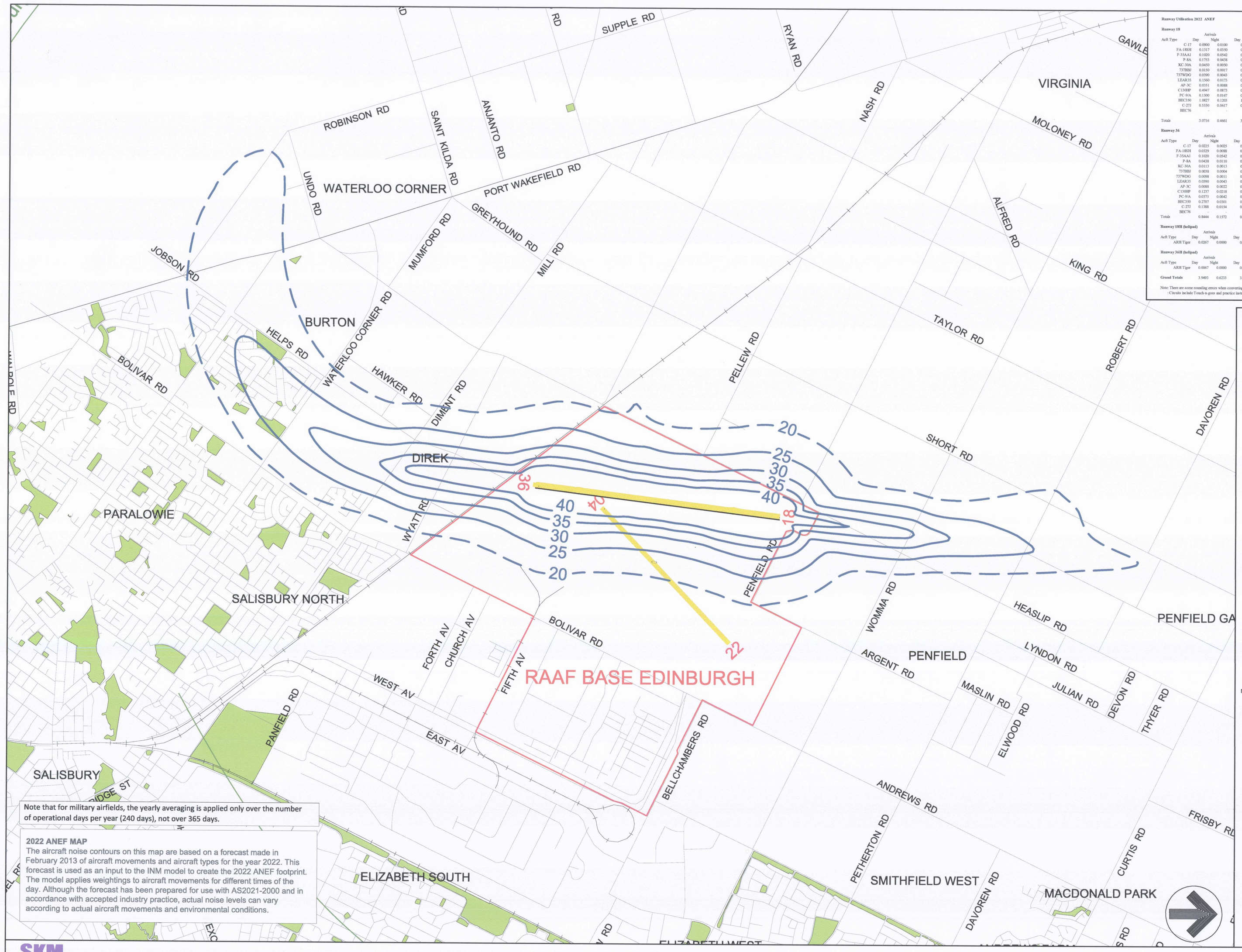

Note that for military airfields, the yearly averaging is applied only over the number of operational days per year (240 days), not over 365 days.

2022 ANEF MAP

The aircraft noise contours on this map are based on a forecast made in February 2013 of aircraft movements and aircraft types for the year 2022. This forecast is used as an input to the INM model to create the 2022 ANEF footprint. The model applies weightings to aircraft movements for different times of the day. Although the forecast has been prepared for use with AS2021-2000 and in accordance with accepted industry practice, actual noise levels can vary according to actual aircraft movements and environmental conditions.

Runway Utilisation 2022 ANEF

Runway 18

Acft Type	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Circuits Day	Circuits Night	Totals
C-17	0.0900	0.0100	0.0900	0.0100	-	-	0.2000
FA-18SH	0.1317	0.0330	0.1317	0.0330	-	-	0.3333
F-35AA1	0.1020	0.0542	0.1020	0.0542	-	-	0.3125
P-8A	0.1753	0.0438	0.1753	0.0438	1.4027	0.3507	2.1918
KC-30A	0.0450	0.0050	0.0450	0.0050	-	-	0.1000
737BBJ	0.0150	0.0017	0.0150	0.0017	-	-	0.0333
737WDG	0.0390	0.0043	0.0390	0.0043	-	-	0.0867
LEAR35	0.1560	0.0173	0.1560	0.0173	-	-	0.3467
AP-3C	0.0351	0.0088	0.0351	0.0088	0.2805	0.0701	0.4384
C130HP	0.4947	0.0873	0.4947	0.0873	1.5606	0.2754	3.0000
PC-9/A	0.1500	0.0167	0.1500	0.0167	-	-	0.3333
BHC30	1.0827	0.1203	1.0827	0.1203	0.8255	0.0917	3.3233
C-27J	0.5550	0.0617	0.5550	0.0617	-	-	1.2233
BEC76	-	-	-	-	3.2000	0.0000	3.2000
Totals	3.0716	0.4661	3.0716	0.4661	7.2694	0.7879	15.1326

Runway 36

Acft Type	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Circuits Day	Circuits Night	Totals
C-17	0.0225	0.0025	0.0225	0.0025	-	-	0.0500
FA-18SH	0.0329	0.0088	0.0329	0.0088	-	-	0.0833
F-35AA1	0.1020	0.0542	0.1020	0.0542	-	-	0.3125
P-8A	0.0438	0.0110	0.0438	0.0110	0.3507	0.0877	0.5479
KC-30A	0.0113	0.0013	0.0113	0.0013	-	-	0.0250
737BBJ	0.0038	0.0004	0.0038	0.0004	-	-	0.0083
737WDG	0.0098	0.0011	0.0098	0.0011	-	-	0.0217
LEAR35	0.0390	0.0043	0.0390	0.0043	-	-	0.0867
AP-3C	0.0088	0.0022	0.0088	0.0022	0.0701	0.0175	0.1096
C130HP	0.1237	0.0218	0.1237	0.0218	0.3902	0.0689	0.7500
PC-9/A	0.0375	0.0042	0.0375	0.0042	-	-	0.0833
BHC30	0.2707	0.0301	0.2707	0.0301	0.2064	0.0229	0.8308
C-27J	0.1388	0.0154	0.1388	0.0154	-	-	0.3083
BEC76	-	-	-	-	0.8000	0.0000	0.8000
Totals	0.8444	0.1572	0.8444	0.1572	1.8174	0.1970	4.0175

Runway 18H (helipad)

Acft Type	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Circuits Day	Circuits Night	Totals
ARH Tiger	0.0267	0.0000	0.0267	0.0000	0.2133	0.0000	0.2667

Runway 36H (helipad)

Acft Type	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Circuits Day	Circuits Night	Totals
ARH Tiger	0.0067	0.0000	0.0067	0.0000	0.0533	0.0000	0.0667
Grand Totals	3.9493	0.6233	3.9493	0.6233	9.3534	0.9849	19.4835

Note: There are some rounding errors when converting annual aircraft movements to average daily movements.
: Circuits include Touch-n-goes and practice instrument approaches (with overshoots)

EXTRACT FROM AS2021 – 2000

Table 2.1 Building Site Acceptability Based on ANEF Zones

(To be used in conjunction with Table 3.3)

Building Type	ANEF Zone of Site: Acceptable	Conditional	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in **all** ANEF zones		

NOTES:

1. The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variation in aircraft flight paths. Because of this, the procedure of Clause 2.3.2 may be followed for building sites outside but near to the 20 ANEF contour.
2. Within 20 ANEF to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate (see also Figure A1 of Appendix A).
3. 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). In these cases Table 2.1 should be used to determine site acceptability, but internal design noise levels within the specific spaces should be determined by Table 3.3.
4. This Standard does not recommend development in unacceptable areas. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas designated as unacceptable, it is recommended that such development should achieve the required ANR determined according to Clause 3.2. For residences, schools, etc., the effect of aircraft noise on outdoor areas associated with the buildings should be considered.
5. In no case should new development take place in greenfield sites deemed unacceptable because such development may impact airport operations.

EXTRACT FROM AS2021 – 2000

Table 3.3 Indoor Design of Sound Levels* for Determination of Aircraft Noise Reduction

Building Type and activity	Indoor design sound level*, dB(A)
Houses, home units, flats, caravan parks	
Sleeping areas, dedicated lounges	50
Other habitable spaces	55
Bathrooms, toilets, laundries	60
Hotels, motels, hostels	
Relaxing, sleeping	55
Social activities	70
Service activities	75
Schools, universities	
Libraries, study areas	50
Teaching areas, assembly areas (see Note 5)	55
Workshops, gymnasia	75
Hospitals, nursing homes	
Wards, theatres, treatment and consulting rooms	50
Laboratories	65
Service areas	75
Public buildings	
Churches, religious activities	50
Theatres, cinemas, recording studios (see Note 4)	40
Court houses, libraries, galleries	50
Commercial buildings, offices and shops	
Private offices, conference rooms	55
Drafting, open offices	65
Typing, data processing	70
Shops, supermarkets, showrooms	75
Industrial	
Inspection, analysis, precision work	75
Light machinery, assembly, bench work	80
Heavy machinery, warehouse, maintenance	85

*These indoor design sound levels are not intended to be used for measurement of adequacy of construction. For measurement of the adequacy of construction against aircraft noise intrusion see Appendix C.

NOTES

1. The indoor design sound levels in Column 2 are hypothesized values based on Australian experience. A design sound level is the maximum level (dB(A)) from an aircraft flyover which, when heard inside a building by the average listener, will be judged as not intrusive or annoying by that listener while carrying out the specified activity. Owing to the variability of subjective responses to aircraft noise, these figures will not provide sufficiently low interior noise levels for occupants who have a particular sensitivity to aircraft noise.
2. Some of these levels, because of the short duration of individual aircraft flyovers, exceed some other criteria published by Standards Australia for indoor background noise levels (see AS 2107).
3. The indoor design sound levels are intended for the sole purpose of designing adequate construction against aircraft noise intrusion and are not intended to be used for assessing the effects of noise. Land use planning authorities may have their own internal noise level requirements which may be used in place of the levels above.
4. For opera and concert halls and theatres, and for recording, broadcast and television studios and similar buildings where noise intrusion is unacceptable, specialist acoustic advice should always be obtained.
5. Certain activities in schools may be considered particularly noise sensitive and 50 dB(A) may be a more desirable indoor sound level to select for any teaching areas used for such activities. However, the effect of other noise sources should be considered.
6. The provisions of this Standard relating to different internal design sound levels for different indoor spaces could result in the use of different construction and materials in contiguous spaces, and require the construction of substantial barriers between habitable spaces, e.g. heavy self-closing internal doors, detracting from the amenity of the building. Therefore consideration should be given to a uniform perimeter insulation approach.

SKM

SOUTH AUSTRALIA

ADELAIDE

Area of Interest shown in Red

LEGEND

- 2022 ANEF - 20 CONTOUR
- 2022 ANEF - 25, 30, 35 & 40 CONTOURS
- RAAF Base Edinburgh
- Edinburgh Runways
- Main Highways
- Streets
- Railway
- Parks/Recreation Areas

ENDORSEMENT

I am satisfied that the data used in the production of the Summary report and this ANEF map is correct at the time this forecast is made, and endorse this ANEF map.

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Head Infrastructure Division - Defence Support and Reform Group
Department of Defence

SCALE OF KILOMETRES

0.5 0 1 2

(1:20 000 for A1 size only)

Production Date: 21 February 2013

Australian Government
Department of Defence

RAAF Base Edinburgh 2022 ANEF