AD 2.1 AERODROMES

VQPR AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VQPR - PARO/International

VQPR AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	*ARP co-ordinates and site at AD*	272412.47N 0892529.55E Centre of RWY
2	*Direction and distance from(city)*	51 Km SW from Thimphu
3	*Elevation/Reference temperature*	2 241M (7 352 ft) MSL/ 28°C
4	*MAG VAR/Annual changes*	0.12˚ West 2006
5	*AD Administration, address, telephone, telefax, telex. AFS*	Department of Civil Aviation, Paro: Bhutan. Tel No.(975)-8- 271403,271383 Email: airport@druknet.bt
6	*Type of traffic permitted (IFR/VFR)*	IFR in VMC is permitted due to high terrain
7	*Remarks*	AD PPR

VQPR AD 2.3 OPERATIONAL HOURS

1	*AD Administration*	Available MON - FRI 0300 – 1100 (UTC)
2	*Customs and immigration*	Available during sked operations
3	*Health and sanitation*	Available during sked operation & as and when require
4	*AIS Briefing Office*	Available during operations and MON - FRI 0300 – 1100 (UTC)
5	*ATS Reporting Office*	Available during operations and MON - FRI 0300 – 1100 (UTC)
6	*MET Briefing Office*	Available during operations and MON - FRI 0300 – 1100 (UTC)
7	*ATS*	During Operational Hrs
8	*Fuelling*	Available during sked operations
9	*Handling*	Available during sked operations
10	*Security*	24 hours
11	*De-icing*	Not available
12	*Remarks*	Out side those hours, service available O/R. Request to be submitted to the AD 24hrs before intended operation.

VQPR AD 2.4 HANDLING SERVICES AND FACILITIES

1	*Cargo-handling facilities*	Available with airline operator, Druk-air
2	*Fuel/oil types*	Aviation Turbine Fuel only – Jet A1
3	*Fuelling facilities/capacity*	1 truck, 9000 litres, 500ltrs/Sec.
4	*De-icing facilities*	Manual by sweeping
5	*Hanger space for visiting aircraft*	Limited, by prior arrangement only.
6	*Repair facilities for visiting A/C*	Available by prior arrangement with operator, Druk-air.
7	*Remarks*	NIL

VQPR AD 2.5 PASSENGER FACILITIES

1	*Hotels*	Near AD and in the city.
2	*Restaurants*	At AD and in city.
3	*Transportation*	Taxi from the AD to Thimphu
4	*Medical facilities*	First aid at AD. Hospital in the Paro town 8 Km.
5	*Bank and Post Office*	Bank & Post office at AD. Open within AD HR
6	*Tourist Office*	Office in the city :Tel: 975 – 2- 323251,fax: 975-2- 323695
7	*Remarks*	Nil

VQPR AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	*AD category for fire fighting*	Within AD HR: CAT 6
2	*Rescue equipment*	Rescue Tools with CFT
3	*Capability for removal of disabled aircraft*	Towing facility provided by Druk-air
4	*Remarks*	NIL

VQPR AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	*Type of clearing equipment*	Manually Sweeping
2	*Clearance priorities*	1. RWY 33/15 and associated TWY to Apron
3	*Remarks*	Information on snow clearance published from November - April through NOTAM . See also snow plan in section AD 1.2.2

VQPR AD 2.8 APRON, TAXIWAYS AND CHECK LOCATION DATA

1	*Apron surface and strength*	1. Apron **A** Surface : Concrete, Strength: PCN 22/R/C/W/U 2. Apron **B** Surface : Concrete, Strength: PCN 22/R/C/W/U
2	*Taxiway width, surface and strength*	1. Taxiway: **A** Width:15 M Surface: Concrete Strength: PCN 13/R/C/W/U 2. Taxiway **B** Width: 18 M Surface: Concrete Strength: PCN 13/R/C/W/U
3	*ACL location and elevation*	Location: At Apron Elevation: 2 232M
4	*VOR checkpoints*	***Point A – Taxiway A Holding Points*** ***27°24'20.97N 089°25'20.84E*** ***DVOR 324.4° DME 7.7NM*** ***Point B – Threshold RWY15*** ***27°24'39N 089°25'11E*** ***DVOR 325.1° DME 8.2NM***
5	*INS check points*	-
6	*Remarks*	NIL

VQPR AD 2.9 SURFACE MOVEMENT GUIDANCE ANDCONTROL SYSTEM AND MARKINGS

1	*Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands*	Nose-in guidance at aircraft stand
2	*RWY and TWY markings and LGT*	Markings Available
3	*Stop bars*	Stop bars where appropriate.
4	*Remarks*	NIL.

VQPR AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			*In Circling area ad at AD*		*Remarks*
RWY/Area affected	*Obstacle type* *Elevation* *Markings/LGT*	*Coordinates*	*Obstacle type* *Elevation* *Markings/LGT*	*Coordinates*	
a	b	c	a	b	
RWY 15 **SEE AD 2 – VQPR 3-1** **RWY33** **SEE AD 2 – VQPR 3-2**			**TO BE DEVELOPED**		

VQPR AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	*Associated MET Office*	Paro Airport
2	*Hours of service* *MET Office outside hours*	During Flight operations only
3	*Office responsible for TAF preparation* *Periods validity*	TO BE DEVELOPED
4	*Type of landing forecast* *Interval of issuance*	Current Weather half hourly during flight operations (in Plain Language)
5	*Briefing/consultation provided*	Personal consultation During flight operation(on demand)
6	*Flight documentation* *Language (s) used*	TO BE DEVELOPED, English
7	*Charts and other information available for briefing or consultation*	TO BE DEVELOPED/ satellite images/significant WX chart/upper charts are downloaded and provided prior departure.
8	*Supplementary equipment available for providing information*	*NIL*
9	*ATS unit provided with information*	Paro Control Tower
10	*Additional information (limitation of service, etc.)*	Presently limited to providing METAR and local current valley WX in plain language only during flight operations.

VQPR AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE & MA BRG	Dimensions of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
15 33	150.38° 331.50°	2265 X 30 M 2265 X 30 M	PCN 22 ASPHALT	272439.26N 0892511.43E 272343.19N 0892547.14E	2 240 M AMSL 2 224 M AMSL
Slope of RYW-SWY	SWY Dimensions (M)	CWY Dimensions (M)	Strip Dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
0.81%	160M X 30M 120M X 30M	NIL	2385 M X 150 M	NIL	BGN 15 274243.8N 0892508.6E BGN 33 272339.8N 0892549.3E

VQPR AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
15	2145	2145	2265	1985	NIL
33	2105	2105	2265	1985	

VQPR AD 2.14 APPROACH RUNWAY LIGHTNING

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	RWY edge LGT LEN, spacing colour INTST	RWY END LGT colour INTST	RWY END LGT Colour WBAR	Remarks
NIL									

VQPR AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	*ABN/IBN location, characteristics and hours of operation*	Not established
2	*LDI location and LGT* *Anemometer location and LGT*	LDI: 50 M NW and 700 M SW of ARP, unlighted Anemometer : 300 M from THR 15 and THR 33, unlighted
3	*TWY edge and centre line lighting*	NIL
4	*Secondary power supply/switch-over time*	Secondary power supply to all lighting at AD 500KVA Switch-over time : 60 sec
5	*Remarks*	NIL

VQPR AD 2.16 HELICOPTER LANDING AREA

1	*Coordinates TLOF of THR of FATO*	**TO BE DEVELOPED**
2	*TLOF and/or FATO elevation M/FT*	**TO BE DEVELOPED**
3	*TLOF and FATO are dimensions, surface, strength, marking*	**TO BE DEVELOPED**
4	*True and MAG BRG of FATO*	**TO BE DEVELOPED**
5	*Declared distance available*	**TO BE DEVELOPED**
6	*APP and FATO lightning*	**TO BE DEVELOPED**
7	*Remarks*	

VQPR AD 2.17 ATS AIRSPACE

1	*Designation and lateral limits*	PARO CTR* 273222N 0892730E 271956N 0893516E 270159N 0893515E 270159N 0892606E 271522N 0892606E 272747N 0891819E 273222N 0892730E
2	*Vertical limits*	17 500 MSL
3	*Airspace classification*	Class D*
4	*ATS unit call signLanguage(s)*	PARO Tower English
5	*Transition altitude*	18 000 ft
6	*Remarks*	Two ways communication Clearance – ATC & ADC required * Proposed CTR for Paro AD

VQPR AD 2.18 ATS COMMUNICATION FACILITIES

Service Designation	Callsign	Frequency	Hours of operation	Remarks
TWR	Paro Tower	120.3 Mhz (EXTN) 120.3 Mhz (STBY) 121.5 EMER. Freq.	HO	As per sked flight operations
RADIO	Paro Radio	8921 Khz 13342 Khz	HO	-do-

VQPR AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, CAT of ILS/MLS (forVOR/ILS/MLS, give VAR)	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
DVOR/DME	PRO	108.4 MHz	HO	7.7 NM south of aerodrome 271803N 0893020E	3 500M	DME Channel 21X
NDB	PR	410 Khz		500M south west of RWY 272358N 0892529E	2 226.7M	NIL

VQPR 2.20 LOCAL TRAFFIC REGULATIONS

1. Airport regulations

1.1 At Paro Airport a number of local regulations apply, in accordance with Annex 2,11,14 Doc. 4444. See GEN 1.2.

1.2 Marshaller assistance can be requested.

1.3 When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given to each aircraft by the TWR on VHF R/T.

2. Taxiing to and from stands.

2.1 Arriving aircraft will be allocated a stand number by the TWR

2.2 Assistance from the "FOLLOW ME" vehicle can be requested from the TWR.

2.3 Departing flights shall contact the TWR to obtain ATC and ADC clearance before commencing Pushback & Start up. Request for ATC clearance may take place at the earliest 5 minutes prior to Pushback & start-up. Frequency 120.3Mhz is to be used. Departing aircraft shall obtain taxi instruction from Paro TWR on 120.3 Mhz.

3. Parking for small aircraft (General aviation)

General aviation small aircraft shall be guided by marshallers to the parking area.

4. Parking area for helicopters

The parking area for helicopters will always be guided by a marshaller on the stand or on R/T from TWR.

5. Apron Taxiing during winter conditions

"Follow me" vehicle can be provided on request.

6. Taxiing Limitations

No limitations

7. School and Training Technical test flight – use of runways

Subject to permission from tower

8 Helicopter traffic

8.1 Request Airport Office during the hours of service and, if possible, not later then 24 hrs before the flight is to be carried out.

8.2 Any request for approval of traffic shall contain the following information:
a) Owner/Operator
b) Type of helicopter, registration/call sign
c) Date, arrival time/departure time, destination(s).

8.3 Furthermore, other details relevant to the evaluation of the request shall be given as required.

9. Removal of disable aircraft from runways

9.1 When an aircraft is wrecked on a runway, it is the duty of the owner or user of such aircraft to have it removed from the runway as quickly as possible. If a wrecked aircraft is not removed from the runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority at owner's or user's expense.

VQPR AD 2.21 NOISE ABATEMENT PROCEDURES

TO BE DEVELOPED

VQPR AD 2.22 FLIGHT PROCEDURES

1 **General**

Flight within Paro air traffic circuit shall be in accordance with the Visual Meteorological Conditions (VMC).

a) Prior operating into Paro airport the pilot in- command should be briefed and visit the aerodrome as an observer.

- or should Undertake instruction in a simulator approved by the authority for that purpose.
- or Request guide pilot(navigator) from the Authorised Clearing Agent.
- Clearances on behalf of private airlines and for additional logistics can arrange by the Local Clearing Agent. For contact see GEN 1.1 para 7

Note:- *Bhutan Air Services (BAS) is the authorized Clearing agent on behalf of Department of Civil Aviation responsible in coordinating and collecting document for onward submission to the DGCA for seeking approval of clearances for private aircraft/helicopter that fly to Bhutan. All fees and charges at Paro Aerodrome are also collected by the Bhutan Air Service on Behalf of DGCA..*

b) In order to avoid unnecessary delay while departing from Paro, relevant clearances **(YANKEE ALPHA NUMBER)** from DGCA India and other relevant clearances from the respective authority must be obtained to over fly/transiting through the respective airspaces.

c) Specific date & time of arrival/ departure or over flying/transiting should be clearly mentioned while obtaining such clearances.

d) Last minute change in flight plan could lead to **DELAY OF FLIGHT TO OBTAIN NEW ADC/FIC.** Therefore, it is recommended that all flights are to adhere with planned flight plan or inform to ARO regarding the changes in flight plan at least one day prior. **DGCA Bhutan shall not be responsible for the delay of flight.**

e) Flight wishing to depart early morning from Paro (BTN 0000–0400 UTC), is recommended to file the flight plan at least one day prior to departure from Paro to avoid delay in obtaining ADC/FIC from INDIA FIR/FIC.

f) Flight plan can be filed during operational hours or during office hours (03:00 – 10:00 UTC) at the following address.

ARO,
CONTROL TOWER,
1st FLOOR,
PARO AIRPORT.
Tel No. 975-8-272306/272895
Fax No. 975272307
Email:- paro.aro@dca.gov.bt
AFTN:- VQPRZPZX

2 **Radar Procedures**

No Radar facilities are available at Paro Aerodrome.

3 **Communication failure**

In the event of a communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 10 Vol. II and Annex 2 general rules para 3.6.52

4 **Procedures for IFR flights with in Paro air traffic circuit**
Due to high terrain and steep mountains adjacent to the aerodrome, only flight in VMC is permitted.

5 **Procedures for flights to/from Paro AD**

5.1 ATC clearance for flights will be given under the conditions described below:

a) A flight plan containing items 7 to 18 and indicating the purpose of the flight, shall be submitted to Paro ATC.

b) ATC and ADC/FIC clearance number shall be obtained before the aircraft Taxi out.

c) Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.

d) Deviation from the ATC clearance may only be made when prior permission has been obtained.

e) Two-ways radio communication shall be maintained on the frequency 120.3 MHz.

5.2 With the high terrain and rapid phenomenon change of weather in and around the Paro aerodrome, all flights are operated in VMC, therefore any aircraft operating in Bhutan territory are required to obtain weather information from Paro aerodrome at least one hour prior to departure.

→ 5.3 Paro weather will available on HF Radio on freq. **8921Khz** and **13342Khz**, call sign Paro radio or can be requested on AFTN i.e. On ***VQPRYMYX,*** VQPRZTZX***, VQPRZPZX.***

5.4 Arrival Instruction

5.4.1 Flight plan should be filed on AFTN/Fax prior one hour departure followed by status of flight, in the event of any delay or cancellation of flight likely to occur.

5.4.2 **Airborne call is must** as soon as the aircraft departs from the departure aerodrome with the **ATD and ETA over Paro. Airborne time & ETA should be informed to Paro radio on HF.**

5.4.3 Entry/Exit from/to Bhutan to Indian airspace is on positive R/T contact with Hasimara (IAF 130.4MHz) Bagdogra (IAF 131.2MHz) and Guwahati (Civil ACC 120.5MHz or Civil APP 123.9MHz) as applicable (See AIP India for latest Frequency).

5.4.4 Entry/Exit into circuit area is via **Chhuzom** (*confluence of rivers Paro Thimphu)* at safety altitude. Descend below safety altitude only in VMC. All arriving aircraft to contact Paro tower atleast 38 NM before reaching confluence.

5.4.5 TA18,000, TL will be passed by ATC

(a) Circuit area/pattern is generally to the west of airfield. Aircraft on circuit may not be visible to ATC, due to hills, descending circuit.

(b) Towards North/North East of the airfield the *Dupshare* valley is **unsafe and not Permitted for** circuit.

5.4.6 Final approach track for both runway is curved due to hilly terrain, "**EXERCISE CAUTION"**. Approach on final is above 3ºGP. No visual guidance like VASI. PAPI. ILS, Runway lights e.t.c., available on final.

5.4.7 Surface winds conditions at different positions of runway can be requested. Surface winds increase in intensity usually in the afternoon hours.

5.4.8 Severe turbulence may experience when entering the valley.

5.4.9 Strong anabatic wind in the afternoon (Feb – May) may give raise to moderate to severe turbulence; it is recommended to restrict flight movement to the morning.

5.4.10 Only one aircraft at a time is permitted to Descend in a valley.

5.4.11 Holding point is over TAKTI 180º/15 NM from VOR/DME at altitude cleared by Paro ATC. Minimum ***altitude*** 16 000ft.

5.4.12 Helicopters operating as a domestic flight/mountain flight within Bhutan territory shall contact Paro tower on fixed line/mobile for Paro weather and the departure information (ETA/ETD). This shall be applied only to those helicopter not equipped with **HF radio facilities** on board

5.5 Departure Instruction

5.5.1 **No SIDS** (Standard Instrument Departure) is established for Paro airport. Therefore, all aircraft shall strictly follow in visual meteorological conditions (VMC).

5.5.2 After departure climb initially 18 000ft on QNH maintaining visual to terrain/obstacle and report over Confluence/VOR"PRO". An estimates time over designated compulsory reporting points and destination shall be passed to TWR.

5.5.3 When reaching altitude 18 000 ft and/or before crossing Bhutan airspace, aircraft shall contact the following adjacent ACC/APP for higher level and position report.

a) ***BOGOP (R598)***
Contact Hashimara on freq 130.4mhz & also with Gauhati on freq 120.5 Mhz (Approach) 123.9 Mhz (Area)

b) ***SUBSU (G348)***
Contact Baghdora on freq 131.2Mhz & also with Gauhati on freq 120.5 Mhz (Approach) 123.9 Mhz (Area)

c) For further Information and other Frequency see India AIP.

5.5.4 After establishing contact with the adjacent ACC, aircraft shall report back to Paro tower with their assigned level and position before leaving Bhutan airspace/crossing transfer point i.e. Over **BOGOP/SUBSU**

6 RESTRICTION-

a) Only Day operations in visual meteorological conditions (VMC) is permitted
b) No night landing/bad weather facilities
c) Altitudes to be maintained as per ICAO Rules of the Air.
d) Avoid flying over yellow rooftop i.e., *(dzongs, monastery, temples)*
→ ***e)*** Flight shall be permitted ***to take-off & land between sunrise & sunset for all types of flight operations.***

VQPR AD 2.23 ADDITIONAL INFORMATION

1. **Bird concentrations in the vicinity of the airport**

As far as practicable, Aerodrome Control will inform pilots of the bird activity and the estimated heights AGL, when situation warrants.

VQPR AD 2.24 CHARTS RELATED TO AN AERODROME

page

Aerodrome chart..... ..AD 2-VQPR-1-1
Aerodrome Obstacle Chart - ICAO Type- A runway 15…..... AD 2-VQPR-3-1
Aerodrome Obstacle Chart - ICAO Type -A runway 33…..... AD 2–VQPR-3-2
Visual Approach Chart - ICAO …….… AD 2-VQPR-.6-1

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