to	Distribution list	**LoA 03**

from	J.-H. Baerens, CC/FB-N	phone	0421 5372 143	date DRF until	29.08.2011 03.11.2011

Amendment of the LoA between Maastricht UAC (MUAC) and Bremen ACC wef 22 SEP 2011

1. Essentials

Annex E, E.2 – the UHF for EIDE and EIDW have been corrected, as they are in place already.

2. List of Changes

Date	Parts	Page(s)	add, replace or delete
22.09.2011	amendment LoA	all	replace

Axel Brandt
Chief of Support

Hans-Michael Jung
Chief of Section

Sector families affected:												
	North A*	North B*	East A*	East B*	South*	FDS	FIS	FMP	DA	SV CC	SV FDA	office
mandatory	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑
* only applicable to sector(s): EIDE, EIDW												

This LoA is valid for:												
	North A*	North B*	East A*	East B*	South*	FDS	FIS	FMP	DA	SV CC	SV FDA	office
	☑	☑	☑	☑	☑	☑	☐	☑	☑	☑	☑	☑
* only applicable to sector(s): HEI, ALEH, FRI, EID, HRZ, EMS, DST, BOR, MAR, MRZ												

Distribution list: LoA I: 1 - 3, 5 Mr T. Teichert Mr U. Voigt Ms K. Fröhlich
Mr Ch. Faby Ms Ch. Heise Mr J. Janocha

PAGE INTENTIONALLY LEFT BLANK.

LETTER OF AGREEMENT

between

Deutsche Flugsicherung GmbH	**and**	**Eurocontrol Agency**
Control Centre Bremen		
Bremen ACC		**Maastricht UAC**

Effective: 2009-11-19

1 General.

1.1 Purpose.

The purpose of this Letter of Agreement is to define the coordination procedures to be applied between Maastricht UAC and Bremen ACC when providing ATS to General Air Traffic (IFR).

These procedures are supplementary to those specified in ICAO, EUROCONTROL and National documents.

1.2 Operational Status.

Both parties shall keep each other advised of any changes in the operational status of their facilities and navigational aids which may affect the procedures specified in this Letter of Agreement.

1.3 **Definitions for General Air Traffic and Operational Air Traffic.**

1.3.1 General Air Traffic (GAT):

"All flights which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation."

1.3.2 Operational Air Traffic (OAT):

"All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities."

2 Areas of Responsibility and Delegation of the Responsibility for the Provision of ATS.

2.1 **Areas of Responsibility.**

The lateral and vertical limits of the respective areas of responsibility are as follows:

Note: See paragraph 2.2 for the description of the areas where delegation of the responsibility for the provision of ATS is applicable.

2.1.1 Maastricht UAC.

Lateral limits: Hannover UIR

Vertical limits: FL 245 - UNL

Airspace classification: C

ICAO airspace classification for the area of responsibility of Maastricht UAC along the common boundary of the areas of responsibility of Maastricht UAC and Bremen ACC is described in Annex B to this Letter of Agreement.

2.1.2 Bremen ACC

Lateral limits: Bremen FIR as published in the AIP Germany

Vertical limits: as published in the AIP Germany

Airspace classification: C at and above FL100

and

Lateral limits: Rhein UIR as published in the AIP Germany:

Vertical limits: as published in the AIP Germany

Airspace classification: C

and

Vertical limits: Munich FIR as published in the AIP Germany

Vertical limits: as published in the AIP Germany

Airspace classification: C

ICAO airspace classification for the area of responsibility of Bremen ACC along the common boundary of the areas of responsibility of Maastricht UAC and Bremen ACC is described in Annex B to this Letter of Agreement.

2.2 Delegation of the Responsibility for the Provision of ATS.

2.2.1 General.

The provision of ATS in respect of delegations of ATS between Maastricht UAC and Bremen ACC includes the following services:

- Air traffic control service,
- Flight Information service for controlled flights and
- Alerting service.

2.2.2 Delegation of ATS from Bremen ACC to Maastricht UAC.

Within the Rhein UIR the responsibility for the provision of ATS to GAT in accordance with the airspace classification has been delegated from Bremen ACC to Maastricht UAC within the following areas:

2.2.2.1 **SCHWERIN SOUTH LOW Area** - see Appendix 1

Lateral Limits: (1) 54 15 00N 011 53 34E - (2) 52 43 50N 011 06 26E - (3) 54 08 00N 011 15 30E - (4) 54 17 44N 011 38 18E - (1) 54 15 00N 011 53 34E.

Vertical Limits: FL245 - FL285

Airspace classification: C

Note: In the same area the responsibility for the provision of ATS to OAT in accordance with the airspace classification has been delegated from Bremen ACC to DFS Maastricht UAC.

2.2.2.2 **RISOK LOW Area** - see Appendix 2

Lateral Limits: (1) 51 48 23N 011 08 38E - (2) 51 50 28N 011 12 30E - (3) 51 54 23N 011 07 48E - (1) 51 48 23N 011 08 38E.

Vertical Limits: FL245 - FL285

Airspace classification: C

Note: In the same area the responsibility for the provision of ATS to **OAT** in accordance with the airspace classification has been delegated from Bremen ACC to DFS Maastricht UAC.

2.2.3 Delegation of ATS from Maastricht UAC to Bremen ACC.
Not applicable.

2.2.4 Other Areas.

Delegations of ATS to/from other coordinating air traffic services units along the common boundary of the Areas of Responsibility of Maastricht UAC and Bremen ACC are described in Annex B to this Letter of Agreement.

2.2.5 Alerting Service within ATS-delegated Airspace.

The ATS-unit responsible for the provision of ATS, by virtue of delegation, shall provide alerting service and shall notify immediately the Supervisor of the delegating ATS-unit in case of an emergency.

The Supervisor of the delegating ATS-unit shall notify the appropriate Rescue Coordination Centre.

3 Procedures.

3.1 The procedures to be applied by Maastricht UAC and Bremen ACC are detailed in the Annexes to this Letter of Agreement:

Annex A: Definitions and Abbreviations
Annex B: Area of Common Interest
Annex C: Exchange of Flight Data
Annex D: Procedures for Coordination
Annex E: Transfer of Control and Transfer of Communications
Annex F: Radar Based Coordination Procedures
Annex G: Supplementary Procedures

3.2 These procedures shall be promulgated to the operational staff of the ATS-units concerned.

4 Revisions and Deviations.

4.1 Revision of the Letter of Agreement.

The revision of the present Letter of Agreement, excluding Annexes, requires the mutual written consent of the signatory authorities.

4.2 Revision of the Annexes to the Letter of Agreement.

The revision of Annexes to the present Letter of Agreement requires the mutual written consent of the authorities designated by the respective signatory approving authorities, normally the Heads of Operations at the respective units.

4.3 Temporary Deviations.

When necessary, the Supervisors of the ATS units concerned may introduce, by mutual agreement and for a specified time period, temporary modifications to the procedures laid down in the Annexes to the present Letter of Agreement.

Such provisions shall, however, not exceed 3 months duration.

4.4 Incidental Deviations.

Instances may arise where incidental deviations from the procedures specified in the Annexes to this Letter of Agreement may become necessary. Under these circumstances air traffic controllers are expected to exercise their best judgement to ensure the safety and efficiency of air traffic.

5 Cancellation.

5.1 Cancellation of the present Letter of Agreement by mutual written agreement of the respective Approving Authorities may take place at any time.

5.2 Cancellation of this Letter of Agreement by either party is possible at any time, provided that the cancelling party declares its intention to cancel the Letter of Agreement with a minimum pre-notification time of **6 months** before the date the cancellation is to take effect.

6 Interpretation and Settlement of Disputes.

6.1 Should any doubt or diverging views arise regarding the interpretation of any provision of the present Letter of Agreement, or in case of dispute regarding its application, the parties shall endeavour to reach a solution acceptable to both of them.

6.2 Should no agreement be reached, each of the parties shall refer to a higher level of its national aviation administration, to which the dispute shall be submitted for settlement.

7 Validity.

This Letter of Agreement becomes effective 19.11.2009 and supersedes all previous Letters of Agreement between Maastricht UAC and Bremen ACC.

Bremen, [date] 5/11/09

i. V. Werner Spier
Deutsche Flugsicherung GmbH
Spokesman and Head of Operations
Bremen ACC

Maastricht, [date] 16/XI. 09

H. Matthes
Head of Operations Division
Maastricht UAC

Langen, [date] 09.11.2009

i. V. Andre Biestmann
Deutsche Flugsicherung GmbH
Head of ATM Operations and Strategy

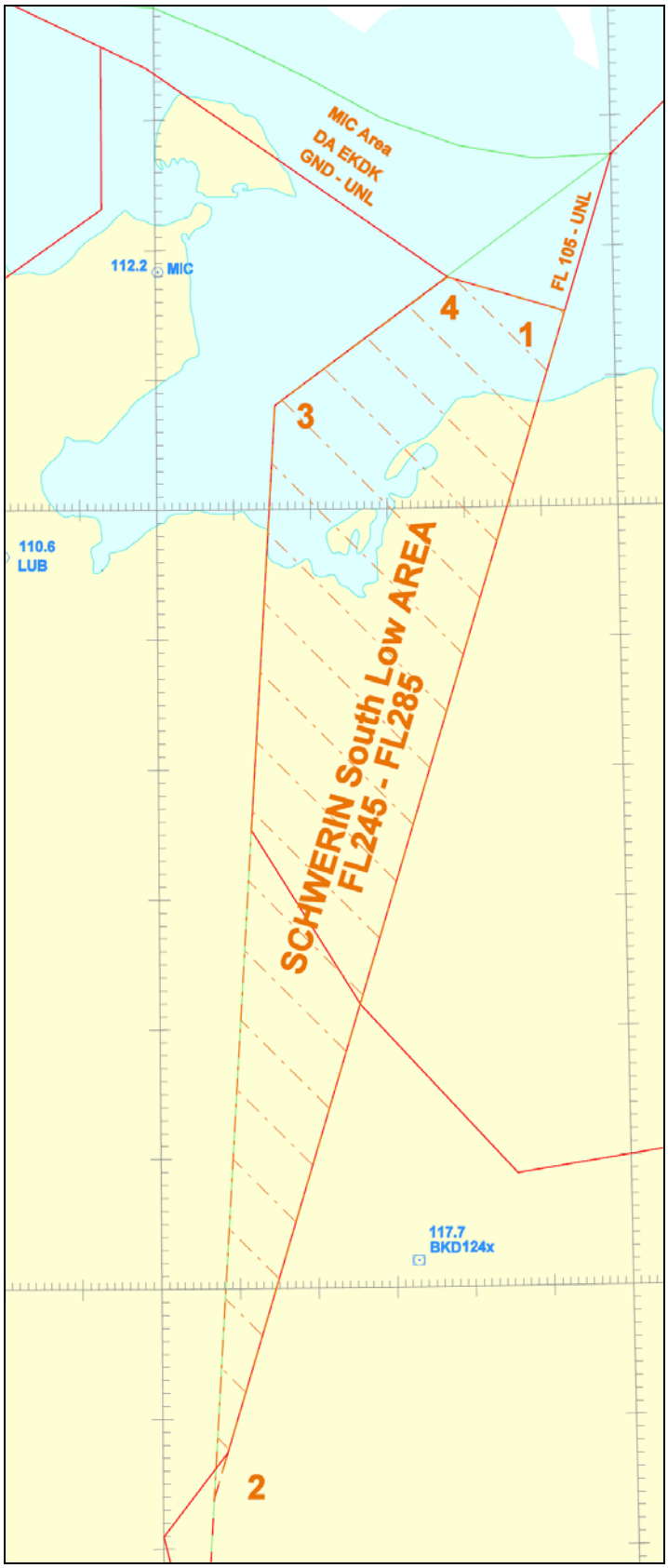
Maastricht, [date] 17 NOV. 2009

K.-H. Kloos
Director
Maastricht UAC

PAGE INTENTIONALLY LEFT BLANK.

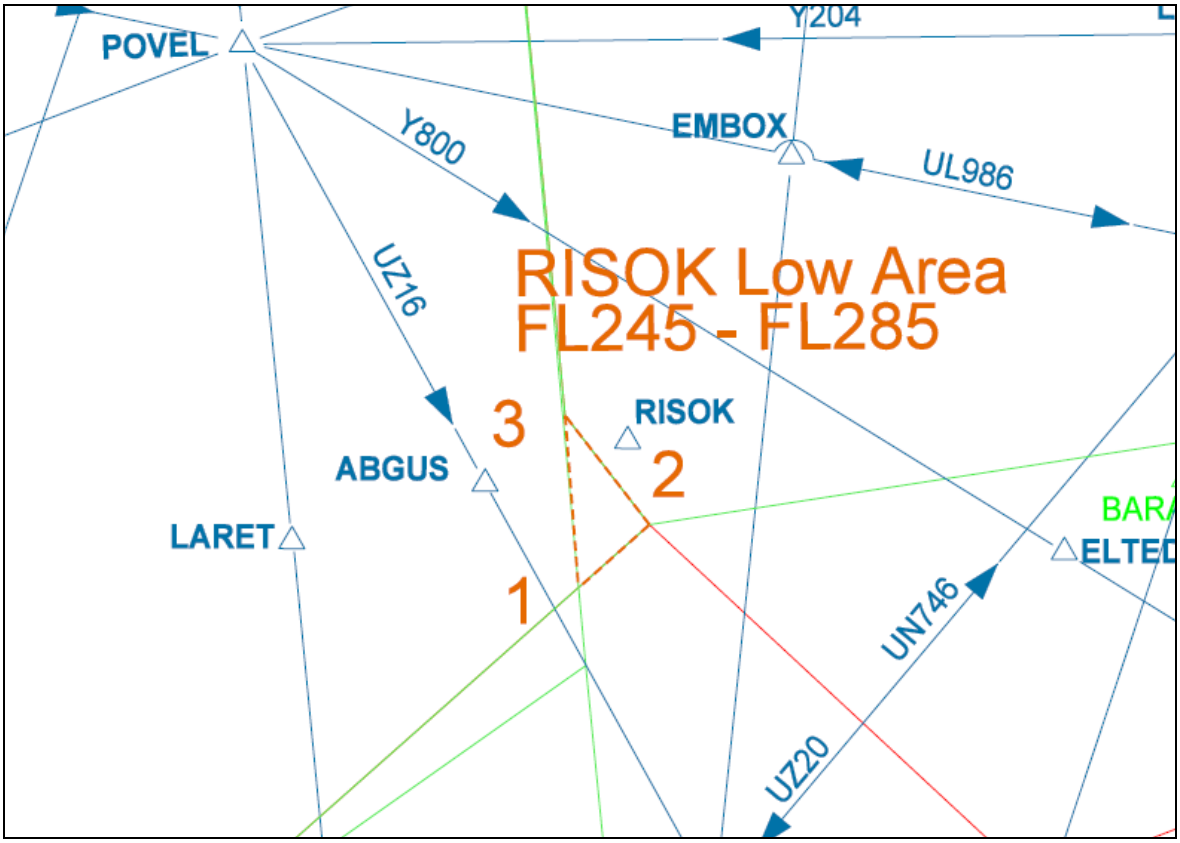
Appendix 1

Schwerin South Low Area - (see para. 2.2)



Appendix 2

RISOK Low Area - (see para. 2.2)



Appendix 3

RECORD OF AMENDMENTS

AMD No.	DATE	PART	PAGE	add, delete or replace
1	2009-12-17	Appendix 3	9	replace
		Annex A	A1, A4	replace
		Annex B	B1 – B8	replace
		Annex C	C1, C4	replace
		Annex D	D1 – D10 D11, D12	replace add
		Annex E	E1	replace
2	2010-01-14	Appendix 3	9	replace
		Annex C	C1, C4	replace
		Annex G	G1, G3, G4	replace
3	2010-04-08	Appendix 1	7	replace
		Appendix 3	9	replace
		Annex B	B1, B9	replace
		Annex D	D1 – D4, D8,D11	replace
		Annex G	G1 – G4	replace
4	2010-05-06	Appendix 3	9	replace
		Annex D	D1 – D3, D9	replace
5	2010-06-03	Appendix 3	9	replace
		Annex D	D1, D3 - D5, D8, D10, D11	replace
		Annex G	G1, G3	replace
6	2010-08-26	Appendix 3	9	replace
		Annex B	B1, B5 – B7, B9	replace
7	2010-09-23	Appendix 3	9	replace
		Annex A	A1, A4	replace
		Annex C	C1 – C3	replace
		Annex D	D1 – D6, D8, D9	replace
8	2010-11-18	Appendix 3	9	replace
		Annex C	C1, C6	replace
		Annex D	D1, D6	replace
9	2010-12-16	Appendix 3	9	replace
		Annex D	D1, D5, D9	replace
		Annex G	G1 –G3	replace
10	2011-02-10	Appendix 3	9	replace
		Annex D	D1 – D12	replace
		Annex G	G1, G3	replace
11	2011-03-10	Appendix 3	9	replace
		Annex B	B1, B2, B9	replace
		Annex D	D1, D7	replace
		Annex E	E1	replace
12	2011-04-07	Appendix 3	9	replace
		Annex D	D1, D8, D10	replace
13	2011-05-05	Appendix 3	9	replace
		Annex D	D1 – D12 D13, D14	replace add
		Annex E	E1	replace
14	2011-06-02	Appendix 3	9	replace
		Annex D	D1, D2, D4, D7 - D10, D12	replace
15	2011-07-28	Appendix3	9	replace
		Annex D	D1, D3, D4, D6	replace

AMD No.	DATE	PART	PAGE	add, delete or replace
16	2011-08-25	Appendix 3	10	replace
		Annex A	A1, A4	replace
		Annex B	B1, B9	replace
		Annex C	C1, C3	replace
		Annex D	D1, D3 – D5, D8 – D13	replace
		Annex E	E1	replace
		Annex G	G1, G2	replace
17	2011-09-22	Appendix 3	10	replace
		Annex E	E1	replace

Annex A.

Definitions and Abbreviations.

Effective: 2009-11-19
Revised: 2011-08-25

A.1 Definitions.

A.1.1 Area of Responsibility.

An airspace of defined dimensions where a sole ATS unit has responsibility for providing air traffic services.

A.1.2 Area of Common Interest.

A volume of airspace as agreed between 2 ATS-units, extending into the adjacent/subjacent Areas of Responsibility, within which airspace structure and related activities may have an impact on air traffic coordination procedures.

A.1.3 Approval Request.

Request from an ATS-unit to the ATS-unit concerned for an approval of:

- an aircraft not yet airborne, whenever the flying time to the transfer of control point is less than the agreed minimum prenotification time, or
- an aircraft in flight intending to operate under conditions other than those de-scribed in mutually agreed procedures, or
- a change of the coordinated flight level within 5 minutes of the ETO for the transfer of control point.

A.1.4 Expedite Clearance.

An urgent clearance request from an ATS-unit to the ATS-unit concerned for an aircraft in flight whenever the flying time to the transfer of control point is less than the agreed minimum prenotification time.

A.1.5 Division Level.

The level dividing two super-imposed areas of responsibility for the provision of ATS.

A.1.6 **General Air Traffic.**

All flights which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation.

A.1.7 **Operational Air Traffic.**

All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.

A.1.8 **Reduced Vertical Separation Minimum (RVSM).**

A vertical separation minimum of 300 m (1 000 ft) which is applied between FL 290 and FL 410 inclusive, on the basis of regional air navigation agreements and in accordance with conditions specified therein.

A.1.8.1 RVSM Approved Aircraft.

Aircraft that have received State approval for RVSM operations within the EUR RVSM airspace.

A.1.8.2 RVSM Entry Point.

The first reporting point over which an aircraft passes or is expected to pass immediately before, upon, or immediately after initial entry into EUR RVSM airspace, normally the first reference point for applying a 300 m (1 000 ft) vertical separation minimum between RVSM approved aircraft.

A.1.8.3 RVSM Exit Point.

The last reporting point over which an aircraft passes or is expected to pass immediately before, upon, or immediately after leaving EUR RVSM airspace, normally the last reference point for applying a 300 m (1 000 ft) vertical separation minimum between RVSM approved aircraft.

A.1.9 **Release.**

A.1.9.1 Release for Climb.

An authorization for the accepting unit to climb (a) specific aircraft before the transfer of control.

Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.

A.1.9.2 Release for Descent.

An authorization for the accepting unit to descend (a) specific aircraft before the transfer of control.

Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.

A.1.9.3 Release for Turn.

An authorization for the accepting unit to turn (a) specific aircraft away from the current flight path by not more than 45° before the transfer of control.

Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.

A.1.10 **State Aircraft.**

Only aircraft used in military, customs and police services shall qualify as State Aircraft.

A.2 Abbreviations.

ABI	Advance Boundary Information
ACC	Area Control Centre
ACI*	Area of Common Interest
ACT	Activation Message
AIP	Aeronautical Information Publication
ALEH*	Aller East High sector
AMC*	Airspace Management Cell
AoR*	Area of Responsibility
ATC	Air Traffic Control
ATCC	Air Traffic Control Centre
ATS	Air Traffic Services
AUP*	Airspace Use Plan
BA*	Bremen Assistant
BOR*	Börde sector
CAA	Civil Aviation Authorities
CBA*	Cross Border Area
CCP*	Contingency Contact Point
CDR*	Conditional Route
CCC*	Celle Co-ordinating Controller
CEC*	Celle Executive Controller
COP*	Coordination Point
CRAM*	Conditional Route Availability Message
CRC*	Control and Reporting Centre
DL*	Division Level
DST*	Deister sector
***E**	Executive controller
EIDE*	Eider East sector
EIDW*	Eider West sector
EMS*	EMS sector
ETO	Estimated Time Over Significant Point
EUR	European
FDS*	Flight Data Specialist
FLA*	Flight Level Allocation
FIR	Flight Information Region
FIS	Flight Information Service
FL	Flight Level
FMP*	Flow Management Position
FRI*	Friesland sector
GAT*	General Air Traffic
GND	Ground
HCC*	Holstein Co-ordinating Controller
HEC*	Holstein Executive Controller
HEI*	Heide sector
HRZ*	Harz sector
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
JCC	Jever Co-ordinating Controller
JEC	Jever Executive Controller
LAM	Logical Acknowledge Message
LoA*	Letter of Agreement
MAR*	Mark sector
MCC*	Munster Co-ordinating Controller
MEC*	Munster Executive Controller
MFC*	Multi Frequency Coding (telephone system)
MilATCC*	Military Air Traffic Control Centre
MHz	Megahertz
Mil	Military
MRZ*	Mueritz sector
MSL	Mean Sea Level
MUAC	Maastricht UAC
NM	Nautical Mile
OAT*	Operational Air Traffic
OLDI*	On-line Data Interchange
ORCAM	Originating Region Code Assignment Method
***P**	Planning Controller
RCC*	Ruhr Co-ordinating Controller
REC*	Ruhr Executive controller
RTF	Radio Telephony
RVSM	Reduced Vertical Separation Minimum
SCC*	Solling Co-ordinating Controller
SEC*	Solling Executive Controller
SID	Standard Instrument Departure
SSR	Secondary Surveillance Radar
STAR	Standard Instrument Arrival
TDO*	Tactical Delta Operator
THO*	Tactical Hannover Operator
TSA*	Temporary Segregated Airspace
UAC	Upper Area Control Centre
UHF	Ultra High Frequency
UIR	Upper Flight Information Region
UTC	Coordinated Universal Time
VFR	Visual Flight Rules
VHF	Very High Frequency
WWC1/2/3/4/5A	Bremen ACC FDS 1/2/3/4/5

Note: Abbreviations marked with an * are non-ICAO abbreviations.

For further abbreviations and definitions see AIP Germany part GEN.

Annex B.

Area of Common Interest.

Effective: 2009-11-19
Revised: 2011-08-25

B.1 Airspace Structure and Classification within the Area of Common Interest.

Area	Vertical limits	Airspace Classification
Rhein and Hannover UIRs	FL 245 - UNL	C (FL245-FL660)
Bremen FIR	GND - FL245	C (FL100-FL245)

B.2 Sectorisation.

B.2.1 The sectorisation within the ACI is shown in Appendices 1 and 2 to Annex B.

B.2.2 Coordinates of the Bremen sector boundary points mentioned in appendix 2 to Annex B:

1	550400N 082000E	2	550000N 080000E	3	545600N 081300E
4	534000N 063000E	5	550000N 063000E	6	544400N 081100E
7	545100N 093100E	8	544924N 094420E	9	545028N 095336E
10	544554N 100313E	11	544435N 101000E	12	543900N 081200E
13	543930N 103000E	14	543920N 104000E	15	543542N 105300E
16	542311N 105300E	17	541130N 102500E	18	540200N 095400E
19	540440N 092650E	20	532415N 082800E	21	533450N 085620E
22	540800N 083400E	23	531800N 071130E	24	540532N 083545E
25	531900N 070130E	26	531220N 081910E	27	524415N 083415E
28	521700N 080000E	29	521420N 070340E	30	523925N 070330E
31	524830N 070430E	32	530000N 071234E	33	531253N 071304E
34	533759N 095937E	35	533331N 095034E	36	532600N 095445E
37	524100N 090510E	38	535307N 091455E	39	543400N 105900E
40	542700N 120000E	41	541744N 113818E	42	540800N 111530E
43	533516N 111158E	44	532144N 112549E	45	530843N 114531E
46	524723N 110813E	47	524620N 110652E	48	524350N 110626E
49	524056N 110002E	50	523710N 110133E	51	522225N 110413E
52	515430N 110739E	53	515028N 111230E	54	514317N 112426E
55	523639N 121129E	56	513400N 104200E	57	512002N 102315E
58	512000N 093500E	59	512000N 091000E	60	510955N 090728E
61	510959N 084431E	62	511754N 083631E	63	513543N 085200E
64	515400N 085200E	65	520800N 084429E	66	520700N 080000E
67	521137N 093926E	68	515600N 094125E	69	541500N 115334E
70	Not applicable	71	Not applicable	72	520818N 090000E

73	523000N 094215E	74	523000N 092800E	75	522846N 110452E
76	522959N 103128E	77	524631N 074929E	78	524235N 094423E
79	522157N 093721E	80	532011N 065937E	81	532356N 065658E
82	532828N 065149E	83	532945N 064859E	84	533015N 064430E
85	533122N 064020E	86	533338N 063624E	87	545015N 091700E
88	545220N 091320E	89	545400N 090110E	90	545500N 084000E
91	550417N 082655E				

B.2.3 Coordinates of the Maastricht UAC sectors mentioned in appendix 1 to Annex B:

B.2.3.1 Coordinates of sector CELLE.

522136N 0083954E - 530005N 0091927E - 530000N 0101453E - 532344N 0103309E - 532344N 0112638E - 530631N 0111754E - 524350N 0110626E - 522846N 0110500E - 522800N 0110454E - 522225N 0110413E - 521730N 0110450E - 521700N 0104830E - 520941N 0095309E - 520300N 0092430E - 515028N 0083014E - 515600N 0083041E - 521730N 0083800E - 522136N 0083954E.

B.2.3.2 Coordinates of sector HOLSTEIN.

544200N 0084000E - 543800N 0084500E - 543916N 0100258E - 543930N 0103000E - 543920N 0104000E - 543542N 0105300E - 543400N 0105900E - 543247N 0110205E - 541744N 0113818E - 541500N 0115334E - 532344N 0112638E - 532344N 0103309E - 530000N 0101453E - 530005N 0091927E - 530610N 0085111E - 534525N 0085658E - 541237N 0075842E - 545500N 0084000E - 544200N 0084000E.

B.2.3.3 Coordinates of sector JEVER.

524749N 0054348E - 525827N 0050818E - 531913N 0044348E - 540620N 0041048E - 543000N 0043209E - 550000N 0063000E - 550000N 0080000E - 550400N 0082000E - 550409N 0082331E - 550417N 0082655E - 545500N 0084000E - 541237N 0075842E - 534525N 0085658E – 530610 N0085111E - 524749N 0074757E - 524749N 0070415E - 524749N 0054348E.

B.2.3.4 Coordinates of sector MUENSTER.

530610N 0085111E - 530005N 0091927E - 522136N 0083954E - 521730N 0083800E - 515600N 0083041E - 515028N 0083014E - 512800N 0082915E - 511838N 0084312E - 510508N 0085435E - 510460N 0083651E - 511147N 0082929E - 511612N 0082440E - 511215N 0081026E - 510851N 0080308E - 512447N 0075350E - 514809N 0071353E - 515550N 0064760E - 520422N 0062111E - 520803N 0060603E - 522027N 0061338E - 523200N 0064100E - 523223N 0070225E - 523925N 0070330E - 524749N 0070415E - 524749N 0074757E - 530610N 0085111E.

B.2.3.5 Coordinates of sector SOLLING.

510542N 0100321E - 510500N 0100227E - 510508N 0092600E - 510508N 0091443E - 510508N 0085435E - 511838N 0084312E - 512800N 0082915E - 515028N 0083014E - 520300N 0092430E - 520941N 0095309E - 521700N 0104830E - 521730N 0110450E - 521230N 0110530E - 515423N 0110748E - 515028N 0111230E - 514823N 0110838E - 513400N 0104160E - 512913N 0103533E - 512002N 0102315E - 510542N 0100321E.

B.3 Special Areas within the Area of Common Interest.

B.3.1 **Delegation of the Responsibility for the Provision of ATS to/from other ATS units within the ACI** - see Appendices to Annex B

B.3.1.1 Michaelsdorf Area

Within the Hannover UIR and Bremen FIR the responsibility for the provision of ATC in accordance with the airspace classification has been delegated from Maastricht UAC/DFS UAC Maastricht and Bremen ACC to ACC Copenhagen within the Michaelsdorf Area:

Lateral Limits:	542700N 0120000E - 541744N 0113818E - 543400N 0105900E - 543920N 0104000E - along FIR/UIR- boundary - 542700N 0120000E.
Vertical Limits:	GND - FL 660.
Airspace classification:	C (at and above FL 100 - FL 660) E (at and above 2500 GND - below FL 100) G (GND - below 2500 GND)

The following applies for the area:

- IFR-flights are not allowed in airspace classification G.
- ACC Bremen is responsible for provision of ATS to uncontrolled VFR-flights within Bremen FIR (airspace classification E and G).

B.3.1.2 Alsie Area

Within the Hannover UIR the responsibility for the provision of ATS has been delegated from Maastricht UAC (for GAT) and Lippe UAC (for OAT) to Copenhagen ACC within the Alsie Area:

Lateral limits:	N 54 50 28 E 009 53 36 – N 54 45 54 E 010 03 13 – along UIR-boundary – N 54 39 30 E 010 30 00 – N 54 38 00 E 008 45 00 – N 54 42 00 E 008 40 00 – N 54 55 00 E 008 40 00 – N 54 54 00 E 009 01 10 – N 54 52 20 E 009 13 20 – N 54 50 15 E 009 17 00 – N 54 51 00 E 009 31 00 – N 54 49 24 E 009 44 20 – N 54 50 28 E 009 53 36.
Vertical limits:	FL245 – FL660.
Airspace classification:	C.

The following applies for the area:

- That part of the area which is situated within the lateral limits of German R- and D-areas is only available during times of non-activation of the relevant R- and D-areas.

B.3.1.3 Arpe Area

Within the Hannover UIR the responsibility for the provision of ATS has been delegated from Maastricht UAC (for GAT) and Lippe UAC (for OAT) to Karlsruhe UAC within the Arpe Area:

Lateral limits:	N 51 11 47 E 008 29 29 – N 51 16 12 E 008 24 40 - N 51 12 15 E 008 10 26 – N 51 06 00 E 007 57 00 - N 50 55 57 E 007 40 56 – N 50 43 15 E 007 49 00 - along the Hannover / Rhein UIR boundary N 51 11 47 E 008 29 29.
Vertical extension:	FL245 - FL660
Airspace classification:	C

B.3.1.4 ABGUS Area

Within the Hannover UIR the responsibility for the provision of ATS has been delegated from Maastricht UAC (for GAT) and Lippe UAC (for OAT) to Munich ACC and Karlsruhe UAC within the Abgus Area:

Lateral limits:	N 51 34 00 E 010 42 00 – N 51 45 30 E 011 08 45 - N 51 48 23 E 011 08 38 – N 51 34 00 E 010 42 00.	
Vertical limits:	FL315 - FL660 to Karlsruhe UAC FL245 - FL315 to Munich ACC	(ABGUS HIGH Area) (ABGUS LOW Area)
Airspace classification:	C	

B.3.1.5 Schwerin North Area

Within the Bremen FIR and Rhein UIR the responsibility for the provision of ATS in accordance with the airspace classification has been delegated from Bremen ACC and UAC Karlsruhe to ACC Copenhagen within the Schwerin North Area:

Lateral limits:	N 54 27 00 E 012 00 00 – N 54 15 00 E 011 53 34 – N 54 17 44 E 011 38 18 – N 54 27 00 E 012 00 00.
Vertical limits:	FL285 – FL660 from Karlsruhe UAC to ACC Copenhagen FL105 – FL285 from Bremen ACC to ACC Copenhagen
Airspace classification:	C

B.3.1.6 Schwerin South High Area

Within the Rhein UIR the responsibility for the provision of ATS has been delegated from Karlsruhe UAC to Maastricht UAC (for GAT) and Lippe UAC (for OAT) within the Schwerin South High Area:

Lateral limits:	N 54 15 00 E 011 53 34 – N 52 43 50 E 011 06 26 – N 54 08 00 E 011 15 30 – N 54 17 44 E 011 38 18 – N 54 15 00 E 011 53 34.
Vertical limits:	FL285 - FL660
Airspace classification:	C

B.3.1.7 Twenthe Area

Within the Bremen FIR and Hannover UIR the responsibility for the provision of ATS has been delegated from Bremen ACC and Maastricht UAC (for GAT) and Lippe UAC (for OAT) to MilATCC NM within the Twenthe Area:

Lateral limits: The part of the Bremen FIR/Hannover UIR west of a line linking the co-ordinates N 52 39 25 E 007 03 30 and N 52 23 50 E 007 03 40.

Vertical limits: 2500 GND – FL660.

Airspace classification: E (2500 GND – FL100)
C (FL100 – FL660)

B.3.1.8 Hannover Area

Within the Langen FIR the responsibility for the provision of ATS has been delegated from Langen ACC to Bremen ACC within the Hannover Area.

Lateral limits: N 52 08 00 E 008 44 29 – N 52 08 18 E 009 00 00 –
N 51 52 55 E 009 00 00 – N 51 45 16 E 009 00 00 –
N 51 45 00 E 008 52 00 – N 51 52 55 E 008 52 00 –
N 51 54 00 E 008 52 00 – N 52 08 00 E 008 44 29.

Vertical limits: FL105 - FL245

Airspace classification: C

B.3.1.9 Paderborn Area

Within the Langen FIR the responsibility for the provision of ATS has been delegated from Langen ACC to Bremen ACC within the Paderborn Area.

Lateral limits: N 51 45 00 E 008 52 00 – N 51 45 16 E 009 00 00 –
N 51 40 00 E 009 00 00 – N 51 28 37 E 008 52 00 –
N 51 40 00 E 008 52 00 – N 51 35 43 E 008 52 00 –
N 51 40 00 E 008 52 00 – N 51 45 00 E 008 52 00.

Vertical limits: FL105 – FL245

Airspace classification: C

B.3.1.10 ESADU Area

Within the Langen FIR the responsibility for the provision of ATS has been delegated from Langen ACC to Bremen ACC within the following area:

Lateral limits: N 51 35 43 E 008 52 00 – N 51 28 37 E 008 52 00 –
N 51 20 00 E 008 46 00 – N 51 20 00 E 008 54 28 –
N 51 20 00 E 009 10 00 – N 51 09 55 E 009 07 28 –
N 51 09 59 E 008 44 31 – N 51 17 54 E 008 36 31 –
N 51 35 43 E 008 52 00.

Vertical limits: FL 205 – FL 245

Airspace classification: C

B.3.1.11 Warburg Area

Within the Rhein UIR the responsibility for the provision of ATS has been delegated from Karlsruhe UAC to Maastricht UAC (for GAT) and Lippe UAC (for OAT) within the Warburg Area:

Lateral limits:	N 51 11 47 E 008 29 29 – N 51 05 00 E 008 36 51 – N 51 05 08 E 009 14 43 – N 51 05 08 E 009 26 00 – N 51 19 55 E 009 31 00 – N 51 20 00 E 008 46 00 – N 51 11 47 E 008 29 29.
Vertical Limits:	FL245 - FL 660
Airspace classification:	C

B.3.1.12 KEMAD LOW Area

Within the Rhein UIR the responsibility for the provision of ATS has been delegated from Karlsruhe UAC to Maastricht UAC (for GAT) and Lippe UAC (for OAT) within the KEMAD Low Area:

Lateral limits:	N 51 19 55 E 009 31 00 – N 51 20 01 E 010 03 34 – N 51 06 15 E 010 03 22 – N 51 05 42 E 010 03 21 – N 51 05 00 E 010 02 27 – N 51 05 08 E 009 26 00 – N 51 19 55 E 009 31 00.
Vertical limits:	FL245 - FL 255
Airspace classification:	C

B.3.1.13 NOMKA Area

Within the Rhein UIR and the responsibility for the provision of ATS has been delegated from Karlsruhe UAC to Maastricht UAC (for GAT) and Lippe UAC (for OAT) within the NOMKA Area:

Lateral limits:	N 51 20 00 E 009 56 10 – N 51 20 02 E 010 23 15 – N 51 34 00 E 010 42 00 – N 51 20 00 E 009 56 10.
Vertical limits:	at and above FL245
Airspace classification:	C

B.3.1.14 RISOK High Area

Within the Rhein UIR the responsibility for the provision of ATS has been delegated from Karlsruhe UAC to Maastricht UAC (for GAT) and Lippe UAC (for OAT) within the RISOK High Area:

Lateral limits:	N 51 48 23 E 011 08 38 – N 51 50 28 E 011 12 30 - N 51 54 23 E 011 07 48 – N 51 48 23 E 011 08 38.
Vertical limits:	FL285 - FL660
Airspace classification:	C

B.3.1.15 RIMET Area

Within the Bremen FIR the responsibility for the provision of ATS has been delegated from Bremen ACC to Langen ACC within the following area:

Lateral Limits:	N 51 28 42 E 010 03 42 – N 51 29 13 E 010 35 33 – N 51 20 02 E 010 23 15 – N 51 20 01 E 010 03 34 – N 51 28 42 E 010 03 42.
Vertical Limits:	FL235 – FL245

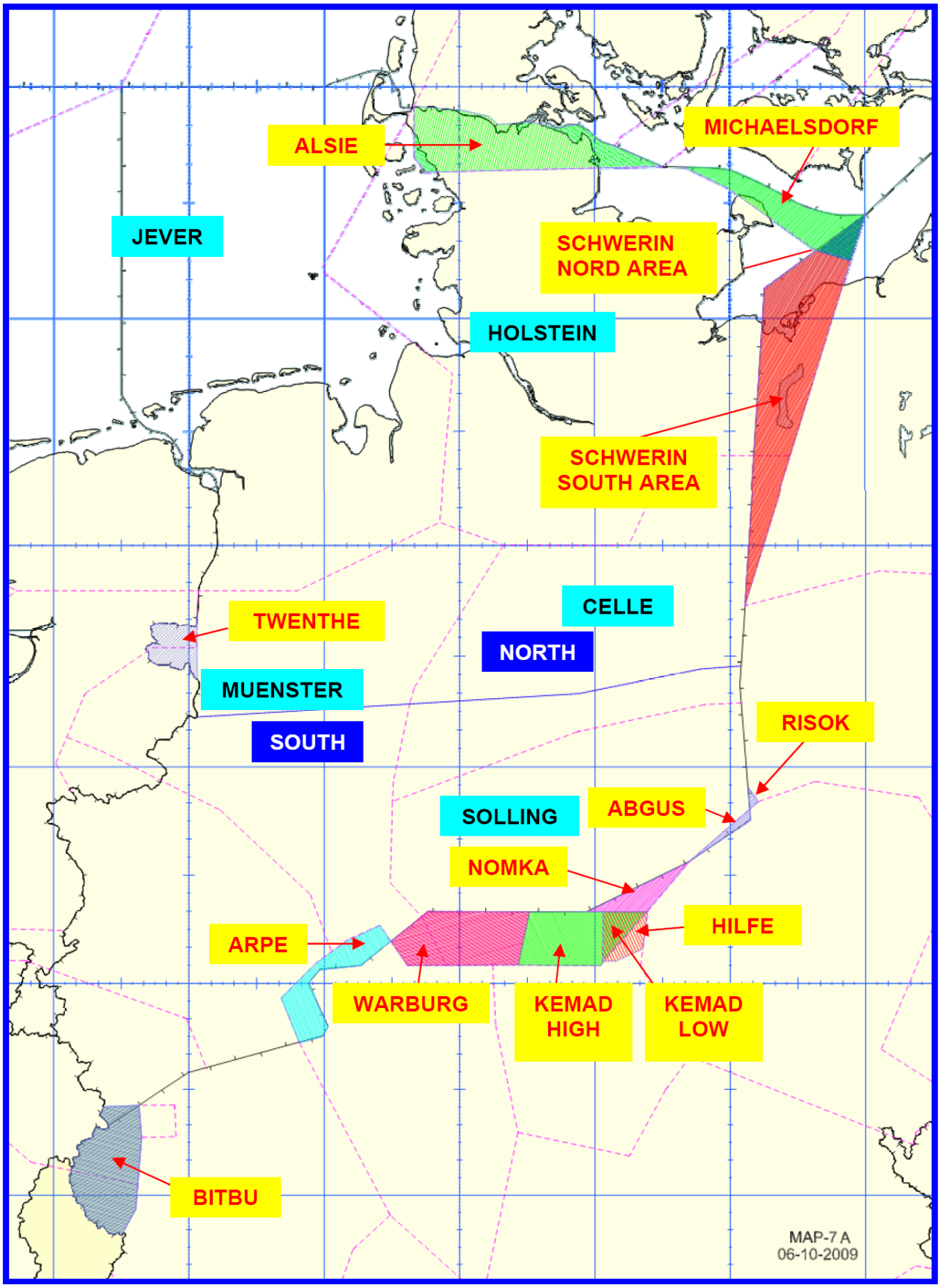
Airspace classification: C

B.3.2 **Other Areas** - see Appendix to Annex B.

ED-R 206 (TRA-Mecklenburg 1) as published in the AIP Germany.

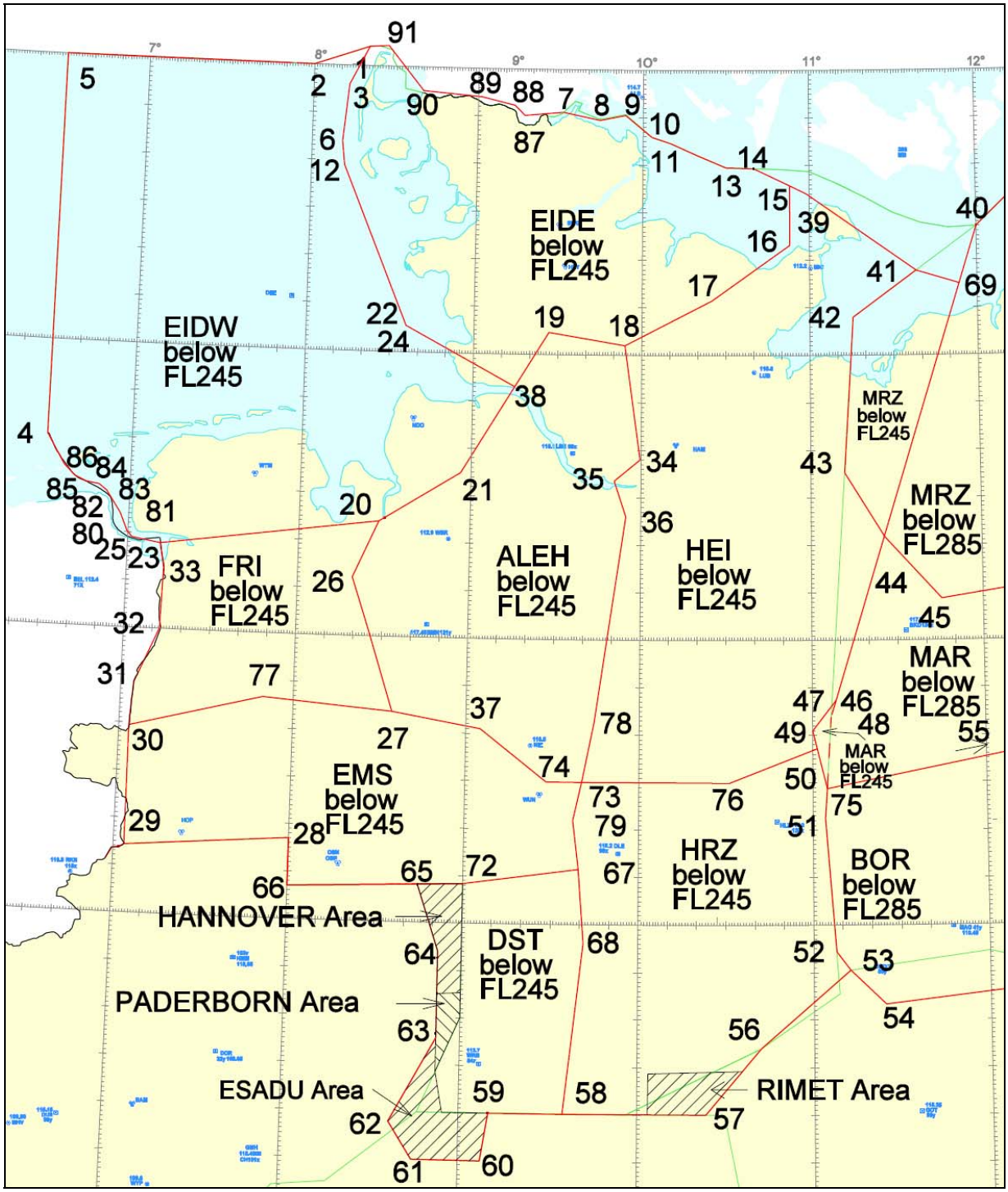
Appendix 1 to Annex B

Area of responsibility and Sectorisation Maastricht UAC



Appendix 2 to Annex B

Sectorisation Bremen ACC



PAGE INTENTIONALLY LEFT BLANK.

Annex C.

Exchange of Flight Data.

Effective: 2009-11-19
Revised: 2011-08-25

C.1 General.

C.1.1 Basic Flight Plan Data.

Basic flight plan data should normally be available at the ATS units.

C.1.2 Current Flight Plan Data.

Messages including current flight plan data shall be forwarded by the transferring ATS unit to the accepting ATS unit either by automatic data exchange or by telephone to the appropriate sector/position.

C.1.2.1 Automatic Data Exchange.

ABI/ACT/LAM messages are exchanged between the two ATS units in accordance with Appendix 1 to Annex C.

C.1.2.2 Verbal Estimates.

For conditions that are not supported by the automatic data exchange, verbal estimates will be exchanged.

A verbal estimate shall be passed to the appropriate sector at the accepting ATS unit at least **8** minutes prior, but not earlier than 30 minutes before the aircraft is estimated to pass the transfer of control point, and shall contain:

a) Call sign.

Note: To indicate that the flight plan is available, the accepting ATS unit should state aircraft type and destination after having received the call sign.

b) SSR code (discrete mode A code or special purpose code 1000).

c) ETO for the appropriate COP as laid down in Annex D to this LoA.

d) Cleared flight level, specifying climb or descent conditions if applicable, at the transfer of control point.

Requested flight level if different from cleared flight level.

e) Other information, if applicable.

Normally, verbal estimates will not be passed in parallel with ACT messages.

In any case, verbally passed data shall take precedence over data exchanged automatically.

C.1.2.3 Failure of Automatic Data Exchange.

In the event of a failure which prevents the automatic transfer of data, the Supervisor Bremen and the Maastricht UAC Sector Supervisor of the Hannover Sectors shall immediately decide to revert to the verbal exchange of estimates.

After recovery from a system failure, the Supervisors shall agree as to when they will revert to automatic data exchange.

Note: For Maastricht Fallback procedure see Annex G.3.

C.1.3 **Non-availability of Basic Flight Plan Data.**

If the accepting ATS unit does not have basic flight plan data available, additional information may be requested from the transferring ATS unit to supplement the ACT message or a verbal estimate.

C.1.4 **Revisions.**

Any significant revisions to the flight data shall be transmitted to the accepting ATS unit.

Time differences of **5** minutes or more shall be exchanged.

Note: Changes of the coordinated flight levels within **5** minutes of the ETO for the transfer of control point are subject to an **Approval Request**.

Within the context of RVSM any changes in aircraft's ability to continue to meet the vertical navigation accuracy or any in-flight contingency which has an impact on RVSM operations are considered as significant revisions.

C.1.5 **Expedite Clearance and Approval Request.**

Whenever the minimum flying time of **8** minutes to the transfer of control point **cannot be met**, either an expedite clearance request, or an approval request, as appropriate (see para. A1 of Annex A), shall be initiated.

C.2 Means of Communication and their Use.

C.2.1 **Equipment.**

The following lines are available between Maastricht UAC and Bremen ACC:

- data lines
- telephone lines (MFC)

C.2.2 **Telephone Coordination.**

Any telephone communication shall be terminated with the initials of both parties concerned.

Exchange of flight plan data, estimates and control messages by telephone shall be carried out in accordance with the tables below:

C.2.2.1 Messages from Maastricht UAC to Bremen ACC.

Receiving Sector	Message	Position	Ext.
Mueritz sector (MRZ)	Flight Plan Data and Estimates	WWC4A	34 2127
	Control Messages, Expedite Clearances, Approval Requests and Revisions	MRZP	34 2037
	Radar Coordination	MRZE	34 2027
Mark sector (MAR)	Flight Plan Data and Estimates	WWC4A	34 2127
	Control Messages, Expedite Clearances, Approval Requests and Revisions	MARP	34 2036
	Radar Coordination	MARE	34 2026

Receiving Sector	Message	Position	Ext.
Boerde sector (BOR)	Flight Plan Data and Estimates	WWC1A	34 2109
	Control Messages, Expedite Clearances, Approval Requests and Revisions	BORP	34 2072
	Radar Coordination	BORE	34 2062
Eider West sector (EIDW)	Flight Plan Data and Estimates	WWC2A	34 2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions	EIDWP	34 2031
	Radar Coordination	EIDWE	34 2021
Eider East sector (EIDE)	Flight Plan Data and Estimates	WWC2A	34 2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions	EIDEP	34 2032
	Radar Coordination	EIDEE	34 2022
Friesland sector (FRI)	Flight Plan Data and Estimates	WWC2A	34 2123
	Control Messages, Expedite Clearances, Approval Requests and Revisions	FRIP	34 2033
	Radar Coordination	FRIE	34 2023
Aller East High sector (ALEH)	Flight Plan Data and Estimates	WWC5A	34 2142
	Control Messages, Expedite Clearances, Approval Requests and Revisions	ALEHP	34 2051
	Radar Coordination	ALEHE	34 2041
Heide sector (HEI)	Flight Plan Data and Estimates	WWC5A	34 2142
	Control Messages, Expedite Clearances, Approval Requests and Revisions	HEIP	34 2053
	Radar Coordination	HEIE	34 2043
EMS sector (EMS)	Flight Plan Data and Estimates	WWC3A	34 2164
	Control Messages, Expedite Clearances, Approval Requests and Revisions	EMSP	34 2071
	Radar Coordination	EMSE	34 2061
Deister sector (DST)	Flight Plan Data and Estimates	WWC3A	34 2164
	Control Messages, Expedite Clearances, Approval Requests and Revisions	DSTP	34 2075
	Radar Coordination	DSTE	34 2065
Harz sector (HRZ)	Flight Plan Data and Estimates	WWC3A	34 2164
	Control Messages, Expedite Clearances, Approval Requests and Revisions	HRZP	34 2074
	Radar Coordination	HRZE	34 2064

Supervisor ATC (WWC1M): 34 2199 FMP (WWC1F): 34 2099
Supervisor Flight Data (WWCAM): 34 2120
Telefax: +49 421 53 55 33

C.2.2.2 Messages from Bremen ACC to Maastricht UAC.

Receiving Sector	Message	Position	Ext.
Celle Sector	Flight Plan Data and Estimates	THO	4249
	All co-ordination messages	CCC	4280
	Urgent Radar Co-ordination	CEC	4281
Solling Sector	Flight Plan Data and Estimates	THO	4249
	All co-ordination messages	SCC	4260
	Urgent Radar Co-ordination	SEC	4261
Jever Sector	Flight Plan Data and Estimates	TDO	4259
	All co-ordination messages	JCC	4250
	Urgent Radar Co-ordination	JEC	4251
Ruhr Sector	Flight Plan Data and Estimates	THO	4249
	All co-ordination messages	RCC	4240
	Urgent Radar Co-ordination	REC	4241
Münster Sector	Flight Plan Data and Estimates	THO	4249
	All co-ordination messages	MCC	4290
	Urgent Radar Co-ordination	MEC	4291
Holstein Sector	Flight Plan Data and Estimates	TDO	4259
	All co-ordination messages	HCC	4350
	Urgent Radar Co-ordination	HEC	4351

Duty Supervisor DSUP:	4300	MAS/FD-SUP:	4308
Hannover Sector Supervisor:	4302	DECO Sector Supervisor:	4303
Flight Data:	4307	FMP:	4309
Telefax:	+31 43 3661 320		

C.3 Failure of Ground/Ground Voice Communications.

C.3.1 **Fall-Back Procedures for Coordination.**

C.3.1.1 In case VCS (Maastricht Voice Communication System) is unserviceable, the Maastricht UAC Supervisor will inform the Bremen ACC Supervisor immediately that the Back-up Telephone System (BTS) will be operational. Calls to/from Maastricht UAC will arrive as anonymous calls at the Bremen ACC or Maastricht UAC (BTS equipped) working positions.

Note: For Maastricht Fallback procedure see Annex G.3.

C.3.1.2 In the event of MFC failure between the coordinating partners, coordination may be effected via public telephone:

Maastricht UAC:

Centre Supervisor:	+31-43-3662 022
Hannover Sector Supervisor:	+31-43-3661 328
DECO Sector Supervisor:	+31-43-3661 283
Flight Data Supervisor:	+31-43-3661 332
FMP:	+31-43-3661 473
Telefax:	+31-43-3661 320

Note: During MFC failure public telephones will be made available to all sectors. The numbers will be co-ordinated by the respective Sector Supervisors.

Bremen ACC:

Supervisor ATC (WWC1M):	+49 421 5149900
	+49 421 5963 489
Supervisor Flight Data (WWCAM):	+49 421 5149902
FMP (WWC1F):	+49 421 5149906
Telefax:	+49 421 53 55 33

C.3.2 **Alternate Fall-Back Procedures for Coordination.**

In case of communication failure where the alternatives described in para. C.3.1 are not available or practicable, pilots shall be instructed, at least **5** minutes prior to the transfer of control point, to pass flight data on the appropriate frequency of the accepting ATS unit for the purpose of obtaining an ATC entry clearance from the accepting ATS unit.

If the accepting ATS unit cannot issue an entry clearance to the pilot upon his initial contact, the pilot shall be instructed to inform the transferring ATS unit accordingly via RTF.

The transferring ATS unit shall hold the aircraft within its AoR and after a minimum of **10** minutes instruct the pilot to re-establish RTF contact with the accepting ATS unit.

This procedure shall be repeated until an onward clearance has been obtained from the accepting ATS unit.

Appendix 1 to Annex C

Automatic Data Exchange.

ABI/ACT/LAM messages are exchanged between the two ATS units in accordance with the table below:

<table>
<tr><th>Messages</th><th>COPs</th><th colspan="2">Time and/or Distance Parameters</th></tr>
<tr><td></td><td></td><td>Messages from Maastricht UAC to Bremen ACC</td><td>Messages from Bremen ACC to Maastricht UAC</td></tr>
<tr><td>ABI
3a+b
7a+b+c
13a
14a+b+c
16a
22(9a+b+c,
15a+b+c,
80 and 81)</td><td rowspan="3">All
(see
D.2.1 -
D.2.4)</td><td>20 minutes prior to ACT.

No ABI shall be transmitted after ACT-transmission</td><td>ACC Bremen will transmit ABI upon activation of the flight in the ACC Bremen system until 3 minutes before ACT.

No ABI shall be transmitted after ACT-transmission.</td></tr>
<tr><td>ACT [2]
3a+b
7a+b+c
13a
14a+b+c+
d+e

16a
22(9a+b+c,
15a+b+c,
80 and 81)</td><td>Traffic via BATEL:
13 minutes prior COP.

Other traffic:
15 minutes prior COP.</td><td>15 minutes prior COP or 30 NM prior to COP, whichever comes first.</td></tr>
<tr><td>If less than 15 minutes, ACT shall be transmitted as soon as possible, but not later than ETO COP.
Regardless of the obligation to initiate an expedite clearance/approval request.</td><td>If less than the above time/distance parameters, ACT shall be transmitted as soon as possible, but not later than ETO COP.
Regardless of the obligation to initiate an expedite clearance/approval request.</td></tr>
<tr><td>LAM
3a+b+c</td><td colspan="2">Immediately after having received an ACT.

If a LAM is not received at Maastricht UAC within 15 seconds/Bremen ACC within 45 seconds after the ACT-transmission, a warning shall be displayed at the appropriate sector.</td></tr>
</table>

Note: 1. The exchange of ABI/ACT/LAM messages shall follow the OLDI ver. 2.3 standard.

2. ACT shall be forwarded by Maastricht UAC to Lippe Radar in case of departures with an OAT FPL.

ABI/ACT field 22 shall include field types 9 and 15 data with following route information as a minimum: last point prior COP + COP + one route element after COP.

Annex D.

Procedures for Coordination.

Effective: 2009-11-19
Revised: 2011-08-25

D.1 General Conditions for Acceptance of Flights.

D.1.1 Coordination of flights shall take place by reference to the COP for the relevant route and in accordance with the appropriate flight levels specified for the relevant route (see para D.2 and D.3).

D.1.2 Flights transiting through the AoR boundary at FL250 or above shall be **maintaining the coordinated flight level at least 2,5 NM** prior to the transfer of control point unless climb or descent conditions have been clearly stated by use of crossing conditions in the ACT, or by verbal coordination - **except, if otherwise described in para. D.2 or D.3**.

D.1.3 Aircraft which do not carry RTF equipment capable of VHF 8.33 kHz channel spacing, except for UHF equipped state aircraft, shall not be transferred to Maastricht UAC.

D.1.4 If the accepting ATS unit cannot accept a flight offered in accordance with the conditions specified above, it shall clearly indicate its inability and specify the conditions under which the flight will be accepted.

D.1.5 For any proposed deviation from the conditions specified in this Annex (e.g. COP, route or flight level) the transferring unit shall initiate an Approval Request.

Unless otherwise coordinated, subject deviation shall be limited to the vertical and lateral dimension of the receiving sector of the accepting ATS-unit. The receiving sector of the accepting ATS-unit shall define responsibilities for further coordination.

D.1.6 The accepting ATS unit shall **not** notify the transferring ATS unit that it has established ground-air communications with the transferred aircraft unless specifically requested to do so.

D.1.7 As a principle Bremen ACC and Maastricht UAC consider flights to be on an ATS route when within 5 NM of the centreline.

D.2 ATS-Routes, Coordination Points and Flight Level Allocation.

Available ATS-routes, COPs to be used and flight level allocation to be applied, unless otherwise described in para D.3, are described in the tables below.

D.2.1 **Flights from Maastricht UAC to Bremen ACC.**

D.2.1.1 General.

D.2.1.1.1 Bremen ACC generally considers flights with destinations within the Bremen FIR, Amsterdam FIR and the Copenhagen FIR to be at or descending to FL250 without verbal coordination, unless otherwise stated in the tables below.

Flights transferred to Bremen ACC sectors EID, FRI, ALEH, HEI, EMS, DST and HRZ, shall reach FL250 latest at the COP, unless other lateral conditions are stated in D.2.1 or coordinated otherwise. If this transfer condition is met and transfer of communication prior the COP has taken place, Bremen ACC shall ensure that respective flights pass FL240 or below within 15 NM after the COP or agreed lateral transfer conditions.

Note: If Bremen ACC provides the transferring sector with a lower level, the responsibility for internal coordination within Maastricht UAC rests with the transferring sector.

If Bremen ACC sectors EID, FRI, ALEH, HEI, EMS, DST and HRZ, are unable to descend flights according to the above mentioned restrictions, coordination is required with the transferring sector and other affected MUAC sectors.
In all other cases, e. g. when transfer of communication has not taken place or transfer conditions have not been met, the responsibility for internal coordination rests with the transferring Maastricht UAC sector.

D.2.1.1.2 Any DCT clearance beyond the COP is subject to verbal coordination.

D.2.1.1.3 Unless otherwise informed inbound traffic shall remain on track until passing the division level.

D.2.1.1.4 The DECO Sector supervisor shall inform the Bremen ACC supervisor when CC/UM Lippe is status 2 or 3.

D.2.1.1.5 Except for para D.2.2.5 NOTE 1 Maastricht UAC shall in principle be responsible for providing separation between outbound traffic cleared to flight level(s) above FL245 and inbound traffic still within Maastricht UAC's area of responsibility. In such cases where it is judged that Bremen ACC should provide separation then Maastricht UAC shall verbally request Bremen ACC to provide separation between outbound and inbound traffic.

D.2.1.1.6 EDDH, EDHI and EDHL arrivals from the north, east of UN873, will not be accepted by Maastricht UAC.

D.2.1.1.7 The Bremen ACC Supervisor shall inform the Maastricht UAC Hannover Sector Supervisor regarding actual inbound procedure at EDDV ("Hannover East" respectively “Hannover West”).

D.2.1.2 Flights from Maastricht UAC, Jever Sector.

Destination	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Lübeck-Blankensee EDHL	UL619	DHE	EIDW	WWC2A	FL250	
	UN125	REVLA	ALEH	WWC5A	FL260	NOTE 1/2/3
Kiel-Holtenau EDHK		WSR				
Bremen EDDW		EEL	FRI	WWC2A	FL250	NOTE 4
Sylt EDXW	DHE-STAR	DHE	EIDW			
Flensburg EDXF,	P999					
Billund EKBI, Skrydstrup EKSP, Esbjerg EKEB, Kolding EKVD, Stauning EKVJ	(U)N873	LEGPI				
Groningen EHGG		WELGO				

NOTE 1: Flights with destination EDDH/HI/HL filed via EEL-REVLA and destination EDHK via EEL-WSR are considered to be descending to FL260 released for further descent without verbal co-ordination.
Unless otherwise specified and/or co-ordinated Bremen ACC shall not descend arriving traffic via EEL until clear of outbound traffic via WSR - EEL transferred already to Maastricht UAC Jever sector.

NOTE 2: Inbound traffic to EDDH/HI/HL/HK filed via EEL is released for left turn to RIBSO during CC/UM Lippe status 2 or 3. Bremen ACC shall ensure separation with outbound traffic.

NOTE 3: Unless otherwise co-ordinated, Maastricht UAC shall clear arrivals to EDDH/HI/HL/HK via EEL-REVLA/WSR-RIBSO to cross 16 NM prior WSR at FL260 or below.

NOTE 4: Unless otherwise co-ordinated, Maastricht UAC shall clear arrivals to EDDW via EEL-WSR to cross 15 NM after DOBAK at FL250 or below. Maastricht UAC Jever sector shall ensure separation with outbound traffic from EDDH/HI/HK/HL on UN125, by requesting a lower level from the FRI Sector if required.

D.2.1.3 Flights from Maastricht UAC, Holstein Sector.

Destination	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Sylt EDXW	WSR-/LBE-STAR	MELDU	EIDE	WWC2A	FL250	
Padborg EKPB, Sonderborg EKSB, Billund EKBI, Skrydstrup EKSP, Kolding EKVD, Stauning EKVJ, Esbjerg EKEB	UP615/ UM852	EKERN				
Billund EKBI, Skrydstrup EKSP, Kolding EKVD, Stauning EKVJ, Esbjerg EKEB	UP992	BADOS				
Padborg EKPB, Sonderborg EKSB	P999	DHE				NOTE 1
Groningen EHGG			EIDW			
Groningen EHGG, Leer-Papenburg EDWF	UN125	WSR	ALEH	WWC5A	FL247	NOTE 2
Bremen EDDW	UP615 (southb.), UL126 (southb.)	LBE			FL250	
Hannover EDDV, Wunstorf ETNW	UL619, UP992, UP615					
	UM852	HAM	HEI			
	UT726	RAMAR				
Nordholz ETMN	UL619	AMLUH				
Braunschweig/Wolfsburg EDVE	UT726	RAMAR				
	UM852 (southb.)	HAM				
	UL619	LBE	ALEH			
Flensburg EDXF	UM170, UL126, UL11H**					NOTE 3
	UL190, UM852	HAM	HEI			
Laage ETNL, Neubrandenburg ETNU, Heringsdorf EDAH, Barth EDBH	UZ102	BERIM	MRZ	WWC4A		CDR1/2
Overflights					ODD	
	SUVOX DCT ROSOK	ROSOK				

NOTE 1: Unless otherwise co-ordinated, Maastricht UAC shall clear arrivals to EKPB, EKSB to cross 25 NM after DHE at FL250.

NOTE 2: The Holstein sector shall coordinate the transfer level verbally with ALEH sector.

NOTE 3: **UL11H - Maastricht System Route connecting DLE and LBE

D.2.1.4 Flights from Maastricht UAC, Münster Sector.

Destination	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Lübeck-Blanken-see EDHL, Kiel-Holtenau EDHK	UM170	BASUM	ALEH	WWC5A	FL250	NOTE 1
Münster-Osnabrück EDDG, Dortmund EDLW, Gütersloh ETUO, Arnsberg EDLA			EMS	WWC3A		
Bremen EDDW, Bremerhaven EDWB, Emden EDWE, Wilhem-shaven EDWI		OSN				
Hannover EDDV, Wunstorf ETNW	UM170/ UL980					NOTE 2
Kassel EDVK	UL980					

NOTE 1: Unless otherwise coordinated, Maastricht UAC shall clear arrivals to EDDH/EDHI/EDHL via BASUM-WSR-RIBSO or OSN-WSR-RIBSO to cross 15 NM prior WSR at FL250 or below.
Inbound traffic to EDDH/HI/HL, filed via BASUM-WSR is released for right turn to HAM during CC/UM Lippe status 2 or 3. Bremen ACC shall ensure separation with outbound traffic.

NOTE 2: Unless otherwise coordinated, Maastricht UAC shall clear arrivals EDDV, ETNW and EDVK via UL980/UM170 to cross 10 NM prior OSN at FL250.

D.2.1.5 Flights from Maastricht UAC, Celle Sector.

Destination	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Lübeck-Blankensee EDHL, Kiel-Holtenau EDHK	UL190	DLE	HEI	WWC5A	FL250	NOTE 1
	UT726	DIRBO				
Kiel-Holtenau EDHK	UM852	ULSEN				
Braunschweig-Wolfsburg EDVE	UL980	ROBEG	EMS	WWC3A		
Münster-Osnabrück EDDG, Dortmund EDLW, Gütersloh ETUO, Arnsberg EDLA						
Düsseldorf EDDL, Münster-Osnabrück EDDG, Arnsberg EDLA, Dortmund EDLW, Gütersloh ETUO	UZ706	MOBSA				NOTE 2
Bielefeld EDLI	UL126, UL980	ROBEG				
Paderborn EDLP, Allendorf-Eder EDFQ,	UL126		DST			
Kassel EDVK	UL980, UL126					
	UL190	DLE	HRZ			
Magdeburg EDBM, Magedburg/Cochstedt EDBC	UL986					
	UM852, UT726	HLZ				
Laage ETNL	UZ717	GARLU	MAR	WWC4A	FL270	
Schwerin-Parchim EDOP					FL250	
Berlin-Tegel EDDT, Berlin/Schönefeld EDDB	Z870	GURLO				NOTE 3
	UL619	BUMIL				
	T207	BATEL				
Overflights	Z870	GURLO			ODD	
	UP12, UZ717	GARLU				
	UL619	BUMIL				

NOTE 1: Unless otherwise coordinated, Maastricht UAC shall clear EDDH, EDHI, EDHL and EDHK arrivals via UL190 to cross 20 NM prior AGATI at FL250.

NOTE 2: Unless otherwise coordinated, Maastricht UAC shall clear EDDL, EDDG, EDLA, EDLW and ETUO arrivals via UZ706 to cross 35 NM prior MOBSA at FL250.

NOTE 3: **Arrivals to Berlin airports.**

Bremen/MARP shall notify the change of the **runway direction at the Berlin airports** to the Maastricht UAC Supervisor, Hannover Sectors, in due time.

Arrivals to Berlin airports shall be

- routed either via **Z870/UL619-BKD-UL619-VIBIS-VIBIS STAR** or **T207-BATEL-BATEL STAR,** respectively and
- handed over to Bremen/MARE FL280 or below, descending FL250. In case of **east landings** in Berlin, Maastricht UAC will endeavour to hand over traffic as low as possible in the circumstances.

D.2.1.6 Flights from Maastricht UAC, Solling Sector.

Destination	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Bremen EDDW	UL190	NORTA	HRZ	WWC3A	FL250	
Hannover EDDV, Wunstorf ETNW	UL602, UL190 (RWY27)	ELNAT				NOTE 1
	UL602, UL190 (RWY09)		DST			
Braunschweig-Wolfsburg EDVE	UZ717	PIROT				
	UL602, UL190	ELNAT	HRZ			NOTE 2
Leipzig-Altenburg EDAC	UL986, UM852	POVEL				
Leipzig EDDP, Erfurt-Weimar EDDE	UM852					
	T236	UPDAT				
Paderborn EDLP	B293	NORTA				
Transition UAC to ACC within original flightplan	UL126/ UN850 ⇒N850/ Z190 (southb.)	WRB	DST			NOTE 3
Frankfurt-Hahn EDFH						
Saarbrücken EDDR, Zweibrücken EDRZ, Mannheim EDFM, Speyer EDRY, Worms EDFV, Coleman ETOR, Siegerland EDGS	UL126	ROBEG				
Overflights	UL986	POVEL	BOR	WWC1A	ODD	

NOTE 1: Traffic, inbound to EDDV, ETNW via KEMAD/ELNAT:
Bremen ACC generally accepts traffic for Hannover airport on direct tracks to DLE, provided these tracks are within the triangle ELNAT-DLE-ROBEL or on direct tracks to ROBEG, provided these tracks are within the triangle ELNAT ROBEG ROBEL.
Unless otherwise coordinated, Maastricht UAC shall clear EDDV, ETNW arrivals to cross 10 NM after ELNAT at FL250.

NOTE 2: Bremen ACC generally accepts traffic inbound to Braunschweig-Wolfsburg airport planned via KEMAD/ELNAT on direct track to HLZ provided the track is west of UM852.
Unless otherwise coordinated, Maastricht UAC shall clear EDVE arrivals to cross 10 NM after ELNAT at FL250.

NOTE 3: Unless otherwise coordinated, Maastricht UAC shall clear flights to EDFH and with requested transition UAC to ACC to cross 15 DME prior WRB at FL250.

D.2.2 **Flights from Bremen ACC to Maastricht UAC.**

D.2.2.1 General.

D.2.2.1.1 With the exception of para D.2.2.5 NOTE 1 and D.2.2.9 –D.2.2.11 Maastricht UAC shall normally issue a flight level when receiving the estimate, or in due time after receipt of the ACT message.

D.2.2.1.2 In certain traffic situations it might be necessary to use the phrase "upper level assured". This phrase indicates that no doubt exists that an upper flight level will be available for these flights prior to leaving the lateral limits of the Bremen FIR.

D.2.2.1.3 Hamburg departures to the north, east of UN873, shall generally be cleared below FL245.

D.2.2.1.4 The Bremen ACC Supervisor shall inform the Maastricht UAC Hannover Sector Supervisor regarding actual outbound procedure at EDDV ("Hannover East").

D.2.2.1.5 All DCTs published in the ATS route column are flight planable only from 23.00 UTC [22.00 UTC] until 07.00 UTC [06.00 UTC]. Bremen ACC shall not clear flights on these DCTs outside the mentioned timeframe without prior approval from the respective MUAC sector(s).

Note: Times in brackets are valid during central European Summer time

D.2.2.2 Flights from Bremen ACC, EIDE Sector.

<table>
<tr><th>Departure</th><th>ATS-Route</th><th>COP</th><th>Receiving Sector</th><th>FDA</th><th>FLA</th><th>Special Conditions</th></tr>
<tr><td>Billund EKBI, Odense EKOD, Padborg EKPB, Soenderborg EKSB, Skrydstrup EKSP, Esbjerg EKEB, Kolding EKVD</td><td>UP615, UM852, EKERN DCT RIMET</td><td>EKERN</td><td rowspan="6">HOLSTEIN</td><td rowspan="6">TDO</td><td rowspan="6">FL245</td><td></td></tr>
<tr><td>Odense EKOD, Padborg EKPB, Soenderborg EKSB, Skrydstrup EKSP, Kolding EKVD</td><td>UN872, DEGUL DCT CIV, GORLO, MIMVA, RAVLO, NILEM</td><td>DEGUL</td><td></td></tr>
<tr><td>Billund EKBI, Kolding EKVD</td><td>UP992</td><td>ATTUS</td><td></td></tr>
<tr><td rowspan="2">Sylt EDXW</td><td>WSR-SIDs</td><td>VEPOL</td><td rowspan="2">NOTE 1</td></tr>
<tr><td>LBE-SIDs, LBE DCT ABGUS, DENOL, POVEL</td><td>BARDU</td></tr>
</table>

NOTE 1: If necessary, Maastricht UAC shall coordinate Sylt departures with Lippe UAC.

D.2.2.3 Flights from Bremen ACC, EIDW Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hamburg EDDH, Hamburg-Finkenwerder EDHI	UL619	DHE	JEVER	TDO	FL245	
Billund EKBI, Esbjerg EKEB, Kolding EKVD	UN873	LEGPI				
Groningen EHGG		WELGO				

D.2.2.4 Flights from Bremen ACC, FRI Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Bremen EDDW, Bremerhaven EDWB	UN125	DOBAK	JEVER	TDO	FL245	NOTE 1
Groningen EHGG		DOTOB				

NOTE 1: Flights will proceed from EDDW direct to EEL. Whenever this route is not available due to TRA activity, flights shall proceed via UN125.

D.2.2.5 Flights from Bremen ACC, EMS Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Bremen EDDW	Y804	BUSEP	CELLE	THO	FL245	
	UM170, OSN DCT GORLO	OSN	MÜNSTER			
Transition ACC → UAC within original flight plan at non standard profile						
Hannover EDDV, Wunstorf ETNW	UL980, UM170, OSN DCT GORLO					
Paderborn EDLP, Kassel EDVK	UL126, UL980	ROBEG	CELLE			
Münster-Osnabrück EDDG, Dortmund EDLW, Gütersloh ETUO, Arnsberg EDLA	UL980, UZ706, MOBSA DCT GARLU	MOBSA				
	UM170, OSN DCT WSR	OSN	MÜNSTER			

D.2.2.6 Flights from Bremen ACC, ALEH Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Kiel-Holtenau EDHK	UN125	WSR	JEVER	TDO	FL250	NOTE 1
Emden EDWE, Wilhelmshaven EDWI						
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Lübeck EDHL	Y900, IDEKO DCT PODER	IDEKO	CELLE	THO	FL245	
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Lübeck EDHL, Bremerhaven EDWB	UM170, BASUM DCT FAMEN/ TOBIV/ TOLVU	BASUM	MÜNSTER			
Bremen EDDW, Bremerhaven EDWB	UP615 (northb.)	LBE	HOLSTEIN			
Kiel-Holtenau EDHK	UL126, LBE DCT ABGUS, DENOL, POVEL					
Wunstorf ETNW	N850, UP615 (northb.), UZ102	ESTAD				
Lübeck EDHL	Z102-WSR-UN125				FL250	

NOTE 1: Unless otherwise co-ordinated by Bremen ACC ALEH sector, flights departing EDDH/HI/HK filed via WSR-EEL shall be cleared by Bremen ACC to FL250 clear of the Holstein sector. In this case Bremen ACC shall be responsible to separate these flights and flights inbound EDDH/EDHI/EDHL and EDHK via BASUM-WSR descending to FL250. Bremen ACC ALEH sector shall ensure internal co-ordination with Bremen ACC FRI Sector when necessary. Unless otherwise co-ordinated transfer of communication will be effected passing FL245 or passing 16NM West WSR, whichever is earlier.

In case FL250 is not available for departing traffic from EDDH and EDHI filed via WSR-EEL Maastricht UAC JEVER Sector shall inform Bremen ACC sector ALEH about it. Bremen ACC ALEH sector continues in accordance with the procedure laid down in D.2.2.1.2.

D 2.2.7 Flights from Bremen ACC, DST Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hannover EDDV, Wunstorf ETNW	UL126/ UN850 (southb.)	WRB	SOLLING	THO	FL245	NOTE 1
Dortmund EDLW	UM864					
Köln EDDK	Y867					
Paderborn EDLP, Kassel EDVK	UM864	TOLGI				
Transition ACC → UAC within original flight plan at non standard profile	UN850	WRB				
	UL126 (southb.)	ROBEG	CELLE			

NOTE 1: Traffic departing Hannover airport via WRB.
- Maastricht UAC accepts subject flights on direct routeings to WRB (routes UL126, UN850).
- Transfer of communication shall take place before the Langen FIR boundary

D 2.2.8 Flights from Bremen ACC; HEI Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Hamburg EDDH, Hamburg-Finkenwerder EDHI, Lübeck EDHL	UM852, Z113, LEVBU DCT RIMET, ABGUS, POVEL	LEVBU	CELLE	THO	FL245	
Bremen EDDW	Z870	RIDNI				NOTE 1
	UP605, UZ102	HAM	HOLSTEIN	TDO		
Bremerhaven EDWB						
Hannover EDDV, Braunschweig–Wolfsburg EDVE	UM852	AMLUH				
Hannover EDDV, Wunstorf ETNW, Braunschweig–Wolfsburg EDVE	UN851	IRKIS	CELLE	THO		
Lübeck EDHL	UT726					
	UL190	HAM	HOLSTEIN	TDO		
Laage ETNL	UZ102					
Kiel-Holtenau EDHK	UL190, UM852 (Southb.)					
	UL619, UT726	IRKIS	CELLE	THO		

NOTE 1: Only for flights with a RFL at or above FL290 and not for flights with a destination within the Bremen FIR.

D 2.2.9 Flights from Bremen ACC, HRZ Sector.

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Bremen EDDW	UL980, UL986	DLE	CELLE	THO	FL245	
Braunschweig–Wolfsburg EDVE	UL980, UZ717, (westb.)					
	UL190 (southb.), UL126, UN850	NORTA	SOLLING			
Paderborn EDLP, Kassel EDVK	UL190					
Erfurt-Weimar EDDE, Magdeburg EDBM, Leipzig EDDP, Maged-burg/Coch-stedt EDBC	UM852, UL986, POVEL DCT DENOL/ FAMEN/ GORLO/ MIMVA/ RAVLO/ WRB	POVEL				

D 2.2.10 Flights from Bremen ACC, MRZ Sector

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Neubrandenburg ETNU, Heringsdorf EDAH	UZ102	BERIM	HOLSTEIN	TDO	FL260	CDR1/2
Overflights					EVEN	

D 2.2.11 Flights from Bremen ACC; MAR Sector

Departure	ATS-Route	COP	Receiving Sector	FDA	FLA	Special Conditions
Barth EDBH, Laage ETNL, Neubran-denburg ETNU, Magdeburg EDBM, Magedburg/Coch-stedt EDBC	UL619, BUMIL DCT DENOL/ EKERN/ GIKOG/ GORLO/ MIMVA/ NOR/ TOBIV/ TUGDU	BUMIL	CELLE	THO	FL260	
Overflights					EVEN	
Barth EDBH, Laage ETNL, Neubran-denburg ETNU	UZ717, GARLU DCT AMSAN/ GORLO/ MOBSA	GARLU			FL260	
Overflights					EVEN	
	UM864	SORIT				CDR1

D 2.2.12 Flights from Bremen ACC, BOR Sector

<table>
<tr><th>Departure</th><th>ATS-Route</th><th>COP</th><th>Receiving Sector</th><th>FDA</th><th>FLA</th><th>Special Conditions</th></tr>
<tr><td rowspan="2">Berlin-Tegel EDDT</td><td>Y200</td><td rowspan="3">HLZ</td><td rowspan="3">CELLE</td><td rowspan="8">THO</td><td rowspan="6">EVEN</td><td rowspan="5">NOTE 1</td></tr>
<tr><td rowspan="2">HLZ DCT FAMEN/ GORLO/ MIMVA/ RAVLO/ TOBIV</td></tr>
<tr><td rowspan="3">Berlin/Schönefeld EDDB</td><td>Y203</td></tr>
<tr><td>Y204</td><td rowspan="4">POVEL</td><td rowspan="4">SOLLING</td></tr>
<tr><td rowspan="2">POVEL DCT DENOL/ FAMEN/ GORLO/ MIMVA/ RAVLO</td></tr>
<tr><td rowspan="2">Berlin-Tegel EDDT</td><td>Q201</td></tr>
<tr><td>Overflights</td><td rowspan="2">UL986, POVEL DCT DENOL/ FAMEN/ GORLO/ MIMVA/ RAVLO</td><td>NOTE 2</td></tr>
<tr><td>Holzdorf ETSH, Leipzig-Altenburg EDAC</td><td>FL260</td><td></td></tr>
</table>

NOTE 1: **Departures from Berlin airports.**

If not otherwise requested by Maastricht UAC, **departures from Berlin** airports may be cleared **direct** to:

DENOL for **Düsseldorf** and **Niederrhein** arrivals and
PODER for **Köln** arrivals.

NOTE 2: **Arrivals to Düsseldorf and Köln.**

If not otherwise requested by Maastricht UAC, flights via **UZ20-MAG-UL986** with destination

Düsseldorf and **Niederrhein** may be cleared after **SUI direct** to **DENOL**.
Köln may be cleared after **SUI direct** to **PODER.**

D.3 Coordination of Status of Special Areas in the Area of Common Interest.

Bremen ACC shall keep Maastricht UAC advised on the activation times of ED-R 206 (TRA-Mecklenburg 1).

PAGE INTENTIONALLY LEFT BLANK.

Annex E.

Transfer of Control and Transfer of Communication.

Effective: 2009-11-19
Revised: 2011-09-22

E.1 Transfer of Control.

The transfer of control takes place at the AoR-boundary, unless otherwise specified in paragraph E.3.

E.2 Transfer of Communication.

E.2.1 The transfer of communication shall take place not later than the transfer of control, unless otherwise coordinated.
The transfer of communication for flights to Bremen ACC sectors EID, FRI, ALEH, HEI, EMS, DST and HRZ shall take place no later than reaching the transfer conditions, described in paragraph D.2.1 of this LoA, unless otherwise coordinated.

E.2.2 **Frequencies.**

E.2.2.1 Bremen ACC:

	Frequencies VHF	UHF
MRZE:	124.175 MHz	259.825 MHz
MARE:	136.050 MHz	396.975 MHz
BORE:	123.225 MHz	397.475 MHz
EMSE	125.025 MHz	372.550 MHz
DSTE	128,750 MHz	283.950 MHz
HRZE	126.650 MHz	372.300 MHz
ALEHE	123.925 MHz	337.950 MHz
HEIE	125.850 MHz	377.475 MHz
FRIE	124.800 MHz	336.450 MHz
EIDWE	120.225 MHz	313,225 MHz
EIDEE	124.075 MHz	371,750 MHz

Wesentliches

E.2.2.2 Maastricht UAC:

	Frequencies VHF	UHF
Celle Sector:	133.955 MHz	as coordinated *)
Solling Sector:	134.710 MHz	as coordinated *)
Jever Sector:	136.465 MHz	as coordinated *)
Holstein Sector:	120.935 MHz	as coordinated *)
Ruhr Sector:	132.615 MHz	as coordinated *)
Münster Sector:	133.855 MHz	as coordinated *)

*)In case of UHF-equipped state aircraft the UHF-frequency to be assigned shall be coordinated with the respective Maastricht sector 5 minutes prior to transfer of communication at the latest.

E.3 Specific Points for Transfer of Control and Transfer of Communications.

Not applicable.

PAGE INTENTIONALLY LEFT BLANK.

Annex F.

Radar Based Coordination Procedures.

Effective: 2009-11-19
Revised:

F.1 SSR Code Assignment.

F.1.1 Both ATS units shall transfer aircraft on verified discrete SSR codes, or on verified code 1000, which are assigned in accordance with ORCAM.

F.1.2 Any change of SSR code by the accepting ATS unit shall only be initiated after the transfer of control point.

F.1.3 The accepting ATS unit shall be notified of any observed irregularity in the operation of SSR transponders.

F.1.4 Validation of codes for climb-out flights intending to leave the Bremen FIR and to enter the Hannover/Rhein UIR shall, at the latest, take place when passing FL200.

Note: This validation may be guaranteed only for flights with direct transfer of control from Bremen ACC to Maastricht UAC.

F.2 Radar Coordination Procedures.

F.2.1 **General.**

F.2.1.1 Transfer of radar identification and transfer of radar control between Maastricht UAC and Bremen ACC shall be subject to the serviceability of the respective radar systems and two-way direct speech facilities between the radar positions.

F.2.1.2 If it becomes necessary to reduce or suspend radar transfers, a 5 minutes prior notification shall be observed, except in emergency situations, such as loss of radar etc.

F.2.1.3 Radar separation minimum shall be **5** NM.

F.2.1.4 A minimum distance of **2.5** NM to the boundary line of responsibility shall be observed when vectoring aircraft, except when a transfer of radar control has previously been coordinated.

F.2.2 **Transfer of Radar Control.**

Transfer of radar control may be effected after prior verbal coordination provided the minimum distance between the aircraft does not fall below **5** NM.

F.2.3 **Silent Transfer of Radar Control.**

Transfer of radar control may be effected **without prior verbal coordination** provided the minimum distance between successive aircraft about to be transferred is **10** NM and remains constant or is increasing.

Note: When using mach-number speed control, pilots concerned shall be instructed to report their assigned mach-number to the accepting ATS unit upon initial contact.

F.3 Reduced Longitudinal Separation.

In case the two-way direct speech facilities between the respective radar positions of Maastricht UAC and Bremen ACC are not serviceable (see para F.2.1.1) a minimum longitudinal separation of **3** minutes may be applied between aircraft on the same track or crossing tracks, whether at the same level, climbing or descending, provided that the relevant aircraft are continuously radar monitored and the transferring ATS unit has ensured that the actual distance between the aircraft does not fall below **20** NM.

Annex G.

Supplementary Procedures.

Effective: 2009-11-19
Revised: 2011-08-25

G.1 Air Traffic Flow Management Procedures.

G.1.1 **General.**

Ad hoc flow control measures between Maastricht UAC and Bremen ACC may be implemented to relieve emergency situations, e.g. system failure etc.

G.1.2 **Application.**

The decision to apply flow control measures shall only be taken by the watch supervisor of the centre concerned.

These local measures will be applied for short periods of time only until the problem has been resolved or the CFMU has taken over.

G.2 Contingency Arrangements.

G.2.1 **General.**

G.2.1.1 In case of technical or catastrophic outage resulting in the disruption of the provision of ATS at Maastricht UAC or at Bremen ACC, the adjacent coordinating partners are expected to assist the failing ATS-unit as far as possible in order to ensure the safe evacuation of air traffic from the AoR of the failing ATS-unit.

G.2.2.2 In case of contingency the regulations of this chapter take precedence over the respective provisions of Annexes A to F to this LoA.

G.2.2 **Disruption of the provision of ATS at Bremen ACC.**

G.2.2.1 Contingency Phase 0.

In the event of an incident which requires the cessation of Operations or causes a sudden loss of Bremen ACC, the Bremen Supervisor shall notify and brief the Supervisor of Maastricht UAC as far as possible.

If necessary and possible, measures shall be agreed in order to ensure the safe evacuation of all controlled air traffic from the AoR of Bremen ACC.
When the Operations of Bremen ACC have ceased and its AoR is clear of controlled traffic, the Supervisor in charge of Operations shall declare contingency phase 0 for Bremen ACC.

From this time on

- the AoR of Bremen ACC shall be called the Contingency Area (CA) until full serviceability of Bremen ACC is recovered,
- the CA is a No-Fly-Zone, entry is prohibited until contingency phase 2 is activated.

G.2.2.2 Contingency Contact Point (CCP) Bremen ACC – Communications.

Supervisor ATC	+49 421 596 3489 or
	+49 173 340 1129

G.2.2.3 Contingency Phase 1.

Not applicable

G.2.2.4 Contingency Phase 2.

In contingency phase 2 Bremen ACC re-establishes the provision of ATS within its AoR by combining ATC sectors to contingency sectors. These Contingency sectors will be re-located to Aiding units.

The contingency sectors will correspond to existing sectors at Bremen ACC:

- **Müritz and Mark sector:**
  Contingency sector East 1 at CRC Schönewalde
- **Boerde and Flaeming sector:**
  Contingency sector East 2 at CRC Schönewalde
- **Heide and Aller East High sector:**
  Contingency sector North High at Maastricht UAC
- **Eider West, Eider East, Friesland and Aller East Low sector:**
  Contingency sector North/West at Maastricht UAC.
- **Ems, Deister und Harz sector:**
  Contingency sector South High at Maastricht UAC

G.2.2.4.1 Activation / Deactivation.

Bremen chief of CCP shall inform the Supervisor Maastricht UAC about the activation and deactivation of the contingency sector.

G.2.2.4.2 ATFM Procedures.

Necessary ATFM-measures to be applied during contingency phase 2 will be initiated by the Supervisor Bremen ACC.

G.2.2.4.3 Exchange of Flight Data.

- Basic flight plan data are available at the contingency working positions only to some extent.
- Since OLDI-data exchange with the contingency working positions is not possible, all estimates shall be coordinated by telephone. The pre notification time of estimates shall be 30 - 15 minutes before the aircraft is estimated to pass the common boundary.
- An expedite clearance shall be obtained by the transferring ATS unit when
  - the estimate cannot be passed at least 15 minutes before the aircraft is estimated to pass the common boundary.
  - a change of coordinated flight level has to be executed within 5 minutes prior to crossing the common boundary.

G.2.2.5 Control Procedures.

G.2.2.5.1 Deviations from published ATS-routes shall be coordinated only to prevent dangerous situations or in case of emergencies.

G.2.2.5.2 Separation minima between succeeding aircraft on transfer shall be with verbal coordination 15 NM constant or increasing.

G.2.2.6 Contingency sectors and communications.

Bremen ACC Contingency sectors	Type of message	Position	MFC-No / Public Phone Frequency /
East 1 P (CBE1P)	Control Messages, Expedite Clearances, Approval Requests, Revisions	Planner	34 7793 +49 3538 9863 3798
East 1 E (CBE1E)	Radar Coordination	Executive	34 7794 +49 3538 9863 3799 VHF 134.650 MHz UHF 373.975 MHZ
East FDA (CBEBA)	Flight Plan Data, Estimates	Assistant East	34 7795 +49 3538 9863 3797
East 2 P (CBE2P)	Control Messages, Expedite Clearances, Approval Requests, Revisions	Planner	34 7791 +49 3538 9863 3796
East 2 E (CBE2E)	Radar Coordination	Executive	34 7792 +49 3538 9863 3795 VHF 126.075 MHz UHF 396.975 MHz
East FDA (CBEBA)	Flight Plan Data, Estimates	Assistant East	34 7795 +49 3538 9863 3797
South HIGH P (CBSHP)	Control Messages, Expedite Clearances, Approval Requests, Revisions	Planner	34 4931 +31 43366 2520
South HIGH E (CBSHE)	Radar Coordination	Executive	34 4930 +31 43366 2521 VHF: 133.725 MHz UHF: -
North / West P (CBNWP)	Control Messages, Expedite Clearances, Approval Requests, Revisions	Planner	34 4921 +31 43366 2516
North / West E (CBNWE)	Radar Coordination	Executive	34 4920 +31 43366 2517 **VHF:** 120.225 MHz (124.800 MHz) **UHF**: -
North HIGH P (CBNHP)	Control Messages, Expedite Clearances, Approval Requests, Revisions	Planner	34 4926 +31 43366 2518
North-HIGH-E (CBNHE)	Radar Co-ordination	Executive	34 4925 +31 43366 2519 VHF: 127.675 MHz UHF: -
North/South FDA (CBNSA)	Flight Plan Data, Estimates	Assistant North High, South High and North/West	34 4924 +31 43366 2523
Contingency Supervisor CBNSM	Procedures, Capacity, Emergency	Supervisor Bremen	34 4923 +31 43366 2522

Note: Bremen ACC contingency working positions will call the working positions of Maastricht UAC on the extensions agreed in this LoA.

G.2.2.7 Voice Communication Systems

All coordination partners of Bremen ACC shall make sure that they are able to reach the Bremen ACC contingency working positions via MFC numbers, taking into consideration that Bremen ACC is completely off, including the technical systems. Public Phone shall be used as back up system. During exercises all systems at Bremen keep on running, beside OLDI-data exchange.

G.2.2.8 Callsign

Telephone call sign for Bremen ACC in case of contingency: Bremen Contingency + name of working position (e.g. North High)

G.2.2.9 SSR Code Assignment.

During contingency, Bremen ACC may not be able to transfer aircraft on discrete SSR codes, or on code 1000, assigned in accordance with ORCAM.

G.2.3 **Disruption of the provision of ATS at Maastricht UAC.**

G.2.3.1 Maastricht UAC Fall-back System Procedures.

G.2.3.1.1 Maastricht UAC – Main System Failure.

G.2.3.1.1.1 The Maastricht UAC Duty Supervisor shall keep the adjacent ATC unit informed of any system degradation affecting the provision of ATS, and shall specify the conditions under which ATS will be provided in case of a Main System Failure.

These conditions can be inter alia: refusal of all or certain flights, refusal of certain traffic flows, or provisional acceptance of certain flights requiring Radar Hand-over.

G.2.3.1.1.2 The phrase: “MAASTRICHT UAC MAIN SYSTEM DOWN. REQUEST RADAR HAND-OVER, NO NEW ESTIMATES ACCEPTED UFN” shall be used to signify that flights that were coordinated before the Main System Failure will be accepted by Maastricht UAC, and that those flights require a Radar Hand-over. Flights that are not coordinated before will not be accepted, nor will any estimate be accepted until further notice. This measure will allow Maastricht UAC to start up the Maastricht Fallback System (MFS) and should last up to 5 minutes.

G.2.3.1.1.3 The phrase: “MAASTRICHT UAC FALLBACK OPERATIONS. VERBAL ESTIMATES ONLY, RADAR HAND-OVER REQUIRED” shall be used to signify that Maastricht UAC is operating on the Fallback System under the following conditions:

- The Duty Supervisor of Maastricht UAC will inform the adjacent ATC unit which flights or traffic flows will be accepted;
- Bremen ACC initially plans departing flights without transition into the Maastricht UAC AoR;
- Verbal estimates are to be passed to either the Tactical Delta Operator or the Tactical Hannover Operator (TDO/THO);
- Maastricht UAC will pass verbal estimates;
- All flights require acceptance from the respective sector coordinator and a Radar Hand-over. Note that under these circumstances the acceptance of an estimate does not imply acceptance of the respective flight.

G.2.3.1.1.4 When System activities are planned by Maastricht UAC affecting the automatic data exchange messages the program of such activities shall be published by Maastricht UAC to the adjacent ATC unit in due time. Before the planned activities start they shall be confirmed by the Duty Supervisor. Depending on the nature of the activities Maastricht UAC could be working on the Fallback System in which case G.2.3.1.1.3 applies.
System activities are usually planned Monday to Friday during night time with the planning published the Friday before.

G.2.3.1.2 Communications.

G.2.3.1.2.1 When Fallback Communications are in use (either in real operations or for training purposes) Supervisors in charge shall keep each other informed about the magnitude of the effect and - if possible - the expected duration of Fallback Systems operations.

G.2.3.1.3 Recovery.

G.2.3.1.3.1 After recovery from Fallback System operations, the supervisor in charge shall inform the adjacent ATC unit of resumed standard operations.

G.2.3.2 <u>Maastricht UAC Contingency - Emergency Recovery Plan.</u>

G.2.3.2.1 Purpose.

This annex defines procedures to be applied in a state of emergency when Maastricht UAC has to shut down the main Ops room and operations shall be resumed in the Maastricht UAC Test and Training Room (TTR) or from a contingency location to be decided by the Maastricht Crisis Team.

G.2.3.2.2 Contingency Phase 0 – Immediate Actions.

When the operational status of Maastricht UAC becomes impaired to such an extent, that ATS can no longer be provided, the Duty Supervisor Maastricht UAC shall initiate the immediate actions to be taken in Phase 0 of the Maastricht UAC Contingency Plan.

G.2.3.2.2.1 Contingency Contact Point (CCP).

Contingency Contact Point during Phase 0 is the Maastricht UAC Duty Supervisor **(CCP1)**. In case the Maastricht UAC Duty Supervisor is unable to perform the actions stated below, the CCP for Maastricht UAC shall be the Supervisor Amsterdam ACC **(CCP1A).**

G.2.3.2.2.2 The immediate actions comprise**:**

1. **CCP1 / CCP1A** activate the trigger **NOTAM (MUAC in Contingency)**
2. **NOTIFICATION ACTIONS**: declare the state of emergency by notifying CFMU, aiding units and neighbouring centres;
    - the AoR of Maastricht UAC shall be called the Contingency Area (CA)
    - entry into the CA is prohibited
    - Phraseology to be used: ***MAASTRICHT UAC is out of service; stop ALL entries into the Contingency Area (CA), start evacuation of the CA.***

Note: In case of a total failure (data, surveillance and/or **communications**) of Maastricht UAC, Amsterdam ACC is given the authority to initiate and monitor the immediate Notification actions as described for Phase 0 until the evacuation of the Contingency Area (CA) has been completed.

- **CCP1/CCP1A** shall inform:
    - Amsterdam ACC, Bremen ACC and CFMU.
    - The message shall consequently be passed on as follow:

        - AMSTERDAM ACC informs: Brussels ACC and Copenhagen ACC
        - BRUSSELS ACC informs: London ACC, Paris ACC and Reims ACC/UAC
        - ACC COPENHAGEN informs: Scottish ACC
        - BREMEN ACC informs: Langen ACC, Munich ACC and NAPC (National Policing Centre)
        - LANGEN ACC informs: Karlsruhe UAC

NOTE: Each notified unit shall inform the military authorities within their area (For Germany this will be done centrally by notification of NAPC).

END