to	Distribution list	**LoA 13f**

from	J.-H. Baerens, CC/FB-N	phone	0421 5372 143	date DRF until	17.10.2011 01.12.2011

Amendment of the LoA between GAFCOM, RNLAF, AFSBw and DFS, wef 20.10.2011 (CBA)

1. Essentials

Annex B: Maps updated

Annex C: C.2.2 Change of the VCS directory CRC SCHÖNEWALDE, CRC ERNDTEBRÜCK and ERNDTEBRÜCK Training Center

Annex C, C.3.2.3: Change of the Public network directory ERNDTEBRÜCK

Annex D, Appendix 1: Change of the AOCS Fax (revised fax numbers)

2. List of Changes

Date	Parts	Page(s)	add, replace, delete
20.10.2011	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): 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): EIDW												

Distribution list: LoA I

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Letter of Agreement

between

DFS Deutsche Flugsicherung

DFS Deutsche Flugsicherung GmbH (DFS)

German Air Force

GERMAN AIR FORCE COMMAND (GAFCOM)

Royal Netherlands Air Force

COMMANDO LUCHTSTRIJDKRACHTEN / AFDELING MISSIE ONDERSTEUNING

Amt für Flugsicherung der Bundeswehr (AFSBw)

In the following referred to as “parties”.

Subject: Common coordination procedures for Cross Border Areas

WEF August 31, 2006

Promulgation: August 03, 2006

1 General

1.1 Purpose

The purpose of this document is to describe the control and coordination procedures of the agreed Cross Border Area (CBA), including the airspace structure, the procedures to be applied, airspace management procedures for the operations of military aircraft inside the CBA.

CBA Sea 1 is established for the conduct of OAT operation that requires large airspace dimensions across the national borders in VMC / IMC, day and night (according scheduling) and for large number of aircraft. CBA Sea 1 is published in DEU / NLD MIL AIP.

These procedures are supplementary to those specified in ICAO, EUROCONTROL, NATO and/or national documents.

1.2 Operational status

All parties shall keep each other advised of any changes in the operational status of their facilities and navigational aids which may affect the cooperation procedures specified in this LoA and / or the handling of air traffic.

1.3 Air traffic categories

1.3.1 General air traffic (GAT)

GAT are flights which are conducted in accordance with the rules and regulations of the ICAO and / or the national civil aviation law.

1.3.2 Operational air traffic (OAT)

OAT are flights of military aircraft which due to

- the provision governing the issuance of a certification as military aircraft,
- the mission,
- or the configuration

are not conducted in accordance with the regulations applicable to General Air Traffic, but in compliance with the rules and procedures established by the appropriate military authorities.

2 Responsibilities

2.1 The ATC units listed below shall be responsible for the provision of ATS within their assigned areas of responsibilities The following ATS are provided: ATC, FIS and ALRS:

Germany:
DFS / EUROCONTROL

Netherlands:
Royal Netherlands Air Force / LVNL / EUROCONTROL

2.2 The TACCS units listed below shall be responsible exclusively for the provision of control service and support of air defence flights and for the tactical support for air traffic of the armed forces within the CBA:

- TACCC Meßstetten;
- TACCC Erndtebrück;
- TACCC Schönewalde and DTACCC Schönewalde;
- TACCC Brockzetel;
- CRC Nieuw Milligen and TACF Nieuw Milligen;
- E-3 A, D and F.

2.3 Territorial Matters

This LoA shall not interfere with agreements between the states concerning sovereignty, air policing and provision of services according to regional agreements.

2.4 Special Provisions

This LoA refers only to step 1 of the CBA project.

2.5 Alerting Service

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 Co-ordination Centre.

3 Procedures

The procedures to be applied by parties are detailed in the Annexes to this LoA.

3.1 Annexes

Annex A	**Definitions and abbreviations**
Annex B	**Area of common interest**
Annex C	**Exchange of flight data**
Annex D	**Procedures for control and coordination**
Annex E	**Transfer of control and transfer of communication**
Annex F	**Radar based coordination procedures**
Annex G	**Supplementary procedures** (The signatures DFS are not applicable for this Annex, because it defines exclusively inner military affairs.)

4 Revisions and deviations

4.1 Revision of this LoA

Revision of this LoA, excluding the annexes, requires the mutual written consent of the signatory parties.

4.2 Revision of annexes

Revision of annexes to the LoA requires the written confirmation of the mutual consent of the designated authorities.

Designated authorities are:

- Business Unit Center, Department Current Operations for DFS GmbH;
- GAFCOM A 5 II c for TACCS;
- RNLAF CLSK / AMO for RNLAF AOCS NM and assigned transportable site;
- AFSBw Group I 4 for AFSBw;
- GAFCOM A 5 III a / RNLAF CLSK / AJO for Flight Crew Procedures.

4.3 Temporary deviations

When necessary, GAFCOM A 5 II c / A 5 III a, RNLAF CLSK / AMO and the responsible ATC unit may introduce, by mutual agreement and for a specified period of time (max. three month), temporary modifications to the procedures laid down in the annexes to the present LoA.

4.4 Incidental deviations

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

5 Interpretation and settlement of disputes

5.1 Should any doubt or diverging views arise regarding the interpretation of any provision of this LoA, or in case of dispute regarding its application, the parties shall endeavor to reach a solution acceptable for all parties involved.

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

6 Cancellation

6.1 Cancellation of this LoA by mutual written agreement of the respective party may take place at any time.

6.2 Cancellation of this LoA or of one of the annexes by either party is possible at any time, provided that the cancelling party declares its intention to cancel the LoA with a minimum pre-notification time of one year before the date the cancellation is to take effect.

7 Validity

This LoA becomes effective August 31, 2006 and supercedes the following LoA:

- Letter of Agreement between CRC Nieuw Milligen, Bremen ACC and Radarführungsregiment 1;
- Letter of Agreement between CRC Nieuw Milligen and CRC Brockzetel.

Langen, 7/07/2006

i. V. Andreas Angenendt
Business Unit Centre
Director Operations

Langen, 10.07.06

i.V. Klaus Schnell
CDC Military Affairs

Den Haag, 17/07/2006

A.H.L. van Happen
Colonel
Royal Netherlands Air Force
Head of Mission Support Branch

Köln, 09.08.2006

Helmut Schütz
Colonel (GS)
German Air Force Command
Director Operations

Charles Dvořák
Colonel
Amt für Flugsicherung der Bundeswehr
Leiter

Record of amendments

AMD NO.	DATE	ANNEXES	PAGE	ADD, DELETE or REPLACE
1	02 AUG 2007	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex B	1, 3,	REPLACE
		Annex B	5, 7	REPLACE
		Annex D	1 - 3	REPLACE
		Annex D	7, 8	REPLACE
		Annex D	9	ADD
2	30 AUG 2007	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex B	1, 8	REPLACE
		Annex C	1, 3	REPLACE
3	12 MAR 2009	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex C	1, 2,	REPLACE
		Annex C	5, 6	REPLACE
4	24 SEP 2009	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex B	1	REPLACE
		Annex B	4 – 7	REPLACE
		Annex B	12	REPLACE
		Annex C	1, 6	REPLACE
		Annex D	1 – 2	REPLACE
		Annex G	G 1, G 4	REPLACE
5	31 OCT 2009	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex C	2, 3	REPLACE
6	03 JUN 2010	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex C	1, 4	REPLACE
7	29 JUL 2010	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex C	1, 5	REPLACE
		Annex D	1,2,7,8,9	REPLACE
		Annex G	1,4	REPLACE
8	16 DEC 2010	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex B	6	REPLACE
		Annex C	2, 5	REPLACE
		Annex G	2 - 5	REPLACE
9	20 OCT 2011	Record of amendments	6	REPLACE
		Checklist	7	REPLACE
		Annex A	1, 5	REPLACE
		Annex B	1, 8, - 10	REPACE
		Annex C	1 - 3, 5	REPLACE
		Annex C	7	ADD
		Annex D	1, 7 , 8	REPLACE
		Annex D	6A – 6B	ADD

Checklist

General	
1	31 AUG 2006
2	31 AUG 2006
3	31 AUG 2006
4	31 AUG 2006
5	31 AUG 2006
6	**20 OCT 2011**
7	**20 OCT 2011**
Annex A	
A 1	**20 OCT 2011**
A 2	31 AUG 2006
A 3	31 AUG 2006
A 4	31 AUG 2006
A 5	**20 OCT 2011**
A 6	31 AUG 2006
Annex B	
B 1	**20 OCT 2011**
B 2	31 AUG 2006
B 3	02 AUG 2007
B 4	24 SEP 2009
B 5	24 SEP 2009
B 6	16 DEC 2010
B 7	24 SEP 2009
B 8	**20 OCT 2011**
B 9	**20 OCT 2011**
B 10	**20 OCT 2011**
B 11	31 AUG 2006
B 12	24 SEP 2009
B 13	31 AUG 2006
Annex C	
C 1	**20 OCT 2011**
C 2	**20 OCT 2011**
C 3	**20 OCT 2011**
C 4	03 JUN 2010
C 5	**20 OCT 2011**
C 6	24 SEP 2009
C 7	**20 OCT 2011**
Annex D	
D 1	**20 OCT 2011**
D 2	29 JUL 2010
D 3	02 AUG 2007
D 4	31 AUG 2006
D 5	31 AUG 2006
D 6	31 AUG 2006
D 6A	**20 OCT 2011**
D 6B	**20 OCT 2011**
D 7	**20 OCT 2011**
D 8	**20 OCT 2011**
D 9	29 JUL 2010
Annex E	
E 1	31 AUG 2006
Annex F	
F 1	31 AUG 2006
F 2	31 AUG 2006
Annex G	
G 1	29 JUL 2010
G 2	16 DEC 2010
G 3	16 DEC 2010
G 4	16 DEC 2010
G 5	16 DEC 2010

Annex A

Definitions and abbreviations

Effective: August 31, 2006
Revised: October 20, 2011

A.1 Definitions

A.1.1 Approval Request

Request from an ATC unit to the ATC unit concerned for an ATC clearance for:

- 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 described in mutually agreed procedures.

A.1.2 Area of responsibility (AoR)

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

A.1.3 Area of common interest (ACI)

A volume of airspace as agreed between two ATC units, extending into the adjacent or stratified areas of responsibility, within which airspace structure and related activities may have an impact on air traffic coordination procedures.

A.1.4 ATS route

A specified route designated for channeling the flow of traffic as necessary for the provision of air traffic services.

A.1.5 Clearance limit

The point to which an aircraft is granted an air traffic control clearance. One of the following details shall be defined as clearance limit: Aerodrome of destination, point or airspace boundary.

A.1.6 Close Advisory Control

A form of aircraft mission control in which the aircraft is continuously controlled, for altitude, speed and heading, to a position from which the mission can be accomplished. The controlling unit will provide adequate warnings of hazards affecting aircraft safety. **The aircraft commander is responsible for the aircraft's navigation and collision avoidance.**

A.1.7 **Close Positive Control**

A form of aircraft mission control in which the aircraft is continuously controlled for altitude, speed and heading, to a position from which the mission can be accomplished. **The controlling unit is responsible for taking actions for collision avoidance, such as ordering the necessary alterations to heading, speed and altitude to maintain operation criteria**.

A.1.8 **Coordination**

The process of obtaining an agreement on clearances, transfer of control, advice or information to be issued to aircraft, by means of information exchanged between air traffic services units and TACCC or between controller positions within such units.

A.1.9 **Danger Area**

An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

A.1.10 **Expedite Clearance**

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

A.1.11 **Flight path**

The path of an aeroplane through the air, defined in three dimensions, usually with reference to an origin at the start of take-off roll or at the landing threshold.

Note: Pertaining to traffic passing through a CBA Sea 1 the origin of the flight path is determined as 5 NM before entering the CBA, the flight path ends 5 NM after leaving the CBA. The dimensions of the flight path are 5 NM either side of the track of the aeroplane and either

1000 FT above and below the aeroplane when below FL290, or

2000 FT above and below the aeroplane when above FL290, or

1000 FT below and 2000 FT above the aeroplane when at FL290.

A.1.12 **Loose Advisory Control**

A form of aircraft mission control in which the aircraft commander selects his own speed, altitude, heading and the appropriate tactics required to accomplish the assigned task. The controlling unit will advise the aircraft commander of the current tactical picture and will provide further advice if and when available. The controlling unit will provide adequate warnings of hazards affecting aircraft safety. **The aircraft commander is responsible for navigation and collision avoidance.**

A.1.13 **Loose Positive Control**

A form of aircraft mission control in which the aircraft commander selects his own speed, altitude, heading and the appropriate tactics required to accomplish the assigned task. The controlling unit will advise the aircraft of the current tactical picture and will provide further advice if and when available. **The controlling unit is responsible for taking actions for collision avoidance, such as ordering the necessary alterations to heading, speed and altitude to maintain operation criteria**.

A.1.14 **Positive Control Service / Advisory Control Service**

The RNLAF uses the above mentioned terms as equivalent to Close / Loose Positive Control / Close / Loose Advisory Control.

A.1.15 **Radar hand-off**

The transfer of responsibility for the provision of radar service to an aircraft from one radar controller to another without interruption of radar service.

A.1.16 **Reduced vertical separation minimum (RVSM)**

A vertical separation minimum of 1000 FT which is applied between FL 290 and FL 410 inclusive, on the basis of regional air navigation agreement and in accordance with conditions specified therein.

A.1.17 **Restricted area**

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

A.1.18 **RVSM approved aircraft**

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

A.1.19 **Security flights**

Security flights are flights which are conducted for the immediate defence of the Federal Republic of Germany or in order to guarantee the integrity of the airspace of the Federal Republic of Germany and prevent attacks on the safety of air traffic, particularly aircraft hijacking, acts of sabotage and terrorism.

Flights resulting from urgent national or NATO security requirements, which for this reason do not necessarily comply with control and direction described within the MilAIP Netherlands GEN 2.3. See MilAIP Netherlands ENR 1.16-5.1.

Priority shall be given to security flights of air defence above all other traffic, except those flights for which the pilot declares an emergency or which are apparently in an emergency situation, including flights affected or threatened by unlawful interference.

A.1.20 **State aircraft**

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

A.1.21 **Training flight**

Flights of military or civil aircraft, flying on behalf of the Bundeswehr, RNLAF or NATO, for which TACCC is responsible for training purposes.

A.1.22 **Transfer of control point**

A defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next.

For further abbreviations and definitions see

DFS Manual of Operations ATC Services, chapter 170 ENCYCLOPEDIA;

AIP Germany GEN 2.2-1 – 2.2-13;

Mil AIP Germany and AFSBw BesAnMilFS 6-100

AIP Netherlands GEN 2.2-1 – 2.2-13

Mil AIP Netherlands GEN 2.2 - 2.3

A.2 Abbreviations

A	AAR	Air to Air Refuelling
	AC	Aircraft Controller
	ACC	Area Control Center
	ACI	Area of Common Interest
	AEW	Airborne Early Warning
	AFSBw	Amt für Flugsicherung der Bundeswehr
	AIP	Aeronautical Information Publication
	ALRS	Alerting Service
	AMC	Airspace Management Cell
	AMSL	Above Mean Sea Level
	AOCS	Air Operations and Control Station
	AoR	Area of Responsibility
	APAS	ASACS Peacetime Availability Schedule
	ASACS	Air Surveillance and Control System
	ASM	Air Surveillance Manager
	ATC	Air Traffic Control
	ATP	Allied Tactical Publication
	ATS	Air Traffic Service
C	CBA	Cross Border Area
	COMAO	Composite Air Operations
	COMIL	Coordination Center for Military Airspace Utilization
	COP	Change Over Point
	COSA	Coordinating and Scheduling Agency
	CRC	Control and Reporting Center
D	(D)ACT	(Dissimilar) Air Combat Training
	DC	Duty Controller
	DCA	Duty Controller Assistant
	DFL	Division Flight Level
	DFS	Deutsche Flugsicherung GmbH
E	ED-D	Danger area
	ED-R	Restricted area
	EH-D	Danger area
	EH-R	Restricted area
	ETO	Estimated Time Over
	EUROCONTROL	European Organization for the Safety of Air Navigation
F	FA	Fighter Allocator
	FC	Fighter Controller
	FIR	Flight Information Region
	FIS	Flight Information Service
	FL	Flight Level
	FPL	Filed Flight Plan
	FT	feet
G	GAFCOM	German Air Force Command
	GAT	General Air Traffic
	GEMIL FLIP MAP	German Military Flight Information Publication Aeronautical Maps and Charts
	GND	Ground
H	HPZ	Helicopter Protected Zone
	HTZ	Helicopter Traffic Zone
I	ICAO	International Civil Aviation Organisation
	IFF	Identification Friend/Foe
	IFR	Instrument Flight Rules
	IMC	Instrument Meteorological Conditions
	IPC	Initial Planning Conference
L	LVNL	Luchtverkeersleiding Nederland
	LoA	Letter of Agreement
M	MC	Master Controller
	Mil AIP	Military Aeronautical Information Publication
	MilRADNET	Military RADAR Data Network
	MSL	Mean Sea Level
	MO ATS	Manual of Operations Air Traffic Services
	MRVA	Minimum Radar Vectoring Altitude
N	NAEW	North Atlantic Treaty Organization Airborne Early Warning
	NAPC COSA DEU	National Air Policing Center Coordinating and Scheduling Agency Germany
	NATO	North Atlantic Treaty Organization

	NM	Nautical Mile
	NOTAM	Notice to Airman
O	OAT	Operational Air Traffic
	OPS	Operations
	ORCAM	Originating Region Code Assignment Method
P	PCA	Planning and Coordinating Authority for Military Air Activities
	POC	Point of Contact
Q	QFE	Atmospheric pressure at aerodrome elevation
R	RCF	Radio Communication Failure
	RMCDE	RADAR Message Conversion and Distribution Equipment
	RMSC	Resources Management Support Cell
	RVSM	Reduced Vertical Separation Minima
S	SSR	Secondary Surveillance Radar
T	TACCC	Tactical Air Command and Control Center
	TACCS	Tactical Air Command and Control Service
	TACF	Transportable Air Control Facility
	TAD	Tactical Air Designator
	TRA	Temporary Reserved Airspace
	TRAMON	TRA Monitoring Unit
U	UAC	Upper Area Control Center
	UIR	Upper Flight Information Region
V	VCS	Voice Communication System
	VFR	Visual Flight Rules
	VMC	Visual Meteorological Conditions
W	WEF	With Effect From

Annex B

Area of common interest

Effective: August 31, 2006
Revised: October 20, 2011

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

For FIR, UIR and airspace classification refer to AIP Germany ENR 2.1 and AIP Netherlands ENR 2.1.

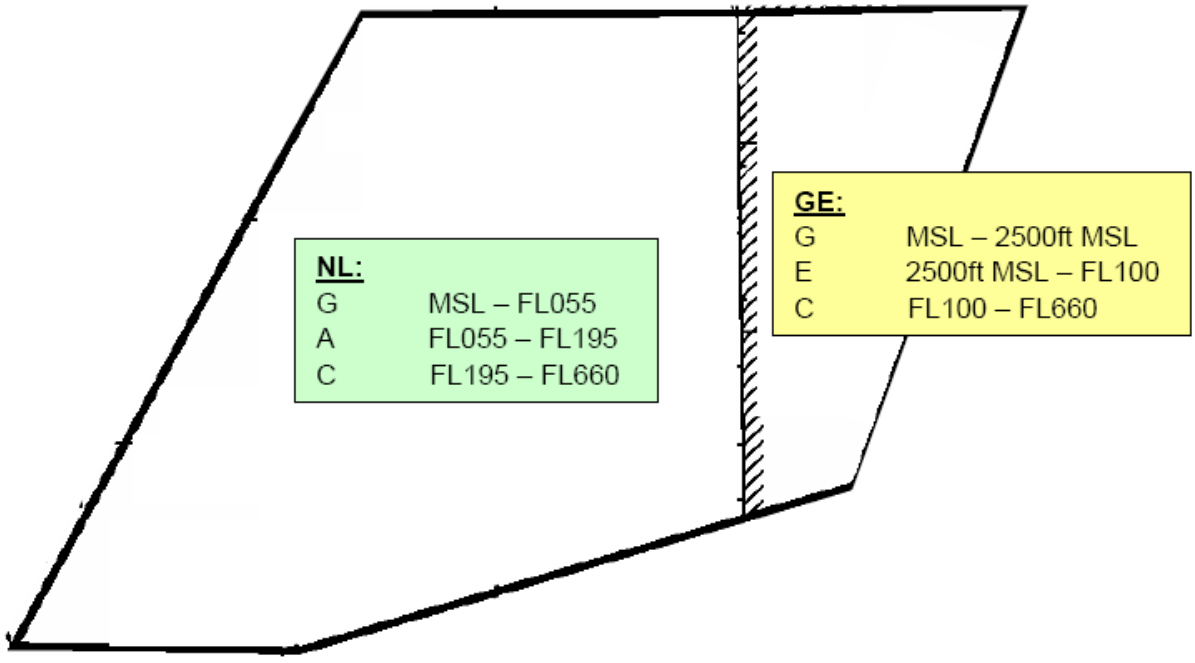
Lateral and vertical dimensions, times of activation of ED-R (TRA) restricted areas and ED-D danger areas are depicted in AIP Germany (ENR 5.1, 5.2), Mil AIP Germany and GEMIL FLIP MAP.

Air refueling anchors are depicted in Mil AIP Germany and GEMIL FLIP MAP.

Lateral and vertical dimensions, times of activation of NLD-TRA and EH-D danger areas are depicted in AIP Netherlands, Mil AIP Netherlands.

Provision of services for military traffic within the areas:

B.1.1 Airspace classification in CBA Sea 1



B.1.2 **CBA Sea 1**

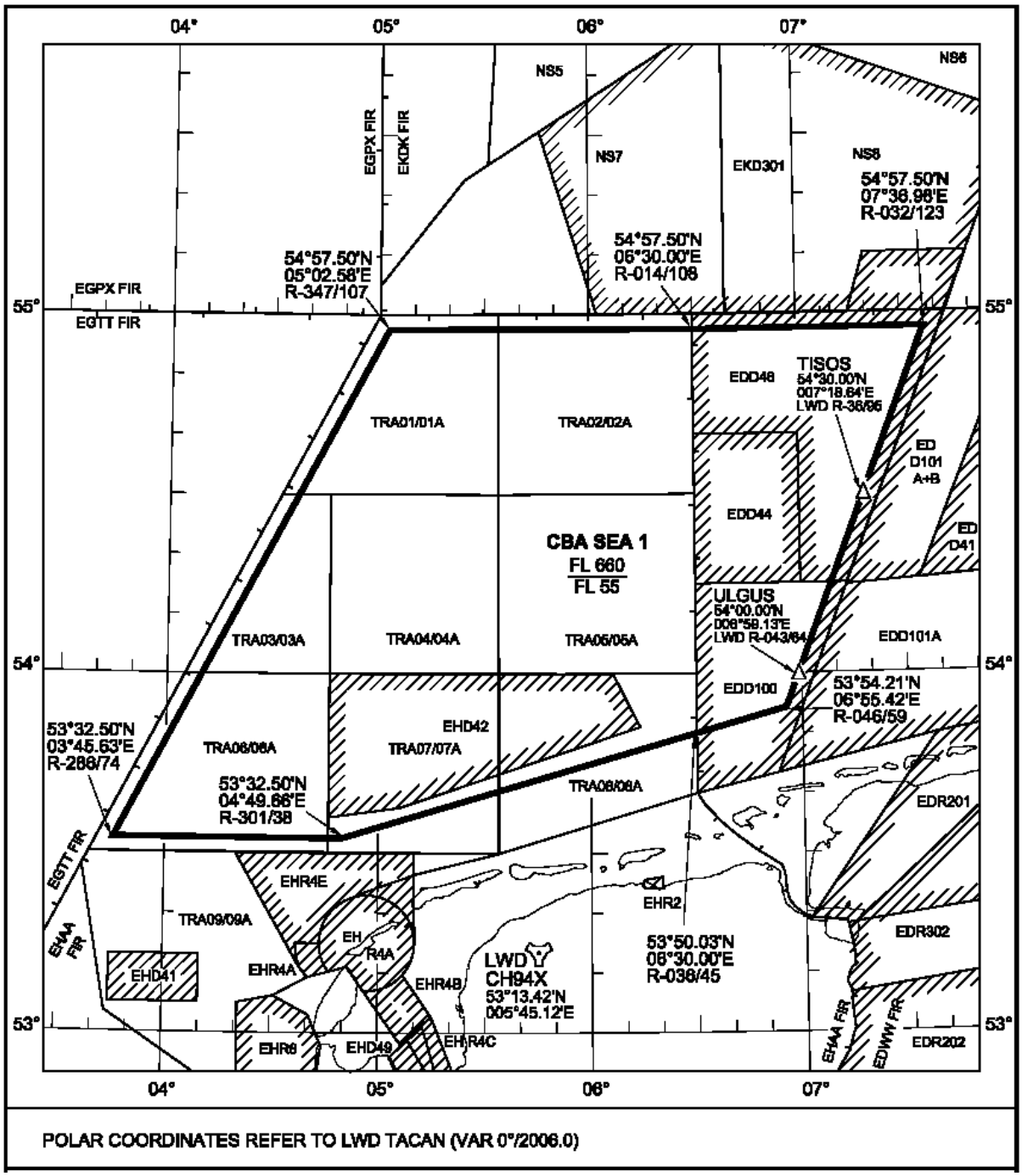
Vertical limits:

Subarea 1: FL55 – FL 660

Note:

If the local QNH is lower than 1013,2 hPa the lowest usable FL is 065, if the local QNH is lower than 980 hPa the lowest usable FL is 075 and if the local QNH is lower than 947 hPa the lowest usable FL is 085.

The coordinates used in the depiction below are decimal.



B.1.3 **National Airspaces affected by CBA Sea 1:**

Germany:

- ED-D 100 (defined in German AIP)
- ED-D 44 (defined in German AIP)
- ED-D 46 (defined in German AIP)

Netherlands:

In the CBA Sea 1:

- EH – D42 (MSL – 30000 AMSL)
- EH – D 01/01 A
- EH – D 02/02 A
- EH – D 03/03 A
- EH – D 04/04 A
- EH – D 05/05 A
- EH – D 06/06 A
- EH – D 07/07 A
- EH – D 08/08 A
- CTA Nieuw Milligen North

B.2 ATC units, areas of responsibility and sectors

<table>
<tr><td rowspan="2"></td><td colspan="2"><u>ATC service</u></td></tr>
<tr><td>Bremen FIR</td><td>Hannover UIR</td></tr>
<tr><td rowspan="2">Germany</td><td>GAT/OAT:
Bremen ACC</td><td>GAT: Maastricht UAC</td></tr>
<tr><td></td><td>OAT: DFS Maastricht UAC (Lippe Radar)</td></tr>
<tr><td rowspan="3">The Netherlands</td><td colspan="2">Amsterdam FIR</td></tr>
<tr><td>GAT: Amsterdam ACC (up to FL245)</td><td>GAT: Maastricht UAC (above FL245)</td></tr>
<tr><td colspan="2">OAT: Nieuw Milligen ATC</td></tr>
</table>

B.3 Special areas within the ACI

Below the CBA Sea 1:

- North Sea Area Amsterdam (MSL – FL055);
- Low Flying Area Charlie (MSL – 500 AMSL, Navy);

A helicopter traffic zone (HTZ) is established around each platform or rig to safeguard helicopter manoeuvres associated with approach and departure. The special areas (except the North Sea Area Amsterdam) shall be avoided within the ACI. The HTZ extends vertically from MSL up to and including 2000 ft AMSL and is horizontally defined as a circle of 2 NM radius around each individual platform/rig.

Platform Co-ordinates

Platform	Co-ordinates	Within HPZ	NDB FREQ	NDB IDENT
AME-2	53°29'00"N 005°52'01"E*	Ameland	-	-
AWG-1	53°29'31"N 005°56'25"E*	Ameland	358	WO
F15-A	54°12'57"N 004°49'38"E*	F15	334	ZT
G14-A	54°13'26"N 005°29'55"E*	-	-	-
G16A-A	54°07'31"N 005°12'08"E*	-	-	-
G17D-A	54°02'57"N 005°25'55"E*	-	384	GDF
H7	54°31'00"N 006°02'00"E*	-		
K6-D	53°40'30"N 003°49'42"E*	Pentacon	323	KZ
K6-GT	53°45'09"N 003°54'53"E*	Pentacon	-	-
K6-PC	53°41'54"N 003°52'08"E*	Pentacon	323	ZP
K6-PN	53°41'55"N 003°44'52"E*	Pentacon	432	ZR
K9-AB-A	53°31'12"N 003°59'33"E*	Pentacon	-	-
K9-AB-B	53°33'03"N 003°46'46"E*	-	-	-
K9C-A	53°39'09"N 003°52'22"E*	Pentacon	-	-
L2-FA-1	53°57'38"N 004°29'46"E*	Litho	358	WC
L4-A	53°43'28"N 004°05'51"E*	Pentacon	323	RH
L4-B	53°40'34"N 004°00'04"E*	Pentacon	323	EC
L4-PN	53°49'24"N 004°02'59"E*	-	-	-
L5-B	53°42'15"N 004°36'08"E*	-	-	-
L5-FA-1	53°48'39"N 004°21'04"E*	Litho	323	TJ
L7-A	53°35'58"N 004°04'56"E*	Pentacon	323	EK
L7-B	53°36'30"N 004°12'19"E*	Pentacon	323	AR
L7-H	53°37'28"N 004°08'37"E*	Pentacon	323	AY
L7-N	53°34'19"N 004°10'31"E*	Pentacon	323	PM
L7-PQC	53°32'14"N 004°12'08"E*	Pentacon	323	AW
L8-A	53°35'01"N 004°28'15"E*	Pentacon	-	-
L8-G	53°34'52"N 004°36'10"E*	Pentacon	323	LB
L8-H	53°33'50"N 004°34'00"E*	Pentacon	-	-
L8-P	53°38'24"N 004°33'45"E*	-	-	-
L8-P4	53°39'38"N 004°32'22"E*	-	-	-
L9-FF-1	53°36'52"N 004°57'37"E*	-	422	NAL

The positions of mobile rigs will be published by NOTAM.

A helicopter protected zone (HPZ) is established around a platform or group of platforms.

Below CBA Sea 1 the following HPZs exists:

- HPZ AMELAND (MSL – 2000 AMSL);
- HPZ F15 (MSL – 2000 AMSL);
- HPZ LITHO (MSL – 2000 AMSL);
- HPZ GOROMAND (MSL – 2000 AMSL);
- HPZ PENTACON (MSL – 2000 AMSL).

Adjacent areas CBA Sea 1:

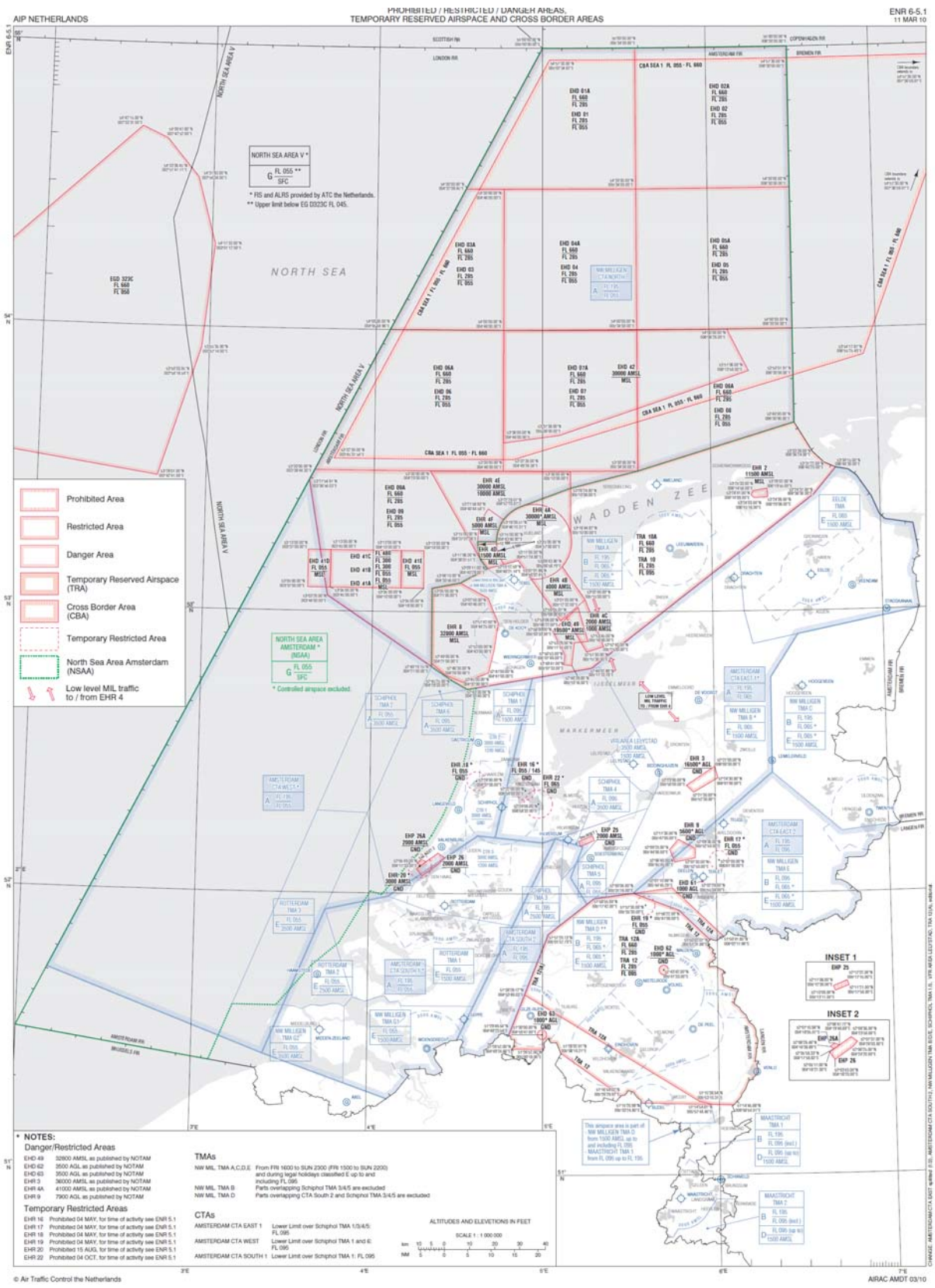
- EHR 4E (FL 100 – FL 300);
- NM TMA A (1500FT AMSL – FL 195);
- TRA 10(A) (FL 95 – FL 660);
- EHD 9(A) (FL 55 – FL 660).

B.3.1 **Delegation of the responsibility for the provision of ATS**

not applicable

B.3.2 Other Areas

North Sea Area Amsterdam (see note)



Note:

Prior entry of the North Sea Area Amsterdam the monitoring unit “AMSTERDAM INFORMATION” shall be called. A flight plan, two-way communication with “AMSTERDAM INFORMATION” and a fully functioning SSR transponder is mandatory to operate within the North Sea Area Amsterdam.

B.4 Co-ordination Points / Reference points

Germany

- TISOS 54°30.00’ N 007°18.64’ E;
- ULGUS 54°00.00’ N 006°59.13’ E;
- GOLVI 53°58.23’ N 006°50.95’ E (WTM 310/40).

The Netherlands

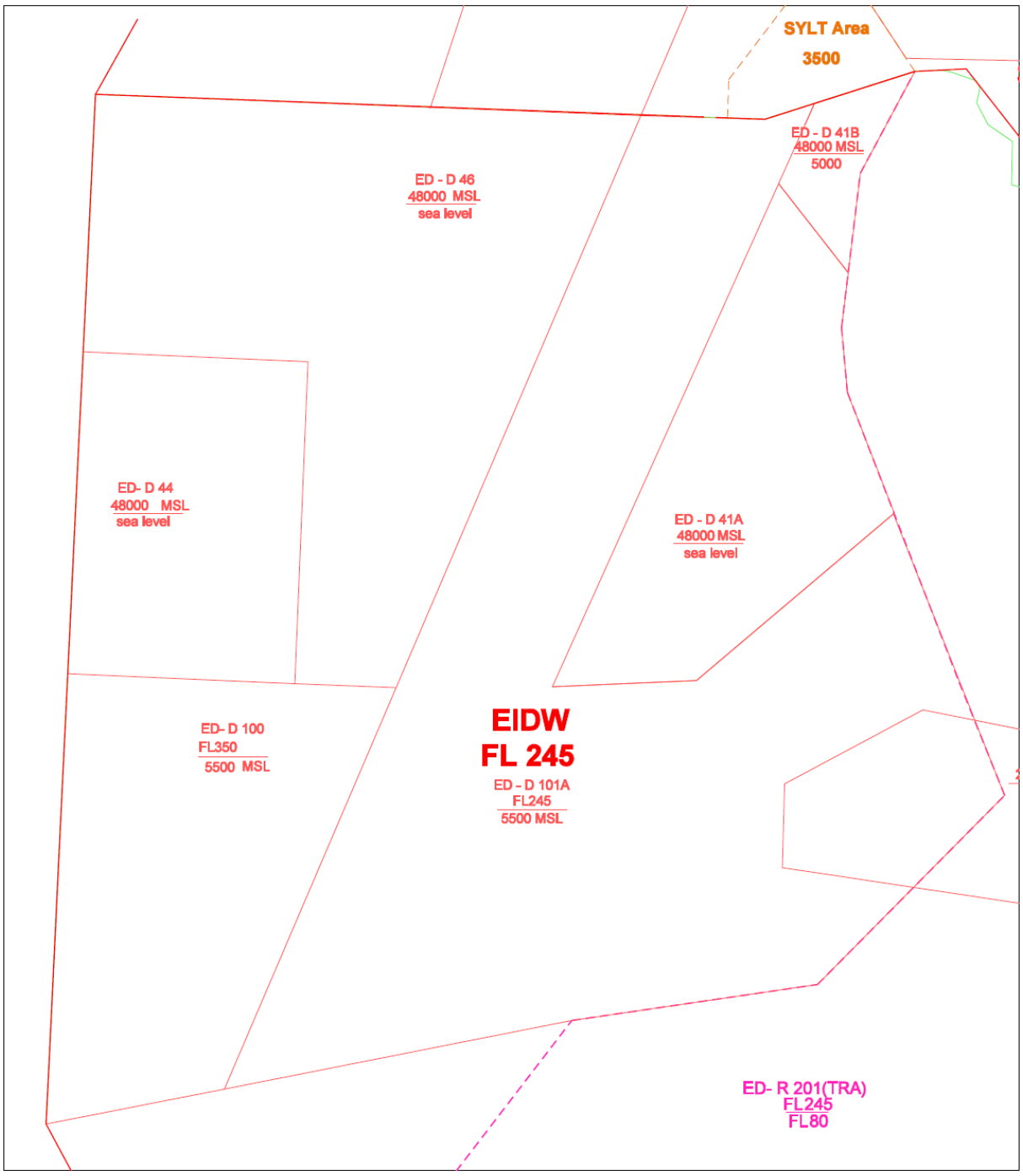
- XEROM 53°32’57” N 004°10’69” E;
- VEPAK 53°36’32” N 005°10’76” E;
- ASKID 53°45’49” N 006°03’09” E.

- W1N[1] 52°48’15” N 005°13’30” E;
- W1S[2] 51°58’55” N 005°17’42” E.

[1] used by EHVK for homebound traffic in FL 390
[2] used by EHVK for inbound traffic in FL 240

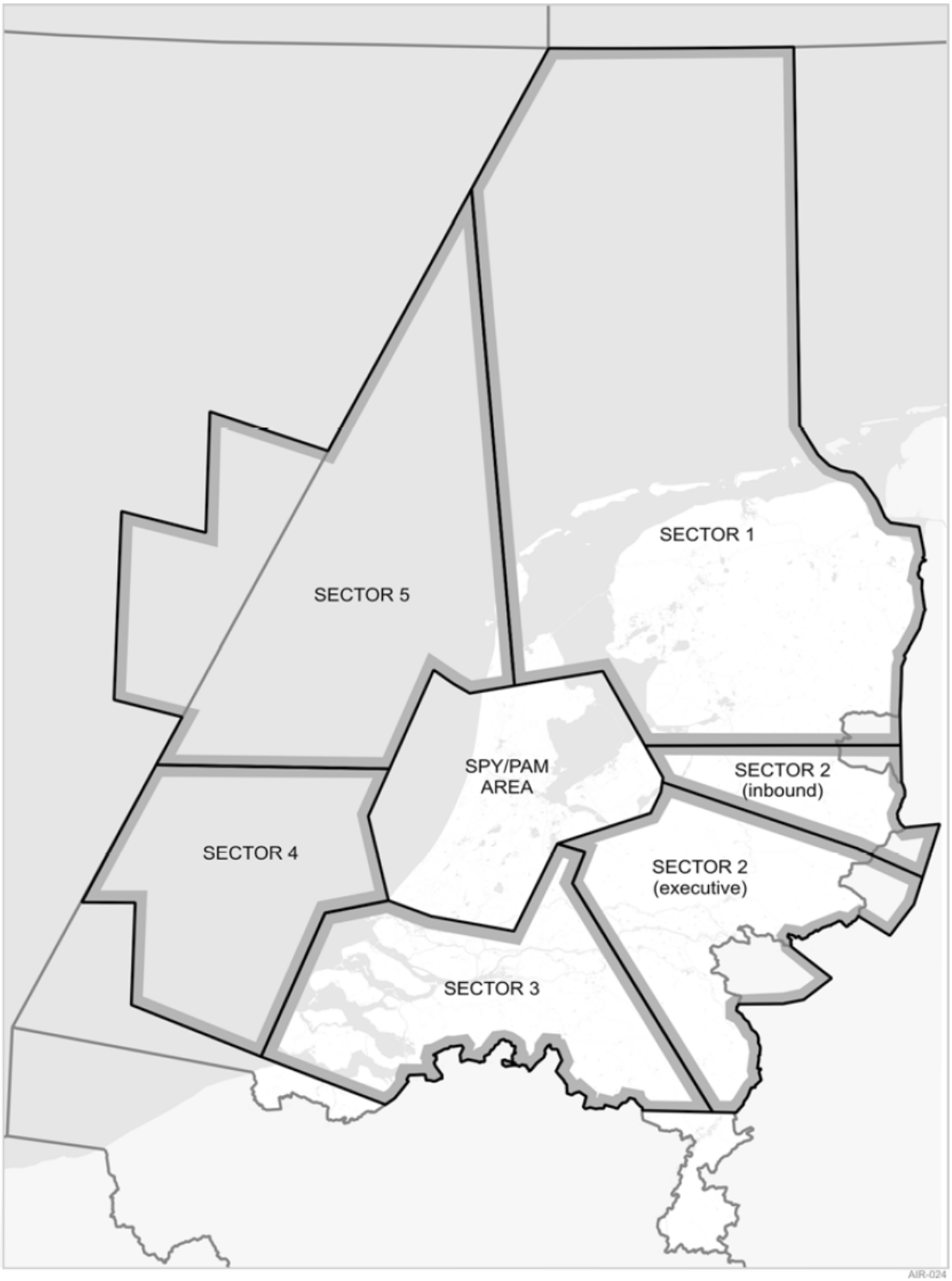
Appendix 1 of Annex B

Bremen ACC



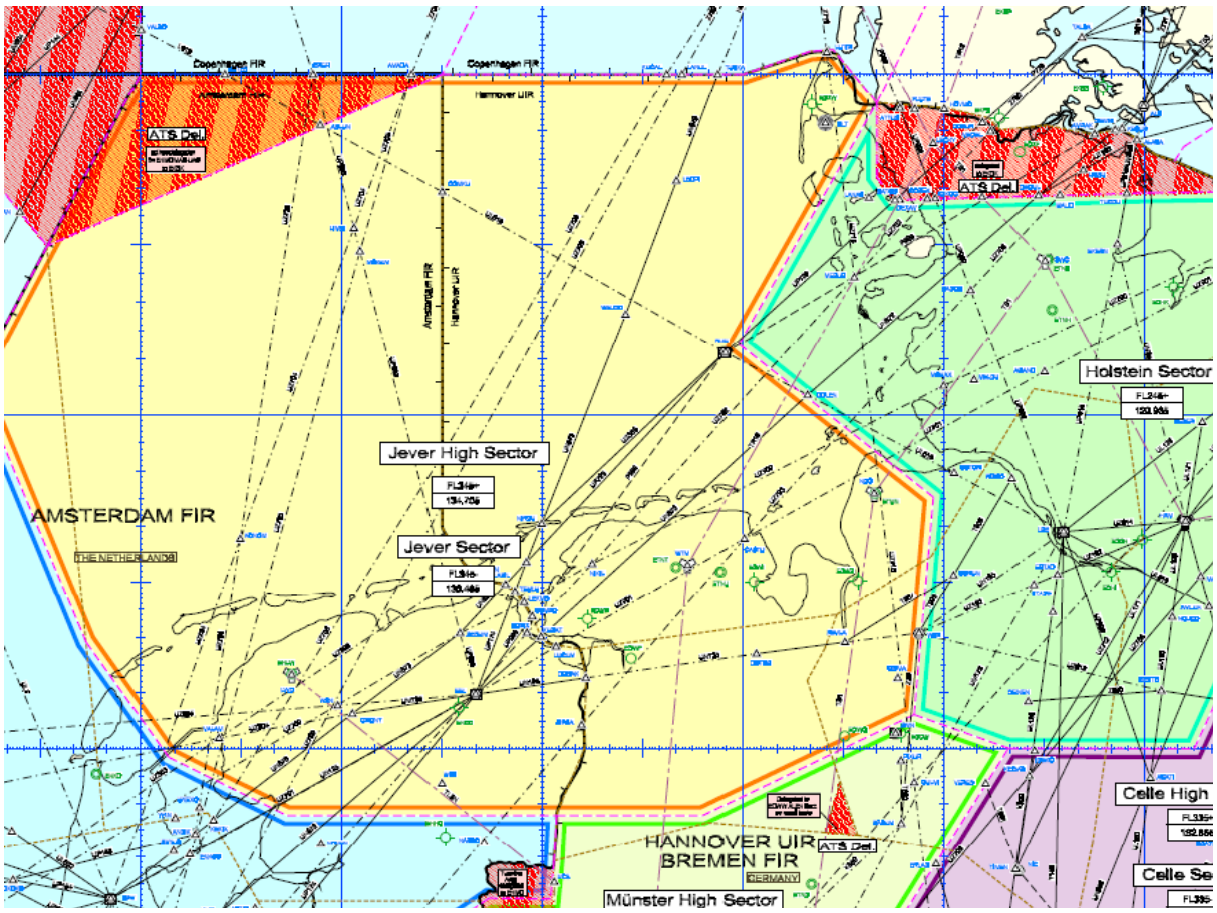
Appendix 2 of Annex B

Amsterdam ACC



Appendix 3 of Annex B

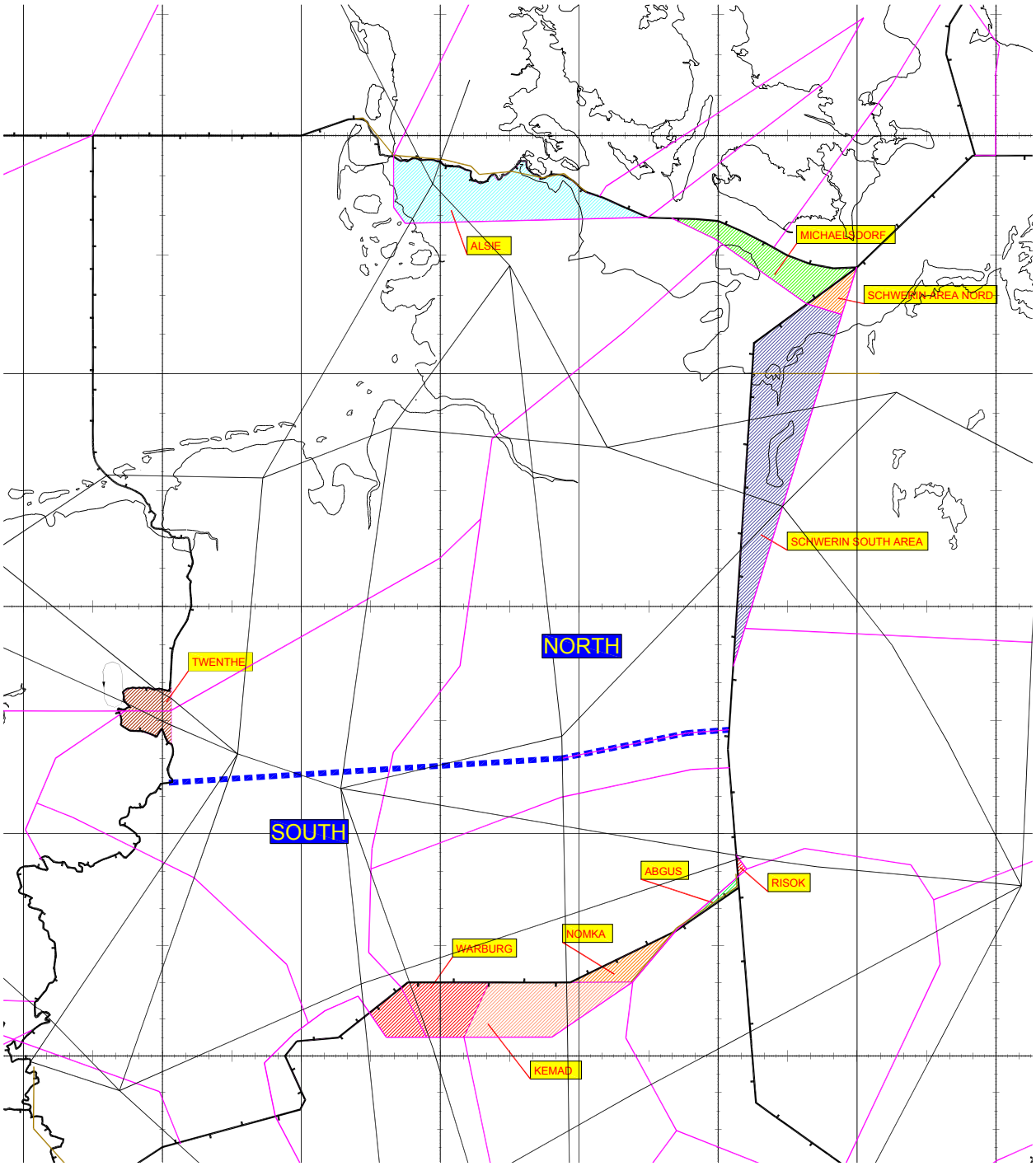
Maastricht UAC



Wesentliches

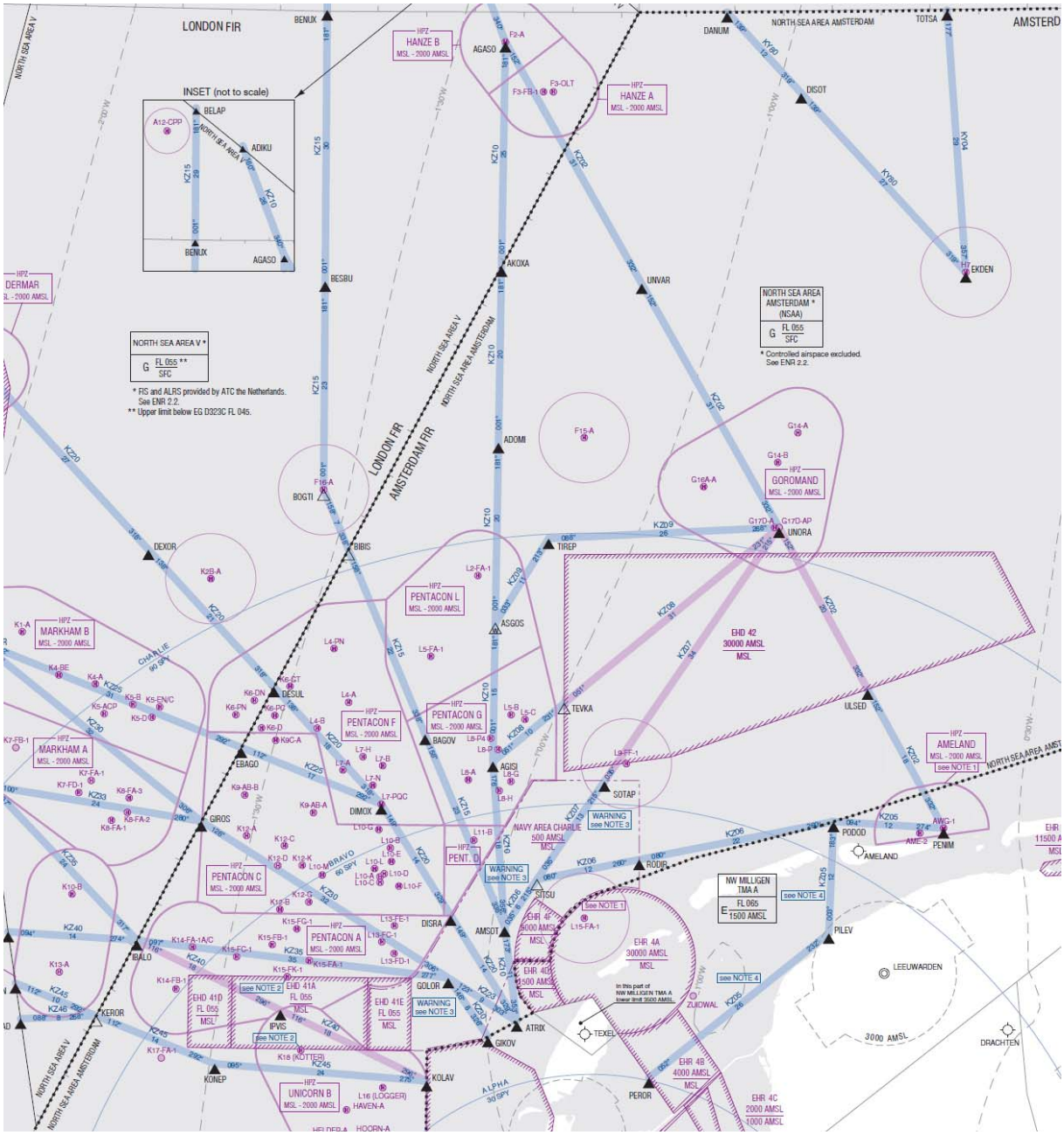
Appendix 4 of Annex B

DFS Maastricht UAC (Lippe Radar)



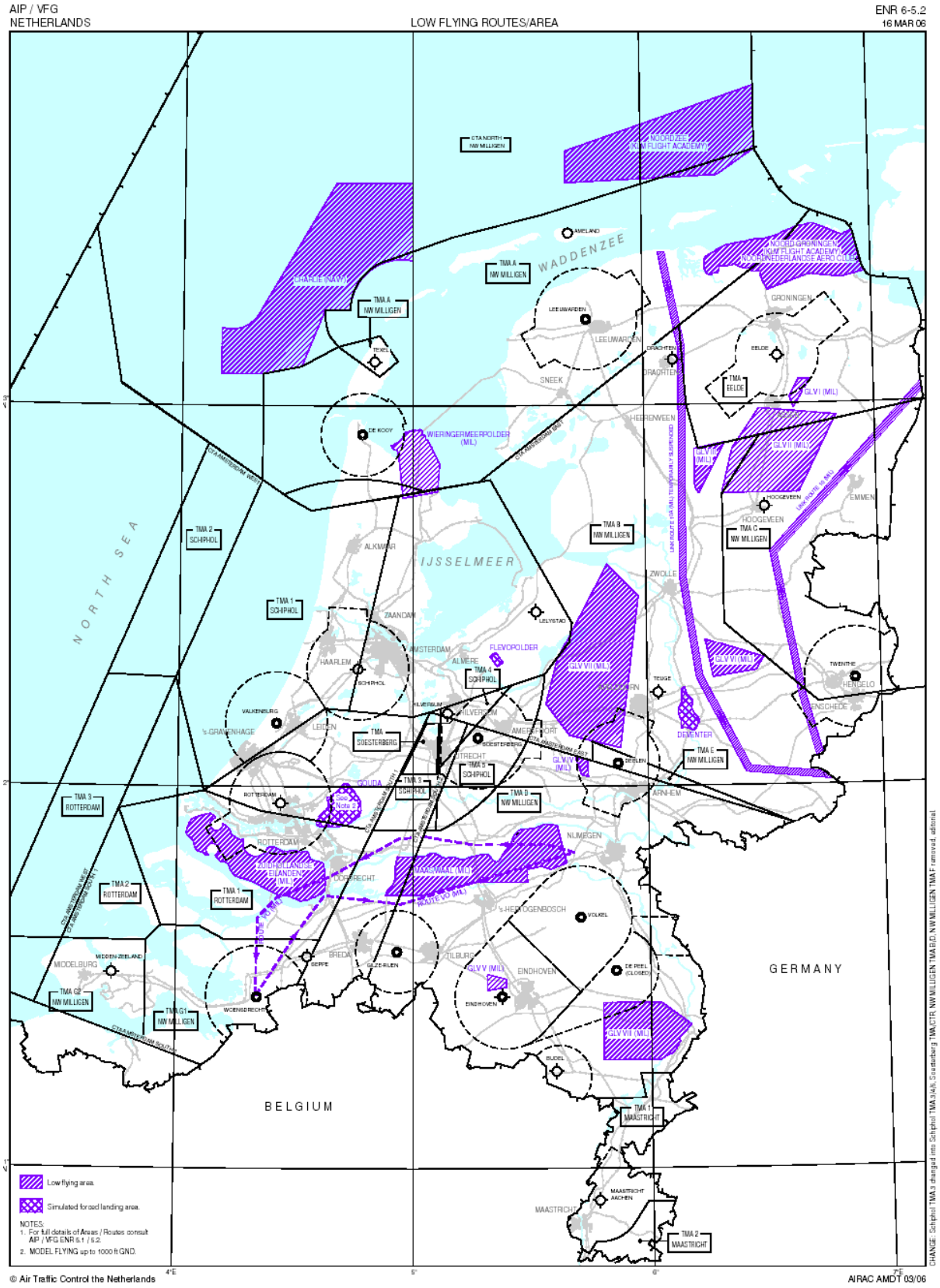
Appendix 5 of Annex B

Helicopter Protection Zones



Appendix 6 of Annex B

Low Flying Routes



Annex C

Exchange of flight data

Effective: August 31, 2006
Revised: October 20, 2011

C.1 Verbal coordination of flight data

C.1.1 Verbal estimate

A verbal estimate shall be passed to the accepting unit at least 5 minutes, but not earlier than 10 minutes, prior the aircraft is estimated to pass the transfer of control point, and shall contain:

a) Callsign;
b) Number of Aircraft;
c) SSR code;
d) ETO for the appropriate COP;
e) Cleared flight level, specifying climb or descent conditions if applicable, at the transfer of control point;
f) Other information, if applicable.

C.1.2 Expedite Clearance and Approval Requests.

Whenever the minimum time for a verbal estimate of 5 minutes cannot be met, either an Expedite Clearance Request or an Approval Request shall be initiated.

C.1.3 Revisions.

Time differences of 3 minutes or more shall be exchanged.

Changes to the coordinated flight levels for the transfer of control point are subject to an Approval Request.

Changes of other major items (e.g. Route, SSR code) shall be exchanged.

C.2 Directory of VCS and frequency allocation

C.2.1 General

C.2.1.1 Telephone calls shall be terminated by exchanging the **initials** of both coordination partners.

C.2.1.2 Exchange of flight plan data, estimates and air traffic control messages by telephone shall be carried out with ATS POC laid down in the tables below.

ATS POC shall be notified about the assigned TACCC POC prior mission start (depicted from table below).

C.2.2 VCS directory TACCC (POC)

CRC	Meßstetten	Schöne-walde	Holzdorf DCRC	Erndte-brück	Erndtebrück Training Center	CRC Nieuw Milligen
Callsign	SWEETAPPLE	SUNRISE	RED HAWK	LONESHIP	SLATE ROCK	BANDBOX
MC	7306	7606	7906	7406	7506	1743
FA1	7313	7613	7913	7413	7513	1745
FA2	7315	7615	7915	7415	7515	
AC1	7317	7617	7917	7417	7517	
AC2	7319	7619	7919	7419	7519	
AC3	7321	7621	7921	7421	7521	
AC4	7323	7623	7923	7423	7523	
AC5	7325	7625	7925	7425	7525	
AC6	7327	7627	7927	7427	7527	
AC7	7329	7629	7929	7429	7529	

Wesentliches

C.2.3 VCS directory National Air Policing Center (NAPC)

Position	Position Designation	VCS
Air Surveillance Manager 1	ASM 1	7104
Air Surveillance Manager 2	ASM 2	7105
Ressources Management Support Cell 1	SSZ 1	7106
Ressources Management Support Cell 2	SSZ 2	7107
Coordinating and Scheduling Agency 1	COSA 1	7109
Coordinating and Scheduling Agency 2	COSA 2	7111
Planning and Coordinating Authority for Military Air Activities	PCA	7113
Flight OPS (AAR)	FlgBtrb 1	7114
Flight OPS (AAR)	FlgBtrb 1	7115

C.2.4 VCS directory Bremen ACC

Position	Position Designation	VCS
Supervisor CC	WWC1M	2199
Data Assistant	WWC1D	2119
Eider West Planner	EIDWP	2031
TRAMON 201 (Monitor ED-D 100)	WWC1S	2082

C.2.5 VCS directory Nieuw Milligen ATC (DutchMil)

Position	Position Designation	VCS
Supervisor	SUP	1700
Coordinator Upper	COOU	1710

C.2.6 VCS directory DFS Maastricht UAC (Lippe Radar)

Position	Position Designation	VCS
Supervisor CC	LIC1M	4901
Lippe North Flight Plan Data	LINA	4956
Lippe North Planner	LINP	4950
Lippe Monitor 1	LIC1S	4981
Lippe Monitor 2	LIC2S	4982
Lippe Monitor 3	LIC3S	4983

C.2.7 Frequency allocation at ATC units

Frequency allocation Bremen ACC

For information on Bremen ACC frequency allocation see AIP Germany.

Frequency allocation Lippe UAC

For information on Lippe UAC frequency allocation see AIP Germany.

Frequency allocation Nieuw Milligen ATC

For information on Nieuw Milligen ATC frequency allocation see AIP Netherlands.

C.3 Failure of ground / ground voice communication

C.3.1 Fallback procedure for coordination

In the event of failure of the direct VCS lines between an ATC unit and TACCC, coordination shall be carried out with the assistance of an adjacent ATC unit or otherwise by public telephone.

C.3.2 Public network directory TACCS

C.3.2.1 National Air Policing Center Uedem

COSA Duty Officer	Phone	+49 28 24 97 74 32 40
COSA Duty Officer	Fax	+49 28 24 97 74 32 49
Email:		fueznatlvcosa@bundeswehr.org
RMSC Duty Officer	Phone	+49 28 24 97 74 32 10
RMSC Duty Officer	Fax	+49 28 24 97 74 32 29
Email:		fueznatlvssz@bundeswehr.org

C.3.2.2 TACCC Meßstetten

Master Controller	Phone	+49 74 31 63 47 55 55
Fighter Allocator	Phone	+49 74 31 63 47 55 41
Fax Ops-room	Fax	+49 74 31 63 47 55 09
Email:		einsfueber1crcmc@bundeswehr.org

C.3.2.3 TACCC Erndtebrück

Master Controller	Phone	+49 27 53 6 04 30 40
Fighter Allocator	Phone	+49 27 53 6 04 30 41
Fax Ops-room	Fax	+49 27 53 6 04 181
Email:		einsfueber2crcmc@bundeswehr.org

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TACCC Erndtebrück Training Center

Master Controller	Phone	+49 27 53 6 04 39 40
Fighter Allocator	Phone	+49 27 53 6 04 39 41

C.3.2.4 TACCC Schönewalde

Master Controller	Phone	+49 35 3 89 86 33720
Fighter Allocator	Phone	+49 35 3 89 86 33740
Fax Ops-room	Fax	+49 35 3 89 86 33729
Email:		einsfueber3crcmc@bundeswehr.org

C.3.2.5 DTACCC Holzdorf

Master Controller	Phone	+49 35 3 89 86 33680
Fighter Allocator	Phone	+49 35 3 89 86 33683
Fax Ops-room	Fax	+49 35 3 89 86 33677
Email:		einsfueber3dcrcmc@bundeswehr.org

C.3.2.7 **CRC Nieuw Milligen**

Master Controller	Phone	+31 577 41 2350
Fighter Allocator	Phone	+31 577 41 2354
Fax Ops-room	Fax	+31 57745 8498
Email:	crcmc@mindef.nl	

C.3.3 **Public network directory ATC**

C.3.3.1 **Public network directory Bremen ACC**

Supervisor CC +49-421-5372-120 or +49-421-5963-489
Fax Ops-room +49-421-535533

C.3.3.2 **Public network directory Lippe UAC**

Supervisor CC +31-43-3661-330 Fax Ops-room +31-43-3661-298

C.3.3.3 **Public network directory Amsterdam UAC**

Supervisor Phone +31 20 406 2200 FAX +31 20 406 2199

C.3.3.4 **Public network directory Nieuw Milligen ATC**

Supervisor +31-57745-8700. Fax Ops-room +31-57745-8323.

C.4 POC for initial scheduling

GAFCOM A 5 III a	+49 2203 908 2574	FAX +49 2203 908 3583
Email:	lwfuekdoa5iiia@bundeswehr.org	

RNLAF CLSK / AMO	+31 70 339 7378	Fax: +31 70 339 6574
Email:	amo@clsk.af.dnet.mindef.nl	

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Annex D

Procedures for coordination

Effective: August 31, 2006
Revised: October 20, 2011

D.1 General conditions for acceptance of flights

D.1.1 Missions intending to operate in CBA Sea 1 are subject to coordination between ATC units and TACCS.

D.1.2 Transfer of aircraft shall be verbally coordinated between the appropriate transferring and receiving controllers.

D.1.3 If the receiving controller cannot accept a flight offered in accordance with the conditions specified, the controller shall specify the conditions under which the flight will be accepted.

D.1.4 Only a/c with an operational transponder (Mode 3 A/C or Mode S) shall be allowed to work in CBA.

D.2 Aircraft in emergency situations

D.2.1 The monitoring TACCS unit(s) shall inform the supervisor of the appropriate ATC unit as soon as possible on aircraft in emergency situations.

D.3 General procedures for the use of CBA

D.3.1. General

D.3.1.1 The provision of services by TACCS in the CBA Sea 1 may be conducted by more than one monitoring unit at the same time.

D.3.1.2 The use of CBA Sea 1 airspace shall have priority over affected national airspaces in confines of the CBA.

D.3.1.3 Following activities are permissible in CBA:

- COMAO;
- AAR only in support of other permitted activities of the CBA;
- long range intercepts;
- ACT/DACT (exercises with more than 4 aircraft);
- supersonic flights;
- Link 16 training;
- IMC Intercepts;
- Night Vision Goggle with reduced light setting.

D.3.2 **CBA Sea 1 booking**

D.3.2.1 Use of the CBA Sea 1 is possible:

- Mon - Thu 08:00 – 24:00 lcl, Fri 08:00 – 17:00 lcl (except on national holidays NLD and / or DEU). National holidays refer to DEU and NLD AIP;
- CBA availability is based on airspace not used by national demands (free slots in national TRA/Airspace Schedule.

For the evaluation purpose and in the light of burden sharing, planners are encouraged to make balanced use of the CBA Sea 1.

D.3.2.2 National PCA will exchange their respective national TRA / Airspace schedule continuously to build bilateral awareness on availability of CBA (free slots in national airspace schedule).

D.3.2.3 Flying units intending to make use of a scheduled CBA Sea 1 slot will forward their booking request (see Appendix 1 to Annex D) to their national PCA at any time but not later than Wednesday, 12:00 L before the week of the planned usage.

After coordination between the national PCA the CBA Sea 1 slot will be confirmed by the national PCA not later than Friday 12:00 L before the week of the intended use (see Appendix 2 to Annex D). Dates will change to the working day before if Wednesday/Friday are holidays.

A NOTAM for the extended use of ED-D 100 will be published by DFS AMC. The timeframe for the NOTAM shall be defined by NAPC COSA DEU.

The affected national airspaces shall be booked and published via current channels.

If the airspace is already booked, last minute changes (e.g. monitoring unit or user) are permissible until the actual use.

D.3.2.4 Public network directory

NAPC COSA DEU	Phone +49 28 24 97 74 32 40
AOCS NM planner	Phone +31 577 41 2355
AMC	Phone +49 61 03 31 0 57 53

D.3.2.5 NAPC COSA DEU / AOCS NM shall provide the supervisor / respective position (data assistant for Bremen ACC) of the appropriate ATC units at least 15 minutes before commencing scheduled operations in CBA Sea 1 with the following data:

- estimated time of occupation of the CBA Sea 1;
- callsign, number and type of aircraft and the respective controlling TACCS unit(s);
- SSR code (if available);
- departure and destination aerodrome;
- type of mission.

D.3.2.6 **Revisions**

Revisions to information mentioned above shall be forwarded by NAPC COSA DEU / AOCS NM as soon as possible.

D.3.2.7 **Problem Reports / Feedback Reports**

Reports can be filed by any unit/agency involved in CBA procedures. Reports shall be forwarded to national PCA. PCA will distribute reports to further agencies.

D.3.3 **Operations in CBA**

In compliance with AIP Germany uncontrolled VFR flights shall be considered at any time in airspace E below FL 100 in FIR Bremen.

D.3.3.1 **Actual beginning of operations**

D.3.3.1.1 The TACCS unit intending to take responsibility for a CBA Sea 1 shall inform the ATC unit responsible for the CBA Sea 1 about the beginning of operations and forward the designation of the responsible position at the TACCS unit.

The responsible working position at the DFS ATC unit / NM ATC unit shall be provided with the following information for monitoring purposes:

- area designation and slots;
- callsign, number and type of aircraft;
- SSR code;
- departure and destination aerodromes;
- TAD or frequency.

The responsible working position at the DFS ATC unit / CRC NM shall release the CBA Sea 1 to the responsible TACCS unit(s).

D.3.3.1.2 **VFR Ingress into CBA Sea 1**

TACCS units are permitted to approve VFR flights to enter the CBA Sea 1 after the release acc. D.3.3.1.1.

D.3.3.1.3 **IFR Ingress into CBA**

The clearance for ingress and use of the area is issued when the radar hand-off to the TACCS unit has been accomplished.

D.3.3.1.4 **VFR Egress CBA**

The TACCS unit shall advise the ATC unit / CRC NM about aircraft leaving in accordance with VFR.

D.3.3.1.5 **IFR Egress CBA**

The TACCS unit shall advise the respective position at the responsible ATC unit 5 minutes in advance of training aircraft intending to leave the CBA. After prior coordination an ATC clearance based on the estimate shall be obtained before the mission is leaving the training area.

A radar hand-off shall be accomplished by the TACCS unit with the responsible position at the ATC unit.

Formation flights should be handed over in standard formation unless otherwise agreed.

Note:

A standard formation is a formation where a lateral or longitudinal distance of not more than 1 NM for handover to German ATC Units or 0,5 NM for handover to Dutch ATC Units and a maximum vertical distance of 100 FT to the formation leader is maintained by the other elements.

D.3.3.2 **Termination of operations in CBA Sea 1**

D.3.3.2.1 The TACCS unit(s) shall advise the responsible position at all ATC units involved about the termination of operations.

D.3.4 **IMC Intercepts**

TACCS unit shall apply Positive Control Service during IMC Intercepts.

D.3.4.1 Transfer of control of exercise aircraft from ATC to TACCS units and vice versa may take place in IMC. E-3 A, D, or F is not permitted to monitor IMC Intercepts.

D.3.5 **Maximum number of exercise aircraft admitted simultaneously in CBA**

As scheduled during the IPC.

D.3.6 Flights through CBA Sea 1

D.3.6.1 As a rule, no transit clearances shall be issued if CBA Sea 1 is in use.

Exceptions:

- Flights for which the pilot declares an emergency or which are apparently in an emergency situation, including flights affected or threatened by unlawful interference;
- Flights on search and rescue missions;
- Flights carrying sick or injured persons requiring immediate medical assistance, including flights urgently required for the life-saving medical care of sick and injured persons;
- Flights subject to measures in order to avert imminent danger due to adverse weather conditions.

D.3.6.2 ATC shall provide information about the above mentioned flights through CBA.

D.3.6.3 No (D)ACT shall be allowed within the flight path of an aircraft in transit of CBA Sea 1.

D.3.7 Control and coordination procedures

D.3.7.1 The TACCS unit(s) may use the airspace up to the CBA Sea 1 boundary. On principle a minimum distance of 5NM horizontally to the CBA-boundary shall be maintained by the ATC unit.

D.3.7.2 The TACCS unit(s) shall not be responsible for maintaining minimum safe distances between military training aircraft operating in the CBA Sea 1; traffic information shall be provided as far as possible. On request advisories for evasive actions shall be given.

D.3.7.3 If due to technical problems the TACCS unit(s) need(s) to terminate the control service, the aircraft operating within the CBA Sea 1 shall be notified that the CBA Sea 1 OPS are suspended (the national rules for airspace shall be applied) or the mission shall be handed over to another TACCS unit. If this procedure is not applicable, aircraft shall be transferred to the appropriate ATC unit for IFR recovery. All efforts shall be taken to find a contingency working position to provide at least area monitoring.

Note:

The radar and radio coverage of the responsible TACCS units are limited. Limitations will be briefed to the aircrews by the responsible TACCS unit(s).

D.3.8 **Radio communication failure procedures**

D.3.8.1 When a training aircraft is experiencing RCF, the responsible TACCS unit shall carry out the join-up of the formation.

D.3.8.2 The aircraft experiencing RCF shall:

- set the transponder to Mode 3/A code 7600;
- proceed to the position inside the training area as fixed during pre-flight briefing.

D.3.8.3 If a join-up cannot be accomplished, the aircraft with RCF shall hold inside the CBA Sea 1 for 7 minutes. These 7 minutes commence counting when the transponder is set to 3/A 7600.

After 7 minutes the aircraft with RCF shall continue in accordance with the filed flight plan to the initial approach fix of the destination.

D.3.8.4 If the aircraft with RCF cannot hold for 7 minutes (e.g. further difficulties or fuel shortage) the transponder shall be set to 3/A 7700 and the aircraft shall continue in accordance with the filed flight plan to the initial approach fix of the destination.

D.3.9 **SSR Transponder failure procedures**

If a/c working in CBA Sea 1 experiencing a SSR Transponder failure the respective a/c have to join an a/c for standard formation with an operational transponder or leave the area.

D.3.10 **Air to air refuelling operations (AAR)**

D.3.10.1 NATO ALLIED TACTICAL PUBLICATION 56 (ATP 56) governs the procedures for AAR.

D.3.10.2 Within an AAR anchor normally a maximum number of two simultaneous AAR operations are permissible. Tanker cell formations count as one operation.

D.3.10.3 The position of the AAR anchor is subject to tactical requirements and will be coordinated between TACCS and the ATC unit concerned.

D.3.10.4 (D)ACT shall be prohibited above AAR operations.

D.3.11 **NVG with reduced light setting**

D.3.11.1 If flights cross the CBA, NVG operations shall be terminated and anti – collision lights and positions lights shall be switched on.

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Appendix 1 to Annex D

CBA REQUEST for: (Date)_____ (Time)_____

from:

UNIT:
POC:

PHONE :
FAX :

EMAIL:

to national PCA (mark below) :

Wesentliches

☐ RNLAF

AOCS Nieuw Milligen, NL
Fax +31-577-458498

Email: crcsqn@aocs.af.dnet.mindef.nl

☐ GAF

NAPC Germany COSA /PCA
Fax +49-2824-97 74-3249

Email: fueznatlvcosa@bundeswehr.org

Additional Information :

Max/ Min Altitude
Planned Activity

No./ Type A/C
Controlling Unit

Other:

DO NOT FILE LATER THAN WEDNESDAY, 12:00 L BEFORE WEEK OF USE

Appendix 2 to Annex D

CBA REQUEST / DECLINATION for: (Date)_____ (Time)_____

from national PCA (mark below) :

☐ RNLAF	☐ GAF
AOCS Nieuw Milligen, NL Fax +31-577-458498 Email: crcsqn@aocs.af.dnet.mindef.nl	NAPC Germany COSA /PCA Fax +49-2824-97 74-3249 Email: fueznatlvcosa@bundeswehr.org

to

UNIT:
POC:
PHONE :
FAX :
EMAIL:

Additional Information :

☐ The CBA will be assigned as requested.

☐ The CBA request is rejected because ……..……

☐ The CBA will be assigned with the following changes:

Max/ Min Altitude
Planned Activity
No./ Type A/C
Controlling Unit

Other:

Appendix 3 to Annex D

CBA Problem Report

DATE:		**TIMESLOT:**	
SQUADRON:		**MISSION LEAD:**	
NO OF A/C:		**TYPE OF MISSION:**	
POC:	**PHONE**	**FAX**	**EMAIL**

PROBLEM

RECOMMENDATION

Please forward this form after CBA Mission ASAP to :

NAPC COSA (DEU) Fax: 0049 28 24 97 74 32 49
and AOCS NM (NLD) Fax: 0031 5774 54 8498

Annex E

Transfer of control and transfer of communication

Effective: August 31, 2006
Revised:

E.1 Transfer of control

E.1.1 A radar hand-off is mandatory **prior** to transfer of control.

Transfer of control shall take place when crossing the boundary of the CBA.

E.1.2 A radar hand-off shall be carried out by the radar position (coordinator or radar controller) responsible for the aircraft on transfer.

E.1.3 The transfer conditions shall be mutually agreed upon between the ATC unit and the TACCS unit.

E.1.4 The TACCS unit shall be responsible that aircraft on transfer keep to the agreed upon transfer conditions.

E.1.5 A radar transfer shall be accomplished by forwarding the following flight data to the receiving unit:

- callsign;
- number and type of aircraft;
- position of radar hand-off;
- SSR code;
- cleared flight level and route.

E.1.6 Aircraft flying in formation shall be

- considered as one flight;
- in standard formation on transfer, otherwise individual coordination is required for each element of the formation.

E.1.7 Transfer of control shall not take place until the conditions specified by the receiving unit are met.

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.

E.2.2 Transfer of communication shall take place as soon as the aircraft on transfer is clear of all conflicting traffic.

E.2.3 Successful transfer of communication shall be acknowledged by changing the SSR code of the aircraft on transfer to the assigned code of the accepting unit.

Annex F

Radar based coordination procedures

Effective: August 31, 2006
Revised:

F.1 SSR code assignment

F.1.1 ATC units shall transfer aircraft on verified discrete SSR codes assigned in accordance with ORCAM.

F.1.2 Any change of the assigned SSR code by the accepting unit may only take place after the aircraft is in radar contact.

F.1.3 Any observed irregularity in the operation of SSR transponders is subject to coordination between concerned units.

F.2 Separation / minimum distances

F.2.1 **Minimum distances between aircraft to be established by TACCS**

TACCS units shall be responsible to establish either a minimum lateral distance observed by radar or a minimum vertical distance between aircraft under control and all other known or observed air traffic.

The altimeter setting shall be ICAO standard (1013.2 hPa / 29.92 Inch).

F.2.1.1 The minimum lateral distance shall be 5 NM.

F.2.1.2 The minimum vertical distance shall be:

- 1000 FT between flights at and below FL 290;
- 2000 FT between flights at and above FL 290.

Infringement of these minima is permissible between air defence traffic.

F.2.2 **Distances to airspace boundaries to be established by TACCS**

The published vertical and lateral boundaries of the CBA Sea 1 shall not be infringed.

F.2.3 **Distances to CBA Sea 1 boundaries to be established by ATC**

ATC shall establish and / or maintain the following distances to airspace boundaries.

F.2.3.1 **Lateral distances**

The minimum lateral distance to airspace boundaries shall be the radar separation minimum prescribed for the area concerned, however, not less than 5 NM.

F.2.3.2 **Vertical distances**

The vertical distances shall be 1000 FT to the lower vertical boundary.

F.2.3.3 **AAR operations within CBA**

F.2.3.3.1 TACCS shall maintain 1 NM distance with a tanker formation to the CBA Sea 1 boundary.

F.2.3.3.2 The minimum radar separation / distance with a tanker formation (tanker and receiver) to crossing flights shall be increased by 1 NM.

F.2.3.3.3 (D)ACT shall be prohibited above AAR operations.

F.3 Radar coordination procedures

F.3.1 **Radar hand-off**

F.3.1.1 A radar hand-off shall be carried out by the radar position (coordinator or radar controller) responsible for the aircraft on transfer.

F.3.1.2 The transfer conditions shall be mutually agreed upon by the ATC unit and the TACCS unit.

F.3.1.3 The accepting unit shall be responsible that aircraft after transfer of communication keep to the agreed upon transfer conditions.

F.3.1.4 A radar hand-off shall be accomplished by forwarding the following flight data to the receiving unit:

- callsign;
- number and type of aircraft;
- position of aircraft;
- SSR code;
- cleared flight level and route.

F.3.2 **Distance on transfer at the same level**

The distance of aircraft / formation entering or leaving the CBA Sea 1 at the same level shall be at least 10 NM constant or increasing.

Note:

When using radar headings or speed restrictions to maintain the distance of 10 NM, this has to be coordinated with the receiving executive controller / AC or FA prior to transfer of communication.

Annex G

Supplementary procedures

Effective: August 31, 2006
Revised: July 29, 2010

G.1 Flight Crew Procedures

G.1.1 General

Prior initial commencing operations in CBA Sea 1 aircrews have to certify the knowledge of this LoA by signature. LoA should be reviewed prior each Mission in CBA.

G.1.2 Pre-flight Procedures

On the day of CBA Sea 1 usage a member of the participating aircrew (e.g. Mission Commander / Package Lead) shall confirm / coordinate directly with the controlling agency for latest details.(e.g. WX, Radio, SSR Code, limitations in radar and radio coverage etc)

Aircrews will provide following information and addresses in the flight plan:

- Position Entry / Exit Point;
- ETA Entry / Exit Point;
- Signaladresses to DEU/NLD AMC.

G.1.3 Flight Procedures

Air operations within CBA Sea 1 are based on agreed NATO Standards , DEU / NLD Mil AIP or national regulations whichever is more restrictive.

G.2 Agreement between GAFCOM TACCS and CRC Nieuw Milligen describing the mutual use of radars

G.2.1 Objective

Aircraft control by ASACS units requires best available radar coverage using several radars simultaneously to cover technical problems or other equipment malfunctions of individual radars during the mission. Therefore, GAF and RNLAF agreed on the mutual use of nominated GAF and RNLAF military RADAR by GAF TACCC / DTACCC and RNLAF CRC / TACF in terms of Air Surveillance and Aircraft Control activity. This Appendix describes necessary procedures and regulations.

G.2.2 Terms and definitions

G.2.2.1 Master TACCC

The TACCC being responsible for the most sensitive RADAR setup, continuous status monitoring, necessary masking and NATO reporting. This includes actions for sensor control, to meet the operational requirements of all users, such as:

- change in Search Modes and RX filters,
- RADAR masking, e.g. blanking areas or inhibit sectors for all users,
- activation of Wartime Reserved Modes to counter ECM.

G.2.2.2 Slave TACCC

A TACCC, which is receiving plot data from the respective RADAR. With an additional on site masking the Slave TACCC may define its current volume of radar data information without any impact on other users. Changes in RADAR setup are to be coordinated with the respective Master TACCC.

G.2.3 Air defence entities comprised by this Appendix

GAF entities using RNLAF RADARs:

- TACCC Erndtebrück (EB);
- TACCC Meßstetten (MS);
- TACCC Schönewalde (SC);
- DTACCC Schönewalde.

RNLAF entities using GAF RADARs:

- CRC Nieuw Milligen (NM);
- TACF Nieuw Milligen.

RNLAF RADARs available for use by GAF

- MPR Wier (WR);
- MPR Nieuw Milligen (NM).

GAF RADARs available for use by RNLAF

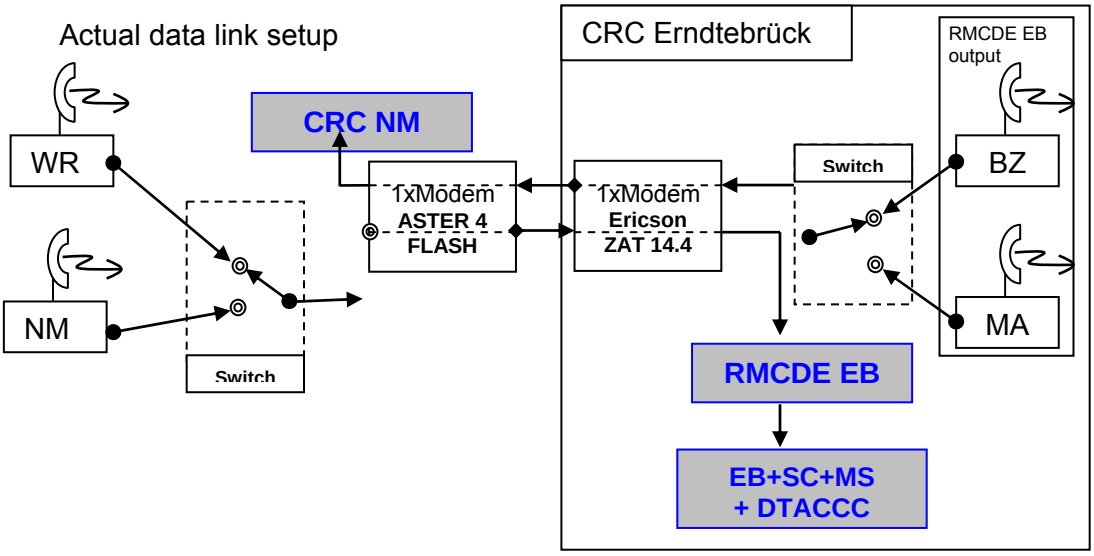
- HADR Brockzetel (BZ);
- HADR Marienbaum (MA).

G.2.4 Exchange of RADAR plot data

A data link has been established to transmit RADAR plot data from either HADR BZ or MA to CRC NM. At the same time, this link is also used to transmit RADAR plot data from either MPR WR or NM to an RMCDE at TACCC EB, which then allows distribution via the MilRADNET. Based on this configuration, all GAF TACCC / DTACCC are able to and may use the received RADAR plot data simultaneously.

As a perspective, a direct message exchange between the RMCDE at TACCC EB and an equivalent equipment at CRC NM should be established, which would allow a broader use of RADAR plot data, enhance radar coverage and implement redundancy.

G.2.4.1 Actual data link setup



G.2.5 Planning and scheduling of RADAR maintenance and procedures for selective recall

During times of aircraft control activities (generally Monday – Thursday, 06:00 L – 2400 L and Friday, 06:00 L – 16:00 L), HADR BZ and MPR WR **will not** be planned on RADAR maintenance simultaneously.

HADR MA and MPR NM may be planned on RADAR maintenance simultaneously.

RMSC is tasked to provide the ASACS Peacetime Availability Schedule (APAS) and daily planning schedule for CAOC Uedem AoR. These schedules also include RNLAF CRC and RADARs. Therefore, RMSC DEU will be the common POC to coordinate and deconflict scheduled RADAR maintenances and will distribute the schedules to CRC NM as well.

CRC NM will report its planning as soon as possible (as a minimum two days prior the event) to the officer in charge at RMSC, who in turn will incorporate this in the existing schedules or implement de-confliction, if deemed necessary.

POC RMSC for scheduling and de-confliction (long-term planning):

GE Military Net: 34 53 – 20 31 or 20 32
Commercial: +49 – 28 24 – 97 74 – 20 31 or 20 32
FAX: +49 – 28 24 – 97 74 – 20 99
E-Mail: fueznatlvssz@bundeswehr.org

POC CRC NM for scheduling and de-confliction (long-term planning):

NL Military Net: 490 – 84 64
Commercial: +31 – 5 77 45 – 84 64
FAX: +31 – 5 77 45 – 84 99
E-Mail: crcsqn@aocs.af.dnet.mindef.nl

The highest level in terms of de-confliction will be Chief RMSC and Head of OPS CRC NM.

Unscheduled short-term maintenance requirements or selective recalls due to technical outages are to be assessed and coordinated between Master Controller at CRC NM and Duty Officer at RMSC. On top, additional NATO requirements have to be considered.

POC RMSC for short-term planning and selective recalls:

GE Military Net: 34 53 – 32 10 or 32 20 Duty Officer
Commercial: +49 – 28 24 – 97 74 – 32 10 or 32 20 Duty Officer
FAX: +49 – 28 24 – 97 74 – 32 29
E-Mail: fueznatlvssz@bundeswehr.org

POC CRC NM for scheduling and de-confliction (long-term planning):
NL Military Net: 490 – 2350 Master Controller
Commercial: +31 – 5 77 41 2350 Master Controller
FAX: +31 – 5 77 45 – 84 98
E-Mail: crcsqn@aocs.af.dnet.mindef.nl

G.2.6 Sensor management and daily OPS coordination responsibilities

Master TACCC will always be a national responsibility. Therefore, GAF TACCC / DTACCC are Slave TACCC to RNLAF RADARs and RNLAF CRC / TACF will be Slave TACCC to GAF RADARs.

It is a Master TACCC responsibility to inform all nominated Slave TACCC about the actual RADAR setup, technical limitations and equipment outages.

The RMSC will nominate the Master TACCC for HADR MA and BZ according to the present Air Surveillance and Control System Configuration (ASACSCON) based on HQ CC Air Ramstein Manual 80-7 Vol. III. Soon after taking over this function and additionally upon any change in RADAR setup, the TPO of the Master TACCC will initiate a detailed status information exchange with CRC NM.
POC at CRC NM: +31 – 5 77 41 2382 TPO

The RNLAF RADARs may be used by multiple GAF TACCC / DTACCC simultaneously. Each GAF TACCC / DTACCC being a Slave TACCC of any RNLAF RADAR will contact CRC NM, which in turn will inform about the current RADAR setup. Thereafter, CRC NM TPO will initiate the follow on detailed status information exchange with these nominated GAF TACCC / DTACCC.

POC at GAF TACCC:

		VCS	Commercial	GAF military
Erndtebrück (**EB**)	TPO	34 7050	+49 – 27 53 – 6 04 – 30 80	35 65 – 30 80
	SC/E	34 7042	+49 – 27 53 – 6 04 – 30 40	35 65 – 30 40
Schönewalde (**SC**)	TPO	34 7550	+49 – 3 53 89 – 86 – 12 11	83 03 – 12 11
	SC/E	34 7542	+49 – 3 53 89 – 86 – 12 14	83 03 – 12 14
Meßstetten (**MS**)	TPO	34 7750	+49 – 74 31 – 63 47 – 45 42	54 66 – 45 42
	SC/E	34 7742	+49 – 74 31 – 63 47 – 55 48	54 66 – 55 48

RMSC will provide CRC NM with the actually used GAF RADAR matrix and code table for HADR and MPR to enable coordination via non-secure lines and for display of the current setup.

ASACSTAT and ECM reporting are to be carried out according NATO and national documents and regulations.

Generally, RADAR plot data will be recorded by the data handling system of the receiving site. In case of recording or replay problems, RMSC may initiate data retention (as soon as possible within 20 days after the respective Air Incident) and / or reduction of nominated RADAR data at CRC NM.

CRC NM may initiate the same requests via RMSC. GAF and RNLAF agreed on forwarding of the reduction result to the requesting unit.

In cases, where a Slave TACCC uses a foreign RADAR only for control of aircraft within a specified airspace and time frame, the TPO of the Master TACCC has to be informed well in advance. RADAR setup then will be coordinated accordingly to meet mission requirements at best. Settings will be changed after mutual co-ordination only.

END