AD 2. AERODROMES

FYWH AD 2.1 AERODROME LOCATION INDICATOR AND NAME

FYWH - Hosea Kutako International Airport, Windhoek

FYWH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1.	ARP co-ordinates and site at AD	222847,62S 0172815,42E
2.	Direction and distance from (city)	24.3NM/45KM East of Windhoek
3.	Elevation/reference temperature	5 640 FT/30 °C
4.	Geiod undulation at AD ELEV PSN	101 FT (30 M)
5.	MAG VAR/annual change	14° W (2004)
6.	AD administration, address, telephone, telefax, telex, AFS	Namibia Airports Company Limited Hosea Kutako International Airport P.O Box 1 WINDHOEK NAMIBIA Mr. Leonard N. Shipuata: Airport Manager Contact Details Tel: +264 61 295 5600, Fax: +264 61 295 5622, Cell: +264 811441631 (during or after hours) E-mail: shipuatal@airports.com.na or ceo@airports.com ATC Tel: +264 62 702490/1/2/3 Fax: +264 62 702499 DCA Fax: +264 61 702066 AFS: FYWHYDYX
7.	Types of traffic permitted (IFR/VFR)	IFR/VFR
8.	Remarks	Nil

FYWH AD 2.3 OPERATIONAL HOURS

1.	AD administration	Aerodrome HOD As per NOTAM
2.	Customs and immigration	Same as AD
3.	Health and sanitation	Nil facilities
4.	AIS briefing office	Same as AD
5.	ATS reporting office (ARO)	Same as AD
6.	MET briefing office	Same as AD
	ATS	Area and FIS H24
7.		TWR HOD Same as AD
		ATC Tel: +264 62 702490 Fax: +264 62 702499
8.	Fuelling	Same as AD
9.	Handling	Same as AD administration
10.	Security	24 HRS
11.	De-icing	Nil facilities
	Remarks	Aircraft wishing to operate outside the H.O.D should apply 48
12.		HRS in advance and a surcharge of N\$8536.00per hour
		thereof will apply

FYWH AD 2.4 HANDLING SERVICES AND FACILITIES

1.	Cargo-handling facilities	Fork lift capacity 9 tons, Double Container pallets/ dolleys, Cargo Dolleys, Single container Dolleys, Wooden Panel Baggage cart, High-Low Loader(FMC), Baggage Loading belts, Ground Power units, Golf cart/passengers, Passenger assisted vehicle, Nonmotorised steps-Wide body, Motorised steps-Wide body, Toilet services, Douglas & Rofan Tractors, Ex Hyster Forklift.	
		Air Namibia Ground Handling Menzies Aviation (Pty) Ltd	
2.	Fuel/oil types	AVTUR-100 Ashless, Red Band, ASO W100, W120 Nil AVGAS(only Jet A1)	
3.	Fuelling facilities/capacity	Hydrant refueling system and Bowser of 18,000L. One truck with capacity of 18,000L with a floor of 900 litres/min	
4.	De-icing facilities	Nil facilities	
5.	Hangar space for visiting aircraft	Nil facilities	
6.	Repair facilities for visiting aircraft	Nil facilities	
7.	Remarks	AFT HR Fuelling charges N\$ 2,000.00 per hour	

FYWH AD 2.5 PASSENGER FACILITIES

1.	Hotels	In City
2.	Restaurants	On AD
3.	Transportation	Airport Shuttles, taxi service and Car hire
4.	Medical facilities	First aid, ambulance on AP Hospital in city ± 50 KM
5.	Bank and post office	Bank open with AD Administration hours , Post office open with AD Hours.
6.	Tourist office	Information Counter
7.	Remarks	Nil

FYWH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1.	AD category for fire fighting	Category 9
2.	Rescue equipment	3 x Fire Tenders
		700 000L water reservoir
		14750L AFFF (Foam- Trisol "S" 6%)
		900KG Dry Chemical Powder
		Hydrants (15)
3.	Capability for removal of disabled aircraft	Airlines Responsibility
4.	Remarks	Fire Protection HOD: H24
		No ACFT is to take-off or land outside these hours, except in emergency
		Trained personnel for fire protection: 15 per shift
		All fire Tenders are fully equipped

FYWH AD 2.7 SEASONAL AVAILABILITY - CLEARING

Available throughout the year and no need for clearing.

FYWH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1.	Apron surface and strength	Surface: Parking stands 1 – 6, Concrete
		Parking stands 7 – 10; Interlocks surface
		PCN 40/F/A/W/T
2.	Taxiway width, surface and strength	Width: 22 M
		Surface: ASPH
		Strength: PCN 49/F/C/W/T
		TWY B: PCN 38/F/A/W/T
		TWY C: PCN 86/F/A/W/T
3.	ACL location and elevation	Location: Centre of apron Elevation: 5610 FT
		Location: THR RWY 08 Elevation: 5640 FT
		Location: THR RWY 16 Elevation: 5581 FT
		Location: THR 26 Elevation: 5501 FT
		Location: THR 34 Elevation: 5571 FT
4.	VOR/INS checkpoints	Not applicable
5.	Remarks	Nil

FYWH AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1.	Use of aircraft stand ID signs, TWY guide lines and visual docking/ parking guidance system of aircraft stands	Aircraft TWY Guidelines and Parking Bays / Stands are Available.
2.	RWY and TWY markings and LGT	RWY: Designation, THR, TDZ, side-stripe markings, Centre line. TWY: Centre line, holding positions at intersections marked, blue edge lights.
3.	Stop bars	Nil facilities
4.	Remarks	305 M marker on RWY 34 only. CHEVRON markers on RWY and TWY shoulders. Lighted windsock. Nil taxiing guidance system.

FYWH AD 2.10 AERODROME OBSTACLES

	Area 2					
OBST ID/			ELEV/HGT(M	Markings /		
Designation	OBST Type	OBST position)	Type, Colour	Remarks	
а	b	с	d	е	f	
Receiver Mast (East)	Receiver Mast (East)	S222910.38555 E0172850.90257	1732.601	NIL INFO	Top of receiver mast (mast = 33,0m AGL).	
Receiver Mast (West)	Receiver Mast (West)	S222910.40685 E0172849.00588	1732.868	NIL INFO	Top of receiver mast (mast = 33,0m AGL).	
Receiver Mast (North)	Receiver Mast (North)	S222908.64236 E0172850.88243	1731.324	NIL INFO	Top of receiver mast (mast = 33,0m AGL).	
Transformer	Transformer	S222839.20187 E0172847.02414	1691.692	NIL INFO	Top of roof of transformer building (=3.50m AGL).	
Jet Fuel Tank	Jet Fuel Tank	S222918.62115 E0172742.27386	1727.590	NIL INFO	Top centre of A1 Jet Fuel Bulk storage tank.	
Single Steel Pole1	Single Steel Pole1	S222950.55889 E0172917.99671	1719.992	NIL INFO	Top of EPTL single steel pole structure (22,9m AGL).	
Single Steel Pole 2	Single Steel Pole 2	S222954.55315 E0172907.962	1734.319	NIL INFO	Top of EPTL single steel pole structure (22,9m AGL).	
Single Steel Pole 3	Single Steel Pole 3	S222951.78845 E0172904.0088	1732.735	NIL INFO	Top of EPTL single steel pole structure (23,5m AGL).	
Single Steel Pole 4	Single Steel Pole 4	S222947.38443 E0172857.74474	1724.070	NIL INFO	Top of EPTL single steel pole structure (22,0m AGL).	
Single steel pole 5	Single steel pole 5	S222951.62919 E0172847.16294	1725.333	NIL INFO	Top of EPTL single steel pole structure (23,0m AGL).	
Control Tower	Control Tower	S222910.62228 E0172751.20227	1744.968	NIL INFO	Top of mast on control tower roof (Mast is 17,5m above roof).	
Apron Lights (East)	Apron Lights (East)	S222907.6641 E0172756.63101	1729.145	NIL INFO	Top of light array of apron light (21,1m AGL)	
Apron Lights (West)	Apron Lights (West)	S222915.86057 E0172738.84865	1732.062	NIL INFO	Top of light array of apron light (22,1m AGL)	
Water Tank	Water Tank	S222929.22992 E0172619.71438	1743.595	NIL INFO	Top of water tank.	

VOR WHV	VOR WHV	S222838.51746 E0172814.07165	1710.896	NIL INFO	Top of red lights on DME antenna (Top of red lights on DME antenna above foundation = 9,1m)
MTC Tower	MTC Tower	S222931.446 E0172728.9122	1761.600	NIL INFO	Top of MTC tower (Top of tower is 42.0m AGL).
NDB (West)	NDB (West)	S222904.04848 E0172811.3193	1728.633	NIL INFO	Top of NDB tower (Tower is 31.1m AGL).
NDB (East)	NDB (East)	S222902.75856 E0172814.12101	1727.282	NIL INFO	Top of NDB tower (Tower is 31.1m AGL).
Glide Path 26	Glide Path 26	S222817.78223 E0172910.74138	1688.473	NIL INFO	Top of GP tower and centre of antenna phase (Tower=11.0m AGL).
Approach Rotating Beacon	Approach Rotating Beacon	S222940.70276 E0172712.01966	1743.498	NIL INFO	Top centre of airport rotating beacon on water tower.
Automatic Weather Station (East)	Automatic Weather Station (East)	S222847.27201 E0172808.31729	1724.045	NIL INFO	Top of lightening conductor on Automatic Weather Station mast (11.25m AGL).
Automatic Weather Station (West)	Automatic Weather Station (West)	S222917.35115 E0172703.00393	1739.486	NIL INFO	Top of lightening conductor on Automatic Weather Station mast (11.3m AGL).
Met station THR26	Met station THR26	S222819.33254 E0172908.88088	1690.64	NIL INFO	Met Station next to THR26. Measured to top of lightning conductor 12.2m AGL
Radar Left hand side (LHS) of Threshold08	Radar Left hand side (LHS) of Threshold08	S222937.98565 E0172726.13010	1774.342	NIL INFO	Radar situated LHS of Threshold08. Measured to top centre of Radar. Height to top of lightning conductor between red lights 51.35m AGL
Water Tank LHS of Threshold08 and Radar	Water Tank LHS of Threshold08 and Radar	S222950.87169 E0172735.58534	1750.6	NIL INFO	Situated LHS of Threshold08 and Radar. Measured to top centre of tank 25.6m AGL
Windmill Opposite Tower	Windmill Opposite Tower	S222845.72720 E0172735.62509	1721.271	NIL INFO	Windmill situated 885m from Control Tower. Measured to top of windmill 19.7m AGL

High Ground High	liah Ground	S223304.20095 E0172718.42739	1712.593	NIL INFO	High Ground on South Eastern Side of Approach08
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Area 3					
OBST ID/				Markings /	
Designation	OBST Type	OBST position	ELEV/HGT	Type, Colour	Remarks
а	b	С	d	е	f
Nil					

FYWH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1.	Associated Met office	Windhoek	
2.	Hours of service MET office outside hours	H24	
3.	Office responsible for TAF preparation Periods of validity	Windhoek 9, 18 HR	
4.	Type of landing forecast Interval of issuance	TREND	
5.	Briefing/consultation provided	P, T	
6.	Flight documentation Language(s) used	PL, TB English	
7.	Charts and other information available for briefing or consultation	S3, U85, U7, U5, U3, U2, P5	
8.	Supplementary equipment available for providing information	Nil	
9.	ATS units provided with information	Windhoek FIC,	
		Cape Town RCC,	
		Johannesburg RCC	
10.	Additional information (limitation of service, etc.)	Nil	

Mean daily maximum and minimum temperatures (°C) for each month of the year												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Max	31,3	28,7	27,6	26,1	23,1	20,4	21,2	24,1	26,9	29,6	29,6	30,2
Min	17,7	16,3	14,4	9,8	5,7	2,8	2,4	5,2	8,5	12,3	15,3	16,4
Mean p	Mean pressure for each month of the year at approximately the times of MAX and MIN temperatures in hPa											
Max	827,7	829,0	829,7	830,0	831,1	832,3	833,2	832,1	831,0	829,3	829,3	828,3
Min	828,9	829,6	831,0	831,4	832,4	833,6	834,8	833,8	832,8	830,9	830,3	829,4

FYWH AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Design ations RWY	TRUE BRG	Dimensions of RWY (M)	Strength (LCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR Elevation and Highest Elevation of TDZ of Precision APP RWY
1	2	3	4	5	6
08	063.37°	4569.193 x 45	PCN73/F/A/W/T/ASPH	222923.02S 0172658.54E 222923.11S 0172658.35E GUND 101.6 FT	THR 5641 FT TDZ 5630 FT
26	243.37°	4569.193 x 45	PCN 73/F/A/W/T/ASPH	222817.21S 0172921.40E 222817.12S0172921.59E GUND 101.2 FT	THR 5501 FT TDZ 5508 FT
16	141.09°	1525 x 30	ASPH	222839.80S 0172808.71E 222839.64S 0172808.57E GUND 101.4 FT	THR 5574 FT
34	321.09°	1525 x 30	ASPH	222918.07S 0172841.86E 222918.22S 0172841.99E GUND 101.4 FT	THR 5565 FT

Slope of RWY-SWY	SWY Dimensions (M)	CWY Dimensions (M)	Strip Dimensions (M)	OFZ	Remarks	
7	8	9	10	11	12	
0.941 %	Nil	120.551 M	4687.974x 344.72	Nil info	No simultaneous operation in terms of taxiing and landing/take off by Code E ACFT	
0.941 %	Nil	120.551 M	4687.974x 344.72	Nil info	is permitted at Hosea Kutako International Airport due to the short distance between the centreline of the main runway RWY 08/26 and the parallel taxiway	
0.199 %	11.477	161.434 M	1643.64 x 110	Nil info	Nil	
0.199 %	11.477	161.434 M	1643.64 x 110	Nil info	Nil	

FYWH AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA(M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
08	4569.193	4689.744	4569.193	4569.193	RESA: 240X180
26	4569.193	4689.744	4569.193	4569.193	RESA: 240X180
16	1523.640	1685.074	1535.117	1523.117	RESA: 120X120
34	1523.640	1685.074	1535.117	1525.117	RESA: 120X120

FYWH AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT, LEN	RWY Centre line LGT length, spacing, colour, INTST
1	2	3	4	5	6
08	SALS, 420 M, LIH	Green	PAPI 3°	Nil info	Nil info
26	PALS, 900 M, LIH	Green	PAPI 3°	Nil info	Nil info
34	LIH	Green	PAPI 3°	Nil info	Nil info
16	LIH	Green	Nil info	Nil info	Nil info

RWY edge LGT LEN spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
7	8	9	10
4569.193 M/60 M, White/LIH	Red	Nil info	Last 600 M of RWY is amber
4569.193 M/60 M, White/LIH	Red	Nil info	Nil
1525 M/50 M, White/LIH	Red	Nil info	Nil
1525 M/50 M, White/LIH	Red	Nil info	Nil

FYWH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1.	ABN/IBN location, characteristics and hours of operation	ABN FLG G/W 700 M South of THR RWY 08
2.	Anemometer location and LGT	WDI - LGT Anemometer: 75 M W of THR RWY 34
3.	TWY edge and centre line lighting	Edge: All TWY - blue Centre line: Nil info
4.	Secondary power supply/switch-over time	Available Switch-over time <u>+</u> 7 seconds
5.	Remarks	The secondary power supply at Hosea Kutako International Airport is met by the following: Three standby generators, 2 x 500kva and 1 x 1000kva Caterpillar diesel generators situated at the power plant. This three generators supply the entire airport including all navigational equipment. The total capacity of the secondary power is 2MVA The generators are supplied with diesel fuel that is stored in an underground fuel tank with a capacity of 13000L. Each generator is having a day tank with a capacity of 100L that is supplied from the outside tank with 1000L capacity In case of power failure the system triggers the three generators to start automatically and simultaneously. The load is transferred to the secondary power in less than 15 seconds The following aerodrome facilities are provided with secondary supply capable of supplying power when there is a failure of the primary power supply: Runway, taxiway and approach lighting, PAPI lighting, ATC control tower, radar, meteorological equipment, fire station, apron floodlighting, VOR, NDB, glideslope, VDF, localizer, transmitter station, receiver station, east substation

FYWH AD 2.16 HELICOPTER LANDING AREA

Nil facilities available.

FYWH AD 2.17 ATS AIRSPACE

1.	Designation and lateral limits	Windhoek CTR: Lateral Limits: (a) From a point S221547.81 E0173639.39, clockwise along the arc of a circle, radius 15NM, and centered at S222838.50 E0172814.00, to a point at S222753.76 E0174424.06. (b) Thence a straight line to a point at S224009.23 E0171748.05. (c) Thence clockwise along the arc of a circle, radius 15NM, and centered at S222838.50 E0172814.00, to a point at S222705.46 E0171207.80. (d) Thence a straight line back to the starting point at S221547.81 E0173639.39.
2.	Vertical limits	GND – 9000FT ALT
3.	Airspace classification	С
4.	ATS unit call sign Language(s)	Windhoek Tower English
5.	Transition altitude	10 000 FT
6.	Remarks	Nil

FYWH AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Windhoek Approach	120.5 MHz	H24	
APN		125.9MHz		Apron control introduced on FREQ 125.9 MHz. All non- scheduled, private and training flights shall establish contact with the apron office. Contact shall be made prior to landing/departure, if traffic allows, alternatively when released by ATC after vacating the RWY/TWY.
TWR	Windhoek Tower	118.1 MHz	H24	
ACC	Windhoek Radar	124.7 MHz	H24	
FIS	Windhoek Information	129,26 MHz North 123,8 MHz South		
ATIS	Windhoek ATIS	126.2MHz	HS	Daily 0600 – 1900 Operational 50NM radius around the airport on FREQ 126.2MHz or TEL 0813323509

FYWH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, CAT of ILS/MLS (for VOR/ILS/ MLS give VAR)	ID	Frequency	Hours of OPR	Site of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
VOR	WHV	114,5 MHz	H24	222838.5S 0172814.0E		Letdown radial 084 intercepts the Centre line of RWY 26 approximately 1 NM from THR
UHF DME	WHV	Tx 1179 MHz Rx 1116 MHz	H24	222838.5S 0172814.0E	5613.1 FT	Channel 92 X co- axially co-located with VOR
ILS LLZ (RWY 26) CAT I	WD	110,3 MHz	H24	222927.3S 0172649.2E		Middle and outer marker Completely withdrawn and replaced with a low powered DME which is co- located with the glide slope
ILS GP (RWY 26) CAT I		335 MHz	H24	222817.7S 0172910.7E		ALT above OM 678 FT, Angle 3°

FYWH AD 2.20 LOCAL TRAFFIC REGULATIONS

1. Aerodrome regulations

1.1 Circuit Altitude:

- a) Turbine-powered aircraft 7 000 FT ALT
- b) Reciprocating engine powered aircraft 6500 FT ALT.
- 1.2 All pilots operating at Hosea Kutako must wear a green reflective jacket depicting their airlines concerned on the rear of the jacket for safety reasons as well as easy identification.

Taxiing to and from stands 2.1 Landing

- From RWY26: follow taxiway Echo and/or Charlie or Bravo exit to apron
- From RWY08: follow taxiway Charlie and/or Delta or Echo exit to apron
- From RWY16: follow taxiway Delta exit to apron
- From RWY34: follow taxiway Delta exit to apron

2.2 Departure (from any parking stand on the apron)

- From Apron to holding point Alpha RWY 08: follow taxiway Charlie to taxiway Bravo leading to holding point Bravo enter runway 08/26 to the turning circle Alpha RWY08.
- From Apron to holding point Bravo RWY08:

- follow taxiway Charlie to taxiway Bravo leading to holding point Bravo
- From Apron to holding point Charlie RWY 08: follow taxiway Charlie to intersection Charlie
- From Apron to holding point Charlie RWY 26: follow taxiway Charlie to intersection Charlie
- From Apron to holding point Delta RWY 26: follow taxiway Charlie to taxiway Delta leading to intersection Delta
- From Apron to holding point Echo RWY 26: follow taxiway Charlie to taxiway Delta to intersection Delta, cross runway 16/34 to taxiway Echo leading to the holding point Echo
- From Apron to holding point Foxtrot RWY 26: follow taxiway Charlie to taxiway Delta to intersection Delta, cross runway 16/34 to taxiway Echo leading to the holding point Echo enter RWY08/26 to turning circle Foxtrot RWY26
- 3. Parking area for small aircraft (general aviation)

Pilots are strictly requested to adhere to the marshalling signals from the Marshaller e.g. parking position etc. and make use of wheel chokes when parked.

4. Parking area for helicopters

Nil limitations.

- Apron Taxiing during winter conditions
 Nil limitations.
 - Taxiing LimitationsNil limitations.
- School and training flights Technical test flights Use of runways

Instrument and Circuit training slot time required, including night flying. Phone Eros Briefing office on +264 61 702083 or obtain in person at the Briefing Office. Maximum 3 days in advance. Pilots must advise ATC prior to taxi of Slot Time Reference Number (STRN) allocated at time of booking.

- 8 Helicopter traffic Limitation Nil limitations.
- 9 Removal of disabled aircraft from runways Airlines Responsibility

FYWH AD 2.21 NOISE ABATEMENT PROCEDURES

Nil procedures.

FYWH AD 2.22 FLIGHT PROCEDURES

Communication Failure Procedure

General:

Aircraft should adhere to the procedures stipulated in ENR 1.5 para 6 (ICAO Doc 4444 Chapter 15). In addition, the relevant procedures below shall be applied by inbound aircraft.

- 1. Squawk 7600
- 2. Approach clearance received and acknowledged: Continue approach according to clearance.
- 3. No approach clearance received and/or acknowledged:
 - Maintain the level last received and acknowledged.
 - Proceed direct to WHV VOR and hold.
 - In WHV hold, commence descent/climb to 10000ft MSL.
 - Hold for minimum 10 minutes or if EAT is received and acknowledged, leave holding on EAT.
 - Carry out a normal instrument approach (or visual approach during VMC conditions) to the most suitable runway.

VFR traffic

- a) Join overhead the aerodrome at 2000ft AGL
- b) Observe and join the Aerodrome TFC
- c) Make all turns to the left whenever possible
- d) Land as soon as possible and report to the ATC

FYWH AD 2.23 ADDITIONAL INFORMATION

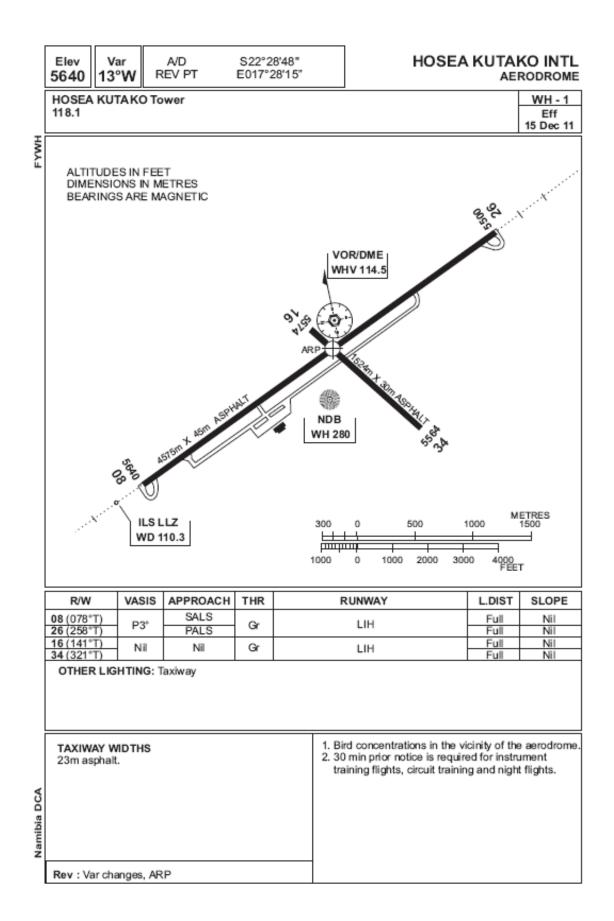
1. Bird concentrations in the vicinity of the aerodrome

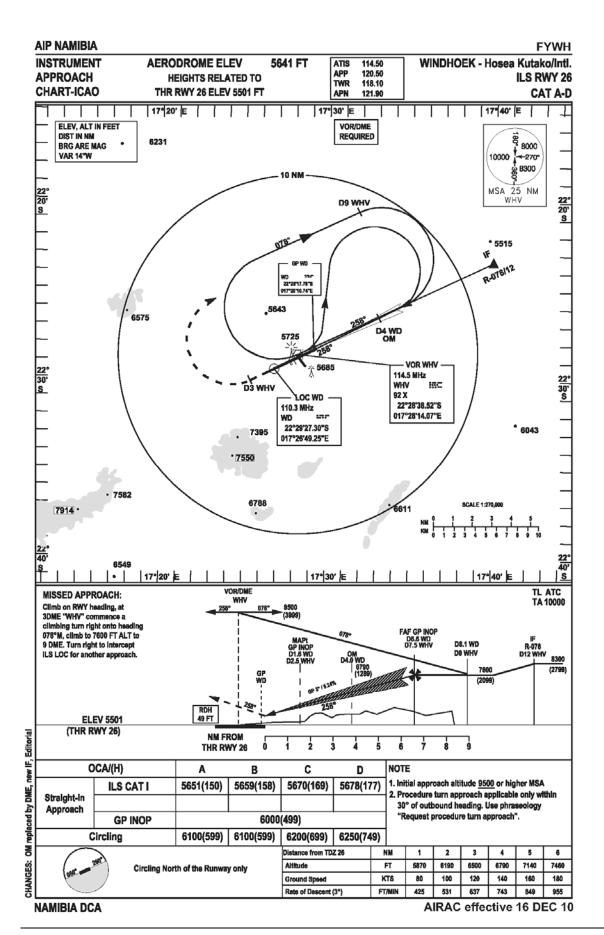
WARNING: Migratory birds and guinea fowl.

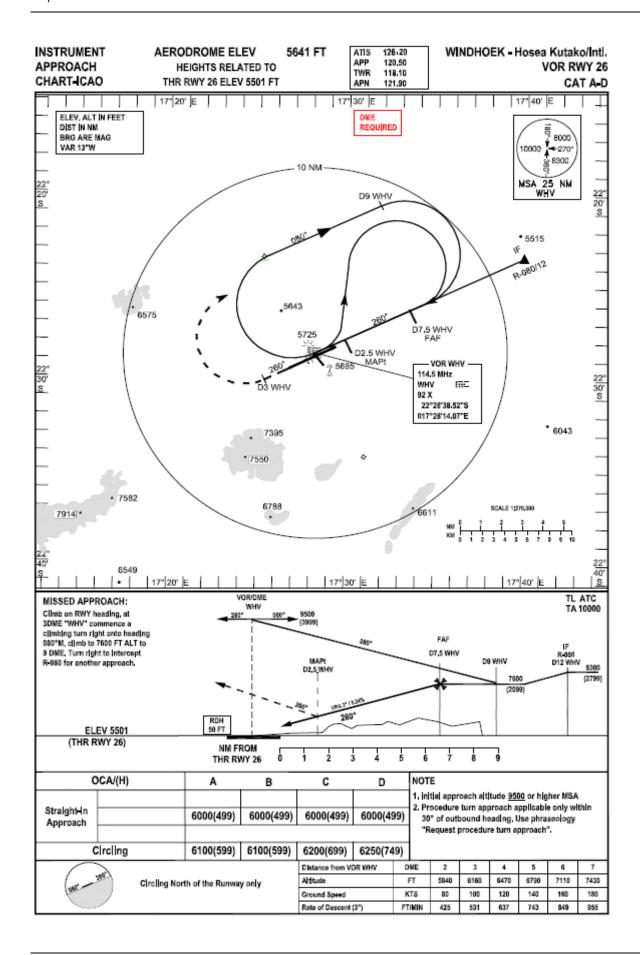
FYWH AD 2.24 CHARTS RELATED TO WINDHOEK

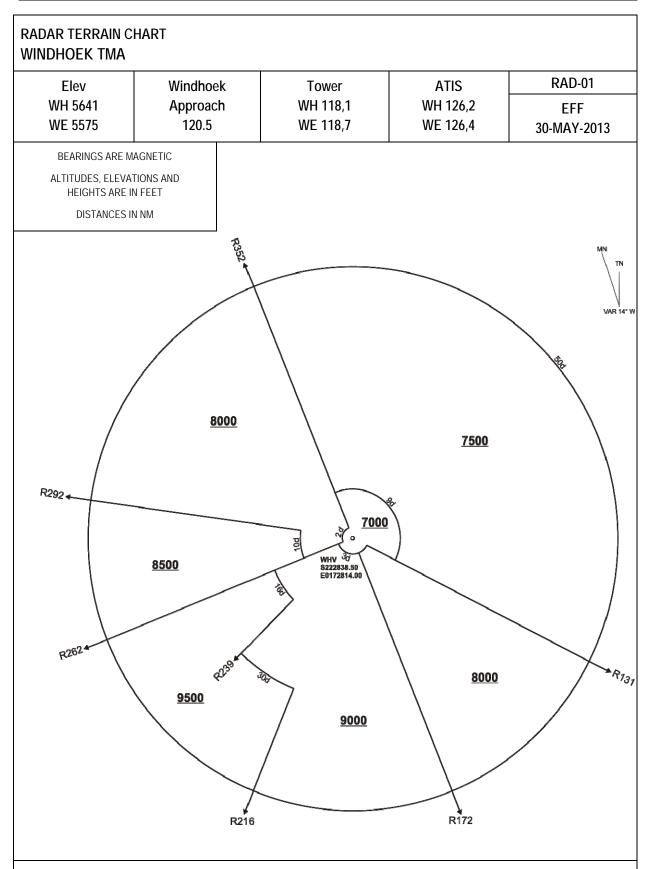
The following charts are produced for Hosea Kutako Aerodrome

ICAO Charts					
No	Chart Type	Page No			
1	Aerodrome Chart - ICAO	FYWH AD 2-17			
2	Instrument Approach Chart - ICAO ILS RWY 26	FYWH AD 2-19			
3	Instrument Approach Chart - ICAO VOR RWY 26	FYWH AD 2-21			
4	RADAR TERRAIN CHART: Windhoek TMA	FYWH AD 2-23			









A minimum vertical clearance of 1000ft is applied up to WHV 20d and 1000ft thereafter.

Note 1: Only to be used for crosschecking of assigned altitudes.

Note 2: Altitudes only valid once under positive surveillance control, otherwise MSA applies.