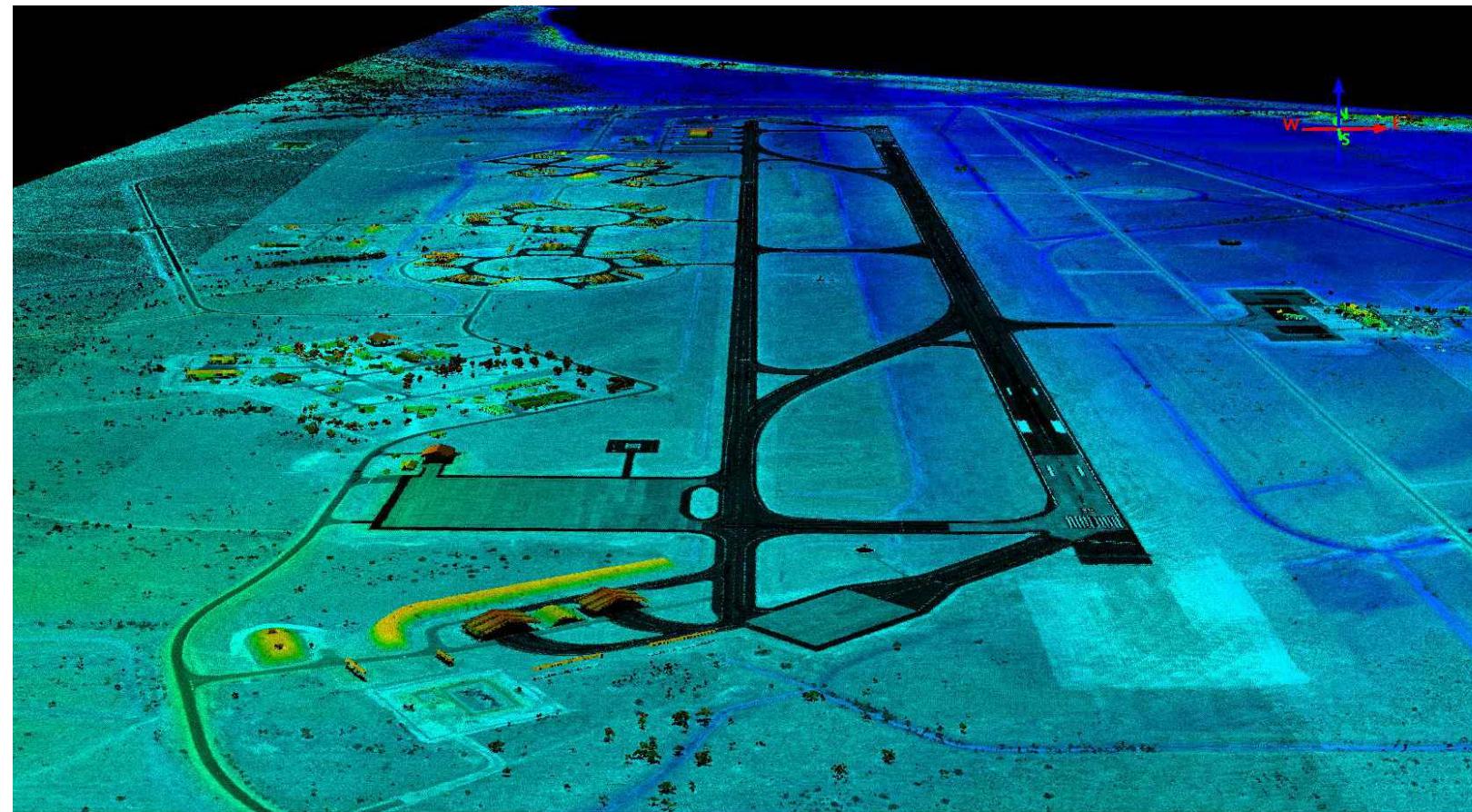


OBSTACLE LIMITATION SURVEYS AND ASSESSMENT

RAAF BASE LEARMONT
AERODROME OBSTACLE CHART ICAO TYPE A
(OPERATING LIMITATIONS) ISSUED NOVEMBER 2024



DECLARED DISTANCES FOR RUNWAY 36	
TAKE OFF RUN AVAILABLE (TORA)	3047m (9996')
TAKE OFF DISTANCE AVAILABLE (TODA)	3352m (10997') 2.40%
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	3047m (9996')
LANDING DISTANCE AVAILABLE (LDA)	3047m (9996')
SUPPLEMENTARY TAKE OFF DISTANCE AVAILABLE (STODA)	3330m (10925') 1.6%, 3340m (10958') 1.9% 3343m (10967') 2.0%, 3348m (10984') 2.2%

LEGEND

- LOWEST SURVEYED SLOPE
- GROUND LEVEL
- MOST LIMITING OBSTACLE
- ① OBSTACLE

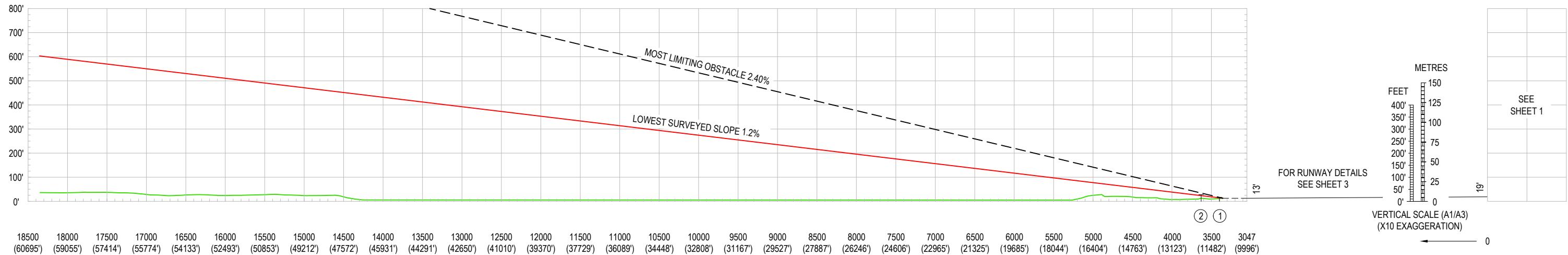
NOTES

- AZIMUTH AND COORDINATES FOR THIS SURVEY ARE BASED ON MGA2020 ZONE 50 THE VERTICAL DATUM BEING AHD.
- HORIZONTAL DIMENSIONS IN METRES (FEET) ELEVATIONS IN FEET
- USERS OF THIS CHART SHOULD NOTIFY ANY ERRORS OR OMISSIONS AS SOON AS THEY BECOME APPARENT TO :-
- AERONAUTICAL INFORMATION SERVICE - AIR FORCE EMAIL: AIS.AF@DEFENCE.GOV.AU
- FOR FURTHER INFORMATION REGARDING THIS CHART CONTACT THE ABOVE
- MAGNETIC VARIATION 0°15' E (MARCH 2023)
- AERIAL SURVEY COMPLETED MARCH 2016. GROUND SURVEY CHECKS AND VERIFICATION NOVEMBER 2022.

LEGEND

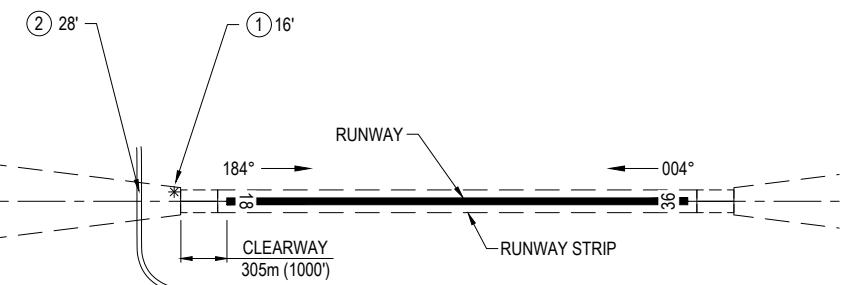
OBSTRUCTIONS AND OBSTACLES

- ① OBJECT NUMBER
- 392' TOP ELEVATION IN FEET
- * TREE(S) OR VEGETATION
- BUILDING OR LARGE STRUCTURE
- POLE, TOWER, SPIRE ETC
- △ ANTENNA
- MOVING (ROADS, RAILWAY TRACKS ETC)
- TERRAIN PENETRATING LOWEST SURVEYED SLOPE
- OVERHEAD TRANSMISSION LINE
- FENCE LINE



RUNWAY 36

1:25000 (A1) 250 0 500 1000
1:50000 (A3) SCALE 1:25000



RUNWAY STRIP: 3167m (10390') x 150m (492')
RUNWAY: 3047m (9996') x 45m (147') SEALED

THE TYPE A SURVEY HAS BEEN CONDUCTED IN ACCORDANCE WITH ICAO ANNEX 4 AND DEPARTMENT OF DEFENCE REQUIREMENTS. THE CHART CLEARLY SHOWS THE GRAPHICAL RESULTS OF THE SURVEY AND HAS BEEN CHECKED FOR ACCURACY AND COMPLETENESS OF INFORMATION. THE CHART IS CERTIFIED CORRECT FOR PUBLICATION.



KEY DIAGRAM

DANIEL GEEVES
REGISTERED SURVEYOR
aurecon

15/11/2024
DATE

DEPARTMENT OF DEFENCE

SECURITY AND ESTATE GROUP

AERODROME OBSTACLE CHART - ICAO TYPE A
(OPERATING LIMITATIONS) NOVEMBER 2024, COMPILED BY AURECON

TO BE READ IN CONJUNCTION WITH CURRENT NOTAMS

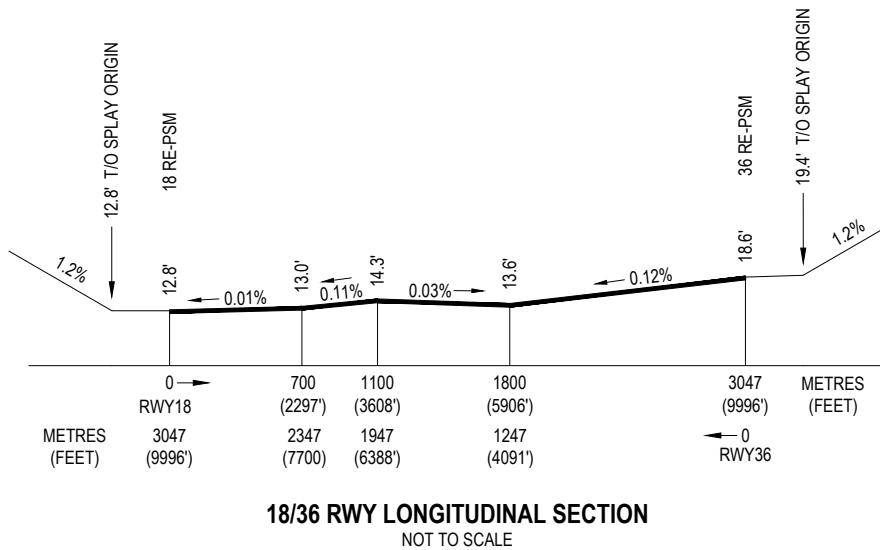
THE ORIGIN OF THE TAKE OFF SURFACE IS LOCATED AT THE END OF THE CLEARWAY
DISTANCES COMMENCE FROM THE RAAF RE-PSM AT THE START OF THE TAKE-OFF RUNWAY (SOT)

DATUM

AZIMUTH AND COORDINATES FOR THIS SURVEY ARE BASED ON MGA2020 ZONE 50
THE VERTICAL DATUM BEING AHD.

DEFINITIONS

- RE-PSM: RUNWAY END PERMANENT SURVEY MARK
- LENGTH OF INNER EDGE 180m
- RATE OF DIVERGENCE OF SPLAY (EACH SIDE) 12.5%
- FINAL WIDTH 1800m
- OVERALL LENGTH 15000m



18 TAKE OFF																					
REF No	REPSM AT START OF TORA (REPSM 18)								RUNWAY MAGNETIC BEARING			TORA		TODA		ELEVATION AT T.O. ORIGIN					
	GEOGRAPHIC								MGA		ELEVATION										
	DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)	EASTING	NORTHING	(m)	(Ft)	(DEG)	(MIN)	(SEC)	(m)	(Ft)	(m)	(Ft)		
	-22.2199693	-22°	13'	11.890"	114.0911514	114°	05'	28.145"	200118.84	7539944.79	3.9	12.8	183°	36'	36.076"	3047	9996	3352	10997	5.9	19.4

OBJECTS THAT APPEAR ON THE CHART

REF No	GEOGRAPHIC								MGA		ELEVATION TOP		TYPE OF OBSTACLE	DISTANCE FROM SOT		OFFSET		GRADIENT TO TOP	
	LAT LONG								EASTING	NORTHING	(m)	(Ft)		(m)	(Ft)	LEFT/RIGHT	%		
	DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)	(m)	(Ft)	(m)	(Ft)		(m)	(Ft)	LEFT/RIGHT	%		
1	-22.251449	-22°	15'	05.21"	114.088891	114°	05'	20.00"	199952.76	7536452.59	10.4	34.0	TREE	3493.7	11462.1	2.1	6.9	L	3.15
2	-22.252761	-22°	15'	09.94"	114.088536	114°	05'	18.72"	199918.92	7536306.50	10.7	35.2	TREE	3641.1	11945.9	24.6	80.8	R	1.67
3	-22.252825	-22°	15'	10.17"	114.089072	114°	05'	20.66"	199974.42	7536300.48	10.4	34.1	TREE	3644.4	11956.8	31.0	101.9	L	1.54
4	-22.252897	-22°	15'	10.42"	114.088881	114°	05'	19.97"	199954.80	7536292.16	10.1	33.2	TREE	3653.7	11987.2	11.9	38.9	L	1.40
5	-22.252890	-22°	15'	10.40"	114.088610	114°	05'	18.99"	199926.86	7536292.43	10.4	34.2	TREE	3654.8	11990.7	16.0	52.6	R	1.49
6	-22.252956	-22°	15'	10.64"	114.087681	114°	05'	15.65"	199831.17	7536283.24	12.3	40.2	MOVING	3668.5	12035.9	111.1	364.5	R	2.01
7	-22.253155	-22°	15'	11.35"	114.088431	114°	05'	18.35"	199908.95	7536262.73	11.0	36.1	TREE	3685.3	12090.8	32.5	106.6	R	1.53
8	-22.253252	-22°	15'	11.70"	114.087591	114°	05'	15.32"	199822.56	7536250.31	12.6	41.3	MOVING	3701.8	12145.1	118.1	387.5	R	1.92
9	-22.253317	-22°	15'	11.94"	114.088162	114°	05'	17.38"	199881.56	7536244.20	10.6	34.7	FENCE	3705.1	12155.8	58.9	193.3	R	1.32

36 TAKE OFF																					
REF No	REPSM AT START OF TORA (REPSM 36)								RUNWAY MAGNETIC BEARING			TORA		TODA		ELEVATION AT T.O. ORIGIN					
	GEOGRAPHIC								MGA		ELEVATION										
	DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)	EASTING	NORTHING	(m)	(Ft)	(DEG)	(MIN)	(SEC)	(m)	(Ft)	(m)	(Ft)		
	-22.2474242	-22°	14'	50.727"	114.0891620	114°	05'	20.983"	199972.14	7536899.07	5.7	18.6	3°	36'	36.076"	3047	9996	3352	10997	3.9	12.8

OBJECTS THAT APPEAR ON THE CHART

REF No	GEOGRAPHIC								MGA		ELEVATION TOP		TYPE OF OBSTACLE	DISTANCE FROM SOT		OFFSET		GRADIENT TO TOP	
	LAT LONG								EASTING	NORTHING	(m)	(Ft)		(m)	(Ft)	LEFT/RIGHT	%		
	DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)	(m)	(Ft)	(m)	(Ft)		(m)	(Ft)	LEFT/RIGHT	%		
1	-22.216873	-22°	13'	00.74"	114.091978	114°	05'	31.12"	200197.55	7540289.43	4.9	16.2	TREE	3394.9	11138.0	62.0	203.4	R	2.40
2	-22.214784	-22°	12'	53.22"	114.092200	114°	05'	31.91"	200215.93	7540521.37	8.4	27.6	MOVING	3627.3	11900.4	69.2	227.0	R	1.64

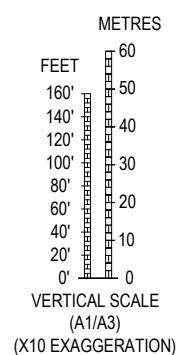
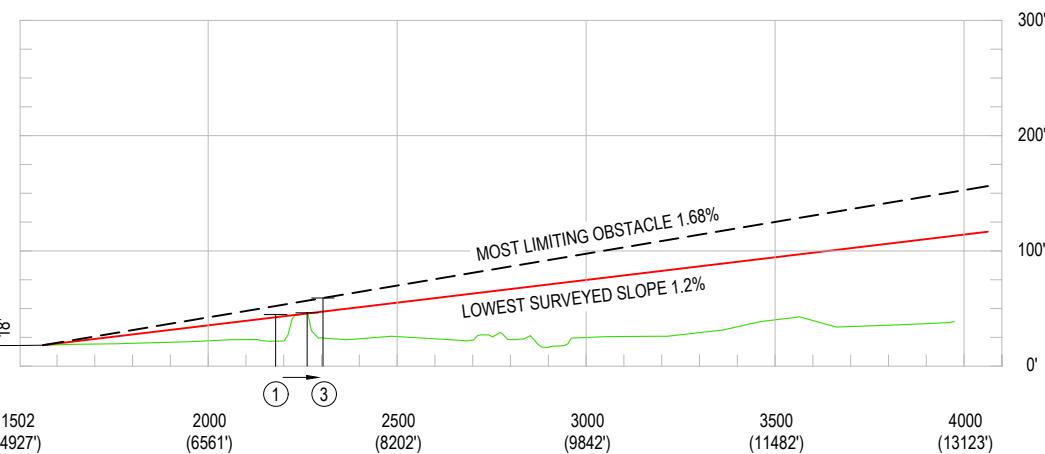
DECLARED DISTANCES FOR EMERGENCY RUNWAY 18R (TWY A)	
TAKE OFF RUN AVAILABLE (TORA)	1502m (4927')
TAKE OFF DISTANCE AVAILABLE (TODA)	1562m (10997') 1.68%
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	1502m (4927')
LANDING DISTANCE AVAILABLE (LDA)	1502m (4927')
SUPPLEMENTARY TAKE OFF DISTANCE AVAILABLE (STODA)	1521m (4990') 1.6%

LEGEND

The diagram illustrates surveying levels and an obstacle. It features three horizontal lines: a red line at the top labeled 'LOWEST SURVEYED SLOPE', a green line in the middle labeled 'GROUND LEVEL', and a black dashed line at the bottom labeled 'MOST LIMITING OBSTACLE'. Below these lines is a vertical line labeled 'OBSTACLE' with a circled '1' at its base.

SEE
SHEET 5

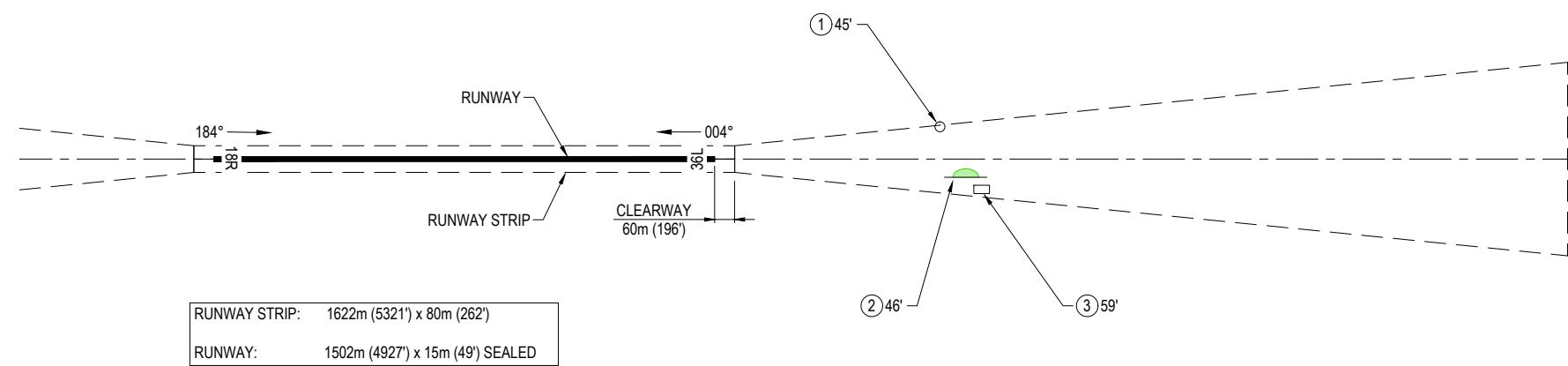
FOR RUNWAY DETAILS
SEE SHEET 6



EMERGENCY RUNWAY 18R

TWY A (CODE 2)

1:10000 (A1) 100 0 200 400m
 1:20000 (A3) SCALE 1:10000



RUNWAY 18R (TWY A) SURVEY HAS BEEN ASSESSED BASED ON THE FOLLOWING "CODE 2" TAKE-OFF PARAMETERS FOR AN EMERGENCY RUNWAY:
LENGTH OF INNER EDGE - 80m
RATE OF DIVERGENCE (EACH SIDE) - 10%
FINAL WIDTH - 580m
OVERALL LENGTH - 2500m

THE TYPE A SURVEY HAS BEEN CONDUCTED IN ACCORDANCE WITH ICAO ANNEX 4 AND DEPARTMENT OF DEFENCE REQUIREMENTS. THE CHART CLEARLY SHOWS THE GRAPHICAL RESULTS OF THE SURVEY AND HAS BEEN CHECKED FOR ACCURACY AND COMPLETENESS OF INFORMATION. THE CHART IS CERTIFIED CORRECT FOR PUBLICATION.

DANIEL GEEVES
REGISTERED SURVEYOR

5/11/2024
DATE



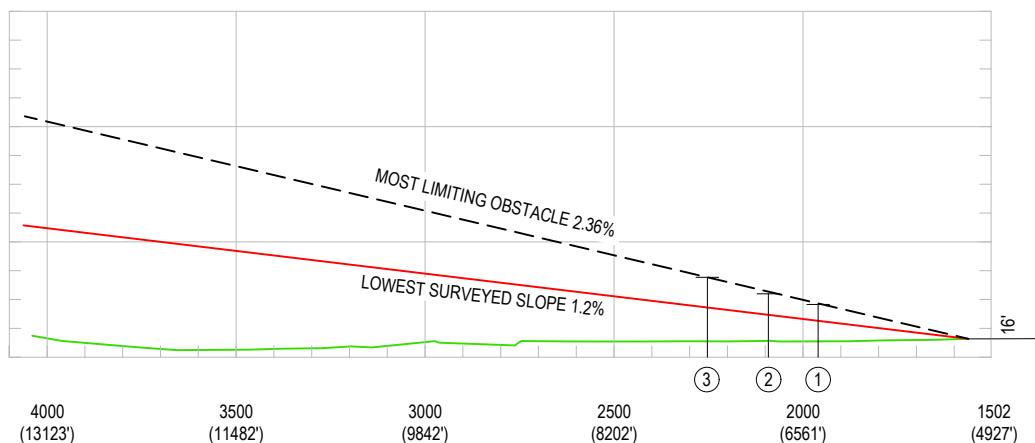
KEY DIAGRAM

CLIENT	REVISION DETAILS					APPROVED	SCALE	SIZE	FOR ISSUE NOT FOR CONSTRUCTION	PROJECT	OBSTACLE LIMITATION SURVEYS AND ASSESSMENT RAAF BASE LEARMONT						
	REV	DATE	REVISION DETAILS														
 Australian Government Department of Defence Security and Estate Group	A	10.11.23	FOR REVIEW			DG	AS SHOWN	A1/A3				AERODROME OBSTACLE CHART ICAO TYPE A (OPERATING LIMITATIONS) ISSUED NOVEMBER 2024 EMERGENCY RUNWAY 18R - SHEET 4 OF 6					
	B	30.11.23	100% ISSUE FOR REVIEW			DG	DRAWN	MH									
	C	12.02.24	100% ISSUE			DG	SURVEYED	KI/MH/AAM									
	D	25.03.24	100% ISSUE - AMMEND RWS WIDTH AS PER DEFENCE INSTRUCTION			DG	CHECKED	GH									
	E	15.11.24	100% ISSUE - UPDATE RWS WIDTH			DG											

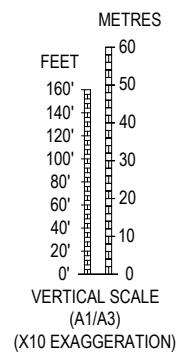
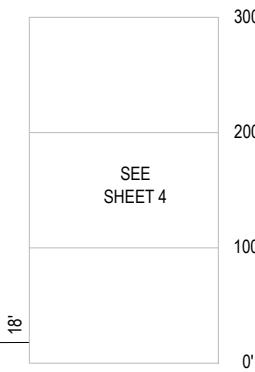
DECLARED DISTANCES FOR EMERGENCY RUNWAY 36L (TWY A)	
TAKE OFF RUN AVAILABLE (TORA)	1502m (4927')
TAKE OFF DISTANCE AVAILABLE (TODA)	1562m (10997') 2.36%
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	1502m (4927')
LANDING DISTANCE AVAILABLE (LDA)	1502m (4927')
SUPPLEMENTARY TAKE OFF DISTANCE AVAILABLE (STODA)	1242m (4074') 1.6%, 1398m (4586') 1.9% 1432m (4698') 2.0%, 1513m (4963') 2.2%

LEGEND

- LOWEST SURVEYED SLOPE
- GROUND LEVEL
- MOST LIMITING OBSTACLE
- ① OBSTACLE



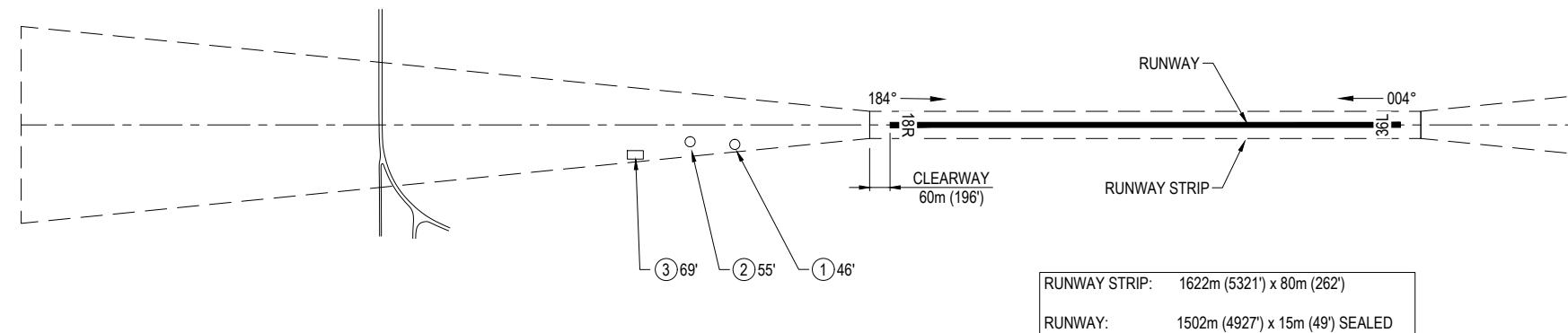
FOR RUNWAY DETAILS
SEE SHEET 6



EMERGENCY RUNWAY 36L

TWY A (CODE 2)

1:10000 (A1)
1:20000 (A3)
SCALE 1:10000



RUNWAY STRIP: 1622m (5321') x 80m (262')
RUNWAY: 1502m (4927') x 15m (49') SEALED

RUNWAY 36L (TWY A) SURVEY HAS BEEN ASSESSED BASED ON THE FOLLOWING "CODE 2" TAKE-OFF PARAMETERS FOR AN EMERGENCY RUNWAY:
LENGTH OF INNER EDGE - 80m
RATE OF DIVERGENCE (EACH SIDE) - 10%
FINAL WIDTH - 580m
OVERALL LENGTH - 2500m

THE TYPE A SURVEY HAS BEEN CONDUCTED IN ACCORDANCE WITH ICAO ANNEX 4 AND DEPARTMENT OF DEFENCE REQUIREMENTS. THE CHART CLEARLY SHOWS THE GRAPHICAL RESULTS OF THE SURVEY AND HAS BEEN CHECKED FOR ACCURACY AND COMPLETENESS OF INFORMATION. THE CHART IS CERTIFIED CORRECT FOR PUBLICATION.



KEY DIAGRAM
80 36 36
80 36

DANIEL GEEVES
REGISTERED SURVEYOR
aurecon

15/11/2024
DATE

CLIENT	REV	DATE	REVISION DETAILS	APPROVED	SCALE	SIZE	FOR ISSUE NOT FOR CONSTRUCTION	PROJECT	OBSTACLE LIMITATION SURVEYS AND ASSESSMENT RAAF BASE LEARMONT
	A	10.11.23	FOR REVIEW	DG	AS SHOWN	A1/A3			
	B	30.11.23	100% ISSUE FOR REVIEW	DG	DRAWN				
	C	12.02.24	100% ISSUE	DG	MH				
	D	25.03.24	100% ISSUE - AMMEND RWS WIDTH AS PER DEFENCE INSTRUCTION	DG	SURVEYED				
	E	15.11.24	100% ISSUE - UPDATE RWS WIDTH	DG	KI/MH/AAM				
					CHECKED				
					GH				
							APPROVED 15/11/2024		
							DANIEL GEEVES		
TITLE									AERODROME OBSTACLE CHART ICAO TYPE A (OPERATING LIMITATIONS) ISSUED NOVEMBER 2024 EMERGENCY RUNWAY 36L - SHEET 5 OF 6
DRAWING No.	520002	WBS	TYPE	DISC	SITE	NUMBER	REV		
	-EST09759-	DRG	UU	LEA	006		E		

DEPARTMENT OF DEFENCE

SECURITY AND ESTATE GROUP

AERODROME OBSTACLE CHART - ICAO TYPE A
(OPERATING LIMITATIONS) NOVEMBER 2024, COMPILED BY AURECO

TO BE READ IN CONJUNCTION WITH CURRENT NOTAMs

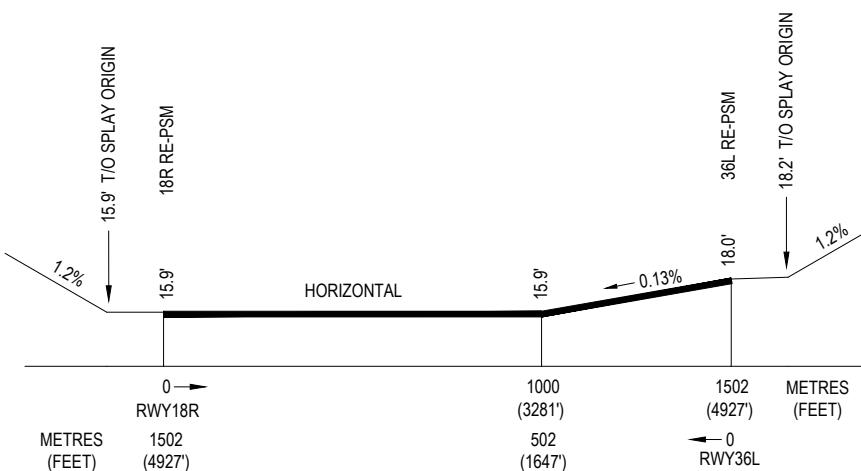
THE ORIGIN OF THE TAKE OFF SURFACE IS LOCATED AT THE END OF THE CLEARWAY DISTANCES COMMENCE FROM THE RAAF RE-PSM AT THE START OF THE TAKE-OFF RUNWAY (SO

DATUM
AZIMUTH AND COORDINATES FOR THIS SURVEY ARE BASED ON MGA2020 ZONE 5
THE VERTICAL DATUM BEING AHD

DEFINITIONS

- RE-PSM: RUNWAY END PERMANENT SURVEY MARKS
- LENGTH OF INNER EDGE 80m
- RATE OF DIVERGENCE OF SPLAY (EACH SIDE) 10%
- FINAL WIDTH 580m
- OVERALL LENGTH 2500m

18R TAKE OFF (TWY A)																				
REPSM AT START OF TORA (REPSM 18R)												RUNWAY MAGNETIC BEARING			TORA		TODA		ELEVATION AT T.O. ORIGIN	
GEOGRAPHIC								MGA		ELEVATION										
LAT				LONG				EASTING		NORTHING		(m)	(Ft)	(DEG)	(MIN)	(SEC)	(m)	(Ft)	(m)	(Ft)
DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)	199794.70	7539038.64	4.8	15.9	183°	36'	31.372"	1502	4927	1562	5124	5.6	18.2
OBJECTS THAT APPEAR ON THE CHART																				
REF No	GEOGRAPHIC								MGA		ELEVATION TOP		TYPE OF OBSTACLE		DISTANCE FROM SOT		OFFSET		GRADIENT TO TOP	
	LAT				LONG				EASTING						(m)	(FT)	(m)	(FT)	LEFT/RIGHT	%
1	-22.247773	-22°	14'	51.98"	114.087354	114°	05'	14.47"	199786.41	7536856.87	13.7	44.8	WINDSOCK		2178.1	7146.0	96.6	316.8	L	1.32
2	-22.248114	-22°	14'	53.21"	114.085851	114°	05'	09.06"	199632.16	7536816.04	13.9	45.5	EARTH BUND		2226.3	7304.0	55.4	181.9	R	1.25
3	-22.248786	-22°	14'	55.62"	114.085457	114°	05'	07.64"	199592.95	7536740.84	18.0	59.1	HANGER		2303.2	7556.4	91.0	298.4	R	1.68



18R/36L (TWY A) EMERGENCY RWY LONGITUDINAL SECTION
NOT TO SCALE

36L TAKE OFF (TWY A)																					
	REPSM AT START OF TORA (REPSM 36L)										RUNWAY MAGNETIC BEARING		TORA		TODA		ELEVATION AT T.O. ORIGIN				
	GEOGRAPHIC					MGA		ELEVATION													
	LAT				LONG					EASTING	NORTHING	(m)	(Ft)	(DEG)	(MIN)	(SEC)	(m)	(Ft)	(m)	(Ft)	
	DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)													
	-22.2416271	-22°	14'	29.858"	114.0868605	114°	05'	12.698"	199722.40	7537536.76	5.5	18.0	3°	36'	31.372"	1502	4927	1562	5124	4.8	15.9
OBJECTS THAT APPEAR ON THE CHART																					
REF No	GEOGRAPHIC										MGA		ELEVATION TOP		TYPE OF OBSTACLE		DISTANCE FROM SOT		OFFSET		GRADIENT TO TOP
	LAT				LONG					EASTING	NORTHING	(m)	(FT)	(m)			(FT)	(m)	(FT)	LEFT/RIGHT	%
	DECIMAL DEG	(DEG)	(MIN)	(SEC)	DECIMAL DEG	(DEG)	(MIN)	(SEC)													
1	-22.223935	-22°	13'	26.16"	114.087583	114°	05'	15.30"	199759.23	7539498.37	13.9	45.7	LIGHT POLE			1959.7	6429.5	57.5	188.6	L	2.29
2	-22.222754	-22°	13'	21.91"	114.087744	114°	05'	15.87"	199773.32	7539629.52	16.8	55.0	LIGHT POLE			2091.3	6861.2	49.7	163.2	L	2.25
3	-22.221278	-22°	13'	16.59"	114.087477	114°	05'	14.91"	199742.61	7539792.54	21.1	69.3	HANGER			2252.5	7390.2	88.2	289.4	I	2.36

THE TYPE A SURVEY HAS BEEN CONDUCTED IN ACCORDANCE WITH ICAO ANNEX 4 AND DEPARTMENT OF DEFENCE REQUIREMENTS. THE CHART CLEARLY SHOWS THE GRAPHICAL RESULTS OF THE SURVEY AND HAS BEEN CHECKED FOR ACCURACY AND COMPLETENESS OF INFORMATION. THE CHART IS CERTIFIED CORRECT FOR PUBLICATION.

DANIEL GEEVES
REGISTERED SURVEYOR


5/11/2024
DATE