MEMORANDUM OF UNDERSTANDING

entered into by and between the



NAMIBIA CIVIL AVIATION AUTHORITY AIR NAVIGATION SERVICE PROVIDER

(Hereinafter referred to as "ANS")

and



SOARING SOCIETY OF NAMIBIA

(Hereinafter referred to as "SSN")

(Hereinafter the ANS and SSN are jointly referred to as "the Parties")

For the conduct of gliding operations within the Republic of Namibia (FYWF FIR)

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RECORD OF AMENDMENTS

Nr.	Date	Brief description of the changes	Changed / New sections	Version	Editor
1	1 Sep 2023	New Document		Ver 1.0	Erik Bruys

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1 September 2023

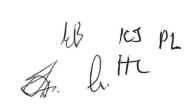
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1. PREAMBLE

RECOGNISING the NCAA as a juristic person established in terms of Article 8 of the Civil Aviation Act (Act 6 of 2016) to conduct the functions of the Authority and to provide an Air Navigation Service (ANS) within Namibia;

RECOGNISING the SSN as a holder of an Aviation Recreational Organization (ARO) certificate issued by the NCAA in terms of NAMCARS PART 149 for the operation and organization of glider aircraft activities in Namibia for aviation recreational purposes;

COMMITTING to provide a platform for the promotion and safe conduct of recreational gliding activities within Namibia:

RECOGNISING the actions taken by both parties in previous years to improve the coordination and operability of gliding activities;

NOTWITHSTANDING the understanding reached through this MoU the regulations as defined in the document NAMCAR as well as information circulars, technical standards and any directives issued by the Executive Director of the NCAA from time to time shall remain applicable;

ACKNOWLEDGING the provisions of the SSN Manual of Procedure;

NOW THEREFORE the Parties have reached the following by signing this MoU;

This MoU shall come into force on the date of signature and remain valid until it has been revoked by mutual agreement of both parties. This MoU may be subject to amendment as and when required by the parties.

The MoU is only valid subject to the SSN maintaining a valid ARO approval.

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2. OBJECT

The object of this MoU is to enhance civil aviation safety through coordinated efforts and defined responsibilities of all parties while involved in gliding activities.

3. ENFORCEABILITY OF THE MOU

Once signed this MoU will be the baseline of coordinated operations for SSN and ANS and each party will be expected to maintain their agreed responsibilities. The requirements of the NAMCARs, as amended, specifically Parts 91, 104, 149 and 172 shall be enforceable at all times and any non-compliance of the Regulations or MoU shall be reported to the Executive Director of the Namibia Civil Aviation Authority.

4. DEFINITIONS

For the purposes of this MoU, the following definitions of airspace and responsibilities will apply:

4.1 Transponder Mandatory Zone (TMZ)

Transponder Mandatory Zones are established during the gliding season to ensure greater awareness of glider traffic in areas that may have high-density IFR traffic operations. These areas are established to ensure the ATC is aware if glider activity is taking place in certain areas, and also to allow TCAS equipped aircraft better situational awareness of locating gliders when flying in the same airspace.

Transponder operation for all gliders at FL145 and above as well as in the TMZ's is mandatory. All aircraft that are operating in transponder mandatory zones as defined in NOTAM and this MoU are required to be equipped with and operate SSR transponders mode A and C simultaneously. All gliders to make use of squawk code 7677 when squawking.

The TMZ's are defined in AIP ENR section – Transponder mandatory zones.

4.2 Competition Season

The Competition Season means the time when a lot of glider pilots from around the world visit Namibia and fly from the designated gliding centers for Personal, African or World-Records.

The competition season runs from 01 November to 31 January of the following year.

4.3 Gliding Area as per AIP ENR 5.5 (Also referred to Competition Area)

A predefined airspace sector of lateral and vertical dimensions as published in the Namibia Integrated Aeronautical Publications or amended via NOTAM or AIP Supplement. It is noted that the Competition Area is referenced in the AIP as the Special Gliding Area.

4.4 SAR

Means Search and Rescue and is the provision of locating and retrieving an aircraft after an accident, forced landing or missing aircraft.

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4.5 Out landing of a glider

Out landing of a glider is part of the gliding sport and is a fairly common occurrence when a glider is unable to reach its intended destination due to the lack of thermals or any other operational concerns. Not every out landing is an emergency and does not require the activation of ERP's. The SSN is responsible to manage an out landed glider and its occupants and, depending on the nature of the out landing, institute the necessary measures accordingly.

4.6 NCAA (ANS)

Namibia Civil Aviation Authority "Air Navigation Services" shall be the Unit within the NCAA that is responsible for the provision of Air Traffic Services within Namibia.

4.7 ARO

Aviation Recreation Organization. (NAMCAR's Part 149)

4.8 MOP

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Manual of Procedure

5. AREAS OF RESPONSIBILITIES

NCAA Flight Operation Section shall be responsible for providing oversight activities and the NCAA (ANS) Division shall be responsible for the provision of limited ATS, alerting and SAR services as agreed between all parties in this MoU.

SSN shall be responsible for the provision of all activities in relation to gliding as per their Manual of Procedure and the requirements stipulated as per their ARO.

SSN shall also be responsible for monitoring daily glider activities and initiating any actions in relation to overdue gliders. If SSN is unable to complete its responsibilities in terms of SAR and Alerting actions the SSN shall inform the NCAA (ANS) that assistance is required in the provision of alerting or SAR actions, where after the NCAA shall resume normal mandated functions and initiate SAR or Alerting actions as appropriate. The SSN ceases to be responsible for the provision of assistance to gliders however shall continue to provide support to the NCAA where able.

6. GLIDER OPERATIONS WITHIN WINDHOEK FLIGHT INFORMATION REGION (FIR)

Gliders operating in the Windhoek (FYWF) FIR shall comply with all regular ATS procedures applicable for the specific airspace in which they operate.

Gliding operations are based on the VFR principles of "see and avoid". It is the aim of gliderpilots to limit "eyes inside cockpit" to a minimum to gain maximum benefit from analyzing meteorological conditions outside.

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Due to the nature of gliding, a glider's trajectory will constantly change to gain maximum benefit from meteorological conditions, like thermals etc. It is also common practice for gliders to "flock" together, and it is therefore of very limited benefit to pass traffic information to gliders. Gliders constantly look out for other aircraft throughout their flight and do therefore not require ATC to provide them with traffic information, unless specifically so requested.

Gliders are required to squawk #7677 in the special gliding area (above FL145), as well as when operating within a TMZ. When technically able, gliders are encouraged to keep their transponders on throughout their flight, in order to provide better situational awareness for ATC, as well as enabling TCAS equipped aircraft to get traffic information.

6.1 UNCONTROLLED AIRSPACE FROM GND TO FL145

Gliders operating in Class-G airspace are required to comply with normal Airspace access rules and provisions. No Glider Operations are allowed in the Windhoek/Walvis Bay Terminal Control Area (TMA) or in Class A Airspace.

6.2 CONTROLLED AIRSPACE CLASS E FROM FL145-FL195

The airspace within the lateral confines of the Special Gliding Area (Competition Gliding Area) from FL145 to FL195 is downgraded from Class A to Class E airspace. FYWH RADAR FREQ 124.7MHZ.

Within Class E airspace, IFR and VFR flights are permitted, IFR flights are subject to air traffic control service and are separated from other IFR flights in accordance with Airspace Rules.

In class E airspace, IFR flights will receive traffic information on VFR flights as far as it is practical, available and if the situation allows.

The ICAO standard is "see and avoid". According to this motto everybody shall contribute to safety in this airspace. Although operation of systems such as FLARM, TCAS or ADS-B may provide situational awareness of traffic operating in the airspace, crews should not use these as a primary means of identifying other traffic, remembering that not all aircraft may be equipped with these systems. Even if operating on an IFR Flight Plan, all flight crews operating within Class E Airspace should continuously "look-out" for possible conflicting traffic.

Radio contact and an ATC clearance are not required for VFR flights. It is recommended that radio watch is maintained on frequency 124.7MHz. Transponder operation for all gliders at FL145 and above as well as in the TMZ's is mandatory. All aircraft that are operating in transponder mandatory zones as defined in NOTAM and this MoU are required to be equipped with and operate SSR transponders mode A and C simultaneously. All gliders to make use of squawk code #7677 when squawking.

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7. RADIO AND TRANSPONDER OPERATIONS

7.1 RADIO AND TRANSPONDER EQUIPED GLIDERS

Gliders that are transponder equipped and capable of operating such for extended periods are advised to switch "ON" their transponder with the assigned squawk code #7677. The usage of transponder is mandatory for operations above FL145 as well as inside the TMZ areas and inside the TMZ Kiripotib from FL100 to FL145.

7.2 TRANSPONDER MANDATORY ZONE (TMZ)

The use of transponders is established to ensure greater awareness of glider traffic in areas that may have high-density IFR traffic operations. TMZ areas are established to ensure the ATC is aware if glider activity is taking place in certain areas, and also to allow TCAS equipped aircraft better situational awareness of locating gliders when flying in the same airspace. The squawk code for gliders is #7677.

Glider pilots must ensure that the transponder is switched "ON" with altitude at all times whilst within the TMZ or above FL145. Once outside of the TMZ the PIC will follow procedures as stipulated in part 7.1 of the MoU

7.2.1 TMZ Kiripotib and Pokweni

A Transponder Mandatory Zone (TMZ) shall be established between the Windhoek TMA and 80DME WHV between Radials 155 and 205 WHV. The TMZ operation will be applicable to all gliders above FL145 in the designated glider area up to 80NM WHV and above FL100 in the Buffer Zone also known to the gliders as the Kiripotib Zone.

The TMZ Kiripotib Zone is established between the Windhoek TMA–C 50NM WHV and 60NM WHV with borders Radial 115 VOR WHV in the East and Radial 205 VOR WHV in the West. FL100 up to FL145.

7.2.2 TMZ Walvis Bay

A TMZ shall be established between the Walvis Bay TMA and 80DME WBV and the borders of the special gliding area. The TMZ operation will be applicable to all gliders above FL145 in the designated area.

7.2.3 TMZ Lüderitz

A TMZ shall be established between the Lüderitz FYLZ ARP and 45DME Lüderitz FYLZ ARP and the borders of the special gliding area. The TMZ operation will be applicable to all gliders above FL145 in the designated area.

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7.2.4 TMZ Airway G653

A TMZ shall be established both sides 15NM along the Route G653. The borders of the special gliding area are the West- and East- side border. The TMZ operation will be applicable to all gliders above FL145 in the designated area.

7.2.5 TMZ Airway R987

A TMZ shall be established both sides 15NM along the Route R987. The borders of the special gliding area are the North- and South- side border. The TMZ operation will be applicable to all gliders above FL145 in the designated area.

8. ATS PROCEDURES

8.1 BUFFER ZONE TMZ KIRIPOTIB

A Buffer zone is established above FL145 between the Special Gliding Area (Competition Gliding Area) and 10NM from the Windhoek TMA boundary, and 20NM from the Walvis Bay TMA boundary respectively.

A TMZ Kiripotib will be established between the Windhoek TMA–C (50nm WHV) and 60nm WHV with borders Radial 115 VOR WHV in the East and Radial 205 VOR WHV in the West. FL100 up to FL145.

Operating a glider in this area should be conducted in accordance with point 7.1

8.2 CONTROLLED AIRSPACE

No Glider may operate within the confines of the Windhoek and Walvis Bay TMAs, unless otherwise authorized by ATC. Gliders may not operate within Class A Airspace in Namibia.

Should a glider pilot encounter conditions that are unavoidable and it is evident that the glider may inadvertently enter controlled airspace the PIC shall immediately notify ATC on the appropriate frequency (or 121.5MHz) of this.

8.3 GLIDER OPERATIONS

Due to the nature of glider flights, ATC cannot request a glider to maintain an altitude and direction. Gliders generally ascend by thermalling which is a process of circling within a thermal air mass. A glider will descend or climb as it moves through the air. This rate of climb/descent may vary for any moment.

8.4 GLIDER OPERATIONS OUTSIDE OF THE COMPETITION GLIDING AREA

Gliders operating outside the Special Gliding Area (Competition Gliding Area) shall comply with all regular ATS procedures applicable for that airspace.

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Pilots are reminded that outside of the Competition Gliding area Class G airspace is designated up to FL145 only and nil VFR flights are permitted in Class A Airspace.

9. FREQUENCIES

9.1 TIBA FREQUENCIES

Aircraft operating within 5NM and below 3000 feet AGL of the following published aerodromes where gliding activity is taking place, shall make appropriate TIBA broadcasts in English on appropriate frequencies.

The following TIBA Frequencies are allocated to the Gliding bases as follows:

Pokweni	120.200MHz
Kiripotib	120.250MHz
Veronica	123.200MHz
Bitterwasser	123.600MHz

In addition, other TIBA frequencies published within the Gliding Area are as follows:

KEETMANSHOOP	118.3 MHz	

Note: Although Keetmanshoop is unmanned a dedicated frequency has been assigned for traffic broadcasts.

All other <u>unmanned</u>	124.8 MHZ
airfields	

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9.2 ATS FREQUENCIES AND CONTACT DETAILS

ATSU	FREQ	<u>TELEPHONE</u>
WINDHOEK AREA CONTROL CENTRE (ATS Supervisor)	n/a	+264 61 702290/1
WINDHOEK RADAR	124.7 MHz	+264 61 702290/1
WINDHOEK APPROACH	120.5 MHz	+264 61 702290/1
WINDHOEK INFORMATION NORTH	129.6 MHz	
WINDHOEK INFORMATION SOUTH	123.8 MHz	+264 61 702290/1
WINDHOEK ACC/SAR		+264 61 702070
EROS TOWER	118.7 MHz	+264 61 702090/1
WINDHOEK TOWER	118.1 MHz	+264 62 702490/2
WALVISBAY APPROACH	122.5 MHz	+264 64 702690/1
LUDERITZ TOWER	118.6 MHz	+264 63 703590/1

10. CONTACT DETAILS

10.1 ATS CONTACT DETAILS

See 9.2

10.2 SSN OPERATIONAL BASES CONTACT DETAILS

The following contact details are provided for reference.

<u>Bitterwasser</u>	Mr. Ralph Bürklin	Email: <u>rb@buerklinsh.de</u>
		Tel: +49 1728511203
<u>Veronica</u>	Mr. Gysbert Van der Westhuizen	Email: gysbert@arugamelodges.com
		Tel: 081 2962651
<u>Pokweni</u>	Mr. Jos Van der Merwe	Email: pokweni@iway.na
		Tel: 081 2722594

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<u>Kiripotib</u>	Mr. Hans von Hase	Email: hans@kiripotib.com
		Tel: 081 2432628
SSN	Mr Hans Wiehahn	Email: hanswiehahn@gmail.com
		Tel: 081 3356144
Quality and	Ralph Bürklin	Mob. +49 172 8511203
Safety Manager SSN		+264 81 6468122
		Email: <u>rb@buerklinsh.de</u>

11. ALERTING ACTION AND SAR

NCAA ANS shall not be responsible for the provision of an alerting service to any of the participating gliders operating within the Windhoek FIR. SSN shall be responsible for flight monitoring and initiation of any alerting action required for gliders operating in the Windhoek FIR.

SSN will initiate the recovery of any glider that has executed an outfield landing and SSN shall recover the glider at their cost. Should the SSN not be able to recover such glider, and requires assistance in the recovery or believes that recovery is not possible, the SSN shall then notify the NCAA ANS section of same and pass all relevant information necessary to activate the relevant SAR stage. NCAA then resumes responsibility for the activation and conduct of the SAR and SSN shall continue to support the NCAA where able. The cost of such SAR will be borne in accordance with prevailing statutory stipulations taking into consideration the nature and extent of the SAR operation.

If a glider in the air encounters any difficulty or is unable to contact SSN ground operations for position reporting, the PIC may inform the appropriate ANS Centre either via the telephone or appropriate manned frequency. ANS shall then be responsible to ensure the information is relayed to the SSN as soon as possible and to coordinate any actions required in providing assistance to the flight.

In the event of any accident involving a glider, the SSN is responsible for initial SAR interventions and activation of civil defense (ambulance, police, etc.). Thereafter the SSN shall inform the Directorate of Aircraft Accidents and Incidents Investigation (DAAII) and the relevant ANS office that will coordinate with the SSN on the processes to be followed and assist where required.

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12. CROSS BORDER OPERATIONS

Where the SSN has received approval for cross border operations into Gaborone FIR (FBGR) or the Johannesburg FIR (FAJA), the PIC of the glider shall be responsible for coordinating any cross-FIR operations. Windhoek ANS shall not be required to coordinate glider operations with FBGR or FAJA and the SSN shall ensure that the appropriate agencies have been notified of such operations. NCAA ANS will be unable to render SAR services outside the Republic of Namibia and the SSN shall be responsible for alerting the appropriate authorities should SAR action be required during cross border operations. The SSN may be required to bear the costs incurred for such notification and coordination with the Civil Aviation Authorities of Botswana or South Africa, ANS and their respective investigation units.

13. EMERGENCY PROCEDURES

All emergency procedures regarding the operating of gliders will be conducted in accordance with the approved MOP of the SSN.

14. SAFETY CONSULTATIONS

The parties hereto agree to conduct safety meetings prior to the start of the gliding season, and post-season. Safety Meetings will have the objective of refining any procedures affecting the continued safety of gliding operations.

15. NOTIFICATION OF INCIDENTS OR DISPUTES

Should there be a requirement to notify the Executive Director of any incident or dispute, such will be reported via the incident reporting addressing system at incidents@ncaa.na

Mandatory Occurrence Report (MOR) forms are available on the NCAA website www.ncaa.com.na and shall be submitted in accordance with the requirements of the NAMCARS's relating to mandatory occurrence reporting.

The NCAA or the SSN may also submit reports on any perceived violations or infringements by utilizing the Voluntary Report Form available on the NCAA website.

The NCAA will notify the SSN Quality and Safety Manager of any incident report received as soon as reasonably practicable on the contact details provided in this MoU.

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16. NOMINATION OF CONTACT PERSONS

The following contact persons are nominated for each party.

For the Namibian Civil Aviation Authority:

For The Executive Director Namibian Civil Aviation Authority

Erik Bruys	Jeremia Kamati	Hilma Leonard
ATS: Standards Specialist	Senior Manager: ATS	Head: ANS
bruyse@ncaa.na	kamatij@ncaa.na	<u>leonardh@ncaa.na</u>
TEL: +264 61 702209	TEL: +264 61 702 217	TEL: +264 61 702084
Mob: +264 81 2480808	Mob +264 81 127 7425	Mob: +264 81 2455813

And for the Soaring Society of Namibia

Ralph Bürklin

Quality and Safety Manager

Mob. +49 172 8511203 or +264 81 6468122

Email: rb@buerklinsh.de

17. FINANCIAL MATTERS

Unless otherwise agreed, each Party shall bear its own cost for the implementation of this MoU.

18. AMENDMENT

This MoU may be amended in writing at any time by mutual consent of the Parties.

19. COMMENCEMENT AND DURATION

This MoU will come into effect on the date of signature and will remain in effect until terminated.

20. TERMINATION CLAUSE

This MoU may be terminated by agreement between the parties. However, a party may give the other party 30 days prior notice in writing of its intention to terminate this MoU.

21. JURISDICTION

The parties to this MoU agree to the exclusive jurisdiction of the courts of law of the Republic of Namibia.

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Signed at WINSHOEK	on the <u>2014</u> day of <u>October</u> 20 <u>2</u> 3
	eing duly authorized thereto have signed this MoU.
FOR AND ON BEHALF S	SOARING SOCIETY OF NAMIBIA
	Sonhal.
	MR. J (Hans) Wiehahn
AS AUTHORISED	SIGNATORY ON BEHALF OF THE CHAIRPERSON / SSN
AS WITNESSES:	
1	FULL NAMES
2	CHRISTINE EZMAN.
	FULL NAMES
OR AND O	N BEHALF OF NCAA
	46
	MS. Hilma Leonard
	HEAD: AIR NAVIGATION SERVICES / NCAA
AS WITNESSES:	
1. Tark -	JEREMIA I. KAMATI FULL NAMES
2	PHILIPPINE LUNDAMA FULL NAMES

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