

UAKK AD 2

Note: The following sections in this chapter are intentionally left blank: AD-2.10, AD-2.16, AD-2.21, AD-2.25

UAKK AD 2.1 Aerodrome Location Indicator And Name

UAKK - KARAGANDA

UAKK AD 2.2 Aerodrome Geographical And Administrative Data

1	ARP coordinates and site at AD	494018N 0732007E At the centre of RWY
2	Direction and distance from (city)	130°, 13 NM km from Karaganda
3	Elevation/Reference temperature	1766 FT/24° C
4	Geoid undulation at AD ELEV PSN	-118 FT
5	MAG VAR/Annual Change	8° E (2013) / 0.01°
6	AD Administration, address, telephone, telefax, telex, AFS	Post: Authority of Airport 100000 Karaganda, JSC "Sary-Arka International Airport" Republic of Kazakhstan Phone: +7 (7212) 771261 Fax: +7 (7212) 771264 AFS: UAKKAPBF
7	Types of traffic permitted (IFR/VFR)	IFR-VFR
8	Remarks	Nil

UAKK AD 2.3 Operational Hours

1	AD Operator	H24 Phone: +7 (7212) 428555
2	Customs and immigration	H24 Phone: +7 (7212) 428576 Phone: +7 (7212) 428594
3	Health and sanitation	H24 Phone: +7 (7212) 428503
4	AIS Briefing Office	H24
5	ATS Reporting Office (ARO)	H24 Phone: +7 (7212) 496641 Phone: +7 (7212) 496572 Fax: +7 (7212) 496560
6	MET Briefing Office	H24 Phone: +7 (7212) 496673
7	ATS	H24
8	Fuelling	H24 Phone: +7 (7212) 428533
9	Handling	H24 Phone: +7 (7212) 428555
10	Security	H24 Phone: +7 (7212) 428526

11	De-icing	H24 Phone: +7 (7212) 428582
12	Remarks	Nil

UAKK AD 2.4 Handling Services And Facilities

1	Cargo-handling facilities	Handling up to 27 tonnes weight, more on request
2	Fuel/oil types	TS-1, RT (equivalent to Jet A-1)/MS-8, SM-4.5
3	Fuelling facilities/capacity	The maximum amount of fuel 750 000 l. 2 Fuel truck 60000 l. 2200 l/min 3 Fuel truck 22000 l. 1000 l/min 1 Fuel truck 7500 l 750 l/min
4	De-icing facilities	2 BC FMC TEMPEST
5	Hangar space for visiting aircraft	NOT AVBL for visiting aircraft
6	Repair facilities for visiting aircraft	Minor repairs at aircraft repair base
7	Remarks	Nil

UAKK AD 2.5 Passenger Facilities

1	Hotels	Airport hotel, city hotel Karaganda
2	Restaurants	AVBL
3	Transportation	Buses, taxis
4	Medical facilities	Aid post at Airport Terminal, ambulance service, hospital in Karaganda
5	Bank and Post Office	Bank ATM
6	Tourist Office	In the city Karaganda
7	Remarks	Nil

UAKK AD 2.6 Rescue And Fire Fighting Services

1	AD category for fire fighting	CAT A7
2	Rescue equipment	AVBL 3 Truck, total capacity – 25000 l.
3	Capability for removal of disabled aircraft	In emergency situations, without destroying aircraft, at the airport available emergency rescue equipment that allows to perform a "Pull out the aircraft" with a undamaged landing gear, on solid (non-deformable) ground, in case of taxiway and runway excursion. Phone: +7 (7212) 428580 Phone: +7 705 7510013 Email:m.sembaevich@kgf.aero
4	Remarks	Nil

UAKK AD 2.7 Seasonal Availability - Clearing

1	Types of clearing equipment	Air blowers 2, De-icing equipment 1, Snow sweepers 5, Snow rotor 3
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2	Clearance priorities	1. RWY 2. TWY 3. Stands
3	Remarks	A liquid deicing reagent "Green Way F65" is used to remove and prevent the formation of ice deposits on the runway

UAKK AD 2.8 Aprons, Taxiways And Check Locations/Positions Data

1	Apron surface and strength	STANDS		SURFACE	STRENGTH
		1-5, 2A, 3A		CONC+REINF	PCN 55/R/A/W/T
		6-9, 6A, 13A		CONC+REINF	PCN 32/R/A/X/T
		10-12		CONC+ASPH	PCN 20/R/A/X/T
		13-18		CONC+ASPH	PCN 19/R/A/X/T
		14A		CONC+REINF	PCN 55/R/A/W/T
		19-21, 20A		CONC+REINF	PCN 52/R/A/W/T
		22-27 (AN-2)		CONC+ASPH	Nil
2	Taxiway width, surface and strength	TWY	WIDTH (M)	SURFACE	STRENGTH
		A	23	CONC+REINF	PCN 55/R/A/W/T
		B	23	CONC+REINF	PCN 35/R/A/X/T
		4	18	CONC+REINF	Nil
		Taxiing on the apron (ST 1-5)	Nil	CONC+REINF	PCN 55/R/A/W/T
		Taxiing on the apron (from ST 6 to ST 18)	Nil	CONC+REINF	PCN 32/R/A/X/T
		Taxiing on the apron (from ST 19 to ST 21)	Nil	CONC+REINF	PCN 52/R/A/W/T
3	Altimeter checkpoint location and elevation	Stands: 1-3,2A, 6-9 – 536m/1759FT; 4-5 – 537m/1762FT; 10-11, 3A,6A, 21, 20A– 535m/1755FT; 12-20,13A,14A, 22-27 – 534m/1752FT.			
4	VOR checkpoints	Nil			
5	INS checkpoints	Nil			
6	Remarks	Starting aircraft engines installed nose to the terminal in stands 1-9 is prohibited. Starting the engines is allowed after towing to the places intended for starting the engines. It is allowed to start engines and taxiing on its own thrust of aircraft engines of the A320 type and less on stand 4, 7, and 9 when the aircraft is installed parallel to the station. TWY 4 - MIL			

UAKK 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-boards at entrance of TWYs to RWYs DGS: Nil
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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 and side lines. Lights: RWY and TWY A,B
3	Stop bars	Nil
4	Other runway protection measures	Nil
5	Remarks	Leading VAN «Follow me» AVBL

UAKK AD 2.10 Aerodrome Obstacles

NIL

UAKK AD 2.11 Meteorological Information Provided

1	Associated MET Office	Meteorological service Karaganda Phone: +7 (7212) 496673
2	Hours of service MET Office outside hour	H24
3	Office responsible for TAF preparation: Periods of validity	Meteorological service Karaganda, 24HR (0024, 0606, 1212, 1818)
4	Trend forecast Interval of issuance	TREND 30 min
5	Briefing/consultation provided	Personal consultation (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	H24 ARO, TWR, 122.000 MHZ, RU, EN.
10	Additional information	Nil

UAKK 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
05	58,38°	3601 X 60	55/R/A/W/T REINF+CON C	493948.35N 0731851.49E - -119.4 FT	THR 1765.7 FT	-0.106%
23	238,42°	3601 X 60	55/R/A/W/T REINF+CON C	494049.44N 0732124.50E - -119.4 FT	THR 1753.1 FT	+0.106%

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	300 X 150	3901 X 300	90 X 150	Nil	AVBL	Nil
Nil	250 X 150	3901 X 300	90 X 150	Nil	AVBL	Nil

UAKK AD 2.13 Declared Distances

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
05	3601	3901	3601	3601	Nil
23	3601	3851	3601	3601	Nil
TWY A - 05	2062	2362	2062	Nil	Nil
TWY A - 23	1562	1812	1562	Nil	Nil
TWY B - 05	1668	1968	1668	Nil	Nil
TWY B - 23	1956	2206	1956	Nil	Nil
TWY 4 - 05	800	1100	800	Nil	Nil
TWY 4 - 23	2819	3069	2819	Nil	Nil
Turning Bay 2 - 23	3301	3551	3301	Nil	Nil

UAKK 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
05	CAT I (PALS) 900 M LIH	GRN Nil	PAPI LEFT/3° 15,78 M	Nil	Nil	3601m, spacing 60m, 0-3001m white, last 600m yellow LIH	RED Nil	Nil	Nil
23	CAT I (PALS) 870 M LIH	GRN Nil	PAPI LEFT/3° 15,52 M	Nil	Nil	3601m, spacing 60m, 0-3001m white, last 600m yellow LIH	RED Nil	Nil	Nil

UAKK AD 2.15 Other Lighting, Secondary Power Supply

1	ABN/IBN location, characteristics and hours of operation	ABN: Nil IBN: Nil
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: From THR 05 – 400m, THR 23 – 700m, LGT
3	TWY edge and centre line lighting	TWY A EDGE: BLU TWY B EDGE: BLU
4	Secondary power supply/switch-over time	AVBL, 15 SEC Secondary power supply (uninterruptible power supply (UPS)) of airfield lighting absent
5	Remarks	Turning Bay Lights (U-turn) - Yellow

UAKK AD 2.16 Helicopter Landing Area

NIL

UAKK AD 2.17 ATS Airspace

1	Designation and lateral limits	KARAGANDA CTR A circle radius 27 NM centered on 494018N 0732007E
2	Vertical limits	7000 FT ALT / GND
3	Airspace classification	C
4	ATS unit call sign Language(s)	KARAGANDA TOWER EN KARAGANDA VYSHKA RU
5	Transition altitude	10000 FT
6	Hours of applicability	H24
7	Remarks	Nil

UAKK 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
TWR	KARAGANDA TOWER (EN) KARAGANDA VYSHKA (RU)	122 MHZ	Nil	Nil	H24	VDF AVBL
ATIS	KARAGANDA ATIS (EN) KARAGANDA ATIS (RU)	135,8 MHZ 127,8 MHZ	Nil	Nil	H24	Nil

UAKK 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 operatio n	Position of transmitting antenna coordinates	Elevation of DME transmitt ing antenna	Service volume radius from the GBAS referen ce point	Remar ks
1	2	3	4	5	6	7	8
ILS LOC 05 I/D/2	IRG	109,9 MHZ	H24	494103.4N 0732159.5E		Nil	Nil
GP 05 I/C/2		333,8 MHZ		493949.3N 0731908.7E			
DME05	IRG	CH 36X		493949.4N 0731908.7E	1800 FT		
ILS LOC 23 I/D/2	IKA	111,7 MHZ	H24	493937.0N 0731823.0E		Nil	Nil
GP 23 I/C/2		333,5 MHZ		494039.8N 0732115.0E			
DME23	IKA	CH 54X		494039.8N 0732115.0E	1800 FT		
DVOR/DME (8°E/2013)	KRG	113.4 MHZ CH 81X	H24	494113.9N 0732225.7E	1800 FT	Nil	Nil

UAKK AD 2.20 Local Aerodrome Regulations**1. Movement procedure (towing, taxiing) of aircraft on the airfield.**

Aircraft movement on the aerodrome shall be carried out by taxiing or towing by special vehicles. Taxiing and towing shall be carried out only along the center lines of taxiways. U-turns for aircraft on RWY are prohibited and are carried out at the discretion of the PIC for turnaround areas located at the ends of RWY 05 and RWY 23 with an extension of 95 meters, or on the RWY (width 60 meters).

2. Precautions during taxiing, towing, taking into account the visibility conditions and the covering state of the apron, parking places, taxiways.

Aircraft shall be carried out after the "Follow-me" car when RVR less than 550 m. "Tower" air traffic controller managing aircraft traffic in aerodrome, informs the crews about the relative positions of aircraft, including following the same route in low visibility conditions.

The towing supervisor (the person of Aviation Engineering service, who has entitlement for these kinds of work) is responsible for towing and directs the actions of personnel involved in the towing and responsible for its safety.

3. Taxiing into stands under its own engines power and by towing.

For protection of jet blast effect:

- Taxiing into stands shall be carried out under own engines power. Aircraft shall be parked with heading to the terminal (stands 1-9), with heading to the hangar and engineering buildings (stands № 19-21). Aircraft type A320 and smaller can be parked parallel to the terminal on the aircraft stands 4, 7, 9.;
- Jet blast effect during taxiing into/out of stands № 10-18 is non-hazardous. Taxiing into/out of stands under own engines power is allowed for the ACFT with ACN equal to or less than 19 and ACFT with overall dimensions equal or less Tu-134 (ACFT length 37 m., wingspan 29.01m.);
- Aircraft type B747 taxiing into/out of the aircraft stand 14A is carried out by towing.

- Taxiing to the aircraft stands 19-21 for aircraft B747, AN-124 is allowed via taxiing route (taxiing route along the apron) under its own engines power, from taxiway-A when aircraft stands 5, 6, 7, 10-18 are vacant, from taxiway-B when aircraft stands 13-18 are vacant
 - In all other cases, the movement of the aircraft B747 via taxiing route on the apron should be carried out by towing only.
- Towing of the aircraft from TWY A via TR (Taxiing route along the apron) to stands 19-21 and from TWY B to stands 1, 2, 3, 3A, 4, when B747 or similar parked on stands 6, 6A, is prohibited.
- In this case, taxiing of B747 into the stand 3A from TWY A and to the stands 19-21 from TWY B is allowed under own engines power.
- Taxiing into stands 2A, 3A, 6A, 13A, 20A shall be carried out after the «Follow me» car. Start up shall be carried out on stands 2A, 3A, 6A, 13A, 20A and taxiing out by own engines power.

Taxiing of aircraft with a wingspan of more than 51m onto the aircraft stands 1-5 and 2A, 3A via taxiway A is performed in the absence of aircraft on the aircraft stands 1-5, onto the aircraft stands 5-9 and 6A in the absence of aircraft on the aircraft stands 5-7.

The movement of special vehicles along the vehicles route behind stands 6-18 from the runway side is prohibited while aircraft towing or taxiing along the apron taxiing route to stands 6-21.

4. Taxiing out procedure from stands under own engines power and by towing.

- Movement of aircraft from stands № 1-9, 15-18, 19-21 to engine start-up area shall be carried out by towing.
- Taxiing out of stands 15-18 by own engines power is allowed for aircraft with ACN equal or less 19, with heading to the artificial runway and aircraft with overall dimensions equal or less Tu-134 (aircraft length 37m., wingspan 29.01 m).

Start up of engines shall be carried out in established points, placed on:

- point 1 - at the beginning of Taxiing route along the apron westward of stand 1;
- point 2 - on the Taxiing route along the apron between stands 4 and 5;
- point 3 - on the Taxiing route along the apron eastward of stand 7;
- point 4 - on the Taxiing route along the apron between stands 12 and 13;
- point 5 - on the Taxiing route along the apron between stands 15 and 16.

Engines start-up on the parking stands 4, 7, 9 is allowed, when the aircraft is parked parallel to the terminal.

5. Parking area for small aircraft (general aviation), in case such stands are available

There are 6 parking stands for An-2 aircraft.

6. De-icing areas of aircraft, engine start-up areas, deviation areas.

De-icing areas are combined with engine start-up points, placed on:

- point 1 - at the beginning of Taxiing route along the apron westward of stand 1;
- point 2 - on the Taxiing route along the apron between stands 4 and 5;
- point 3 - on the Taxiing route along the apron eastward of stand 7;
- point 4 - on the Taxiing route along the apron between stands 12 and 13;
- point 5 - on the Taxiing route along the apron between stands 15 and 16.

The deviation areas are absent.

7. The movement procedure of aircraft and vehicles in critical and sensitive zones of ILS during aerodrome operation on the minima I, II and III ICAO category.

Intersection of critical zones of radio beacon landing system with aircraft, vehicles and other mobile facilities shall be carried out with the clearance of the "Tower" air traffic controller.

Intersection of these areas with mentioned facilities during autoland approach from final turn till landing is prohibited.

8. Restrictions in the operation of large aircraft including restrictions on the use of its own power for taxiing (in cases, if such restrictions are available).

There are weight and / or traffic restrictions for aircraft with ACN exceeding the numerical values of PCN.

Operating modes of aircraft with overloads are presented in the table

RECOMMENDED AIRCRAFT OPERATING MODES WITH RESTRICTIONS AND OVERLOADS ON RIGID SURFACES (R) at the Karaganda aerodrome

№	Aircraft type	Weight, kg		ACN for base category, code "A" is appropriate		PCN strength	Weight limitation, kg			
		Max. take-off weight	of an empty aircraft	Max. take-off weight	mass of an empty aircraft		without limited intensity	with limited intensity		
								(average daily rate for the year)		
1 Aircraft departure	2 Aircraft departures					10 Aircraft departures				
1	2	3	4	5	6	7	8	9	10	11
RWY - PCN 48/R/A/W/T, TWY A - PCN 50/R/A/W/T										
1	B 747-400	395 986	176 901	53	19	48	376 655	*	*	*
2	B 747-8	443 613	191 053	64	22	48	359 426	*	434 593	412 485
3	B 787-8	228 384	136 078	61	32	48	193 371	*	*	221 456
4	MD-11	282 600	131 000	56	23	48	255 036	*	*	*
5	A 330-200	233 900	117 041	53	26	48	220 916	*	*	*
6	A 330-300	230 900	120 132	53	27	48	218 119	*	*	*
7	A 330-300	233 900	120 132	55	28	48	212 832	*	*	*
TWY B - PCN 35/R/A/X/T										
1	B 737-300	61 462	32 885	37	18	35	58 454	*	*	*
2	B 737-400	63 049	32 659	40	18	35	56 142	*	*	*
3	B 737-500	60 781	32 659	37	18	35	57 821	*	*	*
4	B 737-600	66 224	36 378	37	18	35	63 082	*	*	*

№	Aircraft type	Weight, kg		ACN for base category, code "A" is appropriate		PCN strength	Weight limitation, kg			
							without limited intensity	with limited intensity		
		(average daily rate for the year)								
		1 Aircraft departure	2 Aircraft departures	10 Aircraft departures						
1	2	3	4	5	6	7	8	9	10	11
5	B 737-700	70 307	37 648	41	20	35	60 976	*	*	*
6	B 737-800	79 243	41 413	49	23	35	58 873	75 848	71 604	67 860
7	B 747-200F	379 203	156 625	48	16	35	288 781	369 929	349 642	331 742
8	B 747-300	379 203	174 860	47	18	35	294 647	376 854	356 302	338 169
9	B 747-400	395 986	176 901	53	19	35	280 000	355 176	336 382	319 799
10	B 747-8	443 613	191 053	64	22	35	269 226	339 382	321 843	306 368
11	B 757-300	124 058	64 592	36	15	35	121 226	*	*	*
12	B 767-200ER	179 623	82 327	44	17	35	147 191	*	178 722	169 448
13	B 767-300	163 747	86 183	40	18	35	146 119	*	*	*
14	B 767-300ER	187 334	89 811	48	19	35	143 617	182 850	173 042	164 387
15	B 777-200	252 651	135 171	40	21	35	221 735	*	*	*
16	B 787-8	228 384	136 078	61	32	35	145 627	182 761	173 478	165 286
17	MD-11	282 600	131 000	56	23	35	186 127	239 723	226 324	214 502
18	A 300-B2	142 900	87 851	37	20	35	136 424	*	*	*
19	A 300-600 B4	165 900	91 759	46	20	35	134 533	*	159 484	152 145
20	A 310-300	157 900	83 000	45	20	35	127 940	*	154 155	146 445
21	A 320-100	68 400	41 244	39	22	35	62 010	*	*	*
22	A 320-200	73 900	41 345	44	22	35	60 582	*	73 530	69 722
23	A 330-200	210 900	117 041	47	26	35	157 266	209 410	196 374	184 872

№	Aircraft type	Weight, kg		ACN for base category, code "A" is appropriate		PCN strength	Weight limitation, kg			
							without limited intensity	with limited intensity		
		(average daily rate for the year)								
		1 Aircraft departure	2 Aircraft departures	10 Aircraft departures						
1	2	3	4	5	6	7	8	9	10	11
24	A 330-200	233 900	117 041	53	26	35	155 994	206 489	193 865	182 726
25	A 330-300	212 900	120 132	40	27	35	177 220	*	*	*
26	A 330-300	215 900	120 132	48	27	35	156 615	209 819	196 518	184 782
27	A 330-300	230 900	120 132	53	27	35	154 214	203 918	191 492	180 528
28	A 330-300	233 900	120 132	55	28	35	149 627	198 786	186 497	175 653
29	AN-124	398 000	180 000	36	16	35	387 100	*	*	*
30	AN-225	600 000	254 000	41	16	35	516 960	*	*	*
Stands 6-9,6A,13A - PCN 31/R/A/X/T										
1	B 737-200	58 332	29 121	34	14	31	55 411	*	*	*
2	B 737-300	61 462	32 885	37	18	31	53 942	*	*	*
3	B 737-400	63 049	32 659	40	18	31	51 998	*	*	59 799
4	B 737-500	60 781	32 659	37	18	31	53 380	*	*	*
5	B 737-600	66 224	36 378	37	18	31	58 370	*	*	*
6	B 737-700	70 307	37 648	41	20	31	56 310	*	68 752	65 093
7	B 737-800	79 243	41 413	49	23	31	54 508	70 028	66 148	62 724
8	B 747-200F	379 203	156 625	48	16	31	267 914	342 107	323 559	307 192
9	B 747-300	379 203	174 860	47	18	31	273 508	348 669	329 879	313 299
10	B 747-400	395 986	176 901	53	19	31	260 669	329 401	312 218	297 057
11	B 747-8	443 613	191 053	64	22	31	251 186	315 329	299 293	285 144
12	B 757-300	124 058	64 592	36	15	31	112 731	*	*	*

№	Aircraft type	Weight, kg		ACN for base category, code "A" is appropriate		PCN strength	Weight limitation, kg			
		Max. take-off weight	of an empty aircraft	Max. take-off weight	mass of an empty aircraft		without limited intensity	with limited intensity		
								(average daily rate for the year)		
								1 Aircraft departure	2 Aircraft departures	10 Aircraft departures
1	2	3	4	5	6	7	8	9	10	11
13	B 767-200ER	179 623	82 327	44	17	31	136 380	174 818	165 209	156 730
14	B 767-300	163 747	86 183	40	18	31	135 542	*	*	155 451
15	B 767-300ER	187 334	89 811	48	19	31	133 528	169 399	160 431	152 518
16	B 777-200	252 651	135 171	40	21	31	203 186	*	*	238 102
17	B 787-8	228 384	136 078	61	32	31	136 078	170 030	161 542	154 052
18	MD-11	282 600	131 000	56	23	31	172 345	221 347	209 097	198 288
19	A 300-B2	142 900	87 851	37	20	31	126 709	*	*	*
20	A 300-600 B4	165 900	91 759	46	20	31	125 978	156 395	148 791	142 081
21	A 310-300	157 900	83 000	45	20	31	118 952	150 909	142 920	135 871
22	A 320-100	68 400	41 244	39	22	31	57 218	*	*	66 239
23	A 320-200	73 900	41 345	44	22	31	56 143	71 927	67 981	64 499
24	A 330-200	210 900	117 041	47	26	31	143 858	191 532	179 614	169 097
25	A 330-200	233 900	117 041	53	26	31	143 010	189 176	177 635	167 451
26	A 330-300	212 900	120 132	40	27	31	155 812	*	*	196 109
27	A 330-300	215 900	120 132	48	27	31	142 934	191 578	179 417	168 687
28	A 330-300	230 900	120 132	53	27	31	141 434	186 877	175 516	165 492
29	A 330-300	233 900	120 132	55	28	31	136 987	181 932	170 696	160 781
30	AN-124	398 000	180 000	36	16	31	354 400	*	*	*
31	AN-225	600 000	254 000	41	16	31	475 440	*	586 160	553 595
32	IL 76 TD	191 000	87 200	35	12	31	177 461	*	*	*

№	Aircraft type	Weight, kg		ACN for base category, code "A" is appropriate		PCN strength	Weight limitation, kg			
							without limited intensity	with limited intensity		
		Max. take-off weight	of an empty aircraft	Max. take-off weight	mass of an empty aircraft			(average daily rate for the year)		
								1 Aircraft departure	2 Aircraft departures	10 Aircraft departures
1	2	3	4	5	6	7	8	9	10	11
Stands 10-12 - PCN 20/R/A/X/T										
1	B 737-200	58 332	29 121	34	14	20	37 884	47 621	45 187	43 039
2	B 737-300	61 462	32 885	37	18	20	35 893	45 920	43 413	41 202
3	B 737-400	63 049	32 659	40	18	20	35 422	44 631	42 329	40 297
4	B 737-500	60 781	32 659	37	18	20	35 619	45 487	43 020	40 843
5	B 737-600	66 224	36 378	37	18	20	39 520	49 992	47 374	45 064
6	B 737-700	70 307	37 648	41	20	20	37 648	48 016	45 424	43 137
7	B 737-800	79 243	41 413	49	23	20	-	46 748	44 323	42 183
8	B 757-200	113 852	60 328	30	13	20	82 367	103 357	98 110	93 480
9	B 757-300	124 058	64 592	36	15	20	78 751	97 629	92 909	88 745
10	A 320-100	68 400	41 244	39	22	20	-	48 699	46 036	43 687
11	A 320-200	73 900	41 345	44	22	20	-	48 251	45 784	43 608
12	Fokker 100	44 680	24 375	28	13	20	33 851	42 875	40 619	38 628
13	ERJ 190LR	50 460	29 500	26	13	20	40 786	*	48 848	46 477
14	ERJ 195	52 449	28 970	31	15	20	36 307	46 090	43 644	41 486
15	SSJ 100-95	46 000	27 500	27	14	20	36 038	45 526	43 154	41 061
Stands 14A - PCN 55/R/A/W/T										
1	B 747-8	443 613	191 053	64	22	55	389 493	*	*	*
2	B 787-8	228 384	136 078	61	32	55	209 286	*	*	*
3	MD-11	282 600	131 000	56	23	55	278 006	*	*	*
Stands 19-21,20A - PCN 52/R/A/W/T										

№	Aircraft type	Weight, kg		ACN for base category, code "A" is appropriate		PCN strength	Weight limitation, kg			
							without limited intensity	with limited intensity		
		(average daily rate for the year)								
		1 Aircraft departure	2 Aircraft departures	10 Aircraft departures						
1	2	3	4	5	6	7	8	9	10	11
1	B 747-400	395 986	176 901	53	19	52	389 542	*	*	*
2	B 747-8	443 613	191 053	64	22	52	371 453	*	*	426 634
3	B 787-8	228 384	136 078	61	32	52	199 737	*	*	*
4	MD-11	282 600	131 000	56	23	52	264 224	*	*	*
5	A 330-200	233 900	117 041	53	26	52	229 572	*	*	*
6	A 330-300	230 900	120 132	53	27	52	226 640	*	*	*
7	A 330-300	233 900	120 132	55	28	52	221 259	*	*	*
* - means that the aircraft can be operated with full weight										

8.1 Overload operation mode

Elements of artificial pavement structures of the aerodrome	Operation with overload						
	At full mass with limitation on the average annual traffic intensity			Mass limitation under traffic intensity constraint (average daily over a year), kg			
	Up to 10 aircraft movements per day	Up to 2 aircraft movements per day	Up to 1 aircraft movement per day	Aircraft type	Up to 1 aircraft movement per day	Up to 2 aircraft movements per day	Up to 10 aircraft movements per day
1	2	3	4	5	6	7	8
RWY, TWY A Apron (Stands 1...5, 2A, 3A), Stand 14A, TWYroute on apron (from Stand 1 to Stand 5) PCN 55/R/A W/T	A 321-100 A 321-200 B 787-8 MD-11 ER	B 747-8F B 777-300ER		B 747-8F B 777-300ER	* *	* *	447 296 346 315

TWY B PCN 35/R/A X/T	A 300-B2 A 320-100 B 737-300 B 737-400 B 737-500 B 737-600 B 737-700 B 757-300 B 777-200	A 310-300 B 767- 200ER B767-300	A 300-600 B4 A 319-100 A 320-200	A 300-600 B4 A 310-300 A 319-100 A 320-200 A 320 Neo A 321-100 A 321-200 A 330-200 A 330-300 A 330-300 B 737-800 B 737 MAX 8 B 737 MAX 9 B 747-200F B 747-300 B 747-400 B 747-400F B 747-8F B 767-200ER B 767-300 B 767-300ER B 777-300 B 777-300ER B 787-8 MD-11ER	* * * * 77 482 76 196 74 636 201 774 214 305 198 996 75 930 75 047 72 054 376 810 376 854 357 326 355 695 339 091 * * 182 861 263 316 260 924 181 294 232 492	159 227 * 75 521 73 538 73 287 72 070 70 531 188 997 200 351 186 780 71 676 71 016 68 155 355 873 356 302 338 435 336 304 321 595 * * 173 075 248 615 247 117 171 712 219 572	151 595 155 250 71 616 69 806 69 585 68 429 66 910 177 723 188 039 176 001 67 923 67 460 64 715 337 399 338 169 321 767 319 194 306 159 172 805 160 970 164 441 235 644 234 935 163 257 208 172
Stands 6...9, 6A, 13A, TWY route on apron (from Stands 6 to Stands 18) PCN 32/R/A X/T	A 300-B2 An-124 B 737- 200/200C/200QC B 737-500 B 737-600 B 757-300 ERJ 195ER IL-76TD	A 320-100 B 737-300 B 777-200	A 310-300 B 737-400 B 737-700 B 767-300	A 300-600 B4 A 310-300 A 319-100 A 320-100 A 320-200 A 320 Neo A 321-100 A 321-200 A 330-200 A 330-300 A 330-300 B 737-300 B 737-400 B 737-700 B 737-800 B 737 MAX 8 B 737 MAX 9 B 747-200F B 747-300 B 747-400 B 747-400F B 747-8F B 767-200ER B 767-300 B 767-300ER B 777-200 B 777-300 B 777-300ER B 787-8 MD-11ER	156 015 * 73 877 * 71 967 71 728 70 537 69 007 184 251 195 168 182 242 * * * 70 096 69 519 66 707 348 096 348 669 331 419 329 101 315 097 178 377 * 169 440 * 243 155 241 989 168 153 214 773	148 106 151 465 69 830 * 68 100 67 892 66 765 65 254 172 569 182 411 171 073 * 63 878 68 752 66 207 65 834 63 142 328 954 329 879 314 147 311 372 299 102 168 407 157 002 160 494 * 229 714 229 366 159 392 202 961	141 128 143 895 66 260 66 239 64 688 64 508 63 436 61 943 162 262 171 154 161 218 62 963 60 492 65 093 62 775 62 583 59 997 312 063 313 299 298 908 295 729 284 988 159 610 149 067 152 600 245 814 217 855 218 228 151 662 192 538

Stands 10...12 PCN 20/R/A X/T	CRJ 900ER		ERJ 190LR	A 320-100 A 320-200 A 320 Neo B 737- 200/200C/ 200QC B 737-300 B 737-400 B 737-500 B 737-600 B 737-700 B 737-800 B 737 MAX 8 B 737 MAX 9 B 757-200 B 757-300 ERJ 190LR ERJ 195ER Fokker 100 SSJ 100-95	109 439 48 699 48 767 48 713 47 320 46 179 44 690 46 121 49 992 48 016 46 761 47 409 45 319 102 361 97 548 * 50 053 42 875 45 526	104 042 46 036 46 350 46 315 44 817 43 631 42 292 43 573 47 374 45 424 44 330 45 106 43 091 97 069 92 814 48 848 47 406 40 619 43 154	99 280 43 687 44 218 44 200 42 609 41 383 40 175 41 325 45 064 43 137 42 185 43 074 41 125 92 400 88 637 46 477 45 070 38 628 41 061
Stands 19...21, 20A PCN 52/R/A W/T	A 321-100 A 321-200 A 330-300 B 737 MAX 9 B 747-400 B 747-400F B 787-8 MD-11 ER	B 747-8F	B 777- 300ER	A 330-200 B 747-8F B 777-300 B 777-300ER	184 251 * 243 155 *	172 569 449 060 229 714 347 707	162 262 426 125 217 855 329 608
* - Indicates that operation of the aircraft at maximum weight is permitted							

9. Taxiing in winter conditions (apron), in cases if some taxiways are not equipped with center line lights, and they may be not visible due to snow.

Taxiing in winter conditions in case of taxiways may be invisible due to packed snow shall be carried out after the «Follow me» car.

10. Removal of disabled aircraft from runways.

According to UAKK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES aerodrome has possibility to remove disabled aircraft less than 60 tone, without damage of landing gear.

UAKK AD 2.21 Noise Abatement Procedures

NIL

UAKK AD 2.22 Flight procedures

1. Flight and ground movement procedures.

Departing aircraft shall fly over fix points on the predetermined heights with IAS limitations, noted on SID and instrument approach charts.

Aircraft takeoff and landing with tailwind is permitted when tailwind speed is not greater than value set by Flight Operational manual of each aircraft type. Final decision of tailwind landing/takeoff shall be made by pilot-in-command.

It is allowed to take-off an aircraft with a course opposite to the runway operating direction in the absence of approaching aircraft in CTR and TMA and in coordination with the flight supervisor.

Takeoff shall be performed from the starting point of RWY where runway physical characteristics complies required actual aircraft takeoff weight and takeoff conditions.

For take-off or landing, the helicopter commander, in coordination with the ATS unit shall use any part of the runway or any other part of the airfield, as provided for by the flight operation instructions at the aerodrome

(aeronautical aerodrome passport).

Rolling takeoff and running landing, IFR takeoff and landing of helicopters (Special visual flight rules at night) are conducted only from (on) the runway.

Envisaged to take-off and land helicopters from/to the runway, as well as from/to the central fuel station stand of the military unit 50185 and on the taxiway A, B, parking stand 20, taxiway 4 in compliance with the established intervals between take-off and approaching aircraft, and distances to obstacles.

Pilot-in-command is responsible for taking-off and landing from/to taxiway A, B, parking stand 20, taxiway 4, central fuel station stand of military unit 50185 and compliance with the established distances to obstacles.

Aircraft ground movement on manoeuvring area shall be carried out by taxiing or towing. Taxiing and towing shall be carried out strictly along TWY centreline.

Taxiing of aircraft shall be carried out by instructions of Tower ATC. Taxiing speed shall be set by pilot-in-command according to the condition of TWY, presence of obstacles, aircraft weight, wind conditions and visibility.

In all cases taxiing speed should not exceed speed set by Flight Operational manual of this type of aircraft.

ATC is responsible for taxi route assignment; pilot-in-command is responsible for taxiing rules compliance; person, assigned for control taxiing on the airfield section, is responsible for safety.

Helicopter taxiing shall be carried out with wind limitations, according to Flight Operational manual, at constant visibility of landmarks located in front.

In the absence of the possibility of taxiing or towing (the unsatisfactory condition of the ground or the design of the helicopter does not allow taxiing), the helicopter is allowed to move through the air in strict compliance with the requirements of the relevant paragraphs of the Flight Procedure and Rules in Civil Aviation of the Republic of Kazakhstan.

Air taxiing of helicopters with a skid landing gear from the stand to the take-off place and back, is carried out according to the marking on the route designated by the air traffic controller of the control point "Tower" in compliance with the established obstruction clearance under the responsibility of the helicopter commander.

2. Low Visibility Procedures.

Low Visibility Procedures (LVP) are effected when RVR is less than 550 m when manoeuvring area or part thereof is not visually monitored from the "Tower" control centre. Low Visibility Procedures are cancelled when RVR is greater than 550 m.

Low Visibility Procedures are initiated by Air traffic Manager, in case of his absence - by Tower ATC.

The following procedure shall be carried out in case of low visibility conditions, when Tower ATC is not able to control aircraft movement on the manoeuvring area:

- Clearance for TWY entering shall be given only after received report of TWY vacation from other aircraft or vehicle.

Control the obstacles on RWY and in ILS critical areas is carried out by air traffic controller according to reports of flight crew or aerodrome service specialist reports. The report on runway vacation in conditions of low visibility is carried out on taxiways only after the vacation of the ILS critical zones indicated by light sign (holding position).

Taxiing into apron after RWY vacation shall be carried out after follow-me car. Taxiing into stands shall be carried out by marshaller's signals.

Taxiing of aircraft out of stands to holding position shall be carried out after follow-me car. Aircraft shall stop at the holding position before the light sign indicating the ILS critical area.

The operation of LVP shall be reported to flight crew by Tower ATC phrase: "LOW VISIBILITY PROCEDURES IN OPERATION".

The controller informs pilots about any changes in the operational status of radio and lighting equipment.

3. VFR procedures within the aerodrome control zone (CTR)

All VFR flights within the control zone (except "Balapan" ATZ) are performed at an altitude of at least 3000 feet, unless otherwise prescribed by the "Tower" ATC.

In the sector from 080 ° to 256 °:

- from 0 to 7 miles, VFR flights are operated at an altitude of not less than 3000 feet;
- from 7 miles to the CTR boundary, VFR flights are operated at an altitude of at least 4,000 feet.

The absolute altitudes are assigned by "Tower" ATC without taking into account man-made obstacles. Flights over man-made obstacles is carried out by flight crew independently.

Flights must not be performed over populated areas within the control zone.

For VFR flights, the aerodrome has a flight circle (left / right) at an altitude of 3000 feet. The air traffic controller of the "Tower" ATC unit is determine and report which flight circle is in use.

Entering the flight circle, crossing the runway alignment is made only with the permission of the air traffic controller of the "Tower" ATC unit.

The aircraft crew preliminarily agrees with the ATS unit the flight area and altitude range during aerial work in the control zone at absolute altitudes.

"Balapan" ATZ is used only for training flights of "Aviation training center" LLC. During training flights in "Balapan" ATZ other aircraft should fly over "Balapan" ATZ.

When entering the control zone (CTR) from uncontrolled airspace, the aircraft crew must obtain an air traffic control clearance 5 minutes before the estimated time of entering the controlled airspace.

Entry / exit of aircraft of category A and helicopters flying in VFR to / from the control zone (CTR) is carried out at the shortest distance through the corresponding point.

If the air situation requires the holding procedure, the air traffic controller of the "Tower" ATC unit gives the instructions to the aircraft crew to follow to one of the holding points.

№	Waypoint name (visual reference)	Geographical coordinates	Radial (mag.) and distance from NAVAID (ARP)	Remarks
1	BOTAKARA (southern outskirts of Botakara)	N500207 E0734441	026° 25.4 nm KRG DVOR/DME (027° 27.0 nm ARP)	Entry/exit
2	MIKE	N495156 E0735740	056° 25.2 nm KRG DVOR/DME (056° 27.0 nm ARP)	Entry/exit
3	LIMA	N494526 E0740100	072° 25.4 nm KRG DVOR/DME (070° 27.0 nm ARP)	Entry/exit
4	BEREKESHI (northern outskirts of Berekeshi)	N491604 E0733821	149° 27.2 nm KRG DVOR/DME (145° 27.0 nm ARP)	Entry/exit
5	KYZYLKOI (NE outskirts of Kyzylkoi, visual reference – M-36 highway)	N491330 E0732458	168° 27.8 nm KRG DVOR/DME (165° 27.0 nm ARP)	Entry/exit
6	KOKSUN (east side of Koksun)	N493052 E0724114	241° 28.7 nm KRG DVOR/DME (241° 27.0 nm ARP)	Entry/exit
7	SHAHTINSK (eastern outskirts of Shahtinsk)	N494211 E0723838	264° 28.5 nm KRG DVOR/DME (266° 27.0 nm ARP)	Entry/exit
8	TEMIRTAU (western outskirts of Temirtau)	N500125 E0725409	309° 27.3 nm KRG DVOR/DME (313° 27.0 nm ARP)	Entry/exit
9	AKKUDUK (northern outskirts of Akkuduk)	N494734 E0734541	059° 16.4 nm KRG DVOR/DME (058° 18.1 nm ARP)	Entry/exit

No	Waypoint name (visual reference)	Geographical coordinates	Radial (mag.) and distance from NAVAID (ARP)	Remarks
10	ALPHA (northern outskirts of Togyzkuduk)	N495345 E0733525	025° 15.1 nm KRG DVOR/DME (028° 16.7 nm ARP)	Holding
11	BRAVO (abeam NDB 5.0 nm)	N493652 E0732600	144° 5.0 nm KRG DVOR/DME (123° 5.1 nm ARP)	Holding
12	DELTA (west side of Zarechnoe)	N494004 E0730220	257° 13.1 nm KRG DVOR/DME (260° 11.6 nm ARP)	Holding

UAKK 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
Nil	Nil	Nil	Nil

2. Ornithological situation in the aerodrome area.

The ornithological situation in the aerodrome area is determined by the seasonal and daily migration of birds. The Karaganda aerodrome is surrounded by agricultural fields.

2.1 Seasonal migration of birds (time)

The period of spring migration - activity from March to late May, the most active peak migration in April, but there may be changes when the climatic conditions change. The danger is posed by rooks, jackdaws, pigeons, kites, cranes, owls, ducks, waders, etc. Bird activity is observed in the morning hours from 00:30 to 03:00 (UTC) and in the evening from 12:00 to 15:00 (UTC).

The period of autumn migration is active from mid-August to the end of October, also depending on the climate and sharp changes in weather conditions.

The danger is posed by rooks, jackdaws, pigeons, kites, cranes, owls, ducks, waders, etc.

The most active flight hours are from 23:00 to 03:00 (UTC), evening movements from 11:00 to 15:00 (UTC).

The intensity of bird migration increases during agricultural work and the maturation of cereals and other crops.

During these times, pilots are advised to turn on landing lights when flying in the aerodrome area, during takeoff, landing approach, and during climb and descent.

Spring and Autumn periods are characterized by movements of migratory birds: rooks flights 300-600 individuals from 01:00 to 03:00 hours (UTC) from west to east and from 12:00 to 15:00 (UTC) from east to west at the altitude of 200-600 FT.

In **summer**, in the morning and evening hours, a flight of flocks of birds of prey from 1 to 5 individuals is observed at a relative altitude of up to 600 FT and rollers at an altitude of 33 FT. All year round, there are flights of pigeons, corvids at relative altitude of up to 200 FT in flocks of 15-25 individuals and more.

2.2 Direction

The main directions of migration in spring are from southwest to northeast, in autumn in the opposite direction. In autumn, in the area of the aerodrome and at the aerodrome, a large number of black crows are accumulated, representing a serious danger for flights from sunrise to sunset.

On the territory of the airside area, the main flights occur from NW to SE and in the opposite direction.

2.3 Altitude

The altitude of flights depends on the season and weather conditions. Different types of birds fly at different

heights.

Approximate heights of flights of various bird species found on the airfield and near the airside area and aerodrome:

- ducks - from 295 to 9842 FT;
- larks and various waders - from 131 to 4593 FT;
- birds of prey - from 328 to 26246 FT;
- seagulls - from 328 to 1640 FT;
- sparrows - from 16 to 49 FT;
- owls - from 16 to 98 FT;

2.4 Intensity of bird migration

Bird migration takes place around the clock.

2.5 Daily migration of birds

2.5.1 Daily migration of birds (time)

From dawn to the onset of evening twilight

2.5.2 Direction

Flights over the terrain and to feeding bases with the intersection of the takeoff and landing course from NW to SE.

2.5.3 Altitude

Flights from 32 to 492 FT. Mass flights of corvids at altitudes of 164-1640 FT.

2.6 Radar control over the flying of birds

Radar control over the flying of birds in the area of the aerodrome is not provided.

2.7 Information transmission

Information about the ornithological situation is transmitted via the ATIS broadcasting channel in English and Russian and, if necessary, through the ATM dispatcher. In case of complication of the ornithological situation in the aerodrome area, it is possible for a short-term inclusion in the ATIS report of additional concretizing information about the peculiarities of the ornithological situation.

UAKK AD 2.24 Charts Related To An Aerodrome

Name	Page
Aerodrome Chart ICAO	UAKK AD 2.24.1-1
Aerodrome Ground Movement and Parking Chart ICAO	UAKK AD 2.24.3-1
Aerodrome Obstacle Chart – ICAO Type A RWY 05/23	UAKK AD 2.24.4-1
Standard Departure Chart Instrument (SID) RWY 05 ICAO	UAKK AD 2.24.7-1-1
Standard Departure Chart Instrument (SID) RWY 23 ICAO	UAKK AD 2.24.7-2-1
Standard Arrival Chart Instrument (STAR) RWY 05 ICAO	UAKK AD 2.24.9-1-1
Standard Arrival Chart Instrument (STAR) RWY 23 ICAO	UAKK AD 2.24.9-2-1
ATC Surveillance Minimum Altitude Chart ICAO	UAKK AD 2.24.10-1
Instrument Approach Chart – ILS/DME RWY 05 ICAO	UAKK AD 2.24.11-1-1
Instrument Approach Chart – ILS/DME RWY 23 ICAO	UAKK AD 2.24.11-2-1
Instrument Approach Chart – LOC/DME RWY 05 ICAO	UAKK AD 2.24.11-3-1
Instrument Approach Chart – LOC/DME RWY 23 ICAO	UAKK AD 2.24.11-4-1
Instrument Approach Chart – VOR/DME - Y RWY 05 ICAO	UAKK AD 2.24.11-5-1
Instrument Approach Chart – VOR/DME - Y RWY 23 ICAO	UAKK AD 2.24.11-6-1
Instrument Approach Chart – VOR/DME - Z RWY 05 ICAO	UAKK AD 2.24.11-7-1
Instrument Approach Chart – VOR/DME - Z RWY 23 ICAO	UAKK AD 2.24.11-8-1
Visual Approach chart – ICAO	UAKK AD 2.24.12-1
VFR Departure/Arrival Chart	UAKK AD 2.24.14-1

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