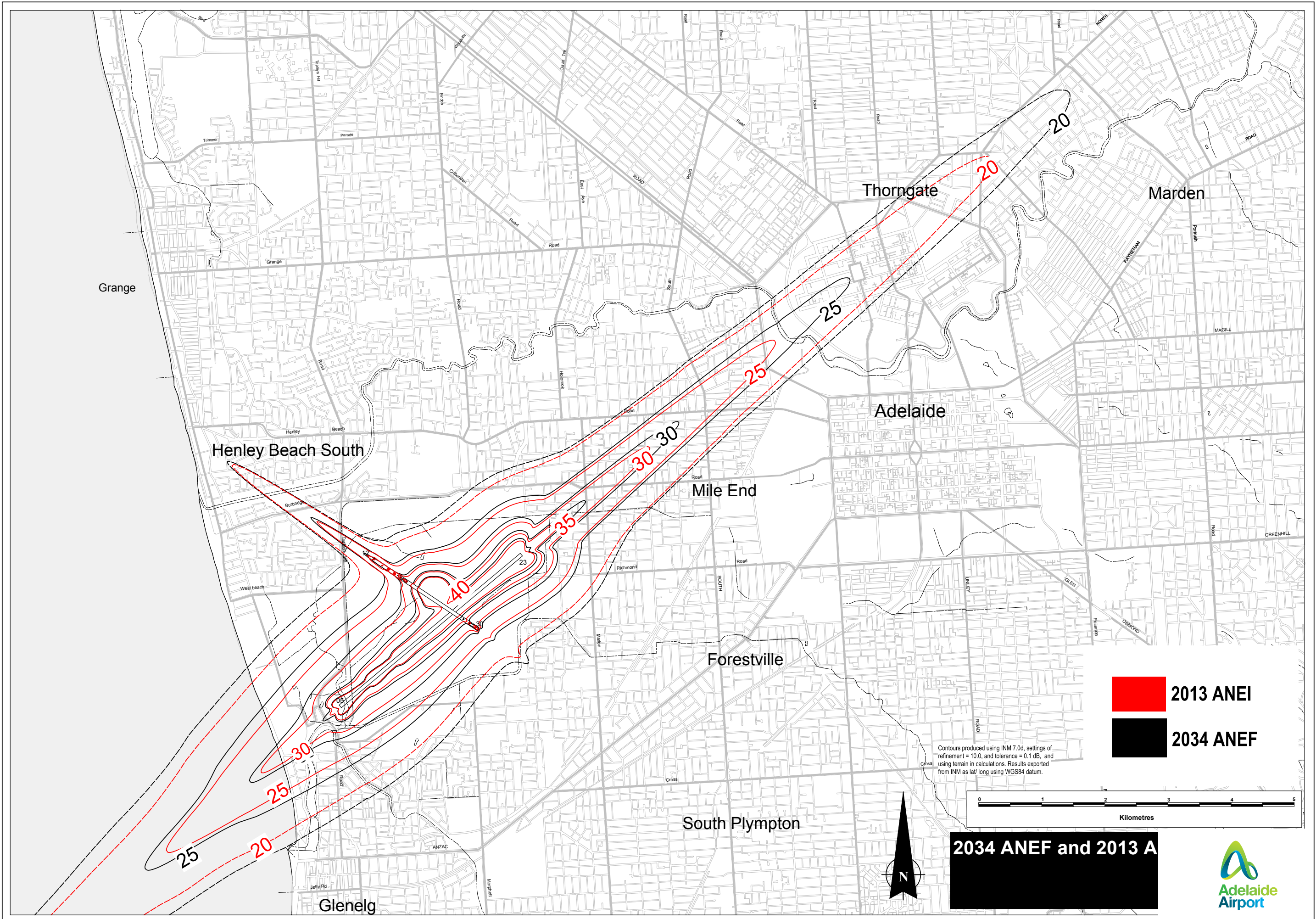


Figure B5. Aircraft noise metrics

Comparison of the 2034 ANEF with the ANEF
in the previous Master Plan (2029)

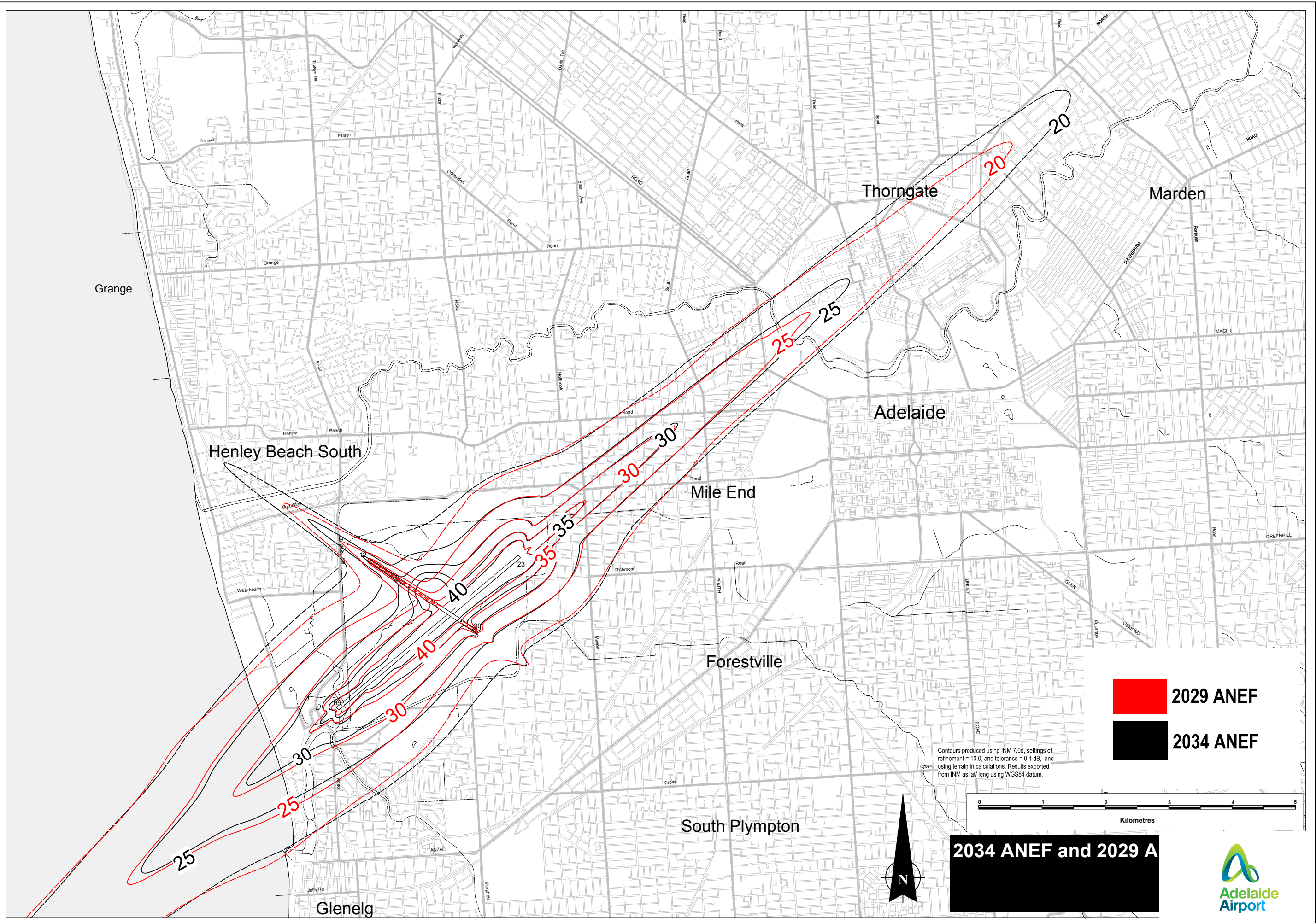


Figure B6. Aircraft noise metrics

Comparison of the Ultimate Capacity ANEC
with the Ultimate Capacity ANEC from the
Previous Master Plan (2009)

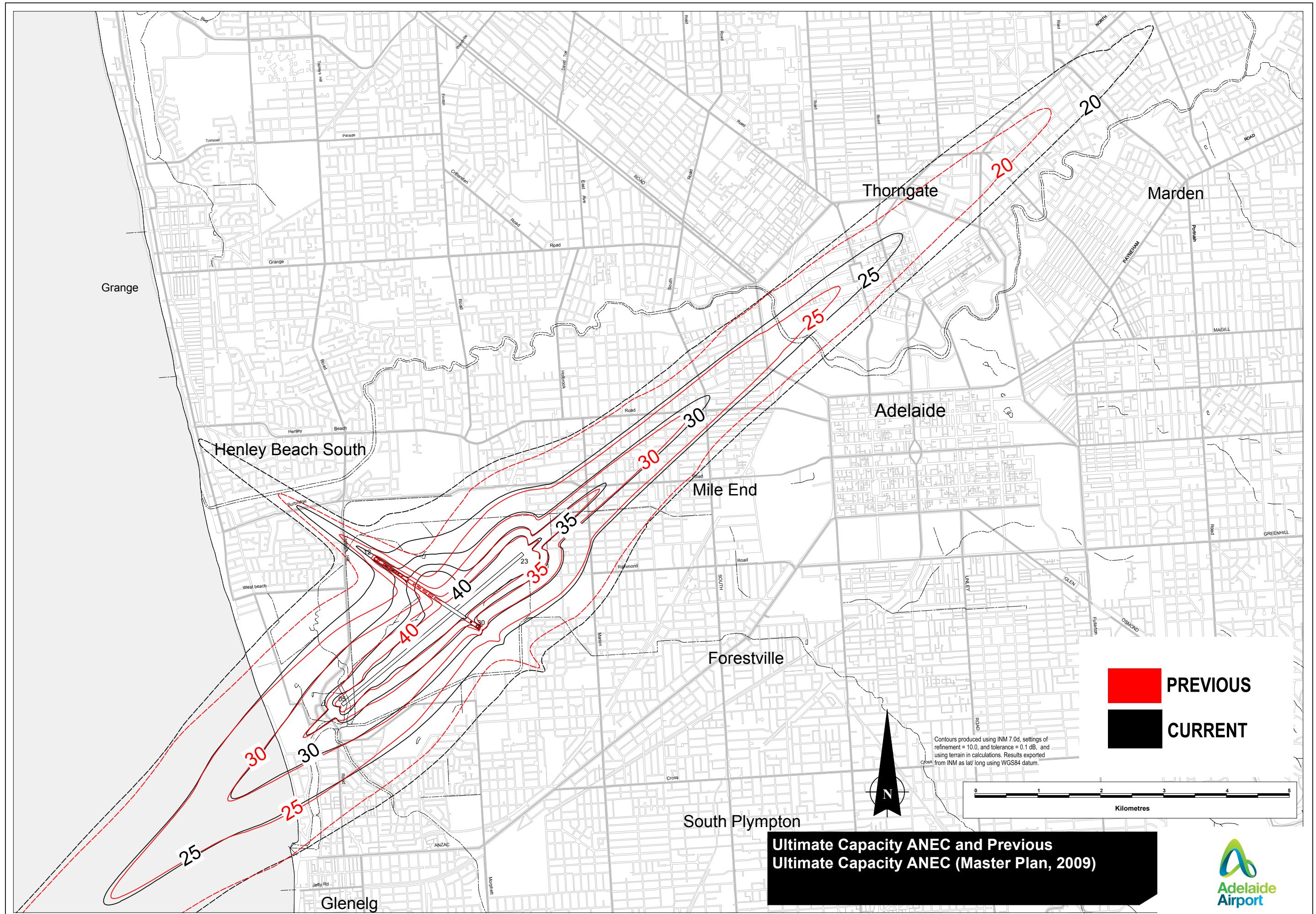


Figure B7. Aircraft noise metrics

N70 Map for Adelaide Airport in 2013

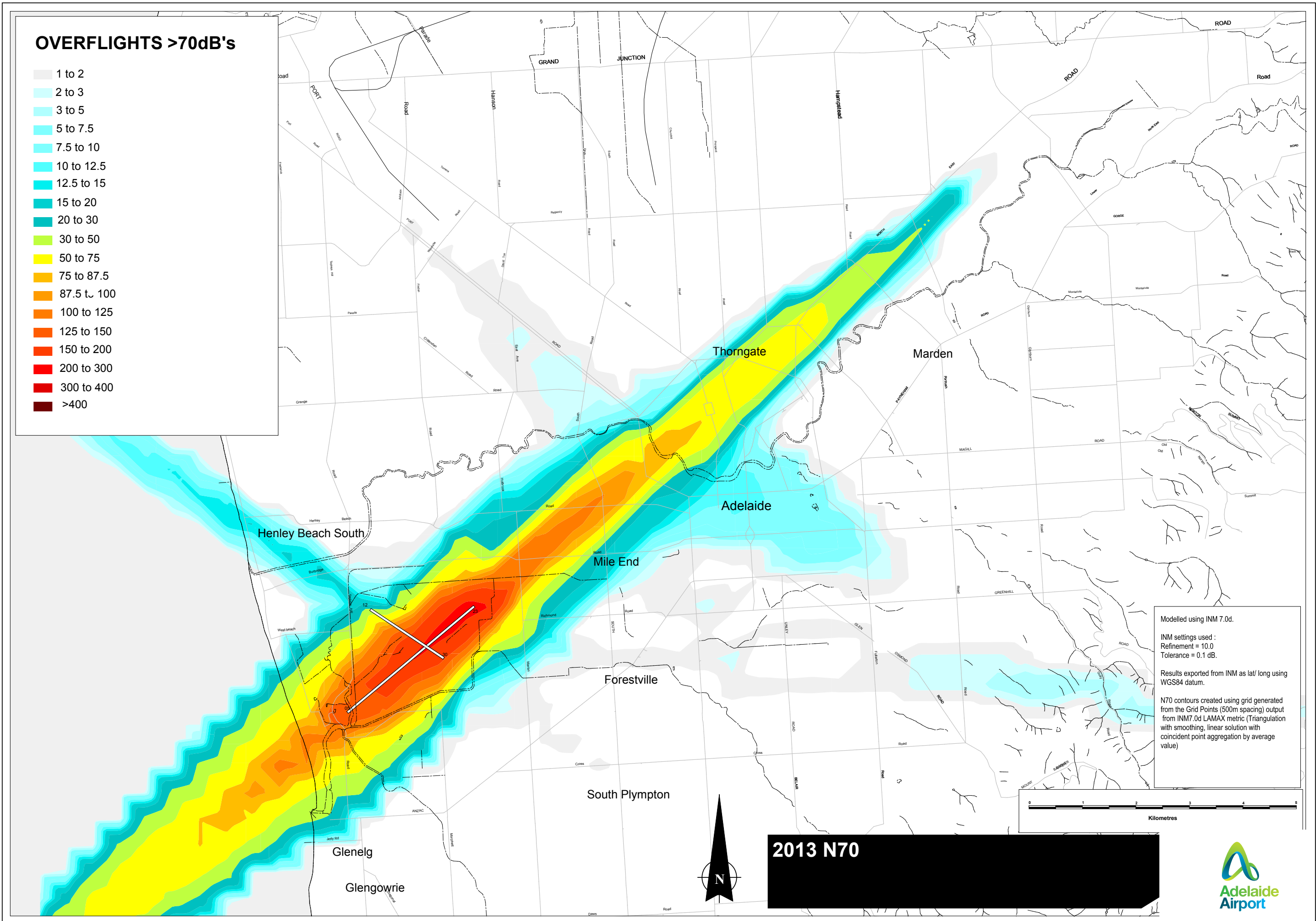


Figure B8. Aircraft noise metrics

N70 Map for Adelaide Airport in 2034

