Norseman Aerodrome

Take-Off and Approach Surveys

Date: 30/11/2021

Inspector: Christopher Bitmead

Aerodrome Management Services Pty Ltd

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NORSEMAN AERODROME

TAKE-OFF AND APPROACH SURVEYS

Date: 30/11/2021

Aerodrome Summary	
Aerodrome Owner/Operator	**Shire of Dundas**
Aerodrome Category	**Aircraft Landing Area (ALA)**
Terminal Instrument Flight Procedures (TIFPs)	**Nil**
Runway Lighting	**Portable – emergency use only**
Runway Code	**Surveyed to Code 3 non-instrument parameters**
Largest aircraft regularly using the aerodrome	**Proposed Dash 8-300 operations**
Typical flight schedule	**Proposed twice weekly**

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1. Disclaimer

This report has been prepared by Aerodrome Management Services (AMS) for Maroomba Airlines.

The Norseman Aerodrome is an unregulated aircraft landing area (ALA). CASA does not approve or regulate ALAs, although it may inspect an ALA as part of its oversight of aircraft operators (rather than of the ALA owner/operator). The ultimate responsibility of determining if the ALA facilities are suitable for the safe operation of the aircraft, including the Obstacle Limitation Surfaces (OLS), lies with the aircraft operator and the pilot in command. It is also their responsibility to obtain permission from the aerodrome owner and/or operator to utilise the aerodrome and, where applicable, obtain pavement concessions, landing and parking approvals.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed on the date of the survey. AMS holds no responsibility or obligation to update this report to account for subsequent events or changes.

AMS does not accept liability in connection with any unverified details, errors or omissions in the information published by the aerodrome operator or provided to the AMS inspector.

2. Certification

This aerodrome survey was conducted in accordance with the requirements set by the Civil Aviation Safety Authority (where applicable). The qualifications of the technical inspector are outlined in Appendix 1.

I hereby certify that, to the best of my knowledge, the published aerodrome data and the survey included in this report are correct.

Signature

Christopher Bitmead
Aerodrome Management Services Pty Ltd

3. Runway Threshold Data

The runway threshold coordinates are not published in the Designated Airspace Handbook[1] (DAH).

The Data Quality Requirement (DQR) for runway threshold point coordinates is accuracy to within 1 metre. Due to tectonic movement, these coordinates should be reviewed at least every 5 years to ensure ongoing accuracy. The DQR for threshold point elevation is accuracy to 0.25 metres.

During this inspection, the runway thresholds were surveyed, and the data is detailed in the table below.

Runway Designator	Threshold Point Coordinates		Threshold Point Elevation	Date of last assessment
01	321235S	1214526E	263.9036	30/11/21
19	321149S	1214532E	263.6394	30/11/21

4. Obstacle Limitation Surfaces (OLS)

4.1 Take-off and Approach Surfaces

The survey of the take-off and approach surfaces for the aerodrome is detailed in Appendix 4. Supplementary take-off distances and gradients are detailed in the survey sheet.

The survey was conducted using Code 3 non-instrument runway parameters as specified in the Part 139 (Aerodromes) Manual of Standards[2] (MOS). These include a take-off inner edge of 180 m.

4.2 Transitional Surfaces

Potential objects were visually assessed, and no issues were found.

4.3 Visual Assessment of the OLS

The inner horizontal and conical surfaces were visually assessed from the aerodrome. No issues were found.

[1] *Designated Airspace Handbook (Airservices Australia, December 2021)*
[2] *(Part 139 (Aerodromes) Manual of Standards 2019 (legislation.gov.au)*

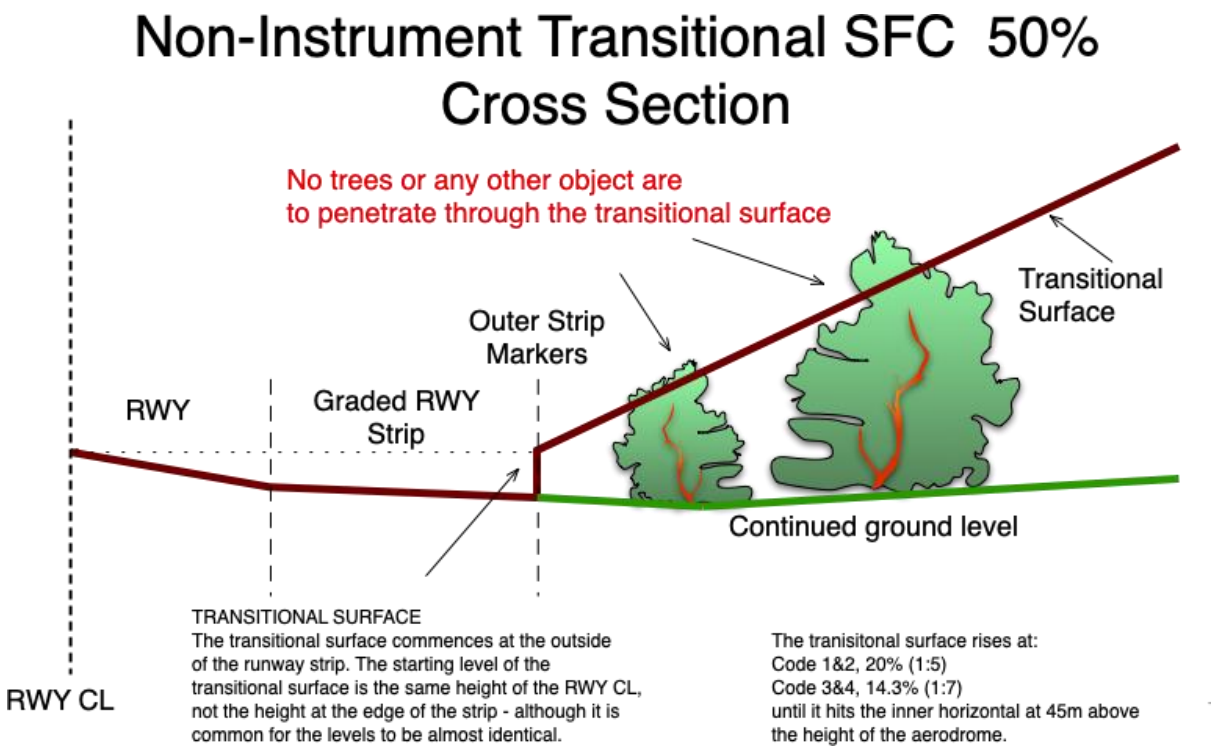
Appendix 1 – Qualifications of Technical Inspector

Civil Aviation Safety Regulation (CASR) 139.075 and the Part 139 MOS (sections 12.10 and 12.11) require the technical inspection of an aerodrome to be conducted by a person with relevant technical qualifications and experience, or demonstrable relevant technical experience.

This aerodrome survey was conducted by Christopher Bitmead. Christopher has experience in accordance with CASR 139 to conduct Annual Technical Inspections of Certified airports. Experience includes, but is not limited to:

- Long term management of multiple aerodromes;
- Short term relief management of multiple aerodromes;
- Project managed aerodrome construction projects, including greenfield aerodromes and rebuilds/expansions of existing facilities;
- Project managed aerodrome lighting installations;
- Project managed aerodrome line-marking installations;
- Inspection of runway surfaces;
- Technical inspections at multiple aerodromes;
- Survey of aerodrome facilities, set out of lighting and line-marking, and take off approach and transitional surfaces.

Appendix 2 – Transitional Surface Schematics



Appendix 3 – Take-off and Approach Survey Data and Photos

Norseman - Aerodrome Survey

Date 30/11/2021

Position 32 12.6S 121 45.3E Elevation 863 FT

Runway Details	Dimensions	1419 m x 30 m		Slope	0% down to S		Surface	Sealed	
	Levels	TKOF 01	RWY END	263.6394		TKOF 19	RWY END	263.9036	
			RWS END	263.6375			RWS END	264.0262	Runway BRG (T) 5.5

Declared Distances

RWY	*TORA*	*TODA*	*ASDA*	*LDA*
1	1419	1479 (2.62%)	1419	1419
19	1419	1479 (2.28%)	1419	1419

Supplementary Take-Off Distances

RWY	*1.6%*	*1.9%*	*2.2%*	*2.5%*	*3.3%*	*5.0%*
1	1319	1383	1431	1466	NA	NA
19	1091	1296	1445	NA	NA	NA

Survey Specs

Code 3 Non-Instrument

Take-Off SFC		*Approach SFC*	
Inner Edge	180 m	Inner Edge	150 m
Dist FM THR	60 m	Dist FM THR	60 m
Divergence	12.5%	Divergence	10%
Final Width	1800 m	1st Sect Slope	3.33%
Length	15000 m	1st Sect Length	3000 m

Obstacle Information

TKOF RWY	*Object No*	*Description*	*DIST OUT*	*HT ABV CWY*	*OBST GRAD*	*OBST RL*	*DIST FM SOT*	*OFFSET*	*Comment*
1	1	Tree	90.62 m	6.41 m	7.07%	270.05 m	1569.62 m	189.44 mL	Outside TKOF SFC
1	2	Tree	131.88 m	6.79 m	5.15%	270.43 m	1610.88 m	211.21 mL	Outside TKOF SFC
1	3	Tree	194.31 m	5.88 m	3.02%	269.52 m	1673.31 m	174.25 mL	Outside TKOF SFC
1	4	Tower	5655.63 m	126.28 m	2.23%	389.91 m	7134.63 m	3534.04 mL	Outside TKOF SFC
1	5	Tower	5666.91 m	116.35 m	2.05%	379.99 m	7145.91 m	3515.92 mL	Outside TKOF SFC
1	6	Tree	1282.05 m	7.64 m	0.59%	271.28 m	2761.05 m	379.36 mL	Outside TKOF SFC
1	7	Bollard	346.18 m	1.62 m	0.46%	265.26 m	1825.18 m	23.8 mR	
1	8	Tree	345.31 m	2.53 m	0.73%	266.17 m	1824.31 m	57.06 mR	
1	9	Tree	250.54 m	6.56 m	2.62%	270.2 m	1729.54 m	65.65 mR	Critical Object
1	10	Tree	229 m	3.06 m	1.33%	266.7 m	1708 m	75.07 mR	
1	11	Tree	394.05 m	3.62 m	0.92%	267.26 m	1873.05 m	151 mR	Outside TKOF SFC
19	1	Tree	76.28 m	12.72 m	16.68%	276.75 m	1555.28 m	177.29 mL	Outside TKOF SFC
19	2	Tree	146.62 m	10.39 m	7.08%	274.42 m	1625.62 m	148.95 mL	Outside TKOF SFC
19	3	Tree	405.93 m	19.29 m	4.75%	283.32 m	1884.93 m	242.79 mL	Outside TKOF SFC
19	4	Tree	353.94 m	14.12 m	3.99%	278.15 m	1832.94 m	212.82 mL	Outside TKOF SFC
19	5	Tree	415.44 m	15.96 m	3.84%	279.98 m	1894.44 m	178.07 mL	Outside TKOF SFC
19	6	Tree	910.44 m	20.77 m	2.28%	284.79 m	2389.44 m	31.8 mL	Critical Object
19	7	Weather Station	403.56 m	8.2 m	2.03%	272.23 m	1882.56 m	162.36 mR	Outside TKOF SFC

Runway 01 Take-off

Runway 19 Take-off