EBBR — BRUSSELS / Brussels-National

EBBR AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EBBR — BRUSSELS / Brussels-National

EBBR AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP COORD and site at AD	505405N - 0042904E 247° MAG / 1.8 km from the TWR
2	Direction and distance from (city)	6.5 NM NE from Brussels
3	ELEV / Reference temperature	184 ft / 23°C
4	Geoid undulation	141 ft
5	VAR / Annual change	1°W (2005) / 0.12° decreasing
6	AD Administration, address, TEL, FAX, telex and AFS	Mail: The Brussels Airport Company Brussels Airport B-1930 Zaventem Tel:+32 (0) 2 753 42 00 (office hours only) Tel:+32 (0) 2 753 69 00 (Airport Inspection, H24) Fax:+32 (0) 2 753 69 09 (Airport Inspection) AFS:EBBRYDYX
7	Types of TFC permitted (IFR / VFR)	IFR / VFR
8	RMK	NIL

EBBR AD 2.3 OPERATIONAL HOURS

1	AD Administration	H24
2	Customs and immigration	H24
3	Health and sanitation	H24
4	AIS Briefing Office	H24
5	ATS Reporting Office (ARO)	H24
6	MET Briefing Office	H24
7	ATS	H24
8	Fuelling	H24 (between 2100 and 0500, only with credit cards acceptable by the chosen petroleum company)
9	Handling	H24
10	Security	H24
11	De-icing	H24
12	RMK	See also Local Traffic Regulations (EBBR 2.20, § 1) and Noise Abatement Procedures (EBBR 2.21, § 1)

4

EBBR AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Modern handling facilities Nearest railway siding: Brussels (10 km)
2	Fuel / Oil types	JET A1 / All
3	Fuelling facilities / Capacity	Pits and trucks / No limitations
4	De-icing facilities	By arrangement with handling agent
5	Hangar space for visiting ACFT	NIL
6	Repair facilities for visiting ACFT	All repairs
7	RMK	General aviation handling is compulsory

EBBR AD 2.5 PASSENGER FACILITIES

1	Hotels	at AD and in the city
2	Restaurants	at AD and in the city
3	Transportation	Taxis, buses, railway and car hire
4	Medical facilities	Doctor, recovery rooms and ambulances Hospitals in Brussels (10 km) and in Vilvoorde (5 km)
5	Bank / Post office	at AD
6	Tourist information	at AD
7	RMK	NIL

EBBR AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD CAT for fire fighting	CAT 9
2	Rescue equipment	CAT 9 compliant
3	Capability for removal of disabled ACFT	NIL
4	RMK	NIL

EBBR AD 2.7 SEASONAL AVAILABILITY - CLEARING

←	1	Types of clearing equipment	31 vehicles composed of: sweeper-blowers tractors equipped with sweeper-blower sprayers of de-icing liquid snow blowers stand-sweepers spreaders
•	2	Clearance priorities	 RWYs, appropriate important TWYs and holding bays Important aprons and aircraft stands Remaining part movement area and all roads outside the movement area

3	RMK	Transmission of information by SNOWTAM and METAR.
		Designated authority to co-ordinate information about the current state of progress of snow clearance operations and the conditions of the movement area is the Airport Inspection:
		Tel:++32 (0) 2 753 69 00 Fax:++32 (0) 2 753 69 09
		Braking action measured by SFH - Surface Friction Tester (high-pressure tire)

EBBR AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: CONC
		Strength: apron 1 north: PCN 72/R/A/W/T apron 1 south, 2 north and 2 south: PCN 77/R/A/W/T apron 3 north: PCN 68/R/C/W/T apron 3 south: PCN 110 R/B/W/T apron 9: PCN 117/R/B/W/T apron 40: PCN 68/R/C/W/U apron 53 and 55: PCN 11/R/A/W/U apron 56: PCN 50/R/A/W/U apron 60: PCN 120/R/B/W/T other aprons: PCN 56/R/A/W/U
2	TWY width, surface and strength	Width and strength: see chart <u>AD2 EBBR GMC.02</u> Surface: CONC / ASPH
3	ACL and ELEV	On satellite and parking areas, mean ELEV: 56 m (184 ft)
4	VOR / INS check points	VOR checkpoints: NIL INS checkpoints: see chart AD2 EBBR APDC.01 and AD2 EBBR APDC.02
5	RMK	NIL

EBBR AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of ACFT stand ID signs, TWY guide lines and visual docking/parking guidance system of ACFT stands	ACFT stand ID signs: AVBL TWY guide lines: AVBL
		Parking guidance lines: AVBL at all stands
		Docking guidance system: see <u>EBBR AD 2.20</u>
2	RWY and TWY markings	RWY : Designation, THR, TDZ, centre line and edge lines

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		TWY: Centre line, edge lines and HLDG positions (CAT I and CAT II/III operations) at the TWY/RWY intersections
3	Stop bars	AVBL (see chart AD2 EBBR GMC.01)
4	RMK	RWY 07R: a. Sign "PSN 1" (line-up position 1) on the left beyond the PAPI at 461.4 m from displaced THR 07R b. Sign "PSN 2" (line-up position 2) on the left at 743.7 m from displaced THR 07R, BTN TWY C 6 and C 5 c. Sign "PSN H" (line-up position heavy) on the left at 194 m from displaced THR 07R

EBBR AD 2.10 AERODROME OBSTACLES

- ← No Area 2 or Area 3 obstacle data sets are currently provided for EBBR.
- Details on EBBR aerodrome obstacles can be found on the aerodrome obstacle charts (see EBBR AD 2.24).

Note 1: Pilots shall draw attention to the presence of an obstacle of 86 m AMSL (46 m above THR 07L) in the axis of RWY 07L/25R and at 1 610 m from THR 07L. This obstacle (church lighted on the top by a cross of red lights) protrudes 17 m above the APCH surface of RWY 07L and the TKOF climb surface of RWY 25R.

Note 2: Pilots shall drawn attention to the presence of the new control tower building (105,7 m AMSL) between THR 25R and THR 25L.

EBBR AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	EBBR MET
2	HR of service	H24
3	Office responsible for TAF preparation:	EBBR
	Periods of validity	9 and 24 HR
4	Type of LDG forecast	TREND
	Interval of issuance	30 MIN
5	Briefing / consultation provided	Official in charge, TEL, personal consultation, CCTV, full display
6	Flight documentation / languages used	Charts, abbreviated plain language text / Fr, Ho and En
7	Charts and other information AVBL for briefing or consultation	Surface charts, ALT charts, prognostic ALT charts, prognostic chart of significant weather, TROP and MAX wind chart
8	Supplementary equipment AVBL for providing information	Weather radar, receiver of cloud photographies transmitted by satellite, FAX and self-briefing terminal
9	ATS units provided with information	AIS, TWR, APP and ACC
10	Additional information	- International aviation:
		 Tel:++32 (0) 2 206 28 50* Fax:++32 (0) 2 206 28 49
		- TEL Briefing (VFR flights, gliding, ballooning,):

CONSULTEL Tel:0902 / 88173 *	
* Communications automatically recorded on tape	

EBBR AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

RWY designator	TRUE BRG		Strength (PCN) and	THR COORD	THR ELEV and
		RWY (m)	surface of RWY and SWY	RWY end COORD	highest ELEV of TDZ of precision APCH RWY
				THR geoid undulation	APCH RWY
1	2	3	4	5	6
02	014.43°	2 987 x 50	67/F/A/W/T	505314.39N 0042929.68E	THR 183 ft
			ASPH	505446.54N 0043007.27E	TDZ 184 ft
				141 ft	
20	194.43°	2 987 x 50	67/F/A/W/T	505439.64N 0043004.46E	THR 113 ft
			ASPH	505312.94N 0042929.09E	TDZ 131 ft
				141 ft	
07R	069.89°	9° 3 211 x 45	62/F/A/W/T	505321.89N 0042855.40E	THR 175 ft
			ASPH	505356.19N 0043123.88E	
				141 ft	
25L	249.89°	3 211 x 45	62/F/A/W/T	505356.19N 0043123.88E	THR 159 ft
			ASPH	505320.54N 0042849.53E	TDZ 165 ft
				141 ft	
07L	065.38°	3 638 x 45	80/F/A/W/T	505400.12N 0042734.43E	THR 129 ft
			ASPH	505445.58N 0043011.76E	
				141 ft	
25R	245.38°	3 638 x 45	80/F/A/W/T	505441.55N 0042957.79E	THR 110 ft
			ASPH	505356.64N 0042722.39E	TDZ 112 ft
				141 ft	

Slope of RWY-SWY	SWY dimensions (m)	CWY dimensions (m)	Strip dimensions (m)	OFZ	RMK
7	8	9	10	11	12
-0.78%	NIL	NIL	3 107 x 300	yes	(*)
+0.78%	NIL	NIL	3 107 x 300	yes	(*)
-0.15%	NIL	NIL	3 331 x 300	yes	(*)
+0.15%	NIL	NIL	3 331 x 300	yes	(*)
-0.21%	NIL	NIL	3 758 x 300	yes	(*)
+0.21%	NIL	NIL	3 758 x 300	yes	(*)

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(*) for details on obstacles present in the OFZ, please consult chart AD 2 EBBR ADC.01.

EBBR AD 2.13 DECLARED DISTANCES

RWY designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	RMK
1	2	3	4	5	6
02	2 987	2 987	2 987	2 941	NIL
20	2 987	2 987	2 987	2 767	NIL
07R	2 891	2 891	2 891	3 089	No TKOF before PSN H
25L	3 211	3 211	3 211	3 211	NIL
07L	3 638	3 638	3 638	3 380	NIL
25R	3 638	3 638	3 638	3 338	NIL

In order to reduce the taxi procedure, ATC may, with a visibility of 2 km or more and subject to pilot's acceptance, authorize take-off from one of the intersections below. Pilots unable to accept should advise ATC duly in advance.

To expedite departing traffic when RWY 02 is in use, departure on RWY 07R from position "H", line-up position 1 or line-up position 2 will be assigned by ATC.

RWY	FROM	TORA (m)	RWY	FROM	TORA (m)
02	C5	2 325	25L	P5 / C1	2 210
	E1	2 075		C2	1 690
	E3	2 028		C3	1 237
	E4	1 253		C4	1 237
20	A1	2 825	07L	В9	2 518
	B1	2 675		A6	2 647
	E6	2 164		B8	2 602
	E5	1 558		A5	2 148
	E4	1 558		B7	1 855
				В6	1 389
				A3	1 570
				B5	1 506
07R	C6	2 405	25R	A1	3 428
	C5	2 148		B1	3 267
	C4	1 792		В3	2 770
	Line-up PSN 1	2 624		B5	1 997
	Line-up PSN 2	2 341		A3	1 967
	Line-up PSN H	2 891		В6	1 965
	C3	1 774		B7	1 515
				A5	1 407

Note: Intersection TORA are measured from the point of contact of taxiway centre line marking and runway centre line.

EBBR AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY 02						
APCH LGT	Type:	PALS CAT II / III		VASIS	Туре:	PAPI (left / 3°)
SYSTEM	Length:	900 m (*)			MEHT:	49 ft (15 m)
	Intensity:	LIH				
RWY THR LGT	Colour:	green		TDZ LGT	900 m	
	Wing bars:	NIL				
RWY END LGT	Colour:	red		SWY LGT	NIL	
	Wing bars:	NIL				
RWY CENTRE	Length:	2 987 m	white:	from 0 to 2 0	87 m	
LINE LGT	Spacing:	15 m	red / white	e: from 2 087 to	2 687 m	
	Intensity:	LIH	red:	from 2 687 to	2 987 m	
RWY EDGE LGT	Length:	2 987 m	red:	from 0 to 45	m	
	Spacing:	30 m	white:	from 45 to 2	987 m	
	Intensity:	LIH				
REMARK	(*) Barrette a	it 570 m omitted di	ue to railwa	у		

RWY 20							
APCH LGT	Type:	PALS CAT I		VAS	SIS	Туре:	PAPI (left / 3°)
SYSTEM	Length:	630 m				МЕНТ:	56 ft (17 m)
	Intensity:	LIH					
RWY THR LGT	Colour:	green		TDZ	Z LGT	NIL	
	Wing bars:	NIL					
RWY END LGT	Colour:	red		SW	Y LGT	NIL	
	Wing bars:	NIL					
RWY CENTRE	Length:	2 987 m	white:		from 0 to 2 08	7 m	
LINE LGT	Spacing:	15 m	red / white	e <i>:</i>	from 2 087 to	2 687 m	
	Intensity:	LIH	red:		from 2 687 to	2 987 m	
RWY EDGE LGT	Length:	2 987 m	red:		from 0 to 220	m	
	Spacing:	30 m	white:		from 220 to 2	987 m	
	Intensity:	LIH					
REMARK	NIL						

RWY 07R						
APCH LGT SYSTEM	Туре:	NIL		VASIS	Type: MEHT:	PAPI (left / 3°) 66 ft (20 m)
RWY THR LGT	Colour:	green NIL		TDZ LGT	NIL	
DWV FND LCT	Wing bars:			CMAYLOT	NIII	
RWY END LGT	Colour:	red		SWY LGT	NIL	
	Wing bars:	NIL				
RWY CENTRE	Length:	3 211 m	white:	from 0 to 2	311 m	
LINE LGT	Spacing:	15 m	red / white	e: from 2 311	to 2 911 m	
	Intensity:	LIH	red:	from 2 911	to 3 211 m	
RWY EDGE LGT	Length:	3 211 m	red:	from 0 to 1	25 m	
	Spacing:	30 m	white:	from 125 to	3 211 m	
	Intensity:	LIH				
REMARK	NIL					

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RWY 25L						
APCH LGT	Type:	PALS CAT II	/ III	VASIS	Туре:	PAPI (left / 3°)
SYSTEM	Length:	900 m			MEHT:	63 ft (19 m)
	Intensity:	LIH				
RWY THR LGT	Colour:	green		TDZ LGT	900 m	
	Wing bars:	NIL				
RWY END LGT	Colour:	red		SWY LGT	NIL	
	Wing bars:	NIL				
RWY CENTRE	Length:	3 211 m	white:	from 0 to 2	311 m	
LINE LGT	Spacing:	15 m	red / whit	te: from 2 311	to 2 911 m	
	Intensity:	LIH	red:	from 2 911	to 3 211 m	
RWY EDGE LGT	Length:	3 211 m	red:	NIL		
	Spacing:	30 m	white:	from 0 to 3	211 m	
	Intensity:	LIH				
REMARK	NIL					

RWY 07L						
APCH LGT	Туре:	NIL		VASIS	Туре:	PAPI (left / 3°)
SYSTEM					MEHT:	66 ft (20 m)
RWY THR LGT	Colour:	green		TDZ LGT	NIL	
	Wing bars:	NIL				
RWY END LGT	Colour:	red		SWY LGT	NIL	
	Wing bars:	NIL				
RWY CENTRE	Length:	3 338 m	white:	from 0 to 2	738 m	
LINE LGT	Spacing:	15 m	red / white	e: from 2 738	to 3 338 m	
	Intensity:	LIH	red:	from 3 338	to 3 638 m	
RWY EDGE LGT	Length:	3 638 m	red:	from 0 to 2	58 m	
	Spacing:	30 m	white:	from 258 to	o 3 638 m	
	Intensity:	LIH				
REMARK	NIL					

RWY 25R						
APCH LGT	Туре:	PALS CAT II / III		VASIS	Type:	PAPI (right / 3°)
SYSTEM	Length:	600 m			MEHT:	61 ft (19 m)
	Intensity:	LIH				
RWY THR LGT	Colour:	green		TDZ LGT	900 m	
	Wing bars:	NIL				
RWY END LGT	Colour:	red		SWY LGT	NIL	
	Wing bars:	NIL				
RWY CENTRE	Length:	3 608 m	white:	from 30 to 2	738 m	
LINE LGT	Spacing:	15 m	red / white	e: from 2 738 to	3 338 m	
	Intensity:	LIH	red:	from 3 338 to	3 638 m	
RWY EDGE LGT	Length:	3 638 m	red:	from 0 to 300	m	
	Spacing:	30 m	white:	from 300 to 3	638 m	
	Intensity:	LIH				
REMARK	NIL					

EBBR AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN / IBN location, characteristics and HR of operation	NIL
2	LDI location and LGT	NIL
	Wind direction indicator and LGT	At THR 07L (lighted) At 198 m from THR 07R (lighted) At 378 m from THR 25L (lighted) At 430 m from THR 20 and 209 m from THR 25R (lighted) At 472 m from THR 02 and 940 m from THR 07R (lighted)
3	TWY edge and centre line lighting	see chart AD2 EBBR GMC.02
4	Secondary power supply Switch-over time	AVBL 0 SEC
5	RMK	NIL

EBBR AD 2.16 HELICOPTER LANDING AREA

NIL.

EBBR AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	Brussels CTR 504434N 0043404E - an arc of circle, 10 NM radius, centred on 505405N 0042904E and traced clockwise to 505203N 0044435E - 504434N 0043404E.
2	Vertical limits	1 500 ft AMSL
3	Airspace classification	C (1)
4	ATS unit call sign Language(s)	Brussels Tower En
5	Transition altitude	4 500 ft AMSL
6	RMK	(1) Partially airspace class G during EBGB operational hours between GND and 1 000 ft AMSL: 510401N 0042700E - 505800N 0042800E - 505545N 0042452E - 505800N 0041428E - an arc of circle, 10 NM radius, centred on 505405N 0042904E and traced clockwise to 510401N 0042700E (see chart AD2 EBBR VAC.01 and AD 2 PVT-EBGB).

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EBBR AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	FREQ	HRs of operation	RMK
1	2	3	4	5
APP / TAR	Brussels ARR	118.250 MHz (2) 120.100 MHz (3) 389.375 MHz 362.300 MHz 121.500 MHz (1) 243.000 MHz (1)	H24	(1) EMERG FREQ (2) For ARR TFC via S, N and W except for TFC BLW FL 65 requesting to enter Brussels TMA. (See Brussels DEP.) (3) For ARR TFC via E on ATC instruction only
	Brussels DEP	126.625 MHz	H24	NIL
	Brussels Final	129.725 MHz (2) 127.575 MHz (3) 121.500 MHz (1)	H24	(1) EMERG FREQ (2) Final APP RWY 25R on ATC instruction only (3) Final APP RWY 25L on ATC instruction only
TWR	Brussels TWR	118.600 MHz 120.775 MHz 388.525 MHz 257.800 MHz 121.500 MHz (1) 127.150 MHz (2)	H24	(1) EMERG FREQ (2) spare FREQ
	Brussels GND	121.875 MHz 118.050 MHz 121.700 MHz (1)	H24	GND movement control (1) spare FREQ
CLR	Brussels Delivery	121.950 MHz	H24	
SRE	Brussels Radar	120.100 MHz (1)	H24	(1) SRA on ATC instruction only
ATIS	Brussels ARR	110.600 MHz (1) 112.050 MHz (2) 114.600 MHz (3) 117.550 MHz (4) 114.900 MHz (5) 132.475 MHz	H24	see EBBR AD2.23, Additional information (1) BUN FREQ (2) FLO FREQ (3) BUB FREQ (4) HUL FREQ (5) AFI FREQ D-ATIS AVBL (see GEN 3.4, § 3.3.2)
	Brussels DEP	121.750 MHz	H24	see EBBR AD2.23, Additional information
VDF	Brussels Homer	120.100 MHz 118.250 MHz 118.600 MHz 121.500 MHz (1)	H24	(1) EMERG FREQ
SAR	Brussels Rescue	282.800 MHz 123.100 MHz	НО	OPR: Belgian Air Component Combined Scene of SAR (monitored only when SAR operation in progress).
OPS	Melsbroek Operation	336.525 MHz	H24	OPR: Belgian Air Component Contact mandatory for all MIL ACFT from/to EBMB 15 MIN prior ETA/ETD to state POB

EBBR AD 2.19 RADIO NAVIGATION AND LANDING AIDS

	of aid VAR	ID	FREQ	Hours of operation	Position of transmitting antenna	DME antenna elevation	RMK
•	1	2	3	4	5	6	7
	R/DME (2005)	BUB	114.600 MHz CH 93X	H24	0043217.1E THR 25		070° GEO / 0.60 NM from THR 25L
L .	<u> </u>	OD		1104	E05542 0N		Coverage: 100 NM (FL 500)
'	<u>L</u>	ОВ	293 kHz	H24	505513.0N 0043658.2E		070° GEO / 3.76 NM from THR 25L Coverage: 25 NM Collocated with OM ILS 25L
I	L	OP	402 kHz	H24	505619.4N 0043533.6E		065° GEO / 3.91 NM from THR 25R Coverage: 25 NM
							Collocated with OM ILS 25R
	L	OZ	314 kHz	H24	504936.2N 0042801.3E		194° GEO / 3.77 NM from THR 02 Coverage: 20 NM Collocated with OM ILS 02
ILS 02	(CAT I)				I.	
	LLZ	IBX	109.900 MHz	H24	505455.9N 0043011.1E		014° GEO / 1.76 NM from THR 02 No back beam AVBL LLZ only reliable within 35° either side of course line
	GP		333.800 MHz	H24	505323.9N 0042940.2E		Slope 3° RDH 52 ft
	DME	IBX	CH 36X	H24	505324.0N 0042939.9E	194 ft	Collocated with GP 0 at 340 m from THR 02
	OM	dash / dash	75 MHz	H24	504936.7N 0042801.2E		3.75 NM from THR 02 or use IBX DME fix
	MM	dot / dash	75 MHz	H24	505239.9N 0042915.4E		0.59 NM from THR 02 or use IBX DME fix
ILS 20	(CAT I						
	LLZ	IBM	111.150 MHz	H24	505306.1N 0042926.3E		194° GEO / 1.62 NM from THR 20 No back beam AVBL LLZ only reliable within 35° either side of course line
	GP		331.550 MHz	0043006.8E RD		Slope 3° RDH 54 ft Coverage restricted to 6° at left-hand site antenna	
	DME	IBM	CH 48Y	H24	505429.8N 0043006.8E	134 ft	Collocated with GP 0 at 315 m from THR 20
ILS 25	L (CAT	III)					
	LLZ	IBL	110.350 MHz	H24	505318.7N 0042841.5E		250° GEO / 1.83 NM from THR 25L No back beam AVBL LLZ only reliable within 35° either side of course line
	GP		334.850 MHz	H24	505349.0N 0043110.7E		Slope 3° RDH 59 ft
	DME	IBL	CH 40Y	H24	505349.2N 0043110.7E	164 ft	Collocated with GP 0 at 316 m from THR 25L
	ОМ	dash / dash	75 MHz	H24	505512.9N 0043659.1E		3.75 NM from THR 25L or use IBL DME fix

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	MM	dot / dash	75 MHz	H24	505409.1N 0043219.7E		0.60 NM from THR 25L or use IBL DME fix
ILS 25	R (CAT	· III)					
	LLZ	IBR	108.900 MHz	H24	505348.9N 0042655.5E		245° GEO / 2.12 NM from THR 25R No back beam AVBL LLZ only reliable within 35° either side of course line
	GP		329.300 MHz	H24	505441.1N 0042940.9E		Slope 3° RDH 54 ft
	DME	IBR	CH 26X	H24	505441.0N 0042941.0E	127 ft	Collocated with GP 0 at 307 m from THR 25R
	ОМ	dash / dash	75 MHz	H24	505619.3N 0043532.9E		3.89 NM from THR 25R or use IBR DME fix
	MM	dot / dash	75 MHz	H24	505456.1N 0043052.6E		0.63 NM from THR 25R or use IBR DME fix

EBBR AD 2.20 LOCAL TRAFFIC REGULATIONS

1 GENERAL

1.1 AIRPORT COORDINATION

EBBR is a coordinated airport. Unless exempted, and irrespective of noise abatement procedures (<u>EBBR 2.21, § 1</u>), ATFM slot, or traffic rights, take-off or landing of an IFR flight without an appropriate allocated slot is prohibited and punishable. No slots will be allocated for take-off during following periods:

- SAT, 0000 to SAT, 0500
- SAT, 2300 to SUN, 0500
- SUN, 2300 to MON, 0500

1.1.1 COORDINATION PROCEDURE

For every take-off and landing of an IFR flight, a slot shall be requested and obtained from the coordinator before the filing of the flight plan:

Mail:

Brussels Slot Coordination VZW Mr Didier Hocq Brussels Airport PB119 B-1930 Zaventem 4

Tel:+32 (0) 2 753 57 91 to 94 Fax:+32 (0) 2 753 57 90

Email: BRUACXH@brucoord.org or didier.hocq@brucoord.org

SITA:BRUACXH

URL: http://www.brucoord.org

Operational hours: 0700-1600 (MON to FRI, HOL excl)

Slot applications shall normally be submitted via SITA or e-mail, whereby the procedures and formats of the *IATA Standard Schedule Information Manual* (SSIM, chapter 6), must be used. In exceptional cases, applications may be submitted by fax or telephone. If it is not possible to adhere to SSIM, an adjusted SSIM format or a specially developed form should be used. In any case, the application should at least include following data:

- Date of operation
- · Aircraft identification (item 7)
- Type of aircraft (item 9)
- Aerodrome of departure (item 13)
- · Aerodrome of destination (item 16)
- Take-off time (STD) and/or scheduled on-block time (STA)

Applications should be made as early as possible. In case of short-term applications or alterations to flights, lower priority handling must be expected as against flights with earlier allocated slots for the same time of arrival or departure.

The arrival and departure times at coordinated airports included in the announcements and/or applications, must conform to the flight plan. For fully coordinated airports, the arrival and departure times may only be published by the air carrier and/or operator after allocation of the slots by the airport coordinator.

Permission for entry and exit granted by the Belgian CAA does not replace the obligation to report or submit an application to the airport coordinator. The same applies to flight schedules for scheduled air services approved by the Belgian CAA.

Any unused slot shall be returned to the airport coordinator in due time.

1.1.2 SHORT NOTICE REQUESTS

The short notice procedure is applicable to:

- new movements or existing movements with changed times, when the request is made for the same working day or the next day prior to 1000.
- movements during weekends and HOL, when the request is made the same weekend or HOL the operation is taking place.

Such requests shall be submitted with at least 2 HR prior notice to:

Email:BRUACXH@brucoord.org

Fax:+32 (0) 2 753 57 90 (for applications from MON to FRI between 0700 and 1600)

Fax:+32 (0) 2 753 67 41 (for applications outside these hours and on HOL)

1.1.3 EXEMPTIONS

Following flights are exempted from coordination, but should be reported to the airport coordinator as far in advance as possible:

- Flights carrying members of the Belgian Royal Family, the Belgian governments or foreign royal families, foreign heads
 of state or leaders of governments, the President or commissioners of the European Commission when they are on official
 mission
- · Military missions

Following flights are exempted from coordination, but should be reported to the airport coordinator as soon as possible after the operation:

- · ILS calibration flights when urgently needed for operational reasons
- · Missions in case of disaster or medical urgency
- · Police emergency flights
- SAR flights
- · Landing (and subsequent departure) in case of operational diversion

1.2 USE OF VHF RADIO BY VEHICLES

Vehicles on the manoeuvring area use VHF radio for communication with Brussels TWR. Vehicles are thus on the same frequency as aircraft on the active runway, enhancing pilot and driver awareness (see also chart <u>AD 2.EBBR-MISC.05</u>).

1.3 GROUND SURVEILLANCE - USE OF MODE S TRANSPONDERS

EBBR is equipped with an advanced ground surveillance system using Mode S. Operators intending to use the airport should ensure that Mode S transponders are able to operate when their aircraft are on the ground.

Pilots shall select XPDR or the equivalent according to specific installation, AUTO if available, not OFF or STBY, and the assigned Mode A code:

- · From the request for push back or taxi, whichever is earlier
- After landing, continuously until the aircraft is fully parked on stand. When parked, Mode A code 2000 shall be set before selecting OFF or STBY.

Whenever possible, the aircraft identification (i.e. call sign used in flight) shall be entered as from the request for push back or taxi, whichever is earlier (through the FMS or the transponder control panel). Pilots shall use the ICAO format for aircraft identification, as entered in item 7 of the flight plan form (e.g. "DAT123").

To ensure that the performance of systems based on SSR frequencies (incl. airborne ACAS units and SSR radars) is not compromised, ACAS shall not be selected before receiving clearance to line up. It should be deselected after vacating the runway.

Aircraft taxiing without flight plan, shall select Mode A code 2000.

1.4 BIRD STRIKES

Pilots are requested to report bird strikes to:

Airport Inspection

Tel:+32 (0) 2 753 69 00 Fax:+32 (0) 2 753 69 09

Email: inspect@brusselsairport.be

Belgian CAA

Tel:+32 (0) 2 724 02 53 Fax:+32 (0) 2 724 02 39

Email: yvan.tesseur@mobilit.fgov.be

2 TAXI REGULATIONS

2.1 GENERAL

Pilots are advised to consult chart AD 2.EBBR-MISC.06, depicting the hot spots on the manoeuvring area.

Between 2200 and 0459, taxi restrictions apply (see EBBR AD 2.21, § 2.1).

2.2 USE OF STOPBARS

Stopbars at entry points of active RWY are operated permanently. Due to operational requirements and practices, the stopbar at RWY entry point P9 will remain off when configuration RWY 02/07R is used.

Aircraft and vehicles shall never cross a lit stopbar.

When a lit stopbar cannot be cycled, the RWY entry point will be taken out of service and aircraft and vehicles will be rerouted. If rerouting is not possible, ATC will clear the aircraft or vehicle to cross a lit stopbar, stating the reason why the stopbar remains lit in each individual clearance.

When stopbars for all RWY entry points of one or more RWY cannot be lit, this shall be announced via RTF and ATIS, as well as via NOTAM if the outage is estimated to occur for a period of at least two hours.

Pilots are reminded that when stopbars are not lit, this does not constitute an authorisation of any kind to enter a RWY, irrespective if this RWY is active or not. An explicit clearance or instruction to enter or cross any RWY is required.

2.3 STANDARD TAXI ROUTES

2.3.1 GENERAL

Aircraft requiring full length for departure shall advise GND at the latest when requesting taxi clearance.

Arriving aircraft shall remain on TWR frequency until instructed to contact GND.

Ground operations are controlled by two sectors: GND North and GND South (see chart <u>AD 2.EBBR-MISC.05</u>). Transfer of control and communication point between GND N and GND S is TWY INN 8 or OUT 8.

Aircraft will be transferred to the appropriate TWR frequency to enter or cross an active runway. An explicit clearance to cross or enter **any** runway shall be issued by ATC. If no such clearance is received, pilots shall obtain it from ATC before crossing the relevant holding position marking.

2.3.2 RUNWAY CONFIGURATION 25L/R

Departures originating from sector GND N will expect to depart from B1. Departures originating from sector GND S will expect to depart from W41 or W42.

Clearance to cross RWY 02/20 at E4-F4, E5-F4 or E6-F5 may be given by GND. Aircraft arriving on RWY 25L and proceeding via E1 or E3 will receive clearance to cross RWY 02/20 from TWR.

2.3.3 RUNWAY CONFIGURATION 02-07L/R

Departing traffic that requires crossing RWY 07R will be transferred to TWR FREQ 120.775 for crossing clearance.

Traffic departing from RWY 07R will receive line-up clearance on GND S FREQ 121.875.

Departing traffic will receive take-off clearance on TWR FREQ 120.775.

Aircraft vacating RWY 02 via E1, E3 or E4 may expect instructions to contact GND S on FREQ 121.875. Aircraft vacating RWY 02 via E5, E6, B1 or A1 may expect instructions to contact GND N on FREQ 118.050.

2.3.4 LVP

See EBBR AD 2.22, § 4.1.2.

3 APRON REGULATIONS

3.1 DOCKING GUIDANCE

When arriving at parking positions on remote stands or on stands where no guidance system is installed, pilots shall contact GND, obtain marshaller guidance and to await the marshaller on the taxiway centre line.

A docking guidance system is available at parking positions 140 to 172, 201 to 240, 350 to 354 and 680 to 699. Guidance to these positions by marshallers may still be requested from GND.

When the pilot receives from the guidance system a wrong type of aircraft, a wrong flight number, an ERR-message, an ESTOP emergency stop message or if the display becomes unreadable, **he shall stop immediately**, contact GND and ask for a marshaller.

System messages on parking positions 140 to 172, 350 to 354 and 680 to 699					
"Flight number" / "Aircraft type" flashing	Gate is ready for docking. Aircraft is not yet detected				
"Aircraft type" steadily	Aircraft has been detected. AC symbol appears and system guides the pilot				
"Distance"	Distance to stop position in metres. Approach slowly				
Arrow <	Correction to the left required				
Arrow >	Correction to the right required				
"STOP"	Stop now, the docking position has been reached				
"OK"	Docking successful				
"STOP TOO FAR"	Aircraft has gone past the stop position				
"ESTOP"	Emergency stop. Stop aircraft immediately and await marshaller instructions				
"BRIN" / "STOP"	Bridge is not in good position. Stop aircraft and await marshaller instructions (not applicable at stands 680 to 699)				

System messages on parking positions 201 to 240				
"TEST" / "STOP"	System starts and runs a test			
"WAIT" / "STOP"	System awaits order to start			
"BRIN" / "STOP"	Bridge is not in good position. Stop aircraft and await marshaller instructions			
"STBY" / "STOP"	Emergency stop. Stop aircraft immediately and await marshaller instructions			
"TOO" followed by "FAR"	Aircraft has gone 1.5 m past the stop position			
"SLOW"	Aircraft speed exceeds 3 m/SEC at 22 m from the stop position			
"Flight number"	Flight number is displayed until the aircraft is at 30 m from the stop position			
"Aircraft type"	Aircraft type is displayed from 21 m from the stop position onwards			
"STOP" followed by "OK"	Docking successful			

Note: Two simultaneous messages are always shown in an alternate way.

3.2 PUSH-BACK

Unless prior permission has been obtained from the Airport Inspection, push-back is compulsory at nose-in stands. Push-back shall be executed immediately after approval has been received from GND, taking into account the traffic information and/or restrictions contained in the approval message.

4 RUNWAY REGULATIONS

4.1 SELECTION OF RUNWAY-IN-USE

The direction in which aircraft take off and land is determined by the speed and direction of the surface wind and by the preferential runway system.

The term "runway-in-use" is used to indicate the runway that - at a particular time - is considered by ATC to be the most suitable for use by the types of aircraft expected to land or take off. Normally, an aircraft will take off and land into the wind, unless safety, runway configuration or traffic conditions determine that a different direction is preferable. However, in selecting the runway-in-use, ATC shall also take into consideration other relevant factors such as the aerodrome traffic circuits, the length of the runway, the approach and landing aids available, meteorological conditions, aircraft performance and noise abatement.

Accepting a runway is a pilot's decision. If the pilot-in-command considers the runway-in-use not usable for reasons of safety or performance, he shall request permission to use another runway. ATC will accept such request, provided that traffic and air safety conditions permit.

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4.2 PREFERENTIAL RUNWAY SYSTEM

4.2.1 RUNWAY CONFIGURATION SCHEME

		0500 to 1459	1500 to 2159	2200 to 0459
MON 0500	DEP	25R		25R / 20 ⁽¹⁾
till TUE 0459	ARR	25L /	/ 25R	25R / 25L ⁽²⁾
TUE 0500	DEP	25	5R	25R / 20 ⁽¹⁾
till WED 0459	ARR	25L /	/ 25R	25R / 25L ⁽²⁾
WED 0500	DEP	25	5R	25R / 20 ⁽¹⁾
till THU 0459	ARR	25L /	/ 25R	25R / 25L ⁽²⁾
THU 0500	DEP	25	5R	25R / 20 ⁽¹⁾
till FRI 0459	ARR	25L /	/ 25R	25R / 25L ⁽²⁾
FRI 0500	DEP	25	5R	25R ⁽³⁾
till SAT 0459	ARR	25L /	/ 25R	25R
SAT 0500	DEP	25R	25R / 20 ⁽¹⁾	25L ⁽⁴⁾
till SUN 0459	ARR	25L / 25R	25R / 25L ⁽²⁾	25L
SUN 0500 till MON 0459	DEP	25R / 20 ⁽¹⁾	25R	20 ⁽⁴⁾
	ARR	25R / 25L ⁽²⁾	25L / 25R	20

⁽¹⁾ RWY 25R only for traffic via ELSIK, NIK, HELEN, DENUT, KOK and CIV / RWY 20 only for traffic via LNO, SPI, SOPOK, PITES and ROUSY / Aircraft with MTOW > 200 t shall use RWY 25R regardless the destination.

Times of runway changeover are subject to flexibility in order to ensure transition in safe conditions. ATC will operate the changeover as close as possible from the indicated time, taking into account the traffic conditions.

4.2.2 EXCEPTIONS

The preferential runway system is not the determining factor in runway selection under the following circumstances:

- a. When the runway is dry or wet and the crosswind component exceeds 15 kt (gusts included).
- b. When the runway is dry or wet and the tailwind component exceeds 7 kt (gusts included), including a buffer value of 2 kt.
- c. When the runways are contaminated or when braking action is less than good.
- d. When alternative runways are successively requested by pilots for safety reasons.
- e. When pilots report excessive wind at higher altitudes
- f. When wind shear has been reported or forecast, or when thunderstorms are expected to affect arriving or departing traffic.

When the wind components exceed the indicated values, a runway more into wind will be assigned. However, RWY 07L/R will not be used for landing, except when no other suitable runway is available.

In headwind configurations, the crosswind component is not a limiting factor when take-off is conducted on pilot's responsibility and at ATC discretion.

4.2.3 DEFINITIONS

Following definitions (based upon JAR-OPS terminology) apply:

- A dry runway is one that is neither wet nor contaminated, and includes those paved runways that have been specially
 prepared with grooves or porous pavement and are maintained to retain "effectively dry" braking action even when moisture
 is present.
- A **wet** runway has a shiny appearance due to a thin layer of water. When this layer is less than 3 mm in depth, there is no substantial risk of hydroplaning.
- A runway is considered contaminated when more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by:
 - * surface water more than 3 mm deep, or by slush or loose snow, equivalent to more than 3 mm of water
 - * snow that has been compressed into a solid mass that resists further compression and will hold together or break into lumps if picked up (also referred to as "compacted snow"), or
 - ice, including wet ice.

⁽²⁾ Arrival on RWY 25L at ATC discretion only.

⁽³⁾ No airport slot will be allocated for take-off between 0000 and 0500 (EBBR 2.20, § 1).

⁽⁴⁾ No airport slot will be allocated for take-off between 2300 and 0500 (EBBR 2.20, § 1).

- A runway is considered **damp** when the surface is not dry, but when the moisture on it does not give it a shiny appearance.
- A runway is considered slippery when poor braking action (rain, freezing rain, very light ice or packed snow) increases
 the accelerate-stop distance.
- Braking action "good" is a comparative value meaning that aircraft should not experience directional control or braking
 difficulties and that stopping is available within the scheduled distance, but that conditions are not as good as when landing
 on a clear, dry runway.

4.3 RUNWAY OCCUPATION

In order to avoid go-arounds, aircraft should vacate the runway quickly, without prejudice to safety. Pilots should take into consideration that it might be more efficient to use an exit situated farther away, than to try to vacate too quickly, miss the exit and then having to taxi slowly to the next. The aim should be to achieve a normal touchdown with progressive smooth deceleration to vacate, at a safe speed, at the nominated exit point.

The table below indicates the distances to exit. The exits are grouped in left or right turns and by increasing distance.

RWY	exit	distance to exit (m)	RWY	exit	distance to exit (m)
25L	C1/P5	850	07L	A5	1 149
	C2	1 232		A3	1 731
	C3/C4	1 792		B7	1 241
	C5	2 148		B6	1 702
	C6	2 405		B5	1 739
25R	A3	1 270		В3	2 512
	A5	1 848		B1	3 009
	A6	2 347	02	E3	802
	B6	1 089		E4/E5	1 512
	B5	1 206		E6	2 118
	B7	1 555		B1	2 629
	B9	2 218	20	E4	1 033
	B8	2 302		E3	1 808
07R	C3/C4	1 115		E1	1 855
	C2	1 568		C5	2 105
	C1/P5	2 088			

5 SPECIFIC TRAFFIC REGULATIONS

5.1 AIRCRAFT WITHOUT RADIO

Aircraft without radio are prohibited.

5.2 GLIDER FLIGHTS

Glider flights are prohibited.

5.3 ULM FLIGHTS

ULM flights are prohibited.

5.4 BALLOON FLIGHTS

Balloon flights are prohibited.

5.5 PARACHUTING

Parachuting is prohibited.

5.6 ACROBATIC FLIGHTS

Acrobatic flights are prohibited.

5.7 TRAINING AND TEST FLIGHTS

Provided traffic conditions permit, training and test flights may be performed using RWY 25L/R, outside following periods:

. 2200-0459

• MON to FRI: 0600-1000 and 1600-1900

SAT: 0700-1000 SUN: 1600-2000 Local VFR is not allowed from SS to SR.

EBBR AD 2.21 NOISE ABATEMENT PROCEDURES

1 GENERAL

1.1 NOISE RESTRICTIONS

Movements of jet aircraft with MTOW ≥ 34 t or with a capacity of more than 19 seats (crew-only seats excl.) are restricted:

- take-off or landing with QC > 8 is forbidden between 2200 and 0459
- take-off or landing with QC > 12 is forbidden between 0500 and 0559
- take-off with QC > 48 is forbidden between 0600 and 1959
- landing with QC > 24 is forbidden between 0600 and 1959
- take-off with QC > 24 is forbidden between 2000 and 2159
- landing with QC > 12 is forbidden between 2000 and 2159.

Restrictions between 0600 and 2159 do not apply to aircraft that operated at EBBR between 25 OCT 2008 and 24 OCT 2009.

Exemptions may be granted for:

- take-off between 2000 and 2159 with QC ≤ 26 (with a maximum of 3% of the number of take-offs per year for this time period)
- take-off between 2200 en 0459 with QC ≤ 12 (with a maximum of 200 take-offs per year and only for aircraft that operated at EBBR between 25 OCT 2008 and 24 OCT 2009)
- landing between 2200 and 0459 with QC ≤ 12 (with a maximum of 500 exemptions in 2010, 430 in 2011, 360 in 2012 and 300 per year afterwards).

Exemptions shall be requested from the CAA in advance via FAX (+32 (0) 2 724 02 01)

The QC is calculated using the formula QC = $10^{[(G-85)/10]}$, whereby "G" equals:

- · for take-off: half the sum of the certified fly-over and sideline noise levels in EPNdB of the aircraft at its MTOW
- for landing: the certified approach noise level in EPNdB of the aircraft at its maximum landing weight, minus 9 EPNdB

Take-off or landing of marginally compliant aircraft is forbidden between 2200 and 0459.

Following flights are exempted from the noise guota system:

- Flights carrying members of the Belgian Royal Family, the Federal Government, regional or community governments or foreign royal families, foreign heads of state or government leaders, the President or members of the European Commission on official mission
- · Missions in case of disaster or medical urgency
- Military missions
- Take-off or landing performed in exceptional conditions (flights on which an immediate threat exists to the health of people or animals, diverted flights, etc.)

In case of circumstances beyond the operator's control, a non-compliant flight may be exceptionally allowed, provided that proper justification is sent to the Director-General of the CAA within two working days after the flight.

For marginally compliant aircraft, an authorization of temporary use may be delivered by the Minister of Transport or his representative, if the aircraft is operated exceptionally or in non-commercial flights for modifications, repairs or maintenance.

1.2 REVERSE THRUST

Except for safety reasons, reverse thrust shall not be used at other than idle power. On the aprons, it is prohibited at any time.

2 GROUND PROCEDURES

2.1 TAXI RESTRICTIONS BETWEEN 2200 AND 0459

Maximum four aircraft are authorized to taxi simultaneously to the holding position(s) of the runway(s)-in-use. Additionally, only three aircraft are allowed to await take-off clearance at the holding position at the same time.

Engine run-up is not allowed at the holding position, except for run-up tests performed immediately before take-off as part of the take-off procedure.

2.2 ENGINE TEST RUNS AND IDLE CHECKS

Engine test runs and idle checks in the open air and without silencers must be restricted to the very minimum and require prior permission from the Airport Authority.

Engine test runs are only allowed between 0600 and 2100. They can only take place on the crossing of TWY F3, Y, W1 and W2. If this crossing is not available due to infrastructural reasons, holding platform P7 may be used instead.

2.3 POWER SUPPLY

The aircraft parking positions 140 to 172, 201 to 240 and 680 to 699 are equipped with 400 Hz and pre-conditioned air (PCA). As soon as possible after arrival at one of these positions (5 MIN after docking MAX), 400 Hz shall be connected and the APU switched off. Upon departure (15 MIN before ETD), the APU may be started and 400 Hz shall be disconnected. When 400 Hz or PCA is not available, the APU may be used.

When no PCA is available and an authorization from the Airport Inspection has been obtained, the use of the APU is allowed during periods of extreme high or low temperatures for aircraft docked for more than 1 HR at the aircraft parking position.

3 ARRIVAL PROCEDURES

3.1 ILS APPROACH

Aircraft performing an ILS approach shall not intercept the GP below:

- 2 000 ft QNH for RWY 25L/R (3 000 ft and 2 000 ft respectively in case of simultaneous approach)
- 2 000 ft QNH for RWY 02
- 3 000 ft QNH for RWY 20.

After interception, the aircraft shall not descend below the GP.

3.2 SURVEILLANCE RADAR APPROACH

Aircraft performing an SRA without ILS assistance, shall not descend below 2 000 ft QNH before 6 NM from touchdown, nor fly thereafter below a descent path of 3°.

3.3 VISUAL APPROACH

Aircraft performing a visual approach without ILS or radar assistance, shall not descend below 1 800 ft QNH before intercepting the PAPI approach slope, nor fly below it thereafter.

3.4 NOISE ABATEMENT APPROACH AND LANDING PROCEDURES

Noise abatement descend and approach procedures using continuous descent and reduced power / reduced drag techniques should be used when following conditions apply:

- ILS available
- · runway clear and dry
- · visibility exceeding 1 900 m
- ceiling higher than 500 ft above AD ELEV
- cross wind component lower than 15 kt (gusts incl)
- tail wind component lower than 5 kt (gusts incl)
- · no adverse weather conditions that may affect the approach (wind shear, thunderstorms, etc)

Turbo-jet powered aircraft shall use as final flap setting the minimum certified landing flaps setting published in the Aircraft Flight Manual for the applicable conditions. However, each pilot-in-command may use a different flaps setting approved for the aircraft if he determines that it is necessary in the interest of safety.

3.5 SPEED LIMITATION

Aircraft being radar vectored shall reduce speed to 250 KIAS when entering the radar vectoring area or when below FL 100. 250 KIAS MAX shall be respected by all pilots as soon as they cross one of the speed limiting points (SLP) as shown on chart AD 2.EBBR-STAR.01.

3.6 SPECIAL PROCEDURES FOR ARRIVALS BETWEEN 2200 AND 0459

Traffic leaving IAF KERKY for approach to RWY 25L/R will not be cleared to descend below FL 70 until crossing R-360 BUB.

Aircraft performing an ILS approach shall not intercept the ILS LLZ/GP earlier than 11 NM from THR and not below 3 000 ft QNH. When simultaneous approaches are in progress, the ILS LLZ/GP shall not be intercepted below 3 000 ft (RWY 25R) and 4 000 ft (RWY 25L).

4 DEPARTURE PROCEDURES

4.1 GENERAL

The SID (see <u>EBBR AD 2.22</u>, § 3.2.1) constitute noise abatement procedures. It is therefore emphasized that pilots shall adhere to these routes as closely as performance permits. If unable to comply with these procedures, they shall advise ATC immediately.

4.2 CLIMB GRADIENT

In order to minimize noise nuisance and to clear obstacles in the departure area, aircraft shall maintain a net climb gradient of 7% MNM until passing 3 200 ft QNH. If unable to comply, pilots shall advise ATS accordingly when requesting start-up clearance.

4.3 NOISE ABATEMENT TAKE-OFF AND CLIMB PROCEDURES

For turbo-jet aircraft:

- · From take-off to 1 700 ft QNH
 - * take-off power
 - * take-off flaps
 - climb to V2 + 10 to 20 kt or as limited by body angle
- At 1 700 ft QNH
 - * reduce thrust to not less than climb thrust
- From 1 700 ft QNH to 3 200 ft QNH
 - climb at V2 + 10 to 20 kt
- At 3 200 ft QNH
 - accelerate smoothly to en-route climb speed with flaps retraction

For propeller aircraft:

- · From take-off to 1 700 ft QNH
 - * take-off power
 - climb at maximum gradient compatible with safety
 - speed not less than single engine climb speed, nor higher than best rate of climb speed
- At 1 700 ft QNH
 - reduce power to the maximum normal operating power (if this power has been used for showing compliance with the noise certification requirements) or to the maximum climb power
- From 1 700 ft QNH to 3 200 ft QNH
 - * climb at the maximum gradients with reduced power, maintaining constant speed
- At 3 200 ft QNH
 - accelerate smoothly to en-route climb speed

4.4 SPEED RESTRICTIONS

Unless otherwise instructed by ATC for safety reasons, maximum speed below FL 100 is 250 KIAS or clean speed (V_{ZF}), whichever is higher.

4.5 SPECIAL PROCEDURES FOR AIRCRAFT WITH MTOW > 200 T

When preferential runway system configuration RWY 25R/20 is in use for departures, the following aircraft shall use RWY 25R for departure, regardless of their destination.

			ICAO AIRCRA	FT TYPE (see IC	AO Doc 8643)		
	A124	A332	A333	A342	A343	A345	A346
	A388	AN22	B741	B742	B743	B744	B74S
←	B764	B772	B773	B77L	B77W	C5	C17

←	DC10	IL96	L101	MD11	
	DOTO	ILOU	LIUI	MIDIT	

4.6 SPECIAL PROCEDURES FOR DEPARTURES BETWEEN 2200 AND 0459

All departures from RWY 25R shall start their take-off at the beginning of the runway and preferably an uninterrupted take-off from P3 will be made.

When RWY 25L or 25R are runway-in-use for take-off, following types of aircraft only will be allocated CIV 7D or CIV 2Q if routing via CIV:

	ICAO AIRCRAFT TYPE (see ICAO Doc 8643)							
A109	B461	C152	CL60	F27	JS41	PC12		
A319	B462	C172	CN35	F2TH	L188	PRM1		
A320	B463	C182	CRJ1	F406	L29B	PUMA		
A321	B712	C206	CRJ2	F50	L410	R22		
AA5	B733	C208	CRJ7	F60	LJ31	R44		
AC68	B734	C210	CVLT	F70	LJ35	RJ1H		
AC90	B735	C212	D228	F900	LJ45	RJ70		
AC95	B736	C25A	D328	FA10	LJ55	RJ85		
AL02	B737	C303	DC3	FA20	LJ60	S601		
AL03	B738	C310	DH8A	FA50	LYNX	S61		
AN72	B739	C337	DH8C	GALX	M20P	SB20		
AS32	B752	C340	DH8D	GAZL	M20T	SC7		
AS50	B753	C404	DHC6	GLEX	MD52	SF34		
AS55	BE10	C414	DR40	GLF4	MD90	SH33		
AS65	BE20	C421	E110	GLF5	MU30	SH36		
ASTR	BE30	C425	E120	H25A	N262	SR20		
AT43	BE33	C441	E121	H25B	P180	SR22		
AT44	BE35	C500	E135	H25C	P28A	SW3		
AT45	BE36	C501	E145	H500	P28R	SW4		
AT72	BE40	C525	E400	H53	P32R	TBM7		
ATP	BE58	C550	EC20	H60	PA34	TRIN		
B06	BE60	C551	EC35	J328	PA46	WW24		
B105	BE99	C560	EC55	JPRO	PAY1			
B190	BE9L	C56X	EXPL	JS20	PAY2			
B350	BE9T	C650	F100	JS31	PAY3			
B407	BN2P	C750	F260	JS32	PAY4			

EBBR AD 2.22 FLIGHT PROCEDURES

1 GENERAL

1.1 AERODROME MINIMA

Take-off and landing: 150 m RVR.

Specific minima:

- ILS RWY 20: 800 m RVR
- VOR RWY 07L (CAT A/B): 2 800 m VIS
- VOR RWY 07L (CAT C/D): 3 300 m VIS
- VOR RWY 07R (CAT A/B): 1 500 m VIS
- VOR RWY 07R (CAT C): 1 800 m VIS
- VOR RWY 07R (CAT D): 2 000 m VIS
- VOR RWY 25L (CAT A): 900 m VIS
- VOR RWY 25L (CAT B/C): 1 000 m VIS
- VOR RWY 25L (CAT D): 1 400 m VIS

2 IFR FLIGHTS (INBOUND)

2.1 GENERAL

2.1.1 AIRCRAFT EQUIPMENT

DME is compulsory for all inbound IFR traffic.

2.1.2 RADAR VECTORING

Radar vectoring may be expected when crossing 30 DME BUB.

In case of radar vectoring, the intermediate approach procedure may be partially or completely omitted. The clearance limit assigned by Brussels ACC will then be replaced by a clearance to a final approach aid or radar vectors will be given to direct the aircraft to a position from where final approach can be started or a visual approach made.

2.1.3 SPEED LIMITATIONS

During the initial approach segment, the IAS shall not exceed 220 kt.

In case of ILS approach, 220 KIAS shall be maintained until established on ILS. The OM (RWY 02, 25L/R) or 4 DME IBM (RWY 20) shall be crossed at 160 KIAS. Aircraft unable to maintain 160 KIAS will not be accepted during periods 0700-0900, 1200-1300 and 1600-1900 ATA.

Pilots are requested to comply as promptly as feasible within operational constraints with any speed adjustments requested by ATC. Aircraft unable to comply with the requested speed shall inform ATC and indicate the speed that will be used.

The speed limitations do not relieve pilots of their responsibility to observe any applicable noise abatement procedures (see <u>EBBR AD 2.21</u>).

2.2 HOLDING PATTERNS

The holding patterns shall be entered at 170 KIAS MAX (aircraft CAT A/B) or 230 KIAS MAX (aircraft CAT C/D).

ANTWERPEN

Fix	ANT DVOR/DME
Turn / inbound track (MAG)	Left / 119°
Levels (MAX / MNM)	FL 140 / FL 80
Remarks	NIL

BRUNO

Fix	BUN DVOR/DME
Turn / inbound track (MAG)	Right / 117°
Levels (MAX / MNM)	FL 140 / 3 000 ft QNH
Remarks	At ATC discretion only

FLORA

Fix	FLO DVOR/DME
Turn / inbound track (MAG)	Right / 310°
Levels (MAX / MNM)	FL 140 / FL 60
Remarks	NIL

GOSLY

Fix	GSY DVOR/DME
Turn / inbound track (MAG)	Left / 360°
Levels (MAX / MNM)	FL 230 / FL 100
Remarks	At ATC discretion only

KERKY

Fix	KERKY (R-283 AFI/5.7 NM and R-208 NIK/16.0 NM)

Turn / inbound track (MAG)	Right / 103°
Levels (MAX / MNM)	FL 90 / 4 000 ft QNH
Remarks	NIL

NIVOR

Fix	NIVOR (R-157 AFI/14.0 NM and R-257 HUL/13.7 NM)
Turn / inbound track (MAG)	Left / 077°
Levels (MAX / MNM)	FL 90 / 3 000 ft QNH
Remarks	At ATC discretion only

2.3 APPROACH PROCEDURES

2.3.1 STANDARD INSTRUMENT ARRIVALS

STAR have been established as shown on chart <u>AD 2.EBBR-STAR.01</u> and as listed below. ATC may deviate from these routes and pilots may expect radar vectors for separation reasons or in order to expedite traffic flow.

Depending on traffic conditions (LVP in progress, etc.), ATC may clear traffic to hold at GSY DVOR/DME. At EAT, such traffic will be re-cleared for a standard approach or will be radar vectored for sequencing.

	Designator	Significant point	Track (MAG)	Distance (NM)	MNM IFR level	Remarks
	BATTY 2A	BATTY				TFC shall endeavour to cross IAF
			298°	30.5	FL 70	FLO at FL 80 MAX.
		FLO DVOR				_
	LNO 1A	LNO DVOR				TFC shall endeavour to cross IAF
			310°	27.9	FL 70	FLO at FL 80 MAX.
		FLO DVOR				_
←	ARVOL 3A	ARVOL				(*) Turning point to intercept and
			036°	14.7	FL 70	follow R-252 BUN.
		AKOVI				_
			036°	9.5	FL 70	
		RODRI (*)				
		()	-	-	FL 70	_
		KERKY				_
←	ARVOL 3B	ARVOL				To be used on ATC discretion.
			084°	12.9	FL 70	
		CIV DVOR				
		0.7 2 7 0.1	072°	32.5	FL 70	
		HUL DVOR	0.2	02.0		
		1102 3 7 011	069°	20.2	FL 70	
		FLO DVOR		20.2	1270	
←	TULNI 3A	TULNI				To be used only when MIL activities
	TOLITIOA	TOLIVI	056°	20.1	FL 90	permit.
		AKOVI	030	20.1	1 L 90	
		ANOVI	036°	9.5	FL 70	(*) Turning point to intercept and
		RODRI (*)	030	9.5	FL 70	follow R-252 BUN.
		RODRI ()	_	_	FL 70	
		KERKY	-	-	FL /U	
	TULNI 3B					To be used on ATC discretion.
	IULNI 3B	TULNI	089°	24.0	EL 00	To be used on ATC discretion.
		01/4 D) (0D	089	21.0	FL 90	
		CIV DVOR	0700	20.5	EL 70	
		11111 DVOD	072°	32.5	FL 70	
		HUL DVOR	2000	00.0	F1 70	
		EL 0 D) (0D	069°	20.2	FL 70	
	1/01/ //	FLO DVOR				N
	KOK 4A	KOK VORTAC				NIL
		==	103°	51.6	FL 70	
		KERKY				
	WOODY 4A	WOODY				NIL
			206°	7.5	FL 70	
		8.4 DME NIK				
			119°	-	FL 70	
		ANT DVOR				
	BEKEM 4A	BEKEM				NIL
			224°	13.2	FL 70	
		8.7 DME NIK				
			119°	-	FL 70	
		ANT DVOR				

2.3.2 SURVEILLANCE RADAR APPROACH

SRA is available on all runways and will be terminated either:

- at a distance of 2 NM (RWY 02, 20, 25L/R) or 3 NM (RWY 07L/R) from threshold
- before the aircraft enters an area of continuous radar clutters
- when the aircraft reports that a visual approach can be made.

The aircraft will be informed at regular intervals of its position relative to the extended RCL and heading corrections will be given as necessary. The distance from THR will be passed on at each NM.

The levels through which the aircraft should be passing to maintain the glide path (3° or 5.2% on all runways) will also be passed on at each NM:

DIST TO THR	ALTITUDE (ft)					
(NM)	RWY 02	RWY 07L	RWY 07R	RWY 20	RWY 25L	RWY 25R
6	2 000	2 000	2 000	2 000	2 000	2 000
5	1 800	1 800	1 800	1 800	1 800	1 800
4	1 500	1 500	1 500	1 400	1 500	1 400
3	1 200	1 100	1 200	1 100	1 200	1 100
2	900	NIL	NIL	800	800	800

RWY	THR ELEV (ft)	INBD TRACK (MAG)	DIST FROM FAF TO THR (NM)	DIST FROM MAPT TO THR (NM)	OCA (OCH) (ft)	MNM VIS (m)
02	183	015°	6	2	880 (700)	3 600
07L	129	066°	6	3	1 030 (900)	5 500
07R	175	071°	6	3	1 030 (860)	5 500
20	113	195°	6	2	800 (690)	3 600
25L	159	251°	6	2	800 (640)	3 600
25R	110	246°	6	2	800 (690)	3 600

2.3.3 CIRCLING APPROACH

Circling approaches are prohibited.

2.3.4 SIMULTANEOUS DEPENDENT IFR APPROACHES ON RWY 25L AND 25R

Simultaneous dependent IFR approaches may be performed on RWY 25L and 25R, provided that following conditions are met:

- visibility is 2 km MNM and cloud ceiling is 600 ft MNM
- · radio, radar and ILS equipment (both airborne and on ground) are fully serviceable

ATC will provide following separations:

- · a minimum 1 000 ft vertical separation between aircraft during turn-on to the LLZ course until interception
- a minimum staggered radar separation of 2 NM between aircraft established on the adjacent LLZ. Minimum ICAO standard separations will continue to be applied between aircraft on the same LLZ course.

The ATIS broadcast will include the following message: "Simultaneous dependent IFR approaches in progress on runways 25R and 25L." When receiving this information, pilots shall advise ATC of the unavailability of any equipment needed to perform the approach.

Each pilot will be informed by Brussels APP of the assigned runway and shall acknowledge receipt of the message. The assigned runway will be repeated by ATC with the instruction for ILS interception.

Depending on traffic conditions, aircraft may be vectored to one of both LLZ courses for a straight-in approach. If, for any reason, a vectored aircraft does not receive LLZ interception instructions, the pilot will perform interception of the LLZ serving the assigned runway by himself. In any case, pilots shall execute a precise interception, without overshooting the LLZ axis. If overshoot occurs, ATC will instruct to return to the LLZ course immediately.

Any undue track variation in relation to the LLZ axis or any equipment malfunctioning shall be reported to ATC immediately, together with any decision to perform a missed approach. ATC will radar monitor the missed approach and transmit instructions to start a new approach.

2.3.5 SIMULTANEOUS INDEPENDENT IFR APPROACHES ON RWY 25L AND 25R (SIMINDEP)

Simultaneous independent IFR approaches without radar sepration between aircraft on the adjacent runway centre lines may be performed on RWY 25L and 25R, provided that following conditions are met:

- visibility is 2 km MNM and cloud ceiling is 600 ft MNM
- · radio, radar and ILS equipment (LLZ, GP, DME and markers) are fully serviceable, both airborne and on ground.

In addition to the minimum MET conditions stated above, **any adverse weather** that might increase ILS LLZ course deviations to the extent that safety may be impaired and/or an unacceptable number of deviation alerts would occur, will impose suspension of SIMINDEP operations.

ATC will provide following separations:

- A radar separation of at least 3 NM and/or 1 000 ft vertical separation during turn-on to the LLZ course until both aircraft are stabilized on the LLZ course.
- 1 000 ft MNM vertical separation between aircraft established on adjacent LLZ until 14 NM from touchdown.
- · Minimum ICAO standard separations will continue to be applied between aircraft on the same LLZ course.

Note 1: No Transgression Zone (NTZ): A corridor of airspace of defined dimensions located centrally between the two extended runway centre lines where a penetration by an aircraft requires a controller intervention to manoeuvre any threatened aircraft on the adjacent approach.

Note 2: An aircraft established on ILS LLZ course is separated from another aircraft established on an adjacent parallel ILS LLZ course, provided neither aircraft penetrates the NTZ as depicted on the radar display.

Following procedures apply:

- a. The ATIS broadcast will include the following message: "Simultaneous independent IFR approaches in progress ILS 25R frequency 108.9; ILS 25L frequency 110.35." When informed by ATIS that SIMINDEP are in progress, pilots will advise ATC of any unavailability of required equipment.
- b. Each pilot will be informed by Brussels APP of the assigned runway for landing and shall acknowledge receipt of the message. The assigned runway (25L or 25R) will be repeated by the controller with the instruction for ILS interception.
- c. Pilots experiencing radio-communication failure before runway assignment shall execute an ILS approach on RWY 25L.
- d. If for any reason an aircraft being radar vectored does not receive LLZ interception instructions, the pilot shall intercept the ILS/LLZ course serving the **assigned** runway by himself.
- e. Pilots shall execute precise LLZ interception (not overshooting the LLZ axis).
- f. If an aircraft is observed to overshoot the assigned LLZ course during its turn to final on the assigned runway, the pilot will be instructed to return to the LLZ course immediately.
- g. When an aircraft is observed penetrating the NTZ, the aircraft on the adjacent LLZ course will be immediately cleared by the appropriate controller to climb and turn away (45° MAX) from penetrating aircraft.
- h. Any undue track variation in relation to the LLZ axis or any equipment malfunction shall be reported immediately to ATC, together with any decision to perform a missed appraach. ATC will exercise radar monitoring of the missed approach and will transmit instructions to start a new approach.

2.4 MISSED APPROACH

Unless instructed otherwise by Brussels TWR or Brussels APP, the missed approach procedures as published on the instrument approach charts (see <u>EBBR AD 2.24</u>) shall be followed.

3 IFR FLIGHTS (OUTBOUND)

3.1 STARTING PROCEDURES

3.1.1 AIRPORT COLLABORATIVE DECISION MAKING (A-CDM)

← CDM is part of the European programme "Single European Sky" to optimize airspace and airport operations. Major European airports started implementing local CDM-programmes (A-CDM), which will become a harmonized procedure in Europe.

A-CDM is about partnership at airports between Airport Operations, ATC, Aircraft Operators, Slot Coordinator and Ground Handlers. Emphasis is put on:

- · Linking the inbound, turn-round and outbound processes;
- · The sharing of the right information at the right time to the right people best placed to act upon it; and
- · The improved flight operational data exchange between airports and the ATFM network

3.1.1.1 CDM PROCEDURES

3.1.1.1.1 Flight Plan Check

The ATC FPL-originator needs to check if the flight has a valid airport slot and that the scheduled departure time of the related ATC flight plan is in line with the Airport Slot. If they do not correspond, the contact address will be informed together with the request to coordinate the times. The CDM-process may be blocked if the flight is not coordinated according the rules and the flight plan may be rejected (no TSAT) if the air carrier intends to take off without having an airport slot allocated by the Brussels Slot Coordinator (EC-Regulation N°793/2004 amending Council Regulation 95/93 on common rules for the allocation of slots at Community Airports §14.1).

Filing and updating a flight plan is and remains the responsibility of the Aircraft Operator. He may delegate these tasks to his accredited Handling Agent.

← 3.1.1.1.2 TOBT-TSAT PROCEDURE

INFO from airline / handler	TOBT	Target off block time: confirmation of estimated ready time
INFO from ATC		Target start-up approval time, based on TOBT or EOBT (if TOBT not AVBL): sequenced off block time

TOBT represents the time that an Aircraft Operator or Handling Agent estimates that an aircraft will be ready, all doors closed, boarding bridge removed, push back vehicle available, ready to start-up immediately and push back within 5 MIN after reception of start-up clearance from TWR.

TSAT is issued by ATC and represents the time at which an aircraft can expect start-up, taking into account the ATFM restrictions and local constraints. ATC sequences the departures based on TOBT.

TSAT will be calculated from TOBT-30 MIN onwards. Changes to the TOBT do not affect the TSAT in general, as long as the newly calculated TOBT is not later than TSAT. However it is of the utmost importance that a TOBT reflects the potential readiness of the aircraft, since it is the basis for the determination of TSAT.

← 3.1.1.1.3 ACTIONS BY COCKPIT CREW

Pilots at a stand with a docking guidance system display (e.g. Pier A or B, P60): TOBT is displayed from EOBT-20 MIN onwards and TSAT appears at TOBT-5 MIN.

Pilots at a stand with no docking guidance system display (e.g. on remote stands): TOBT can be obtained from the Redcap/Loadmaster and the TSAT becomes available at Brussels Delivery on FREQ 121.950 MHz from approximately TOBT-10 MIN onwards.

Start-up shall be requested from Brussels Delivery on FREQ 121.950 MHz or via Digital Data Link (see <u>below</u>, § 3.1.2) in accordance with the related TSAT±5 MIN (TSAT takes the ATFM slot into consideration, if any). The start-up request shall only be made when the aircraft is "ready" (see TOBT definition) and when push back (if required) becomes available. Pilots **must** check the pushback availability before requesting start-up.

If the flight is not ready at TSAT+5 MIN, ATS will issue a new TSAT only after receipt of an updated EOBT. The IATA delay code becomes "code 61".

Aircraft requiring full runway length shall include this in their start-up request. Pilots are reminded that noise abatement procedures affecting some runway distances remain to be adhered to (see <u>EBBR AD 2.21, § 4.5</u>).

The request for push back and/or taxi shall be done within 5 MIN after reception of start-up clearance. TWR shall be advised if the latter is not possible and delay is expected. Otherwise, the TOBT will be deleted and must be entered again. If pilot does not call at TSAT+5 MIN, ATC will issue a new TSAT only after receipt of an updated EOBT.

The pushback sequence of the Handling Agent is based on TSAT, not on TOBT. The pushback vehicle will become available at TSAT-5 MIN.

← 3.1.1.1.4 ACTIONS BY AIRLINE REPRESENTATIVE OR HANDLING AGENT

The first TOBT is triggered automatically at EOBT-2 HR and copies the value of EOBT.

Until the TSAT has been issued, the TOBT can be corrected as often as desired. Thereafter, the TOBT corrections are limited to a maximum of three.

If the TOBT cannot be adhered to, it must be corrected by the TOBT responsible person.

As the TOBT is triggering additional processes at the airport, TOBT adaptations shall be done as soon as possible. If a flight is to be withdrawn from the TOBT and/or TSAT calculation, the TOBT shall be cancelled. To set this process in motion again, the TOBT shall be filed anew. It is still mandatory to send a delay message to the IFPS if the EOBT deviates by 15 MIN or more.

Note: Restricted flights should not update their EOBT/TOBT in function of the related CTOT.

Aircraft Operators shall communicate known or expected delays to their Handling Agent and the Airport Partners well in advance.

In case of changing the aircraft and filing a change message (CHG-type / registration), the original TOBT will be retained.

3.1.1.1.5 ACTIONS BY ATC

The TOBT received by Brussels Delivery is processed and results in a TSAT, which can never be earlier than TOBT. Start-up approval will only be granted from TSAT-5 MIN till TSAT+5 MIN.

←

3.1.1.2 CDM-ALERTS

An alert mechanism monitors expected upcoming events to trigger data updates and consistency. These alert messages will be sent via the A-CDM Information Sharing Platform and are classified into 3 classes, sorted in decreasing priority:

- · Primary Alert;
- · Secondary Alert; and
- · Advisory Alert

React onto the alerts as required.

3.1.1.3 COORDINATION WITH THE CFMU/CTOT

A permanent and fully automatic data exchange with the CFMU is established. This data transfer enables highly accurate early predictions of landing and departure times. Furthermore, this allows for more accurate and efficient calculation of the CTOT due to the use of local target take-off times.

The following system-to-system messages are used:

- · Flight Update Message (FUM)
- · Early Departure Planning Information Message (E-DPI)
- Target Departure Planning Information Message (T-DPI)
 - T-DPI-t is based on the TOBT and related updates
 - * T-DPI-s is based on TSAT and related updates
- · ATC Departure Planning Information Message (A-DPI)
- · Cancel DPI (C-DPI)

The first DPI (E-DPI) is based on the Estimated Off-Block Time (=STD) and confirms the validity of the Airport Slot against a flight plan. The target DPIs are triggered by TOBT/ TSAT and provide Target Take-Off Times, used to re-assess the impact on the network. The final DPI is sent at Actual Off-Block Time and freezes the ATFM slot.

The basic CFMU procedures continue to apply. The CFMU will generally take these local target take-off times into consideration and will try to adjust the CTOT accordingly, if possible.

3.1.1.4 DE-ICING

In case of on-stand de-icing, the TOBT value shall include the time at which de-icing is expected to be finished. The resulting TSAT is the target time to start-up in order to proceed to the runway holding position.

In case of remote de-icing the TOBT is based on the remote de-icing sequence but it does NOT include any assessment of de-icing operations. However in building the pre-departure sequence, ATC will include the waiting time for de-icing in the TSAT. The estimated de-icing time is part of the taxi-out calculation by ATC. In order to do so properly, ATC needs extra information from the Ground Handler such as de-icing sequence and rate. De-icing must therefore be requested by the pilot as early as possible.

3.1.2 DATA LINK CLEARANCE DELIVERY SERVICE (DCL)

3.1.2.1 GENERAL

A DCL through Digital Data Link is implemented at Brussels TWR. The system, implemented through ACARS, uses the SITA, which complies with the requirements and recommendations of *EUROCAE Document ED 85*.

To use DCL via Data Link, the user should have certified on-board equipment according to the recommendations of *Document ED 85* and comply with the entire operational procedure that overcomes the risk identified by *Document ED 85*.

In order to be authorized to use Brussels DCL, operators shall apply to the national authority responsible for their own operational oversight (or to the state of registry when appropriate) to obtain technical and operational approval to receive departure clearance over ACARS. When obtained, copy of such authorization shall be sent to Belgocontrol:

Mail:

Belgocontrol DGO Tervuursesteenweg 303 B-1820 Steenokkerzeel

The document shall indicate the type and registration of each authorized aircraft, as well as the ICAO and IATA aircraft operating agency designator of the operator.

3.1.2.2 OPERATIONAL USE

DCL via Data Link can only be used by aircraft using SID whose specifications include level requirements.

The service does not provide clearance revision. Any clearance modification will be made via the Brussels Delivery voice frequency.

After reception of the departure clearance, the pilot shall send to the ground system an acknowledge message including the entire content of the clearance before contacting GND. In case a departure clearance is not received, the pilot shall contact Brussels Delivery by voice.

TSAT will be communicated from TOBT-10 MIN onwards. Syntax: "Standby till TSAT hh:mm".

Note: TSAT on DGS has precedence over TSAT via Data Link (TSAT can only be sent once via DCL, thus late TSAT-changes should be monitored via DGS).

The aircrew, before taking off, shall check the consistency of the SID delivered in the DCL message with the departure runway and the flight plan information. Voice procedures shall be used in case of inconsistency.

Departure clearance delivered by voice shall always supersede any DCL clearance. Pilots are reminded to keep a continuous listening watch on 121.950 MHz.

3.2 DEPARTURE PROCEDURES

3.2.1 STANDARD INSTRUMENT DEPARTURES

SID have been established as shown on the EBBR SID charts (see <u>EBBR AD 2.24</u>) and as listed below. Pilots unable to comply shall inform ATC when requesting start-up clearance.

After take-off, aircraft shall remain on TWR frequency.

Note: ATC may deviate from these routes.

RWY 02

ĺ	Designator	Ro	ute	Remarks
		Lateral	Vertical	
-	LNO 3F	1 700 ft QNH RT to intercept	(FL 70 when QNH is below 977 hPa) or above if	
	SPI 3F	1 700 ft QNH RT to intercept	Cross R-045 HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	
	SOPOK 3F	1 700 ft QNH RT to intercept	when QNH is below 977 hPa) or above if instructed	
	PITES 3F	1 700 ft QNH RT to intercept	when QNH is below 977 hPa) or above if instructed	

ROUSY 3F	1 700 ft QNH RT to intercept	when QNH is below 977 hPa) or above if instructed	
CIV 6F	At 700 ft QNH TR 030. At 1 700 ft QNH RT to intercept R-356 HUL INBD. At 3 DME HUL RT to intercept R-073 CIV INBD to CIV.		AVBL when RWY 02 in single RWY operations. ATC climb requirements: see below (§ 3.2.2). M617 southbound, MAX FL 170. Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA. N872 and UN872 southbound, only for TFC flightplanned above FL 195.
KOK 1F	Climb straight ahead. At 1 700 ft QNH LT direct to KOK.		L607 westbound.
DENUT 5F	At 700 ft QNH TR 010. At 1800 ft QNH DCT to DENUT.		B-RNAV above MSA.
HELEN 5F	At 700 ft QNH TR 010. At 1800 ft QNH DCT to HELEN.		B-RNAV above MSA.
NIK 2F	At 700 ft QNH TR 010. At 1 700 ft QNH LT direct to NIK.		M624 northbound. Not to be used by TFC DEST EHAM.
ELSIK 1 F	At 700 ft QNH RT direct to BUN, ELSIK next.		L179 eastbound. To be used when adequate MIL airspaces are AVBL for GAT.

RWY 07L / R

Designator	Ro	ute	Remarks
	Lateral	Vertical	
LNO 2H		(FL 70 when QNH is below 977 hPa) or above if	AVBL for DEP RWY 07L only. For TFC requesting a cruising or initial FL below FL 195.
LNO 2J		(FL 70 when QNH is below 977 hPa) or above if	AVBL for DEP RWY 07R only. For TFC requesting a cruising or initial FL below FL 195.
SPI 3H	1 700 ft QNH RT to intercept	(FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	

SPI 2	2.2 DME BUB, RT to HUL.	(FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	
SOPO	1 700 ft QNH RT to intercept	when QNH is below 977 hPa) or above if instructed by ATC.	AVBL for DEP RWY 07L only. ATC climb requirements: see below (§ 3.2.2).
SOPO	1 700 ft QNH or 1.1 DME	when QNH is below 977 hPa) or above if instructed by ATC.	
← PITES	1 700 ft QNH RT to	when QNH is below 977 hPa) or above if instructed by ATC.	AVBL for DEP RWY 07L only. ATC climb requirements: see below (§ 3.2.2). CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 2H - SOPOK - RITAX - DIK - PITES). Only when UM150 between DIK and PITES is AVBL (alternative route: SOPOK 2H - SOPOK - ETENO).
← PITES	1 700 ft QNH or 1.1 DME	when QNH is below 977 hPa) or above if instructed by ATC.	AVBL for DEP RWY 07R only. ATC climb requirements: see below (§ 3.2.2). CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 2J - SOPOK - RITAX - DIK - PITES). Only when UM150 between DIK and PITES is AVBL (alternative route: SOPOK 2J - SOPOK - ETENO).
ROUS	1 700 ft QNH RT to intercept	when QNH is below 977 hPa) or above if instructed by ATC.	AVBL for DEP RWY 07L only. ATC climb requirements: see below (§ 3.2.2). CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 2H - SOPOK - RITAX - ROUSY).

ROUSY 3J	1 700 QNH or 1.1 DME BUB	when QNH is below 977 hPa) or above if instructed	AVBL for DEP RWY 07R only. ATC climb requirements: see below (§ 3.2.2). CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 2H - SOPOK - RITAX - ROUSY).
CIV 4H	Climb straight ahead. At 1 700 ft QNH LT HDG 277 to intercept R-044 CIV INBD to CIV.		AVBL for DEP RWY 07L only. ATC climb requirements: see below (§ 3.2.2). M617 southbound, MAX FL 170. Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA. N872 and UN872 southbound, only for TFC flightplanned above FL 195.
CIV 4J		(FL 70 when QNH is below 977 hPa) or above if	AVBL for DEP RWY 07R only. ATC climb requirements: see below (§ 3.2.2). M617 southbound, MAX FL 170. Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA. N872 and UN872 southbound, only for TFC flightplanned above FL 195.
KOK 1H	Climb straight ahead. At 1 700 ft QNH LT direct to KOK.		L607 westbound.
DENUT 4H	Climb straight ahead. At 1 800 ft QNH DCT to DENUT.		B-RNAV above MSA.
HELEN 4H	Climb straight ahead. At 1 800 ft QNH DCT to HELEN.		B-RNAV above MSA.
NIK 1H	Climb straight ahead. At 1 700 ft QNH LT direct to NIK.		M624 northbound. Not to be used by TFC DEST EHAM.
ELSIK 1H	At 700 ft QNH LT direct to BUN, ELSIK next.		L179 eastbound. To be used when adequate MIL airspaces are AVBL for GAT.

RWY 20

	Designator	Ro	oute	Remarks
		Lateral	Vertical	
←	LNO 4L		Cross R-045 HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	

SPI 3L	intercept R-288 LNO INBD,	Cross R-045 HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	
SOPOK 2L	intercept R-322 HUL INBD. LT to intercept R-288 SPI	Cross HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	ATC climb requirements: see <u>below (§ 3.2.2)</u> .
PITES 3L	intercept R-322 HUL INBD. LT to intercept R-288 SPI	when QNH is below 977 hPa) or above if instructed by ATC.	
PITES 3N	At 700 ft QNH LT to intercept R-149 NIK. LT to intercept R-310 DIK INBD to DIK, PITES next.	1	AVBL from 2200 to 0459. Exceptionally CLSD from 2200 to 2300, due to MIL activities in Belgium (alternative route: PITES 3L). ATC climb requirements: see below (§ 3.2.2). Only when UM150 between DIK and PITES is AVBL (alternative route: SOPOK 2L - SOPOK - ETENO).
ROUSY 3L	At 700 ft QNH LT to intercept R-322 HUL INBD. LT to intercept R-288 SPI INBD. When passing REMBA, RT direct to RITAX, ROUSY next.	Cross HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	
ROUSY 3N	At 700 ft QNH LT to intercept R-150 NIK. LT to intercept R-139 AFI to ROUSY.		AVBL from 2200 to 0459. Exceptionally CLSD from 2200 to 2300, due to MIL activities in Belgium (alternative route: ROUSY 3L). ATC climb requirements: see below (§ 3.2.2).
CIV 7L	At 700 ft QNH TR 159. RT to intercept R-067 CIV INBD to CIV.		ATC climb requirements: see <u>below (§ 3.2.2)</u> . M617 southbound, MAX FL 170. Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA. N872 and UN872 southbound, only for TFC flightplanned ABV FL 195.

DENUT 3L Climb straight ahead. At 1 700 ft QNH RT to intercept R-309 HUL to DENUT. At 700 ft QNH RT to intercept intercept R-309 HUL to DENUT. At 700 ft QNH RT to intercept R-309 HUL to DENUT. At 700 ft QNH RT to intercept R-309 HUL to DENUT. At 700 ft QNH RT to intercept R-309 HUL to DENUT. Cross R-281 BUB at or intercept R-309 HUL to DENUT. Cross R-281 BUB at or 25R is not AVBL from 2200 to 0459 or where 25R is not AVBL for LDG. (U)L610 westbound. For TFC overflying London TM. requested FL above FL 245. For TFC DEST EGKK, EGHH and AVBL from 0500 to 2159. For TFC INBD London TMA except EGKK, EGHH and EGHI: route cont HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIM GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route cont HELEN - HSD. HELEN 2N At 700 ft QNH RT to Cross R-281 BUB at or AVBL from 2200 to 0459 or when the continuation of the	H and RWY A with EGHI. DEST ection, A with
R-309 HUL to DENUT. R-309 HUL to DENUT. R-309 HUL to DENUT. R-309 HUL to DENUT. Requested FL above FL 245. For TFC destination EGKK, EGHEGHI. For TFC destination EGKK, EGHEGHI. AVBL from 2200 to 0459 or wheir 25R is not AVBL for LDG. (U)L610 westbound. For TFC overflying London TM. requested FL above FL 245. For TFC DEST EGKK, EGHH and TM. requested FL above FL 245. For TFC DEST EGKK, EGHH and EGHI: route content of the content of	H and RWY A with EGHI. DEST ection, A with
The property of the property o	H and RWY A with EGHI. DEST ection, A with
DENUT 2N At 700 ft QNH RT to intercept R-309 HUL to DENUT. At 700 ft QNH RT to intercept R-309 HUL to DENUT. Climb straight ahead. At 1700 ft QNH RT to intercept R-316 HUL to HELEN. Climb straight ahead. At 1700 ft QNH RT to intercept R-316 HUL to HELEN. Climb straight ahead. At 1700 ft QNH RT to intercept R-316 HUL to HELEN. AVBL from 0500 to 2159. For TFC INBD London TMA except EGKK, EGHH and EGHI: route conn HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route connection HELEN - HSD.	A with EGHI. DEST ection,
intercept R-309 HUL to DENUT. 25R is not AVBL for LDG. (U)L610 westbound. For TFC overflying London TM. requested FL above FL 245. For TFC DEST EGKK, EGHH and AVBL from 0500 to 2159. For TFC INBD London TMA except EGKK, EGHH and EGHI: route connection: HELEN - COA. For TFC overflying London TMA except EGKK, EGHH and EGHI: route connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIM GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route cont HELEN - HSD.	A with EGHI. DEST ection, A with
(U)L610 westbound. For TFC overflying London TM. requested FL above FL 245. For TFC DEST EGKK, EGHH and AVBL from 0500 to 2159. For TFC INBD London TMA except EGKK, EGHH and EGHI: route connection: HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIM GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route confection HELEN - TULIP.	DEST ection,
requested FL above FL 245. For TFC DEST EGKK, EGHH and AVBL from 0500 to 2159. AVBL from 0500 to 2159. For TFC INBD London TMA except EGKK, EGHH and EGHI: route conn HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIM GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route connection HELEN - HSD.	DEST ection,
HELEN 3L Climb straight ahead. At 1 700 ft QNH RT to intercept R-316 HUL to HELEN. Climb straight ahead. At 1 700 ft QNH RT to intercept R-316 HUL to HELEN. For TFC INBD London TMA except EGKK, EGHH and EGHI: route conn HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route conn HELEN - HSD.	DEST ection,
1 700 ft QNH RT to intercept R-316 HUL to HELEN. For TFC INBD London TMA except EGKK, EGHH and EGHI: route conn HELEN - COA. For TFC overflying London TM. requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route conn HELEN - HSD.	ection, A with
R-316 HUL to HELEN. For TFC INBD London TMA except EGKK, EGHH and EGHI: route conn HELEN - COA. For TFC overflying London TM requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route connection HELEN - HSD.	ection, A with
requested FL below FL 245: connection: HELEN - COA. For TFC via L745 intending to Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route cont HELEN - HSD.	
Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP. For TFC DEST EHAM: route cont HELEN - HSD.	
HELEN - HSD.	IVA or
HELEN 2N At 700 ft ONH DT to Cross D 291 DLD at at AVD from 2200 to 0450 ar what	nection
intercept R-316 HUL to above 1 700 ft QNH. HELEN.	ı RWY
For TFC INBD London TMA except EGKK, EGHH and EGHI: route cont HELEN - COA.	
For TFC overflying London TM. requested FL below FL 245: connection HELEN - COA.	
For TFC via L745 intending to Amsterdam FIR via RAVLO, MIN GODOS: route connection HELEN - TULIP.	IVA or
For TFC DEST EHAM: route cont HELEN - HSD.	nection
NIK 2L Climb straight ahead. At AVBL from 0500 to 2159.	
1 700 ft QNH RT direct to NIK. M624 northbound.	
Not to be used by TFC DEST EHA	M.
NIK 2N At 700 ft QNH RT direct to RIK. Cross R-281 BUB at or above 1 700 ft QNH. AVBL from 2200 to 0459 or when above 1 700 ft QNH.	
M624 northbound.	ı RWY

		Not to be used by TFC DEST EHAM.	
ELSIK 1L	At 700 ft QNH LT direct to BUN, ELSIK next.	L179 eastbound. To be used when adequate MIL airspace are AVBL for GAT.	

RWY 25L / R

ר	esignator	Route		Remarks	
	esignator	Lateral	Vertical	Remarks	
← L	NO 2D	Climb straight ahead. At 4 000 ft QNH or when	Cross HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed	Only AVBL 0500 from to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. For TFC requesting a cruising or initial FL below FL 195. To be used by four-engine ACFT.	
S	SPI 2D	4 000 ft QNH or when	(FL 70 when QNH is below 977 hPa) or above if	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. To be used by four-engine ACFT.	
S	орок 3C	1 700 ft QNH LT to HUL. After HUL intercept R-288 SPI INBD. When passing BULUX or climbing through FL 170, whichever is later, RT direct to SOPOK.	when QNH is below 977 hPa) or above if instructed by ATC.	ATC climb requirements: see <u>below</u> (§ 3.2.2). To be used by single, two and three-engine ACFT. May be used by four-engine ACFT noise certificated according to <i>ICAO Annex 16</i> Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID.	
S	SOPOK 3D	4 000 ft QNH or when	(FL 70 when QNH is below 977 hPa) or above if	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. ATC climb requirements: see below (§ 3.2.2). To be used by four-engine ACFT.	
P	PITES 3C		when QNH is below 977 hPa) or above if instructed	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. ATC climb requirements: see below (§ 3.2.2). To be used by single, two and three-engine ACFT. May be used by four-engine ACFT noise certificated according to ICAO Annex 16 Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID. CDR 1 - H24.	

			TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 3C - SOPOK - RITAX - DIK - PITES). Only when UM150 between DIK and PITES is AVBL (alternative route: SOPOK 3C - SOPOK - ETENO).
PITES 3D	4 000 ft QNH or when	(FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. ATC climb requirements: see below (§ 3.2.2). To be used by four-engine ACFT. CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 3D - SOPOK - RITAX - DIK -PITES). Only when UM150 between DIK and PITES is AVBL (alternative route: SOPOK 3D - SOPOK - ETENO).
ROUSY 3C	1 700 ft QNH, LT to HUL.	when QNH is below 977 hPa) or above if instructed	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. ATC climb requirements: see below (§ 3.2.2). To be used by single, two and three-engine ACFT. May be used by four-engine ACFT noise certificated according to ICAO Annex 16 Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID. CDR 1 - HR24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 3C - SOPOK - RITAX - ROUSY).
ROUSY 3D	4 000 ft QNH or when	(FL 70 when QNH is below 977 hPa) or above if	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L. ATC climb requirements: see below (§ 3.2.2). To be used by four-engine ACFT. CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 3D - SOPOK - RITAX - ROUSY).
CIV 1C	At 700 ft QNH RT HDG 289 to intercept R-278 BUB, at 6.7 DME BUB LT to intercept R-045 CIV INBD to CIV.		Not AVBL during weekends from 0500 to 2159. ATC climb requirements: see below (§ 3.2.2). M617 southbound, MAX FL 170.

			Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA.
			N872 and UN872 southbound, only for TFC flightplanned ABV FL 195.
CIV 1E	Climb straight ahead. At 1 700 ft QNH, LT direct to		Only AVBL during weekends from 0500 to 2159.
	CIV.		ATC climb requirements: see <u>below (§</u> 3.2.2).
			M617 southbound, MAX FL 170.
			Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA.
			N872 and UN872 southbound, only for TFC flightplanned ABV FL 195.
KOK 2C	At 700 ft QNH RT HDG 292	Cross 7.0 DME BUB at or	L607 westbound.
	to intercept R-281 BUB to KOK.	above 1 700 ft QNH.	
DENUT 3C		Cross R-281 BUB at or	(U)L610 westbound.
	intercept R-309 HUL to DENUT.	above 1 700 π QNH.	For TFC overflying London TMA with requested FL above FL 245.
			For TFC DEST EGKK, EGHH and EGHI.
HELEN 3C	At 700 ft QNH RT to intercept R-316 HUL to HELEN.		For TFC INBD London TMA except DEST EGKK, EGHH and EGHI: route connection HELEN - COA.
			For TFC overflying London TMA with requested FL below FL 245: route connection HELEN - COA.
			For TFC via L745 intending to leave Amsterdam FIR via RAVLO, MIMVA or GODOS: route connection HELEN - COA - TULIP.
			For TFC DEST EHAM: route connection HELEN - HSD.
NIK 2C	At 700 ft QNH RT direct to NIK.	Cross R-281 BUB at or above 1 700 ft QNH.	Only AVBL from 0500 to 2159 for DEP RWY 25R and H24 for DEP RWY 25L.
			M624 northbound.
			Not to be used by TFC DEST EHAM.
ELSIK 2C	At 700 ft QNH RT direct to BUN, ELSIK next.	Cross R-281 BUB at or above 1 700 ft QNH.	L179 eastbound.
	BON, ELSIN HEXL	above 1700 it QNH.	To be used when adequate MIL airspaces are AVBL for GAT.
			To be used by all TFC at ATC discretion. Pilots unable to comply with the procedure shall advise ATC and expect ELSIK 2D.
ELSIK 2D	· ·	Cross R-281 BUB at or	L179 eastbound.
	NIK, ELSIK next.	above 1 700 ft QNH.	To be used when adequate MIL airspaces are AVBL for GAT.
			To be used at ATC discretion.

RWY 25R ONLY

Designator	Route		Remarks
	Lateral	Vertical	
LNO 2C	_	Cross R-045 HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if instructed by ATC.	AVBL from 0500 to 2159. For TFC requesting a cruising or initial FL below FL 195. To be used by single, two and three-engine ACFT. May be used by four-engine ACFT noise
			certificated according to <i>ICAO Annex 16</i> Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID.
LNO 3Z	to intercept R-045 CIV. Do	by ATC.	AVBL from 2200 to 0459. For TFC requesting a cruising or initial FL below FL 195.
SPI 2C	1 700 ft QNH LT to intercept		AVBL from 0500 to 2159. To be used by single, two and three-engine ACFT. May be used by four-engine ACFT noise certificated according to <i>ICAO Annex 16</i> Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID.
SPI 4Z	to intercept R-045 CIV. Do	by ATC.	AVBL from 2200 to 0459. ATC climb requirements: see below (§ 3.2.2).
SOPOK 4Z	to intercept R-045 CIV. Do	instructed by ATC.	
PITES 3Z	to intercept R-045 CIV. Do	instructed by ATC.	

ROUSY 3Z		instructed by ATC.	SOPOK 4Z - SOPOK - RITAX - DIK - PITES). Only when UM150 between DIK and PITES is AVBL (alternative route: SOPOK 2L - SOPOK - ETENO). AVBL from 2200 to 0459. ATC climb requirements: see below (§ 3.2.2). CDR 1 - H24. TEMPO CLSD on ATC instructions due to MIL requirements (alternative route: SOPOK 4Z - SOPOK - RITAX - ROUSY).
CIV 7D	At 3.0 DME BUB (THR 07L) fly TR 253. At 6.0 DME BUB LT to TR 208 to intercept R-055 CIV INBD to CIV. Sequence of waypoints: RWL07 [A400+; R] - BR045 - BR009 - CIV (see note)		AVBL from 2200 to 0459. ATC climb requirements: see below (§ 3.2.2). M617 southbound, MAX FL 170. Y50 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA. N872 and UN872 southbound, only for TFC flightplanned ABV FL 195. To be used by ACFT types listed in EBBR AD 2.21, § 4.5. Note: the additional sequence of waypoints is published for database coding purposes only. The route must be considered as an overlay of the conventional route. In order to remain within acceptable limits, pilots shall cross-check the navigation accuracy using the conventional navigation displays. Turn anticipation is mandatory for all waypoints except for those in bold, which shall be overflown. The waypoints identified by a BR0 suffix are not displayed to ATC.
NIK 4Z	At 700 ft QNH or 3.0 DME BUB, whichever is later, RT on TR 360. LT to intercept R-141 NIK INBD to NIK.	Cross R-281 BUB at or above 1 700 ft QNH.	AVBL from 2200 to 0459. Not to be used by TFC DEST EHAM.

Note: Waypoint coordinates

	LAT	LONG
RWR25	505441.5N	0042957.7E
RWL07	505400.1N	0042734.3E
BR009	504645.6N	0041652.9E
BR045	505247.9N	0042143.7E

RWY 25L ONLY

Designator	Route		Remarks
	Lateral	Vertical	
LNO 2Q		Cross R-045 HUL at FL 60 (FL 70 when QNH is below 977 hPa) or above if	
	IO LINO.	instructed by ATC.	To be used by single, two and three-engine ACFT.
			May be used by four-engine ACFT noise certificated according to <i>ICAO Annex 16</i> Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID.
SPI 2Q	intercept R-288 LNO INBD,	(FL 70 when QNH is below	To be used by single, two and three-engine ACFT.
	RT to intercept R-296 SPI INBD to SPI.	977 hPa) or above if instructed by ATC.	May be used by four-engine ACFT noise certificated according to <i>ICAO Annex 16</i> Chapter 3 / FAR Part 36 Stage 3 and whose performances permit to adhere to the SID.
CIV 2Q	Climb straight ahead. At 7.0		AVBL from 2200 to 0459.
	DME BUB LT to TR 208 to intercept R-055 CIV INBD to CIV.		ATC climb requirements: see <u>below (§</u> 3.2.2).
			M617 southbound, MAX FL 170.
			N872 southbound, MAX FL 190, compulsory for TFC DEST Paris TMA.
			T172 and UN872 southbound, only for TFC flightplanned above FL 195.
			To be used by ACFT types listed in <u>EBBR AD 2.21, § 4.5</u> .

3.2.2 CLIMB REQUIREMENTS

All traffic shall initially climb to FL 60, unless instructed otherwise by ATC. Brussels APP or Brussels ACC will allocate a higher level as soon as possible.

Following additional requirements apply:

- Traffic proceeding via SOPOK ETENO LIRSU and planned above FL 245 shall cross BULUX at FL 170 MNM and ETENO at FL 250 MNM.
- Traffic proceeding via REMBA RITAX shall cross REMBA at FL 100 MNM.
- Traffic proceeding via RITAX ROUSY or RITAX PITES and planned above FL 245 shall cross RITAX or abeam at FL 250 MNM.
- · Traffic proceeding via CIV MEDIL and planned above FL 265 shall cross MEDIL at FL 210 MNM.

Aircraft unable to meet these requirements shall advise ATC when requesting start-up clearance, allowing for appropriate coordination to be made with adjacent ATS units in due time.

4 LOW VISIBILITY PROCEDURES

4.1 FACILITIES AND EQUIPMENT AVAILABLE

4.1.1 RUNWAYS

RWY 25L and 25R are equipped with ILS and are approved for CAT II and III. Following RVR minima apply:

- · CAT II (RWY 25L): below 550 m to 300 m
- · CAT II (RWY 25R): below 800 m to 300 m
- · CAT III: below 300 m to 150 m

150 m RVR has been fixed as minimum RVR value by the Belgian CAA. Pilots requesting to land with RVR below 150 m will be advised that they are below minimum, but will not be refused landing clearance.

The runway exits are equipped with alternating green and yellow centre line lights within the ILS sensitive areas. Landing aircraft should leave this area as soon as possible.

In order to provide adequate protection of the ILS system, no vehicle or aircraft shall infringe the ILS sensitive areas when an arriving aircraft is within 2 NM from touchdown and has not completed its landing run.

Departing aircraft are required to use the following CAT II/III holding points at RWY 25R: B1 (backtrack not allowed), P3 or A1. Intersection take-offs are not allowed except when entering RWY 25R via B1 or A1.

Guided take-off is not available.

4.1.2 TAXIWAYS

Taxi is restricted to the taxiways equipped with centre line lights. Standard routes are established for departing and arriving aircraft (see chart <u>AD 2.EBBR-MISC.03</u>). After receiving taxi clearance, aircraft shall proceed only when a green centre line path is illuminated, except on TWY N6-A1.

Aircraft taxiing north of pier A for departure from RWY 25R shall use TWY INN-2, INN-3 and INN-4 to avoid infringing the ILS sensitive area.

When RVR at TDZ falls below 400 m, a follow-me car is available on stand-by to assist pilots during taxi upon request.

ATC may use ground surveillance information to assist in monitoring aircraft and vehicles on the manoeuvring area. Any ground surveillance derived information is however to be considered as advice only.

4.1.3 COMMUNICATIONS

Pilots will be informed by ATIS or ATC when LVP are in progress. The ATIS message will contain the phrase "LOW VISIBILITY PROCEDURES IN PROGRESS" and will also provide details of any unavailability of equipment relevant to LVP.

Pilots will be informed by ATC when LVP are terminated.

4.2 CRITERIA FOR INITATION AND TERMINATION OF LVP

The preparation phase will start when visibility falls below 1 500 m and/or ceiling is at or below 300 ft, and CAT II/III operations are expected. The operations phase will start when RVR falls below 800 m or ceiling is at or below 200 ft.

LVP will be terminated when RVR is greater than 800 m and ceiling is higher than 200 ft, and a continuing improvement in these conditions is expected.

4.3 OTHER INFORMATION

When LVP are in operation, arriving aircraft will be vectored to intercept the ILS at least 10 NM from touchdown. ATC will provide suitable spacing between arrivals to achieve sufficient protection of the ILS sensitive area (see § 4.1.1 above). This spacing will be in the order of 8 NM in case of CAT II operations and 10 NM during CAT III operations.

The traffic manager will determine the applicable traffic acceptance rate according to the circumstances.

CAT II and CAT III approach practice during normal operations is allowed, but pilots should be aware that due to high traffic intensity, protection of the ILS sensitive area cannot be guaranteed and fluctuations in the ILS signal may occur.

5 VFR FLIGHTS

5.1 GENERAL

Pilots flying to/from EBBR or crossing Brussels CTR or TMA shall adhere strictly to all published procedures and ATC instructions. Non-adherence can cause unacceptable supplementary workload for ATC and may result in delays for the flights concerned. In any case, IFR traffic will have priority over VFR traffic.

VFR traffic (state aircraft and helicopter flights excluded) shall not enter Brussels CTR or TMA during following periods:

- · from MON to FRI: 0700-0900, 1200-1300 and 1600-1900
- on SAT: 0700-0800
- · on SUN: 1600-1900.

Local VFR flights at night within the aerodrome traffic circuit are prohibited.

The published routes are compulsory. All routes are allocated at ATC discretion according to the traffic situation. Pilots unable to comply shall contact ATC immediately to request an alternative route.

To enhance the see-and-avoid concept, VFR flights operating in Brussels CTR or TMA are advised to switch on their navigation, landing and anti-collision lights, and they shall keep a sharp look-out for other aircraft.

In order to improve radar detection, pilots flying transponder equipped aircraft shall set code 7000 in mode A/C. Unless another code has been previously allocated, Brussels TWR will allocate a code from series 6301-6313.

5.2 VISUAL REPORTING POINTS

VFR traffic shall only use following reporting points:

Abbreviation	Name	Associated landmark	Position
AM	Abeam Mechelen	see AD 2.EBBR-VAC.01	510117N 0043023E
AT	Atomium	monument	505342N 0042029E
BE	Bertem	radar station	505226N 0043659E
CA	Brucargo	cargo terminal	505420N 0042726E
GB	Groot-Bijgaarden	motorway intersection R0-E40	505231N 0041626E
НО	Haasrode	intersection motorway E40 and road N25	505041N 0044302E
KH	Kampenhout-Sas	intersection canal Leuven-Dijle and road N21	505720N 0043537E
LO	Waterloo	monument	504042N 0042417E
ME	Mechelen	water tower	510039N 0042749E
NO	Nossegem	intersection motorway E40 and road N227	505210N 0043038E
PU	Peutie	pylon	505555N 0042748E
SH	South Herent	west of KBC building	505331N 0044027E
TE	Ternat	castle	505216N 0041014E
WA	Wavre	radio and television mast	504426N 0043512E
ZB	Forêt de Soignes/Zoniënbos	motorway intersection R0-E411	504803N 0042754E

5.3 INBOUND TRAFFIC

5.3.1 COMMUNICATIONS

Pilots intending to enter Brussels CTR shall contact Brussels TWR on FREQ 120.775 MHz (entry via AT, GB or ME) or 118.600 MHz (entry via HO, LO or WA).

Pilots entering Brussels TMA shall contact Brussels Departure (entry between 2 000 ft AMSL and FL 60) or Brussels ACC (entry above FL 60).

All VFR flights with destination EBBR shall report their position and obtain an ATC clearance before entering the Brussels CTA, TMA or CTR. When practicable, the request shall be made at least 5 MIN prior to entry.

5.3.2 ROUTES

RWY 20 AND 25L/R IN USE

Arrivals from the north	Join Brussels CTR via ME and proceed to PU. Traffic shall remain RIGHT of motorway E19 and enter the aerodrome traffic circuit according to ATC instructions.
Arrivals from the south	Join Brussels CTR via WA or LO and proceed to ZB, NO next. Traffic shall remain RIGHT of motorways E411/R0, and enter the aerodrome traffic circuit according to ATC instructions.

RWY 02 AND 07L/R IN USE

Arrivals from the west	Join Brussels CTR via TE and proceed to GB, AT and CA next. Traffic shall remain RIGHT of motorway E40 and enter the aerodrome traffic circuit according to ATC instructions.
Arrivals from the east	Join Brussels CTR via HO and proceed to BE, NO next. Traffic shall remain RIGHT of motorway E40, and enter the aerodrome traffic circuit according to ATC instructions.

Crossing traffic shall follow the routes indicated above and proceed in accordance with ATC instructions.

Crossing traffic with destination EBGB will not be allowed to route directly to EBGB, but will be instructed to vacate Brussels CTR via the relevant outbound routes indicated below.

Aircraft crossing Brussels CTR east of EBBR may be instructed by ATC to hold over reporting point SH (northbound traffic) or KH (southbound traffic), awaiting clearance to cross the final approach path of RWY 25L/R.

5.4 OUTBOUND TRAFFIC

5.4.1 COMMUNICATIONS

Pilots departing from EBBR shall request start-up clearance from Brussels Delivery. The clearance will be issued depending on traffic density.

Together with start-up clearance, pilots will receive instructions regarding the transponder setting, the outbound routes to be expected and the ATS unit(s) to be contacted with the associated frequency.

Departing traffic with destination EBGB will not be allowed to route directly to EBGB, but will be instructed to vacate Brussels CTR via the relevant outbound routes indicated above.

5.4.2 ROUTES

RWY 20 AND 25L/R IN USE

Departures to the north	After take-off, right turn to PU and proceed via AM. Traffic shall remain RIGHT of motorway E19 and leave Brussels CTR according to ATC instructions.
Departures to the south	After take-off, left turn to NO and proceed via ZB to LO or WA. Traffic shall remain RIGHT of motorways R0/E411 and leave Brussels CTR according to ATC instructions.

RWY 02 AND 07L/R IN USE

Departures to the west	After take-off, left turn to CA and proceed via AT, GB and TE. Traffic shall remain RIGHT of motorway E40 and leave Brussels CTR according to ATC instructions.
Departures to the east	After take-off, right turn to NO or abeam and proceed via BE and HO. Traffic shall remain RIGHT of motorway E40 and leave Brussels CTR according to ATC instructions.

6 RADIO COMMUNICATION FAILURE

If an aircraft does not succeed in landing within the 30 MIN normally allowed for approach and landing, it shall leave Brussels CTR and TMA on R-290 BUB at 2 200 ft QNH or below, and land at the first suitable aerodrome where the weather conditions allow a visual approach and landing.

See also ENR 1.1, § 3.3.5.3.

EBBR AD 2.23 ADDITIONAL INFORMATION

1 ATIS

ATIS messages serving inbound and outbound traffic are broadcasted H24 (see EBBR AD 2.18).

The messages contain following elements in the order as listed:

Item	ATIS	Start of expression
Aerodrome name	BRUNAT	Brussels
Alphabetical designator	INFO (A till Z)	Information (alfa - zulu)
Time of observation	HHMM	
Type of approach to be expected	TYP APCH	Expecting vectoring
Runway in use for landing	LDG RWY	Landing runway
Runway in use for take-off	TKOF RWY	Take-off runway

Braking action	BA (TDZ)	Braking action touchdown
	MID	Mid-point
	END	Stop-end
Operational status	OPS STS	Operational status
Surface wind, direction and speed (including significant variations)	WIND	Wind
Visibility	VIS	Visibility
RVR	RVR (RWY)	Runway visual range on runway
	TDZ / m	touchdown / metres
	MID / m	mid-point / metres
	END / m	stop-end / metres
Present weather	WX	Present weather
Cloud base	BASE	Cloud base
Air temperature	Т	Temperature
Dew point temperature	DP	Dew point
Altimeter setting	QNH	QNH
Transition level	TL	Transition level
Recent weather	RE	Recent weather
Wind shear	WS	Windshear
Landing forecast TREND	TREND	Trend

When rapidly changing weather conditions make it inadvisable to include a weather report in the ATIS broadcast, the weather data are omitted and replaced by the phrase "MET REPORT OMITTED DUE TO RAPID CHANGES". The omitted data can be requested from ATC.

Pilots are requested to listen to the ATIS broadcast prior to the first contact with ATS. When establishing communication with the relevant ATS unit, the pilot shall acknowledge receipt of ATIS message with the phrase "INFORMATION ... (alphabetical designator) RECEIVED". ATS will confirm the validity of the received alphabetical designator. If the designator has changed meanwhile, only the actually valid designator will be given.

2 LIGHTNING PROCEDURE

Lightning procedure in progress will be announced by ATIS.

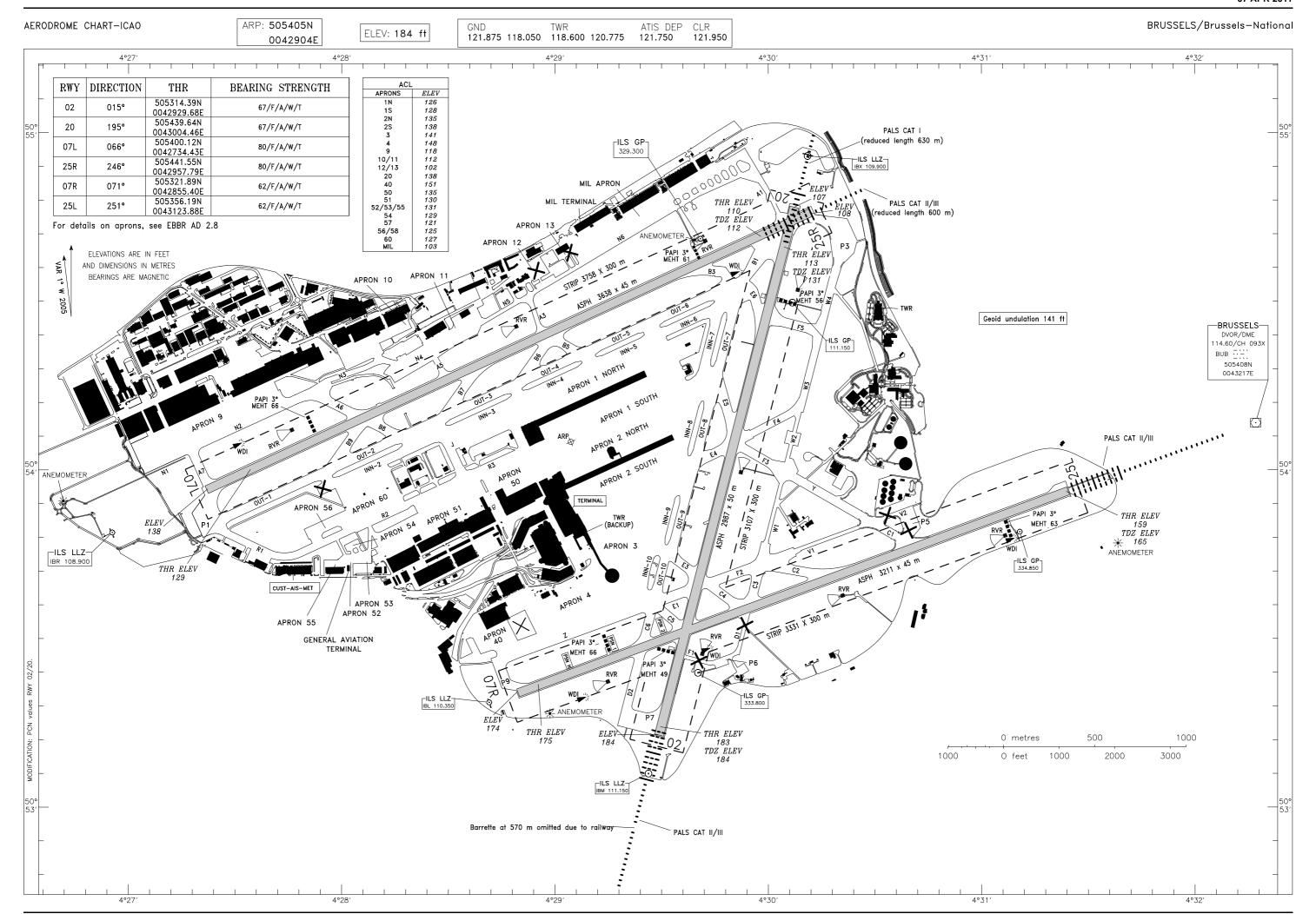
When lightning procedure is activated, some handling activities may be temporarily suspended.

EBBR AD 2.24 CHARTS RELATED TO EBBR

1.	Aerodrome Chart - ICAO	AD2 EBBR ADC.01					
		AD2 EBBR ADC.02					
2.	Aerodrome Ground Movement Chart - ICAO	AD2 EBBR GMC.01					
- 3.	Appendix to Aerodrome Ground Movement Chart - ICAO	AD2 EBBR GMC.02a					
		AD2 EBBR GMC.02b					
		AD2 EBBR GMC.02c					
4.	Aircraft Parking Docking Chart - ICAO	AD2 EBBR APDC.01					
		AD2 EBBR APDC.02					
5.	Instrumental Meteorological Installations	AD2 EBBR MISC.02					
6.	Aerodrome Ground Movement Responsibilities	AD2 EBBR MISC.05					
7.	Aerodrome Obstacle Chart - ICAO (Type A - Operating limitations)						
7.1.	RWY 02/20	AD2 EBBR AOC.01					
7.2.	RWY 07L/25R	AD2 EBBR AOC.02					
7.3.	RWY 07R/25L	AD2 EBBR AOC.03					
8.	Aerodrome Obstacle Chart (Type B)	AD2 EBBR AOC.04					
9.	Precision Approach Terrain Chart - ICAO						
9.1.	RWY 25L	AD2 EBBR PATC.01					
9.2.	RWY 25R	AD2 EBBR PATC.02					
10.	Low Visibility Procedures Chart	AD2 EBBR MISC.03					

11.	ATC Surveillance Minimum Altitude Chart - ICAO	AD2 EBBR ATCSMAC.01
12.	Standard Arrival Chart - Instrument - ICAO	AD2 EBBR STAR.01
13.	Standard Departure Chart - Instrument - ICAO	
13.1	RWY 02	AD2 EBBR SID.01
13.2	RWY 07L	AD2 EBBR SID.02
13.3	RWY 07R	AD2 EBBR SID.03
13.4	RWY 20	AD2 EBBR SID.04
13.5	RWY 25L	AD2 EBBR SID.05
13.6	RWY 25R (0500 - 2159)	AD2 EBBR SID.06
13.7	RWY 25R (2200 - 0459)	AD 2 EBBR SID.07
14.	Instrument Approach Chart - ICAO	
14.1.	ILS or LLZ RWY 25R (IAF FLO)	AD2 EBBR IAC.01
14.2.	ILS or LLZ RWY 25R (IAF ANT/KERKY)	AD2 EBBR IAC.02
14.3.	ILS or LLZ RWY 25L (IAF FLO)	AD2 EBBR IAC.03
14.4.	ILS or LLZ RWY 25L (IAF KERKY/ANT)	AD2 EBBR IAC.04
14.5.	VOR RWY 25L (IAF KERKY/ANT)	AD2 EBBR IAC.05
14.6.	VOR RWY 25L (IAF FLO)	AD2 EBBR IAC.06
14.7.	ILS or LLZ RWY 02	AD2 EBBR IAC.07
14.8.	VOR RWY 07R	AD2 EBBR IAC.08
14.9.	ILS or LLZ RWY 20	AD2 EBBR IAC.09
14.10.	VOR RWY 07L	AD2 EBBR IAC.10
15.	Visual Approach Chart - ICAO	AD2 EBBR VAC.01
16.	"Area Requiring Special Attention" Chart	AD2 EBBR MISC.06





AERODROME CHART-ICAO APPENDIX1: RUNWAY MARKING AND LIGHT AIDS BRUSSELS/Brussels—National MARKING AIDS RWY 02 / 20 AND EXIT TWY LIGHTING AIDS RWY 02 / 20 AND EXIT TWY MARKING AIDS RWY 07L / 25R AND EXIT TWY LIGHTING AIDS RWY 07L / 25R AND EXIT TWY A5 A3. MARKING AIDS RWY 07R / 25L AND EXIT TWY LIGHTING AIDS RWY 07R / 25L AND EXIT TWY LEGEND D1 RWY-HOLDING PSN (Pattern A) шш RWY-HOLDING PSN (Pattern B) STOP BAR RWY END and THR >•< •< RWY END THR DISPLACED



APPENDIX TO AERODROME GROUND MOVEMENT CHART - ICAO

TAXIWAYS

DESIG- NATOR	WIDTH (m)	BEARING STRENGTH	EDGE LIGHTS	EDGE LIGHTS ON THE CURVES ONLY	CENTRE LINE LIGHTS	REMARKS
1	2	3	4	5	6	7
A1	20	PCN 35/F/A/W/U	•	-	-	
А3	25	PCN 56/F/A/W/U	•	-	-	
A5	30	PCN 56/F/A/W/U	•	-	-	
A6	30	PCN 120/R/A/W/T	•	-	•	
A7	30	PCN 120/R/A/W/T	•	-	•	
B1	35	PCN 120/F/A/W/T	•	-	•	
В3	30	PCN 56/F/A/W/U	•	-	•	
B5	30	PCN 56/F/A/W/U	-	•	•	
В6	30	PCN 92/F/A/W/T	-	•	•	Rapid exit TWY
В7	30	PCN 93/F/A/W/T	-	•	•	Rapid exit TWY
B8	30	PCN 120/F/A/W/T	-	•	•	
В9	30	PCN 83/F/A/W/T	-	•	•	Rapid exit TWY
C1	44	PCN 56/F/A/W/U	•	-	-	
C2	30	PCN 120/F/A/W/T	•	-	• (*)	Rapid exit TWY
						(*) Unidirectional
С3	30	PCN 56/F/A/W/U	•	-	-	
C4	30	PCN 56/F/A/W/U	•	-	• (*)	(*) Unidirectional
C5	30	PCN 56/F/A/W/U	•	-	• (*)	(*) Unidirectional
C6	30	PCN 120/F/A/W/T	•	-	•	
D1	-	-	-	-	-	TWY not AVBL
D2	30	PCN 120/F/A/W/T	•	-	•	
E1	30	PCN 56/F/A/W/U	•	-	•	
E3	30	PCN 56/F/A/W/U	•	-	•	
E4	30	PCN 66/F/A/W/T	-	•	•	
E5	30	PCN 75/F/A/W/T	-	•	•	Rapid exit TWY
E6	35	PCN 120/F/A/W/T	•	-	•	
F1	-	-	-	-	-	TWY not AVBL
F2	30	PCN 56/F/A/W/U	•	-	•	
F3	44	PCN 56/F/A/W/U	•	-	-	
F4	25	PCN 70/F/A/W/T	•	-	•	
F5	30	PCN 120/F/A/W/T	•	-	•	



DESIG- NATOR	WIDTH (m)	BEARING STRENGTH	EDGE LIGHTS	EDGE LIGHTS ON THE CURVES ONLY	CENTRE LINE LIGHTS	REMARKS
1	2	3	4	5	6	7
INN-2	30	PCN 56/F/A/W/U	-	•	•	
INN-3	30	PCN 97/F/A/W/T	-	• (*)	•	(*) On one side
INN-4	30	PCN 85/F/A/W/T	-	• (*)	•	(*) On one side
INN-5	30	PCN 69/F/A/W/T	-	• (*)	•	(*) On one side
INN-6	30	PCN 69/F/A/W/T	-	•	•	
INN-7	30	PCN 100/F/A/W/T	-	•	•	
INN-8	30	PCN 104/F/A/W/T	-	• (*)	•	(*) On one side
INN-9	30	PCN 120/R/A/W/T	-	• (*)	•	(*) On one side
INN-10	30	PCN 120/R/A/W/T	• (*)	-	•	(*) On one side
J	30	PCN 56/F/A/W/U	-	• (*)	•	(*) On one side
К	Apron TWY	PCN 56/R/A/W/U	-	-	•	Wingspan 36 m MAX
М	Apron TWY	PCN 56/R/A/W/U	-	• (*)	•	(*) On one side
N2	30	PCN 117/R/B/W/T	• (*)	-	•	(*) On one side
N3	20	PCN 35/F/A/W/U	• (*)	-	-	Wingspan 36 m MAX
						(*) Only reflectors
N4	20	PCN 35/F/A/W/U	• (*)	-	-	(*) Only reflectors
N5	20	PCN 35/F/A/W/U	• (*)	-	-	Wingspan 52 m MAX
						(*) Only reflectors
N6	20	PCN 35/F/A/W/U	• (*)	-	-	Wingspan 36 m MAX (see note below)
						(see Hote below) (*) Partly on one side
OUT-1	30	PCN 65/F/A/W/T	_	•	•	.,,
OUT-2	30	PCN 79/F/A/W/T	_	•	•	
OUT-3	30	PCN 120/F/A/W/T	_	•	•	
OUT-4	30	PCN 63/F/A/W/T		•	•	
OUT-5	30	PCN 120/F/A/W/T	_	•	•	
OUT-6	30	PCN 120/F/A/W/T	_	•	•	
OUT-7	30	PCN 120/F/A/W/T	-	•	•	
OUT-8	30	PCN 69/F/A/W/T	-	•	•	
OUT-9	30	PCN 120/F/A/W/T	-	•	•	
OUT-10	30	PCN 120/F/A/W/T	•		•	
R1	20	PCN 54/R/C/W/T	•	-	-	Wingspan 45 m MAX
R2	20	PCN 56/R/A/W/U	• (*)	-	•	(*) On one side
						(*) Partly reflectors
R3	20	PCN 56/R/A/W/U	-	• (*)	•	(*) On one side
R4	Apron TWY	PCN 77/R/A/W/T	-	-	•	TWY strip 40 m North
						ACFT code E: DEST Apron 1 South or Apron 2 North only

Note: Aircraft with wingspan exceeding 36 m are allowed to use TWY N6 when taxiing to and from the military apron on their own responsibility.



DESIG- NATOR	WIDTH (m)	BEARING STRENGTH	EDGE LIGHTS	EDGE LIGHTS ON THE CURVES ONLY	CENTRE LINE LIGHTS	REMARKS
1	2	3	4	5	6	7
S	Apron TWY	PCN 77/R/A/W/T	-	-	•	TWY strip 40 m South
						ACFT code E: DEST Apron 1 South or Apron 2 North only
V1	20	PCN 56/F/A/W/U	•	-	-	
V2	-	-	-	-	-	TWY not AVBL
W1	20	PCN 56/R/A/W/U	•	-	• (*)	(*) Partly
W2	20	PCN 56/R/A/W/U	•	-	-	
W3	25	PCN 67/F/A/W/T	•	-	•	
W4	25	PCN 67/F/A/W/T	•	-	•	
Υ	44	PCN 56/F/A/W/U	•	-	-	
Z	30	PCN 120/F/A/W/T	• (*)	-	•	(*) Only reflectors

 $\underline{\textit{Note}}\textsc{:}$ The distance between the axis of taxiways R4 and S is 76 m.

AIRCRAFT STAND TAXILANES

DESIGNA- TOR	BEARING STRENGTH	EDGE LIGHTS	EDGE LIGHTS ON THE CURVES ONLY	CENTRE LINE LIGHTS	REMARKS
1	2	3	4	5	6
Strip 0	PCN 68/R/C/W/T	-	-	•	Wingspan 36 m MAX
Strip 1	PCN 56/R/A/W/U	-	-	-	Wingspan 36 m MAX
Strip 2	PCN 56/R/A/W/U	-	-	-	Wingspan 36 m MAX
Strip 3	PCN 56/R/A/W/U	-	-	-	Wingspan 36 m MAX
Strip 4	PCN 56/R/A/W/U	-	-	-	
N1	PCN 56/R/A/W/U	• (*)	-	•	(*) On one side
Т	PCN 56/R/A/W/U	-	-	•	
U	PCN 56/R/A/W/U	-	-	-	Wingspan 36 m MAX

HOLDING PLATFORMS

DESIGNA- TOR	BEARING STRENGTH	EDGE LIGHTS	EDGE LIGHTS ON THE CURVES ONLY	CENTRE LINE LIGHTS	REMARKS
1	2	3	4	5	6
P1	PCN 120/F/A/W/T	•	-	•	
P3	PCN 77/F/A/W/T	•	-	•	Contains taxilanes W41 and W42
P5	-	-	-	-	Platform not AVBL
P6	-	-	-	-	Platform not AVBL
P7	PCN 120/F/A/W/T	•	-	•	Contains taxilane D22
P9	PCN 120/F/A/W/T	-	-	•	



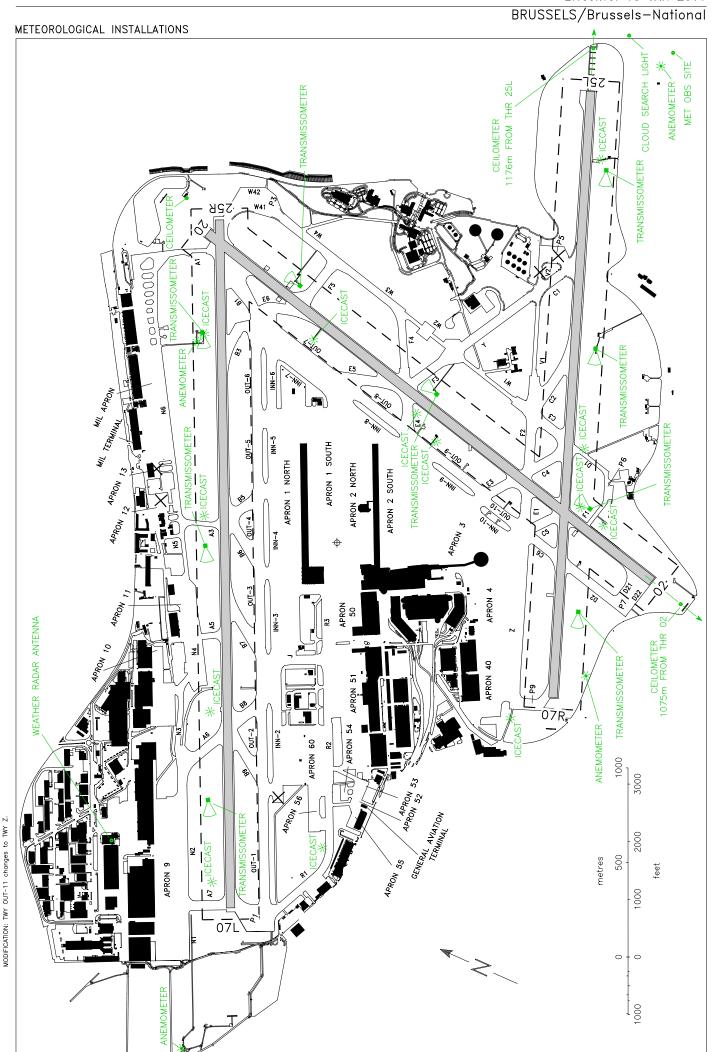


GND 121.875 118.050 CLR 121.950 AIRCRAFT PARKING / BRUSSELS/Brussels-National DOCKING CHART - ICAO 4°27′ 4°28′ 903 42 APRON 9 50° 54' INN-2 updated. 908 and 909 MODIFICATION: New layout and stands 4°27′ 4°28′ VAR 10 W APRON STANDS INS COORDINATES 505414.43N 505413.25N 505412.07N 505411.00N 505409.82N 505408.64N 505407.46N 505405.10N 0042740.07E 0042736.00E 0042731.92E 0042727.22E 0042723.15E 0042719.08E 0042715.01E 0042707.66E 0042703.42E 901 902 903 904 905 906 907 908 505403.88N 909

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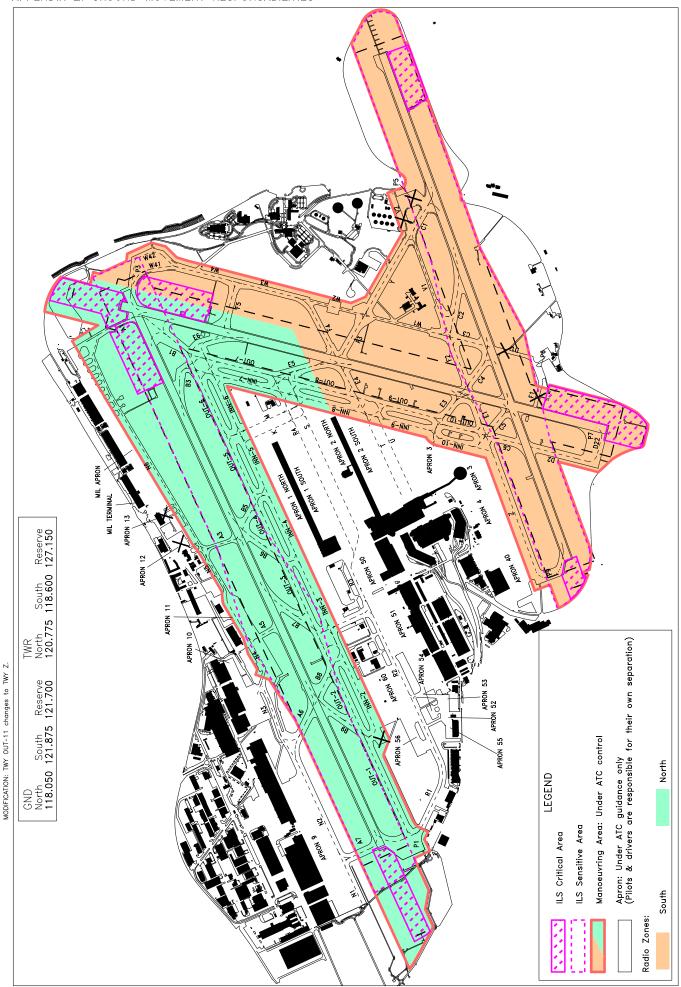
AD2 EBBR MISC.02 Effective: 13 JAN 2011





AERODROME GROUND MOVEMENT CHART-ICAO APPENDIX 2: GROUND MOVEMENT RESPONSABILITIES

BRUSSELS/Brussels-National



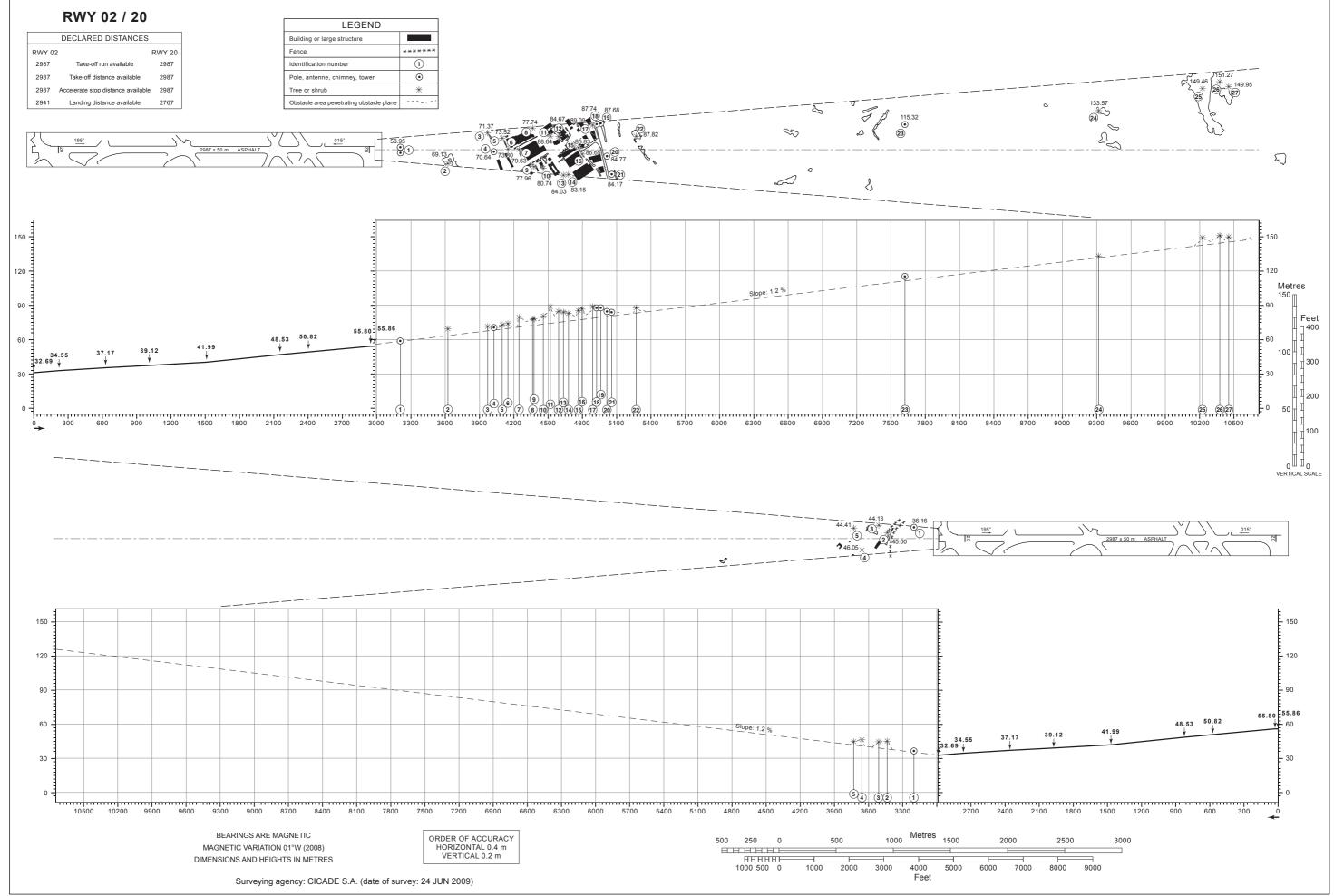
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AERODROME OBSTACLE CHART

TYPE A [OPERATING LIMITATIONS]

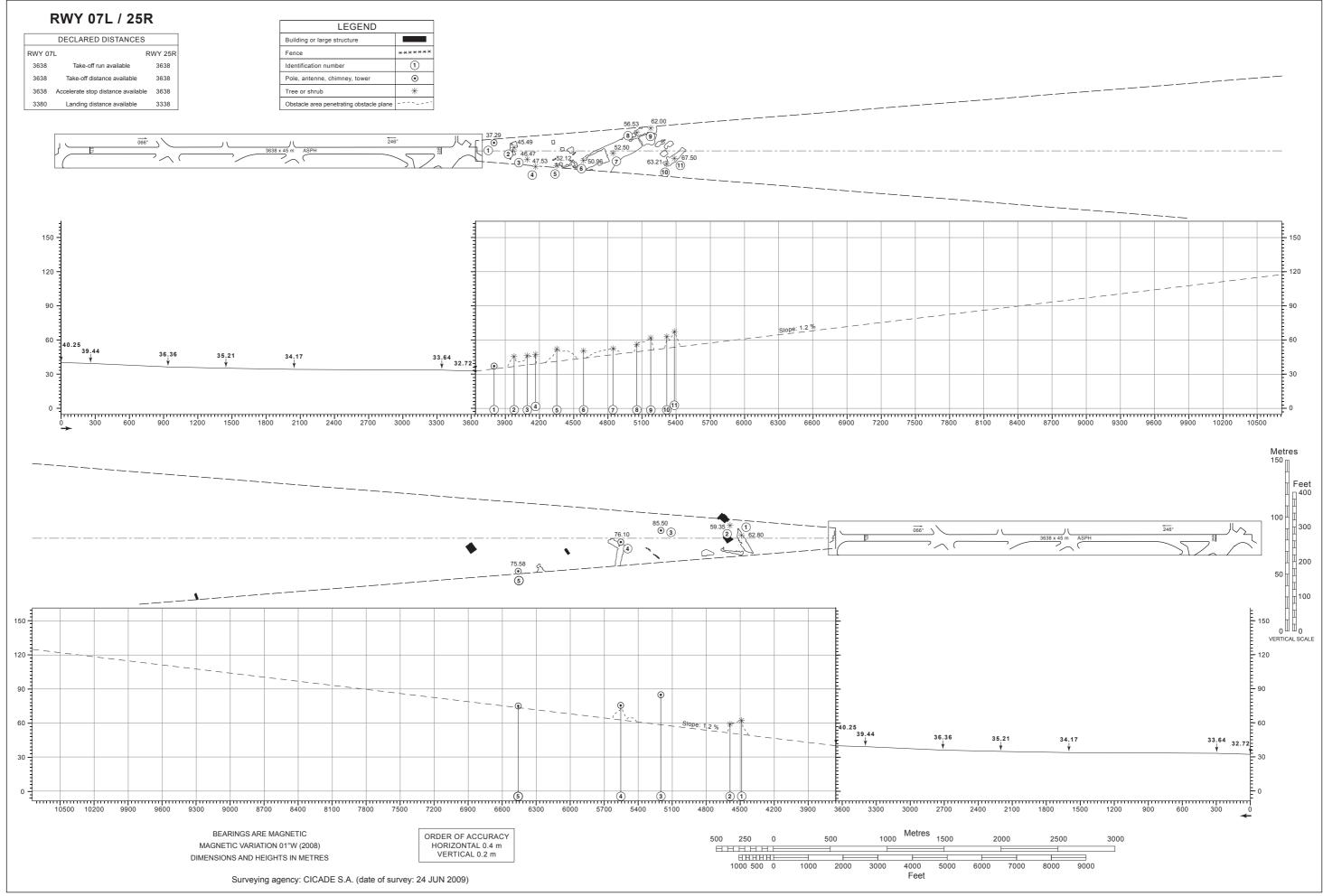
BRUSSELS / Brussels-National



AERODROME OBSTACLE CHART

TYPE A [OPERATING LIMITATIONS]

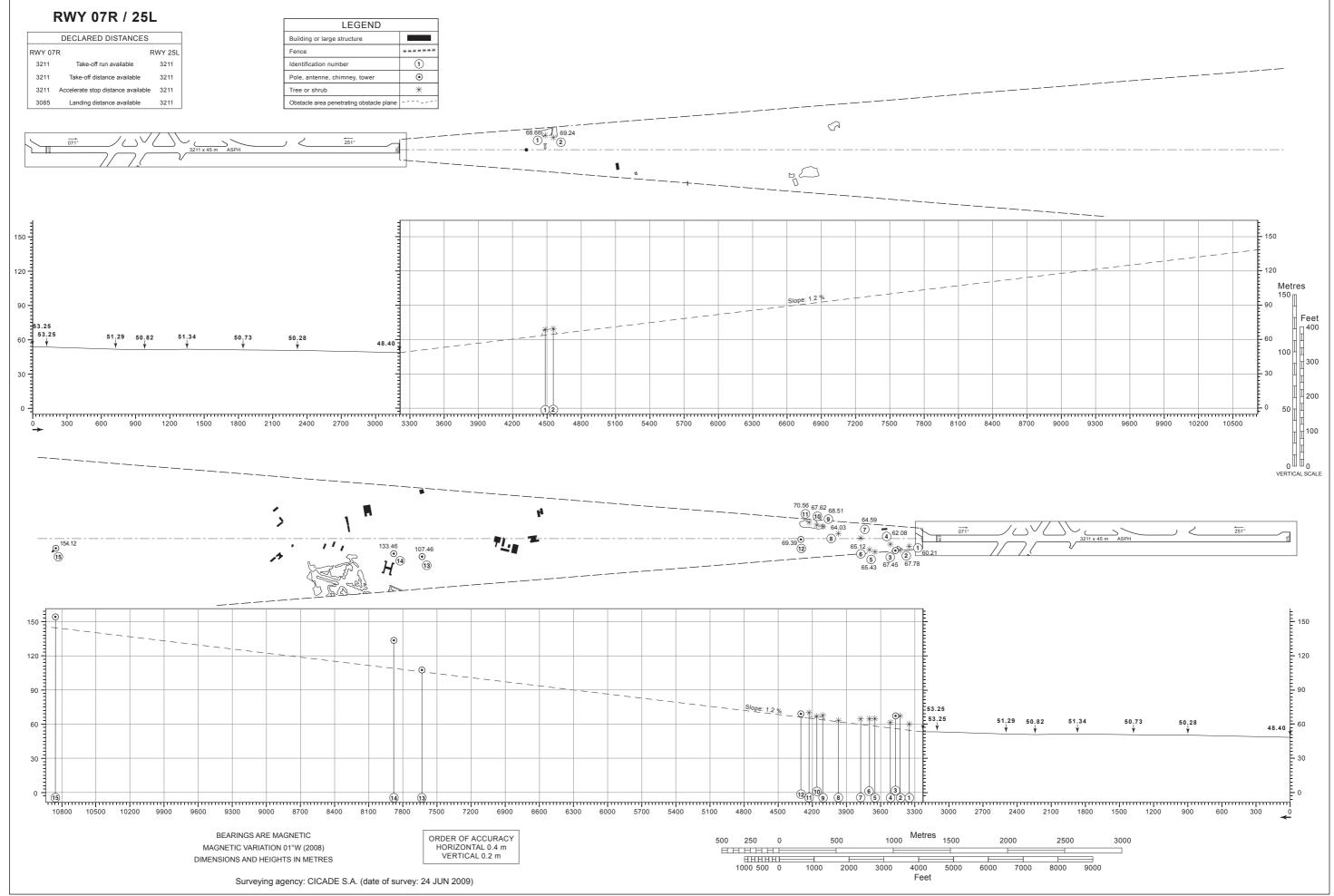
BRUSSELS / Brussels-National

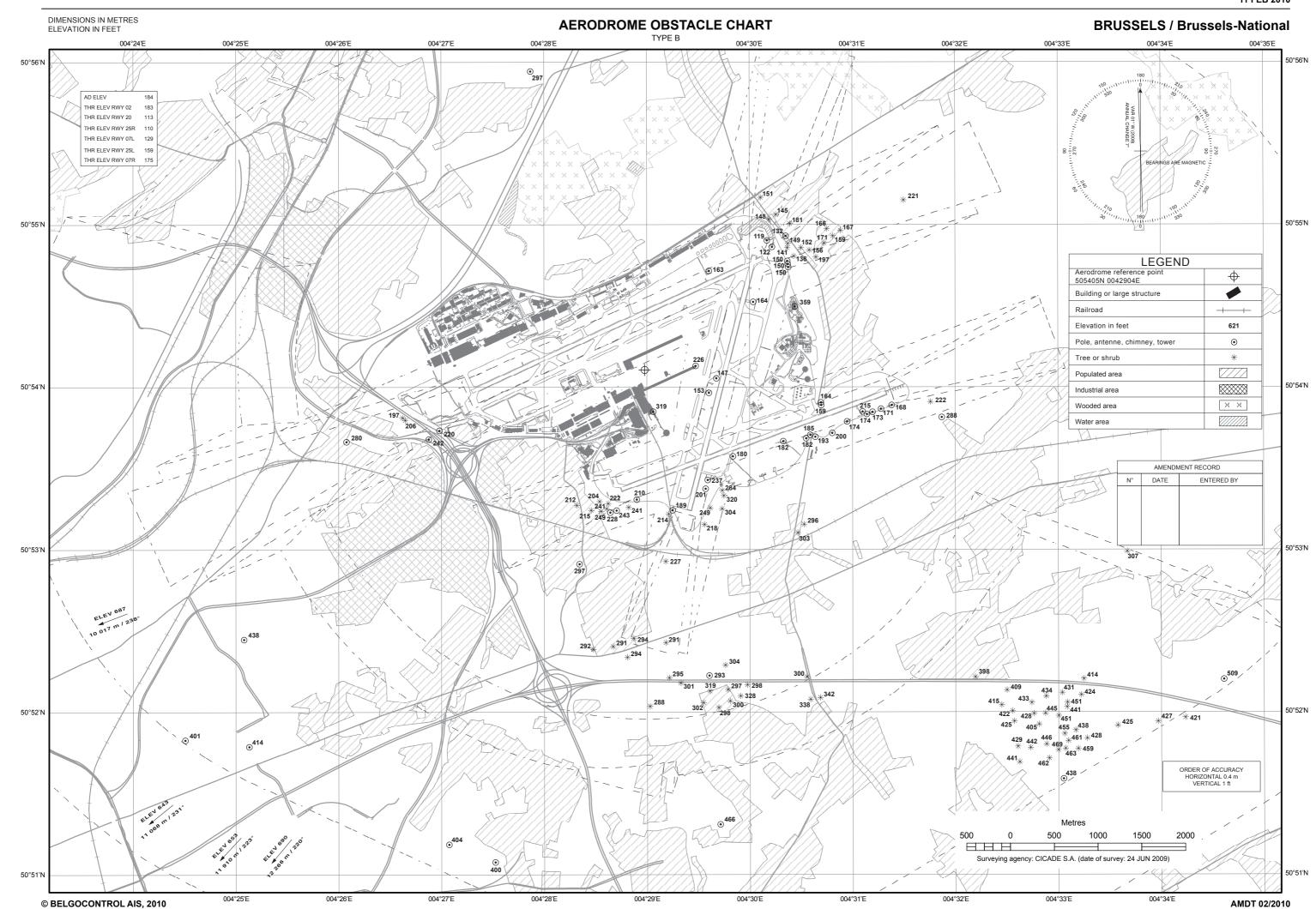


AERODROME OBSTACLE CHART

TYPE A [OPERATING LIMITATIONS]

BRUSSELS / Brussels-National

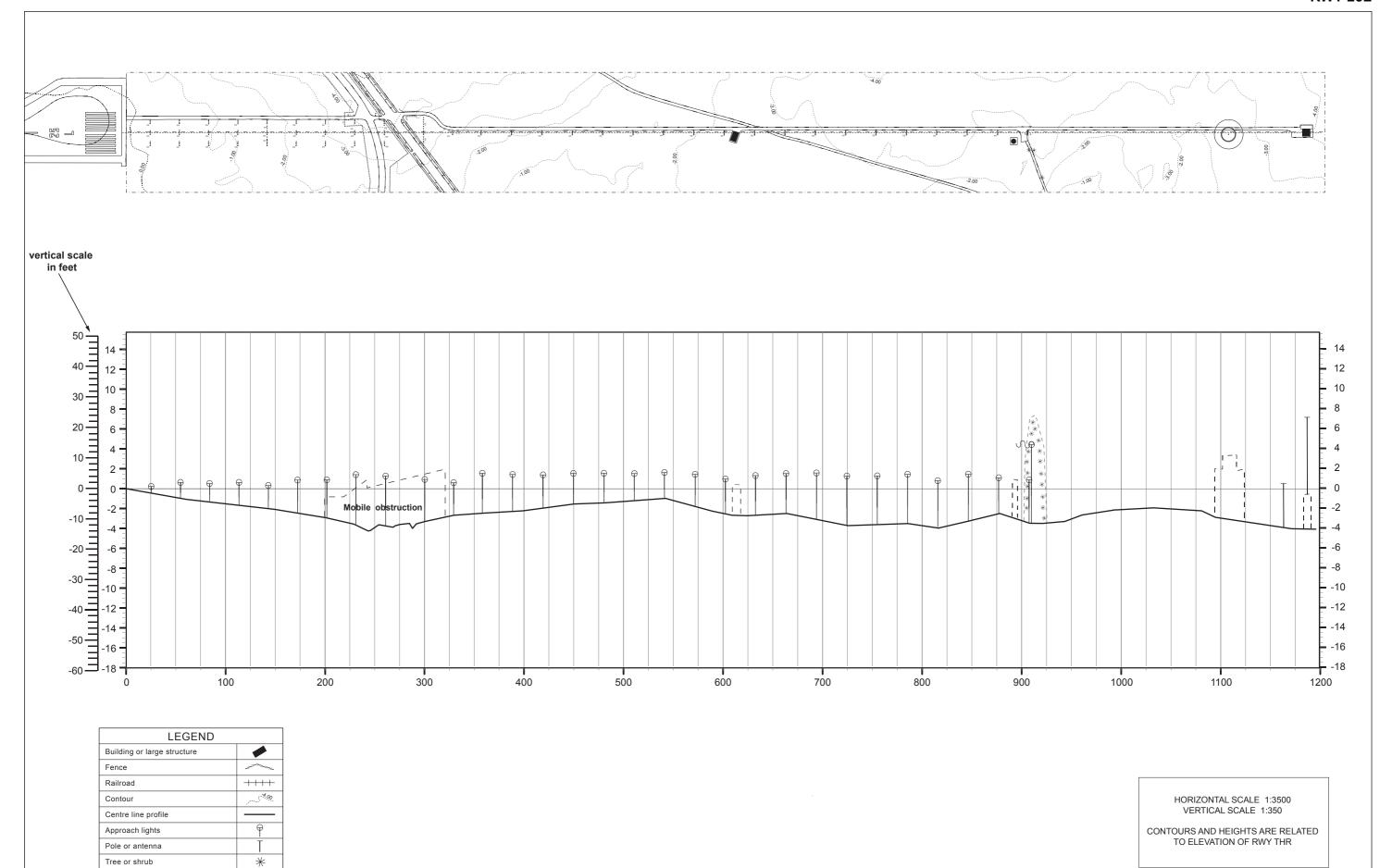




DIMENSIONS IN METRES HEIGHTS IN METRES

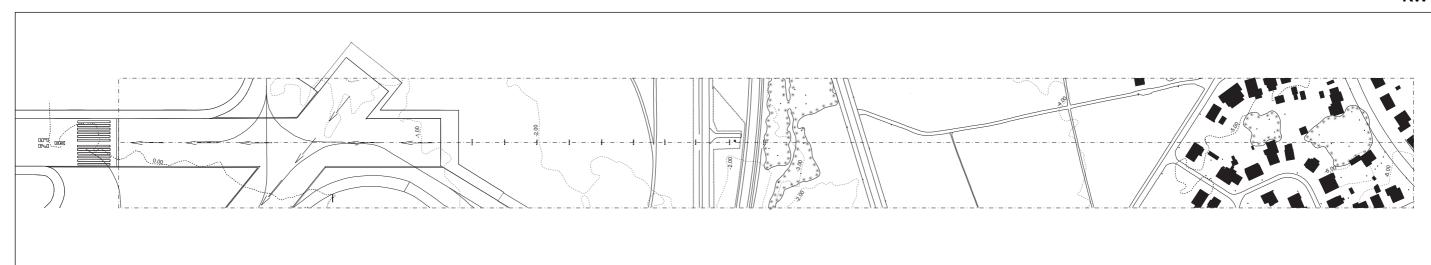
PRECISION APPROACH TERRAIN CHART - ICAO

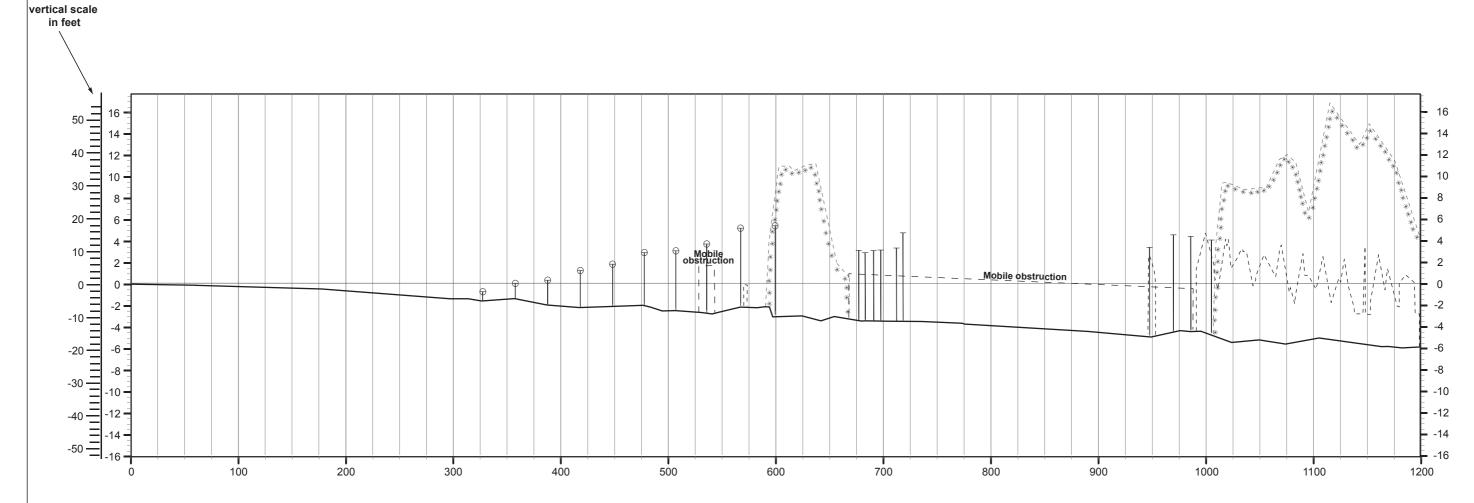
BRUSSELS / Brussels-National RWY 25L



DIMENSIONS IN METRES HEIGHTS IN METRES

PRECISION APPROACH TERRAIN CHART - ICAO





LEGEND	
Building or large structure	
Fence	my miles frage frage
Railroad	++++
Contour	4.00
Centre line profile	
Approach lights	P
Pole or antenna	T
Tree or shrub	*

HORIZONTAL SCALE 1:3500 VERTICAL SCALE 1:350

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RWY THR

Surveying agency: CICADE S.A. (date of survey: 24 JUN 2009)

APPENDIX 3: AERODROME GROUND MOVEMENT CHART-ICAO

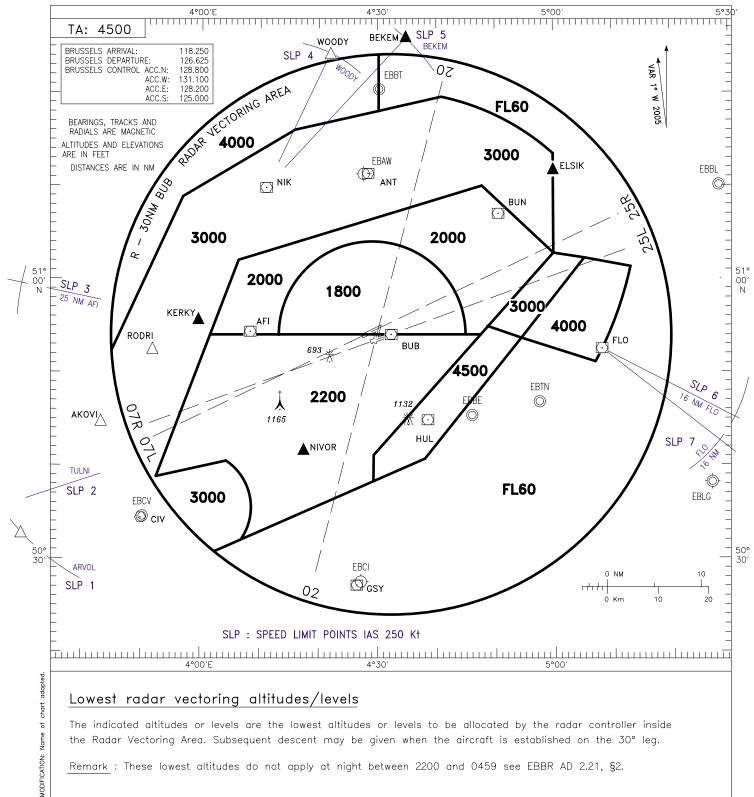
BRUSSELS/Brussels—National



ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD ELEV 184 ft

BRUSSELS/Brussels-National **BELGIUM**



Lowest radar vectoring altitudes/levels

The indicated altitudes or levels are the lowest altitudes or levels to be allocated by the radar controller inside the Radar Vectoring Area. Subsequent descent may be given when the aircraft is established on the 30° leg.

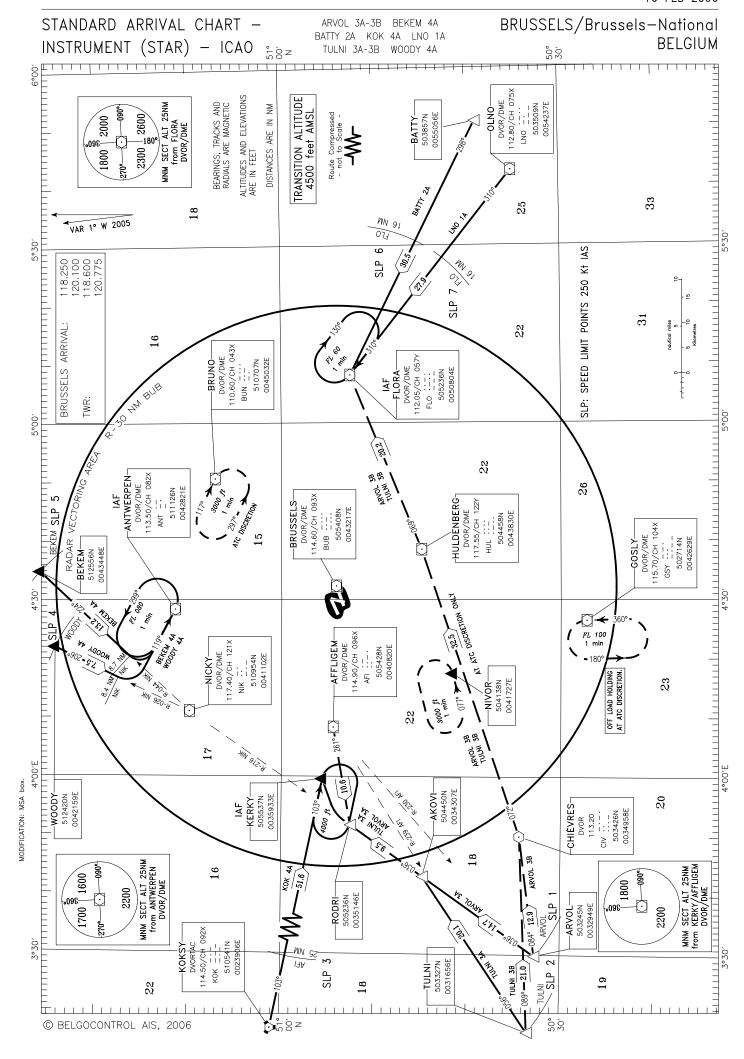
Remark: These lowest altitudes do not apply at night between 2200 and 0459 see EBBR AD 2.21, §2.

Communication failure

Ref ENR 1.1, §3.3.5.3 and EBBR AD 2.22, §4.2.

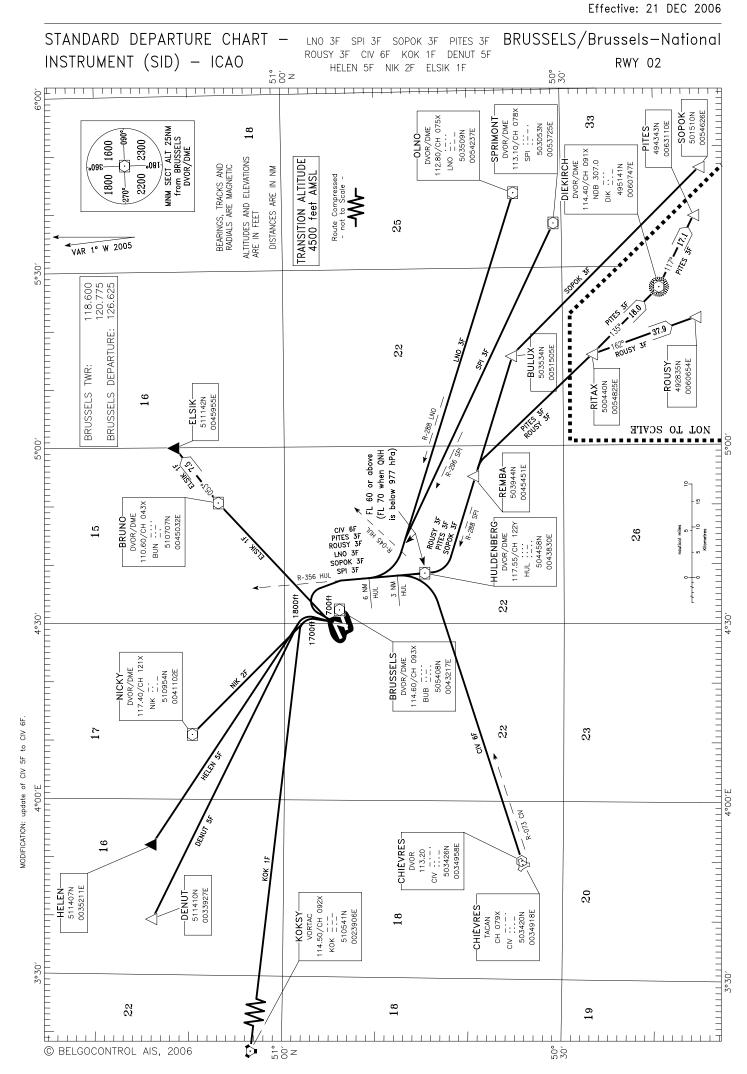
If a pilot under radar control is being vectored away - without limitation as to time or geographical reference from the route last confirmed by him and is experiencing radiocommunication failure, he shall set the SSR radiofailure code and return on the shortest way to the route according to the current flightplan.



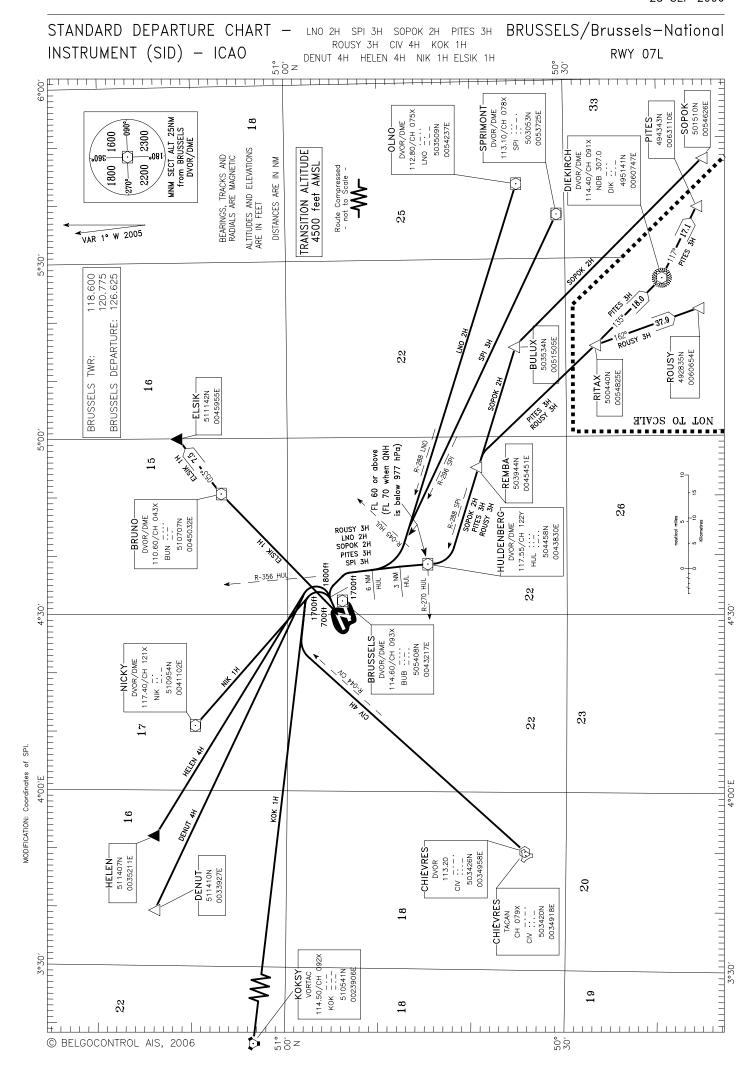




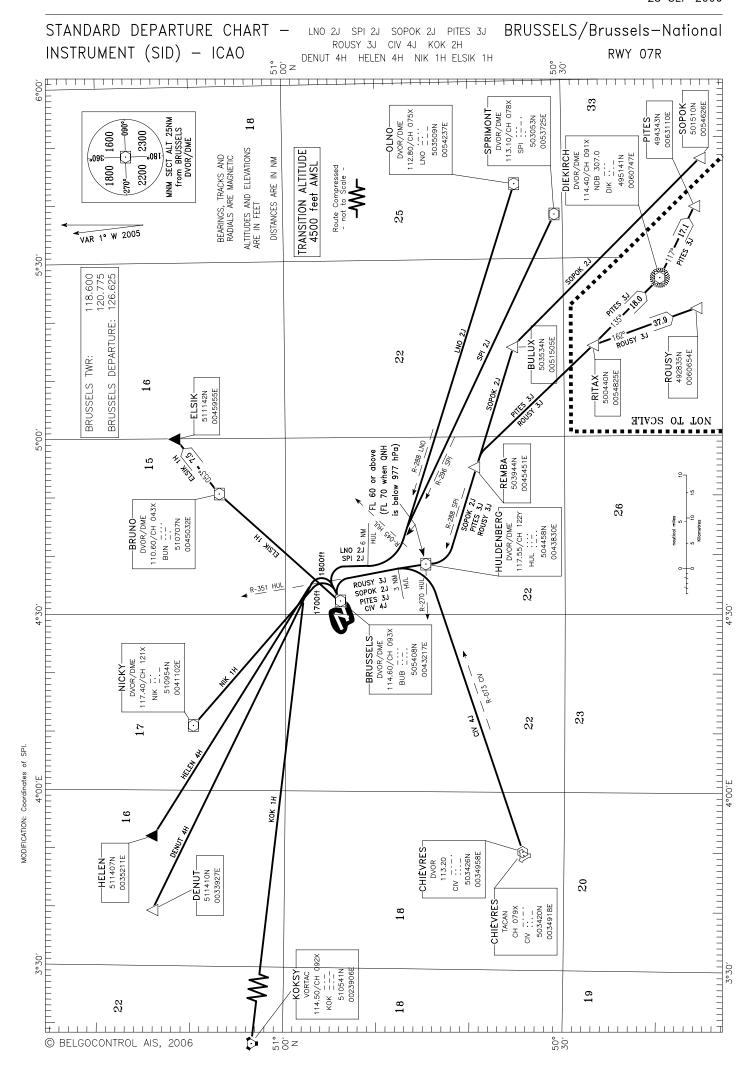
AD2 EBBR SID.01



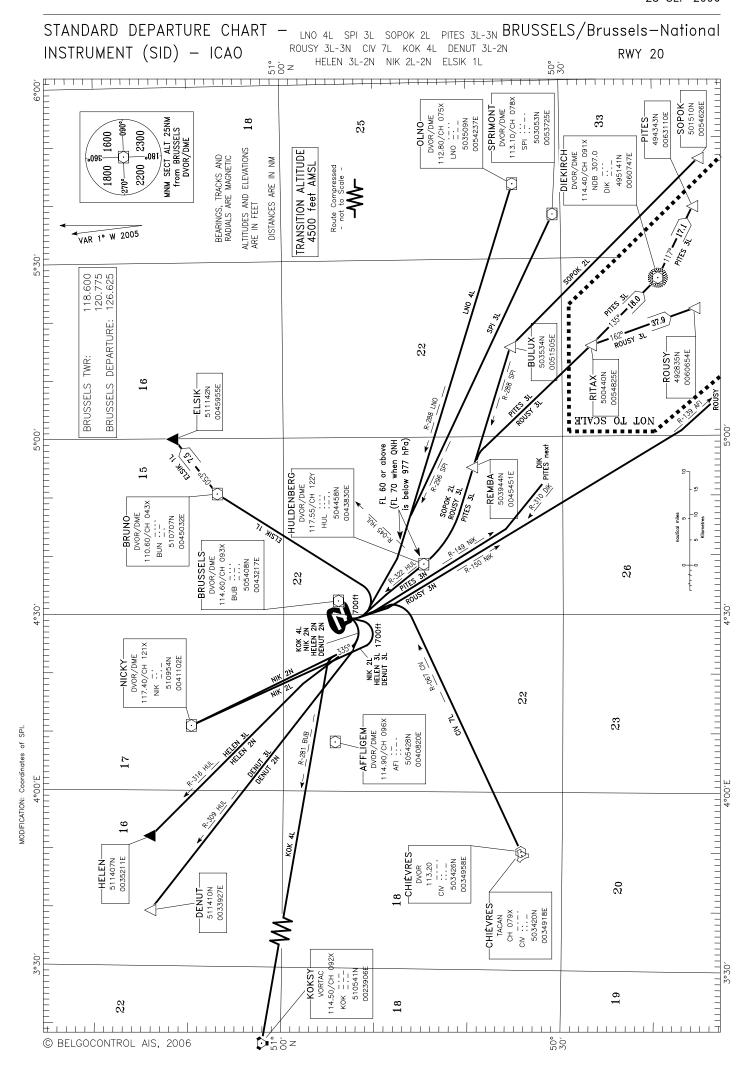




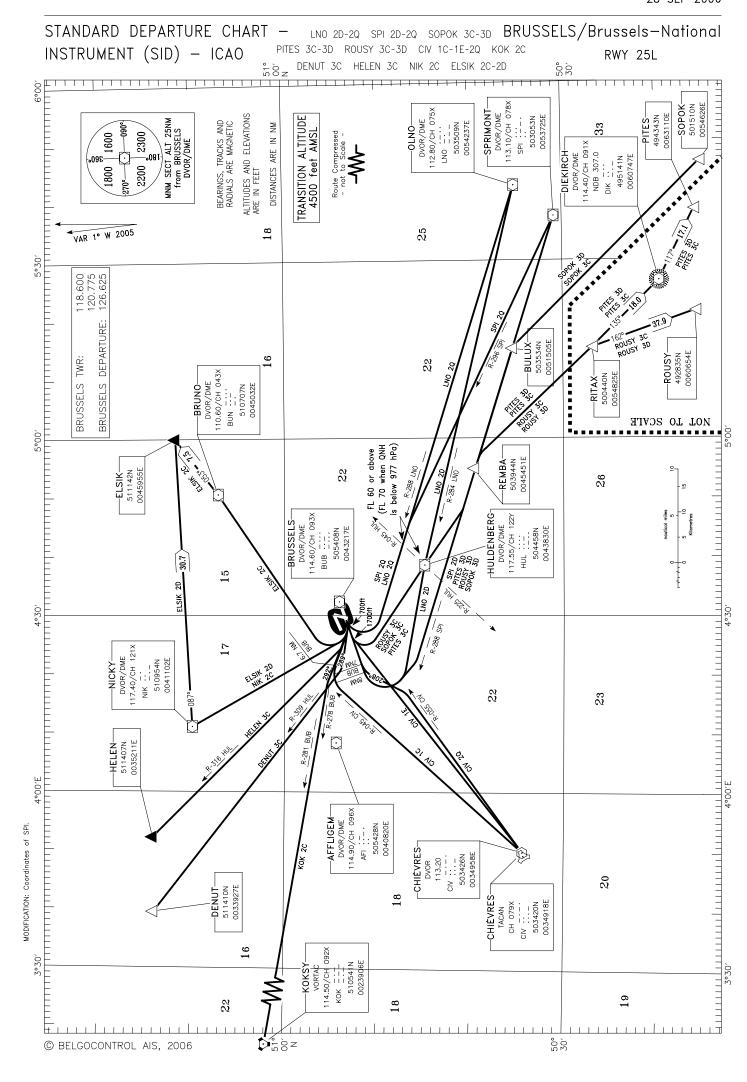




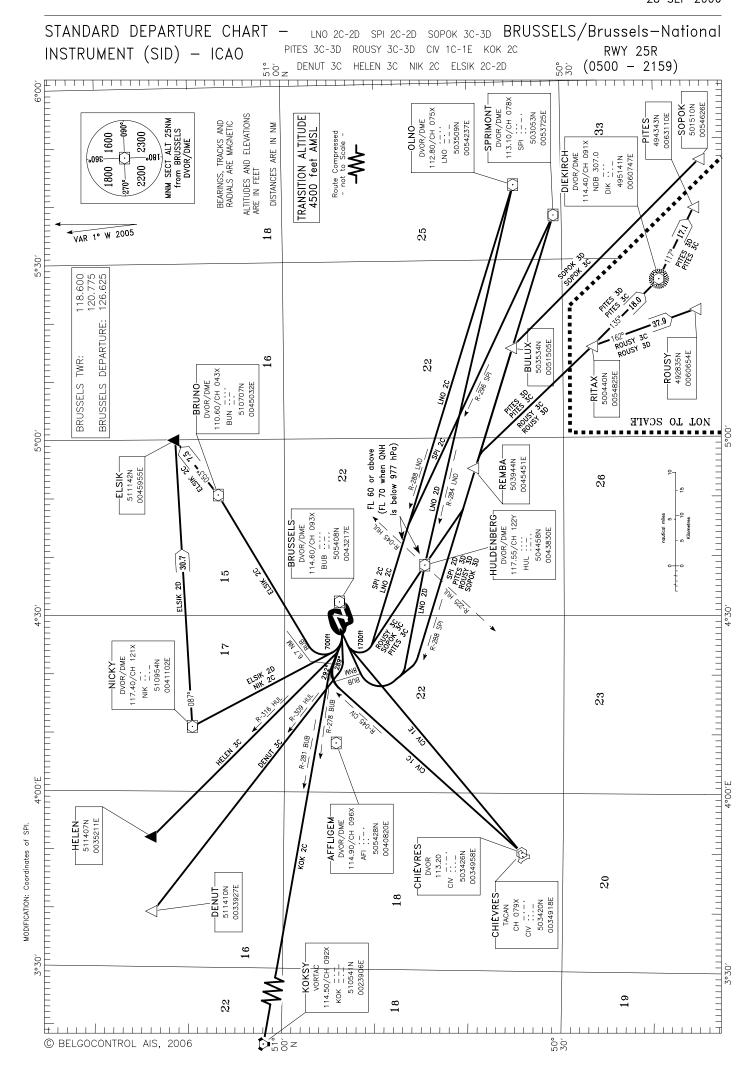




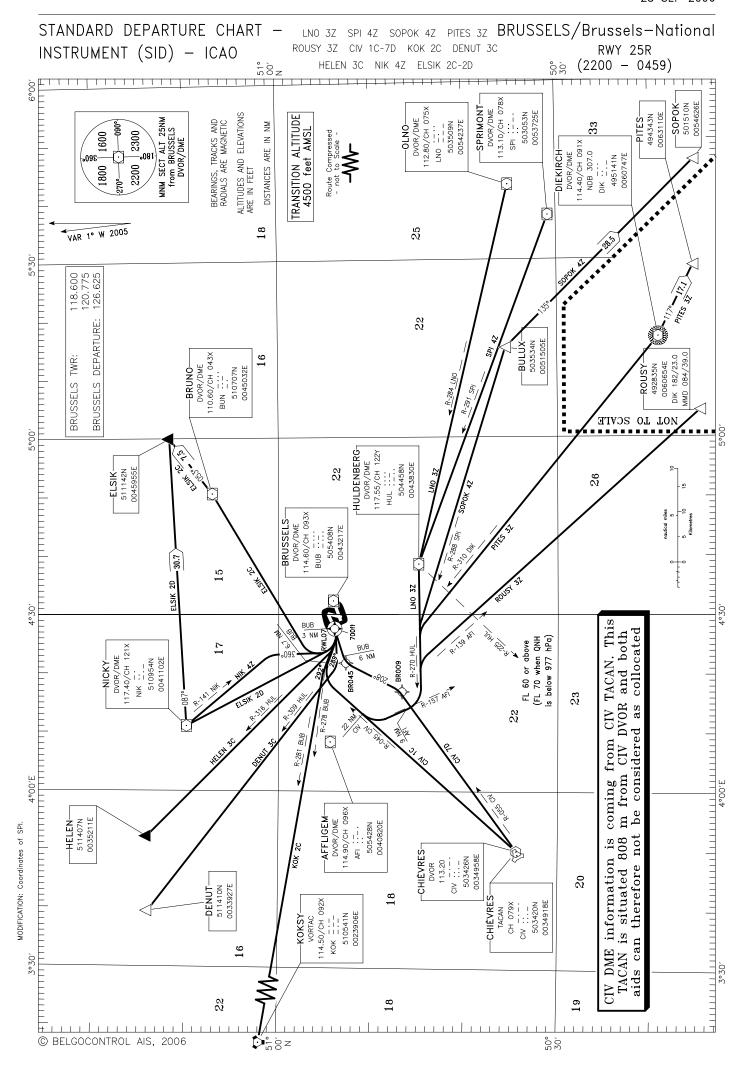










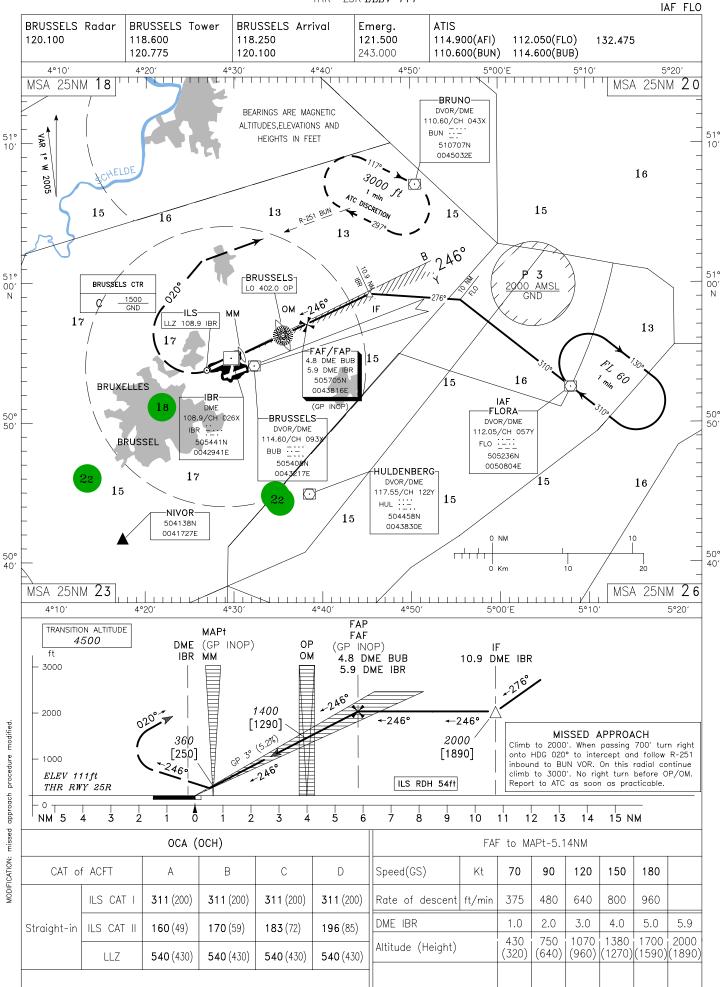




INSTRUMENT APPROACH CHART-ICAO

AD ELEV 184
OCH RELATED TO
THR 25R ELEV 111

BRUSSELS/Brussels-National BELGIUM ILS or LLZ RWY 25R

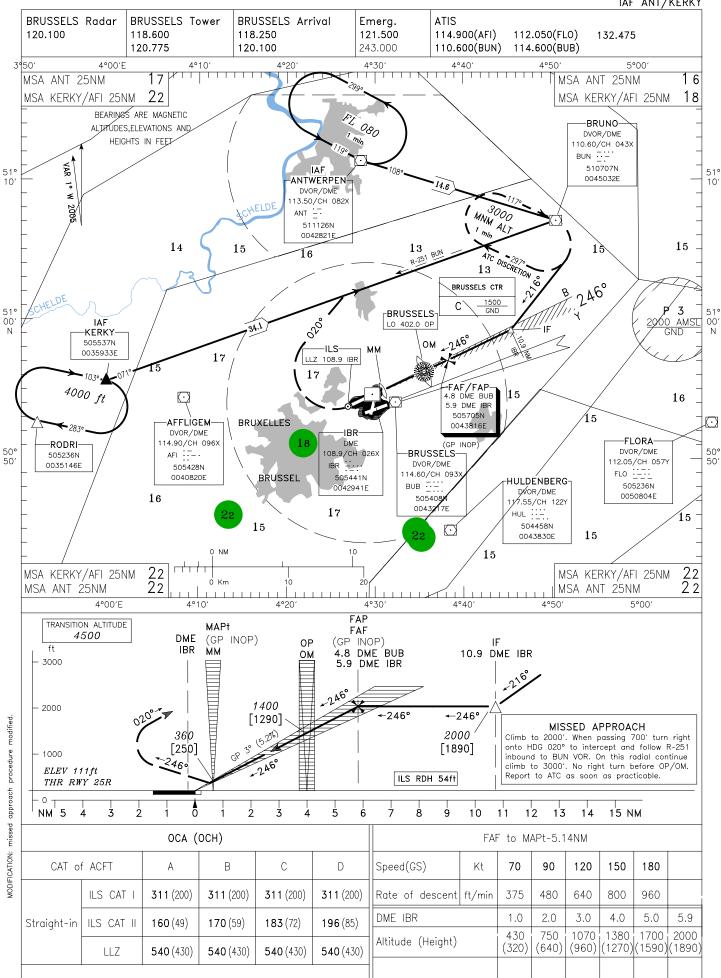




INSTRUMENT APPROACH CHART-ICAO

AD ELEV 184
OCH RELATED TO
THR 25R ELEV 111

BRUSSELS/Brussels-National BELGIUM ILS or LLZ RWY 25R IAF ANT/KERKY





15 MAR 2007 AD ELEV 184 INSTRUMENT BRUSSELS/Brussels-National **APPROACH** OCH RELATED TO BELGIUM ILS or LLZ RWY 25L CHART-ICAO THR 25L ELEV 159 IAF FLO BRUSSELS Radar BRUSSELS Tower **BRUSSELS Arrival** Emerg. **ATIS** 120.100 118.600 118.250 121.500 114.900(AFI) 112.050(FLO) 132,475 243.000 110.600(BUN) 120.775 120.100 114.600(BUB) 4°10′ 4°20′ 4°30 4°40' 4°50′ 5°00′E 5°20′ MSA 25NM 20 MSA 25NM 18 BEARINGS, TRACKS AND RADIALS ARE MAGNETIC CHELDI ALTITUDES AND ELEVATIONS ARE IN FEET DISTANCES ARE IN NM _ • ¥ 16 13 15 16 15 -FAP/FAF-2005 8.1 DME BUB 8.9 DME IBL IRL 505654N DME 0044419E BRUSSELS CTR 334.85/CH 040 3 51° 00′ 251 00′ N IBL -... ĀMSL С 505349N BRUSSELS-0043111E DVOR/DME 17 114.60/CH 093 BUB BRUSSELS 0043217E LO 293.0 OB 60 16 13 OM ÌМ **BRUXELLES** 15 -266 FLO IAF -11 5 FLORA 509 50° LLZ 110.350 IBI DVOR/DME , 112.05/CH 057 BRUSSEL FLO :--505236N 0050804E 15 15 16 17 \bigcirc HULDENBERG-15 15 DVOR/DME 117.55/CH 122Y NIVOR-HUL 504138N 504458N 0041727E 0043830E 50° 40′ 501 MSA 25NM 26 MSA 25NM 23 4°10′ 4°20 4°30′ 4°40 4°50 5°00′E 5°10′ 5°20′ BUB TRANSITION ALTITUDE FAP/FAF IBL MÁPt 4500 DME (GP INOP) OB 5 DME BUB 8.9 DME IBL 13.9 DME IBL ОМ ΜM ft 3000 3000 [2840] - 2000 MISSED APPROACH MNM Climb to 2500'. When passing 700' turn left onto HDG 120° to intercept and follow R-266 inbound to FLO VOR. On this radial continue 2000 700 [1840] 1410 climb to 4500'. No left turn before BUB/MM. Report to ATC as soon as practicable. - 1000 [540] 410 [1250] ELEV 159ft ILS RDH 59ft THR RWY 25L [250] procedure 2 5 NM 5 3 3 6 8 10 11 12 13 14 1⁵ NM ż OCA (OCH) FAF to MAPt-8.10NM approach Speed(GS) CAT of ACFT Α В С D Κt 70 90 120 150 180 ILS CAT I 359 (200) 359 (200) 359 (200) 359 (200) Rate of descent ft/min 375 480 640 800 960 8.9 Straight-in ILS CAT II 229 (70) 246 (87) 258 (99) 272 (113) DME IBL 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 LLZ 560 (400) 560 (400) 560 (400) 560 (400) DIST.THR

ALTITUDE

(Height)

1440 1750

(640)|(960)|(1280)|(1600)|(1910)|(2230)|(2550)|(2840)

1120

| 2070 | 2390 | 2700 | 3000



AD ELEV 184 INSTRUMENT BRUSSELS/Brussels-National **APPROACH BELGIUM** OCH RELATED TO ILS or LLZ RWY CHART-ICAO THR 25L *ELEV 159* ANT BRUSSELS Radar BRUSSELS Tower BRUSSELS Arrival ATIS Emerg. 114.900(AFI) 120.100 118.600 118.250 121.500 112.050(FLO) 132,475 120.775 120.100 243.000 110.600(BUN) 114.600(BUB) 4°00′E 4°10′ 4°20 4°30′ 4°40′ 4°50 5°00 17 MSA ANT 25NM 16 MSA ANT 25NM 22 MSA KERKY/AFI 25NM MSA KERKY/AFI 25NM BRUNO 80 DVOR/DMF 110.60/CH 043X BUN ::-510707N IAF ANTWERPEN 519 0045032E 10 14.6 Ϋ́AR BEARINGS ARE MAGNETIC DVOR/DME 113.50/CH 082X ALTITUDES, ELEVATIONS AND 1° ₩ 3000 ANT -HEIGHTS IN FEET MNM ALT 511126N 2005 1 min 0042821E 14 1613 ATC DISCRETION 15 15 FAP/FAF 5.0 DME BUB 5.8 DME IBL 13 BRUSSELS CTR 51° 505551N 3 251 Ā<u>MST</u> 00' IAF -KERKY 0043943E С 505537N 2510 -BRUSSELS 0035933E ОМ LO 293.0 OB -ILS 15 LLZ 110.350 IBL 17 15 4000 16 ЙM **BRUXELLES** R-266 FLO AFFLIGEM-283 15 DVOR/DME -FLORA-RODRI DVOR/DME 112.05/CH 057Y 114.90/CH 096X 505236N BRUSSELS -IBL AFI :-- -0035146E DVOR/DME 14.60/CH 093> DMF 505428N FLO: BRUSSEL 334.85/CH 040Y 0040820F 505236N IBL 00508046 505408N 505349N 0043217E 0043111F 15, 16 15 17 \odot 15 15 HULDENBERG DVOR/DME 117.55/CH 122Y NIVOR HUL: 504138N 504458N 0041727F 0043830E 509 50° 0 NM 22 22 MSA KERKY/AFI 25NM MSA KERKY/AFI 25NM 0 Km 22 MSA ANT 25NM MSA ANT 25NM 4°00′E BUB TRANSITION ALTITUDE MAP† (GP INOP) MM IBL FAP/FAF 4500 10.8 DME IBL DME 5.8 DME IBL R-025 HULft 3000 modified. **←**251° procedure 410 2000 2000 [250] MISSED APPROACH [1840] Climb to 2500'. When passing 700' turn left onto HDG 120° to intercept and follow R-266 700 approach 1410 1000 [540] inbound to FLO VOR. On this radial continue climb to 4500'. No left turn before BUB/MM. Report to ATC as soon as practicable. [1250] ELEV 159ft GP 3° ILS RDH 59ft THR RWY 25L 3 Ô 3 5 ł NM 5 8 10 12 13 1[']5NM 11 14 MODIFICATION: to MAPt-5.00NM OCA (OCH) FAF 150 CAT of ACFT С D Speed(GS) Κt 70 90 120 180 В Α ILS CAT I 359 (200) 359 (200) 359 (200) 359 (200) Rate of descent ft/min 375 480 640 800 960 ILS CAT 229 (70) 246 (87) 258 (99) **272** (113) Straight-in DME IBL 1.0 2.0 3.0 4.0 5.0 5.8 DIST.THR LLZ 560 (400) 560 (400) 560 (400) 560 (400) ALTITUDE 480 800 1120 1440 1750 2000 (Height) (320)(640)(960)(1280)(1600)(1840)



AD ELEV 184 INSTRUMENT BRUSSELS/Brussels-National **APPROACH** OCH RELATED TO **BELGIUM** VOR RWY 25L CHART-ICAO THR 25L ELEV 159 IAF KERKY ANT BRUSSELS Arrival BRUSSELS Radar **BRUSSELS** Tower Emerg. **ATIS** 121.500 114.900(AFI) 112.050(FLO) 120.100 118.600 118.250 132,475 120,775 120.100 243.000 110.600(BUN) 114.600(BUB) 4°00'E 4°10′ 4°20 4°30′ 4°40′ 4°50 5°00 17 MSA ANT 25NM 16 MSA ANT 25NM 22 18 MSA KERKY/AFI 25NM MSA KERKY/AFI 25NM BRUNO DVOR/DME 110.60/CH 043X BUN .. DME required 510707N 0045032E 51° 51° 10′ IAF 100 ANTWERPEN BEARINGS ARE MAGNETIC 14.6 15 ALTITUDES, ELEVATIONS AND DVOR/DME Ŗ 113.50/CH 082X HEIGHTS IN FEET WELDE 10 ¥ 3000 MNM ALT 1 min ALT ANT 511126N 0042821E 13 14 15 16 DISCRETION 15 13 BRUSSELS BRUSSELS 293.0 51° 00′ DVOR/DME <u> AMSE</u> 00 ов = ... 14.60/CH 093X Ν IAF 505513N KERKY BUB -0043659E 505537N 505408N 17 0035933E 0043217E 15 ₹ 2000 BRUSSELS CTR 15 ⁴⁰⁰⁰ ft 1500 C 15 GND \Box 16 5.0 DME BUB BRUSSEL AFFLIGEM-505549N DVOR/DME R-266 FLO 0043943E 114.90/CH 096X FLORA-RODRI DVOR/DME 112.05/CH 057Y 50° 50′ 509 AFI 505236N 50 0035146E BRUXELLES 505428N HULDENBERG 0040820E FLO -DVOR/DME 505236N 117.55/CH 122 0050804F HUL 504458N 0043830E $\langle \cdot \rangle$ 15 -NIVOR 15 504138N 15 NM 16 17 22 22 MSA KERKY/AFI 25NM Km MSA KERKY/AFI 25NM 22 22 MSA ANT 25NM MSA ANT 25NM 4°00′E 4°40 TRANSITION ALTITUDE 4500 MAPt R-025 HULft 3.2 DME BUB 5 DME BUB BUB - 3000 missed approach procedure modified. **←**251° - 2000 2000 MISSED APPROACH [1840] Climb to 2500'. When passing 700' turn left onto HDG 120° to intercept and follow R-266 inbound to FLO VOR. On this radial continue 700 MNM $[540] 12^{0}$ 1000 900 climb to 4500'. No left turn before BUB/MM. ELEV 159ft [740] Report to ATC as soon as practicable THR RWY 25L Ô 5 12 13 14 15 NM 5 NM 8 10 11 OCA (OCH) FAF to MAPt-5.00NM MODIFICATION: CAT of ACFT С D Speed(GS) Κt 70 180 A В 90 120 150 Straight-in Rate of descent ft/min 375 480 640 800 960 560 (400) 560 (400) 560 (400) 560 (400) PROCEDURE ALTITUDES (HEIGHTS) DME BUB 5 4 3 0 5.6 4.6 3.6 2.6 1.6 0.6 DIST.THR ALTITUDE 720 2000 1670 1350 1040 560 (HEIGHT) (560)1840` (1520) (1200) (880)(400)



INSTRUMENT

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BRUSSELS/Brussels-National

15 MAR 2007

APPROACH OCH RELATED TO **BELGIUM** VOR RWY 25L CHART-ICAO THR 25L ELEV 159 IAF FLO BRUSSELS Radar BRUSSELS Tower **BRUSSELS Arrival ATIS** Emerg. 114.900(AFI) 120.100 118.600 118.250 121.500 112.050(FLO) 132.475 110.600(BUN) 120.775 120.100 243.000 114.600(BUB) 4°10' 4°40′ 4°50′ 5°00′E 5°20 MSA 25NM 20 51° MSA 25NM 18 BEARINGS, TRACKS AND RADIALS ARE MAGNETIC ALTITUDES AND ELEVATIONS DME required 15 DISTANCES ARE IN NM 13 16 16 15 FAF-8.2 DME BUB 505656N BRUSSELS CTR 51° 00′ N 51° 0044431E С BRUSSELS 17 DVOR/DME 15 3000 14.60/CH 093X BUB -15 -BRUSSELS-505408N 0043217E LO 293.0 OB ŔŹ 16 13 60 BRUXELLES R-266_FL0 FLORA 50° 50′ DVOR/DME 50 112.05/CH 057Y BRUSSEL FLO :-505236N 0050804F 15 16 17 15 15 HULDENBERG NIVOR DVOR/DME 117.55/CH 122Y 0041727E HUL ::: 50° 504458N 0043830E MSA 25NM 23 MSA 25NM 26 4°10 4°30 5°00′E 5°10 TRANSITION ALTITUDE FAF 8.2 DME BUB MAPt OB 3.2 DME BUB 4500 ft BUB 5 DME BUB **~**251° **⊢** 3000 3000 [2840] MNM- 2000 900 MISSED APPROACH [740] Climb to 2500'. When passing 700' turn left onto HDG 120° to intercept and follow R-266 MNM 700 2000 1000 [540] inbound to FLO VOR. On this radial continue [1840] climb to 4500'. No left turn before BUB/MM. Report to ATC as soon as practicable. ELEV 159ft MODIFICATION: missed approach procedure modified. THR RWY 25L 3 5 2 3 8 9 10 13 14 15 NM 4 NM 6 12 OCA (OCH) FAF to MAPt-8.20NM CAT of ACFT Α В С D Speed(GS) Κt 70 90 120 150 180 Straight-in Rate of descent ft/min 375 480 640 800 960 560 (400) 560 (400) 560 (400) 560 (400) PROCEDURE ALTITUDES (HEIGHTS) DME BUB 5 3 0 1 DIST.THR 5.6 4.6 3.6 2.6 0.6 1.6 720 ALTITUDE 2000 1670 1350 1040 560 (HEIGHT) (1840) (1520)(1200)(880)(560)(400)

AD ELEV 184

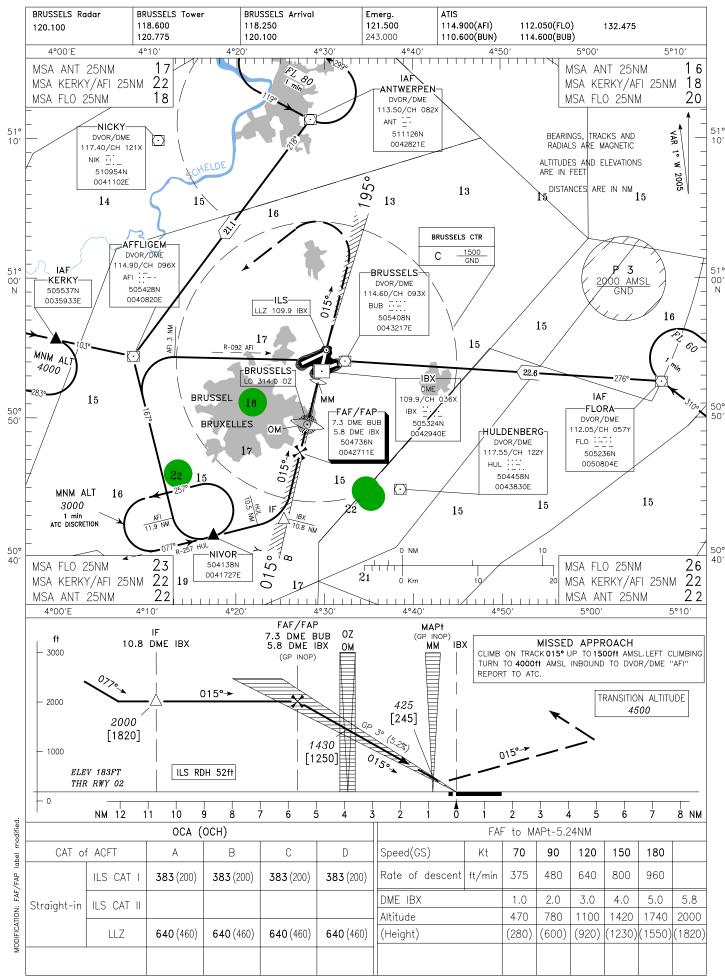


AD2 EBBR IAC.07 Effective: 28 SEP 2006

INSTRUMENT APPROACH CHART-ICAO AD ELEV 184
OCH RELATED TO
THR 02 ELEV 183

BRUSSELS/Brussels—National BELGIUM

ILS or LLZ RWY 02



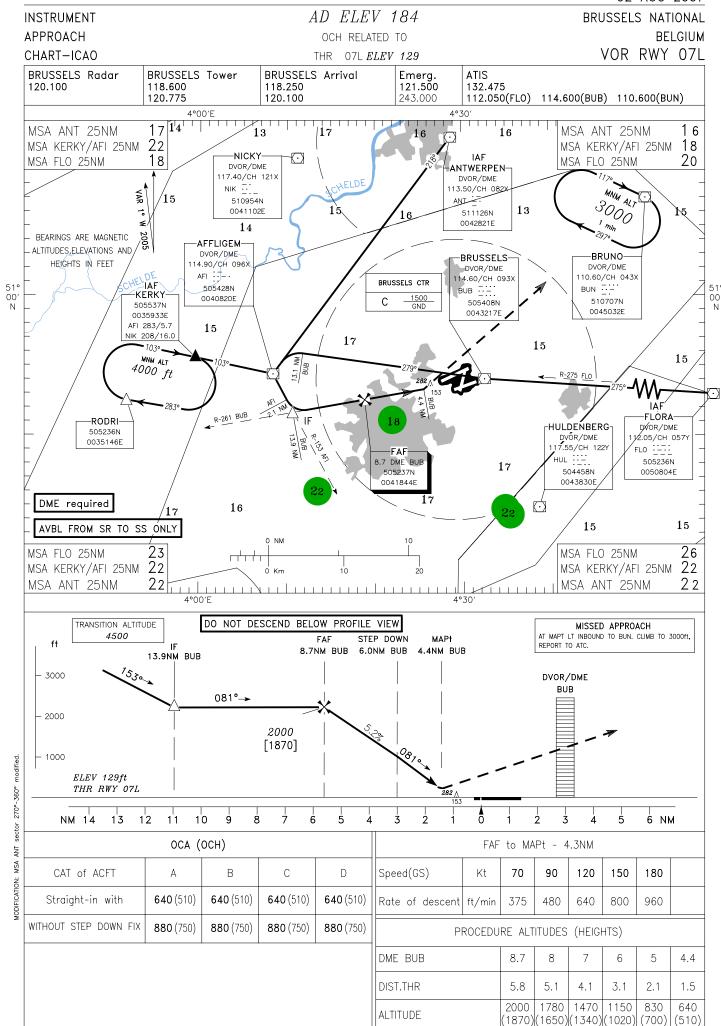


AD ELEV 184 **INSTRUMENT** BRUSSELS/Brussels-National **APPROACH BELGIUM** OCH RELATED TO VOR RWY 07R CHART-ICAO THR 07R ELEV 175 BRUSSELS Radar BRUSSELS Tower **BRUSSELS Arrival ATIS** Emerg. 120.100 121.500 114.900(AFI) 112.050(FLO) 118.600 118.250 132.475 243.000 114.600(BUB) 120.775 120.100 110.600(BUN) 4°00′E 4°10 4°20 4°50 17 14 16 MSA ANT 25 NM MSA ANT 25 NM 1716 16 ANTWERPEN 22 MSA KERKY/AFI 25NM MSA KERKY/AFI 25NM 18 51° 10′ -NICKY DVOR/DME $\langle \cdot \rangle$ 18 MSA FLO 25NM MSA FLO 25NM 20 DVOR/DME 113.50/CH 082X . 117.40/CH 121X ANT -MNM ALT NIK ... HELDE 511126N 3000 BEARINGS ARE MAGNETIC 15 510954N Ω042821Ε 16 ALTITUDES, ELEVATIONS AND 0041102E 15 min HEIGHTS IN FEET KERKY. BRUSSELS CTR 505537N 0035933E 15 C 14 BRUNO-¥, DVOR/DME AFFLIGEM BRUSSELS-10.60/CH 043> 1° ₩ DVOR/DME DVOR/DME BUN .. 114.90*/|*CH 096X 114.60/CH 093X 00 510707N 00' 2005 BUB -AFI 0045032E 505428N 505408N 15 R-283 AF 0043217E 15 Ø040820E 57 10.39 15 MNM ALT 4000 BRUSSEL IAF -FLORA RODRI 505236N 18 NM DVOR /DME 112.05/ CH 0571 0035146E 50° 50 FLØ :--257 BUB. **BRUXELLES** -FAF 505236N IF 7.9 DME BUB 0050804E 17 R-251 BUB 505126N R-243 BUB DME required 0042034F HULDENBERG DVOR/DME 16 17/ 117.55/CH 122\ 22 NM HUI : 504458N 15 ATC DISCRETION 15 0043830E 0 Km 10 BG/ 23 26 MSA FLO 25NM R-257 MSA FLO 25NM R-201 22 MSA KERKY/AFI 25NM 22 MSA KERKY/AFI 25NM 40 22 MSA ANT 25NM 22 MSA ANT 25NM 3°50 4°00′E 4°50 TRANSITION ALTITUDE 4500 FAF STEP MAPt DVOR/DME ft 7.9 DME BUB 4.5 DME BUB 2.5 DME BUB BUB L 3000 071°→ - 2000 071 2000 [1830] MISSED APPROACH 071° - 1000 CLIMB ON TRACK 071°. AT 2000' LEFT CLIMBING TURN 1100 TO 3000', INBOUND TO BUN. (MAX 185Kt IAS-DO NOT CROSS R-180 BUN). REPORT TO ATC. ELEV 175ft THR RWY 07R [930] 0 modified. 7 Ô 7 2 3 8 5 4 ՛ 2 9 NM 10 ģ 6 4 5 6 8 10 NM OCA/OCH and FAF OCA (OCH) FAF to MAPt-5.40NM CAT of ACFT Α В С D Speed(GS) Κt 70 90 120 150 180 Straight-in 560 (390) 560 (390) 560 (390) 560 (390) Rate of descent ft/min 375 480 640 800 960 MODIFICATION: WITHOUT STEP 1100 (920) 1100 (920) 1100 (920) 1100 (920) PROCEDURE ALTITUDES (HEIGHTS) DME BUB 7.9 7 6 5 4 3 2.5 DIST.THR 4.7 0.7 5.6 3.7 2.7 2.2 0.2 1.7 ALTITUDE 1680 1360 560 2000 1100 1100 940 620 (HEIGHT) 1830)(1510)(1190) (920)(920)(770)(390)

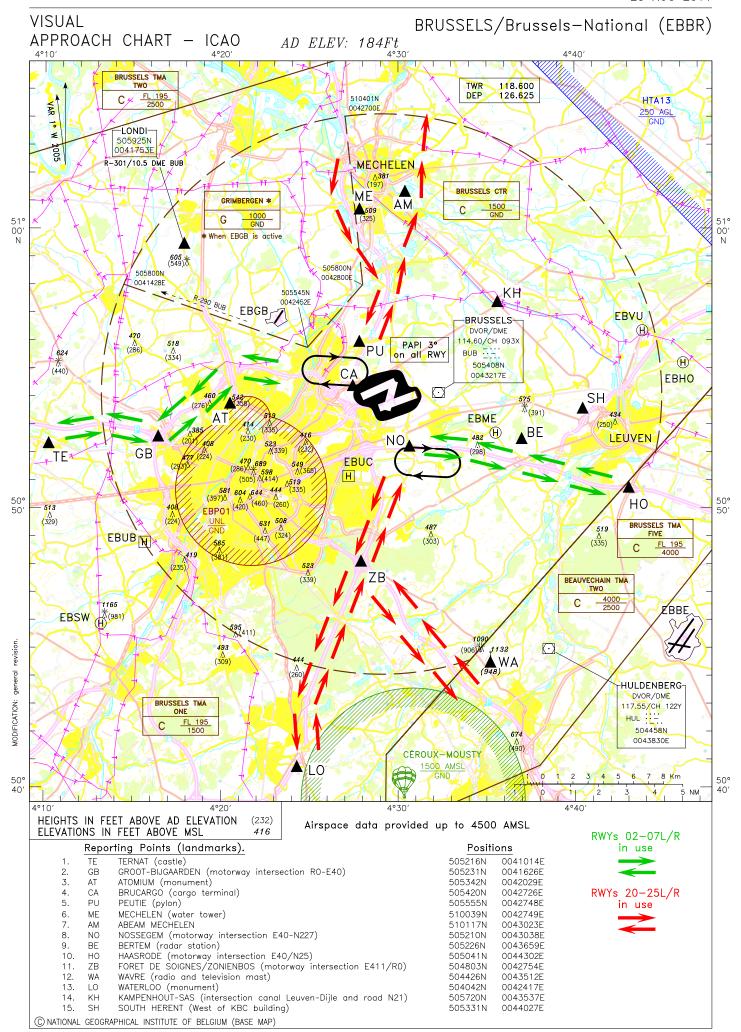


AD ELEV 184 BRUSSELS/Brussels-National INSTRUMENT **APPROACH BELGIUM** OCH RELATED TO ILS or LLZ RWY 20 CHART-ICAO THR 20 ELEV 113 BRUSSELS Radar **BRUSSELS** Tower BRUSSELS Arrival ATIS Emerg. 120.100 121.500 114.900(AFI) 112.050(FLO) 118.600 118.250 132.475 110.600(BUN) 114.600(BUB) 120.775 120.100 243.000 4°40′ 4°50 4°00'E 4°20 4°30′ 5°00′ 5°10 17 16 MSA ANT 25NM MSA ANT 25NM 22 18 MSA KERKY/AFI 25NM MSA KERKY/AFI 25NM MSA FLO 25NM 18 20 MSA FLO 25NM ANTWERPEN--BRUNO DVOR/DME DVOR/DME 13.50/CH 082X DME required 110.60/CH 043X BUN : 511126N 510707N ANTWERPEN CTR 0042821E 0045032E NICKY- \odot 3 IAF DVOR/DME 117.40/CH 121X С NIK -BEARINGS, TRACKS AND RADIALS ARE MAGNETIC 1° W 510954N R-105 NIK 0041102E ALTITUDES AND ELEVATIONS % 12.1 ÖME IBM ARE IN FEET DISTANCES ARE IN NM 195.4 10 Mg IBM 3 AMSL 519 AFFLIGEM DME 00' KERKY DVOR/DME 331.55/CH 048 . 14.90/CH 096× BRUSSELS CTR 505537N IBM -... 0035933E AFI ::-· ANT 15 NM 505430N С FAF 505428N 0043007E 9.1 DME IBM 0040820E 510322N 0043329F ¹⁰⁰⁰ ft - 15.1 FAF (GP INOP) R-261_AFI BRUSSELS DVOR/DME 114.60/CH 093X BUB .. 50 -FLORA-505408N DVOR/DME RODRI 0043217E 112.05/CH 057Y 505236N FLO :--: 0035146E 505236N HULDENBERG -286 HUL DVOR/DME 0050804E 117.55/CH 122Y IAF. $\overline{\cdot}$ HUL ∷ 504458N 0 NM 23 0043830E 26 MSA FLO 25NM MSA FLO 25NM 22 22 MSA KERKY/AFI 25NM MSA KERKY/AFI 25NM Km MSA ANT 25NM 22 MSA ANT 25NM 22 4°00'E 4°10′ 4°20 4°30′ 4°40 4°50 5°00′ 5°10 FAP TRANSITION ALTITUDE MAPt (GP INOP) FAF (GP INOP) DME 4500 5.7 DME IBM 1.4 DME IBM 9.1 DME IBM 12.1 DME IBM IBM ft -195° MISSED APPROACH 3000 INTERMEDIATE MISSED APPROACH SPEED CLIMB STRAIGHT AHEAD INTERCEPT R-286 HUL TURN RIGHT TO RODRI. CLIMBING TO 4000 Ft. 3000 [2887] REPORT TO ATC - 2000 view removed. 286°-1000 profile ELEV 113FT ILS RDH 54 THR RWY 20 .⊑ Altitudes 8 NM 5 ż 2 2 ż 5 7 8 9 10 12 13 NM 6 11 OCA (OCH) FAF to MAPt-7.7NM CAT of ACFT Α В С D Speed(GS) Κt 70 90 120 150 180 ILS CAT I 313 (200) **316** (203) 324 (211) 335 (222) Rate of descent ft/min 375 480 640 800 960 Straight-in LLZ 530 (420) 530 (420) 530 (420) 530 (420) 5 2 DME IBM 8 7 6 4 3 DIST.THR ALTITUDE 2335 2015 1700 1380 745 2665 1060











AERODROME GROUND MOVEMENT CHART-ICAO APPENDIX 4: HOT SPOTS

BRUSSELS-National

