

**UACC AD 2**

Note: The following sections in this chapter are intentionally left blank: AD-2.10, AD-2.21

**UACC AD 2.1 Aerodrome Location Indicator And Name**

UACC - ASTANA

**UACC AD 2.2 Aerodrome Geographical And Administrative Data**

1	ARP coordinates and site at AD	510121N 0712758E At the centre of RWY
2	Direction and distance from (city)	168°, 6.5 NM of Astana center
3	Elevation/Reference temperature	1166 FT / 25° C
4	Geoid undulation at AD ELEV PSN	-106 FT
5	MAG VAR/Annual Change	10° E ( 2023 ) / 0.03°
6	AD Administration, address, telephone, telefax, telex, AFS	Post: Authority of Airport 010014 Astana, Kabanbay batyr ave., 119 JSC "Nursultan Nazarbayev International Airport" Republic of Kazakhstan  Phone: +7 (7172) 777222 Fax: +7 (7172) 777952 AFS: UACCAPBF SITA: NQZAPXH Email: astanaairport@kepter.kz
7	Types of traffic permitted (IFR/VFR)	IFR-VFR
8	Remarks	Nil

**UACC AD 2.3 Operational Hours**

1	AD Operator	H24 Phone: +7 (7172) 777696 Phone: +7 (7172) 777697 Email: pdsa-plan2@nn-airport.kz
2	Customs and immigration	H24 Phone: +7 (7172) 286437 Phone: +7 (7172) 286438 Phone: +7 (7172) 286000
3	Health and sanitation	H24 Phone: +7 (7172) 777185
4	AIS Briefing Office	H24
5	ATS Reporting Office (ARO)	H24 Phone: +7 (7172) 773541 Fax: +7 (7172) 773508
6	MET Briefing Office	H24 Phone: +7 (7172) 773478
7	ATS	H24

8	Fuelling	H24 Phone: +7 (7172) 777897
9	Handling	H24 Email: marketing@nn-airport.kz
10	Security	H24
11	De-icing	H24 Email: ramp@nn-airport.kz Email: a.rustymov@nn-airport.kz
12	Remarks	Nil

#### UACC AD 2.4 Handling Services And Facilities

1	Cargo-handling facilities	Handling up to 30 tonnes weight
2	Fuel/oil types	TS-1, RT(equivalent to Jet A-1) / MS-8
3	Fuelling facilities/capacity	Modern tankers (18000-60000 liters) Mobile fuel filter AVBL
4	De-icing facilities	AVBL
5	Hangar space for visiting aircraft	NOT AVBL for visiting aircraft
6	Repair facilities for visiting aircraft	Minor repairs
7	Remarks	Engine pneumatic start facilities AVBL External power source rated at 140 kW 208V 400Hz AVBL Tow/push back facilities AVBL (up to 400 tones) 2-5.6m height entrance stairs AVBL

#### UACC AD 2.5 Passenger Facilities

1	Hotels	Airport hotel, city hotel
2	Restaurants	AVBL
3	Transportation	Buses, taxis, rent a car
4	Medical facilities	Aid post at airport Terminal, ambulance service, hospitals in Astana
5	Bank and Post Office	AVLB
6	Tourist Office	AVLB and in the city Astana
7	Remarks	Nil

#### UACC AD 2.6 Rescue And Fire Fighting Services

1	AD category for fire fighting	CAT A9
2	Rescue equipment	Modern rescue equipment. 5 fire engines.

3	Capability for removal of disabled aircraft	<p>1. Contact details of personnel responsible for aircraft evacuation. Head of complex shift: Phone: +7 (7172) 777980 Phone: +7 (7172) 777721 Email: pdsashift@nn-airport.kz Office: Phone: +7 (7172) 777307 Email: office@nn-airport.kz</p> <p>2. Availability of means to conduct emergency evacuation operations</p> <ul style="list-style-type: none"> <li>Platform for recovery of aircraft that has lost ability to move designed to lift an aircraft (AC) with a wheel diameter of up to 750 mm (tire or disk diameter) and a maximum wheel width of up to 350 mm with a weighting pressure of no more than 12 tons</li> <li>Platform for recovery of aircraft that has lost ability to move designed to lift an aircraft (AC) with a wheel diameter up to 1300 mm and certain width (width of platform is 1600 mm). Maximum weighting pressure is 30 tons.</li> <li>List of towing bars for AC recovery from aerodrome: A-300; A-310; A-318,319,320,321; A-330; A-340; A-350; B-737; B-747; B-757; B-767; B-777; B-787; AN-24,26; YAK-40; YAK-42; IL-62; IL-96; TU-134; TU-154; TU-204; TU-214; DC-9; DC-10; MD-11; MD-80,81,82,83,90,95; L-1011; E-170,175,190,195</li> <li>Aircraft recovery kit in case of damage to the nose and/or main landing gear</li> <li>Elements for laying on the ground (mats)</li> <li>Compressor</li> <li>Universal set of lifting straps for narrow- and wide-body aircraft (except A380)</li> <li>Devices for towing emergency aircraft that have lost the ability to move</li> <li>Aircraft delay equipment</li> </ul>
4	Remarks	Equipment for towing emergency aircraft that have lost the ability to move for the evacuation of aircraft such as B747, B777, A340, A350, MD11 and alike. The main guideline for the weight of an empty aircraft is from 80,000 kg to 215,000 kg.

## UACC AD 2.7 Seasonal Availability - Clearing

1	Types of clearing equipment	12 plow-brush equipment with turbo pipes, 3 augers, 1 wind machine, 2 trailed reagent sprayers, 1 pusher for cleaning of snow shafts, 1 side lamp cleaning machine on the runway, other modern snow removal equipment
2	Clearance priorities	<p>1. RWY, TWY A, E, P, H, C, stands 1-10, 100</p> <p>2. TWY L, J, B, D, apron A, B, C, D</p> <p>3. Cleaning the runway strip along the entire length to a width of 25 meters from the runway border, cleaning of the verges of parking stands and apron with the interface layout, cleaning of access roads to radio navigation and communication facilities (CNS facilities), fuel and lubricants, inside the aerodrome roads and other works</p>

3	Remarks	Seasonal availability: All seasons, caution advised in winter during snow conditions Information on the de-icing liquids and deicing reagents used is published in the AIC circular in the section SEASONAL SNOWFALL PLAN FOR THE WINTER SEASON
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**UACC AD 2.8 Aprons, Taxiways And Check Locations/Positions Data**

1	Apron surface and strength	APRON	STANDS	SURFACE	STRENGTH
		A	1,4,5,6,19	CONC+ASPH	PCN 66/F/C/W/T
			2,3,17,18	REINF/CONC	PCN 66/R/B/W/T
			7L, 7, 7R, 8L, 8, 8R, 9L, 9, 9R		PCN 69/R/B/W/T
			10,11	CONC+ASPH	PCN 17/R/B/X/T
			12-16		PCN 60/F/C/W/T
			20-23		PCN 93/F/C/W/T
			24-28		PCN 14/R/B/X/T
			29-30		PCN 28/F/C/Y/T
			37-42, 44-49		PCN 53/F/C/Y/T
		B	70-83, 85-88, 90-94		PCN 60/F/C/X/T
			84, 89, 95		PCN 73/F/C/W/T
		C	100-104		PCN 79/F/C/W/T
		D	31-33		PCN 28/F/C/Y/T
			1B-4B		Nil
		K	1K-5K		PCN 36/F/C/X/T

2	Taxiway width, surface and strength	TWY	WIDTH (M)	SURFACE	STRENGTH
		A	23	CONC+ASPH	PCN 66/F/C/X/T
		B	5	CONC+ASPH	PCN 60////
			18	CONC+ASPH	PCN 45/R/B/X/U
		C	23	CONC+ASPH	PCN 60/F/C/X/T
		D	23	CONC+ASPH	PCN 60/F/C/X/T
		E	23	CONC+ASPH	PCN 66/F/C/X/T
		F	20	CONC+ASPH	PCN 60/F/C/X/T
		G	32	CONC+ASPH	PCN 22/R/A/X/T
		H	23	CONC+ASPH	PCN 60/F/C/X/T
		J	23	CONC+ASPH	PCN 79/F/C/W/T
		K	23	CONC+ASPH	PCN 36/F/C/X/T
		L	23	CONC+ASPH	PCN 60/F/C/X/T
		M	23	CONC+ASPH	PCN 79/F/C/W/T
		P1	23	CONC+ASPH	PCN 66/F/C/X/T
		P2	23	CONC+ASPH	PCN 66/F/C/X/T
		P3	23	CONC+ASPH	PCN 66/F/C/X/T
		P4	23	CONC+ASPH	PCN 66/F/C/X/T
		Q	11	CONC+ASPH	PCN 46/R/B/X/T
		W	23	CONC	PCN 12/R/B/W/T
		Y	18	CONC+ASPH	PCN 46/F/C/X/T
3	Altimeter checkpoint location and elevation	Nil			
4	VOR checkpoints	Nil			
5	INS checkpoints	Nil			
6	Remarks	1. When precipitation falls and during the autumn-spring periods, ground elements of the airfield are subject to disintegration 2. Aircraft taxiing via apron D by ATC clearance only. Prior permission required.			

**UACC 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	Guidance sign board at entrance of RWYs, guidance sign designating taxiways and apron Visual docking guidance system at stands 7L, 7, 7R, 8L, 8, 8R, 9L, 9, 9R
2	RWY and TWY markings and LGT	Markings of thresholds, touchdown zones, centre line, fixed distance markers, RWY edges, RWY designations, taxi holding positions, taxiway centre lines
3	Stop bars	TWY A, TWY B, TWY C, TWY D, TWY P before TWY E
4	Other runway protection measures	Nil
5	Remarks	Nil

**UACC AD 2.10 Aerodrome Obstacles**

NIL

## UACC AD 2.11 Meteorological Information Provided

1	Associated MET Office	Meteorological service Astana Phone: +7 (7172) 773478
2	Hours of service MET Office outside hour	H24
3	Office responsible for TAF preparation: Periods of validity	Meteorological service Astana, 24 HR (0024, 0606, 1212, 1818)
4	Trend forecast Interval of issuance	TREND 30 min
5	Briefing/consultation provided	Personal consultation (English, Russian)
6	Flight documentation/languages used	TAF, METAR, SPECI, SIGMET, GAMET, AIRMET English
7	Charts and other information AVBL for briefing or consultation	S, U85, U70, U50, U40, U30, U25, U20, prognostic charts of wind and temperature at flight levels (FL), max wind, T, prognostic charts P85, P70, P50, P40, P30, P25, P20, SWH, SWM of WAFC, SWM+SWH, SWL of Kazakhstan;
8	Supplementary equipment AVBL for providing information	Doppler weather radar (WRM-200)
9	ATS units provided with information	Briefing, TWR, APP, ACC
10	Additional information	Nil

## UACC AD 2.12 Runway Physical Characteristics

Designation s RWY NR	TRUE BRG	Dimensions of RWY (M)	Strength (PCN) 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	Slope of RWY-SWY
1	2	3	4	5	6	7
04	44.52°	3500 X 45	73/F/C/W/T CONC+ASPH	510040.87N 0712655.41E - -106.2 FT	THR 1164.7 FT TDZ 1166 FT	-0.57%
22	224.55°	3500 X 45	73/F/C/W/T CONC+ASPH	510201.65N 0712901.44E - -106.1 FT	THR 1158.1 FT TDZ 1161 FT	0.57%

SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	RESA dimensions (M)	Location and description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
Nil	400 X 150	3800 X 300	90 X 160	Nil	AVBL	Nil
Nil	400 X 150	3800 X 300	90 X 160	Nil	AVBL	Nil

## UACC AD 2.13 Declared Distances

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
22	3500	3900	3500	3500	Nil
04	3500	3900	3500	3500	Nil
TWY B - 22	2291	2691	2291	Nil	Nil
TWY C - 22	2107	2507	2107	Nil	Nil
TWY D - 04	2671	3071	2671	Nil	Nil
TWY C - 04	1393	1793	1393	Nil	Nil
TWY B - 04	1209	1609	1209	Nil	Nil

## UACC 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	RWY edge LGT LEN, spacing, colour, INTST	RWY End LGT colour, WBAR	SWY LGT LEN, colour	Remarks
1	2	3	4	5	6	7	8	9	10
04	CAT IIIA (HIALS) 900 M LIH	GRN Nil	PAPI LEFT/3°	900m	3500m, spacing 15.0m, 0-2600m white, 2600-3200m R/W, 3200-3500m red LIH	3500m, spacing 60m, 0-2900m white, last 600m yellow LIH	RED Nil	Nil	Nil
22	CAT IIIA (HIALS) 900 M LIH	GRN Nil	PAPI LEFT/3°	900m	3500m, spacing 15.0m, 0-2600m white, 2600-3200 R/W, 3200-3500m red LIH	3500m, spacing 60m, 0-2900m white, last 600m yellow LIH	RED Nil	Nil	Nil

## UACC AD 2.15 Other Lighting, Secondary Power Supply

1	ABN/IBN location, characteristics and hours of operation	Nil
2	LDI location and LGT Anemometer location and LGT	Anemometer: 300 m from RWY04 to ARP, 390m from RWY22 to ARP, lighted

3	TWY edge and centre line lighting	EDGE: All TWY CL: TWY A, E, H, C, B, M, J, L, P CL: TWY B, C, H, M, J and L from apron to TWY P
4	Secondary power supply/switch-over time	Available, 0 sec
5	Remarks	Nil

#### UACC AD 2.16 Helicopter Landing Area

1	Coordinates TLOF or THR of FATO Geoid undulation	510138.98N 0712809.40E -106.1	510202.10N 0712837.92E -106.1
2	TLOF and/or FATO elevation	1158.3 FT	1156.2 FT
3	TLOF and FATO area dimensions, surface, strength, marking	Rectangle 25 x 25 M, CONC+ASPH, PCN 47/F/C/X/T, no marking	TLOF/FATO on 25/30, CONC+ASPH, PCN 76/F/C/X/ T, marking
4	True BRG of FATO	Direction of TKOF zones: 035°/215° MAG	Direction of TKOF zones: 030°/ 220° MAG
5	Declared distance available	Nil	Nil
6	APP and FATO lighting	Nil	Nil
7	Remarks	On intersection of TWY P1 and TWY B	Stand 104

#### UACC AD 2.17 ATS Airspace

1	Designation and lateral limits	ASTANA CTR 511821N 0714116E - 510912N 0715557E - 510321N 0714642E then a clockwise arc radius 12 NM centered on 510121N 0712758E - 504930N 0712503E - 504420N 0711703E - 505324N 0710223E - 505808N 0710940E then a clockwise arc radius 12 NM centered on 510121N 0712758E - 511257N 0713246E - 511821N 0714116E
2	Vertical limits	5500 FT ALT / GND
3	Airspace classification	D
4	ATS unit call sign Language(s)	ASTANA TOWER EN ASTANA VYSHKA RU
5	Transition altitude	10000 FT
6	Hours of applicability	H24
7	Remarks	Nil

#### UACC AD 2.18 ATS Communication Facilities

Service designation	Call sign	Frequency	SATVOICE number(s)	Logon address	Hours of operation	Remarks
1	2	3	4	5	6	7
APP	ASTANA APPROACH (EN) ASTANA PODKHOD (RU)	124.6 MHZ	Nil	Nil	H24	Nil
RADAR	ASTANA RADAR (EN) ASTANA KRUG (RU)	120.7 MHZ	Nil	Nil	H24	Nil
SMC	ASTANA GROUND (EN) ASTANA RULENIE (RU)	119.6 MHZ	Nil	Nil	H24	Nil



Service designation	Call sign	Frequency	SATVOICE number(s)	Logon address	Hours of operation	Remarks
1	2	3	4	5	6	7
TWR	ASTANA TOWER (EN) ASTANA VYSHKA (RU)	135.5 MHZ	Nil	Nil	H24	Nil
ATIS	ASTANA ATIS (EN) ASTANA ATIS (RU)	129.5 MHZ 128.3 MHZ	Nil	Nil	H24	EN RU
DELIVERY	ASTANA DELIVERY (EN) ASTANA DELIVERY (RU)	129,8	Nil	Nil	H24	Nil

**UACC AD 2.19 Radio Navigation And Landing Aids**

Type of aid, MAG VAR, ILS Classification, Type of supported OP (for VOR/ILS/MLS, give declination)	ID	Frequency, Channel number	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Service volume radius from the GBAS reference point	Remarks
1	2	3	4	5	6	7	8
DVOR/DME (10°E/2013)	AST	114.4 MHZ CH 91X	H24	510005.6N 0712600.4E	1200 FT	Nil	Nil
ILS LOC 04 III/E/4	IMO	109,5 MHZ	H24	510224.7N 0712937.4E		Nil	Nil
GP 04 III/T/4		332,6 MHZ		510045.5N 0712712.0E			
DME 04	IMO	CH 32X		510045.5N 0712712.0E	1200 FT		
ILS LOC 22 III/E/4	IAK	111,7 MHZ	H24	510018.8N 0712621.0E		Nil	Nil
GP 22 III/T/4		333,5 MHZ		510151.0N 0712854.3E			
DME 22	IAK	CH 54X		510151.0N 0712854.3E	1200 FT		
NDB	M	654 KHZ	H24	510013.2N 0712612.3E	Nil	Nil	Nil

**UACC AD 2.20 Local Aerodrome Regulations**

The Bozshakol flight area. The Bozshakol flight area is intended for exercising piloting techniques, flights at Low Altitudes/Heights and Extremely Low Altitudes/Heights, for landing on a platform (apron) with independent selection from the air, for performing search and rescue work over land in hovering mode day and night, flights with a undersling load day and night (with a helibucket), flights day and night in Simple Meteorological Conditions and Complex Meteorological Conditions, on operating ceiling, for simple and complex aerobatics, group flights, as well as helicopter's test flights. Its area is a circle of 5 km radius with a center on the Bozshakol settlement (505440N 0713843E). The nearest border of the area is 13.0 km, the furthest one is 23.0 km. Restrictive bearings from AST: Magnetic Radio Bearing = 280° - 309°. The altitude/height of flight aerobatic area is from actual height = 15 m to flight level = 6100 m (FL200), Minimum safety altitude = 900 m in QNH pressure.

The Borlykol flight area. The Borlykol flight area is intended for exercising piloting techniques, flights at Low Altitudes/Heights and Extremely Low Altitudes/Heights, landing on a platform (apron) with independent selection from the air, for performing search and rescue work over land in hovering mode day and night, flights with a undersling load day and night (with a helibucket), flights day and night in Simple Meteorological Conditions and Complex Meteorological Conditions, on operating ceiling, for simple and complex aerobatics, group flights, as well as helicopter's test flights. Its area is a circle of 5 km radius with a center on the Borlykol lake (505251N 0715305E). The nearest border of the area is 29.0 km, the furthest one is 39.0 km. Restrictive

bearings from AST: Magnetic Radio Bearing = 274° - 290°. The altitude/height of flight aerobatic area is from actual height = 15 m to flight level = 6100 m (FL200), Minimum safety altitude = 900 m in QNH pressure.

The Saryadyr flight area. The Saryadyr flight area is intended for exercising piloting techniques, flights at Low Altitudes/Heights and Extremely Low Altitudes/Heights, landing on a platform (apron) with independent selection from the air, for performing search and rescue work over land in hovering mode day and night, flights with a undersling load day and night (with a helibucket), flights day and night in Simple Meteorological Conditions and Complex Meteorological Conditions, on operating ceiling, for simple and complex aerobatics, group flights, as well as helicopter's test flights. Its area is a circle of 5 km radius with a center on the Saryadyr settlement (505012N 0713354E). The nearest border of the area is 17.0 km, the furthest one is 26.5 km. Restrictive bearings from AST: Magnetic Radio Bearing = 311° - 337°. The altitude/height of flight aerobatic area is from actual height = 15 m to flight level = 6100 m (FL200), Minimum safety altitude = 900 m in QNH pressure.

The Maibalyk flight area. The Maibalyk flight area is intended for exercising piloting techniques, flights at Low Altitudes/Heights and Extremely Low Altitudes/Heights, landing on a platform (apron) with independent selection from the air, flights day and night in Simple Meteorological Conditions and Complex Meteorological Conditions, group flights, for performing search and air-sea rescue operations over water day and night, flights with a undersling load day and night (with a helibucket), helicopter's test flights, as well as for holding patterns. Its area is a circle of 3 km radius with a center on the Maibalyk lake (505805N 0713229E). The nearest border of the area is 5.3 km, the furthest one is 11.3 km. Restrictive bearings from AST: Magnetic Radio Bearing = 267° - 305°. The altitude/height of flight aerobatic area is from actual height = 15 m to actual height = 200 m, Minimum safety altitude = 900 m in QNH pressure.

Due to the absence of required AGL system and on TWY-G and presence of unacceptable slopes on its unpaved part, following limitations are in place:

Movements of aircrafts on TWY-G when visibility is lower than 800 meters is prohibited;

Movements of aircrafts on TWY-G only by towing when night time and visibility is less than 2000 meters.

The following widenings are designed to perform a 180-degree turn on the runway:

- TURN PAD 95M AVAILABLE AT THR RWY 04;
- TURN PAD 97M AVAILABLE AT THR RWY 22;
- TURN PAD 75M AVAILABLE 2500M FROM THR RWY 22;
- TURN PAD 75M AVAILABLE 1000M FROM THR RWY 04.

Taxiing on taxiway "C" on the Parking lot-9 for aircraft with a wingspan of more than 50m behind the escort vehicle.

There is no aircraft anchorage point in the aircraft parking area.

Starting the engine on the Parking lot - 17 traverse is prohibited.

Lifting of an aircraft by a lifting mechanism is prohibited in aircraft parking lots, with the exception of parking lots 2, 3, 7, 8, 17, 18.

Parking lot №12 is closed.

Before the flight, the crew must listen to the ATIS information, in the period of 5 minutes to 25 minutes before the departure time establish contact with the "ASTANA DELIVERY" on a frequency of 129.800 MHz, report the current ATIS information index and receive ATC clearance. Before tow/start engines establish contact with the "ASTANA GROUND" on a frequency of 119.600 MHz, report the current ATIS information index, the parking stand number, request permission to tow/start engines. If unable to establish contact with the "ASTANA DELIVERY" on a frequency of 129.800 MHz, establish contact with the "ASTANA GROUND" on a frequency of 119.600 MHz.

Engine ground run on parking position 1-9 prohibited.

Aircraft taxiing and service vehicles on the maneuvering area shall not cross the prescribed holding lines established for CAT II and CAT III operations, as well as stop bars, without clearance from Air Traffic Control, and the stop bars must be switched off.

## UACC AD 2.21 Noise Abatement Procedures

NIL

## UACC AD 2.22 Flight Procedures

### 1. General

RWY 04/22 approved for CAT II and CAT IIIA operations.

**2. Low Visibility Procedures during CAT II operations.**

Low Visibility Procedures (LVP) are initiated at Astana aerodrome:

- a. during CAT II and CAT IIIA approaches when RVR is less than 550 m;
- b. during take-off, when RVR is less than 550 m. The status of LVP is reported through ATIS or the broadcast of RTF with the following phrase: "LOW VISIBILITY PROCEDURES IN OPERATION"

The controller shall verify that ILS sensitive area is clear of known traffic before Aircraft reaches 15 km distance from touchdown point.

During approach, the controller informs pilots of:

- unserviceability or downgrading of aids or facilities;
- change of surface wind;
- change of RVR;
- change of cloud base (vertical visibility).

A-SMGCS on SMR, SSR and ADS-B base supports ground movement operations based on established operational procedures.

**3. Arriving Aircraft**

The report on the vacation of the runway is made on the TWY only after the release of the ILS critical zones. Taxiing on the taxiways is carried out by the TWY centerline lights before coupling with the apron. Taxiing on the apron is allowed only behind the follow me car. Parking of the aircraft in the stands is carried out according to the signals of the ground personnel.

Taxiing via TWY shall be carried out along TWY centerlines lights until junction with apron. It is permitted to taxi on the apron only under guidance of a "follow-me" car. Parking to the stands is assisted by a marshaller.

**4. Departing Aircraft**

Aircraft taxiing for take-off from the aircraft stands to the TWY are accompanied by the follow me car. Taxiing on the taxiway is carried out by the TWY centerline lights to the runway holding positions. At the runway holding positions, the aircraft must stop in front of an aerodrome sign of the critical zone (Runway designation of both extremities of the runway on a red background and the designation of the TWY on a black background).

**5. VFR procedures within the aerodrome control zone (CTR)**

Flights within the control zone are conducted at an absolute altitude of no less than 1700 feet, unless otherwise instructed by the controller of the "Radar" ATC unit. Absolute flight altitudes are assigned by the controller of the "Radar" ATC unit without considering obstacles. Crews of aircraft independently perform the avoidance of obstacles. Within the control zone, flights over populated, prohibited, restricted, and dangerous areas are to be avoided. For VFR flights of aircraft with certificated take-off mass of up to 5700 kg and helicopters flying at speeds of no more than 140 knots, at Astana aerodrome the flight circuit is established for Runway 22 (left) and Runway 04 (right) at an altitude of 2000 feet. The width of the rectangular flight path is 3 nautical miles. The controller of the "Radar" ATC unit determines and communicates the utilized traffic circuit to the aircraft crew. Entering the traffic circuit, crossing the runway alignment is made only with the permission of the air traffic controller of the "Radar" ATC unit. Entry/Exit into the control zone is carried out through designated waypoints. *Note: In all cases, the controller of the "Radar" ATC unit assigns altitudes in accordance with the table of the "Minimum Safe True Flight Altitudes for ATS Routes and SID" published in Appendix 5 to the Rules for Aircraft*

*Operations in Civil Aviation of the Republic of Kazakhstan.*

№	Waypoint name	Type	Visual reference	Geographical coordinates	Radial (mag.) from DVOR/DME AST	Distance from DVOR/DME AST
1	KOIANDY	Exit	Northeastern outskirts of the settlement Koyandy	511821N 0714116E	018°	20.6 NM
2	KOSTOMAR	Entry	Eastern outskirts of the locality Kostomar	511319N 0714922E	038°	19.8 NM
3	TANAKOL	Exit	To the north-east of Lake Tanakol	510912N 0715557E	054°	21.0 NM
4	ZHALTYRKOL	Entry	Western outskirts of the locality Zhaltyrkol	505951N 0714824E	081°	14.2 NM
5	KARIER	Exit	South of the sand quarry	505626N 0714517E	097°	12.7 NM
6	NURA	Entry	Northern outskirts of the locality Nura	504723N 0712505E	173°	12.7 NM
7	KARATOMAR	Exit	Southeastern outskirts of the locality Karatomar	505127N 0710534E	226°	15.6 NM
8	ZHANAYDAR	Entry	-	510334N 0710850E	278°	11.4 NM
9	URKER	Exit	Northwest outskirts of the residential area Urker	510853N 0711310E	308°	12.0 NM
10	INTER	Intermediate	Northern outskirts of the microdistrict International, intersection with the Astana-Karaganda highway	510750N 0713550E	029°	9.9 NM
11	IPPODROM	Holding	West of the horse racecourse	510435N 0712226E	324°	5.0 NM
12	MAIBALYK	Holding	Southern shore of Lake Maybalyk	505659N 0713015E	129°	4.1 NM

## 6. Continuous Descent Operation

- CDOs are performed during periods of low traffic density at ATC discretion.
- CDOs are executed only by ACFT that use standard arrival procedures RNAV1 based on GNSS.
- Although these procedures are designed as a closed path, they permit distance planning for CDO, allowing the ACFT Flight Management System/Computer (FMS/FMC) to accurately execute automated optimized descents when:
  - ACFT is cleared to proceed to a waypoint or via a combination of waypoints in order to provide an optimum lateral flight path up to and including the FAP and thus the exact distance to the RWY is known prior to start of the continuous descent operation; or
  - the pilots of the ACFT that to be vectored to final are provided with distance-to-go information.
- CDOs are authorized only when following conditions are respected:

- ILS of RWY intended for landing is in operation;
  - no adverse weather conditions that may affect CDO;
  - no system degradations that may affect GNSS or ILS operation.
5. After receiving "WHEN READY DESCEND TO (LEVEL)" or "DESCEND TO (LEVEL) AT PILOTS DISCRETION" clearance the pilot is allowed to plan/optimize vertical profile in order to apply CDO to FAP.
  6. Depending on traffic, CDO may start from TOD or lower levels.
  7. In accordance with appropriate ATC clearances, CDO can start from the TOD when ACFT is cleared to a waypoint or via a combination of waypoints for direct routing/shortcut and the horizontal trajectory is defined up to and including the FAP. Thus, the exact distance to RWY is known and the descent profile can be readily calculated by the appropriate on board system (FMS) prior to start of the CDO.
  8. After clearance "WHEN READY DESCEND TO (LEVEL)" or "DESCEND TO (LEVEL) AT PILOTS DISCRETION" pilot should maintain the cruising/last assigned level until the optimal descent point/TOD that is determined by pilot or FMS, then start descent with no extra requests unless other ATC instructions are issued.
  9. If necessary ATC may issue additional instructions: "WHEN READY DESCEND TO (LEVEL), REPORT LEAVING (or REPORT TOP-OF-DESCENT)"
  10. Considering airspace structure, ATC issues an instruction to descend to level(s) above level of FAP. Wherein ATC issues further descent instruction prior to CDO flight reaching 3000 feet (900 m) above last assigned level.
  11. After contact with appropriate CTR established, ATC issues approach clearance: "CLEARED ILS APPROACH RUNWAY (NUMBER)". With this clearance pilot should proceed via cleared waypoint(s) to intercept ILS.
  12. It is preferable if CDO is commenced from top of descent. If it is not feasible due to traffic, CDO may be initiated from any lower level.
  13. As a portion of the procedure consists of vectoring, the specific distance to RWY threshold is not known to a pilot prior to start of the CDO. In such cases, ATC will provide the pilot with an estimate of the flight track-miles to the RWY threshold as distance-to-go information. The pilot will use this information to determine the optimum descent rate to achieve a CDO.
  14. ACFT not exceed IAS 220 knots closer 15 n.m. to RW threshold.

## 7. Continuous Climb Operation

Continuous Climb Operations (CCO) are conducted along standard instrument departure routes (SID RNAV1) using GNSS. The feasibility of CCO is determined by the ATC based on the current air traffic situation and operational traffic density.

## UACC AD 2.23 Additional Information

### 1. Accepted exceptions, exemptions and restrictions in aerodrome certificate.

Regulatory reference	Requirement of regulations	Description of exceptions, exemptions and restrictions	Measures taken and validity period
Point 440. Standards of Aerodromes (Heliports) Operation Civil Aviation Republic Kazakhstan	Nil	Nil	ELoS has been approved from 22.04.2022 till 22.04.2024

### 2. Bird concentration near airport.

The intensive flights of flocks of ducks, geese, cormorants, silver and lake gulls, blue pigeon, black and gray crows take place daily during 1-2 hours before and after sunset, when birds fly from the lake (1000 km south-east of the RWY) across the RWY and approach area of RWY 22 and RWY 04 to feeding zones near rivers north and north-west of the airport.

The highest intensity of spring and autumn bird flights are observed in predawn hours. Within 3-4 hours and after sunrise. In the evening, 2-3 hours before sunset, the intensity of the flight increases sharply again and

remains high for several hours after dark. In some places, especially in coastal areas, intensive bird flight is observed throughout the night.

Regular bird flights from Lake Maybalyk through the airfield are observed from April till October, around the 215 approach course of RWY22.

An hour or two hours before sunset, birds make a return flight to their resting place. In spring, the majority of birds fly at an altitude of up to 500 m. At the same time, about 20% of birds move at altitudes up to 10 m, from 10 to 50 m – 50%, from 50 to 100 m – 20%, the remaining 10% fly above 100 m.

The main directions of migration in spring are from southwest to northeast; in autumn in the opposite direction. In autumn, a large number of rooks, crows, silver and lake gulls accumulate in the area of the airfield and at the airfield, which pose a great danger to flights from sunrise to sunset.

In case of necessity, the aerodrome control point informs pilots about bird flights and approximate heights above ground level.

At the mentioned above time intervals, if design characteristics of airborne equipment allow, pilots are recommended to switch on landing lights during the flights in aerodrome area, during take-off, approach, as well as climbing and descent.

Bird concentration scattering measures include:  
periodical deterrence of birds, effective measures regarding to scavenging, removal of green plantations and ground covering, termination of agricultural activity within the airport area.

### UACC AD 2.24 Charts Related To An Aerodrome

Name	Page
Aerodrome Chart ICAO	UACC AD 2.24.1-1
Aerodrome Ground Movement and Parking Chart ICAO	UACC AD 2.24.3-1
Aerodrome Obstacle Chart – ICAO Type A RWY 04/22	UACC AD 2.24.4-1
Precision Approach Terrain Chart – RWY 04 ICAO	UACC AD 2.24.5-1-1
Precision Approach Terrain Chart – RWY 22 ICAO	UACC AD 2.24.5-2-1
Area Chart ICAO	UACC AD 2.24.6-1
Standard Departure Chart Instrument (SID) RWY 04 ICAO	UACC AD 2.24.7-1-1
Standard Departure Chart Instrument (SID) RWY 22 ICAO	UACC AD 2.24.7-2-1
Standard Departure Chart Instrument (SID) RNAV RWY 04 ICAO	UACC AD 2.24.7-3-1
Standard Departure Chart Instrument (SID) RNAV RWY 04 ICAO	UACC AD 2.24.7-4-1
Standard Departure Chart Instrument (SID) RNAV RWY 04 ICAO	UACC AD 2.24.7-5-1
Standard Departure Chart Instrument (SID) RNAV RWY 22 ICAO	UACC AD 2.24.7-6-1
Standard Departure Chart Instrument (SID) RNAV RWY 22 ICAO	UACC AD 2.24.7-7-1
Standard Departure Chart Instrument (SID) RNAV RWY 22 ICAO	UACC AD 2.24.7-8-1
Standard Arrival Chart Instrument (STAR) RWY 04 ICAO	UACC AD 2.24.9-1-1
Standard Arrival Chart Instrument (STAR) RWY 22 ICAO	UACC AD 2.24.9-2-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 04 ICAO	UACC AD 2.24.9-3-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 04 ICAO	UACC AD 2.24.9-4-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 22 ICAO	UACC AD 2.24.9-5-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 22 ICAO	UACC AD 2.24.9-6-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 04 ICAO	UACC AD 2.24.9-7-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 04 ICAO	UACC AD 2.24.9-8-1
Standard Arrival Chart Instrument (STAR) RNAV RWY 22 ICAO	UACC AD 2.24.9-9-1

Name	Page
Standard Arrival Chart Instrument (STAR) RNAV RWY 22 ICAO	UACC AD 2.24.9-10-1
ATC Surveillance Minimum Altitude Chart ICAO	UACC AD 2.24.10-1
Instrument Approach Chart – ILS/DME - Y CAT II & III, RWY 22 ICAO	UACC AD 2.24.11-1-1
Instrument Approach Chart – ILS/DME - Z CAT II & III, RWY 22 ICAO	UACC AD 2.24.11-2-1
Instrument Approach Chart – ILS/DME - Y CAT II & III, RWY 04 ICAO	UACC AD 2.24.11-3-1
Instrument Approach Chart – ILS/DME - Z CAT II & III, RWY 04 ICAO	UACC AD 2.24.11-4-1
Instrument Approach Chart – VOR/DME RWY 22 ICAO	UACC AD 2.24.11-5-1
Instrument Approach Chart – VOR/DME RWY 04 ICAO	UACC AD 2.24.11-6-1
Instrument Approach Chart – RNP RWY 04 ICAO	UACC AD 2.24.11-7-1
Instrument Approach Chart – RNP RWY 22 ICAO	UACC AD 2.24.11-8-1
Visual Approach chart – ICAO	UACC AD 2.24.12-1
Instrument Approach Chart – ILS/DME RWY 22	UACC AD 2.24.13-1-1
Instrument Approach Chart – ILS/DME RWY 04	UACC AD 2.24.13-2-1
Instrument Approach Chart – VOR/DME RWY 22	UACC AD 2.24.13-3-1
Instrument Approach Chart – VOR/DME RWY 04	UACC AD 2.24.13-4-1
Instrument Approach Chart – BC NDB RWY 22	UACC AD 2.24.13-5-1
Instrument Approach Chart – NDB RWY 04	UACC AD 2.24.13-6-1
VFR Departure/Arrival Chart	UACC AD 2.24.14-1

**UACC AD 2.25 Visual segment surface (VSS) penetrations**

No penetrations

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