LETTER OF AGREEMENT

between

ATC the Netherlands **and** DFS Deutsche Flugsicherung GmbH

Eelde TWR/APP **Bremen ACC**

Effective: 11/03/2010

1 General

1.1 Purpose

The purpose of this LoA is to define the co-ordination procedures to be applied between Eelde TWR/APP and Bremen ACC when providing ATS to general air traffic (IFR/VFR) and operational air traffic.

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

1.2 Operational Status

Eelde TWR/APP and Bremen ACC 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 LoA.

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

2.1.1 Eelde TWR/APP

Lateral limits: The limits of the area of responsibility correspond to the boundary of the Eelde TMA as published in AIP the Netherlands.

Vertical limits: as published in AIP the Netherlands

ICAO airspace classification for the area of responsibility of Eelde TWR/APP along the common boundary of the areas of responsibility of Eelde TWR/APP and Bremen ACC, is described in annex B to this LoA.

2.1.2 Bremen ACC

Lateral limits: The limits of the area of responsibility correspond to the boundary of the Bremen FIR as published in AIP Germany.

Vertical limits: as published in AIP Germany

ICAO airspace classification for the area of responsibility of Bremen ACC along the common boundary of the areas of responsibility of Eelde TWR/APP and Bremen ACC, is described in annex B to this LoA.

2.1.3 In order to safeguard the control and co-ordination of IFR flights and controlled VFR flights along the common FIR boundary, Eelde TWR/APP and Bremen ACC have agreed upon a common line indicating the FIR boundary - see appendix 1.

For Flight Information Service, Alerting Service and Rescue the national borders shall be considered as common FIR boundary.

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 Eelde TWR/APP and Bremen ACC includes the following services:

- Air traffic control service (ATC).
- Flight information service for controlled flights.
- Alerting service (ALRS).

2.2.2 Delegation of ATS from Eelde TWR/APP to Bremen ACC

Within the Amsterdam FIR the responsibility for the provision of ATS in accordance with the airspace classification may be delegated temporarily from Eelde TWR/APP to Bremen ACC within the Emden block clearance area (see appendix 1), in order to accommodate IFR flights inbound Emden RWY 07.

Lateral Limits: The part of the Amsterdam FIR enclosed by the FIR boundary and a line linking the following co-ordinates:

53°28'28"N 006°51'49"E –
53º23'56"N 006º56'58"E –
53º20'11"N 006°59'37"E –
53º19'00"N 007º01'30"E –
53°18'00"N 007°11'30"E –
53°16'45"N 007°04'38"E –
53°16'18"N 006°58'19"E –
53°16'58"N 006°55'03"E –
53°18'50"N 006°52'29"E.

Vertical Limits: 1500 ft AMSL - 2500 ft AMSL

Airspace Classification: E

2.2.3 Delegation of ATS from Bremen ACC to Eelde TWR/APP

Not applicable.

2.2.4 Other Areas

Delegations of ATS to/from other co-ordinating ATS units along the common boundary of the areas of responsibility of Eelde TWR/APP and Bremen ACC are described in annex B to this LoA.

2.2.5 Alerting Service within the airspaces with delegated responsibility

The ATS unit responsible for the provision of ATS, by virtue delegation, shall provide alerting service and shall notify immediately the supervisor of the delegating ATS unit. The supervisor of the delegating ATS unit shall notify the appropriate rescue coordination centre.

3 Procedures

3.1 The procedures to be applied by Eelde TWR/APP and Bremen ACC are detailed in the annexes to this LoA:

- Annex A: Definitions and Abbreviations.
- Annex B: Area of Common Interest.
- Annex C: Exchange of Flight Data.
- Annex D: Procedures for Co-ordination.
- Annex E: Transfer of Control and Transfer of Communications.
- Annex F: Radar Based Co-ordination 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 LoA

The revision of the present LoA, excluding annexes, requires the mutual written consent of the signatory authorities.

4.2 Revision of the Appendices and Annexes to the LoA

The revision of appendices and annexes to the present LoA requires the mutual consent of the authorities designated by the respective signatory approving authorities, normally the Heads of Operations at the respective units and the written confirmation of at least one of the parties.

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 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 are expected to exercise their best judgement to ensure the safety and efficiency of air traffic.

5 Cancellation

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

5.2 Cancellation of this LoA by either Approving Authority 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.

6 Interpretation and Settlement of Disputes

6.1 Should any doubt or diverging views arise regarding the interpretation of any provision of the present LoA, 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 LoA becomes effective 11/03/2010 and supersedes the Letter of Agreement between Eelde TWR/APP and Bremen ACC dated 08/05/2008.

Schiphol-Oost,

P.M. van Hoogstraten,
Chief Executive Regional Unit,
Air Traffic Control The Netherlands.

Bremen,

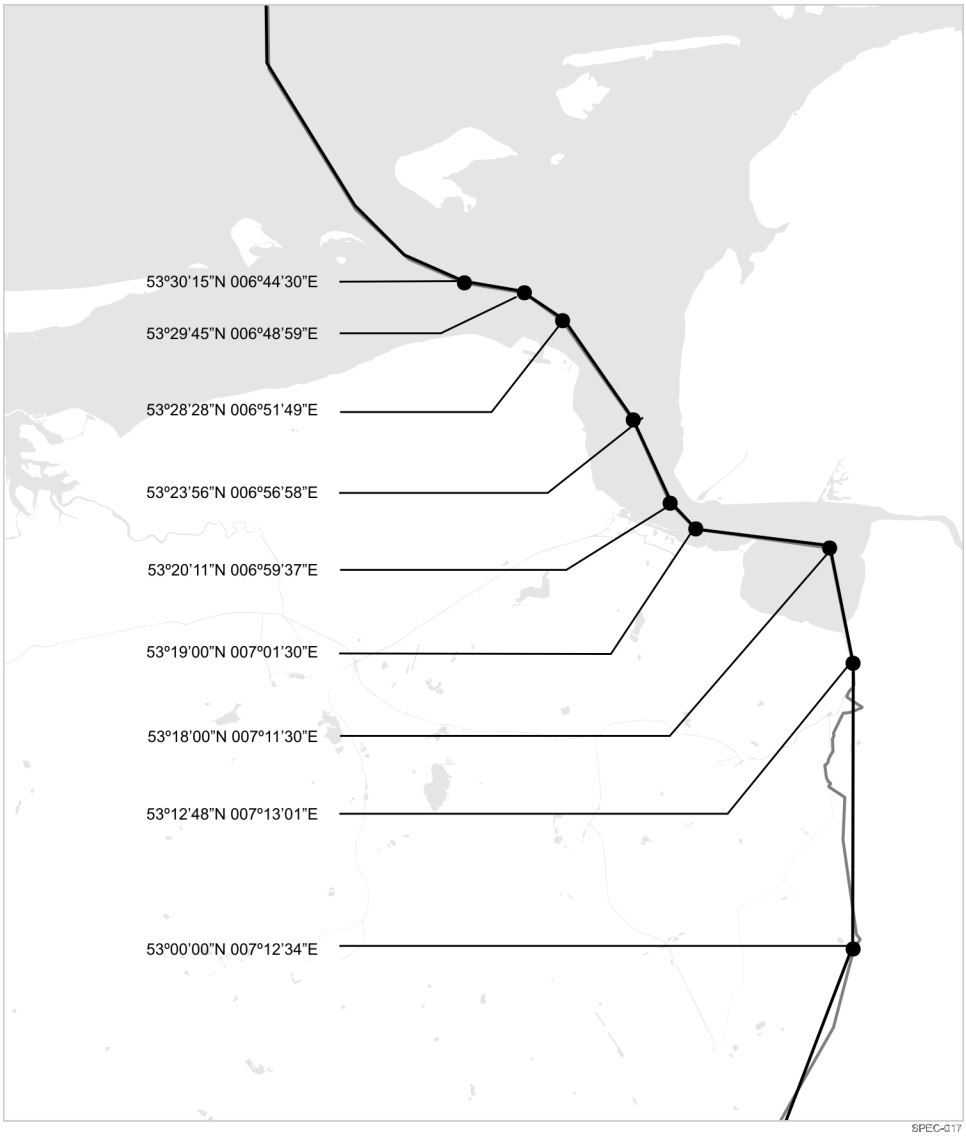
i. V. Werner Spier,
Head of Operations,
Control Centre Bremen ,
DFS Deutsche Flugsicherung GmbH.

Langen,

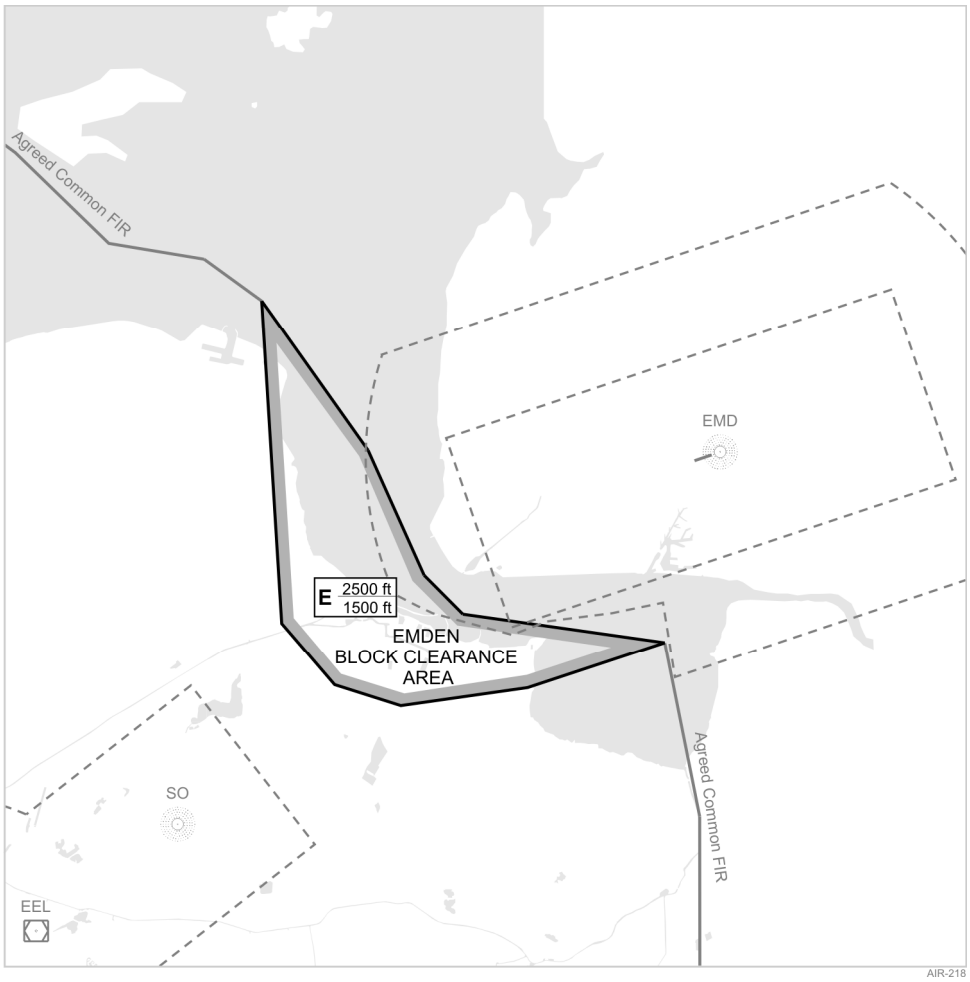
i. V. Andre Biestmann,
Head of ATM Operations & Strategy,
DFS Deutsche Flugsicherung GmbH.

Appendix 1

Agreed Common FIR Boundary



Emden block clearance area



INTENTIONALLY LEFT BLANK

Annex A

Definitions and Abbreviations

Effective: 11/03/2010
Revised: 18/11/2010

A.1 Definitions

A.1.1 **Area of Responsibility**

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

A.1.2 **Area of Common Interest**

A volume of airspace as agreed between two ATS units, extending into the adjacent/subjacent areas of responsibility, within which airspace structure and related activities may have an impact on air traffic co-ordination 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 pre-notification time, or
- an aircraft in flight intending to operate under conditions other than those described in mutually agreed procedures.

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 pre-notification time.

A.1.5 **Division Level (DL)**

The flight level dividing two superimposed areas of responsibility for the provision of ATS.

A.1.6 **Reduced Vertical Separation Minimum (RVSM).**

Not Applicable

A.1.7 **Release**

A.1.7.1 Release for Climb

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

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.7.2 Release for Descent

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

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.7.3 Release for Turn

An authorisation for the accepting unit to turn (a) specific aircraft away from the current flight path by not more than 45^{o} before the transfer of control.

Note: The transferring unit remains responsible for separation within its AoR unless otherwise agreed.

A.1.8. **Minimum Radar Vectoring Altitude**

The lowest altitude within controlled airspace, which may be used for the vectoring of IFR flights, taking into account the minimum safe height and the airspace structure within a specified area.

A.2 Abbreviations

AAA*	Amsterdam Advanced ATC (system)
ABI	Advance Boundary Information Message
ACC	Area Control Centre
ACI	Area of Common Interest
ACT	Activation Message
AFTN	Aeronautical Fixed Telecommunication Network
AIP	Aeronautical Information Publication
ALRS	Alerting Service
AMC*	Airspace Management Cell
AMSL	Above Mean Sea Level
AOCS NM*	Air Operations Control Station Nieuw Milligen
AoR*	Area of Responsibility
APP	Approach
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Services
BDRY	Boundary
CBA*	Cross Border Area
CDR*	Conditional Route
COP	Co-ordination Point
CRAM	Conditional Route Availability Message
CRC	Control and Reporting centre
CTA	Control Area
CTR	Control Zone
DL*	Division Level
DFS	Deutsche Flugsicherung
ETD	Estimated Time of Departure
ETO	Estimated Time Over (significant point)
FIR	Flight Information Region
FIS	Flight Information Service
FL	Flight Level
FMP*	Flow Management Position
ft	feet
GAT	General Air Traffic
GmbH*	Gesellschaft mit beschränkter Haftung
GND	Ground
hPA*	Hectopascal
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions
kt	Knots
LAM	Logical Acknowledge Message
LoA*	Letter of Agreement
MHz	Megahertz
MFC*	Multi Frequency Coding
MSG	Message
MSL	Mean Sea Level
MRVA*	Minimum Radar Vectoring Altitude
NM	Nautical Mile
OAT*	Operational Air Traffic
ORCAM	Originating Region Code Assignment Method
QNH	Altimeter sub-scale setting in hPa
RCL	Requested Cruising Level
RETD*	Revised Estimate Time of Departure
RTF	Radio Telephony
RWY	Runway
SSR	Secondary Surveillance Radar
TMA	Terminal Area
TSA*	Temporary Segregated Airspace
TWR	Tower
UTC	Universal Time Co-ordinate
VFR	Visual Flight Rules

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

INTENTIONALLY LEFT BLANK

Annex B

Area of Common Interest

Effective: 11/03/2010
Revised: 18/11/2010

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

The airspace structure within the ACI is shown in appendix 1 of annex B.

B.1.1 **Amsterdam FIR**

Area	Vertical limits	Airspace Classification
Amsterdam CTA East 1	FL 065 – FL 195	A
Eelde TMA [1)]	1500 ft AMSL – FL 065	E
Eelde CTR [1)]	GND – 3000 ft AMSL	C
Nieuw Milligen TMA A [2)]	FL 065 [3)] – FL 195 1500 ft AMSL – FL 065 [3)]	B E
Nieuw Milligen TMA C [2)]	FL 065 [3)] – FL 195 1500 ft AMSL – FL 065 [3)]	B E
Amsterdam FIR	GND – 1500 ft AMSL	G

[1)] Outside opening hours of Eelde TWR/APP, ATS shall be provided by AOCS NM ATC.
[2)] ATS provided by AOCS NM ATC.
[3)] From Friday 1600 to Sunday 2300 UTC (Friday 1500 to Sunday 2200 UTC summertime) and during legal Dutch holidays (see AIP the Netherlands), classified E up to and including FL 095.

B.1.2 **Bremen FIR**

Area	Vertical limits	Airspace Classification
Bremen FIR	Up to 2500 ft GND 2500 ft GND – up to FL 100 FL 100 – FL 245	G E C
Deviations:		
Emden	Up to 2500 ft GND	F

B.2 Sectorisation

The sectorisation within the ACI is shown in appendix 1 of annex B.

B.3 Special Areas within the Area of Common Interest

B.3.1 **Delegations of the Responsibility for the Provision of ATS to/from other ATS Units within the ACI**

B.3.1.1 Delegation of ATS in the Eelde CTR and Eelde TMA outside operational hours of Eelde TWR/APP

Outside operational hours of Eelde TWR/APP the provision of ATS within the Eelde CTR and Eelde TMA will be delegated to AOCS NM ATC.

B.3.1.2 Delegation of ATS from Amsterdam ACC to Eelde TWR/APP (Eelde training area - see appendix 1 of Annex B)

Within the Amsterdam CTA East 1 the provision of ATS has been delegated during the operational hours of Eelde TWR/APP from Amsterdam ACC to Eelde TWR/APP within the following areas:

Lateral limits: Eelde TMA

Vertical limits: FL 065 - FL 085

Airspace classification: A

B.3.2 **Other Areas**

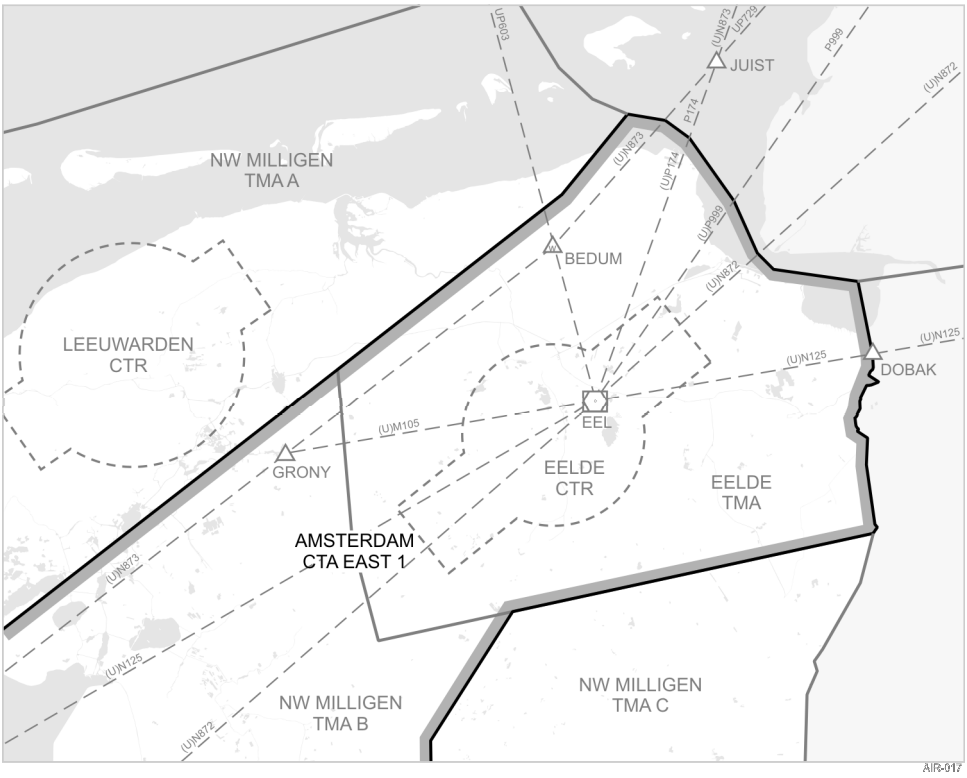
Not applicable.

B.4 Non-published Co-ordination Points

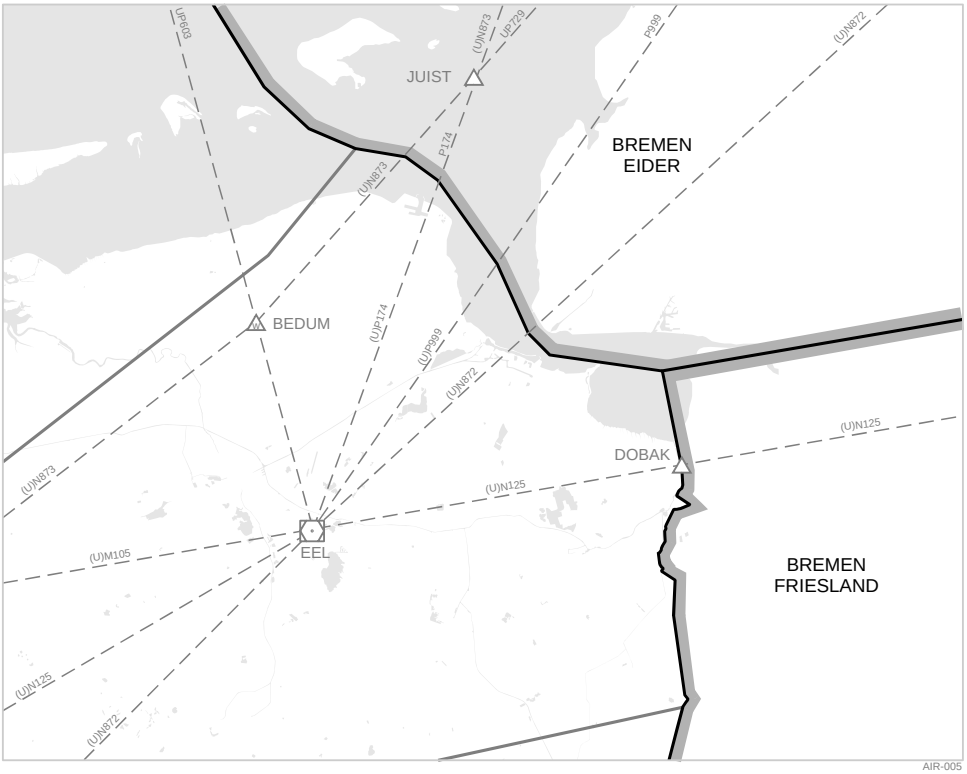
Not applicable.

Appendix 1 of Annex B

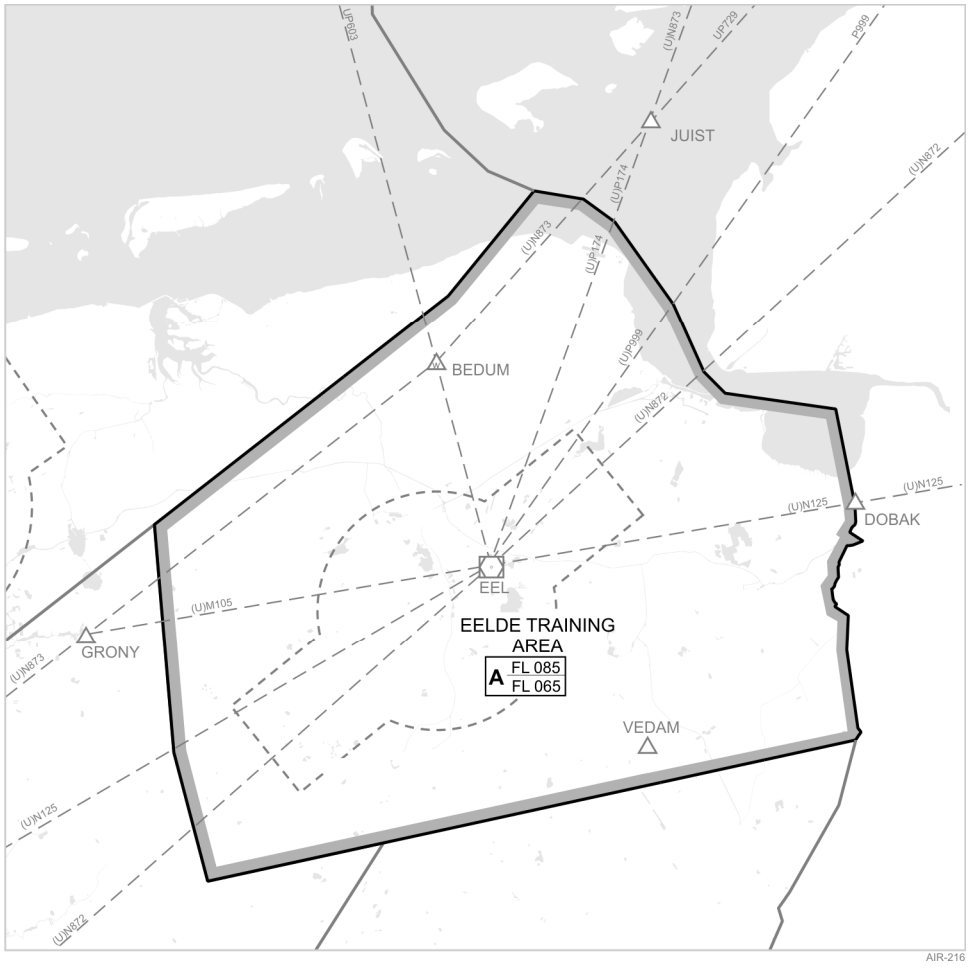
Airspace Structure



Sectorisation



Eelde training area



Annex C

Exchange of Flight Data

Effective: 11/03/2010
Revised: -

C.1 General

Eelde TWR/APP uses the flight data processing system of AAA. Agreements on the automatic data exchange within this LoA refer to the exchange of messages between Amsterdam ACC and Bremen ACC.

C.1.1 **Basic Flight Plans**

Basic flight plan data should normally be available at both centres by means of AFTN or flight plans received by IFPS.

C.1.2 **Current Flight Plan Data**

Messages, including current flight plan data, shall be forwarded by the transferring centre to the accepting centre 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 centres 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 centre at least 10 minutes prior, but not earlier than 30 minutes before the aircraft is estimated to pass the transfer of control point, and shall contain:

- call sign
- SSR code
- ETO for the appropriate COP as laid down in annex D to this LoA
- 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
- other information, if applicable

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

Normally, verbal estimates will not be passed in parallel with ACT messages. In all cases, 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 supervisors 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.

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

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

C.1.4 **Revisions**

Any significant revisions to the flight data are to be transmitted to the accepting centre.

Time differences of 5 minutes or more are to be exchanged.

Changes to the co-ordinated flight levels within 5 minutes of the ETO for the transfer of control point are subject to an approval request.

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

Whenever the minimum time of 10 minutes for a verbal estimate, or those prescribed in appendix 1 to annex C for ACT messages, cannot be met, either an expedite clearance request, an approval request, as appropriate, shall be initiated, except departures EDDW, which are co-ordinated immediately after departure.

C.2 Means of Communications and their Use

C.2.1 **Equipment**

The following lines are available between Eelde TWR/APP and Bremen ACC:

- 1 telephone line (MFC).

C.2.2 **Telephone Co-ordination**

All telephone communications should 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 Eelde TWR/APP to Bremen ACC

Receiving Sector / COPs	Message	Position	Extension
Eider / EEL	Flight plan data and estimates	Assistant	02123
	Control messages, expedite clearance requests, approval requests and revisions	Planner	02031
	Radar co-ordination	Executive	02021
Friesland / EEL	Flight plan data and estimates	Assistant	02123
	Control messages, expedite clearance requests, approval requests and revisions	Planner	02033
	Radar co-ordination	Executive	02023

Supervisor Bremen ACC:	02199	FMP:	02099
Switchboard Bremen:	02119	AMC:	02099
Telefax Bremen ACC:	+49 421 535 533	E-Mail	bremen.supervisor@dfs.de

C.2.2.2 Messages from Bremen ACC to Eelde TWR/APP

Receiving Sector / COPs	Message	Position	Extension
Eelde TWR/APP / EEL	Flight plan data, estimates, expedite clearances and revisions (≥ 10 minutes before ETO)	APP Controller	1744
	Control messages, approval requests, revisions (< 10 minutes before ETO) and radar co-ordination		
	Urgent radar co-ordination		

Switchboard Amsterdam: 1380

Telefax Eelde: +31 50 309 9263

C.3 Failure of Ground/Ground Voice Communications

C.3.1 Fall-Back Procedures for Co-ordination

In the event of failure of the direct lines between the co-ordinating partners, co-ordination may be effected via:

- public telephone, or;
- Amsterdam ACC.

Eelde TWR/APP:	+ 31 50 3099248	
Bremen ACC:	+ 49 421 596 3489	(Supervisor - primary number)
	+ 49 421 514 9900	(Supervisor - secondary number)
Sector:		
	+ 49 421 514 9929	(Eider planner)
	+ 49 421 514 9930	(Friesland planner)
Amsterdam ACC:	+ 31 20 406 2200	(Supervisor)

C.3.2 Alternate Fall-Back Procedures for Co-ordination

In case of communications 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 centre for the purpose of obtaining an ATC entry clearance from the accepting centre.

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

The transferring centre 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 centre.

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

Appendix 1 to Annex C

Automatic Data Exchange

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

Messages	COPs	Time and/or Distance Parameters	
		Messages from Eelde TWR/APP to Bremen ACC	**Messages from Bremen ACC to Eelde TWR/APP**
ABI	EEL	RETD minus 10 minutes.	On activation of the last route-segment (this can be more than 30 minutes prior to ETO COP).
ACT	EEL	RETD minus 5 minutes.	20 minutes prior to ETO COP or 50 NM prior to COP, whichever comes first.
LAM		A LAM should be received at the transferring centre within 45 seconds after the ABI/ACT transmission.	A LAM should be received at the transferring centre within 15 seconds after the ABI/ACT transmission.

Annex D

Procedures for Co-ordination

Effective: 11/03/2010
Revised: 18/11/2010

D.1 General Conditions for Acceptance of Flights

D.1.1 Co-ordination 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 paras D.2 and D.3).

D.1.2 Flights shall be considered to be maintaining the co-ordinated flight level at 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 co-ordination - except if otherwise described in para D.2 or D.3.

D.1.3 If the accepting centre 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.1.4 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.

D.1.5 The accepting centre shall not notify the transferring centre that it has established ground-air communications with the transferred aircraft unless specifically requested to do so.

D.2 ATS Routes, Co-ordination 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 Eelde TWR/APP to Bremen ACC**

Route	COP	Flight Level Allocation	Special Conditions
EEL – TEMLU – JUIST	EEL	FL 060, or FL 050[1)] if RCL is < FL 060	Co-ordination level is the level agreed at the TMA boundary (TEMLU, SOMPO or DOBAK). The flights are released for climb to FL 080 subject to known traffic.
EEL – SOMPO – DHE	EEL	FL 060, or FL 050[1)] if RCL is < FL 060	
EEL – DOBAK – WSR	EEL	FL 060, or FL 050[1)] if RCL is < FL 060	

[1)] By default Eelde TWR/APP transfers flights at FL 050. If the QNH is ≤ 1013 hPA, Eelde TWR/APP shall transfer flights at 5000 ft AMSL without further co-ordination.

For flights that indicate that they want to cancel the IFR flight plan at the Eelde TMA boundary and continue on a VFR flight plan, Eelde APP is requested to let the pilot cancel the IFR flight plan within the Eelde TMA, or to co-ordinate a clearance limit and routing beyond the Eelde TMA boundary.

If an ACT has been sent for these flights Eelde APP shall verbally cancel the ACT (if the IFR flight plan is cancelled prior to the TMA exit point) or verbally co-ordinate the handling of the flight beyond the TMA exit point.

D.2.2 **Flights from Bremen ACC to Eelde TWR/APP**

ATS Route	COP	Flight Level Allocation	Special Conditions
(U)N125 – DOBAK	EEL	FL 070, or RCL if RCL is < FL 070	Co-ordination level is the level agreed at the TMA boundary (TEMLU, SOMPO, DOBAK or KUBAT) The flights are released for descent to 5000 ft AMSL subject to known traffic.
(U)P174 – TEMLU	EEL	FL 070, or RCL if RCL is < FL 070	
(U)P999 – SOMPO	EEL	FL 070, or RCL if RCL is < FL 070	
(U)N872 – KUBAT	EEL	FL 070, or RCL if RCL is < FL 070	

Outside operational hours of Eelde TWR/APP, Bremen ACC shall co-ordinate these flights with Amsterdam ACC or if the requested flightlevel is < FL070 verbally with AOCS NM ATC.

D.2.2.1 Radar service available at Eelde TWR/APP

Bremen ACC shall separate flights following different ATS routes towards EEL either vertically or by assuring that the minimum distance between the relevant aircraft does not fall below 10 NM until passing EEL.

D.2.2.2 Radar service not available at Eelde TWR/APP

If Eelde TWR/APP cannot accept flight according to D.2.2.1, Eelde TWR/APP shall co-ordinate the minimum required separation verbally with Bremen ACC.

D.3 Special Procedures

D.3.1 **Off-route Traffic**

Normally GAT will not be given clearance to operate off the published ATS routes. Exceptions may be granted after co-ordination if traffic situation permits.

D.3.2 Eelde TWR/APP shall inform Bremen ACC about their operational opening hours.

D.3.3 Eelde Radar service is available from Mon-Fri 0800-1800 UTC (0700-1700 UTC summertime).

Note: Deviation from the standard opening hours shall be co-ordinated with Bremen ACC.

D.4 Co-ordination of Status of Special Areas in the Area of Common Interest

D.4.1 The Eelde training area is during the opening hours of Eelde TWR/APP delegated from Amsterdam ACC to Eelde TWR/APP. Outside the opening hours of Eelde TWR/APP the Eelde training area is returned to Amsterdam ACC and the Eelde TMA is delegated to MilATCC.

D.4.2 Bremen ACC requests Eelde TWR/APP to activate and deactivate the Emden block clearance area. Outside the opening hours of Eelde TWR APP, Bremen ACC requests AOCS NM ATC to activate and deactivate the Emden block clearance area.

Annex E

Transfer of Control and Transfer of Communications

Effective: 11/03/2010
Revised: 18/11/2010

E.1 Transfer of Control

The transfer of control takes place at the AoR boundary.

E.2 Transfer of Communications

The transfer of communications shall take place not later than the transfer of control and as specified in para E.3, unless otherwise co-ordinated.

Note: Frequencies:

- Eelde APP : 120.300 MHz
- Eelde TWR : 118.700 MHz
- AOCS NM ATC : 128.350 MHz 397.275 MHz
- Dutch Mil Info : 132.350 MHz 264.325 MHz
- Bremen Eider : 120.225 MHz 313.225 MHz 371.750 MHz
- Bremen Friesland : 124.800 MHz 336.450 MHz
- Bremen FIS1 (north of 53°00'00"N) : 125.100 MHz 340.600 MHz
- Bremen FIS2 (south of 53°00'00"N) : 119.825 MHz 376.400 MHz

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

Not applicable.

INTENTIONALLY LEFT BLANK

Annex F

Radar Based Co-ordination Procedures

Effective: 11/03/2010
Revised: -

F.1 SSR Code Assignment

F.1.1 Eelde TWR/APP and Bremen ACC shall transfer aircraft on verified discrete SSR codes assigned in accordance with ORCAM.

F.1.2 Any change of SSR code by the accepting centre/unit may only take place after the transfer of control point.

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

F.2 Radar Co-ordination Procedures

F.2.1 **General**

F.2.1.1 Transfer of radar identification and transfer of radar control between Eelde TWR/APP 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.

F.2.1.3 Vectoring within the respective AoRs may take place without co-ordination between Eelde TWR/APP and Bremen ACC provided the distance to the AoR boundary is not less than 2.5 NM.

F.2.2 **Transfer of Radar Control**

Transfer of radar control may be effected after prior co-ordination provided the minimum distance between the aircraft does not fall below 10 NM.

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

Transfer of radar control may be effected without prior co-ordination provided the minimum distance between successive aircraft about to be transferred is 10 NM and constant or increasing.

Note: When using speed control, pilots concerned shall be instructed to report their assigned speed to the accepting centre/unit upon initial contact.

F.3 Reduced Longitudinal Separation

F.3.1 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 centre/unit has ensured that the actual distance between the aircraft does not fall below 20 NM.

F.4 Air Traffic Flow Management

Not applicable.

F.5 Radar Separation Minima

F.5.1 The following radar separation minima are applicable:

- Eelde TWR/APP: 3 NM.
- Bremen ACC: 5 NM.

F.5.2 For radar hand-overs, a minimum radar separation of 10 NM may be applied. If longitudinal radar separation is applied, no prior verbal co-ordination is necessary, provided the minimum distance between the relevant aircraft does not fall below 10 NM.

Annex G

Supplementary Procedures

Effective: 11/03/2010
Revised: -

G.1 General.

G.1.1 In case of technical or catastrophic outage resulting in the disruption of the provision of ATS at Bremen ACC, the adjacent co-ordinating 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.1.2 The Contingency Contact Point (CCP) of the failing ATS unit shall decide about the required contingency measures and co-ordinate the subsequent execution of the contingency plan.

G.2 Disruption of the Provision of ATS at Bremen ACC.

G.2.1 **Purpose.**

Paragraph G.2 describes the procedures that must be applied in case of contingency of Bremen ACC; these procedures may overrule respective procedures in annex A to F.

G.2.2 **Contingency Phase 0 – Immediate Actions.**

G.2.2.1 If the operational status of Bremen ACC becomes impaired to such an extent, that ATS can no longer be provided, the Bremen ACC Supervisor shall notify the co-ordinating partners.

If necessary and possible, measures shall be agreed in order to ensure the safe evacuation of all controlled air traffic from the Bremen ACC AoR.

When operation of Bremen ACC is disrupted and the Bremen ACC AoR is vacated from any controlled traffic, the Supervisor in charge of operations shall declare contingency phase 0 for Bremen ACC. From this time on:

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

G.2.2.2 Communications with the Emergency Operations Staff Bremen ACC takes place via the ACC Supervisor: +49 421 596 3489 or +49 173 340 1129.

G.2.3 **Contingency Phase 1 – ATS delegation.**

Not applicable.

G.2.4 **Contingency Phase 2 – Resuming Operations at Bremen ACC Contingency Location.**

G.2.4.1 <u>General.</u>

In contingency phase 2, Bremen ACC re-establishes the provision of ATS within its AoR by opening contingency sectors at CRC Brockzetel. The contingency sectors will correspond to the existing sectors at Bremen ACC:

- the sectors Eider and Friesland are called contingency sector North/West;

G.2.4.2 Activation and De-activation.

The Bremen ACC Supervisor shall inform the co-ordinating partners about the activation and de-activation of the contingency sectors as well as the frequencies to be used.

G.2.4.3 ATFCM Procedures.

If necessary, the Bremen ACC Supervisor shall initiate ATFCM measures.

G.2.4.4 Contingency Sectors and Communications.

G.2.4.4.1 Messages from Amsterdam ACC to Bremen ACC.

Receiving Contingency Sector	**Message**	**Position**	**Extension / public telephone**
North West (Brockzetel)	Flight plan data and estimates	Assistant	34 7891 +49 494 190 3037
	Control messages, expedite clearance requests, approval requests and revisions	Planner	34 7892 + 49 494 190 3038
	Radar co-ordination	Executive	34 7892 FRQ: 133.725 MHz (VHF) 277.350 MHz (UHF)
All sectors	Procedures, capacity, emergency	SUP Bremen ACC	34 7898 +49 494 190 3037

G.2.4.4.2 Messages from Bremen ACC to Eelde TWR/APP.

The Bremen ACC contingency working positions shall call the respective working position as agreed in annex C.

G.2.4.5 Exchange of Flight Data and Co-ordination.

G.2.4.5.1 Limited basic flight plan data is available at the contingency working positions.

G.2.4.5.2 OLDI data exchange with the contingency working positions is not possible. All co-ordination shall be done verbally. Verbal estimates shall be passed to the appropriate sector at least 10 minutes prior, but not earlier than 30 minutes before the aircraft is estimated to pass the AoR boundary.

G.2.4.5.3 The transferring unit shall initiate an expedite clearance or approval request if:

- the verbal estimate cannot be passed at least 10 minutes before the aircraft is estimated to pass the AoR boundary,
- a change of the co-ordinated flight level is necessary within 5 minutes prior to crossing the AoR boundary.

G.2.4.6 Control Procedures.

For flights planned on ATS routes, Bremen ACC accepts co-ordination for direct routings outside ATS routes only in urgent cases, e. g. emergencies, weather diversions.
The separation minimum between aircraft on transfer shall be 15 NM constant or increasing.

G.2.4.7 Call sign.

In case of contingency, Bremen ACC has the following call sign:

- radio telephony: Bremen Radar.
- telephone: Bremen Contingency + name of working position (e. g. North West).

G.2.4.8 SSR Code Assignment.

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

G.3 Contingency Exercises.

G.3.1. **Voice Communication Systems.**

During exercises all systems at Bremen ACC remain operational, except for OLDI data exchange. MFC numbers as published in paragraph G.2.4.4.1 shall be used during exercises. Public phone shall only be used as back-up system.