

**MGA 94 Runway Coordinates**

Location	Eastings (m)	Northings (m)
ARP	475,334.64	7,871,205.78
Threshold RWY 01	475,275.35	7,870,574.85
Threshold RWY 07	474,310.29	7,870,849.61
Threshold RWY 19	476,269.97	7,872,800.49
Threshold RWY 25	475,364.34	7,871,153.98
Eastern end TWY Bravo	475,061.36	7,870,701.00
Western end TWY Bravo	474,428.90	7,870,763.84

**ENDORSEMENT FOR TECHNICAL ACCURACY  
MILITARY INPUT ONLY**

Original signed by John Owens on 29 Sep 2010

Head Infrastructure Division - Defence Support Group  
Department of Defence

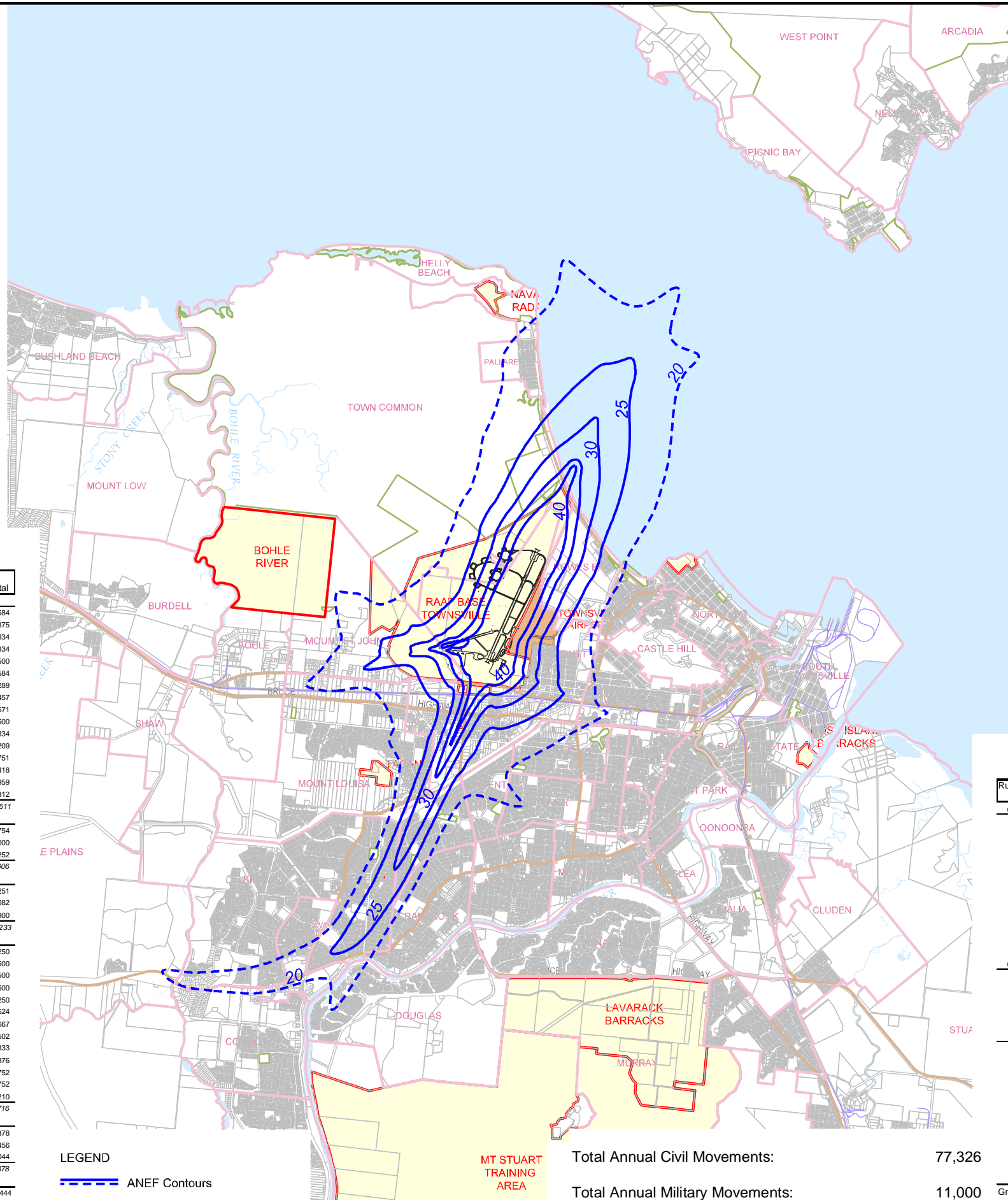
Date: ...../...../2010

The aircraft noise contours on this 2030 ANEF map are based upon a forecast made in March 2010 of aircraft movements and aircraft types for the year 2030. This forecast is used as an input to the INM model to create the 2030 ANEF footprint. The model applies weightings to aircraft movements for different times of the day. The forecast has been prepared for use with AS 2021-2000 and in accordance with accepted industry practice.

The forecast annual military aircraft movements of 11,000 reflect the normal military aircraft operations both based at and transiting through RAAF Base Townsville in a year (240 flying days). Additional military aircraft movements related to military operations and training exercises can occur in excess of the forecast annual military aircraft movements on a periodic basis. The number and type of military aircraft involved in the short duration exercises varies for each individual exercise, is difficult to forecast accurately and, therefore, is not included in the Military Aircraft Daily Movements.

**Military Aircraft Daily Movements by Runway and Aircraft Type**

Runway	Aircraft	Arrivals		Departure		Circuit		Touch & Go		Total		
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Total
<b>01C</b>												
757RR		0.0188	0.0063	0.0250	0.0083					0.0438	0.0146	0.0584
BHAWK		0.5625	0.3750					0.7500	0.5000	1.3125	0.8750	2.1875
C130		0.1876	0.0625	0.2500	0.0833					0.4376	0.1458	0.5834
C17		0.1876	0.0625	0.2500	0.0833					0.4376	0.1458	0.5834
C27J		2.0000	0.5000	3.2000	0.8000			1.8000	0.4500	7.0000	1.7500	8.7500
CSA		0.0188	0.0063	0.0250	0.0083					0.0438	0.0146	0.0584
CH-47		0.1875	0.1250					0.2500	0.1664	0.4375	0.2914	0.7289
CL601		0.0468	0.0156	0.0625	0.0208					0.1093	0.0364	0.1457
F35AA1		1.9002	0.6335	1.9000	0.6334					3.8002	1.2669	5.0671
F35AOS		0.3563	0.1187	0.3562	0.1188					0.7125	0.2375	0.9500
HAWK		0.5938	0.1979	0.5938	0.1979					1.1876	0.3958	1.5834
KC30A		0.1032	0.0344	0.1375	0.0458					0.2407	0.0802	0.3209
KC45		0.0563	0.0188	0.0750	0.0250					0.1313	0.0438	0.1751
P8A		0.2063	0.0688	0.2750	0.0917					0.4813	0.1605	0.6418
PC9		0.1484	0.0496	0.1484	0.0495					0.2968	0.0991	0.3959
SHAWK		0.0234	0.0078					0.0234	0.0078	0.0234	0.0078	0.0312
Sum		6.5975	2.2827	7.2984	2.1661			2.8000	1.1164	16.6959	5.5652	22.2611
<b>07C</b>												
BHAWK								1.1252	0.7502	1.1252	0.7502	1.8754
C27J		1.2000	0.3000					1.2000	0.3000	1.2000	0.3000	1.5000
CH-47								0.3750	0.2502	0.3750	0.2502	0.6252
Sum		1.2000	0.3000					1.5002	1.0004	2.7002	1.3004	4.0006
<b>10B</b>												
BHAWK		2.2500	1.5000	2.6251	1.7500					4.8751	3.2500	8.1251
CH-47		0.7500	0.5000	0.8751	0.5831					1.6251	1.0831	2.7082
SHAWK		0.1080	0.0361	0.1095	0.0364					0.2175	0.0725	0.2900
Sum		3.1080	2.0361	3.6097	2.3695					6.7177	4.4056	11.1233
<b>19C</b>												
757RR		0.0125	0.0041	0.0063	0.0021					0.0188	0.0062	0.0250
C130		0.1251	0.0416	0.0625	0.0208					0.1876	0.0624	0.2500
C17		0.1251	0.0416	0.0625	0.0208					0.1876	0.0624	0.2500
C27J		0.8000	0.2000	0.8000	0.2000			0.2000	0.0500	1.8000	0.4500	2.2500
CSA		0.0125	0.0041	0.0063	0.0021					0.0188	0.0062	0.0250
CL601		0.0312	0.0104	0.0156	0.0052					0.0468	0.0156	0.0624
F35AA1		0.1000	0.0333	0.1000	0.0334					0.2000	0.0667	0.2667
F35AOS		0.0188	0.0063	0.0188	0.0063					0.0376	0.0126	0.0502
HAWK		0.0312	0.0104	0.0313	0.0104					0.0625	0.0208	0.0833
KC30A		0.0688	0.0229	0.0344	0.0115					0.1032	0.0344	0.1376
KC45		0.0376	0.0125	0.0188	0.0063					0.0564	0.0188	0.0752
P8A		0.1376	0.0459	0.0688	0.0229					0.2064	0.0688	0.2752
PC9		0.0079	0.0027	0.0078	0.0026					0.0157	0.0053	0.0210
Sum		1.5083	0.4358	1.2331	0.3444			0.2000	0.0500	2.9414	0.8302	3.7716
<b>28B</b>												
BHAWK		0.9376	0.6251	1.1251	0.7500					2.0627	1.3751	3.4378
CH-47		0.3125	0.2080	0.3751	0.2500					0.6876	0.4580	1.1456
SHAWK		0.0314	0.0104	0.0469	0.0157					0.0783	0.0261	0.1044
Sum		1.2815	0.8435	1.5471	1.0157					2.8286	1.8592	4.6878
Grand Total		13.6953	5.8981	13.6883	5.8957			4.5002	2.1668	31.8838	13.9606	45.8444



**LEGEND**  
 ANEF Contours

Total Annual Civil Movements: **77,326**  
 Total Annual Military Movements: **11,000**

Building Type	ANEF zone of site		
	Acceptable	Conditionally acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	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 (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF (Note 1)	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF (Note 1)	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:
- The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variations in aircraft flight paths.
  - Within the 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.
  - 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 A.1 should be used to determine site acceptability, but internal design noise levels within the specific spaces should be determined by reference to the Australian Standard.
  - The Australian 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 Aircraft Noise Reduction (ANR) determined in accordance with the Standard. For residences, schools, etc., the effect of aircraft noise on outdoor areas associated with the buildings should be considered.
  - In no case should new development take place in greenfield sites deemed unacceptable because such development may impact on airport operations.
- Source: AS 2021-2000

**ENDORSEMENT FOR TECHNICAL ACCURACY  
STANDARD ANEF**

Original signed by Claire Morrison on 29 Sep 2010

Date: ...../...../.....

A / General Manager Safety and Environment  
Airservices Australia, Canberra

The aircraft noise contours on this chart have been calculated using an appropriate modelling process. Airservices Australia has, in accordance with the approved manner of endorsement, considered the physical ultimate capacity of the existing or proposed runways in its endorsement process. The data input and assumptions made in that process are derived in part from external sources. Airservices Australia makes no warranty in respect of that information and excludes all liability for any loss arising from reliance on that information.

**Civil Aircraft Daily Movements by Runway and Aircraft Type**

Runway	Aircraft	Arrivals		Departure		Circuit		Touch & Go		Total		
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Total
<b>01C</b>												
737300		0.5644	1.6932	0.5644	1.6932					1.1288	3.3864	4.5152
737800		6.3493	1.8624	6.3493	1.8625					12.6986	3.7249	16.4235
A320		6.2082	0.2258	6.2082	0.2258					12.4164	0.4516	12.8680
BEC58P		6.4905	0.8890	4.2330	0.8466					10.7235	1.7356	12.4591
DHC830		14.2452	7.4441	14.2451	7.4442					28.4903	14.8883	43.3786
EMB190		5.3052	0.0565	5.3052	0.0564					10.6104	0.1129	10.7233
F10065		2.2011	0.8070	2.2012	0.8070					4.4023	1.6140	6.0163
GASEPF		5.3165	1.9866	4.0353	0.8411			8.2400	2.0600	17.5918	4.8877	22.4795
GASEPV		6.9136	3.3018	5.2204	1.8343					12.1340	5.1361	17.2701
LEAR60		1.0018	0.0339	1.0019	0.0339					2.0037	0.0678	2.0715
Sum		54.5958	18.3003	49.3640	15.6450			8.2400	2.0600	112.1998	36.0053	148.2051
<b>07C</b>												
BEC58P		0.6547	0.0000	4.2303	0.2822					4.8850	0.2822	5.1672
GASEPF		1.6086	0.0000	3.5105	1.2641					5.1191	1.2641	6.3832
GASEPV		0.2709	0.0000	3.9394	2.0884					4.2103	2.0884	6.2987
Sum		2.5342	0.0000	11.6802	3.6347					14.2144	3.6347	17.8491
<b>19C</b>												
737300		0.2032	0.1694	0.2032	0.1694					0.4064	0.3388	0.7452
737800		1.4957	0.4798	1.4957	0.4798					2.9914	0.9596	3.9510
A320		1.7496	0.0564	1.7496	0.0564					3.4992	0.1128	3.6120
BEC58P		4.1399	0.5221	2.8218	0.2822					6.9617	0.8043	7.7660
DHC830		3.9677	2.1785	3.9676	2.1786					7.9353	4.3571	12.2924
EMB190		0.8183	0.0057	0.8183	0.0057					1.6366	0.0114	1.6480
F10065		0.4064	0.0621	0.4065	0.0621					0.8129	0.1242	0.9371
GASEPF		1.7270	0.3102	1.1062	0.1917			2.0600	0.5150	4.8932	1.0169	5.9101
GASEPV		4.1934	1.0611	2.2180	0.4402					6.4114	1.5013	7.9127
LEAR60		0.4938	0.0169	0.4938	0.0169					0.9876	0.0338	1.0214
Sum		19.1950	4.8622	15.2807	3.8830			2.0600	0.5150	35.5357	9.2602	45.7959
Grand Total		76.3250	23.1625	76.3249	23.1627			10.3000	2.5750	162.9499	48.9002	211.8501

No.	Revision	Note	Indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
2	REVISED WORDING FROM DOD REVIEW	DO	KL*	RV*			22.09.10
1	REVISED WORDING FROM ASA REVIEW	DO	KL*	RV*			29.07.10