

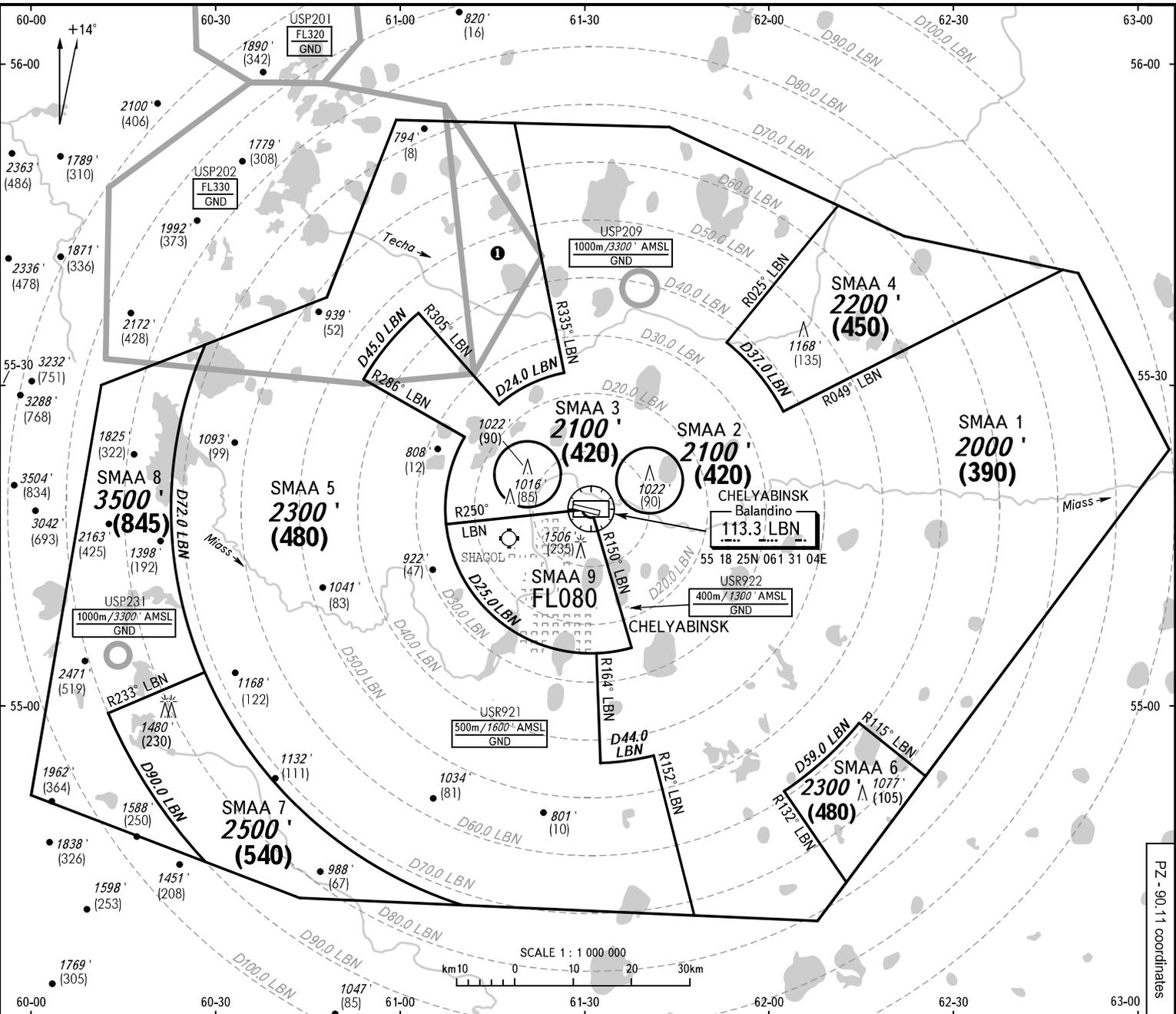
ATC SURVEILLANCE MINIMUM  
ALTITUDE CHART - ICAO

ELEV  
769' / 234m

TRANSITION ALT.: 6000'  
TRANSITION HGT.: (1600)

CHEL YABINSK, RUSSIA  
BALANDINO

PZ - 90.11 coordinates



**WARNING:**

1. Vectoring in sector R150°-250°, D1.5-25km from VORDME LBN shall be carried out at FL0800 or above.
  2. In case of radio communication failure flight crew must reach minimum vectoring altitude (FL), proceed to VORDME LBN. After passing VORDME LBN reach 2000' and execute approach according to the established procedure.
  3. Temperature corrections are applied to altitudes assigned by the ATS unit when necessary.
  4. The chart may only be used for cross-checking of altitudes assigned while the aircraft is under radar control.
- 1 Flights through prohibited area  
USP202 are allowed at FL050-FL330.

START  
APPROACH  
RADAR

125.200  
124.700  
133.200

BEARINGS AND TRACKS ARE MAGNETIC  
ALTITUDES AND ELEVATIONS IN FEET  
HEIGHTS IN METRES  
DISTANCES IN KILOMETRES

All set: -QNH(QFE on req);  
-hPa(mmm on req).

**CHELYABINSK, RUSSIA**  
**BALANDINO**

SURVEILLANCE MINIMUM ALTITUDE AREAS		
IDENT	MNM ALT/HGT (ft/M)	LATERAL LIMITS (PZ-90.11 coordinates)
SMAA 1	2000 ft/ (390) M	555423.58N 0611829.43E - 555401.00N 0614355.00E - 554635.65N 0621133.24E - 553354.37N 0615309.54E - then clockwise by arc of a circle radius of 37 KM centred at 551825.06N 0613103.50E to 552726.22N 0620218.20E - 554018.45N 0624808.52E - 553959.00N 0625039.00E 552321.00N 0630453.00E - 545317.65N 0622438.93E - 545819.34N 0621404.77E - then clockwise by arc of a circle radius of 59 KM centred at 551825.06N 0613103.50E to 545201.24N 0620158.16E - 524328.88N 0621147.56E - 543954.00N 0620708.00E - 544029.07N 0614729.53E - 545524.66N 0614105.35E - then clockwise by arc of a circle radius of 44 KM centred at 551825.06N 0613103.50E to 545443.12N 0613232.48E - 550457.15N 0613154.27E - then anticlockwise by arc of a circle radius of 25 KM centred at 551825.06N 0613103.50E to 550528.16N 0613734.39E - 551738.46N 0613127.07E - then clockwise by arc of a circle radius of 1.5 KM to 551819.90N 0612938.95E - 551656.90N 0610735.17E - then clockwise by arc of a circle radius of 25 KM centred at 551825.06N 0613103.50E to 552506.32N 0611031.46E - 553024.83N 060540.83E - then clockwise by arc of a circle radius of 45 KM centred at 551825.06N 0613103.50E to 553638.35N 0610253.60E - 552808.96N 0611605.45E - then clockwise by arc of a circle radius of 24 KM centred at 551825.06N 0613103.50E to 553106.53N 0612640.17E - 555423.58N 0611829.43E. Except the circles radius of 5.7 KM centred at 552104.05N 0614032.80E and 552138.84N 0612045.51E.
SMAA 2	2100 ft/ (420) M	A circle radius of 5.7 KM centred at 552104.05N 0614032.80E.
SMAA 3	2100 ft/ (420) M	A circle radius of 5.7 KM centred at 552138.84N 0612045.51E.
SMAA 4	2200 ft/ (450) M	554635.65N 0621133.24E - 554341.00N 0622215.00E - 554018.45N 0624808.52E - 552726.22N 0620218.20E - then anticlockwise by arc of a circle radius of 37 KM centred at 551825.06N 0613103.50E to 553354.37N 0615309.54E - 554635.65N 0621133.24E.
SMAA 5	2300 ft/ (480) M	550457.15N 0613154.27E - 545443.12N 0613232.48E - then anticlockwise by arc of a circle radius of 44 KM centred at 551825.06N 0613103.50E to 545524.66N 0614105.35E - 544029.07N 0614729.53E - 544126.50N 0611028.01E - then clockwise by arc of a circle radius of 72 KM centred at 551825.06N 0613103.50E to 553327.76N 0602807.09E - 553801.00N 0604755.00E - 555436.00N 0605900.00E - 555423.58N 0611829.43E - 553106.53N 0612640.17E - then anticlockwise by arc of a circle radius of 24 KM centred at 551825.06N 0613103.50E to 552808.96N 0611605.45E - 553638.35N 0610253.60E - then anticlockwise by arc of a circle radius of 45 KM centred at 551825.06N 0613103.50E to 553024.83N 0605400.83E - 552506.32N 0611031.46E - then anticlockwise by arc of a circle radius of 25 KM centred at 551825.06N 0613103.50E to 550457.15N 0613154.27E.
SMAA 6	2300 ft/ (480) M	545819.34N 0621404.77E - 545317.65N 0622438.93E - 544328.88N 0621147.56E - 545201.24N 0620158.16E - then anticlockwise by arc of a circle radius of 59 KM centred at 551825.06N 0613103.50E to 545819.34N 0621404.77E.
SMAA 7	2500 ft/ (540) M	544126.50N 0611028.01E - then clockwise by arc of a circle radius of 72 KM to 550255.23N 0602851.45E - 545858.41N 0601328.22E - then anticlockwise by arc of a circle radius of 90 KM centred at 551825.06N 0613103.50E to 544515.84N 0602924.74E - 544200.00N 0604430.00E - 544126.50N 0611028.01E.
SMAA 8	3500 ft/ (845) M	553327.76N 0602807.09E - then anticlockwise by arc of a circle radius of 72 KM to 550255.23N 0602851.45E - 545858.41N 0601328.22E - then anticlockwise by arc of a circle radius of 90 KM centred at 551825.06N 0613103.50E to 544515.84N 0602924.74E - 545111.00N 0600123.00E - 552933.00N 0601121.00E - 553327.76N 0602807.09E.
SMAA 9	FL080*	551738.46N 0613127.07E - 550528.16N 0613734.39E - then clockwise by arc of a circle radius of 25 KM centred at 551825.06N 0613103.50E to 551656.90N 0610735.17E - 551819.90N 0612938.95E - then anticlockwise by arc of a circle radius of 1.5 KM to 551738.46N 0613127.07E.

- \* assigned ALT to restrict flights over the city of Chelyabinsk.